ENVIRONMENTAL IMPACT EVALUATION

APPENDICES A-H

ORANGE RAILROAD STATION

NEW HAVEN LINE

State Project No. 106-120

prepared for

Connecticut Department of Transportation

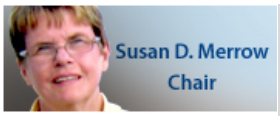
MAY 2017

prepared by FUSS & O'NEILL

Prepared pursuant to Regulations of Connecticut State Agencies Section 22a-1a-1 to 12, inclusive

Appendix A

Project Scoping and Agency Coordination



ENVIRONMENTAL MONITOR

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CEQ HOME

August 16, 2016

Scoping Notices

1. Preston River Walk Remediation, Preston
2. Evaluation for Maintenance Building at East Haven Rifle Range, East Haven
3. Additional Landings at East Haven Rifle Range, East Haven
4. New Commuter Railroad Station - Barnum Avenue, Bridgeport
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Post-Scoping Notices: Environmental Impact Evaluation (EIE) Not Required

1. **NEW!** Relocation of I-91 Northbound (NB) Interchange and Widening of I-91 NB and Rt. 15 NB to I-84 EB

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1. Southbury Affordable-Elderly Housing Development, Southbury

State Land Transfers

1. **NEW!** #18 Thames St., Groton
2. **NEW!** Hartford Turnpike, Vernon

The next edition of the Environmental Monitor will be published on September 6, 2016.
Subscribe to e-alerts to receive an e-mail when the Environmental Monitor is published.

Notices in the Environmental Monitor are written by the sponsoring agencies and are published unedited. Questions about the content of any notice should be directed to the sponsoring agency.

Scoping Notices

"Scoping" is for projects in the earliest stages of planning. At the scoping stage, detailed information on a project's design, alternatives, and environmental impacts does not yet exist. Sponsoring agencies are asking for comments from other agencies and from the public as to the scope of alternatives and environmental impacts that should be considered for further study. Send your comments to the contact person listed for the project by the date indicated.

The following Scoping Notices have been submitted for review and comment.

1. Notice of Scoping for Preston Riverwalk Remediation

Municipality where proposed project might be located: Preston

Address of Possible Project Location: 14 Route 12, Preston, CT 06365

Project Description: The Department of Economic and Community Development (DECD) will utilize up to $10 million of funds allocated under Public Act No. 15-193 to perform abatement, demolition and remediation activities at the approximately 393-acre former Norwich State Hospital located in the Town of Preston. The site, which was formerly owned and operated by the State, has been included on the DECD Priority List of state-owned and formerly state-owned brownfields under Section 3 of (P.A. 15-193.)

The site has been dormant since the hospital closed its doors in 1996 and the Town of Preston took title to the property from the state in 2009. In May 2016, the Town of Preston and the Mohegan Tribal Gaming Authority (MTGA) entered into a Memorandum of Understanding (MOU) with regard to the sale and redevelopment of the property.

The proposed State funding will not be used for the redevelopment of the site, which will be privately financed. The $10 million will be used for the abatement of hazardous building materials, demolition activities, remediation, and related professional services.

Project Map: Click here to view a Location Map of the project area.

Written comments from the public are welcomed and will be accepted until the close of business on: Friday, August 19, 2016. Any person can ask the sponsoring agency to hold a Public Scoping Meeting by sending such a request to the address below. If a meeting is requested by 25 or more individuals, or by an association that represents 25 or more members, the sponsoring agency shall schedule a Public Scoping Meeting. Such requests must be made by Friday, July 29, 2016.

Written comments and/or requests for a Public Scoping Meeting should be sent to

Name: Maya Loewenberg
Agency: Department of Economic and Community Development
Address: 505 Hudson Street, Hartford, CT 06106
Fax: 860-760-5740
E-Mail: maya.loewenberg@ct.gov

If you have questions about the public meeting, or other questions about the scoping for this project, contact:

Name: Maya Loewenberg
Agency: Department of Economic and Community Development
Address: 505 Hudson Street, Hartford, CT 06106
Phone: 860-270-8155
Fax: 860-760-5740
E-Mail: maya.loewenberg@ct.gov

2. Notice of Scoping for Evaluation for Maintenance Building Location at East Haven Rifle Range

Municipality: East Haven, CT

Project Description: Executive Order 13690 Evaluation for East Haven Rifle Range Maintenance Building, Federal Executive Order 13690 – Establishing a Federal Flood Risk Management for Further Soliciting and Considering Stakeholder Input, The Connecticut Military Department is soliciting public and stakeholder input for the construction of a new Range Maintenance Building at the existing East Haven Rifle Range Facility owned and operated by the Connecticut Military Department.

Project Maps: Click to view a map of the project area.
Click to view the FEMA flood map.
Click to view the master plan.
Click to view the layout plan.

Written comments from the public are welcomed and will be accepted until the close of business on: **Friday, 19 August 2016**.

Any person can ask the sponsoring agency to hold a Public Scoping Meeting by sending such a request to the address below by **Friday, 29 July 2016**. If a meeting is requested by 25 or more individuals, or by an association that represents 25 or more members, the sponsoring agency shall schedule a Public Scoping Meeting.

Additional information about this project can be viewed in person at 360 Broad Street, Hartford, CT 06105

Written comments and/or requests for a Public Scoping Meeting should be sent to:

Name: Rob Dollak
Agency: Connecticut Military Department
Address: 360 Broad Street, Hartford, CT 06105
E-Mail: robert.f.dollak.nfg@mail.mil

If you have questions about the public meeting, or other questions about the scoping for this project, contact:

Name: Rob Dollak
Agency: Connecticut Military Department
Address: 360 Broad Street, Hartford, CT 06105
E-Mail: robert.f.dollak.nfg@mail.mil
Phone: 860-524-4945

The agency released an Environmental Impact Evaluation for this project in September, 2007.

3. Notice of Scoping for Additional Landings of Helicopters at East Haven Rifle Range

Municipality: East Haven, CT

Project Description: Project is for an increase of the current number of helicopter landings from approximately 4-5 annually to once per month.
Click to see the environmental checklist.

Project Maps: Click to view a map of the project area.
Click to see the landing zone.

Written comments from the public are welcomed and will be accepted until the close of business on: **Friday, 19 August 2016**.

Any person can ask the sponsoring agency to hold a Public Scoping Meeting by sending such a request to the address below by **Friday, 29 July 2016**. If a meeting is requested by 25 or more individuals, or by an association that represents 25 or more members, the sponsoring agency shall schedule a Public Scoping Meeting.

Additional information about this project can be viewed in person at 360 Broad Street, Hartford, CT 06105

Written comments and/or requests for a Public Scoping Meeting should be sent to:

Name: Rob Dollak
Agency: Connecticut Military Department
Address: 360 Broad Street, Hartford, CT 06105
E-Mail: robert.f.dollak.nfg@mail.mil

If you have questions about the public meeting, or other questions about the scoping for this project, contact:

Name: Rob Dollak
Agency: Connecticut Military Department
Address: 360 Broad Street, Hartford, CT 06105
E-Mail: robert.f.dollak.nfg@mail.mil
Phone: 860-524-4945

4. Notice of Scoping for New Commuter Railroad Station - Barnum Avenue

Municipality where proposed project might be located: Bridgeport

Address of Possible Project Location: Barnum Avenue between Seaview Avenue and Pembroke Street

Project Description: The proposed project consists of constructing a new commuter rail station on the New Haven Line of Metro North Railroad. The proposed project will include two center-island platforms to provide the flexibility to serve both local and express trains, reconstructing track to accommodate these platforms, cross-track passenger access, widening of the retained railroad embankment, catenary structure relocation, a surface parking lot, and associated landscaping. The proposed project site is currently vacant, and was previously occupied by structures associated with the Remington Arms Facility. The proposed station would require expanding the railroad right-of-way (ROW) to accommodate the passenger platforms and would require permanently closing or relocating Crescent Avenue between Hallett Street and Waterview Avenue, and potentially to Seaview Avenue. The vacant site north of the ROW would serve as the surface parking lot. It is also possible that some type of small facility may be constructed to serve multiple purposes including a waiting area for passengers. It is proposed that vehicles would access the station from Barnum avenue; pedestrian and cyclists access routes to the station will consider ease of access, surrounding land use, and future development in the vicinity.

Currently, East Bridgeport suffers from a lack of convenient rail service, needed to sustain existing businesses and meet the areas future transportation demands. Due in large part to planning and financing efforts of the City of Bridgeport, significant development projects are underway or planned in East Bridgeport. The proposed station will support this growth.

The Connecticut Department of Transportation (Department) is currently in coordination with the CT State Historic Preservation Office, which has determined that proposed project site contains above ground historic resources. The New Haven Line track and associated infrastructure is considered eligible for the National Register of Historic Places. The Department anticipates that the demolition of the retaining walls and associated track infrastructure will constitute an adverse effect. Mitigation measures will be developed as the proposed project progresses.

Project Maps: Click here to view maps of the project area.

Written comments from the public are welcomed and will be accepted until the close of business on: Friday September 2, 2016

Any person can ask the sponsoring agency to hold a Public Scoping Meeting by sending such a request to the address below. If a meeting is requested by 25 or more individuals, or by an association that represents 25 or more members, the sponsoring agency shall schedule a Public Scoping Meeting. Such requests must be made by Friday August 12, 2016.

Written comments and/or requests for a Public Scoping Meeting should be sent to

Name:	Mr. Mark W. Alexander, Transportation Assistant Planning Director
Agency:	Connecticut Department of Transportation Bureau of Policy and Planning
Address:	2800 Berlin Turnpike Newington, CT 06131
Fax:	860-594-3028
E-Mail:	dot.environmentalplanning@ct.gov

If you have questions about the scoping for this project, contact:

Name:	Mr. Keith A. Hall, Project Manager
Agency:	Connecticut Department of Transportation Bureau of Engineering and Construction
Address:	2800 Berlin Turnpike Newington, CT 06131
Phone:	860-594-3301
E-Mail:	Keith.A.Hall@ct.gov

The Connecticut Department of Transportation's (CTDOT) Environmental Classification Document requires the preparation of an Environmental Impact Evaluation (EIE) for projects involving the construction of a new rail facility. CTDOT expects to release an EIE for this project for public review and comment in 2017.

5. Notice of Scoping for Seaside State Park Master Plan

Municipality where proposed project might be located: Waterford

Address of Possible Project Location: 36 Shore Road

Project Description: The Department of Energy and Environmental Protection, Bureau of Outdoor Recreation is proposing to implement the Seaside State Park Master Plan (July 2016), which is to further the transformation of the former Seaside Regional Center site into a 32-acre State park. The Master Plan has five main goals, which are: 1) promote and improve recreation and public access to Long Island Sound; 2) Restore, preserve, and reuse historic assets where feasible; 3) preserve and improve the site's ecology and habitat; 4) create an implementation and operating plan that is financially feasible; and 5) engage the public in helping shape the future of Seaside State Park.

The Master Plan explored and identified three potential State park concepts. The three concepts and their main elements are:

1) **Destination Park**: a) active beach park with serpentine boardwalk and living shoreline; b) park lodge featuring renovation of historic buildings, sun decks and restaurant, adjacent private cottage rentals; and c) living shoreline restoration of oyster reef and coastal woodland habitat.

2) **Ecological Park**: a) nature trail linking wildlife viewing areas; b) landscape art installations with a heliotropic theme; c) living shoreline restoration of oyster reef and coastal woodland habitat; and d) historic buildings demolished.

3) **Passive Recreation Park**: a) low maintenance open lawns and tree groves; b) unprogrammed park grounds and beaches; c) restoration of seawall; and d) historic buildings demolished.

The Master Plan has identified a modified version of the Destination Park concept as a preferred option; however and at this point in time, the Environmental Impact Evaluation would evaluate all three concepts, along with the no-action alternative.

To view the Master Plan click on this link: Master Plan

Project Map(s): Click on the following links to view:

- Location Map of the project area (656 kb)

- Aerial Photo of Existing Site (2.2 MB)
- Destination Park Concept (486 kb)
- Ecological Park Concept (567 kb)
- Passive Recreation Park Concept (498 kb)

Written comments from the public are welcomed and will be accepted until the close of business on: Thursday, September 1, 2016.

There will be a Public Scoping Meeting for this project at:

DATE: **Wednesday, August 24, 2016**

TIME: 7:00 pm (doors open at 6:30 pm)

PLACE: Waterford Town Hall Auditorium, 15 Rope Ferry Road, Waterford, CT

Additional information about the project can be viewed online by clicking here.

Written comments should be sent to:

Name:	David A. Kalafa, Policy Development Coordinator
Agency:	Department of Energy and Environmental Protection
Address:	79 Elm Street Hartford, Connecticut 06106
Fax:	860-424-4070
E-Mail:	DEEP.seasideEIE@ct.gov

If you have questions about the public meeting, or other questions about the scoping for this project, contact:

Name:	Jeff Bolton
Agency:	Department of Administrative Services - Division of Construction Services
Address:	165 Capitol Ave, Room 483, Hartford, CT 06106
Phone:	860-713-5706
Fax:	860-713-7251
E-Mail:	Jeffrey.bolton@ct.gov

The agency expects to release an Environmental Impact Evaluation for this project, for public review and comment, in late 2016 or early 2017.

6. Notice of Scoping for Proposed Commuter Railroad Station

Municipality where proposed project might be located: Orange, Connecticut

Address of Possible Project Location: The proposed project site is located on the eastern end of Salemme Lane, approximately 0.25 miles south of Interstate 95. The site is bounded on the west by Marsh Hill Road, on the east by the Oyster River, and on the southeast by the Metro North Railroad.

Project Description: The Connecticut Department of Transportation (Department) is proposing to construct a New Haven Line commuter rail station on the Metro North Railroad in the Town of Orange, CT through a public-private partnership agreement that will include Transit Oriented Development (TOD). The commuter rail station will include station platforms, canopies, a pedestrian overpass, and a service access road within the existing railroad right-of-way. A commuter drop-off/pick-up, taxi stand and bus stop areas will be part of the TOD developer's site work. Two new approximately 1020 feet long, canopied station platforms, one bound for New Haven and one bound for Stamford and points west are proposed. A covered pedestrian bridge will connect the two platforms via stairtowers and elevators. The Stamford-bound platform will connect to sidewalks leading to a proposed commercial/commuter parking structure that is being constructed as part of a proposed TOD adjacent to the proposed commuter rail station.

The proposed TOD, which is subject to local review and approval, will include improvements and extension of the existing Salemme Lane, and is anticipated to include construction of 6 new buildings, housing 200 dwelling units and approximately 21,500 square feet of retail space, 43 on-street and 80 off-street surface parking spaces, an approximately 800 space parking structure, and associated site landscaping and stormwater management features. The proposed parking structure will consist of a 3-level 230+/- space section that will be dedicated parking for the TOD development and a second, 6-level, 265+/- space commercial/commuter garage that will serve the rail station. The Department will share expenses for the portion of the garage dedicated to commuter parking. The TOD design also provides opportunity for future pedestrian connection with the Yale West Campus to the north.

Elements of the project associated with the rail station will be funded by the State of Connecticut and the Federal Transit Administration.

Project Maps: Click here to view a location map of the project area.

Click here to view an illustrative site plan.

Written comments from the public are welcomed and will be accepted until the close of business on: Friday, September 23, 2016

There will be a Public Scoping Meeting for this project at:

DATE: Thursday, September 8, 2016

TIME: Doors open at 6:30 PM, a presentation will begin at 7:00 PM

PLACE: High Plains Community Center Gymnasium, 525 Orange Center Road, Orange, CT 06477

NOTES: The meeting location is accessible to persons with disabilities. Deaf and hearing impaired persons wishing to attend this meeting and requiring an interpreter may make arrangements by contacting the Department's Office of Communication at 860-594-3062 (voice only) at least five days prior to the meeting.

Written comments should be sent to:

Name: Mr. Mark W. Alexander, Transportation Assistant Planning Director
Agency: Connecticut Department of Transportation
Bureau of Policy and Planning
Address: 2800 Berlin Turnpike, Newington, CT 06131
Fax: 860-594-3028
E-Mail: dot.environmentalplanning@ct.gov

If you have questions about the public meeting, or other questions about the scoping for this project, contact:

Name: Mr. Keith A. Hall, Project Manager
Agency: Connecticut Department of Transportation
Bureau of Engineering and Construction
Address: 2800 Berlin Turnpike, Newington, CT 06131
Phone: 860-594-3301
E-Mail: Keith.A.Hall@ct.gov

The Connecticut Department of Transportation's (CTDOT) Environmental Classification Document requires the preparation of an Environmental Impact Evaluation (EIE) for projects involving the construction of a new rail facility. CTDOT expects to release an EIE for this project for public review and comment in 2017.

7. Notice of Scoping for Franklin Sewer Extension

Municipality where proposed project would be located: Franklin

Project Location: Route 32

Project Description: The project, funded by an Urban Action Grant, will consist of the design, permitting and construction of approximately 7,500 feet of 8" and 12" gravity sewers from a connection with the City of Norwich sewer system along a portion of Old Route 32, continuing northerly along State Route 32 to the intersection of Murphy Road in Franklin. At the same time, approximately 6,100 feet of gas main and related improvements and appurtenances will be installed in Route 32, between the intersections of Murphy Road and New Park Avenue, and 8,000 feet of 12" water main will be installed from the interconnection with the City of Norwich Water system on New Park Avenue and along State Route 32 between the intersections of Old Route 32 and Murphy Road. Water and gas utilities will be funded by the U.S. Department of Agriculture and U.S. Economic Development Administration.

Project Map: Click here to view a project location map.

Additional information about the project can be viewed in person at:

Department of Energy and Environmental Protection
Bureau of Water Protection & Land Reuse (2nd floor)
79 Elm Street
Hartford, CT 06106

Written comments from the public are welcomed and will be accepted until the close of business on: September 16, 2016

Any person can ask the sponsoring agency to hold a Public Scoping Meeting by sending such a request to the address below. If a meeting is requested by 25 or more individuals, or by an association that represents 25 or more members, the sponsoring agency shall schedule a Public Scoping Meeting. Such requests must be made by August 26, 2016.

Written comments and/or requests for a Public Scoping Meeting should be sent to:

Name: Ivonne Hall

Agency: Department of Energy & Environmental Protection
Bureau of Water Protection & Land Reuse
Address: 79 Elm Street
Hartford, CT 06106-5127
Phone: 860-424-3754
Fax: 860-424-4067
E-Mail: ivonne.hall@ct.gov

If you have questions about scoping for this project, contact Ms. Hall, as directed above.

The Connecticut Department of Energy and Environmental Protection is an Affirmative Action/Equal Opportunity Employer that is committed to complying with the requirements of the Americans with Disabilities Act. Any person with a disability who may need a communication aid or service may contact the agency's ADA Coordinator at 860-424-3194 or at deep.hrmed@ct.gov. Any person with limited proficiency in English, who may need information in another language, may contact the agency's Title VI Coordinator at 860-424-3035 or at deep.aaoffice@ct.gov. ADA or Title VI discrimination complaints may be filed with DEEP's EEO Manager at (860) 424-3035 or at deep.aaoffice@ct.gov.

Post-Scoping Notices:Environmental Impact Evaluation Not Required

This category is required by the October 2010 revision of the Generic Environmental Classification Document for State Agencies. A notice is published here if the sponsoring agency, after publication of a scoping notice and consideration of comments received, has determined that an Environmental Impact Evaluation (EIE) does not need to be prepared for the proposed project.

The following Post-Scoping Notice has been submitted for publication in this edition.

1. Post-Scoping Notice for Relocation of I-91 Northbound (NB) Interchange 29 and Widening of I-91 NB and Route 15 NB to I-84 Eastbound (EB).

Municipalities where project will be located: Hartford and East Hartford

CEPA Determination: On August 18, 2015 the Connecticut Department of Transportation (Department) published a Notice of Scoping to solicit public comments for this project in the *Environmental Monitor*. During the scoping period, the Department received comments from the Department of Public Health, the Connecticut Department of Energy and Environmental Protection, the Office of Policy and Management, and one member of the public. The Department has taken those comments into consideration and has concluded that the project does not require the preparation of Environmental Impact Evaluation under CEPA.

In addition to requirements under CEPA, an Environmental Assessment was performed under the National Environmental Policy Act (NEPA) to determine the proper level of Federal environmental documentation. After concluding this process, the Department will be seeking a Finding of No Significant Impact under NEPA since the project is not expected to have any associated significant environmental impacts.
The agency's conclusion is documented in a Memo of Findings and Determination and Environmental Assessment Checklist.

If you have questions about the project, you can contact the agency at:

Name: Mr. Mark W. Alexander, Transportation Assistant Planning Director
Agency: Connecticut Department of Transportation
Bureau of Policy and Planning
Address: 2800 Berlin Turnpike
Newington, CT 06131
Fax: 860-594-3028
E-Mail: dot.environmentalplanning@ct.gov

What happens next: The Connecticut Department of Transportation expects the project to go forward. This is expected to be the final notice of the project to be published in the *Environmental Monitor*.

EIE Notices

After Scoping, an agency that wishes to undertake an action that could significantly affect the environment must produce, for public review and comment, a detailed written evaluation of the expected environmental impacts. This is called an Environmental Impact Evaluation (EIE).

The following EIE Notice has been submitted for review and comment.

1. Notice of EIE for Southbury Affordable-Elderly Housing Development

Municipality where project is proposed: Southbury

Address of Possible Project Location: 1230 South Britain Road (Southbury Training School [STS] land)

Project Description: The proposed action includes the disposition of the 45-acre state-owned parcel at STS to the Town of Southbury and the proposed development of senior housing, either at the STS parcel or elsewhere within the Town of Southbury. The Town intends to lease the parcel to Pierce Hollow Village, Inc (PHV), a non-profit organization, for the development of senior housing. The use of state funds has not directly caused the need for the EIE. Instead, the EIE has been triggered by the land transfer per SA 13-23.

Project Maps: General Location. Parcel Figure.

Comments on this EIE will be accepted until the close of business on: **August 19, 2016**

The public can view a copy of this EIE at: the Southbury Town Clerk's Office (501 Main Street, Southbury, CT); Southbury Public Library - Central (100 Poverty Rd., Southbury, CT). The EIE is available online by clicking here. (7.3 MB)

Send your comments about this EIE to:

Name: Jeff Bolton
Agency: DAS - Division of Construction Services
Address: 165 Capitol Ave, Room 483, Hartford, CT 06106
E-Mail: jeffrey.bolton@ct.gov

No public hearing is scheduled for this EIE. A public hearing request must be made by twenty-five persons or an association having not less than twenty-five persons. Such requests must be made by the close of business on and no later than July 15, 2016.

If you have questions about requesting a public hearing, or where you can review this EIE, or similar matters, please contact:

Name: Jeff Bolton
Agency: DAS - Division of Construction Services
Address: 165 Capitol Ave, Room 483, Hartford, CT 06106
E-Mail: jeffrey.bolton@ct.gov
Phone: 860-713-5706

State Land Transfer Notices

Connecticut General Statutes Section 4b-47 requires public notice of most proposed sales and transfers of state-owned lands. The public has an opportunity to comment on any such proposed transfer. Each notice includes an address where comments should be sent. Read more about the process.

The following Land Transfer Notices have been submitted for publication in this edition.

1. Notice of Proposed Land Transfer, Groton

Complete Address of Property: 18 Thames Street, Groton

Commonly used name of property or other identifying information: N/A

Number of acres to be transferred: 0.455

Click to view map of property location

Description of Property

Below is some general information about the property. It should not be considered a complete description of the property and should not be relied upon for making decisions. If only a portion of a property is proposed for transfer, the description pertains only to the portion being transferred.
Brief Description of Historical and Current Uses: Not available
The property to be transferred contains the following:

Structures: ☐ Buildings in use ☑ Buildings not in use ☐ No Structures
Other Features: ☐ Wooded land ☐ Nonagricultural fields ☐ Active agriculture ☑ Paved areas ☐ Ponds, streams, other water, wetlands

Water Supply: ☑ Public water supply ☐ On-site well ☐ Unknown
Waste Disposal: ☑ Served by sewers ☐ On-site septic system ☐ Unknown

Click to view aerial view of property

The property is in the following municipal zone(s):

☐ Residential ☐ Industrial ☑ Commercial ☐ Institutional
☐ Other:
☐ Not zoned ☐ Not known

Special features of the property, if known: Unknown

Value of property, if known: Unknown

☐ If checked, value is not known.

Links to other available information
Type of Sale or Transfer:
☑ Sale or transfer of property in fee

☐ Sale or transfer of partial interest in the property (such as an easement). Description of interest:
Proposed recipient, if known: N/A

Proposed use by property recipient, if known: N/A

The agency is proposing to transfer the property with the following restrictions on future uses:
☑ If checked, the state is not currently proposing restrictions on future uses.

Reason the State of Connecticut is proposing to transfer this property: No longer meets the State's needs.

Comments from the public are welcome and will be accepted until the close of business on September 15, 2016.

Comments may include (but are not limited to) information you might have about significant natural resources or recreation resources on the property, as well as your recommendations for means to preserve such resources.

Written comments* should be sent to:

Name:	Patrick O'Brien
Agency:	Office of Policy and Management
Address:	450 Capitol Avenue MS#52 ASP
	Hartford, CT 06106-1379
E-Mail:	Patrick.Obrien@ct.gov

***E-Mail submissions are preferred.**

With copies to:
Shane Mallory, DAS
165 Capitol Ave, G-1
Hartford, CT 06106
shane.mallory@ct.gov

(Comments from state agencies must be on agency letterhead and signed by agency head. Scanned copies are preferred.)

What Happens Next?

To find out if this proposed transfer is the subject of further notices, check future editions of the Environmental Monitor. Sign up for e-alerts to receive a reminder e-mail on Environmental Monitor publication dates.

2. Notice of Proposed Land Transfer, Vernon

Complete Address of Property: (Unknown number) Hartford Turnpike, Vernon, CT

Commonly used name of property or other identifying information: N/A

Number of acres to be transferred: 300 Sq. Feet

Click to view map of property location

Description of Property

Below is some general information about the property. It should not be considered a complete description of the property and should not be relied upon for making decisions. If only a portion of a property is proposed for transfer, the description pertains only to the portion being transferred.

Brief Description of Historical and Current Uses: Old easement.

The property to be transferred contains the following:

Structures:	☐ Buildings in use	☐ Buildings not in use	☑ No Structures
Other Features:	☐ Wooded land	☐ Nonagricultural fields	☑ Active agriculture
	☐ Paved areas	☐ Ponds, streams, other water, wetlands	
Water Supply:	☐ Public water supply	☐ On-site well	☑ Unknown
Waste Disposal:	☐ Served by sewers	☐ On-site septic system	☑ Unknown

Click to view a parcel map of the property

The property is in the following municipal zone(s):
☑ Residential ☐ Industrial ☐ Commercial ☐ Institutional
☐ Other:
☐ Not zoned ☐ Not known

Special features of the property, if known: Unknown

Value of property, if known:
☑ If checked, value is not known.

Type of Sale or Transfer:

☑ Sale or transfer of property in fee

☐ Sale or transfer of partial interest in the property (such as an easement). Description of interest:

Proposed recipient, if known: Unknown

Proposed use by property recipient, if known: Unknown

The agency is proposing to transfer the property with the following restrictions on future uses:

☑ If checked, the state is not currently proposing restrictions on future uses.

Reason the State of Connecticut is proposing to transfer this property: no longer meets State's needs.

Comments from the public are welcome and will be accepted until the close of business on September 15, 2016.

Comments may include (but are not limited to) information you might have about significant natural resources or recreation resources on the property, as well as your recommendations for means to preserve such resources.

Written comments* should be sent to:

Name:	Patrick O'Brien
Agency:	Office of Policy and Management
Address:	450 Capitol Avenue MS#52 ASP
	Hartford, CT 06106-1379
E-Mail:	Patrick.Obrien@ct.gov

***E-Mail submissions are preferred.**

Send copies of comments to:

Shane Mallory, DAS
165 Capitol Ave, G-1
Hartford, CT 06106
shane.mallory@ct.gov

(Comments from state agencies must be on agency letterhead and signed by agency head. Scanned copies are preferred.)

What Happens Next?

To find out if this proposed transfer is the subject of further notices, check future editions of the Environmental Monitor. Sign up for e-alerts to receive a reminder e-mail on Environmental Monitor publication dates.

The Adobe Reader is necessary to view and print Adobe Acrobat documents, including some of the maps and illustrations that are linked to this publication. If you have an outdated version of Adobe Reader, it might cause pictures to display incompletely. To download up-to-date versions of the free software, click on the Get Acrobat button, below. This link will also provide information and instructions for downloading and installing the reader.

Download the free Acrobat Reader! Access.Adobe is a tool that allows blind and visually impaired users to read any documents in Adobe PDF format. For more information, read the product overview at Adobe.com.

Content Last Modified on 8/16/2016 11:58:12 AM

Orange Commuter Railroad Station

CEPA/NEPA Public Scoping Meeting

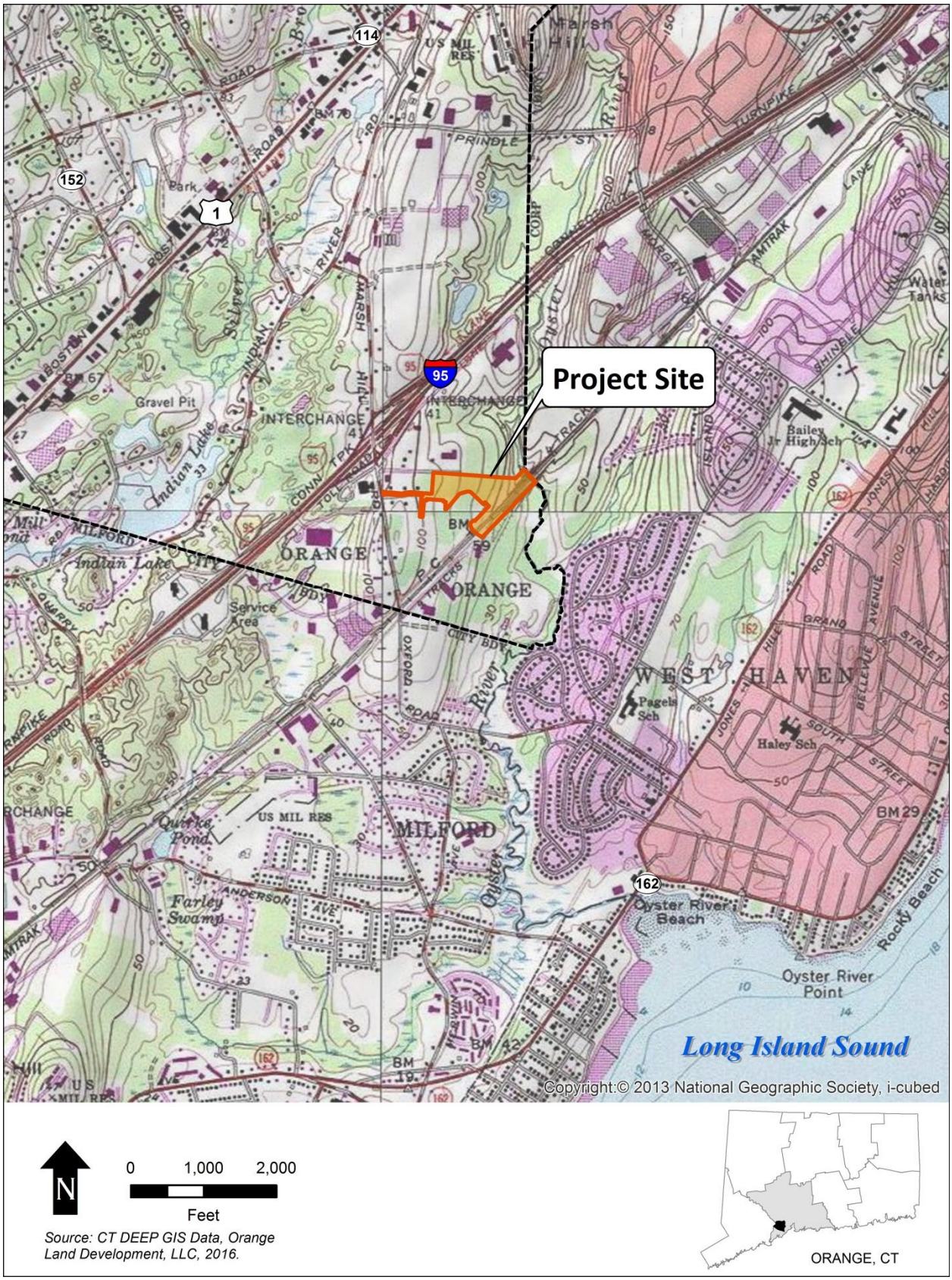
September 8, 2016

High Plains Community Center Gymnasium

525 Orange Center Road, Orange, CT

Information Packet

- Project Locus
- Proposed Project Plan
- Comment Form


Project Site
Long Island Sound
Copyright:© 2013 National Geographic Society, i-cubed
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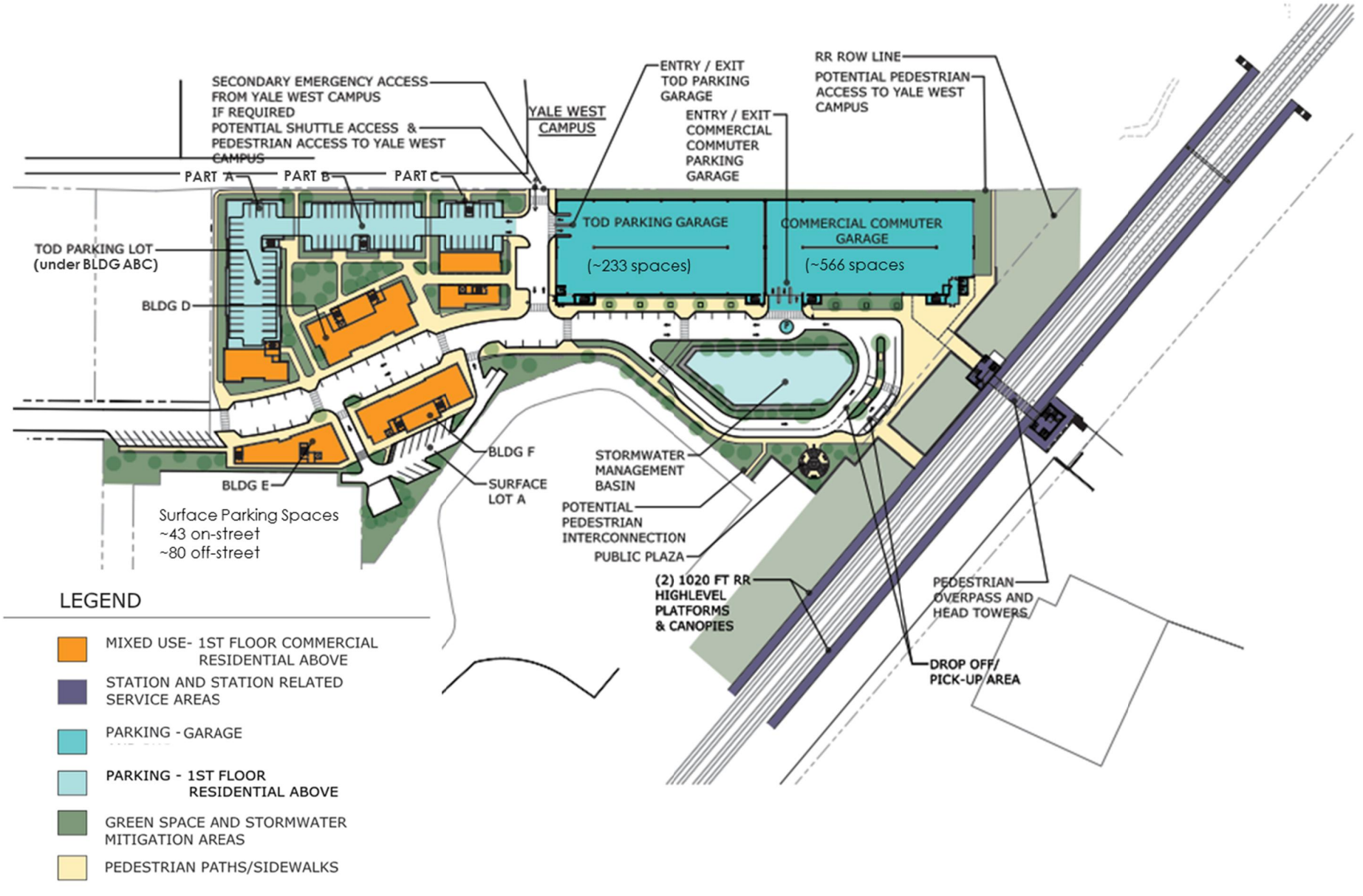
Feet
Source: CT DEEP GIS Data, Orange Land Development, LLC, 2016.
ORANGE, CT


SECONDARY EMERGENCY ACCESS FROM YALE WEST CAMPUS IF REQUIRED
POTENTIAL SHUTTLE ACCESS & PEDESTRIAN ACCESS TO YALE WEST CAMPUS
YALE WEST CAMPUS
ENTRY / EXIT TOD PARKING GARAGE
ENTRY / EXIT COMMERCIAL COMMUTER PARKING GARAGE
RR ROW LINE
POTENTIAL PEDESTRIAN ACCESS TO YALE WEST CAMPUS
PART A
PART B
PART C
TOD PARKING GARAGE
(~233 spaces)
COMMERCIAL COMMUTER GARAGE
(~566 spaces
TOD PARKING LOT (under BLDG ABC)
BLDG D
BLDG E
BLDG F
SURFACE LOT A
Surface Parking Spaces
~43 on-street
~80 off-street
STORMWATER MANAGEMENT BASIN
POTENTIAL PEDESTRIAN INTERCONNECTION
PUBLIC PLAZA
(2) 1020 FT RR HIGHLEVEL PLATFORMS & CANOPIES
PEDESTRIAN OVERPASS AND HEAD TOWERS
DROP OFF/ PICK-UP AREA
LEGEND
MIXED USE- 1ST FLOOR COMMERCIAL RESIDENTIAL ABOVE
STATION AND STATION RELATED SERVICE AREAS
PARKING - GARAGE
PARKING - 1ST FLOOR RESIDENTIAL ABOVE
GREEN SPACE AND STORMWATER MITIGATION AREAS
PEDESTRIAN PATHS/SIDEWALKS

COMMENTS

Date: _____

The Connecticut Department of Transportation and Federal Transit Administration are interested in your ideas and comments on the Environmental Assessment/Environmental Impact Evaluation (EA/EIE) for the proposed Orange Commuter Rail Station in Orange, CT.

Please complete this self-addressed form (Please print clearly), and leave it with a study team member this evening, or email (dot.environmentalplanning@ct.gov) or mail by October 7, 2016 (Postage required).

Name _____ Address _____

City _____ State _____ Zip Code _____

I have been informed about this study primarily through: (Please select one)

_ Newsletters _ Public Meetings _ Newspaper Advertisement _ Website

_ Radio _ Newspaper Articles _ Friends/Neighbors _ Other _____

COMMENTS: (PLEASE PRINT CLEARLY)

_____

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THANK YOU FOR YOUR PARTICIPATION.

FOLD HERE AND STAPLE

POSTAGE
REQUIRED

CONNECTICUT DEPARTMENT OF TRANSPORTATION
BUREAU OF POLICY AND PLANNING
OFFICE OF ENVIRONMENTAL PLANNING, ROOM 2159 (NE2)
P. O. BOX 31746
NEWINGTON, CONNECTICUT 06131-7546

FUSS & O'NEILL

ATTENDANCE SHEET

Orange Commuter Railroad Station
Connecticut Environmental Policy Act (CEPA)/National Environmental Policy Act (NEPA)
Project Scoping

Connecticut Department of Transportation

September 8, 2016 Public Scoping Meeting

NAME	ADDRESS	TELEPHONE/ EMAIL
ED Crowley	2 INDIAN NECK Branford	203 410 7198
Tom Daly	99 Realty Dr. Cheshire CT 06410	203-271-1773
Gayle Slossberg	14 Honeysuckle Lane MILFORD	860- 203- 240-0482
LEN FARBER	706 Ansonia Ave	7954580
Stephanie Jathow	617 Saddle Ridge Rd.	Orge 203-384-2044
Mitch Goldblatt	291 Drummond Road, Orange	mitchgoldblatt@aol.com Orange . 203-795-4337
Paul Davis	335 Smith Farm Rd Orange	203-795-4916
Bob Shea	643 Prospect West Hartford	8609895567

CONNECTICUT DEPARTMENT OF

ENERGY & ENVIRONMENTAL PROTECTION

OFFICE OF ENVIRONMENTAL REVIEW

79 ELM STREET, HARTFORD, CT 06106-5127

To: Mark W. Alexander - Transportation Assistant Planning Director
DOT - Environmental Planning, 2800 Berlin Turnpike, Newington, CT 06131

From: David J. Fox - Senior Environmental Analyst **Telephone:** 860-424-4111

E-Mail: david.fox@ct.gov

Date: October 6, 2016

Subject: Commuter Railroad Station, Orange

The Department of Energy & Environmental Protection has received the Notice of Scoping announcing preparation of an Environmental Impact Evaluation for construction of a new commuter railroad station at Salemme Lane in Orange. A public-private partnership will also construct a mixed use retail/residential transit-oriented development at the site. As with previous proposals for new stations, the Department endorses the project given the need to increase the parking supply on the New Haven Line. Increased transit ridership will reduce fuel consumption and regional emissions of air pollutants that result from automobile usage, decreasing vehicular emissions that contribute to ozone formation, particulate matter levels and climate change. For the same reason, the Department supports efforts to increase the demand for public transportation through transit-oriented development. Expansion of housing opportunities and concentrating development around transportation nodes are two principal growth management principles of *Conservation & Development Policies: The Plan for Connecticut 2013 - 2018*. The following commentary is submitted for your consideration.

The project site extends to the Oyster River, which forms the boundary between Orange and West Haven. Any work or construction activity within the inland wetland areas or watercourses on-site will require a permit from the Inland Water Resources Division (IWRD) pursuant to section 22a-39(h) of the Connecticut General Statutes. Existing wetlands and watercourses at the site should be delineated by a certified soil scientist and their functional values should be evaluated. Any development should avoid regulated areas to the maximum extent practicable. In order to protect water quality and habitat of the watercourse, riparian vegetation should be preserved. Unavoidable impacts should be mitigated and buffer areas established to further protect wetlands and watercourses. The degree of impact should be quantified by acreage and a discussion of the functional values that would be lost or impaired should be included in any CEPA document.

A portion of the proposed project area is within the 100-year flood zone of the Oyster River on the community's Flood Insurance Rate Map. If any work is proposed within the flood zone, the project must be certified by ConnDOT as being in compliance with flood and stormwater management standards specified in section 25-68d of the CGS and section 25-68h-1 through 25-68h-3 of the Regulations of Connecticut State Agencies (RCSA) and receive

approval from the Department. The site is not within Connecticut's coastal boundary as defined by section 22a-94 of the CGS.

For both projects, the Department strongly supports the use of low impact development (LID) practices such as water quality swales and rain gardens for infiltration of stormwater on site. Key strategies for effective LID include: managing stormwater close to where precipitation falls; infiltrating, filtering, and storing as much stormwater as feasible; managing stormwater at multiple locations throughout the landscape; conserving and restoring natural vegetation and soils; preserving open space and minimizing land disturbance; designing the site to minimize impervious surfaces; and providing for maintenance and education. Water quality and quantity benefits are maximized when multiple techniques are grouped together. Consequently, we typically recommend the utilization of one, or a combination, of the following measures:

- the use of pervious pavement or grid pavers (which are very compatible for parking lot and fire lane applications), or impervious pavement without curbs or with notched curbs to direct runoff to properly designed and installed infiltration areas,
- the use of vegetated swales, tree box filters, and/or infiltration islands to infiltrate and treat stormwater runoff (from building roofs, roads and parking lots),
- the minimization of access road widths and parking lot areas to the maximum extent possible to reduce the area of impervious surface,
- if soil conditions permit, the use of dry wells to manage runoff from the building roofs,
- the use of vegetated roofs (green roofs) to reduce the runoff from buildings,
- incorporation of proper physical barriers or operational procedures to prevent release of pollutants from special activity areas (e.g. loading docks, maintenance and service areas, dumpsters),
- the installation of rainwater harvesting systems to capture stormwater from building roofs for the purpose of reuse for irrigation, and
- providing for pollution prevention measures to reduce the introduction of pollutants to the environment.

The effectiveness of various LID techniques that rely on infiltration depends on the soil types present at the site. According to the Natural Resources Conservation Service's Soil Web Survey, the soils at the property consist of Agawam fine sandy loam and urban. Agawam soils are rated somewhat suitable for infiltration techniques. Urban land soils are unrated in their suitability for various stormwater management practices. However, infiltration practices may be suitable at this site. Soil mapping consists of a minimum 3 acres map unit and soils may vary substantially within each mapping unit. Test pits should be dug in areas planned for infiltration practices to verify soil suitability and/or limitations. Planning should insure that areas to be used for infiltration are not compacted during the construction process by vehicles or machinery. The siting of areas for infiltration must also consider any existing soil or groundwater contamination. Even if infiltration is limited at a site, it is still possible to implement LID practices such as green roofs on buildings or the use of cisterns to capture and reuse rainwater.

The projects will require registration under the *General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities* (DEEP-WPED-GP-015). The construction stormwater general permit dictates separate compliance

procedures for Locally Approvable projects and Locally Exempt projects (as defined in the permit). Locally Exempt construction projects disturbing over 1 acre must submit a registration form and Stormwater Pollution Control Plan (SWPCP) to the Department. Locally Approvable construction projects with a total disturbed area of one to five acres are not required to register with the Department provided the development plan has been approved by a municipal land use agency and adheres to local erosion and sediment control land use regulations and the *CT Guidelines for Soil Erosion and Sediment Control*. Locally Approvable construction projects with a total disturbed area of five or more acres must submit a registration form to the Department prior to the initiation of construction. This registration shall include a certification by a Qualified Professional who designed the project and a certification by a Qualified Professional or regional Conservation District who reviewed the SWPCP and deemed it consistent with the requirements of the general permit. The SWPCP for Locally Approvable projects is not required to be submitted to the Department unless requested. The SWPCP must include measures such as erosion and sediment controls and post construction stormwater management. A goal of 80 percent removal of total suspended solids from the stormwater discharge shall be used in designing and installing post-construction stormwater management measures. Stormwater treatment systems must be designed to comply with the post-construction stormwater performance management requirements of the permit. These include post-construction performance standards requiring retention of the water quality volume and incorporating control measures for runoff reduction and low impact development practices. For further information, contact the division at 860-424-3018. The construction stormwater general permit registrations can now be filed electronically through DEEP's e-Filing system known as ezFile. Additional information can be found on-line at: Construction Stormwater GP.

Stormwater management for parking garages typically should involve two separate collection systems designed to treat the runoff from different types of parking areas. Any exposed parking levels will produce a high volume of runoff with relatively low concentrations of pollutants. Runoff from such areas should be directed to the storm sewer system and the collection system should include controls to remove sediment and oil or grease. A hydrodynamic separator, incorporating swirl technology, circular screening technology or engineered cylindrical sedimentation technology, is recommended to remove medium to coarse grained sediments and oil or grease. The treatment system should be sized such that it can treat stormwater runoff adequately. The Department recommends that the treatment system be designed to treat the first inch of stormwater runoff. Upon installation, a maintenance plan to remove sediment and oil or grease should also be implemented.

Interior levels of the garage will produce a low volume of runoff with relatively high concentrations of pollutants. In addition, the need for cleaning of the garage must be considered and floor washwater cannot be directed to a stormwater sewer system. Runoff from interior areas should be directed to the sanitary sewer system, again with appropriate treatment. An oil separator tank with a capacity of at least 1000 gallons is required. A licensed waste oil hauler must clean the tank at least once a year. A list of certified haulers can be obtained from the Bureau of Materials Management & Compliance Assurance at 860-424-3366 or on-line at: Waste Transporters. The discharge of floor washwater is covered under a *General Permit for Miscellaneous Discharges of Sewer Compatible Wastewater* as building maintenance wastewater. Registration is required for discharges greater than 5000 gallons per day. For

further information concerning stormwater management, contact the Permitting & Enforcement Division at 860-424-3018. A fact sheet describing the permit and the registration form may be downloaded at: Miscellaneous Discharge GP.

Construction of the station and the transit oriented development may lead to the discovery of hazardous materials, hazardous waste and/or contaminated soils. It is assumed that ConnDOT's standard procedures, such as preparing Land Use Evaluation reports (Task 110) and Preliminary Evaluation reports (Task 120), would be employed to evaluate the potential to encounter contamination. A site-specific hazardous materials management plan should be developed prior to commencement of construction and a health and safety plan for construction workers should also be prepared.

> Development plans in urban areas that entail soil excavation should include a protocol for sampling and analysis of potentially contaminated soil. Soil with contaminant levels that exceed the applicable criteria of the Remediation Standard Regulations, that is not hazardous waste, is considered to be special waste. The disposal of special wastes, as defined in section 22a-209-1 of the Regulations of Connecticut State Agencies (RCSA), requires written authorization from the Waste Engineering and Enforcement Division prior to delivery to any solid waste disposal facility in Connecticut. If clean fill is to be segregated from waste material, there must be strict adherence to the definition of clean fill, as provided in Section 22a-209-1 of the RCSA. A fact sheet regarding disposal of special wastes and the authorization application form may be obtained at: Special Waste Fact Sheet.
>
> The Waste Engineering & Enforcement Division has issued a *General Permit for Contaminated Soil and/or Sediment Management (Staging & Transfer)* (DEP-SW-GP-001). It establishes a uniform set of environmentally protective management measures for stockpiling soils when they are generated during construction or utility installation projects where contaminated soils are typically managed (held temporarily during characterization procedures to determine a final disposition). Temporary storage of less than 1000 cubic yards of contaminated soils (which are not hazardous waste) at the excavation site does not require registration, provided that activities are conducted in accordance with the applicable conditions of the general permit. Registration is required for on-site storage of more than 1000 cubic yards for more than 45 days or transfer of more than 10 cubic yards off-site. A fact sheet describing the general permit, a copy of the general permit and registration forms are available on-line at: Soil Management GP.

The PCB Program notes that railroad facilities, particularly tracks and ballast, have been associated with PCB contamination due to historic use of PCB equipment on electric trains. This should be considered in conducting any site investigations to assess existing environmental conditions.

The Department encourages the use of newer off-road construction equipment that meets the latest EPA or California Air Resources Board (CARB) standards. If that newer equipment cannot be used, equipment with the best available controls on diesel emissions including

retrofitting with diesel oxidation catalysts or particulate filters in addition to the use of ultra-low sulfur fuel would be the second choice that can be effective in reducing exhaust emissions. The use of newer equipment that meets EPA standards would obviate the need for retrofits.

The Department also encourages the use of newer on-road vehicles that meet either the latest EPA or CARB standards for construction projects. These on-road vehicles include dump trucks, fuel delivery trucks and other vehicles typically found at construction sites. On-road vehicles older than the 2007-model year typically should be retrofitted with diesel oxidation catalysts or diesel particulate filters for projects. Again, the use of newer vehicles that meet EPA standards would eliminate the need for retrofits.

Additionally, Section 22a-174-18(b)(3)(C) of the Regulations of Connecticut State Agencies (RCSA) limits the idling of mobile sources to 3 minutes. This regulation applies to most vehicles such as trucks and other diesel engine-powered vehicles commonly used on construction sites. Adhering to the regulation will reduce unnecessary idling at truck staging zones, delivery or truck dumping areas and further reduce on-road and construction equipment emissions. Use of posted signs indicating the three-minute idling limit is recommended. It should be noted that only DEEP can enforce Section 22a-174-18(b)(3)(C) of the RCSA. Therefore, it is recommended that the project sponsor include language similar to the anti-idling regulations in the contract specifications for construction in order to allow them to enforce idling restrictions at the project site without the involvement of the Department.

A further recommendation is permanent installation of “No Idling” signs at key areas along the street, such as pick-up and drop-off areas, where cars and buses may be standing with the engine running, as a reminder to the public that it is not legal to idle. Signs are available by contacting DEEP’s Air Bureau.

In keeping with the Department’s interest in furthering the use of alternate fuels for transportation purposes, we recommend that Level 2 electric vehicle charging stations be included at 3% of the parking spaces in the project design. Increasing the availability of public charging stations will facilitate the introduction of the electric vehicle technology into the state and serve to alleviate the present energy dependence on petroleum and improve air quality.

The projects should include amenities to encourage commuting by bicycle, including parking at the station and making nearby streets bike-friendly. Long-term bicycle parking should provide commuters a secure and weather-protected place to store their bicycles. Adding bicycle parking to the station would be a low-cost, space-saving method of increasing train ridership.

The Natural Diversity Data Base, maintained by DEEP, contains no records of extant populations of Federally listed endangered or threatened species or species listed by the State, pursuant to section 26-306 of the Connecticut General Statutes, as endangered, threatened or special concern in the project area. This information is not the result of comprehensive or site-specific field investigations. Also, be advised that this is a preliminary review. A more detailed review may be conducted as part of any subsequent environmental permit applications submitted to DEEP for the proposed site. Consultation with the Natural Diversity Data Base should not be substituted for on-site surveys required for environmental assessments. The extent of

investigation by competent biologist(s) of the flora and fauna found at the site would depend on the nature of the existing habitat(s). If field investigations reveal any Federal or State listed species, please contact the DEEP Geologic & Natural History Survey at 860-424-3540.

Thank you for the opportunity to review this project. If there are any questions concerning these comments, please contact me.

cc: Keith A. Hall, DOT
Jeff Caiola, DEEP/IWRD
Louis Corsino, DEEP/APSD
Robert Hannon, DEEP/OPPD
Gary Trombly, DEEP/PCB

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

Raul Pino, M.D., M.P.H.
Commissioner

Dannel P. Malloy
Governor

Nancy Wyman
Lt. Governor

Drinking Water Section

September 23, 2016

Mr. Mark W. Alexander
Transportation Assistant Planning Director
CT Department of Transportation
Bureau of Policy and Planning
2800 Berlin Turnpike
Newington, CT 06131

Re: Notice of Scoping for Proposed Commuter Railroad Station—Orange, CT

Dear Mr. Alexander:

The Drinking Water Section of the Department of Public Health has reviewed the above-mentioned project for potential impacts to any sources of public drinking water supply. This project does not appear to be in a public water supply source water area; therefore, the Drinking Water Section has no comments at this time.

Sincerely,

Eric McPhee
Supervising Environmental Analyst
Drinking Water Section

Keeping Connecticut Healthy
DPH
Connecticut Department of Public Health

Phone: (860) 509-8000 • Fax: (860) 509-7184 • VP: (860) 899-1611
410 Capitol Avenue, P.O. Box 340308
Hartford, Connecticut 06134-0308
www.ct.gov/dph

STATE OF CONNECTICUT

OFFICE OF POLICY AND MANAGEMENT

Division of Transportation, Conservation, and Development Policy and Planning

October 7, 2016

Mr. Mark Alexander
Connecticut Department of Transportation
Bureau of Policy and Planning
2800 Berlin Turnpike, Newington, CT 06131

Re: Notice of Scoping:
Proposed Commuter Railroad Station, Orange

Dear Mark:

The Office of Policy and Management (OPM) has reviewed the Notice of Scoping for DOT's proposed Commuter Railroad Station project in Orange and submits the following comments:

- The proposed new station is little more than two miles from the West Haven station and little more than five miles from stations in Milford and New Haven. What is the impact of adding a station in such close proximity to other stations on Metro North or Amtrak operations, especially on travel times?

- The scoping notice says that the private TOD developer will provide a bus stop area, but does not indicate what buses might serve it. It does not appear that NH Transit or Milford Transit serve the proposed station area, so what bus is expected to serve that stop? Each bus route in the area already appears to provide a connection with an existing Metro North station and adding the proposed station to any existing route would likely detract from existing service. More people might benefit if area bus service and connections to existing stations were improved.

  The closest bus route appears to be a NH Transit route that passes the far side of the Yale West Campus, at least ½ mile from the station. That route, however, is only a part-time route. The station area, furthermore, might be unreachable from that bus route at the completion of this project. The scoping notice says, "The TOD design also provides opportunity for future pedestrian connection with the Yale West Campus to the north."

- According to this 2015 article from the New Haven Register, the City of West Haven recently received funding to dramatically improve connections between the West Haven Station and Yale's West Campus:

  The Federal Highway Administration has reinstated a $973,834 grant for improvements related to the city's railroad station, including a bike path connecting the two-year-old station to Yale University's West Campus, federal and local officials said Wednesday. *http://www.nhregister.com/article/NH/20150826/NEWS/150829599*

  The bike path and roadway improvements along Frontage Road would allow students a direct connect to Metro North service at just under two miles from the Yale Campus. How has this project, and other planned or ongoing projects in the vicinity, influenced the demand for a new commuter station in Orange?

Phone: (860) 418-6412 Fax: (860) 418-6493
450 Capitol Avenue, MS# 54ORG, Hartford, Connecticut 06106-1379

- The surrounding neighborhood is predominantly characterized by large lot, auto-centric development, with only a small number of businesses and residences located within a walkable distance of the proposed station. Other than the people occupying the private development, and commuters who might choose to park at the new station rather than at one of the nearby stations, who is expected to use the proposed station? Given the large amount of new rail station parking either constructed or planned in the region, OPM questions the rationale for additional parking. State provision of such parking can undermine the prospect for real TOD.

- As OPM pointed out in comments submitted in response to DOT's scoping notice for a new parking garage in New Haven, parking costs vary widely among the area's Metro North stations:

Station	Permit cost/period	~Annual Cost
New Haven	$95/month	$1140
West Haven	$300/6 months	$600
Milford	$275/year	$275

Sources: http://www.parknewhaven.com/DETAILS.aspx?id=20&zoom=14
http://www.ct.gov/dot/cwp/view.asp?A=1373&Q=528126
http://www.milfordtransit.com/trainstation.htm

With annual parking costs apparently varying by $800 at stations within a 10-mile distance, pricing at one facility can encourage people to drive further to park at a more-distant station. Not only is there a potential environmental consequence, it might also affect the long-term viability of individual facilities.

According to the "Annual O&M Costs and Reserve Assumptions" for King County, WA's *Right Size Parking Calculator* (http://www.rightsizeparking.org), New Haven's higher cost is in the range that is necessary to maintain the long-term viability of a parking garage, even assuming full occupancy and ignoring initial construction costs (see http://www.rightsizeparking.org/RSP_Parking_Rev_Cost_Memo.pdf).

The state's plan of conservation and development makes it clear that agencies are expected to consider such costs by stating:

> *Perform a life-cycle cost analysis to identify potential cost burdens beyond the initial capital investment for any proposed action involving the expansion of infrastructure beyond the current limits of the existing or planned service area for the particular form(s) of infrastructure, except when necessary to address immediate public health or safety concerns;*

Has DOT analyzed the life cycle costs of parking facilities and the effects of price differences on the long-term viability of state-funded facilities, as well as on people's decisions regarding which station to use?

Thank you for the opportunity to respond to this Notice of Scoping and please feel free to contact me if you have any questions.

Sincerely:

Phone: (860) 418-6412 Fax: (860) 418-6493
450 Capitol Avenue, MS# 54ORG, Hartford, Connecticut 06106-1379

Matt Pafford
Office of Policy & Management
450 Capitol Ave, MS# 54ORG
Hartford, CT 06106
(860) 418-6412
matthew.pafford@ct.gov

Appendix B

Transportation Impact Analysis Documentation

Orange Rail Station Ridership Projections

Morning Peak Inbound Boardings	2017		2037	
	Trips	%	Trips	%
Existing Boardings	0	0%	490	24%
New Transit Trips	20	4%	718	36%
Trips Diverted from Milford	470	96%	794	40%
Total	**490**	**100%**	**2002**	**100%**

NOTE: Source - *Analysis of Passenger and Parking Demand at a New Metro-North Station in Orange*, prepared for Orange Land Development, LLC and CTDOT by Warner Transportation Consulting, Inc. in March 2014. The new boardings were calculated based on growth in population, TOD, area employment and on the Yale West campus. Yale growth was given as a range by Yale's Director of Finance and Administration. An average of the range was used for analysis purposes.

$$t = \frac{Vf - Vi}{a} = \frac{103 - 0}{3.52} = 29.3 \text{sec.}$$

$$d = Vi * t + 0.5 * a * t^2 = (0 * 29.3) + 0.5 * 3.52 * 29.3^2 = 1511 \, feet$$

Travel at 70 mph on Track 3 between Orange Station and Final Crossover

Train length = 1,020 feet (12 cars)

$$t = \frac{d}{V} = \frac{1020}{66} = 15.5 \text{sec.}$$

Deceleration to 45 mph for crossover to Track 1

$$t = \frac{Vf - Vi}{a} = \frac{66 - 103}{-4.11} = 9.0 \text{sec.}$$

$$d = Vi * t + 0.5 * a * t^2 = (103 * 9.0) + 0.5 * -4.11 * 9.0^2 = 760 \, feet$$

Acceleration to 75 mph on Track 1

$$t = \frac{Vf - Vi}{a} = \frac{110 - 66}{3.52} = 12.5 \text{sec.}$$

$$d = Vi * t + 0.5 * a * t^2 = (66 * 12.5) + 0.5 * 3.52 * 12.5^2 = 1{,}101 \, feet$$

Travel at 70 mph between Orange Station and Final Crossover on Track 3

Distance at 70 mph = Total Impacted Distance – ∑ Acceleration and Deceleration Distances - Distance at 70 mph between West Haven Station and Orange Station on Track 3

Total Impacted Distance = 28,443 feet (distance between start of deceleration on Track 1 prior to initial crossover to end of acceleration on Track 1 after final crossover)

∑ Accel. and Decel. Distances = 7,645 feet

Travel at 70 mph between West Haven Station and Orange Station on Track 3 = 7,966 feet

d = 28,443 – 7,645 – 7,966 = 12,832 feet

Engineering, Planning,
Landscape Architecture
and Environmental Science

MILONE & MACBROOM®

February 2016

Mr. Edward M. Crowley, Manager
Orange Land Development, LLC
5 Indian Neck Avenue
Branford, CT 06405

RE: Traffic Impact Study
Transit Oriented Development
Orange, Connecticut
MMI #4329-02-23

Dear Mr. Crowley:

At your request, we have prepared this traffic impact study of a proposed Transit Oriented Development (TOD) on property located off Salemme Lane in Orange, Connecticut. The proposed TOD is to contain approximately 200 residential units and 21,500 square feet of commercial space. Figure 1 depicts the site location and the surrounding area roadway network.

Efforts undertaken as part of this study included review of current area roadway and traffic conditions, collection of new intersection traffic counts, review of prior and recent studies conducted for this site, and an analysis of potential future impacts. In July 2005, a traffic impact and access study was prepared by the Connecticut Department of Transportation (CTDOT) to address a need for a new Metro-North rail station in either West Haven or Orange.[1] At the time of that study, there was a 10-mile gap along the New Haven branch rail line with no station between Milford and New Haven. A new station has since opened in West Haven. There is now renewed interest for a station in Orange. In June 2009, we prepared a traffic study to summarize the impact of a 2,000-space parking garage for the potential Orange rail station and TOD. Recently, a study of potential ridership at a new Metro-North Station in Orange was prepared.[2]

Site Environs and Access

The site is located at Salemme Lane, which will serve as the primary access to the TOD. Salemme Lane is accessible via Marsh Hill Road, which is a 55- to 60-foot-wide multilane roadway. The posted speed limit on Marsh Hill Road is 30 miles per hour (mph) in both directions. Land uses in the vicinity of the site include commercial, industrial, and residential.

Visibility was reviewed from Salemme Lane at its intersection with Marsh Hill Road. Motorists egressing from Salemme Lane will have available Intersectional Sight Distances that exceed CTDOT guidelines for the posted speed limit of 30 mph. The sightlines in both directions are within the town right-of-way.

---

1. *Technical Memorandum – West Haven/Orange Commuter Railroad Station – Traffic Impact and Access Study for Commuter Rail Station Site Selection.* State Project No. 106-116. Connecticut Department of Transportation. July 2005
2. *Analysis of Passenger and Parking Demand at a New Metro-North Station in Orange. Final Report.* March 26, 2014. Warner Transportation Consulting, Inc.

Accidents

Information on traffic accident statistics for the study area for the 3-year period of January 2011 to December 2013 was gathered from CTDOT as well as from local police departments. A total of 54 accidents occurred along Marsh Hill Road between the I-95 northbound ramps and the railroad underpass during this period; 13 of these accidents resulted in injury. Of the 54 total accidents, 31 were rear-end collisions and five were sideswipes. There were no apparent unusual accident trends in the study area.

Proposed Development

The proposed rail station and TOD are to be located on land along Salemme Lane that is currently undeveloped. The TOD will contain approximately 200 residential units and 21,500 square feet of commercial space. A gated driveway to/from the north of the site will allow for emergency access from the Yale West Campus and, at Yale's discretion, pedestrian connectivity and shuttle bus access. Salemme Lane is to be signalized at Marsh Hill Road and tied into the existing traffic signal at the Southern Connecticut Gas (SCG) driveway located about 100 feet to the south.

Existing Traffic Volumes

Existing traffic volume data was collected as part of this study. Manual turning movement counts were conducted on Wednesday, October 2, 2013, and Thursday, October 3, 2013, for the same study intersections that were evaluated in the 2005 CTDOT study:

- U.S. Route 1 at Lambert Road (Orange)
- Marsh Hill Road at Indian River Road (Orange)
- Marsh Hill Road at I-95 southbound ramps 41 (Orange)
- Marsh Hill Road at I-95 northbound off ramp 41 and West Campus Drive (Orange)
- West Campus Drive at I-95 northbound on ramp (Orange)
- Marsh Hill Road at Salemme Lane (Orange)
- Oxford Road at Merwin Avenue (Milford)
- Woodmont Road at Benham Hill Road (West Haven)
- Woodmont Road at Jones Hill Road/Route 162 (West Haven)
- Merwin Avenue at Anderson Avenue and Depot Road (Milford)

In addition, manual turning movement counts were conducted on Wednesday, July 15, 2015, for the intersection of Marsh Hill Road and Edison Road.

Traffic counts occurred during the weekday morning and afternoon commuter periods (7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m., respectively). The morning peak hour was found to occur from 7:30 a.m. to 8:30 a.m. and the afternoon peak hour from 4:30 p.m. to 5:30 p.m. The existing peak-hour traffic volumes at the study intersections are shown in Figures 2 and 3. Average daily traffic (ADT) data from 1996 to 2012 was obtained from CTDOT from five Traffic Monitoring Stations as presented in Table 1. As can be seen, traffic has increased at most locations near the site over the last several years as well as the decade as a whole. Much of this growth can be attributed to the recently opened United Illuminating Operations Center and Administrative Office Building.

TABLE 1
Average Daily Traffic

Location	Average Daily Traffic (ADT)				
	2000	2003	2006	2009	2012
Marsh Hill Road west of Indian River Road	4,000	3,700	3,400	3,300	3,300
Marsh Hill Road north of I-95 southbound ramp	18,700	19,500	22,900	20,400	24,200
Marsh Hill Road north of I-95 northbound ramp and Frontage Road	18,800	18,500	21,000	18,800	20,000
Marsh Hill Road south of Salemme Lane	14,500	14,700	14,900	15,200	15,900

Source: CTDOT

Orange Metro-North Rail Station Traffic

Vehicle traffic that may be generated by the proposed commuter rail station was estimated based on all-day boarding data from the Warner ridership study adjusted to peak-hour levels from data in the CTDOT study. Table 2 provides a summary of the all-day near-future and all-day long-term rail ridership estimates from the Warner study. As a conservative measure for the purpose of this study, the long-term (horizon 2035) commuter rail ridership estimates have been included in our analysis.

The first step was to turn the ridership estimates into origin trips that would be arriving from off site versus those originating from on site (TOD residents leaving for work in the morning, Yale West Campus employees and students returning home in the afternoon, etc.). Those arriving from off site to board the train either drive a car and park, carpool, or are dropped off. This type of boarding will generate motor vehicle traffic. Based on our interpolation of parked cars to rail boardings to segregate TOD boarding from off-site boarders, we arrived at the estimates of boarders arriving from off site to then take the train on a daily basis. These are also shown in Table 2.

TABLE 2
Orange Metro-North Station Weekday Ridership Estimates
Conservative Scenario

	Weekday Boardings [1]	Parked Cars [1]	Departure Boardings Arriving from Off Site to then Take the Train
If the Orange Metro-North Station Opened Today [2]			
Shifts in riders:			
Area residents	410	340	410
Nonarea residents	60	0	0
Induced riders	20	15	20
Subtotal	*490*	*355*	*430*
Future Riders (by horizon 2035) [2]			
Population growth including TOD [3]	794	253	305
Yale West Campus	776	0	0
Other employment growth[3]	82	20	25
New Haven - Hartford - Springfield Commuter Rail	10	8	10
Subtotal	*1,662*	*281*	*340*
TOTAL	**2,152**	**636**	**770**

1: *Analysis of Passenger and Parking Demand at a New Metro-North Station in Orange – Final Report* – March 26, 2014. Warner Transportation Consulting, Inc.

2: Boardings with associated parked cars are predominantly commuters that will be boarding at and departing from the Orange Metro-North Station in the morning. Boardings without parked cars are associated with riders who arrive at the Orange Metro-North Station in the morning via the train and depart from the Orange Metro-North Station in the afternoon.

3: This largely includes future riders that live at the TOD and walk to the station. It also includes future riders that will live nearby and drive to the station in order to take the train (estimated based on the ratio of parked cars to boardings for the other categories). Per the Warner study, some future nearby employees may also drive to the station to take the train to points south for business.

The next step was to determine the number of departure boardings initially arriving from off site to then take the train that may occur during the morning commuter *period* and also during peak *hours*. Based on the Warner study's review of demands at the Milford and West Haven Metro-North Stations, it is estimated that around 70 percent of the weekday boardings at the future Orange Metro-North Station will occur during the morning commuter period before 9:00 a.m. Per the aforementioned CTDOT study, it is estimated that approximately 42 percent of these commuter *period* boardings will occur during the single morning peak *hour*. Approximately 37 percent of these commuter period boardings will return during the single afternoon peak hour. Applying these factors results in the peak-hour boarding estimates shown in Table 3.

TABLE 3
Orange Metro-North Station Time-of-Day Ridership Estimates
Boardings Associated With Riders That Initially Arrive at the Station by Motor Vehicle

Daily Departure Boardings[1]	770
A.M. Commuter *Period* Boardings (70 percent of total)[2]	540
A.M. Peak *Hour* Boardings (42 percent of peak-period boardings)[3]	225
P.M. Peak *Hour* Alightings (37 percent of peak-period boardings)[4]	200

1. Near term + 2035 horizon
2. Approximately 70 percent of the daily boardings are estimated to occur during the morning commuter period (before 9:00 a.m.). Source: *Analysis of Passenger and Parking Demand at a New Metro-North Station in Orange – Final Report* - March 26, 2014. Warner Transportation Consulting, Inc. (pg. 9)
3. Approximately 42 percent of the morning commuter *period* boardings are estimated to occur during the morning peak *hour*. Source: *Technical Memorandum - West Haven/Orange Commuter Railroad Station - Traffic Impact and Access Study for Commuter Rail Station Site Selection*. CTDOT State Project No. 106-116. July 2005 (pg. 58)
4. Approximately 37 percent of the morning commuter *period* boardings are estimated to alight during the afternoon peak *hour*. Source: *ibid*

The third step was to convert the peak-hour boarding and alighting estimates from Table 3 into vehicle trips to and from the proposed Orange Metro-North Station. Based again on data from the CTDOT study, it is estimated that the vehicle occupancy rate of rail boarders initially arriving to the station by motor vehicle will be 1.1 persons per vehicle and that 5 percent of these rail boarders will be dropped off or picked up. Applying these factors to the boarding data in Table 3 results in the peak-hour vehicle trip estimates in Table 4. Additionally shown are vehicle trips associated with future shuttle service between the train station and United Illuminating (UI) and other nearby employers.

TABLE 4
Vehicle Trip Projections - Orange Metro-North Station
Peak-Hour Conditions

	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
Off-Site Boarding and Alighting Vehicles[1]	**205**			**180**		
Off-Site Boarding and Alighting Vehicle Trips	**Enter**	**Exit**	**Total**	**Enter**	**Exit**	**Total**
Drop-off/Pickup[2]	10	10	20	10	10	20
Drive and Park[3]	195	0	195	0	170	170
Future Area Employee Shuttle Service (UI, etc.)[4]	10	10	20	10	10	20
TOTAL	**215**	**20**	**235**	**20**	**190**	**210**

Note: Based on methodology used in *the Technical Memorandum - West Haven/Orange Commuter Railroad Station - Traffic Impact and Access Study for Commuter Rail Station Site Selection.* CTDOT State Project No. 106-116 July 2005 (pg. 58)

1. Estimated vehicle occupancy rate of 1.1 associated with the passengers arriving/departing via automobile
2. Five percent of passengers estimated to be dropped off/picked up
3. Ninety-five percent of passengers estimated to arrive via automobile and park
4. Estimated roughly one shuttle every 5 minutes during peak hours

Based on the information and methodology described above, it is estimated that the proposed Orange Metro-North Station will generate approximately 235 total vehicle trips (215 enter, 20 exit) during the morning peak hour and 210 total vehicle trips (20 enter, 190 exit) during the afternoon peak hour. As will be described below, the peak-hour vehicle trip projections associated with the proposed Orange Metro-North Station have been added to existing traffic volumes to develop a future background profile of traffic conditions.

TOD Site Traffic

The TOD site traffic was estimated using data for similar land uses as provided by the Institute of Transportation Engineers[3] (ITE) for approximately 21,500 square feet of general commercial space and 200 dwelling units. Table 5 presents the peak-hour site traffic generation estimates. The commercial space is assumed to be a mix of retail (including restaurant) and office; the exact split is unknown at this time. For analysis, the Shopping Center land use (ITE Code #820) was used for commercial space trip generation. This is higher during the afternoon peak hour (when traffic in the area is heaviest) than other commercial uses that may ultimately occupy the commercial space. In any case, the mix of commercial uses does not impact the findings presented herein.

In addition to the vehicle trip projections from Orange Metro-North Station users, the residential and

3. *Trip Generation, 9th Edition.* Institute of Transportation Engineers. 2012

Future Traffic Volumes

In order to assess the impact of the TOD, roadway traffic within the study area was developed first without (background) and then with (combined) the TOD site traffic volumes.

Background (no-build) traffic is reflective of roadway conditions without the TOD. Review of CTDOT traffic monitoring data from stations in Orange, Milford, and West Haven finds that daily volumes over the last 10 years have for the most part increased by 0.5 percent per year. Therefore, the existing traffic volumes were increased by an annual growth factor of 2 percent to a horizon of 2017.

Inquiry was also made to the Town of Orange and to CTDOT regarding any other area developments, and it was found that there are a few major traffic generators (MTGs) near the study area to impact traffic in the short-term future. Northeast Beverage Expansion (OSTA AD #252) located at 32 Robinson Boulevard involves a 37,450-square-foot expansion of warehouse space, which will generate approximately 16 total vehicle trips (13 enter, 3 exit) during the morning peak hour and 14 total vehicle trips (3 enter, 11 exit) during the weekday afternoon peak hour. Aurora Products Expansion (OSTA AD #264) located at 205 Edison Road involves a 40,280-square-foot expansion of warehouse space, which will generate approximately 17 total vehicle trips (13 enter, 4 exit) during the morning peak hour and 15 total vehicle trips (3 enter, 12 exit) during the weekday afternoon peak hour. An approximately 80,000-square-foot general office building is proposed on the southeast corner of Marsh Hill Road and Edison Road, which is expected to generate approximately 160 total vehicle trips (140 enter, 20 exit) during the weekday morning peak hour and 170 total vehicle trips (30 enter, 140 exit) during the weekday afternoon peak hour. Note that signal timing adjustments and the lengthening of the southbound left-turn lane to the intersection of Marsh Hill Road and the I-91 southbound ramps have been recommended as part of this office project and are reflected in our background traffic analyses. Additionally, background traffic estimates include the vehicle projections for the Orange Metro-North rail station. Figures 15 and 16 show the 2017 background traffic volume estimates for the weekday morning and afternoon peak hours.

The estimated site traffic volumes from the residential and commercial TOD were then added to the background traffic to develop the future combined (build) traffic volumes. The combined volumes are reflective of roadway conditions with the TOD in place. Figures 17 and 18 depict the combined peak traffic volumes at the study intersections for the weekday morning and afternoon peak hours.

Capacity Analysis

Existing, background, and combined condition peak-hour traffic volumes were evaluated by means of the Trafficware *Synchro* software package, which uses the methodologies of the *Highway Capacity Manual*. The intersection of Woodmont Road and Benham Hill Road was not analyzed because it is relatively insignificant within the network and because *Synchro* is unable to analyze its nonstandard stop control with STOP signs on the Benham Hill Road approach and only one of the Woodmont Road approaches.

Analyses for the combined condition peak hours were conducted for the 10 study intersections. A Level of Service (LOS) was determined for pertinent movements at each intersection. The LOS is a qualitative measure of the efficiency of operations of an intersection in terms of delay and inconvenience to

motorists. A description of the various LOS designations, A through F, is given in the Appendix. Design plans were obtained from CTDOT for State Project #0106-0122 for "U.S. Route 1 Operational Lanes from Lambert Road to Route 114," which will involve the widening of U.S. Route 1 from four lanes to five lanes along this section. This improvement will lengthen the storage of the westbound left-turn lane on U.S. Route 1 at Lambert Road to approximately 260 feet and will close the western driveway of the Shell gas station on the southeast corner of the intersection. The roadway improvements proposed by State Project #0106-0122 were modeled in our analysis for future conditions of the intersection of U.S. Route 1 and Lambert Road.

Salemme Lane was analyzed assuming it maintains its current offset from the SCG driveway. Under existing and background conditions, Salemme Lane is unsignalized. Under combined conditions, Salemme Lane is to become signalized. Table 6 summarizes the overall LOS findings. A detailed LOS table summarizing by lane groups at the study intersections is located in the Appendix.

TABLE 6
Capacity Analysis Summary

Intersection/Approach	A.M. Peak Hour			P.M. Peak Hour		
	Existing	Background	Combined	Existing	Background	Combined
SIGNALIZED						
U.S. Route 1 and Lambert Road	C	C	C	C	D	D (D)
Marsh Hill Road and Indian River Road	B	B	B	C	C	C
Marsh Hill Road and Edison Road	A	A	B	B	B	B
Marsh Hill Road and I-95 southbound ramp	C	C	C	C	C	C
Marsh Hill Road and I-95 northbound ramp**	C	C	C	C	C	C (C)
Marsh Hill Road, Salemme Lane, and SCG*	-	-	B	-	-	B
Merwin Avenue and Anderson Avenue	B	B	B	B	B	B
Route 162 and Woodmont Road	B	B	B	C	C	C
UNSIGNALIZED						
I-95 Ramp and West Campus Drive						
Northwestbound Approach	B	B	B	B	B	B
Marsh Hill Road and Salemme Lane*						
Westbound Approach	B	C	-	B	D	-
Southbound Approach	B	B	-	A	A	-
Oxford Road and Merwin Avenue	E	F	F (D)†	F	F	F (E)†

*Salemme Lane was analyzed as unsignalized under existing and background conditions and as signalized under combined conditions.

**Assumes extension of southbound left-turn lane and minor signal timing adjustment

( ): With minor timing adjustments to improve some individual movements and intersections. No effect on overall LOS (see Appendix).

( )† With minor widening of the westbound approach at Merwin Avenue and Oxford Road to accommodate turn lanes.

During the afternoon peak hour, the intersection of U.S. Route 1 and Lambert Road will drop from LOS C to D with the addition of commuter rail trips, not the TOD trips. Timing changes could be implemented, which will likely be needed as a cumulative result of this project and several other new and proposed

nearby developments. It is not recommended that these timing changes be implemented at this time but rather monitored as these projects come to fruition.

As part of the traffic study for the 80,000-square-foot office building on Edison Road prepared by Milone & MacBroom, Inc. on August 7, 2015, it was recommended that the southbound left-turn lane be restriped at the intersection of Marsh Hill Road and the I-95 southbound ramps to provide 100 additional feet of storage length (to approximately 350 feet). This would accommodate existing traffic, normal traffic growth in the coming years, and new traffic from the area developments as well as new traffic generated by the proposed TOD.

Certain mitigation improvements should be considered to maintain adequate LOS near the site. The intersection of Marsh Hill Road and Salemme Lane should be signalized and tied into the existing SCG signal in the future when the Metro-North Station and proposed TOD are built. Changes to pavement marking to accommodate this change are shown in the attached "Conceptual Roadway Improvement Plan." This can be accommodated within the existing right-of-way.

The queues exiting Salemme Lane were evaluated. Based on the current site plan, the 95th percentile queues were calculated at six feet in the morning and 124 feet in the afternoon. The Hope Academy driveway is located about 135 feet from the stop bar as is the easterly driveway to 65 Marsh Hill Road. Consequently, blockage for even peak conditions is not anticipated.

Understanding that the actual opening date of the new train station has not been set at this time, a sensitivity test reflecting an opening year of 2021 was conducted. This entailed additional growth of the existing traffic volumes by 0.5 percent per year for an additional four years to a horizon of 2021. We determined that our findings would be essentially the same as for the 2017 analysis including operations at the intersection of Marsh Hill Road and Salemme Lane. Besides the improvements at this intersection, the only mitigation at other intersections would be limited to minor timing changes.

The unsignalized intersection of Oxford Road and Merwin Avenue is expected to perform at LOS F under both background and combined conditions during both morning and afternoon peak hours. It is recommended that all approaches to this intersection be restriped to accommodate turn lanes on each approach. Such improvements to this intersection raise its overall LOS from F to D during the morning peak hour and from F to E during the afternoon peak hour. A minor widening on the southeast corner within the existing right-of-way would be required.

Possible Reconfiguration of the Egress from Southern Connecticut Gas Company

We met with representatives from SCG to discuss the proposed revisions at Salemme Lane and integration into the signalized intersection of Marsh Hill Road and the SCG driveway. They requested additional information on a number of fronts, which was provided, and most recently asked if we could accommodate a change to their egress such that exiting traffic would take place onto Executive Boulevard, about 800 feet south of Salemme Lane. This change in site access at SCG was tested. We found that operations at the intersection of Marsh Hill Road, Salemme Lane, and the SCG driveway would improve.

Regarding access onto Executive Boulevard, a new traffic signal at the intersection of Marsh Hill Road and Executive Boulevard may be required. A separate analysis would be needed to determine if signalization here is warranted, whether a signal is feasible within the available right-of-way, and if the signal could function appropriately at that location. This could be pursued independent of this application, but with or without the change, the intersection of Marsh Hill Road, Salemme Lane, and the SCG driveway will function adequately.

Summary and Conclusion

This study was conducted to assess the traffic implications of the proposed TOD at Salemme Lane in Orange, Connecticut. Salemme Lane currently contains some residences, and the site at the end of Salemme Lane is currently undeveloped. The TOD will involve approximately 200 residential units and approximately 21,500 square feet of commercial space. Site access will be provided from Salemme Lane via Marsh Hill Road. A detailed field reconnaissance, data assembly effort, and traffic counting program were undertaken to determine a profile of existing conditions. Anticipated traffic generation for the TOD was estimated based on ITE data for similar land uses. Potential ridership estimates at a new Metro-North rail station in Orange were separately projected.

Recommendations include the following:

- The signalization of Marsh Hill Road and Salemme Lane and connecting to the existing traffic signal at SCG upon opening of the TOD
- Monitoring the intersection of U.S. Route 1 and Lambert Road for future signal timing changes
- Minor widening and restriping of the intersection of Oxford Road and Merwin Avenue to accommodate turn lanes

Assuming implementation of these recommendations, it is our opinion that the traffic generated by the proposed TOD can be accommodated at the site and on the surrounding roadways. We hope this report is useful to you in assessing the traffic impact from this project. If you have any questions or need any further information, please do not hesitate to contact either of us.

Very truly yours,

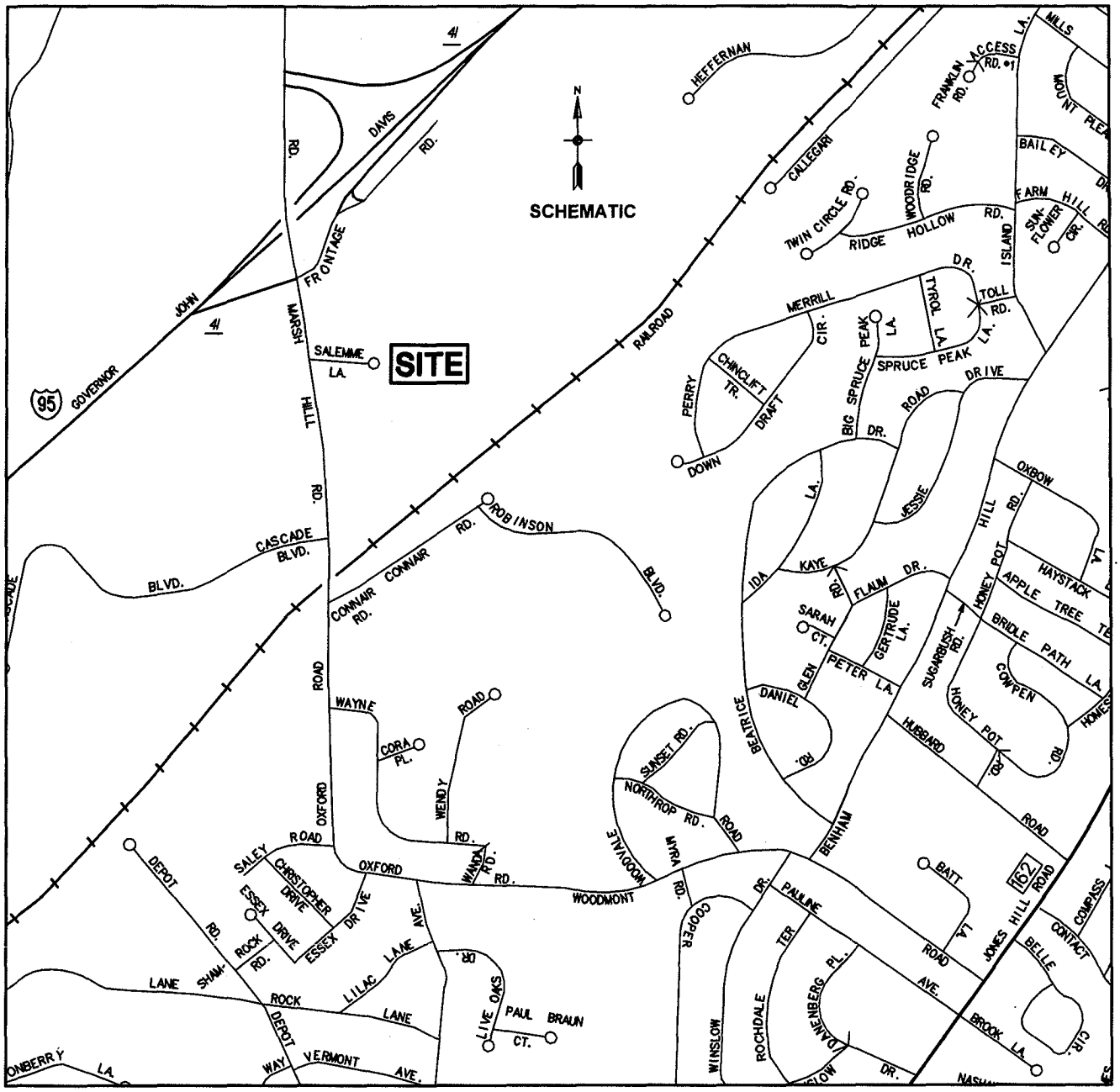
MILONE & MACBROOM, INC.

David G. Sullivan, P.E., Associate
Manager of Traffic Engineering

Neil C. Olinski, MS, PTP
Transportation Planner II

Attachments

4329-02-23-f1916-rpt

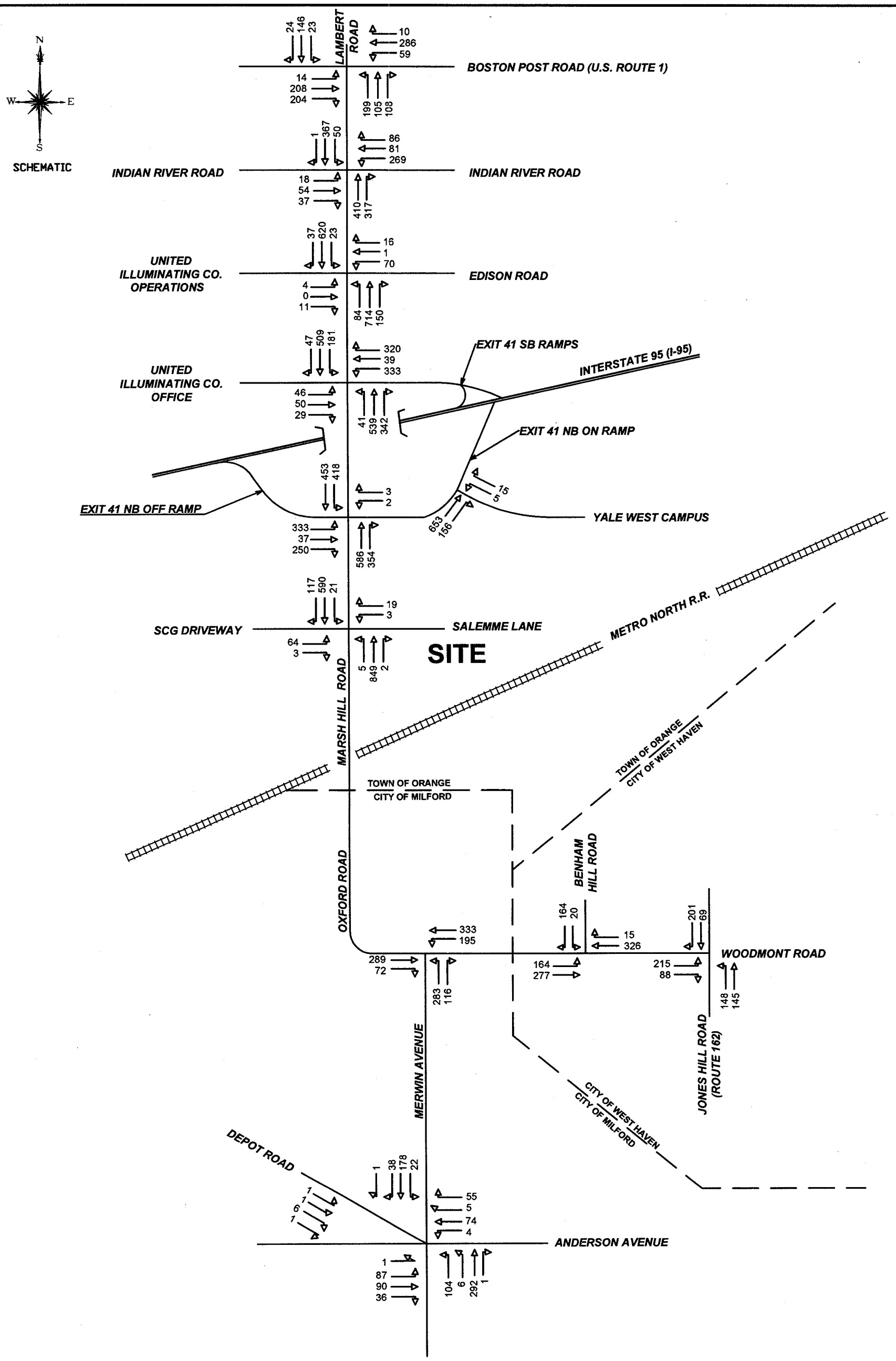


SITE LOCATION

Transit Oriented Development
Orange, Connecticut

MILONE & MACBROOM, Inc.

FIGURE 1

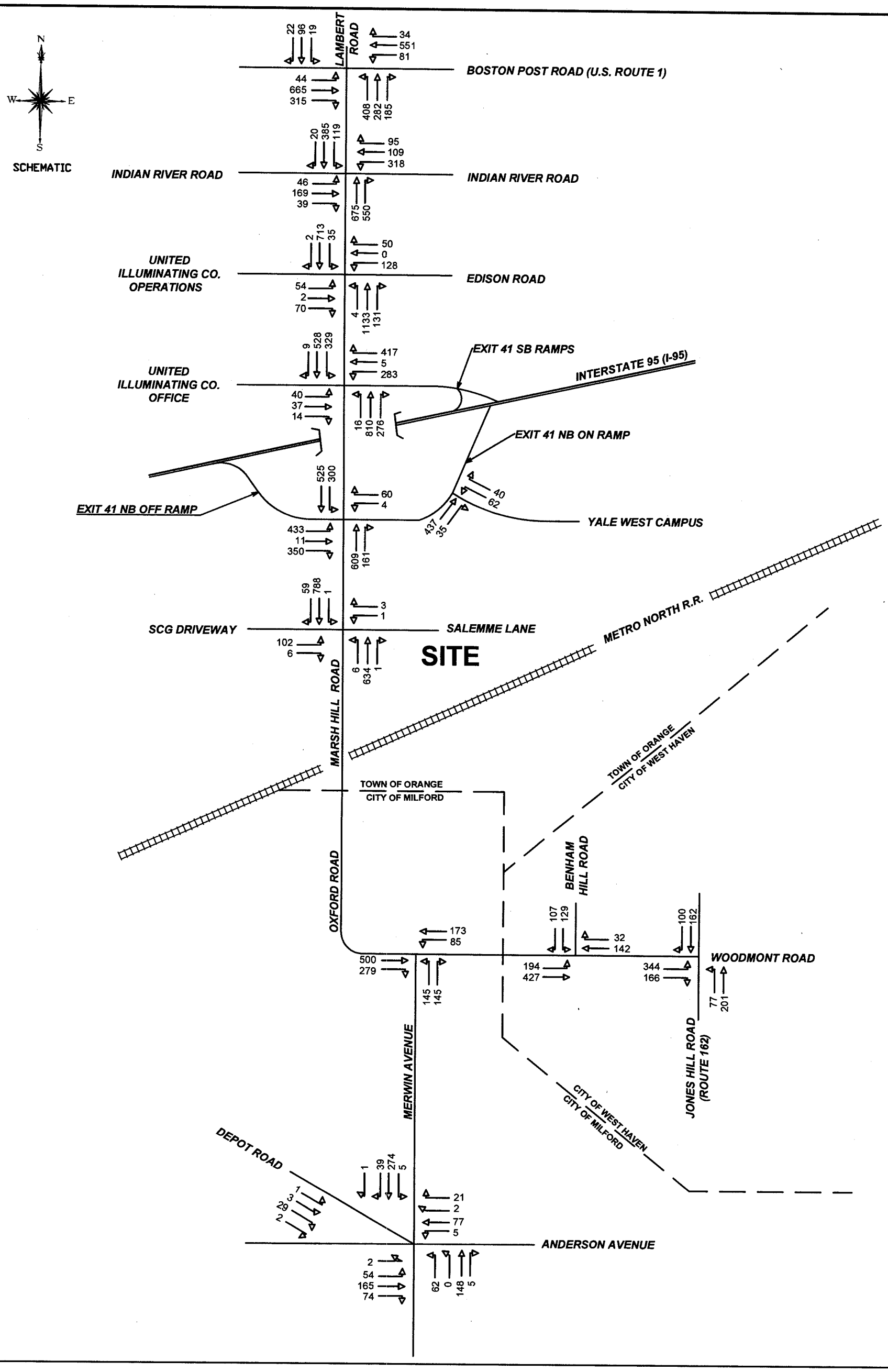


EXISTING TRAFFIC VOLUMES
WEEKDAY MORNING PEAK HOUR

Transit Oriented Development
Orange, Connecticut

MILONE & MACBROOM, Inc.

FIGURE 2

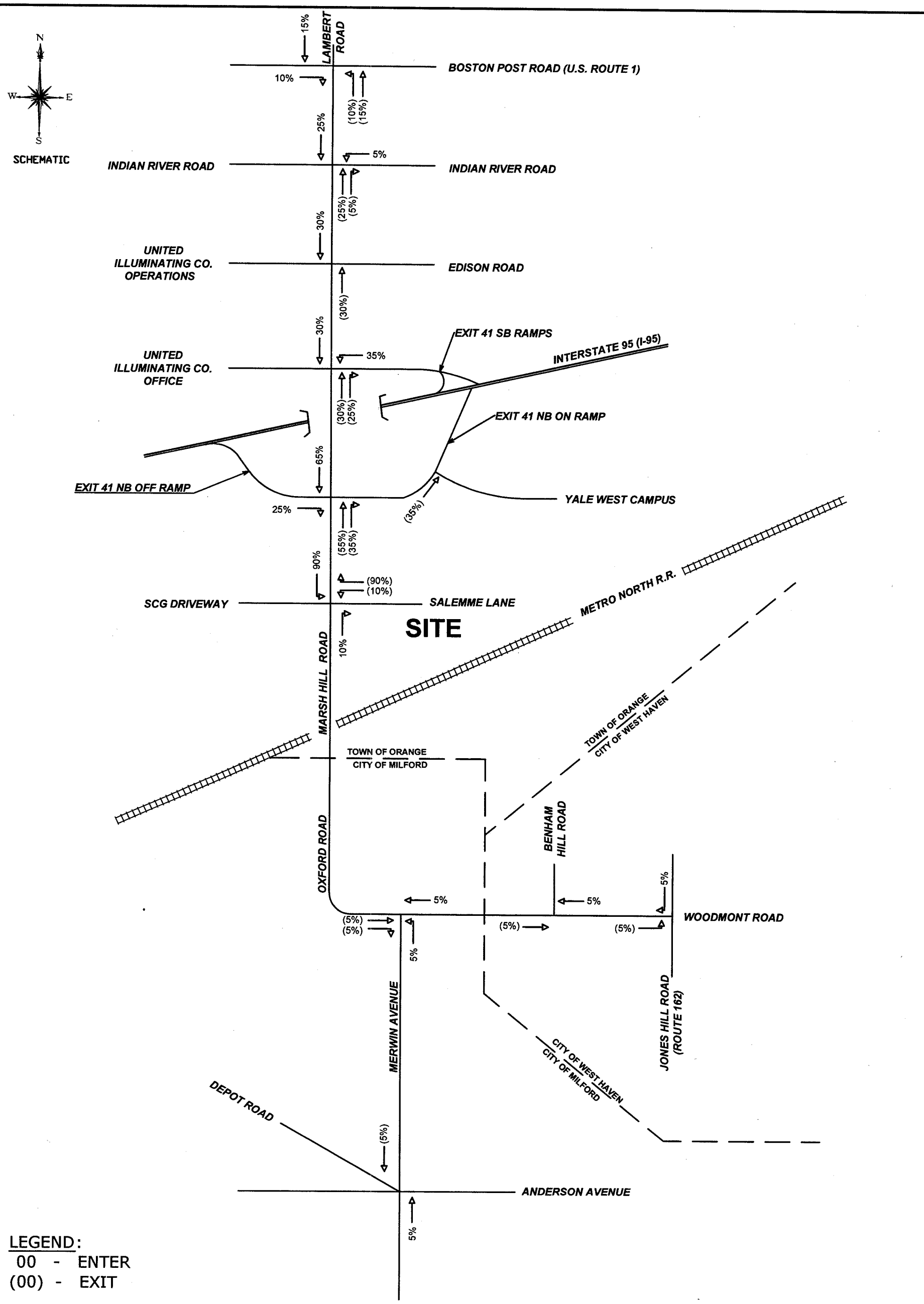


EXISTING TRAFFIC VOLUMES
WEEKDAY AFTERNOON PEAK HOUR

Transit Oriented Development
Orange, Connecticut

MILONE & MACBROOM, Inc.

FIGURE 3

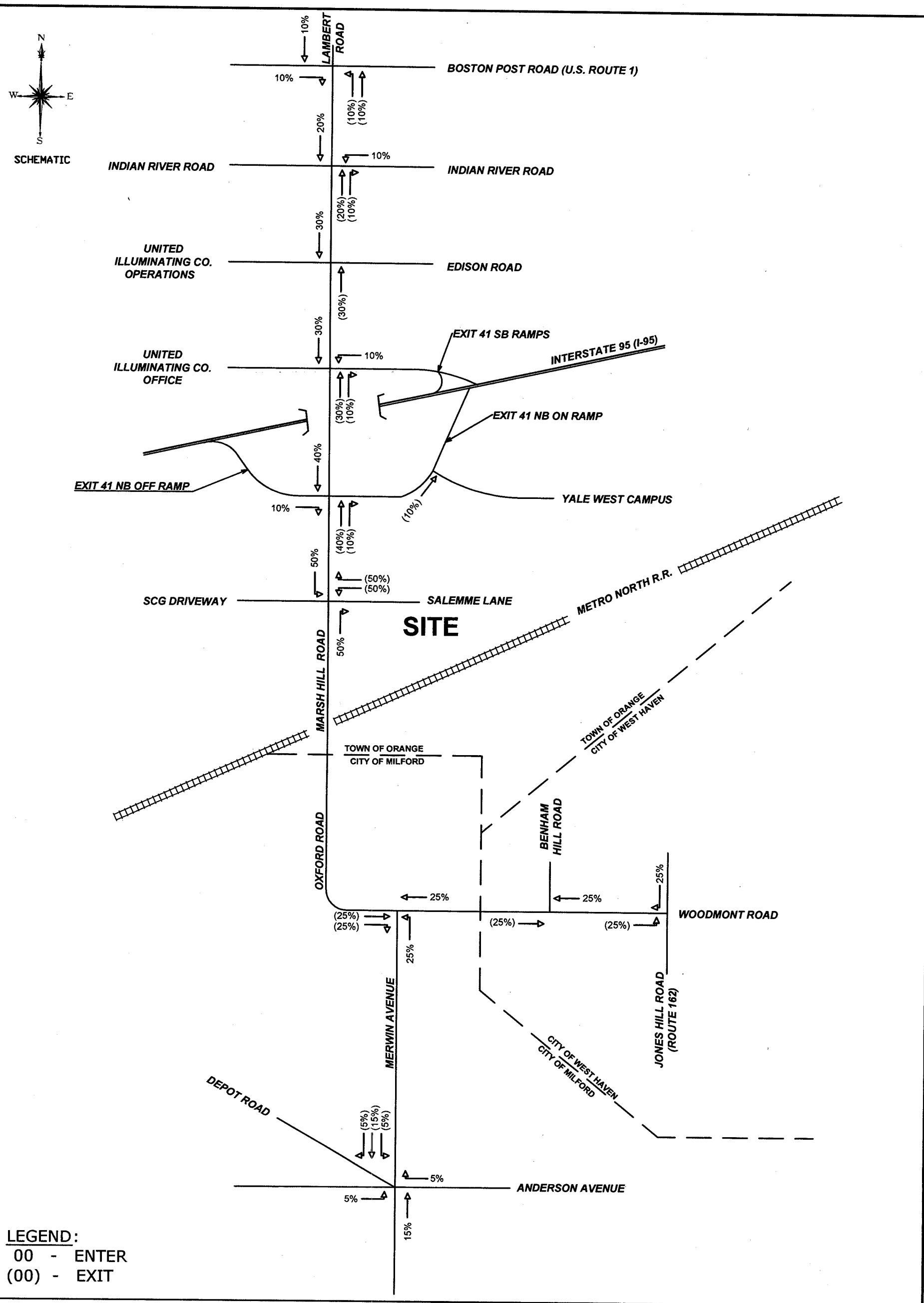


SITE DISTRIBUTION (RESIDENTIAL)

Transit Oriented Development
Orange, Connecticut

MILONE & MACBROOM, Inc.

FIGURE 4

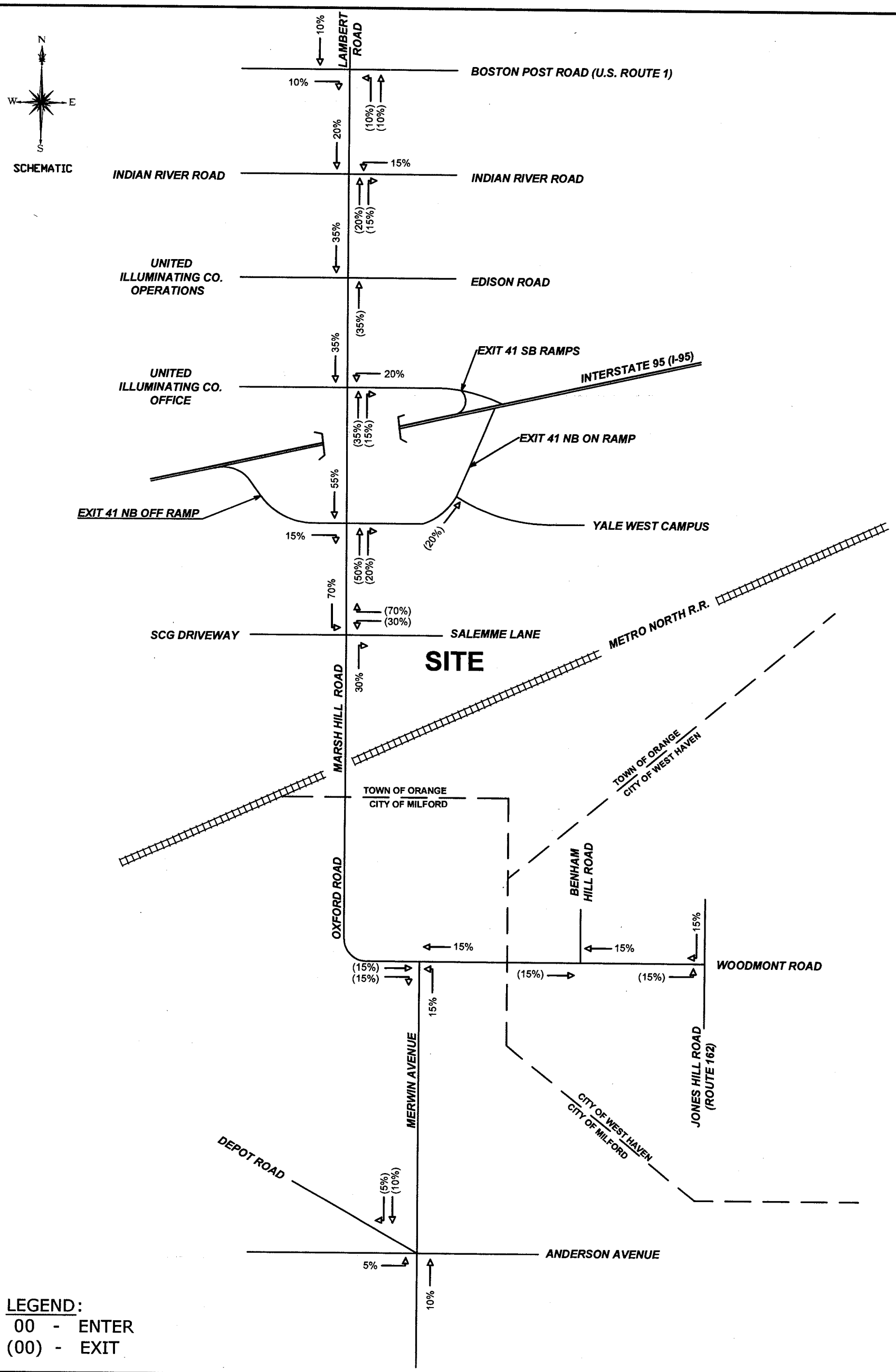


SITE DISTRIBUTION (COMMERCIAL)

Transit Oriented Development
Orange, Connecticut

MILONE & MACBROOM, Inc.

FIGURE 5

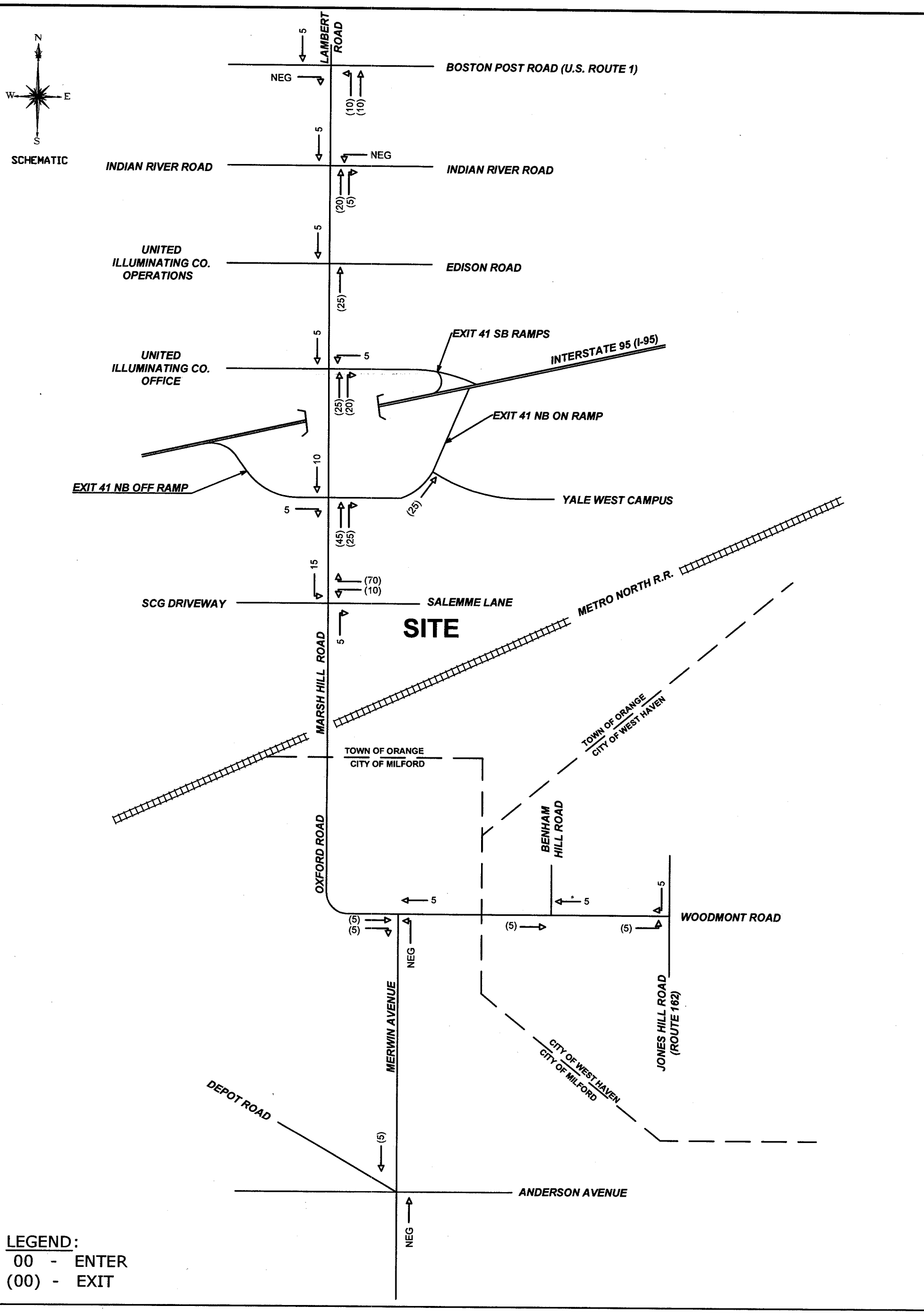


SITE DISTRIBUTION (COMMUTER RAIL STATION)

Transit Oriented Development
Orange, Connecticut

MILONE & MACBROOM, Inc.

FIGURE 6



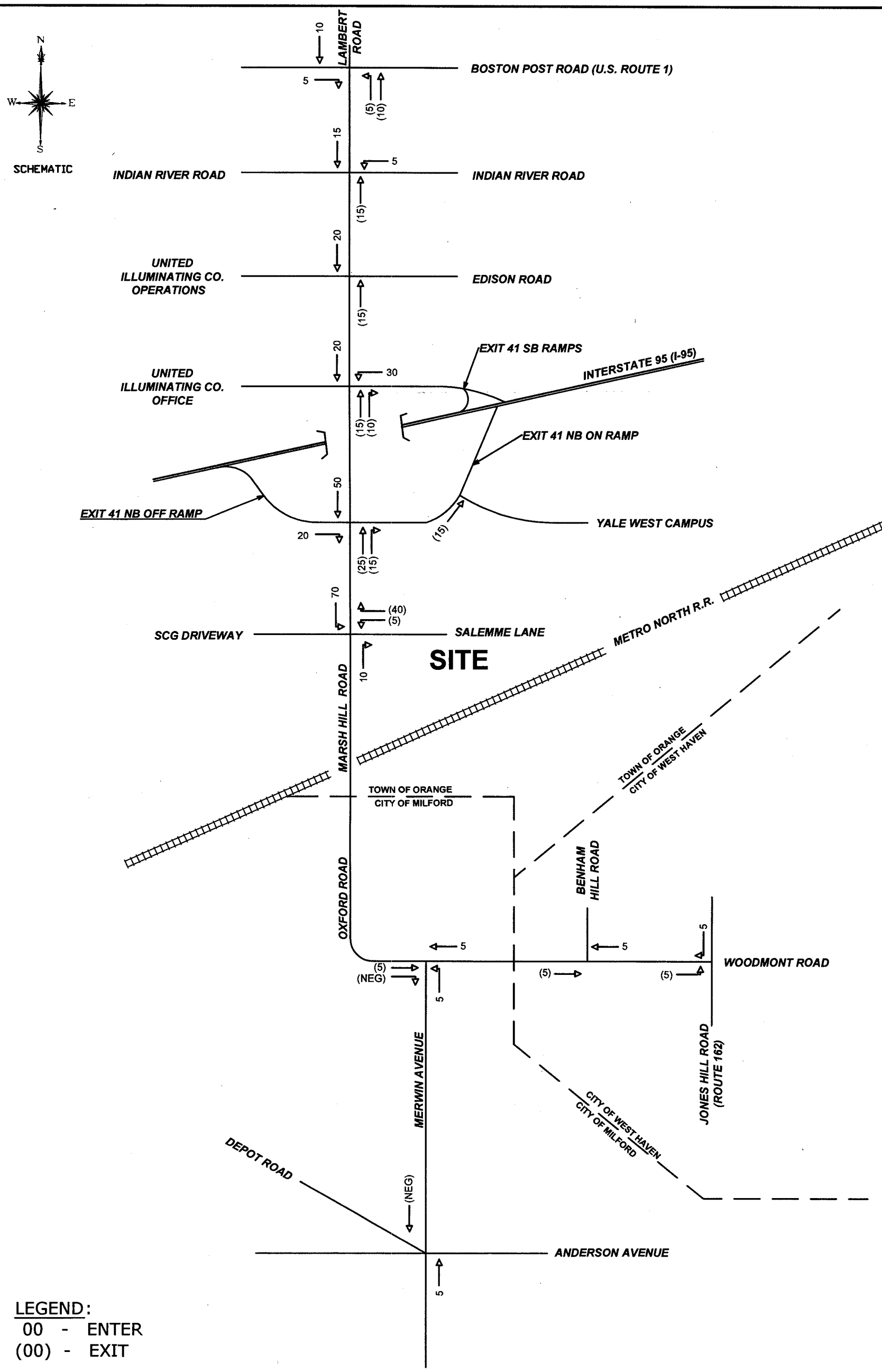
SITE TRAFFIC (RESIDENTIAL)

WEEKDAY MORNING PEAK HOUR

Transit Oriented Development
Orange, Connecticut

MILONE & MACBROOM, Inc.

FIGURE 7



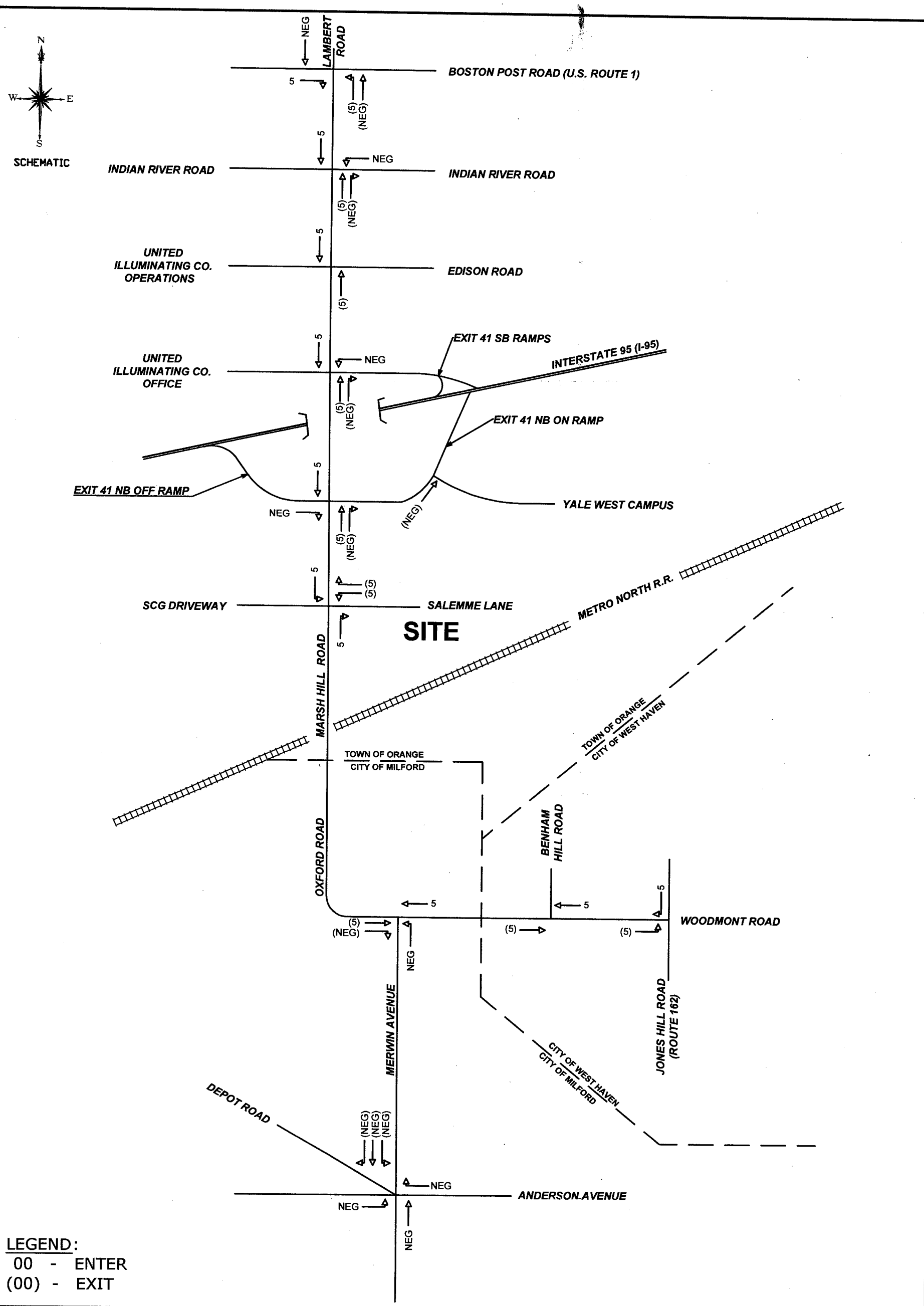
SITE TRAFFIC (RESIDENTIAL)

WEEKDAY AFTERNOON PEAK HOUR

Transit Oriented Development
Orange, Connecticut

MILONE & MACBROOM, Inc.

FIGURE 8



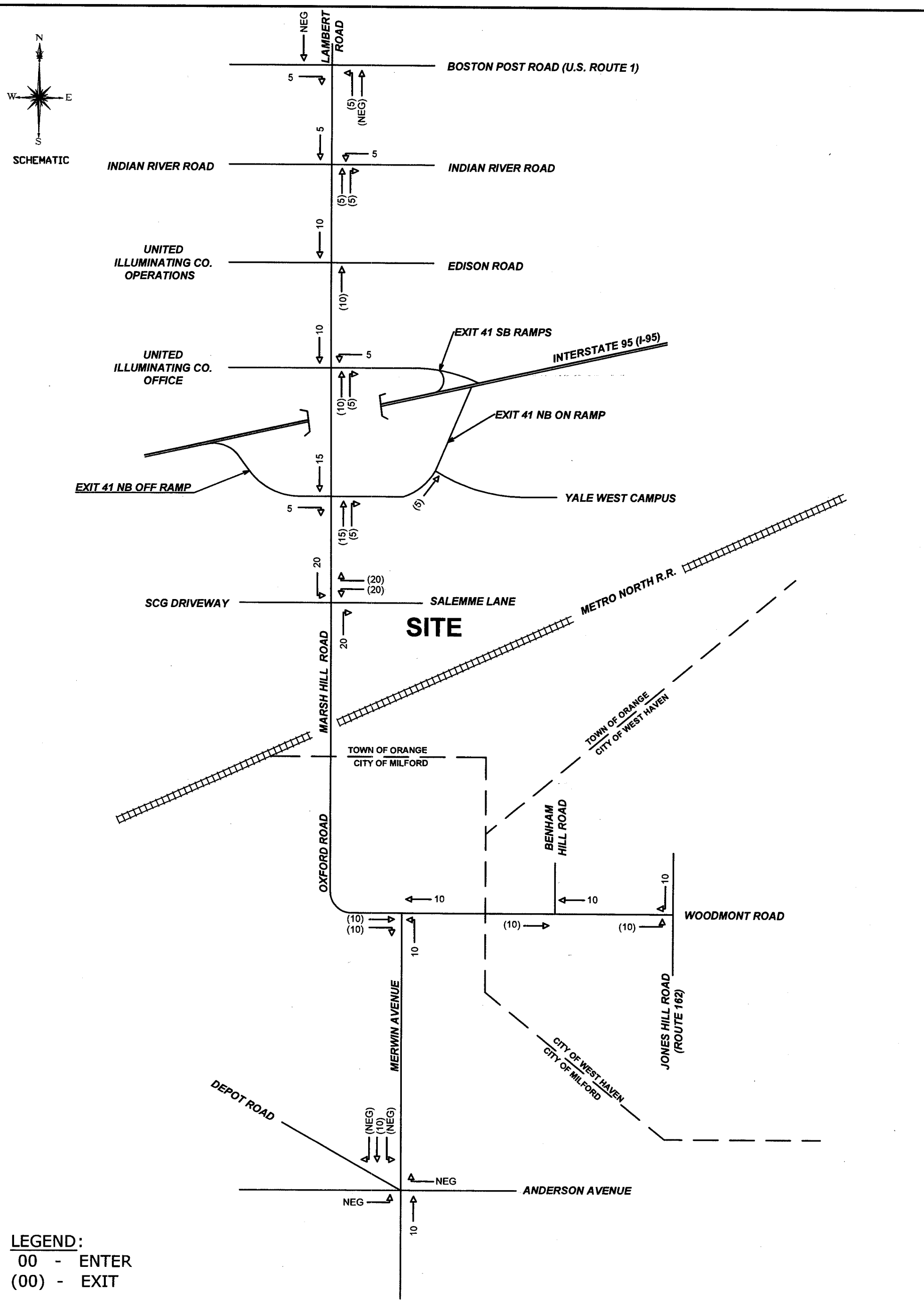
SITE TRAFFIC (COMMERCIAL)

WEEKDAY MORNING PEAK HOUR

Transit Oriented Development
Orange, Connecticut

MILONE & MACBROOM, Inc.

FIGURE 9



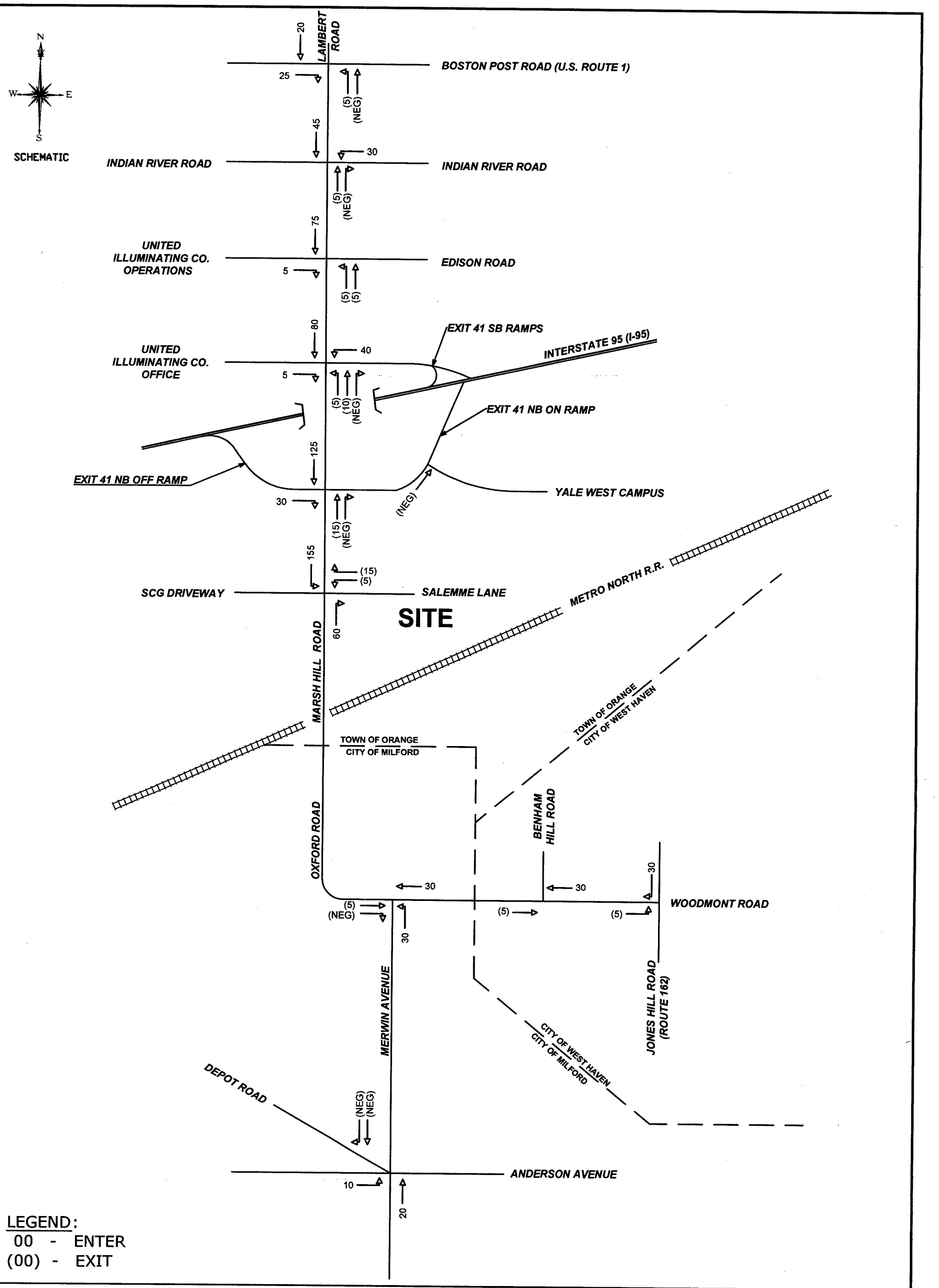
SITE TRAFFIC (COMMERCIAL)

WEEKDAY AFTERNOON PEAK HOUR

Transit Oriented Development
Orange, Connecticut

MILONE & MACBROOM, Inc.

FIGURE 10



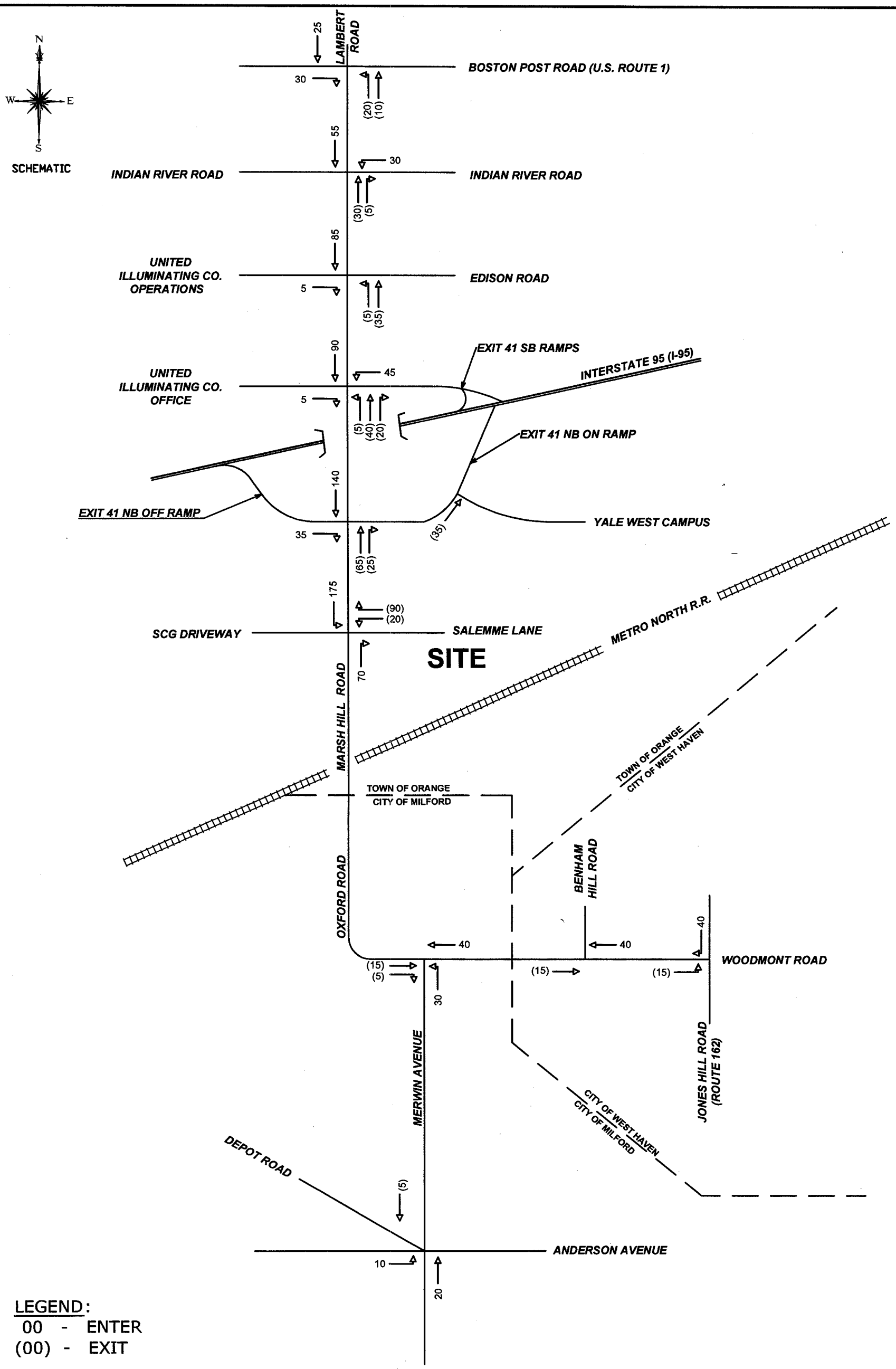
SITE TRAFFIC (COMMUTER RAIL STATION)

WEEKDAY MORNING PEAK HOUR

Transit Oriented Development
Orange, Connecticut

MILONE & MACBROOM, Inc.

FIGURE 11

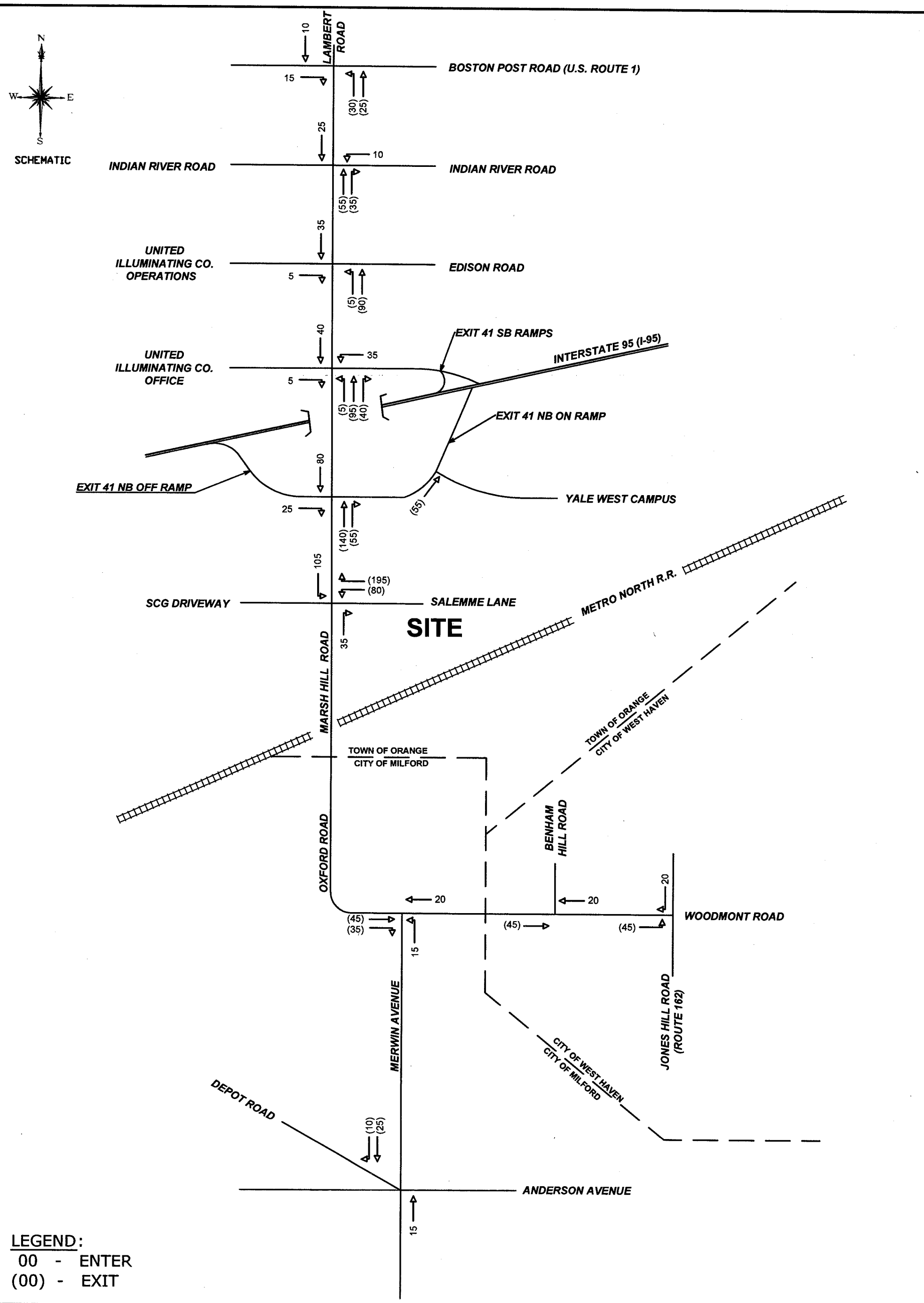


TOTAL SITE TRAFFIC VOLUMES
WEEKDAY MORNING PEAK HOUR

Transit Oriented Development
Orange, Connecticut

MILONE & MACBROOM, Inc.

FIGURE 13

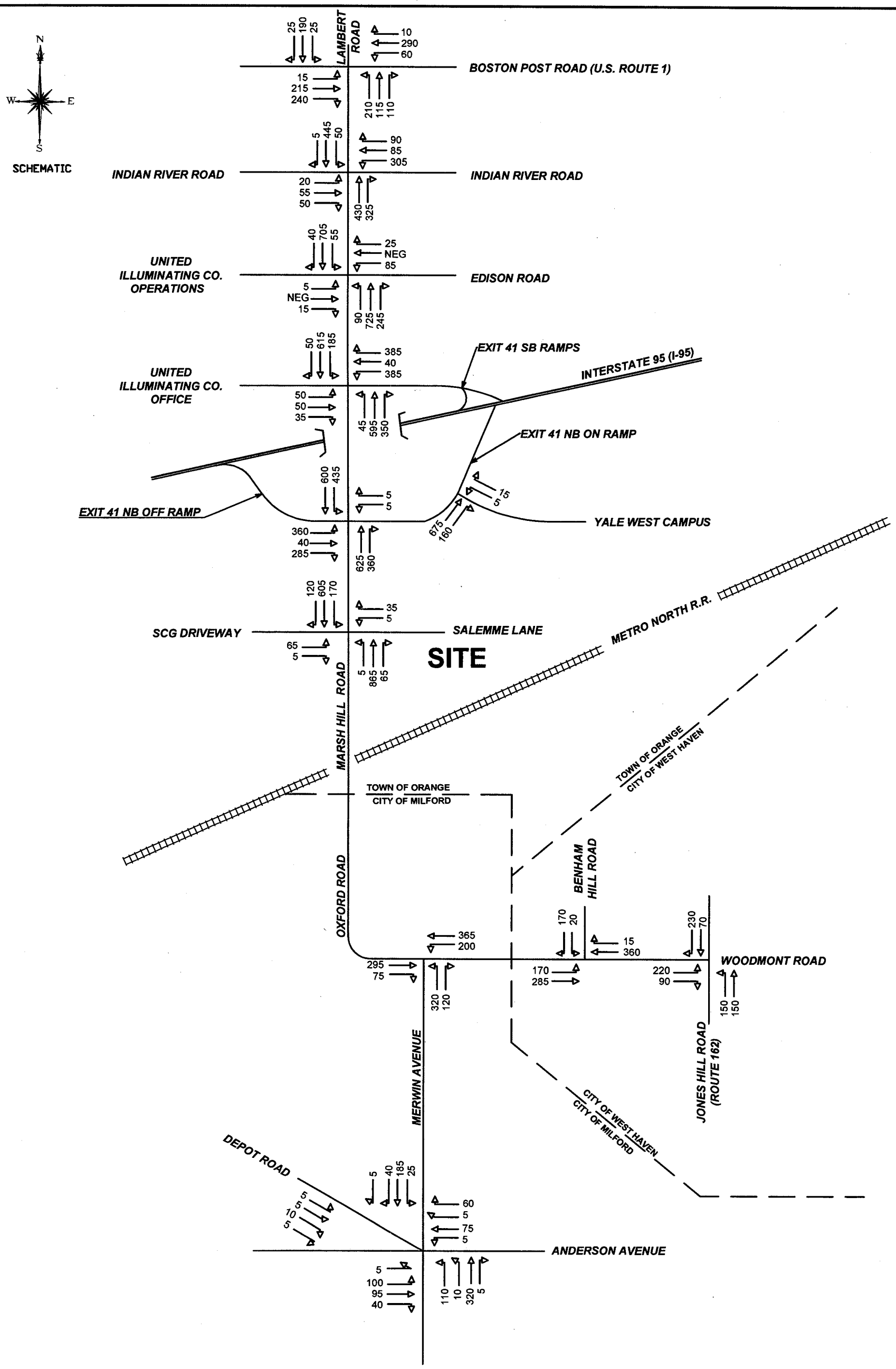


TOTAL SITE TRAFFIC VOLUMES
WEEKDAY AFTERNOON PEAK HOUR

Transit Oriented Development
Orange, Connecticut

MILONE & MACBROOM, Inc.

FIGURE 14

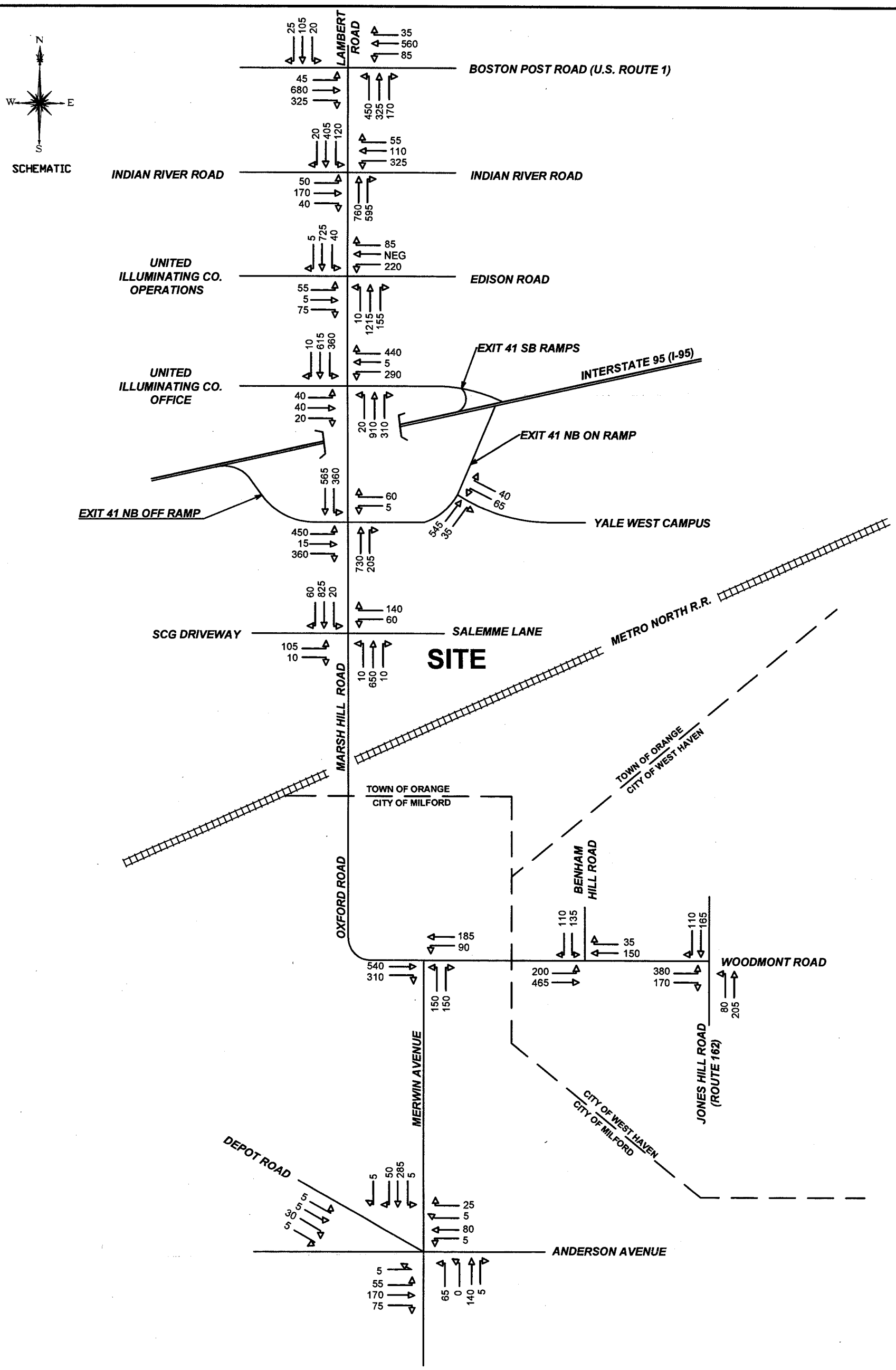


BACKGROUND TRAFFIC VOLUMES
WEEKDAY MORNING PEAK HOUR

Transit Oriented Development
Orange, Connecticut

MILONE & MACBROOM, Inc.

FIGURE 15

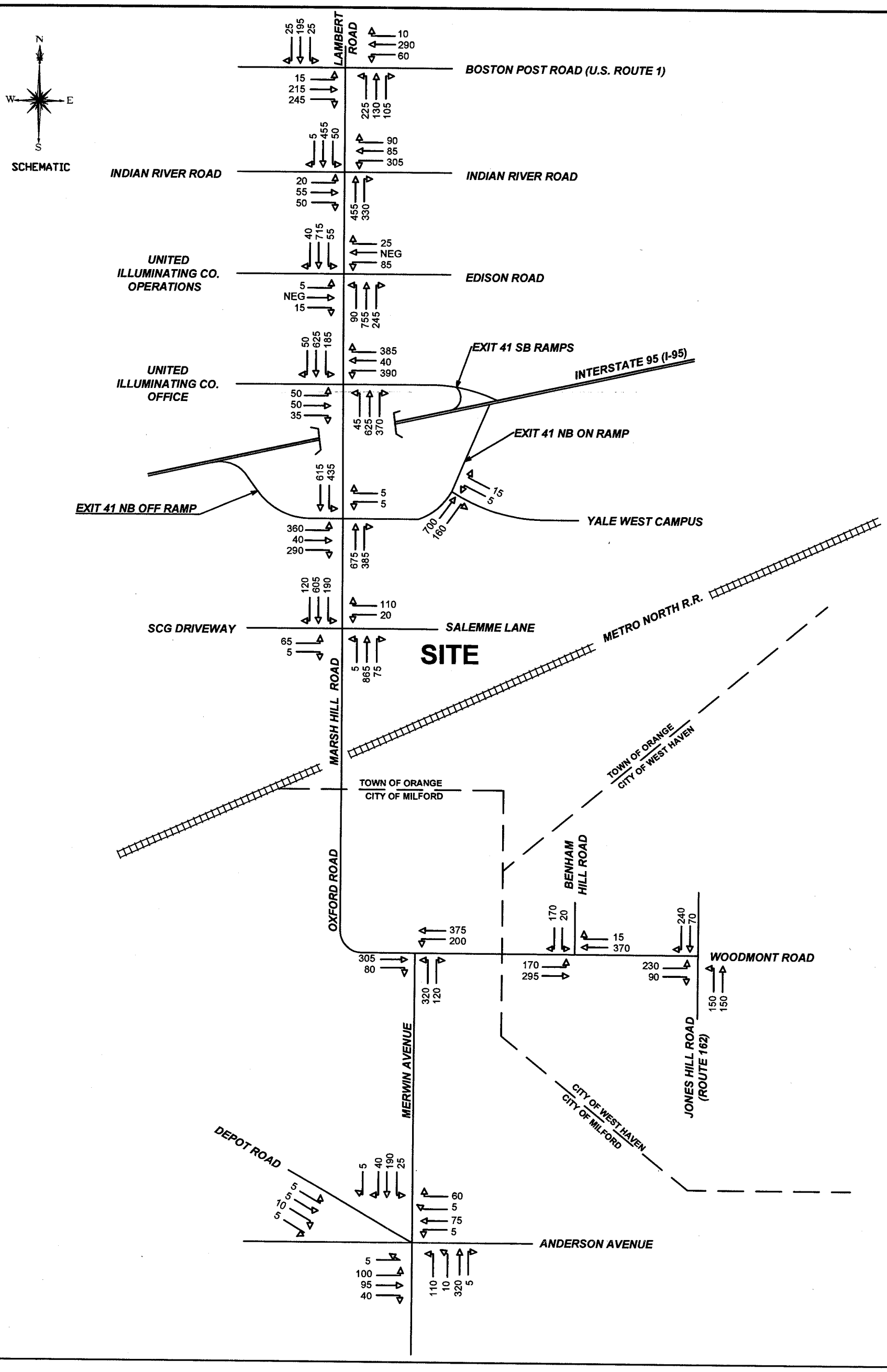


BACKGROUND TRAFFIC VOLUMES
WEEKDAY AFTERNOON PEAK HOUR

Transit Oriented Development
Orange, Connecticut

MILONE & MACBROOM, Inc.

FIGURE 16

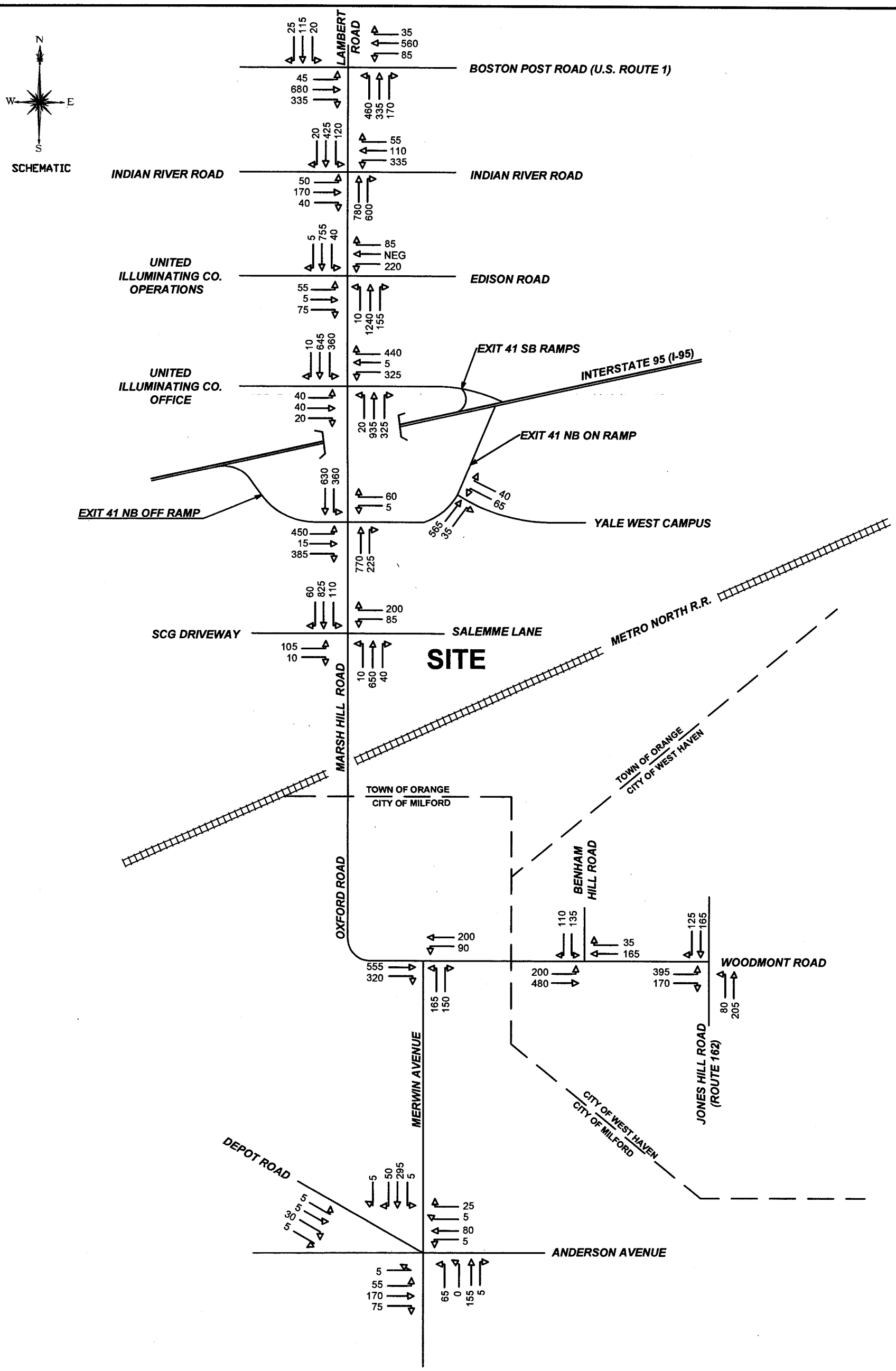


COMBINED TRAFFIC VOLUMES
WEEKDAY MORNING PEAK HOUR

Transit Oriented Development
Orange, Connecticut

MILONE & MACBROOM, Inc.

FIGURE 17



COMBINED TRAFFIC VOLUMES
WEEKDAY AFTERNOON PEAK HOUR

Transit Oriented Development
Orange, Connecticut

MILONE & MACBROOM, Inc.

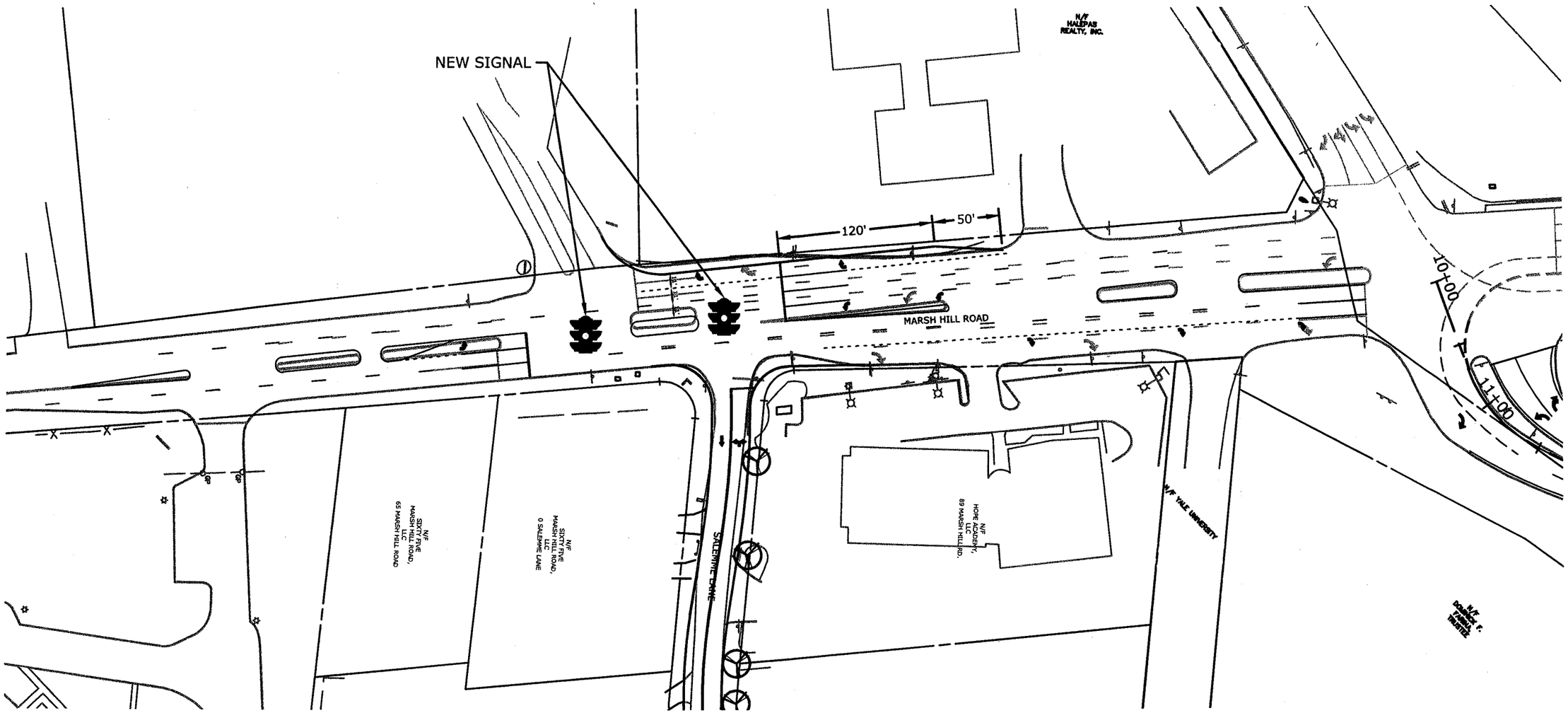
FIGURE 18

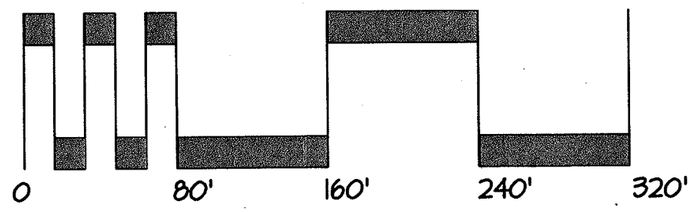
Detailed Capacity Analysis Summary

Location / Lane Group	Levels of Service					
	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
	Existing Conditions	Background Conditions	Combined Conditions	Existing Conditions	Background Conditions	Combined Conditions
Signalized Intersections						
U.S. Route 1 and Lambert Road						
Eastbound Left	D	D	D	D	D	D
Eastbound Thru, Thru	B	B	B	C	C	C
Eastbound Right	A	A	A	A	A	A
Westbound Left	E	E	E	E	E	E
Westbound Thru, Thru/Right	B	B	B	C	C	C
Northbound Left	D	D	D	E	E (E)	F (E)
Northbound Thru/Left	D	D	D	E	E (E)	E (E)
Northbound Right	A	A	A	A	A	A
Southbound Thru/Left, Thru/Right	D	D	D	D	D	D
OVERALL	**C**	**C**	**C**	**C**	**D**	**D**
Marsh Hill Road and Indian River Road						
Eastbound Left	C	C	C	C	C	C
Eastbound Thru/Right	C	C	C	D	D	D
Westbound Left	C	C	C	D	D	D
Westbound Thru/Left	C	C	C	D	D	D
Westbound Right	A	A	A	A	A	A
Northbound Thru, Thru	B	B	B	C	C	C
Northbound Right	A	A	A	A	B	B
Southbound Left	C	C	C	D	D	D
Southbound Thru, Thru/Right	B	B	B	B	B	B
OVERALL	**B**	**B**	**B**	**C**	**C**	**C**
Marsh Hill Road and Edison Road						
Eastbound Left	B	B	C	C	C	C
Eastbound Thru/Right	A	A	A	B	B	B
Westbound Left	C	C	D	C	D	D
Westbound Thru/Right	B	A	A	A	A	A
Northbound Left	A	A	A	A	A	A
Northbound Thru, Thru/Right	A	A	A	A	A	A
Southbound Left	B	B	B	B	C	C
Southbound Thru, Thru	B	B	B	B	B	B
Southbound Right	A	A	A	A	A	A
OVERALL	**A**	**A**	**B**	**B**	**B**	**B**
Marsh Hill Road and I-95 SB Ramps						
Eastbound Left	D	D	D	D	D	D
Eastbound Thru	D	D	D	D	D	D
Eastbound Right	A	A	A	A	A	A
Westbound Left	D	D	D	E	E (E)*	F (E) *
Westbound Thru/Left, Thru Right	C	C	C	B	B	B
Westbound Right	A	A	A	B	B	B
Northbound Left	E	E	D	C	D	D
Northbound Thru, Thru	C	C	C	C	C (D)*	C (D)
Northbound Thru/Right	A	B	A	A	A	A
Southbound Left	E	E	E	E	F (D)*	F (D)
Southbound Thru, Thru	B	C	B	B	B	B
Southbound Right	A	A	A	A	A	A
OVERALL	**C**	**C**	**C**	**C**	**C**	**C**
Marsh Hill Road and I-95 NB Ramps						
Eastbound Left, Left	D	D	D	D	E	E
Eastbound Thru/Right	B	B	B	B	B	B
Eastbound Right	A	B	B	A	A	A
Westbound Left	D	D	D	D	D	D
Westbound Right	A	A	A	A	A	A
Northbound Thru, Thru	C	C	B	C	C	C
Northbound Right	A	A	A	A	A	A
Southbound Left, Left	D	D	D	C	C	C
Southbound Thru, Thru	A	A	A	A	A	A
OVERALL	**C**	**C**	**C**	**C**	**C**	**C**
Marsh Hill Road, Salemme Lane, and SCG						
Eastbound Left/Thru/Right	--	--	A	--	--	A
Westbound Left/Thru/Right	--	--	A	--	--	C
Northbound Left	--	--	A	--	--	A
Northbound Thru/Right	--	--	B	--	--	B
Southbound Left	--	--	B	--	--	A
Southbound Thru	--	--	A	--	--	A
Southbound Right	--	--	A	--	--	A
OVERALL	--	--	**B**	--	--	**B**
Merwin Avenue and Anderson Avenue						
Eastbound Approach	B	C	C	C	C	C
Westbound Approach	B	B	B	B	B	B
Northbound Approach	B	B	B	B	B	B
Southbound Approach	A	B	B	B	B	B
Southeastbound Approach	B	C	C	C	C	C
OVERALL	**B**	**B**	**B**	**B**	**B**	**B**
Route 162 (Jones Hill Road) and Woodmont Road						
Eastbound Left/Right	C	C	C	C	C	C
Northbound Left/Thru	A	A	A	B	B	B
Southbound Thru/Right	A	A	A	B	B	B
OVERALL	**B**	**B**	**B**	**C**	**C**	**C**
Unsignalized Intersections						
I-95 Ramp and West Campus Drive						
Eastbound (Frontage Road) Thru	A	A	A	A	A	A
Eastbound (Frontage Road) Right	A	A	A	A	A	A
Northbound (Yale West Campus) Left	C	C	C	B	C	C
Northbound (Yale West Campus) Right	B	B	B	B	B	B
Marsh Hill Road and Salemme Lane						
Westbound Left/Right	B	C	--	B	D	--
Northbound Thru/Right	A	A	--	A	A	--
Southbound Left	B	B	--	A	A	--
Southbound Thru	A	A	--	A	A	--
Oxford Road and Merwin Avenue						
Eastbound Approach	C	D	D (C)**	F	F	F (F)**
Westbound Approach	F	F	F (D)**	B	C	C (B)**
Northbound Approach	D	E	E (D)**	C	C	C (B)**
OVERALL	E	F	F (D) **	F	F	F (E)**

( ): with minor timing adjustments ( )*: with minor timing adjustments associated with Scinto office development

( )**: with restriping and minor widening at Merwin Avenue and Oxford Road to accommodate turn lanes





NORTH

CONCEPTUAL ROADWAY IMPROVEMENTS

ORANGE TOD

MARSH HILL ROAD
ORANGE, CONNECTICUT

FEBRUARY 17, 2015

MILONE & MACBROOM®

APPENDIX

Appendix

LEVEL OF SERVICE
FOR
SIGNALIZED INTERSECTIONS

Level of service for signalized intersections is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions: in the absence of traffic control, geometric delay, any incidents, and any other vehicles. Specifically, LOS criteria for traffic signals are stated in terms of the average control delay per vehicle, typically for a 15-min analysis period. Delay is a complex measure and depends on a number of variables, including the quality of progression, the cycle length, the green ratio, and the v/c ratio for the lane group. The criteria are given below.

LEVEL-OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS	
LEVEL OF SERVICE	**AVERAGE CONTROL DELAY (sec/veh)**
A	≤ 10
B	> 10 AND ≤ 20
C	> 20 AND ≤ 35
D	> 35 AND ≤ 55
E	> 55 AND ≤ 80
F	> 80

Specific descriptions of each LOS for signalized intersections are provided below:

Level of Service A describes operations with very low control delay, up to 10 s/veh. This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.

Level of Service B describes operations with delay greater than 10 and up to 20 s/veh. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.

Level of Service C describes operations with control delay greater than 20 and up to 35 s/veh. These higher delays may result from only fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a given green phase does not serve queued vehicles and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

Level of Service D describes operations with control delay greater than 35 and up to 55 s/veh. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

Level of Service E describes operations with control delay greater than 55 and up to 80 s/veh. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.

Level of Service F describes operations with control delay in excess of 80 s/veh. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of lane groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.

Reference: Highway Capacity Manual 2000, Transportation Research Board, 2000.

LEVEL OF SERVICE
FOR
UNSIGNALIZED INTERSECTIONS
ALL-WAY STOP-CONTROL (AWSC)

The criteria for AWSC intersections have different threshold values than do those for signalized intersections primarily because drivers expect different levels of performance from distinct types of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an AWSC intersection. Thus a higher level of control delay is acceptable at a signalized intersection for the same LOS. The level-of-service criteria are given below.

LEVEL-OF SERVICE CRITERIA FOR AWSC INTERSECTIONS	
LEVEL OF SERVICE	**CONTROL DELAY (s/veh)**
A	**≤ 10**
B	**> 10 AND ≤ 15**
C	**> 15 AND ≤ 25**
D	**> 25 AND ≤ 35**
E	**> 35 AND ≤ 50**
F	**> 50**

Reference: Highway Capacity Manual 2000, Transportation Research Board, 2000.

LEVEL OF SERVICE
FOR TWO-WAY
STOP SIGN CONTROLLED INTERSECTIONS

The level of service for a TWSC (two-way stop controlled) intersection is determined by the computed or measured control delay and is defined for each minor movement. Level of service is not defined for the intersection as a whole. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. LOS criteria are given in the Table. LOS criteria are given below:

LEVEL-OF SERVICE CRITERIA FOR TWSC INTERSECTIONS	
LEVEL OF SERVICE	**AVERAGE CONTROL DELAY (s/veh)**
A	**≤ 10**
B	**> 10 AND ≤ 15**
C	**> 15 AND ≤ 25**
D	**> 25 AND ≤ 35**
E	**> 35 AND ≤ 50**
F	**> 50**

Reference: Highway Capacity Manual 2000, Transportation Research Board, 2000.

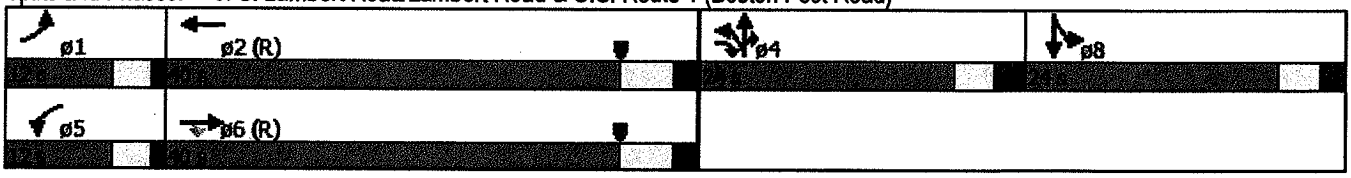
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	215	240	60	290	10	210	115	110	25	190	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			1%			1%			-1%	
Storage Length (ft)	175		175	260		0	180		0	0		0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (ft)	50			50			50			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	0.95
Frt			0.850		0.995				0.850		0.984	
Flt Protected	0.950			0.950			0.950	0.985			0.995	
Satd. Flow (prot)	1778	3557	1591	1761	3504	0	1673	1734	1575	0	3483	0
Flt Permitted	0.950			0.950			0.950	0.985			0.995	
Satd. Flow (perm)	1778	3557	1591	1761	3504	0	1673	1734	1575	0	3483	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			267		4				131		11	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		978			901			679			266	
Travel Time (s)		16.7			15.4			15.4			6.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	17	239	267	67	322	11	233	128	122	28	211	28
Shared Lane Traffic (%)							24%					
Lane Group Flow (vph)	17	239	267	67	333	0	177	184	122	0	267	0
Turn Type	Prot	NA	pm+ov	Prot	NA		Split	NA	Prot	Split	NA	
Protected Phases	1	6	4	5	2		4	4	4	8	8	
Permitted Phases			6									
Detector Phase	1	6	6	5	2		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	5.0	15.0	12.0	5.0	15.0		12.0	12.0	12.0	7.0	7.0	
Minimum Split (s)	9.0	21.0	17.0	9.0	21.0		17.0	17.0	17.0	12.0	12.0	
Total Split (s)	12.0	40.0	24.0	12.0	40.0		24.0	24.0	24.0	24.0	24.0	
Total Split (%)	12.0%	40.0%	24.0%	12.0%	40.0%		24.0%	24.0%	24.0%	24.0%	24.0%	
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	4.0	6.0	5.0	4.0	6.0		5.0	5.0	5.0		5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Recall Mode	None	C-Min	None	None	C-Min		None	None	None	None	None	
Act Effct Green (s)	5.7	47.1	68.8	7.1	52.2		15.7	15.7	15.7		11.8	
Actuated g/C Ratio	0.06	0.47	0.69	0.07	0.52		0.16	0.16	0.16		0.12	
v/c Ratio	0.17	0.14	0.23	0.54	0.18		0.67	0.67	0.34		0.63	
Control Delay	48.1	17.5	1.4	60.4	15.0		52.4	52.1	8.3		47.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	48.1	17.5	1.4	60.4	15.0		52.4	52.1	8.3		47.0	
LOS	D	B	A	E	B		D	D	A		D	
Approach Delay		10.3			22.6			41.2			47.0	
Approach LOS		B			C			D			D	
Stops (vph)	17	123	12	56	159		146	152	15		213	
Fuel Used(gal)	0	3	2	2	4		4	5	2		5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
CO Emissions (g/hr)	29	238	124	116	301		312	325	114		321	
NOx Emissions (g/hr)	6	46	24	23	59		61	63	22		62	
VOC Emissions (g/hr)	7	55	29	27	70		72	75	26		74	
Dilemma Vehicles (#)	0	11	0	0	15		0	0	0		0	
Queue Length 50th (ft)	11	46	0	42	50		112	117	0		83	
Queue Length 95th (ft)	32	81	28	86	106		182	187	42		120	
Internal Link Dist (ft)		898			821			599			186	
Turn Bay Length (ft)	175		175	260			180					
Base Capacity (vph)	142	1675	1178	140	1830		317	329	405		670	
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	
Reduced v/c Ratio	0.12	0.14	0.23	0.48	0.18		0.56	0.56	0.30		0.40	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 45 (45%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 28.0 Intersection LOS: C
Intersection Capacity Utilization 50.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: S. Lambert Road/Lambert Road & U.S. Route 1 (Boston Post Road)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	55	50	305	85	90	0	430	325	50	445	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			1%	
Storage Length (ft)	125		0	200		200	0		175	225		0
Storage Lanes	1		0	1		1	0		1	1		0
Taper Length (ft)	50			50			25			50		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.928				0.850			0.850		0.998	
Flt Protected	0.950			0.950	0.972					0.950		
Satd. Flow (prot)	1770	1729	0	1681	1720	1583	0	3557	1591	1761	3514	0
Flt Permitted	0.950			0.950	0.972					0.950		
Satd. Flow (perm)	1770	1729	0	1681	1720	1583	0	3557	1591	1761	3514	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		49				100			361		2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		624			1998			409			905	
Travel Time (s)		14.2			45.4			9.3			20.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	61	56	339	94	100	0	478	361	56	494	6
Shared Lane Traffic (%)				37%								
Lane Group Flow (vph)	22	117	0	214	219	100	0	478	361	56	500	0
Turn Type	Split	NA		Split	NA	pt+ov		NA	pt+ov	Prot	NA	
Protected Phases	5	5		4	4	1 4		2	2 4	1	1 2	
Permitted Phases												
Detector Phase	5	5		4	4	4		2	2	1	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		5.0	5.0			16.0		6.0		
Minimum Split (s)	11.0	11.0		9.0	9.0			21.0		10.0		
Total Split (s)	18.0	18.0		19.0	19.0			29.0		14.0		
Total Split (%)	22.5%	22.5%		23.8%	23.8%			36.3%		17.5%		
Yellow Time (s)	3.0	3.0		3.0	3.0			3.0		3.0		
All-Red Time (s)	2.0	2.0		1.0	1.0			2.0		1.0		
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0		
Total Lost Time (s)	5.0	5.0		4.0	4.0			5.0		4.0		
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Recall Mode	None	None		None	None			Min		None		
Act Effct Green (s)	8.2	8.2		11.6	11.6	15.5		19.5	37.3	7.6	26.5	
Actuated g/C Ratio	0.14	0.14		0.20	0.20	0.27		0.34	0.66	0.13	0.47	
v/c Ratio	0.09	0.40		0.63	0.62	0.20		0.39	0.31	0.24	0.30	
Control Delay	28.1	22.3		33.6	33.3	3.4		18.9	1.9	30.8	11.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay	28.1	22.3		33.6	33.3	3.4		18.9	1.9	30.8	11.0	
LOS	C	C		C	C	A		B	A	C	B	
Approach Delay		23.2			27.8			11.6			13.0	
Approach LOS		C			C			B			B	
Stops (vph)	20	58		158	160	14		307	21	45	247	
Fuel Used(gal)	0	1		5	5	2		6	2	1	8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
CO Emissions (g/hr)	23	91		364	370	108		438	171	82	554	
NOx Emissions (g/hr)	4	18		71	72	21		85	33	16	108	
VOC Emissions (g/hr)	5	21		84	86	25		101	40	19	129	
Dilemma Vehicles (#)	0	0		0	0	0		0	0	0	0	
Queue Length 50th (ft)	7	23		74	75	0		76	0	19	55	
Queue Length 95th (ft)	29	77		#195	#198	18		141	35	59	103	
Internal Link Dist (ft)		544			1918			329			825	
Turn Bay Length (ft)	125			200		200			175	225		
Base Capacity (vph)	451	477		494	505	638		1674	1169	345	2089	
Starvation Cap Reductn	0	0		0	0	0		0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0		0	0	0	0	
Storage Cap Reductn	0	0		0	0	0		0	0	0	0	
Reduced v/c Ratio	0.05	0.25		0.43	0.43	0.16		0.29	0.31	0.16	0.24	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 56.7
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.63
Intersection Signal Delay: 16.9 Intersection LOS: B
Intersection Capacity Utilization 46.5% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Marsh Hill Road/S. Lambert Road & Indian River Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	0	15	85	0	25	90	725	245	55	705	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	175		0	170		115
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			140			140			105		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.850			0.850			0.962				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1583	0	1770	1583	0	1770	3405	0	1770	3539	1583
Flt Permitted							0.241			0.265		
Satd. Flow (perm)	1863	1583	0	1863	1583	0	449	3405	0	494	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		361			331			125				116
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		331			904			894			460	
Travel Time (s)		7.5			24.7			20.3			10.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	0	17	94	0	28	100	806	272	61	783	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	17	0	94	28	0	100	1078	0	61	783	44
Turn Type	pm+pt	NA		pm+pt	NA		custom	NA		Perm	NA	Prot
Protected Phases	3	4		7	8		1	1 6			2	2
Permitted Phases	4			8			6			2		
Detector Phase	3	4		7	8		1	1 6		2	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0			25.0	25.0	25.0
Minimum Split (s)	11.0	11.4		11.0	11.4		9.2			29.9	29.9	29.9
Total Split (s)	11.0	11.4		11.0	11.4		16.2			51.4	51.4	51.4
Total Split (%)	12.2%	12.7%		12.2%	12.7%		18.0%			57.1%	57.1%	57.1%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0			3.3	3.3	3.3
All-Red Time (s)	1.0	1.4		1.0	1.4		1.2			1.6	1.6	1.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0			0.0	0.0	0.0
Total Lost Time (s)	4.0	4.4		4.0	4.4		4.2			4.9	4.9	4.9
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Recall Mode	None	None		None	None		None			Min	Min	Min
Act Effct Green (s)	9.8	7.3		9.8	7.3		42.2	43.5		26.5	26.5	26.5
Actuated g/C Ratio	0.17	0.12		0.17	0.12		0.72	0.74		0.45	0.45	0.45
v/c Ratio	0.02	0.03		0.32	0.06		0.18	0.42		0.27	0.49	0.06
Control Delay	20.0	0.1		24.4	0.2		5.1	4.9		18.5	15.1	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	20.0	0.1		24.4	0.2		5.1	4.9		18.5	15.1	0.1
LOS	B	A		C	A		A	A		B	B	A
Approach Delay		5.3			18.9			4.9			14.6	
Approach LOS		A			B			A			B	
Stops (vph)	6	0		67	0		29	322		40	474	0
Fuel Used(gal)	0	0		3	1		1	10		1	10	0
CO Emissions (g/hr)	5	3		212	48		62	665		56	669	19

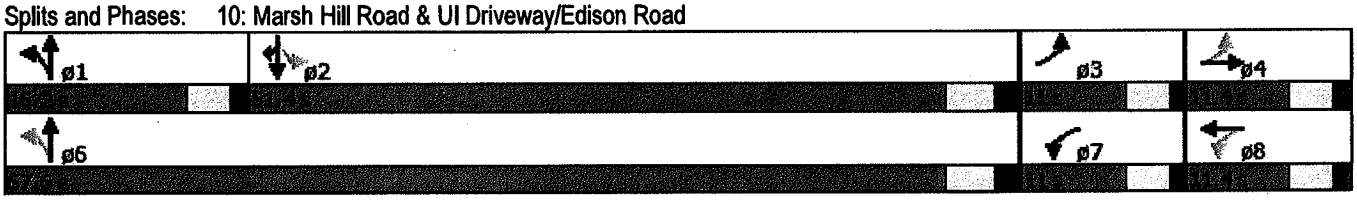
Lane Group	6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	25.0
Minimum Split (s)	29.9
Total Split (s)	67.6
Total Split (%)	75%
Yellow Time (s)	3.3
All-Red Time (s)	1.6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	Min
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)	1	1		41	9		12	129		11	130	4
VOC Emissions (g/hr)	1	1		49	11		14	154		13	155	4
Dilemma Vehicles (#)	0	0		0	0		0	0		0	0	0
Queue Length 50th (ft)	2	0		30	0		7	44		13	95	0
Queue Length 95th (ft)	11	0		67	0		31	142		49	191	0
Internal Link Dist (ft)		251			824			814			380	
Turn Bay Length (ft)				100			175			170		115
Base Capacity (vph)	298	512		298	486		604	3284		392	2809	1280
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.02	0.03		0.32	0.06		0.17	0.33		0.16	0.28	0.03

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 58.7
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.49
Intersection Signal Delay: 9.6 Intersection LOS: A
Intersection Capacity Utilization 71.3% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 10: Marsh Hill Road & UI Driveway/Edison Road



Lane Group	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	50	35	385	40	385	45	595	350	185	615	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	350		350	300		300	300		300
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (ft)	50			100			50			100		
Lane Util. Factor	1.00	1.00	1.00	0.91	0.86	0.91	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.929	0.850			0.850			0.850
Flt Protected	0.950			0.950	0.979		0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1610	2914	1441	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950	0.979		0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1610	2914	1441	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			152		214	214			389			148
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		381			611			1181			894	
Travel Time (s)		8.7			13.9			26.8			20.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	56	39	428	44	428	50	661	389	206	683	56
Shared Lane Traffic (%)				45%		50%						
Lane Group Flow (vph)	56	56	39	235	451	214	50	661	389	206	683	56
Turn Type	Split	NA	Perm	Split	NA	Prot	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		7	7	7	1	6		5	2	
Permitted Phases			4						6			2
Detector Phase	4	4	4	7	7	7	1			5		
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	5.0	19.0	19.0	5.0	19.0	19.0
Minimum Split (s)	12.5	12.5	12.5	12.7	12.7	12.7	9.0	24.8	24.8	9.0	24.8	24.8
Total Split (s)	17.5	17.5	17.5	27.7	27.7	27.7	15.0	25.8	25.8	19.0	29.8	29.8
Total Split (%)	19.4%	19.4%	19.4%	30.8%	30.8%	30.8%	16.7%	28.7%	28.7%	21.1%	33.1%	33.1%
Yellow Time (s)	3.0	3.0	3.0	3.2	3.2	3.2	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	1.0	1.8	1.8	1.0	1.8	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.7	5.7	5.7	4.0	5.8	5.8	4.0	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	8.1	8.1	8.1	17.5	17.5	17.5	7.3	32.4	32.4	13.5	42.4	42.4
Actuated g/C Ratio	0.09	0.09	0.09	0.19	0.19	0.19	0.08	0.36	0.36	0.15	0.47	0.47
v/c Ratio	0.35	0.33	0.14	0.75	0.61	0.47	0.35	0.52	0.48	0.78	0.41	0.07
Control Delay	44.3	43.5	1.0	49.0	20.0	7.9	55.3	27.6	10.1	57.1	20.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.3	43.5	1.0	49.0	20.0	7.9	55.3	27.6	10.1	57.1	20.4	0.2
LOS	D	D	A	D	C	A	E	C	B	E	C	A
Approach Delay		32.8			24.7			22.7			27.2	
Approach LOS		C			C			C			C	
Stops (vph)	46	46	0	194	187	26	42	520	218	169	415	0
Fuel Used(gal)	1	1	0	4	5	1	1	12	5	4	9	0
CO Emissions (g/hr)	60	59	8	293	323	96	81	818	360	306	639	24

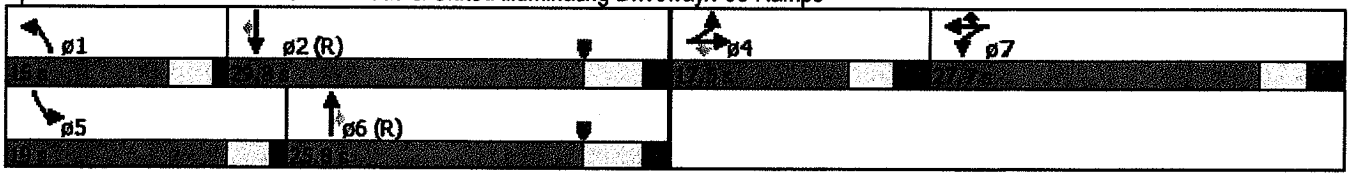
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)	12	11	2	57	63	19	16	159	70	59	124	5
VOC Emissions (g/hr)	14	14	2	68	75	22	19	190	83	71	148	6
Dilemma Vehicles (#)	0	0	0	0	0	0	0	0	0	0	0	0
Queue Length 50th (ft)	31	31	0	137	68	0	27	206	88	112	148	0
Queue Length 95th (ft)	66	66	0	215	116	59	m59	270	m119	#206	238	0
Internal Link Dist (ft)		301			531			1101			814	
Turn Bay Length (ft)			200	350		350	300		300	300		300
Base Capacity (vph)	236	248	342	393	874	513	216	1273	818	295	1667	824
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.23	0.11	0.60	0.52	0.42	0.23	0.52	0.48	0.70	0.41	0.07

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 24 (27%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 25.2 Intersection LOS: C
Intersection Capacity Utilization 61.0% ICU Level of Service B
Analysis Period (min) 15

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 12: Marsh Hill Road & United Illuminating Driveway/I-95 Ramps



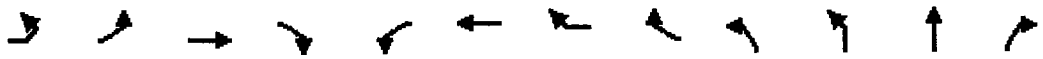
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	360	40	285	5	0	5	0	625	360	435	600	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		350	0		300	0		350	600		0
Storage Lanes	2		3	1		1	0		1	2		0
Taper Length (ft)	25			25			25			250		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt		0.886	0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3433	1568	1504	1770	0	1583	0	3539	1583	3433	3539	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3433	1568	1504	1770	0	1583	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		139	179			182			378			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		758			604			603			1181	
Travel Time (s)		17.2			13.7			13.7			26.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	400	44	317	6	0	6	0	694	400	483	667	0
Shared Lane Traffic (%)			44%									
Lane Group Flow (vph)	400	183	178	6	0	6	0	694	400	483	667	0
Turn Type	Split	NA	Prot	Prot		Prot		NA	pt+ov	Prot	NA	
Protected Phases	5	5	5	4		4		2	2 4	1	1 2	
Permitted Phases												
Detector Phase	5	5	5	4		4				1		
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0		7.0		21.0		5.0		
Minimum Split (s)	12.7	12.7	12.7	12.5		12.5		27.8		10.5		
Total Split (s)	19.7	19.7	19.7	16.5		16.5		33.3		20.5		
Total Split (%)	21.9%	21.9%	21.9%	18.3%		18.3%		37.0%		22.8%		
Yellow Time (s)	3.2	3.2	3.2	3.0		3.0		4.0		3.0		
All-Red Time (s)	2.5	2.5	2.5	2.5		2.5		2.8		2.5		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0		0.0		
Total Lost Time (s)	5.7	5.7	5.7	5.5		5.5		6.8		5.5		
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?												
Recall Mode	None	None	None	None		None		C-Min		None		
Act Effct Green (s)	13.3	13.3	13.3	7.0		7.0		41.6	44.1	14.6	63.0	
Actuated g/C Ratio	0.15	0.15	0.15	0.08		0.08		0.46	0.49	0.16	0.70	
v/c Ratio	0.79	0.52	0.48	0.04		0.02		0.42	0.41	0.87	0.27	
Control Delay	49.1	16.5	10.1	39.2		0.2		24.9	8.8	44.2	5.1	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	49.1	16.5	10.1	39.2		0.2		24.9	8.8	44.2	5.1	
LOS	D	B	B	D		A		C	A	D	A	
Approach Delay		32.1						19.0			21.5	
Approach LOS		C						B			C	
Stops (vph)	333	49	24	8		0		484	86	394	242	
Fuel Used(gal)	8	2	1	0		0		9	3	10	7	
CO Emissions (g/hr)	529	126	98	8		2		614	197	706	523	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)	103	24	19	1		0		119	38	137	102	
VOC Emissions (g/hr)	123	29	23	2		0		142	46	164	121	
Dilemma Vehicles (#)	0	0	0	0		0		0	0	0	0	
Queue Length 50th (ft)	113	23	0	3		0		165	45	144	55	
Queue Length 95th (ft)	#168	88	58	15		0		267	92	#223	150	
Internal Link Dist (ft)		678			524			523			1101	
Turn Bay Length (ft)			350			300			350	600		
Base Capacity (vph)	534	361	385	216		353		1634	968	572	2477	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.75	0.51	0.46	0.03		0.02		0.42	0.41	0.84	0.27	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 1 (1%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 23.3 Intersection LOS: C
Intersection Capacity Utilization 61.8% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 11: Marsh Hill Road & I-95 NB Off Ramp/Frontage Road



Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	5	100	95	40	5	75	5	60	110	10	320	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)			0%			0%					-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.978			0.939					0.998	
Flt Protected			0.979			0.998					0.987	
Satd. Flow (prot)	0	0	1784	0	0	1746	0	0	0	0	1844	0
Flt Permitted			0.820			0.986					0.851	
Satd. Flow (perm)	0	0	1494	0	0	1725	0	0	0	0	1590	0
Right Turn on Red				No				No				No
Satd. Flow (RTOR)												
Link Speed (mph)			25			25					25	
Link Distance (ft)			634			454					531	
Travel Time (s)			17.3			12.4					14.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	111	106	44	6	83	6	67	122	11	356	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	267	0	0	162	0	0	0	0	495	0
Turn Type	Perm	Perm	NA		Perm	NA			Perm	Perm	NA	
Protected Phases			1			1					2	
Permitted Phases	1	1			1				2	2		
Detector Phase	1	1	1		1	1			2	2	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0		7.0	7.0			7.0	7.0	7.0	
Minimum Split (s)	11.0	11.0	11.0		11.0	11.0			11.0	11.0	11.0	
Total Split (s)	19.0	19.0	19.0		19.0	19.0			30.0	30.0	30.0	
Total Split (%)	31.7%	31.7%	31.7%		31.7%	31.7%			50.0%	50.0%	50.0%	
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0			3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0			1.0	1.0	1.0	
Lost Time Adjust (s)			0.0			0.0					0.0	
Total Lost Time (s)			4.0			4.0					4.0	
Lead/Lag	Lead	Lead	Lead		Lead	Lead			Lag	Lag	Lag	
Lead-Lag Optimize?												
Recall Mode	None	None	None		None	None			Min	Min	Min	
Act Effct Green (s)			13.2			13.2					20.3	
Actuated g/C Ratio			0.29			0.29					0.45	
v/c Ratio			0.62			0.32					0.70	
Control Delay			25.1			17.7					18.3	
Queue Delay			0.0			0.0					0.0	
Total Delay			25.1			17.7					18.3	
LOS			C			B					B	
Approach Delay			25.1			17.7					18.3	
Approach LOS			C			B					B	
Stops (vph)			182			105					328	
Fuel Used(gal)			3			1					5	
CO Emissions (g/hr)			225			104					345	
NOx Emissions (g/hr)			44			20					67	
VOC Emissions (g/hr)			52			24					80	

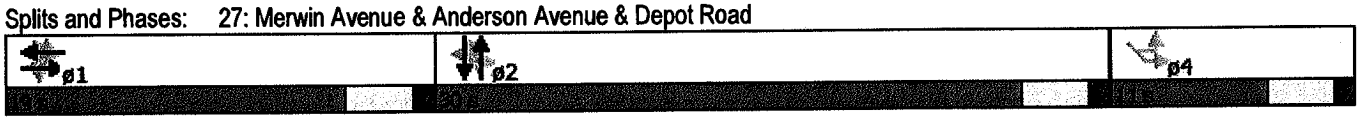
Lane Group	SEL	SET	SBR	SBR2	SEL2	SET	SER	SER2
Lane Configurations								
Volume (vph)	25	185	40	5	5	5	10	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%				0%		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.976				0.921		
Flt Protected		0.995				0.980		
Satd. Flow (prot)	0	1800	0	0	0	1681	0	0
Flt Permitted		0.936				0.980		
Satd. Flow (perm)	0	1693	0	0	0	1681	0	0
Right Turn on Red				No				No
Satd. Flow (RTOR)								
Link Speed (mph)		25				25		
Link Distance (ft)		2088				725		
Travel Time (s)		56.9				19.8		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	28	206	44	6	6	6	11	6
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	284	0	0	0	29	0	0
Turn Type	Perm	NA			Perm	Perm		
Protected Phases		2						
Permitted Phases	2				4	4		
Detector Phase	2	2			4	4		
Switch Phase								
Minimum Initial (s)	7.0	7.0			7.0	7.0		
Minimum Split (s)	11.0	11.0			11.0	11.0		
Total Split (s)	30.0	30.0			11.0	11.0		
Total Split (%)	50.0%	50.0%			18.3%	18.3%		
Yellow Time (s)	3.0	3.0			3.0	3.0		
All-Red Time (s)	1.0	1.0			1.0	1.0		
Lost Time Adjust (s)		0.0				0.0		
Total Lost Time (s)		4.0				4.0		
Lead/Lag	Lag	Lag						
Lead-Lag Optimize?								
Recall Mode	Min	Min			None	None		
Act Effct Green (s)		20.3				7.5		
Actuated g/C Ratio		0.45				0.16		
v/c Ratio		0.38				0.10		
Control Delay		11.6				23.2		
Queue Delay		0.0				0.0		
Total Delay		11.6				23.2		
LOS		B				C		
Approach Delay		11.6				23.2		
Approach LOS		B				C		
Stops (vph)		155				24		
Fuel Used(gal)		7				0		
CO Emissions (g/hr)		481				26		
NOx Emissions (g/hr)		94				5		
VOC Emissions (g/hr)		111				6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR
Dilemma Vehicles (#)		0			0				0	
Queue Length 50th (ft)		46			26				82	
Queue Length 95th (ft)		#188			95				#251	
Internal Link Dist (ft)		554			374				451	
Turn Bay Length (ft)										
Base Capacity (vph)		527			609				973	
Starvation Cap Reductn		0			0				0	
Spillback Cap Reductn		0			0				0	
Storage Cap Reductn		0			0				0	
Reduced v/c Ratio		0.51			0.27				0.51	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 45.5
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 18.3 Intersection LOS: B
Intersection Capacity Utilization 81.6% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 27: Merwin Avenue & Anderson Avenue & Depot Road



Lane Group	SBL	SBT	SBR	SBR2	SEL	SER	SER2
Dilemma Vehicles (#)	0				0		
Queue Length 50th (ft)	39				6		
Queue Length 95th (ft)	119				30		
Internal Link Dist (ft)	2008				645		
Turn Bay Length (ft)							
Base Capacity (vph)	1036				277		
Starvation Cap Reductn	0				0		
Spillback Cap Reductn	0				0		
Storage Cap Reductn	0				0		
Reduced v/c Ratio	0.27				0.10		

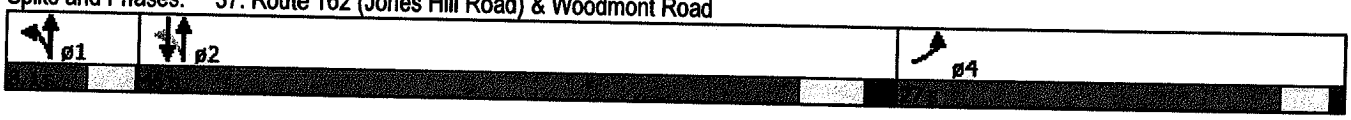
Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	220	90	150	150	70	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.961				0.897	
Flt Protected	0.966			0.976		
Satd. Flow (prot)	1729	0	0	1818	1671	0
Flt Permitted	0.966			0.720		
Satd. Flow (perm)	1729	0	0	1341	1671	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	25				256	
Link Speed (mph)	25			25	25	
Link Distance (ft)	929			995	702	
Travel Time (s)	25.3			27.1	19.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	244	100	167	167	78	256
Shared Lane Traffic (%)						
Lane Group Flow (vph)	344	0	0	334	334	0
Turn Type	Prot		D.P+P	NA	NA	
Protected Phases	4		1	1 2	2	
Permitted Phases			2			
Detector Phase	4			2	2	
Switch Phase						
Minimum Initial (s)	7.0		3.0		15.0	
Minimum Split (s)	11.0		6.1		21.0	
Total Split (s)	27.0		8.1		46.0	
Total Split (%)	33.3%		10.0%		56.7%	
Yellow Time (s)	3.0		3.0		4.0	
All-Red Time (s)	1.0		0.1		2.0	
Lost Time Adjust (s)	0.0				0.0	
Total Lost Time (s)	4.0				6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Recall Mode	None		Max		Min	
Act Effct Green (s)	13.0			24.0	15.9	
Actuated g/C Ratio	0.27			0.51	0.34	
v/c Ratio	0.70			0.46	0.46	
Control Delay	22.4			9.3	6.3	
Queue Delay	0.0			0.0	0.0	
Total Delay	22.4			9.3	6.3	
LOS	C			A	A	
Approach Delay	22.4			9.3	6.3	
Approach LOS	C			A	A	
Stops (vph)	236			168	70	
Fuel Used(gal)	6			4	2	
CO Emissions (g/hr)	393			263	172	
NOx Emissions (g/hr)	76			51	33	
VOC Emissions (g/hr)	91			61	40	
Dilemma Vehicles (#)	0			0	0	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 50th (ft)	74			39	14	
Queue Length 95th (ft)	157			106	68	
Internal Link Dist (ft)	849			915	622	
Turn Bay Length (ft)						
Base Capacity (vph)	864			1307	1469	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.40			0.26	0.23	

Intersection Summary		
Area Type:	Other	
Cycle Length: 81.1		
Actuated Cycle Length: 47.3		
Natural Cycle: 45		
Control Type: Semi Act-Uncoord		
Maximum v/c Ratio: 0.70		
Intersection Signal Delay: 12.8		Intersection LOS: B
Intersection Capacity Utilization 63.4%		ICU Level of Service B
Analysis Period (min) 15		

Splits and Phases: 37: Route 162 (Jones Hill Road) & Woodmont Road



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	675	160	0	0	5	15
Sign Control	Free			Free	Stop	
Grade	0%			0%	-2%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	750	178	0	0	6	17
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	604					
pX, platoon unblocked						
vC, conflicting volume			928		750	375
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			928		750	375
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	97
cM capacity (veh/h)			733		347	623

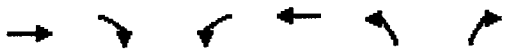
Direction, Lane #	SB 1	SB 2	SB 3	NB 1	NB 2
Volume Total	375	375	178	6	17
Volume Left	0	0	0	6	0
Volume Right	0	0	178	0	17
cSH	1700	1700	1700	347	623
Volume to Capacity	0.22	0.22	0.10	0.02	0.03
Queue Length 95th (ft)	0	0	0	1	2
Control Delay (s)	0.0	0.0	0.0	15.5	10.9
Lane LOS				C	B
Approach Delay (s)	0.0			12.1	
Approach LOS				B	

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	28.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	5	35	930	65	170	725
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	39	1033	72	189	806
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			143			603
pX, platoon unblocked	0.94	0.92			0.92	
vC, conflicting volume	1850	553			1106	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1571	331			934	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	94			72	
cM capacity (veh/h)	68	610			668	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	44	669	417	189	403	403
Volume Left	6	0	0	189	0	0
Volume Right	39	0	72	0	0	0
cSH	306	1700	1700	668	1700	1700
Volume to Capacity	0.15	0.41	0.25	0.28	0.24	0.24
Queue Length 95th (ft)	13	0	0	29	0	0
Control Delay (s)	18.8	0.0	0.0	12.5	0.0	0.0
Lane LOS	C			B		
Approach Delay (s)	18.8	0.0		2.4		
Approach LOS	C					

Intersection Summary				
Average Delay	1.5			
Intersection Capacity Utilization	Err%	ICU Level of Service		H
Analysis Period (min)	15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	295	75	200	365	320	120
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	328	83	222	406	356	133

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	411	628	489
Volume Left (vph)	0	222	356
Volume Right (vph)	83	0	133
Hadj (s)	-0.09	0.10	0.02
Departure Headway (s)	6.7	6.7	6.7
Degree Utilization, x	0.77	1.0	0.91
Capacity (veh/h)	522	537	524
Control Delay (s)	28.5	121.3	46.3
Approach Delay (s)	28.5	121.3	46.3
Approach LOS	D	F	E

Intersection Summary			
Delay	72.3		
Level of Service	F		
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		

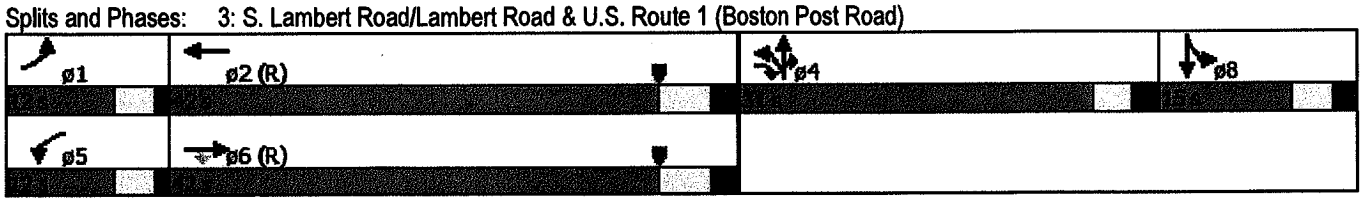
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	680	325	85	560	35	450	325	170	20	105	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			1%			1%			-1%	
Storage Length (ft)	175		175	260		0	180		0	0		0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (ft)	50			50			50			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	0.95
Frt			0.850		0.991				0.850		0.975	
Flt Protected	0.950			0.950			0.950	0.991			0.993	
Satd. Flow (prot)	1778	3557	1591	1761	3490	0	1673	1745	1575	0	3444	0
Flt Permitted	0.950			0.950			0.950	0.991			0.993	
Satd. Flow (perm)	1778	3557	1591	1761	3490	0	1673	1745	1575	0	3444	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			235		7				189		19	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		978			901			679			266	
Travel Time (s)		16.7			15.4			15.4			6.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	756	361	94	622	39	500	361	189	22	117	28
Shared Lane Traffic (%)							16%					
Lane Group Flow (vph)	50	756	361	94	661	0	420	441	189	0	167	0
Turn Type	Prot	NA	pm+ov	Prot	NA		Split	NA	Prot	Split	NA	
Protected Phases	1	6	4	5	2		4	4	4	8	8	
Permitted Phases			6									
Detector Phase	1	6	6	5	2		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	5.0	15.0	12.0	5.0	15.0		12.0	12.0	12.0	7.0	7.0	
Minimum Split (s)	9.0	21.0	17.0	9.0	21.0		17.0	17.0	17.0	12.0	12.0	
Total Split (s)	12.0	42.0	31.0	12.0	42.0		31.0	31.0	31.0	15.0	15.0	
Total Split (%)	12.0%	42.0%	31.0%	12.0%	42.0%		31.0%	31.0%	31.0%	15.0%	15.0%	
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	4.0	6.0	5.0	4.0	6.0		5.0	5.0	5.0		5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Recall Mode	None	C-Min	None	None	C-Min		None	None	None	None	None	
Act Effct Green (s)	6.8	37.7	69.7	7.6	40.3		26.0	26.0	26.0		8.7	
Actuated g/C Ratio	0.07	0.38	0.70	0.08	0.40		0.26	0.26	0.26		0.09	
v/c Ratio	0.41	0.56	0.31	0.71	0.47		0.97	0.97	0.34		0.53	
Control Delay	54.6	27.0	2.8	73.5	24.1		73.9	74.3	6.3		44.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	54.6	27.0	2.8	73.5	24.1		73.9	74.3	6.3		44.7	
LOS	D	C	A	E	C		E	E	A		D	
Approach Delay		20.7			30.3			61.9			44.7	
Approach LOS		C			C			E			D	
Stops (vph)	42	523	41	78	426		326	342	21		123	
Fuel Used(gal)	1	13	3	3	11		12	13	2		3	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
CO Emissions (g/hr)	85	936	192	179	751		850	895	170		192	
NOx Emissions (g/hr)	16	182	37	35	146		165	174	33		37	
VOC Emissions (g/hr)	20	217	44	41	174		197	207	39		45	
Dilemma Vehicles (#)	0	34	0	0	30		0	0	0		0	
Queue Length 50th (ft)	31	199	24	59	165		278	293	0		48	
Queue Length 95th (ft)	69	264	56	#134	226		#481	#500	53		81	
Internal Link Dist (ft)		898			821			599			186	
Turn Bay Length (ft)	175		175	260			180					
Base Capacity (vph)	142	1342	1180	140	1409		434	453	549		361	
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	
Reduced v/c Ratio	0.35	0.56	0.31	0.67	0.47		0.97	0.97	0.34		0.46	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 45 (45%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 38.1 Intersection LOS: D
Intersection Capacity Utilization 67.0% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: S. Lambert Road/Lambert Road & U.S. Route 1 (Boston Post Road)



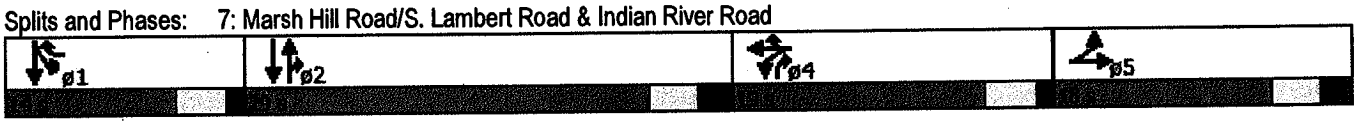
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	170	40	325	110	55	0	760	595	120	405	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			1%	
Storage Length (ft)	125		0	200		200	0		175	225		0
Storage Lanes	1		0	1		1	0		1	1		0
Taper Length (ft)	50			50			25			50		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.972				0.850			0.850		0.993	
Flt Protected	0.950			0.950	0.976					0.950		
Satd. Flow (prot)	1770	1811	0	1681	1727	1583	0	3557	1591	1761	3497	0
Flt Permitted	0.950			0.950	0.976					0.950		
Satd. Flow (perm)	1770	1811	0	1681	1727	1583	0	3557	1591	1761	3497	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13				95			254		9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		624			1998			409			905	
Travel Time (s)		14.2			45.4			9.3			20.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	189	44	361	122	61	0	844	661	133	450	22
Shared Lane Traffic (%)				34%								
Lane Group Flow (vph)	56	233	0	238	245	61	0	844	661	133	472	0
Turn Type	Split	NA		Split	NA	pt+ov		NA	pt+ov	Prot	NA	
Protected Phases	5	5		4	4	1 4		2	2 4	1	1 2	
Permitted Phases												
Detector Phase	5	5		4	4	4		2	2	1	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		5.0	5.0			16.0		6.0		
Minimum Split (s)	11.0	11.0		9.0	9.0			21.0		10.0		
Total Split (s)	18.0	18.0		19.0	19.0			29.0		14.0		
Total Split (%)	22.5%	22.5%		23.8%	23.8%			36.3%		17.5%		
Yellow Time (s)	3.0	3.0		3.0	3.0			3.0		3.0		
All-Red Time (s)	2.0	2.0		1.0	1.0			2.0		1.0		
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0		
Total Lost Time (s)	5.0	5.0		4.0	4.0			5.0		4.0		
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?												
Recall Mode	None	None		None	None			Min		None		
Act Effct Green (s)	11.9	11.9		13.5	13.5	20.6		22.8	40.4	8.9	33.9	
Actuated g/C Ratio	0.16	0.16		0.19	0.19	0.28		0.31	0.55	0.12	0.47	
v/c Ratio	0.19	0.76		0.77	0.77	0.12		0.76	0.66	0.62	0.29	
Control Delay	30.9	47.5		48.1	47.8	1.5		29.3	11.4	46.6	12.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay	30.9	47.5		48.1	47.8	1.5		29.3	11.4	46.6	12.2	
LOS	C	D		D	D	A		C	B	D	B	
Approach Delay		44.3			42.7			21.4			19.8	
Approach LOS		D			D			C			B	
Stops (vph)	44	169		182	187	4		645	267	105	230	
Fuel Used(gal)	1	4		6	7	1		13	7	3	8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
CO Emissions (g/hr)	56	279		450	462	63		926	461	224	530	
NOx Emissions (g/hr)	11	54		88	90	12		180	94	44	103	
VOC Emissions (g/hr)	13	65		104	107	15		215	112	52	123	
Dilemma Vehicles (#)	0	0		0	0	0		0	0	0	0	
Queue Length 50th (ft)	25	106		120	123	0		202	132	64	68	
Queue Length 95th (ft)	57	#216		#232	#237	7		272	254	#131	98	
Internal Link Dist (ft)		544			1918			329			825	
Turn Bay Length (ft)	125			200		200			175	225		
Base Capacity (vph)	329	348		361	370	560		1222	996	252	1739	
Starvation Cap Reductn	0	0		0	0	0		0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0		0	0	0	0	
Storage Cap Reductn	0	0		0	0	0		0	0	0	0	
Reduced v/c Ratio	0.17	0.67		0.66	0.66	0.11		0.69	0.66	0.53	0.27	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 72.8
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 27.3 Intersection LOS: C
Intersection Capacity Utilization 66.5% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Marsh Hill Road/S. Lambert Road & Indian River Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	5	75	220	0	85	10	1215	155	40	725	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	175		0	170		115
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			140			140			105		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.860			0.850			0.983				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1602	0	1770	1583	0	1770	3479	0	1770	3539	1583
Flt Permitted	0.727			0.727			0.245			0.142		
Satd. Flow (perm)	1354	1602	0	1354	1583	0	456	3479	0	265	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		83			143			36				116
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		331			904			894			460	
Travel Time (s)		7.5			24.7			20.3			10.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	6	83	244	0	94	11	1350	172	44	806	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	89	0	244	94	0	11	1522	0	44	806	6
Turn Type	pm+pt	NA		pm+pt	NA		custom	NA		Perm	NA	custom
Protected Phases	3	4		7	8		1	16			2	2
Permitted Phases	4			8			6			2		2
Detector Phase	3	4		7	8		1	16		2	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0			25.0	25.0	25.0
Minimum Split (s)	11.0	11.4		11.0	11.4		9.2			29.9	29.9	29.9
Total Split (s)	11.0	12.4		11.0	12.4		11.2			55.4	55.4	55.4
Total Split (%)	12.2%	13.8%		12.2%	13.8%		12.4%			61.6%	61.6%	61.6%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0			3.3	3.3	3.3
All-Red Time (s)	1.0	1.4		1.0	1.4		1.2			1.6	1.6	1.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0			0.0	0.0	0.0
Total Lost Time (s)	4.0	4.4		4.0	4.4		4.2			4.9	4.9	4.9
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Recall Mode	None	None		None	None		None			Min	Min	Min
Act Effct Green (s)	13.1	7.4		13.1	7.4		44.7	44.7		32.5	32.5	32.5
Actuated g/C Ratio	0.19	0.11		0.19	0.11		0.65	0.65		0.47	0.47	0.47
v/c Ratio	0.20	0.36		0.82	0.32		0.03	0.67		0.35	0.49	0.01
Control Delay	25.2	14.9		50.1	5.3		4.8	9.7		21.4	13.9	0.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	25.2	14.9		50.1	5.3		4.8	9.7		21.4	13.9	0.0
LOS	C	B		D	A		A	A		C	B	A
Approach Delay		19.1			37.6			9.6			14.2	
Approach LOS		B			D			A			B	
Stops (vph)	43	22		186	5		4	752		26	451	0
Fuel Used(gal)	1	1		9	2		0	16		1	9	0
CO Emissions (g/hr)	46	40		632	172		7	1147		41	661	2

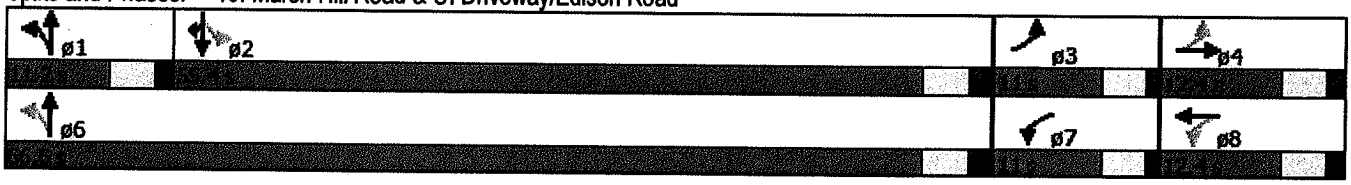
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	25.0
Minimum Split (s)	29.9
Total Split (s)	66.6
Total Split (%)	74%
Yellow Time (s)	3.3
All-Red Time (s)	1.6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	Min
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)	9	8		123	34		1	223		8	129	0
VOC Emissions (g/hr)	11	9		147	40		2	266		10	153	1
Dilemma Vehicles (#)	0	0		0	0		0	0		0	0	0
Queue Length 50th (ft)	19	2		87	0		2	197		12	124	0
Queue Length 95th (ft)	60	46		#193	17		6	268		39	169	0
Internal Link Dist (ft)		251			824			814			380	
Turn Bay Length (ft)				100			175			170		115
Base Capacity (vph)	298	263		298	314		431	3094		198	2657	1217
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.20	0.34		0.82	0.30		0.03	0.49		0.22	0.30	0.00

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 69.3
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 14.8 Intersection LOS: B
Intersection Capacity Utilization 64.5% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Marsh Hill Road & UI Driveway/Edison Road



Lane Group	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	40	20	290	5	440	20	910	310	360	615	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	350		350	300		300	300		300
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (ft)	50			100			50			100		
Lane Util. Factor	1.00	1.00	1.00	0.91	0.86	0.91	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.901	0.850			0.850			0.850
Flt Protected	0.950			0.950	0.984		0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1610	2841	1441	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950	0.984		0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1610	2841	1441	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		245	244			344			148
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		381			611			1181			894	
Travel Time (s)		8.7			13.9			26.8			20.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	44	22	322	6	489	22	1011	344	400	683	11
Shared Lane Traffic (%)				38%		50%						
Lane Group Flow (vph)	44	44	22	200	373	244	22	1011	344	400	683	11
Turn Type	Split	NA	Perm	Split	NA	Prot	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		7	7	7	1	6		5	2	
Permitted Phases			4						6			2
Detector Phase	4	4	4	7	7	7	1			5		
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	5.0	19.0	19.0	5.0	19.0	19.0
Minimum Split (s)	12.5	12.5	12.5	12.7	12.7	12.7	9.0	24.8	24.8	9.0	24.8	24.8
Total Split (s)	19.5	19.5	19.5	18.7	18.7	18.7	14.0	27.8	27.8	24.0	37.8	37.8
Total Split (%)	21.7%	21.7%	21.7%	20.8%	20.8%	20.8%	15.6%	30.9%	30.9%	26.7%	42.0%	42.0%
Yellow Time (s)	3.0	3.0	3.0	3.2	3.2	3.2	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	1.0	1.8	1.8	1.0	1.8	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.7	5.7	5.7	4.0	5.8	5.8	4.0	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	7.7	7.7	7.7	12.6	12.6	12.6	6.0	31.2	31.2	20.0	50.8	50.8
Actuated g/C Ratio	0.09	0.09	0.09	0.14	0.14	0.14	0.07	0.35	0.35	0.22	0.56	0.56
v/c Ratio	0.29	0.28	0.07	0.88	0.61	0.59	0.19	0.82	0.45	1.02	0.34	0.01
Control Delay	43.5	42.9	0.4	76.3	17.4	11.5	38.8	26.8	9.0	86.7	13.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.5	42.9	0.4	76.3	17.4	11.5	38.8	26.8	9.0	86.7	13.2	0.0
LOS	D	D	A	E	B	B	D	C	A	F	B	A
Approach Delay		34.6			30.0			22.6			40.0	
Approach LOS		C			C			C			D	
Stops (vph)	38	38	0	158	114	32	18	617	108	304	332	0
Fuel Used(gal)	1	1	0	5	3	2	0	17	4	11	8	0
CO Emissions (g/hr)	48	47	4	316	239	122	31	1172	281	737	544	5

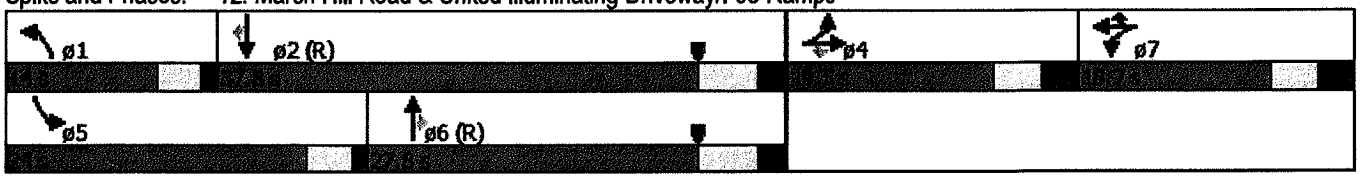
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)	9	9	1	62	47	24	6	228	55	143	106	1
VOC Emissions (g/hr)	11	11	1	73	55	28	7	272	65	171	126	1
Dilemma Vehicles (#)	0	0	0	0	0	0	0	0	0	0	0	0
Queue Length 50th (ft)	24	24	0	124	38	0	9	211	72	~235	95	0
Queue Length 95th (ft)	56	56	0	#257	88	73	m14	m#402	m110	#419	187	0
Internal Link Dist (ft)		301			531			1101			814	
Turn Bay Length (ft)			200	350		350	300		300	300		300
Base Capacity (vph)	275	289	415	232	619	416	196	1226	773	393	1996	957
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.15	0.05	0.86	0.60	0.59	0.11	0.82	0.45	1.02	0.34	0.01

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 61 (68%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 30.4 Intersection LOS: C
Intersection Capacity Utilization 77.3% ICU Level of Service D
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 12: Marsh Hill Road & United Illuminating Driveway/I-95 Ramps



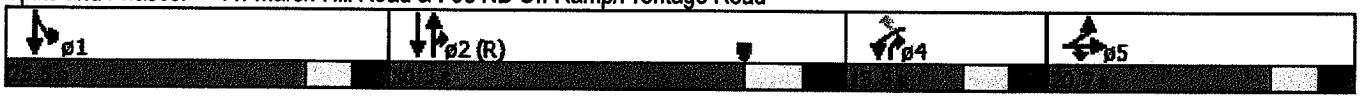
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	450	15	360	5	0	60	0	730	205	360	565	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		350	0		300	0		350	600		0
Storage Lanes	2		3	1		1	0		1	2		0
Taper Length (ft)	25			25			25			250		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt		0.862	0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3433	1525	1504	1770	0	1583	0	3539	1583	3433	3539	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3433	1525	1504	1770	0	1583	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		192	208			182			228			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		758			604			603			1181	
Travel Time (s)		17.2			13.7			13.7			26.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	500	17	400	6	0	67	0	811	228	400	628	0
Shared Lane Traffic (%)			48%									
Lane Group Flow (vph)	500	209	208	6	0	67	0	811	228	400	628	0
Turn Type	Split	NA	Prot	Prot		Perm		NA	pt+ov	Prot	NA	
Protected Phases	5	5	5	4				2	2 4	1	1 2	
Permitted Phases						4						
Detector Phase	5	5	5	4		4				1		
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0		7.0		21.0		5.0		
Minimum Split (s)	12.7	12.7	12.7	12.5		12.5		27.8		10.5		
Total Split (s)	20.7	20.7	20.7	13.5		13.5		30.3		25.5		
Total Split (%)	23.0%	23.0%	23.0%	15.0%		15.0%		33.7%		28.3%		
Yellow Time (s)	3.2	3.2	3.2	3.0		3.0		4.0		3.0		
All-Red Time (s)	2.5	2.5	2.5	2.5		2.5		2.8		2.5		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0		0.0		
Total Lost Time (s)	5.7	5.7	5.7	5.5		5.5		6.8		5.5		
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?												
Recall Mode	None	None	None	None		None		C-Min		None		
Act Effct Green (s)	14.8	14.8	14.8	7.0		7.0		32.2	42.2	15.0	54.0	
Actuated g/C Ratio	0.16	0.16	0.16	0.08		0.08		0.36	0.47	0.17	0.60	
v/c Ratio	0.89	0.51	0.49	0.04		0.23		0.64	0.26	0.70	0.30	
Control Delay	56.1	11.5	9.5	39.2		1.9		25.4	1.9	34.4	7.8	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	56.1	11.5	9.5	39.2		1.9		25.4	1.9	34.4	7.8	
LOS	E	B	A	D		A		C	A	C	A	
Approach Delay		35.4						20.3			18.1	
Approach LOS		D						C			B	
Stops (vph)	409	36	27	8		0		588	15	282	255	
Fuel Used(gal)	10	2	2	0		0		10	1	7	8	
CO Emissions (g/hr)	703	122	113	8		21		731	79	517	525	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)	137	24	22	1	4		142	15	101	102		
VOC Emissions (g/hr)	163	28	26	2	5		169	18	120	122		
Dilemma Vehicles (#)	0	0	0	0	0		0	0	0	0		
Queue Length 50th (ft)	144	8	0	3	0		217	0	116	131		
Queue Length 95th (ft)	#230	73	62	15	0		302	15	m110	m75		
Internal Link Dist (ft)		678			524		523			1101		
Turn Bay Length (ft)			350			300			350	600		
Base Capacity (vph)	572	414	424	157	306		1267	863	762	2124		
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		0	0	0	0		
Reduced v/c Ratio	0.87	0.50	0.49	0.04	0.22		0.64	0.26	0.52	0.30		

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 1 (1%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 23.7 Intersection LOS: C
Intersection Capacity Utilization 64.1% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Marsh Hill Road & I-95 NB Off Ramp/Frontage Road



Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	5	55	170	75	5	80	5	25	65	140	5	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)			0%			0%				-1%		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.967			0.964				0.997		
Flt Protected			0.990			0.998				0.985		
Satd. Flow (prot)	0	0	1783	0	0	1792	0	0	0	1838	0	0
Flt Permitted			0.916			0.981				0.830		
Satd. Flow (perm)	0	0	1650	0	0	1762	0	0	0	1549	0	0
Right Turn on Red				No				No			No	
Satd. Flow (RTOR)												
Link Speed (mph)			25			25				25		
Link Distance (ft)			634			454				531		
Travel Time (s)			17.3			12.4				14.5		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	61	189	83	6	89	6	28	72	156	6	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	339	0	0	129	0	0	0	234	0	0
Turn Type	Perm	Perm	NA		Perm	NA			Perm	NA		Perm
Protected Phases			1			1				2		
Permitted Phases	1	1			1				2			2
Detector Phase	1	1	1		1	1			2	2		2
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0		7.0	7.0			7.0	7.0		7.0
Minimum Split (s)	11.0	11.0	11.0		11.0	11.0			11.0	11.0		11.0
Total Split (s)	19.0	19.0	19.0		19.0	19.0			30.0	30.0		30.0
Total Split (%)	31.7%	31.7%	31.7%		31.7%	31.7%			50.0%	50.0%		50.0%
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0			3.0	3.0		3.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0			1.0	1.0		1.0
Lost Time Adjust (s)			0.0			0.0				0.0		
Total Lost Time (s)			4.0			4.0				4.0		
Lead/Lag	Lead	Lead	Lead		Lead	Lead			Lag	Lag		Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None		None	None			Min	Min		Min
Act Effct Green (s)			13.7			13.7				15.9		
Actuated g/C Ratio			0.33			0.33				0.38		
v/c Ratio			0.63			0.22				0.39		
Control Delay			22.7			14.9				13.0		
Queue Delay			0.0			0.0				0.0		
Total Delay			22.7			14.9				13.0		
LOS			C			B				B		
Approach Delay			22.7			14.9				13.0		
Approach LOS			C			B				B		
Stops (vph)			219			79				137		
Fuel Used(gal)			4			1				2		
CO Emissions (g/hr)			272			77				142		
NOx Emissions (g/hr)			53			15				28		
VOC Emissions (g/hr)			63			18				33		

Lane Group	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations							
Volume (vph)	285	50	5	5	5	30	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Grade (%)	1%				0%		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.978				0.897		
Flt Protected	0.999				0.988		
Satd. Flow (prot)	1811	0	0	0	1651	0	0
Flt Permitted	0.995				0.988		
Satd. Flow (perm)	1804	0	0	0	1651	0	0
Right Turn on Red			No				No
Satd. Flow (RTOR)							
Link Speed (mph)	25				25		
Link Distance (ft)	2088				725		
Travel Time (s)	56.9				19.8		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	317	56	6	6	6	33	6
Shared Lane Traffic (%)							
Lane Group Flow (vph)	385	0	0	0	51	0	0
Turn Type	NA			Perm	Perm		
Protected Phases	2						
Permitted Phases				4	4		
Detector Phase	2			4	4		
Switch Phase							
Minimum Initial (s)	7.0			7.0	7.0		
Minimum Split (s)	11.0			11.0	11.0		
Total Split (s)	30.0			11.0	11.0		
Total Split (%)	50.0%			18.3%	18.3%		
Yellow Time (s)	3.0			3.0	3.0		
All-Red Time (s)	1.0			1.0	1.0		
Lost Time Adjust (s)	0.0				0.0		
Total Lost Time (s)	4.0				4.0		
Lead/Lag	Lag						
Lead-Lag Optimize?							
Recall Mode	Min			None	None		
Act Effct Green (s)	15.9				7.6		
Actuated g/C Ratio	0.38				0.18		
v/c Ratio	0.56				0.17		
Control Delay	14.8				21.7		
Queue Delay	0.0				0.0		
Total Delay	14.8				21.7		
LOS	B				C		
Approach Delay	14.8				21.7		
Approach LOS	B				C		
Stops (vph)	242				41		
Fuel Used(gal)	10				1		
CO Emissions (g/hr)	675				45		
NOx Emissions (g/hr)	131				9		
VOC Emissions (g/hr)	156				10		

Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBT	NBR	SBL
Dilemma Vehicles (#)			0			0				0		
Queue Length 50th (ft)			51			17				33		
Queue Length 95th (ft)			#234			76				101		
Internal Link Dist (ft)			554			374				451		
Turn Bay Length (ft)												
Base Capacity (vph)			648			692				1096		
Starvation Cap Reductn			0			0				0		
Spillback Cap Reductn			0			0				0		
Storage Cap Reductn			0			0				0		
Reduced v/c Ratio			0.52			0.19				0.21		

Intersection Summary

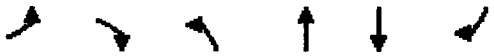
Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 41.6
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.63
Intersection Signal Delay: 17.1 Intersection LOS: B
Intersection Capacity Utilization 72.5% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 27: Merwin Avenue & Anderson Avenue & Depot Road

Lane Group	SBT	SBR	SBR2	SELT	SER	SER2
Dilemma Vehicles (#)	0			0		
Queue Length 50th (ft)	58			9		
Queue Length 95th (ft)	164			44		
Internal Link Dist (ft)	2008			645		
Turn Bay Length (ft)						
Base Capacity (vph)	1277			302		
Starvation Cap Reductn	0			0		
Spillback Cap Reductn	0			0		
Storage Cap Reductn	0			0		
Reduced v/c Ratio	0.30			0.17		

Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	380	170	80	205	165	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.958				0.946	
Flt Protected	0.967			0.986		
Satd. Flow (prot)	1726	0	0	1837	1762	0
Flt Permitted	0.967			0.851		
Satd. Flow (perm)	1726	0	0	1585	1762	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	28				58	
Link Speed (mph)	25			25	25	
Link Distance (ft)	929			995	702	
Travel Time (s)	25.3			27.1	19.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	422	189	89	228	183	122
Shared Lane Traffic (%)						
Lane Group Flow (vph)	611	0	0	317	305	0
Turn Type	Prot		D.P+P	NA	NA	
Protected Phases	4		1	1 2	2	
Permitted Phases			2			
Detector Phase	4			2	2	
Switch Phase						
Minimum Initial (s)	7.0		3.0		15.0	
Minimum Split (s)	11.0		6.1		21.0	
Total Split (s)	27.0		8.1		46.0	
Total Split (%)	33.3%		10.0%		56.7%	
Yellow Time (s)	3.0		3.0		4.0	
All-Red Time (s)	1.0		0.1		2.0	
Lost Time Adjust (s)	0.0				0.0	
Total Lost Time (s)	4.0				6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Recall Mode	None		Max		Min	
Act Effct Green (s)	23.0			23.4	15.5	
Actuated g/C Ratio	0.41			0.41	0.27	
v/c Ratio	0.85			0.47	0.58	
Control Delay	29.3			13.2	19.3	
Queue Delay	0.0			0.0	0.0	
Total Delay	29.3			13.2	19.3	
LOS	C			B	B	
Approach Delay	29.3			13.2	19.3	
Approach LOS	C			B	B	
Stops (vph)	423			196	187	
Fuel Used(gal)	11			4	3	
CO Emissions (g/hr)	752			275	240	
NOx Emissions (g/hr)	146			53	47	
VOC Emissions (g/hr)	174			64	56	
Dilemma Vehicles (#)	0			0	0	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 50th (ft)	169			64	70	
Queue Length 95th (ft)	#369			112	137	
Internal Link Dist (ft)	849			915	622	
Turn Bay Length (ft)						
Base Capacity (vph)	718			1363	1261	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.85			0.23	0.24	

Intersection Summary

Area Type: Other
Cycle Length: 81.1
Actuated Cycle Length: 56.6
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 22.7 Intersection LOS: C
Intersection Capacity Utilization 73.7% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 37: Route 162 (Jones Hill Road) & Woodmont Road

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	545	35	0	0	65	40
Sign Control	Free			Free	Stop	
Grade	0%			0%	-2%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	606	39	0	0	72	44
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	604					
pX, platoon unblocked						
vC, conflicting volume			644		606	303
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			644		606	303
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		83	94
cM capacity (veh/h)			937		429	693

Direction, Lane #	EB 1	EB 2	EB 3	NB 1	NB 2
Volume Total	303	303	39	72	44
Volume Left	0	0	0	72	0
Volume Right	0	0	39	0	44
cSH	1700	1700	1700	429	693
Volume to Capacity	0.18	0.18	0.02	0.17	0.06
Queue Length 95th (ft)	0	0	0	15	5
Control Delay (s)	0.0	0.0	0.0	15.1	10.5
Lane LOS				C	B
Approach Delay (s)	0.0			13.4	
Approach LOS				B	

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	25.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	60	140	755	10	20	885
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	67	156	839	11	22	983
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			150			603
pX, platoon unblocked	0.94	0.94			0.94	
vC, conflicting volume	1217	425			850	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1099	256			709	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	65	78			97	
cM capacity (veh/h)	189	698			831	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3	SB 4
Volume Total	222	559	291	22	328	328	328
Volume Left	67	0	0	22	0	0	0
Volume Right	156	0	11	0	0	0	0
cSH	386	1700	1700	831	1700	1700	1700
Volume to Capacity	0.58	0.33	0.17	0.03	0.19	0.19	0.19
Queue Length 95th (ft)	87	0	0	2	0	0	0
Control Delay (s)	26.3	0.0	0.0	9.4	0.0	0.0	0.0
Lane LOS	D			A			
Approach Delay (s)	26.3	0.0		0.2			
Approach LOS	D						

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	39.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	540	310	90	185	150	150
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	600	344	100	206	167	167

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	944	306	333
Volume Left (vph)	0	100	167
Volume Right (vph)	344	0	167
Hadj (s)	-0.18	0.10	-0.17
Departure Headway (s)	5.4	6.1	6.2
Degree Utilization, x	1.0	0.52	0.58
Capacity (veh/h)	659	573	556
Control Delay (s)	213.8	15.6	17.4
Approach Delay (s)	213.8	15.6	17.4
Approach LOS	F	C	C

Intersection Summary			
Delay	134.2		
Level of Service	F		
Intersection Capacity Utilization	89.5%	ICU Level of Service	E
Analysis Period (min)	15		

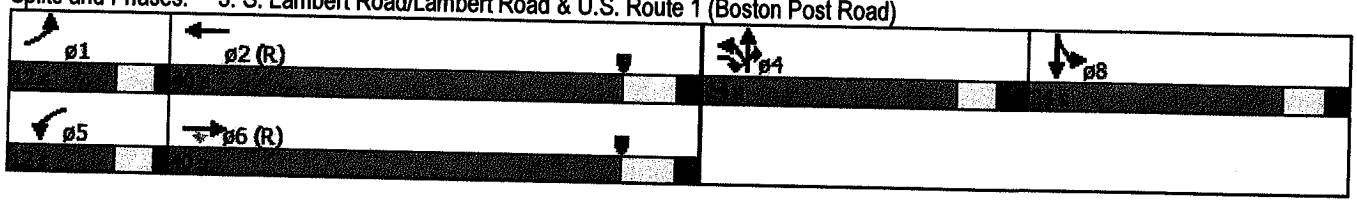
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	215	245	60	290	10	225	130	105	25	195	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			1%			1%			-1%	
Storage Length (ft)	175		175	260		0	180		0	0		0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (ft)	50			50			50			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	0.95
Frt			0.850		0.995				0.850		0.985	
Flt Protected	0.950			0.950			0.950	0.986			0.995	
Satd. Flow (prot)	1778	3557	1591	1761	3504	0	1673	1736	1575	0	3486	0
Flt Permitted	0.950			0.950			0.950	0.986			0.995	
Satd. Flow (perm)	1778	3557	1591	1761	3504	0	1673	1736	1575	0	3486	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			272		4				131		11	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		978			901			679			266	
Travel Time (s)		16.7			15.4			15.4			6.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	17	239	272	67	322	11	250	144	117	28	217	28
Shared Lane Traffic (%)							23%					
Lane Group Flow (vph)	17	239	272	67	333	0	192	202	117	0	273	0
Turn Type	Prot	NA	pm+ov	Prot	NA		Split	NA	Prot	Split	NA	
Protected Phases	1	6	4	5	2		4	4	4	8	8	
Permitted Phases			6									
Detector Phase	1	6	6	5	2		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	5.0	15.0	12.0	5.0	15.0		12.0	12.0	12.0	7.0	7.0	
Minimum Split (s)	9.0	21.0	17.0	9.0	21.0		17.0	17.0	17.0	12.0	12.0	
Total Split (s)	12.0	40.0	24.0	12.0	40.0		24.0	24.0	24.0	24.0	24.0	
Total Split (%)	12.0%	40.0%	24.0%	12.0%	40.0%		24.0%	24.0%	24.0%	24.0%	24.0%	
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	4.0	6.0	5.0	4.0	6.0		5.0	5.0	5.0		5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Recall Mode	None	C-Min	None	None	C-Min		None	None	None	None	None	
Act Effct Green (s)	5.7	46.4	68.7	7.1	51.5		16.3	16.3	16.3		12.0	
Actuated g/C Ratio	0.06	0.46	0.69	0.07	0.52		0.16	0.16	0.16		0.12	
v/c Ratio	0.17	0.14	0.23	0.54	0.18		0.71	0.72	0.32		0.64	
Control Delay	48.1	17.9	1.4	60.4	15.4		53.9	54.0	7.5		46.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	48.1	17.9	1.4	60.4	15.4		53.9	54.0	7.5		46.9	
LOS	D	B	A	E	B		D	D	A		D	
Approach Delay		10.4			22.9			43.3			46.9	
Approach LOS		B			C			D			D	
Stops (vph)	17	126	13	56	159		160	169	13		219	
Fuel Used(gal)	0	3	2	2	4		5	5	2		5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
CO Emissions (g/hr)	29	241	128	116	303		344	362	107		329	
NOx Emissions (g/hr)	6	47	25	23	59		67	71	21		64	
VOC Emissions (g/hr)	7	56	30	27	70		80	84	25		76	
Dilemma Vehicles (#)	0	11	0	0	15		0	0	0		0	
Queue Length 50th (ft)	11	47	0	42	51		122	128	0		84	
Queue Length 95th (ft)	32	81	28	86	107		196	205	39		122	
Internal Link Dist (ft)		898			821			599			186	
Turn Bay Length (ft)	175		175	260			180					
Base Capacity (vph)	142	1650	1177	140	1806		317	329	405		671	
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	
Reduced v/c Ratio	0.12	0.14	0.23	0.48	0.18		0.61	0.61	0.29		0.41	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 45 (45%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 29.0 Intersection LOS: C
Intersection Capacity Utilization 50.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: S. Lambert Road/Lambert Road & U.S. Route 1 (Boston Post Road)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	55	50	305	85	90	0	455	330	50	455	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			1%	
Storage Length (ft)	125		0	200		200	0		175	225		0
Storage Lanes	1		0	1		1	0		1	1		0
Taper Length (ft)	50			50			25			50		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.928				0.850			0.850		0.998	
Flt Protected	0.950			0.950	0.972					0.950		
Satd. Flow (prot)	1770	1729	0	1681	1720	1583	0	3557	1591	1761	3514	0
Flt Permitted	0.950			0.950	0.972					0.950		
Satd. Flow (perm)	1770	1729	0	1681	1720	1583	0	3557	1591	1761	3514	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		49				100			367		2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		624			1998			409			905	
Travel Time (s)		14.2			45.4			9.3			20.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	61	56	339	94	100	0	506	367	56	506	6
Shared Lane Traffic (%)				37%								
Lane Group Flow (vph)	22	117	0	214	219	100	0	506	367	56	512	0
Turn Type	Split	NA		Split	NA	pt+ov		NA	pt+ov	Prot	NA	
Protected Phases	5	5		4	4	1 4		2	2 4	1	1 2	
Permitted Phases												
Detector Phase	5	5		4	4	4		2	2	1	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		5.0	5.0			16.0		6.0		
Minimum Split (s)	11.0	11.0		9.0	9.0			21.0		10.0		
Total Split (s)	18.0	18.0		19.0	19.0			29.0		14.0		
Total Split (%)	22.5%	22.5%		23.8%	23.8%			36.3%		17.5%		
Yellow Time (s)	3.0	3.0		3.0	3.0			3.0		3.0		
All-Red Time (s)	2.0	2.0		1.0	1.0			2.0		1.0		
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0		
Total Lost Time (s)	5.0	5.0		4.0	4.0			5.0		4.0		
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?												
Recall Mode	None	None		None	None			Min		None		
Act Effct Green (s)	8.2	8.2		11.6	11.6	15.5		19.6	37.4	7.6	26.6	
Actuated g/C Ratio	0.14	0.14		0.20	0.20	0.27		0.34	0.66	0.13	0.47	
v/c Ratio	0.09	0.40		0.63	0.63	0.20		0.41	0.31	0.24	0.31	
Control Delay	28.2	22.4		33.8	33.5	3.4		19.1	1.9	31.0	11.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay	28.2	22.4		33.8	33.5	3.4		19.1	1.9	31.0	11.1	
LOS	C	C		C	C	A		B	A	C	B	
Approach Delay		23.3			28.0			11.8			13.0	
Approach LOS		C			C			B			B	
Stops (vph)	20	58		156	161	14		327	22	45	253	
Fuel Used(gal)	0	1		5	5	2		7	2	1	8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
CO Emissions (g/hr)	23	92		363	371	108		465	174	83	568	
NOx Emissions (g/hr)	4	18		71	72	21		91	34	16	111	
VOC Emissions (g/hr)	5	21		84	86	25		108	40	19	132	
Dilemma Vehicles (#)	0	0		0	0	0		0	0	0	0	
Queue Length 50th (ft)	7	23		74	75	0		82	0	19	57	
Queue Length 95th (ft)	29	77		#195	#198	18		150	36	59	105	
Internal Link Dist (ft)		544			1918			329			825	
Turn Bay Length (ft)	125			200		200			175	225		
Base Capacity (vph)	450	476		493	504	637		1670	1170	344	2085	
Starvation Cap Reductn	0	0		0	0	0		0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0		0	0	0	0	
Storage Cap Reductn	0	0		0	0	0		0	0	0	0	
Reduced v/c Ratio	0.05	0.25		0.43	0.43	0.16		0.30	0.31	0.16	0.25	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 56.9
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.63
Intersection Signal Delay: 17.0 Intersection LOS: B
Intersection Capacity Utilization 46.5% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Marsh Hill Road/S. Lambert Road & Indian River Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	0	15	85	0	25	90	755	245	55	715	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	175		0	170		115
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			140			140			105		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.850			0.850			0.963				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1583	0	1770	1583	0	1770	3408	0	1770	3539	1583
Flt Permitted							0.287			0.257		
Satd. Flow (perm)	1863	1583	0	1863	1583	0	535	3408	0	479	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		358			317			118				116
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		331			904			894			460	
Travel Time (s)		7.5			24.7			20.3			10.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	0	17	94	0	28	100	839	272	61	794	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	17	0	94	28	0	100	1111	0	61	794	44
Turn Type	pm+pt	NA		pm+pt	NA		custom	NA		Perm	NA	Prot
Protected Phases	3	4		7	8		1	1 6			2	2
Permitted Phases	4			8			6			2		
Detector Phase	3	4		7	8		1	1 6		2	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0			25.0	25.0	25.0
Minimum Split (s)	11.0	11.4		11.0	11.4		9.2			29.9	29.9	29.9
Total Split (s)	11.0	11.4		11.0	11.4		16.2			51.4	51.4	51.4
Total Split (%)	12.2%	12.7%		12.2%	12.7%		18.0%			57.1%	57.1%	57.1%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0			3.3	3.3	3.3
All-Red Time (s)	1.0	1.4		1.0	1.4		1.2			1.6	1.6	1.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0			0.0	0.0	0.0
Total Lost Time (s)	4.0	4.4		4.0	4.4		4.2			4.9	4.9	4.9
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Recall Mode	None	None		None	None		None			C-Min	C-Min	C-Min
Act Effct Green (s)	10.0	7.0		10.0	7.0		72.4	73.3		56.5	56.5	56.5
Actuated g/C Ratio	0.11	0.08		0.11	0.08		0.80	0.81		0.63	0.63	0.63
v/c Ratio	0.03	0.04		0.47	0.07		0.17	0.40		0.20	0.36	0.04
Control Delay	30.4	0.1		42.5	0.3		7.4	8.0		12.9	10.3	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	30.4	0.1		42.5	0.3		7.4	8.0		12.9	10.3	0.1
LOS	C	A		D	A		A	A		B	B	A
Approach Delay		8.0			32.8			7.9			10.0	
Approach LOS		A			C			A			B	
Stops (vph)	6	0		76	0		35	407		29	341	0
Fuel Used(gal)	0	0		2	0		1	11		1	8	0
CO Emissions (g/hr)	5	3		118	14		67	758		47	576	19

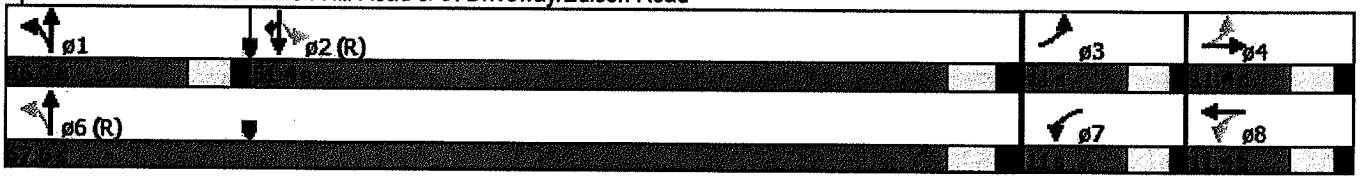
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	25.0
Minimum Split (s)	29.9
Total Split (s)	67.6
Total Split (%)	75%
Yellow Time (s)	3.3
All-Red Time (s)	1.6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	C-Min
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)	1	1		23	3		13	148		9	112	4
VOC Emissions (g/hr)	1	1		27	3		15	176		11	133	4
Dilemma Vehicles (#)	0	0		0	0		0	0		0	0	0
Queue Length 50th (ft)	3	0		53	0		13	107		13	97	0
Queue Length 95th (ft)	13	0		89	0		m56	239		45	185	0
Internal Link Dist (ft)		251			824			814			380	
Turn Bay Length (ft)				100			175			170		115
Base Capacity (vph)	198	453		198	415		595	2796		300	2223	1037
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.03	0.04		0.47	0.07		0.17	0.40		0.20	0.36	0.04

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.47
Intersection Signal Delay: 10.1 Intersection LOS: B
Intersection Capacity Utilization 72.2% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Marsh Hill Road & UI Driveway/Edison Road



Lane Group	SBL
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

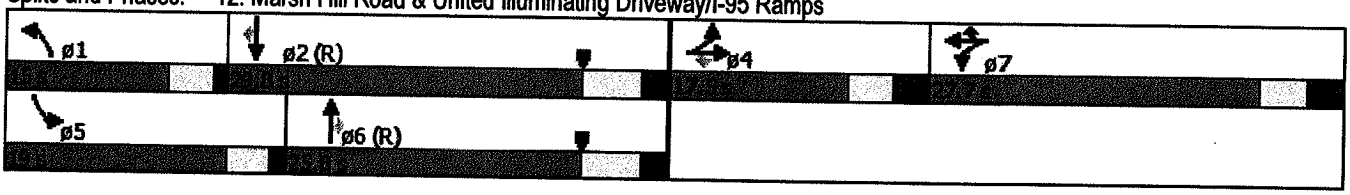
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	50	35	390	40	385	45	625	370	185	625	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	350		350	300		300	300		300
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (ft)	50			100			50			100		
Lane Util. Factor	1.00	1.00	1.00	0.91	0.86	0.91	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.929	0.850			0.850			0.850
Flt Protected	0.950			0.950	0.979		0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1610	2914	1441	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950	0.979		0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1610	2914	1441	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			152		214	214			411			148
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		381			611			1181			894	
Travel Time (s)		8.7			13.9			26.8			20.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	56	39	433	44	428	50	694	411	206	694	56
Shared Lane Traffic (%)				45%		50%						
Lane Group Flow (vph)	56	56	39	238	453	214	50	694	411	206	694	56
Turn Type	Split	NA	Perm	Split	NA	Prot	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		7	7	7	1	6		5	2	
Permitted Phases			4						6			2
Detector Phase	4	4	4	7	7	7	1			5		
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	5.0	19.0	19.0	5.0	19.0	19.0
Minimum Split (s)	12.5	12.5	12.5	12.7	12.7	12.7	9.0	24.8	24.8	9.0	24.8	24.8
Total Split (s)	17.5	17.5	17.5	27.7	27.7	27.7	15.0	25.8	25.8	19.0	29.8	29.8
Total Split (%)	19.4%	19.4%	19.4%	30.8%	30.8%	30.8%	16.7%	28.7%	28.7%	21.1%	33.1%	33.1%
Yellow Time (s)	3.0	3.0	3.0	3.2	3.2	3.2	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	1.0	1.8	1.8	1.0	1.8	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.7	5.7	5.7	4.0	5.8	5.8	4.0	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	8.1	8.1	8.1	17.6	17.6	17.6	7.3	32.3	32.3	13.5	42.3	42.3
Actuated g/C Ratio	0.09	0.09	0.09	0.20	0.20	0.20	0.08	0.36	0.36	0.15	0.47	0.47
v/c Ratio	0.35	0.33	0.14	0.76	0.61	0.47	0.35	0.55	0.49	0.78	0.42	0.07
Control Delay	44.3	43.5	1.0	49.1	20.0	7.9	52.2	24.1	7.6	71.2	14.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.3	43.5	1.0	49.1	20.0	7.9	52.2	24.1	7.6	71.2	14.1	0.2
LOS	D	D	A	D	C	A	D	C	A	E	B	A
Approach Delay		32.8			24.8			19.4			25.5	
Approach LOS		C			C			B			C	
Stops (vph)	46	46	0	196	191	26	42	429	156	174	285	0
Fuel Used(gal)	1	1	0	4	5	1	1	11	5	5	8	0
CO Emissions (g/hr)	60	59	8	296	326	96	79	782	338	345	540	24

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)	12	11	2	58	63	19	15	152	66	67	105	5
VOC Emissions (g/hr)	14	14	2	69	76	22	18	181	78	80	125	6
Dilemma Vehicles (#)	0	0	0	0	0	0	0	0	0	0	0	0
Queue Length 50th (ft)	31	31	0	139	68	0	27	134	47	108	80	0
Queue Length 95th (ft)	66	66	0	218	117	59	m58	#280	m81	#215	110	m0
Internal Link Dist (ft)		301			531			1101			814	
Turn Bay Length (ft)			200	350		350	300		300	300		300
Base Capacity (vph)	236	248	342	393	874	513	216	1269	831	295	1662	822
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.23	0.11	0.61	0.52	0.42	0.23	0.55	0.49	0.70	0.42	0.07

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 24 (27%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 23.5 Intersection LOS: C
Intersection Capacity Utilization 61.9% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 12: Marsh Hill Road & United Illuminating Driveway/I-95 Ramps



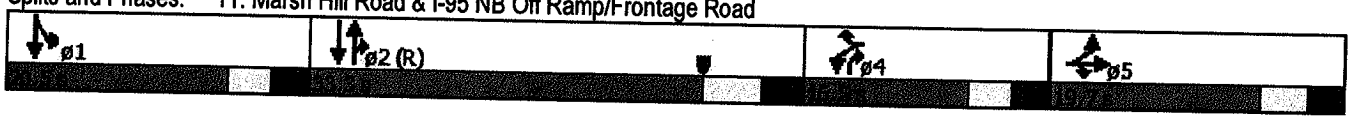
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	360	40	290	5	0	5	0	675	385	435	615	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		350	0		300	0		350	600		0
Storage Lanes	2		3	1		1	0		1	2		0
Taper Length (ft)	25			25			25			250		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt		0.885	0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3433	1566	1504	1770	0	1583	0	3539	1583	3433	3539	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3433	1566	1504	1770	0	1583	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		142	180			182			378			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		758			604			603			1181	
Travel Time (s)		17.2			13.7			13.7			26.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	400	44	322	6	0	6	0	750	428	483	683	0
Shared Lane Traffic (%)			44%									
Lane Group Flow (vph)	400	186	180	6	0	6	0	750	428	483	683	0
Turn Type	Split	NA	Prot	Prot		Prot		NA	pt+ov	Prot	NA	
Protected Phases	5	5	5	4		4		2	2 4	1	1 2	
Permitted Phases												
Detector Phase	5	5	5	4		4				1		
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0		7.0		21.0		5.0		
Minimum Split (s)	12.7	12.7	12.7	12.5		12.5		27.8		10.5		
Total Split (s)	19.7	19.7	19.7	16.5		16.5		33.3		20.5		
Total Split (%)	21.9%	21.9%	21.9%	18.3%		18.3%		37.0%		22.8%		
Yellow Time (s)	3.2	3.2	3.2	3.0		3.0		4.0		3.0		
All-Red Time (s)	2.5	2.5	2.5	2.5		2.5		2.8		2.5		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0		0.0		
Total Lost Time (s)	5.7	5.7	5.7	5.5		5.5		6.8		5.5		
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?												
Recall Mode	None	None	None	None		None		C-Min		None		
Act Effct Green (s)	13.3	13.3	13.3	7.0		7.0		41.6	44.1	14.6	63.0	
Actuated g/C Ratio	0.15	0.15	0.15	0.08		0.08		0.46	0.49	0.16	0.70	
v/c Ratio	0.79	0.53	0.48	0.04		0.02		0.46	0.44	0.87	0.28	
Control Delay	49.1	16.4	10.2	39.2		0.2		16.3	2.2	44.3	5.1	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	49.1	16.4	10.2	39.2		0.2		16.3	2.2	44.3	5.1	
LOS	D	B	B	D		A		B	A	D	A	
Approach Delay		32.1						11.2			21.3	
Approach LOS		C						B			C	
Stops (vph)	333	49	26	8		0		269	16	394	257	
Fuel Used(gal)	8	2	1	0		0		7	2	10	8	
CO Emissions (g/hr)	529	127	101	8		2		482	145	706	539	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)	103	25	20	1	0		64	28	137	105		
VOC Emissions (g/hr)	123	29	23	2	0		112	34	164	125		
Dilemma Vehicles (#)	0	0	0	0	0		0	0	0	0		
Queue Length 50th (ft)	113	23	0	3	0		80	7	145	54		
Queue Length 95th (ft)	#168	88	60	15	0		165	9	#221	156		
Internal Link Dist (ft)		678			524		523			1101		
Turn Bay Length (ft)			350			300		350	600			
Base Capacity (vph)	534	363	385	216	353		1634	968	572	2477		
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		0	0	0	0		
Reduced v/c Ratio	0.75	0.51	0.47	0.03	0.02		0.46	0.44	0.84	0.28		

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 1 (1%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 20.1 Intersection LOS: C
Intersection Capacity Utilization 63.0% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 11: Marsh Hill Road & I-95 NB Off Ramp/Frontage Road



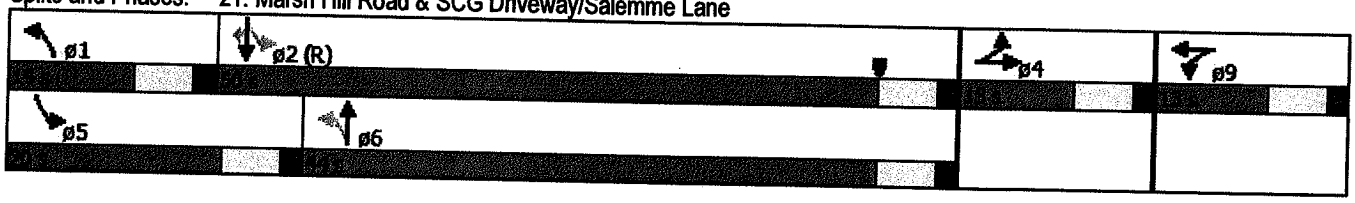
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑↑↱		↰	↑↑	↱
Volume (vph)	65	0	5	20	0	110	5	865	75	190	605	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	50		0	100		120
Storage Lanes	0		0	0		0	1		0	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.990			0.886			0.988				0.850
Flt Protected		0.956			0.992		0.950			0.950		
Satd. Flow (prot)	0	1763	0	0	1637	0	1770	3497	0	1770	3539	1583
Flt Permitted		0.956			0.992		0.396			0.172		
Satd. Flow (perm)	0	1763	0	0	1637	0	738	3497	0	320	3539	1583
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		230			230			12				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		321			345			406			603	
Travel Time (s)		7.3			7.8			9.2			13.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	72	0	6	22	0	122	6	961	83	211	672	133
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	78	0	0	144	0	6	1044	0	211	672	133
Turn Type	Split	NA		Split	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	4	4		9	9		1	6		5	2	
Permitted Phases							6			2		2
Detector Phase	4	4		9	9		1			5		2
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	18.2		5.0	18.2	18.2
Minimum Split (s)	12.5	12.5		12.5	12.5		10.5	24.5		10.5	24.5	24.5
Total Split (s)	13.0	13.0		13.0	13.0		14.0	44.0		20.0	50.0	50.0
Total Split (%)	14.4%	14.4%		14.4%	14.4%		15.6%	48.9%		22.2%	55.6%	55.6%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	1.5
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		5.5			5.5		5.5	5.5		5.5	5.5	5.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	Min		None	C-Min	C-Min
Act Effct Green (s)		7.0			7.0		52.2	47.2		62.0	59.9	59.9
Actuated g/C Ratio		0.08			0.08		0.58	0.52		0.69	0.67	0.67
v/c Ratio		0.22			0.42		0.01	0.57		0.57	0.29	0.13
Control Delay		1.5			4.5		6.2	17.3		12.0	5.2	4.3
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		1.5			4.5		6.2	17.3		12.0	5.2	4.3
LOS		A			A		A	B		B	A	A
Approach Delay		1.5			4.5			17.2			6.5	
Approach LOS		A			A			B			A	
Stops (vph)		0			2		3	621		80	273	36
Fuel Used(gal)		0			0		0	32		2	5	1
CO Emissions (g/hr)		14			33		11	2250		126	349	61

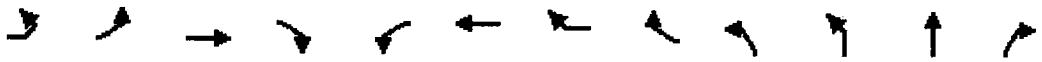
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)		3			7		2	438		24	68	12
VOC Emissions (g/hr)		3			8		3	521		29	81	14
Dilemma Vehicles (#)		0			0		0	0		0	0	0
Queue Length 50th (ft)		0			0		1	208		16	41	10
Queue Length 95th (ft)		0			6		5	308		60	101	32
Internal Link Dist (ft)		241			265			326			523	
Turn Bay Length (ft)							50			100		120
Base Capacity (vph)		357			347		553	1838		454	2354	1053
Starvation Cap Reductn		0			0		0	0		0	0	0
Spillback Cap Reductn		0			0		0	0		0	0	0
Storage Cap Reductn		0			0		0	0		0	0	0
Reduced v/c Ratio		0.22			0.41		0.01	0.57		0.46	0.29	0.13

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 29.8 (33%), Referenced to phase 2:SBTL, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 11.1 Intersection LOS: B
Intersection Capacity Utilization 61.1% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 21: Marsh Hill Road & SCG Driveway/Salemme Lane





Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	5	100	95	40	5	75	5	60	110	10	320	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)			0%			0%					-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.978			0.939					0.998	
Flt Protected			0.979			0.998					0.987	
Satd. Flow (prot)	0	0	1784	0	0	1746	0	0	0	0	1844	0
Flt Permitted			0.820			0.986					0.849	
Satd. Flow (perm)	0	0	1494	0	0	1725	0	0	0	0	1586	0
Right Turn on Red				No				No				No
Satd. Flow (RTOR)												
Link Speed (mph)			25			25					25	
Link Distance (ft)			634			454					531	
Travel Time (s)			17.3			12.4					14.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	111	106	44	6	83	6	67	122	11	356	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	267	0	0	162	0	0	0	0	495	0
Turn Type	Perm	Perm	NA		Perm	NA			Perm	Perm	NA	
Protected Phases			1			1					2	
Permitted Phases	1	1			1				2	2		
Detector Phase	1	1	1		1	1			2	2	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0		7.0	7.0			7.0	7.0	7.0	
Minimum Split (s)	11.0	11.0	11.0		11.0	11.0			11.0	11.0	11.0	
Total Split (s)	19.0	19.0	19.0		19.0	19.0			30.0	30.0	30.0	
Total Split (%)	31.7%	31.7%	31.7%		31.7%	31.7%			50.0%	50.0%	50.0%	
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0			3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0			1.0	1.0	1.0	
Lost Time Adjust (s)			0.0			0.0					0.0	
Total Lost Time (s)			4.0			4.0					4.0	
Lead/Lag	Lead	Lead	Lead		Lead	Lead			Lag	Lag	Lag	
Lead-Lag Optimize?												
Recall Mode	None	None	None		None	None			Min	Min	Min	
Act Effct Green (s)			13.2			13.2					20.4	
Actuated g/C Ratio			0.29			0.29					0.45	
v/c Ratio			0.62			0.32					0.70	
Control Delay			25.1			17.7					18.3	
Queue Delay			0.0			0.0					0.0	
Total Delay			25.1			17.7					18.3	
LOS			C			B					B	
Approach Delay			25.1			17.7					18.3	
Approach LOS			C			B					B	
Stops (vph)			183			105					328	
Fuel Used(gal)			3			1					5	
CO Emissions (g/hr)			226			104					345	
NOx Emissions (g/hr)			44			20					67	
VOC Emissions (g/hr)			52			24					80	

Lane Group	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	25	190	40	5	5	5	10	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%				0%		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977				0.921		
Flt Protected		0.995				0.980		
Satd. Flow (prot)	0	1802	0	0	0	1681	0	0
Flt Permitted		0.937				0.980		
Satd. Flow (perm)	0	1697	0	0	0	1681	0	0
Right Turn on Red				No				No
Satd. Flow (RTOR)								
Link Speed (mph)		25				25		
Link Distance (ft)		2088				725		
Travel Time (s)		56.9				19.8		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	28	211	44	6	6	6	11	6
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	289	0	0	0	29	0	0
Turn Type	Perm	NA			Perm	Perm		
Protected Phases		2						
Permitted Phases	2				4	4		
Detector Phase	2	2			4	4		
Switch Phase								
Minimum Initial (s)	7.0	7.0			7.0	7.0		
Minimum Split (s)	11.0	11.0			11.0	11.0		
Total Split (s)	30.0	30.0			11.0	11.0		
Total Split (%)	50.0%	50.0%			18.3%	18.3%		
Yellow Time (s)	3.0	3.0			3.0	3.0		
All-Red Time (s)	1.0	1.0			1.0	1.0		
Lost Time Adjust (s)		0.0				0.0		
Total Lost Time (s)		4.0				4.0		
Lead/Lag	Lag	Lag						
Lead-Lag Optimize?								
Recall Mode	Min	Min			None	None		
Act Effct Green (s)		20.4				7.5		
Actuated g/C Ratio		0.45				0.16		
v/c Ratio		0.38				0.11		
Control Delay		11.6				23.2		
Queue Delay		0.0				0.0		
Total Delay		11.6				23.2		
LOS		B				C		
Approach Delay		11.6				23.2		
Approach LOS		B				C		
Stops (vph)		157				24		
Fuel Used(gal)		7				0		
CO Emissions (g/hr)		489				26		
NOx Emissions (g/hr)		95				5		
VOC Emissions (g/hr)		113				6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBLS	NBL	NBT	NBR
Dilemma Vehicles (#)		0			0					0	
Queue Length 50th (ft)		47			26					83	
Queue Length 95th (ft)		#188			95					#252	
Internal Link Dist (ft)		554			374					451	
Turn Bay Length (ft)											
Base Capacity (vph)		526			608					969	
Starvation Cap Reductn		0			0					0	
Spillback Cap Reductn		0			0					0	
Storage Cap Reductn		0			0					0	
Reduced v/c Ratio		0.51			0.27					0.51	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 45.6
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 18.3 Intersection LOS: B
Intersection Capacity Utilization 81.8% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 27: Merwin Avenue & Anderson Avenue & Depot Road

Lane Group	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Dilemma Vehicles (#)		0				0		
Queue Length 50th (ft)		40				6		
Queue Length 95th (ft)		121				30		
Internal Link Dist (ft)		2008				645		
Turn Bay Length (ft)								
Base Capacity (vph)		1036				276		
Starvation Cap Reductn		0				0		
Spillback Cap Reductn		0				0		
Storage Cap Reductn		0				0		
Reduced v/c Ratio		0.28				0.11		

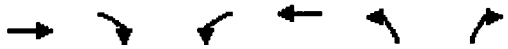
Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	230	90	150	150	70	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.962				0.896	
Flt Protected	0.965			0.976		
Satd. Flow (prot)	1729	0	0	1818	1669	0
Flt Permitted	0.965			0.715		
Satd. Flow (perm)	1729	0	0	1332	1669	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	24				267	
Link Speed (mph)	25			25	25	
Link Distance (ft)	929			995	702	
Travel Time (s)	25.3			27.1	19.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	256	100	167	167	78	267
Shared Lane Traffic (%)						
Lane Group Flow (vph)	356	0	0	334	345	0
Turn Type	Prot		D.P+P	NA	NA	
Protected Phases	4		1	1 2	2	
Permitted Phases			2			
Detector Phase	4			2	2	
Switch Phase						
Minimum Initial (s)	7.0		3.0		15.0	
Minimum Split (s)	11.0		6.1		21.0	
Total Split (s)	27.0		8.1		46.0	
Total Split (%)	33.3%		10.0%		56.7%	
Yellow Time (s)	3.0		3.0		4.0	
All-Red Time (s)	1.0		0.1		2.0	
Lost Time Adjust (s)	0.0				0.0	
Total Lost Time (s)	4.0				6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Recall Mode	None		Max		Min	
Act Effct Green (s)	13.6			24.2	16.2	
Actuated g/C Ratio	0.28			0.50	0.34	
v/c Ratio	0.70			0.46	0.47	
Control Delay	22.6			9.7	6.4	
Queue Delay	0.0			0.0	0.0	
Total Delay	22.6			9.7	6.4	
LOS	C			A	A	
Approach Delay	22.6			9.7	6.4	
Approach LOS	C			A	A	
Stops (vph)	244			169	70	
Fuel Used(gal)	6			4	3	
CO Emissions (g/hr)	407			265	176	
NOx Emissions (g/hr)	79			52	34	
VOC Emissions (g/hr)	94			61	41	
Dilemma Vehicles (#)	0			0	0	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 50th (ft)	78			41	14	
Queue Length 95th (ft)	168			110	71	
Internal Link Dist (ft)	849			915	622	
Turn Bay Length (ft)						
Base Capacity (vph)	850			1285	1448	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.42			0.26	0.24	

Intersection Summary			
Area Type:	Other		
Cycle Length: 81.1			
Actuated Cycle Length: 48.2			
Natural Cycle: 45			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 13.0		Intersection LOS: B	
Intersection Capacity Utilization 64.6%		ICU Level of Service C	
Analysis Period (min) 15			

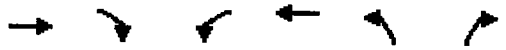
Splits and Phases: 37: Route 162 (Jones Hill Road) & Woodmont Road



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	700	160	0	0	5	15
Sign Control	Free			Free	Stop	
Grade	0%			0%	-2%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	778	178	0	0	6	17
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	604					
pX, platoon unblocked						
vC, conflicting volume			956		778	389
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			956		778	389
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	97
cM capacity (veh/h)			715		333	610

Direction, Lane #	EB 1	EB 2	EB 3	NB 1	NB 2
Volume Total	389	389	178	6	17
Volume Left	0	0	0	6	0
Volume Right	0	0	178	0	17
cSH	1700	1700	1700	333	610
Volume to Capacity	0.23	0.23	0.10	0.02	0.03
Queue Length 95th (ft)	0	0	0	1	2
Control Delay (s)	0.0	0.0	0.0	16.0	11.1
Lane LOS				C	B
Approach Delay (s)	0.0			12.3	
Approach LOS				B	

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	29.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	305	80	200	375	320	120
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	339	89	222	417	356	133

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	428	639	489
Volume Left (vph)	0	222	356
Volume Right (vph)	89	0	133
Hadj (s)	-0.09	0.10	0.02
Departure Headway (s)	6.7	6.8	6.8
Degree Utilization, x	0.80	1.0	0.92
Capacity (veh/h)	523	540	522
Control Delay (s)	31.2	131.3	47.2
Approach Delay (s)	31.2	131.3	47.2
Approach LOS	D	F	E

Intersection Summary				
Delay	77.3			
Level of Service	F			
Intersection Capacity Utilization	86.8%	ICU Level of Service	E	
Analysis Period (min)	15			

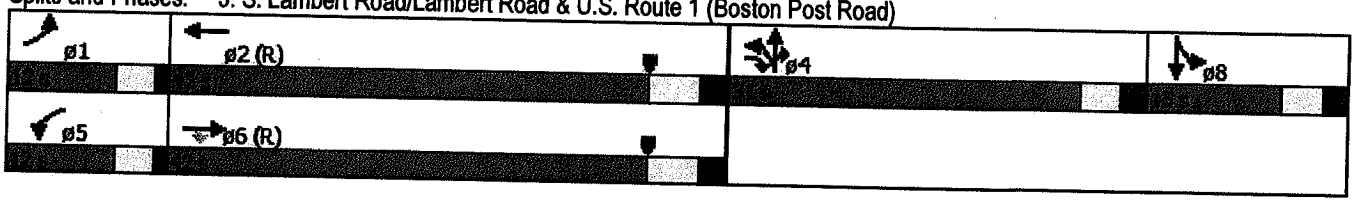
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	680	335	85	560	35	460	335	170	20	115	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			1%			1%			-1%	
Storage Length (ft)	175		175	260		0	180		0	0		0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (ft)	50			50			50			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	0.95
Frt			0.850		0.991				0.850		0.976	
Flt Protected	0.950			0.950			0.950	0.991			0.994	
Satd. Flow (prot)	1778	3557	1591	1761	3490	0	1673	1745	1575	0	3451	0
Flt Permitted	0.950			0.950			0.950	0.991			0.994	
Satd. Flow (perm)	1778	3557	1591	1761	3490	0	1673	1745	1575	0	3451	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			217		7				189		17	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		978			901			679			266	
Travel Time (s)		16.7			15.4			15.4			6.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	756	372	94	622	39	511	372	189	22	128	28
Shared Lane Traffic (%)							15%					
Lane Group Flow (vph)	50	756	372	94	661	0	434	449	189	0	178	0
Turn Type	Prot	NA	pm+ov	Prot	NA		Split	NA	Prot	Split	NA	
Protected Phases	1	6	4	5	2		4	4	4	8	8	
Permitted Phases			6									
Detector Phase	1	6	6	5	2		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	5.0	15.0	12.0	5.0	15.0		12.0	12.0	12.0	7.0	7.0	
Minimum Split (s)	9.0	21.0	17.0	9.0	21.0		17.0	17.0	17.0	12.0	12.0	
Total Split (s)	12.0	42.0	31.0	12.0	42.0		31.0	31.0	31.0	15.0	15.0	
Total Split (%)	12.0%	42.0%	31.0%	12.0%	42.0%		31.0%	31.0%	31.0%	15.0%	15.0%	
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	4.0	6.0	5.0	4.0	6.0		5.0	5.0	5.0		5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Recall Mode	None	C-Min	None	None	C-Min		None	None	None	None	None	
Act Effct Green (s)	6.8	37.6	69.6	7.6	40.2		26.0	26.0	26.0		8.8	
Actuated g/C Ratio	0.07	0.38	0.70	0.08	0.40		0.26	0.26	0.26		0.09	
v/c Ratio	0.41	0.57	0.32	0.71	0.47		1.00	0.99	0.34		0.56	
Control Delay	54.6	27.1	3.2	73.5	24.2		81.7	78.5	6.3		46.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	54.6	27.1	3.2	73.5	24.2		81.7	78.5	6.3		46.3	
LOS	D	C	A	E	C		F	E	A		D	
Approach Delay		20.7			30.4			67.1			46.3	
Approach LOS		C			C			E			D	
Stops (vph)	42	524	50	78	427		335	348	21		137	
Fuel Used(gal)	1	13	3	3	11		13	13	2		3	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
CO Emissions (g/hr)	85	937	205	479	763		922	935	170		211	
NOx Emissions (g/hr)	16	182	40	35	146		179	182	33		41	
VOC Emissions (g/hr)	20	217	47	41	174		214	217	39		49	
Dilemma Vehicles (#)	0	34	0	0	30		0	0	0		0	
Queue Length 50th (ft)	31	200	30	59	165		291	300	0		52	
Queue Length 95th (ft)	69	264	64	#134	226		#503	#512	53		87	
Internal Link Dist (ft)		898			821			599			186	
Turn Bay Length (ft)	175		175	260			180					
Base Capacity (vph)	142	1338	1173	140	1405		434	453	549		360	
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	
Reduced v/c Ratio	0.35	0.57	0.32	0.67	0.47		1.00	0.99	0.34		0.49	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 45 (45%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 40.0 Intersection LOS: D
Intersection Capacity Utilization 67.6% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: S. Lambert Road/Lambert Road & U.S. Route 1 (Boston Post Road)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	170	40	335	110	55	0	780	600	120	425	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			1%	
Storage Length (ft)	125		0	200		200	0		175	225		0
Storage Lanes	1		0	1		1	0		1	1		0
Taper Length (ft)	50			50			25			50		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.972				0.850			0.850		0.993	
Flt Protected	0.950			0.950	0.975					0.950		
Satd. Flow (prot)	1770	1811	0	1681	1725	1583	0	3557	1591	1761	3497	0
Flt Permitted	0.950			0.950	0.975					0.950		
Satd. Flow (perm)	1770	1811	0	1681	1725	1583	0	3557	1591	1761	3497	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13				95			254		8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		624			1998			409			905	
Travel Time (s)		14.2			45.4			9.3			20.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	189	44	372	122	61	0	867	667	133	472	22
Shared Lane Traffic (%)				34%								
Lane Group Flow (vph)	56	233	0	246	248	61	0	867	667	133	494	0
Turn Type	Split	NA		Split	NA	pt+ov		NA	pt+ov	Prot	NA	
Protected Phases	5	5		4	4	1 4		2	2 4	1	1 2	
Permitted Phases												
Detector Phase	5	5		4	4	4		2	2	1	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		5.0	5.0			16.0		6.0		
Minimum Split (s)	11.0	11.0		9.0	9.0			21.0		10.0		
Total Split (s)	18.0	18.0		19.0	19.0			29.0		14.0		
Total Split (%)	22.5%	22.5%		23.8%	23.8%			36.3%		17.5%		
Yellow Time (s)	3.0	3.0		3.0	3.0			3.0		3.0		
All-Red Time (s)	2.0	2.0		1.0	1.0			2.0		1.0		
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0		
Total Lost Time (s)	5.0	5.0		4.0	4.0			5.0		4.0		
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?												
Recall Mode	None	None		None	None			Min		None		
Act Effct Green (s)	11.9	11.9		13.7	13.7	20.8		22.9	40.7	8.9	34.0	
Actuated g/C Ratio	0.16	0.16		0.19	0.19	0.28		0.31	0.56	0.12	0.47	
v/c Ratio	0.20	0.76		0.78	0.77	0.12		0.78	0.67	0.62	0.30	
Control Delay	30.9	47.7		49.5	47.8	1.5		30.2	11.5	46.9	12.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay	30.9	47.7		49.5	47.8	1.5		30.2	11.5	46.9	12.4	
LOS	C	D		D	D	A		C	B	D	B	
Approach Delay		44.5			43.5			22.1			19.7	
Approach LOS		D			D			C			B	
Stops (vph)	44	169		188	191	4		661	272	105	243	
Fuel Used(gal)	1	4		7	7	1		14	7	3	8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
CO Emissions (g/hr)	56	279		469	458	63		860	488	224	557	
NOx Emissions (g/hr)	11	54		91	91	12		187	95	44	108	
VOC Emissions (g/hr)	13	65		109	109	15		222	113	52	129	
Dilemma Vehicles (#)	0	0		0	0	0		0	0	0	0	
Queue Length 50th (ft)	25	106		124	125	0		209	135	64	72	
Queue Length 95th (ft)	57	#216		#244	#243	7		#283	259	#131	103	
Internal Link Dist (ft)		544			1918			329			825	
Turn Bay Length (ft)	125			200		200			175	225		
Base Capacity (vph)	326	345		358	367	557		1213	999	250	1728	
Starvation Cap Reductn	0	0		0	0	0		0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0		0	0	0	0	
Storage Cap Reductn	0	0		0	0	0		0	0	0	0	
Reduced v/c Ratio	0.17	0.68		0.69	0.68	0.11		0.71	0.67	0.53	0.29	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 73.1
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 27.7 Intersection LOS: C
Intersection Capacity Utilization 66.8% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Marsh Hill Road/S. Lambert Road & Indian River Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	5	75	220	0	85	10	1240	155	40	755	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	175		0	170		115
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			140			140			105		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.860			0.850			0.983				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1602	0	1770	1583	0	1770	3479	0	1770	3539	1583
Flt Permitted	0.714			0.714			0.263			0.135		
Satd. Flow (perm)	1330	1602	0	1330	1583	0	490	3479	0	251	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		83			139			35				116
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		331			904			894			460	
Travel Time (s)		7.5			24.7			20.3			10.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	6	83	244	0	94	11	1378	172	44	839	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	89	0	244	94	0	11	1550	0	44	839	6
Turn Type	pm+pt	NA		pm+pt	NA		D.P+P	NA		Perm	NA	custom
Protected Phases	3	4		7	8		1	1 6			2	2
Permitted Phases	4			8			2			2		2
Detector Phase	3	4		7	8		1	1 6		2	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0			25.0	25.0	25.0
Minimum Split (s)	11.0	11.4		11.0	11.4		9.2			29.9	29.9	29.9
Total Split (s)	11.0	12.4		11.0	12.4		11.2			55.4	55.4	55.4
Total Split (%)	12.2%	13.8%		12.2%	13.8%		12.4%			61.6%	61.6%	61.6%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0			3.3	3.3	3.3
All-Red Time (s)	1.0	1.4		1.0	1.4		1.2			1.6	1.6	1.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0			0.0	0.0	0.0
Total Lost Time (s)	4.0	4.4		4.0	4.4		4.2			4.9	4.9	4.9
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Recall Mode	None	None		None	None		None			Min	Min	Min
Act Effct Green (s)	13.1	7.5		13.1	7.5		41.4	45.8		33.4	33.4	33.4
Actuated g/C Ratio	0.19	0.11		0.19	0.11		0.59	0.65		0.47	0.47	0.47
v/c Ratio	0.21	0.37		0.84	0.32		0.03	0.68		0.37	0.50	0.01
Control Delay	26.1	15.2		53.0	5.8		4.8	9.7		22.3	13.9	0.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	26.1	15.2		53.0	5.8		4.8	9.7		22.3	13.9	0.0
LOS	C	B		D	A		A	A		C	B	A
Approach Delay		19.6			39.9			9.7			14.2	
Approach LOS		B			D			A			B	
Stops (vph)	43	22		185	5		5	766		26	468	0
Fuel Used(gal)	1	1		5	1		0	17		1	10	0
CO Emissions (g/hr)	47	40		334	54		7	1169		42	687	2

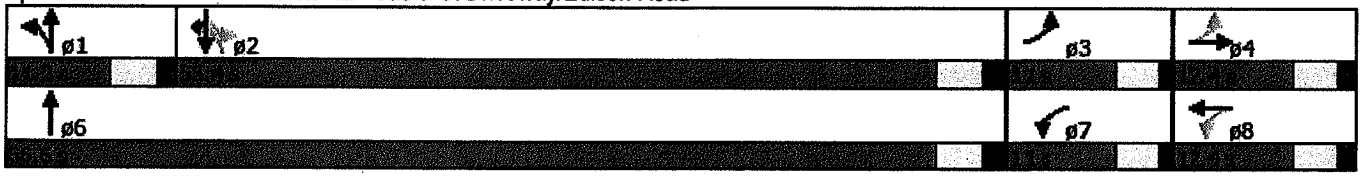
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	25.0
Minimum Split (s)	29.9
Total Split (s)	66.6
Total Split (%)	74%
Yellow Time (s)	3.3
All-Red Time (s)	1.6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	Min
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)	9	8		65	11		1	227		8	134	0
VOC Emissions (g/hr)	11	9		77	13		2	271		10	159	1
Dilemma Vehicles (#)	0	0		0	0		0	0		0	0	0
Queue Length 50th (ft)	20	2		88	0		2	204		12	131	0
Queue Length 95th (ft)	62	47		#204	20		6	275		40	177	0
Internal Link Dist (ft)		251			824			814			380	
Turn Bay Length (ft)				100			175			170		115
Base Capacity (vph)	292	261		292	308		419	3056		186	2625	1204
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.21	0.34		0.84	0.31		0.03	0.51		0.24	0.32	0.00

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 70.4
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 15.0 Intersection LOS: B
Intersection Capacity Utilization 65.2% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Marsh Hill Road & UI Driveway/Edison Road



Lane Group	ø6
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	40	20	325	5	440	20	935	325	360	645	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	350		350	300		300	300		300
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (ft)	50			100			50			100		
Lane Util. Factor	1.00	1.00	1.00	0.91	0.86	0.91	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.908	0.850			0.850			0.850
Flt Protected	0.950			0.950	0.982		0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1610	2857	1441	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950	0.982		0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1610	2857	1441	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		245	244			361			148
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		381			611			1181			894	
Travel Time (s)		8.7			13.9			26.8			20.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	44	22	361	6	489	22	1039	361	400	717	11
Shared Lane Traffic (%)				41%		50%						
Lane Group Flow (vph)	44	44	22	213	399	244	22	1039	361	400	717	11
Turn Type	Split	NA	Perm	Split	NA	Prot	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		7	7	7	1	6		5	2	
Permitted Phases			4						6			2
Detector Phase	4	4	4	7	7	7	1			5		
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	5.0	19.0	19.0	5.0	19.0	19.0
Minimum Split (s)	12.5	12.5	12.5	12.7	12.7	12.7	9.0	24.8	24.8	9.0	24.8	24.8
Total Split (s)	19.5	19.5	19.5	18.7	18.7	18.7	14.0	27.8	27.8	24.0	37.8	37.8
Total Split (%)	21.7%	21.7%	21.7%	20.8%	20.8%	20.8%	15.6%	30.9%	30.9%	26.7%	42.0%	42.0%
Yellow Time (s)	3.0	3.0	3.0	3.2	3.2	3.2	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	1.0	1.8	1.8	1.0	1.8	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.7	5.7	5.7	4.0	5.8	5.8	4.0	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	7.7	7.7	7.7	13.0	13.0	13.0	6.0	30.8	30.8	20.0	50.4	50.4
Actuated g/C Ratio	0.09	0.09	0.09	0.14	0.14	0.14	0.07	0.34	0.34	0.22	0.56	0.56
v/c Ratio	0.29	0.28	0.07	0.92	0.64	0.59	0.19	0.86	0.46	1.02	0.36	0.01
Control Delay	43.5	42.9	0.4	81.5	19.1	11.2	39.6	28.7	9.2	86.7	13.5	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.5	42.9	0.4	81.5	19.1	11.2	39.6	28.7	9.2	86.7	13.5	0.0
LOS	D	D	A	F	B	B	D	C	A	F	B	A
Approach Delay		34.6			32.4			23.9			39.3	
Approach LOS		C			C			C			D	
Stops (vph)	38	38	0	163	133	32	18	643	115	304	355	0
Fuel Used(gal)	1	1	0	5	4	2	0	18	4	11	8	0
CO Emissions (g/hr)	48	47	4	349	269	121	31	1232	296	737	575	5

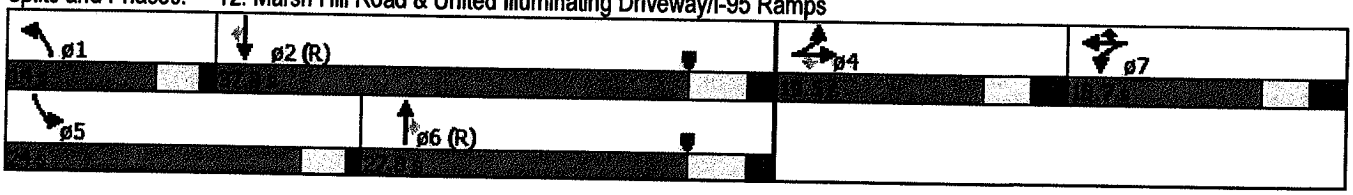
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)	9	9	1	68	52	24	6	240	58	143	112	1
VOC Emissions (g/hr)	11	11	1	81	62	28	7	286	69	171	133	1
Dilemma Vehicles (#)	0	0	0	0	0	0	0	0	0	0	0	0
Queue Length 50th (ft)	24	24	0	132	46	0	9	221	76	~235	102	0
Queue Length 95th (ft)	56	56	0	#279	99	73	m14	m#422	m119	#419	197	0
Internal Link Dist (ft)		301			531			1101			814	
Turn Bay Length (ft)			200	350		350	300		300	300		300
Base Capacity (vph)	275	289	415	232	622	416	196	1211	779	393	1981	951
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.15	0.05	0.92	0.64	0.59	0.11	0.86	0.46	1.02	0.36	0.01

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 61 (68%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 31.3 Intersection LOS: C
Intersection Capacity Utilization 78.7% ICU Level of Service D
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 12: Marsh Hill Road & United Illuminating Driveway/I-95 Ramps



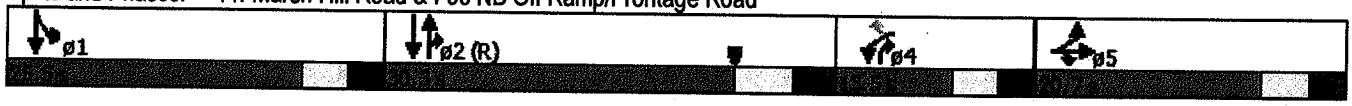
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	450	15	385	5	0	60	0	770	225	360	630	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		350	0		300	0		350	600		0
Storage Lanes	2		3	1		1	0		1	2		0
Taper Length (ft)	25			25			25			250		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt		0.861	0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3433	1524	1504	1770	0	1583	0	3539	1583	3433	3539	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3433	1524	1504	1770	0	1583	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		205	223			182			250			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		758			604			603			1181	
Travel Time (s)		17.2			13.7			13.7			26.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	500	17	428	6	0	67	0	856	250	400	700	0
Shared Lane Traffic (%)			48%									
Lane Group Flow (vph)	500	222	223	6	0	67	0	856	250	400	700	0
Turn Type	Split	NA	Prot	Prot		Perm		NA	pt+ov	Prot	NA	
Protected Phases	5	5	5	4				2	2 4	1	1 2	
Permitted Phases						4						
Detector Phase	5	5	5	4		4				1		
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0		7.0		21.0		5.0		
Minimum Split (s)	12.7	12.7	12.7	12.5		12.5		27.8		10.5		
Total Split (s)	20.7	20.7	20.7	13.5		13.5		30.3		25.5		
Total Split (%)	23.0%	23.0%	23.0%	15.0%		15.0%		33.7%		28.3%		
Yellow Time (s)	3.2	3.2	3.2	3.0		3.0		4.0		3.0		
All-Red Time (s)	2.5	2.5	2.5	2.5		2.5		2.8		2.5		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0		0.0		
Total Lost Time (s)	5.7	5.7	5.7	5.5		5.5		6.8		5.5		
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?												
Recall Mode	None	None	None	None		None		C-Min		None		
Act Effct Green (s)	14.8	14.8	14.8	7.0		7.0		32.2	42.2	15.0	54.0	
Actuated g/C Ratio	0.16	0.16	0.16	0.08		0.08		0.36	0.47	0.17	0.60	
v/c Ratio	0.89	0.53	0.52	0.04		0.23		0.68	0.29	0.70	0.33	
Control Delay	56.1	11.4	9.5	39.2		1.9		29.8	3.1	34.8	8.2	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	56.1	11.4	9.5	39.2		1.9		29.8	3.1	34.8	8.2	
LOS	E	B	A	D		A		C	A	C	A	
Approach Delay		34.6						23.7			17.9	
Approach LOS		C						C			B	
Stops (vph)	409	39	29	8		0		625	21	287	294	
Fuel Used(gal)	10	2	2	0		0		12	1	7	8	
CO Emissions (g/hr)	703	130	122	8		21		821	92	521	593	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)	137	25	24	1		4		160	18	101	115	
VOC Emissions (g/hr)	163	30	28	2		5		190	21	121	137	
Dilemma Vehicles (#)	0	0	0	0		0		0	0	0	0	
Queue Length 50th (ft)	144	8	0	3		0		225	0	116	150	
Queue Length 95th (ft)	#230	75	64	15		0		#342	43	m112	m85	
Internal Link Dist (ft)		678			524			523			1101	
Turn Bay Length (ft)			350			300			350	600		
Base Capacity (vph)	572	424	436	157		306		1267	875	762	2124	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.87	0.52	0.51	0.04		0.22		0.68	0.29	0.52	0.33	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 1 (1%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 24.5 Intersection LOS: C
Intersection Capacity Utilization 65.7% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Marsh Hill Road & I-95 NB Off Ramp/Frontage Road



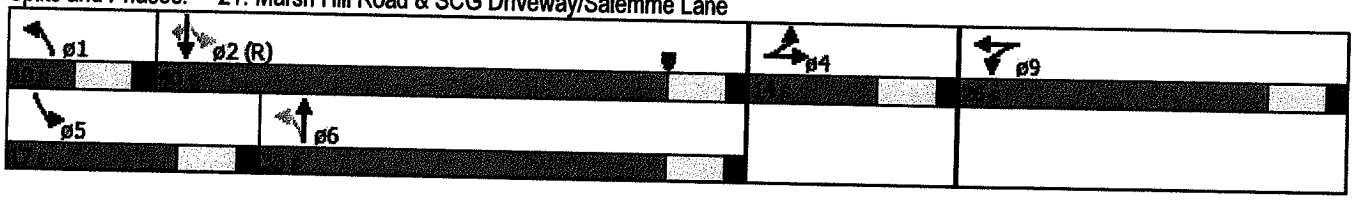
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	0	10	85	0	200	10	650	40	110	825	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	50		0	100		120
Storage Lanes	0		0	0		0	1		0	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.988			0.905			0.991				0.850
Flt Protected		0.956			0.985		0.950			0.950		
Satd. Flow (prot)	0	1759	0	0	1660	0	1770	3507	0	1770	3539	1583
Flt Permitted		0.956			0.985		0.288			0.257		
Satd. Flow (perm)	0	1759	0	0	1660	0	536	3507	0	479	3539	1583
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		230			230			7				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		321			345			406			603	
Travel Time (s)		7.3			7.8			9.2			13.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	0	11	94	0	222	11	722	44	122	917	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	128	0	0	316	0	11	766	0	122	917	67
Turn Type	Split	NA		Split	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	4	4		9	9		1	6		5	2	
Permitted Phases							6			2		2
Detector Phase	4	4		9	9		1			5		2
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	18.2		5.0	18.2	18.2
Minimum Split (s)	12.5	12.5		12.5	12.5		10.5	24.5		10.5	24.5	24.5
Total Split (s)	14.0	14.0		26.0	26.0		10.0	33.0		17.0	40.0	40.0
Total Split (%)	15.6%	15.6%		28.9%	28.9%		11.1%	36.7%		18.9%	44.4%	44.4%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	1.5
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		5.5			5.5		5.5	5.5		5.5	5.5	5.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	Min		None	C-Min	C-Min
Act Effct Green (s)		7.0			11.3		46.8	42.3		55.2	53.2	53.2
Actuated g/C Ratio		0.08			0.13		0.52	0.47		0.61	0.59	0.59
v/c Ratio		0.37			0.77		0.03	0.46		0.30	0.44	0.07
Control Delay		3.0			24.2		9.6	18.5		7.1	7.3	6.7
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		3.0			24.2		9.6	18.5		7.1	7.3	6.7
LOS		A			C		A	B		A	A	A
Approach Delay		3.0			24.2			18.4			7.3	
Approach LOS		A			C			B			A	
Stops (vph)		0			89		6	456		26	255	17
Fuel Used(gal)		0			3		0	24		1	7	0
CO Emissions (g/hr)		25			186		23	1662		57	456	32

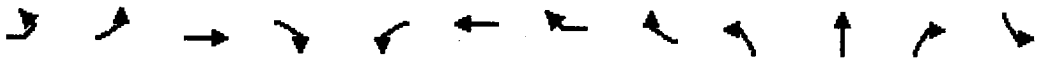
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)		5			36		4	323		11	89	6
VOC Emissions (g/hr)		6			43		5	385		13	106	7
Dilemma Vehicles (#)		0			0		0	0		0	0	0
Queue Length 50th (ft)		0			47		2	142		17	69	9
Queue Length 95th (ft)		0			124		11	246		26	141	m30
Internal Link Dist (ft)		241			265			326			523	
Turn Bay Length (ft)							50			100		120
Base Capacity (vph)		374			555		340	1651		458	2092	936
Starvation Cap Reductn		0			0		0	0		0	0	0
Spillback Cap Reductn		0			0		0	0		0	0	0
Storage Cap Reductn		0			0		0	0		0	0	0
Reduced v/c Ratio		0.34			0.57		0.03	0.46		0.27	0.44	0.07

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:SBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 13.1 Intersection LOS: B
Intersection Capacity Utilization 57.2% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

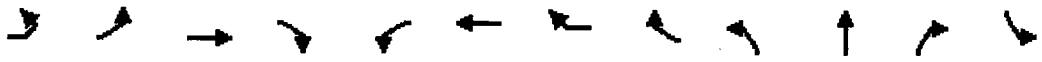
Splits and Phases: 21: Marsh Hill Road & SCG Driveway/Salemme Lane





Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	5	55	170	75	5	80	5	25	65	155	5	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)			0%			0%				-1%		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.967			0.964				0.997		
Flt Protected			0.990			0.998				0.986		
Satd. Flow (prot)	0	0	1783	0	0	1792	0	0	0	1840	0	0
Flt Permitted			0.916			0.981				0.836		
Satd. Flow (perm)	0	0	1650	0	0	1762	0	0	0	1560	0	0
Right Turn on Red				No				No			No	
Satd. Flow (RTOR)												
Link Speed (mph)			25			25				25		
Link Distance (ft)			634			454				531		
Travel Time (s)			17.3			12.4				14.5		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	61	189	83	6	89	6	28	72	172	6	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	339	0	0	129	0	0	0	250	0	0
Turn Type	Perm	Perm	NA		Perm	NA			Perm	NA		Perm
Protected Phases			1			1				2		
Permitted Phases	1	1			1				2			2
Detector Phase	1	1	1		1	1			2	2		2
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0		7.0	7.0			7.0	7.0		7.0
Minimum Split (s)	11.0	11.0	11.0		11.0	11.0			11.0	11.0		11.0
Total Split (s)	19.0	19.0	19.0		19.0	19.0			30.0	30.0		30.0
Total Split (%)	31.7%	31.7%	31.7%		31.7%	31.7%			50.0%	50.0%		50.0%
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0			3.0	3.0		3.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0			1.0	1.0		1.0
Lost Time Adjust (s)			0.0			0.0				0.0		
Total Lost Time (s)			4.0			4.0				4.0		
Lead/Lag	Lead	Lead	Lead		Lead	Lead			Lag	Lag		Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None		None	None			Min	Min		Min
Act Effct Green (s)			13.7			13.7				16.3		
Actuated g/C Ratio			0.33			0.33				0.39		
v/c Ratio			0.63			0.22				0.41		
Control Delay			23.1			15.1				13.1		
Queue Delay			0.0			0.0				0.0		
Total Delay			23.1			15.1				13.1		
LOS			C			B				B		
Approach Delay			23.1			15.1				13.1		
Approach LOS			C			B				B		
Stops (vph)			219			79				147		
Fuel Used(gal)			4			1				2		
CO Emissions (g/hr)			274			77				152		
NOx Emissions (g/hr)			53			15				30		
VOC Emissions (g/hr)			64			18				35		

Lane Group	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations							
Volume (vph)	295	50	5	5	5	30	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Grade (%)	1%				0%		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.979				0.897		
Flt Protected	0.999				0.988		
Satd. Flow (prot)	1813	0	0	0	1651	0	0
Flt Permitted	0.995				0.988		
Satd. Flow (perm)	1805	0	0	0	1651	0	0
Right Turn on Red			No				No
Satd. Flow (RTOR)							
Link Speed (mph)	25				25		
Link Distance (ft)	2088				725		
Travel Time (s)	56.9				19.8		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	328	56	6	6	6	33	6
Shared Lane Traffic (%)							
Lane Group Flow (vph)	396	0	0	0	51	0	0
Turn Type	NA			Perm	Perm		
Protected Phases	2						
Permitted Phases				4	4		
Detector Phase	2			4	4		
Switch Phase							
Minimum Initial (s)	7.0			7.0	7.0		
Minimum Split (s)	11.0			11.0	11.0		
Total Split (s)	30.0			11.0	11.0		
Total Split (%)	50.0%			18.3%	18.3%		
Yellow Time (s)	3.0			3.0	3.0		
All-Red Time (s)	1.0			1.0	1.0		
Lost Time Adjust (s)	0.0				0.0		
Total Lost Time (s)	4.0				4.0		
Lead/Lag	Lag						
Lead-Lag Optimize?							
Recall Mode	Min			None	None		
Act Effct Green (s)	16.3				7.6		
Actuated g/C Ratio	0.39				0.18		
v/c Ratio	0.57				0.17		
Control Delay	14.9				22.0		
Queue Delay	0.0				0.0		
Total Delay	14.9				22.0		
LOS	B				C		
Approach Delay	14.9				22.0		
Approach LOS	B				C		
Stops (vph)	250				41		
Fuel Used(gal)	10				1		
CO Emissions (g/hr)	695				45		
NOx Emissions (g/hr)	135				9		
VOC Emissions (g/hr)	161				10		



Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBT	NBR	SBL
Dilemma Vehicles (#)			0			0				0		
Queue Length 50th (ft)			53			17				35		
Queue Length 95th (ft)			#238			77				108		
Internal Link Dist (ft)			554			374				451		
Turn Bay Length (ft)												
Base Capacity (vph)			643			687				1054		
Starvation Cap Reductn			0			0				0		
Spillback Cap Reductn			0			0				0		
Storage Cap Reductn			0			0				0		
Reduced v/c Ratio			0.53			0.19				0.24		

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 42
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.63
Intersection Signal Delay: 17.2 Intersection LOS: B
Intersection Capacity Utilization 73.9% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 27: Merwin Avenue & Anderson Avenue & Depot Road

Lane Group	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Dilemma Vehicles (#)	0				0		
Queue Length 50th (ft)	60				9		
Queue Length 95th (ft)	169				45		
Internal Link Dist (ft)	2008				645		
Turn Bay Length (ft)							
Base Capacity (vph)	1220				300		
Starvation Cap Reductn	0				0		
Spillback Cap Reductn	0				0		
Storage Cap Reductn	0				0		
Reduced v/c Ratio	0.32				0.17		

Intersection Summary

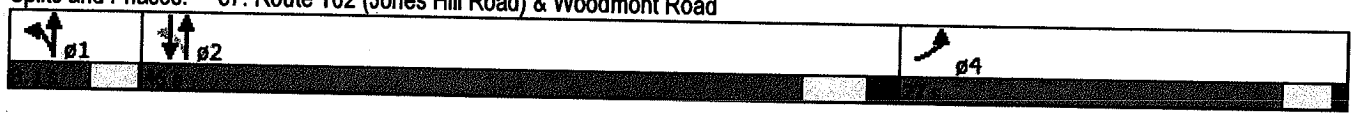
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	395	170	80	205	165	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.959				0.942	
Flt Protected	0.966			0.986		
Satd. Flow (prot)	1726	0	0	1837	1755	0
Flt Permitted	0.966			0.847		
Satd. Flow (perm)	1726	0	0	1578	1755	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	27				67	
Link Speed (mph)	25			25	25	
Link Distance (ft)	929			995	702	
Travel Time (s)	25.3			27.1	19.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	439	189	89	228	183	139
Shared Lane Traffic (%)						
Lane Group Flow (vph)	628	0	0	317	322	0
Turn Type	Prot		D.P+P	NA	NA	
Protected Phases	4		1	1 2	2	
Permitted Phases			2			
Detector Phase	4			2	2	
Switch Phase						
Minimum Initial (s)	7.0		3.0		15.0	
Minimum Split (s)	11.0		6.1		21.0	
Total Split (s)	27.0		8.1		46.0	
Total Split (%)	33.3%		10.0%		56.7%	
Yellow Time (s)	3.0		3.0		4.0	
All-Red Time (s)	1.0		0.1		2.0	
Lost Time Adjust (s)	0.0				0.0	
Total Lost Time (s)	4.0				6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Recall Mode	None		Max		Min	
Act Effct Green (s)	23.0			23.5	15.6	
Actuated g/C Ratio	0.41			0.41	0.28	
v/c Ratio	0.88			0.47	0.61	
Control Delay	32.1			13.1	19.5	
Queue Delay	0.0			0.0	0.0	
Total Delay	32.1			13.1	19.5	
LOS	C			B	B	
Approach Delay	32.1			13.1	19.5	
Approach LOS	C			B	B	
Stops (vph)	434			195	194	
Fuel Used(gal)	11			4	4	
CO Emissions (g/hr)	796			274	254	
NOx Emissions (g/hr)	155			53	49	
VOC Emissions (g/hr)	184			64	59	
Dilemma Vehicles (#)	0			0	0	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 50th (ft)	176			64	73	
Queue Length 95th (ft)	#391			112	143	
Internal Link Dist (ft)	849			915	622	
Turn Bay Length (ft)						
Base Capacity (vph)	715			1355	1257	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.88			0.23	0.26	

Intersection Summary

Area Type: Other
Cycle Length: 81.1
Actuated Cycle Length: 56.7
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 24.2 Intersection LOS: C
Intersection Capacity Utilization 75.5% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 37: Route 162 (Jones Hill Road) & Woodmont Road



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱			↰	↱
Volume (veh/h)	570	35	0	0	65	40
Sign Control	Free			Free	Stop	
Grade	0%			0%	-2%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	633	39	0	0	72	44
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	604					
pX, platoon unblocked						
vC, conflicting volume			672		633	317
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			672		633	317
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		82	93
cM capacity (veh/h)			914		412	679

Direction, Lane #	EB 1	EB 2	SB 3	NB 1	NB 2
Volume Total	317	317	39	72	44
Volume Left	0	0	0	72	0
Volume Right	0	0	39	0	44
cSH	1700	1700	1700	412	679
Volume to Capacity	0.19	0.19	0.02	0.18	0.07
Queue Length 95th (ft)	0	0	0	16	5
Control Delay (s)	0.0	0.0	0.0	15.6	10.7
Lane LOS				C	B
Approach Delay (s)	0.0			13.7	
Approach LOS				B	

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	26.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	555	320	90	200	165	150
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	617	356	100	222	183	167

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	972	322	350
Volume Left (vph)	0	100	183
Volume Right (vph)	356	0	167
Hadj (s)	-0.19	0.10	-0.15
Departure Headway (s)	5.5	6.2	6.3
Degree Utilization, x	1.0	0.56	0.61
Capacity (veh/h)	663	557	552
Control Delay (s)	245.4	16.7	18.8
Approach Delay (s)	245.4	16.7	18.8
Approach LOS	F	C	C

Intersection Summary			
Delay	152.3		
Level of Service	F		
Intersection Capacity Utilization	92.6%	ICU Level of Service	F
Analysis Period (min)	15		

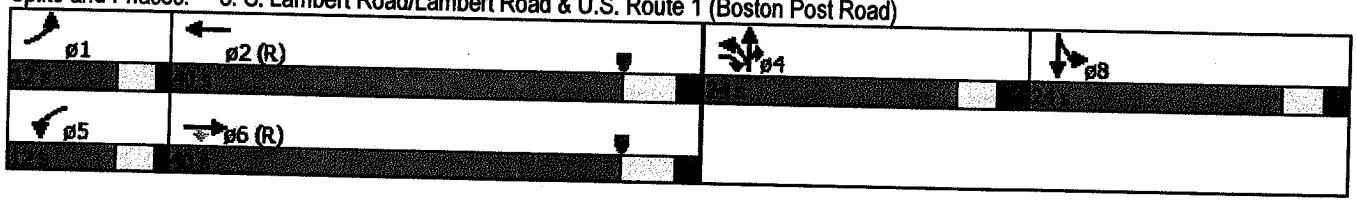
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	208	204	59	286	10	199	105	108	23	146	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			1%			1%			-1%	
Storage Length (ft)	175		175	260		0	180		0	0		0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (ft)	50			50			50			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	0.95
Frt			0.850		0.995				0.850		0.981	
Flt Protected	0.950			0.950			0.950	0.984			0.994	
Satd. Flow (prot)	1778	3557	1591	1761	3504	0	1673	1733	1575	0	3468	0
Flt Permitted	0.950			0.950			0.950	0.984			0.994	
Satd. Flow (perm)	1778	3557	1591	1761	3504	0	1673	1733	1575	0	3468	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			227		4				131		14	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		978			901			679			266	
Travel Time (s)		16.7			15.4			15.4			6.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	231	227	66	318	11	221	117	120	26	162	27
Shared Lane Traffic (%)							25%					
Lane Group Flow (vph)	16	231	227	66	329	0	166	172	120	0	215	0
Turn Type	Prot	NA	pm+ov	Prot	NA		Split	NA	Prot	Split	NA	
Protected Phases	1	6	4	5	2		4	4	4	8	8	
Permitted Phases			6									
Detector Phase	1	6	6	5	2		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	5.0	15.0	12.0	5.0	15.0		12.0	12.0	12.0	7.0	7.0	
Minimum Split (s)	9.0	21.0	17.0	9.0	21.0		17.0	17.0	17.0	12.0	12.0	
Total Split (s)	12.0	40.0	24.0	12.0	40.0		24.0	24.0	24.0	24.0	24.0	
Total Split (%)	12.0%	40.0%	24.0%	12.0%	40.0%		24.0%	24.0%	24.0%	24.0%	24.0%	
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	4.0	6.0	5.0	4.0	6.0		5.0	5.0	5.0		5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Recall Mode	None	C-Min	None	None	C-Min		None	None	None	None	None	
Act Effct Green (s)	5.7	49.0	70.4	7.1	54.2		15.3	15.3	15.3		10.3	
Actuated g/C Ratio	0.06	0.49	0.70	0.07	0.54		0.15	0.15	0.15		0.10	
v/c Ratio	0.16	0.13	0.19	0.53	0.17		0.65	0.65	0.34		0.58	
Control Delay	48.1	16.2	1.3	59.9	13.8		51.6	51.1	8.2		46.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	48.1	16.2	1.3	59.9	13.8		51.6	51.1	8.2		46.2	
LOS	D	B	A	E	B		D	D	A		D	
Approach Delay		10.1			21.5			40.0			46.2	
Approach LOS		B			C			D			D	
Stops (vph)	16	115	11	55	150		137	143	14		169	
Fuel Used(gal)	0	3	2	2	4		4	4	2		4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
CO Emissions (g/hr)	27	223	106	113	288		291	302	111		256	
NOx Emissions (g/hr)	5	43	21	22	56		57	59	22		50	
VOC Emissions (g/hr)	6	52	25	26	67		67	70	26		59	
Dilemma Vehicles (#)	0	10	0	0	15		0	0	0		0	
Queue Length 50th (ft)	10	43	0	41	46		106	110	0		65	
Queue Length 95th (ft)	31	75	24	84	101		171	175	40		100	
Internal Link Dist (ft)		898			821			599			186	
Turn Bay Length (ft)	175		175	260			180					
Base Capacity (vph)	142	1744	1186	140	1899		317	329	405		670	
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	
Reduced v/c Ratio	0.11	0.13	0.19	0.47	0.17		0.52	0.52	0.30		0.32	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 45 (45%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 27.0 Intersection LOS: C
Intersection Capacity Utilization 49.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: S. Lambert Road/Lambert Road & U.S. Route 1 (Boston Post Road)



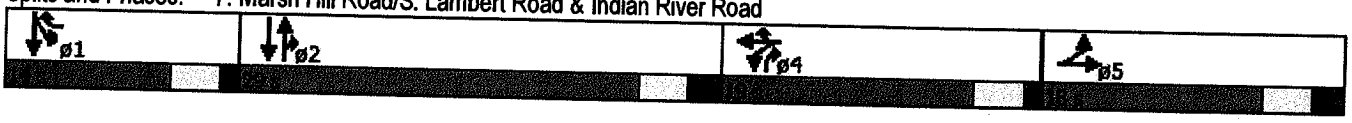
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	54	37	269	81	86	0	410	317	50	367	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			1%	
Storage Length (ft)	125		0	200		200	0		175	225		0
Storage Lanes	1		0	1		1	0		1	1		0
Taper Length (ft)	50			50			25			50		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.939				0.850			0.850			
Flt Protected	0.950			0.950	0.973					0.950		
Satd. Flow (prot)	1770	1749	0	1681	1722	1583	0	3557	1591	1761	3522	0
Flt Permitted	0.950			0.950	0.973					0.950		
Satd. Flow (perm)	1770	1749	0	1681	1722	1583	0	3557	1591	1761	3522	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37				96			352			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		624			1998			409			905	
Travel Time (s)		14.2			45.4			9.3			20.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	20	60	41	299	90	96	0	456	352	56	408	1
Shared Lane Traffic (%)				36%								
Lane Group Flow (vph)	20	101	0	191	198	96	0	456	352	56	409	0
Turn Type	Split	NA		Split	NA	pt+ov		NA	pt+ov	Prot	NA	
Protected Phases	5	5		4	4	1 4		2	2 4	1	1 2	
Permitted Phases												
Detector Phase	5	5		4	4	4		2	2	1	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		5.0	5.0			16.0		6.0		
Minimum Split (s)	11.0	11.0		9.0	9.0			21.0		10.0		
Total Split (s)	18.0	18.0		19.0	19.0			29.0		14.0		
Total Split (%)	22.5%	22.5%		23.8%	23.8%			36.3%		17.5%		
Yellow Time (s)	3.0	3.0		3.0	3.0			3.0		3.0		
All-Red Time (s)	2.0	2.0		1.0	1.0			2.0		1.0		
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0		
Total Lost Time (s)	5.0	5.0		4.0	4.0			5.0		4.0		
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Recall Mode	None	None		None	None			Min		None		
Act Effct Green (s)	7.9	7.9		10.7	10.7	14.6		18.9	35.8	7.5	25.9	
Actuated g/C Ratio	0.14	0.14		0.19	0.19	0.27		0.34	0.65	0.14	0.47	
v/c Ratio	0.08	0.36		0.59	0.59	0.20		0.37	0.30	0.23	0.25	
Control Delay	27.4	22.5		31.7	31.7	3.4		18.3	1.9	29.7	10.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay	27.4	22.5		31.7	31.7	3.4		18.3	1.9	29.7	10.3	
LOS	C	C		C	C	A		B	A	C	B	
Approach Delay		23.3			26.1			11.2			12.7	
Approach LOS		C			C			B			B	
Stops (vph)	17	54		142	148	14		291	22	45	195	
Fuel Used(gal)	0	1		5	5	1		6	2	1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
CO Emissions (g/hr)	20	81		320	331	103		414	167	82	447	
NOx Emissions (g/hr)	4	16		62	64	20		80	33	16	87	
VOC Emissions (g/hr)	5	19		74	77	24		96	39	19	104	
Dilemma Vehicles (#)	0	0		0	0	0		0	0	0	0	
Queue Length 50th (ft)	6	21		65	67	0		69	0	18	42	
Queue Length 95th (ft)	28	72		157	163	18		133	34	58	83	
Internal Link Dist (ft)		544			1918			329			825	
Turn Bay Length (ft)	125			200		200			175	225		
Base Capacity (vph)	463	485		507	520	650		1719	1143	354	2150	
Starvation Cap Reductn	0	0		0	0	0		0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0		0	0	0	0	
Storage Cap Reductn	0	0		0	0	0		0	0	0	0	
Reduced v/c Ratio	0.04	0.21		0.38	0.38	0.15		0.27	0.31	0.16	0.19	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 55
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 16.2 Intersection LOS: B
Intersection Capacity Utilization 45.4% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 7: Marsh Hill Road/S. Lambert Road & Indian River Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	0	11	70	1	16	84	714	150	23	620	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	175		0	170		115
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			140			140			105		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.850			0.858			0.974				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1583	0	1770	1598	0	1770	3447	0	1770	3539	1583
Flt Permitted							0.293			0.298		
Satd. Flow (perm)	1863	1583	0	1863	1598	0	546	3447	0	555	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		398			18			67				116
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		331			904			894			460	
Travel Time (s)		7.5			24.7			20.3			10.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	0	12	78	1	18	93	793	167	26	689	41
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	12	0	78	19	0	93	960	0	26	689	41
Turn Type	pm+pt	NA		pm+pt	NA		custom	NA		Perm	NA	Prot
Protected Phases	3	4		7	8		1	1 6			2	2
Permitted Phases	4			8			6			2		
Detector Phase	3	4		7	8		1	1 6		2	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0			25.0	25.0	25.0
Minimum Split (s)	11.0	11.4		11.0	11.4		9.2			29.9	29.9	29.9
Total Split (s)	11.0	11.4		11.0	11.4		16.2			51.4	51.4	51.4
Total Split (%)	12.2%	12.7%		12.2%	12.7%		18.0%			57.1%	57.1%	57.1%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0			3.3	3.3	3.3
All-Red Time (s)	1.0	1.4		1.0	1.4		1.2			1.6	1.6	1.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0			0.0	0.0	0.0
Total Lost Time (s)	4.0	4.4		4.0	4.4		4.2			4.9	4.9	4.9
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Recall Mode	None	None		None	None		None			Min	Min	Min
Act Effct Green (s)	8.4	7.3		8.4	7.3		41.3	43.5		26.0	26.0	26.0
Actuated g/C Ratio	0.16	0.14		0.16	0.14		0.77	0.82		0.49	0.49	0.49
v/c Ratio	0.01	0.02		0.28	0.08		0.14	0.34		0.10	0.40	0.05
Control Delay	20.0	0.1		23.8	14.8		3.8	3.5		13.3	12.1	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	20.0	0.1		23.8	14.8		3.8	3.5		13.3	12.1	0.1
LOS	B	A		C	B		A	A		B	B	A
Approach Delay		5.1			22.0			3.5			11.5	
Approach LOS		A			C			A			B	
Stops (vph)	6	0		57	9		22	219		16	375	0
Fuel Used(gal)	0	0		2	1		1	8		0	8	0
CO Emissions (g/hr)	4	2		174	39		54	548		21	545	18

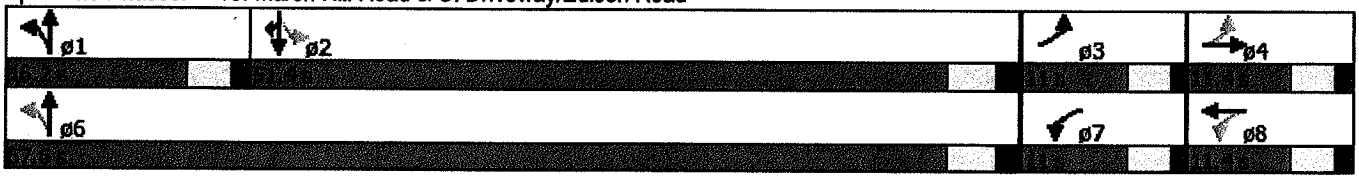
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	25.0
Minimum Split (s)	29.9
Total Split (s)	67.6
Total Split (%)	75%
Yellow Time (s)	3.3
All-Red Time (s)	1.6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	Min
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)	1	0		34	8		11	107		4	106	3
VOC Emissions (g/hr)	1	0		40	9		13	127		5	126	4
Dilemma Vehicles (#)	0	0		0	0		0	0		0	0	0
Queue Length 50th (ft)	1	0		25	0		6	40		5	80	0
Queue Length 95th (ft)	8	0		55	18		30	128		24	165	0
Internal Link Dist (ft)		251			824			814			380	
Turn Bay Length (ft)				100			175			170		115
Base Capacity (vph)	281	559		281	233		709	3397		478	3053	1381
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.01	0.02		0.28	0.08		0.13	0.28		0.05	0.23	0.03

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 53.3
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.40
Intersection Signal Delay: 7.6 Intersection LOS: A
Intersection Capacity Utilization 67.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 10: Marsh Hill Road & UI Driveway/Edison Road



Lane Group	ø6
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

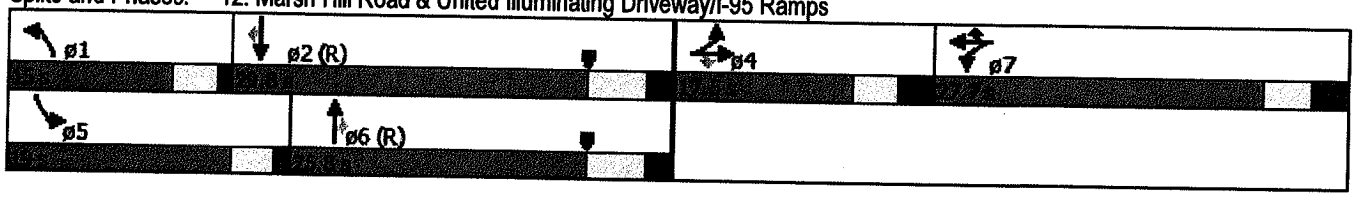
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	50	29	333	39	320	41	539	342	181	509	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	350		350	300		300	300		300
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (ft)	50			100			50			100		
Lane Util. Factor	1.00	1.00	1.00	0.91	0.86	0.91	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.932	0.850			0.850			0.850
Flt Protected	0.950			0.950	0.979		0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1610	2923	1441	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950	0.979		0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1610	2923	1441	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			152		174	182			380			148
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		381			611			1181			894	
Travel Time (s)		8.7			13.9			26.8			20.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	56	32	370	43	356	46	599	380	201	566	52
Shared Lane Traffic (%)				45%		49%						
Lane Group Flow (vph)	51	56	32	203	384	182	46	599	380	201	566	52
Turn Type	Split	NA	Perm	Split	NA	Prot	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		7	7	7	1	6		5	2	
Permitted Phases			4						6			2
Detector Phase	4	4	4	7	7	7	1			5		
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	5.0	19.0	19.0	5.0	19.0	19.0
Minimum Split (s)	12.5	12.5	12.5	12.7	12.7	12.7	9.0	24.8	24.8	9.0	24.8	24.8
Total Split (s)	17.5	17.5	17.5	27.7	27.7	27.7	15.0	25.8	25.8	19.0	29.8	29.8
Total Split (%)	19.4%	19.4%	19.4%	30.8%	30.8%	30.8%	16.7%	28.7%	28.7%	21.1%	33.1%	33.1%
Yellow Time (s)	3.0	3.0	3.0	3.2	3.2	3.2	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	1.0	1.8	1.8	1.0	1.8	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.7	5.7	5.7	4.0	5.8	5.8	4.0	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	8.0	8.0	8.0	16.0	16.0	16.0	7.1	34.1	34.1	13.3	44.1	44.1
Actuated g/C Ratio	0.09	0.09	0.09	0.18	0.18	0.18	0.08	0.38	0.38	0.15	0.49	0.49
v/c Ratio	0.32	0.34	0.11	0.71	0.58	0.45	0.33	0.45	0.45	0.77	0.33	0.06
Control Delay	43.8	43.9	0.8	47.8	21.0	8.4	58.1	25.3	9.8	56.3	18.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	43.9	0.8	47.8	21.0	8.4	58.1	25.3	9.8	56.3	18.4	0.1
LOS	D	D	A	D	C	A	E	C	A	E	B	A
Approach Delay		33.9			25.1			21.0			26.5	
Approach LOS		C			C			C			C	
Stops (vph)	43	46	0	167	167	23	40	469	215	167	320	0
Fuel Used(gal)	1	1	0	4	4	1	1	10	5	4	7	0
CO Emissions (g/hr)	55	59	6	250	283	83	76	722	351	298	505	23

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)	11	12	1	49	55	16	15	140	68	58	98	4
VOC Emissions (g/hr)	13	14	1	58	66	19	18	167	81	69	117	5
Dilemma Vehicles (#)	0	0	0	0	0	0	0	0	0	0	0	0
Queue Length 50th (ft)	28	31	0	120	62	0	28	180	88	109	111	0
Queue Length 95th (ft)	62	66	0	185	103	54	m57	245	162	#199	192	0
Internal Link Dist (ft)		301			531			1101			814	
Turn Bay Length (ft)			200	350		350	300		300	300		300
Base Capacity (vph)	236	248	342	393	845	489	216	1342	836	295	1735	851
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.23	0.09	0.52	0.45	0.37	0.21	0.45	0.45	0.68	0.33	0.06

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 24 (27%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 24.4 Intersection LOS: C
Intersection Capacity Utilization 58.6% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 12: Marsh Hill Road & United Illuminating Driveway/I-95 Ramps



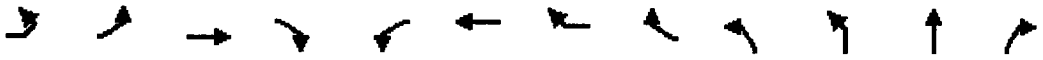
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	333	37	250	2	0	3	0	586	354	418	453	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		350	0		300	0		350	600		0
Storage Lanes	2		3	1		1	0		1	2		0
Taper Length (ft)	25			25			25			250		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt		0.888	0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3433	1571	1504	1770	0	1583	0	3539	1583	3433	3539	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3433	1571	1504	1770	0	1583	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		122	179			182			389			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		758			604			603			1181	
Travel Time (s)		17.2			13.7			13.7			26.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	370	41	278	2	0	3	0	651	393	464	503	0
Shared Lane Traffic (%)			44%									
Lane Group Flow (vph)	370	163	156	2	0	3	0	651	393	464	503	0
Turn Type	Split	NA	Prot	Prot		Prot		NA	pt+ov	Prot	NA	
Protected Phases	5	5	5	4		4		2	2 4	1	1 2	
Permitted Phases												
Detector Phase	5	5	5	4		4				1		
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0		7.0		21.0		5.0		
Minimum Split (s)	12.7	12.7	12.7	12.5		12.5		27.8		10.5		
Total Split (s)	19.7	19.7	19.7	16.5		16.5		33.3		20.5		
Total Split (%)	21.9%	21.9%	21.9%	18.3%		18.3%		37.0%		22.8%		
Yellow Time (s)	3.2	3.2	3.2	3.0		3.0		4.0		3.0		
All-Red Time (s)	2.5	2.5	2.5	2.5		2.5		2.8		2.5		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0		0.0		
Total Lost Time (s)	5.7	5.7	5.7	5.5		5.5		6.8		5.5		
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?												
Recall Mode	None	None	None	None		None		C-Min		None		
Act Effct Green (s)	13.0	13.0	13.0	7.0		7.0		42.0	44.5	14.5	63.3	
Actuated g/C Ratio	0.14	0.14	0.14	0.08		0.08		0.47	0.49	0.16	0.70	
v/c Ratio	0.75	0.49	0.42	0.01		0.01		0.39	0.40	0.84	0.20	
Control Delay	46.9	16.7	7.7	38.5		0.0		24.4	8.0	43.8	5.0	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	46.9	16.7	7.7	38.5		0.0		24.4	8.0	43.8	5.0	
LOS	D	B	A	D		A		C	A	D	A	
Approach Delay		30.9						18.2			23.6	
Approach LOS		C						B			C	
Stops (vph)	311	44	15	3		0		446	73	389	187	
Fuel Used(gal)	7	2	1	0		0		8	3	10	6	
CO Emissions (g/hr)	480	113	79	3		1		568	185	680	396	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)	93	22	15	1		0		111	36	132	77	
VOC Emissions (g/hr)	111	26	18	1		0		132	43	158	92	
Dilemma Vehicles (#)	0	0	0	0		0		0	0	0	0	
Queue Length 50th (ft)	104	22	0	1		0		153	18	138	71	
Queue Length 95th (ft)	151	82	42	8		0		250	72	#208	113	
Internal Link Dist (ft)		678			524			523			1101	
Turn Bay Length (ft)			350			300			350	600		
Base Capacity (vph)	534	347	385	216		353		1652	980	572	2490	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.69	0.47	0.41	0.01		0.01		0.39	0.40	0.81	0.20	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 1 (1%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 23.4 Intersection LOS: C
Intersection Capacity Utilization 60.6% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 11: Marsh Hill Road & I-95 NB Off Ramp/Frontage Road



Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	1	87	90	40	4	74	5	55	104	6	292	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)			0%			0%					-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.975			0.941						
Flt Protected			0.980			0.999					0.986	
Satd. Flow (prot)	0	0	1780	0	0	1751	0	0	0	0	1846	0
Flt Permitted			0.848			0.991					0.850	
Satd. Flow (perm)	0	0	1540	0	0	1737	0	0	0	0	1591	0
Right Turn on Red				No				No				No
Satd. Flow (RTOR)												
Link Speed (mph)			25			25					25	
Link Distance (ft)			634			454					531	
Travel Time (s)			17.3			12.4					14.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	97	100	44	4	82	6	61	116	7	324	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	242	0	0	153	0	0	0	0	448	0
Turn Type	Perm	Perm	NA		Perm	NA			Perm	Perm	NA	
Protected Phases			1			1					2	
Permitted Phases	1	1			1				2	2		
Detector Phase	1	1	1		1	1			2	2	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0		7.0	7.0			7.0	7.0	7.0	
Minimum Split (s)	11.0	11.0	11.0		11.0	11.0			11.0	11.0	11.0	
Total Split (s)	19.0	19.0	19.0		19.0	19.0			30.0	30.0	30.0	
Total Split (%)	31.7%	31.7%	31.7%		31.7%	31.7%			50.0%	50.0%	50.0%	
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0			3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0			1.0	1.0	1.0	
Lost Time Adjust (s)			0.0			0.0					0.0	
Total Lost Time (s)			4.0			4.0					4.0	
Lead/Lag	Lead	Lead	Lead		Lead	Lead			Lag	Lag	Lag	
Lead-Lag Optimize?												
Recall Mode	None	None	None		None	None			Min	Min	Min	
Act Effct Green (s)			11.9			11.9					18.4	
Actuated g/C Ratio			0.30			0.30					0.46	
v/c Ratio			0.53			0.30					0.62	
Control Delay			18.9			14.7					14.1	
Queue Delay			0.0			0.0					0.0	
Total Delay			18.9			14.7					14.1	
LOS			B			B					B	
Approach Delay			18.9			14.7					14.1	
Approach LOS			B			B					B	
Stops (vph)			164			95					282	
Fuel Used(gal)			3			1					4	
CO Emissions (g/hr)			185			92					284	
NOx Emissions (g/hr)			36			18					55	
VOC Emissions (g/hr)			43			21					66	

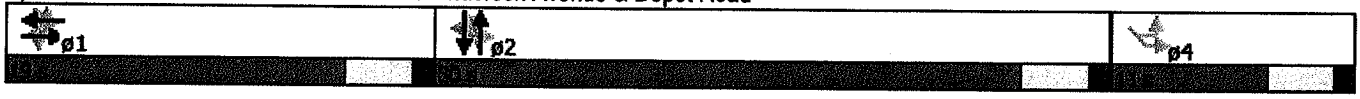
Lane Group	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	22	178	38	1	1	1	6	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%				0%		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.978				0.892		
Flt Protected		0.995				0.990		
Satd. Flow (prot)	0	1804	0	0	0	1645	0	0
Flt Permitted		0.948				0.990		
Satd. Flow (perm)	0	1718	0	0	0	1645	0	0
Right Turn on Red				No				No
Satd. Flow (RTOR)								
Link Speed (mph)		25				25		
Link Distance (ft)		2088				725		
Travel Time (s)		56.9				19.8		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	198	42	1	1	1	7	1
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	265	0	0	0	10	0	0
Turn Type	Perm	NA			Perm	Perm		
Protected Phases		2						
Permitted Phases	2				4	4		
Detector Phase	2	2			4	4		
Switch Phase								
Minimum Initial (s)	7.0	7.0			7.0	7.0		
Minimum Split (s)	11.0	11.0			11.0	11.0		
Total Split (s)	30.0	30.0			11.0	11.0		
Total Split (%)	50.0%	50.0%			18.3%	18.3%		
Yellow Time (s)	3.0	3.0			3.0	3.0		
All-Red Time (s)	1.0	1.0			1.0	1.0		
Lost Time Adjust (s)		0.0				0.0		
Total Lost Time (s)		4.0				4.0		
Lead/Lag	Lag	Lag						
Lead-Lag Optimize?								
Recall Mode	Min	Min			None	None		
Act Effct Green (s)		18.4				7.4		
Actuated g/C Ratio		0.46				0.18		
v/c Ratio		0.34				0.03		
Control Delay		9.8				19.6		
Queue Delay		0.0				0.0		
Total Delay		9.8				19.6		
LOS		A				B		
Approach Delay		9.8				19.6		
Approach LOS		A				B		
Stops (vph)		139				11		
Fuel Used(gal)		6				0		
CO Emissions (g/hr)		441				9		
NOx Emissions (g/hr)		86				2		
VOC Emissions (g/hr)		102				2		

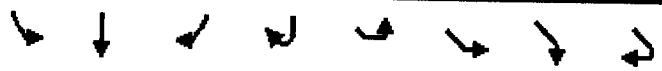
Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBT	NBR
Dilemma Vehicles (#)			0			0				0	
Queue Length 50th (ft)			37			21				60	
Queue Length 95th (ft)			#150			91				212	
Internal Link Dist (ft)			554			374				451	
Turn Bay Length (ft)											
Base Capacity (vph)			608			685				1088	
Starvation Cap Reductn			0			0				0	
Spillback Cap Reductn			0			0				0	
Storage Cap Reductn			0			0				0	
Reduced v/c Ratio			0.40			0.22				0.41	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 40.3
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 14.3 Intersection LOS: B
Intersection Capacity Utilization 76.8% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 27: Merwin Avenue & Anderson Avenue & Depot Road





Lane Group	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Dilemma Vehicles (#)		0				0		
Queue Length 50th (ft)		30				2		
Queue Length 95th (ft)		110				15		
Internal Link Dist (ft)		2008				645		
Turn Bay Length (ft)								
Base Capacity (vph)		1175				302		
Starvation Cap Reductn		0				0		
Spillback Cap Reductn		0				0		
Storage Cap Reductn		0				0		
Reduced v/c Ratio		0.23				0.03		

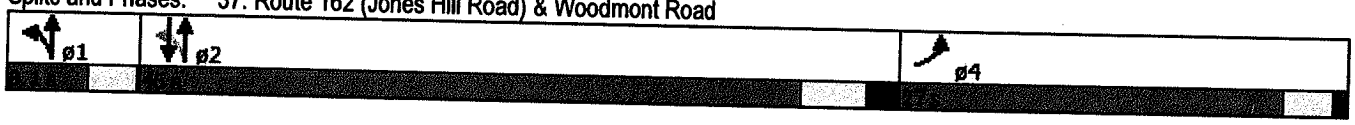
Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	215	88	148	145	69	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.961				0.900	
Flt Protected	0.966			0.975		
Satd. Flow (prot)	1729	0	0	1816	1676	0
Flt Permitted	0.966			0.734		
Satd. Flow (perm)	1729	0	0	1367	1676	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	25				223	
Link Speed (mph)	25			25	25	
Link Distance (ft)	929			995	702	
Travel Time (s)	25.3			27.1	19.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	239	98	164	161	77	223
Shared Lane Traffic (%)						
Lane Group Flow (vph)	337	0	0	325	300	0
Turn Type	Prot		D.P+P	NA	NA	
Protected Phases	4		1	1 2	2	
Permitted Phases			2			
Detector Phase	4			2	2	
Switch Phase						
Minimum Initial (s)	7.0		3.0		15.0	
Minimum Split (s)	11.0		6.1		21.0	
Total Split (s)	27.0		8.1		46.0	
Total Split (%)	33.3%		10.0%		56.7%	
Yellow Time (s)	3.0		3.0		4.0	
All-Red Time (s)	1.0		0.1		2.0	
Lost Time Adjust (s)	0.0				0.0	
Total Lost Time (s)	4.0				6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Recall Mode	None		Max		Min	
Act Effct Green (s)	12.7			23.6	15.7	
Actuated g/C Ratio	0.27			0.51	0.34	
v/c Ratio	0.69			0.44	0.42	
Control Delay	22.1			8.9	6.4	
Queue Delay	0.0			0.0	0.0	
Total Delay	22.1			8.9	6.4	
LOS	C			A	A	
Approach Delay	22.1			8.9	6.4	
Approach LOS	C			A	A	
Stops (vph)	231			159	68	
Fuel Used(gal)	5			4	2	
CO Emissions (g/hr)	383			252	156	
NOx Emissions (g/hr)	74			49	30	
VOC Emissions (g/hr)	89			59	36	
Dilemma Vehicles (#)	0			0	0	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 50th (ft)	72			37	14	
Queue Length 95th (ft)	148			99	65	
Internal Link Dist (ft)	849			915	622	
Turn Bay Length (ft)						
Base Capacity (vph)	874			1341	1482	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.39			0.24	0.20	

Intersection Summary			
Area Type:	Other		
Cycle Length: 81.1			
Actuated Cycle Length: 46.6			
Natural Cycle: 45			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 12.7		Intersection LOS: B	
Intersection Capacity Utilization 60.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 37: Route 162 (Jones Hill Road) & Woodmont Road



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	653	156	0	0	5	15
Sign Control	Free			Free	Stop	
Grade	0%			0%	-2%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	726	173	0	0	6	17
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	604					
pX, platoon unblocked						
vC, conflicting volume			899		726	363
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			899		726	363
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	97
cM capacity (veh/h)			751		360	634

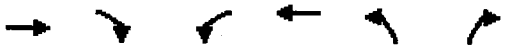
Direction, Lane #	EB 1	EB 2	EB 3	NB 1	NB 2
Volume Total	363	363	173	6	17
Volume Left	0	0	0	6	0
Volume Right	0	0	173	0	17
cSH	1700	1700	1700	360	634
Volume to Capacity	0.21	0.21	0.10	0.02	0.03
Queue Length 95th (ft)	0	0	0	1	2
Control Delay (s)	0.0	0.0	0.0	15.2	10.8
Lane LOS				C	B
Approach Delay (s)	0.0			11.9	
Approach LOS				B	

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	28.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	3	19	913	2	25	707
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	3	21	1014	2	28	786
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			143			603
pX, platoon unblocked	0.94	0.93			0.93	
vC, conflicting volume	1464	508			1017	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1213	312			861	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	97			96	
cM capacity (veh/h)	158	634			720	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	24	676	340	28	393	393
Volume Left	3	0	0	28	0	0
Volume Right	21	0	2	0	0	0
cSH	449	1700	1700	720	1700	1700
Volume to Capacity	0.05	0.40	0.20	0.04	0.23	0.23
Queue Length 95th (ft)	4	0	0	3	0	0
Control Delay (s)	13.5	0.0	0.0	10.2	0.0	0.0
Lane LOS	B			B		
Approach Delay (s)	13.5	0.0		0.3		
Approach LOS	B					

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	35.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	289	72	195	333	283	116
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	321	80	217	370	314	129

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	401	587	443
Volume Left (vph)	0	217	314
Volume Right (vph)	80	0	129
Hadj (s)	-0.09	0.11	0.00
Departure Headway (s)	6.5	6.5	6.7
Degree Utilization, x	0.73	1.0	0.82
Capacity (veh/h)	534	551	532
Control Delay (s)	24.8	79.5	33.2
Approach Delay (s)	24.8	79.5	33.2
Approach LOS	C	F	D

Intersection Summary				
Delay	49.8			
Level of Service	E			
Intersection Capacity Utilization	80.7%	ICU Level of Service	D	
Analysis Period (min)	15			

Orange TOD

Weekday Afternoon Peak Hour

3: S. Lambert Road/Lambert Road & U.S. Route 1 (Boston Post Road)

Existing Conditions

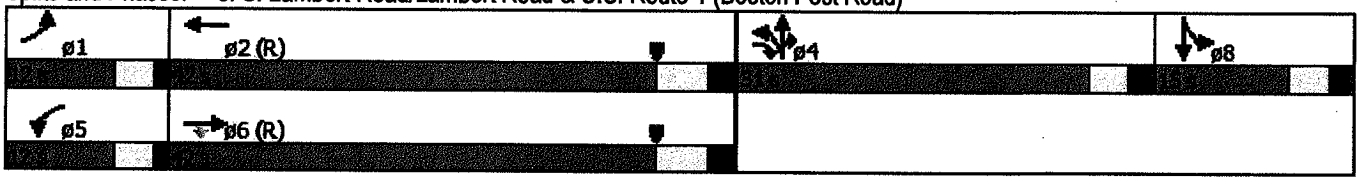
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	665	315	81	551	34	408	282	165	19	96	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			1%			1%			-1%	
Storage Length (ft)	175		175	260		0	180		0	0		0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (ft)	50			50			50			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	0.95
Frt			0.850		0.991				0.850		0.976	
Flt Protected	0.950			0.950			0.950	0.990			0.993	
Satd. Flow (prot)	1778	3557	1591	1761	3490	0	1673	1743	1575	0	3447	0
Flt Permitted	0.950			0.950			0.950	0.990			0.993	
Satd. Flow (perm)	1778	3557	1591	1761	3490	0	1673	1743	1575	0	3447	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			261		7				183		17	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		978			901			679			266	
Travel Time (s)		16.7			15.4			15.4			6.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	739	350	90	612	38	453	313	183	21	107	24
Shared Lane Traffic (%)							17%					
Lane Group Flow (vph)	49	739	350	90	650	0	376	390	183	0	152	0
Turn Type	Prot	NA	pm+ov	Prot	NA		Split	NA	Prot	Split	NA	
Protected Phases	1	6	4	5	2		4	4	4	8	8	
Permitted Phases			6									
Detector Phase	1	6	6	5	2		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	5.0	15.0	12.0	5.0	15.0		12.0	12.0	12.0	7.0	7.0	
Minimum Split (s)	9.0	21.0	17.0	9.0	21.0		17.0	17.0	17.0	12.0	12.0	
Total Split (s)	12.0	42.0	31.0	12.0	42.0		31.0	31.0	31.0	15.0	15.0	
Total Split (%)	12.0%	42.0%	31.0%	12.0%	42.0%		31.0%	31.0%	31.0%	15.0%	15.0%	
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	4.0	6.0	5.0	4.0	6.0		5.0	5.0	5.0		5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Recall Mode	None	C-Min	None	None	C-Min		None	None	None	None	None	
Act Effct Green (s)	6.8	41.0	72.0	7.5	41.6		24.9	24.9	24.9		8.4	
Actuated g/C Ratio	0.07	0.41	0.72	0.08	0.42		0.25	0.25	0.25		0.08	
v/c Ratio	0.40	0.51	0.29	0.68	0.45		0.90	0.90	0.35		0.50	
Control Delay	54.3	24.9	2.2	70.8	23.3		62.6	61.0	6.5		44.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	54.3	24.9	2.2	70.8	23.3		62.6	61.0	6.5		44.3	
LOS	D	C	A	E	C		E	E	A		D	
Approach Delay		19.2			29.1			51.1			44.3	
Approach LOS		B			C			D			D	
Stops (vph)	41	489	32	74	411		301	313	21		113	
Fuel Used(gal)	1	13	3	2	10		10	10	2		3	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
CO Emissions (g/hr)	83	879	178	167	727		709	729	165		175	
NOx Emissions (g/hr)	16	171	35	33	141		138	142	32		34	
VOC Emissions (g/hr)	19	204	41	39	168		164	169	38		41	
Dilemma Vehicles (#)	0	33	0	0	29		0	0	0		0	
Queue Length 50th (ft)	30	192	16	57	160		241	249	0		44	
Queue Length 95th (ft)	67	257	46	#128	222		#410	#422	52		75	
Internal Link Dist (ft)		898			821			599			186	
Turn Bay Length (ft)	175		175	260			180					
Base Capacity (vph)	142	1459	1218	140	1455		434	453	544		360	
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	
Reduced v/c Ratio	0.35	0.51	0.29	0.64	0.45		0.87	0.86	0.34		0.42	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 45 (45%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 33.1 Intersection LOS: C
Intersection Capacity Utilization 60.7% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: S. Lambert Road/Lambert Road & U.S. Route 1 (Boston Post Road)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	169	39	318	109	95	0	675	550	119	385	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			1%	
Storage Length (ft)	125		0	200		200	0		175	225		0
Storage Lanes	1		0	1		1	0		1	1		0
Taper Length (ft)	50			50			25			50		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.972				0.850			0.850		0.993	
Flt Protected	0.950			0.950	0.976					0.950		
Satd. Flow (prot)	1770	1811	0	1681	1727	1583	0	3557	1591	1761	3497	0
Flt Permitted	0.950			0.950	0.976					0.950		
Satd. Flow (perm)	1770	1811	0	1681	1727	1583	0	3557	1591	1761	3497	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12				106			256		9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		624			1998			409			905	
Travel Time (s)		14.2			45.4			9.3			20.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	188	43	353	121	106	0	750	611	132	428	22
Shared Lane Traffic (%)				34%								
Lane Group Flow (vph)	51	231	0	233	241	106	0	750	611	132	450	0
Turn Type	Split	NA		Split	NA	pt+ov		NA	pt+ov	Prot	NA	
Protected Phases	5	5		4	4	1 4		2	2 4	1	1 2	
Permitted Phases												
Detector Phase	5	5		4	4	4		2	2	1	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		5.0	5.0			16.0		6.0		
Minimum Split (s)	11.0	11.0		9.0	9.0			21.0		10.0		
Total Split (s)	18.0	18.0		19.0	19.0			29.0		14.0		
Total Split (%)	22.5%	22.5%		23.8%	23.8%			36.3%		17.5%		
Yellow Time (s)	3.0	3.0		3.0	3.0			3.0		3.0		
All-Red Time (s)	2.0	2.0		1.0	1.0			2.0		1.0		
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0		
Total Lost Time (s)	5.0	5.0		4.0	4.0			5.0		4.0		
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?												
Recall Mode	None	None		None	None			Min		None		
Act Effct Green (s)	11.8	11.8		13.3	13.3	20.4		22.2	39.6	8.9	33.2	
Actuated g/C Ratio	0.16	0.16		0.18	0.18	0.28		0.31	0.55	0.12	0.46	
v/c Ratio	0.18	0.75		0.75	0.76	0.20		0.68	0.62	0.61	0.28	
Control Delay	30.5	46.9		46.8	46.9	3.4		27.0	10.0	45.7	12.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay	30.5	46.9		46.8	46.9	3.4		27.0	10.0	45.7	12.1	
LOS	C	D		D	D	A		C	A	D	B	
Approach Delay		43.9			38.9			19.3			19.7	
Approach LOS		D			D			B			B	
Stops (vph)	40	168		179	184	15		559	220	104	218	
Fuel Used(gal)	1	4		6	6	2		11	6	3	7	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
CO Emissions (g/hr)	51	274		438	452	114		795	423	220	504	
NOx Emissions (g/hr)	10	53		85	88	22		155	82	43	98	
VOC Emissions (g/hr)	12	64		101	105	26		184	98	51	117	
Dilemma Vehicles (#)	0	0		0	0	0		0	0	0	0	
Queue Length 50th (ft)	22	106		116	121	0		173	107	63	64	
Queue Length 95th (ft)	53	#214		#226	#232	18		236	212	#130	94	
Internal Link Dist (ft)		544			1918			329			825	
Turn Bay Length (ft)	125			200		200			175	225		
Base Capacity (vph)	334	352		366	376	573		1241	982	256	1763	
Starvation Cap Reductn	0	0		0	0	0		0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0		0	0	0	0	
Storage Cap Reductn	0	0		0	0	0		0	0	0	0	
Reduced v/c Ratio	0.15	0.66		0.64	0.64	0.18		0.60	0.62	0.52	0.26	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 71.9
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 25.9 Intersection LOS: C
Intersection Capacity Utilization 63.6% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Marsh Hill Road/S. Lambert Road & Indian River Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	2	70	128	0	50	4	1133	131	35	713	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	175		0	170		115
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			140			140			105		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.854			0.850			0.984				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1591	0	1770	1583	0	1770	3483	0	1770	3539	1583
Flt Permitted	0.741			0.741			0.249			0.185		
Satd. Flow (perm)	1380	1591	0	1380	1583	0	464	3483	0	345	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		78			158			32				116
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		331			904			894			460	
Travel Time (s)		7.5			24.7			20.3			10.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	2	78	142	0	56	4	1259	146	39	792	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	60	80	0	142	56	0	4	1405	0	39	792	2
Turn Type	pm+pt	NA		pm+pt	NA		custom	NA		Perm	NA	custom
Protected Phases	3	4		7	8		1	1 6			2	2
Permitted Phases	4			8			6			2		2
Detector Phase	3	4		7	8		1	1 6		2	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0			25.0	25.0	25.0
Minimum Split (s)	11.0	11.4		11.0	11.4		9.2			29.9	29.9	29.9
Total Split (s)	11.0	12.4		11.0	12.4		11.2			55.4	55.4	55.4
Total Split (%)	12.2%	13.8%		12.2%	13.8%		12.4%			61.6%	61.6%	61.6%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0			3.3	3.3	3.3
All-Red Time (s)	1.0	1.4		1.0	1.4		1.2			1.6	1.6	1.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0			0.0	0.0	0.0
Total Lost Time (s)	4.0	4.4		4.0	4.4		4.2			4.9	4.9	4.9
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Recall Mode	None	None		None	None		None			Min	Min	Min
Act Effct Green (s)	13.0	7.5		13.0	7.5		42.0	43.3		29.5	29.5	29.5
Actuated g/C Ratio	0.21	0.12		0.21	0.12		0.66	0.69		0.47	0.47	0.47
v/c Ratio	0.18	0.31		0.43	0.17		0.01	0.59		0.24	0.48	0.00
Control Delay	21.9	12.5		26.0	1.1		5.0	8.8		16.8	14.2	0.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	21.9	12.5		26.0	1.1		5.0	8.8		16.8	14.2	0.0
LOS	C	B		C	A		A	A		B	B	A
Approach Delay		16.5			19.0			8.8			14.2	
Approach LOS		B			B			A			B	
Stops (vph)	41	19		101	0		2	641		24	453	0
Fuel Used(gal)	1	0		5	1		0	15		0	9	0
CO Emissions (g/hr)	42	33		322	98		3	1022		34	656	1

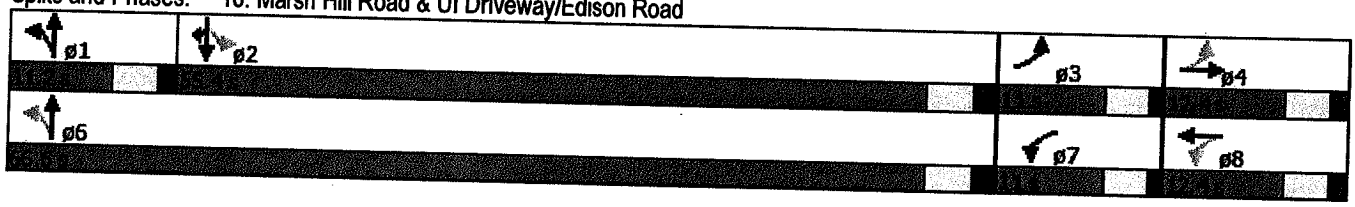
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	25.0
Minimum Split (s)	29.9
Total Split (s)	66.6
Total Split (%)	74%
Yellow Time (s)	3.3
All-Red Time (s)	1.6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	Min
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)	8	6		63	19		1	199		7	128	0
VOC Emissions (g/hr)	10	8		75	23		1	237		8	152	0
Dilemma Vehicles (#)	0	0		0	0		0	0		0	0	0
Queue Length 50th (ft)	17	1		42	0		1	172		10	121	0
Queue Length 95th (ft)	53	40		107	0		4	238		31	169	0
Internal Link Dist (ft)		251			824			814			380	
Turn Bay Length (ft)				100			175			170		115
Base Capacity (vph)	328	278		328	347		460	3250		273	2806	1279
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.18	0.29		0.43	0.16		0.01	0.43		0.14	0.28	0.00

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 63.2
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 11.7 Intersection LOS: B
Intersection Capacity Utilization 56.4% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 10: Marsh Hill Road & UI Driveway/Edison Road



Lane Group	SBL
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

12: Marsh Hill Road & United Illuminating Driveway/I-95 Ramps

Existing Conditions

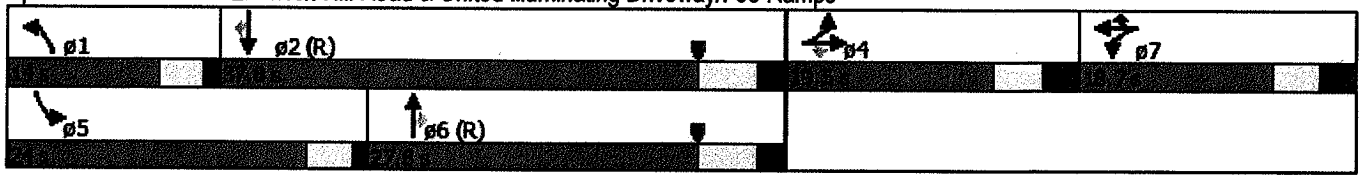
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	37	14	283	5	417	16	810	276	329	528	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	350		350	300		300	300		300
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (ft)	50			100			50			100		
Lane Util. Factor	1.00	1.00	1.00	0.91	0.86	0.91	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.903	0.850			0.850			0.850
Flt Protected	0.950			0.950	0.984		0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1610	2847	1441	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950	0.984		0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1610	2847	1441	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		232	231			307			148
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		381			611			1181			894	
Travel Time (s)		8.7			13.9			26.8			20.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	41	16	314	6	463	18	900	307	366	587	10
Shared Lane Traffic (%)				38%		50%						
Lane Group Flow (vph)	44	41	16	195	357	231	18	900	307	366	587	10
Turn Type	Split	NA	Perm	Split	NA	Prot	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		7	7	7	1	6		5	2	
Permitted Phases			4						6			2
Detector Phase	4	4	4	7	7	7	1			5		
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	5.0	19.0	19.0	5.0	19.0	19.0
Minimum Split (s)	12.5	12.5	12.5	12.7	12.7	12.7	9.0	24.8	24.8	9.0	24.8	24.8
Total Split (s)	19.5	19.5	19.5	18.7	18.7	18.7	14.0	27.8	27.8	24.0	37.8	37.8
Total Split (%)	21.7%	21.7%	21.7%	20.8%	20.8%	20.8%	15.6%	30.9%	30.9%	26.7%	42.0%	42.0%
Yellow Time (s)	3.0	3.0	3.0	3.2	3.2	3.2	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	1.0	1.8	1.8	1.0	1.8	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.7	5.7	5.7	4.0	5.8	5.8	4.0	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	7.7	7.7	7.7	12.6	12.6	12.6	5.8	31.5	31.5	19.7	51.0	51.0
Actuated g/C Ratio	0.09	0.09	0.09	0.14	0.14	0.14	0.06	0.35	0.35	0.22	0.57	0.57
v/c Ratio	0.29	0.26	0.05	0.87	0.60	0.58	0.16	0.73	0.41	0.94	0.29	0.01
Control Delay	43.5	42.4	0.3	73.6	17.5	11.4	33.2	23.9	8.9	69.9	12.6	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.5	42.4	0.3	73.6	17.5	11.4	33.2	23.9	8.9	69.9	12.6	0.0
LOS	D	D	A	E	B	B	C	C	A	E	B	A
Approach Delay		36.2			29.7			20.3			34.3	
Approach LOS		D			C			C			C	
Stops (vph)	38	35	0	155	111	32	15	512	91	284	275	0
Fuel Used(gal)	1	1	0	4	3	2	0	14	4	9	7	0
CO Emissions (g/hr)	48	44	3	303	230	115	24	995	248	597	458	4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)	9	8	1	59	45	22	5	194	48	116	89	1
VOC Emissions (g/hr)	11	10	1	70	53	27	5	231	57	138	106	1
Dilemma Vehicles (#)	0	0	0	0	0	0	0	0	0	0	0	0
Queue Length 50th (ft)	24	22	0	120	37	0	8	178	56	205	79	0
Queue Length 95th (ft)	56	53	0	#249	86	71	m14	m#241	m95	#373	156	0
Internal Link Dist (ft)		301			531			1101			814	
Turn Bay Length (ft)			200	350		350	300		300	300		300
Base Capacity (vph)	275	289	415	232	609	405	196	1239	754	393	2004	961
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.14	0.04	0.84	0.59	0.57	0.09	0.73	0.41	0.93	0.29	0.01

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 61 (68%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 27.6 Intersection LOS: C
Intersection Capacity Utilization 72.5% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 12: Marsh Hill Road & United Illuminating Driveway/I-95 Ramps



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	433	11	350	4	0	60	0	609	161	300	525	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		350	0		300	0		350	600		0
Storage Lanes	2		3	1		1	0		1	2		0
Taper Length (ft)	25			25			25			250		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt		0.859	0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3433	1520	1504	1770	0	1583	0	3539	1583	3433	3539	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3433	1520	1504	1770	0	1583	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		191	198			182			179			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		758			604			603			1181	
Travel Time (s)		17.2			13.7			13.7			26.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	481	12	389	4	0	67	0	677	179	333	583	0
Shared Lane Traffic (%)			49%									
Lane Group Flow (vph)	481	203	198	4	0	67	0	677	179	333	583	0
Turn Type	Split	NA	Prot	Prot		Perm		NA	pt+ov	Prot	NA	
Protected Phases	5	5	5	4				2	2 4	1	1 2	
Permitted Phases						4						
Detector Phase	5	5	5	4		4				1		
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0		7.0		21.0		5.0		
Minimum Split (s)	12.7	12.7	12.7	12.5		12.5		27.8		10.5		
Total Split (s)	20.7	20.7	20.7	13.5		13.5		30.3		25.5		
Total Split (%)	23.0%	23.0%	23.0%	15.0%		15.0%		33.7%		28.3%		
Yellow Time (s)	3.2	3.2	3.2	3.0		3.0		4.0		3.0		
All-Red Time (s)	2.5	2.5	2.5	2.5		2.5		2.8		2.5		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0		0.0		
Total Lost Time (s)	5.7	5.7	5.7	5.5		5.5		6.8		5.5		
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?												
Recall Mode	None	None	None	None		None		C-Min		None		
Act Effct Green (s)	14.6	14.6	14.6	7.0		7.0		34.1	44.1	13.2	54.2	
Actuated g/C Ratio	0.16	0.16	0.16	0.08		0.08		0.38	0.49	0.15	0.60	
v/c Ratio	0.86	0.50	0.48	0.03		0.23		0.50	0.21	0.66	0.27	
Control Delay	53.6	11.0	9.5	39.0		1.9		20.8	1.8	34.4	8.2	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	53.6	11.0	9.5	39.0		1.9		20.8	1.8	34.4	8.2	
LOS	D	B	A	D		A		C	A	C	A	
Approach Delay		33.9						16.8			17.7	
Approach LOS		C						B			B	
Stops (vph)	395	32	27	7		0		438	13	235	244	
Fuel Used(gal)	9	2	2	0		0		8	1	6	7	
CO Emissions (g/hr)	662	117	108	6		21		550	62	431	494	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)	129	23	21	1		4	107	12	84	96		
VOC Emissions (g/hr)	153	27	25	1		5	127	14	100	114		
Dilemma Vehicles (#)	0	0	0	0		0	0	0	0	0		
Queue Length 50th (ft)	138	6	0	2		0	125	0	97	123		
Queue Length 95th (ft)	#217	69	61	13		0	159	13	m97	m76		
Internal Link Dist (ft)		678			524		523			1101		
Turn Bay Length (ft)			350			300		350	600			
Base Capacity (vph)	572	412	415	157		306	1342	867	762	2130		
Starvation Cap Reductn	0	0	0	0		0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0		0	0	0	0	0		
Storage Cap Reductn	0	0	0	0		0	0	0	0	0		
Reduced v/c Ratio	0.84	0.49	0.48	0.03		0.22	0.50	0.21	0.44	0.27		

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 1 (1%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 22.3 Intersection LOS: C
Intersection Capacity Utilization 59.3% ICU Level of Service B
Analysis Period (min) 15

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Marsh Hill Road & I-95 NB Off Ramp/Frontage Road

Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	2	54	165	74	5	77	2	21	62	148	5	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)			0%			0%				-1%		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.966			0.971				0.997		
Flt Protected			0.991			0.997				0.986		
Satd. Flow (prot)	0	0	1783	0	0	1803	0	0	0	1840	0	0
Flt Permitted			0.922			0.979				0.853		
Satd. Flow (perm)	0	0	1659	0	0	1771	0	0	0	1592	0	0
Right Turn on Red				No				No			No	
Satd. Flow (RTOR)												
Link Speed (mph)			25			25				25		
Link Distance (ft)			634			454				531		
Travel Time (s)			17.3			12.4				14.5		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	60	183	82	6	86	2	23	69	164	6	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	327	0	0	117	0	0	0	239	0	0
Turn Type	Perm	Perm	NA		Perm	NA			Perm	NA		Perm
Protected Phases			1			1				2		
Permitted Phases	1	1			1				2			2
Detector Phase	1	1	1		1	1			2	2		2
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0		7.0	7.0			7.0	7.0		7.0
Minimum Split (s)	11.0	11.0	11.0		11.0	11.0			11.0	11.0		11.0
Total Split (s)	19.0	19.0	19.0		19.0	19.0			30.0	30.0		30.0
Total Split (%)	31.7%	31.7%	31.7%		31.7%	31.7%			50.0%	50.0%		50.0%
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0			3.0	3.0		3.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0			1.0	1.0		1.0
Lost Time Adjust (s)			0.0			0.0				0.0		
Total Lost Time (s)			4.0			4.0				4.0		
Lead/Lag	Lead	Lead	Lead		Lead	Lead			Lag	Lag		Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None		None	None			Min	Min		Min
Act Effct Green (s)			12.9			12.9				14.7		
Actuated g/C Ratio			0.33			0.33				0.37		
v/c Ratio			0.60			0.20				0.40		
Control Delay			20.9			13.9				13.1		
Queue Delay			0.0			0.0				0.0		
Total Delay			20.9			13.9				13.1		
LOS			C			B				B		
Approach Delay			20.9			13.9				13.1		
Approach LOS			C			B				B		
Stops (vph)			212			72				144		
Fuel Used(gal)			4			1				2		
CO Emissions (g/hr)			255			68				147		
NOx Emissions (g/hr)			50			13				29		
VOC Emissions (g/hr)			59			16				34		

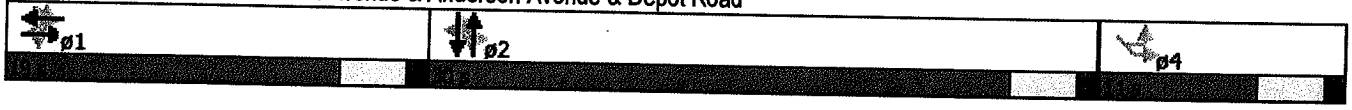
Lane Group	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations							
Volume (vph)	274	39	1	1	3	29	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Grade (%)	1%				0%		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.983				0.879		
Flt Protected	0.999				0.995		
Satd. Flow (prot)	1820	0	0	0	1629	0	0
Flt Permitted	0.995				0.995		
Satd. Flow (perm)	1813	0	0	0	1629	0	0
Right Turn on Red			No				No
Satd. Flow (RTOR)							
Link Speed (mph)	25				25		
Link Distance (ft)	2088				725		
Travel Time (s)	56.9				19.8		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	304	43	1	1	3	32	2
Shared Lane Traffic (%)							
Lane Group Flow (vph)	354	0	0	0	38	0	0
Turn Type	NA			Perm	Perm		
Protected Phases	2						
Permitted Phases				4	4		
Detector Phase	2			4	4		
Switch Phase							
Minimum Initial (s)	7.0			7.0	7.0		
Minimum Split (s)	11.0			11.0	11.0		
Total Split (s)	30.0			11.0	11.0		
Total Split (%)	50.0%			18.3%	18.3%		
Yellow Time (s)	3.0			3.0	3.0		
All-Red Time (s)	1.0			1.0	1.0		
Lost Time Adjust (s)	0.0				0.0		
Total Lost Time (s)	4.0				4.0		
Lead/Lag	Lag						
Lead-Lag Optimize?							
Recall Mode	Min			None	None		
Act Effct Green (s)	14.7				7.6		
Actuated g/C Ratio	0.37				0.19		
v/c Ratio	0.53				0.12		
Control Delay	14.4				20.2		
Queue Delay	0.0				0.0		
Total Delay	14.4				20.2		
LOS	B				C		
Approach Delay	14.4				20.2		
Approach LOS	B				C		
Stops (vph)	223				31		
Fuel Used(gal)	9				0		
CO Emissions (g/hr)	620				33		
NOx Emissions (g/hr)	121				6		
VOC Emissions (g/hr)	144				8		

Lane Group	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBT	NBR	SBL
Dilemma Vehicles (#)		0			0				0		
Queue Length 50th (ft)		39			12				29		
Queue Length 95th (ft)		#213			67				103		
Internal Link Dist (ft)		554			374				451		
Turn Bay Length (ft)											
Base Capacity (vph)		686			731				1140		
Starvation Cap Reductn		0			0				0		
Spillback Cap Reductn		0			0				0		
Storage Cap Reductn		0			0				0		
Reduced v/c Ratio		0.48			0.16				0.21		

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 39.6
Natural Cycle: 50
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 16.3 Intersection LOS: B
Intersection Capacity Utilization 70.8% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 27: Merwin Avenue & Anderson Avenue & Depot Road



Lane Group	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Dilemma Vehicles (#)	0				0		
Queue Length 50th (ft)	45				5		
Queue Length 95th (ft)	150				35		
Internal Link Dist (ft)	2008				645		
Turn Bay Length (ft)							
Base Capacity (vph)	1299				314		
Starvation Cap Reductn	0				0		
Spillback Cap Reductn	0				0		
Storage Cap Reductn	0				0		
Reduced v/c Ratio	0.27				0.12		

Intersection Summary

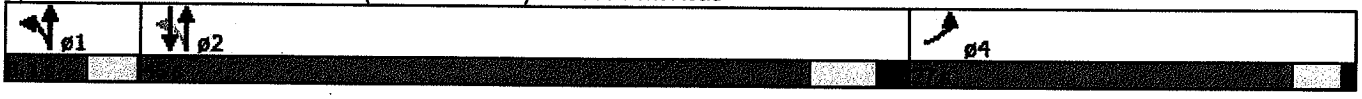
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	344	166	77	201	162	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.956				0.949	
Flt Protected	0.967			0.986		
Satd. Flow (prot)	1722	0	0	1837	1768	0
Flt Permitted	0.967			0.858		
Satd. Flow (perm)	1722	0	0	1598	1768	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	30				54	
Link Speed (mph)	25			25	25	
Link Distance (ft)	929			995	702	
Travel Time (s)	25.3			27.1	19.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	382	184	86	223	180	111
Shared Lane Traffic (%)						
Lane Group Flow (vph)	566	0	0	309	291	0
Turn Type	Prot		D.P+P	NA	NA	
Protected Phases	4		1	1 2	2	
Permitted Phases			2			
Detector Phase	4			2	2	
Switch Phase						
Minimum Initial (s)	7.0		3.0		15.0	
Minimum Split (s)	11.0		6.1		21.0	
Total Split (s)	27.0		8.1		46.0	
Total Split (%)	33.3%		10.0%		56.7%	
Yellow Time (s)	3.0		3.0		4.0	
All-Red Time (s)	1.0		0.1		2.0	
Lost Time Adjust (s)	0.0				0.0	
Total Lost Time (s)	4.0				6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Recall Mode	None		Max		Min	
Act Effct Green (s)	23.0			23.3	15.4	
Actuated g/C Ratio	0.41			0.41	0.27	
v/c Ratio	0.79			0.46	0.56	
Control Delay	24.4			13.0	19.0	
Queue Delay	0.0			0.0	0.0	
Total Delay	24.4			13.0	19.0	
LOS	C			B	B	
Approach Delay	24.4			13.0	19.0	
Approach LOS	C			B	B	
Stops (vph)	384			192	177	
Fuel Used(gal)	9			4	3	
CO Emissions (g/hr)	659			268	228	
NOx Emissions (g/hr)	128			52	44	
VOC Emissions (g/hr)	153			62	53	
Dilemma Vehicles (#)	0			0	0	

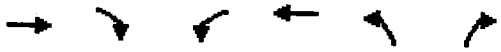
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 50th (ft)	149		62	67		
Queue Length 95th (ft)	#323		110	131		
Internal Link Dist (ft)	849		915	622		
Turn Bay Length (ft)						
Base Capacity (vph)	718		1376	1268		
Starvation Cap Reductn	0		0	0		
Spillback Cap Reductn	0		0	0		
Storage Cap Reductn	0		0	0		
Reduced v/c Ratio	0.79		0.22	0.23		

Intersection Summary

Area Type: Other
Cycle Length: 81.1
Actuated Cycle Length: 56.5
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 20.0 Intersection LOS: C
Intersection Capacity Utilization 70.3% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 37: Route 162 (Jones Hill Road) & Woodmont Road





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	437	35	0	0	62	40
Sign Control	Free			Free	Stop	
Grade	0%			0%	-2%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	486	39	0	0	69	44
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	604					
pX, platoon unblocked						
vC, conflicting volume			524		486	243
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			524		486	243
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		87	94
cM capacity (veh/h)			1038		511	758

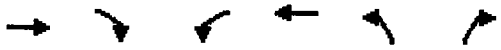
Direction, Lane #	EB 1	EB 2	EB 3	NB 1	NB 2
Volume Total	243	243	39	69	44
Volume Left	0	0	0	69	0
Volume Right	0	0	39	0	44
cSH	1700	1700	1700	511	758
Volume to Capacity	0.14	0.14	0.02	0.13	0.06
Queue Length 95th (ft)	0	0	0	12	5
Control Delay (s)	0.0	0.0	0.0	13.1	10.0
Lane LOS				B	B
Approach Delay (s)	0.0			11.9	
Approach LOS				B	

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	22.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	1	3	736	1	1	847
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1	3	818	1	1	941
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			150			603
pX, platoon unblocked	0.94	0.94			0.94	
vC, conflicting volume	1134	409			819	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1020	251			685	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	219	706			852	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3	SB 4
Volume Total	4	545	274	1	314	314	314
Volume Left	1	0	0	1	0	0	0
Volume Right	3	0	1	0	0	0	0
cSH	454	1700	1700	852	1700	1700	1700
Volume to Capacity	0.01	0.32	0.16	0.00	0.18	0.18	0.18
Queue Length 95th (ft)	1	0	0	0	0	0	0
Control Delay (s)	13.0	0.0	0.0	9.2	0.0	0.0	0.0
Lane LOS	B			A			
Approach Delay (s)	13.0	0.0		0.0			
Approach LOS	B						

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	30.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	500	279	85	173	145	145
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	556	310	94	192	161	161

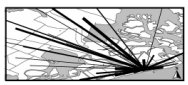
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	866	287	322
Volume Left (vph)	0	94	161
Volume Right (vph)	310	0	161
Hadj (s)	-0.18	0.10	-0.17
Departure Headway (s)	5.3	6.1	6.2
Degree Utilization, x	1.0	0.48	0.55
Capacity (veh/h)	670	577	560
Control Delay (s)	155.1	14.6	16.6
Approach Delay (s)	155.1	14.6	16.6
Approach LOS	F	B	C

Intersection Summary			
Delay	97.5		
Level of Service	F		
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		

Orange Land Development, LLC
and Connecticut Department of Transportation

Analysis of Passenger and Parking Demand at a New Metro-North Station in Orange

Final Report
March 26, 2014


WARNER
TRANSPORTATION CONSULTING, INC.
177 Riverside Drive
Northampton, MA 01062
413 585-5026

1. Introduction

The State of Connecticut is considering the introduction of a new passenger rail station on the New Haven line in Orange. In support of this effort, it has improved the I-95 interchange at Marsh Hill Road, sought a public-private partnership for station construction, and made a formal commitment to serve any future Orange station with full Metro-North service[1].

Locally, the Town of Orange is highly supportive of an Orange station development. It has adopted a higher-density, Transit-Oriented Development District zoning plan that would go into effect as soon as the state proceeds with station construction. Yale University also plans to develop walking paths between the growing activity centers of its West Campus and the Orange station. This would provide easy rail access for the prospective 8,000 faculty, staff, and students just a third-of-a mile away. United Illuminating, with three buildings and 1100 employees within one mile of the station site, has also planned to operate a shuttle bus to the station and to promote development of a transportation management association (TMA) that would expand the service to other area businesses.

In December, 2013, Connecticut DOT and its Orange development partner, Orange Land Development, LLC asked Warner Transportation Consulting to forecast the station's passenger and parking demand. This would help to ensure that the planned station facilities are suitable for the expected number of passengers and for the number of cars that would park in the station garage.

We have now completed that analysis. We conclude that with parking priced the same as at West Haven, the Orange station would have 490 boardings and 355 rail-related parked cars if open today, and between 1852 and 2152 boardings and 636 rail-related parked cars by 2030. Note that the station boardings and vehicles parked would go down if Orange station parking cost more, or if Milford eliminated its current waiting list to get a permit space.

The station garage would also serve the residents of the TODD and visitors to the area's retail services. This would add at least 250 parking spaces in the facility for a total garage demand of 886 spaces. This could grow even higher if Yale uses the station garage to help meet its employee or student parking needs.

The details behind these forecasts of ridership and parking demand are the subject of this report.

[1] HB 6215, An act concerning construction of the Orange Train Station

2. Approach

Our estimates of demand come from a systematic analysis of key travel groups that might use the Orange station. This is a sensible, direct assessment of individual Metro-North riders now using neighboring stations, and of potential new rail trip generators or attractors near the station site.

The numbers do not result from the use of a regional transportation and land use model. Those models build up representations of travel flows over broad areas by using mathematical calculations to generate trip productions and attractions, to estimate the number of trips between specific origins and destinations, and then to divide these trips among alternative modes and routes. A well-calibrated model is unbeatable for forecasts of major transportation changes, and federal agencies require the use of these models if federal funding for the project exceeds a certain level.

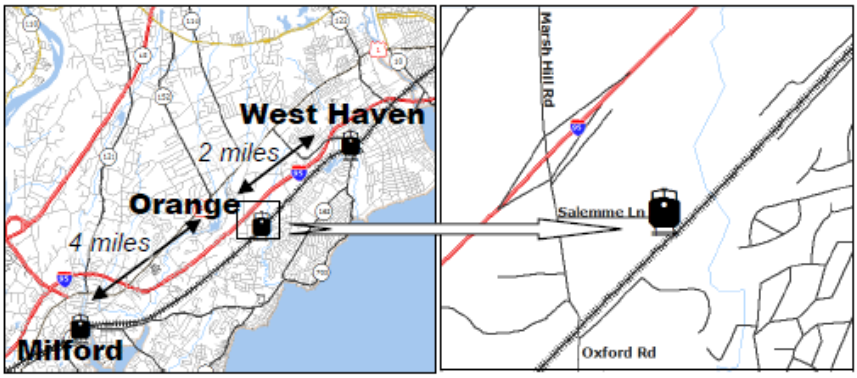
A new rail station at Orange, however, does not meet the threshold for cost and probably does not meet it for *regional* transportation significance. The station would not be an FTA New Starts program that would trigger the need for the use of a regional model, and it seems unlikely that Orange would be a "super station" attracting significant travelers from a broad regional catchment zone. The West Haven station--despite the expectations in 2004--has not served this role, and the planned introduction of extensive commuter rail service between New Haven and Hartford would further limit the ability of Orange to attract passengers living beyond the local area. In any case, the particular focus on boardings at Orange, and not on the related vehicle flows on area roadways, suggest that there is little need for the mathematical abstractions and geographic aggregations of regional transportation models when it is possible to examine the specific travelers and travel generators directly. That is the approach we used in this analysis.

We did this in two main ways:

1. Intercept surveys of travelers who now use the neighboring Metro-North stations at West Haven or Milford. Staff distributed questionnaires and small pencils as people approached the westbound platform between 5:30 AM and noon. Signs posted around the station informed most travelers about the survey effort prior to their intercept. Questions asked about the location of their residence, trip purpose, and their response to the proposed new station at Orange. The surveys included a map and description of the Orange station including the cost of station parking. Different versions of the surveys tested different possible parking rates. This followed a conjoint analysis experimental design, and allowed us to calculate demand for the station (and garage) under different possible cost scenarios. The key variables from one of the 16 versions of the Milford survey appear on the next page. The West Haven questionnaire also asked questions about what travelers did before that station opened, and (at the request of Metro-North and CT DOT) about their satisfaction with different attributes of the new station.

Stated preference section from version 1 of the Milford survey

Connecticut DOT is considering a new Metro North station at Orange, located as shown below:



The station would be 0.4 miles from I-95 Exit 41 (Marsh Hill Road).

All trains that stop at Milford would also stop at Orange.

Parking at Orange would be in a multi-floor garage.

Imagine, theoretically, that the fare and parking conditions were as follows:

version 1	Milford	Orange
Fare to Grand Central	Same as now $411 monthly, $19.25 one way peak	Same as West Haven $458 monthly $21.50 one way peak
Long term parking permit (spot guaranteed)	Same as now new permits *NOT* available	$300 for 6 months, new permits available
Daily parking fee	$6, but lot tends to fill by 8 AM	$6--spaces always available

The January 14 survey at West Haven elicited 196 completed questionnaires. The January 17 survey at Milford elicited 361 completions.

2. Direct examination of individual businesses and planned developments in the vicinity of the Orange station. While the survey aimed at understanding which *current* rail users would shift from adjacent stations to Orange, the assessment of area businesses and developments aimed largely at the *future* users of the Orange station. We examined the planned changes to existing trip generators as well as the planned new developments, particularly Yale's West Campus and the Transit Oriented Development around the Orange station.

The analysis also accounted for population and employment projections available from Connecticut DOT and the South Central Regional Council of Governments (SCRCOG).

3. Current Metro-North users who would shift to Orange

Area residents who might consider taking Metro-North from Orange already have the option of catching the train from the nearby stations of West Haven (two miles east) or Milford (four miles west). It is fair to assume that the majority of these are already doing so. This is the case for these area residents because the few miles to the alternative station is a small part of the full trip to the rail-served destination. Grand Central Terminal, for example, is the destination for 85 percent of morning peak period trips on the New Haven line; Stamford is the next busiest destination. Compared with the travel time from Orange and the cost of parking in New York or

Stamford, the extra drive-access time to West Haven or Milford would not be a determining factor in most people's decision to take the train.

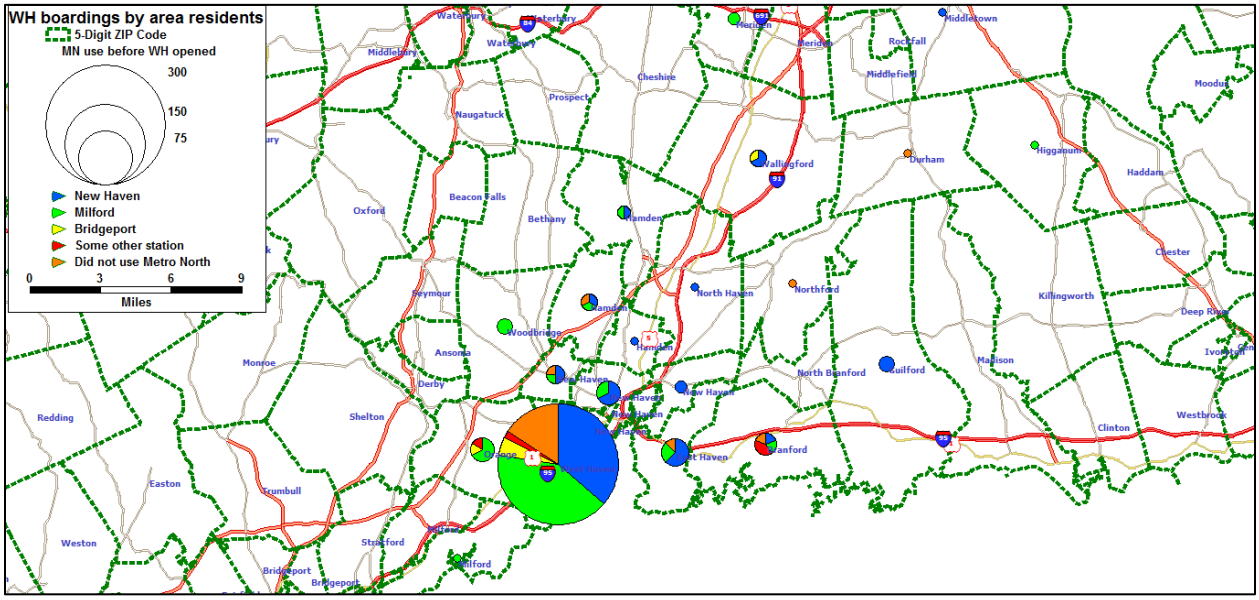
The experience at West Haven confirms this intuition. That station opened in August 2013. Our survey of morning passengers boarding there six months later shows that 86 percent of these passengers shifted to West Haven from some other station, mostly the adjacent stations of New Haven and Milford. Only 14 percent were new passengers on Metro-North. The table below shows the full response to this survey question by riders at the West Haven station.

What Metro-North station did you usually use prior to the opening of the West Haven station?

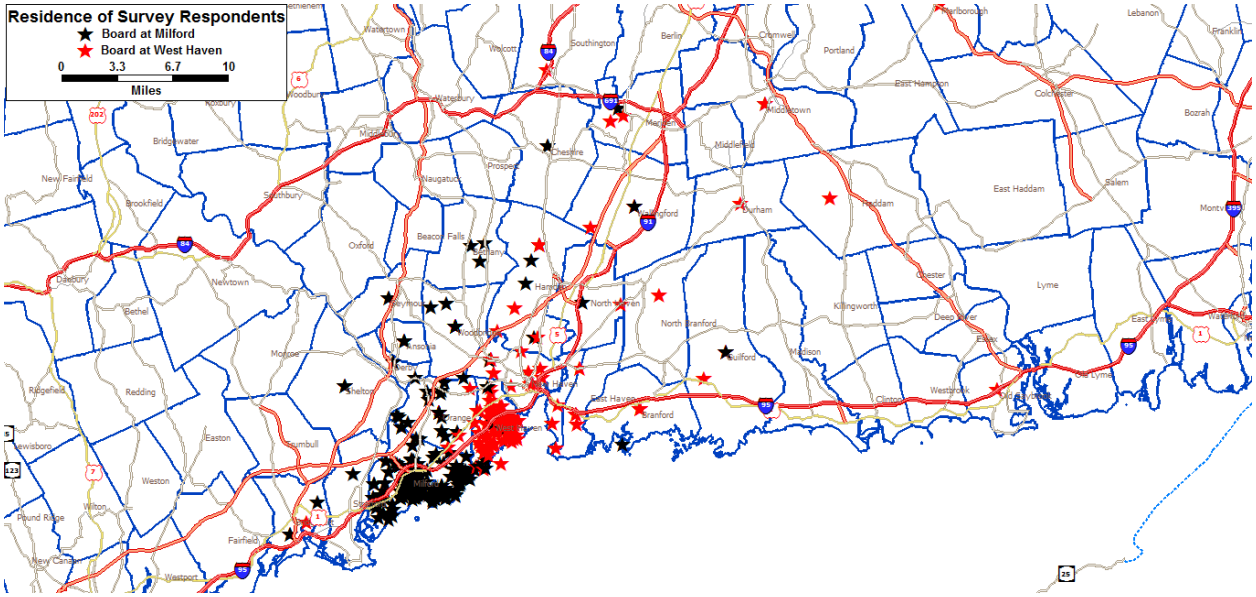
(Values in table are percentages and add across to 100%)

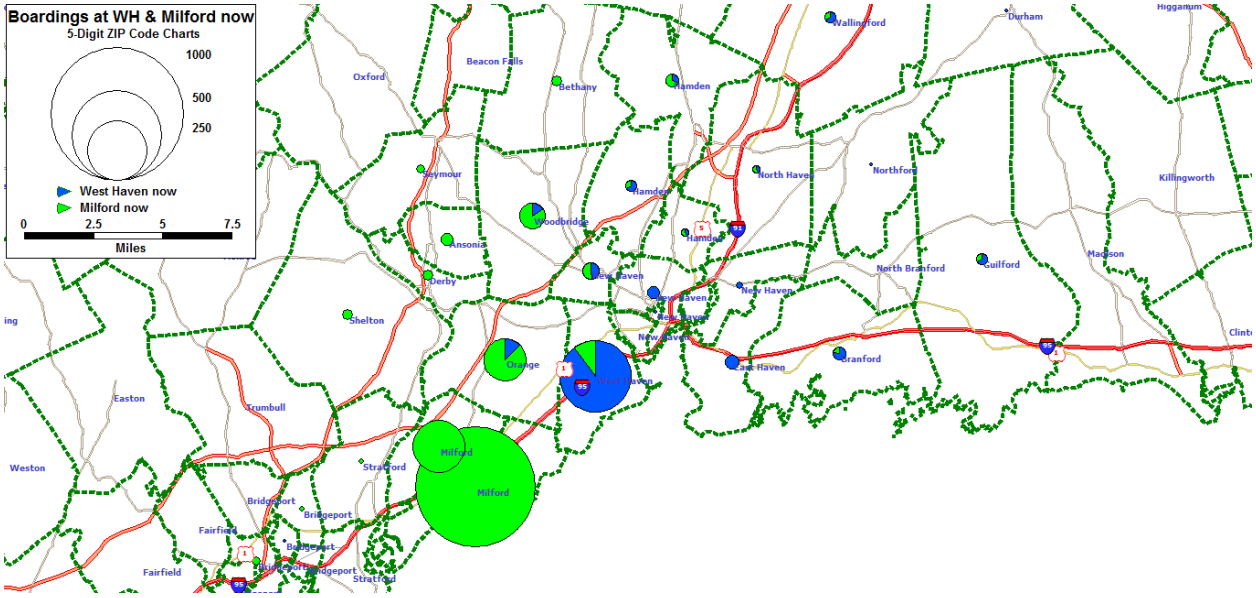
		New Haven	Milford	Bridge-port	some other station	did not use Metro North	Valid responses
All responses		43.9	33.7	4.8	3.7	13.9	187
train time	before 7 AM	42.2	32.8	6.3	4.7	14.1	64
	7 to 8 AM	38.2	34.2	5.3	3.9	18.4	76
	8 to 9 AM	55.0	35.0	0.0	5.0	5.0	20
	after 9AM	52.6	42.1	0.0	0.0	5.3	19
West Haven residents		36.3	41.2	4.9	2.0	15.7	102

The map below shows the distribution of these responses by zip code of the respondent's residence. It shows that West Haven draws people from Orange, Woodbridge, and from other communities stretching 20 or more miles to the north and east. Most of the West Haven boardings (59 percent of the West Haven survey respondents with identifiable zip codes), however, come from residents of that city's 06516 zip code.

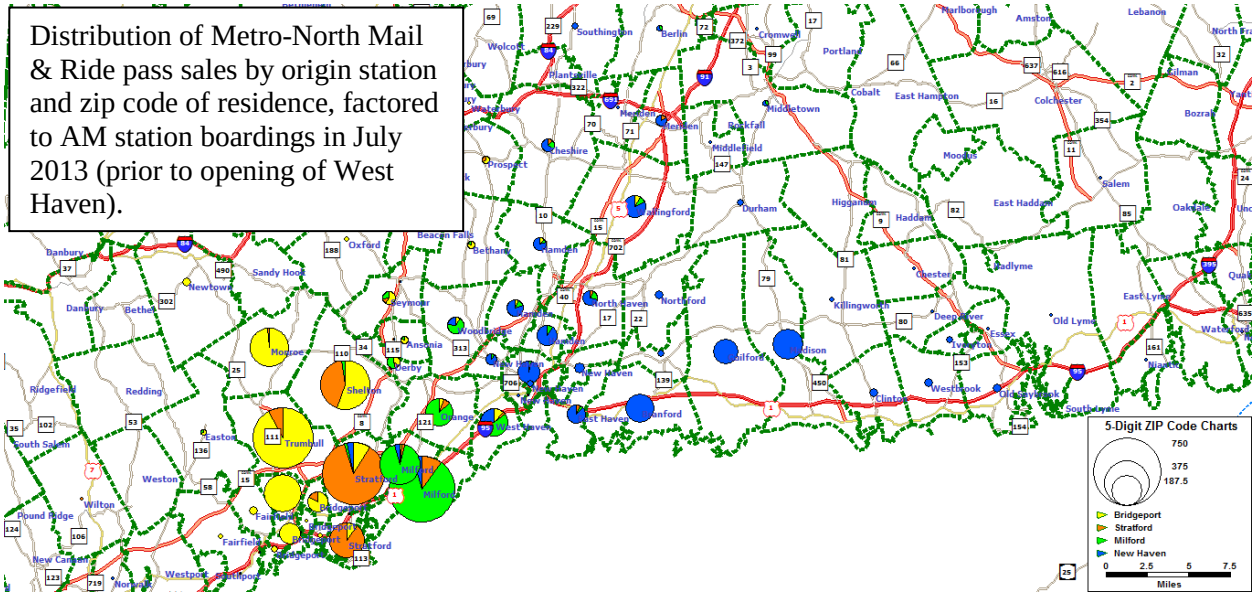


The exhibits below show the distribution of area residents who currently use the West Haven and Milford stations. The map at the top shows the residence of survey respondents, geocoded to their address if given or to the center point of the zip code if that was all the respondent provided. The bottom map aggregates this data at the zip code level, and factored up to reflect the current total AM boardings at each of these stations.

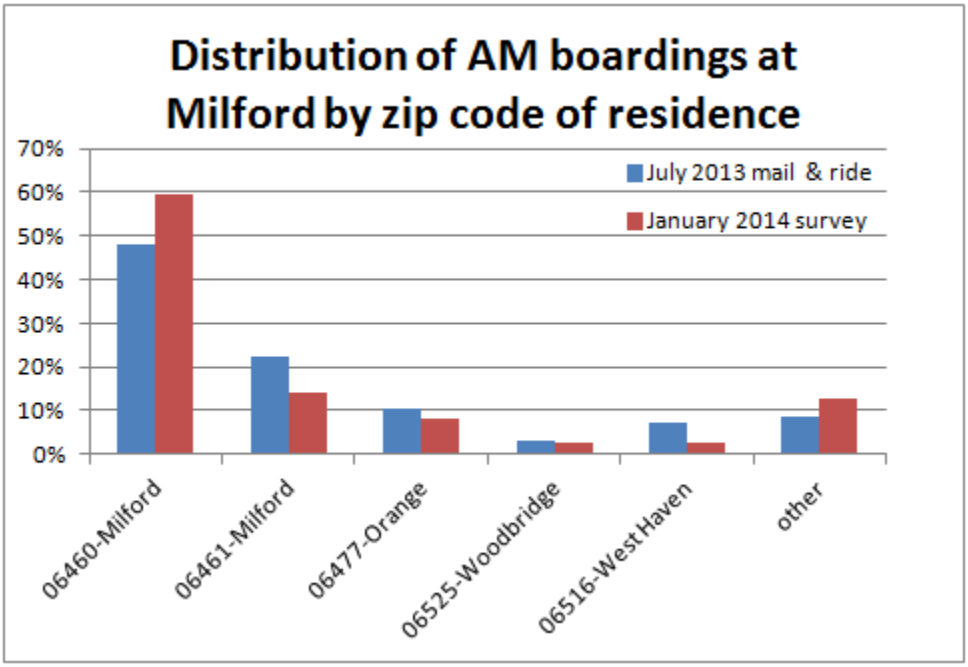




The maps indicate that except for a few passengers from Orange, Woodbridge, and the western part of West Haven, area residents do not travel east to access Metro-North. This latter finding is generally consistent with the following map showing the distribution of people buying Metro-North mail & ride passes by origin station and zip code of their residence. Note that this data is from July 2013, thus representing a period before West Haven opened. It is the most recent such data that Metro-North had available.



The Mail & Ride data also allows us to gauge the representativeness of the survey data. The chart below makes this comparison, and suggests a general consistency. The opening of the station at West Haven would account for the drop of Milford boardings by residents of West Haven and Orange.



3.1 Current Milford and West Haven AM boardings

The number of travelers who would shift to Orange depends on course on the number of travelers who now use these other stations. The actual boardings, however, are not entirely clear, as the data available from Metro-North is out-of-date, and this may also be the case for the information from Connecticut DOT. The only available data was as follows:

Station	Available information	Comment
West Haven	Metro-North reports 200 boardings on the inbound trains from 4:15 to 8:29 for "Summer 2013" Connecticut DOT (e-mail from John Foster) reports 335 AM peak inbound boardings in the fall 2013, and estimates 65 more inbound boardings in the off peak. This totals 400 total inbound boardings.	The station only opened on August 18, 2013
Milford	Metro North reports the following 2012 weekday boardings: <u>Inbound</u> AM peak 1280 Off peak 524 Total inbound 1804 <u>Outbound</u> AM reverse 19 PM peak 18 Off peak 26 Total outbound 63 Total weekday boardings 1867	This data is from before West Haven opened and thus does not account for the shift from Milford to that station.

We believe these numbers are too low for West Haven, and too high for Milford. We estimate current boardings as follows:

	West Haven	Milford
before 9AM	381	1148
9 AM to 2 PM	124	329
after 2 PM	60	141
Total boardings	565	1618

We calculate the West Haven boardings based primarily on the 300 vehicles that Connecticut DOT says currently park at the station. According to the January survey, 58 percent of the AM inbound passengers at West Haven drove alone and parked at the station. Another 4 percent parked at the station after carpooling. These rates and 300 parked cars suggest that the AM inbound boardings at West Haven is not 400, but 505. We divided this among the morning and early afternoon travelers based on the proportions that Metro-North counted at Milford in 2012. We assume that the boardings after 2 PM are non-residents who are making their return trip home from some West Haven area destination. West Haven is not the home end of these trips, and thus these late afternoon and evening boardings would not add to the cars parked at the West Haven station. Our survey did not capture these travelers, but we estimate 60 travelers with destinations ends near West Haven based on the shuttle to Yale's West Campus, and the other trip generators in the area.

Our key adjustment for Milford is to account for the travelers that shifted to West Haven. According to the January survey, 33.7 percent of the AM boardings at West Haven previously boarded at Milford. Applying this

to the 505 home-end boardings suggests that 170 West Haven travelers used to board at Milford. Subtracting this from Metro-North's 2012 count of Milford inbound travelers and accounting for travelers with the destination end at Milford leaves that station with 1618 boardings, of which 1477 are by area residents.

3.2 Area resident shifts to Orange from Milford or West Haven stations

Which of the area residents using these adjacent stations would shift to a new station at Orange? The strongest determinant is relative distance: you are more likely to use the station at Orange if that's the station closest to your home. In fact, there is a significant share of current rail travelers--particularly among those now using the station at Milford--who live closer to the station at Orange. Most of the January survey respondents reported their home address or nearest intersection, and based on this, we find the following:

Current station	Percent of area residents who live closer to the station at Orange	Number of area residents who live closer to the station at Orange
Milford	29%	425
West Haven	12%	61
Both stations	26%	486

For many of these riders, the shift to Orange would be a noticeable savings in access time. Those now using Milford could save as much as eight minutes on their drive to the station--16 minutes for the round-trip. The more common time savings, however, would be much smaller, and as the access time savings drops, the decision to shift to Orange would increasingly depend on the cost for the train ticket, the price for parking at Orange, and whether the Milford station continues to run out of parking.

For area residents heading to New York, Stamford, or other points west, the fare from Milford will be cheaper than from West Haven or Orange. A monthly Metro-North ticket from Milford to Grand Central, for example, is now $411. The comparable monthly from West Haven is $458, and Connecticut DOT has established that Orange would be in the same fare zone as West Haven. This policy decision removes a potential incentive to attract current West Haven station users to shift to Orange, and it adds a disincentive for Milford station users to shift to Orange. The time savings to access the Orange station would have to overcome the $47 difference for the monthly ticket, or the $2.25 difference in the one-way fare ($4.50 for the round trip) that the infrequent traveler would pay.

Parking issues would have an even stronger effect. A six-month commuter parking permit at West Haven station is $300 for six months, and daily parking for non-commuters costs $6. Commuter parking at the Milford station now costs as little as $275 *per year* or $175 for six months. The parking costs at the Orange station would be at least as high as at West Haven, and could be much higher. As the parking price goes up, the relative benefits of closer station access goes down, and fewer people would thus shift to the Orange station.

On the other hand, parking is limited at Milford station. There is a four-year waiting list for a commuter permit, and parking near the station tends to fill by 9 AM. Some travelers who would prefer to park at Milford are taking their second-best option of walking, getting a lift to the station, or using a nearby station--which would include the new station at Orange.

Finally in this section, there is also the issue that access time savings to get to the Orange station does not necessarily mean that the travelers could leave their homes later. Consider a commuter who lives near the corner of New Haven and Merwin Avenues in the east side of Milford and who now takes the 7:04 AM train to New York. It is a 3.5 mile, 8 minute drive to the Milford station, and if it takes five minutes to park the car and get to the platform, the commuter could leave the house at 6:51. The alternative 1.8 mile drive to the Orange station would take only 4 minutes, but the 7:04 from Milford leaves Orange at 7:00. With a five minute cushion to park the car and get to the platform, the commuter using Orange would still have to leave the house at 6:51. This commuter--and others who would drive east to Orange and then catch a westbound train--thus would not reap the full benefits of the closer station choice.

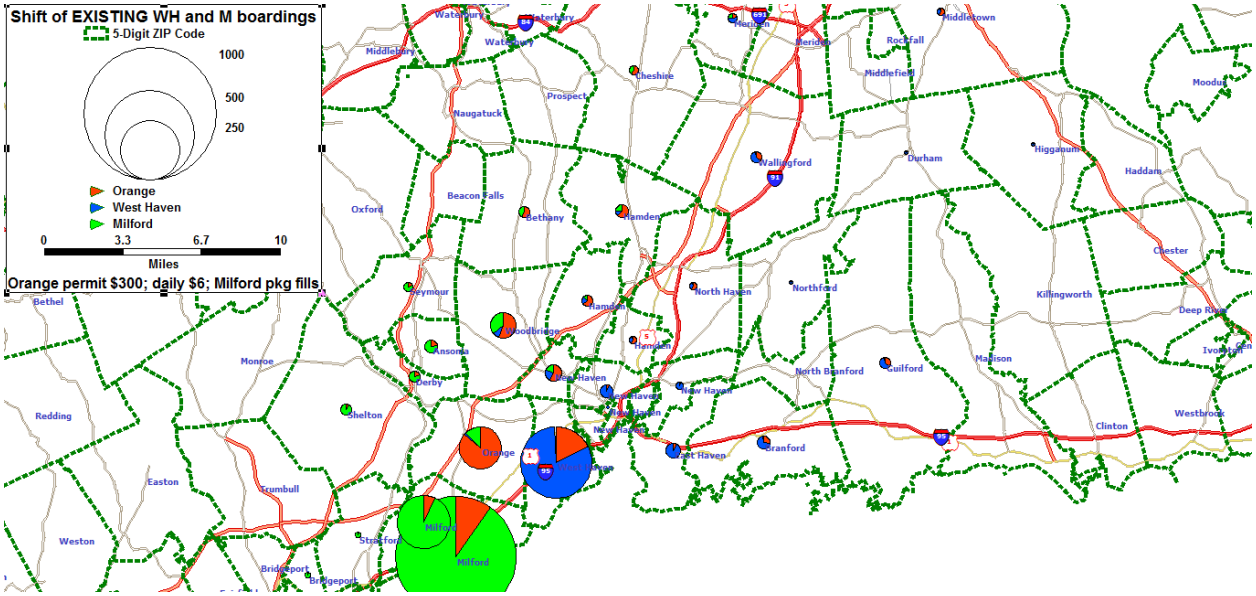
Analysis of survey results

The conjoint analysis design of the survey allows us to test how parking issues would influence the current Metro-North users to shift to Orange. The table below shows these results.

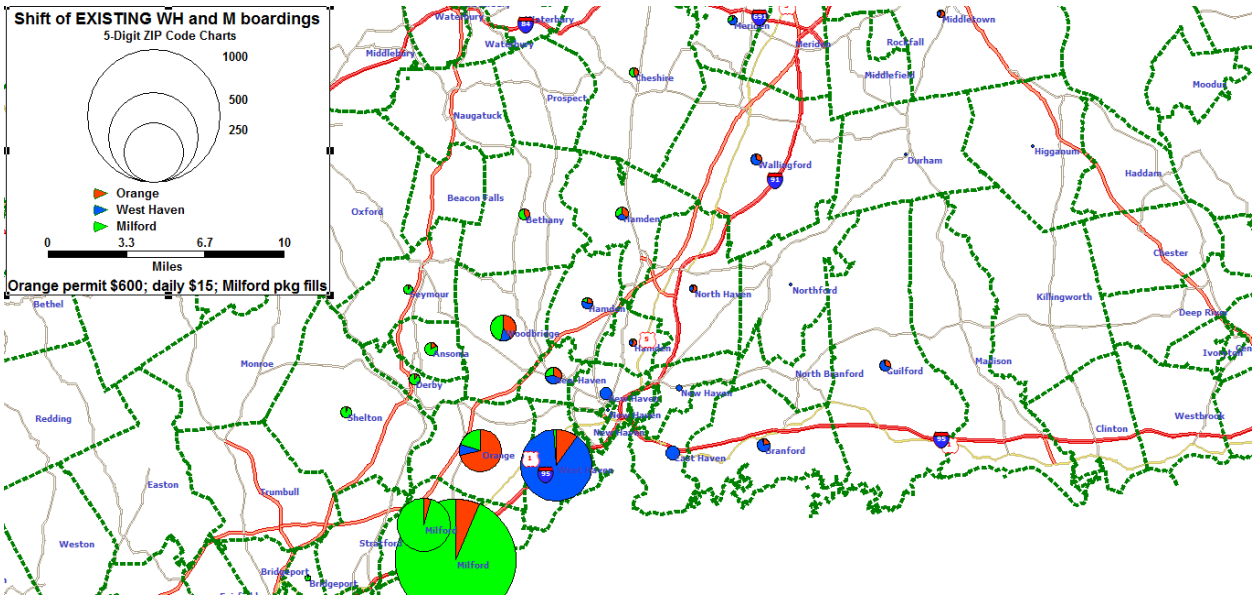
Parking costs at Orange		Boardings by area residents at each station					
		If Milford station parking remains constrained			If Milford station parking becomes sufficient for demand		
6-month permit	daily cost	Milford station	West Haven station	Orange station	Milford station	West Haven station	Orange station
300	6	1155	428	400	1255	428	300
300	9	1155	436	392	1255	436	292
300	12	1155	441	387	1255	441	287
300	15	1155	446	383	1255	446	282
400	6	1179	447	356	1275	447	261
400	9	1179	455	348	1275	455	253
400	12	1179	461	343	1275	461	247
400	15	1179	465	339	1275	465	243
500	6	1203	460	320	1293	460	229
500	9	1203	468	312	1293	468	221
500	12	1203	474	306	1293	474	216
500	15	1203	478	302	1293	478	212
600	6	1225	469	289	1311	469	203
600	9	1225	477	281	1311	477	195
600	12	1225	483	275	1311	483	189
600	15	1225	487	271	1311	487	185

It is unlikely that parking conditions would sufficiently improve at Milford so as to meet current demand. Thus, the first series of results is the more likely scenario. The maps on the next pages show the shares at each station by community of residence under the low and high cost parking scenarios.

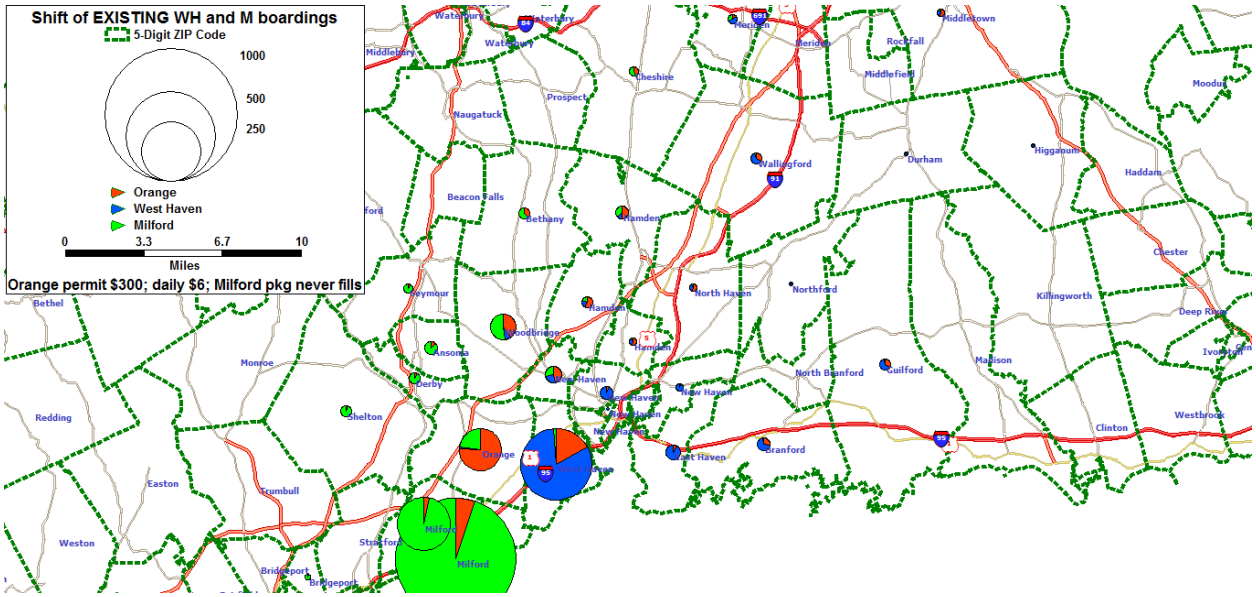
Boardings by area residents from each community if Orange parking costs are at the lowest level tested, and Milford parking continues to fill



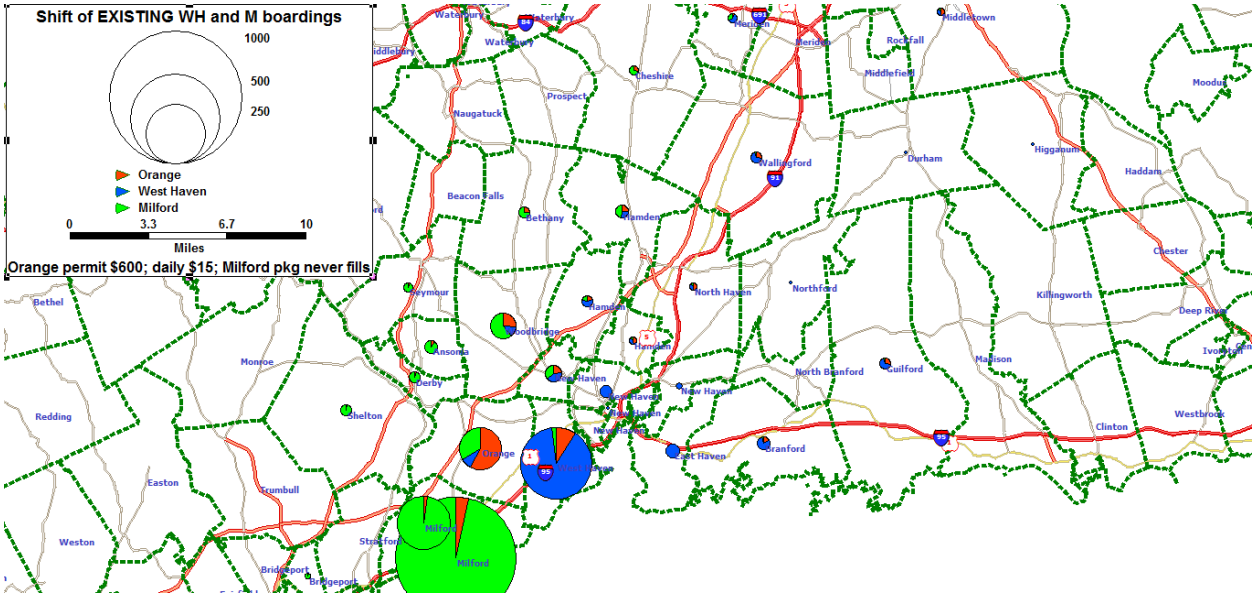
Boardings by area residents from each community if Orange parking costs are at the highest level tested, and Milford parking continues to fill



Boardings by area residents from each community if Orange parking costs are at the lowest level tested, and Milford parking is sufficient for all demand



Boardings by area residents from each community if Orange parking costs are at the highest level tested, and Milford parking is sufficient for all demand



The following pages show the stated preferences by survey version and details of the logit analysis.

Milford version	Conditions tested: Orange permit cost	Orange daily cost	Milford parking availability	Percent of respondents living in each area choosing to shift to Orange: Orange	West Haven	Milford	E of WH	NE of Milford	Other	total
1	300	6	tends to fill by 8	50%	--	7%	--	--	0%	11%
2	300	9	tends to fill by 9	20%	33%	0%	--	0%	--	11%
3	300	12	always available	--	--	6%	--	0%	0%	5%
4	300	15	tends to fill by 9	--	--	15%	--	50%	0%	17%
5	400	6	tends to fill by 9	50%	--	0%	--	--	0%	13%
6	400	9	tends to fill by 8	0%	--	0%	--	0%	50%	5%
7	400	12	tends to fill by 9	50%	--	12%	--	100%	0%	19%
8	400	15	always available	0%	--	12%	--	0%	0%	9%
9	500	6	always available	--	--	0%	100%	0%	0%	6%
10	500	9	tends to fill by 9	0%	0%	6%	--	0%	100%	13%
11	500	12	tends to fill by 8	0%	--	7%	--	0%	50%	11%
12	500	15	tends to fill by 9	0%	--	5%	0%	0%	0%	4%
13	600	6	tends to fill by 9	0%	--	0%	--	60%	--	15%
14	600	9	always available	50%	0%	0%	0%	--	0%	6%
15	600	12	tends to fill by 9	0%	--	0%	100%	50%	50%	15%
16	600	15	tends to fill by 8	0%	0%	0%	0%	--	--	0%
all				25%	13%	5%	33%	26%	25%	10%

Milford survey version

Milford version	Total number of surveys with respondent choosing Orange or Milford: Orange	West Haven	Milford	E of WH	NE of Milford	Other	total
1	2	0	15	0	0	1	18
2	5	3	9	0	1	0	18
3	0	0	17	0	1	3	21
4	0	0	20	0	2	1	23
5	6	0	16	0	0	1	23
6	1	0	14	0	4	2	21
7	2	0	17	0	1	1	21
8	1	0	17	0	2	2	22
9	0	0	14	1	2	1	18
10	1	1	18	0	1	2	23
11	1	0	15	0	1	2	19
12	1	0	19	1	1	1	23
13	3	0	12	0	5	0	20
14	2	2	10	2	0	1	17
15	1	0	14	1	2	2	20
16	2	2	17	1	0	0	22
all	28	8	244	6	23	20	329

West Haven version	Conditions tested			Percent of respondents living in each area choosing to shift to Orange						
	Orange permit cost	Orange daily cost	availability	Orange	West Haven	Milford	E of WH	NE of Milford	Other	total
1	300	6	tends to fill by 9	100%	0%	100%	--	0%	0%	17%
2	300	9	always available	100%	33%	--	0%	--	0%	30%
3	300	12	always available	--	0%	--	100%	0%	0%	11%
4	300	15	always available	--	0%	--	33%	--	0%	9%
5	400	6	always available	--	0%	--	0%	--	0%	0%
6	400	9	tends to fill by 9	100%	0%	--	--	50%	0%	15%
7	400	12	always available	--	0%	--	--	0%	0%	0%
8	400	15	always available	--	0%	--	0%	--	0%	0%
9	500	6	always available	--	13%	--	0%	--	0%	10%
10	500	9	always available	0%	0%	--	0%	0%	0%	0%
11	500	12	tends to fill by 9	--	0%	--	0%	0%	0%	0%
12	500	15	always available	--	0%	0%	0%	0%	0%	0%
13	600	6	always available	--	0%	--	0%	--	0%	0%
14	600	9	always available	100%	0%	--	--	0%	0%	10%
15	600	12	always available	--	13%	--	--	--	--	13%
16	600	15	tends to fill by 9	0%	0%	--	0%	--	0%	0%
all				67%	4%	50%	14%	10%	0%	8%

West Haven survey version

West Haven version	Total number of surveys with respondent choosing Orange or WH						
	Orange	West Haven	Milford	E of WH	NE of Milford	Other	total
1	1	8	1	0	1	1	12
2	1	6	0	2	0	1	10
3	0	4	0	1	1	3	9
4	0	5	0	3	0	3	11
5	0	6	0	1	0	2	9
6	1	6	0	0	2	4	13
7	0	10	0	0	1	3	14
8	0	3	0	1	0	1	5
9	0	8	0	1	0	1	10
10	1	3	0	1	2	2	9
11	0	7	0	1	1	1	10
12	0	5	1	1	1	2	10
13	0	4	0	1	0	4	9
14	1	6	0	0	1	2	10
15	0	8	0	0	0	0	8
16	1	3	0	1	0	3	8
all	6	92	2	14	10	33	157

Logit analysis results

Milford model			
Parameter	**Estimate**	**Std. Error**	**T Test**
ASC	-1.106558	0.429866	-2.574193
added distance to Orange	-0.394773	0.079788	-4.947758
permit cost if commuter	-0.00204	0.001047	-1.94899
Milford never fills	-0.783963	0.525423	-1.492061
ASC adjustments--re-anchoring Residence in Orange	3		
Residence northeast of Milford	1.5		
Resident east of West Haven	.5		
Measures of goodness of fit			
Asymptotic rho squared	0.596515		
Adjusted rho squared	0.578974		

West Haven model			
Parameter	**Estimate**	**Std. Error**	**T Test**
ASC	0.480252	1.411167	0.340322
added distance to Orange	-0.472102	0.271616	-1.738124
permit cost if commuter	-0.007044	0.003657	-1.926418
daily cost if non-commuter	-0.321809	0.191589	-1.679687
resident of Orange	3.138279	1.318485	2.380216
ASC adjustments--reanchoring Residence in Orange	3		
Residence northeast of Milford	3		
Resident east of West Haven			
Asymptotic rho squared	0.718565		
Adjusted rho squared	0.673481		

The "re-anchoring" accounts for skewed results based on the relatively small number of surveys from riders in each of these communities. The technique is equivalent to adjustments that analysts often make when combining stated-preference and revealed preference data bases. In any case, the size and magnitude of the logit parameters are consistent with our expectations. Note that we did test various specifications including nested logit structures with distinct levels for station choice (Milford or Orange) and access choice (park at the station or otherwise). These did not yield lead to a stronger model.

3.3 Shifts to Orange by area residents now using Stratford or Bridgeport stations

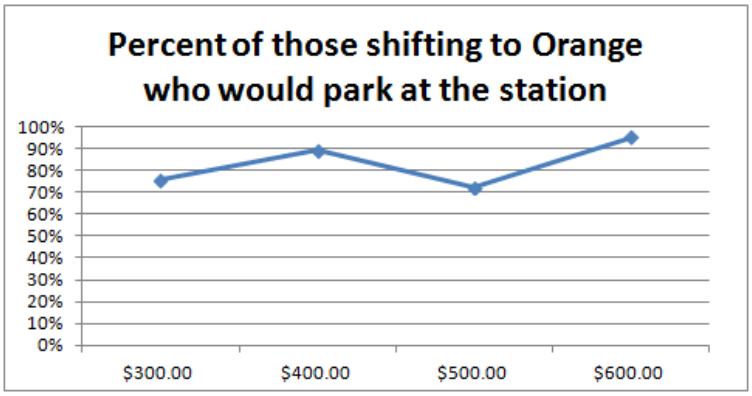
Most area residents who use Metro-North now board at Milford or West Haven, and understanding how these travelers might shift to Orange was the focus of the January surveys. A few area residents who might shift to Orange are likely bypassing these nearby stations to board trains elsewhere. The latest available information on Metro-North's Mail & Ride program shows that 20 residents of Orange and 24 residents of West Haven bought monthly commuter tickets for use at Bridgeport or Stratford stations. Note that this is from July 2013--before West Haven station opened--and our January survey at West Haven found that five percent of the AM passengers did shift from Stratford or Bridgeport. Nonetheless, there may be some riders who still drive to Stratford or Bridgeport, and who would be willing to shift to Orange. We estimate that the new station would attract ten of these riders.

	Station used		
Resident of	Milford	Stratford	Bridgeport
Orange	132	11	9
West Haven	93	5	19

3.4 Parking demand among current area residents shifting to Orange

In addition to asking respondents about the station they would use under different scenarios, the survey asked riders shifting to Orange about the parking arrangement they would use at the new station. Note that we did imagine that this--like the choice of station--would be a function of the cost of parking. We reasoned that as price for parking at Orange went up, some area residents would choose not to use Orange, and some others would shift to Orange but plan to get there without having to park their cars. The analysis (including the various nested logit specifications) did not bear this out. The key issue may be that the lack of area sidewalks precludes most current area residents from getting to Orange without having to drive there and park. The chart on the next page shows these results. Overall, 83 percent of area residents who would shift to Orange would park at the station garage.

Our approach then is to estimate parking demand at Orange as 83 percent of those who we first determine as shifting to Orange. At this rate, the 410 AM boardings at Orange by current area residents under the lower parking cost scenario would result in 340 cars parked at the station.



3.5 Shifts to Orange by area visitors using Metro-North

The analysis in the previous sections applied to area residents who now take Metro-North from either Milford or West Haven. These stations also serve travelers who live outside the area and who are working, studying, or visiting businesses, schools, or households within the area. We estimate that this group includes 60 travelers who now use West Haven, and 141 who now use Milford.

Few of these travelers are likely to have destinations closer to the Orange station than to the station they currently use. The following table shows the relative population and employment within one mile of these stations.

	Within one mile of the station			
Station	population	retail	non-retail	Total employment
Orange	8,104	1,531	4,510	6,041
West Haven	19,167	1,491	6,799	8,290
Milford	8,752	2,760	9,052	11,812

The distance is important as Milford, West Haven (or Orange) is the destination (non-home) end of the trip, and these travelers do not have their cars; if the traveler's cannot get a lift or take a bus or taxi, they are thus walking to their destination. We assume then that few current travelers headed for destinations close to the Orange station are in fact now on the train. One exception to this is travelers now bound for Yale's West Campus. The Yale shuttle serving West Campus now also stops at the West Haven train station. West Campus travelers would have easier, walkable access from the Orange station, and would thus shift to that station.

We assume then that current visitors to the area would shift their use of stations as follows:

Boardings by area non-residents at each station				
now		If Orange were open		
West Haven	Milford	West Haven	Milford	Orange
60	141	24	121	56

These boardings would generally occur after 2 PM, and would not add to vehicles parked at the station.

4. Future demand

There are three broad categories of changes that will affect future demand for the Orange station:

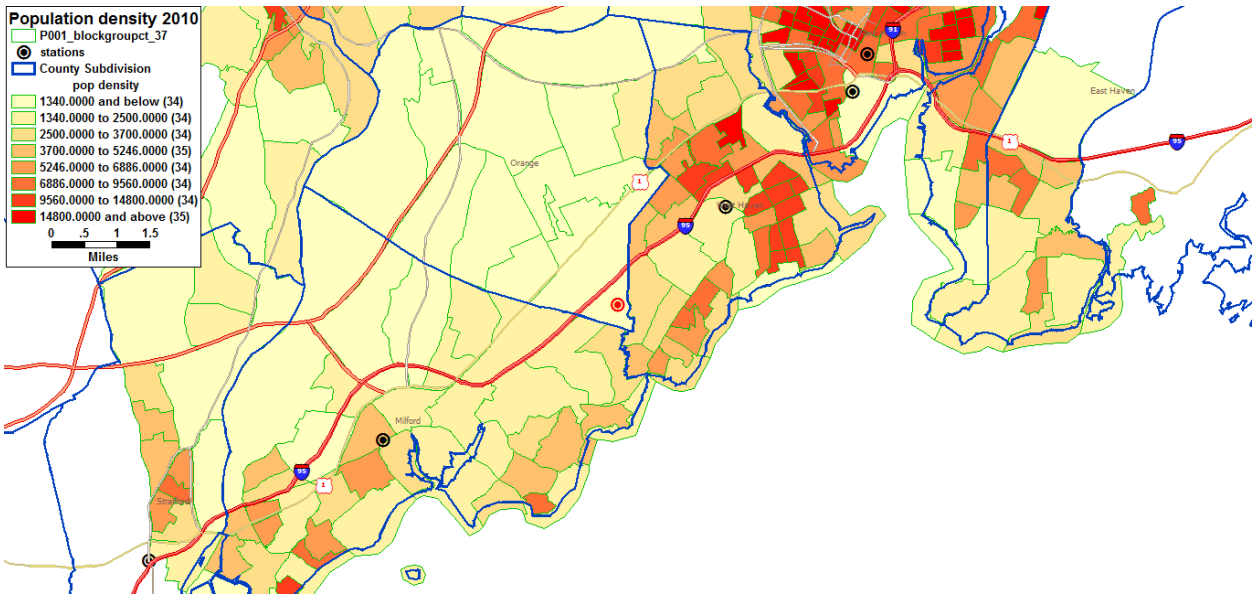
- demographic and mode share changes in areas influenced by the Orange station
- employment and other trip attraction changes in Orange and surrounding comunities
- transportation system changes other than the new station at Orange

This section considers each of these developments over the next 20 years.

4.1 Demographic and mode share changes in areas influenced by the Orange station

General population changes

As shown in the map below, Orange currently has a much lower population density than the surrounding towns. Overall, the population per square mile in Orange (760) is about one-third of that in Milford (2,263) and one-sixth that in West Haven (4,774).



Forecasts based on current age distribution of residents and extended trends of residential development suggest that the relative population and density of population would not significantly change. The State Data Center at the University of Connecticut, for example, base population changes by 2025 in Orange, Milford and West Haven to be as follows:

	population 2012	population 2025	change	annual percent change
Orange	13,935	14,682	747	0.40%
Milford	52,981	52,661	-320	-0.05%
West Haven	55,404	57,068	1,664	0.23%

Population impacts of the Orange TODD project

The above population projection does not account for the Transit Oriented Development District in the 230 acre triangle of Orange south of I-95. The town has adopted this higher density zoning plan to take effect as soon as the state formalizes plans to build the Orange station. The state's private partner in the station development, Orange Land Development ,LLC, would also build a 250 clustered residential units and accompanying retail space adjacent to the station site. It is likely that similar high density developments would follow--attracted by the proximity to the train station and Yale's West Campus, the character and amenities of Orange, and now permitted under the new TODD zoning guidelines. Paul Dinice, the zoning administrator for the town of Orange, does not have a clear number of total units that might be built under the TODD guidelines. He says, however, that the town views the dense retail and residential development in West Hartford's Blue Back Square as an inspiration for the TODD, and is supportive of the Orange site's full potential.

An assumption of 1000 residential units in the next 20 years in the Orange TODD does not seem unreasonable. At a further assumed average household size of 1.5, this would raise the population in the triangle from 251 now to 1751--a relatively high population density of 4,800 per square mile.

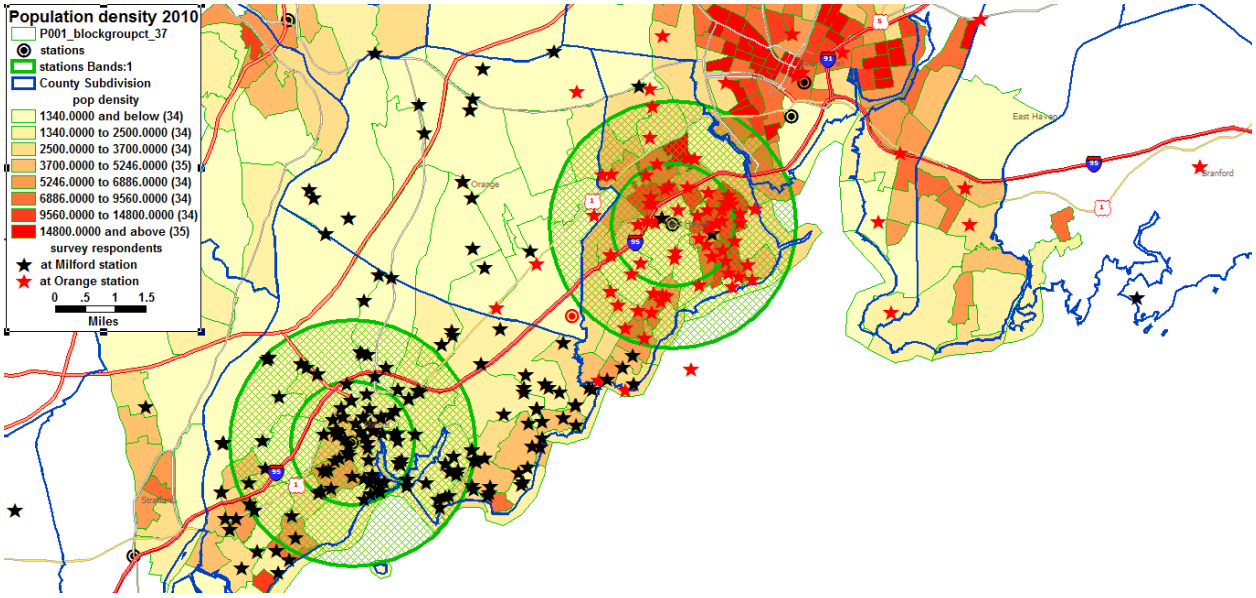
Change in rail trip rates

While the number of residents in the area will change, so will the percentage of the residents who use Metro-North. This is intuitive: area residents will make some changes to their mode or destination in response to their improved train access, and they will be more likely to sell their homes (when the time comes) to households who want to be close to a train station. This is also evident from the data around the existing area train stations. The map on the next page shows 1-mile and 2-miles bands around the Milford and West Haven stations. The accompanying table below shows the Metro-North daily boardings by residents within these bands based on the home locations provided by respondents to the January survey.

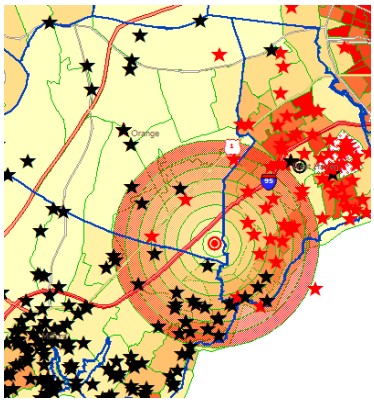
		Metro-North daily boardings		population		Daily Metro-North trips per 1000 residents	
radius	sq miles	Milford	WH	Milford	WH	Milford	WH
0 to 1	3.1	419	220	8752	19167	47.9	11.5
1 to 2	9.4	204	124	15826	34478	12.9	3.6

For Milford, where the train service has existed for many decades, residents within one mile of the station board a Metro-North train at the rate of 47.9 daily boardings per 1000 people. The rate from one to two miles from the station is 12.9. West Haven, where the train only opened last year, the comparable rates

are 11.5 and 3.6. The current rate of the affected population around the Orange station is now only 0.6 and 2.6 percent. (This counts only half the residents in the West Haven section of the two-mile band, as they are closer to the West Haven station than they are to the one planned for Orange.)



Consider now the effect of applying the Milford station rates to the expected population affected by the new station in Orange. The map below shows eight, quarter mile width bands up to two miles from the station. The stars indicate the homes of respondents to the January surveys at the Milford and West Haven stations. The accompanying table shows the affected future population in each of these bands. This population excludes the share of West Haven residents who would live closer to the station in West Haven. The table also shows the current rail trip rate, and the rate that would occur as the population takes on travel characteristics similar to that in Milford. The one exception to this is for the area within one-quarter mile of the station. In Orange we assume that the rate for the TODD is four times that for the surrounding area. This may even be conservative; the TDM Encyclopedia prepared by the Victoria Transport Policy Institute in October 2013 documents cases of transit-oriented development generating mode shares three or more times that in the rest of the surrounding area. Differences in the context, however, preclude a simple transfer of those rates, but TODD at Stamford and other New Haven line stations are believed to be at this level.



Band size	affected future population	Daily rail boardings per 1000 residents		added boardings at Orange
		now	future	
1.75 to 2 miles	3922	2.2	12.9	42
1.5 to 1.75 miles	3951	2.2	12.9	42
1.25 to 1.5 miles	4453	2.3	12.9	47
1 to 1.25 miles	3972	3.9	12.9	36
.75 to 1 mile	3132	0.5	47.9	148
.5 to .75 miles	2187	1.1	47.9	102
.25 to .5 miles	1089	0.7	47.9	51
0 to .25 miles	1696	0.0	191.6	325
Total				794

The result of this analysis is that rail boardings in the two mile section closest to the Orange station (i.e. not including those closest to the West Haven station) goes up, in the long run, by 794 daily boardings. For the affected Orange station area beyond two miles, the change in population is expected to be only 540 residents by 2030. The added trips beyond this are would be negligible.

For added parking demand, we assume a drive access mode share of .83 beyond one mile, .4 from one half to one mile, .2 from one-quarter to one-half mile, and 0 below one quarter mile. At these rates, the added Orange users would add from 159 to 253 parked cars at the station depending on the pricing cost charged. The higher volume would be for the $300 permit / $6 daily cost; the lower rate for the $600 permit / $15 daily cost.

4.2 Employment and other trip attraction changes in Orange and surrounding communities

Most people using the Orange station will live in the area and take the train to jobs or other activities in New York, Stamford, or (to a lesser extent) Norwalk, Bridgeport, and other New Haven line destinations. These travelers will board the train at Orange in the morning or early afternoon, and will return to Orange in the late afternoon or evening. A smaller number of travelers will get off at Orange in the morning, and will board at Orange for their return trip in the late afternoon or evening. These latter travelers are non-residents of the area, and most will go to businesses or other activity centers near the Orange station. Few visitors will take the train for trips beyond half a mile or so from the station, as these travelers will not have their car when they get off in Orange, and they will thus be generally constrained by the distance they are willing to walk. Note that Connecticut DOT has no plans for bus transit at the station.

Our review of state and SCRCOG employment estimates and discussions with local businesses suggests that the area within one mile of the station has the following current and future trip attractions:

development	Distance from station	Current employees / students	Employees / students in 20 years	Station access
Yale West Campus	Numerous buildings .3 to .8 miles from the station	1300	5000 to 8000	Walk and shuttle
United Illuminating	Three buildings up to .6 miles from station.	1100	1300	Shuttle access or walkable
Marsh Hill Rd at Edison Road extension	.8 miles from station	0	300	Shuttle access
TODD retail and other businesses	0 to .3 miles	0	200	Walkable
Other (in Orange)	.5 to 1miles	922	1280	Possible shuttle access
total		3322	8080 to 11080	

Yale's West Campus

The biggest development here is the expansion of Yale's West Campus. This is a 136 acre site immediately north and east of the Orange station. It has 1.6 million square feet of research, office, and warehouse space, and is home to Yale's School of Nursing and the Collections Study Center (the university's archive for art and artifacts). According to Rebecca Brandriff, Yale West's director of finance & administration, 1300 staff, faculty and students now work at the west campus. She expects this to grow to around 3,000 staff and faculty (not including students) in the next five years, and she says the campus could have 5000 to 8000 people in the next 20 years.

There are five factors that suggest many of these people would use the Orange station:

- Yale plans to develop tree-lined walkways between the station and the Yale West campus. The hub of Yale West activity (Office Complex North and South) is .35 miles from the train platforms, a distance that most people could cover in five to seven minutes.

- People who don't want to walk would likely also have a shuttle service option. The existing West Campus shuttle (connecting Yale West and the main campus in New Haven) now stops at the West Haven station. Yale could re-route this to serve the new Metro-North connection point in Orange.

- Shore Line East would likely serve the Orange station. Yale employees already are heavy users of this passenger rail service, and the development of West Campus has to be a strong reason why the railroad added West Haven to the stops made by its two AM and two PM trains that go west of New Haven (the only other stops are Bridgeport and Stamford). The Orange station would improve access to West Campus, and we thus assume that Shore Line East would shift to this station and add trains as the need develops.

- Financial incentives would encourage the use of rail commuting. According to Brandriff, the free parking that now exists at Yale West would disappear as the campus becomes more established and the number of staff increases. Commuters who take Metro-North or Shore Line East to Orange would avoid these on-campus parking costs, and would also qualify for Yale subsidies for the rail ticket costs.

- The School of Nursing currently has 300 students at Yale West, and the introduction of various science, technology, engineering and mathematics programs on the site would bring many more students to the campus. Compared with the general population, students tend to have relatively low rates of auto ownership.

We estimate that Yale West now draws 24 employees, students and visitors using the West Haven station--a rate of 1.8 percent of the 1300 staff and students at West Campus. These are existing Metro-North or Shore Line East riders who would shift to Orange. Given the factors above, we assume that the rail share would increase to 10 percent. Applying this to 5000 or 8000 future staff and students yields 476 to 776 new rail boardings at Orange.

Note that Yale is also re-locating its Cancer Center to the West Campus. Brandriff believes that some people receiving treatment at the Center would also use the rail service.

Other developments

The other businesses near the station area account for 3080 total employees. At a rate of 2 percent, this would add 62 daily (off peak) boardings at Orange. Again, Orange is at the destination end from these travelers' homes. These trips would not add to station parking.

On the other hand, these work sites do generate non-home based trips, which would include business trips from the work site to Stamford, New York or other points for which the rail service would be an attractive option. We can assume then that some of these trips would start at the Orange station and would require a space to park. We estimate that the 1000 added non Yale West jobs by 2030 would add 20 trips--and parked cars--per day at the Orange station

4.3 Transportation system changes other than the new station at Orange

There are three transportation changes that could affect future demand for the station at Orange. One of these is the cost and availability of parking at Milford and West Haven. As we noted in section 3, the share of travelers who use Orange will drop as the cost of parking at that station increases relative to that at West Haven. Travelers are also sensitive to the availability and relative cost of parking at Milford.

The second relevant transportation change is the development of a continuous sidewalk network on Marsh Hill Road and some type of foot connection over the tracks that would allow residents of West Haven's Benham Hill Road neighborhoods to walk to the station without the long detour Woodmont, Oxford, and Marsh Hill Roads. Paul Dinise, the Orange zoning administrator, recognizes the value of developing the sidewalk network, and says the town intends to put a sidewalk on Marsh Hill Road between the station and Boston Post Road. A walkable short-cut to the West Haven neighborhoods seems less likely.

Finally, the transportation changes affecting demand is the State's planned introduction of extensive commuter service on the Hartford Line. This would allow train service between Orange and North Haven, Wallingford, Meriden, Hartford, and Springfield. It would reduce the number of people from these communities who now drive to New Haven, West Haven, Orange, or Milford, to access Metro-North, but it would lead to a net increase in boardings at Orange for train travel on this part of the line. In any case, the number of Orange residents working in these communities is very small. The chart below shows the totals from the 2011 Longitudinal Employee Household Dynamics report, and our assessment of the number of rail trips these would generate.

city	Employees from Orange (2011)	Assumed rail mode share	Total rail riders
North Haven	136	2	3
Meriden	36	2	1
Wallingford	33	3	1
Hartford	122	5	6
total			10

Note that we have ignored the potential for train travel between Orange and New Haven. The distance seems too small to generate significant rail trips between the two.

5. Summary of findings

Here is a summary of our calculations, based on parking costs comparable to those at West Haven.

	Boardings	Parked cars
shifts in riders		
residents	410	340
non-residents	60	0
induced riders	20	15
Total if station opened now	490	355
future riders		
population growth including TODD	794	253
Yale West Campus	476 to 776	0
other employment growth	82	20
Hartford line	10	8
Total boardings and rail-related parked cars	1852 to 2152	636

Note that the station garage would be shared use with the residents of the TODD and visitors to the area's retail services. This would add at least 250 parking spaces in the facility for a total garage demand of **886** spaces. This could grow even higher if Yale uses the station garage to help meet its employee or student parking needs.

Appendix C

Air Quality Impact Analysis Documentation

Air Quality Analysis

Orange Railroad Station – New Haven Line

December 2016

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Contents

Figures

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1.1 AIR QUALITY

CEPA and NEPA require consideration of whether the proposed action will have an adverse effect on air quality in the study area. In order to assess the potential for the Proposed Action to affect air quality, quantitative carbon monoxide (CO), qualitative particulate matter ($PM_{2.5}$), and Mobile Source Air Toxics (MSATs) analyses have been prepared. Additionally, a qualitative analysis of greenhouse gas (GHG) emissions was also conducted.

1.1.1 Existing Conditions

Pursuant to the Federal Clean Air Act (CAA) of 1970, the EPA established National Ambient Air Quality Standards (NAAQS) for major pollutants known as "criteria pollutants." Currently, the EPA regulates six criteria pollutants: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter, and lead (Pb). Particulate matter (PM) is divided into two particle size categories: particles with a diameter less than 10 micrometers (PM_{10}) and those with a diameter of less than 2.5 micrometers ($PM_{2.5}$). Connecticut adopted the national standards as shown in Table 1-1 which includes both the primary and secondary NAAQS for the criteria pollutants. The NAAQS are two-tiered: the first tier (primary) is intended to protect public health; the second tier (secondary) is intended to protect public welfare and prevent degradation of the environment.

Table 1-1: National Ambient Air Quality Standards[1]

Pollutant	Averaging Time	Primary Standards [1,2]	Secondary Standards [1,3]
CO	8- hour	9 ppm (10 mg/m^3)	None
	1-hour	35 ppm	
Lead	Rolling 3-Month Average[5]	0.15 µg/m^3	Same as Primary
NO_2	Annual Arithmetic Mean	0.053 ppm (100 µg/m^3)	Same as Primary
	1-hour	0.100 ppm[6]	None
0_3	8-hour (2015 standard)[9]	0.070 ppm	Same as Primary
	8-hour (2008 standard)	0.075 ppm	Same as Primary
	8-hour (1997 standard)	0.08 ppm	Same as Primary
$PM_{2.5}$	Annual Arithmetic Mean	12 µg/m^3 [4,8]	15 µg/m^3 [10]
	24-hour	35 µg/m^3	Same as Primary
PM_{10}	24-hour	150 µg/m^3 [4]	Same as Primary
SO_2	1-hour	75 ppb[7]	None
	3-hour	None	0.5 ppm

Notes:

1. National standards (other than ozone, particulate matter, and those based on annual averages) are not to be exceeded more than once per year.
2. Primary Standards: Levels necessary to protect public health with an adequate margin of safety.
3. Secondary Standards: Levels necessary to protect the public from any known or anticipated adverse effects.
4. For PM_{10}, the 24-hour standard not to be exceeded more than once per year on average over 3 years. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over three years, are equal to or are less than the standard.

[1] https://www.epa.gov/criteria-air-pollutants/naaqs-table (accessed on October 7, 2016).

Pollutant	Averaging Time	Primary Standards [1,2]	Secondary Standards [1,3]
5. National lead standard, rolling three-month average: final rule signed October 15, 2008. 6. To attain this NO2 standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010). 7. Final rule signed June 2, 2010. To attain this standard for SO_2, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 75 ppb. 8. EPA updated the NAAQS for PM2.5 to strengthen the primary annual standard to 12ug/m^3. 9. EPA updated the NAAQS for Ozone to strengthen the primary 8-hour standard to 0.07 ppm on October 1, 2015. An area will meet the standard if the fourth-highest maximum daily 8-hour ozone concentration per year, averaged over three years is equal to or less than 70 ppb. 10. On August 24, 2016, EPA issued a final rule (81 FR 58010), effective October 24, 2016, on "Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements" that stated, in part: "Additionally, in this document the EPA is revoking the 1997 primary annual standard for areas designated as attainment for that standard because the EPA revised the primary annual standard in 2012." See: https://www.gpo.gov/fdsys/pkg/FR-2016-08-24/pdf/2016-18768.pdf			

Section 176(c) of the CAA requires federal agencies to ensure that all of their actions conform to applicable implementation plans for achieving and maintaining the NAAQS. Federal actions must not cause or contribute to any new violation of any standard, increase the frequency or severity of any existing violation, or delay timely attainment of any standard.

Attainment

The NAAQS apply to the concentration of a pollutant in outdoor ambient air. If the air quality in a geographic area is equal to, or is better than the national standard, the Environmental Protection Agency (EPA) will designate the region as an attainment area. Areas where air quality does not meet the national standards are designated as non-attainment areas. Once the air quality in a non-attainment area improves to the point where it meets the standards and the additional redesignation requirements in the CAA [Section 107(d)(3)(E)], EPA may redesignate the area as an attainment/maintenance area, which are typically referred to as "maintenance areas."

The CAA requires EPA to designate the status of all areas as being in or out of compliance with the NAAQS. The CAA further defines non-attainment areas for ozone based on the severity of the violation as marginal, moderate, serious, severe, and extreme. The state has developed a State Implementation Plan (SIP) to attain and maintain the standards in the NAAQS. The EPA Green Book[2], which lists non-attainment, maintenance, and attainment areas, was reviewed to determine the designations for New Haven County in which the Project is located. The EPA Green Book shows that New Haven County is designated by the EPA as a moderate non-attainment area for the 2008 8-hour ozone standard and a maintenance area for CO and $PM_{2.5}$ (1997 and 2006 standards). The area is designated as attainment for all other NAAQS. On August 24, 2016, EPA issued a final rule (81 FR 58010), effective October 24, 2016, on "Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements" that stated, in part: "Additionally, in this document the EPA is revoking the 1997 primary annual standard for areas designated as attainment for that standard because the EPA revised the primary annual standard in 2012." (See: https://www.gpo.gov/fdsys/pkg/FR-2016-08-24/pdf/2016-18768.pdf). Accordingly, the region is no longer designated as maintenance with the 1997 standard for $PM_{2.5}$ but is still designated as maintenance with the 2006 standard.

[2] EPA Green Book: https://www.epa.gov/green-book/green-book-frequent-questions

Mobile Source Air Toxics

The EPA identified nine compounds with significant contributions from mobile sources that are among the national and regional-scale cancer drivers from their 1999 National Air Toxics Assessment. The nine compounds identified were: acetaldehyde, acrolein; benzene; 1, 3-butadiene; diesel particulate matter plus diesel exhaust organic gases; ethylbenzene, formaldehyde; naphthalene; and polycyclic organic matter (POM). While FHWA considers these the priority mobile source air toxics, the list is subject to change and may be adjusted in consideration of future EPA rules.

The Federal Highway Administration (FHWA) October 18, 2016 guidance presents a tiered approach for assessing MSATs in NEPA documents. This approach is also applicable to projects funded by the Federal Transit Authority (FTA). The three levels are for projects with 1) no meaningful MSAT effects, 2) low potential MSAT effects, and 3) high potential MSAT effects, respectively. The FHWA guidance defines the levels of analysis for each type of MSAT effect:

- No analysis for projects with no potential for meaningful MSAT effects;
- A qualitative analysis for projects with low potential MSAT effects; and
- A quantitative analysis for projects with high potential MSAT effects.

The alternatives discussed in Section 1.7.4 were evaluated against each threshold criteria in order to determine the type of MSAT analysis required to satisfy NEPA.

Carbon Monoxide

CO is a toxic colorless and odorless gas that results from the incomplete combustion of gasoline and other fossil fuels. Because CO disperses quickly, the concentrations can vary greatly over relatively short distances. Relatively high concentrations of CO may occur near congested intersections, along heavily used roadways conveying slow-moving traffic, and in areas where atmospheric dispersion is inhibited by urban "street canyon" conditions.

Certain transit projects[3] located in carbon monoxide (CO) nonattainment or maintenance areas would require a quantitative CO hot-spot analysis during the environmental review process and generally include projects that affect congested intersections (e.g. fixed guideway transit projects that take an existing traffic lane from a congested highway or projects that include major park-and-ride lots). EPA recently released a new mobile source emission factor model, the motor vehicle emission simulator (MOVES) along with guidance for using MOVES in project level CO analyses[4]. EPA approved air dispersion models are used to determine CO concentrations at receptor locations as part of the hot spot analysis. For this analysis, the CAL3QHC software modeling program was used to estimate CO concentrations in the hot spot analysis. Furthermore, the FHWA provides additional information pertaining to project related carbon monoxide (CO) analyses. Two types of analyses are discussed by FHWA: mesoscale and microscale. The mesoscale analysis is a regional analysis consisting of nitrogen oxide (NOx), ozone (O_3) and hydrocarbons. Where these pollutants are an issue, a mesoscale analysis may be undertaken to evaluate the regional impacts of the project. A microscale analysis is a localized study where air quality dispersion modeling may be required to demonstrate that project related CO impacts are below the National Ambient Air Quality Standards (NAAQS).

[3] Projects are defined in40 CFR 93.1.3 https://www.law.cornell.edu/cfr/text/40/93.123

[4] EPA, "Using MOVES2014 in Project Level Carbon Monoxide Analyses", March 2015

Particulate Matter

PM is a broad class of air pollutants that exists as liquid droplets or solids, with a wide range of size and chemical composition. It is emitted by a variety of sources, both natural and man-made. Major man-made sources of PM include the combustion of fossil fuels in vehicles, power plants and homes, construction activities, agricultural activities, and wood-burning fireplaces. Smaller particulates less than or equal to 10 and 2.5 microns in size (PM_{10} and $PM_{2.5}$) are of particular health concern because they can get deeper into the lungs and affect respiratory and heart function.

The Proposed Action is located in an area which is designated as maintenance for fine particulate matter ($PM_{2.5}$) NAAQS; therefore, transportation conformity requirements pertaining to particulate matter apply for this Project. Connecticut has prepared a SIP[5] that outlines the control measures implemented to achieve compliance and maintain the ozone and $PM_{2.5}$ NAAQS, respectively. As noted earlier, on August 24, 2016, EPA issued a final rule (81 FR 58010), effective October 24, 2016, on "Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements" that stated in part "Additionally, in this document the EPA is revoking the 1997 primary annual standard for areas designated as attainment for that standard because the EPA revised the primary annual standard in 2012. (See: https://www.gpo.gov/fdsys/pkg/FR-2016-08-24/pdf/2016-18768.pdf). Accordingly, the region is no longer designated as maintenance with the 1997 standard for $PM_{2.5}$ but still designated as maintenance with the 2006 standard.

1.1.2 Impact Assessment

1.1.2.1 Methodology

The air quality analysis consisted of evaluating air emission of carbon monoxide (CO), particulate matter (PM), Mobile Source Air Toxics (MSATs) and greenhouse gases. The methodologies and assumptions applied to the analysis for each pollutant are discussed below, and are consistent with Federal Highway Administration (FHWA), Federal Transit Administration (FTA), EPA and Connecticut Department of Energy & Environmental Protection (CTDEEP) guidance.

1.1.2.2 Carbon Monoxide (CO) Analysis

A CO hot-spot analysis was conducted for traffic-related impacts at nearby intersections along with dispersion modeling of vehicle exhaust related to the proposed parking garage. Traffic forecasts for the Study Alternatives were developed for the Existing Conditions (2016), Construction Year (2017) and Design Year (2037) conditions, using traffic forecasts were performed for Build and No-Build Conditions, with Build Conditions assuming construction and operation of the Transit Oriented Development (TOD).

1.1.2.3 CO Hot-Spot Methodology

The CO hot-spot analysis included a review of the traffic conditions at eight signalized intersections in the area of the Proposed Action for the No Build and Build Alternative to identify the worst-case locations for assessment. Both morning and afternoon peak conditions were assessed.

For intersections where project-specific modeling was determined to be required, modeling methodologies and assumptions were applied following EPA and CTDEEP guidance. The microscale analyses were conducted using the latest version of the EPA emission model (MOVES2014a) and

[5]CTDEEP http://www.ct.gov/deep/cwp/view.asp?a=2684&q=322164&deepNav_GID=1619#CTPMISIP2012

dispersion model (CAL3QHC) to estimate worst-case CO concentrations at individual receptor (i.e., receiver) locations. Peak CO concentrations modeled for each location were then added to the appropriate CO background concentrations (as specified in the CTDEEP CO design values for 2015) to determine the worst-case CO impacts at each location. These values were then compared to the 1-hour and 8-hour CO NAAQS to show compliance.

1.1.2.4 Intersections Studied

An analysis of the LOS and peak hourly volumes was evaluated for the Proposed Action Build and No Action (or No Build) Alternative to confirm the worst-case intersection for study. The intersection locations studied for each Build and No Build alternative are shown in Figure 1-1. Per EPA guidance, the intersections are typically ranked for each alternative using peak AM and PM volumes and LOS. Table 1-2 shows a summary of the peak AM and PM traffic volumes along with LOS for each intersection. Traffic volumes used to summarize the signalized intersections are included in Appendix A (Appendix B of the EIE).

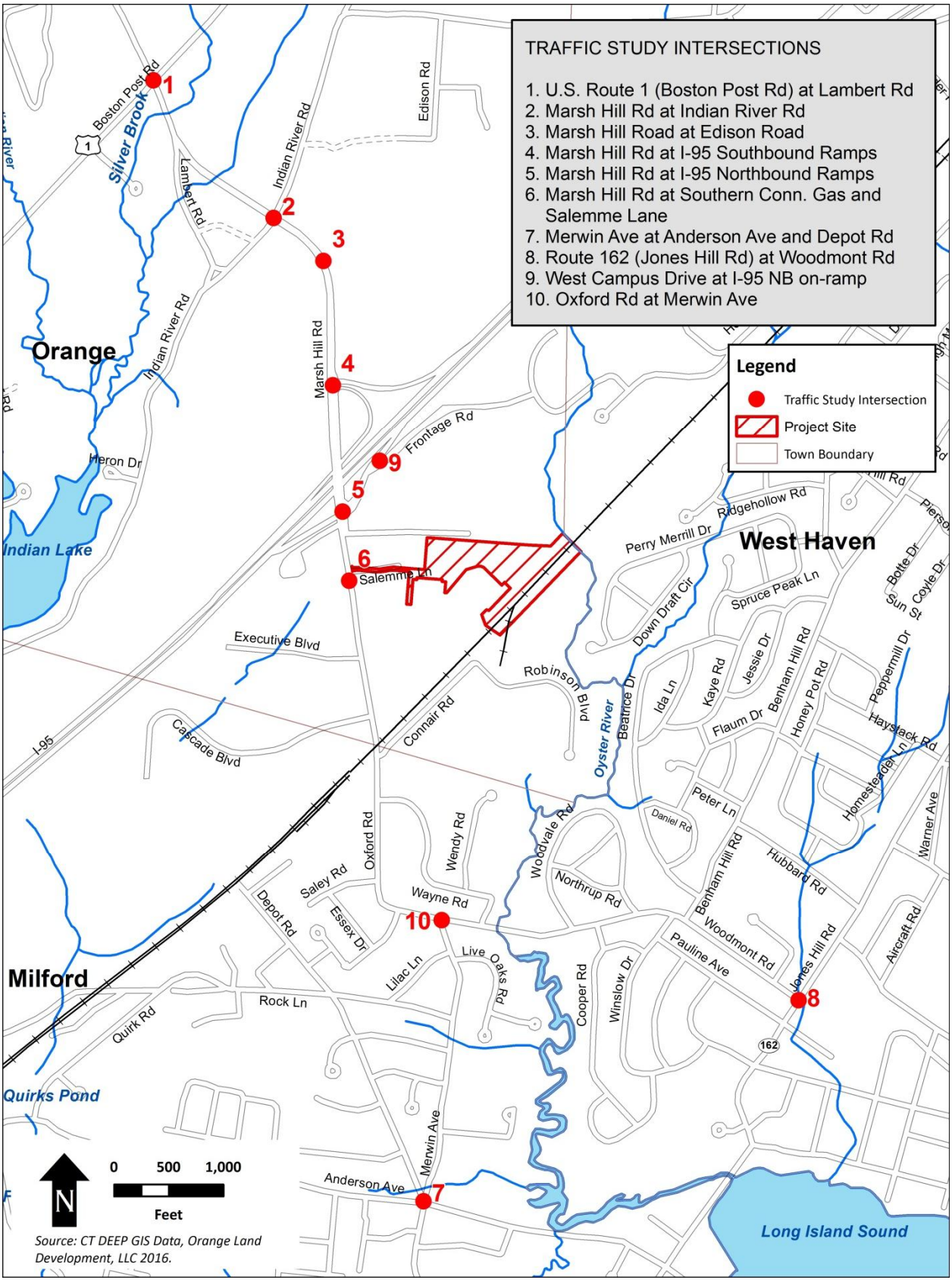


Figure 1-1: Intersection Locations Studied

As shown in Table 1-2, there are three intersections with a LOS of D or worse in 2037 for the Build and No Build conditions indicating the potential for higher delays and vehicle queuing and thereby potential microscale impacts. Since these intersections clearly represent the worst case locations of traffic volumes and LOS, a formal ranking of the intersections was not necessary. Therefore, the following three intersections were modeled for the air quality analysis consistent with EPA guidance:

1. US Route 1 at Lambert Road;
2. Marsh Hill Road at I-95 SB Ramps; and
3. Route 162 at Woodmont Road.

Table 1-2: Signalized Intersection LOS and Peak AM and PM Volumes

					2017				2037			
			Existing		No Build		Build		No Build		Build	
Site Number	Intersection	Peak	Peak Volumes	LOS	Peak Volumes	LOS	Peak Volumes	LOS	Peak Volumes	LOS	Peak Volumes	LOS
1	U.S. Route 1 (Boston Road) at Lambert Road	AM	1386	C					1686	D	1771	D
		PM	2682	C					3163	D	3264	D
2	Marsh Hill Road at Indian River Road	AM	1690	B	1860	B	1900	B	2083	B	2203	B
		PM	2525	C	2650	C	2705	C	2967	C	3107	C
3	Marsh Hill Road at Edison Road	AM	1730	A	1990	A	2030	B	2230	B	2360	B
		PM	2322	B	2590	B	2645	B	2902	C	3052	C
4	Marsh Hill Road at I-95 SB Ramps	AM	2476	C	2785	C	2850	C	3118	D	3323	D
		PM	2764	C	3060	C	3165	C	3427	E	3667	F
5	Marsh Hill Road at I-95 NB Ramps	AM	2436	C	2715	C	2810	C	3077	C	3377	C
		PM	2453	C	2750	C	2900	C	3081	C	3401	C
6	Marsh Hill Road at SCG	AM	1673	A			2060	B	2174	A	2554	C
		PM	1601	A			2095	B	2116	B	2616	C
7	Merwin Avenue at Anderson Avenue and Depot Road	AM	1003	B	1110	B	1115	B	1245	B	1280	B
		PM	969	B	1020	B	1045	B	1147	B	1197	B
8	Route 162 (Jones Hill Road) at Woodmont Road	AM	866	B	910	B	930	B	1019	C	1074	C
		PM	1050	C	1110	C	1140	C	1244	C	1309	D

The traffic analysis, as described in the Traffic and Parking Section of the EIE and summarized above, demonstrates that of the eight signalized intersections evaluated, only three were selected for evaluation in the CO hot-spot analysis since these locations are expected to have the highest traffic volumes and vehicle queuing and thereby the highest CO concentrations. It is assumed that if these intersections show peak ground level CO concentrations below the CO NAAQS, then all other locations in the study area would also be below the CO NAAQS.

The evaluation for the three intersections was conducted consistent with EPA and CTDEEP guidance using MOVES2014a and CAL3QHC (invoked via the latest version of the FHWA CAL3i interface software) to develop conservative estimates for CO concentrations. CAL3i provides a user-friendly interface for the EPA CAL3QHC model that serves to facilitate and streamline the modeling process, particularly for worst-case analyses. Details on the assumptions used for the modeling analyses are provided in the following sections.

1.1.2.5 MOVES Emissions Estimation

Vehicle emission rates for CO were estimated using the latest version of the EPA Motor Vehicle Emissions Simulator model (MOVES2014a). The methodologies and assumptions used for the MOVES modeling were consistent with FHWA and EPA guidance[6]. Specifically:

- Vehicle and fuels data required for input into the MOVES2014a model were provided by CTDEEP for 2016, 2017 and 2037 conditions, consistent with the latest planning assumptions for the area of the Proposed Action (i.e., New Haven County).
- Fuel data, vehicle population data, and age distribution data were provided by CTDEEP to populate the MOVES project data manager database (i.e., New Haven County).
- Source type hour fractions for each link were derived using project-specific data for car and truck volumes along with the source type population data for each source type.
- MOVES link files were developed for the intersections studied for each analysis year. The link file includes road type, peak-hour volumes, link lengths, roadway speed, and roadway grade.
- The roadway grades for the intersections were derived from GIS and Google Earth.
- Worst-case meteorological data (i.e.,New Haven County) as provided by CTDEEP was used in the project data manager database.

A summary of the MOVES inputs are presented in Table 1-3.

[6] EPA, "Using MOVES2014 in Project Level Carbon Monoxide Analyses", March 2015.

Table 1-3: Summary of MOVES Inputs

Parameter	Assumption
Domain/Scale	"Project"
Calculation Type	"Inventory"
Evaluation Month	January
Time Span	Year= (2016, 2017, 2037), AM Hour= 7AM to 8AM, Days=Weekdays
Geographic Bounds	New Haven County
Vehicles Equipment[3]	All Vehicle Types for diesel and gasoline
Link Files	Roadway Specific developed by HMMH
Roadway Grade/Link Speeds	Developed by HMMH using GIs/Google Earth and Posted Speed Limits
Fuel and Inspection/Maintenance (I/M) Inputs	Fuels and I/M Data Provided by CTDEEP
Vehicle Population and Age Distribution	Provided by CTDEEP
Pollutants and Process Panel	CO Running and CO Crankcase
Output Panel	Grams and Miles Selected as Units, Population and Distance traveled

1.1.2.6 MOVES Emission Factors

Mobile source emission factors are calculated based on the actual posted speeds at which vehicles travel through the intersection. The MOVES runs were used to generate CO emission rates for input into the CAL3QHC dispersion model for the base (2016), construction (2017), and design (2037) years. For estimating CO emission rates for the intersection analysis, the following assumptions were made:

- An average vehicle speed of 30 and 40 mph was assumed for the Route 1 at Lambert Road intersection; 30, 35, and 40 mph for Marsh Hill Road at I95 SB Ramps; and 25 and 35 mph was assumed for Route 162 at Woodmont Road;
- Project specific roadway grades (see below);
- Zero median width;
- At grade intersection; and
- Receptor locations on the edge of the right-of-way assuming EPA guidance.

Emission rates were developed for roadway links based on vehicle speed and roadway grades at each of the links entering and departing the intersections. Average road grades were taken from GIS and/or Google Earth maps and included in the MOVES roadway link files for each intersection.

As an example of the CO emission rates, Table 1-4 summarizes the emission factors generated by MOVES for each year and vehicle speed and roadway grades using MOVES2014a. A sample MOVES input file is provided in Appendix B. A complete set of MOVES input/output files can be made available upon request.

Table 1-4: Summary of MOVES CO Emission Factors

Intersection	Approach	Vehicle Speed (mph)	Roadway Grade (%)	2016 (g/mile)	2017 (g/mile)	2037 (g/mile)
US Route 1 at Lambert Road	Lambert Road NB Approach/Depart	30/30	2.2/2.65	4.4/4.6	4.2/4.4	1.4/1.5
	Boston Road EB Approach/Depart	40/40	-0.4/-0.8	2.6/2.5	2.5/2.4	0.9/0.8
	Lambert Road SB Approach/Depart	30/30	-2.65/-2.2	2.3/2.4	2.2/2.3	0.7/0.7
	Boston Road WB Approach/Depart	40/40	0.8/0.4	3.3/3.1	3.1/2.9	1.1/1.0
	Idle[2]	0	n/a	15.6	13.8	3.4
Marsh Hill Road at I-95 SB Ramps	SB Ramp WB Approach/Depart	35/30	3.4/-3.1	4.9/2.1	4.8/2.0	1.7/0.6
	Marsh Hill SB Approach/Depart	40/40	-0.4/-1.9	2.5/2.0	2.4/1.9	0.9/0.7
	UILCO EB Approach/Depart	30/35	3.1/3.4	4.7/4.9	4.6/4.8	1.6/1.7
	Marsh Hill NB Approach/Depart	40/40	1.9/0.4	3.8/2.9	3.7/2.8	1.4/1.0
	Idle2	0	n/a	15.6	13.8	3.4
Route 162 at Woodmont Road	Woodmont RD EB Approach/Depart	25/25	-1.5/1.5	2.9/4.2	2.7/3.9	0.9/1.3
	Jones Hill Rd NB Approach/Depart	35/35	0.4/3.8	3.2/5.5	3.0/5.3	1.0/1.8
	Jones Hill Rd SB Approach/Depart	35/35	-3.8/-0.4	1.8/2.8	1.7/2.7	0.6/0.9
	Idle[2]	0	n/a	15.6	13.8	3.4

Notes:
1. MOVES generated CO emission rates utilize the New Haven County data in the MOVES file.
2. Idle emissions are denoted in grams per vehicle hour

1.1.2.7 CAL3QHC

The latest version of the CAL3QHC model (04244)[7] was used to predict worst-case 1-hour CO concentrations from free-flow links using the latest version of the FHWA CAL3i[8]. CAL3i is a software package that incorporates the EPA CAL3QHC dispersion model and various worst-case default parameters per EPA guidance. The peak 1-hour concentrations from CAL3QHC were scaled by a persistence factor of 0.7 (EPA default) to estimate 8-hour concentrations. This persistence factor

[7] "User's Guide to CAL3QHC Version 2.0: A Modeling Methodology for Predicting Pollutant Concentrations Near Roadway Intersections", EPA-454/R-92-006 (Revised), EPA, September 1995.
[8] See CAL3Interface – A Graphical User Interface for the CALINE3 and CAL3QHC Highway Air Quality Models", Michael Claggett, Ph.D., FHWA Resource Center, 2016.

accounts for the variability in meteorology over an eight-hour period relative to one-hour conditions. A summary of inputs used in the CAL3Interface model are shown in Table 1-5.

Worst-case modeled concentrations from CAL3QHC were added to appropriate background CO concentrations for comparison to the NAAQS. The background CO levels specified in the CT DEEP[9] Design Values for 2015 were used. As a conservative approach, the higher CO values for the more distant City of Bridgeport were used rather than the CO values for the nearby City of New Haven. Background CO concentrations of 2.4 ppm (one-hour CO concentration) and 1.8 ppm (eight-hour concentration) were used as input to CAL3QHC.

Table 1-5: Summary of CAL3QHC Inputs

Description	Value
Surface Roughness Coefficient	175 Centimeters
CO Background Concentrations	2.4 ppm 1-hour, 1.8 ppm 8-hour (Bridgeport Roosevelt)
Persistence Factor	0.7 (EPA default)
Wind Speed	1.0 meter per second
Stability Class[1]	E
Mixing Height	1,000 meters
Wind Direction	5 degree increments (1 thru 36)
Receptor Height	5.9 feet
Note: 1. CAL3QHC was run for both Stability Class D and E for 2016. The highest concentrations consistently occurred for Stability E, therefore, Stability E was used for all existing and future conditions.	

CAL3QHC input and output files are provided in Appendix C.

1.1.2.8 Receptors

Receptor locations are placed in the vicinity of the intersection at worst-case locations such as sidewalks, property lines, and parking lots where the public generally has access. For worst-case analyses for arterial streets (including intersections), the receptors are placed ten feet from the roadway edge (i.e., at the nearest possible location for the model, which assumes a ten-foot mixing zone next to the roadway).

Receptor locations for the worst-case intersection were generated in CAL3i consistent with EPA modeling guidelines[10] where the receptors were located a minimum of 3 meters from the edge of the roadway and positioned at a height of 1.8 meters above the ground (5.9 feet). Figure D-1 thru Figure D-3 in Appendix D shows the receptor locations at the worst-case intersection as displayed in the CAL3i interface for the No-Build and Build conditions. If the peak CO concentrations at the worst-case areas selected in the analysis are below the NAAQS for CO, it is assumed that all other locations in the corridor also would remain below the thresholds.

[9] CTDEEP CO Design Values http://www.ct.gov/deep/cwp/view.asp?a=2684&q=421150&deepNav_GID=1619
[10] "Guidelines for Modeling Carbon Monoxide from Roadway Intersections", EPA-454/R-92-005, US EPA, 1992.

1.1.2.9 CAL3QHC Modeling Results

The results of the 1-hour and 8-hour CO hot-spot analysis for the three worst-case intersection locations are presented in Table 1-6 for the existing, construction and design year Build and No-Build conditions. The table includes the overall worst-case modeled concentrations for the AM and PM peak periods, and includes the CAL3QHC modeled receptor number in parenthesis. The concentrations in Table 1-6 also include the appropriate 1-hour and 8-hour background concentrations of 2.4 ppm and 1.8 ppm[11], respectively, for comparison to the CO NAAQS. The highest 1-hour predicted concentrations for the base, opening and design year Build and No-Build conditions were 3.6 ppm, 3.6 ppm and 2.8 ppm, respectively. The highest modeled 1-hour concentration for the existing, 2017 and 2037 conditions are expected at the Marsh Hill Road and I-95 SB Ramp intersection. All predicted peak 1-hour CO concentrations are well below the 1-hour CO NAAQS of 35 ppm.

The peak 1-hour values generated by CAL3QHC were scaled by a persistence factor of 0.7 to generate peak 8-hour CO concentrations, and these values were then added to the appropriate background concentration for comparison to the CO NAAQS. The highest 8-hour concentrations for the base, opening and design year Build and No-Build conditions were 2.6 ppm, 2.6 ppm and 2.1 ppm, respectively. Similar to the 1-hour concentrations, the highest modeled 8-hour concentrations for the existing, 2017 and 2037 conditions are expected at the Marsh Hill Road and I-95 SB Ramp intersection. All predicted peak 8-hour CO concentrations are also below the 8-hour CO NAAQS standard of 9 ppm.

These results demonstrate that the three worst-case intersections identified for existing, Build and No-Build alternatives would not cause or contribute to a violation of the CO NAAQS within the study corridor, and thereby satisfy all NEPA and CAA requirements pertaining to CO.

Table 1-6: CAL3QHC CO Modeling Results for the Worst-Case Intersections

Intersection	Averaging Period	2016[1,2]		2017[1,2]				2037[1,2]				NAAQS (ppm)
		Existing		No Build		Build		No Build		Build		
		Peak AM (PPM)	Peak PM (PPM)	Peak AM (ppm)	Peak PM (ppm)	Peak AM (ppm)	Peak PM (ppm)	Peak AM (ppm)	Peak PM (ppm)	Peak AM (ppm)	Peak PM (ppm)	
Route 1 at Lambert Road	1-hour	3.4(9)	3.6(9)	3.3(28)	3.5(9)	3.3(28)	3.5(9)	2.6(17)	2.7(28)	2.6(17)	2.7(1)	35
	8-hour	2.5(9)	2.6(9)	2.4(28)	2.6(9)	2.4(28)	2.6(9)	1.9(17)	2.0(28)	1.9(17)	2.0(1)	9
Marsh Hill Road at I-95 SB Ramps	1-hour	3.5(1)	3.6(1)	3.5(1)	3.6(1)	3.5(1)	3.6(1)	2.7(5)	2.7(5)	2.8(1)	2.7(5)	35
	8-hour	2.6(1)	2.6(1)	2.6(1)	2.6(1)	2.6(1)	2.6(1)	2.0(5)	2.0(5)	2.1(1)	2.0(5)	9
Route 162 at Woodmont Road	1-hour	2.9(1)	2.8(1)	2.9(1)	3.3(1)	2.9(1)	2.9(1)	2.5(4)	2.5(4)	2.5(4)	2.5(4)	35
	8-hour	2.2(1)	2.1(1)	2.2(1)	2.4(1)	2.2(1)	2.2(1)	1.9(4)	1.9(4)	1.9(4)	1.9(4)	9

Notes:

1. Number in parenthesis is the receptor number as modeled in CAL3QHC.
2. Modeled concentrations include 1-hour CTDEEP Background value of 2.4 ppm and 8-hour background value of 1.8 ppm.

[11] http://www.ct.gov/deep/cwp/view.asp?a=2684&q=421150&deepNav_GID=1619

1.1.2.10 Parking Area Emissions

In addition to surface parking, there is an above grade parking garage planned as part of the Proposed Action consisting of shared parking to service both the TOD development and the proposed commuter rail station. The garage will consist of up to six levels and is not fully enclosed – it has open sides which provide ventilation of CO emissions from moving and idling vehicles into the ambient air. For modeling purposes, emissions are conservatively assumed to vent from the footprint of the entire garage area (including both TOD and Commercial Commuter Garage spaces) which is approximately 975 feet in length by 216 feet in width on its longest side. Emissions from the parking garage were calculated using MOVES2014a for 2016 to estimate the total CO emissions from the AM and PM peak hours which include both moving, startup and idle emissions. As a conservative assumption, the 2016 construction year was chosen since emissions are expected to decrease in the future due to EPA emissions standards and the removal of older less efficient vehicles. As a conservative approach, the MOVES run includes both the shared parking structure spaces (799) and the surface street parking spaces (123) for a total of 922 spaces.

Vehicles Entering and Exiting the Garage

CO emissions from vehicles entering and exiting the parking garage were estimated based on the MOVES emission rate and the total miles traveled. The miles traveled within the garage was calculated by multiplying the average distance a car would travel in the garage by the number of cars entering and leaving the garage. It was estimated that each vehicle, on average, drives halfway into the garage and halfway out to park and leave.

The footprint of the garage is approximately 975 feet by 216 feet. Assuming the cars entering and exiting the garage travel approximately 596 feet, a total trip of 104 miles is traveled in the garage (596 feet x 922 cars / 5,280 feet per mile) during the peak AM or PM hour. Assuming the vehicles travel at an average speed of 15 mph within the garage, while entering and leaving, a CO emission rate of 4.7 grams per mile was obtained from MOVES.

Therefore, the emission rate from the vehicles entering and exiting the garage can be calculated as follows:

4.7 grams/mile x 104 miles/hour x 1 hour/3600 seconds = 0.14 grams/second

Garage Vehicle Starts and Idling

Similarly, MOVES was run in the off network mode to estimate vehicle starting and idling activity within the garage. The resultant emission rate for starts and extended idling from MOVES was 1.22 grams per second.

Total Garage CO Emissions

The total CO emission rate from the parking garage assuming all the spaces were filled including starts and extended idling is 1.4 grams per second.

Garage Emission Dispersion Modeling

The EPA SCREEN3 model was run to determine ground level impacts from the total CO emissions associated with the garage. The following input parameters were used:

- The parking garage was modeled as a volume source with an average release height of 6.86 meters which is roughly half of the 45 foot building height above ground level;
- Urban dispersion coefficients were used;
- Flat terrain; and
- Full default meteorology.

1.1.2.11 Background CO Concentrations

Similar to the CO hot-spot analysis, background air quality levels were added to modeled concentrations for comparison to the NAAQS. Consistent with the CO intersection modeling analysis, background levels of future CO concentrations of 2.4 ppm (one-hour) and 1.8 ppm (eight-hour) were provided by CTDEEP.

Also consistent with the CO intersection modeling, peak eight-hour SCREEN3 concentrations were calculated using an eight-hour to one-hour ratio (or persistence factor) of 0.70 as recommended by EPA.

1.1.2.12 Mobile Source Modeling Results

The results of the one-hour build CO concentrations from CAL3QHC and SCREEN3 for the highest predicted receptor are provided in Table 1-7.

As a conservative approach, the results of the one-hour modeled CO ground-level concentrations from both models were added to CTDEEP supplied background levels for comparison to the NAAQS. The one-hour values were then scaled by 0.7 to generate eight-hour values. These values represent the highest potential concentrations independent of time and space (i.e. as they are predicted by each model during the simultaneous occurrence of "defined" worst case meteorology and maximum modeled values).

The highest cumulative one-hour concentration predicted in the area of the project for the 2017 future build conditions plus background is 3.8 ppm. The total one-hour concentration includes the maximum predicted concentrations from SCREEN3 for the parking garage plus the maximum predicted concentrations from CAL3QHC. This value is well below the one-hour NAAQS standard of 35 ppm.

The highest eight-hour concentration predicted in the area of the project for the 2017 future build conditions plus background is 2.8 ppm. The total eight-hour concentrations include maximum predicted concentrations from SCREEN3 and CAL3QHC modeled sources. This value is well below the eight-hour NAAQS standard of nine ppm.

Table 1-7: Summary of Mobile Source Modeling Results

Intersection	Average Period	2017 Peak Build Concentration (PPM)[1]	2017 Parking Garage Concentration (PPM)[2]	Total Concentration (PPM)[3]	NAAQS (PPM)
Route 1 at Lambert Road	1-Hour	3.5	0.2	3.7	35
	8-Hour	2.6	0.15	2.7	9
Marsh Hill Road at I-95 SB Ramps	1-Hour	3.6	0.2	3.8	35
	8-Hour	2.6	0.15	2.8	9
Route 162 at	1-Hour	2.9	0.2	3.1	35

Woodmont Road	8-Hour	2.2	0.15	2.3	9

Notes:
1. Denotes the maximum modeled concentrations from CAL3QHC in Table 4-6.
2. Denotes the maximum modeled concentrations from SCREEN3.
3. Denotes the cumulative maximum modeled concentrations from CAL3QHC and SCREEN3 independent of location, time or meteorological conditions.

1.1.2.13 Conclusions

Using a conservative approach, the CO concentrations at the nearest sensitive receptors from the three intersections and the parking garage plus monitored background values are well under the CO NAAQS thresholds.

1.1.3 Mesoscale Analysis

A mesoscale analysis was performed to assess the total VOCs and NOx (i.e., ozone precursors) associated with motor vehicle emissions for the Proposed Action, including the adjacent TOD development, compared to the No Action Alternative, assuming that the TOD development is not constructed. The mesoscale analysis typically evaluates the regional impact of VOC and NOx affiliated with the project.

1.1.3.1 Methodology

As mentioned above, The EPA Green Book shows that New Haven County is designated by the EPA as a moderate non-attainment area for the 2008 8-hour ozone standard and a maintenance area for CO, and $PM_{2.5}$ (1997 and 2006 standards). The area is designated as attainment for all other NAAQS. Ozone, a common constituent of smog, is formed in the atmosphere rather than being directly emitted from pollutant sources. Ozone forms as a result of volatile organic compounds (VOCs) and oxides of nitrogen (NO_X) reacting in the presence of sunlight in the atmosphere. Ozone levels are highest in warm-weather months. VOCs and NO_X are termed "ozone precursors" and their emissions are regulated to control the creation of ozone.

The Connecticut Department of Transportation (CTDOT) conducts mesoscale analyses to determine ozone and $PM_{2.5}$ conformity with the SIP. The mesoscale analysis is prepared to document the emissions analysis that was completed to evaluate Transportation Conformity of the Metropolitan Regional Planning Organizations' Fiscal Year 2015-2018 Transportation Improvement Program (TIP), as Amended in September 2016 and the 2015 Regional Long Range Transportation Plans (LRTP) to the State Implementation Plan (SIP) for air quality. An analysis of NO_X and VOC was conducted for summer conditions for 2017 and 2040.

The mesoscale analysis uses the EPA MOVES2014a emission model. Emissions are calculated using emission factors which are dependent on meteorological conditions, vehicle fleet mixes, emission standards, fuel data, and road types along with vehicle characteristics including vehicle speed, vehicle hours traveled and vehicle miles traveled (VMT). VMT estimates were developed from CTDOT statewide network-based travel model for baseline and future conditions. A more detailed description of the

modeling methodology and assumptions are found in the Ozone Air Quality Conformity Determination (amended September 2016)[12].

1.1.3.2 Existing Conditions

The CTDEEP operates ozone monitoring stations at locations throughout Connecticut. The stations closest to the proposed project area are located in New Haven (approximately 9 miles to the east) and Stratford (approximately 11 miles to the southwest). During 2015, both monitor locations reported a fourth high daily average above the EPA 2015 8-hour ozone standard of 0.070 ppm with the Stratford monitor reporting 15 days above the standard and the New Haven monitor reporting 7 days above the standard. The maximum 8-hour concentration reported at Stratford was 0.095 ppm with a fourth highest 8-hour concentration of 0.086 ppm. The maximum 8-hour concentration reported at New Haven was 0.093 ppm while the fourth highest 8-hour concentration was 0.081 ppm. It should be noted that while the 2015 ozone concentrations are above the EPA 2015 8-hour ozone NAAQS, ozone exceedances and concentrations in Connecticut have trended lower over the past 30 years as shown in Figure 1-2 and Figure 1-3 below.

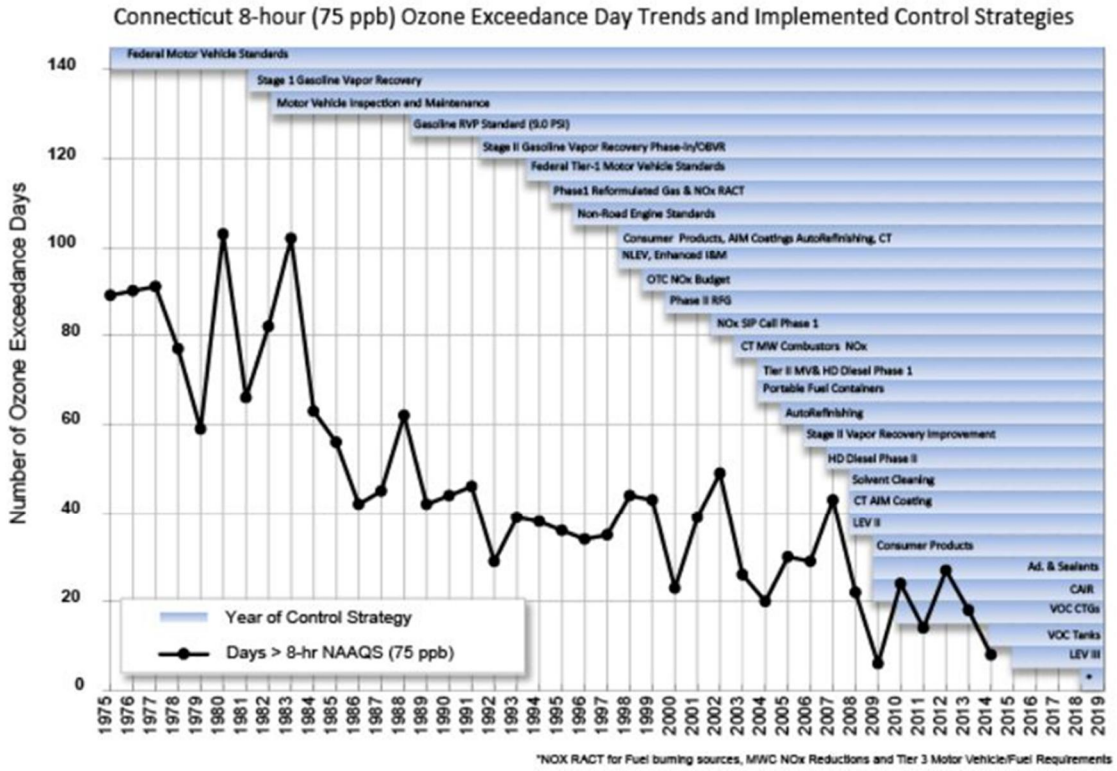


Figure 1-2: Connecticut 8-hour Ozone Exceedance Day Trends

Source: http://www.ct.gov/deep/cwp/view.asp?a=2684&q=322062&deepNav_GID=1744

12 http://www.ct.gov/dot/lib/dot/documents/dplansprojectsstudies/plans/airqualityconformity/ozoneconformity_september_2016_amended.pdf

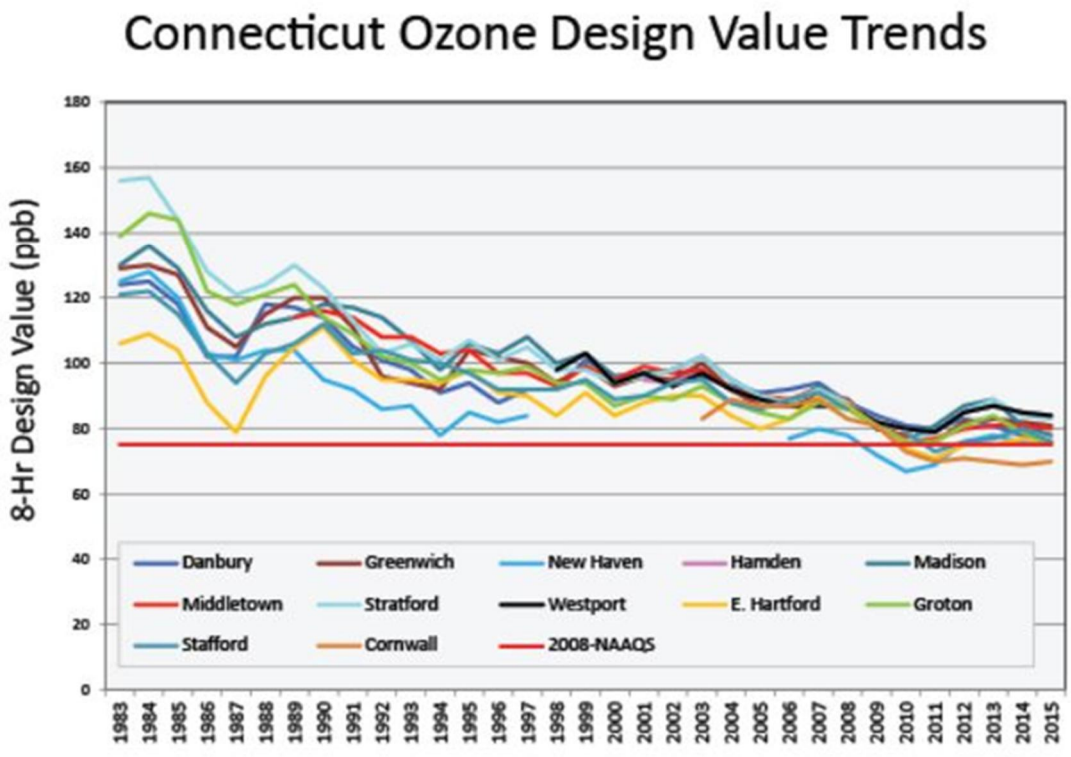


Figure 1-3: Connecticut Ozone Design Value Trends

Source: http://www.ct.gov/deep/cwp/view.asp?a=2684&q=322062&deepNav_GID=1744

1.1.3.3 Potential Mesoscale Impacts

Under the No Action alternative, vehicle trips would remain unchanged and similar to the existing conditions, and so no impacts are expected to the mesoscale air quality results.

The mesoscale analysis conducted by the CTDOT for 2017 estimates 8-hour summertime emissions in the greater Connecticut area air quality district as 15.99 tons per day of VOC and 21.99 tons per day of NO_X and is well below the budgets of 26.3 tons per day of VOCs and 49.2 tons per day of NO_X. For comparison, the 2040 final year modeled, VOC emissions are expected to decrease to 6.17 tons per day and NO_X is expected to decrease to 6.49 tons per day. The expected reduction in emissions is primarily due to programs such as reformulated fuels, enhanced inspection and maintenance programs (I/M), stage two vapor recovery and the low emissions vehicle program.

The new Orange Rail station was included in the ozone SIP Conformity mesoscale analysis, however, the adjacent proposed residential/commercial portion of the TOD development project was not[13]. Given the relatively small nature of the VMT associated with the residential/commercial portion of the proposed TOD relative to the total VMT's in the region, it is unlikely that this portion of the project would result in a substantial change in emissions or any subsequent direct or indirect impacts to the mesoscale analysis.

[13] It is assumed that mesoscale impacts associated with the proposed multi-family residential building will be addressed by the developer of this privately owned TOD. This analysis would be separate from the Environmental Impact Evaluation and is not included in this air quality study.

1.1.3.4 Mitigation

Since emissions of VOC and NO_X are expected to decrease from 2018 to 2040 within the air district of the Proposed Action and projected emissions are well below the budgeted allowances required to maintain compliance with the SIP and the NAAQS, no specific mitigation measures are proposed.

1.1.4 Mobile Source Air Toxics Analysis Methodology

On October 18, 2016, the FHWA issued updated interim guidance regarding Mobile Source Air Toxics (MSATs) in a NEPA analysis to include the EPA's recent MOVES2014a emission model along with updated research on air toxic emissions from mobile sources. The guidance includes three categories and criteria for analyzing MSATs in a NEPA documents:

1. No meaningful MSAT effects,
2. Low potential MSAT effects, and
3. High potential MSAT effects.

A qualitative analysis is required for projects which meet the low potential MSAT effects criteria while a quantitative analysis is required for projects meeting the high potential MSAT effects criteria.

Projects with Low Potential MSAT Effects are described as:

- Those that serve to improve operations of highway, transit, freight without adding substantial new capacity or without creating a facility that is likely to significantly increase emissions. This category covers a broad range of project types including minor widening projects and new interchanges, such as those that replace a signalized intersection on a surface street or where design year traffic is not projected to meet the 140,000 to 150,000 Annual Average Daily Traffic (AADT) criteria.

Projects with High Potential MSAT Effects must:

- Create or significantly alter a major intermodal freight facility that has the potential to concentrate high levels of diesel particulate matter in a single location;
- Create new or add significant capacity to urban highways such as interstates, urban arterials, or urban collector-distributor routes with traffic volumes where the AADT is projected to be in the range of 140,000 to 150,000 or greater by the design year; and
- Proposed to be located in proximity to populated areas.

In accordance with the latest MSAT guidance, the area of the Proposed Action is best characterized as a project with "low potential MSAT effects" since projected design year traffic is expected to be well below the 140,000 to 150,000 AADT criteria. Specifically, the Design Year Build Alternative is expected to have the highest Average Daily Traffic (ADT) volumes of 28,100 ADT from the United Illuminating Company driveway (UILCO) to Exit 41 southbound off-ramp segment. Table 1-8 summarizes the expected ADT and VMT along the mainline links throughout the project corridor.

Table 1-8: Orange Rail Station ADT and Vehicle Miles Traveled

		2015 PM Peak Hour				2017 No Build PM				2017 Build PM					2037 No Build PM				2037 Build PM				
Link	Distance (miles)	Total	ADT	%Diesel	VMT	Total	ADT	%Diesel	VMT	Total	ADT	%Diesel	Diesel Build-No Build	VMT	Total	ADT	%Diesel	VMT	Total	ADT	%Diesel	Diesel Build-No Build	VMT
Old Tavern Road to Lambert Road	0.23	477.00	4,770	229	1,097	555	5,550	266	1,277	575	5,750	276	10	1,323	621	6,210	298	1,428	666	6,660	320	22	1,532
Lambert to Indian River	0.31	1,340.00	13,400	643	4,154	1,410	14,100	677	4,371	1,450	14,500	696	19	4,495	1,579	15,790	758	4,895	1,674	16,740	804	46	5,189
Indian River to UILCO	0.15	1,987.00	19,870	954	2,981	2,125	21,250	1,020	3,188	2,180	21,800	1,046	26	3,270	2,381	23,810	1,143	3,572	2,521	25,210	1,210	67	3,782
UILCO to Exit 41SB Off Ramp	0.18	2,133.00	21,330	1024	3,839	2,375	23,750	1,140	4,275	2,430	24,300	1,166	26	4,374	2,660	26,600	1,277	4,788	2,810	28,100	1,349	72	5,058
Exit 41 SB offramp to Exit 41 NB	0.22	1,927.00	19,270	925	4,239	2,165	21,650	1,039	4,763	2,270	22,700	1,090	50	4,994	2,425	24,250	1,164	5,335	2,665	26,650	1,279	115	5,863
Exit 41 NB Offramp to SCG Driveway	0.15	1,586.00	15,860	761	2,379	1,800	18,000	864	2,700	1,950	19,500	936	72	2,925	2,016	20,160	968	3,024	2,283	22,830	1,096	128	3,425
SCG Driveway to Merwin AVE	0.56	1,097.00	10,970	527	6,143	1,185	11,850	569	6,636	1,240	12,400	595	26	6,944	1,327	13,270	637	7,431	1,442	14,420	692	55	8,075
Merwin Ave to Anderson Ave	0.5	539.00	5,390	259	2,695	565	5,650	271	2,825	580	5,800	278	7	2,900	634	6,340	304	3,170	684	6,840	328	24	3,420
Merwin Ave to Benham Road	0.42	870.00	8,700	418	3,654	925	9,250	444	3,885	955	9,550	458	14	4,011	1,036	10,360	497	4,351	1,101	11,010	528	31	4,624
Benham Road to Jones Hill Road	0.24	687.00	6,870	330	1,649	740	7,400	355	1,776	770	7,700	370	14	1,848	829	8,290	398	1,990	894	8,940	429	31	2,146
Salame Lane	0.14	6	60	3	8	230	2,300	110	322	435	4,350	209	98	609	257	2,570	123	360	672	6,720	323	199	941
Totals									36,017					37,693				40,344					44,054

Notes:

1. Peak Hour represents 10 percent of the ADT and scaled accordingly to get ADT for each link.
2. Worst case percent diesel from AM and PM was 4.8% and was derived from Worst Case Traffic Counts diesel data performed by Reliable Traffic Counts, LLC.

The results in Table 1-8 demonstrate that the expected ADT volumes would be much less than the 140,000 to 150,000 AADT MSAT criteria. As a result, a qualitative assessment of MSAT emissions projections was conducted for the affected network consistent with FHWA guidance.

1.1.4.1 Background

Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments (CAAA) of 1990, whereby Congress mandated that the U.S. Environmental Protection Agency (EPA) regulate 188 air toxics, also known as hazardous air pollutants (HAPs). The EPA assessed this expansive list in its rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007), and identified a group of 93 compounds emitted from mobile sources that are part of EPA's Integrated Risk Information System (IRIS) 2011 National Air Toxics Assessment (NATA)[14]. In addition, EPA identified nine compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers, or contributors, and that are non-cancer hazard contributors from the 2011 National Air Toxics Assessment (NATA)[15]. These are *1,3-butadiene, acetaldehyde, acrolein, benzene, diesel particulate matter (diesel PM), ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter*. While FHWA considers these the priority mobile source air toxics, the list is subject to change and may be adjusted in consideration of future EPA rules.

1.1.4.2 Existing Conditions

At present, the state does not conduct continuous monitoring of MSATs in the proposed Project study area. The CT DEEP did conduct a Toxic Air Study in Connecticut (TASC) from 1999-2003 to provide data on ambient levels of HAPs in Connecticut. This monitoring was conducted in the immediate vicinity of six stationary sources, and one background site. The study showed that while concentrations of formaldehyde and acetaldehyde increased during the summer months, most likely as a result of photochemistry, the increased concentrations of these chemicals also may have been influenced by mobile sources. In addition, concentrations of formaldehyde did show occasions of point source influence.

These two compounds were monitored at levels which may be of concern, as compared to proposed limits for annual exposure from the Connecticut Department of Public Health (CT DPH), although these levels were consistent with levels measured across the country. The study concluded that concentrations of formaldehyde and acetaldehyde are likely dominated by emissions from motor vehicles.

Motor Vehicle Emissions Simulator (MOVES)

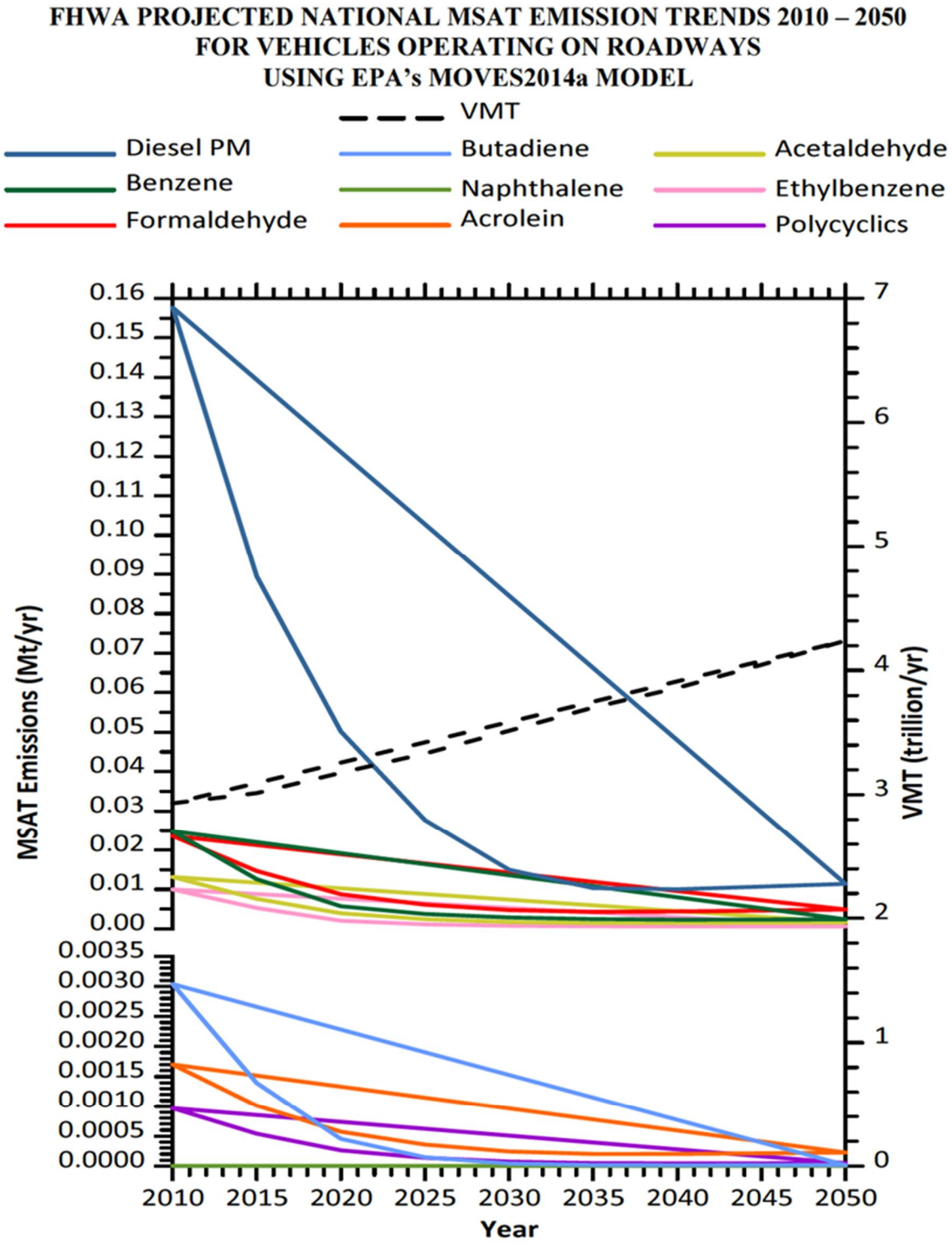
According to EPA, MOVES2014 is a major revision to MOVES2010 and improves upon it in many respects. MOVES2014 includes new data, new emissions standards, and new functional improvements and features. It incorporates substantial new data for emissions, fleet, and activity developed since the release of MOVES2010. These new emissions data are for light- and heavy-duty vehicles, exhaust and evaporative emissions, and fuel effects. MOVES2014 also adds updated vehicle sales, population, age distribution, and vehicle miles travelled (VMT) data. MOVES2014 incorporates the effects of three new Federal emissions standard rules not included in MOVES2010. These new standards are all expected to impact MSAT emissions and include Tier 3 emissions and fuel standards starting in 2017 (79 FR 60344),

[14] https://www.epa.gov/iris
[15] https://www.epa.gov/national-air-toxics-assessment

heavy-duty greenhouse gas regulations that phase in during model years 2014-2018 (79 FR 60344), and the second phase of light duty greenhouse gas regulations that phase in during model years 2017-2025 (79 FR 60344). Since the release of MOVES2014, EPA has released MOVES2014a. In the November 2015 MOVES2014a Questions and Answers Guide,[16] EPA states that for on-road emissions, MOVES2014a adds new options requested by users for the input of local VMT, includes minor updates to the default fuel tables, and corrects an error in MOVES2014 brake wear emissions. The change in brake wear emissions results in small decreases in PM emissions, while emissions for other criteria pollutants remain essentially the same as MOVES2014.

Using EPA's MOVES2014a model, as shown in Figure 1-4, FHWA estimates that even if VMT increases by 45 percent from 2010 to 2050 as forecast, a combined reduction of 91 percent in the total annual emissions for the priority MSAT is projected for the same time period.

[16] https://www3.epa.gov/otaq/models/moves/documents/420b15095.pdf



Note: Trends for specific locations may be different, depending on locally derived information representing vehicle-miles travelled, vehicle speeds, vehicle mix, fuels, emission control programs, meteorology, and other factors

Source: EPA MOVES2014a model runs conducted by FHWA, September 2016.

Figure 1-4: National MSAT Emission Trends 2010-2050 for Vehicles Operating on Roadways Using EPA's MOVES 2014a Model

Diesel PM is the dominant component of MSAT emissions, making up 50 to 70 percent of all priority MSAT pollutants by mass, depending on calendar year. Users of MOVES2014a will notice some differences in emissions compared with MOVES2010b. MOVES2014a is based on updated data on some emissions and pollutant processes compared to MOVES2010b, and also reflects the latest Federal emissions standards in place at the time of its release. In addition, MOVES2014a emissions forecasts are based on lower VMT projections than MOVES2010b, consistent with recent trends suggesting reduced nationwide VMT growth compared to historical trends.

1.1.4.3 MSAT Research

Air toxics analysis is a continuing area of research. While much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. In particular, the tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure remain limited. These limitations impede the ability to evaluate how potential public health risks posed by MSAT exposure should be factored into project-level decision-making within the context of NEPA.

Nonetheless, air toxics concerns continue to arise on highway projects during the NEPA process. Even as the science emerges, the public and other agencies expect FHWA to address MSAT impacts in its environmental documents. The FHWA, EPA, the Health Effects Institute, and others have funded and conducted research studies to try to more clearly define potential risks from MSAT emissions associated with highway projects. The FHWA will continue to monitor the developing research in this field.

1.1.4.4 Project MSAT Analysis

The amount of mobile source air toxics (MSAT) emitted would be proportional to the amount of vehicle miles traveled (VMT) and rail activity, assuming that other variables (such as travel not associated with the Orange Rail Station) are the same for each alternative. As shown in Table 1-8 above, the VMT estimated for the Proposed Action are higher than that for the No Action Alternative because of the additional activity associated with the Rail Station. This increase in VMT and rail activity associated with the Proposed Action would lead to higher MSAT emissions (particularly diesel particulate matter) in the vicinity of the Rail Station. The higher emissions could be offset somewhat by two factors: 1) the decrease in regional vehicle traffic due to increased use of rail and 2) increased speeds on area highways due to the decrease in vehicle traffic. The extent to which these emissions decreases will offset Rail Station-related emissions increases is not known.

Because the estimated vehicle VMT and rail activity under the Proposed Action varies by less than 9 percent for the 2037 condition, it is expected there would be no appreciable difference in overall MSAT emissions among the No Action and Proposed Action alternatives in 2037. Also, regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of the Environmental Protection Agency's (EPA) national control programs that are projected to reduce annual MSAT emissions by over 90 percent from 2010 to 2050 (Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents, Federal Highway Administration, October 12, 2016). Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the EPA-projected reductions are so significant (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future as well.

The additional activity contemplated as part of the project alternative will potentially have the effect of increasing diesel emissions in the vicinity of nearby homes, schools, and businesses; therefore, under each alternative there may be localized areas where ambient concentrations of MSAT would be higher than under the No Action alternative. The localized differences in MSAT concentrations would likely be

slightly higher under the Proposed Action. However, as discussed above, the magnitude and the duration of these potential differences cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific health impacts. Even though there may be differences among the alternatives, on a region-wide basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will cause substantial reductions over time that in almost all cases the MSAT levels in the future will be significantly lower than today.

In sum, the Proposed Action in the design year could be associated with higher levels of MSAT emissions in the study area, relative to the No Action Alternative, and yet may realize some benefit from improvements in speeds and reductions in region-wide vehicle traffic. There also could be slightly higher differences in MSAT levels among Alternatives in a few localized areas where rail activity occurs closer to homes, schools, and businesses. Under all alternatives, MSAT levels are likely to decrease over time due to nationally mandated cleaner vehicles and fuels.

1.1.4.5 MSAT Conclusions

What we know about mobile source air toxics is still evolving. Information is currently incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with each of the project Alternatives. Under the Proposed Action alternative, there may be slightly higher MSAT emissions in the design year relative to the No Action Alternative due to increased VMT. There could also be increases in MSAT levels in a few localized areas where VMT increases. However, EPA's vehicle and fuel regulations are expected to result in significantly lower MSAT levels in the future than exist today due to cleaner engine standards coupled with fleet turnover. The magnitude of the EPA-projected reductions is so great that, even after accounting for VMT growth, MSAT emissions in the study area would be significantly lower in the future than they are today, regardless of the preferred Alternative chosen.

1.1.5 Particulate Matter

The area of the Proposed Action is located in an EPA designated maintenance area for fine particulate matter ($PM_{2.5}$); therefore, transportation conformity rule requirements apply for this project. It should be noted on August 24, 2016, EPA issued a final rule (81 FR 58010), effective October 24, 2016, on "Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements" that stated, in part: "Additionally, in this document the EPA is revoking the 1997 primary annual standard for areas designated as attainment for that standard because the EPA revised the primary annual standard in 2012." Accordingly, the region is no longer designated as maintenance for the 1997 $PM_{2.5}$ standards but still designated as maintenance for the 2006 standard, and the associated EPA regulatory requirements for conformity for $PM_{2.5}$ still apply. A $PM_{2.5}$ project criteria assessment was conducted consistent with EPA regulatory requirements (40 CFR 93.123(b)(1)) and guidance to determine if the project is one of potential air quality concern for $PM_{2.5}$ as follows:

(i) New Highway Construction

This project does not involve new highway construction and does not meet the definition of a project of air quality concern for $PM_{2.5}$ under (i).

(ii) Highway Capacity Expansion

This project does not involve highway capacity expansion and does not meet the definition of project of air quality concern for $PM_{2.5}$ under (ii).

(iii) Intersections

The EPA criteria for a project of air quality concern is "Projects affecting intersections that are at Level-of-Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project." This criteria is not met by this project. First, as shown in Table 1-8 above, truck percentages are low (4.8 percent[17]) and the increase in diesel traffic vehicles related to the project is less than significant (199 vehicles). Second, as shown in Table 1-2 earlier, the project is expected to either improve the Level-of-Service or remain the same for all intersections expected to operate at a LOS D, E, or F. There are two intersections at Marsh Hill Road/I-95 SB Ramps and Route 62 at Woodmont Road for the 2037 PM Build Condition where the LOS is expected to go from a LOS E to F and C to D, respectively. However, as stated above, the changes are not due to an increase in traffic volumes from a significant number of diesel vehicles related to the project. The LOS for other intersections are expected to generally improve or remain the same for all Build conditions. Finally, truck percentages for the project will be low (4.8 percent) and the increase in diesel traffic volumes for the Build condition is much less than the highway capacity expansion significance threshold of 2,000 ADT for projects of air quality concern. Given all of these considerations, this project does not affect intersections with a significant number of diesel vehicles and does not meet the definition of project of air quality concern for $PM_{2.5}$ under (iii).

(iv) New Intermodal or Transit Facility for Rail, Bus, or Truck

The project does involve a new intermodal or transit facility for rail, bus or truck. A project of air quality concern for new bus or rail terminals would include:

- New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location; and
- Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location.

Examples of projects of air quality concern that would be covered by 40 CFR 93.123(b)(1)(iii) and (iv) and would require a $PM_{2.5}$ hot spot include:

- A major new bus or intermodal terminal that is considered to be a "regionally significant project" under 40 CFR 93.101; and
- An existing bus or intermodal terminal that has a large vehicle fleet where the number of diesel buses increases by 50% or more, as measured by bus arrivals (e.g. a facility with 10 buses in the peak hour).

According to the Connecticut Transit (CTtransit)-Connecticut Post Mall O2 bus schedule, approximately 3 buses per hour currently run within the vicinity of the location of the proposed Orange Rail Station. In addition, the current Greater Bridgeport Transit (GBT) operates the Coastal Link bus line and currently stops once per hour at nearby Devon Center. With approximately 200 riders per day expected at the Orange Rail Station, it is feasible that the bus routes could be augmented to provide bus service to the station. It's unlikely that either service

[17] Worst case percent diesel from AM and PM was 4.8% derived from Worst Case Traffic Counts performed by Reliable Traffic Counts, LLC dated 10/3/2013.

would create additional routes or increase the frequency of scheduled stops due to the rail station. Therefore, a peak hour total of 4 buses could be expected to stop at the Orange Rail Station based on the current bus schedule of 3 or 4 buses per hour in the vicinity of the proposed station. With this assumption, the proposed rail station would have significantly lower expected bus traffic than the "small terminal" threshold value of 10 buses in the peak hour in the example above.

Furthermore, based on the expected ADT associated with the Proposed Action, truck percentages are expected to be low (4.8 percent)[18] and the expected increase in diesel traffic vehicles related to the project is less than significant. As shown in (iii) above, the increase in diesel traffic volumes for the Proposed Action condition is much less than the highway capacity expansion significance threshold of 2,000 ADT for projects of air quality concern. Given all of these considerations, this project does not affect an intermodal facility with a significant number of diesel vehicles or bus service and does not meet the definition of project of air quality concern for $PM_{2.5}$ under (iv).

(v) Expanded Intermodal or Transit Facility for Rail, Bus, or Truck

This project does not involve an expanded intermodal or transit facility for rail, bus, or truck and does not meet the definition of a project of air quality concern for $PM_{2.5}$ under (v).

1.1.5.1 Trends in $PM_{2.5}$ Background Concentration

A review of the latest $PM_{2.5}$ monitoring data reported by the CTDEEP[19] for 2015 was conducted for monitoring locations available near the Study Area. A total of two nearby monitor locations were reviewed; Criscuolo Park (New Haven) and Roosevelt School (Bridgeport). The $PM_{2.5}$ data are summarized in Table 1-9, which shows that the maximum 24-hour and annual $PM_{2.5}$ background concentrations are 24 micrograms per cubic meter ($\mu g/m^3$) and 9.4 $\mu g/m^3$, respectively; both of which are well below the respective $PM_{2.5}$ NAAQS of 35 $\mu g/m^3$ and 12 $\mu g/m^3$.

Given the general downward trend in ambient $PM_{2.5}$ concentrations in Connecticut, it is unlikely the current annual NAAQS for $PM_{2.5}$ of 12 $\mu g/m^3$ within the study area would be exceeded based on expected ADT and diesel truck volumes associated with the Project.

Table 1-9: CTDEEP 2015 $PM_{2.5}$ Air Monitoring Values Near the Orange Station Project

Site ID	City	$PM_{2.5}$ 24-Hour, 98th Percentile Values ($\mu g/m^3$)	Annual Arithmetic Mean 3-Year Average ($\mu g/m^3$)
Criscuolo Park	New Haven	22	8.3
Roosevelt School	Bridgeport	24	9.4
Maximum		24	9.4

[18] Worst case percent diesel from AM and PM was 4.8% derived from Worst Case Traffic Counts performed by Reliable Traffic Counts, LLC.
[19] CTDEEP Air Monitoring Design Values:
http://www.ct.gov/deep/cwp/view.asp?a=2684&q=421150&deepNav_GID=1619

1.1.5.2 $PM_{2.5}$ Conclusions

Based on the criteria specified in the Transportation Conformity rule and associated guidance, the Project is not considered to be one of "air quality concern" for fine particulate matter. Therefore, the CAA and 40 CFR 93.116 requirements for $PM_{2.5}$ are met without a detailed quantitative hot-spot analysis, since such projects have been found not to be of air quality concern under 40 CFR 3.123(b)(1).

1.1.6 Greenhouse Gas Emissions

1.1.6.1 Existing Conditions

Climate change is a critical national and global concern. Human activity is changing the earth's climate by causing the buildup of heat-trapping greenhouse gas (GHG) emissions through the burning of fossil fuels and other human activities. Carbon dioxide (CO_2) is the largest component of human produced emissions; other prominent emissions include methane (CH_4), nitrous oxide (N_2O) and hydrofluorocarbons (HFCs). These emissions are different from criteria air pollutants since their effects in the atmosphere are global rather than localized, and also since they remain in the atmosphere for decades to centuries, depending on the species.

Greenhouse gas emissions have accumulated rapidly as the world has industrialized, with concentration of atmospheric CO_2 increasing from roughly 300 parts per million in 1900 to over 400 parts per million today. Over this timeframe, global average temperatures have increased by roughly 1.5 degrees Fahrenheit (1 degree Celsius), and the most rapid increases have occurred over the past 50 years. Scientists have warned that significant and potentially dangerous shifts in climate and weather are possible without substantial reductions in greenhouse gas emissions. They commonly have cited 2 degrees Celsius (1 degree Celsius beyond warming that has already occurred) as the total amount of warming the earth can tolerate without serious and potentially irreversible climate effects. For warming to be limited to this level, atmospheric concentrations of CO_2 would need to stabilize at a maximum of 450 ppm, requiring annual global emissions to be reduced 40-70% below 2010 levels by 2050[20]. State and national governments in many developed countries have set GHG emissions reduction targets of 80 percent below current levels by 2050, recognizing that post-industrial economies are primarily responsible for GHGs already in the atmosphere. As part of a 2014 bilateral agreement with China, the U.S. pledged to reduce GHG emissions 26 to 28 percent below 2005 levels by 2025; this emissions reduction pathway is intended to support economy-wide reductions of 80 percent or more by 2050[21].

In 2008, the Connecticut legislature enacted legislation (Connecticut General Statute's 22a-200) that sets a statewide GHG emissions target of 10 percent below 1990 levels by 2020 and 80 percent below 2001 levels by 2050. The state is in position to achieve the 2020 target ahead of schedule. According to the latest Connecticut Greenhouse Gas Emissions Inventory 2012[22], GHG emissions fell to 39.5 million metric tons (MMT) which represents an overall decline of 10.5 percent from 1990 emissions. The bulk of Connecticut's GHG emissions are from Transportation (40 percent) followed by Electric Power Generation (18 percent) and Residential use (17 percent). The remaining 25 percent is comprised of waste and wastewater, commercial, industrial and agriculture.

[20] IPCC, 2014: Climate Change 2014: Synthesis Report Summary for Policymakers. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.
[21] "U.S.-China Joint Announcement on Climate Change," White House, Office of the Press Secretary, November 11, 2014, on the White House website, https://www.whitehouse.gov/the-press-office/2014/11/11/us-china-joint-announcement-climate-change, accessed June 5, 2015.
[22] http://www.ct.gov/deep/lib/deep/climatechange/2012_ghg_inventory_2015/2012_ct_ghg_inventory_final.pdf

To meet the ambitious 2050 reductions, the Governor created the Governors Council on Climate Change (GCCC) under Executive Order 46 in April of 2015, to examine the existing policies and regulations designed to reduce GHG emissions and identify new strategies to meet the 2050 target.

1.1.6.2 Potential Impact

On August 2, 2016 the Council on Environmental Quality (CEQ) released guidance on Climate Change in NEPA; *Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews*. As stated in the FHWA Transmittal of CEQ Guidance (August 2016), the CEQ guidance applies to EAs and EISs and calls for analysis of direct and indirect GHG emissions from proposed Federal Agency actions. The guidance establishes that the level of analysis should be commensurate with the quantity of projected GHG emissions. It also calls for consideration of the impacts of a changing climate on the proposed action and on the affected environment.

Under the No Action Alternative, the Orange Rail Station would not be built and no vehicle trips would be diverted or generated although other development on the adjacent privately-owned parcel could occur.

The proposed Orange Rail Station could result in a minor increase in the use of gasoline and diesel powered vehicles and associated GHG emissions compared to the overall traffic in the vicinity of the project. GHG emissions from vehicles using roadways are a function of distance traveled (expressed as vehicle miles traveled, or VMT), vehicle speed, and road grade. GHG emissions are also generated during roadway construction and maintenance activities. VMT derived from the MSAT Affected Network for each Alternative was used to characterize the VMT changes for the GHG discussion (See Table 1-8 above).

Under the No Action Alternative, VMT is expected to gradually increase in the vicinity of the Proposed Action between 2017 and 2037 as employment and population in the area increases. Furthermore, under the Preferred Alternative, increased capacity and improved transit access with the Orange Rail Station will lead to a slight increase in VMT in the immediate vicinity of the project area relative to the No Action Alternative.

Under the No Action Alternative, VMT is expected to increases approximately 12 percent between 2017 and 2037 while under the Preferred Alternative, VMT is expected to increase on average approximately 17 percent compared to 2017 levels. Nationally, the Energy Information Administration (EIA) estimates that VMT will increase by approximately 38 percent between 2012 and 2040, so the VMT increase under the No Action and Preferred Alternatives is still at or well below the projected national rate.

1.1.6.3 Mitigation

A major factor in mitigating this increase in VMT is more stringent national fuel economy standards. EIA projects that vehicle energy efficiency (and thus, GHG emissions) on a per-mile basis will improve by 28 percent between 2012 and 2040. This improvement in vehicle emissions rates will help mitigate the increase in VMT for both the No Action and Preferred Alternatives. Other factors related to the project would also help reduce GHG emissions relative to the No Action Alternative. The project would improve rail access across the area and thereby remove vehicle trips from roadway networks in the southwestern Connecticut region.

1.1.7 Tip and Conformity Determination

EPA promulgated the transportation conformity rule (40 CFR Parts 51 and 93) pursuant to requirements of the CAA. The rule only applies in EPA designated non-attainment or maintenance areas (40 CFR 93.102(b)). The area of the Proposed Action is designated by the EPA as a moderate non-attainment area for the 2008 8-hour ozone standard and a maintenance area for CO, and $PM_{2.5}$ (1997 and 2006 standards). The area is designated as attainment for all other NAAQS. Based on these EPA designations for the Study Area, transportation conformity requirements apply for this project for $PM_{2.5}$. On August 24, 2016, EPA issued a final rule (81 FR 58010), effective October 24, 2016, on *"Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements"* that stated, in part: *"Additionally, in this document the EPA is revoking the 1997 primary annual standard for areas designated as attainment for that standard because the EPA revised the primary annual standard in 2012."*[23] Accordingly the region is no longer designated as maintenance for the 1997 $PM_{2.5}$ standards. The area is still designated as maintenance with the 2006 $PM_{2.5}$ standards. Air quality conformity is a process intended to ensure that FTA funding goes to transit activities that are consistent with the air quality goals set forth in the Clean Air Act.

1.1.7.1 Project Level Conformity Determination

The EPA promulgated the Transportation Conformity Rule (40 CFR Parts 51 and 93) concerning applicability, procedures, and criteria that transportation agencies must use in analyzing and determining conformity of transportation projects. The Transportation Conformity Rule applies to federal funded transportation projects in certain areas that have violated one or more of the NAAQS in EPA designated non-attainment or maintenance areas (40 CFR 93.102(b)). In March of 2006, EPA issued joint guidance for conducting a hot-spot analysis for particulate matter. The guidance applies to projects within a maintenance or non-attainment area for $PM_{2.5}$ and outlines the criteria for determining whether a project is considered to be one of "air quality concern". The guidance has been updated since 2006 and in November 2015, EPA issued the most recent updated modeling guidance for performing quantitative analyses of $PM_{2.5}$ and PM_{10} emissions to demonstrate conformity with the $PM_{2.5}$ NAAQS. This guidance pertains to federal-funded or approved transportation projects that are deemed to be projects of air quality concern that are located in $PM_{2.5}$ non-attainment and maintenance areas. As the project is located in an area subject to the federal transportation conformity rule, inter-agency consultation is required under the federal rule and the Connecticut Regulation for Transportation Conformity. Air quality conformity inter-agency consultation was conducted on the models, methods and assumptions for transportation conformity in June of 2010[24].

Based on the criteria specified in the Transportation Conformity rule and associated guidance, the Project is not considered to be one of "air quality concern" for fine particulate matter (See Section 1.7.5). Therefore, the CAA and 40 CFR 93.116 requirements for $PM_{2.5}$ were met without a hot-spot analysis, since such projects have been found not to be of air quality concern under 40 CFR 3.123(b)(1).

The conformity rule requires that a conforming transportation plan and program be in place at the time of the project approval (40 CFR 93.114), and for the project to be included in the conforming plan and

[23] See: https://www.gpo.gov/fdsys/pkg/FR-2016-08-24/pdf/2016-18768.pdf
[24] http://www.ct.gov/dot/lib/dot/documents/dplansprojectsstudies/plans/airqualityconformity/interagencyconsulationprocess_7-6-2010.pdf

program (40 CFR 93.115). The CTDOT performed a $PM_{2.5}$ Air Quality Determination[25] and an Ozone Air Quality Determination[26] for projects included in the Transportation Conformity of the Metropolitan Regional Planning Organizations' Fiscal Year 2015–2018 Transportation Improvement Programs (TIP) as Amended, and the 2015 Regional Long Range Transportation Plans (LRTP) to the State Implementation Plan (SIP) for air quality. The submittal also incorporates the FY 2015–2018 TIPs, as Amended and 2015 LRTPs from Connecticut's Regional Planning Organizations (RPOs), and Mobile Vehicle Emission Budgets (MVEBs). The Orange Rail Station construction was included in both the STIP and LRTP of both the $PM_{2.5}$ and ozone Conformity Determination which showed that construction and operation of the Orange Rail Station would not interfere with the SIP and that the current STIP and LRTP were found to be in conformance.[27]

[25] http://www.ct.gov/dot/lib/dot/documents/dplansprojectsstudies/plans/airqualityconformity/pm_conformity_september_2016_amended.pdf

[26] http://www.ct.gov/dot/lib/dot/documents/dplansprojectsstudies/plans/airqualityconformity/ozoneconformity_september_2016_amended.pdf

[27] It is assumed that impacts associated with the proposed residential and commercial buildings will be addressed by the developer of this privately-owned TOD. This analysis would be separate from the Environmental Impact Evaluation and is not included in this air quality study. The TOD was not included in the latest CTDOT Transportation Conformity Determinations.

Appendix A – Traffic Analysis – See Appendix B of EIE

Appendix B Sample MOVES2014a Input File (Complete Set of Files Available Upon Request)

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2015 Existing Conditons]]></description>

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Appendix C CAL3QHC Files

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*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station RUN: Exit 41SB Ramp 2016 AM

DATE : 11/29/16
TIME : 15:48: 5

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1. N Leg App - FreeFlow	*	-24.0	0.0	-24.0	1200.0	*	1200.	360.	AG	737.	2.5	0.0	67.7		
2. N Leg App - Queue	*	-24.0	48.0	-24.0	168.4	*	120.	360.	AG	123.	100.0	0.0	48.0	0.94	6.1
3. N Leg Dep - FreeFlow	*	24.0	0.0	24.0	1200.0	*	1200.	360.	AG	871.	2.0	0.0	67.7		
4. S Leg App - FreeFlow	*	24.0	0.0	24.0	-1200.0	*	1200.	180.	AG	922.	3.8	0.0	67.7		
5. S Leg App - Queue	*	24.0	-36.0	24.0	-1279.7	*	1244.	180.	AG	130.	100.0	0.0	48.0	1.85	63.2
6. S Leg Dep - FreeFlow	*	-24.0	0.0	-24.0	-1200.0	*	1200.	180.	AG	905.	2.9	0.0	67.7		
7. E Leg App - FreeFlow	*	0.0	24.0	1200.0	24.0	*	1200.	90.	AG	692.	4.9	0.0	67.7		
8. E Leg App - Queue	*	48.0	24.0	112.3	24.0	*	64.	90.	AG	112.	100.0	0.0	48.0	0.54	3.3
9. E Leg Dep - FreeFlow	*	0.0	-18.0	1200.0	-18.0	*	1200.	90.	AG	127.	2.1	0.0	55.7		
10. W Leg App - FreeFlow	*	0.0	-18.0	-1200.0	-18.0	*	1200.	270.	AG	125.	4.7	0.0	55.7		
11. W Leg App - Queue	*	-48.0	-18.0	-65.5	-18.0	*	17.	270.	AG	96.	100.0	0.0	36.0	0.29	0.9
12. W Leg Dep - FreeFlow	*	0.0	24.0	-1200.0	24.0	*	1200.	270.	AG	573.	4.9	0.0	67.7		

JOB: Orange Line Station RUN: Exit 41SB Ramp 2016 AM

DATE : 11/29/16
TIME : 15:48: 5

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. N Leg App - Queue	90	75	2.0	737	1600	13.78	1	3
5. S Leg App - Queue	90	79	2.0	922	1600	13.78	1	3
8. E Leg App - Queue	90	68	2.0	692	1600	13.78	1	3
11. W Leg App - Queue	90	78	2.0	125	1600	13.78	1	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. N Leg, E Side-Corner	58.0	58.0	5.9
2. N Leg, E Side - 25 m	58.0	130.0	5.9
3. N Leg, E Side - 50 m	58.0	212.0	5.9
4. N Leg, E Side-Midblk	58.0	648.0	5.9
5. N Leg, W Side-Corner	-58.0	58.0	5.9
6. N Leg, W Side - 25 m	-58.0	130.0	5.9
7. N Leg, W Side - 50 m	-58.0	212.0	5.9
8. N Leg, W Side-Midblk	-58.0	648.0	5.9
9. S Leg, E Side-Corner	58.0	-46.0	5.9
10. S Leg, E Side - 25 m	58.0	-118.0	5.9
11. S Leg, E Side - 50 m	58.0	-200.0	5.9
12. S Leg, E Side-Midblk	58.0	-636.0	5.9
13. S Leg, W Side-Corner	-58.0	-46.0	5.9
14. S Leg, W Side - 25 m	-58.0	-118.0	5.9
15. S Leg, W Side - 50 m	-58.0	-200.0	5.9
16. S Leg, W Side-Midblk	-58.0	-636.0	5.9
17. E Leg, N Side - 25 m	130.0	58.0	5.9
18. E Leg, N Side - 50 m	212.0	58.0	5.9
19. E Leg, N Side-Midblk	648.0	58.0	5.9
20. W Leg, N Side - 25 m	-130.0	58.0	5.9
21. W Leg, N Side - 50 m	-212.0	58.0	5.9
22. W Leg, N Side-Midblk	-648.0	58.0	5.9
23. E Leg, S Side - 25 m	130.0	-46.0	5.9
24. E Leg, S Side - 50 m	212.0	-46.0	5.9
25. E Leg, S Side-Midblk	648.0	-46.0	5.9
26. W Leg, S Side - 25 m	-130.0	-46.0	5.9
27. W Leg, S Side - 50 m	-212.0	-46.0	5.9
28. W Leg, S Side-Midblk	-648.0	-46.0	5.9

JOB: Orange Line Station RUN: Exit 41SB Ramp 2016 AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10.	* 0.0000	0.0000	0.0000	0.0000	0.4000	0.2000	0.1000	0.1000	0.3000	0.1000	0.1000	0.2000	0.7000	0.3000	0.2000
20.	* 0.0000	0.0000	0.0000	0.0000	0.5000	0.2000	0.1000	0.1000	0.3000	0.1000	0.0000	0.0000	0.6000	0.2000	0.2000
30.	* 0.0000	0.0000	0.0000	0.0000	0.5000	0.3000	0.1000	0.1000	0.3000	0.0000	0.0000	0.0000	0.3000	0.1000	0.5000
40.	* 0.0000	0.0000	0.0000	0.0000	0.5000	0.3000	0.1000	0.1000	0.2000	0.1000	0.0000	0.0000	0.2000	0.4000	0.4000
50.	* 0.0000	0.0000	0.0000	0.0000	0.5000	0.4000	0.1000	0.1000	0.2000	0.1000	0.0000	0.0000	0.3000	0.6000	0.4000
60.	* 0.0000	0.0000	0.0000	0.0000	0.5000	0.4000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.3000	0.5000	0.4000
70.	* 0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.4000	0.5000	0.4000
80.	* 0.1000	0.0000	0.0000	0.0000	0.5000	0.4000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.4000	0.5000	0.4000
90.	* 0.2000	0.0000	0.0000	0.0000	0.6000	0.5000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.5000	0.4000	0.4000
100.	* 0.3000	0.1000	0.0000	0.0000	0.7000	0.5000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000
110.	* 0.4000	0.1000	0.1000	0.0000	0.5000	0.5000	0.2000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000
120.	* 0.3000	0.1000	0.1000	0.0000	0.5000	0.7000	0.2000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000
130.	* 0.4000	0.1000	0.0000	0.0000	0.4000	0.7000	0.2000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000
140.	* 0.4000	0.1000	0.0000	0.0000	0.4000	0.6000	0.4000	0.1000	0.0000	0.0000	0.0000	0.0000	0.5000	0.5000	0.5000
150.	* 0.4000	0.2000	0.0000	0.0000	0.4000	0.6000	0.5000	0.1000	0.0000	0.0000	0.0000	0.0000	0.5000	0.5000	0.5000
160.	* 0.4000	0.2000	0.0000	0.0000	0.6000	0.7000	0.7000	0.1000	0.0000	0.0000	0.0000	0.0000	0.5000	0.5000	0.5000
170.	* 0.7000	0.3000	0.2000	0.0000	0.8000	0.8000	0.9000	0.2000	0.3000	0.3000	0.3000	0.2000	0.6000	0.6000	0.6000
180.	* 0.9000	0.7000	0.6000	0.2000	0.6000	0.5000	0.6000	0.2000	0.7000	0.7000	0.7000	0.6000	0.4000	0.4000	0.3000
190.	* 1.1000	0.9000	0.5000	0.2000	0.1000	0.0000	0.0000	0.0000	1.0000	1.0000	1.0000	1.0000	0.1000	0.1000	0.1000
200.	* 0.7000	0.4000	0.3000	0.2000	0.1000	0.0000	0.0000	0.0000	0.9000	0.9000	0.9000	0.9000	0.0000	0.0000	0.0000
210.	* 0.5000	0.1000	0.3000	0.1000	0.1000	0.0000	0.0000	0.0000	0.8000	0.8000	0.8000	0.8000	0.0000	0.0000	0.0000
220.	* 0.2000	0.2000	0.3000	0.1000	0.1000	0.0000	0.0000	0.0000	0.7000	0.7000	0.7000	0.7000	0.0000	0.0000	0.0000
230.	* 0.2000	0.4000	0.3000	0.1000	0.1000	0.1000	0.0000	0.0000	0.6000	0.6000	0.6000	0.6000	0.0000	0.0000	0.0000
240.	* 0.3000	0.4000	0.2000	0.1000	0.1000	0.1000	0.0000	0.0000	0.6000	0.6000	0.6000	0.6000	0.0000	0.0000	0.0000
250.	* 0.2000	0.3000	0.1000	0.0000	0.2000	0.1000	0.0000	0.0000	0.6000	0.6000	0.6000	0.6000	0.0000	0.0000	0.0000
260.	* 0.3000	0.3000	0.0000	0.0000	0.2000	0.1000	0.0000	0.0000	0.4000	0.5000	0.5000	0.5000	0.0000	0.0000	0.0000
270.	* 0.4000	0.3000	0.1000	0.1000	0.2000	0.0000	0.0000	0.0000	0.6000						

```
0.6000  0.6000  0.6000  0.1000  0.0000  0.0000
 280.  *  0.2000  0.2000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.5000
0.5000  0.5000  0.5000  0.1000  0.0000  0.0000
 290.  *  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000
0.7000  0.6000  0.6000  0.1000  0.1000  0.0000
 300.  *  0.3000  0.2000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.3000
0.7000  0.6000  0.6000  0.1000  0.1000  0.0000
 310.  *  0.3000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.3000
0.6000  0.6000  0.6000  0.1000  0.0000  0.0000
 320.  *  0.3000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.2000
0.5000  0.7000  0.7000  0.1000  0.0000  0.0000
 330.  *  0.2000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.4000
0.6000  0.7000  0.8000  0.2000  0.0000  0.0000
 340.  *  0.2000  0.2000  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.5000
0.5000  0.8000  0.9000  0.2000  0.0000  0.0000
 350.  *  0.2000  0.2000  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.6000
0.6000  0.6000  1.0000  0.3000  0.0000  0.0000
 360.  *  0.1000  0.1000  0.1000  0.1000  0.2000  0.1000  0.1000  0.1000  0.4000
0.4000  0.4000  0.6000  0.5000  0.3000  0.2000

------*-------------------------------------------------------------------------
----------------------------------------
 MAX   *  1.1000  0.9000  0.6000  0.2000  0.8000  0.8000  0.9000  0.2000  1.0000
1.0000  1.0000  1.0000  0.7000  0.6000  0.6000
 DEGR. *    190     190     180     180     170     170     170     170     190
190     190     190      10      50     170
```


JOB: Orange Line Station RUN: Exit 41SB Ramp 2016 AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

```
WIND  * CONCENTRATION
ANGLE *     (PPM)
(DEGR)*      16      17      18      19      20      21      22      23      24
25      26      27      28

------*-------------------------------------------------------------------------
--------------------------
  10.  *  0.6000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
0.1000  0.1000  0.1000  0.1000
  20.  *  0.5000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
0.1000  0.2000  0.1000  0.1000
  30.  *  0.5000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
0.1000  0.2000  0.1000  0.1000
  40.  *  0.5000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.1000  0.1000
0.1000  0.2000  0.2000  0.1000
  50.  *  0.4000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.1000  0.1000
0.1000  0.2000  0.2000  0.1000
  60.  *  0.4000  0.0000  0.0000  0.0000  0.2000  0.1000  0.0000  0.1000  0.1000
0.1000  0.0000  0.2000  0.1000
  70.  *  0.4000  0.0000  0.0000  0.0000  0.2000  0.1000  0.0000  0.1000  0.1000
0.1000  0.3000  0.1000  0.1000
```

```
  80.  *  0.4000  0.1000  0.1000  0.1000  0.2000  0.1000  0.1000  0.1000  0.1000
0.1000  0.1000  0.1000  0.1000
  90.  *  0.4000  0.2000  0.2000  0.2000  0.4000  0.3000  0.1000  0.1000  0.1000
0.0000  0.2000  0.2000  0.0000
 100.  *  0.4000  0.2000  0.2000  0.2000  0.4000  0.2000  0.2000  0.0000  0.0000
0.0000  0.1000  0.1000  0.1000
 110.  *  0.4000  0.2000  0.2000  0.2000  0.2000  0.2000  0.2000  0.0000  0.0000
0.0000  0.2000  0.1000  0.1000
 120.  *  0.4000  0.1000  0.1000  0.1000  0.2000  0.2000  0.2000  0.0000  0.0000
0.0000  0.2000  0.1000  0.1000
 130.  *  0.4000  0.1000  0.1000  0.1000  0.2000  0.2000  0.2000  0.0000  0.0000
0.0000  0.3000  0.1000  0.1000
 140.  *  0.5000  0.1000  0.1000  0.1000  0.4000  0.2000  0.2000  0.0000  0.0000
0.0000  0.4000  0.1000  0.1000
 150.  *  0.5000  0.1000  0.1000  0.1000  0.5000  0.3000  0.2000  0.0000  0.0000
0.0000  0.4000  0.2000  0.0000
 160.  *  0.5000  0.1000  0.1000  0.1000  0.5000  0.3000  0.1000  0.0000  0.0000
0.0000  0.4000  0.2000  0.0000
 170.  *  0.6000  0.1000  0.1000  0.1000  0.5000  0.2000  0.1000  0.0000  0.0000
0.0000  0.4000  0.1000  0.0000
 180.  *  0.2000  0.2000  0.1000  0.1000  0.2000  0.1000  0.1000  0.1000  0.0000
0.0000  0.1000  0.0000  0.0000
 190.  *  0.0000  0.5000  0.3000  0.1000  0.1000  0.1000  0.1000  0.4000  0.1000
0.0000  0.0000  0.0000  0.0000
 200.  *  0.0000  0.6000  0.4000  0.1000  0.1000  0.1000  0.1000  0.4000  0.3000
0.0000  0.0000  0.0000  0.0000
 210.  *  0.0000  0.6000  0.4000  0.2000  0.1000  0.1000  0.1000  0.4000  0.3000
0.1000  0.0000  0.0000  0.0000
 220.  *  0.0000  0.7000  0.3000  0.2000  0.1000  0.1000  0.1000  0.3000  0.2000
0.1000  0.0000  0.0000  0.0000
 230.  *  0.0000  0.5000  0.2000  0.2000  0.1000  0.1000  0.1000  0.3000  0.2000
0.1000  0.0000  0.0000  0.0000
 240.  *  0.0000  0.4000  0.3000  0.2000  0.1000  0.1000  0.1000  0.3000  0.2000
0.1000  0.0000  0.0000  0.0000
 250.  *  0.0000  0.3000  0.3000  0.3000  0.2000  0.2000  0.1000  0.3000  0.1000
0.1000  0.0000  0.0000  0.0000
 260.  *  0.0000  0.3000  0.3000  0.2000  0.2000  0.2000  0.2000  0.3000  0.1000
0.1000  0.0000  0.0000  0.0000
 270.  *  0.0000  0.4000  0.4000  0.2000  0.1000  0.1000  0.1000  0.3000  0.2000
0.0000  0.1000  0.0000  0.0000
 280.  *  0.0000  0.1000  0.1000  0.1000  0.1000  0.1000  0.1000  0.3000  0.1000
0.1000  0.1000  0.1000  0.1000
 290.  *  0.0000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000  0.2000
0.1000  0.1000  0.1000  0.1000
 300.  *  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.1000  0.1000  0.1000  0.1000
 310.  *  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.1000  0.1000  0.1000  0.1000
 320.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000  0.1000
0.1000  0.1000  0.1000  0.1000
 330.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000  0.1000
0.1000  0.1000  0.1000  0.1000
 340.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.1000
0.1000  0.1000  0.1000  0.1000
 350.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.1000
0.1000  0.1000  0.1000  0.1000
 360.  *  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
0.1000  0.1000  0.1000  0.1000

------*-------------------------------------------------------------------------
--------------------------
 MAX   *  0.6000  0.7000  0.4000  0.3000  0.5000  0.3000  0.2000  0.4000  0.3000
0.1000  0.4000  0.2000  0.1000
```

DEGR. * 10 220 200 250 150 90 100 190 200
10 140 40 10

THE HIGHEST CONCENTRATION OF 1.1000 PPM OCCURRED AT RECEPTOR 1.

```
Q,EPA,,F,,0,T,T,F,T,0.7,
4,4,3,4,2200,2200,2200,2200,2200,2200,2200,2200,1036.75,1036.75,1
036.66666666667,1036.75,1036.75,1036.75,1036.66666666667,1036.75,
12,12,12,12,10,10,10,10,0,0,-1200,1200,0,0,1200,-1200,-
1200,1200,0,0,1200,-1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
120,120,120,120,62,62,62,62,2,2,2,2,1600,1600,1600,1600,1,1,1,1,3
,3,3,3
'Orange Line Station',60,175,0.0,0.0,28,0.3048,1,0
'N Leg, E Side-Corner',58.0,58.0,5.9
'N Leg, E Side - 25 m',58.0,130.0,5.9
'N Leg, E Side - 50 m',58.0,212.0,5.9
'N Leg, E Side-Midblk',58.0,648.0,5.9
'N Leg, W Side-Corner',-58.0,58.0,5.9
'N Leg, W Side - 25 m',-58.0,130.0,5.9
'N Leg, W Side - 50 m',-58.0,212.0,5.9
'N Leg, W Side-Midblk',-58.0,648.0,5.9
'S Leg, E Side-Corner',58.0,-46.0,5.9
'S Leg, E Side - 25 m',58.0,-118.0,5.9
'S Leg, E Side - 50 m',58.0,-200.0,5.9
'S Leg, E Side-Midblk',58.0,-636.0,5.9
'S Leg, W Side-Corner',-58.0,-46.0,5.9
'S Leg, W Side - 25 m',-58.0,-118.0,5.9
'S Leg, W Side - 50 m',-58.0,-200.0,5.9
'S Leg, W Side-Midblk',-58.0,-636.0,5.9
'E Leg, N Side - 25 m',130.0,58.0,5.9
'E Leg, N Side - 50 m',212.0,58.0,5.9
'E Leg, N Side-Midblk',648.0,58.0,5.9
'W Leg, N Side - 25 m',-130.0,58.0,5.9
'W Leg, N Side - 50 m',-212.0,58.0,5.9
'W Leg, N Side-Midblk',-648.0,58.0,5.9
'E Leg, S Side - 25 m',130.0,-46.0,5.9
'E Leg, S Side - 50 m',212.0,-46.0,5.9
'E Leg, S Side-Midblk',648.0,-46.0,5.9
'W Leg, S Side - 25 m',-130.0,-46.0,5.9
'W Leg, S Side - 50 m',-212.0,-46.0,5.9
'W Leg, S Side-Midblk',-648.0,-46.0,5.9
'Exit 41SB Ramp 2016 PM',12,1,0,'CO'
1
'N Leg App - FreeFlow','AG',-24,0,-24,1200,866,2.97,0.0,67.7
2
'N Leg App - Queue','AG',-24,48,-24,1200,0.0,48.0,4
90,70,2,866,20.42,1600,1,3
1
'N Leg Dep - FreeFlow','AG',24,0,24,1200,825,2.38,0.0,67.7
1
'S Leg App - FreeFlow','AG',24,0,24,-1200,1102,4.46,0.0,67.7
2
'S Leg App - Queue','AG',24,-36,24,-1200,0.0,48.0,4
90,80,2,1102,20.42,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-24,0,-24,-1200,1267,3.39,0.0,67.7
1
```

```
'E Leg App - FreeFlow','AG',0,24,1200,24,705,5.73,0.0,67.7
2
'E Leg App - Queue','AG',48,24,1200,24,0.0,48.0,4
90,77,2,705,20.42,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-18,1200,-18,30,2.49,0.0,55.7
1
'W Leg App - FreeFlow','AG',0,-18,-1200,-18,91,5.47,0.0,55.7
2
'W Leg App - Queue','AG',-48,-18,-1200,-18,0.0,36.0,3
90,76,2,91,20.42,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,24,-1200,24,642,5.73,0.0,67.7
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station RUN: Exit 41SB Ramp 2016 PM

DATE : 11/29/16
TIME : 15:51:27

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1. N Leg App - FreeFlow	*	-24.0	0.0	-24.0	1200.0	*	1200.	360.	AG	866.	2.5	0.0	67.7		
2. N Leg App - Queue	*	-24.0	48.0	-24.0	139.4	*	91.	360.	AG	115.	100.0	0.0	48.0	0.76	4.6
3. N Leg Dep - FreeFlow	*	24.0	0.0	24.0	1200.0	*	1200.	360.	AG	825.	2.0	0.0	67.7		
4. S Leg App - FreeFlow	*	24.0	0.0	24.0	-1200.0	*	1200.	180.	AG	1102.	3.8	0.0	67.7		
5. S Leg App - Queue	*	24.0	-36.0	24.0	-1950.4	*	1914.	180.	AG	131.	100.0	0.0	48.0	2.59	97.2
6. S Leg Dep - FreeFlow	*	-24.0	0.0	-24.0	-1200.0	*	1200.	180.	AG	1267.	2.9	0.0	67.7		
7. E Leg App - FreeFlow	*	0.0	24.0	1200.0	24.0	*	1200.	90.	AG	705.	4.9	0.0	67.7		
8. E Leg App - Queue	*	48.0	24.0	347.6	24.0	*	300.	90.	AG	126.	100.0	0.0	48.0	1.10	15.2
9. E Leg Dep - FreeFlow	*	0.0	-18.0	1200.0	-18.0	*	1200.	90.	AG	30.	2.1	0.0	55.7		
10. W Leg App - FreeFlow	*	0.0	-18.0	-1200.0	-18.0	*	1200.	270.	AG	91.	4.7	0.0	55.7		
11. W Leg App - Queue	*	-48.0	-18.0	-60.5	-18.0	*	12.	270.	AG	94.	100.0	0.0	36.0	0.17	0.6
12. W Leg Dep - FreeFlow	*	0.0	24.0	-1200.0	24.0	*	1200.	270.	AG	642.	4.9	0.0	67.7		

JOB: Orange Line Station RUN: Exit 41SB Ramp 2016 PM

DATE : 11/29/16
TIME : 15:51:27

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. N Leg App - Queue	90	70	2.0	866	1600	13.78	1	3
5. S Leg App - Queue	90	80	2.0	1102	1600	13.78	1	3
8. E Leg App - Queue	90	77	2.0	705	1600	13.78	1	3
11. W Leg App - Queue	90	76	2.0	91	1600	13.78	1	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. N Leg, E Side-Corner	58.0	58.0	5.9
2. N Leg, E Side - 25 m	58.0	130.0	5.9
3. N Leg, E Side - 50 m	58.0	212.0	5.9
4. N Leg, E Side-Midblk	58.0	648.0	5.9
5. N Leg, W Side-Corner	-58.0	58.0	5.9
6. N Leg, W Side - 25 m	-58.0	130.0	5.9
7. N Leg, W Side - 50 m	-58.0	212.0	5.9
8. N Leg, W Side-Midblk	-58.0	648.0	5.9
9. S Leg, E Side-Corner	58.0	-46.0	5.9
10. S Leg, E Side - 25 m	58.0	-118.0	5.9
11. S Leg, E Side - 50 m	58.0	-200.0	5.9
12. S Leg, E Side-Midblk	58.0	-636.0	5.9
13. S Leg, W Side-Corner	-58.0	-46.0	5.9
14. S Leg, W Side - 25 m	-58.0	-118.0	5.9
15. S Leg, W Side - 50 m	-58.0	-200.0	5.9
16. S Leg, W Side-Midblk	-58.0	-636.0	5.9
17. E Leg, N Side - 25 m	130.0	58.0	5.9
18. E Leg, N Side - 50 m	212.0	58.0	5.9
19. E Leg, N Side-Midblk	648.0	58.0	5.9
20. W Leg, N Side - 25 m	-130.0	58.0	5.9
21. W Leg, N Side - 50 m	-212.0	58.0	5.9
22. W Leg, N Side-Midblk	-648.0	58.0	5.9
23. E Leg, S Side - 25 m	130.0	-46.0	5.9
24. E Leg, S Side - 50 m	212.0	-46.0	5.9
25. E Leg, S Side-Midblk	648.0	-46.0	5.9
26. W Leg, S Side - 25 m	-130.0	-46.0	5.9
27. W Leg, S Side - 50 m	-212.0	-46.0	5.9
28. W Leg, S Side-Midblk	-648.0	-46.0	5.9

JOB: Orange Line Station RUN: Exit 41SB Ramp 2016 PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10.	* 0.0000	0.0000	0.0000	0.0000	0.3000	0.1000	0.1000	0.1000	0.3000	0.1000	0.2000	0.3000	0.7000	0.3000	0.4000
20.	* 0.0000	0.0000	0.0000	0.0000	0.4000	0.1000	0.1000	0.1000	0.4000	0.2000	0.1000	0.0000	0.6000	0.2000	0.4000
30.	* 0.0000	0.0000	0.0000	0.0000	0.5000	0.1000	0.1000	0.1000	0.4000	0.2000	0.1000	0.0000	0.5000	0.2000	0.6000
40.	* 0.0000	0.0000	0.0000	0.0000	0.5000	0.1000	0.1000	0.1000	0.4000	0.3000	0.1000	0.0000	0.1000	0.4000	0.6000
50.	* 0.0000	0.0000	0.0000	0.0000	0.5000	0.2000	0.1000	0.1000	0.4000	0.3000	0.1000	0.0000	0.3000	0.7000	0.5000
60.	* 0.0000	0.0000	0.0000	0.0000	0.4000	0.2000	0.1000	0.1000	0.4000	0.2000	0.0000	0.0000	0.4000	0.7000	0.5000
70.	* 0.0000	0.0000	0.0000	0.0000	0.4000	0.2000	0.1000	0.1000	0.4000	0.2000	0.0000	0.0000	0.6000	0.6000	0.4000
80.	* 0.2000	0.0000	0.0000	0.0000	0.6000	0.3000	0.1000	0.1000	0.3000	0.1000	0.0000	0.0000	0.6000	0.5000	0.4000
90.	* 0.5000	0.0000	0.0000	0.0000	0.7000	0.4000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.6000	0.4000	0.4000
100.	* 0.7000	0.2000	0.0000	0.0000	0.9000	0.6000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000
110.	* 0.8000	0.2000	0.1000	0.0000	0.6000	0.7000	0.3000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000
120.	* 0.7000	0.3000	0.2000	0.0000	0.5000	0.7000	0.3000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000
130.	* 0.6000	0.3000	0.1000	0.0000	0.5000	0.7000	0.2000	0.1000	0.0000	0.0000	0.0000	0.0000	0.5000	0.5000	0.5000
140.	* 0.5000	0.3000	0.1000	0.0000	0.4000	0.6000	0.3000	0.1000	0.0000	0.0000	0.0000	0.0000	0.5000	0.5000	0.5000
150.	* 0.5000	0.3000	0.1000	0.0000	0.6000	0.7000	0.3000	0.1000	0.0000	0.0000	0.0000	0.0000	0.6000	0.6000	0.6000
160.	* 0.4000	0.3000	0.1000	0.0000	0.6000	0.9000	0.6000	0.2000	0.0000	0.0000	0.0000	0.0000	0.7000	0.7000	0.7000
170.	* 0.7000	0.5000	0.2000	0.2000	0.8000	0.9000	0.8000	0.2000	0.3000	0.3000	0.3000	0.3000	0.7000	0.7000	0.7000
180.	* 1.2000	0.8000	0.6000	0.3000	0.5000	0.7000	0.6000	0.2000	0.9000	0.9000	0.9000	0.7000	0.5000	0.5000	0.5000
190.	* 1.1000	0.9000	0.6000	0.2000	0.2000	0.2000	0.0000	0.0000	1.2000	1.2000	1.2000	1.0000	0.1000	0.1000	0.1000
200.	* 0.8000	0.4000	0.4000	0.2000	0.1000	0.1000	0.0000	0.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.0000
210.	* 0.5000	0.2000	0.2000	0.2000	0.1000	0.1000	0.0000	0.0000	0.8000	0.8000	0.8000	0.8000	0.0000	0.0000	0.0000
220.	* 0.3000	0.2000	0.3000	0.2000	0.1000	0.1000	0.0000	0.0000	0.8000	0.8000	0.8000	0.8000	0.0000	0.0000	0.0000
230.	* 0.1000	0.4000	0.2000	0.1000	0.1000	0.1000	0.0000	0.0000	0.6000	0.6000	0.6000	0.6000	0.0000	0.0000	0.0000
240.	* 0.2000	0.3000	0.0000	0.0000	0.1000	0.1000	0.0000	0.0000	0.6000	0.6000	0.6000	0.6000	0.0000	0.0000	0.0000
250.	* 0.2000	0.3000	0.1000	0.0000	0.2000	0.1000	0.0000	0.0000	0.6000	0.6000	0.6000	0.6000	0.0000	0.0000	0.0000
260.	* 0.3000	0.3000	0.0000	0.0000	0.2000	0.1000	0.0000	0.0000	0.6000	0.6000	0.6000	0.6000	0.0000	0.0000	0.0000
270.	* 0.3000	0.2000	0.1000	0.1000	0.2000	0.0000	0.0000	0.0000	0.6000						

0.6000 0.6000 0.6000 0.1000 0.0000 0.0000
 280. * 0.2000 0.1000 0.0000 0.0000 0.1000 0.0000 0.0000 0.0000 0.6000
0.7000 0.6000 0.6000 0.1000 0.1000 0.0000
 290. * 0.2000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.5000
0.7000 0.6000 0.6000 0.1000 0.1000 0.0000
 300. * 0.2000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.3000
0.7000 0.6000 0.6000 0.1000 0.1000 0.0000
 310. * 0.3000 0.1000 0.1000 0.1000 0.0000 0.0000 0.0000 0.0000 0.4000
0.7000 0.6000 0.6000 0.1000 0.1000 0.0000
 320. * 0.3000 0.2000 0.2000 0.2000 0.0000 0.0000 0.0000 0.0000 0.2000
0.7000 0.8000 0.8000 0.1000 0.0000 0.0000
 330. * 0.2000 0.2000 0.2000 0.2000 0.0000 0.0000 0.0000 0.0000 0.4000
0.7000 0.8000 0.8000 0.1000 0.0000 0.0000
 340. * 0.2000 0.2000 0.2000 0.2000 0.0000 0.0000 0.0000 0.0000 0.5000
0.7000 0.8000 0.9000 0.2000 0.0000 0.0000
 350. * 0.2000 0.2000 0.2000 0.1000 0.0000 0.0000 0.0000 0.0000 0.5000
0.6000 0.8000 1.1000 0.2000 0.0000 0.0000
 360. * 0.1000 0.1000 0.1000 0.1000 0.2000 0.1000 0.1000 0.1000 0.5000
0.4000 0.4000 0.6000 0.5000 0.3000 0.3000

------*---

 MAX   * 1.2000 0.9000 0.6000 0.3000 0.9000 0.9000 0.8000 0.2000 1.2000
1.2000 1.2000 1.1000 0.7000 0.7000 0.7000
 DEGR. *   180   190   180   180   100   160   170   160   190
190   190   350   10   50   160

JOB: Orange Line Station RUN: Exit 41SB Ramp 2016 PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND * CONCENTRATION
ANGLE *   (PPM)
(DEGR)*   16   17   18   19   20   21   22   23   24
25   26   27   28

------*---
----
  10. * 0.6000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.3000 0.3000
0.1000 0.1000 0.1000 0.1000
  20. * 0.7000 0.0000 0.0000 0.0000 0.1000 0.0000 0.0000 0.4000 0.4000
0.1000 0.2000 0.1000 0.1000
  30. * 0.6000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.4000 0.4000
0.1000 0.2000 0.1000 0.1000
  40. * 0.5000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.4000 0.4000
0.1000 0.2000 0.1000 0.1000
  50. * 0.5000 0.0000 0.0000 0.0000 0.1000 0.0000 0.0000 0.4000 0.4000
0.1000 0.2000 0.2000 0.1000
  60. * 0.4000 0.0000 0.0000 0.0000 0.1000 0.0000 0.0000 0.4000 0.3000
0.1000 0.2000 0.2000 0.1000
  70. * 0.4000 0.0000 0.0000 0.0000 0.2000 0.1000 0.0000 0.3000 0.2000
0.1000 0.3000 0.2000 0.1000

```
  80.  *  0.4000  0.2000  0.1000  0.1000  0.3000  0.1000  0.1000  0.2000  0.1000
0.1000  0.4000  0.2000  0.1000
  90.  *  0.4000  0.4000  0.3000  0.2000  0.5000  0.4000  0.2000  0.1000  0.1000
0.0000  0.5000  0.3000  0.0000
 100.  *  0.4000  0.6000  0.5000  0.2000  0.5000  0.3000  0.2000  0.0000  0.0000
0.0000  0.3000  0.1000  0.1000
 110.  *  0.4000  0.8000  0.7000  0.2000  0.3000  0.3000  0.3000  0.0000  0.0000
0.0000  0.4000  0.1000  0.1000
 120.  *  0.4000  0.7000  0.7000  0.2000  0.2000  0.2000  0.2000  0.0000  0.0000
0.0000  0.4000  0.1000  0.1000
 130.  *  0.5000  0.6000  0.5000  0.1000  0.3000  0.2000  0.2000  0.0000  0.0000
0.0000  0.4000  0.1000  0.1000
 140.  *  0.5000  0.5000  0.5000  0.1000  0.5000  0.4000  0.2000  0.0000  0.0000
0.0000  0.4000  0.3000  0.1000
 150.  *  0.6000  0.5000  0.5000  0.1000  0.5000  0.5000  0.2000  0.0000  0.0000
0.0000  0.4000  0.4000  0.1000
 160.  *  0.7000  0.4000  0.4000  0.1000  0.5000  0.5000  0.2000  0.0000  0.0000
0.0000  0.4000  0.4000  0.1000
 170.  *  0.7000  0.4000  0.4000  0.1000  0.5000  0.3000  0.1000  0.0000  0.0000
0.0000  0.4000  0.1000  0.0000
 180.  *  0.4000  0.7000  0.6000  0.1000  0.2000  0.2000  0.1000  0.2000  0.1000
0.0000  0.1000  0.0000  0.0000
 190.  *  0.1000  0.9000  0.6000  0.1000  0.1000  0.1000  0.1000  0.5000  0.2000
0.0000  0.0000  0.0000  0.0000
 200.  *  0.0000  0.9000  0.7000  0.2000  0.1000  0.1000  0.1000  0.5000  0.3000
0.1000  0.0000  0.0000  0.0000
 210.  *  0.0000  0.9000  0.8000  0.2000  0.1000  0.1000  0.1000  0.5000  0.3000
0.1000  0.0000  0.0000  0.0000
 220.  *  0.0000  0.9000  0.8000  0.2000  0.1000  0.1000  0.1000  0.4000  0.3000
0.1000  0.0000  0.0000  0.0000
 230.  *  0.0000  0.8000  0.7000  0.2000  0.1000  0.1000  0.1000  0.4000  0.3000
0.1000  0.0000  0.0000  0.0000
 240.  *  0.0000  0.5000  0.7000  0.3000  0.1000  0.1000  0.1000  0.3000  0.3000
0.1000  0.0000  0.0000  0.0000
 250.  *  0.0000  0.5000  0.7000  0.3000  0.2000  0.2000  0.2000  0.3000  0.1000
0.1000  0.0000  0.0000  0.0000
 260.  *  0.0000  0.4000  0.7000  0.3000  0.2000  0.2000  0.2000  0.3000  0.1000
0.1000  0.0000  0.0000  0.0000
 270.  *  0.0000  0.4000  0.5000  0.3000  0.2000  0.2000  0.1000  0.3000  0.2000
0.1000  0.1000  0.1000  0.0000
 280.  *  0.0000  0.1000  0.1000  0.1000  0.1000  0.1000  0.1000  0.3000  0.2000
0.2000  0.1000  0.1000  0.1000
 290.  *  0.0000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000  0.2000
0.2000  0.1000  0.1000  0.1000
 300.  *  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.4000
0.1000  0.1000  0.1000  0.1000
 310.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000  0.4000
0.1000  0.1000  0.1000  0.1000
 320.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000  0.4000
0.1000  0.1000  0.1000  0.1000
 330.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000  0.4000
0.1000  0.1000  0.1000  0.1000
 340.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000  0.4000
0.1000  0.1000  0.1000  0.1000
 350.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.1000  0.1000  0.1000  0.1000
 360.  *  0.3000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.1000  0.1000  0.1000  0.1000

------*-------------------------------------------------------------------------
--------------------------
 MAX   *  0.7000  0.9000  0.8000  0.3000  0.5000  0.5000  0.3000  0.5000  0.4000
0.2000  0.5000  0.4000  0.1000
```

DEGR. * 20 190 210 240 90 150 110 190 20
280 90 150 10

THE HIGHEST CONCENTRATION OF 1.2000 PPM OCCURRED AT RECEPTOR 1.

```
Q,EPA,,F,,0,T,T,F,T,0.7,
3,2,4,3,2200,2200,2200,2200,2200,2200,2200,2200,1036.8,1036.8,103
6.8,1036.8,1036.8,1036.8,1036.8,1036.8,12,12,12,12,10,10,10,10,0,
0,-1200,1200,0,0,1200,-1200,-1200,1200,0,0,1200,-
1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
120,120,120,120,62,62,62,62,2,2,2,2,1600,1600,1600,1600,1,1,1,1,3
,3,3,3
'Orange Line Station CAL3QHC Run',60,175,0.0,0.0,28,0.3048,1,0
'N Leg, E Side-Corner',46.0,46.0,5.9
'N Leg, E Side - 25 m',46.0,118.0,5.9
'N Leg, E Side - 50 m',46.0,200.0,5.9
'N Leg, E Side-Midblk',46.0,636.0,5.9
'N Leg, W Side-Corner',-34.0,46.0,5.9
'N Leg, W Side - 25 m',-34.0,118.0,5.9
'N Leg, W Side - 50 m',-34.0,200.0,5.9
'N Leg, W Side-Midblk',-34.0,636.0,5.9
'S Leg, E Side-Corner',46.0,-58.0,5.9
'S Leg, E Side - 25 m',46.0,-130.0,5.9
'S Leg, E Side - 50 m',46.0,-212.0,5.9
'S Leg, E Side-Midblk',46.0,-648.0,5.9
'S Leg, W Side-Corner',-34.0,-58.0,5.9
'S Leg, W Side - 25 m',-34.0,-130.0,5.9
'S Leg, W Side - 50 m',-34.0,-212.0,5.9
'S Leg, W Side-Midblk',-34.0,-648.0,5.9
'E Leg, N Side - 25 m',118.0,46.0,5.9
'E Leg, N Side - 50 m',200.0,46.0,5.9
'E Leg, N Side-Midblk',636.0,46.0,5.9
'W Leg, N Side - 25 m',-106.0,46.0,5.9
'W Leg, N Side - 50 m',-188.0,46.0,5.9
'W Leg, N Side-Midblk',-624.0,46.0,5.9
'E Leg, S Side - 25 m',118.0,-58.0,5.9
'E Leg, S Side - 50 m',200.0,-58.0,5.9
'E Leg, S Side-Midblk',636.0,-58.0,5.9
'W Leg, S Side - 25 m',-106.0,-58.0,5.9
'W Leg, S Side - 50 m',-188.0,-58.0,5.9
'W Leg, S Side-Midblk',-624.0,-58.0,5.9
'US RT1 and Lambert 2016 AM',12,1,0,'CO'
1
'N Leg App - FreeFlow','AG',-12,0,-12,1200,193,2.31,0.0,43.7
2
'N Leg App - Queue','AG',-12,36,-12,1200,0.0,24.0,2
100,81,2,193,15.58,1600,1,3
1
'N Leg Dep - FreeFlow','AG',18,0,18,1200,409,2.44,0.0,55.7
1
'S Leg App - FreeFlow','AG',18,0,18,-1200,412,4.36,0.0,55.7
2
'S Leg App - Queue','AG',18,-48,18,-1200,0.0,36.0,3
100,81,2,412,15.58,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-12,0,-12,-1200,129.0,4.61,0.0,43.7
1
```

```
'E Leg App - FreeFlow','AG',0,18,1200,18,355,3.27,0.0,55.7
2
'E Leg App - Queue','AG',36,18,1200,18,0.0,36.0,3
100,92,2,355,15.58,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-24,1200,-24,509,3.03,0.0,67.7
1
'W Leg App - FreeFlow','AG',0,-24,-1200,-24,426,2.65,0.0,67.7
2
'W Leg App - Queue','AG',-24,-24,-1200,-24,0.0,48.0,4
100,92,2,426,15.58,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,18,-1200,18,339,2.50,0.0,55.7
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2016 AM

DATE : 11/29/16
TIME : 15:36:30

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1. N Leg App - FreeFlow	*	-12.0	0.0	-12.0	1200.0	*	1200.	360.	AG	193.	2.3	0.0	43.7		
2. N Leg App - Queue	*	-12.0	36.0	-12.0	78.5	*	43.	360.	AG	68.	100.0	0.0	24.0	0.40	2.2
3. N Leg Dep - FreeFlow	*	18.0	0.0	18.0	1200.0	*	1200.	360.	AG	409.	2.4	0.0	55.7		
4. S Leg App - FreeFlow	*	18.0	0.0	18.0	-1200.0	*	1200.	180.	AG	412.	4.4	0.0	55.7		
5. S Leg App - Queue	*	18.0	-48.0	18.0	-108.7	*	61.	180.	AG	102.	100.0	0.0	36.0	0.57	3.1
6. S Leg Dep - FreeFlow	*	-12.0	0.0	-12.0	-1200.0	*	1200.	180.	AG	129.	4.6	0.0	43.7		
7. E Leg App - FreeFlow	*	0.0	18.0	1200.0	18.0	*	1200.	90.	AG	355.	3.3	0.0	55.7		
8. E Leg App - Queue	*	36.0	18.0	699.1	18.0	*	663.	90.	AG	115.	100.0	0.0	36.0	1.84	33.7
9. E Leg Dep - FreeFlow	*	0.0	-24.0	1200.0	-24.0	*	1200.	90.	AG	509.	3.0	0.0	67.7		
10. W Leg App - FreeFlow	*	0.0	-24.0	-1200.0	-24.0	*	1200.	270.	AG	426.	2.7	0.0	67.7		
11. W Leg App - Queue	*	-24.0	-24.0	-555.6	-24.0	*	532.	270.	AG	154.	100.0	0.0	48.0	1.66	27.0
12. W Leg Dep - FreeFlow	*	0.0	18.0	-1200.0	18.0	*	1200.	270.	AG	339.	2.5	0.0	55.7		

JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2016 AM

DATE : 11/29/16
TIME : 15:36:30

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. N Leg App - Queue	* 100	81	2.0	193	1600	15.58	1	3
5. S Leg App - Queue	* 100	81	2.0	412	1600	15.58	1	3
8. E Leg App - Queue	* 100	92	2.0	355	1600	15.58	1	3
11. W Leg App - Queue	* 100	92	2.0	426	1600	15.58	1	3

RECEPTOR LOCATIONS

RECEPTOR	* COORDINATES (FT) X	Y	Z
1. N Leg, E Side-Corner	* 46.0	46.0	5.9
2. N Leg, E Side - 25 m	* 46.0	118.0	5.9
3. N Leg, E Side - 50 m	* 46.0	200.0	5.9
4. N Leg, E Side-Midblk	* 46.0	636.0	5.9
5. N Leg, W Side-Corner	* -34.0	46.0	5.9
6. N Leg, W Side - 25 m	* -34.0	118.0	5.9
7. N Leg, W Side - 50 m	* -34.0	200.0	5.9
8. N Leg, W Side-Midblk	* -34.0	636.0	5.9
9. S Leg, E Side-Corner	* 46.0	-58.0	5.9
10. S Leg, E Side - 25 m	* 46.0	-130.0	5.9
11. S Leg, E Side - 50 m	* 46.0	-212.0	5.9
12. S Leg, E Side-Midblk	* 46.0	-648.0	5.9
13. S Leg, W Side-Corner	* -34.0	-58.0	5.9
14. S Leg, W Side - 25 m	* -34.0	-130.0	5.9
15. S Leg, W Side - 50 m	* -34.0	-212.0	5.9
16. S Leg, W Side-Midblk	* -34.0	-648.0	5.9
17. E Leg, N Side - 25 m	* 118.0	46.0	5.9
18. E Leg, N Side - 50 m	* 200.0	46.0	5.9
19. E Leg, N Side-Midblk	* 636.0	46.0	5.9
20. W Leg, N Side - 25 m	* -106.0	46.0	5.9
21. W Leg, N Side - 50 m	* -188.0	46.0	5.9
22. W Leg, N Side-Midblk	* -624.0	46.0	5.9
23. E Leg, S Side - 25 m	* 118.0	-58.0	5.9
24. E Leg, S Side - 50 m	* 200.0	-58.0	5.9
25. E Leg, S Side-Midblk	* 636.0	-58.0	5.9
26. W Leg, S Side - 25 m	* -106.0	-58.0	5.9
27. W Leg, S Side - 50 m	* -188.0	-58.0	5.9
28. W Leg, S Side-Midblk	* -624.0	-58.0	5.9

JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2016 AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	*	CONCENTRATION (PPM) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2000	0.1000	0.1000	0.0000	0.4000	0.1000	0.1000
20.	*	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.2000	0.1000	0.1000	0.1000	0.2000	0.1000	0.3000
30.	*	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.2000	0.1000	0.1000	0.1000	0.1000	0.2000	0.3000
40.	*	0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.3000	0.1000	0.1000	0.0000	0.2000	0.3000	0.2000
50.	*	0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.3000	0.2000	0.1000	0.0000	0.2000	0.4000	0.1000
60.	*	0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.4000	0.2000	0.1000	0.0000	0.2000	0.4000	0.1000
70.	*	0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.4000	0.2000	0.1000	0.0000	0.5000	0.3000	0.1000
80.	*	0.1000	0.0000	0.0000	0.0000	0.3000	0.0000	0.0000	0.0000	0.3000	0.1000	0.0000	0.0000	0.5000	0.1000	0.0000
90.	*	0.5000	0.1000	0.0000	0.0000	0.7000	0.1000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.4000	0.0000	0.0000
100.	*	0.8000	0.2000	0.1000	0.0000	0.9000	0.2000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000
110.	*	0.7000	0.2000	0.1000	0.0000	0.4000	0.2000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000
120.	*	0.6000	0.2000	0.1000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000
130.	*	0.4000	0.2000	0.1000	0.0000	0.0000	0.2000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000
140.	*	0.4000	0.2000	0.1000	0.1000	0.0000	0.2000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.1000	0.1000
150.	*	0.4000	0.2000	0.1000	0.1000	0.1000	0.2000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
160.	*	0.3000	0.2000	0.1000	0.1000	0.3000	0.2000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
170.	*	0.3000	0.2000	0.1000	0.1000	0.3000	0.4000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
180.	*	0.5000	0.2000	0.1000	0.1000	0.2000	0.1000	0.1000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
190.	*	0.5000	0.3000	0.0000	0.2000	0.3000	0.2000	0.1000	0.1000	0.2000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
200.	*	0.4000	0.1000	0.1000	0.2000	0.3000	0.2000	0.2000	0.1000	0.3000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
210.	*	0.1000	0.1000	0.1000	0.1000	0.3000	0.2000	0.2000	0.1000	0.4000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
220.	*	0.2000	0.3000	0.2000	0.1000	0.3000	0.2000	0.2000	0.0000	0.4000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
230.	*	0.2000	0.3000	0.2000	0.0000	0.4000	0.2000	0.2000	0.0000	0.4000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
240.	*	0.3000	0.3000	0.2000	0.0000	0.4000	0.2000	0.2000	0.0000	0.4000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
250.	*	0.4000	0.2000	0.1000	0.0000	0.4000	0.2000	0.1000	0.0000	0.4000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
260.	*	0.5000	0.1000	0.0000	0.0000	0.4000	0.1000	0.0000	0.0000	0.5000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000
270.	*	0.3000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.8000						

```
0.2000  0.1000  0.1000  0.6000  0.1000  0.0000
 280.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  1.0000
0.3000  0.2000  0.1000  0.9000  0.2000  0.0000
 290.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.6000
0.4000  0.3000  0.1000  0.8000  0.3000  0.1000
 300.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000
0.5000  0.3000  0.1000  0.6000  0.3000  0.2000
 310.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000
0.5000  0.3000  0.1000  0.6000  0.3000  0.2000
 320.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000
0.5000  0.3000  0.2000  0.5000  0.3000  0.2000
 330.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000
0.5000  0.2000  0.2000  0.5000  0.2000  0.2000
 340.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.3000  0.3000  0.2000  0.4000  0.2000  0.2000
 350.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000
0.3000  0.2000  0.2000  0.4000  0.2000  0.1000
 360.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000
0.2000  0.3000  0.1000  0.4000  0.2000  0.1000

------*-------------------------------------------------------------------------
----------------------------------------
 MAX   *  0.8000  0.3000  0.2000  0.2000  0.9000  0.4000  0.2000  0.1000  1.0000
0.5000  0.3000  0.2000  0.9000  0.4000  0.3000
 DEGR. *    100     190     220     190     100     170     120     140     280
300     290     320     280      50      20
```


JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2016 AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

```
WIND  * CONCENTRATION
ANGLE *     (PPM)
(DEGR)*      16      17      18      19      20      21      22      23      24
25      26      27      28

------*-------------------------------------------------------------------------
--------------------------
  10.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.4000  0.4000  0.0000
  20.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.4000  0.4000  0.0000
  30.  *  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.5000  0.5000  0.0000
  40.  *  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.2000  0.5000  0.5000  0.0000
  50.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.1000  0.5000  0.5000  0.1000
  60.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000  0.4000
0.1000  0.6000  0.6000  0.2000
  70.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000  0.4000
0.1000  0.6000  0.7000  0.6000
```

```
  80.  *  0.0000  0.1000  0.1000  0.0000  0.2000  0.1000  0.0000  0.3000  0.3000
0.1000  0.5000  0.7000  0.8000
  90.  *  0.0000  0.5000  0.5000  0.1000  0.4000  0.2000  0.3000  0.2000  0.2000
0.1000  0.4000  0.4000  0.6000
 100.  *  0.0000  0.7000  0.7000  0.2000  0.3000  0.3000  0.6000  0.0000  0.0000
0.0000  0.1000  0.2000  0.1000
 110.  *  0.0000  0.7000  0.7000  0.4000  0.1000  0.3000  0.4000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
 120.  *  0.0000  0.6000  0.6000  0.4000  0.1000  0.3000  0.3000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 130.  *  0.0000  0.4000  0.4000  0.4000  0.3000  0.3000  0.2000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 140.  *  0.1000  0.4000  0.4000  0.4000  0.4000  0.3000  0.1000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 150.  *  0.1000  0.4000  0.4000  0.4000  0.3000  0.3000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 160.  *  0.1000  0.3000  0.3000  0.3000  0.3000  0.3000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 170.  *  0.1000  0.3000  0.3000  0.3000  0.3000  0.3000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 180.  *  0.0000  0.3000  0.3000  0.3000  0.3000  0.3000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 190.  *  0.0000  0.3000  0.3000  0.3000  0.3000  0.3000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 200.  *  0.0000  0.3000  0.3000  0.3000  0.3000  0.3000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 210.  *  0.0000  0.5000  0.4000  0.4000  0.3000  0.3000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 220.  *  0.0000  0.5000  0.4000  0.4000  0.3000  0.3000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 230.  *  0.0000  0.5000  0.4000  0.4000  0.4000  0.4000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 240.  *  0.0000  0.6000  0.7000  0.6000  0.4000  0.4000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 250.  *  0.0000  0.6000  0.8000  0.7000  0.4000  0.4000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 260.  *  0.0000  0.5000  0.8000  0.8000  0.4000  0.4000  0.1000  0.2000  0.2000
0.0000  0.1000  0.1000  0.0000
 270.  *  0.0000  0.3000  0.4000  0.6000  0.1000  0.1000  0.0000  0.4000  0.4000
0.3000  0.5000  0.5000  0.1000
 280.  *  0.0000  0.0000  0.1000  0.1000  0.0000  0.0000  0.0000  0.5000  0.4000
0.4000  0.8000  0.8000  0.1000
 290.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.4000  0.8000  0.8000  0.1000
 300.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.3000
0.4000  0.6000  0.6000  0.0000
 310.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.3000
0.3000  0.6000  0.6000  0.0000
 320.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.5000  0.5000  0.0000
 330.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.5000  0.5000  0.0000
 340.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.4000  0.4000  0.0000
 350.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.4000  0.4000  0.0000
 360.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.4000  0.4000  0.0000

------*-------------------------------------------------------------------------
--------------------------
 MAX   *  0.2000  0.7000  0.8000  0.8000  0.4000  0.4000  0.6000  0.5000  0.4000
0.4000  0.8000  0.8000  0.8000
```

```
 DEGR. *      30      100      250      260       90      230      100      280       60
280      280      280       80

 THE HIGHEST CONCENTRATION OF   1.0000 PPM OCCURRED AT RECEPTOR      9.
```

```
Q,EPA,,F,,0,T,T,F,T,0.7,
3,2,4,3,2200,2200,2200,2200,2200,2200,2200,2200,1036.8,1036.8,103
6.8,1036.8,1036.8,1036.8,1036.8,1036.8,12,12,12,12,10,10,10,10,0,
0,-1200,1200,0,0,1200,-1200,-1200,1200,0,0,1200,-
1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
120,120,120,120,62,62,62,62,2,2,2,2,1600,1600,1600,1600,1,1,1,1,3
,3,3,3
'Orange Line Station CAL3QHC Run',60,175,0.0,0.0,28,0.3048,1,0
'N Leg, E Side-Corner',46.0,46.0,5.9
'N Leg, E Side - 25 m',46.0,118.0,5.9
'N Leg, E Side - 50 m',46.0,200.0,5.9
'N Leg, E Side-Midblk',46.0,636.0,5.9
'N Leg, W Side-Corner',-34.0,46.0,5.9
'N Leg, W Side - 25 m',-34.0,118.0,5.9
'N Leg, W Side - 50 m',-34.0,200.0,5.9
'N Leg, W Side-Midblk',-34.0,636.0,5.9
'S Leg, E Side-Corner',46.0,-58.0,5.9
'S Leg, E Side - 25 m',46.0,-130.0,5.9
'S Leg, E Side - 50 m',46.0,-212.0,5.9
'S Leg, E Side-Midblk',46.0,-648.0,5.9
'S Leg, W Side-Corner',-34.0,-58.0,5.9
'S Leg, W Side - 25 m',-34.0,-130.0,5.9
'S Leg, W Side - 50 m',-34.0,-212.0,5.9
'S Leg, W Side-Midblk',-34.0,-648.0,5.9
'E Leg, N Side - 25 m',118.0,46.0,5.9
'E Leg, N Side - 50 m',200.0,46.0,5.9
'E Leg, N Side-Midblk',636.0,46.0,5.9
'W Leg, N Side - 25 m',-106.0,46.0,5.9
'W Leg, N Side - 50 m',-188.0,46.0,5.9
'W Leg, N Side-Midblk',-624.0,46.0,5.9
'E Leg, S Side - 25 m',118.0,-58.0,5.9
'E Leg, S Side - 50 m',200.0,-58.0,5.9
'E Leg, S Side-Midblk',636.0,-58.0,5.9
'W Leg, S Side - 25 m',-106.0,-58.0,5.9
'W Leg, S Side - 50 m',-188.0,-58.0,5.9
'W Leg, S Side-Midblk',-624.0,-58.0,5.9
'US RT1 and Lambert 2016 PM',12,1,0,'CO'
1
'N Leg App - FreeFlow','AG',-12,0,-12,1200,137,2.31,0.0,43.7
2
'N Leg App - Queue','AG',-12,36,-12,1200,0.0,24.0,2
100,90,2,137,15.58,1600,1,3
1
'N Leg Dep - FreeFlow','AG',18,0,18,1200,492,2.44,0.0,55.7
1
'S Leg App - FreeFlow','AG',18,0,18,-1200,855,4.36,0.0,55.7
2
'S Leg App - Queue','AG',18,-48,18,-1200,0.0,36.0,3
100,74,2,855,15.58,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-12,0,-12,-1200,360,4.62,0.0,43.7
1
```

```
'E Leg App - FreeFlow','AG',0,18,1200,18,666,3.26,0.0,55.7
2
'E Leg App - Queue','AG',36,18,1200,18,0.0,36.0,3
100,92,2,666,15.58,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-24,1200,-24,981,3.03,0.0,67.7
1
'W Leg App - FreeFlow','AG',0,-24,-1200,-24,1024,2.65,0.0,67.7
2
'W Leg App - Queue','AG',-24,-24,-1200,-24,0.0,48.0,4
100,92,2,1024,15.58,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,18,-1200,18,849,2.50,0.0,55.7
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2016 PM

DATE : 11/29/16
TIME : 15:39:12

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1. N Leg App - FreeFlow	*	-12.0	0.0	-12.0	1200.0	*	1200.	360.	AG	137.	2.3	0.0	43.7		
2. N Leg App - Queue	*	-12.0	36.0	-12.0	75.4	*	39.	360.	AG	75.	100.0	0.0	24.0	0.71	2.0
3. N Leg Dep - FreeFlow	*	18.0	0.0	18.0	1200.0	*	1200.	360.	AG	492.	2.4	0.0	55.7		
4. S Leg App - FreeFlow	*	18.0	0.0	18.0	-1200.0	*	1200.	180.	AG	855.	4.4	0.0	55.7		
5. S Leg App - Queue	*	18.0	-48.0	18.0	-177.4	*	129.	180.	AG	93.	100.0	0.0	36.0	0.81	6.6
6. S Leg Dep - FreeFlow	*	-12.0	0.0	-12.0	-1200.0	*	1200.	180.	AG	360.	4.6	0.0	43.7		
7. E Leg App - FreeFlow	*	0.0	18.0	1200.0	18.0	*	1200.	90.	AG	666.	3.3	0.0	55.7		
8. E Leg App - Queue	*	36.0	18.0	1838.6	18.0	*	1803.	90.	AG	115.	100.0	0.0	36.0	3.47	91.6
9. E Leg Dep - FreeFlow	*	0.0	-24.0	1200.0	-24.0	*	1200.	90.	AG	981.	3.0	0.0	67.7		
10. W Leg App - FreeFlow	*	0.0	-24.0	-1200.0	-24.0	*	1200.	270.	AG	1024.	2.7	0.0	67.7		
11. W Leg App - Queue	*	-24.0	-24.0	-2199.2	-24.0	*	2175.	270.	AG	154.	100.0	0.0	48.0	4.00	110.5
12. W Leg Dep - FreeFlow	*	0.0	18.0	-1200.0	18.0	*	1200.	270.	AG	849.	2.5	0.0	55.7		

JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2016 PM

DATE : 11/29/16
TIME : 15:39:12

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. N Leg App - Queue	100	90	2.0	137	1600	15.58	1	3
5. S Leg App - Queue	100	74	2.0	855	1600	15.58	1	3
8. E Leg App - Queue	100	92	2.0	666	1600	15.58	1	3
11. W Leg App - Queue	100	92	2.0	1024	1600	15.58	1	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. N Leg, E Side-Corner	46.0	46.0	5.9
2. N Leg, E Side - 25 m	46.0	118.0	5.9
3. N Leg, E Side - 50 m	46.0	200.0	5.9
4. N Leg, E Side-Midblk	46.0	636.0	5.9
5. N Leg, W Side-Corner	-34.0	46.0	5.9
6. N Leg, W Side - 25 m	-34.0	118.0	5.9
7. N Leg, W Side - 50 m	-34.0	200.0	5.9
8. N Leg, W Side-Midblk	-34.0	636.0	5.9
9. S Leg, E Side-Corner	46.0	-58.0	5.9
10. S Leg, E Side - 25 m	46.0	-130.0	5.9
11. S Leg, E Side - 50 m	46.0	-212.0	5.9
12. S Leg, E Side-Midblk	46.0	-648.0	5.9
13. S Leg, W Side-Corner	-34.0	-58.0	5.9
14. S Leg, W Side - 25 m	-34.0	-130.0	5.9
15. S Leg, W Side - 50 m	-34.0	-212.0	5.9
16. S Leg, W Side-Midblk	-34.0	-648.0	5.9
17. E Leg, N Side - 25 m	118.0	46.0	5.9
18. E Leg, N Side - 50 m	200.0	46.0	5.9
19. E Leg, N Side-Midblk	636.0	46.0	5.9
20. W Leg, N Side - 25 m	-106.0	46.0	5.9
21. W Leg, N Side - 50 m	-188.0	46.0	5.9
22. W Leg, N Side-Midblk	-624.0	46.0	5.9
23. E Leg, S Side - 25 m	118.0	-58.0	5.9
24. E Leg, S Side - 50 m	200.0	-58.0	5.9
25. E Leg, S Side-Midblk	636.0	-58.0	5.9
26. W Leg, S Side - 25 m	-106.0	-58.0	5.9
27. W Leg, S Side - 50 m	-188.0	-58.0	5.9
28. W Leg, S Side-Midblk	-624.0	-58.0	5.9

JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2016 PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10.	* 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.3000	0.1000	0.2000	0.1000	0.5000	0.2000	0.3000
20.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.3000	0.2000	0.1000	0.1000	0.4000	0.3000	0.5000
30.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.3000	0.2000	0.1000	0.1000	0.3000	0.4000	0.5000
40.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.3000	0.2000	0.1000	0.1000	0.5000	0.5000	0.5000
50.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.4000	0.3000	0.1000	0.1000	0.6000	0.7000	0.4000
60.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.5000	0.3000	0.1000	0.1000	0.6000	0.7000	0.4000
70.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.6000	0.3000	0.1000	0.0000	0.8000	0.7000	0.4000
80.	* 0.3000	0.0000	0.0000	0.0000	0.4000	0.0000	0.0000	0.0000	0.6000	0.3000	0.1000	0.0000	0.9000	0.7000	0.3000
90.	* 0.7000	0.2000	0.1000	0.0000	0.9000	0.2000	0.1000	0.0000	0.4000	0.1000	0.0000	0.0000	0.7000	0.5000	0.2000
100.	* 1.0000	0.3000	0.2000	0.0000	0.9000	0.4000	0.2000	0.0000	0.1000	0.0000	0.0000	0.0000	0.5000	0.4000	0.2000
110.	* 0.8000	0.5000	0.2000	0.0000	0.6000	0.5000	0.2000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.2000
120.	* 0.7000	0.3000	0.2000	0.1000	0.4000	0.3000	0.2000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.2000
130.	* 0.6000	0.2000	0.1000	0.1000	0.2000	0.2000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.3000	0.2000
140.	* 0.6000	0.2000	0.1000	0.1000	0.3000	0.2000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.3000	0.2000
150.	* 0.6000	0.2000	0.1000	0.1000	0.3000	0.2000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.2000	0.2000
160.	* 0.5000	0.2000	0.1000	0.1000	0.6000	0.3000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.3000	0.2000	0.2000
170.	* 0.6000	0.3000	0.1000	0.1000	0.6000	0.5000	0.2000	0.0000	0.1000	0.1000	0.1000	0.1000	0.2000	0.2000	0.2000
180.	* 0.8000	0.3000	0.3000	0.1000	0.6000	0.3000	0.2000	0.0000	0.3000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000
190.	* 1.0000	0.4000	0.3000	0.2000	0.5000	0.2000	0.1000	0.1000	0.6000	0.5000	0.4000	0.2000	0.0000	0.0000	0.0000
200.	* 0.7000	0.4000	0.2000	0.2000	0.5000	0.2000	0.1000	0.1000	0.6000	0.4000	0.3000	0.3000	0.0000	0.0000	0.0000
210.	* 0.4000	0.3000	0.2000	0.2000	0.5000	0.2000	0.2000	0.1000	0.6000	0.4000	0.2000	0.2000	0.0000	0.0000	0.0000
220.	* 0.3000	0.3000	0.2000	0.1000	0.5000	0.2000	0.2000	0.1000	0.4000	0.4000	0.1000	0.1000	0.0000	0.0000	0.0000
230.	* 0.4000	0.3000	0.2000	0.1000	0.6000	0.2000	0.2000	0.1000	0.4000	0.4000	0.1000	0.1000	0.0000	0.0000	0.0000
240.	* 0.5000	0.3000	0.2000	0.1000	0.6000	0.3000	0.2000	0.1000	0.4000	0.4000	0.1000	0.1000	0.0000	0.0000	0.0000
250.	* 0.6000	0.5000	0.2000	0.1000	0.7000	0.5000	0.2000	0.1000	0.4000	0.4000	0.1000	0.1000	0.0000	0.0000	0.0000
260.	* 0.8000	0.3000	0.2000	0.0000	0.7000	0.3000	0.2000	0.0000	0.6000	0.4000	0.1000	0.1000	0.3000	0.0000	0.0000
270.	* 0.6000	0.2000	0.1000	0.0000	0.5000	0.2000	0.1000	0.0000	1.1000						

```
0.6000  0.2000  0.1000  0.8000  0.2000  0.1000
 280.  *  0.2000  0.0000  0.0000  0.0000  0.2000  0.0000  0.0000  0.0000  1.2000
0.9000  0.3000  0.1000  1.2000  0.5000  0.2000
 290.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.9000
0.9000  0.3000  0.2000  1.0000  0.5000  0.2000
 300.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.7000
0.8000  0.3000  0.2000  0.8000  0.4000  0.2000
 310.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000
0.8000  0.4000  0.2000  0.7000  0.4000  0.2000
 320.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000
0.6000  0.4000  0.2000  0.6000  0.3000  0.2000
 330.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.2000
0.6000  0.5000  0.3000  0.6000  0.2000  0.2000
 340.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.2000
0.5000  0.6000  0.4000  0.5000  0.2000  0.2000
 350.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.4000
0.3000  0.5000  0.3000  0.5000  0.2000  0.1000
 360.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.4000
0.3000  0.3000  0.2000  0.5000  0.3000  0.2000

------*-------------------------------------------------------------------------
----------------------------------------
 MAX   *  1.0000  0.5000  0.3000  0.2000  0.9000  0.5000  0.2000  0.1000  1.2000
0.9000  0.6000  0.4000  1.2000  0.7000  0.5000
 DEGR. *    100     110     180     190      90     110     100     110     280
280     340     340     280      50      20
```


JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2016 PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

```
WIND  * CONCENTRATION
ANGLE *     (PPM)
(DEGR)*      16      17      18      19      20      21      22      23      24
25      26      27      28

------*-------------------------------------------------------------------------
--------------------------
  10.  *  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.5000  0.5000  0.5000
  20.  *  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.5000  0.5000  0.5000
  30.  *  0.3000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.6000  0.6000  0.6000
  40.  *  0.3000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.6000  0.6000  0.6000
  50.  *  0.3000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000  0.4000
0.4000  0.6000  0.6000  0.7000
  60.  *  0.3000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.5000  0.5000
0.5000  0.7000  0.7000  0.8000
  70.  *  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.6000  0.6000
0.6000  0.9000  0.8000  0.9000
```

```
  80.  *  0.2000  0.3000  0.3000  0.2000  0.2000  0.1000  0.1000  0.6000  0.6000
0.5000  0.8000  1.1000  1.1000
  90.  *  0.2000  0.7000  0.7000  0.6000  0.8000  0.6000  0.4000  0.4000  0.4000
0.3000  0.7000  0.7000  0.7000
 100.  *  0.2000  1.0000  1.0000  0.9000  0.6000  0.6000  0.7000  0.1000  0.1000
0.1000  0.2000  0.2000  0.3000
 110.  *  0.2000  0.8000  0.8000  0.8000  0.3000  0.4000  0.6000  0.0000  0.0000
0.0000  0.2000  0.1000  0.0000
 120.  *  0.2000  0.7000  0.7000  0.7000  0.2000  0.6000  0.6000  0.0000  0.0000
0.0000  0.2000  0.0000  0.0000
 130.  *  0.2000  0.6000  0.6000  0.6000  0.6000  0.6000  0.6000  0.0000  0.0000
0.0000  0.2000  0.0000  0.0000
 140.  *  0.2000  0.6000  0.6000  0.6000  0.7000  0.5000  0.5000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
 150.  *  0.2000  0.6000  0.6000  0.6000  0.7000  0.6000  0.5000  0.0000  0.0000
0.0000  0.1000  0.1000  0.0000
 160.  *  0.2000  0.5000  0.5000  0.5000  0.6000  0.6000  0.5000  0.0000  0.0000
0.0000  0.1000  0.1000  0.0000
 170.  *  0.2000  0.5000  0.5000  0.5000  0.6000  0.5000  0.5000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
 180.  *  0.2000  0.5000  0.5000  0.5000  0.5000  0.5000  0.5000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 190.  *  0.0000  0.6000  0.5000  0.5000  0.5000  0.5000  0.5000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 200.  *  0.0000  0.7000  0.6000  0.5000  0.5000  0.5000  0.5000  0.1000  0.1000
0.0000  0.0000  0.0000  0.0000
 210.  *  0.0000  0.8000  0.7000  0.6000  0.5000  0.5000  0.5000  0.1000  0.1000
0.0000  0.0000  0.0000  0.0000
 220.  *  0.0000  0.8000  0.8000  0.6000  0.5000  0.5000  0.5000  0.2000  0.1000
0.0000  0.0000  0.0000  0.0000
 230.  *  0.0000  0.8000  0.7000  0.6000  0.6000  0.6000  0.6000  0.2000  0.0000
0.0000  0.0000  0.0000  0.0000
 240.  *  0.0000  0.7000  0.9000  0.7000  0.6000  0.6000  0.6000  0.2000  0.1000
0.0000  0.0000  0.0000  0.0000
 250.  *  0.0000  0.8000  0.9000  0.8000  0.7000  0.7000  0.7000  0.2000  0.1000
0.0000  0.0000  0.0000  0.0000
 260.  *  0.0000  1.0000  1.0000  0.9000  0.7000  0.7000  0.7000  0.4000  0.3000
0.2000  0.3000  0.3000  0.3000
 270.  *  0.0000  0.7000  0.7000  0.7000  0.5000  0.4000  0.4000  0.9000  0.7000
0.4000  0.8000  0.8000  0.7000
 280.  *  0.0000  0.1000  0.2000  0.2000  0.2000  0.2000  0.1000  0.9000  0.7000
0.6000  1.2000  1.2000  1.1000
 290.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.5000  0.3000
0.6000  1.0000  1.0000  1.0000
 300.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.3000
0.5000  0.8000  0.8000  0.8000
 310.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.3000
0.4000  0.7000  0.7000  0.7000
 320.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.6000  0.6000  0.6000
 330.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.6000  0.6000  0.6000
 340.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.5000  0.5000  0.5000
 350.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.5000  0.5000  0.5000
 360.  *  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.5000  0.5000  0.5000

------*-------------------------------------------------------------------------
--------------------------
 MAX   *  0.3000  1.0000  1.0000  0.9000  0.8000  0.7000  0.7000  0.9000  0.7000
0.6000  1.2000  1.2000  1.1000
```

DEGR. * 30 100 100 260 90 250 100 280 270 70 280 280 80

THE HIGHEST CONCENTRATION OF 1.2000 PPM OCCURRED AT RECEPTOR 9.

```
Q,EPA,,F,,0,T,T,T,T,0.7,
1,1,1,1,2200,2200,2200,2200,2200,2200,2200,2200,1037,1037,1037,10
37,1037,1037,1037,1037,12,12,12,12,10,10,10,10,0,0,-
1200,1200,0,0,1200,-1200,-1200,1200,0,0,1200,-
1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
0,120,120,120,0,62,62,62,0,2,2,2,0,1600,1600,1600,0,1,1,1,0,3,3,3
'Orange Line Station',60,175,0.0,0.0,23,0.3048,1,0
'N Leg, E Side-Corner',22.0,22.0,5.9
'N Leg, E Side - 0 m',0.0,22.0,5.9
'N Leg, W Side-Corner',-22.0,22.0,5.9
'S Leg, E Side-Corner',22.0,-22.0,5.9
'S Leg, E Side - 25 m',22.0,-94.0,5.9
'S Leg, E Side - 50 m',22.0,-176.0,5.9
'S Leg, E Side-Midblk',22.0,-612.0,5.9
'S Leg, W Side-Corner',-22.0,-22.0,5.9
'S Leg, W Side - 25 m',-22.0,-94.0,5.9
'S Leg, W Side - 50 m',-22.0,-176.0,5.9
'S Leg, W Side-Midblk',-22.0,-612.0,5.9
'E Leg, N Side - 25 m',94.0,22.0,5.9
'E Leg, N Side - 50 m',176.0,22.0,5.9
'E Leg, N Side-Midblk',612.0,22.0,5.9
'W Leg, N Side - 25 m',-94.0,22.0,5.9
'W Leg, N Side - 50 m',-176.0,22.0,5.9
'W Leg, N Side-Midblk',-612.0,22.0,5.9
'E Leg, S Side - 25 m',94.0,-22.0,5.9
'E Leg, S Side - 50 m',176.0,-22.0,5.9
'E Leg, S Side-Midblk',612.0,-22.0,5.9
'W Leg, S Side - 25 m',-94.0,-22.0,5.9
'W Leg, S Side - 50 m',-176.0,-22.0,5.9
'W Leg, S Side-Midblk',-612.0,-22.0,5.9
'Woodmont-Jones 2016 AM',9,1,0,'CO'
1
'S Leg App - FreeFlow','AG',6,6,6,-1200,303,3.39,0.0,31.7
2
'S Leg App - Queue','AG',6,-12,6,-1200,0.0,12.0,1
81,58,2,303,20.42,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-6,6,-6,-1200,349,4.71,0.0,31.7
1
'E Leg App - FreeFlow','AG',0,6,1200,6,293,3.57,0.0,31.7
2
'E Leg App - Queue','AG',12,6,1200,6,0.0,12.0,1
81,41,2,293,20.42,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-6,1200,-6,360,6.10,0.0,31.7
1
'W Leg App - FreeFlow','AG',0,-6,-1200,-6,270,2.0,0.0,31.7
2
'W Leg App - Queue','AG',-12,-6,-1200,-6,0.0,12.0,1
81,76,2,270,20.42,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,6,-1200,6,154,3.19,0.0,31.7
```

```
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station RUN: Woodmont-Jones 2016 AM

DATE : 11/29/16
TIME : 16: 0:57

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)		(G/MI)	(FT)	(FT)		(VEH)	
1. S Leg App - FreeFlow	*	6.0	6.0	6.0	-1200.0	*	1206.	180.	AG	303.	2.9	0.0	31.7		
2. S Leg App - Queue	*	6.0	-12.0	6.0	-122.4	*	110.	180.	AG	30.	100.0	0.0	12.0	0.81	5.6
3. S Leg Dep - FreeFlow	*	-6.0	6.0	-6.0	-1200.0	*	1206.	180.	AG	349.	4.2	0.0	31.7		
4. E Leg App - FreeFlow	*	0.0	6.0	1200.0	6.0	*	1200.	90.	AG	293.	3.2	0.0	31.7		
5. E Leg App - Queue	*	12.0	6.0	77.7	6.0	*	66.	90.	AG	21.	100.0	0.0	12.0	0.41	3.3
6. E Leg Dep - FreeFlow	*	0.0	-6.0	1200.0	-6.0	*	1200.	90.	AG	360.	5.5	0.0	31.7		
7. W Leg App - FreeFlow	*	0.0	-6.0	-1200.0	-6.0	*	1200.	270.	AG	270.	1.8	0.0	31.7		
8. W Leg App - Queue	*	-12.0	-6.0	-2898.7	-6.0	*	2887.	270.	AG	39.	100.0	0.0	12.0	****	146.6
9. W Leg Dep - FreeFlow	*	0.0	6.0	-1200.0	6.0	*	1200.	270.	AG	154.	2.8	0.0	31.7		

JOB: Orange Line Station RUN: Woodmont-Jones 2016 AM

DATE : 11/29/16
TIME : 16: 0:57

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

```
-----------------------*-------------------------------------------------------------
--------------------
       2. S Leg App - Queue   *      81       58       2.0       303       1600
15.58      1        3
       5. E Leg App - Queue   *      81       41       2.0       293       1600
15.58      1        3
       8. W Leg App - Queue   *      81       76       2.0       270       1600
15.58      1        3

       RECEPTOR LOCATIONS
       ------------------
                              *           COORDINATES (FT)          *
         RECEPTOR             *      X          Y          Z         *
     -------------------------*-------------------------------------*
      1. N Leg, E Side-Corner *        22.0       22.0        5.9    *
      2. N Leg, E Side - 0 m  *         0.0       22.0        5.9    *
      3. N Leg, W Side-Corner *       -22.0       22.0        5.9    *
      4. S Leg, E Side-Corner *        22.0      -22.0        5.9    *
      5. S Leg, E Side - 25 m *        22.0      -94.0        5.9    *
      6. S Leg, E Side - 50 m *        22.0     -176.0        5.9    *
      7. S Leg, E Side-Midblk *        22.0     -612.0        5.9    *
      8. S Leg, W Side-Corner *       -22.0      -22.0        5.9    *
      9. S Leg, W Side - 25 m *       -22.0      -94.0        5.9    *
     10. S Leg, W Side - 50 m *       -22.0     -176.0        5.9    *
     11. S Leg, W Side-Midblk *       -22.0     -612.0        5.9    *
     12. E Leg, N Side - 25 m *        94.0       22.0        5.9    *
     13. E Leg, N Side - 50 m *       176.0       22.0        5.9    *
     14. E Leg, N Side-Midblk *       612.0       22.0        5.9    *
     15. W Leg, N Side - 25 m *       -94.0       22.0        5.9    *
     16. W Leg, N Side - 50 m *      -176.0       22.0        5.9    *
     17. W Leg, N Side-Midblk *      -612.0       22.0        5.9    *
     18. E Leg, S Side - 25 m *        94.0      -22.0        5.9    *
     19. E Leg, S Side - 50 m *       176.0      -22.0        5.9    *
     20. E Leg, S Side-Midblk *       612.0      -22.0        5.9    *
     21. W Leg, S Side - 25 m *       -94.0      -22.0        5.9    *
     22. W Leg, S Side - 50 m *      -176.0      -22.0        5.9    *
     23. W Leg, S Side-Midblk *      -612.0      -22.0        5.9    *

                            PAGE  3
      JOB: Orange Line Station                                RUN: Woodmont-Jones
2016 AM

       MODEL RESULTS
       -------------

       REMARKS : In search of the angle corresponding to
                 the maximum concentration, only the first
                 angle, of the angles with same maximum
                 concentrations, is indicated as maximum.

 WIND ANGLE RANGE:  10.-360.

 WIND  * CONCENTRATION
 ANGLE *     (PPM)
 (DEGR)*       1        2        3        4        5        6        7        8        9
 10       11       12       13       14       15

------*-------------------------------------------------------------------------------
-----------------------------------------
  10.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.1000  0.1000
0.2000  0.1000  0.0000  0.0000  0.0000  0.0000
  20.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.1000  0.2000
```

```
0.2000  0.1000  0.0000  0.0000  0.0000  0.0000
  30.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.1000  0.2000
0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
  40.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.2000
0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
  50.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.1000  0.2000
0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
  60.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.2000  0.2000
0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
  70.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.1000  0.1000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  80.  *  0.0000  0.0000  0.0000  0.3000  0.0000  0.0000  0.0000  0.1000  0.1000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  90.  *  0.2000  0.2000  0.2000  0.1000  0.0000  0.0000  0.0000  0.3000  0.2000
0.1000  0.1000  0.2000  0.2000  0.2000  0.1000
 100.  *  0.2000  0.3000  0.2000  0.1000  0.0000  0.0000  0.0000  0.2000  0.1000
0.0000  0.0000  0.2000  0.2000  0.2000  0.1000
 110.  *  0.3000  0.3000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
0.0000  0.0000  0.2000  0.2000  0.2000  0.1000
 120.  *  0.2000  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.1000  0.1000  0.1000  0.1000  0.1000  0.1000
 130.  *  0.2000  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.1000
0.1000  0.1000  0.1000  0.1000  0.1000  0.1000
 140.  *  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.1000
0.1000  0.1000  0.1000  0.1000  0.1000  0.1000
 150.  *  0.2000  0.1000  0.2000  0.0000  0.0000  0.0000  0.0000  0.2000  0.1000
0.1000  0.1000  0.1000  0.1000  0.1000  0.1000
 160.  *  0.2000  0.2000  0.2000  0.0000  0.0000  0.0000  0.0000  0.2000  0.1000
0.1000  0.1000  0.1000  0.1000  0.1000  0.1000
 170.  *  0.2000  0.3000  0.3000  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
0.1000  0.1000  0.1000  0.1000  0.1000  0.1000
 180.  *  0.5000  0.3000  0.2000  0.2000  0.2000  0.2000  0.1000  0.1000  0.1000
0.1000  0.1000  0.1000  0.1000  0.1000  0.1000
 190.  *  0.5000  0.2000  0.1000  0.3000  0.2000  0.2000  0.2000  0.1000  0.0000
0.0000  0.0000  0.1000  0.1000  0.1000  0.1000
 200.  *  0.3000  0.1000  0.1000  0.3000  0.2000  0.2000  0.2000  0.0000  0.0000
0.0000  0.0000  0.1000  0.1000  0.1000  0.1000
 210.  *  0.1000  0.1000  0.1000  0.2000  0.2000  0.1000  0.1000  0.0000  0.0000
0.0000  0.0000  0.1000  0.1000  0.1000  0.1000
 220.  *  0.0000  0.1000  0.1000  0.2000  0.2000  0.1000  0.1000  0.0000  0.0000
0.0000  0.0000  0.1000  0.1000  0.1000  0.1000
 230.  *  0.1000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.1000  0.1000  0.1000  0.1000
 240.  *  0.1000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.2000  0.1000  0.1000  0.1000
 250.  *  0.1000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.3000  0.2000  0.2000  0.1000
 260.  *  0.2000  0.2000  0.2000  0.2000  0.1000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.2000  0.3000  0.2000  0.2000
 270.  *  0.1000  0.1000  0.1000  0.3000  0.2000  0.0000  0.0000  0.2000  0.1000
0.0000  0.0000  0.1000  0.1000  0.2000  0.1000
 280.  *  0.0000  0.0000  0.0000  0.3000  0.2000  0.1000  0.0000  0.2000  0.1000
0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
 290.  *  0.0000  0.0000  0.0000  0.2000  0.2000  0.1000  0.0000  0.2000  0.1000
0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
 300.  *  0.0000  0.0000  0.0000  0.1000  0.2000  0.0000  0.0000  0.2000  0.1000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 310.  *  0.0000  0.0000  0.0000  0.1000  0.2000  0.0000  0.0000  0.1000  0.1000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 320.  *  0.0000  0.0000  0.0000  0.1000  0.2000  0.1000  0.1000  0.1000  0.1000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 330.  *  0.0000  0.0000  0.0000  0.1000  0.2000  0.1000  0.1000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
```

340.	*	0.0000	0.0000	0.0000	0.1000	0.1000	0.2000	0.2000	0.1000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000					
350.	*	0.0000	0.0000	0.0000	0.1000	0.1000	0.2000	0.2000	0.1000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000					
360.	*	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.1000	0.1000	0.1000
0.1000	0.1000	0.0000	0.0000	0.0000	0.0000					

MAX	*	0.5000	0.3000	0.3000	0.3000	0.2000	0.2000	0.2000	0.3000	0.2000
0.2000	0.1000	0.3000	0.3000	0.2000	0.2000					
DEGR.	*	180	100	170	80	180	180	190	90	20
10	10	250	260	90	260					

JOB: Orange Line Station RUN: Woodmont-Jones 2016 AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	*	CONCENTRATION (PPM) 16	17	18	19	20	21	22	23
10.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
20.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
30.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
40.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
50.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
60.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.2000	0.2000
70.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.2000	0.2000
80.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.1000	0.2000
90.	*	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.2000	0.2000
100.	*	0.1000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.1000
110.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
120.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
130.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
140.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
150.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
160.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
170.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
180.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
190.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
200.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
210.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
220.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
230.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
240.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
260.	*	0.2000	0.2000	0.1000	0.0000	0.1000	0.1000	0.1000	0.1000
270.	*	0.1000	0.1000	0.2000	0.2000	0.1000	0.2000	0.2000	0.2000
280.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000
290.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.2000	0.2000	0.2000
300.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.2000	0.2000	0.2000

310.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
320.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
330.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
340.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
350.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
360.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
MAX	*	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000
DEGR.	*	260	260	80	80	80	80	60	60

THE HIGHEST CONCENTRATION OF 0.5000 PPM OCCURRED AT RECEPTOR 1.

```
Q,EPA,,F,,0,T,T,T,T,0.7,
1,1,1,1,2200,2200,2200,2200,2200,2200,2200,2200,1037,1037,1037,10
37,1037,1037,1037,1037,12,12,12,12,10,10,10,10,0,0,-
1200,1200,0,0,1200,-1200,-1200,1200,0,0,1200,-
1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
0,120,120,120,0,62,62,62,0,2,2,2,0,1600,1600,1600,0,1,1,1,0,3,3,3
'Orange Line Station',60,175,0.0,0.0,23,0.3048,1,0
'N Leg, E Side-Corner',22.0,22.0,5.9
'N Leg, E Side - 0 m',0.0,22.0,5.9
'N Leg, W Side-Corner',-22.0,22.0,5.9
'S Leg, E Side-Corner',22.0,-22.0,5.9
'S Leg, E Side - 25 m',22.0,-94.0,5.9
'S Leg, E Side - 50 m',22.0,-176.0,5.9
'S Leg, E Side-Midblk',22.0,-612.0,5.9
'S Leg, W Side-Corner',-22.0,-22.0,5.9
'S Leg, W Side - 25 m',-22.0,-94.0,5.9
'S Leg, W Side - 50 m',-22.0,-176.0,5.9
'S Leg, W Side-Midblk',-22.0,-612.0,5.9
'E Leg, N Side - 25 m',94.0,22.0,5.9
'E Leg, N Side - 50 m',176.0,22.0,5.9
'E Leg, N Side-Midblk',612.0,22.0,5.9
'W Leg, N Side - 25 m',-94.0,22.0,5.9
'W Leg, N Side - 50 m',-176.0,22.0,5.9
'W Leg, N Side-Midblk',-612.0,22.0,5.9
'E Leg, S Side - 25 m',94.0,-22.0,5.9
'E Leg, S Side - 50 m',176.0,-22.0,5.9
'E Leg, S Side-Midblk',612.0,-22.0,5.9
'W Leg, S Side - 25 m',-94.0,-22.0,5.9
'W Leg, S Side - 50 m',-176.0,-22.0,5.9
'W Leg, S Side-Midblk',-612.0,-22.0,5.9
'Woodmont-Jones 2016 PM',9,1,0,'CO'
1
'S Leg App - FreeFlow','AG',6,6,6,-1200,510,2.92,0.0,31.7
2
'S Leg App - Queue','AG',6,-12,6,-1200,0.0,12.0,1
81,58,2,510,15.58,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-6,6,-6,-1200,177,4.17,0.0,31.7
1
'E Leg App - FreeFlow','AG',0,6,1200,6,278,3.19,0.0,31.7
2
'E Leg App - Queue','AG',12,6,1200,6,0.0,12.0,1
81,41,2,278,15.58,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-6,1200,-6,545,5.53,0.0,31.7
1
'W Leg App - FreeFlow','AG',0,-6,-1200,-6,262,1.77,0.0,31.7
2
'W Leg App - Queue','AG',-12,-6,-1200,-6,0.0,12.0,1
81,76,2,262,15.58,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,6,-1200,6,328,2.84,0.0,31.7
```

```
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station RUN: Woodmont-Jones 2016 PM

DATE : 11/29/16
TIME : 16: 3: 3

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)		(G/MI)	(FT)	(FT)		(VEH)	
1. S Leg App - FreeFlow	*	6.0	6.0	6.0	-1200.0	*	1206.	180.	AG	510.	2.9	0.0	31.7		
2. S Leg App - Queue	*	6.0	-12.0	6.0	-1631.1	*	1619.	180.	AG	30.	100.0	0.0	12.0	1.36	82.2
3. S Leg Dep - FreeFlow	*	-6.0	6.0	-6.0	-1200.0	*	1206.	180.	AG	177.	4.2	0.0	31.7		
4. E Leg App - FreeFlow	*	0.0	6.0	1200.0	6.0	*	1200.	90.	AG	278.	3.2	0.0	31.7		
5. E Leg App - Queue	*	12.0	6.0	74.3	6.0	*	62.	90.	AG	21.	100.0	0.0	12.0	0.39	3.2
6. E Leg Dep - FreeFlow	*	0.0	-6.0	1200.0	-6.0	*	1200.	90.	AG	545.	5.5	0.0	31.7		
7. W Leg App - FreeFlow	*	0.0	-6.0	-1200.0	-6.0	*	1200.	270.	AG	262.	1.8	0.0	31.7		
8. W Leg App - Queue	*	-12.0	-6.0	-2807.6	-6.0	*	2796.	270.	AG	39.	100.0	0.0	12.0	****	142.0
9. W Leg Dep - FreeFlow	*	0.0	6.0	-1200.0	6.0	*	1200.	270.	AG	328.	2.8	0.0	31.7		

JOB: Orange Line Station RUN: Woodmont-Jones 2016 PM

DATE : 11/29/16
TIME : 16: 3: 3

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

```
-----------------------*-------------------------------------------------------------
--------------------
       2. S Leg App - Queue   *      81       58       2.0       510       1600
15.58      1        3
       5. E Leg App - Queue   *      81       41       2.0       278       1600
15.58      1        3
       8. W Leg App - Queue   *      81       76       2.0       262       1600
15.58      1        3

       RECEPTOR LOCATIONS
       ------------------
                              *           COORDINATES (FT)          *
         RECEPTOR             *      X          Y          Z         *
     -------------------------*-------------------------------------*
      1. N Leg, E Side-Corner *        22.0       22.0        5.9    *
      2. N Leg, E Side - 0 m  *         0.0       22.0        5.9    *
      3. N Leg, W Side-Corner *       -22.0       22.0        5.9    *
      4. S Leg, E Side-Corner *        22.0      -22.0        5.9    *
      5. S Leg, E Side - 25 m *        22.0      -94.0        5.9    *
      6. S Leg, E Side - 50 m *        22.0     -176.0        5.9    *
      7. S Leg, E Side-Midblk *        22.0     -612.0        5.9    *
      8. S Leg, W Side-Corner *       -22.0      -22.0        5.9    *
      9. S Leg, W Side - 25 m *       -22.0      -94.0        5.9    *
     10. S Leg, W Side - 50 m *       -22.0     -176.0        5.9    *
     11. S Leg, W Side-Midblk *       -22.0     -612.0        5.9    *
     12. E Leg, N Side - 25 m *        94.0       22.0        5.9    *
     13. E Leg, N Side - 50 m *       176.0       22.0        5.9    *
     14. E Leg, N Side-Midblk *       612.0       22.0        5.9    *
     15. W Leg, N Side - 25 m *       -94.0       22.0        5.9    *
     16. W Leg, N Side - 50 m *      -176.0       22.0        5.9    *
     17. W Leg, N Side-Midblk *      -612.0       22.0        5.9    *
     18. E Leg, S Side - 25 m *        94.0      -22.0        5.9    *
     19. E Leg, S Side - 50 m *       176.0      -22.0        5.9    *
     20. E Leg, S Side-Midblk *       612.0      -22.0        5.9    *
     21. W Leg, S Side - 25 m *       -94.0      -22.0        5.9    *
     22. W Leg, S Side - 50 m *      -176.0      -22.0        5.9    *
     23. W Leg, S Side-Midblk *      -612.0      -22.0        5.9    *

                            PAGE  3
      JOB: Orange Line Station                                RUN: Woodmont-Jones
2016 PM

       MODEL RESULTS
       -------------

       REMARKS : In search of the angle corresponding to
                 the maximum concentration, only the first
                 angle, of the angles with same maximum
                 concentrations, is indicated as maximum.

 WIND ANGLE RANGE:  10.-360.

 WIND  * CONCENTRATION
 ANGLE *     (PPM)
 (DEGR)*       1        2        3        4        5        6        7        8        9
 10       11       12       13       14       15

------*-------------------------------------------------------------------------------
-----------------------------------------
  10.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000
0.1000  0.3000  0.0000  0.0000  0.0000  0.0000
  20.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.1000  0.1000
```

```
0.2000  0.2000  0.0000  0.0000  0.0000  0.0000
  30.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.1000  0.2000
0.2000  0.2000  0.0000  0.0000  0.0000  0.0000
  40.  *  0.0000  0.0000  0.0000  0.1000  0.1000  0.0000  0.0000  0.0000  0.3000
0.2000  0.2000  0.0000  0.0000  0.0000  0.0000
  50.  *  0.0000  0.0000  0.0000  0.1000  0.1000  0.0000  0.0000  0.1000  0.2000
0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
  60.  *  0.0000  0.0000  0.0000  0.2000  0.1000  0.0000  0.0000  0.1000  0.2000
0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
  70.  *  0.0000  0.0000  0.0000  0.2000  0.1000  0.0000  0.0000  0.1000  0.2000
0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
  80.  *  0.0000  0.0000  0.0000  0.3000  0.1000  0.0000  0.0000  0.2000  0.2000
0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
  90.  *  0.2000  0.2000  0.2000  0.2000  0.0000  0.0000  0.0000  0.3000  0.1000
0.1000  0.1000  0.2000  0.2000  0.2000  0.1000
 100.  *  0.3000  0.3000  0.3000  0.1000  0.0000  0.0000  0.0000  0.2000  0.1000
0.1000  0.1000  0.3000  0.3000  0.2000  0.1000
 110.  *  0.3000  0.3000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
0.1000  0.1000  0.2000  0.2000  0.2000  0.2000
 120.  *  0.2000  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
0.1000  0.1000  0.1000  0.1000  0.1000  0.1000
 130.  *  0.2000  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
0.1000  0.1000  0.1000  0.1000  0.1000  0.1000
 140.  *  0.2000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.2000  0.1000  0.1000  0.1000  0.1000
 150.  *  0.2000  0.1000  0.2000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.2000  0.1000  0.1000  0.1000  0.1000
 160.  *  0.2000  0.3000  0.2000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.2000  0.1000  0.1000  0.1000  0.2000
 170.  *  0.3000  0.3000  0.4000  0.2000  0.2000  0.2000  0.1000  0.3000  0.3000
0.3000  0.3000  0.1000  0.1000  0.1000  0.2000
 180.  *  0.4000  0.4000  0.3000  0.2000  0.2000  0.2000  0.2000  0.3000  0.3000
0.3000  0.1000  0.1000  0.1000  0.1000  0.1000
 190.  *  0.4000  0.3000  0.1000  0.3000  0.3000  0.3000  0.3000  0.0000  0.0000
0.0000  0.0000  0.2000  0.1000  0.1000  0.1000
 200.  *  0.3000  0.0000  0.1000  0.2000  0.2000  0.2000  0.2000  0.0000  0.0000
0.0000  0.0000  0.2000  0.1000  0.1000  0.1000
 210.  *  0.2000  0.1000  0.1000  0.2000  0.2000  0.2000  0.2000  0.0000  0.0000
0.0000  0.0000  0.1000  0.1000  0.1000  0.1000
 220.  *  0.0000  0.1000  0.1000  0.2000  0.2000  0.2000  0.2000  0.0000  0.0000
0.0000  0.0000  0.1000  0.1000  0.1000  0.1000
 230.  *  0.1000  0.1000  0.1000  0.2000  0.2000  0.2000  0.2000  0.0000  0.0000
0.0000  0.0000  0.1000  0.1000  0.1000  0.1000
 240.  *  0.1000  0.1000  0.1000  0.2000  0.2000  0.2000  0.2000  0.0000  0.0000
0.0000  0.0000  0.2000  0.1000  0.1000  0.1000
 250.  *  0.1000  0.2000  0.2000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000
0.0000  0.0000  0.3000  0.2000  0.2000  0.2000
 260.  *  0.3000  0.3000  0.3000  0.2000  0.1000  0.1000  0.1000  0.1000  0.0000
0.0000  0.0000  0.2000  0.3000  0.2000  0.3000
 270.  *  0.2000  0.2000  0.2000  0.4000  0.3000  0.2000  0.2000  0.2000  0.1000
0.0000  0.0000  0.1000  0.1000  0.2000  0.2000
 280.  *  0.0000  0.0000  0.0000  0.4000  0.2000  0.2000  0.1000  0.2000  0.1000
0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
 290.  *  0.0000  0.0000  0.0000  0.3000  0.2000  0.2000  0.1000  0.2000  0.1000
0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
 300.  *  0.0000  0.0000  0.0000  0.3000  0.3000  0.2000  0.2000  0.2000  0.1000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 310.  *  0.0000  0.0000  0.0000  0.2000  0.3000  0.2000  0.2000  0.1000  0.1000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 320.  *  0.0000  0.0000  0.0000  0.1000  0.2000  0.2000  0.2000  0.1000  0.1000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 330.  *  0.0000  0.0000  0.0000  0.1000  0.2000  0.2000  0.2000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
```

340.	*	0.0000	0.0000	0.0000	0.1000	0.2000	0.2000	0.2000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
350.	*	0.0000	0.0000	0.0000	0.1000	0.2000	0.2000	0.3000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
360.	*	0.0000	0.0000	0.0000	0.1000	0.1000	0.2000	0.2000	0.1000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000
MAX	*	0.4000	0.4000	0.4000	0.4000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.2000	0.3000
DEGR.	*	180	180	170	270	190	190	190	90	40	170	10	100	100	90	260

JOB: Orange Line Station RUN: Woodmont-Jones 2016 PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	*	CONCENTRATION (PPM) 16	17	18	19	20	21	22	23
10.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
20.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
30.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
40.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
50.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
60.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.1000	0.2000	0.2000
70.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.1000	0.2000	0.2000
80.	*	0.0000	0.0000	0.3000	0.2000	0.2000	0.2000	0.2000	0.2000
90.	*	0.1000	0.2000	0.2000	0.2000	0.2000	0.1000	0.2000	0.2000
100.	*	0.3000	0.2000	0.1000	0.1000	0.1000	0.1000	0.0000	0.1000
110.	*	0.2000	0.2000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
120.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
130.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
140.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
150.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
160.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000
170.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000
180.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
190.	*	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000
200.	*	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000
210.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
220.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
230.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
240.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250.	*	0.2000	0.2000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
260.	*	0.3000	0.3000	0.2000	0.1000	0.1000	0.1000	0.1000	0.1000
270.	*	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000
280.	*	0.0000	0.0000	0.2000	0.3000	0.2000	0.2000	0.2000	0.2000
290.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000
300.	*	0.0000	0.0000	0.1000	0.2000	0.2000	0.2000	0.2000	0.2000

310.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
320.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
330.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
340.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
350.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
360.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
MAX	*	0.3000	0.3000	0.3000	0.3000	0.2000	0.2000	0.2000	0.2000
DEGR.	*	100	260	80	280	60	80	60	60

THE HIGHEST CONCENTRATION OF 0.4000 PPM OCCURRED AT RECEPTOR 3.

```
Q,EPA,,F,,0,T,T,F,T,0.7,
4,4,3,4,2200,2200,2200,2200,2200,2200,2200,2200,1036.75,1036.75,1
036.66666666667,1036.75,1036.75,1036.75,1036.66666666667,1036.75,
12,12,12,12,10,10,10,10,0,0,-1200,1200,0,0,1200,-1200,-
1200,1200,0,0,1200,-1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
120,120,120,120,62,62,62,62,2,2,2,2,1600,1600,1600,1600,1,1,1,1,3
,3,3,3
'Orange Line Station',60,175,0.0,0.0,28,0.3048,1,0
'N Leg, E Side-Corner',58.0,58.0,5.9
'N Leg, E Side - 25 m',58.0,130.0,5.9
'N Leg, E Side - 50 m',58.0,212.0,5.9
'N Leg, E Side-Midblk',58.0,648.0,5.9
'N Leg, W Side-Corner',-58.0,58.0,5.9
'N Leg, W Side - 25 m',-58.0,130.0,5.9
'N Leg, W Side - 50 m',-58.0,212.0,5.9
'N Leg, W Side-Midblk',-58.0,648.0,5.9
'S Leg, E Side-Corner',58.0,-46.0,5.9
'S Leg, E Side - 25 m',58.0,-118.0,5.9
'S Leg, E Side - 50 m',58.0,-200.0,5.9
'S Leg, E Side-Midblk',58.0,-636.0,5.9
'S Leg, W Side-Corner',-58.0,-46.0,5.9
'S Leg, W Side - 25 m',-58.0,-118.0,5.9
'S Leg, W Side - 50 m',-58.0,-200.0,5.9
'S Leg, W Side-Midblk',-58.0,-636.0,5.9
'E Leg, N Side - 25 m',130.0,58.0,5.9
'E Leg, N Side - 50 m',212.0,58.0,5.9
'E Leg, N Side-Midblk',648.0,58.0,5.9
'W Leg, N Side - 25 m',-130.0,58.0,5.9
'W Leg, N Side - 50 m',-212.0,58.0,5.9
'W Leg, N Side-Midblk',-648.0,58.0,5.9
'E Leg, S Side - 25 m',130.0,-46.0,5.9
'E Leg, S Side - 50 m',212.0,-46.0,5.9
'E Leg, S Side-Midblk',648.0,-46.0,5.9
'W Leg, S Side - 25 m',-130.0,-46.0,5.9
'W Leg, S Side - 50 m',-212.0,-46.0,5.9
'W Leg, S Side-Midblk',-648.0,-46.0,5.9
'Exit 41SB Ramp 2017 NB AM',12,1,0,'CO'
1
'N Leg App - FreeFlow','AG',-24,0,-24,1200,850,2.5,0.0,67.7
2
'N Leg App - Queue','AG',-24,48,-24,1200,0.0,48.0,4
90,75,2,850,13.78,1600,1,3
1
'N Leg Dep - FreeFlow','AG',24,0,24,1200,1035,1.99,0.0,67.7
1
'S Leg App - FreeFlow','AG',24,0,24,-1200,990,3.85,0.0,67.7
2
'S Leg App - Queue','AG',24,-36,24,-1200,0.0,48.0,4
90,79,2,990,13.78,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-24,0,-24,-1200,1030,2.88,0.0,67.7
1
```

```
'E Leg App - FreeFlow','AG',0,24,1200,24,810,4.94,0.0,67.7
2
'E Leg App - Queue','AG',48,24,1200,24,0.0,48.0,4
90,68,2,810,13.78,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-18,1200,-18,135,2.07,0.0,55.7
1
'W Leg App - FreeFlow','AG',0,-18,-1200,-18,135,4.66,0.0,55.7
2
'W Leg App - Queue','AG',-48,-18,-1200,-18,0.0,36.0,3
90,78,2,135,13.78,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,24,-1200,24,585,4.95,0.0,67.7
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station RUN: Exit 41SB Ramp 2017 NB AM

DATE : 11/16/16
TIME : 14:10:11

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
		*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1.	N Leg App - FreeFlow	*	-24.0	0.0	-24.0	1200.0	*	1200.	360.	AG	850.	2.5	0.0	67.7		
2.	N Leg App - Queue	*	-24.0	48.0	-24.0	376.4	*	328.	360.	AG	123.	100.0	0.0	48.0	1.09	16.7
3.	N Leg Dep - FreeFlow	*	24.0	0.0	24.0	1200.0	*	1200.	360.	AG	1035.	2.0	0.0	67.7		
4.	S Leg App - FreeFlow	*	24.0	0.0	24.0	-1200.0	*	1200.	180.	AG	990.	3.8	0.0	67.7		
5.	S Leg App - Queue	*	24.0	-36.0	24.0	-1461.8	*	1426.	180.	AG	130.	100.0	0.0	48.0	1.99	72.4
6.	S Leg Dep - FreeFlow	*	-24.0	0.0	-24.0	-1200.0	*	1200.	180.	AG	1030.	2.9	0.0	67.7		
7.	E Leg App - FreeFlow	*	0.0	24.0	1200.0	24.0	*	1200.	90.	AG	810.	4.9	0.0	67.7		
8.	E Leg App - Queue	*	48.0	24.0	123.1	24.0	*	75.	90.	AG	112.	100.0	0.0	48.0	0.63	3.8
9.	E Leg Dep - FreeFlow	*	0.0	-18.0	1200.0	-18.0	*	1200.	90.	AG	135.	2.1	0.0	55.7		
10.	W Leg App - FreeFlow	*	0.0	-18.0	-1200.0	-18.0	*	1200.	270.	AG	135.	4.7	0.0	55.7		
11.	W Leg App - Queue	*	-48.0	-18.0	-67.2	-18.0	*	19.	270.	AG	96.	100.0	0.0	36.0	0.32	1.0
12.	W Leg Dep - FreeFlow	*	0.0	24.0	-1200.0	24.0	*	1200.	270.	AG	585.	4.9	0.0	67.7		

JOB: Orange Line Station RUN: Exit 41SB Ramp 2017 NB AM

DATE : 11/16/16
TIME : 14:10:11

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. N Leg App - Queue	* 90	75	2.0	850	1600	13.78	1	3
5. S Leg App - Queue	* 90	79	2.0	990	1600	13.78	1	3
8. E Leg App - Queue	* 90	68	2.0	810	1600	13.78	1	3
11. W Leg App - Queue	* 90	78	2.0	135	1600	13.78	1	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. N Leg, E Side-Corner	58.0	58.0	5.9
2. N Leg, E Side - 25 m	58.0	130.0	5.9
3. N Leg, E Side - 50 m	58.0	212.0	5.9
4. N Leg, E Side-Midblk	58.0	648.0	5.9
5. N Leg, W Side-Corner	-58.0	58.0	5.9
6. N Leg, W Side - 25 m	-58.0	130.0	5.9
7. N Leg, W Side - 50 m	-58.0	212.0	5.9
8. N Leg, W Side-Midblk	-58.0	648.0	5.9
9. S Leg, E Side-Corner	58.0	-46.0	5.9
10. S Leg, E Side - 25 m	58.0	-118.0	5.9
11. S Leg, E Side - 50 m	58.0	-200.0	5.9
12. S Leg, E Side-Midblk	58.0	-636.0	5.9
13. S Leg, W Side-Corner	-58.0	-46.0	5.9
14. S Leg, W Side - 25 m	-58.0	-118.0	5.9
15. S Leg, W Side - 50 m	-58.0	-200.0	5.9
16. S Leg, W Side-Midblk	-58.0	-636.0	5.9
17. E Leg, N Side - 25 m	130.0	58.0	5.9
18. E Leg, N Side - 50 m	212.0	58.0	5.9
19. E Leg, N Side-Midblk	648.0	58.0	5.9
20. W Leg, N Side - 25 m	-130.0	58.0	5.9
21. W Leg, N Side - 50 m	-212.0	58.0	5.9
22. W Leg, N Side-Midblk	-648.0	58.0	5.9
23. E Leg, S Side - 25 m	130.0	-46.0	5.9
24. E Leg, S Side - 50 m	212.0	-46.0	5.9
25. E Leg, S Side-Midblk	648.0	-46.0	5.9
26. W Leg, S Side - 25 m	-130.0	-46.0	5.9
27. W Leg, S Side - 50 m	-212.0	-46.0	5.9
28. W Leg, S Side-Midblk	-648.0	-46.0	5.9

JOB: Orange Line Station RUN: Exit 41SB Ramp 2017 NB AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10.	* 0.0000	0.0000	0.0000	0.0000	0.7000	0.7000	0.6000	0.1000	0.3000	0.2000	0.1000	0.2000	0.9000	0.5000	0.5000
20.	* 0.0000	0.0000	0.0000	0.0000	0.8000	0.7000	0.7000	0.2000	0.3000	0.2000	0.0000	0.0000	0.7000	0.2000	0.3000
30.	* 0.0000	0.0000	0.0000	0.0000	0.7000	0.7000	0.7000	0.2000	0.3000	0.1000	0.0000	0.0000	0.5000	0.1000	0.5000
40.	* 0.0000	0.0000	0.0000	0.0000	0.5000	0.5000	0.5000	0.1000	0.3000	0.1000	0.0000	0.0000	0.2000	0.5000	0.4000
50.	* 0.0000	0.0000	0.0000	0.0000	0.5000	0.5000	0.5000	0.1000	0.2000	0.1000	0.0000	0.0000	0.3000	0.6000	0.4000
60.	* 0.0000	0.0000	0.0000	0.0000	0.5000	0.5000	0.5000	0.1000	0.1000	0.1000	0.1000	0.0000	0.3000	0.5000	0.5000
70.	* 0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000	0.1000	0.1000	0.1000	0.1000	0.0000	0.4000	0.5000	0.5000
80.	* 0.1000	0.0000	0.0000	0.0000	0.5000	0.4000	0.4000	0.1000	0.1000	0.1000	0.0000	0.0000	0.5000	0.5000	0.4000
90.	* 0.2000	0.0000	0.0000	0.0000	0.7000	0.5000	0.5000	0.1000	0.1000	0.0000	0.0000	0.0000	0.5000	0.4000	0.4000
100.	* 0.4000	0.1000	0.0000	0.0000	0.7000	0.5000	0.4000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000
110.	* 0.4000	0.1000	0.1000	0.0000	0.5000	0.5000	0.5000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000
120.	* 0.5000	0.1000	0.1000	0.0000	0.5000	0.7000	0.6000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000
130.	* 0.4000	0.1000	0.1000	0.0000	0.4000	0.7000	0.6000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000
140.	* 0.4000	0.1000	0.1000	0.0000	0.4000	0.7000	0.7000	0.1000	0.0000	0.0000	0.0000	0.0000	0.5000	0.5000	0.5000
150.	* 0.4000	0.2000	0.0000	0.0000	0.6000	0.7000	0.7000	0.2000	0.0000	0.0000	0.0000	0.0000	0.5000	0.5000	0.5000
160.	* 0.4000	0.2000	0.1000	0.0000	0.6000	0.7000	0.9000	0.2000	0.0000	0.0000	0.0000	0.0000	0.6000	0.6000	0.6000
170.	* 0.7000	0.4000	0.2000	0.1000	0.8000	0.8000	1.0000	0.3000	0.3000	0.3000	0.3000	0.3000	0.7000	0.7000	0.6000
180.	* 1.1000	0.7000	0.6000	0.3000	0.6000	0.5000	0.7000	0.3000	0.7000	0.7000	0.7000	0.7000	0.5000	0.5000	0.5000
190.	* 1.1000	0.9000	0.6000	0.3000	0.2000	0.0000	0.0000	0.0000	1.0000	1.0000	1.0000	1.0000	0.1000	0.1000	0.1000
200.	* 0.7000	0.5000	0.3000	0.3000	0.1000	0.1000	0.0000	0.0000	0.9000	0.9000	0.9000	0.9000	0.0000	0.0000	0.0000
210.	* 0.6000	0.1000	0.3000	0.2000	0.1000	0.1000	0.0000	0.0000	0.8000	0.8000	0.8000	0.8000	0.0000	0.0000	0.0000
220.	* 0.4000	0.2000	0.3000	0.1000	0.1000	0.1000	0.0000	0.0000	0.7000	0.7000	0.7000	0.7000	0.0000	0.0000	0.0000
230.	* 0.2000	0.4000	0.3000	0.1000	0.1000	0.1000	0.0000	0.0000	0.6000	0.6000	0.6000	0.6000	0.0000	0.0000	0.0000
240.	* 0.3000	0.4000	0.3000	0.1000	0.1000	0.1000	0.0000	0.0000	0.6000	0.6000	0.6000	0.6000	0.0000	0.0000	0.0000
250.	* 0.3000	0.4000	0.3000	0.1000	0.2000	0.1000	0.0000	0.0000	0.6000	0.6000	0.6000	0.6000	0.0000	0.0000	0.0000
260.	* 0.4000	0.4000	0.3000	0.1000	0.2000	0.1000	0.0000	0.0000	0.5000	0.6000	0.6000	0.6000	0.0000	0.0000	0.0000
270.	* 0.5000	0.3000	0.3000	0.1000	0.2000	0.0000	0.0000	0.0000	0.6000						

```
0.6000  0.6000  0.6000  0.1000  0.0000  0.0000
 280.  *  0.3000  0.3000  0.3000  0.1000  0.1000  0.0000  0.0000  0.0000  0.6000
0.6000  0.6000  0.6000  0.1000  0.0000  0.0000
 290.  *  0.3000  0.3000  0.3000  0.1000  0.0000  0.0000  0.0000  0.0000  0.4000
0.7000  0.6000  0.6000  0.1000  0.1000  0.0000
 300.  *  0.3000  0.3000  0.3000  0.1000  0.0000  0.0000  0.0000  0.0000  0.3000
0.7000  0.6000  0.6000  0.1000  0.1000  0.0000
 310.  *  0.3000  0.3000  0.3000  0.1000  0.0000  0.0000  0.0000  0.0000  0.3000
0.6000  0.6000  0.6000  0.1000  0.0000  0.0000
 320.  *  0.4000  0.4000  0.3000  0.1000  0.0000  0.0000  0.0000  0.0000  0.3000
0.5000  0.7000  0.7000  0.1000  0.0000  0.0000
 330.  *  0.5000  0.5000  0.4000  0.2000  0.0000  0.0000  0.0000  0.0000  0.5000
0.6000  0.8000  0.8000  0.2000  0.0000  0.0000
 340.  *  0.4000  0.4000  0.3000  0.2000  0.0000  0.0000  0.0000  0.0000  0.7000
0.7000  0.8000  0.9000  0.2000  0.0000  0.0000
 350.  *  0.3000  0.3000  0.2000  0.1000  0.1000  0.1000  0.0000  0.0000  0.7000
0.7000  0.9000  1.0000  0.4000  0.1000  0.1000
 360.  *  0.1000  0.1000  0.1000  0.1000  0.4000  0.3000  0.3000  0.1000  0.5000
0.6000  0.6000  0.6000  0.7000  0.5000  0.3000

------*-------------------------------------------------------------------------
----------------------------------------
 MAX   *  1.1000  0.9000  0.6000  0.3000  0.8000  0.8000  1.0000  0.3000  1.0000
1.0000  1.0000  1.0000  0.9000  0.7000  0.6000
 DEGR. *    180     190     180     180      20     170     170     170     190
190     190     190      10     170     160
```


JOB: Orange Line Station RUN: Exit 41SB Ramp 2017 NB AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

```
WIND  * CONCENTRATION
ANGLE *     (PPM)
(DEGR)*      16      17      18      19      20      21      22      23      24
25      26      27      28

------*-------------------------------------------------------------------------
--------------------------
  10.  *  0.6000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.1000  0.1000
0.1000  0.2000  0.1000  0.1000
  20.  *  0.6000  0.0000  0.0000  0.0000  0.3000  0.0000  0.0000  0.1000  0.1000
0.1000  0.4000  0.2000  0.1000
  30.  *  0.5000  0.0000  0.0000  0.0000  0.2000  0.1000  0.0000  0.1000  0.1000
0.1000  0.3000  0.2000  0.1000
  40.  *  0.5000  0.0000  0.0000  0.0000  0.2000  0.1000  0.0000  0.1000  0.1000
0.1000  0.3000  0.2000  0.1000
  50.  *  0.4000  0.0000  0.0000  0.0000  0.2000  0.1000  0.0000  0.1000  0.1000
0.1000  0.2000  0.2000  0.1000
  60.  *  0.4000  0.0000  0.0000  0.0000  0.2000  0.1000  0.0000  0.1000  0.1000
0.1000  0.1000  0.2000  0.1000
  70.  *  0.4000  0.0000  0.0000  0.0000  0.2000  0.1000  0.1000  0.1000  0.1000
0.1000  0.3000  0.2000  0.2000
```

```
  80.  *  0.4000  0.1000  0.1000  0.1000  0.2000  0.1000  0.2000  0.1000  0.1000
0.1000  0.2000  0.1000  0.1000
  90.  *  0.4000  0.2000  0.2000  0.2000  0.4000  0.3000  0.1000  0.1000  0.1000
0.0000  0.2000  0.2000  0.0000
 100.  *  0.4000  0.3000  0.3000  0.2000  0.4000  0.2000  0.2000  0.0000  0.0000
0.0000  0.2000  0.1000  0.1000
 110.  *  0.4000  0.2000  0.2000  0.2000  0.3000  0.2000  0.3000  0.0000  0.0000
0.0000  0.4000  0.1000  0.1000
 120.  *  0.4000  0.2000  0.2000  0.2000  0.2000  0.2000  0.2000  0.0000  0.0000
0.0000  0.4000  0.1000  0.1000
 130.  *  0.4000  0.2000  0.2000  0.2000  0.3000  0.2000  0.2000  0.0000  0.0000
0.0000  0.4000  0.1000  0.1000
 140.  *  0.5000  0.1000  0.1000  0.1000  0.5000  0.2000  0.2000  0.0000  0.0000
0.0000  0.4000  0.1000  0.1000
 150.  *  0.5000  0.1000  0.1000  0.1000  0.5000  0.3000  0.2000  0.0000  0.0000
0.0000  0.4000  0.2000  0.1000
 160.  *  0.6000  0.1000  0.1000  0.1000  0.5000  0.3000  0.1000  0.0000  0.0000
0.0000  0.4000  0.2000  0.0000
 170.  *  0.6000  0.1000  0.1000  0.1000  0.5000  0.2000  0.1000  0.0000  0.0000
0.0000  0.4000  0.1000  0.0000
 180.  *  0.2000  0.4000  0.2000  0.1000  0.2000  0.1000  0.1000  0.1000  0.1000
0.0000  0.1000  0.0000  0.0000
 190.  *  0.1000  0.6000  0.3000  0.1000  0.1000  0.1000  0.1000  0.4000  0.2000
0.0000  0.0000  0.0000  0.0000
 200.  *  0.0000  0.8000  0.4000  0.1000  0.1000  0.1000  0.1000  0.5000  0.3000
0.0000  0.0000  0.0000  0.0000
 210.  *  0.0000  0.8000  0.4000  0.2000  0.1000  0.1000  0.1000  0.5000  0.3000
0.1000  0.0000  0.0000  0.0000
 220.  *  0.0000  0.7000  0.4000  0.2000  0.1000  0.1000  0.1000  0.3000  0.3000
0.1000  0.0000  0.0000  0.0000
 230.  *  0.0000  0.6000  0.2000  0.3000  0.1000  0.1000  0.1000  0.3000  0.2000
0.1000  0.0000  0.0000  0.0000
 240.  *  0.0000  0.5000  0.4000  0.3000  0.1000  0.1000  0.1000  0.3000  0.2000
0.1000  0.0000  0.0000  0.0000
 250.  *  0.0000  0.5000  0.3000  0.3000  0.2000  0.2000  0.2000  0.3000  0.1000
0.1000  0.0000  0.0000  0.0000
 260.  *  0.0000  0.4000  0.4000  0.2000  0.2000  0.2000  0.2000  0.3000  0.1000
0.1000  0.0000  0.0000  0.0000
 270.  *  0.0000  0.4000  0.4000  0.2000  0.2000  0.1000  0.1000  0.3000  0.2000
0.1000  0.1000  0.1000  0.0000
 280.  *  0.0000  0.1000  0.2000  0.2000  0.1000  0.1000  0.1000  0.3000  0.1000
0.1000  0.1000  0.1000  0.1000
 290.  *  0.0000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000  0.2000
0.2000  0.1000  0.1000  0.1000
 300.  *  0.0000  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.1000  0.1000  0.1000  0.1000
 310.  *  0.0000  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.1000  0.1000  0.1000  0.1000
 320.  *  0.0000  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.5000  0.2000
0.1000  0.1000  0.1000  0.1000
 330.  *  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.5000  0.2000
0.1000  0.1000  0.1000  0.1000
 340.  *  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000  0.1000
0.1000  0.1000  0.1000  0.1000
 350.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.1000
0.1000  0.1000  0.1000  0.1000
 360.  *  0.3000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.1000
0.1000  0.1000  0.1000  0.1000

------*-------------------------------------------------------------------------
--------------------------
 MAX   *  0.6000  0.8000  0.4000  0.3000  0.5000  0.3000  0.3000  0.5000  0.3000
0.2000  0.4000  0.2000  0.2000
```

```
 DEGR. *      10      200      200      230      140       90      110      200      200
290       20       20       70

 THE HIGHEST CONCENTRATION OF   1.1000 PPM OCCURRED AT RECEPTOR      1.
```

```
Q,EPA,,F,,0,T,T,F,T,0.7,
4,4,3,4,2200,2200,2200,2200,2200,2200,2200,2200,1036.75,1036.75,1
036.66666666667,1036.75,1036.75,1036.75,1036.66666666667,1036.75,
12,12,12,12,10,10,10,10,0,0,-1200,1200,0,0,1200,-1200,-
1200,1200,0,0,1200,-1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
120,120,120,120,62,62,62,62,2,2,2,2,1600,1600,1600,1600,1,1,1,1,3
,3,3,3
'Orange Line Station',60,175,0.0,0.0,28,0.3048,1,0
'N Leg, E Side-Corner',58.0,58.0,5.9
'N Leg, E Side - 25 m',58.0,130.0,5.9
'N Leg, E Side - 50 m',58.0,212.0,5.9
'N Leg, E Side-Midblk',58.0,648.0,5.9
'N Leg, W Side-Corner',-58.0,58.0,5.9
'N Leg, W Side - 25 m',-58.0,130.0,5.9
'N Leg, W Side - 50 m',-58.0,212.0,5.9
'N Leg, W Side-Midblk',-58.0,648.0,5.9
'S Leg, E Side-Corner',58.0,-46.0,5.9
'S Leg, E Side - 25 m',58.0,-118.0,5.9
'S Leg, E Side - 50 m',58.0,-200.0,5.9
'S Leg, E Side-Midblk',58.0,-636.0,5.9
'S Leg, W Side-Corner',-58.0,-46.0,5.9
'S Leg, W Side - 25 m',-58.0,-118.0,5.9
'S Leg, W Side - 50 m',-58.0,-200.0,5.9
'S Leg, W Side-Midblk',-58.0,-636.0,5.9
'E Leg, N Side - 25 m',130.0,58.0,5.9
'E Leg, N Side - 50 m',212.0,58.0,5.9
'E Leg, N Side-Midblk',648.0,58.0,5.9
'W Leg, N Side - 25 m',-130.0,58.0,5.9
'W Leg, N Side - 50 m',-212.0,58.0,5.9
'W Leg, N Side-Midblk',-648.0,58.0,5.9
'E Leg, S Side - 25 m',130.0,-46.0,5.9
'E Leg, S Side - 50 m',212.0,-46.0,5.9
'E Leg, S Side-Midblk',648.0,-46.0,5.9
'W Leg, S Side - 25 m',-130.0,-46.0,5.9
'W Leg, S Side - 50 m',-212.0,-46.0,5.9
'W Leg, S Side-Midblk',-648.0,-46.0,5.9
'Exit 41SB Ramp 2017 NB PM',12,1,0,'CO'
1
'N Leg App - FreeFlow','AG',-24,0,-24,1200,985,2.5,0.0,67.7
2
'N Leg App - Queue','AG',-24,48,-24,1200,0.0,48.0,4
90,70,2,985,13.78,1600,1,3
1
'N Leg Dep - FreeFlow','AG',24,0,24,1200,925,1.99,0.0,67.7
1
'S Leg App - FreeFlow','AG',24,0,24,-1200,1240,3.85,0.0,67.7
2
'S Leg App - Queue','AG',24,-36,24,-1200,0.0,48.0,4
90,80,2,1240,13.78,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-24,0,-24,-1200,1390,2.88,0.0,67.7
1
```

```
'E Leg App - FreeFlow','AG',0,24,1200,24,735,4.94,0.0,67.7
2
'E Leg App - Queue','AG',48,24,1200,24,0.0,48.0,4
90,77,2,735,13.78,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-18,1200,-18,35,2.07,0.0,55.7
1
'W Leg App - FreeFlow','AG',0,-18,-1200,-18,100,4.66,0.0,55.7
2
'W Leg App - Queue','AG',-48,-18,-1200,-18,0.0,36.0,3
90,76,2,100,13.78,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,24,-1200,24,710,4.95,0.0,67.7
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station RUN: Exit 41SB Ramp 2017 NB PM

DATE : 11/16/16
TIME : 14:16:35

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1. N Leg App - FreeFlow	*	-24.0	0.0	-24.0	1200.0	*	1200.	360.	AG	985.	2.5	0.0	67.7		
2. N Leg App - Queue	*	-24.0	48.0	-24.0	168.1	*	120.	360.	AG	115.	100.0	0.0	48.0	0.87	6.1
3. N Leg Dep - FreeFlow	*	24.0	0.0	24.0	1200.0	*	1200.	360.	AG	925.	2.0	0.0	67.7		
4. S Leg App - FreeFlow	*	24.0	0.0	24.0	-1200.0	*	1200.	180.	AG	1240.	3.8	0.0	67.7		
5. S Leg App - Queue	*	24.0	-36.0	24.0	-2326.8	*	2291.	180.	AG	131.	100.0	0.0	48.0	2.92	116.4
6. S Leg Dep - FreeFlow	*	-24.0	0.0	-24.0	-1200.0	*	1200.	180.	AG	1390.	2.9	0.0	67.7		
7. E Leg App - FreeFlow	*	0.0	24.0	1200.0	24.0	*	1200.	90.	AG	735.	4.9	0.0	67.7		
8. E Leg App - Queue	*	48.0	24.0	422.1	24.0	*	374.	90.	AG	126.	100.0	0.0	48.0	1.14	19.0
9. E Leg Dep - FreeFlow	*	0.0	-18.0	1200.0	-18.0	*	1200.	90.	AG	35.	2.1	0.0	55.7		
10. W Leg App - FreeFlow	*	0.0	-18.0	-1200.0	-18.0	*	1200.	270.	AG	100.	4.7	0.0	55.7		
11. W Leg App - Queue	*	-48.0	-18.0	-61.7	-18.0	*	14.	270.	AG	94.	100.0	0.0	36.0	0.19	0.7
12. W Leg Dep - FreeFlow	*	0.0	24.0	-1200.0	24.0	*	1200.	270.	AG	710.	4.9	0.0	67.7		

JOB: Orange Line Station RUN: Exit 41SB Ramp 2017 NB PM

DATE : 11/16/16
TIME : 14:16:35

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. N Leg App - Queue	* 90	70	2.0	985	1600	13.78	1	3
5. S Leg App - Queue	* 90	80	2.0	1240	1600	13.78	1	3
8. E Leg App - Queue	* 90	77	2.0	735	1600	13.78	1	3
11. W Leg App - Queue	* 90	76	2.0	100	1600	13.78	1	3

RECEPTOR LOCATIONS

RECEPTOR	* COORDINATES (FT) X	Y	Z
1. N Leg, E Side-Corner	* 58.0	58.0	5.9
2. N Leg, E Side - 25 m	* 58.0	130.0	5.9
3. N Leg, E Side - 50 m	* 58.0	212.0	5.9
4. N Leg, E Side-Midblk	* 58.0	648.0	5.9
5. N Leg, W Side-Corner	* -58.0	58.0	5.9
6. N Leg, W Side - 25 m	* -58.0	130.0	5.9
7. N Leg, W Side - 50 m	* -58.0	212.0	5.9
8. N Leg, W Side-Midblk	* -58.0	648.0	5.9
9. S Leg, E Side-Corner	* 58.0	-46.0	5.9
10. S Leg, E Side - 25 m	* 58.0	-118.0	5.9
11. S Leg, E Side - 50 m	* 58.0	-200.0	5.9
12. S Leg, E Side-Midblk	* 58.0	-636.0	5.9
13. S Leg, W Side-Corner	* -58.0	-46.0	5.9
14. S Leg, W Side - 25 m	* -58.0	-118.0	5.9
15. S Leg, W Side - 50 m	* -58.0	-200.0	5.9
16. S Leg, W Side-Midblk	* -58.0	-636.0	5.9
17. E Leg, N Side - 25 m	* 130.0	58.0	5.9
18. E Leg, N Side - 50 m	* 212.0	58.0	5.9
19. E Leg, N Side-Midblk	* 648.0	58.0	5.9
20. W Leg, N Side - 25 m	* -130.0	58.0	5.9
21. W Leg, N Side - 50 m	* -212.0	58.0	5.9
22. W Leg, N Side-Midblk	* -648.0	58.0	5.9
23. E Leg, S Side - 25 m	* 130.0	-46.0	5.9
24. E Leg, S Side - 50 m	* 212.0	-46.0	5.9
25. E Leg, S Side-Midblk	* 648.0	-46.0	5.9
26. W Leg, S Side - 25 m	* -130.0	-46.0	5.9
27. W Leg, S Side - 50 m	* -212.0	-46.0	5.9
28. W Leg, S Side-Midblk	* -648.0	-46.0	5.9

JOB: Orange Line Station RUN: Exit 41SB Ramp 2017 NB PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10.	* 0.0000	0.0000	0.0000	0.0000	0.5000	0.4000	0.2000	0.1000	0.3000	0.2000	0.2000	0.3000	0.8000	0.4000	0.4000
20.	* 0.0000	0.0000	0.0000	0.0000	0.6000	0.3000	0.2000	0.1000	0.4000	0.3000	0.1000	0.1000	0.7000	0.2000	0.4000
30.	* 0.0000	0.0000	0.0000	0.0000	0.5000	0.3000	0.1000	0.1000	0.4000	0.3000	0.1000	0.0000	0.5000	0.3000	0.6000
40.	* 0.0000	0.0000	0.0000	0.0000	0.5000	0.3000	0.1000	0.1000	0.4000	0.3000	0.1000	0.0000	0.1000	0.5000	0.6000
50.	* 0.0000	0.0000	0.0000	0.0000	0.5000	0.4000	0.1000	0.1000	0.4000	0.3000	0.1000	0.0000	0.3000	0.7000	0.5000
60.	* 0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.1000	0.1000	0.4000	0.3000	0.1000	0.0000	0.4000	0.7000	0.5000
70.	* 0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.1000	0.1000	0.4000	0.2000	0.0000	0.0000	0.6000	0.7000	0.5000
80.	* 0.2000	0.0000	0.0000	0.0000	0.6000	0.4000	0.1000	0.1000	0.3000	0.1000	0.0000	0.0000	0.6000	0.6000	0.4000
90.	* 0.5000	0.0000	0.0000	0.0000	0.8000	0.4000	0.1000	0.1000	0.2000	0.0000	0.0000	0.0000	0.6000	0.4000	0.4000
100.	* 0.8000	0.2000	0.0000	0.0000	1.0000	0.6000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000
110.	* 0.8000	0.3000	0.1000	0.0000	0.6000	0.7000	0.3000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000
120.	* 0.7000	0.3000	0.2000	0.0000	0.5000	0.7000	0.3000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000
130.	* 0.6000	0.3000	0.1000	0.0000	0.5000	0.7000	0.4000	0.1000	0.0000	0.0000	0.0000	0.0000	0.5000	0.5000	0.5000
140.	* 0.5000	0.3000	0.2000	0.0000	0.4000	0.6000	0.4000	0.1000	0.0000	0.0000	0.0000	0.0000	0.5000	0.6000	0.6000
150.	* 0.5000	0.3000	0.1000	0.0000	0.6000	0.7000	0.4000	0.2000	0.0000	0.0000	0.0000	0.0000	0.6000	0.6000	0.6000
160.	* 0.4000	0.3000	0.1000	0.1000	0.7000	0.9000	0.7000	0.2000	0.0000	0.0000	0.0000	0.0000	0.7000	0.7000	0.7000
170.	* 0.7000	0.5000	0.2000	0.2000	0.8000	1.0000	0.9000	0.2000	0.3000	0.3000	0.3000	0.3000	0.8000	0.8000	0.8000
180.	* 1.2000	0.9000	0.7000	0.4000	0.8000	0.8000	0.6000	0.3000	1.0000	1.0000	0.9000	0.8000	0.6000	0.6000	0.5000
190.	* 1.1000	1.0000	0.6000	0.3000	0.3000	0.2000	0.1000	0.0000	1.2000	1.2000	1.2000	1.2000	0.2000	0.2000	0.2000
200.	* 0.9000	0.4000	0.4000	0.2000	0.1000	0.1000	0.0000	0.0000	1.1000	1.1000	1.1000	1.0000	0.0000	0.0000	0.0000
210.	* 0.5000	0.2000	0.4000	0.2000	0.1000	0.1000	0.0000	0.0000	0.8000	0.8000	0.8000	0.8000	0.0000	0.0000	0.0000
220.	* 0.5000	0.2000	0.4000	0.2000	0.1000	0.1000	0.0000	0.0000	0.8000	0.8000	0.8000	0.8000	0.0000	0.0000	0.0000
230.	* 0.2000	0.5000	0.4000	0.2000	0.1000	0.1000	0.0000	0.0000	0.7000	0.7000	0.7000	0.7000	0.0000	0.0000	0.0000
240.	* 0.3000	0.5000	0.4000	0.2000	0.2000	0.1000	0.1000	0.0000	0.6000	0.6000	0.6000	0.6000	0.0000	0.0000	0.0000
250.	* 0.3000	0.4000	0.3000	0.1000	0.2000	0.1000	0.1000	0.0000	0.6000	0.6000	0.6000	0.6000	0.0000	0.0000	0.0000
260.	* 0.5000	0.4000	0.1000	0.1000	0.2000	0.1000	0.0000	0.0000	0.6000	0.6000	0.6000	0.6000	0.0000	0.0000	0.0000
270.	* 0.4000	0.3000	0.1000	0.1000	0.2000	0.0000	0.0000	0.0000	0.6000						

```
0.6000  0.6000  0.6000  0.1000  0.0000  0.0000
 280.  *  0.4000  0.3000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.6000
0.7000  0.6000  0.6000  0.1000  0.1000  0.0000
 290.  *  0.3000  0.2000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.5000
0.7000  0.6000  0.6000  0.1000  0.1000  0.0000
 300.  *  0.4000  0.3000  0.2000  0.2000  0.0000  0.0000  0.0000  0.0000  0.3000
0.7000  0.6000  0.6000  0.1000  0.1000  0.0000
 310.  *  0.4000  0.2000  0.2000  0.2000  0.0000  0.0000  0.0000  0.0000  0.4000
0.8000  0.7000  0.7000  0.1000  0.1000  0.0000
 320.  *  0.4000  0.2000  0.2000  0.2000  0.0000  0.0000  0.0000  0.0000  0.2000
0.7000  0.8000  0.8000  0.1000  0.1000  0.0000
 330.  *  0.3000  0.2000  0.2000  0.2000  0.0000  0.0000  0.0000  0.0000  0.5000
0.7000  0.8000  0.8000  0.1000  0.0000  0.0000
 340.  *  0.2000  0.2000  0.2000  0.2000  0.0000  0.0000  0.0000  0.0000  0.5000
0.7000  0.9000  0.9000  0.2000  0.0000  0.0000
 350.  *  0.2000  0.2000  0.2000  0.2000  0.1000  0.1000  0.1000  0.0000  0.6000
0.6000  0.8000  1.1000  0.2000  0.0000  0.1000
 360.  *  0.1000  0.1000  0.1000  0.1000  0.2000  0.1000  0.1000  0.1000  0.5000
0.4000  0.4000  0.6000  0.5000  0.3000  0.3000

------*-------------------------------------------------------------------------
----------------------------------------
 MAX   *  1.2000  1.0000  0.7000  0.4000  1.0000  1.0000  0.9000  0.3000  1.2000
1.2000  1.2000  1.2000  0.8000  0.8000  0.8000
 DEGR. *    180     190     180     180     100     170     170     180     190
190     190     190      10     170     170
```


JOB: Orange Line Station RUN: Exit 41SB Ramp 2017 NB PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

```
WIND  * CONCENTRATION
ANGLE *     (PPM)
(DEGR)*      16      17      18      19      20      21      22      23      24
25      26      27      28

------*-------------------------------------------------------------------------
--------------------------
  10.  *  0.6000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.3000  0.3000
0.1000  0.2000  0.1000  0.1000
  20.  *  0.7000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.4000  0.4000
0.1000  0.3000  0.1000  0.1000
  30.  *  0.7000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.4000  0.4000
0.1000  0.3000  0.1000  0.1000
  40.  *  0.6000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.4000  0.4000
0.1000  0.2000  0.2000  0.1000
  50.  *  0.5000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.4000  0.4000
0.1000  0.2000  0.2000  0.1000
  60.  *  0.4000  0.0000  0.0000  0.0000  0.2000  0.1000  0.0000  0.4000  0.4000
0.1000  0.2000  0.2000  0.1000
  70.  *  0.4000  0.0000  0.0000  0.0000  0.2000  0.1000  0.0000  0.4000  0.3000
0.1000  0.3000  0.3000  0.1000
```

```
  80.  *  0.4000  0.2000  0.2000  0.1000  0.3000  0.2000  0.1000  0.3000  0.2000
0.1000  0.4000  0.3000  0.2000
  90.  *  0.4000  0.5000  0.4000  0.2000  0.5000  0.5000  0.3000  0.1000  0.1000
0.0000  0.5000  0.3000  0.1000
 100.  *  0.4000  0.7000  0.6000  0.2000  0.5000  0.5000  0.2000  0.0000  0.0000
0.0000  0.3000  0.1000  0.1000
 110.  *  0.4000  0.8000  0.7000  0.2000  0.3000  0.4000  0.3000  0.0000  0.0000
0.0000  0.4000  0.1000  0.1000
 120.  *  0.4000  0.7000  0.7000  0.2000  0.2000  0.2000  0.3000  0.0000  0.0000
0.0000  0.4000  0.2000  0.1000
 130.  *  0.5000  0.6000  0.6000  0.1000  0.4000  0.4000  0.2000  0.0000  0.0000
0.0000  0.4000  0.3000  0.1000
 140.  *  0.6000  0.5000  0.5000  0.1000  0.5000  0.4000  0.2000  0.0000  0.0000
0.0000  0.4000  0.3000  0.1000
 150.  *  0.6000  0.5000  0.5000  0.1000  0.5000  0.5000  0.2000  0.0000  0.0000
0.0000  0.4000  0.4000  0.1000
 160.  *  0.7000  0.4000  0.4000  0.1000  0.5000  0.5000  0.2000  0.0000  0.0000
0.0000  0.4000  0.4000  0.1000
 170.  *  0.7000  0.4000  0.4000  0.1000  0.5000  0.3000  0.1000  0.0000  0.0000
0.0000  0.4000  0.2000  0.0000
 180.  *  0.4000  0.8000  0.6000  0.1000  0.2000  0.2000  0.1000  0.2000  0.1000
0.0000  0.1000  0.1000  0.0000
 190.  *  0.1000  0.9000  0.7000  0.1000  0.1000  0.1000  0.1000  0.5000  0.3000
0.0000  0.0000  0.0000  0.0000
 200.  *  0.0000  0.9000  0.8000  0.2000  0.1000  0.1000  0.1000  0.5000  0.4000
0.1000  0.0000  0.0000  0.0000
 210.  *  0.0000  0.9000  0.9000  0.2000  0.1000  0.1000  0.1000  0.5000  0.4000
0.1000  0.0000  0.0000  0.0000
 220.  *  0.0000  0.9000  0.8000  0.2000  0.1000  0.1000  0.1000  0.4000  0.3000
0.1000  0.0000  0.0000  0.0000
 230.  *  0.0000  0.8000  0.7000  0.2000  0.1000  0.1000  0.1000  0.4000  0.3000
0.1000  0.0000  0.0000  0.0000
 240.  *  0.0000  0.5000  0.9000  0.3000  0.2000  0.2000  0.2000  0.4000  0.3000
0.1000  0.0000  0.0000  0.0000
 250.  *  0.0000  0.5000  0.7000  0.4000  0.2000  0.2000  0.2000  0.4000  0.2000
0.1000  0.0000  0.0000  0.0000
 260.  *  0.0000  0.4000  0.7000  0.4000  0.2000  0.2000  0.2000  0.4000  0.2000
0.1000  0.0000  0.0000  0.0000
 270.  *  0.0000  0.4000  0.5000  0.4000  0.2000  0.2000  0.2000  0.3000  0.3000
0.1000  0.1000  0.1000  0.0000
 280.  *  0.0000  0.1000  0.1000  0.2000  0.1000  0.1000  0.1000  0.3000  0.2000
0.3000  0.1000  0.1000  0.1000
 290.  *  0.0000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.1000  0.1000  0.1000
 300.  *  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.4000
0.1000  0.1000  0.1000  0.1000
 310.  *  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000  0.5000
0.1000  0.1000  0.1000  0.1000
 320.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000  0.4000
0.1000  0.1000  0.1000  0.1000
 330.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.5000  0.4000
0.1000  0.1000  0.1000  0.1000
 340.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000  0.4000
0.1000  0.1000  0.1000  0.1000
 350.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.1000  0.1000  0.1000  0.1000
 360.  *  0.3000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.1000  0.1000  0.1000  0.1000

------*-------------------------------------------------------------------------
--------------------------
 MAX   *  0.7000  0.9000  0.9000  0.4000  0.5000  0.5000  0.3000  0.5000  0.5000
0.3000  0.5000  0.4000  0.2000
```

DEGR. * 20 190 210 250 90 90 90 190 310 280 90 150 80

THE HIGHEST CONCENTRATION OF 1.2000 PPM OCCURRED AT RECEPTOR 1.

```
Q,EPA,,F,,0,T,T,F,T,0.7,
3,2,4,3,2200,2200,2200,2200,2200,2200,2200,2200,1036.8,1036.8,103
6.8,1036.8,1036.8,1036.8,1036.8,1036.8,12,12,12,12,10,10,10,10,0,
0,-1200,1200,0,0,1200,-1200,-1200,1200,0,0,1200,-
1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
120,120,120,120,62,62,62,62,2,2,2,2,1600,1600,1600,1600,1,1,1,1,3
,3,3,3
'Orange Line Station CAL3QHC Run',60,175,0.0,0.0,28,0.3048,1,0
'N Leg, E Side-Corner',46.0,46.0,5.9
'N Leg, E Side - 25 m',46.0,118.0,5.9
'N Leg, E Side - 50 m',46.0,200.0,5.9
'N Leg, E Side-Midblk',46.0,636.0,5.9
'N Leg, W Side-Corner',-34.0,46.0,5.9
'N Leg, W Side - 25 m',-34.0,118.0,5.9
'N Leg, W Side - 50 m',-34.0,200.0,5.9
'N Leg, W Side-Midblk',-34.0,636.0,5.9
'S Leg, E Side-Corner',46.0,-58.0,5.9
'S Leg, E Side - 25 m',46.0,-130.0,5.9
'S Leg, E Side - 50 m',46.0,-212.0,5.9
'S Leg, E Side-Midblk',46.0,-648.0,5.9
'S Leg, W Side-Corner',-34.0,-58.0,5.9
'S Leg, W Side - 25 m',-34.0,-130.0,5.9
'S Leg, W Side - 50 m',-34.0,-212.0,5.9
'S Leg, W Side-Midblk',-34.0,-648.0,5.9
'E Leg, N Side - 25 m',118.0,46.0,5.9
'E Leg, N Side - 50 m',200.0,46.0,5.9
'E Leg, N Side-Midblk',636.0,46.0,5.9
'W Leg, N Side - 25 m',-106.0,46.0,5.9
'W Leg, N Side - 50 m',-188.0,46.0,5.9
'W Leg, N Side-Midblk',-624.0,46.0,5.9
'E Leg, S Side - 25 m',118.0,-58.0,5.9
'E Leg, S Side - 50 m',200.0,-58.0,5.9
'E Leg, S Side-Midblk',636.0,-58.0,5.9
'W Leg, S Side - 25 m',-106.0,-58.0,5.9
'W Leg, S Side - 50 m',-188.0,-58.0,5.9
'W Leg, S Side-Midblk',-624.0,-58.0,5.9
'US RT1 and Lambert 2017 NB AM',12,1,0,'CO'
1
'N Leg App - FreeFlow','AG',-12,0,-12,1200,240,2.18,0.0,43.7
2
'N Leg App - Queue','AG',-12,36,-12,1200,0.0,24.0,2
100,81,2,240,13.78,1600,1,3
1
'N Leg Dep - FreeFlow','AG',18,0,18,1200,490,2.31,0.0,55.7
1
'S Leg App - FreeFlow','AG',18,0,18,-1200,435,4.15,0.0,55.7
2
'S Leg App - Queue','AG',18,-48,18,-1200,0.0,36.0,3
100,81,2,435,13.78,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-12,0,-12,-1200,140,4.39,0.0,43.7
1
```

```
'E Leg App - FreeFlow','AG',0,18,1200,18,360,3.14,0.0,55.7
2
'E Leg App - Queue','AG',36,18,1200,18,0.0,36.0,3
100,92,2,360,13.78,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-24,1200,-24,525,2.88,0.0,67.7
1
'W Leg App - FreeFlow','AG',0,-24,-1200,-24,470,2.51,0.0,67.7
2
'W Leg App - Queue','AG',-24,-24,-1200,-24,0.0,48.0,4
100,92,2,470,13.78,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,18,-1200,18,350,2.36,0.0,55.7
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2017 NB AM

DATE : 11/16/16
TIME : 14:17:44

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1. N Leg App - FreeFlow	*	-12.0	0.0	-12.0	1200.0	*	1200.	360.	AG	240.	2.2	0.0	43.7		
2. N Leg App - Queue	*	-12.0	36.0	-12.0	89.1	*	53.	360.	AG	60.	100.0	0.0	24.0	0.50	2.7
3. N Leg Dep - FreeFlow	*	18.0	0.0	18.0	1200.0	*	1200.	360.	AG	490.	2.3	0.0	55.7		
4. S Leg App - FreeFlow	*	18.0	0.0	18.0	-1200.0	*	1200.	180.	AG	435.	4.2	0.0	55.7		
5. S Leg App - Queue	*	18.0	-48.0	18.0	-112.3	*	64.	180.	AG	90.	100.0	0.0	36.0	0.60	3.3
6. S Leg Dep - FreeFlow	*	-12.0	0.0	-12.0	-1200.0	*	1200.	180.	AG	140.	4.4	0.0	43.7		
7. E Leg App - FreeFlow	*	0.0	18.0	1200.0	18.0	*	1200.	90.	AG	360.	3.1	0.0	55.7		
8. E Leg App - Queue	*	36.0	18.0	721.0	18.0	*	685.	90.	AG	102.	100.0	0.0	36.0	1.88	34.8
9. E Leg Dep - FreeFlow	*	0.0	-24.0	1200.0	-24.0	*	1200.	90.	AG	525.	2.9	0.0	67.7		
10. W Leg App - FreeFlow	*	0.0	-24.0	-1200.0	-24.0	*	1200.	270.	AG	470.	2.5	0.0	67.7		
11. W Leg App - Queue	*	-24.0	-24.0	-676.1	-24.0	*	652.	270.	AG	136.	100.0	0.0	48.0	1.83	33.1
12. W Leg Dep - FreeFlow	*	0.0	18.0	-1200.0	18.0	*	1200.	270.	AG	350.	2.4	0.0	55.7		

JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2017 NB AM

DATE : 11/16/16
TIME : 14:17:44

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. N Leg App - Queue	*	100	81	2.0	240	1600	13.78	1	3
5. S Leg App - Queue	*	100	81	2.0	435	1600	13.78	1	3
8. E Leg App - Queue	*	100	92	2.0	360	1600	13.78	1	3
11. W Leg App - Queue	*	100	92	2.0	470	1600	13.78	1	3

RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (FT) X	Y	Z	*
1. N Leg, E Side-Corner	*	46.0	46.0	5.9	*
2. N Leg, E Side - 25 m	*	46.0	118.0	5.9	*
3. N Leg, E Side - 50 m	*	46.0	200.0	5.9	*
4. N Leg, E Side-Midblk	*	46.0	636.0	5.9	*
5. N Leg, W Side-Corner	*	-34.0	46.0	5.9	*
6. N Leg, W Side - 25 m	*	-34.0	118.0	5.9	*
7. N Leg, W Side - 50 m	*	-34.0	200.0	5.9	*
8. N Leg, W Side-Midblk	*	-34.0	636.0	5.9	*
9. S Leg, E Side-Corner	*	46.0	-58.0	5.9	*
10. S Leg, E Side - 25 m	*	46.0	-130.0	5.9	*
11. S Leg, E Side - 50 m	*	46.0	-212.0	5.9	*
12. S Leg, E Side-Midblk	*	46.0	-648.0	5.9	*
13. S Leg, W Side-Corner	*	-34.0	-58.0	5.9	*
14. S Leg, W Side - 25 m	*	-34.0	-130.0	5.9	*
15. S Leg, W Side - 50 m	*	-34.0	-212.0	5.9	*
16. S Leg, W Side-Midblk	*	-34.0	-648.0	5.9	*
17. E Leg, N Side - 25 m	*	118.0	46.0	5.9	*
18. E Leg, N Side - 50 m	*	200.0	46.0	5.9	*
19. E Leg, N Side-Midblk	*	636.0	46.0	5.9	*
20. W Leg, N Side - 25 m	*	-106.0	46.0	5.9	*
21. W Leg, N Side - 50 m	*	-188.0	46.0	5.9	*
22. W Leg, N Side-Midblk	*	-624.0	46.0	5.9	*
23. E Leg, S Side - 25 m	*	118.0	-58.0	5.9	*
24. E Leg, S Side - 50 m	*	200.0	-58.0	5.9	*
25. E Leg, S Side-Midblk	*	636.0	-58.0	5.9	*
26. W Leg, S Side - 25 m	*	-106.0	-58.0	5.9	*
27. W Leg, S Side - 50 m	*	-188.0	-58.0	5.9	*
28. W Leg, S Side-Midblk	*	-624.0	-58.0	5.9	*

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10.	* 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2000	0.1000	0.1000	0.0000	0.4000	0.1000	0.1000
20.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.2000	0.1000	0.1000	0.0000	0.2000	0.1000	0.3000
30.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.2000	0.1000	0.1000	0.0000	0.1000	0.2000	0.3000
40.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.3000	0.1000	0.1000	0.0000	0.2000	0.3000	0.2000
50.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.3000	0.1000	0.1000	0.0000	0.1000	0.3000	0.1000
60.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.3000	0.2000	0.1000	0.0000	0.2000	0.4000	0.1000
70.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.4000	0.1000	0.1000	0.0000	0.4000	0.3000	0.1000
80.	* 0.1000	0.0000	0.0000	0.0000	0.3000	0.0000	0.0000	0.0000	0.3000	0.1000	0.0000	0.0000	0.4000	0.1000	0.0000
90.	* 0.5000	0.1000	0.0000	0.0000	0.6000	0.1000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.4000	0.0000	0.0000
100.	* 0.6000	0.2000	0.0000	0.0000	0.7000	0.2000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000
110.	* 0.6000	0.2000	0.1000	0.0000	0.4000	0.2000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000
120.	* 0.5000	0.2000	0.1000	0.0000	0.2000	0.2000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000
130.	* 0.4000	0.2000	0.1000	0.0000	0.0000	0.2000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000
140.	* 0.3000	0.2000	0.1000	0.0000	0.0000	0.2000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.1000	0.1000
150.	* 0.3000	0.2000	0.1000	0.1000	0.1000	0.2000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
160.	* 0.3000	0.1000	0.1000	0.0000	0.2000	0.2000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
170.	* 0.3000	0.1000	0.1000	0.0000	0.3000	0.4000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
180.	* 0.5000	0.2000	0.1000	0.1000	0.2000	0.1000	0.1000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
190.	* 0.4000	0.3000	0.1000	0.1000	0.2000	0.2000	0.1000	0.1000	0.2000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
200.	* 0.3000	0.1000	0.2000	0.2000	0.3000	0.2000	0.1000	0.1000	0.3000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
210.	* 0.1000	0.1000	0.2000	0.2000	0.3000	0.2000	0.1000	0.1000	0.3000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
220.	* 0.2000	0.3000	0.1000	0.1000	0.3000	0.2000	0.1000	0.1000	0.4000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
230.	* 0.2000	0.3000	0.2000	0.0000	0.3000	0.2000	0.2000	0.0000	0.4000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
240.	* 0.3000	0.3000	0.2000	0.0000	0.4000	0.2000	0.2000	0.0000	0.4000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
250.	* 0.4000	0.2000	0.1000	0.0000	0.4000	0.2000	0.1000	0.0000	0.4000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
260.	* 0.5000	0.1000	0.0000	0.0000	0.4000	0.1000	0.0000	0.0000	0.5000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000
270.	* 0.3000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.8000						

```
0.2000  0.1000  0.1000  0.5000  0.1000  0.0000
 280.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.9000
0.3000  0.2000  0.1000  0.8000  0.2000  0.1000
 290.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.6000
0.5000  0.3000  0.1000  0.8000  0.3000  0.1000
 300.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000
0.5000  0.3000  0.1000  0.7000  0.3000  0.2000
 310.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000
0.5000  0.3000  0.1000  0.5000  0.2000  0.2000
 320.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000
0.5000  0.3000  0.2000  0.4000  0.2000  0.2000
 330.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000
0.4000  0.2000  0.2000  0.4000  0.2000  0.2000
 340.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.3000  0.3000  0.2000  0.4000  0.2000  0.1000
 350.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.2000
0.2000  0.2000  0.1000  0.4000  0.2000  0.1000
 360.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000
0.2000  0.3000  0.1000  0.3000  0.1000  0.1000

------*-------------------------------------------------------------------------
----------------------------------------
 MAX   *  0.6000  0.3000  0.2000  0.2000  0.7000  0.4000  0.2000  0.1000  0.9000
0.5000  0.3000  0.2000  0.8000  0.4000  0.3000
 DEGR. *    100     190     200     200     100     170     230     140     280
290     290     320     280      60      20
```


JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2017 NB AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

```
WIND  * CONCENTRATION
ANGLE *     (PPM)
(DEGR)*      16      17      18      19      20      21      22      23      24
25      26      27      28

------*-------------------------------------------------------------------------
--------------------------
  10.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.4000  0.4000  0.4000
  20.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.4000  0.4000  0.4000
  30.  *  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.4000  0.4000  0.4000
  40.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.2000  0.4000  0.4000  0.4000
  50.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.2000  0.5000  0.5000  0.5000
  60.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.1000  0.5000  0.5000  0.7000
  70.  *  0.0000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.4000  0.3000
0.1000  0.5000  0.7000  0.8000
```

```
  80.  *  0.0000  0.1000  0.1000  0.0000  0.2000  0.1000  0.0000  0.3000  0.3000
0.1000  0.5000  0.6000  0.9000
  90.  *  0.0000  0.5000  0.4000  0.2000  0.4000  0.2000  0.2000  0.2000  0.2000
0.1000  0.4000  0.3000  0.6000
 100.  *  0.0000  0.6000  0.6000  0.3000  0.3000  0.3000  0.4000  0.0000  0.0000
0.0000  0.1000  0.1000  0.1000
 110.  *  0.0000  0.6000  0.6000  0.4000  0.1000  0.3000  0.4000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
 120.  *  0.0000  0.5000  0.5000  0.5000  0.1000  0.3000  0.4000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 130.  *  0.0000  0.4000  0.4000  0.4000  0.3000  0.3000  0.3000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 140.  *  0.1000  0.3000  0.3000  0.3000  0.3000  0.3000  0.3000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 150.  *  0.1000  0.3000  0.3000  0.3000  0.3000  0.3000  0.3000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 160.  *  0.1000  0.3000  0.3000  0.3000  0.3000  0.3000  0.3000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 170.  *  0.1000  0.3000  0.3000  0.3000  0.3000  0.3000  0.3000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 180.  *  0.0000  0.3000  0.3000  0.3000  0.3000  0.3000  0.3000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 190.  *  0.0000  0.3000  0.3000  0.3000  0.3000  0.3000  0.3000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 200.  *  0.0000  0.3000  0.3000  0.3000  0.3000  0.3000  0.2000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 210.  *  0.0000  0.4000  0.3000  0.3000  0.3000  0.3000  0.2000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 220.  *  0.0000  0.4000  0.3000  0.3000  0.3000  0.3000  0.1000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 230.  *  0.0000  0.5000  0.4000  0.4000  0.3000  0.3000  0.1000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 240.  *  0.0000  0.5000  0.5000  0.5000  0.4000  0.3000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 250.  *  0.0000  0.6000  0.7000  0.6000  0.4000  0.4000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 260.  *  0.0000  0.5000  0.7000  0.7000  0.4000  0.4000  0.1000  0.2000  0.2000
0.0000  0.1000  0.1000  0.0000
 270.  *  0.0000  0.3000  0.4000  0.6000  0.1000  0.1000  0.0000  0.4000  0.4000
0.3000  0.5000  0.5000  0.1000
 280.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.4000  0.3000
0.4000  0.8000  0.8000  0.2000
 290.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.4000  0.8000  0.8000  0.3000
 300.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.3000
0.3000  0.7000  0.7000  0.4000
 310.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.3000
0.3000  0.5000  0.5000  0.3000
 320.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.3000
0.3000  0.4000  0.4000  0.4000
 330.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.4000  0.4000  0.4000
 340.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.4000  0.4000  0.4000
 350.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.4000  0.4000  0.4000
 360.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.4000  0.4000  0.4000

------*-------------------------------------------------------------------------
--------------------------
 MAX   *  0.2000  0.6000  0.7000  0.7000  0.4000  0.4000  0.4000  0.4000  0.4000
0.4000  0.8000  0.8000  0.9000
```

DEGR. * 30 100 260 260 90 250 100 70 270 280 280 280 80

THE HIGHEST CONCENTRATION OF 0.9000 PPM OCCURRED AT RECEPTOR 28.

```
Q,EPA,,F,,0,T,T,F,T,0.7,
3,2,4,3,2200,2200,2200,2200,2200,2200,2200,2200,1036.8,1036.8,103
6.8,1036.8,1036.8,1036.8,1036.8,1036.8,12,12,12,12,10,10,10,10,0,
0,-1200,1200,0,0,1200,-1200,-1200,1200,0,0,1200,-
1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
120,120,120,120,62,62,62,62,2,2,2,2,1600,1600,1600,1600,1,1,1,1,3
,3,3,3
'Orange Line Station CAL3QHC Run',60,175,0.0,0.0,28,0.3048,1,0
'N Leg, E Side-Corner',46.0,46.0,5.9
'N Leg, E Side - 25 m',46.0,118.0,5.9
'N Leg, E Side - 50 m',46.0,200.0,5.9
'N Leg, E Side-Midblk',46.0,636.0,5.9
'N Leg, W Side-Corner',-34.0,46.0,5.9
'N Leg, W Side - 25 m',-34.0,118.0,5.9
'N Leg, W Side - 50 m',-34.0,200.0,5.9
'N Leg, W Side-Midblk',-34.0,636.0,5.9
'S Leg, E Side-Corner',46.0,-58.0,5.9
'S Leg, E Side - 25 m',46.0,-130.0,5.9
'S Leg, E Side - 50 m',46.0,-212.0,5.9
'S Leg, E Side-Midblk',46.0,-648.0,5.9
'S Leg, W Side-Corner',-34.0,-58.0,5.9
'S Leg, W Side - 25 m',-34.0,-130.0,5.9
'S Leg, W Side - 50 m',-34.0,-212.0,5.9
'S Leg, W Side-Midblk',-34.0,-648.0,5.9
'E Leg, N Side - 25 m',118.0,46.0,5.9
'E Leg, N Side - 50 m',200.0,46.0,5.9
'E Leg, N Side-Midblk',636.0,46.0,5.9
'W Leg, N Side - 25 m',-106.0,46.0,5.9
'W Leg, N Side - 50 m',-188.0,46.0,5.9
'W Leg, N Side-Midblk',-624.0,46.0,5.9
'E Leg, S Side - 25 m',118.0,-58.0,5.9
'E Leg, S Side - 50 m',200.0,-58.0,5.9
'E Leg, S Side-Midblk',636.0,-58.0,5.9
'W Leg, S Side - 25 m',-106.0,-58.0,5.9
'W Leg, S Side - 50 m',-188.0,-58.0,5.9
'W Leg, S Side-Midblk',-624.0,-58.0,5.9
'US RT1 and Lambert 2017 NB PM',12,1,0,'CO'
1
'N Leg App - FreeFlow','AG',-12,0,-12,1200,150,2.18,0.0,43.7
2
'N Leg App - Queue','AG',-12,36,-12,1200,0.0,24.0,2
100,90,2,150,13.78,1600,1,3
1
'N Leg Dep - FreeFlow','AG',18,0,18,1200,515,2.31,0.0,55.7
1
'S Leg App - FreeFlow','AG',18,0,18,-1200,945,4.15,0.0,55.7
2
'S Leg App - Queue','AG',18,-48,18,-1200,0.0,36.0,3
100,74,2,945,13.78,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-12,0,-12,-1200,405,4.39,0.0,43.7
1
```

```
'E Leg App - FreeFlow','AG',0,18,1200,18,680,3.14,0.0,55.7
2
'E Leg App - Queue','AG',36,18,1200,18,0.0,36.0,3
100,92,2,680,13.78,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-24,1200,-24,1035,2.88,0.0,67.7
1
'W Leg App - FreeFlow','AG',0,-24,-1200,-24,1050,2.51,0.0,67.7
2
'W Leg App - Queue','AG',-24,-24,-1200,-24,0.0,48.0,4
100,92,2,1050,13.78,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,18,-1200,18,870,2.36,0.0,55.7
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2017 NB PM

DATE : 11/16/16
TIME : 14:19:16

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1. N Leg App - FreeFlow	*	-12.0	0.0	-12.0	1200.0	*	1200.	360.	AG	150.	2.2	0.0	43.7		
2. N Leg App - Queue	*	-12.0	36.0	-12.0	83.7	*	48.	360.	AG	67.	100.0	0.0	24.0	0.78	2.4
3. N Leg Dep - FreeFlow	*	18.0	0.0	18.0	1200.0	*	1200.	360.	AG	515.	2.3	0.0	55.7		
4. S Leg App - FreeFlow	*	18.0	0.0	18.0	-1200.0	*	1200.	180.	AG	945.	4.2	0.0	55.7		
5. S Leg App - Queue	*	18.0	-48.0	18.0	-210.4	*	162.	180.	AG	82.	100.0	0.0	36.0	0.89	8.2
6. S Leg Dep - FreeFlow	*	-12.0	0.0	-12.0	-1200.0	*	1200.	180.	AG	405.	4.4	0.0	43.7		
7. E Leg App - FreeFlow	*	0.0	18.0	1200.0	18.0	*	1200.	90.	AG	680.	3.1	0.0	55.7		
8. E Leg App - Queue	*	36.0	18.0	1882.5	18.0	*	1846.	90.	AG	102.	100.0	0.0	36.0	3.53	93.8
9. E Leg Dep - FreeFlow	*	0.0	-24.0	1200.0	-24.0	*	1200.	90.	AG	1035.	2.9	0.0	67.7		
10. W Leg App - FreeFlow	*	0.0	-24.0	-1200.0	-24.0	*	1200.	270.	AG	1050.	2.5	0.0	67.7		
11. W Leg App - Queue	*	-24.0	-24.0	-2264.9	-24.0	*	2241.	270.	AG	136.	100.0	0.0	48.0	4.09	113.8
12. W Leg Dep - FreeFlow	*	0.0	18.0	-1200.0	18.0	*	1200.	270.	AG	870.	2.4	0.0	55.7		

JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2017 NB PM

DATE : 11/16/16
TIME : 14:19:16

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. N Leg App - Queue	100	90	2.0	150	1600	13.78	1	3
5. S Leg App - Queue	100	74	2.0	945	1600	13.78	1	3
8. E Leg App - Queue	100	92	2.0	680	1600	13.78	1	3
11. W Leg App - Queue	100	92	2.0	1050	1600	13.78	1	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. N Leg, E Side-Corner	46.0	46.0	5.9
2. N Leg, E Side - 25 m	46.0	118.0	5.9
3. N Leg, E Side - 50 m	46.0	200.0	5.9
4. N Leg, E Side-Midblk	46.0	636.0	5.9
5. N Leg, W Side-Corner	-34.0	46.0	5.9
6. N Leg, W Side - 25 m	-34.0	118.0	5.9
7. N Leg, W Side - 50 m	-34.0	200.0	5.9
8. N Leg, W Side-Midblk	-34.0	636.0	5.9
9. S Leg, E Side-Corner	46.0	-58.0	5.9
10. S Leg, E Side - 25 m	46.0	-130.0	5.9
11. S Leg, E Side - 50 m	46.0	-212.0	5.9
12. S Leg, E Side-Midblk	46.0	-648.0	5.9
13. S Leg, W Side-Corner	-34.0	-58.0	5.9
14. S Leg, W Side - 25 m	-34.0	-130.0	5.9
15. S Leg, W Side - 50 m	-34.0	-212.0	5.9
16. S Leg, W Side-Midblk	-34.0	-648.0	5.9
17. E Leg, N Side - 25 m	118.0	46.0	5.9
18. E Leg, N Side - 50 m	200.0	46.0	5.9
19. E Leg, N Side-Midblk	636.0	46.0	5.9
20. W Leg, N Side - 25 m	-106.0	46.0	5.9
21. W Leg, N Side - 50 m	-188.0	46.0	5.9
22. W Leg, N Side-Midblk	-624.0	46.0	5.9
23. E Leg, S Side - 25 m	118.0	-58.0	5.9
24. E Leg, S Side - 50 m	200.0	-58.0	5.9
25. E Leg, S Side-Midblk	636.0	-58.0	5.9
26. W Leg, S Side - 25 m	-106.0	-58.0	5.9
27. W Leg, S Side - 50 m	-188.0	-58.0	5.9
28. W Leg, S Side-Midblk	-624.0	-58.0	5.9

JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2017 NB PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10.	* 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.3000	0.1000	0.2000	0.1000	0.6000	0.2000	0.3000
20.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.3000	0.2000	0.1000	0.0000	0.4000	0.2000	0.5000
30.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.3000	0.2000	0.1000	0.1000	0.3000	0.4000	0.5000
40.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.3000	0.2000	0.1000	0.1000	0.5000	0.5000	0.5000
50.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.3000	0.2000	0.1000	0.1000	0.5000	0.6000	0.5000
60.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.4000	0.3000	0.1000	0.1000	0.6000	0.7000	0.5000
70.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.6000	0.3000	0.1000	0.0000	0.7000	0.7000	0.5000
80.	* 0.3000	0.0000	0.0000	0.0000	0.4000	0.0000	0.0000	0.0000	0.6000	0.3000	0.1000	0.0000	0.9000	0.7000	0.4000
90.	* 0.7000	0.1000	0.1000	0.0000	0.8000	0.1000	0.1000	0.0000	0.4000	0.1000	0.0000	0.0000	0.6000	0.5000	0.3000
100.	* 0.8000	0.2000	0.1000	0.0000	0.9000	0.2000	0.1000	0.0000	0.1000	0.0000	0.0000	0.0000	0.5000	0.4000	0.2000
110.	* 0.7000	0.4000	0.2000	0.0000	0.6000	0.4000	0.2000	0.0000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.2000
120.	* 0.6000	0.3000	0.1000	0.1000	0.4000	0.3000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.2000
130.	* 0.6000	0.2000	0.1000	0.1000	0.1000	0.2000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.2000
140.	* 0.5000	0.2000	0.1000	0.1000	0.3000	0.2000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.2000
150.	* 0.5000	0.2000	0.1000	0.1000	0.3000	0.2000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.3000	0.2000
160.	* 0.5000	0.1000	0.1000	0.0000	0.4000	0.3000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.3000	0.2000	0.2000
170.	* 0.6000	0.2000	0.1000	0.0000	0.7000	0.5000	0.2000	0.0000	0.1000	0.1000	0.1000	0.1000	0.4000	0.3000	0.3000
180.	* 0.8000	0.3000	0.3000	0.1000	0.6000	0.5000	0.2000	0.0000	0.3000	0.3000	0.2000	0.2000	0.2000	0.2000	0.2000
190.	* 0.9000	0.4000	0.3000	0.1000	0.4000	0.2000	0.1000	0.1000	0.7000	0.5000	0.4000	0.3000	0.1000	0.1000	0.1000
200.	* 0.6000	0.2000	0.2000	0.2000	0.5000	0.2000	0.1000	0.1000	0.6000	0.5000	0.3000	0.3000	0.0000	0.0000	0.0000
210.	* 0.3000	0.3000	0.2000	0.2000	0.5000	0.2000	0.1000	0.1000	0.6000	0.6000	0.3000	0.3000	0.0000	0.0000	0.0000
220.	* 0.3000	0.3000	0.1000	0.1000	0.5000	0.2000	0.1000	0.1000	0.5000	0.5000	0.2000	0.2000	0.0000	0.0000	0.0000
230.	* 0.4000	0.3000	0.2000	0.1000	0.5000	0.2000	0.2000	0.1000	0.4000	0.4000	0.1000	0.1000	0.0000	0.0000	0.0000
240.	* 0.5000	0.3000	0.2000	0.1000	0.6000	0.2000	0.2000	0.1000	0.4000	0.4000	0.1000	0.1000	0.0000	0.0000	0.0000
250.	* 0.6000	0.4000	0.2000	0.1000	0.6000	0.4000	0.2000	0.1000	0.3000	0.3000	0.1000	0.1000	0.0000	0.0000	0.0000
260.	* 0.8000	0.3000	0.2000	0.0000	0.7000	0.3000	0.2000	0.0000	0.5000	0.3000	0.1000	0.1000	0.3000	0.0000	0.0000
270.	* 0.6000	0.1000	0.1000	0.0000	0.5000	0.1000	0.1000	0.0000	1.0000						

```
0.5000  0.3000  0.1000  0.7000  0.2000  0.1000
 280.  *  0.2000  0.0000  0.0000  0.0000  0.2000  0.0000  0.0000  0.0000  1.1000
0.7000  0.5000  0.1000  1.1000  0.4000  0.2000
 290.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.9000
0.7000  0.5000  0.2000  0.9000  0.4000  0.2000
 300.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.7000
0.8000  0.5000  0.2000  0.8000  0.4000  0.2000
 310.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000
0.6000  0.6000  0.2000  0.6000  0.3000  0.2000
 320.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000
0.7000  0.7000  0.3000  0.5000  0.2000  0.2000
 330.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.3000
0.6000  0.6000  0.4000  0.5000  0.2000  0.2000
 340.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.2000
0.4000  0.6000  0.4000  0.5000  0.2000  0.1000
 350.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.4000
0.3000  0.5000  0.4000  0.5000  0.2000  0.1000
 360.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.4000
0.3000  0.3000  0.2000  0.4000  0.2000  0.2000

------*-------------------------------------------------------------------------
----------------------------------------
 MAX   *  0.9000  0.4000  0.3000  0.2000  0.9000  0.5000  0.2000  0.1000  1.1000
0.8000  0.7000  0.4000  1.1000  0.7000  0.5000
 DEGR. *    190     110     180     200     100     170     110     120     280
300     320     330     280      60      20
```


JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2017 NB PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

```
WIND  * CONCENTRATION
ANGLE *     (PPM)
(DEGR)*      16      17      18      19      20      21      22      23      24
25      26      27      28

------*-------------------------------------------------------------------------
--------------------------
  10.  *  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.5000  0.5000  0.5000
  20.  *  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.5000  0.5000  0.5000
  30.  *  0.3000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.5000  0.5000  0.5000
  40.  *  0.3000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.5000  0.5000  0.5000
  50.  *  0.3000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.6000  0.6000  0.6000
  60.  *  0.3000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000  0.4000
0.4000  0.6000  0.6000  0.8000
  70.  *  0.2000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.6000  0.6000
0.6000  0.8000  0.7000  0.9000
```

```
  80.  *  0.2000  0.3000  0.3000  0.1000  0.2000  0.1000  0.0000  0.6000  0.6000
0.5000  0.9000  0.9000  1.0000
  90.  *  0.2000  0.7000  0.7000  0.5000  0.7000  0.6000  0.3000  0.4000  0.4000
0.3000  0.7000  0.6000  0.6000
 100.  *  0.2000  0.8000  0.8000  0.8000  0.6000  0.6000  0.6000  0.1000  0.1000
0.1000  0.2000  0.2000  0.2000
 110.  *  0.2000  0.7000  0.7000  0.7000  0.3000  0.4000  0.6000  0.0000  0.0000
0.0000  0.2000  0.1000  0.0000
 120.  *  0.2000  0.6000  0.6000  0.6000  0.2000  0.6000  0.6000  0.0000  0.0000
0.0000  0.2000  0.1000  0.0000
 130.  *  0.2000  0.6000  0.6000  0.6000  0.6000  0.6000  0.5000  0.0000  0.0000
0.0000  0.2000  0.0000  0.0000
 140.  *  0.2000  0.5000  0.5000  0.5000  0.6000  0.6000  0.5000  0.0000  0.0000
0.0000  0.2000  0.0000  0.0000
 150.  *  0.2000  0.5000  0.5000  0.5000  0.7000  0.6000  0.5000  0.0000  0.0000
0.0000  0.1000  0.1000  0.0000
 160.  *  0.2000  0.5000  0.5000  0.5000  0.6000  0.6000  0.5000  0.0000  0.0000
0.0000  0.1000  0.1000  0.0000
 170.  *  0.2000  0.5000  0.5000  0.5000  0.6000  0.5000  0.5000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
 180.  *  0.2000  0.5000  0.5000  0.5000  0.5000  0.5000  0.5000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 190.  *  0.0000  0.6000  0.5000  0.5000  0.5000  0.5000  0.5000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 200.  *  0.0000  0.7000  0.6000  0.5000  0.5000  0.5000  0.5000  0.1000  0.1000
0.0000  0.0000  0.0000  0.0000
 210.  *  0.0000  0.7000  0.6000  0.5000  0.5000  0.5000  0.5000  0.2000  0.1000
0.0000  0.0000  0.0000  0.0000
 220.  *  0.0000  0.7000  0.7000  0.5000  0.5000  0.5000  0.5000  0.2000  0.1000
0.0000  0.0000  0.0000  0.0000
 230.  *  0.0000  0.8000  0.7000  0.6000  0.5000  0.5000  0.5000  0.2000  0.0000
0.0000  0.0000  0.0000  0.0000
 240.  *  0.0000  0.6000  0.7000  0.6000  0.6000  0.6000  0.6000  0.2000  0.1000
0.0000  0.0000  0.0000  0.0000
 250.  *  0.0000  0.8000  0.8000  0.7000  0.6000  0.6000  0.6000  0.2000  0.1000
0.0000  0.0000  0.0000  0.0000
 260.  *  0.0000  0.9000  0.8000  0.8000  0.7000  0.7000  0.6000  0.4000  0.2000
0.2000  0.3000  0.3000  0.2000
 270.  *  0.0000  0.7000  0.7000  0.7000  0.4000  0.4000  0.4000  0.9000  0.7000
0.4000  0.7000  0.7000  0.7000
 280.  *  0.0000  0.1000  0.1000  0.1000  0.2000  0.2000  0.1000  0.8000  0.6000
0.5000  1.1000  1.1000  1.0000
 290.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000  0.3000
0.6000  0.9000  0.9000  0.9000
 300.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.3000
0.4000  0.8000  0.8000  0.8000
 310.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.3000
0.3000  0.6000  0.6000  0.6000
 320.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.3000
0.3000  0.5000  0.5000  0.5000
 330.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.5000  0.5000  0.5000
 340.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.5000  0.5000  0.5000
 350.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.5000  0.5000  0.5000
 360.  *  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.5000  0.5000  0.5000

------*-------------------------------------------------------------------------
--------------------------
 MAX   *  0.3000  0.9000  0.8000  0.8000  0.7000  0.7000  0.6000  0.9000  0.7000
0.6000  1.1000  1.1000  1.0000
```

DEGR. * 30 260 100 100 90 260 100 270 270
70 280 280 80

THE HIGHEST CONCENTRATION OF 1.1000 PPM OCCURRED AT RECEPTOR 9.

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station RUN: Woodmont-Jones 2017 NB AM

DATE : 11/16/16
TIME : 14: 4:58

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1. S Leg App - FreeFlow	*	6.0	6.0	6.0	-1200.0	*	1206.	180.	AG	310.	2.8	0.0	31.7		
2. S Leg App - Queue	*	6.0	-12.0	6.0	-128.0	*	116.	180.	AG	26.	100.0	0.0	12.0	0.83	5.9
3. S Leg Dep - FreeFlow	*	-6.0	6.0	-6.0	-1200.0	*	1206.	180.	AG	380.	4.0	0.0	31.7		
4. E Leg App - FreeFlow	*	0.0	6.0	1200.0	6.0	*	1200.	90.	AG	300.	3.0	0.0	31.7		
5. E Leg App - Queue	*	12.0	6.0	79.3	6.0	*	67.	90.	AG	19.	100.0	0.0	12.0	0.42	3.4
6. E Leg Dep - FreeFlow	*	0.0	-6.0	1200.0	-6.0	*	1200.	90.	AG	370.	5.3	0.0	31.7		
7. W Leg App - FreeFlow	*	0.0	-6.0	-1200.0	-6.0	*	1200.	270.	AG	300.	1.7	0.0	31.7		
8. W Leg App - Queue	*	-12.0	-6.0	-3240.2	-6.0	*	3228.	270.	AG	35.	100.0	0.0	12.0	****	164.0
9. W Leg Dep - FreeFlow	*	0.0	6.0	-1200.0	6.0	*	1200.	270.	AG	160.	2.7	0.0	31.7		

JOB: Orange Line Station RUN: Woodmont-Jones 2017 NB AM

DATE : 11/16/16
TIME : 14: 4:58

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE	RED	CLEARANCE	APPROACH	SATURATION	IDLE	SIGNAL	ARRIVAL
	*	LENGTH	TIME	LOST TIME	VOL	FLOW RATE	EM FAC	TYPE	RATE
	*	(SEC)	(SEC)	(SEC)	(VPH)	(VPH)	(gm/hr)		

```
-----------------------*-------------------------------------------------------------
--------------------
       2. S Leg App - Queue   *      81       58       2.0       310       1600
13.78      1        3
       5. E Leg App - Queue   *      81       41       2.0       300       1600
13.78      1        3
       8. W Leg App - Queue   *      81       76       2.0       300       1600
13.78      1        3

       RECEPTOR LOCATIONS
       ------------------
                              *           COORDINATES (FT)          *
         RECEPTOR             *      X          Y          Z         *
     -------------------------*-------------------------------------*
      1. N Leg, E Side-Corner *        22.0       22.0        5.9   *
      2. N Leg, E Side - 0 m  *         0.0       22.0        5.9   *
      3. N Leg, W Side-Corner *       -22.0       22.0        5.9   *
      4. S Leg, E Side-Corner *        22.0      -22.0        5.9   *
      5. S Leg, E Side - 25 m *        22.0      -94.0        5.9   *
      6. S Leg, E Side - 50 m *        22.0     -176.0        5.9   *
      7. S Leg, E Side-Midblk *        22.0     -612.0        5.9   *
      8. S Leg, W Side-Corner *       -22.0      -22.0        5.9   *
      9. S Leg, W Side - 25 m *       -22.0      -94.0        5.9   *
     10. S Leg, W Side - 50 m *       -22.0     -176.0        5.9   *
     11. S Leg, W Side-Midblk *       -22.0     -612.0        5.9   *
     12. E Leg, N Side - 25 m *        94.0       22.0        5.9   *
     13. E Leg, N Side - 50 m *       176.0       22.0        5.9   *
     14. E Leg, N Side-Midblk *       612.0       22.0        5.9   *
     15. W Leg, N Side - 25 m *       -94.0       22.0        5.9   *
     16. W Leg, N Side - 50 m *      -176.0       22.0        5.9   *
     17. W Leg, N Side-Midblk *      -612.0       22.0        5.9   *
     18. E Leg, S Side - 25 m *        94.0      -22.0        5.9   *
     19. E Leg, S Side - 50 m *       176.0      -22.0        5.9   *
     20. E Leg, S Side-Midblk *       612.0      -22.0        5.9   *
     21. W Leg, S Side - 25 m *       -94.0      -22.0        5.9   *
     22. W Leg, S Side - 50 m *      -176.0      -22.0        5.9   *
     23. W Leg, S Side-Midblk *      -612.0      -22.0        5.9   *

                            PAGE  3
      JOB: Orange Line Station                                RUN: Woodmont-Jones
2017 NB AM

       MODEL RESULTS
       -------------

       REMARKS : In search of the angle corresponding to
                 the maximum concentration, only the first
                 angle, of the angles with same maximum
                 concentrations, is indicated as maximum.

 WIND ANGLE RANGE:  10.-360.

 WIND  * CONCENTRATION
 ANGLE *     (PPM)
 (DEGR)*       1        2        3        4        5        6        7        8        9
 10       11       12       13       14       15

------*-------------------------------------------------------------------------------
-----------------------------------------
  10.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.1000  0.1000
0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
  20.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.1000  0.1000
```

```
0.2000  0.1000  0.0000  0.0000  0.0000  0.0000
  30.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.1000  0.2000
0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
  40.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.2000
0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
  50.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.1000  0.2000
0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
  60.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.2000  0.2000
0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
  70.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.1000  0.1000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  80.  *  0.0000  0.0000  0.0000  0.2000  0.0000  0.0000  0.0000  0.2000  0.1000
0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
  90.  *  0.2000  0.2000  0.2000  0.1000  0.0000  0.0000  0.0000  0.3000  0.2000
0.1000  0.1000  0.2000  0.2000  0.2000  0.1000
 100.  *  0.2000  0.2000  0.2000  0.1000  0.0000  0.0000  0.0000  0.3000  0.2000
0.1000  0.1000  0.2000  0.2000  0.2000  0.1000
 110.  *  0.3000  0.3000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
0.0000  0.0000  0.2000  0.2000  0.2000  0.1000
 120.  *  0.2000  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.1000  0.1000  0.1000  0.1000  0.1000  0.1000
 130.  *  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.1000
0.1000  0.1000  0.1000  0.1000  0.1000  0.1000
 140.  *  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.1000
0.1000  0.1000  0.1000  0.1000  0.1000  0.1000
 150.  *  0.2000  0.1000  0.2000  0.0000  0.0000  0.0000  0.0000  0.2000  0.1000
0.1000  0.1000  0.1000  0.1000  0.1000  0.1000
 160.  *  0.2000  0.1000  0.2000  0.0000  0.0000  0.0000  0.0000  0.2000  0.1000
0.1000  0.1000  0.1000  0.1000  0.1000  0.1000
 170.  *  0.2000  0.3000  0.2000  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
0.1000  0.1000  0.1000  0.1000  0.1000  0.1000
 180.  *  0.5000  0.3000  0.2000  0.2000  0.2000  0.2000  0.1000  0.1000  0.1000
0.1000  0.1000  0.1000  0.1000  0.1000  0.1000
 190.  *  0.4000  0.1000  0.1000  0.3000  0.2000  0.2000  0.2000  0.1000  0.1000
0.1000  0.0000  0.1000  0.1000  0.1000  0.1000
 200.  *  0.2000  0.1000  0.1000  0.3000  0.2000  0.2000  0.2000  0.0000  0.0000
0.0000  0.0000  0.1000  0.1000  0.1000  0.1000
 210.  *  0.1000  0.1000  0.1000  0.2000  0.2000  0.1000  0.1000  0.0000  0.0000
0.0000  0.0000  0.1000  0.1000  0.1000  0.1000
 220.  *  0.0000  0.1000  0.1000  0.2000  0.2000  0.1000  0.1000  0.0000  0.0000
0.0000  0.0000  0.1000  0.1000  0.1000  0.1000
 230.  *  0.0000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.1000  0.1000  0.1000  0.1000
 240.  *  0.1000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.2000  0.1000  0.1000  0.1000
 250.  *  0.1000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.2000  0.2000  0.2000  0.1000
 260.  *  0.1000  0.1000  0.1000  0.2000  0.1000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.1000  0.3000  0.2000  0.1000
 270.  *  0.1000  0.1000  0.1000  0.3000  0.2000  0.0000  0.0000  0.2000  0.1000
0.0000  0.0000  0.1000  0.1000  0.2000  0.1000
 280.  *  0.0000  0.0000  0.0000  0.3000  0.2000  0.1000  0.0000  0.2000  0.1000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 290.  *  0.0000  0.0000  0.0000  0.2000  0.2000  0.0000  0.0000  0.2000  0.1000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 300.  *  0.0000  0.0000  0.0000  0.1000  0.2000  0.0000  0.0000  0.1000  0.1000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 310.  *  0.0000  0.0000  0.0000  0.1000  0.1000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 320.  *  0.0000  0.0000  0.0000  0.1000  0.2000  0.1000  0.1000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 330.  *  0.0000  0.0000  0.0000  0.1000  0.2000  0.1000  0.1000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
```

340.	*	0.0000	0.0000	0.0000	0.1000	0.1000	0.2000	0.2000	0.1000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000					
350.	*	0.0000	0.0000	0.0000	0.1000	0.1000	0.2000	0.2000	0.1000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000					
360.	*	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.1000	0.1000	0.1000
0.1000	0.1000	0.0000	0.0000	0.0000	0.0000					

MAX	*	0.5000	0.3000	0.2000	0.3000	0.2000	0.2000	0.2000	0.3000	0.2000
0.2000	0.1000	0.2000	0.3000	0.2000	0.1000					
DEGR.	*	180	110	90	190	180	180	190	90	30
20	10	90	260	90	90					

JOB: Orange Line Station RUN: Woodmont-Jones 2017 NB AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	*	CONCENTRATION (PPM) 16	17	18	19	20	21	22	23
10.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
20.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
30.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
40.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
50.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
60.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
70.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.2000
80.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.1000	0.2000
90.	*	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.2000	0.1000
100.	*	0.1000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.1000
110.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
120.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
130.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
140.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
150.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
160.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
170.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
180.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
190.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
200.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
210.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
220.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
230.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
240.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
260.	*	0.1000	0.1000	0.1000	0.0000	0.1000	0.1000	0.1000	0.1000
270.	*	0.1000	0.1000	0.2000	0.2000	0.1000	0.2000	0.2000	0.2000
280.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000
290.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.2000	0.2000	0.2000
300.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000

310.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
320.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
330.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
340.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
350.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
360.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
MAX	*	0.1000	0.1000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000
DEGR.	*	90	90	80	80	80	80	90	70

THE HIGHEST CONCENTRATION OF 0.5000 PPM OCCURRED AT RECEPTOR 1.

```
Q,EPA,,F,,0,T,T,T,T,0.7,
1,1,1,1,2200,2200,2200,2200,2200,2200,2200,2200,1037,1037,1037,10
37,1037,1037,1037,1037,12,12,12,12,10,10,10,10,0,0,-
1200,1200,0,0,1200,-1200,-1200,1200,0,0,1200,-
1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
0,120,120,120,0,62,62,62,0,2,2,2,0,1600,1600,1600,0,1,1,1,0,3,3,3
'Orange Line Station',60,175,0.0,0.0,23,0.3048,1,0
'N Leg, E Side-Corner',22.0,22.0,5.9
'N Leg, E Side - 0 m',0.0,22.0,5.9
'N Leg, W Side-Corner',-22.0,22.0,5.9
'S Leg, E Side-Corner',22.0,-22.0,5.9
'S Leg, E Side - 25 m',22.0,-94.0,5.9
'S Leg, E Side - 50 m',22.0,-176.0,5.9
'S Leg, E Side-Midblk',22.0,-612.0,5.9
'S Leg, W Side-Corner',-22.0,-22.0,5.9
'S Leg, W Side - 25 m',-22.0,-94.0,5.9
'S Leg, W Side - 50 m',-22.0,-176.0,5.9
'S Leg, W Side-Midblk',-22.0,-612.0,5.9
'E Leg, N Side - 25 m',94.0,22.0,5.9
'E Leg, N Side - 50 m',176.0,22.0,5.9
'E Leg, N Side-Midblk',612.0,22.0,5.9
'W Leg, N Side - 25 m',-94.0,22.0,5.9
'W Leg, N Side - 50 m',-176.0,22.0,5.9
'W Leg, N Side-Midblk',-612.0,22.0,5.9
'E Leg, S Side - 25 m',94.0,-22.0,5.9
'E Leg, S Side - 50 m',176.0,-22.0,5.9
'E Leg, S Side-Midblk',612.0,-22.0,5.9
'W Leg, S Side - 25 m',-94.0,-22.0,5.9
'W Leg, S Side - 50 m',-176.0,-22.0,5.9
'W Leg, S Side-Midblk',-612.0,-22.0,5.9
'Woodmont-Jones 2017 NB PM',9,1,0,'CO'
1
'S Leg App - FreeFlow','AG',6,6,6,-1200,1037,2.75,0.0,31.7
2
'S Leg App - Queue','AG',6,-12,6,-1200,0.0,12.0,1
81,58,2,1037,13.78,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-6,6,-6,-1200,1037,3.96,0.0,31.7
1
'E Leg App - FreeFlow','AG',0,6,1200,6,1037,3.03,0.0,31.7
2
'E Leg App - Queue','AG',12,6,1200,6,0.0,12.0,1
81,41,2,1037,13.78,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-6,1200,-6,1037,5.28,0.0,31.7
1
'W Leg App - FreeFlow','AG',0,-6,-1200,-6,1037,1.66,0.0,31.7
2
'W Leg App - Queue','AG',-12,-6,-1200,-6,0.0,12.0,1
81,76,2,1037,13.78,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,6,-1200,6,1037,2.69,0.0,31.7
```

```
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station RUN: Woodmont-Jones 2017 NB PM

DATE : 11/16/16
TIME : 14: 8:18

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)		(G/MI)	(FT)	(FT)		(VEH)	
1. S Leg App - FreeFlow	*	6.0	6.0	6.0	-1200.0	*	1206.	180.	AG	1037.	2.8	0.0	31.7		
2. S Leg App - Queue	*	6.0	-12.0	6.0	-7118.1	*	7106.	180.	AG	26.	100.0	0.0	12.0	2.77	361.0
3. S Leg Dep - FreeFlow	*	-6.0	6.0	-6.0	-1200.0	*	1206.	180.	AG	1037.	4.0	0.0	31.7		
4. E Leg App - FreeFlow	*	0.0	6.0	1200.0	6.0	*	1200.	90.	AG	1037.	3.0	0.0	31.7		
5. E Leg App - Queue	*	12.0	6.0	3643.1	6.0	*	3631.	90.	AG	19.	100.0	0.0	12.0	1.46	184.5
6. E Leg Dep - FreeFlow	*	0.0	-6.0	1200.0	-6.0	*	1200.	90.	AG	1037.	5.3	0.0	31.7		
7. W Leg App - FreeFlow	*	0.0	-6.0	-1200.0	-6.0	*	1200.	270.	AG	1037.	1.7	0.0	31.7		
8. W Leg App - Queue	*	-12.0	-6.0	-11630.3	-6.0	*	*****	270.	AG	35.	100.0	0.0	12.0	****	590.2
9. W Leg Dep - FreeFlow	*	0.0	6.0	-1200.0	6.0	*	1200.	270.	AG	1037.	2.7	0.0	31.7		

JOB: Orange Line Station RUN: Woodmont-Jones 2017 NB PM

DATE : 11/16/16
TIME : 14: 8:18

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

```
-----------------------*-------------------------------------------------------------
--------------------
       2. S Leg App - Queue   *      81       58       2.0      1037       1600
13.78      1        3
       5. E Leg App - Queue   *      81       41       2.0      1037       1600
13.78      1        3
       8. W Leg App - Queue   *      81       76       2.0      1037       1600
13.78      1        3

       RECEPTOR LOCATIONS
       ------------------
                              *           COORDINATES (FT)          *
         RECEPTOR             *      X          Y          Z         *
     -------------------------*-------------------------------------*
      1. N Leg, E Side-Corner *        22.0       22.0        5.9   *
      2. N Leg, E Side - 0 m  *         0.0       22.0        5.9   *
      3. N Leg, W Side-Corner *       -22.0       22.0        5.9   *
      4. S Leg, E Side-Corner *        22.0      -22.0        5.9   *
      5. S Leg, E Side - 25 m *        22.0      -94.0        5.9   *
      6. S Leg, E Side - 50 m *        22.0     -176.0        5.9   *
      7. S Leg, E Side-Midblk *        22.0     -612.0        5.9   *
      8. S Leg, W Side-Corner *       -22.0      -22.0        5.9   *
      9. S Leg, W Side - 25 m *       -22.0      -94.0        5.9   *
     10. S Leg, W Side - 50 m *       -22.0     -176.0        5.9   *
     11. S Leg, W Side-Midblk *       -22.0     -612.0        5.9   *
     12. E Leg, N Side - 25 m *        94.0       22.0        5.9   *
     13. E Leg, N Side - 50 m *       176.0       22.0        5.9   *
     14. E Leg, N Side-Midblk *       612.0       22.0        5.9   *
     15. W Leg, N Side - 25 m *       -94.0       22.0        5.9   *
     16. W Leg, N Side - 50 m *      -176.0       22.0        5.9   *
     17. W Leg, N Side-Midblk *      -612.0       22.0        5.9   *
     18. E Leg, S Side - 25 m *        94.0      -22.0        5.9   *
     19. E Leg, S Side - 50 m *       176.0      -22.0        5.9   *
     20. E Leg, S Side-Midblk *       612.0      -22.0        5.9   *
     21. W Leg, S Side - 25 m *       -94.0      -22.0        5.9   *
     22. W Leg, S Side - 50 m *      -176.0      -22.0        5.9   *
     23. W Leg, S Side-Midblk *      -612.0      -22.0        5.9   *

                            PAGE  3
      JOB: Orange Line Station                                RUN: Woodmont-Jones
2017 NB PM

       MODEL RESULTS
       -------------

       REMARKS : In search of the angle corresponding to
                 the maximum concentration, only the first
                 angle, of the angles with same maximum
                 concentrations, is indicated as maximum.

 WIND ANGLE RANGE:  10.-360.

 WIND  * CONCENTRATION
 ANGLE *     (PPM)
 (DEGR)*       1        2        3        4        5        6        7        8        9
 10       11       12       13       14       15

------*-------------------------------------------------------------------------------
-----------------------------------------
  10.  *  0.0000  0.0000  0.0000  0.3000  0.2000  0.2000  0.1000  0.4000  0.3000
0.5000  0.5000  0.0000  0.0000  0.0000  0.0000
  20.  *  0.0000  0.0000  0.0000  0.3000  0.1000  0.1000  0.0000  0.4000  0.4000
```

0.5000 0.5000 0.0000 0.0000 0.0000 0.0000
30. * 0.0000 0.0000 0.0000 0.3000 0.1000 0.1000 0.0000 0.4000 0.5000
0.5000 0.4000 0.0000 0.0000 0.0000 0.0000
40. * 0.0000 0.0000 0.0000 0.3000 0.2000 0.1000 0.0000 0.4000 0.5000
0.5000 0.4000 0.0000 0.0000 0.0000 0.0000
50. * 0.0000 0.0000 0.0000 0.3000 0.2000 0.1000 0.0000 0.4000 0.6000
0.5000 0.4000 0.0000 0.0000 0.0000 0.0000
60. * 0.0000 0.0000 0.0000 0.5000 0.2000 0.1000 0.0000 0.5000 0.5000
0.4000 0.3000 0.0000 0.0000 0.0000 0.0000
70. * 0.0000 0.0000 0.0000 0.7000 0.2000 0.1000 0.0000 0.7000 0.5000
0.4000 0.3000 0.0000 0.0000 0.0000 0.0000
80. * 0.2000 0.2000 0.2000 0.8000 0.2000 0.1000 0.0000 0.9000 0.5000
0.4000 0.3000 0.2000 0.2000 0.2000 0.2000
90. * 0.5000 0.5000 0.5000 0.6000 0.1000 0.0000 0.0000 0.8000 0.4000
0.3000 0.3000 0.5000 0.5000 0.5000 0.5000
100. * 0.7000 0.7000 0.6000 0.2000 0.0000 0.0000 0.0000 0.5000 0.3000
0.3000 0.3000 0.7000 0.7000 0.6000 0.5000
110. * 0.6000 0.6000 0.5000 0.1000 0.0000 0.0000 0.0000 0.3000 0.3000
0.3000 0.3000 0.6000 0.6000 0.6000 0.4000
120. * 0.5000 0.5000 0.4000 0.0000 0.0000 0.0000 0.0000 0.3000 0.3000
0.3000 0.3000 0.5000 0.5000 0.5000 0.4000
130. * 0.4000 0.3000 0.5000 0.0000 0.0000 0.0000 0.0000 0.4000 0.4000
0.4000 0.4000 0.4000 0.4000 0.4000 0.4000
140. * 0.4000 0.3000 0.4000 0.0000 0.0000 0.0000 0.0000 0.4000 0.4000
0.4000 0.4000 0.4000 0.4000 0.4000 0.4000
150. * 0.4000 0.4000 0.5000 0.0000 0.0000 0.0000 0.0000 0.4000 0.4000
0.4000 0.4000 0.4000 0.4000 0.4000 0.5000
160. * 0.4000 0.5000 0.5000 0.0000 0.0000 0.0000 0.0000 0.5000 0.5000
0.5000 0.5000 0.4000 0.4000 0.4000 0.4000
170. * 0.7000 0.7000 0.8000 0.3000 0.3000 0.3000 0.2000 0.6000 0.6000
0.6000 0.5000 0.4000 0.4000 0.4000 0.5000
180. * 0.9000 0.9000 0.7000 0.5000 0.5000 0.5000 0.4000 0.5000 0.5000
0.5000 0.5000 0.5000 0.4000 0.4000 0.2000
190. * 0.8000 0.7000 0.3000 0.6000 0.6000 0.6000 0.6000 0.1000 0.1000
0.1000 0.1000 0.7000 0.4000 0.4000 0.2000
200. * 0.6000 0.4000 0.2000 0.5000 0.5000 0.5000 0.5000 0.0000 0.0000
0.0000 0.0000 0.6000 0.5000 0.4000 0.2000
210. * 0.4000 0.4000 0.3000 0.5000 0.5000 0.5000 0.5000 0.0000 0.0000
0.0000 0.0000 0.6000 0.5000 0.4000 0.3000
220. * 0.4000 0.4000 0.3000 0.3000 0.3000 0.3000 0.3000 0.0000 0.0000
0.0000 0.0000 0.6000 0.4000 0.4000 0.3000
230. * 0.4000 0.3000 0.3000 0.3000 0.3000 0.3000 0.3000 0.0000 0.0000
0.0000 0.0000 0.5000 0.4000 0.4000 0.3000
240. * 0.5000 0.3000 0.3000 0.3000 0.3000 0.3000 0.3000 0.0000 0.0000
0.0000 0.0000 0.6000 0.5000 0.5000 0.3000
250. * 0.4000 0.4000 0.4000 0.3000 0.3000 0.3000 0.3000 0.0000 0.0000
0.0000 0.0000 0.5000 0.5000 0.6000 0.4000
260. * 0.6000 0.5000 0.5000 0.4000 0.3000 0.3000 0.3000 0.2000 0.0000
0.0000 0.0000 0.6000 0.7000 0.6000 0.5000
270. * 0.4000 0.4000 0.4000 0.8000 0.4000 0.3000 0.3000 0.4000 0.1000
0.0000 0.0000 0.4000 0.4000 0.6000 0.4000
280. * 0.1000 0.1000 0.1000 0.8000 0.5000 0.4000 0.3000 0.4000 0.2000
0.1000 0.0000 0.1000 0.1000 0.2000 0.1000
290. * 0.0000 0.0000 0.0000 0.7000 0.5000 0.3000 0.3000 0.4000 0.2000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
300. * 0.0000 0.0000 0.0000 0.6000 0.5000 0.3000 0.3000 0.3000 0.2000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
310. * 0.0000 0.0000 0.0000 0.5000 0.3000 0.3000 0.3000 0.3000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
320. * 0.0000 0.0000 0.0000 0.4000 0.3000 0.3000 0.3000 0.3000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
330. * 0.0000 0.0000 0.0000 0.4000 0.3000 0.4000 0.5000 0.3000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000

340.	*	0.0000	0.0000	0.0000	0.4000	0.4000	0.5000	0.5000	0.3000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
350.	*	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000	0.5000	0.3000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
360.	*	0.0000	0.0000	0.0000	0.3000	0.2000	0.3000	0.4000	0.4000	0.2000	0.2000	0.5000	0.0000	0.0000	0.0000

MAX	*	0.9000	0.9000	0.8000	0.8000	0.6000	0.6000	0.6000	0.9000	0.6000	0.6000	0.5000	0.7000	0.7000	0.6000
DEGR.	*	180	180	170	80	190	190	190	80	50	170	10	100	100	100

JOB: Orange Line Station RUN: Woodmont-Jones 2017 NB PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	*	CONCENTRATION (PPM) 16	17	18	19	20	21	22	23
10.	*	0.0000	0.0000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
20.	*	0.0000	0.0000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
30.	*	0.0000	0.0000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
40.	*	0.0000	0.0000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
50.	*	0.0000	0.0000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
60.	*	0.0000	0.0000	0.5000	0.5000	0.5000	0.3000	0.3000	0.3000
70.	*	0.0000	0.0000	0.7000	0.7000	0.6000	0.5000	0.3000	0.4000
80.	*	0.2000	0.1000	0.8000	0.8000	0.7000	0.6000	0.5000	0.4000
90.	*	0.4000	0.5000	0.6000	0.6000	0.6000	0.6000	0.5000	0.4000
100.	*	0.6000	0.4000	0.2000	0.2000	0.2000	0.2000	0.1000	0.2000
110.	*	0.4000	0.4000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000
120.	*	0.3000	0.3000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000
130.	*	0.3000	0.3000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000
140.	*	0.4000	0.3000	0.0000	0.0000	0.0000	0.1000	0.1000	0.0000
150.	*	0.4000	0.3000	0.0000	0.0000	0.0000	0.2000	0.1000	0.0000
160.	*	0.3000	0.2000	0.0000	0.0000	0.0000	0.2000	0.1000	0.0000
170.	*	0.2000	0.2000	0.0000	0.0000	0.0000	0.3000	0.0000	0.0000
180.	*	0.2000	0.2000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000
190.	*	0.2000	0.2000	0.3000	0.0000	0.0000	0.0000	0.0000	0.0000
200.	*	0.2000	0.2000	0.2000	0.1000	0.0000	0.0000	0.0000	0.0000
210.	*	0.3000	0.3000	0.2000	0.1000	0.0000	0.0000	0.0000	0.0000
220.	*	0.3000	0.3000	0.2000	0.0000	0.0000	0.0000	0.0000	0.0000
230.	*	0.3000	0.3000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000
240.	*	0.3000	0.3000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000
250.	*	0.4000	0.4000	0.1000	0.0000	0.1000	0.0000	0.0000	0.0000
260.	*	0.5000	0.5000	0.3000	0.1000	0.2000	0.2000	0.2000	0.2000
270.	*	0.4000	0.4000	0.6000	0.5000	0.6000	0.4000	0.4000	0.4000
280.	*	0.1000	0.1000	0.7000	0.6000	0.7000	0.4000	0.4000	0.4000
290.	*	0.0000	0.0000	0.5000	0.5000	0.6000	0.4000	0.4000	0.4000
300.	*	0.0000	0.0000	0.4000	0.5000	0.5000	0.3000	0.3000	0.3000

310.	*	0.0000	0.0000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
320.	*	0.0000	0.0000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
330.	*	0.0000	0.0000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
340.	*	0.0000	0.0000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
350.	*	0.0000	0.0000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
360.	*	0.0000	0.0000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
MAX	*	0.6000	0.5000	0.8000	0.8000	0.7000	0.6000	0.5000	0.4000
DEGR.	*	100	90	80	80	80	80	80	70

THE HIGHEST CONCENTRATION OF 0.9000 PPM OCCURRED AT RECEPTOR 2.

```
Q,EPA,,F,,0,T,T,F,T,0.7,
4,4,3,4,2200,2200,2200,2200,2200,2200,2200,2200,1036.75,1036.75,1
036.66666666667,1036.75,1036.75,1036.75,1036.66666666667,1036.75,
12,12,12,12,10,10,10,10,0,0,-1200,1200,0,0,1200,-1200,-
1200,1200,0,0,1200,-1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
120,120,120,120,62,62,62,62,2,2,2,2,1600,1600,1600,1600,1,1,1,1,3
,3,3,3
'Orange Line Station',60,175,0.0,0.0,28,0.3048,1,0
'N Leg, E Side-Corner',58.0,58.0,5.9
'N Leg, E Side - 25 m',58.0,130.0,5.9
'N Leg, E Side - 50 m',58.0,212.0,5.9
'N Leg, E Side-Midblk',58.0,648.0,5.9
'N Leg, W Side-Corner',-58.0,58.0,5.9
'N Leg, W Side - 25 m',-58.0,130.0,5.9
'N Leg, W Side - 50 m',-58.0,212.0,5.9
'N Leg, W Side-Midblk',-58.0,648.0,5.9
'S Leg, E Side-Corner',58.0,-46.0,5.9
'S Leg, E Side - 25 m',58.0,-118.0,5.9
'S Leg, E Side - 50 m',58.0,-200.0,5.9
'S Leg, E Side-Midblk',58.0,-636.0,5.9
'S Leg, W Side-Corner',-58.0,-46.0,5.9
'S Leg, W Side - 25 m',-58.0,-118.0,5.9
'S Leg, W Side - 50 m',-58.0,-200.0,5.9
'S Leg, W Side-Midblk',-58.0,-636.0,5.9
'E Leg, N Side - 25 m',130.0,58.0,5.9
'E Leg, N Side - 50 m',212.0,58.0,5.9
'E Leg, N Side-Midblk',648.0,58.0,5.9
'W Leg, N Side - 25 m',-130.0,58.0,5.9
'W Leg, N Side - 50 m',-212.0,58.0,5.9
'W Leg, N Side-Midblk',-648.0,58.0,5.9
'E Leg, S Side - 25 m',130.0,-46.0,5.9
'E Leg, S Side - 50 m',212.0,-46.0,5.9
'E Leg, S Side-Midblk',648.0,-46.0,5.9
'W Leg, S Side - 25 m',-130.0,-46.0,5.9
'W Leg, S Side - 50 m',-212.0,-46.0,5.9
'W Leg, S Side-Midblk',-648.0,-46.0,5.9
'Exit 41SB Ramp 2017 Build AM',12,1,0,'CO'
1
'N Leg App - FreeFlow','AG',-24,0,-24,1200,860,2.5,0.0,67.7
2
'N Leg App - Queue','AG',-24,48,-24,1200,0.0,48.0,4
90,75,2,860,13.78,1600,1,3
1
'N Leg Dep - FreeFlow','AG',24,0,24,1200,1050,1.99,0.0,67.7
1
'S Leg App - FreeFlow','AG',24,0,24,-1200,1040,3.85,0.0,67.7
2
'S Leg App - Queue','AG',24,-36,24,-1200,0.0,48.0,4
90,79,2,1040,13.78,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-24,0,-24,-1200,1060,2.88,0.0,67.7
1
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```
'E Leg App - FreeFlow','AG',0,24,1200,24,815,4.94,0.0,67.7
2
'E Leg App - Queue','AG',48,24,1200,24,0.0,48.0,4
90,68,2,815,13.78,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-18,1200,-18,135,2.07,0.0,55.7
1
'W Leg App - FreeFlow','AG',0,-18,-1200,-18,135,4.66,0.0,55.7
2
'W Leg App - Queue','AG',-48,-18,-1200,-18,0.0,36.0,3
90,78,2,135,13.78,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,24,-1200,24,605,4.95,0.0,67.7
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station RUN: Exit 41SB Ramp 2017 Build AM

DATE : 11/16/16
TIME : 14:35: 5

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
		*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1.	N Leg App - FreeFlow	*	-24.0	0.0	-24.0	1200.0	*	1200.	360.	AG	860.	2.5	0.0	67.7		
2.	N Leg App - Queue	*	-24.0	48.0	-24.0	408.2	*	360.	360.	AG	123.	100.0	0.0	48.0	1.10	18.3
3.	N Leg Dep - FreeFlow	*	24.0	0.0	24.0	1200.0	*	1200.	360.	AG	1050.	2.0	0.0	67.7		
4.	S Leg App - FreeFlow	*	24.0	0.0	24.0	-1200.0	*	1200.	180.	AG	1040.	3.8	0.0	67.7		
5.	S Leg App - Queue	*	24.0	-36.0	24.0	-1601.1	*	1565.	180.	AG	130.	100.0	0.0	48.0	2.10	79.5
6.	S Leg Dep - FreeFlow	*	-24.0	0.0	-24.0	-1200.0	*	1200.	180.	AG	1060.	2.9	0.0	67.7		
7.	E Leg App - FreeFlow	*	0.0	24.0	1200.0	24.0	*	1200.	90.	AG	815.	4.9	0.0	67.7		
8.	E Leg App - Queue	*	48.0	24.0	123.5	24.0	*	75.	90.	AG	112.	100.0	0.0	48.0	0.63	3.8
9.	E Leg Dep - FreeFlow	*	0.0	-18.0	1200.0	-18.0	*	1200.	90.	AG	135.	2.1	0.0	55.7		
10.	W Leg App - FreeFlow	*	0.0	-18.0	-1200.0	-18.0	*	1200.	270.	AG	135.	4.7	0.0	55.7		
11.	W Leg App - Queue	*	-48.0	-18.0	-67.2	-18.0	*	19.	270.	AG	96.	100.0	0.0	36.0	0.32	1.0
12.	W Leg Dep - FreeFlow	*	0.0	24.0	-1200.0	24.0	*	1200.	270.	AG	605.	4.9	0.0	67.7		

JOB: Orange Line Station RUN: Exit 41SB Ramp 2017 Build AM

DATE : 11/16/16
TIME : 14:35: 5

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. N Leg App - Queue	90	75	2.0	860	1600	13.78	1	3
5. S Leg App - Queue	90	79	2.0	1040	1600	13.78	1	3
8. E Leg App - Queue	90	68	2.0	815	1600	13.78	1	3
11. W Leg App - Queue	90	78	2.0	135	1600	13.78	1	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. N Leg, E Side-Corner	58.0	58.0	5.9
2. N Leg, E Side - 25 m	58.0	130.0	5.9
3. N Leg, E Side - 50 m	58.0	212.0	5.9
4. N Leg, E Side-Midblk	58.0	648.0	5.9
5. N Leg, W Side-Corner	-58.0	58.0	5.9
6. N Leg, W Side - 25 m	-58.0	130.0	5.9
7. N Leg, W Side - 50 m	-58.0	212.0	5.9
8. N Leg, W Side-Midblk	-58.0	648.0	5.9
9. S Leg, E Side-Corner	58.0	-46.0	5.9
10. S Leg, E Side - 25 m	58.0	-118.0	5.9
11. S Leg, E Side - 50 m	58.0	-200.0	5.9
12. S Leg, E Side-Midblk	58.0	-636.0	5.9
13. S Leg, W Side-Corner	-58.0	-46.0	5.9
14. S Leg, W Side - 25 m	-58.0	-118.0	5.9
15. S Leg, W Side - 50 m	-58.0	-200.0	5.9
16. S Leg, W Side-Midblk	-58.0	-636.0	5.9
17. E Leg, N Side - 25 m	130.0	58.0	5.9
18. E Leg, N Side - 50 m	212.0	58.0	5.9
19. E Leg, N Side-Midblk	648.0	58.0	5.9
20. W Leg, N Side - 25 m	-130.0	58.0	5.9
21. W Leg, N Side - 50 m	-212.0	58.0	5.9
22. W Leg, N Side-Midblk	-648.0	58.0	5.9
23. E Leg, S Side - 25 m	130.0	-46.0	5.9
24. E Leg, S Side - 50 m	212.0	-46.0	5.9
25. E Leg, S Side-Midblk	648.0	-46.0	5.9
26. W Leg, S Side - 25 m	-130.0	-46.0	5.9
27. W Leg, S Side - 50 m	-212.0	-46.0	5.9
28. W Leg, S Side-Midblk	-648.0	-46.0	5.9

JOB: Orange Line Station RUN: Exit 41SB Ramp 2017 Build AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10.	* 0.0000	0.0000	0.0000	0.0000	0.7000	0.7000	0.6000	0.1000	0.3000	0.2000	0.2000	0.2000	0.9000	0.5000	0.5000
20.	* 0.0000	0.0000	0.0000	0.0000	0.8000	0.8000	0.7000	0.2000	0.3000	0.2000	0.0000	0.0000	0.8000	0.3000	0.4000
30.	* 0.0000	0.0000	0.0000	0.0000	0.7000	0.7000	0.7000	0.2000	0.3000	0.1000	0.0000	0.0000	0.5000	0.1000	0.5000
40.	* 0.0000	0.0000	0.0000	0.0000	0.5000	0.5000	0.5000	0.1000	0.3000	0.1000	0.0000	0.0000	0.2000	0.5000	0.4000
50.	* 0.0000	0.0000	0.0000	0.0000	0.5000	0.5000	0.5000	0.1000	0.2000	0.1000	0.0000	0.0000	0.3000	0.6000	0.4000
60.	* 0.0000	0.0000	0.0000	0.0000	0.5000	0.5000	0.5000	0.1000	0.1000	0.1000	0.1000	0.0000	0.3000	0.5000	0.5000
70.	* 0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000	0.1000	0.1000	0.1000	0.1000	0.0000	0.4000	0.5000	0.5000
80.	* 0.1000	0.0000	0.0000	0.0000	0.5000	0.4000	0.4000	0.1000	0.1000	0.1000	0.0000	0.0000	0.5000	0.5000	0.4000
90.	* 0.2000	0.0000	0.0000	0.0000	0.7000	0.5000	0.5000	0.1000	0.1000	0.0000	0.0000	0.0000	0.5000	0.4000	0.4000
100.	* 0.4000	0.1000	0.0000	0.0000	0.7000	0.5000	0.4000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000
110.	* 0.4000	0.1000	0.1000	0.0000	0.5000	0.5000	0.5000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000
120.	* 0.5000	0.1000	0.1000	0.0000	0.5000	0.7000	0.6000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000
130.	* 0.5000	0.1000	0.1000	0.0000	0.4000	0.7000	0.6000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000
140.	* 0.4000	0.1000	0.1000	0.0000	0.4000	0.7000	0.7000	0.1000	0.0000	0.0000	0.0000	0.0000	0.5000	0.5000	0.5000
150.	* 0.4000	0.2000	0.0000	0.0000	0.6000	0.7000	0.7000	0.2000	0.0000	0.0000	0.0000	0.0000	0.5000	0.5000	0.5000
160.	* 0.4000	0.2000	0.1000	0.0000	0.6000	0.7000	0.9000	0.3000	0.0000	0.0000	0.0000	0.0000	0.7000	0.6000	0.6000
170.	* 0.7000	0.4000	0.2000	0.1000	0.8000	0.8000	1.0000	0.4000	0.3000	0.3000	0.3000	0.3000	0.7000	0.7000	0.7000
180.	* 1.1000	0.7000	0.6000	0.3000	0.6000	0.5000	0.7000	0.4000	0.7000	0.7000	0.7000	0.7000	0.5000	0.5000	0.5000
190.	* 1.1000	0.9000	0.6000	0.4000	0.2000	0.0000	0.0000	0.1000	1.1000	1.1000	1.1000	1.0000	0.1000	0.1000	0.1000
200.	* 0.7000	0.5000	0.3000	0.3000	0.1000	0.1000	0.0000	0.0000	0.9000	0.9000	0.9000	0.9000	0.0000	0.0000	0.0000
210.	* 0.6000	0.1000	0.3000	0.2000	0.1000	0.1000	0.0000	0.0000	0.8000	0.8000	0.8000	0.8000	0.0000	0.0000	0.0000
220.	* 0.4000	0.2000	0.3000	0.1000	0.1000	0.1000	0.0000	0.0000	0.7000	0.8000	0.8000	0.8000	0.0000	0.0000	0.0000
230.	* 0.2000	0.4000	0.3000	0.1000	0.1000	0.1000	0.0000	0.0000	0.6000	0.6000	0.6000	0.6000	0.0000	0.0000	0.0000
240.	* 0.3000	0.4000	0.3000	0.1000	0.1000	0.1000	0.0000	0.0000	0.6000	0.6000	0.6000	0.6000	0.0000	0.0000	0.0000
250.	* 0.3000	0.4000	0.3000	0.1000	0.2000	0.1000	0.0000	0.0000	0.6000	0.6000	0.6000	0.6000	0.0000	0.0000	0.0000
260.	* 0.4000	0.4000	0.3000	0.1000	0.2000	0.1000	0.0000	0.0000	0.5000	0.6000	0.6000	0.6000	0.0000	0.0000	0.0000
270.	* 0.5000	0.3000	0.3000	0.1000	0.2000	0.0000	0.0000	0.0000	0.6000						

```
0.6000  0.6000  0.6000  0.1000  0.0000  0.0000
 280.  *  0.3000  0.3000  0.3000  0.1000  0.1000  0.0000  0.0000  0.0000  0.6000
0.7000  0.6000  0.6000  0.1000  0.0000  0.0000
 290.  *  0.3000  0.3000  0.3000  0.1000  0.0000  0.0000  0.0000  0.0000  0.4000
0.7000  0.6000  0.6000  0.1000  0.1000  0.0000
 300.  *  0.3000  0.3000  0.3000  0.1000  0.0000  0.0000  0.0000  0.0000  0.3000
0.7000  0.6000  0.6000  0.1000  0.1000  0.0000
 310.  *  0.3000  0.3000  0.3000  0.1000  0.0000  0.0000  0.0000  0.0000  0.4000
0.6000  0.6000  0.6000  0.1000  0.0000  0.0000
 320.  *  0.4000  0.4000  0.3000  0.1000  0.0000  0.0000  0.0000  0.0000  0.3000
0.5000  0.7000  0.8000  0.1000  0.0000  0.0000
 330.  *  0.5000  0.5000  0.4000  0.2000  0.0000  0.0000  0.0000  0.0000  0.5000
0.7000  0.8000  0.8000  0.2000  0.0000  0.0000
 340.  *  0.5000  0.4000  0.3000  0.2000  0.0000  0.0000  0.0000  0.0000  0.7000
0.7000  0.8000  0.9000  0.2000  0.0000  0.0000
 350.  *  0.3000  0.3000  0.2000  0.1000  0.1000  0.1000  0.1000  0.0000  0.7000
0.7000  0.9000  1.1000  0.4000  0.1000  0.1000
 360.  *  0.1000  0.1000  0.1000  0.1000  0.4000  0.4000  0.3000  0.1000  0.5000
0.6000  0.6000  0.6000  0.7000  0.5000  0.4000

------*-------------------------------------------------------------------------
----------------------------------------
 MAX   *  1.1000  0.9000  0.6000  0.4000  0.8000  0.8000  1.0000  0.4000  1.1000
1.1000  1.1000  1.1000  0.9000  0.7000  0.7000
 DEGR. *    180     190     180     190      20      20     170     170     190
190     190     350      10     170     170
```


JOB: Orange Line Station RUN: Exit 41SB Ramp 2017 Build AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

```
WIND  * CONCENTRATION
ANGLE *     (PPM)
(DEGR)*      16      17      18      19      20      21      22      23      24
25      26      27      28

------*-------------------------------------------------------------------------
--------------------------
  10.  *  0.6000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.1000  0.1000
0.1000  0.2000  0.1000  0.1000
  20.  *  0.6000  0.0000  0.0000  0.0000  0.3000  0.0000  0.0000  0.1000  0.1000
0.1000  0.4000  0.2000  0.1000
  30.  *  0.5000  0.0000  0.0000  0.0000  0.2000  0.1000  0.0000  0.1000  0.1000
0.1000  0.3000  0.2000  0.1000
  40.  *  0.5000  0.0000  0.0000  0.0000  0.2000  0.1000  0.0000  0.1000  0.1000
0.1000  0.3000  0.3000  0.1000
  50.  *  0.4000  0.0000  0.0000  0.0000  0.2000  0.1000  0.0000  0.1000  0.1000
0.1000  0.2000  0.2000  0.1000
  60.  *  0.4000  0.0000  0.0000  0.0000  0.2000  0.1000  0.0000  0.1000  0.1000
0.1000  0.2000  0.2000  0.2000
  70.  *  0.4000  0.0000  0.0000  0.0000  0.2000  0.1000  0.1000  0.1000  0.1000
0.1000  0.3000  0.2000  0.2000
```

```
  80.  *  0.4000  0.1000  0.1000  0.1000  0.2000  0.1000  0.2000  0.1000  0.1000
0.1000  0.2000  0.1000  0.1000
  90.  *  0.4000  0.2000  0.2000  0.2000  0.4000  0.3000  0.1000  0.1000  0.1000
0.0000  0.2000  0.2000  0.0000
 100.  *  0.4000  0.3000  0.3000  0.2000  0.4000  0.2000  0.2000  0.0000  0.0000
0.0000  0.3000  0.1000  0.1000
 110.  *  0.4000  0.2000  0.2000  0.2000  0.3000  0.2000  0.3000  0.0000  0.0000
0.0000  0.4000  0.1000  0.1000
 120.  *  0.4000  0.2000  0.2000  0.2000  0.2000  0.2000  0.2000  0.0000  0.0000
0.0000  0.4000  0.1000  0.1000
 130.  *  0.4000  0.2000  0.2000  0.2000  0.3000  0.2000  0.2000  0.0000  0.0000
0.0000  0.4000  0.1000  0.1000
 140.  *  0.5000  0.1000  0.1000  0.1000  0.5000  0.2000  0.2000  0.0000  0.0000
0.0000  0.4000  0.1000  0.1000
 150.  *  0.5000  0.1000  0.1000  0.1000  0.5000  0.4000  0.2000  0.0000  0.0000
0.0000  0.4000  0.3000  0.1000
 160.  *  0.6000  0.1000  0.1000  0.1000  0.5000  0.4000  0.1000  0.0000  0.0000
0.0000  0.4000  0.3000  0.0000
 170.  *  0.6000  0.1000  0.1000  0.1000  0.5000  0.2000  0.1000  0.0000  0.0000
0.0000  0.4000  0.1000  0.0000
 180.  *  0.3000  0.4000  0.2000  0.1000  0.2000  0.1000  0.1000  0.2000  0.1000
0.0000  0.1000  0.0000  0.0000
 190.  *  0.1000  0.6000  0.3000  0.1000  0.1000  0.1000  0.1000  0.4000  0.2000
0.0000  0.0000  0.0000  0.0000
 200.  *  0.0000  0.8000  0.4000  0.1000  0.1000  0.1000  0.1000  0.5000  0.3000
0.0000  0.0000  0.0000  0.0000
 210.  *  0.0000  0.8000  0.4000  0.2000  0.1000  0.1000  0.1000  0.5000  0.3000
0.1000  0.0000  0.0000  0.0000
 220.  *  0.0000  0.7000  0.4000  0.2000  0.1000  0.1000  0.1000  0.3000  0.3000
0.1000  0.0000  0.0000  0.0000
 230.  *  0.0000  0.6000  0.4000  0.3000  0.1000  0.1000  0.1000  0.3000  0.3000
0.1000  0.0000  0.0000  0.0000
 240.  *  0.0000  0.5000  0.4000  0.3000  0.1000  0.1000  0.1000  0.3000  0.2000
0.1000  0.0000  0.0000  0.0000
 250.  *  0.0000  0.5000  0.3000  0.3000  0.2000  0.2000  0.2000  0.3000  0.1000
0.1000  0.0000  0.0000  0.0000
 260.  *  0.0000  0.4000  0.4000  0.2000  0.2000  0.2000  0.2000  0.3000  0.1000
0.1000  0.0000  0.0000  0.0000
 270.  *  0.0000  0.4000  0.4000  0.2000  0.2000  0.2000  0.1000  0.3000  0.2000
0.1000  0.1000  0.1000  0.0000
 280.  *  0.0000  0.1000  0.2000  0.2000  0.1000  0.1000  0.1000  0.3000  0.1000
0.1000  0.1000  0.1000  0.1000
 290.  *  0.0000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.1000  0.2000
0.2000  0.1000  0.1000  0.1000
 300.  *  0.0000  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.1000  0.1000  0.1000  0.1000
 310.  *  0.0000  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.1000  0.1000  0.1000  0.1000
 320.  *  0.0000  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.5000  0.2000
0.1000  0.1000  0.1000  0.1000
 330.  *  0.0000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.5000  0.2000
0.1000  0.1000  0.1000  0.1000
 340.  *  0.0000  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.5000  0.1000
0.1000  0.1000  0.1000  0.1000
 350.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.1000
0.1000  0.1000  0.1000  0.1000
 360.  *  0.3000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.1000
0.1000  0.1000  0.1000  0.1000

------*-------------------------------------------------------------------------
--------------------------
 MAX   *  0.6000  0.8000  0.4000  0.3000  0.5000  0.4000  0.3000  0.5000  0.3000
0.2000  0.4000  0.3000  0.2000
```

```
 DEGR. *      10      200      200      230      140      150      110      200      200
290       20       40       60

 THE HIGHEST CONCENTRATION OF   1.1000 PPM OCCURRED AT RECEPTOR     1.
```

```
Q,EPA,,F,,0,T,T,F,T,0.7,
4,4,3,4,2200,2200,2200,2200,2200,2200,2200,2200,1036.75,1036.75,1
036.66666666667,1036.75,1036.75,1036.75,1036.66666666667,1036.75,
12,12,12,12,10,10,10,10,0,0,-1200,1200,0,0,1200,-1200,-
1200,1200,0,0,1200,-1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
120,120,120,120,62,62,62,62,2,2,2,2,1600,1600,1600,1600,1,1,1,1,3
,3,3,3
'Orange Line Station',60,175,0.0,0.0,28,0.3048,1,0
'N Leg, E Side-Corner',58.0,58.0,5.9
'N Leg, E Side - 25 m',58.0,130.0,5.9
'N Leg, E Side - 50 m',58.0,212.0,5.9
'N Leg, E Side-Midblk',58.0,648.0,5.9
'N Leg, W Side-Corner',-58.0,58.0,5.9
'N Leg, W Side - 25 m',-58.0,130.0,5.9
'N Leg, W Side - 50 m',-58.0,212.0,5.9
'N Leg, W Side-Midblk',-58.0,648.0,5.9
'S Leg, E Side-Corner',58.0,-46.0,5.9
'S Leg, E Side - 25 m',58.0,-118.0,5.9
'S Leg, E Side - 50 m',58.0,-200.0,5.9
'S Leg, E Side-Midblk',58.0,-636.0,5.9
'S Leg, W Side-Corner',-58.0,-46.0,5.9
'S Leg, W Side - 25 m',-58.0,-118.0,5.9
'S Leg, W Side - 50 m',-58.0,-200.0,5.9
'S Leg, W Side-Midblk',-58.0,-636.0,5.9
'E Leg, N Side - 25 m',130.0,58.0,5.9
'E Leg, N Side - 50 m',212.0,58.0,5.9
'E Leg, N Side-Midblk',648.0,58.0,5.9
'W Leg, N Side - 25 m',-130.0,58.0,5.9
'W Leg, N Side - 50 m',-212.0,58.0,5.9
'W Leg, N Side-Midblk',-648.0,58.0,5.9
'E Leg, S Side - 25 m',130.0,-46.0,5.9
'E Leg, S Side - 50 m',212.0,-46.0,5.9
'E Leg, S Side-Midblk',648.0,-46.0,5.9
'W Leg, S Side - 25 m',-130.0,-46.0,5.9
'W Leg, S Side - 50 m',-212.0,-46.0,5.9
'W Leg, S Side-Midblk',-648.0,-46.0,5.9
'Exit 41SB Ramp 2017 Build PM',12,1,0,'CO'
1
'N Leg App - FreeFlow','AG',-24,0,-24,1200,990,2.5,0.0,67.7
2
'N Leg App - Queue','AG',-24,48,-24,1200,0.0,48.0,4
90,70,2,990,13.78,1600,1,3
1
'N Leg Dep - FreeFlow','AG',24,0,24,1200,990,1.99,0.0,67.7
1
'S Leg App - FreeFlow','AG',24,0,24,-1200,1280,3.85,0.0,67.7
2
'S Leg App - Queue','AG',24,-36,24,-1200,0.0,48.0,4
90,80,2,1280,13.78,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-24,0,-24,-1200,1415,2.88,0.0,67.7
1
```

```
'E Leg App - FreeFlow','AG',0,24,1200,24,770,4.94,0.0,67.7
2
'E Leg App - Queue','AG',48,24,1200,24,0.0,48.0,4
90,77,2,770,13.78,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-18,1200,-18,35,2.07,0.0,55.7
1
'W Leg App - FreeFlow','AG',0,-18,-1200,-18,100,4.66,0.0,55.7
2
'W Leg App - Queue','AG',-48,-18,-1200,-18,0.0,36.0,3
90,76,2,100,13.78,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,24,-1200,24,605,4.95,0.0,67.7
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station RUN: Exit 41SB Ramp 2017 Build PM

DATE : 11/16/16
TIME : 14:36:57

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
		*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1.	N Leg App - FreeFlow	*	-24.0	0.0	-24.0	1200.0	*	1200.	360.	AG	990.	2.5	0.0	67.7		
2.	N Leg App - Queue	*	-24.0	48.0	-24.0	169.4	*	121.	360.	AG	115.	100.0	0.0	48.0	0.87	6.2
3.	N Leg Dep - FreeFlow	*	24.0	0.0	24.0	1200.0	*	1200.	360.	AG	990.	2.0	0.0	67.7		
4.	S Leg App - FreeFlow	*	24.0	0.0	24.0	-1200.0	*	1200.	180.	AG	1280.	3.8	0.0	67.7		
5.	S Leg App - Queue	*	24.0	-36.0	24.0	-2434.3	*	2398.	180.	AG	131.	100.0	0.0	48.0	3.02	121.8
6.	S Leg Dep - FreeFlow	*	-24.0	0.0	-24.0	-1200.0	*	1200.	180.	AG	1415.	2.9	0.0	67.7		
7.	E Leg App - FreeFlow	*	0.0	24.0	1200.0	24.0	*	1200.	90.	AG	770.	4.9	0.0	67.7		
8.	E Leg App - Queue	*	48.0	24.0	518.0	24.0	*	470.	90.	AG	126.	100.0	0.0	48.0	1.20	23.9
9.	E Leg Dep - FreeFlow	*	0.0	-18.0	1200.0	-18.0	*	1200.	90.	AG	35.	2.1	0.0	55.7		
10.	W Leg App - FreeFlow	*	0.0	-18.0	-1200.0	-18.0	*	1200.	270.	AG	100.	4.7	0.0	55.7		
11.	W Leg App - Queue	*	-48.0	-18.0	-61.7	-18.0	*	14.	270.	AG	94.	100.0	0.0	36.0	0.19	0.7
12.	W Leg Dep - FreeFlow	*	0.0	24.0	-1200.0	24.0	*	1200.	270.	AG	605.	4.9	0.0	67.7		

JOB: Orange Line Station RUN: Exit 41SB Ramp 2017 Build PM

DATE : 11/16/16
TIME : 14:36:57

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. N Leg App - Queue	90	70	2.0	990	1600	13.78	1	3
5. S Leg App - Queue	90	80	2.0	1280	1600	13.78	1	3
8. E Leg App - Queue	90	77	2.0	770	1600	13.78	1	3
11. W Leg App - Queue	90	76	2.0	100	1600	13.78	1	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. N Leg, E Side-Corner	58.0	58.0	5.9
2. N Leg, E Side - 25 m	58.0	130.0	5.9
3. N Leg, E Side - 50 m	58.0	212.0	5.9
4. N Leg, E Side-Midblk	58.0	648.0	5.9
5. N Leg, W Side-Corner	-58.0	58.0	5.9
6. N Leg, W Side - 25 m	-58.0	130.0	5.9
7. N Leg, W Side - 50 m	-58.0	212.0	5.9
8. N Leg, W Side-Midblk	-58.0	648.0	5.9
9. S Leg, E Side-Corner	58.0	-46.0	5.9
10. S Leg, E Side - 25 m	58.0	-118.0	5.9
11. S Leg, E Side - 50 m	58.0	-200.0	5.9
12. S Leg, E Side-Midblk	58.0	-636.0	5.9
13. S Leg, W Side-Corner	-58.0	-46.0	5.9
14. S Leg, W Side - 25 m	-58.0	-118.0	5.9
15. S Leg, W Side - 50 m	-58.0	-200.0	5.9
16. S Leg, W Side-Midblk	-58.0	-636.0	5.9
17. E Leg, N Side - 25 m	130.0	58.0	5.9
18. E Leg, N Side - 50 m	212.0	58.0	5.9
19. E Leg, N Side-Midblk	648.0	58.0	5.9
20. W Leg, N Side - 25 m	-130.0	58.0	5.9
21. W Leg, N Side - 50 m	-212.0	58.0	5.9
22. W Leg, N Side-Midblk	-648.0	58.0	5.9
23. E Leg, S Side - 25 m	130.0	-46.0	5.9
24. E Leg, S Side - 50 m	212.0	-46.0	5.9
25. E Leg, S Side-Midblk	648.0	-46.0	5.9
26. W Leg, S Side - 25 m	-130.0	-46.0	5.9
27. W Leg, S Side - 50 m	-212.0	-46.0	5.9
28. W Leg, S Side-Midblk	-648.0	-46.0	5.9

JOB: Orange Line Station RUN: Exit 41SB Ramp 2017 Build PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10.	* 0.0000	0.0000	0.0000	0.0000	0.5000	0.4000	0.3000	0.1000	0.3000	0.2000	0.2000	0.3000	0.8000	0.4000	0.4000
20.	* 0.0000	0.0000	0.0000	0.0000	0.6000	0.3000	0.2000	0.2000	0.4000	0.3000	0.1000	0.1000	0.7000	0.2000	0.4000
30.	* 0.0000	0.0000	0.0000	0.0000	0.6000	0.4000	0.1000	0.1000	0.4000	0.3000	0.1000	0.0000	0.5000	0.3000	0.6000
40.	* 0.0000	0.0000	0.0000	0.0000	0.5000	0.3000	0.1000	0.1000	0.4000	0.3000	0.1000	0.0000	0.1000	0.5000	0.7000
50.	* 0.0000	0.0000	0.0000	0.0000	0.5000	0.4000	0.1000	0.1000	0.4000	0.3000	0.1000	0.0000	0.3000	0.7000	0.5000
60.	* 0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.1000	0.1000	0.4000	0.3000	0.2000	0.0000	0.5000	0.7000	0.6000
70.	* 0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.1000	0.1000	0.4000	0.3000	0.1000	0.0000	0.6000	0.7000	0.6000
80.	* 0.2000	0.0000	0.0000	0.0000	0.6000	0.4000	0.1000	0.1000	0.4000	0.2000	0.0000	0.0000	0.7000	0.6000	0.4000
90.	* 0.6000	0.0000	0.0000	0.0000	0.9000	0.5000	0.1000	0.1000	0.2000	0.0000	0.0000	0.0000	0.6000	0.4000	0.4000
100.	* 0.8000	0.2000	0.0000	0.0000	1.0000	0.7000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000
110.	* 0.8000	0.3000	0.2000	0.0000	0.6000	0.7000	0.3000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000
120.	* 0.7000	0.3000	0.2000	0.0000	0.5000	0.7000	0.4000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.4000
130.	* 0.6000	0.3000	0.3000	0.0000	0.5000	0.7000	0.5000	0.1000	0.0000	0.0000	0.0000	0.0000	0.5000	0.5000	0.5000
140.	* 0.5000	0.3000	0.1000	0.0000	0.4000	0.7000	0.4000	0.1000	0.0000	0.0000	0.0000	0.0000	0.6000	0.6000	0.6000
150.	* 0.5000	0.3000	0.1000	0.1000	0.6000	0.7000	0.5000	0.2000	0.0000	0.0000	0.0000	0.0000	0.6000	0.6000	0.6000
160.	* 0.4000	0.3000	0.1000	0.1000	0.7000	0.9000	0.7000	0.3000	0.0000	0.0000	0.0000	0.0000	0.7000	0.7000	0.7000
170.	* 0.7000	0.5000	0.2000	0.2000	0.8000	0.9000	0.9000	0.2000	0.3000	0.3000	0.3000	0.3000	0.8000	0.8000	0.8000
180.	* 1.2000	0.9000	0.7000	0.4000	0.8000	0.7000	0.6000	0.3000	1.0000	1.0000	1.0000	0.8000	0.6000	0.6000	0.6000
190.	* 1.1000	1.0000	0.6000	0.3000	0.3000	0.1000	0.1000	0.0000	1.2000	1.2000	1.2000	1.2000	0.2000	0.2000	0.2000
200.	* 0.9000	0.5000	0.4000	0.2000	0.1000	0.1000	0.0000	0.0000	1.1000	1.1000	1.1000	1.1000	0.0000	0.0000	0.0000
210.	* 0.5000	0.2000	0.4000	0.2000	0.1000	0.1000	0.0000	0.0000	0.8000	0.8000	0.8000	0.8000	0.0000	0.0000	0.0000
220.	* 0.5000	0.2000	0.4000	0.2000	0.1000	0.1000	0.0000	0.0000	0.8000	0.8000	0.8000	0.8000	0.0000	0.0000	0.0000
230.	* 0.2000	0.5000	0.4000	0.2000	0.1000	0.1000	0.0000	0.0000	0.7000	0.7000	0.7000	0.7000	0.0000	0.0000	0.0000
240.	* 0.3000	0.5000	0.3000	0.2000	0.1000	0.1000	0.0000	0.0000	0.6000	0.6000	0.6000	0.6000	0.0000	0.0000	0.0000
250.	* 0.3000	0.4000	0.2000	0.1000	0.2000	0.1000	0.0000	0.0000	0.6000	0.6000	0.6000	0.6000	0.0000	0.0000	0.0000
260.	* 0.4000	0.4000	0.1000	0.1000	0.2000	0.1000	0.0000	0.0000	0.6000	0.6000	0.6000	0.6000	0.0000	0.0000	0.0000
270.	* 0.4000	0.3000	0.1000	0.1000	0.2000	0.0000	0.0000	0.0000	0.7000						

```
0.7000  0.7000  0.7000  0.1000  0.0000  0.0000
 280.  *  0.3000  0.3000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.6000
0.7000  0.6000  0.6000  0.1000  0.0000  0.0000
 290.  *  0.3000  0.2000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.5000
0.7000  0.6000  0.6000  0.1000  0.1000  0.0000
 300.  *  0.4000  0.3000  0.2000  0.2000  0.0000  0.0000  0.0000  0.0000  0.3000
0.7000  0.6000  0.6000  0.1000  0.1000  0.0000
 310.  *  0.4000  0.2000  0.2000  0.2000  0.0000  0.0000  0.0000  0.0000  0.4000
0.7000  0.7000  0.7000  0.1000  0.0000  0.0000
 320.  *  0.4000  0.2000  0.2000  0.2000  0.0000  0.0000  0.0000  0.0000  0.2000
0.7000  0.8000  0.8000  0.1000  0.0000  0.0000
 330.  *  0.3000  0.2000  0.2000  0.2000  0.0000  0.0000  0.0000  0.0000  0.5000
0.7000  0.8000  0.8000  0.1000  0.0000  0.0000
 340.  *  0.2000  0.2000  0.2000  0.2000  0.0000  0.0000  0.0000  0.0000  0.5000
0.7000  0.9000  1.0000  0.2000  0.0000  0.0000
 350.  *  0.2000  0.2000  0.2000  0.2000  0.1000  0.1000  0.1000  0.0000  0.6000
0.7000  0.8000  1.1000  0.2000  0.0000  0.1000
 360.  *  0.1000  0.1000  0.1000  0.1000  0.2000  0.1000  0.1000  0.1000  0.5000
0.5000  0.5000  0.6000  0.5000  0.3000  0.3000

------*-------------------------------------------------------------------------
----------------------------------------
 MAX   *  1.2000  1.0000  0.7000  0.4000  1.0000  0.9000  0.9000  0.3000  1.2000
1.2000  1.2000  1.2000  0.8000  0.8000  0.8000
 DEGR. *    180     190     180     180     100     160     170     160     190
190     190     190      10     170     170
```


JOB: Orange Line Station RUN: Exit 41SB Ramp 2017 Build PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

```
WIND  * CONCENTRATION
ANGLE *     (PPM)
(DEGR)*      16      17      18      19      20      21      22      23      24
25      26      27      28

------*-------------------------------------------------------------------------
--------------------------
  10.  *  0.6000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.3000  0.3000
0.1000  0.2000  0.1000  0.1000
  20.  *  0.7000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.4000  0.4000
0.1000  0.3000  0.1000  0.1000
  30.  *  0.7000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.4000  0.4000
0.1000  0.3000  0.1000  0.1000
  40.  *  0.6000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.4000  0.4000
0.1000  0.2000  0.2000  0.1000
  50.  *  0.5000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.4000  0.4000
0.1000  0.2000  0.2000  0.1000
  60.  *  0.4000  0.0000  0.0000  0.0000  0.2000  0.1000  0.0000  0.4000  0.4000
0.1000  0.2000  0.2000  0.1000
  70.  *  0.4000  0.0000  0.0000  0.0000  0.2000  0.1000  0.0000  0.4000  0.4000
0.1000  0.3000  0.3000  0.1000
```

```
  80.  *  0.4000  0.2000  0.2000  0.1000  0.3000  0.2000  0.1000  0.3000  0.3000
0.1000  0.4000  0.3000  0.2000
  90.  *  0.4000  0.5000  0.5000  0.2000  0.5000  0.5000  0.2000  0.2000  0.2000
0.0000  0.5000  0.3000  0.1000
 100.  *  0.4000  0.8000  0.7000  0.2000  0.6000  0.4000  0.2000  0.0000  0.0000
0.0000  0.3000  0.1000  0.1000
 110.  *  0.4000  0.8000  0.8000  0.2000  0.3000  0.3000  0.3000  0.0000  0.0000
0.0000  0.4000  0.1000  0.1000
 120.  *  0.4000  0.7000  0.7000  0.2000  0.3000  0.2000  0.2000  0.0000  0.0000
0.0000  0.4000  0.2000  0.1000
 130.  *  0.5000  0.6000  0.6000  0.1000  0.4000  0.4000  0.2000  0.0000  0.0000
0.0000  0.4000  0.3000  0.1000
 140.  *  0.6000  0.5000  0.5000  0.1000  0.5000  0.4000  0.2000  0.0000  0.0000
0.0000  0.4000  0.3000  0.1000
 150.  *  0.6000  0.5000  0.5000  0.1000  0.5000  0.5000  0.2000  0.0000  0.0000
0.0000  0.4000  0.4000  0.1000
 160.  *  0.7000  0.5000  0.5000  0.1000  0.5000  0.5000  0.2000  0.0000  0.0000
0.0000  0.4000  0.4000  0.1000
 170.  *  0.7000  0.4000  0.4000  0.1000  0.5000  0.3000  0.1000  0.0000  0.0000
0.0000  0.4000  0.2000  0.0000
 180.  *  0.4000  0.8000  0.6000  0.1000  0.2000  0.2000  0.1000  0.3000  0.1000
0.0000  0.1000  0.1000  0.0000
 190.  *  0.1000  0.9000  0.7000  0.1000  0.1000  0.1000  0.1000  0.5000  0.3000
0.0000  0.0000  0.0000  0.0000
 200.  *  0.0000  0.9000  0.8000  0.2000  0.1000  0.1000  0.1000  0.5000  0.4000
0.1000  0.0000  0.0000  0.0000
 210.  *  0.0000  0.9000  0.9000  0.2000  0.1000  0.1000  0.1000  0.5000  0.4000
0.1000  0.0000  0.0000  0.0000
 220.  *  0.0000  0.9000  0.8000  0.2000  0.1000  0.1000  0.1000  0.4000  0.3000
0.1000  0.0000  0.0000  0.0000
 230.  *  0.0000  0.8000  0.7000  0.2000  0.1000  0.1000  0.1000  0.4000  0.3000
0.1000  0.0000  0.0000  0.0000
 240.  *  0.0000  0.5000  0.9000  0.4000  0.1000  0.1000  0.1000  0.4000  0.3000
0.1000  0.0000  0.0000  0.0000
 250.  *  0.0000  0.4000  0.7000  0.5000  0.2000  0.2000  0.2000  0.4000  0.2000
0.1000  0.0000  0.0000  0.0000
 260.  *  0.0000  0.4000  0.7000  0.5000  0.2000  0.2000  0.2000  0.4000  0.2000
0.1000  0.0000  0.0000  0.0000
 270.  *  0.0000  0.4000  0.5000  0.5000  0.2000  0.2000  0.1000  0.4000  0.3000
0.1000  0.1000  0.1000  0.0000
 280.  *  0.0000  0.1000  0.2000  0.2000  0.1000  0.1000  0.1000  0.3000  0.2000
0.4000  0.1000  0.1000  0.1000
 290.  *  0.0000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.2000  0.3000
0.4000  0.1000  0.1000  0.1000
 300.  *  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.4000
0.2000  0.1000  0.1000  0.1000
 310.  *  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000  0.5000
0.2000  0.1000  0.1000  0.1000
 320.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000  0.4000
0.1000  0.1000  0.1000  0.1000
 330.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.5000  0.4000
0.1000  0.1000  0.1000  0.1000
 340.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000  0.4000
0.1000  0.1000  0.1000  0.1000
 350.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.1000  0.1000  0.1000  0.1000
 360.  *  0.3000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.1000  0.1000  0.1000  0.1000

------*-------------------------------------------------------------------------
--------------------------
 MAX   *  0.7000  0.9000  0.9000  0.5000  0.6000  0.5000  0.3000  0.5000  0.5000
0.4000  0.5000  0.4000  0.2000
```

DEGR. * 20 190 210 250 100 90 110 190 310
280 90 150 80

THE HIGHEST CONCENTRATION OF 1.2000 PPM OCCURRED AT RECEPTOR 1.

```
Q,EPA,,F,,0,T,T,F,T,0.7,
3,2,4,3,2200,2200,2200,2200,2200,2200,2200,2200,1036.8,1036.8,103
6.8,1036.8,1036.8,1036.8,1036.8,1036.8,12,12,12,12,10,10,10,10,0,
0,-1200,1200,0,0,1200,-1200,-1200,1200,0,0,1200,-
1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
120,120,120,120,62,62,62,62,2,2,2,2,1600,1600,1600,1600,1,1,1,1,3
,3,3,3
'Orange Line Station CAL3QHC Run',60,175,0.0,0.0,28,0.3048,1,0
'N Leg, E Side-Corner',46.0,46.0,5.9
'N Leg, E Side - 25 m',46.0,118.0,5.9
'N Leg, E Side - 50 m',46.0,200.0,5.9
'N Leg, E Side-Midblk',46.0,636.0,5.9
'N Leg, W Side-Corner',-34.0,46.0,5.9
'N Leg, W Side - 25 m',-34.0,118.0,5.9
'N Leg, W Side - 50 m',-34.0,200.0,5.9
'N Leg, W Side-Midblk',-34.0,636.0,5.9
'S Leg, E Side-Corner',46.0,-58.0,5.9
'S Leg, E Side - 25 m',46.0,-130.0,5.9
'S Leg, E Side - 50 m',46.0,-212.0,5.9
'S Leg, E Side-Midblk',46.0,-648.0,5.9
'S Leg, W Side-Corner',-34.0,-58.0,5.9
'S Leg, W Side - 25 m',-34.0,-130.0,5.9
'S Leg, W Side - 50 m',-34.0,-212.0,5.9
'S Leg, W Side-Midblk',-34.0,-648.0,5.9
'E Leg, N Side - 25 m',118.0,46.0,5.9
'E Leg, N Side - 50 m',200.0,46.0,5.9
'E Leg, N Side-Midblk',636.0,46.0,5.9
'W Leg, N Side - 25 m',-106.0,46.0,5.9
'W Leg, N Side - 50 m',-188.0,46.0,5.9
'W Leg, N Side-Midblk',-624.0,46.0,5.9
'E Leg, S Side - 25 m',118.0,-58.0,5.9
'E Leg, S Side - 50 m',200.0,-58.0,5.9
'E Leg, S Side-Midblk',636.0,-58.0,5.9
'W Leg, S Side - 25 m',-106.0,-58.0,5.9
'W Leg, S Side - 50 m',-188.0,-58.0,5.9
'W Leg, S Side-Midblk',-624.0,-58.0,5.9
'US RT1 and Lambert 2017 Build AM',12,1,0,'CO'
1
'N Leg App - FreeFlow','AG',-12,0,-12,1200,245,2.18,0.0,43.7
2
'N Leg App - Queue','AG',-12,36,-12,1200,0.0,24.0,2
100,81,2,245,13.78,1600,1,3
1
'N Leg Dep - FreeFlow','AG',18,0,18,1200,500,2.31,0.0,55.7
1
'S Leg App - FreeFlow','AG',18,0,18,-1200,460,4.15,0.0,55.7
2
'S Leg App - Queue','AG',18,-48,18,-1200,0.0,36.0,3
100,81,2,460,13.78,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-12,0,-12,-1200,155,4.39,0.0,43.7
1
```

```
'E Leg App - FreeFlow','AG',0,18,1200,18,360,3.14,0.0,55.7
2
'E Leg App - Queue','AG',36,18,1200,18,0.0,36.0,3
100,92,2,360,13.78,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-24,1200,-24,540,2.88,0.0,67.7
1
'W Leg App - FreeFlow','AG',0,-24,-1200,-24,475,2.51,0.0,67.7
2
'W Leg App - Queue','AG',-24,-24,-1200,-24,0.0,48.0,4
100,92,2,475,13.78,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,18,-1200,18,345,2.36,0.0,55.7
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2017 Build AM

DATE : 11/16/16
TIME : 14:38:37

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1. N Leg App - FreeFlow	*	-12.0	0.0	-12.0	1200.0	*	1200.	360.	AG	245.	2.2	0.0	43.7		
2. N Leg App - Queue	*	-12.0	36.0	-12.0	90.0	*	54.	360.	AG	60.	100.0	0.0	24.0	0.51	2.7
3. N Leg Dep - FreeFlow	*	18.0	0.0	18.0	1200.0	*	1200.	360.	AG	500.	2.3	0.0	55.7		
4. S Leg App - FreeFlow	*	18.0	0.0	18.0	-1200.0	*	1200.	180.	AG	460.	4.2	0.0	55.7		
5. S Leg App - Queue	*	18.0	-48.0	18.0	-116.9	*	69.	180.	AG	90.	100.0	0.0	36.0	0.64	3.5
6. S Leg Dep - FreeFlow	*	-12.0	0.0	-12.0	-1200.0	*	1200.	180.	AG	155.	4.4	0.0	43.7		
7. E Leg App - FreeFlow	*	0.0	18.0	1200.0	18.0	*	1200.	90.	AG	360.	3.1	0.0	55.7		
8. E Leg App - Queue	*	36.0	18.0	721.0	18.0	*	685.	90.	AG	102.	100.0	0.0	36.0	1.88	34.8
9. E Leg Dep - FreeFlow	*	0.0	-24.0	1200.0	-24.0	*	1200.	90.	AG	540.	2.9	0.0	67.7		
10. W Leg App - FreeFlow	*	0.0	-24.0	-1200.0	-24.0	*	1200.	270.	AG	475.	2.5	0.0	67.7		
11. W Leg App - Queue	*	-24.0	-24.0	-687.1	-24.0	*	663.	270.	AG	136.	100.0	0.0	48.0	1.84	33.7
12. W Leg Dep - FreeFlow	*	0.0	18.0	-1200.0	18.0	*	1200.	270.	AG	345.	2.4	0.0	55.7		

JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2017 Build AM

DATE : 11/16/16
TIME : 14:38:37

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. N Leg App - Queue	*	100	81	2.0	245	1600	13.78	1	3
5. S Leg App - Queue	*	100	81	2.0	460	1600	13.78	1	3
8. E Leg App - Queue	*	100	92	2.0	360	1600	13.78	1	3
11. W Leg App - Queue	*	100	92	2.0	475	1600	13.78	1	3

RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (FT) X	Y	Z	*
1. N Leg, E Side-Corner	*	46.0	46.0	5.9	*
2. N Leg, E Side - 25 m	*	46.0	118.0	5.9	*
3. N Leg, E Side - 50 m	*	46.0	200.0	5.9	*
4. N Leg, E Side-Midblk	*	46.0	636.0	5.9	*
5. N Leg, W Side-Corner	*	-34.0	46.0	5.9	*
6. N Leg, W Side - 25 m	*	-34.0	118.0	5.9	*
7. N Leg, W Side - 50 m	*	-34.0	200.0	5.9	*
8. N Leg, W Side-Midblk	*	-34.0	636.0	5.9	*
9. S Leg, E Side-Corner	*	46.0	-58.0	5.9	*
10. S Leg, E Side - 25 m	*	46.0	-130.0	5.9	*
11. S Leg, E Side - 50 m	*	46.0	-212.0	5.9	*
12. S Leg, E Side-Midblk	*	46.0	-648.0	5.9	*
13. S Leg, W Side-Corner	*	-34.0	-58.0	5.9	*
14. S Leg, W Side - 25 m	*	-34.0	-130.0	5.9	*
15. S Leg, W Side - 50 m	*	-34.0	-212.0	5.9	*
16. S Leg, W Side-Midblk	*	-34.0	-648.0	5.9	*
17. E Leg, N Side - 25 m	*	118.0	46.0	5.9	*
18. E Leg, N Side - 50 m	*	200.0	46.0	5.9	*
19. E Leg, N Side-Midblk	*	636.0	46.0	5.9	*
20. W Leg, N Side - 25 m	*	-106.0	46.0	5.9	*
21. W Leg, N Side - 50 m	*	-188.0	46.0	5.9	*
22. W Leg, N Side-Midblk	*	-624.0	46.0	5.9	*
23. E Leg, S Side - 25 m	*	118.0	-58.0	5.9	*
24. E Leg, S Side - 50 m	*	200.0	-58.0	5.9	*
25. E Leg, S Side-Midblk	*	636.0	-58.0	5.9	*
26. W Leg, S Side - 25 m	*	-106.0	-58.0	5.9	*
27. W Leg, S Side - 50 m	*	-188.0	-58.0	5.9	*
28. W Leg, S Side-Midblk	*	-624.0	-58.0	5.9	*

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10.	* 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2000	0.1000	0.1000	0.0000	0.4000	0.1000	0.1000
20.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.2000	0.1000	0.1000	0.0000	0.2000	0.1000	0.3000
30.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.2000	0.1000	0.1000	0.0000	0.1000	0.2000	0.3000
40.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.3000	0.1000	0.1000	0.0000	0.2000	0.4000	0.2000
50.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.3000	0.1000	0.1000	0.0000	0.1000	0.4000	0.2000
60.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.3000	0.2000	0.1000	0.0000	0.2000	0.4000	0.1000
70.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.4000	0.1000	0.1000	0.0000	0.4000	0.3000	0.1000
80.	* 0.1000	0.0000	0.0000	0.0000	0.3000	0.0000	0.0000	0.0000	0.3000	0.1000	0.0000	0.0000	0.4000	0.2000	0.0000
90.	* 0.5000	0.1000	0.0000	0.0000	0.6000	0.1000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.4000	0.0000	0.0000
100.	* 0.7000	0.2000	0.0000	0.0000	0.7000	0.2000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000
110.	* 0.6000	0.2000	0.1000	0.0000	0.4000	0.2000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000
120.	* 0.5000	0.2000	0.1000	0.0000	0.2000	0.2000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000
130.	* 0.4000	0.2000	0.1000	0.0000	0.0000	0.2000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.3000	0.1000	0.1000
140.	* 0.3000	0.2000	0.1000	0.0000	0.0000	0.2000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.1000	0.1000
150.	* 0.3000	0.2000	0.1000	0.1000	0.2000	0.2000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.1000	0.1000
160.	* 0.3000	0.1000	0.1000	0.0000	0.2000	0.2000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
170.	* 0.3000	0.1000	0.1000	0.0000	0.3000	0.4000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000
180.	* 0.5000	0.2000	0.2000	0.1000	0.3000	0.1000	0.1000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
190.	* 0.4000	0.3000	0.1000	0.1000	0.2000	0.2000	0.1000	0.1000	0.2000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
200.	* 0.3000	0.1000	0.2000	0.2000	0.3000	0.2000	0.1000	0.1000	0.3000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
210.	* 0.1000	0.1000	0.2000	0.2000	0.3000	0.2000	0.1000	0.1000	0.4000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
220.	* 0.2000	0.3000	0.1000	0.1000	0.3000	0.2000	0.1000	0.1000	0.4000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
230.	* 0.2000	0.3000	0.2000	0.0000	0.3000	0.2000	0.2000	0.0000	0.4000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
240.	* 0.3000	0.3000	0.2000	0.0000	0.4000	0.2000	0.2000	0.0000	0.4000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
250.	* 0.4000	0.2000	0.1000	0.0000	0.4000	0.2000	0.1000	0.0000	0.4000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
260.	* 0.5000	0.1000	0.0000	0.0000	0.4000	0.1000	0.0000	0.0000	0.5000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000
270.	* 0.3000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.8000						

```
0.2000  0.1000  0.1000  0.5000  0.1000  0.0000
 280.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.9000
0.3000  0.2000  0.1000  0.8000  0.2000  0.1000
 290.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.6000
0.5000  0.3000  0.1000  0.8000  0.3000  0.1000
 300.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000
0.6000  0.3000  0.1000  0.7000  0.3000  0.2000
 310.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000
0.5000  0.3000  0.1000  0.5000  0.2000  0.2000
 320.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000
0.6000  0.3000  0.2000  0.4000  0.2000  0.2000
 330.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000
0.5000  0.2000  0.2000  0.4000  0.2000  0.2000
 340.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000
0.3000  0.3000  0.2000  0.4000  0.2000  0.1000
 350.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.2000
0.3000  0.2000  0.1000  0.4000  0.2000  0.1000
 360.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.2000
0.3000  0.3000  0.1000  0.3000  0.1000  0.1000

------*-------------------------------------------------------------------------
----------------------------------------
 MAX   *  0.7000  0.3000  0.2000  0.2000  0.7000  0.4000  0.2000  0.1000  0.9000
0.6000  0.3000  0.2000  0.8000  0.4000  0.3000
 DEGR. *    100     190     180     200     100     170     230     140     280
300     290     320     280      40      20
```


JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2017 Build AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

```
WIND  * CONCENTRATION
ANGLE *     (PPM)
(DEGR)*      16      17      18      19      20      21      22      23      24
25      26      27      28

------*-------------------------------------------------------------------------
--------------------------
  10.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.4000  0.4000  0.4000
  20.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.4000  0.4000  0.4000
  30.  *  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.4000  0.4000  0.4000
  40.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.2000  0.4000  0.4000  0.4000
  50.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.2000  0.5000  0.5000  0.5000
  60.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.1000  0.5000  0.5000  0.7000
  70.  *  0.0000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.4000  0.3000
0.1000  0.5000  0.7000  0.8000
```

```
  80.  *  0.0000  0.1000  0.1000  0.0000  0.2000  0.1000  0.0000  0.3000  0.3000
0.1000  0.5000  0.6000  0.9000
  90.  *  0.0000  0.5000  0.4000  0.2000  0.4000  0.2000  0.2000  0.2000  0.2000
0.1000  0.4000  0.3000  0.6000
 100.  *  0.0000  0.7000  0.6000  0.3000  0.3000  0.3000  0.4000  0.0000  0.0000
0.0000  0.1000  0.2000  0.1000
 110.  *  0.0000  0.6000  0.6000  0.4000  0.1000  0.3000  0.4000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
 120.  *  0.0000  0.5000  0.5000  0.5000  0.1000  0.3000  0.4000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 130.  *  0.1000  0.4000  0.4000  0.4000  0.3000  0.3000  0.3000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 140.  *  0.1000  0.3000  0.3000  0.3000  0.3000  0.3000  0.3000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 150.  *  0.1000  0.3000  0.3000  0.3000  0.3000  0.3000  0.3000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 160.  *  0.1000  0.3000  0.3000  0.3000  0.3000  0.3000  0.3000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 170.  *  0.1000  0.3000  0.3000  0.3000  0.3000  0.3000  0.3000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 180.  *  0.0000  0.3000  0.3000  0.3000  0.3000  0.3000  0.3000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 190.  *  0.0000  0.3000  0.3000  0.3000  0.3000  0.3000  0.3000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 200.  *  0.0000  0.3000  0.3000  0.3000  0.3000  0.3000  0.3000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 210.  *  0.0000  0.4000  0.3000  0.3000  0.3000  0.3000  0.2000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 220.  *  0.0000  0.4000  0.3000  0.3000  0.3000  0.3000  0.2000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 230.  *  0.0000  0.5000  0.4000  0.4000  0.3000  0.3000  0.1000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 240.  *  0.0000  0.5000  0.5000  0.5000  0.4000  0.3000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 250.  *  0.0000  0.6000  0.7000  0.6000  0.4000  0.4000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 260.  *  0.0000  0.5000  0.7000  0.7000  0.4000  0.4000  0.1000  0.2000  0.2000
0.0000  0.1000  0.1000  0.0000
 270.  *  0.0000  0.3000  0.4000  0.6000  0.1000  0.1000  0.0000  0.4000  0.4000
0.3000  0.5000  0.5000  0.1000
 280.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.4000  0.3000
0.4000  0.8000  0.8000  0.2000
 290.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.4000  0.8000  0.8000  0.4000
 300.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.3000
0.3000  0.7000  0.7000  0.4000
 310.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.3000
0.3000  0.5000  0.5000  0.4000
 320.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.3000
0.3000  0.4000  0.4000  0.4000
 330.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.4000  0.4000  0.4000
 340.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.4000  0.4000  0.4000
 350.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.4000  0.4000  0.4000
 360.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.4000  0.4000  0.4000

------*-------------------------------------------------------------------------
--------------------------
 MAX   *  0.2000  0.7000  0.7000  0.7000  0.4000  0.4000  0.4000  0.4000  0.4000
0.4000  0.8000  0.8000  0.9000
```

DEGR. * 30 100 260 260 90 250 100 70 270 280 280 280 80

THE HIGHEST CONCENTRATION OF 0.9000 PPM OCCURRED AT RECEPTOR 28.

```
Q,EPA,,F,,0,T,T,F,T,0.7,
3,2,4,3,2200,2200,2200,2200,2200,2200,2200,2200,1036.8,1036.8,103
6.8,1036.8,1036.8,1036.8,1036.8,1036.8,12,12,12,12,10,10,10,10,0,
0,-1200,1200,0,0,1200,-1200,-1200,1200,0,0,1200,-
1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
120,120,120,120,62,62,62,62,2,2,2,2,1600,1600,1600,1600,1,1,1,1,3
,3,3,3
'Orange Line Station CAL3QHC Run',60,175,0.0,0.0,28,0.3048,1,0
'N Leg, E Side-Corner',46.0,46.0,5.9
'N Leg, E Side - 25 m',46.0,118.0,5.9
'N Leg, E Side - 50 m',46.0,200.0,5.9
'N Leg, E Side-Midblk',46.0,636.0,5.9
'N Leg, W Side-Corner',-34.0,46.0,5.9
'N Leg, W Side - 25 m',-34.0,118.0,5.9
'N Leg, W Side - 50 m',-34.0,200.0,5.9
'N Leg, W Side-Midblk',-34.0,636.0,5.9
'S Leg, E Side-Corner',46.0,-58.0,5.9
'S Leg, E Side - 25 m',46.0,-130.0,5.9
'S Leg, E Side - 50 m',46.0,-212.0,5.9
'S Leg, E Side-Midblk',46.0,-648.0,5.9
'S Leg, W Side-Corner',-34.0,-58.0,5.9
'S Leg, W Side - 25 m',-34.0,-130.0,5.9
'S Leg, W Side - 50 m',-34.0,-212.0,5.9
'S Leg, W Side-Midblk',-34.0,-648.0,5.9
'E Leg, N Side - 25 m',118.0,46.0,5.9
'E Leg, N Side - 50 m',200.0,46.0,5.9
'E Leg, N Side-Midblk',636.0,46.0,5.9
'W Leg, N Side - 25 m',-106.0,46.0,5.9
'W Leg, N Side - 50 m',-188.0,46.0,5.9
'W Leg, N Side-Midblk',-624.0,46.0,5.9
'E Leg, S Side - 25 m',118.0,-58.0,5.9
'E Leg, S Side - 50 m',200.0,-58.0,5.9
'E Leg, S Side-Midblk',636.0,-58.0,5.9
'W Leg, S Side - 25 m',-106.0,-58.0,5.9
'W Leg, S Side - 50 m',-188.0,-58.0,5.9
'W Leg, S Side-Midblk',-624.0,-58.0,5.9
'US RT1 and Lambert 2017 Build PM',12,1,0,'CO'
1
'N Leg App - FreeFlow','AG',-12,0,-12,1200,160,2.18,0.0,43.7
2
'N Leg App - Queue','AG',-12,36,-12,1200,0.0,24.0,2
100,90,2,160,13.78,1600,1,3
1
'N Leg Dep - FreeFlow','AG',18,0,18,1200,535,2.31,0.0,55.7
1
'S Leg App - FreeFlow','AG',18,0,18,-1200,965,4.15,0.0,55.7
2
'S Leg App - Queue','AG',18,-48,18,-1200,0.0,36.0,3
100,74,2,965,13.78,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-12,0,-12,-1200,415,4.39,0.0,43.7
1
```

```
'E Leg App - FreeFlow','AG',0,18,1200,18,680,3.14,0.0,55.7
2
'E Leg App - Queue','AG',36,18,1200,18,0.0,36.0,3
100,92,2,680,13.78,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-24,1200,-24,1045,2.88,0.0,67.7
1
'W Leg App - FreeFlow','AG',0,-24,-1200,-24,1060,2.51,0.0,67.7
2
'W Leg App - Queue','AG',-24,-24,-1200,-24,0.0,48.0,4
100,92,2,1060,13.78,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,18,-1200,18,870,2.36,0.0,55.7
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2017 Build PM

DATE : 11/16/16
TIME : 14:40:13

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1. N Leg App - FreeFlow	*	-12.0	0.0	-12.0	1200.0	*	1200.	360.	AG	160.	2.2	0.0	43.7		
2. N Leg App - Queue	*	-12.0	36.0	-12.0	91.3	*	55.	360.	AG	67.	100.0	0.0	24.0	0.83	2.8
3. N Leg Dep - FreeFlow	*	18.0	0.0	18.0	1200.0	*	1200.	360.	AG	535.	2.3	0.0	55.7		
4. S Leg App - FreeFlow	*	18.0	0.0	18.0	-1200.0	*	1200.	180.	AG	965.	4.2	0.0	55.7		
5. S Leg App - Queue	*	18.0	-48.0	18.0	-219.1	*	171.	180.	AG	82.	100.0	0.0	36.0	0.91	8.7
6. S Leg Dep - FreeFlow	*	-12.0	0.0	-12.0	-1200.0	*	1200.	180.	AG	415.	4.4	0.0	43.7		
7. E Leg App - FreeFlow	*	0.0	18.0	1200.0	18.0	*	1200.	90.	AG	680.	3.1	0.0	55.7		
8. E Leg App - Queue	*	36.0	18.0	1882.5	18.0	*	1846.	90.	AG	102.	100.0	0.0	36.0	3.53	93.8
9. E Leg Dep - FreeFlow	*	0.0	-24.0	1200.0	-24.0	*	1200.	90.	AG	1045.	2.9	0.0	67.7		
10. W Leg App - FreeFlow	*	0.0	-24.0	-1200.0	-24.0	*	1200.	270.	AG	1060.	2.5	0.0	67.7		
11. W Leg App - Queue	*	-24.0	-24.0	-2297.8	-24.0	*	2274.	270.	AG	136.	100.0	0.0	48.0	4.14	115.5
12. W Leg Dep - FreeFlow	*	0.0	18.0	-1200.0	18.0	*	1200.	270.	AG	870.	2.4	0.0	55.7		

JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2017 Build PM

DATE : 11/16/16
TIME : 14:40:13

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. N Leg App - Queue	*	100	90	2.0	160	1600	13.78	1	3
5. S Leg App - Queue	*	100	74	2.0	965	1600	13.78	1	3
8. E Leg App - Queue	*	100	92	2.0	680	1600	13.78	1	3
11. W Leg App - Queue	*	100	92	2.0	1060	1600	13.78	1	3

RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (FT) X	Y	Z	*
1. N Leg, E Side-Corner	*	46.0	46.0	5.9	*
2. N Leg, E Side - 25 m	*	46.0	118.0	5.9	*
3. N Leg, E Side - 50 m	*	46.0	200.0	5.9	*
4. N Leg, E Side-Midblk	*	46.0	636.0	5.9	*
5. N Leg, W Side-Corner	*	-34.0	46.0	5.9	*
6. N Leg, W Side - 25 m	*	-34.0	118.0	5.9	*
7. N Leg, W Side - 50 m	*	-34.0	200.0	5.9	*
8. N Leg, W Side-Midblk	*	-34.0	636.0	5.9	*
9. S Leg, E Side-Corner	*	46.0	-58.0	5.9	*
10. S Leg, E Side - 25 m	*	46.0	-130.0	5.9	*
11. S Leg, E Side - 50 m	*	46.0	-212.0	5.9	*
12. S Leg, E Side-Midblk	*	46.0	-648.0	5.9	*
13. S Leg, W Side-Corner	*	-34.0	-58.0	5.9	*
14. S Leg, W Side - 25 m	*	-34.0	-130.0	5.9	*
15. S Leg, W Side - 50 m	*	-34.0	-212.0	5.9	*
16. S Leg, W Side-Midblk	*	-34.0	-648.0	5.9	*
17. E Leg, N Side - 25 m	*	118.0	46.0	5.9	*
18. E Leg, N Side - 50 m	*	200.0	46.0	5.9	*
19. E Leg, N Side-Midblk	*	636.0	46.0	5.9	*
20. W Leg, N Side - 25 m	*	-106.0	46.0	5.9	*
21. W Leg, N Side - 50 m	*	-188.0	46.0	5.9	*
22. W Leg, N Side-Midblk	*	-624.0	46.0	5.9	*
23. E Leg, S Side - 25 m	*	118.0	-58.0	5.9	*
24. E Leg, S Side - 50 m	*	200.0	-58.0	5.9	*
25. E Leg, S Side-Midblk	*	636.0	-58.0	5.9	*
26. W Leg, S Side - 25 m	*	-106.0	-58.0	5.9	*
27. W Leg, S Side - 50 m	*	-188.0	-58.0	5.9	*
28. W Leg, S Side-Midblk	*	-624.0	-58.0	5.9	*

JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2017 Build PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.3000	0.3000	0.2000	0.1000	0.6000	0.2000	0.3000
20.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.3000	0.2000	0.1000	0.0000	0.5000	0.2000	0.5000
30.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.3000	0.2000	0.1000	0.1000	0.3000	0.4000	0.5000
40.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.3000	0.2000	0.1000	0.1000	0.5000	0.5000	0.5000
50.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.3000	0.2000	0.1000	0.1000	0.5000	0.6000	0.5000
60.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.4000	0.3000	0.1000	0.1000	0.6000	0.7000	0.5000
70.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.6000	0.3000	0.1000	0.0000	0.7000	0.7000	0.5000
80.	* 0.3000	0.0000	0.0000	0.0000	0.4000	0.0000	0.0000	0.0000	0.6000	0.3000	0.1000	0.0000	0.9000	0.7000	0.5000
90.	* 0.7000	0.1000	0.1000	0.0000	0.8000	0.1000	0.1000	0.0000	0.4000	0.1000	0.0000	0.0000	0.6000	0.5000	0.3000
100.	* 0.8000	0.2000	0.1000	0.0000	0.9000	0.3000	0.1000	0.0000	0.1000	0.0000	0.0000	0.0000	0.5000	0.4000	0.3000
110.	* 0.7000	0.4000	0.2000	0.0000	0.6000	0.4000	0.2000	0.0000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.2000
120.	* 0.6000	0.3000	0.1000	0.1000	0.4000	0.3000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.2000
130.	* 0.6000	0.2000	0.1000	0.1000	0.1000	0.3000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.2000
140.	* 0.5000	0.2000	0.1000	0.1000	0.3000	0.2000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.4000	0.2000
150.	* 0.5000	0.2000	0.1000	0.1000	0.3000	0.3000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.4000	0.3000	0.2000
160.	* 0.5000	0.1000	0.1000	0.0000	0.5000	0.4000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.5000	0.4000	0.3000
170.	* 0.6000	0.2000	0.1000	0.0000	0.7000	0.5000	0.3000	0.0000	0.1000	0.1000	0.1000	0.1000	0.4000	0.3000	0.3000
180.	* 0.8000	0.3000	0.3000	0.1000	0.7000	0.5000	0.2000	0.0000	0.3000	0.3000	0.2000	0.2000	0.2000	0.2000	0.2000
190.	* 0.9000	0.4000	0.3000	0.1000	0.4000	0.2000	0.1000	0.1000	0.7000	0.6000	0.4000	0.3000	0.1000	0.1000	0.1000
200.	* 0.6000	0.4000	0.2000	0.2000	0.5000	0.2000	0.1000	0.1000	0.6000	0.6000	0.3000	0.3000	0.0000	0.0000	0.0000
210.	* 0.4000	0.3000	0.2000	0.2000	0.5000	0.2000	0.1000	0.1000	0.6000	0.6000	0.3000	0.3000	0.0000	0.0000	0.0000
220.	* 0.3000	0.3000	0.1000	0.1000	0.5000	0.2000	0.1000	0.1000	0.5000	0.5000	0.2000	0.2000	0.0000	0.0000	0.0000
230.	* 0.4000	0.3000	0.2000	0.1000	0.5000	0.2000	0.2000	0.1000	0.4000	0.4000	0.1000	0.1000	0.0000	0.0000	0.0000
240.	* 0.5000	0.3000	0.2000	0.1000	0.6000	0.2000	0.2000	0.1000	0.4000	0.4000	0.1000	0.1000	0.0000	0.0000	0.0000
250.	* 0.6000	0.4000	0.2000	0.1000	0.6000	0.4000	0.2000	0.1000	0.3000	0.3000	0.2000	0.1000	0.0000	0.0000	0.0000
260.	* 0.8000	0.3000	0.2000	0.0000	0.7000	0.3000	0.2000	0.0000	0.5000	0.3000	0.2000	0.1000	0.3000	0.0000	0.0000
270.	* 0.6000	0.1000	0.1000	0.0000	0.5000	0.1000	0.1000	0.0000	1.0000						

```
0.5000  0.4000  0.1000  0.7000  0.2000  0.1000
 280.  *  0.2000  0.0000  0.0000  0.0000  0.2000  0.0000  0.0000  0.0000  1.1000
0.7000  0.5000  0.1000  1.1000  0.4000  0.2000
 290.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.9000
0.7000  0.5000  0.2000  0.9000  0.4000  0.2000
 300.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.7000
0.8000  0.6000  0.2000  0.8000  0.4000  0.2000
 310.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000
0.7000  0.6000  0.2000  0.6000  0.3000  0.2000
 320.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000
0.7000  0.7000  0.3000  0.5000  0.2000  0.2000
 330.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.3000
0.6000  0.6000  0.4000  0.5000  0.2000  0.2000
 340.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.3000
0.4000  0.6000  0.4000  0.5000  0.2000  0.1000
 350.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.4000
0.3000  0.5000  0.4000  0.5000  0.2000  0.1000
 360.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.4000
0.3000  0.3000  0.2000  0.4000  0.2000  0.2000

------*-------------------------------------------------------------------------
----------------------------------------
 MAX   *  0.9000  0.4000  0.3000  0.2000  0.9000  0.5000  0.3000  0.1000  1.1000
0.8000  0.7000  0.4000  1.1000  0.7000  0.5000
 DEGR. *    190     110     180     200     100     170     170     120     280
300     320     330     280      60      20
```


JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2017 Build PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

```
WIND  * CONCENTRATION
ANGLE *     (PPM)
(DEGR)*      16      17      18      19      20      21      22      23      24
25      26      27      28

------*-------------------------------------------------------------------------
--------------------------
  10.  *  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.5000  0.5000  0.5000
  20.  *  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.5000  0.5000  0.5000
  30.  *  0.3000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.5000  0.5000  0.5000
  40.  *  0.3000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.5000  0.5000  0.5000
  50.  *  0.3000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.6000  0.6000  0.6000
  60.  *  0.3000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000  0.4000
0.4000  0.6000  0.6000  0.8000
  70.  *  0.2000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.6000  0.6000
0.6000  0.8000  0.7000  0.9000
```

```
  80.  *  0.2000  0.3000  0.3000  0.1000  0.2000  0.1000  0.0000  0.6000  0.6000
0.5000  0.9000  0.9000  1.0000
  90.  *  0.2000  0.7000  0.7000  0.5000  0.7000  0.6000  0.3000  0.4000  0.4000
0.3000  0.7000  0.6000  0.6000
 100.  *  0.2000  0.8000  0.8000  0.8000  0.6000  0.6000  0.6000  0.1000  0.1000
0.1000  0.2000  0.2000  0.2000
 110.  *  0.2000  0.7000  0.7000  0.7000  0.3000  0.4000  0.6000  0.0000  0.0000
0.0000  0.2000  0.1000  0.0000
 120.  *  0.2000  0.6000  0.6000  0.6000  0.2000  0.6000  0.6000  0.0000  0.0000
0.0000  0.2000  0.1000  0.0000
 130.  *  0.2000  0.6000  0.6000  0.6000  0.6000  0.6000  0.5000  0.0000  0.0000
0.0000  0.2000  0.0000  0.0000
 140.  *  0.2000  0.5000  0.5000  0.5000  0.6000  0.7000  0.5000  0.0000  0.0000
0.0000  0.2000  0.1000  0.0000
 150.  *  0.2000  0.5000  0.5000  0.5000  0.7000  0.6000  0.5000  0.0000  0.0000
0.0000  0.1000  0.1000  0.0000
 160.  *  0.2000  0.5000  0.5000  0.5000  0.6000  0.6000  0.5000  0.0000  0.0000
0.0000  0.1000  0.1000  0.0000
 170.  *  0.2000  0.5000  0.5000  0.5000  0.6000  0.5000  0.5000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
 180.  *  0.2000  0.5000  0.5000  0.5000  0.5000  0.5000  0.5000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 190.  *  0.0000  0.6000  0.5000  0.5000  0.5000  0.5000  0.5000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 200.  *  0.0000  0.7000  0.6000  0.5000  0.5000  0.5000  0.5000  0.1000  0.1000
0.0000  0.0000  0.0000  0.0000
 210.  *  0.0000  0.7000  0.6000  0.5000  0.5000  0.5000  0.5000  0.2000  0.1000
0.0000  0.0000  0.0000  0.0000
 220.  *  0.0000  0.7000  0.7000  0.5000  0.5000  0.5000  0.5000  0.2000  0.1000
0.0000  0.0000  0.0000  0.0000
 230.  *  0.0000  0.8000  0.8000  0.6000  0.5000  0.5000  0.5000  0.2000  0.2000
0.0000  0.0000  0.0000  0.0000
 240.  *  0.0000  0.6000  0.7000  0.6000  0.6000  0.6000  0.6000  0.2000  0.1000
0.0000  0.0000  0.0000  0.0000
 250.  *  0.0000  0.8000  0.8000  0.7000  0.6000  0.6000  0.6000  0.2000  0.1000
0.0000  0.0000  0.0000  0.0000
 260.  *  0.0000  0.9000  0.8000  0.8000  0.7000  0.7000  0.6000  0.4000  0.2000
0.2000  0.3000  0.3000  0.3000
 270.  *  0.0000  0.7000  0.7000  0.7000  0.4000  0.4000  0.4000  0.9000  0.7000
0.4000  0.7000  0.7000  0.7000
 280.  *  0.0000  0.2000  0.1000  0.1000  0.2000  0.2000  0.1000  0.8000  0.6000
0.5000  1.1000  1.1000  1.0000
 290.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.4000  0.3000
0.6000  0.9000  0.9000  0.9000
 300.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.3000
0.4000  0.8000  0.8000  0.8000
 310.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.3000
0.3000  0.6000  0.6000  0.6000
 320.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.3000
0.3000  0.5000  0.5000  0.5000
 330.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.5000  0.5000  0.5000
 340.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.5000  0.5000  0.5000
 350.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.5000  0.5000  0.5000
 360.  *  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.5000  0.5000  0.5000

------*-------------------------------------------------------------------------
--------------------------
 MAX   *  0.3000  0.9000  0.8000  0.8000  0.7000  0.7000  0.6000  0.9000  0.7000
0.6000  1.1000  1.1000  1.0000
```

DEGR. * 30 260 100 100 90 140 100 270 270
70 280 280 80

THE HIGHEST CONCENTRATION OF 1.1000 PPM OCCURRED AT RECEPTOR 9.

```
Q,EPA,,F,,0,T,T,T,T,0.7,
1,1,1,1,2200,2200,2200,2200,2200,2200,2200,2200,1037,1037,1037,10
37,1037,1037,1037,1037,12,12,12,12,10,10,10,10,0,0,-
1200,1200,0,0,1200,-1200,-1200,1200,0,0,1200,-
1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
0,120,120,120,0,62,62,62,0,2,2,2,0,1600,1600,1600,0,1,1,1,0,3,3,3
'Orange Line Station',60,175,0.0,0.0,23,0.3048,1,0
'N Leg, E Side-Corner',22.0,22.0,5.9
'N Leg, E Side - 0 m',0.0,22.0,5.9
'N Leg, W Side-Corner',-22.0,22.0,5.9
'S Leg, E Side-Corner',22.0,-22.0,5.9
'S Leg, E Side - 25 m',22.0,-94.0,5.9
'S Leg, E Side - 50 m',22.0,-176.0,5.9
'S Leg, E Side-Midblk',22.0,-612.0,5.9
'S Leg, W Side-Corner',-22.0,-22.0,5.9
'S Leg, W Side - 25 m',-22.0,-94.0,5.9
'S Leg, W Side - 50 m',-22.0,-176.0,5.9
'S Leg, W Side-Midblk',-22.0,-612.0,5.9
'E Leg, N Side - 25 m',94.0,22.0,5.9
'E Leg, N Side - 50 m',176.0,22.0,5.9
'E Leg, N Side-Midblk',612.0,22.0,5.9
'W Leg, N Side - 25 m',-94.0,22.0,5.9
'W Leg, N Side - 50 m',-176.0,22.0,5.9
'W Leg, N Side-Midblk',-612.0,22.0,5.9
'E Leg, S Side - 25 m',94.0,-22.0,5.9
'E Leg, S Side - 50 m',176.0,-22.0,5.9
'E Leg, S Side-Midblk',612.0,-22.0,5.9
'W Leg, S Side - 25 m',-94.0,-22.0,5.9
'W Leg, S Side - 50 m',-176.0,-22.0,5.9
'W Leg, S Side-Midblk',-612.0,-22.0,5.9
'Woodmont-Jones 2017 Build AM',9,1,0,'CO'
1
'S Leg App - FreeFlow','AG',6,6,6,-1200,320,2.75,0.0,31.7
2
'S Leg App - Queue','AG',6,-12,6,-1200,0.0,12.0,1
120,62,2,320,13.78,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-6,6,-6,-1200,390,3.96,0.0,31.7
1
'E Leg App - FreeFlow','AG',0,6,1200,6,300,3.03,0.0,31.7
2
'E Leg App - Queue','AG',12,6,1200,6,0.0,12.0,1
120,62,2,300,13.78,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-6,1200,-6,380,5.28,0.0,31.7
1
'W Leg App - FreeFlow','AG',0,-6,-1200,-6,310,1.66,0.0,31.7
2
'W Leg App - Queue','AG',-12,-6,-1200,-6,0.0,12.0,1
120,62,2,310,13.78,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,6,-1200,6,160,2.69,0.0,31.7
```

```
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station RUN: Woodmont-Jones 2017 Build AM

DATE : 11/16/16
TIME : 14:34: 3

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1. S Leg App - FreeFlow	*	6.0	6.0	6.0	-1200.0	*	1206.	180.	AG	320.	2.8	0.0	31.7		
2. S Leg App - Queue	*	6.0	-12.0	6.0	-137.1	*	125.	180.	AG	26.	100.0	0.0	12.0	0.85	6.4
3. S Leg Dep - FreeFlow	*	-6.0	6.0	-6.0	-1200.0	*	1206.	180.	AG	390.	4.0	0.0	31.7		
4. E Leg App - FreeFlow	*	0.0	6.0	1200.0	6.0	*	1200.	90.	AG	300.	3.0	0.0	31.7		
5. E Leg App - Queue	*	12.0	6.0	3240.2	6.0	*	3228.	90.	AG	35.	100.0	0.0	12.0	****	164.0
6. E Leg Dep - FreeFlow	*	0.0	-6.0	1200.0	-6.0	*	1200.	90.	AG	380.	5.3	0.0	31.7		
7. W Leg App - FreeFlow	*	0.0	-6.0	-1200.0	-6.0	*	1200.	270.	AG	310.	1.7	0.0	31.7		
8. W Leg App - Queue	*	-12.0	-6.0	-81.5	-6.0	*	69.	270.	AG	19.	100.0	0.0	12.0	0.44	3.5
9. W Leg Dep - FreeFlow	*	0.0	6.0	-1200.0	6.0	*	1200.	270.	AG	160.	2.7	0.0	31.7		

JOB: Orange Line Station RUN: Woodmont-Jones 2017 Build AM

DATE : 11/16/16
TIME : 14:34: 3

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

```
-----------------------*-------------------------------------------------------------
--------------------
       2. S Leg App - Queue   *      81       58       2.0       320       1600
13.78      1        3
       5. E Leg App - Queue   *      81       76       2.0       300       1600
13.78      1        3
       8. W Leg App - Queue   *      81       41       2.0       310       1600
13.78      1        3

       RECEPTOR LOCATIONS
       ------------------
                              *           COORDINATES (FT)          *
         RECEPTOR             *      X          Y          Z         *
     -------------------------*-------------------------------------*
      1. N Leg, E Side-Corner *        22.0       22.0        5.9    *
      2. N Leg, E Side - 0 m  *         0.0       22.0        5.9    *
      3. N Leg, W Side-Corner *       -22.0       22.0        5.9    *
      4. S Leg, E Side-Corner *        22.0      -22.0        5.9    *
      5. S Leg, E Side - 25 m *        22.0      -94.0        5.9    *
      6. S Leg, E Side - 50 m *        22.0     -176.0        5.9    *
      7. S Leg, E Side-Midblk *        22.0     -612.0        5.9    *
      8. S Leg, W Side-Corner *       -22.0      -22.0        5.9    *
      9. S Leg, W Side - 25 m *       -22.0      -94.0        5.9    *
     10. S Leg, W Side - 50 m *       -22.0     -176.0        5.9    *
     11. S Leg, W Side-Midblk *       -22.0     -612.0        5.9    *
     12. E Leg, N Side - 25 m *        94.0       22.0        5.9    *
     13. E Leg, N Side - 50 m *       176.0       22.0        5.9    *
     14. E Leg, N Side-Midblk *       612.0       22.0        5.9    *
     15. W Leg, N Side - 25 m *       -94.0       22.0        5.9    *
     16. W Leg, N Side - 50 m *      -176.0       22.0        5.9    *
     17. W Leg, N Side-Midblk *      -612.0       22.0        5.9    *
     18. E Leg, S Side - 25 m *        94.0      -22.0        5.9    *
     19. E Leg, S Side - 50 m *       176.0      -22.0        5.9    *
     20. E Leg, S Side-Midblk *       612.0      -22.0        5.9    *
     21. W Leg, S Side - 25 m *       -94.0      -22.0        5.9    *
     22. W Leg, S Side - 50 m *      -176.0      -22.0        5.9    *
     23. W Leg, S Side-Midblk *      -612.0      -22.0        5.9    *

                            PAGE  3
      JOB: Orange Line Station                                RUN: Woodmont-Jones
2017 Build AM

       MODEL RESULTS
       -------------

       REMARKS : In search of the angle corresponding to
                 the maximum concentration, only the first
                 angle, of the angles with same maximum
                 concentrations, is indicated as maximum.

 WIND ANGLE RANGE:  10.-360.

 WIND  * CONCENTRATION
 ANGLE *     (PPM)
 (DEGR)*       1        2        3        4        5        6        7        8        9
 10       11       12       13       14       15

------*-------------------------------------------------------------------------------
-----------------------------------------
  10.  *  0.0000  0.0000  0.0000  0.2000  0.0000  0.0000  0.0000  0.0000  0.1000
0.2000  0.1000  0.0000  0.0000  0.0000  0.0000
  20.  *  0.0000  0.0000  0.0000  0.2000  0.0000  0.0000  0.0000  0.0000  0.1000
```

0.2000 0.1000 0.0000 0.0000 0.0000 0.0000
  30. * 0.0000 0.0000 0.0000 0.2000 0.0000 0.0000 0.0000 0.0000 0.2000
0.1000 0.1000 0.0000 0.0000 0.0000 0.0000
  40. * 0.0000 0.0000 0.0000 0.2000 0.0000 0.0000 0.0000 0.1000 0.2000
0.1000 0.1000 0.0000 0.0000 0.0000 0.0000
  50. * 0.0000 0.0000 0.0000 0.2000 0.0000 0.0000 0.0000 0.1000 0.2000
0.1000 0.1000 0.0000 0.0000 0.0000 0.0000
  60. * 0.0000 0.0000 0.0000 0.2000 0.1000 0.0000 0.0000 0.3000 0.3000
0.1000 0.1000 0.0000 0.0000 0.0000 0.0000
  70. * 0.0000 0.0000 0.0000 0.2000 0.1000 0.0000 0.0000 0.3000 0.3000
0.1000 0.1000 0.0000 0.0000 0.0000 0.0000
  80. * 0.1000 0.1000 0.1000 0.3000 0.1000 0.0000 0.0000 0.3000 0.3000
0.1000 0.1000 0.1000 0.1000 0.1000 0.1000
  90. * 0.4000 0.4000 0.4000 0.2000 0.0000 0.0000 0.0000 0.4000 0.2000
0.1000 0.1000 0.4000 0.4000 0.4000 0.2000
 100. * 0.4000 0.4000 0.4000 0.1000 0.0000 0.0000 0.0000 0.3000 0.2000
0.1000 0.1000 0.4000 0.4000 0.4000 0.2000
 110. * 0.4000 0.4000 0.2000 0.0000 0.0000 0.0000 0.0000 0.2000 0.2000
0.1000 0.1000 0.4000 0.4000 0.4000 0.0000
 120. * 0.2000 0.2000 0.2000 0.0000 0.0000 0.0000 0.0000 0.2000 0.2000
0.1000 0.1000 0.2000 0.2000 0.2000 0.0000
 130. * 0.2000 0.2000 0.0000 0.0000 0.0000 0.0000 0.0000 0.2000 0.2000
0.1000 0.1000 0.2000 0.2000 0.2000 0.0000
 140. * 0.2000 0.2000 0.0000 0.0000 0.0000 0.0000 0.0000 0.2000 0.1000
0.1000 0.1000 0.2000 0.2000 0.2000 0.0000
 150. * 0.2000 0.1000 0.2000 0.0000 0.0000 0.0000 0.0000 0.2000 0.1000
0.1000 0.1000 0.2000 0.2000 0.2000 0.0000
 160. * 0.2000 0.1000 0.2000 0.0000 0.0000 0.0000 0.0000 0.2000 0.1000
0.1000 0.1000 0.2000 0.2000 0.2000 0.0000
 170. * 0.2000 0.3000 0.2000 0.0000 0.0000 0.0000 0.0000 0.1000 0.1000
0.1000 0.1000 0.2000 0.2000 0.2000 0.0000
 180. * 0.5000 0.3000 0.1000 0.2000 0.2000 0.2000 0.2000 0.1000 0.1000
0.1000 0.1000 0.2000 0.2000 0.2000 0.0000
 190. * 0.5000 0.1000 0.0000 0.3000 0.2000 0.2000 0.2000 0.1000 0.1000
0.1000 0.0000 0.2000 0.2000 0.2000 0.0000
 200. * 0.4000 0.1000 0.0000 0.3000 0.3000 0.2000 0.2000 0.0000 0.0000
0.0000 0.0000 0.2000 0.2000 0.2000 0.0000
 210. * 0.2000 0.0000 0.0000 0.2000 0.2000 0.1000 0.1000 0.0000 0.0000
0.0000 0.0000 0.2000 0.2000 0.2000 0.0000
 220. * 0.0000 0.0000 0.0000 0.2000 0.2000 0.1000 0.1000 0.0000 0.0000
0.0000 0.0000 0.2000 0.2000 0.2000 0.0000
 230. * 0.0000 0.0000 0.0000 0.2000 0.2000 0.1000 0.1000 0.0000 0.0000
0.0000 0.0000 0.2000 0.2000 0.2000 0.0000
 240. * 0.0000 0.0000 0.0000 0.1000 0.1000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.2000 0.2000 0.2000 0.0000
 250. * 0.0000 0.0000 0.0000 0.1000 0.1000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.2000 0.3000 0.4000 0.0000
 260. * 0.0000 0.0000 0.0000 0.1000 0.1000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.1000 0.3000 0.4000 0.0000
 270. * 0.0000 0.0000 0.0000 0.1000 0.1000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.1000 0.3000 0.0000
 280. * 0.0000 0.0000 0.0000 0.1000 0.1000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.1000 0.0000
 290. * 0.0000 0.0000 0.0000 0.1000 0.1000 0.0000 0.0000 0.1000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
 300. * 0.0000 0.0000 0.0000 0.0000 0.1000 0.0000 0.0000 0.1000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
 310. * 0.0000 0.0000 0.0000 0.1000 0.1000 0.1000 0.1000 0.1000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
 320. * 0.0000 0.0000 0.0000 0.1000 0.2000 0.1000 0.1000 0.1000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
 330. * 0.0000 0.0000 0.0000 0.1000 0.2000 0.1000 0.1000 0.1000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000

340.	*	0.0000	0.0000	0.0000	0.1000	0.1000	0.3000	0.2000	0.1000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				
350.	*	0.0000	0.0000	0.0000	0.2000	0.1000	0.2000	0.2000	0.1000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				
360.	*	0.0000	0.0000	0.0000	0.2000	0.0000	0.1000	0.2000	0.1000	0.1000
0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000				

MAX	*	0.5000	0.4000	0.4000	0.3000	0.3000	0.3000	0.2000	0.4000	0.3000
0.2000	0.1000	0.4000	0.4000	0.4000	0.2000					
DEGR.	*	180	90	90	80	200	340	180	90	60
10	10	90	90	90	90					

JOB: Orange Line Station RUN: Woodmont-Jones 2017 Build AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	*	CONCENTRATION (PPM) 16	17	18	19	20	21	22	23
10.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
20.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
30.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
40.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
50.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
60.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.1000	0.0000	0.0000
70.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.1000	0.0000	0.0000
80.	*	0.0000	0.0000	0.3000	0.3000	0.3000	0.2000	0.1000	0.0000
90.	*	0.2000	0.0000	0.2000	0.2000	0.2000	0.2000	0.2000	0.0000
100.	*	0.1000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
110.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
120.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
130.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
140.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
150.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
160.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
170.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
180.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
190.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
200.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
210.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
220.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
230.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
240.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
260.	*	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000
270.	*	0.0000	0.0000	0.1000	0.1000	0.2000	0.0000	0.0000	0.0000
280.	*	0.0000	0.0000	0.1000	0.2000	0.3000	0.0000	0.0000	0.0000
290.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
300.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000

310.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
320.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
330.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
340.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
350.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
360.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
MAX	*	0.2000	0.0000	0.3000	0.3000	0.3000	0.2000	0.2000	0.0000
DEGR.	*	90	10	80	80	80	80	90	10

THE HIGHEST CONCENTRATION OF 0.5000 PPM OCCURRED AT RECEPTOR 1.

```
Q,EPA,,F,,0,T,T,T,T,0.7,
1,1,1,1,2200,2200,2200,2200,2200,2200,2200,2200,1037,1037,1037,10
37,1037,1037,1037,1037,12,12,12,12,10,10,10,10,0,0,-
1200,1200,0,0,1200,-1200,-1200,1200,0,0,1200,-
1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
0,120,120,120,0,62,62,62,0,2,2,2,0,1600,1600,1600,0,1,1,1,0,3,3,3
'Orange Line Station',60,175,0.0,0.0,23,0.3048,1,0
'N Leg, E Side-Corner',22.0,22.0,5.9
'N Leg, E Side - 0 m',0.0,22.0,5.9
'N Leg, W Side-Corner',-22.0,22.0,5.9
'S Leg, E Side-Corner',22.0,-22.0,5.9
'S Leg, E Side - 25 m',22.0,-94.0,5.9
'S Leg, E Side - 50 m',22.0,-176.0,5.9
'S Leg, E Side-Midblk',22.0,-612.0,5.9
'S Leg, W Side-Corner',-22.0,-22.0,5.9
'S Leg, W Side - 25 m',-22.0,-94.0,5.9
'S Leg, W Side - 50 m',-22.0,-176.0,5.9
'S Leg, W Side-Midblk',-22.0,-612.0,5.9
'E Leg, N Side - 25 m',94.0,22.0,5.9
'E Leg, N Side - 50 m',176.0,22.0,5.9
'E Leg, N Side-Midblk',612.0,22.0,5.9
'W Leg, N Side - 25 m',-94.0,22.0,5.9
'W Leg, N Side - 50 m',-176.0,22.0,5.9
'W Leg, N Side-Midblk',-612.0,22.0,5.9
'E Leg, S Side - 25 m',94.0,-22.0,5.9
'E Leg, S Side - 50 m',176.0,-22.0,5.9
'E Leg, S Side-Midblk',612.0,-22.0,5.9
'W Leg, S Side - 25 m',-94.0,-22.0,5.9
'W Leg, S Side - 50 m',-176.0,-22.0,5.9
'W Leg, S Side-Midblk',-612.0,-22.0,5.9
'Woodmont-Jones 2017 Build PM',9,1,0,'CO'
1
'S Leg App - FreeFlow','AG',6,6,6,-1200,565,2.75,0.0,31.7
2
'S Leg App - Queue','AG',6,-12,6,-1200,0.0,12.0,1
81.1,58,2,565,13.78,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-6,6,-6,-1200,205,3.96,0.0,31.7
1
'E Leg App - FreeFlow','AG',0,6,1200,6,285,3.03,0.0,31.7
2
'E Leg App - Queue','AG',12,6,1200,6,0.0,12.0,1
81.1,76,2,285,13.78,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-6,1200,-6,600,5.28,0.0,31.7
1
'W Leg App - FreeFlow','AG',0,-6,-1200,-6,290,1.66,0.0,31.7
2
'W Leg App - Queue','AG',-12,-6,-1200,-6,0.0,12.0,1
81.1,41,2,290,13.78,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,6,-1200,6,335,2.69,0.0,31.7
```

```
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station RUN: Woodmont-Jones 2017 Build PM

DATE : 11/16/16
TIME : 14:32:36

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)		(G/MI)	(FT)	(FT)		(VEH)	
1. S Leg App - FreeFlow	*	6.0	6.0	6.0	-1200.0	*	1206.	180.	AG	565.	2.8	0.0	31.7		
2. S Leg App - Queue	*	6.0	-12.0	6.0	-2203.7	*	2192.	180.	AG	26.	100.0	0.0	12.0	1.51	111.3
3. S Leg Dep - FreeFlow	*	-6.0	6.0	-6.0	-1200.0	*	1206.	180.	AG	205.	4.0	0.0	31.7		
4. E Leg App - FreeFlow	*	0.0	6.0	1200.0	6.0	*	1200.	90.	AG	285.	3.0	0.0	31.7		
5. E Leg App - Queue	*	12.0	6.0	3069.5	6.0	*	3057.	90.	AG	35.	100.0	0.0	12.0	****	155.3
6. E Leg Dep - FreeFlow	*	0.0	-6.0	1200.0	-6.0	*	1200.	90.	AG	600.	5.3	0.0	31.7		
7. W Leg App - FreeFlow	*	0.0	-6.0	-1200.0	-6.0	*	1200.	270.	AG	290.	1.7	0.0	31.7		
8. W Leg App - Queue	*	-12.0	-6.0	-77.0	-6.0	*	65.	270.	AG	19.	100.0	0.0	12.0	0.41	3.3
9. W Leg Dep - FreeFlow	*	0.0	6.0	-1200.0	6.0	*	1200.	270.	AG	335.	2.7	0.0	31.7		

JOB: Orange Line Station RUN: Woodmont-Jones 2017 Build PM

DATE : 11/16/16
TIME : 14:32:36

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

```
-----------------------*-------------------------------------------------------------
--------------------
       2. S Leg App - Queue   *      81       58       2.0       565       1600
13.78      1        3
       5. E Leg App - Queue   *      81       76       2.0       285       1600
13.78      1        3
       8. W Leg App - Queue   *      81       41       2.0       290       1600
13.78      1        3

       RECEPTOR LOCATIONS
       ------------------
                              *           COORDINATES (FT)          *
         RECEPTOR             *      X          Y          Z         *
     -------------------------*-------------------------------------*
      1. N Leg, E Side-Corner *        22.0       22.0        5.9    *
      2. N Leg, E Side - 0 m  *         0.0       22.0        5.9    *
      3. N Leg, W Side-Corner *       -22.0       22.0        5.9    *
      4. S Leg, E Side-Corner *        22.0      -22.0        5.9    *
      5. S Leg, E Side - 25 m *        22.0      -94.0        5.9    *
      6. S Leg, E Side - 50 m *        22.0     -176.0        5.9    *
      7. S Leg, E Side-Midblk *        22.0     -612.0        5.9    *
      8. S Leg, W Side-Corner *       -22.0      -22.0        5.9    *
      9. S Leg, W Side - 25 m *       -22.0      -94.0        5.9    *
     10. S Leg, W Side - 50 m *       -22.0     -176.0        5.9    *
     11. S Leg, W Side-Midblk *       -22.0     -612.0        5.9    *
     12. E Leg, N Side - 25 m *        94.0       22.0        5.9    *
     13. E Leg, N Side - 50 m *       176.0       22.0        5.9    *
     14. E Leg, N Side-Midblk *       612.0       22.0        5.9    *
     15. W Leg, N Side - 25 m *       -94.0       22.0        5.9    *
     16. W Leg, N Side - 50 m *      -176.0       22.0        5.9    *
     17. W Leg, N Side-Midblk *      -612.0       22.0        5.9    *
     18. E Leg, S Side - 25 m *        94.0      -22.0        5.9    *
     19. E Leg, S Side - 50 m *       176.0      -22.0        5.9    *
     20. E Leg, S Side-Midblk *       612.0      -22.0        5.9    *
     21. W Leg, S Side - 25 m *       -94.0      -22.0        5.9    *
     22. W Leg, S Side - 50 m *      -176.0      -22.0        5.9    *
     23. W Leg, S Side-Midblk *      -612.0      -22.0        5.9    *

                            PAGE  3
      JOB: Orange Line Station                                RUN: Woodmont-Jones
2017 Build PM

       MODEL RESULTS
       -------------

       REMARKS : In search of the angle corresponding to
                 the maximum concentration, only the first
                 angle, of the angles with same maximum
                 concentrations, is indicated as maximum.

 WIND ANGLE RANGE:  10.-360.

 WIND  * CONCENTRATION
 ANGLE *     (PPM)
 (DEGR)*       1        2        3        4        5        6        7        8        9
 10       11       12       13       14       15

------*-------------------------------------------------------------------------------
-----------------------------------------
  10.  *  0.0000  0.0000  0.0000  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000
0.2000  0.3000  0.0000  0.0000  0.0000  0.0000
  20.  *  0.0000  0.0000  0.0000  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000
```

```
0.2000  0.3000  0.0000  0.0000  0.0000  0.0000
  30.  *  0.0000  0.0000  0.0000  0.2000  0.1000  0.0000  0.0000  0.0000  0.2000
0.2000  0.2000  0.0000  0.0000  0.0000  0.0000
  40.  *  0.0000  0.0000  0.0000  0.2000  0.1000  0.0000  0.0000  0.0000  0.3000
0.2000  0.2000  0.0000  0.0000  0.0000  0.0000
  50.  *  0.0000  0.0000  0.0000  0.2000  0.1000  0.0000  0.0000  0.1000  0.3000
0.2000  0.2000  0.0000  0.0000  0.0000  0.0000
  60.  *  0.0000  0.0000  0.0000  0.3000  0.2000  0.0000  0.0000  0.2000  0.3000
0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
  70.  *  0.0000  0.0000  0.0000  0.3000  0.2000  0.0000  0.0000  0.2000  0.3000
0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
  80.  *  0.1000  0.1000  0.1000  0.4000  0.2000  0.0000  0.0000  0.3000  0.3000
0.1000  0.1000  0.1000  0.1000  0.1000  0.1000
  90.  *  0.4000  0.4000  0.4000  0.3000  0.0000  0.0000  0.0000  0.4000  0.1000
0.1000  0.1000  0.4000  0.4000  0.4000  0.2000
 100.  *  0.5000  0.5000  0.5000  0.1000  0.0000  0.0000  0.0000  0.2000  0.1000
0.1000  0.1000  0.5000  0.5000  0.5000  0.2000
 110.  *  0.5000  0.5000  0.2000  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
0.1000  0.1000  0.5000  0.5000  0.4000  0.1000
 120.  *  0.2000  0.2000  0.2000  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
0.1000  0.1000  0.2000  0.2000  0.2000  0.0000
 130.  *  0.2000  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.2000  0.2000  0.2000  0.2000  0.0000
 140.  *  0.2000  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.2000  0.2000  0.2000  0.2000  0.0000
 150.  *  0.2000  0.1000  0.2000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.2000  0.2000  0.2000  0.2000  0.0000
 160.  *  0.2000  0.3000  0.2000  0.0000  0.0000  0.0000  0.0000  0.3000  0.3000
0.3000  0.3000  0.2000  0.2000  0.2000  0.0000
 170.  *  0.2000  0.3000  0.3000  0.2000  0.2000  0.1000  0.0000  0.3000  0.3000
0.3000  0.3000  0.2000  0.2000  0.2000  0.1000
 180.  *  0.4000  0.4000  0.3000  0.2000  0.2000  0.2000  0.2000  0.3000  0.3000
0.3000  0.3000  0.2000  0.2000  0.2000  0.0000
 190.  *  0.4000  0.3000  0.0000  0.3000  0.3000  0.3000  0.2000  0.0000  0.0000
0.0000  0.0000  0.3000  0.2000  0.2000  0.0000
 200.  *  0.4000  0.0000  0.0000  0.2000  0.2000  0.2000  0.2000  0.0000  0.0000
0.0000  0.0000  0.2000  0.2000  0.2000  0.0000
 210.  *  0.3000  0.0000  0.0000  0.2000  0.2000  0.2000  0.2000  0.0000  0.0000
0.0000  0.0000  0.2000  0.2000  0.2000  0.0000
 220.  *  0.1000  0.0000  0.0000  0.2000  0.2000  0.2000  0.2000  0.0000  0.0000
0.0000  0.0000  0.2000  0.2000  0.2000  0.0000
 230.  *  0.0000  0.0000  0.0000  0.2000  0.2000  0.2000  0.2000  0.0000  0.0000
0.0000  0.0000  0.2000  0.2000  0.2000  0.0000
 240.  *  0.0000  0.0000  0.0000  0.2000  0.2000  0.2000  0.2000  0.0000  0.0000
0.0000  0.0000  0.2000  0.2000  0.2000  0.0000
 250.  *  0.0000  0.1000  0.1000  0.2000  0.2000  0.2000  0.2000  0.0000  0.0000
0.0000  0.0000  0.2000  0.3000  0.4000  0.1000
 260.  *  0.1000  0.1000  0.1000  0.2000  0.2000  0.2000  0.2000  0.0000  0.0000
0.0000  0.0000  0.2000  0.3000  0.5000  0.1000
 270.  *  0.1000  0.1000  0.1000  0.2000  0.2000  0.2000  0.2000  0.0000  0.0000
0.0000  0.0000  0.0000  0.1000  0.3000  0.1000
 280.  *  0.0000  0.0000  0.0000  0.3000  0.2000  0.2000  0.2000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.1000  0.0000
 290.  *  0.0000  0.0000  0.0000  0.3000  0.2000  0.2000  0.2000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 300.  *  0.0000  0.0000  0.0000  0.2000  0.2000  0.2000  0.2000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 310.  *  0.0000  0.0000  0.0000  0.2000  0.2000  0.2000  0.2000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 320.  *  0.0000  0.0000  0.0000  0.2000  0.2000  0.2000  0.2000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 330.  *  0.0000  0.0000  0.0000  0.1000  0.2000  0.2000  0.2000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
```

```
 340.  *  0.0000  0.0000  0.0000  0.1000  0.2000  0.2000  0.2000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 350.  *  0.0000  0.0000  0.0000  0.2000  0.2000  0.2000  0.2000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 360.  *  0.0000  0.0000  0.0000  0.2000  0.1000  0.2000  0.2000  0.1000  0.0000
0.0000  0.3000  0.0000  0.0000  0.0000  0.0000

------*-------------------------------------------------------------------------
-----------------------------------------
 MAX   *  0.5000  0.5000  0.5000  0.4000  0.3000  0.3000  0.2000  0.4000  0.3000
0.3000  0.3000  0.5000  0.5000  0.5000  0.2000
 DEGR. *    100     100     100      80     190     190     180      90      40
160      10     100     100     100      90
```


JOB: Orange Line Station RUN: Woodmont-Jones 2017 Build PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) 16	17	18	19	20	21	22	23
10.	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
20.	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
30.	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
40.	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
50.	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
60.	0.0000	0.0000	0.3000	0.3000	0.3000	0.1000	0.0000	0.0000
70.	0.0000	0.0000	0.3000	0.3000	0.3000	0.1000	0.0000	0.0000
80.	0.0000	0.0000	0.4000	0.4000	0.3000	0.2000	0.2000	0.0000
90.	0.2000	0.1000	0.3000	0.3000	0.3000	0.2000	0.2000	0.0000
100.	0.3000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000
110.	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
120.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
130.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
140.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
150.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
160.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
170.	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000
180.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
190.	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000
200.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
210.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
220.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
230.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
240.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250.	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
260.	0.1000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
270.	0.1000	0.1000	0.1000	0.2000	0.3000	0.0000	0.0000	0.0000
280.	0.0000	0.0000	0.2000	0.3000	0.4000	0.0000	0.0000	0.0000
290.	0.0000	0.0000	0.3000	0.3000	0.3000	0.0000	0.0000	0.0000
300.	0.0000	0.0000	0.3000	0.3000	0.3000	0.0000	0.0000	0.0000

310.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
320.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
330.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
340.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
350.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
360.	*	0.0000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
MAX	*	0.3000	0.1000	0.4000	0.4000	0.4000	0.2000	0.2000	0.0000
DEGR.	*	100	90	80	80	280	80	80	10

THE HIGHEST CONCENTRATION OF 0.5000 PPM OCCURRED AT RECEPTOR 1.

```
Q,EPA,,F,,0,T,T,F,T,0.7,
4,4,3,4,2200,2200,2200,2200,2200,2200,2200,2200,1036.75,1036.75,1
036.66666666667,1036.75,1036.75,1036.75,1036.66666666667,1036.75,
12,12,12,12,10,10,10,10,0,0,-1200,1200,0,0,1200,-1200,-
1200,1200,0,0,1200,-1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
120,120,120,120,62,62,62,62,2,2,2,2,1600,1600,1600,1600,1,1,1,1,3
,3,3,3
'Orange Line Station',60,175,0.0,0.0,28,0.3048,1,0
'N Leg, E Side-Corner',58.0,58.0,5.9
'N Leg, E Side - 25 m',58.0,130.0,5.9
'N Leg, E Side - 50 m',58.0,212.0,5.9
'N Leg, E Side-Midblk',58.0,648.0,5.9
'N Leg, W Side-Corner',-58.0,58.0,5.9
'N Leg, W Side - 25 m',-58.0,130.0,5.9
'N Leg, W Side - 50 m',-58.0,212.0,5.9
'N Leg, W Side-Midblk',-58.0,648.0,5.9
'S Leg, E Side-Corner',58.0,-46.0,5.9
'S Leg, E Side - 25 m',58.0,-118.0,5.9
'S Leg, E Side - 50 m',58.0,-200.0,5.9
'S Leg, E Side-Midblk',58.0,-636.0,5.9
'S Leg, W Side-Corner',-58.0,-46.0,5.9
'S Leg, W Side - 25 m',-58.0,-118.0,5.9
'S Leg, W Side - 50 m',-58.0,-200.0,5.9
'S Leg, W Side-Midblk',-58.0,-636.0,5.9
'E Leg, N Side - 25 m',130.0,58.0,5.9
'E Leg, N Side - 50 m',212.0,58.0,5.9
'E Leg, N Side-Midblk',648.0,58.0,5.9
'W Leg, N Side - 25 m',-130.0,58.0,5.9
'W Leg, N Side - 50 m',-212.0,58.0,5.9
'W Leg, N Side-Midblk',-648.0,58.0,5.9
'E Leg, S Side - 25 m',130.0,-46.0,5.9
'E Leg, S Side - 50 m',212.0,-46.0,5.9
'E Leg, S Side-Midblk',648.0,-46.0,5.9
'W Leg, S Side - 25 m',-130.0,-46.0,5.9
'W Leg, S Side - 50 m',-212.0,-46.0,5.9
'W Leg, S Side-Midblk',-648.0,-46.0,5.9
'Exit 41SB Ramp 2037 NB AM',12,1,0,'CO'
1
'N Leg App - FreeFlow','AG',-24,0,-24,1200,952,0.88,0.0,67.7
2
'N Leg App - Queue','AG',-24,48,-24,1200,0.0,48.0,4
90,75,2,952,3.35,1600,1,3
1
'N Leg Dep - FreeFlow','AG',24,0,24,1200,1159,0.70,0.0,67.7
1
'S Leg App - FreeFlow','AG',24,0,24,-1200,1108,1.38,0.0,67.7
2
'S Leg App - Queue','AG',24,-36,24,-1200,0.0,48.0,4
90,81,2,1108,3.35,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-24,0,-24,-1200,1153,1.02,0.0,67.7
1
```

```
'E Leg App - FreeFlow','AG',0,24,1200,24,907,1.72,0.0,67.7
2
'E Leg App - Queue','AG',48,24,1200,24,0.0,48.0,4
90,64,2,907,3.35,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-18,1200,-18,151,0.65,0.0,55.7
1
'W Leg App - FreeFlow','AG',0,-18,-1200,-18,151,1.55,0.0,55.7
2
'W Leg App - Queue','AG',-48,-18,-1200,-18,0.0,36.0,3
90,83,2,151,3.35,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,24,-1200,24,655,1.02,0.0,67.7
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station RUN: Exit 41SB Ramp 2037 NB AM

DATE : 11/16/16
TIME : 15:19: 8

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
		*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1.	N Leg App - FreeFlow	*	-24.0	0.0	-24.0	1200.0	*	1200.	360.	AG	952.	0.9	0.0	67.7		
2.	N Leg App - Queue	*	-24.0	48.0	-24.0	652.1	*	604.	360.	AG	30.	100.0	0.0	48.0	1.22	30.7
3.	N Leg Dep - FreeFlow	*	24.0	0.0	24.0	1200.0	*	1200.	360.	AG	1159.	0.7	0.0	67.7		
4.	S Leg App - FreeFlow	*	24.0	0.0	24.0	-1200.0	*	1200.	180.	AG	1108.	1.4	0.0	67.7		
5.	S Leg App - Queue	*	24.0	-36.0	24.0	-2163.4	*	2127.	180.	AG	32.	100.0	0.0	48.0	3.15	108.1
6.	S Leg Dep - FreeFlow	*	-24.0	0.0	-24.0	-1200.0	*	1200.	180.	AG	1153.	1.0	0.0	67.7		
7.	E Leg App - FreeFlow	*	0.0	24.0	1200.0	24.0	*	1200.	90.	AG	907.	1.7	0.0	67.7		
8.	E Leg App - Queue	*	48.0	24.0	127.1	24.0	*	79.	90.	AG	26.	100.0	0.0	48.0	0.58	4.0
9.	E Leg Dep - FreeFlow	*	0.0	-18.0	1200.0	-18.0	*	1200.	90.	AG	151.	0.6	0.0	55.7		
10.	W Leg App - FreeFlow	*	0.0	-18.0	-1200.0	-18.0	*	1200.	270.	AG	151.	1.5	0.0	55.7		
11.	W Leg App - Queue	*	-48.0	-18.0	-96.8	-18.0	*	49.	270.	AG	25.	100.0	0.0	36.0	0.94	2.5
12.	W Leg Dep - FreeFlow	*	0.0	24.0	-1200.0	24.0	*	1200.	270.	AG	655.	1.0	0.0	67.7		

JOB: Orange Line Station RUN: Exit 41SB Ramp 2037 NB AM

DATE : 11/16/16
TIME : 15:19: 8

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. N Leg App - Queue	90	75	2.0	952	1600	3.35	1	3
5. S Leg App - Queue	90	81	2.0	1108	1600	3.35	1	3
8. E Leg App - Queue	90	64	2.0	907	1600	3.35	1	3
11. W Leg App - Queue	90	83	2.0	151	1600	3.35	1	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. N Leg, E Side-Corner	58.0	58.0	5.9
2. N Leg, E Side - 25 m	58.0	130.0	5.9
3. N Leg, E Side - 50 m	58.0	212.0	5.9
4. N Leg, E Side-Midblk	58.0	648.0	5.9
5. N Leg, W Side-Corner	-58.0	58.0	5.9
6. N Leg, W Side - 25 m	-58.0	130.0	5.9
7. N Leg, W Side - 50 m	-58.0	212.0	5.9
8. N Leg, W Side-Midblk	-58.0	648.0	5.9
9. S Leg, E Side-Corner	58.0	-46.0	5.9
10. S Leg, E Side - 25 m	58.0	-118.0	5.9
11. S Leg, E Side - 50 m	58.0	-200.0	5.9
12. S Leg, E Side-Midblk	58.0	-636.0	5.9
13. S Leg, W Side-Corner	-58.0	-46.0	5.9
14. S Leg, W Side - 25 m	-58.0	-118.0	5.9
15. S Leg, W Side - 50 m	-58.0	-200.0	5.9
16. S Leg, W Side-Midblk	-58.0	-636.0	5.9
17. E Leg, N Side - 25 m	130.0	58.0	5.9
18. E Leg, N Side - 50 m	212.0	58.0	5.9
19. E Leg, N Side-Midblk	648.0	58.0	5.9
20. W Leg, N Side - 25 m	-130.0	58.0	5.9
21. W Leg, N Side - 50 m	-212.0	58.0	5.9
22. W Leg, N Side-Midblk	-648.0	58.0	5.9
23. E Leg, S Side - 25 m	130.0	-46.0	5.9
24. E Leg, S Side - 50 m	212.0	-46.0	5.9
25. E Leg, S Side-Midblk	648.0	-46.0	5.9
26. W Leg, S Side - 25 m	-130.0	-46.0	5.9
27. W Leg, S Side - 50 m	-212.0	-46.0	5.9
28. W Leg, S Side-Midblk	-648.0	-46.0	5.9

JOB: Orange Line Station RUN: Exit 41SB Ramp 2037 NB AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10.	* 0.0000	0.0000	0.0000	0.0000	0.3000	0.2000	0.2000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2000	0.1000	0.0000
20.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.1000
30.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
40.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000
50.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000
60.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000
70.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000
80.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.1000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
90.	* 0.1000	0.0000	0.0000	0.0000	0.2000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000
100.	* 0.1000	0.0000	0.0000	0.0000	0.2000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
110.	* 0.2000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
120.	* 0.2000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
130.	* 0.2000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
140.	* 0.2000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
150.	* 0.1000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000
160.	* 0.1000	0.0000	0.0000	0.0000	0.1000	0.2000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000
170.	* 0.1000	0.0000	0.0000	0.0000	0.2000	0.1000	0.2000	0.3000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000
180.	* 0.3000	0.1000	0.1000	0.0000	0.1000	0.1000	0.1000	0.1000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000
190.	* 0.2000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.3000	0.3000	0.3000	0.3000	0.0000	0.0000	0.0000
200.	* 0.1000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.3000	0.3000	0.3000	0.3000	0.0000	0.0000	0.0000
210.	* 0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
220.	* 0.0000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
230.	* 0.0000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
240.	* 0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
250.	* 0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
260.	* 0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
270.	* 0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000						

```
0.1000  0.1000  0.1000  0.0000  0.0000  0.0000
 280.  *  0.0000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000
0.1000  0.1000  0.1000  0.0000  0.0000  0.0000
 290.  *  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.1000  0.1000  0.1000  0.0000  0.0000  0.0000
 300.  *  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.1000  0.1000  0.1000  0.0000  0.0000  0.0000
 310.  *  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.2000  0.2000  0.2000  0.1000  0.0000  0.0000
 320.  *  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.2000  0.2000  0.2000  0.1000  0.0000  0.0000
 330.  *  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000
0.2000  0.2000  0.2000  0.1000  0.0000  0.0000
 340.  *  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000
0.3000  0.2000  0.3000  0.1000  0.0000  0.0000
 350.  *  0.2000  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000
0.1000  0.3000  0.3000  0.1000  0.0000  0.0000
 360.  *  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000  0.1000  0.0000  0.0000
0.0000  0.0000  0.2000  0.2000  0.1000  0.0000

------*-------------------------------------------------------------------------
----------------------------------------
 MAX   *  0.3000  0.2000  0.1000  0.1000  0.3000  0.2000  0.2000  0.3000  0.3000
0.3000  0.3000  0.3000  0.2000  0.2000  0.2000
 DEGR. *    180     350     180     190      10      10      10     170     190
190     190     190      10     150     150
```


JOB: Orange Line Station RUN: Exit 41SB Ramp 2037 NB AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

```
WIND  * CONCENTRATION
ANGLE *     (PPM)
(DEGR)*      16      17      18      19      20      21      22      23      24
25      26      27      28

------*-------------------------------------------------------------------------
--------------------------
  10.  *  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
  20.  *  0.2000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
  30.  *  0.2000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
  40.  *  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
  50.  *  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
  60.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
  70.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
```

```
  80.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
  90.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 100.  *  0.1000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 110.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 120.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 130.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 140.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 150.  *  0.2000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
 160.  *  0.2000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
 170.  *  0.2000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
 180.  *  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 190.  *  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 200.  *  0.0000  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
0.0000  0.0000  0.0000  0.0000
 210.  *  0.0000  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 220.  *  0.0000  0.2000  0.1000  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 230.  *  0.0000  0.2000  0.1000  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 240.  *  0.0000  0.2000  0.1000  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 250.  *  0.0000  0.2000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 260.  *  0.0000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 270.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 280.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 290.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 300.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 310.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 320.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 330.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 340.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 350.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 360.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000

------*-------------------------------------------------------------------------
--------------------------
 MAX   *  0.2000  0.2000  0.1000  0.1000  0.1000  0.0000  0.0000  0.1000  0.1000
0.0000  0.1000  0.0000  0.0000
```

DEGR. * 10 200 90 90 20 10 10 80 200
10 20 10 10

THE HIGHEST CONCENTRATION OF 0.3000 PPM OCCURRED AT RECEPTOR 5.

```
Q,EPA,,F,,0,T,T,F,T,0.7,
4,4,3,4,2200,2200,2200,2200,2200,2200,2200,2200,1036.75,1036.75,1
036.66666666667,1036.75,1036.75,1036.75,1036.66666666667,1036.75,
12,12,12,12,10,10,10,10,0,0,-1200,1200,0,0,1200,-1200,-
1200,1200,0,0,1200,-1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
120,120,120,120,62,62,62,62,2,2,2,2,1600,1600,1600,1600,1,1,1,1,3
,3,3,3
'Orange Line Station',60,175,0.0,0.0,28,0.3048,1,0
'N Leg, E Side-Corner',58.0,58.0,5.9
'N Leg, E Side - 25 m',58.0,130.0,5.9
'N Leg, E Side - 50 m',58.0,212.0,5.9
'N Leg, E Side-Midblk',58.0,648.0,5.9
'N Leg, W Side-Corner',-58.0,58.0,5.9
'N Leg, W Side - 25 m',-58.0,130.0,5.9
'N Leg, W Side - 50 m',-58.0,212.0,5.9
'N Leg, W Side-Midblk',-58.0,648.0,5.9
'S Leg, E Side-Corner',58.0,-46.0,5.9
'S Leg, E Side - 25 m',58.0,-118.0,5.9
'S Leg, E Side - 50 m',58.0,-200.0,5.9
'S Leg, E Side-Midblk',58.0,-636.0,5.9
'S Leg, W Side-Corner',-58.0,-46.0,5.9
'S Leg, W Side - 25 m',-58.0,-118.0,5.9
'S Leg, W Side - 50 m',-58.0,-200.0,5.9
'S Leg, W Side-Midblk',-58.0,-636.0,5.9
'E Leg, N Side - 25 m',130.0,58.0,5.9
'E Leg, N Side - 50 m',212.0,58.0,5.9
'E Leg, N Side-Midblk',648.0,58.0,5.9
'W Leg, N Side - 25 m',-130.0,58.0,5.9
'W Leg, N Side - 50 m',-212.0,58.0,5.9
'W Leg, N Side-Midblk',-648.0,58.0,5.9
'E Leg, S Side - 25 m',130.0,-46.0,5.9
'E Leg, S Side - 50 m',212.0,-46.0,5.9
'E Leg, S Side-Midblk',648.0,-46.0,5.9
'W Leg, S Side - 25 m',-130.0,-46.0,5.9
'W Leg, S Side - 50 m',-212.0,-46.0,5.9
'W Leg, S Side-Midblk',-648.0,-46.0,5.9
'Exit 41SB Ramp 2037 NB PM',12,1,0,'CO'
1
'N Leg App - FreeFlow','AG',-24,0,-24,1200,1103,0.88,0.0,67.7
2
'N Leg App - Queue','AG',-24,48,-24,1200,0.0,48.0,4
90,75,2,1103,3.35,1600,1,3
1
'N Leg Dep - FreeFlow','AG',24,0,24,1200,1036,0.70,0.0,67.7
1
'S Leg App - FreeFlow','AG',24,0,24,-1200,1388,1.38,0.0,67.7
2
'S Leg App - Queue','AG',24,-36,24,-1200,0.0,48.0,4
90,81,2,1388,3.35,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-24,0,-24,-1200,1557,1.02,0.0,67.7
1
```

```
'E Leg App - FreeFlow','AG',0,24,1200,24,824,1.72,0.0,67.7
2
'E Leg App - Queue','AG',48,24,1200,24,0.0,48.0,4
90,64,2,824,3.35,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-18,1200,-18,39,0.65,0.0,55.7
1
'W Leg App - FreeFlow','AG',0,-18,-1200,-18,112,1.55,0.0,55.7
2
'W Leg App - Queue','AG',-48,-18,-1200,-18,0.0,36.0,3
90,83,2,112,3.35,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,24,-1200,24,795,1.02,0.0,67.7
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station RUN: Exit 41SB Ramp 2037 NB PM

DATE : 11/16/16
TIME : 15:20:26

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
		*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1.	N Leg App - FreeFlow	*	-24.0	0.0	-24.0	1200.0	*	1200.	360.	AG	1103.	0.9	0.0	67.7		
2.	N Leg App - Queue	*	-24.0	48.0	-24.0	1044.4	*	996.	360.	AG	30.	100.0	0.0	48.0	1.41	50.6
3.	N Leg Dep - FreeFlow	*	24.0	0.0	24.0	1200.0	*	1200.	360.	AG	1036.	0.7	0.0	67.7		
4.	S Leg App - FreeFlow	*	24.0	0.0	24.0	-1200.0	*	1200.	180.	AG	1388.	1.4	0.0	67.7		
5.	S Leg App - Queue	*	24.0	-36.0	24.0	-2919.9	*	2884.	180.	AG	32.	100.0	0.0	48.0	3.94	146.5
6.	S Leg Dep - FreeFlow	*	-24.0	0.0	-24.0	-1200.0	*	1200.	180.	AG	1557.	1.0	0.0	67.7		
7.	E Leg App - FreeFlow	*	0.0	24.0	1200.0	24.0	*	1200.	90.	AG	824.	1.7	0.0	67.7		
8.	E Leg App - Queue	*	48.0	24.0	120.1	24.0	*	72.	90.	AG	26.	100.0	0.0	48.0	0.53	3.7
9.	E Leg Dep - FreeFlow	*	0.0	-18.0	1200.0	-18.0	*	1200.	90.	AG	39.	0.6	0.0	55.7		
10.	W Leg App - FreeFlow	*	0.0	-18.0	-1200.0	-18.0	*	1200.	270.	AG	112.	1.5	0.0	55.7		
11.	W Leg App - Queue	*	-48.0	-18.0	-70.0	-18.0	*	22.	270.	AG	25.	100.0	0.0	36.0	0.70	1.1
12.	W Leg Dep - FreeFlow	*	0.0	24.0	-1200.0	24.0	*	1200.	270.	AG	795.	1.0	0.0	67.7		

JOB: Orange Line Station RUN: Exit 41SB Ramp 2037 NB PM

DATE : 11/16/16
TIME : 15:20:26

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. N Leg App - Queue	90	75	2.0	1103	1600	3.35	1	3
5. S Leg App - Queue	90	81	2.0	1388	1600	3.35	1	3
8. E Leg App - Queue	90	64	2.0	824	1600	3.35	1	3
11. W Leg App - Queue	90	83	2.0	112	1600	3.35	1	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. N Leg, E Side-Corner	58.0	58.0	5.9
2. N Leg, E Side - 25 m	58.0	130.0	5.9
3. N Leg, E Side - 50 m	58.0	212.0	5.9
4. N Leg, E Side-Midblk	58.0	648.0	5.9
5. N Leg, W Side-Corner	-58.0	58.0	5.9
6. N Leg, W Side - 25 m	-58.0	130.0	5.9
7. N Leg, W Side - 50 m	-58.0	212.0	5.9
8. N Leg, W Side-Midblk	-58.0	648.0	5.9
9. S Leg, E Side-Corner	58.0	-46.0	5.9
10. S Leg, E Side - 25 m	58.0	-118.0	5.9
11. S Leg, E Side - 50 m	58.0	-200.0	5.9
12. S Leg, E Side-Midblk	58.0	-636.0	5.9
13. S Leg, W Side-Corner	-58.0	-46.0	5.9
14. S Leg, W Side - 25 m	-58.0	-118.0	5.9
15. S Leg, W Side - 50 m	-58.0	-200.0	5.9
16. S Leg, W Side-Midblk	-58.0	-636.0	5.9
17. E Leg, N Side - 25 m	130.0	58.0	5.9
18. E Leg, N Side - 50 m	212.0	58.0	5.9
19. E Leg, N Side-Midblk	648.0	58.0	5.9
20. W Leg, N Side - 25 m	-130.0	58.0	5.9
21. W Leg, N Side - 50 m	-212.0	58.0	5.9
22. W Leg, N Side-Midblk	-648.0	58.0	5.9
23. E Leg, S Side - 25 m	130.0	-46.0	5.9
24. E Leg, S Side - 50 m	212.0	-46.0	5.9
25. E Leg, S Side-Midblk	648.0	-46.0	5.9
26. W Leg, S Side - 25 m	-130.0	-46.0	5.9
27. W Leg, S Side - 50 m	-212.0	-46.0	5.9
28. W Leg, S Side-Midblk	-648.0	-46.0	5.9

JOB: Orange Line Station RUN: Exit 41SB Ramp 2037 NB PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10.	* 0.0000	0.0000	0.0000	0.0000	0.3000	0.3000	0.3000	0.2000	0.0000	0.0000	0.0000	0.0000	0.2000	0.1000	0.2000
20.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
30.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000
40.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.2000	
50.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.2000	
60.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	
70.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	
80.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	
90.	* 0.1000	0.0000	0.0000	0.0000	0.2000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	
100.	* 0.1000	0.0000	0.0000	0.0000	0.2000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	
110.	* 0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	
120.	* 0.2000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	
130.	* 0.2000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	
140.	* 0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	
150.	* 0.1000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	
160.	* 0.1000	0.0000	0.0000	0.0000	0.3000	0.2000	0.1000	0.2000	0.0000	0.0000	0.0000	0.3000	0.3000	0.3000	
170.	* 0.1000	0.0000	0.0000	0.0000	0.3000	0.3000	0.2000	0.3000	0.0000	0.0000	0.0000	0.3000	0.3000	0.3000	
180.	* 0.3000	0.2000	0.1000	0.0000	0.2000	0.2000	0.1000	0.1000	0.3000	0.3000	0.2000	0.2000	0.2000	0.2000	0.2000
190.	* 0.2000	0.2000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.3000	0.3000	0.3000	0.3000	0.0000	0.0000	0.0000
200.	* 0.2000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.3000	0.3000	0.3000	0.3000	0.0000	0.0000	0.0000
210.	* 0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
220.	* 0.0000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
230.	* 0.0000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
240.	* 0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
250.	* 0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
260.	* 0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
270.	* 0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000						

```
0.2000  0.2000  0.2000  0.0000  0.0000  0.0000
 280.  *  0.0000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.2000
0.2000  0.2000  0.2000  0.0000  0.0000  0.0000
 290.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000
0.2000  0.2000  0.2000  0.0000  0.0000  0.0000
 300.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000
0.2000  0.2000  0.2000  0.0000  0.0000  0.0000
 310.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000
0.2000  0.2000  0.2000  0.0000  0.0000  0.0000
 320.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.2000  0.2000  0.2000  0.0000  0.0000  0.0000
 330.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000
0.2000  0.2000  0.2000  0.0000  0.0000  0.0000
 340.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000
0.3000  0.2000  0.3000  0.0000  0.0000  0.0000
 350.  *  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000
0.2000  0.3000  0.3000  0.1000  0.0000  0.0000
 360.  *  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000  0.2000  0.1000  0.0000
0.0000  0.1000  0.2000  0.2000  0.1000  0.1000

------*-------------------------------------------------------------------------
-----------------------------------------
 MAX   *  0.3000  0.2000  0.1000  0.1000  0.3000  0.3000  0.3000  0.3000  0.3000
0.3000  0.3000  0.3000  0.3000  0.3000  0.3000
 DEGR. *    180     180     180     190      10      10      10     170     180
180     190     190     160     160     160
```


JOB: Orange Line Station RUN: Exit 41SB Ramp 2037 NB PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

```
WIND  * CONCENTRATION
ANGLE *     (PPM)
(DEGR)*      16      17      18      19      20      21      22      23      24
25      26      27      28

------*-------------------------------------------------------------------------
--------------------------
  10.  *  0.2000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
  20.  *  0.3000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
  30.  *  0.2000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
  40.  *  0.2000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
  50.  *  0.2000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
  60.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
  70.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
```

```
  80.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
  90.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 100.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 110.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 120.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 130.  *  0.2000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 140.  *  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 150.  *  0.2000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
 160.  *  0.3000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
 170.  *  0.2000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
 180.  *  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 190.  *  0.0000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
0.0000  0.0000  0.0000  0.0000
 200.  *  0.0000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
0.0000  0.0000  0.0000  0.0000
 210.  *  0.0000  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 220.  *  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 230.  *  0.0000  0.2000  0.1000  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 240.  *  0.0000  0.2000  0.1000  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 250.  *  0.0000  0.2000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 260.  *  0.0000  0.0000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 270.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 280.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 290.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 300.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 310.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 320.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 330.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 340.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 350.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 360.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000

------*-------------------------------------------------------------------------
--------------------------
 MAX   *  0.3000  0.2000  0.1000  0.1000  0.1000  0.1000  0.0000  0.1000  0.1000
0.0000  0.1000  0.0000  0.0000
```

DEGR. * 20 210 90 90 10 260 10 180 190
10 10 10 10

THE HIGHEST CONCENTRATION OF 0.3000 PPM OCCURRED AT RECEPTOR 5.

```
Q,EPA,,F,,0,T,T,F,T,0.7,
3,2,4,3,2200,2200,2200,2200,2200,2200,2200,2200,1036.8,1036.8,103
6.8,1036.8,1036.8,1036.8,1036.8,1036.8,12,12,12,12,10,10,10,10,0,
0,-1200,1200,0,0,1200,-1200,-1200,1200,0,0,1200,-
1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
120,120,120,120,62,62,62,62,2,2,2,2,1600,1600,1600,1600,1,1,1,1,3
,3,3,3
'Orange Line Station CAL3QHC Run',60,175,0.0,0.0,28,0.3048,1,0
'N Leg, E Side-Corner',46.0,46.0,5.9
'N Leg, E Side - 25 m',46.0,118.0,5.9
'N Leg, E Side - 50 m',46.0,200.0,5.9
'N Leg, E Side-Midblk',46.0,636.0,5.9
'N Leg, W Side-Corner',-34.0,46.0,5.9
'N Leg, W Side - 25 m',-34.0,118.0,5.9
'N Leg, W Side - 50 m',-34.0,200.0,5.9
'N Leg, W Side-Midblk',-34.0,636.0,5.9
'S Leg, E Side-Corner',46.0,-58.0,5.9
'S Leg, E Side - 25 m',46.0,-130.0,5.9
'S Leg, E Side - 50 m',46.0,-212.0,5.9
'S Leg, E Side-Midblk',46.0,-648.0,5.9
'S Leg, W Side-Corner',-34.0,-58.0,5.9
'S Leg, W Side - 25 m',-34.0,-130.0,5.9
'S Leg, W Side - 50 m',-34.0,-212.0,5.9
'S Leg, W Side-Midblk',-34.0,-648.0,5.9
'E Leg, N Side - 25 m',118.0,46.0,5.9
'E Leg, N Side - 50 m',200.0,46.0,5.9
'E Leg, N Side-Midblk',636.0,46.0,5.9
'W Leg, N Side - 25 m',-106.0,46.0,5.9
'W Leg, N Side - 50 m',-188.0,46.0,5.9
'W Leg, N Side-Midblk',-624.0,46.0,5.9
'E Leg, S Side - 25 m',118.0,-58.0,5.9
'E Leg, S Side - 50 m',200.0,-58.0,5.9
'E Leg, S Side-Midblk',636.0,-58.0,5.9
'W Leg, S Side - 25 m',-106.0,-58.0,5.9
'W Leg, S Side - 50 m',-188.0,-58.0,5.9
'W Leg, S Side-Midblk',-624.0,-58.0,5.9
'US RT1 and Lambert 2037 NB AM',12,1,0,'CO'
1
'N Leg App - FreeFlow','AG',-12,0,-12,1200,269,0.69,0.0,43.7
2
'N Leg App - Queue','AG',-12,36,-12,1200,0.0,24.0,2
150,130,2,269,3.35,1600,1,3
1
'N Leg Dep - FreeFlow','AG',18,0,18,1200,549,0.74,0.0,55.7
1
'S Leg App - FreeFlow','AG',18,0,18,-1200,487,1.38,0.0,55.7
2
'S Leg App - Queue','AG',18,-48,18,-1200,0.0,36.0,3
150,120,2,487,3.35,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-12,0,-12,-1200,157,1.46,0.0,43.7
1
```

```
'E Leg App - FreeFlow','AG',0,18,1200,18,403,1.1,0.0,55.7
2
'E Leg App - Queue','AG',36,18,1200,18,0.0,36.0,3
150,135,2,403,3.35,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-24,1200,-24,588,1.02,0.0,67.7
1
'W Leg App - FreeFlow','AG',0,-24,-1200,-24,527,0.88,0.0,67.7
2
'W Leg App - Queue','AG',-24,-24,-1200,-24,0.0,48.0,4
150,135,2,527,3.35,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,18,-1200,18,392,0.83,0.0,55.7
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2037 NB AM

DATE : 11/16/16
TIME : 15:21:39

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1. N Leg App - FreeFlow	*	-12.0	0.0	-12.0	1200.0	*	1200.	360.	AG	269.	0.7	0.0	43.7		
2. N Leg App - Queue	*	-12.0	36.0	-12.0	142.8	*	107.	360.	AG	16.	100.0	0.0	24.0	0.79	5.4
3. N Leg Dep - FreeFlow	*	18.0	0.0	18.0	1200.0	*	1200.	360.	AG	549.	0.7	0.0	55.7		
4. S Leg App - FreeFlow	*	18.0	0.0	18.0	-1200.0	*	1200.	180.	AG	487.	1.4	0.0	55.7		
5. S Leg App - Queue	*	18.0	-48.0	18.0	-154.3	*	106.	180.	AG	22.	100.0	0.0	36.0	0.58	5.4
6. S Leg Dep - FreeFlow	*	-12.0	0.0	-12.0	-1200.0	*	1200.	180.	AG	157.	1.5	0.0	43.7		
7. E Leg App - FreeFlow	*	0.0	18.0	1200.0	18.0	*	1200.	90.	AG	403.	1.1	0.0	55.7		
8. E Leg App - Queue	*	36.0	18.0	362.6	18.0	*	327.	90.	AG	24.	100.0	0.0	36.0	1.15	16.6
9. E Leg Dep - FreeFlow	*	0.0	-24.0	1200.0	-24.0	*	1200.	90.	AG	588.	1.0	0.0	67.7		
10. W Leg App - FreeFlow	*	0.0	-24.0	-1200.0	-24.0	*	1200.	270.	AG	527.	0.9	0.0	67.7		
11. W Leg App - Queue	*	-24.0	-24.0	-317.5	-24.0	*	293.	270.	AG	32.	100.0	0.0	48.0	1.12	14.9
12. W Leg Dep - FreeFlow	*	0.0	18.0	-1200.0	18.0	*	1200.	270.	AG	392.	0.8	0.0	55.7		

JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2037 NB AM

DATE : 11/16/16
TIME : 15:21:39

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. N Leg App - Queue	*	150	130	2.0	269	1600	3.35	1	3
5. S Leg App - Queue	*	150	120	2.0	487	1600	3.35	1	3
8. E Leg App - Queue	*	150	135	2.0	403	1600	3.35	1	3
11. W Leg App - Queue	*	150	135	2.0	527	1600	3.35	1	3

RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (FT) X	Y	Z	*
1. N Leg, E Side-Corner	*	46.0	46.0	5.9	*
2. N Leg, E Side - 25 m	*	46.0	118.0	5.9	*
3. N Leg, E Side - 50 m	*	46.0	200.0	5.9	*
4. N Leg, E Side-Midblk	*	46.0	636.0	5.9	*
5. N Leg, W Side-Corner	*	-34.0	46.0	5.9	*
6. N Leg, W Side - 25 m	*	-34.0	118.0	5.9	*
7. N Leg, W Side - 50 m	*	-34.0	200.0	5.9	*
8. N Leg, W Side-Midblk	*	-34.0	636.0	5.9	*
9. S Leg, E Side-Corner	*	46.0	-58.0	5.9	*
10. S Leg, E Side - 25 m	*	46.0	-130.0	5.9	*
11. S Leg, E Side - 50 m	*	46.0	-212.0	5.9	*
12. S Leg, E Side-Midblk	*	46.0	-648.0	5.9	*
13. S Leg, W Side-Corner	*	-34.0	-58.0	5.9	*
14. S Leg, W Side - 25 m	*	-34.0	-130.0	5.9	*
15. S Leg, W Side - 50 m	*	-34.0	-212.0	5.9	*
16. S Leg, W Side-Midblk	*	-34.0	-648.0	5.9	*
17. E Leg, N Side - 25 m	*	118.0	46.0	5.9	*
18. E Leg, N Side - 50 m	*	200.0	46.0	5.9	*
19. E Leg, N Side-Midblk	*	636.0	46.0	5.9	*
20. W Leg, N Side - 25 m	*	-106.0	46.0	5.9	*
21. W Leg, N Side - 50 m	*	-188.0	46.0	5.9	*
22. W Leg, N Side-Midblk	*	-624.0	46.0	5.9	*
23. E Leg, S Side - 25 m	*	118.0	-58.0	5.9	*
24. E Leg, S Side - 50 m	*	200.0	-58.0	5.9	*
25. E Leg, S Side-Midblk	*	636.0	-58.0	5.9	*
26. W Leg, S Side - 25 m	*	-106.0	-58.0	5.9	*
27. W Leg, S Side - 50 m	*	-188.0	-58.0	5.9	*
28. W Leg, S Side-Midblk	*	-624.0	-58.0	5.9	*

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10.	* 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000
20.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
30.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
40.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
50.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
60.	* 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
70.	* 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000
80.	* 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
90.	* 0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
100.	* 0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
110.	* 0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
120.	* 0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
130.	* 0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
140.	* 0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
150.	* 0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
160.	* 0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
170.	* 0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
180.	* 0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
190.	* 0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
200.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
210.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
220.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
230.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
240.	* 0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000
250.	* 0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000
260.	* 0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000
270.	* 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2000						

```
0.1000  0.0000  0.0000  0.1000  0.0000  0.0000
 280.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000
0.1000  0.0000  0.0000  0.1000  0.0000  0.0000
 290.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000
0.1000  0.0000  0.0000  0.1000  0.0000  0.0000
 300.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.2000  0.0000  0.0000  0.1000  0.1000  0.0000
 310.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.2000  0.0000  0.0000  0.1000  0.1000  0.0000
 320.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.1000  0.0000  0.0000  0.1000  0.1000  0.0000
 330.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.1000  0.0000  0.0000  0.1000  0.1000  0.0000
 340.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.1000  0.0000  0.0000  0.1000  0.0000  0.0000
 350.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.1000  0.0000  0.0000
 360.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.1000  0.0000  0.0000

------*-------------------------------------------------------------------------
----------------------------------------
 MAX   *  0.1000  0.0000  0.0000  0.0000  0.1000  0.1000  0.0000  0.0000  0.2000
0.2000  0.0000  0.0000  0.1000  0.1000  0.0000
 DEGR. *      90       10       10       10       20      130       10       10      270
300       10       10       10      300       10
```


JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2037 NB AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

```
WIND  * CONCENTRATION
ANGLE *     (PPM)
(DEGR)*      16       17       18       19       20       21       22       23       24
25       26       27       28

------*-------------------------------------------------------------------------
---------------------------
  10.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.1000  0.0000
  20.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.1000  0.0000
  30.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.1000  0.0000
  40.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.1000  0.0000
  50.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.1000  0.0000
  60.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.1000  0.0000
  70.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.1000  0.0000
```

80.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000
90.	*	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
100.	*	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
110.	*	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
120.	*	0.0000	0.1000	0.1000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
130.	*	0.0000	0.1000	0.1000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
140.	*	0.0000	0.1000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
150.	*	0.0000	0.1000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
160.	*	0.0000	0.1000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
170.	*	0.0000	0.1000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
180.	*	0.0000	0.1000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
190.	*	0.0000	0.1000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
200.	*	0.0000	0.1000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
210.	*	0.0000	0.1000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
220.	*	0.0000	0.1000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
230.	*	0.0000	0.1000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
240.	*	0.0000	0.1000	0.1000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250.	*	0.0000	0.2000	0.1000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
260.	*	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
270.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.1000	0.0000	0.0000
280.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.1000	0.1000	0.0000
290.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.0000
300.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.0000
310.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.0000
320.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.0000
330.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.0000
340.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.0000
350.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.0000
360.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.0000
MAX	*	0.0000	0.2000	0.1000	0.0000	0.1000	0.1000	0.0000	0.1000	0.0000	0.0000	0.1000	0.1000	0.0000

DEGR. * 10 250 100 10 140 120 10 270 10
10 10 10 10

THE HIGHEST CONCENTRATION OF 0.2000 PPM OCCURRED AT RECEPTOR 17.

```
Q,EPA,,F,,0,T,T,F,T,0.7,
3,2,4,3,2200,2200,2200,2200,2200,2200,2200,2200,1036.8,1036.8,103
6.8,1036.8,1036.8,1036.8,1036.8,1036.8,12,12,12,12,10,10,10,10,0,
0,-1200,1200,0,0,1200,-1200,-1200,1200,0,0,1200,-
1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
120,120,120,120,62,62,62,62,2,2,2,2,1600,1600,1600,1600,1,1,1,1,3
,3,3,3
'Orange Line Station CAL3QHC Run',60,175,0.0,0.0,28,0.3048,1,0
'N Leg, E Side-Corner',46.0,46.0,5.9
'N Leg, E Side - 25 m',46.0,118.0,5.9
'N Leg, E Side - 50 m',46.0,200.0,5.9
'N Leg, E Side-Midblk',46.0,636.0,5.9
'N Leg, W Side-Corner',-34.0,46.0,5.9
'N Leg, W Side - 25 m',-34.0,118.0,5.9
'N Leg, W Side - 50 m',-34.0,200.0,5.9
'N Leg, W Side-Midblk',-34.0,636.0,5.9
'S Leg, E Side-Corner',46.0,-58.0,5.9
'S Leg, E Side - 25 m',46.0,-130.0,5.9
'S Leg, E Side - 50 m',46.0,-212.0,5.9
'S Leg, E Side-Midblk',46.0,-648.0,5.9
'S Leg, W Side-Corner',-34.0,-58.0,5.9
'S Leg, W Side - 25 m',-34.0,-130.0,5.9
'S Leg, W Side - 50 m',-34.0,-212.0,5.9
'S Leg, W Side-Midblk',-34.0,-648.0,5.9
'E Leg, N Side - 25 m',118.0,46.0,5.9
'E Leg, N Side - 50 m',200.0,46.0,5.9
'E Leg, N Side-Midblk',636.0,46.0,5.9
'W Leg, N Side - 25 m',-106.0,46.0,5.9
'W Leg, N Side - 50 m',-188.0,46.0,5.9
'W Leg, N Side-Midblk',-624.0,46.0,5.9
'E Leg, S Side - 25 m',118.0,-58.0,5.9
'E Leg, S Side - 50 m',200.0,-58.0,5.9
'E Leg, S Side-Midblk',636.0,-58.0,5.9
'W Leg, S Side - 25 m',-106.0,-58.0,5.9
'W Leg, S Side - 50 m',-188.0,-58.0,5.9
'W Leg, S Side-Midblk',-624.0,-58.0,5.9
'US RT1 and Lambert 2037 NB PM',12,1,0,'CO'
1
'N Leg App - FreeFlow','AG',-12,0,-12,1200,168,0.69,0.0,43.7
2
'N Leg App - Queue','AG',-12,36,-12,1200,0.0,24.0,2
150,130,2,168,3.35,1600,1,3
1
'N Leg Dep - FreeFlow','AG',18,0,18,1200,577,0.74,0.0,55.7
1
'S Leg App - FreeFlow','AG',18,0,18,-1200,1058,1.38,0.0,55.7
2
'S Leg App - Queue','AG',18,-48,18,-1200,0.0,36.0,3
150,120,2,1058,3.35,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-12,0,-12,-1200,453,1.46,0.0,43.7
1
```

```
'E Leg App - FreeFlow','AG',0,18,1200,18,761,1.1,0.0,55.7
2
'E Leg App - Queue','AG',36,18,1200,18,0.0,36.0,3
150,135,2,761,3.35,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-24,1200,-24,1159,1.02,0.0,67.7
1
'W Leg App - FreeFlow','AG',0,-24,-1200,-24,1176,0.88,0.0,67.7
2
'W Leg App - Queue','AG',-24,-24,-1200,-24,0.0,48.0,4
150,135,2,1176,3.35,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,18,-1200,18,974,0.83,0.0,55.7
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2037 NB PM

DATE : 11/16/16
TIME : 15:22:33

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1. N Leg App - FreeFlow	*	-12.0	0.0	-12.0	1200.0	*	1200.	360.	AG	168.	0.7	0.0	43.7		
2. N Leg App - Queue	*	-12.0	36.0	-12.0	95.7	*	60.	360.	AG	16.	100.0	0.0	24.0	0.49	3.0
3. N Leg Dep - FreeFlow	*	18.0	0.0	18.0	1200.0	*	1200.	360.	AG	577.	0.7	0.0	55.7		
4. S Leg App - FreeFlow	*	18.0	0.0	18.0	-1200.0	*	1200.	180.	AG	1058.	1.4	0.0	55.7		
5. S Leg App - Queue	*	18.0	-48.0	18.0	-1119.8	*	1072.	180.	AG	22.	100.0	0.0	36.0	1.27	54.4
6. S Leg Dep - FreeFlow	*	-12.0	0.0	-12.0	-1200.0	*	1200.	180.	AG	453.	1.5	0.0	43.7		
7. E Leg App - FreeFlow	*	0.0	18.0	1200.0	18.0	*	1200.	90.	AG	761.	1.1	0.0	55.7		
8. E Leg App - Queue	*	36.0	18.0	1675.3	18.0	*	1639.	90.	AG	24.	100.0	0.0	36.0	2.16	83.3
9. E Leg Dep - FreeFlow	*	0.0	-24.0	1200.0	-24.0	*	1200.	90.	AG	1159.	1.0	0.0	67.7		
10. W Leg App - FreeFlow	*	0.0	-24.0	-1200.0	-24.0	*	1200.	270.	AG	1176.	0.9	0.0	67.7		
11. W Leg App - Queue	*	-24.0	-24.0	-2115.6	-24.0	*	2092.	270.	AG	32.	100.0	0.0	48.0	2.51	106.3
12. W Leg Dep - FreeFlow	*	0.0	18.0	-1200.0	18.0	*	1200.	270.	AG	974.	0.8	0.0	55.7		

JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2037 NB PM

DATE : 11/16/16
TIME : 15:22:33

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. N Leg App - Queue	*	150	130	2.0	168	1600	3.35	1	3
5. S Leg App - Queue	*	150	120	2.0	1058	1600	3.35	1	3
8. E Leg App - Queue	*	150	135	2.0	761	1600	3.35	1	3
11. W Leg App - Queue	*	150	135	2.0	1176	1600	3.35	1	3

RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (FT) X	Y	Z
1. N Leg, E Side-Corner	*	46.0	46.0	5.9
2. N Leg, E Side - 25 m	*	46.0	118.0	5.9
3. N Leg, E Side - 50 m	*	46.0	200.0	5.9
4. N Leg, E Side-Midblk	*	46.0	636.0	5.9
5. N Leg, W Side-Corner	*	-34.0	46.0	5.9
6. N Leg, W Side - 25 m	*	-34.0	118.0	5.9
7. N Leg, W Side - 50 m	*	-34.0	200.0	5.9
8. N Leg, W Side-Midblk	*	-34.0	636.0	5.9
9. S Leg, E Side-Corner	*	46.0	-58.0	5.9
10. S Leg, E Side - 25 m	*	46.0	-130.0	5.9
11. S Leg, E Side - 50 m	*	46.0	-212.0	5.9
12. S Leg, E Side-Midblk	*	46.0	-648.0	5.9
13. S Leg, W Side-Corner	*	-34.0	-58.0	5.9
14. S Leg, W Side - 25 m	*	-34.0	-130.0	5.9
15. S Leg, W Side - 50 m	*	-34.0	-212.0	5.9
16. S Leg, W Side-Midblk	*	-34.0	-648.0	5.9
17. E Leg, N Side - 25 m	*	118.0	46.0	5.9
18. E Leg, N Side - 50 m	*	200.0	46.0	5.9
19. E Leg, N Side-Midblk	*	636.0	46.0	5.9
20. W Leg, N Side - 25 m	*	-106.0	46.0	5.9
21. W Leg, N Side - 50 m	*	-188.0	46.0	5.9
22. W Leg, N Side-Midblk	*	-624.0	46.0	5.9
23. E Leg, S Side - 25 m	*	118.0	-58.0	5.9
24. E Leg, S Side - 50 m	*	200.0	-58.0	5.9
25. E Leg, S Side-Midblk	*	636.0	-58.0	5.9
26. W Leg, S Side - 25 m	*	-106.0	-58.0	5.9
27. W Leg, S Side - 50 m	*	-188.0	-58.0	5.9
28. W Leg, S Side-Midblk	*	-624.0	-58.0	5.9

JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2037 NB PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10.	* 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000
20.	* 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
30.	* 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000
40.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000
50.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
60.	* 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000
70.	* 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000
80.	* 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000
90.	* 0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000
100.	* 0.2000	0.1000	0.0000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
110.	* 0.1000	0.1000	0.0000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
120.	* 0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
130.	* 0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
140.	* 0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
150.	* 0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
160.	* 0.1000	0.0000	0.0000	0.0000	0.2000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000
170.	* 0.1000	0.0000	0.0000	0.0000	0.2000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.3000	0.3000	0.2000
180.	* 0.3000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
190.	* 0.3000	0.1000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
200.	* 0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
210.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
220.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
230.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
240.	* 0.1000	0.1000	0.0000	0.0000	0.1000	0.1000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
250.	* 0.1000	0.1000	0.0000	0.0000	0.1000	0.1000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
260.	* 0.1000	0.1000	0.0000	0.0000	0.2000	0.1000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
270.	* 0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.2000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000

```
0.1000  0.1000  0.1000  0.2000  0.0000  0.0000
 280.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000
0.2000  0.1000  0.1000  0.3000  0.1000  0.0000
 290.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000
0.2000  0.2000  0.1000  0.3000  0.1000  0.1000
 300.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.2000  0.1000  0.1000  0.1000  0.1000  0.0000
 310.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.3000  0.2000  0.2000  0.1000  0.1000  0.0000
 320.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.2000  0.2000  0.2000  0.1000  0.1000  0.0000
 330.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.2000  0.2000  0.2000  0.1000  0.1000  0.0000
 340.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.2000  0.2000  0.2000  0.1000  0.0000  0.0000
 350.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.1000  0.2000  0.2000  0.1000  0.0000  0.0000
 360.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.2000  0.1000  0.0000  0.0000

------*-------------------------------------------------------------------------
-----------------------------------------
 MAX   *  0.3000  0.1000  0.0000  0.0000  0.2000  0.1000  0.0000  0.0000  0.2000
0.3000  0.2000  0.2000  0.3000  0.3000  0.2000
 DEGR. *    180     100      10      10     160     100      10      10      60
310     180     180     170     170     160
```


JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2037 NB PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

```
WIND  * CONCENTRATION
ANGLE *     (PPM)
(DEGR)*      16      17      18      19      20      21      22      23      24
25      26      27      28

------*-------------------------------------------------------------------------
--------------------------
  10.  *  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.1000  0.1000
  20.  *  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.1000  0.1000
  30.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.1000  0.1000
  40.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.1000  0.1000
  50.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
0.1000  0.1000  0.1000  0.1000
  60.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.1000  0.1000  0.1000
  70.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.1000  0.1000  0.3000
```

```
  80.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000
0.2000  0.1000  0.2000  0.3000
  90.  *  0.0000  0.1000  0.1000  0.1000  0.1000  0.1000  0.0000  0.1000  0.1000
0.1000  0.0000  0.0000  0.1000
 100.  *  0.0000  0.2000  0.2000  0.2000  0.1000  0.0000  0.2000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 110.  *  0.0000  0.1000  0.1000  0.1000  0.0000  0.0000  0.1000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 120.  *  0.0000  0.1000  0.1000  0.1000  0.0000  0.1000  0.1000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 130.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.1000  0.1000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 140.  *  0.1000  0.1000  0.1000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 150.  *  0.1000  0.1000  0.1000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 160.  *  0.2000  0.1000  0.1000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 170.  *  0.1000  0.1000  0.1000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 180.  *  0.0000  0.1000  0.1000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 190.  *  0.0000  0.1000  0.1000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 200.  *  0.0000  0.1000  0.1000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 210.  *  0.0000  0.1000  0.1000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 220.  *  0.0000  0.1000  0.1000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 230.  *  0.0000  0.1000  0.1000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 240.  *  0.0000  0.1000  0.1000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 250.  *  0.0000  0.2000  0.1000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 260.  *  0.0000  0.1000  0.2000  0.2000  0.2000  0.2000  0.2000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 270.  *  0.0000  0.1000  0.1000  0.1000  0.1000  0.1000  0.1000  0.1000  0.1000
0.1000  0.2000  0.2000  0.1000
 280.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
0.1000  0.3000  0.3000  0.3000
 290.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000
0.2000  0.3000  0.3000  0.3000
 300.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.2000  0.1000  0.1000  0.1000
 310.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.1000  0.1000  0.1000  0.1000
 320.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.1000  0.1000
 330.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.1000  0.1000
 340.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.1000  0.1000
 350.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.1000  0.1000
 360.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.1000  0.1000

------*-------------------------------------------------------------------------
--------------------------
 MAX   *  0.2000  0.2000  0.2000  0.2000  0.2000  0.2000  0.2000  0.2000  0.2000
0.2000  0.3000  0.3000  0.3000
```

DEGR. * 10 100 100 100 260 260 100 60 60
60 280 280 70

THE HIGHEST CONCENTRATION OF 0.3000 PPM OCCURRED AT RECEPTOR 28.

```
Q,EPA,,F,,0,T,T,T,T,0.7,
1,1,1,1,2200,2200,2200,2200,2200,2200,2200,2200,1037,1037,1037,10
37,1037,1037,1037,1037,12,12,12,12,10,10,10,10,0,0,-
1200,1200,0,0,1200,-1200,-1200,1200,0,0,1200,-
1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
0,120,120,120,0,62,62,62,0,2,2,2,0,1600,1600,1600,0,1,1,1,0,3,3,3
'Orange Line Station',60,175,0.0,0.0,23,0.3048,1,0
'N Leg, E Side-Corner',22.0,22.0,5.9
'N Leg, E Side - 0 m',0.0,22.0,5.9
'N Leg, W Side-Corner',-22.0,22.0,5.9
'S Leg, E Side-Corner',22.0,-22.0,5.9
'S Leg, E Side - 25 m',22.0,-94.0,5.9
'S Leg, E Side - 50 m',22.0,-176.0,5.9
'S Leg, E Side-Midblk',22.0,-612.0,5.9
'S Leg, W Side-Corner',-22.0,-22.0,5.9
'S Leg, W Side - 25 m',-22.0,-94.0,5.9
'S Leg, W Side - 50 m',-22.0,-176.0,5.9
'S Leg, W Side-Midblk',-22.0,-612.0,5.9
'E Leg, N Side - 25 m',94.0,22.0,5.9
'E Leg, N Side - 50 m',176.0,22.0,5.9
'E Leg, N Side-Midblk',612.0,22.0,5.9
'W Leg, N Side - 25 m',-94.0,22.0,5.9
'W Leg, N Side - 50 m',-176.0,22.0,5.9
'W Leg, N Side-Midblk',-612.0,22.0,5.9
'E Leg, S Side - 25 m',94.0,-22.0,5.9
'E Leg, S Side - 50 m',176.0,-22.0,5.9
'E Leg, S Side-Midblk',612.0,-22.0,5.9
'W Leg, S Side - 25 m',-94.0,-22.0,5.9
'W Leg, S Side - 50 m',-176.0,-22.0,5.9
'W Leg, S Side-Midblk',-612.0,-22.0,5.9
'Woodmont-Jones 2037 NB AM',9,1,0,'CO'
1
'S Leg App - FreeFlow','AG',6,6,6,-1200,347,0.86,0.0,31.7
2
'S Leg App - Queue','AG',6,-12,6,-1200,0.0,12.0,1
81,58,2,347,3.35,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-6,6,-6,-1200,426,1.29,0.0,31.7
1
'E Leg App - FreeFlow','AG',0,6,1200,6,336,1.03,0.0,31.7
2
'E Leg App - Queue','AG',12,6,1200,6,0.0,12.0,1
81,76,2,336,3.35,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-6,1200,-6,414,1.85,0.0,31.7
1
'W Leg App - FreeFlow','AG',0,-6,-1200,-6,336,0.55,0.0,31.7
2
'W Leg App - Queue','AG',-12,-6,-1200,-6,0.0,12.0,1
81,41,2,336,3.35,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,6,-1200,6,179,2.69,0.0,31.7
```

```
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station RUN: Woodmont-Jones 2037 NB AM

DATE : 11/16/16
TIME : 15:12:19

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)		(G/MI)	(FT)	(FT)		(VEH)	
1. S Leg App - FreeFlow	*	6.0	6.0	6.0	-1200.0	*	1206.	180.	AG	347.	0.9	0.0	31.7		
2. S Leg App - Queue	*	6.0	-12.0	6.0	-170.1	*	158.	180.	AG	6.	100.0	0.0	12.0	0.93	8.0
3. S Leg Dep - FreeFlow	*	-6.0	6.0	-6.0	-1200.0	*	1206.	180.	AG	426.	1.3	0.0	31.7		
4. E Leg App - FreeFlow	*	0.0	6.0	1200.0	6.0	*	1200.	90.	AG	336.	1.0	0.0	31.7		
5. E Leg App - Queue	*	12.0	6.0	3650.1	6.0	*	3638.	90.	AG	8.	100.0	0.0	12.0	****	184.8
6. E Leg Dep - FreeFlow	*	0.0	-6.0	1200.0	-6.0	*	1200.	90.	AG	414.	1.9	0.0	31.7		
7. W Leg App - FreeFlow	*	0.0	-6.0	-1200.0	-6.0	*	1200.	270.	AG	336.	0.6	0.0	31.7		
8. W Leg App - Queue	*	-12.0	-6.0	-87.3	-6.0	*	75.	270.	AG	5.	100.0	0.0	12.0	0.47	3.8
9. W Leg Dep - FreeFlow	*	0.0	6.0	-1200.0	6.0	*	1200.	270.	AG	179.	2.7	0.0	31.7		

JOB: Orange Line Station RUN: Woodmont-Jones 2037 NB AM

DATE : 11/16/16
TIME : 15:12:19

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

```
------------------------*-------------------------------------------------------------
--------------------
       2. S Leg App - Queue   *      81       58       2.0       347       1600
 3.35      1        3
       5. E Leg App - Queue   *      81       76       2.0       336       1600
 3.35      1        3
       8. W Leg App - Queue   *      81       41       2.0       336       1600
 3.35      1        3

       RECEPTOR LOCATIONS
       ------------------
                              *           COORDINATES (FT)          *
         RECEPTOR             *      X          Y          Z         *
     -------------------------*-------------------------------------*
      1. N Leg, E Side-Corner *        22.0       22.0        5.9   *
      2. N Leg, E Side - 0 m  *         0.0       22.0        5.9   *
      3. N Leg, W Side-Corner *       -22.0       22.0        5.9   *
      4. S Leg, E Side-Corner *        22.0      -22.0        5.9   *
      5. S Leg, E Side - 25 m *        22.0      -94.0        5.9   *
      6. S Leg, E Side - 50 m *        22.0     -176.0        5.9   *
      7. S Leg, E Side-Midblk *        22.0     -612.0        5.9   *
      8. S Leg, W Side-Corner *       -22.0      -22.0        5.9   *
      9. S Leg, W Side - 25 m *       -22.0      -94.0        5.9   *
     10. S Leg, W Side - 50 m *       -22.0     -176.0        5.9   *
     11. S Leg, W Side-Midblk *       -22.0     -612.0        5.9   *
     12. E Leg, N Side - 25 m *        94.0       22.0        5.9   *
     13. E Leg, N Side - 50 m *       176.0       22.0        5.9   *
     14. E Leg, N Side-Midblk *       612.0       22.0        5.9   *
     15. W Leg, N Side - 25 m *       -94.0       22.0        5.9   *
     16. W Leg, N Side - 50 m *      -176.0       22.0        5.9   *
     17. W Leg, N Side-Midblk *      -612.0       22.0        5.9   *
     18. E Leg, S Side - 25 m *        94.0      -22.0        5.9   *
     19. E Leg, S Side - 50 m *       176.0      -22.0        5.9   *
     20. E Leg, S Side-Midblk *       612.0      -22.0        5.9   *
     21. W Leg, S Side - 25 m *       -94.0      -22.0        5.9   *
     22. W Leg, S Side - 50 m *      -176.0      -22.0        5.9   *
     23. W Leg, S Side-Midblk *      -612.0      -22.0        5.9   *

                            PAGE  3
      JOB: Orange Line Station                                RUN: Woodmont-Jones
2037 NB AM

       MODEL RESULTS
       -------------

       REMARKS : In search of the angle corresponding to
                 the maximum concentration, only the first
                 angle, of the angles with same maximum
                 concentrations, is indicated as maximum.

 WIND ANGLE RANGE:  10.-360.

 WIND  * CONCENTRATION
 ANGLE *     (PPM)
 (DEGR)*       1        2        3        4        5        6        7        8        9
 10       11       12       13       14       15

------*-------------------------------------------------------------------------------
-----------------------------------------
  10.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  20.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
```

```
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  30.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  40.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  50.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  60.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  70.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  80.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  90.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 100.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 110.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 120.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 130.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 140.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 150.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 160.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 170.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 180.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 190.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 200.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 210.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 220.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 230.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 240.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 250.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 260.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 270.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 280.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 290.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 300.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 310.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 320.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 330.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
```

340.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
350.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
360.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MAX	*	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
DEGR.	*	10	10	10	70	10	10	10	80	10	10	10	10	10	10

JOB: Orange Line Station RUN: Woodmont-Jones 2037 NB AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	*	CONCENTRATION (PPM) 16	17	18	19	20	21	22	23
10.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
30.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
40.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
50.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
60.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
70.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
80.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
90.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
100.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
110.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
120.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
130.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
140.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
150.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
160.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
170.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
180.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
190.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
200.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
210.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
220.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
230.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
240.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
260.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
270.	*	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000
280.	*	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000
290.	*	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000
300.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

310.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
320.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
330.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
340.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
350.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
360.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MAX	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
DEGR.	*	10	10	70	70	70	10	10	10

THE HIGHEST CONCENTRATION OF 0.1000 PPM OCCURRED AT RECEPTOR 4.

```
Q,EPA,,F,,0,T,T,T,T,0.7,
1,1,1,1,2200,2200,2200,2200,2200,2200,2200,2200,1037,1037,1037,10
37,1037,1037,1037,1037,12,12,12,12,10,10,10,10,0,0,-
1200,1200,0,0,1200,-1200,-1200,1200,0,0,1200,-
1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
0,120,120,120,0,62,62,62,0,2,2,2,0,1600,1600,1600,0,1,1,1,0,3,3,3
'Orange Line Station',60,175,0.0,0.0,23,0.3048,1,0
'N Leg, E Side-Corner',22.0,22.0,5.9
'N Leg, E Side - 0 m',0.0,22.0,5.9
'N Leg, W Side-Corner',-22.0,22.0,5.9
'S Leg, E Side-Corner',22.0,-22.0,5.9
'S Leg, E Side - 25 m',22.0,-94.0,5.9
'S Leg, E Side - 50 m',22.0,-176.0,5.9
'S Leg, E Side-Midblk',22.0,-612.0,5.9
'S Leg, W Side-Corner',-22.0,-22.0,5.9
'S Leg, W Side - 25 m',-22.0,-94.0,5.9
'S Leg, W Side - 50 m',-22.0,-176.0,5.9
'S Leg, W Side-Midblk',-22.0,-612.0,5.9
'E Leg, N Side - 25 m',94.0,22.0,5.9
'E Leg, N Side - 50 m',176.0,22.0,5.9
'E Leg, N Side-Midblk',612.0,22.0,5.9
'W Leg, N Side - 25 m',-94.0,22.0,5.9
'W Leg, N Side - 50 m',-176.0,22.0,5.9
'W Leg, N Side-Midblk',-612.0,22.0,5.9
'E Leg, S Side - 25 m',94.0,-22.0,5.9
'E Leg, S Side - 50 m',176.0,-22.0,5.9
'E Leg, S Side-Midblk',612.0,-22.0,5.9
'W Leg, S Side - 25 m',-94.0,-22.0,5.9
'W Leg, S Side - 50 m',-176.0,-22.0,5.9
'W Leg, S Side-Midblk',-612.0,-22.0,5.9
'Woodmont-Jones 2037 NB PM',9,1,0,'CO'
1
'S Leg App - FreeFlow','AG',6,6,6,-1200,616,0.86,0.0,31.7
2
'S Leg App - Queue','AG',6,-12,6,-1200,0.0,12.0,1
81,58,2,616,3.35,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-6,6,-6,-1200,213,1.29,0.0,31.7
1
'E Leg App - FreeFlow','AG',0,6,1200,6,320,1.03,0.0,31.7
2
'E Leg App - Queue','AG',12,6,1200,6,0.0,12.0,1
81,76,2,320,3.35,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-6,1200,-6,656,1.85,0.0,31.7
1
'W Leg App - FreeFlow','AG',0,-6,-1200,-6,308,0.55,0.0,31.7
2
'W Leg App - Queue','AG',-12,-6,-1200,-6,0.0,12.0,1
81,41,2,308,3.35,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,6,-1200,6,375,2.69,0.0,31.7
```

```
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station RUN: Woodmont-Jones 2037 NB PM

DATE : 11/16/16
TIME : 15:10:35

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)		(G/MI)	(FT)	(FT)		(VEH)	
1. S Leg App - FreeFlow	*	6.0	6.0	6.0	-1200.0	*	1206.	180.	AG	616.	0.9	0.0	31.7		
2. S Leg App - Queue	*	6.0	-12.0	6.0	-2734.7	*	2723.	180.	AG	6.	100.0	0.0	12.0	1.64	138.3
3. S Leg Dep - FreeFlow	*	-6.0	6.0	-6.0	-1200.0	*	1206.	180.	AG	213.	1.3	0.0	31.7		
4. E Leg App - FreeFlow	*	0.0	6.0	1200.0	6.0	*	1200.	90.	AG	320.	1.0	0.0	31.7		
5. E Leg App - Queue	*	12.0	6.0	3467.9	6.0	*	3456.	90.	AG	8.	100.0	0.0	12.0	****	175.6
6. E Leg Dep - FreeFlow	*	0.0	-6.0	1200.0	-6.0	*	1200.	90.	AG	656.	1.9	0.0	31.7		
7. W Leg App - FreeFlow	*	0.0	-6.0	-1200.0	-6.0	*	1200.	270.	AG	308.	0.6	0.0	31.7		
8. W Leg App - Queue	*	-12.0	-6.0	-81.1	-6.0	*	69.	270.	AG	5.	100.0	0.0	12.0	0.43	3.5
9. W Leg Dep - FreeFlow	*	0.0	6.0	-1200.0	6.0	*	1200.	270.	AG	375.	2.7	0.0	31.7		

JOB: Orange Line Station RUN: Woodmont-Jones 2037 NB PM

DATE : 11/16/16
TIME : 15:10:35

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

```
-----------------------*-------------------------------------------------------------
--------------------
       2. S Leg App - Queue   *      81       58       2.0       616       1600
 3.35      1        3
       5. E Leg App - Queue   *      81       76       2.0       320       1600
 3.35      1        3
       8. W Leg App - Queue   *      81       41       2.0       308       1600
 3.35      1        3

       RECEPTOR LOCATIONS
       ------------------
                              *           COORDINATES (FT)          *
         RECEPTOR             *      X          Y          Z         *
     -------------------------*-------------------------------------*
      1. N Leg, E Side-Corner *        22.0       22.0        5.9   *
      2. N Leg, E Side - 0 m  *         0.0       22.0        5.9   *
      3. N Leg, W Side-Corner *       -22.0       22.0        5.9   *
      4. S Leg, E Side-Corner *        22.0      -22.0        5.9   *
      5. S Leg, E Side - 25 m *        22.0      -94.0        5.9   *
      6. S Leg, E Side - 50 m *        22.0     -176.0        5.9   *
      7. S Leg, E Side-Midblk *        22.0     -612.0        5.9   *
      8. S Leg, W Side-Corner *       -22.0      -22.0        5.9   *
      9. S Leg, W Side - 25 m *       -22.0      -94.0        5.9   *
     10. S Leg, W Side - 50 m *       -22.0     -176.0        5.9   *
     11. S Leg, W Side-Midblk *       -22.0     -612.0        5.9   *
     12. E Leg, N Side - 25 m *        94.0       22.0        5.9   *
     13. E Leg, N Side - 50 m *       176.0       22.0        5.9   *
     14. E Leg, N Side-Midblk *       612.0       22.0        5.9   *
     15. W Leg, N Side - 25 m *       -94.0       22.0        5.9   *
     16. W Leg, N Side - 50 m *      -176.0       22.0        5.9   *
     17. W Leg, N Side-Midblk *      -612.0       22.0        5.9   *
     18. E Leg, S Side - 25 m *        94.0      -22.0        5.9   *
     19. E Leg, S Side - 50 m *       176.0      -22.0        5.9   *
     20. E Leg, S Side-Midblk *       612.0      -22.0        5.9   *
     21. W Leg, S Side - 25 m *       -94.0      -22.0        5.9   *
     22. W Leg, S Side - 50 m *      -176.0      -22.0        5.9   *
     23. W Leg, S Side-Midblk *      -612.0      -22.0        5.9   *

                            PAGE  3
      JOB: Orange Line Station                                RUN: Woodmont-Jones
2037 NB PM

       MODEL RESULTS
       -------------

       REMARKS : In search of the angle corresponding to
                 the maximum concentration, only the first
                 angle, of the angles with same maximum
                 concentrations, is indicated as maximum.

 WIND ANGLE RANGE:  10.-360.

 WIND  * CONCENTRATION
 ANGLE *     (PPM)
 (DEGR)*       1        2        3        4        5        6        7        8        9
 10       11       12       13       14       15

------*-------------------------------------------------------------------------------
-----------------------------------------
  10.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  20.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
```

```
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  30.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  40.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  50.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  60.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  70.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  80.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  90.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 100.  *  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.1000  0.1000  0.1000  0.0000
 110.  *  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.1000  0.1000  0.1000  0.1000
 120.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.1000
 130.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 140.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 150.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 160.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 170.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 180.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 190.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 200.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 210.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 220.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 230.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 240.  *  0.0000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.1000
 250.  *  0.0000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
 260.  *  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
 270.  *  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.1000
 280.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 290.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 300.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 310.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 320.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 330.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
```

340.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
350.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
360.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

MAX	*	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
DEGR.	*	100	100	100	50	10	10	10	70	10	10	10	100	100	100

110

JOB: Orange Line Station RUN: Woodmont-Jones 2037 NB PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	*	CONCENTRATION (PPM) 16	17	18	19	20	21	22	23
10.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
30.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
40.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
50.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
60.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
70.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
80.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
90.	*	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
100.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
110.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
120.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
130.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
140.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
150.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
160.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
170.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
180.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
190.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
200.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
210.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
220.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
230.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
240.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
260.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
270.	*	0.1000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000
280.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0000
290.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
300.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000

310.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
320.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
330.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
340.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
350.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
360.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MAX	*	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0000
DEGR.	*	100	90	50	50	50	280	280	10

THE HIGHEST CONCENTRATION OF 0.1000 PPM OCCURRED AT RECEPTOR 4.

```
Q,EPA,,F,,0,T,T,F,T,0.7,
4,4,3,4,2200,2200,2200,2200,2200,2200,2200,2200,1036.75,1036.75,1
036.66666666667,1036.75,1036.75,1036.75,1036.66666666667,1036.75,
12,12,12,12,10,10,10,10,0,0,-1200,1200,0,0,1200,-1200,-
1200,1200,0,0,1200,-1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
120,120,120,120,62,62,62,62,2,2,2,2,1600,1600,1600,1600,1,1,1,1,3
,3,3,3
'Orange Line Station',60,175,0.0,0.0,28,0.3048,1,0
'N Leg, E Side-Corner',58.0,58.0,5.9
'N Leg, E Side - 25 m',58.0,130.0,5.9
'N Leg, E Side - 50 m',58.0,212.0,5.9
'N Leg, E Side-Midblk',58.0,648.0,5.9
'N Leg, W Side-Corner',-58.0,58.0,5.9
'N Leg, W Side - 25 m',-58.0,130.0,5.9
'N Leg, W Side - 50 m',-58.0,212.0,5.9
'N Leg, W Side-Midblk',-58.0,648.0,5.9
'S Leg, E Side-Corner',58.0,-46.0,5.9
'S Leg, E Side - 25 m',58.0,-118.0,5.9
'S Leg, E Side - 50 m',58.0,-200.0,5.9
'S Leg, E Side-Midblk',58.0,-636.0,5.9
'S Leg, W Side-Corner',-58.0,-46.0,5.9
'S Leg, W Side - 25 m',-58.0,-118.0,5.9
'S Leg, W Side - 50 m',-58.0,-200.0,5.9
'S Leg, W Side-Midblk',-58.0,-636.0,5.9
'E Leg, N Side - 25 m',130.0,58.0,5.9
'E Leg, N Side - 50 m',212.0,58.0,5.9
'E Leg, N Side-Midblk',648.0,58.0,5.9
'W Leg, N Side - 25 m',-130.0,58.0,5.9
'W Leg, N Side - 50 m',-212.0,58.0,5.9
'W Leg, N Side-Midblk',-648.0,58.0,5.9
'E Leg, S Side - 25 m',130.0,-46.0,5.9
'E Leg, S Side - 50 m',212.0,-46.0,5.9
'E Leg, S Side-Midblk',648.0,-46.0,5.9
'W Leg, S Side - 25 m',-130.0,-46.0,5.9
'W Leg, S Side - 50 m',-212.0,-46.0,5.9
'W Leg, S Side-Midblk',-648.0,-46.0,5.9
'Exit 41SB Ramp 2037 Build AM',12,1,0,'CO'
1
'N Leg App - FreeFlow','AG',-24,0,-24,1200,1042,0.88,0.0,67.7
2
'N Leg App - Queue','AG',-24,48,-24,1200,0.0,48.0,4
90,75,2,1042,3.35,1600,1,3
1
'N Leg Dep - FreeFlow','AG',24,0,24,1200,1299,0.70,0.0,67.7
1
'S Leg App - FreeFlow','AG',24,0,24,-1200,1173,1.38,0.0,67.7
2
'S Leg App - Queue','AG',24,-36,24,-1200,0.0,48.0,4
90,81,2,1173,3.35,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-24,0,-24,-1200,1193,1.02,0.0,67.7
1
```

```
'E Leg App - FreeFlow','AG',0,24,1200,24,952,1.72,0.0,67.7
2
'E Leg App - Queue','AG',48,24,1200,24,0.0,48.0,4
90,64,2,952,3.35,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-18,1200,-18,156,0.65,0.0,55.7
1
'W Leg App - FreeFlow','AG',0,-18,-1200,-18,156,1.55,0.0,55.7
2
'W Leg App - Queue','AG',-48,-18,-1200,-18,0.0,36.0,3
90,83,2,156,3.35,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,24,-1200,24,675,1.02,0.0,67.7
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station RUN: Exit 41SB Ramp 2037 Build AM

DATE : 11/16/16
TIME : 16:58:55

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
		*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1.	N Leg App - FreeFlow	*	-24.0	0.0	-24.0	1200.0	*	1200.	360.	AG	1042.	0.9	0.0	67.7		
2.	N Leg App - Queue	*	-24.0	48.0	-24.0	885.3	*	837.	360.	AG	30.	100.0	0.0	48.0	1.33	42.5
3.	N Leg Dep - FreeFlow	*	24.0	0.0	24.0	1200.0	*	1200.	360.	AG	1299.	0.7	0.0	67.7		
4.	S Leg App - FreeFlow	*	24.0	0.0	24.0	-1200.0	*	1200.	180.	AG	1173.	1.4	0.0	67.7		
5.	S Leg App - Queue	*	24.0	-36.0	24.0	-2336.4	*	2300.	180.	AG	32.	100.0	0.0	48.0	3.33	116.9
6.	S Leg Dep - FreeFlow	*	-24.0	0.0	-24.0	-1200.0	*	1200.	180.	AG	1193.	1.0	0.0	67.7		
7.	E Leg App - FreeFlow	*	0.0	24.0	1200.0	24.0	*	1200.	90.	AG	952.	1.7	0.0	67.7		
8.	E Leg App - Queue	*	48.0	24.0	131.3	24.0	*	83.	90.	AG	26.	100.0	0.0	48.0	0.61	4.2
9.	E Leg Dep - FreeFlow	*	0.0	-18.0	1200.0	-18.0	*	1200.	90.	AG	156.	0.6	0.0	55.7		
10.	W Leg App - FreeFlow	*	0.0	-18.0	-1200.0	-18.0	*	1200.	270.	AG	156.	1.5	0.0	55.7		
11.	W Leg App - Queue	*	-48.0	-18.0	-103.8	-18.0	*	56.	270.	AG	25.	100.0	0.0	36.0	0.98	2.8
12.	W Leg Dep - FreeFlow	*	0.0	24.0	-1200.0	24.0	*	1200.	270.	AG	675.	1.0	0.0	67.7		

JOB: Orange Line Station RUN: Exit 41SB Ramp 2037 Build AM

DATE : 11/16/16
TIME : 16:58:55

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. N Leg App - Queue	90	75	2.0	1042	1600	3.35	1	3
5. S Leg App - Queue	90	81	2.0	1173	1600	3.35	1	3
8. E Leg App - Queue	90	64	2.0	952	1600	3.35	1	3
11. W Leg App - Queue	90	83	2.0	156	1600	3.35	1	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. N Leg, E Side-Corner	58.0	58.0	5.9
2. N Leg, E Side - 25 m	58.0	130.0	5.9
3. N Leg, E Side - 50 m	58.0	212.0	5.9
4. N Leg, E Side-Midblk	58.0	648.0	5.9
5. N Leg, W Side-Corner	-58.0	58.0	5.9
6. N Leg, W Side - 25 m	-58.0	130.0	5.9
7. N Leg, W Side - 50 m	-58.0	212.0	5.9
8. N Leg, W Side-Midblk	-58.0	648.0	5.9
9. S Leg, E Side-Corner	58.0	-46.0	5.9
10. S Leg, E Side - 25 m	58.0	-118.0	5.9
11. S Leg, E Side - 50 m	58.0	-200.0	5.9
12. S Leg, E Side-Midblk	58.0	-636.0	5.9
13. S Leg, W Side-Corner	-58.0	-46.0	5.9
14. S Leg, W Side - 25 m	-58.0	-118.0	5.9
15. S Leg, W Side - 50 m	-58.0	-200.0	5.9
16. S Leg, W Side-Midblk	-58.0	-636.0	5.9
17. E Leg, N Side - 25 m	130.0	58.0	5.9
18. E Leg, N Side - 50 m	212.0	58.0	5.9
19. E Leg, N Side-Midblk	648.0	58.0	5.9
20. W Leg, N Side - 25 m	-130.0	58.0	5.9
21. W Leg, N Side - 50 m	-212.0	58.0	5.9
22. W Leg, N Side-Midblk	-648.0	58.0	5.9
23. E Leg, S Side - 25 m	130.0	-46.0	5.9
24. E Leg, S Side - 50 m	212.0	-46.0	5.9
25. E Leg, S Side-Midblk	648.0	-46.0	5.9
26. W Leg, S Side - 25 m	-130.0	-46.0	5.9
27. W Leg, S Side - 50 m	-212.0	-46.0	5.9
28. W Leg, S Side-Midblk	-648.0	-46.0	5.9

JOB: Orange Line Station RUN: Exit 41SB Ramp 2037 Build AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10.	* 0.0000	0.0000	0.0000	0.0000	0.3000	0.3000	0.3000	0.2000	0.0000	0.0000	0.0000	0.0000	0.2000	0.1000	0.2000
20.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.1000
30.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000
40.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000
50.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000
60.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	
70.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
80.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
90.	* 0.1000	0.0000	0.0000	0.0000	0.2000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000
100.	* 0.1000	0.0000	0.0000	0.0000	0.2000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
110.	* 0.2000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
120.	* 0.2000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
130.	* 0.2000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
140.	* 0.2000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
150.	* 0.1000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	
160.	* 0.1000	0.0000	0.0000	0.0000	0.1000	0.2000	0.1000	0.1000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	
170.	* 0.1000	0.0000	0.0000	0.0000	0.2000	0.1000	0.2000	0.3000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	
180.	* 0.4000	0.2000	0.1000	0.0000	0.1000	0.1000	0.1000	0.1000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	
190.	* 0.2000	0.2000	0.1000	0.2000	0.0000	0.0000	0.0000	0.0000	0.3000	0.3000	0.3000	0.3000	0.0000	0.0000	0.0000
200.	* 0.2000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.3000	0.3000	0.3000	0.3000	0.0000	0.0000	0.0000
210.	* 0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
220.	* 0.0000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
230.	* 0.0000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
240.	* 0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
250.	* 0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
260.	* 0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
270.	* 0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000						

```
0.2000  0.2000  0.2000  0.0000  0.0000  0.0000
 280.  *  0.0000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000
0.1000  0.1000  0.1000  0.0000  0.0000  0.0000
 290.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.1000  0.1000  0.1000  0.0000  0.0000  0.0000
 300.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.1000  0.1000  0.1000  0.1000  0.0000  0.0000
 310.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.2000  0.2000  0.2000  0.1000  0.0000  0.0000
 320.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.2000  0.2000  0.2000  0.1000  0.0000  0.0000
 330.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000
0.2000  0.2000  0.2000  0.1000  0.0000  0.0000
 340.  *  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000
0.3000  0.2000  0.3000  0.1000  0.0000  0.0000
 350.  *  0.2000  0.2000  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000
0.2000  0.3000  0.3000  0.1000  0.0000  0.0000
 360.  *  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000  0.1000  0.1000  0.0000
0.0000  0.0000  0.2000  0.2000  0.1000  0.1000

------*-------------------------------------------------------------------------
-----------------------------------------
 MAX   *  0.4000  0.2000  0.2000  0.2000  0.3000  0.3000  0.3000  0.3000  0.3000
0.3000  0.3000  0.3000  0.2000  0.2000  0.2000
 DEGR. *    180     180     350     190      10      10      10     170     190
190     190     190      10     150      10
```


JOB: Orange Line Station RUN: Exit 41SB Ramp 2037 Build AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

```
WIND  * CONCENTRATION
ANGLE *     (PPM)
(DEGR)*      16      17      18      19      20      21      22      23      24
25      26      27      28

------*-------------------------------------------------------------------------
--------------------------
  10.  *  0.2000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
  20.  *  0.2000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
  30.  *  0.2000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
  40.  *  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
  50.  *  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
  60.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
  70.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
0.0000  0.1000  0.0000  0.0000
```

```
  80.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
0.0000  0.0000  0.0000  0.0000
  90.  *  0.1000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 100.  *  0.1000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 110.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 120.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 130.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 140.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 150.  *  0.2000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
 160.  *  0.2000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
 170.  *  0.2000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
 180.  *  0.2000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 190.  *  0.0000  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
0.0000  0.0000  0.0000  0.0000
 200.  *  0.0000  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
0.0000  0.0000  0.0000  0.0000
 210.  *  0.0000  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 220.  *  0.0000  0.2000  0.1000  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 230.  *  0.0000  0.2000  0.1000  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 240.  *  0.0000  0.2000  0.1000  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 250.  *  0.0000  0.2000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 260.  *  0.0000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 270.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 280.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 290.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.1000  0.0000  0.0000  0.0000
 300.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 310.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 320.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 330.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 340.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 350.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 360.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000

------*-------------------------------------------------------------------------
--------------------------
 MAX   *  0.2000  0.2000  0.1000  0.1000  0.1000  0.0000  0.0000  0.1000  0.1000
0.1000  0.1000  0.0000  0.0000
```

DEGR. * 10 190 90 90 10 10 10 70 70
290 10 10 10

THE HIGHEST CONCENTRATION OF 0.4000 PPM OCCURRED AT RECEPTOR 1.

```
Q,EPA,,F,,0,T,T,F,T,0.7,
4,4,3,4,2200,2200,2200,2200,2200,2200,2200,2200,1036.75,1036.75,1
036.66666666667,1036.75,1036.75,1036.75,1036.66666666667,1036.75,
12,12,12,12,10,10,10,10,0,0,-1200,1200,0,0,1200,-1200,-
1200,1200,0,0,1200,-1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
120,120,120,120,62,62,62,62,2,2,2,2,1600,1600,1600,1600,1,1,1,1,3
,3,3,3
'Orange Line Station',60,175,0.0,0.0,28,0.3048,1,0
'N Leg, E Side-Corner',58.0,58.0,5.9
'N Leg, E Side - 25 m',58.0,130.0,5.9
'N Leg, E Side - 50 m',58.0,212.0,5.9
'N Leg, E Side-Midblk',58.0,648.0,5.9
'N Leg, W Side-Corner',-58.0,58.0,5.9
'N Leg, W Side - 25 m',-58.0,130.0,5.9
'N Leg, W Side - 50 m',-58.0,212.0,5.9
'N Leg, W Side-Midblk',-58.0,648.0,5.9
'S Leg, E Side-Corner',58.0,-46.0,5.9
'S Leg, E Side - 25 m',58.0,-118.0,5.9
'S Leg, E Side - 50 m',58.0,-200.0,5.9
'S Leg, E Side-Midblk',58.0,-636.0,5.9
'S Leg, W Side-Corner',-58.0,-46.0,5.9
'S Leg, W Side - 25 m',-58.0,-118.0,5.9
'S Leg, W Side - 50 m',-58.0,-200.0,5.9
'S Leg, W Side-Midblk',-58.0,-636.0,5.9
'E Leg, N Side - 25 m',130.0,58.0,5.9
'E Leg, N Side - 50 m',212.0,58.0,5.9
'E Leg, N Side-Midblk',648.0,58.0,5.9
'W Leg, N Side - 25 m',-130.0,58.0,5.9
'W Leg, N Side - 50 m',-212.0,58.0,5.9
'W Leg, N Side-Midblk',-648.0,58.0,5.9
'E Leg, S Side - 25 m',130.0,-46.0,5.9
'E Leg, S Side - 50 m',212.0,-46.0,5.9
'E Leg, S Side-Midblk',648.0,-46.0,5.9
'W Leg, S Side - 25 m',-130.0,-46.0,5.9
'W Leg, S Side - 50 m',-212.0,-46.0,5.9
'W Leg, S Side-Midblk',-648.0,-46.0,5.9
'Exit 41SB Ramp 2037 Build PM',12,1,0,'CO'
1
'N Leg App - FreeFlow','AG',-24,0,-24,1200,1158,0.88,0.0,67.7
2
'N Leg App - Queue','AG',-24,48,-24,1200,0.0,48.0,4
90,75,2,1158,3.35,1600,1,3
1
'N Leg Dep - FreeFlow','AG',24,0,24,1200,1136,0.70,0.0,67.7
1
'S Leg App - FreeFlow','AG',24,0,24,-1200,1528,1.38,0.0,67.7
2
'S Leg App - Queue','AG',24,-36,24,-1200,0.0,48.0,4
90,81,2,1528,3.35,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-24,0,-24,-1200,1652,1.02,0.0,67.7
1
```

```
'E Leg App - FreeFlow','AG',0,24,1200,24,864,1.72,0.0,67.7
2
'E Leg App - Queue','AG',48,24,1200,24,0.0,48.0,4
90,64,2,864,3.35,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-18,1200,-18,44,0.65,0.0,55.7
1
'W Leg App - FreeFlow','AG',0,-18,-1200,-18,117,1.55,0.0,55.7
2
'W Leg App - Queue','AG',-48,-18,-1200,-18,0.0,36.0,3
90,83,2,117,3.35,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,24,-1200,24,835,1.02,0.0,67.7
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station RUN: Exit 41SB Ramp 2037 Build PM

DATE : 11/16/16
TIME : 17: 2:21

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
		*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1.	N Leg App - FreeFlow	*	-24.0	0.0	-24.0	1200.0	*	1200.	360.	AG	1158.	0.9	0.0	67.7		
2.	N Leg App - Queue	*	-24.0	48.0	-24.0	1192.8	*	1145.	360.	AG	30.	100.0	0.0	48.0	1.48	58.2
3.	N Leg Dep - FreeFlow	*	24.0	0.0	24.0	1200.0	*	1200.	360.	AG	1136.	0.7	0.0	67.7		
4.	S Leg App - FreeFlow	*	24.0	0.0	24.0	-1200.0	*	1200.	180.	AG	1528.	1.4	0.0	67.7		
5.	S Leg App - Queue	*	24.0	-36.0	24.0	-3298.2	*	3262.	180.	AG	32.	100.0	0.0	48.0	4.34	165.7
6.	S Leg Dep - FreeFlow	*	-24.0	0.0	-24.0	-1200.0	*	1200.	180.	AG	1652.	1.0	0.0	67.7		
7.	E Leg App - FreeFlow	*	0.0	24.0	1200.0	24.0	*	1200.	90.	AG	864.	1.7	0.0	67.7		
8.	E Leg App - Queue	*	48.0	24.0	123.6	24.0	*	76.	90.	AG	26.	100.0	0.0	48.0	0.55	3.8
9.	E Leg Dep - FreeFlow	*	0.0	-18.0	1200.0	-18.0	*	1200.	90.	AG	44.	0.6	0.0	55.7		
10.	W Leg App - FreeFlow	*	0.0	-18.0	-1200.0	-18.0	*	1200.	270.	AG	117.	1.5	0.0	55.7		
11.	W Leg App - Queue	*	-48.0	-18.0	-72.6	-18.0	*	25.	270.	AG	25.	100.0	0.0	36.0	0.74	1.2
12.	W Leg Dep - FreeFlow	*	0.0	24.0	-1200.0	24.0	*	1200.	270.	AG	835.	1.0	0.0	67.7		

JOB: Orange Line Station RUN: Exit 41SB Ramp 2037 Build PM

DATE : 11/16/16
TIME : 17: 2:21

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. N Leg App - Queue	90	75	2.0	1158	1600	3.35	1	3
5. S Leg App - Queue	90	81	2.0	1528	1600	3.35	1	3
8. E Leg App - Queue	90	64	2.0	864	1600	3.35	1	3
11. W Leg App - Queue	90	83	2.0	117	1600	3.35	1	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. N Leg, E Side-Corner	58.0	58.0	5.9
2. N Leg, E Side - 25 m	58.0	130.0	5.9
3. N Leg, E Side - 50 m	58.0	212.0	5.9
4. N Leg, E Side-Midblk	58.0	648.0	5.9
5. N Leg, W Side-Corner	-58.0	58.0	5.9
6. N Leg, W Side - 25 m	-58.0	130.0	5.9
7. N Leg, W Side - 50 m	-58.0	212.0	5.9
8. N Leg, W Side-Midblk	-58.0	648.0	5.9
9. S Leg, E Side-Corner	58.0	-46.0	5.9
10. S Leg, E Side - 25 m	58.0	-118.0	5.9
11. S Leg, E Side - 50 m	58.0	-200.0	5.9
12. S Leg, E Side-Midblk	58.0	-636.0	5.9
13. S Leg, W Side-Corner	-58.0	-46.0	5.9
14. S Leg, W Side - 25 m	-58.0	-118.0	5.9
15. S Leg, W Side - 50 m	-58.0	-200.0	5.9
16. S Leg, W Side-Midblk	-58.0	-636.0	5.9
17. E Leg, N Side - 25 m	130.0	58.0	5.9
18. E Leg, N Side - 50 m	212.0	58.0	5.9
19. E Leg, N Side-Midblk	648.0	58.0	5.9
20. W Leg, N Side - 25 m	-130.0	58.0	5.9
21. W Leg, N Side - 50 m	-212.0	58.0	5.9
22. W Leg, N Side-Midblk	-648.0	58.0	5.9
23. E Leg, S Side - 25 m	130.0	-46.0	5.9
24. E Leg, S Side - 50 m	212.0	-46.0	5.9
25. E Leg, S Side-Midblk	648.0	-46.0	5.9
26. W Leg, S Side - 25 m	-130.0	-46.0	5.9
27. W Leg, S Side - 50 m	-212.0	-46.0	5.9
28. W Leg, S Side-Midblk	-648.0	-46.0	5.9

JOB: Orange Line Station RUN: Exit 41SB Ramp 2037 Build PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10.	* 0.0000	0.0000	0.0000	0.0000	0.3000	0.3000	0.3000	0.2000	0.0000	0.0000	0.0000	0.0000	0.3000	0.2000	0.2000
20.	* 0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
30.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000
40.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.2000
50.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.2000
60.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000
70.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
80.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
90.	* 0.1000	0.0000	0.0000	0.0000	0.2000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.2000	0.2000
100.	* 0.1000	0.0000	0.0000	0.0000	0.2000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
110.	* 0.2000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
120.	* 0.2000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000
130.	* 0.2000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000
140.	* 0.2000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000
150.	* 0.1000	0.0000	0.0000	0.0000	0.2000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.3000	0.3000	0.3000
160.	* 0.1000	0.0000	0.0000	0.0000	0.3000	0.2000	0.1000	0.2000	0.0000	0.0000	0.0000	0.0000	0.3000	0.3000	0.3000
170.	* 0.1000	0.0000	0.0000	0.0000	0.3000	0.3000	0.3000	0.3000	0.1000	0.1000	0.1000	0.0000	0.3000	0.3000	0.3000
180.	* 0.3000	0.2000	0.2000	0.0000	0.2000	0.2000	0.1000	0.1000	0.3000	0.3000	0.3000	0.2000	0.2000	0.2000	0.2000
190.	* 0.2000	0.2000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.3000	0.3000	0.3000	0.3000	0.0000	0.0000	0.0000
200.	* 0.2000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.3000	0.3000	0.3000	0.3000	0.0000	0.0000	0.0000
210.	* 0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
220.	* 0.0000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
230.	* 0.0000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
240.	* 0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
250.	* 0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
260.	* 0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.2000	0.2000	0.2000	0.2000	0.0000	0.0000	0.0000
270.	* 0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.2000						

```
0.2000  0.2000  0.2000  0.0000  0.0000  0.0000
 280.  *  0.0000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.2000
0.2000  0.2000  0.2000  0.0000  0.0000  0.0000
 290.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000
0.2000  0.2000  0.2000  0.0000  0.0000  0.0000
 300.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000
0.2000  0.2000  0.2000  0.0000  0.0000  0.0000
 310.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000
0.2000  0.2000  0.2000  0.0000  0.0000  0.0000
 320.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000
0.2000  0.2000  0.2000  0.0000  0.0000  0.0000
 330.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000
0.2000  0.2000  0.2000  0.0000  0.0000  0.0000
 340.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000
0.3000  0.2000  0.3000  0.1000  0.0000  0.0000
 350.  *  0.2000  0.2000  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000
0.2000  0.3000  0.3000  0.1000  0.0000  0.0000
 360.  *  0.0000  0.0000  0.0000  0.0000  0.2000  0.2000  0.2000  0.1000  0.0000
0.0000  0.1000  0.2000  0.2000  0.1000  0.1000

------*-------------------------------------------------------------------------
-----------------------------------------
 MAX   *  0.3000  0.2000  0.2000  0.1000  0.3000  0.3000  0.3000  0.3000  0.3000
0.3000  0.3000  0.3000  0.3000  0.3000  0.3000
 DEGR. *    180     180     180     190      10      10      10     170     180
180     180     190      10     150     150
```


JOB: Orange Line Station RUN: Exit 41SB Ramp 2037 Build PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

```
WIND  * CONCENTRATION
ANGLE *     (PPM)
(DEGR)*      16      17      18      19      20      21      22      23      24
25      26      27      28

------*-------------------------------------------------------------------------
--------------------------
  10.  *  0.2000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
  20.  *  0.3000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
  30.  *  0.3000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
  40.  *  0.2000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
  50.  *  0.2000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
  60.  *  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
  70.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
```

```
  80.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
  90.  *  0.2000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 100.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.1000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 110.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 120.  *  0.2000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 130.  *  0.2000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 140.  *  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 150.  *  0.3000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
 160.  *  0.3000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
 170.  *  0.2000  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.0000
 180.  *  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 190.  *  0.0000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
0.0000  0.0000  0.0000  0.0000
 200.  *  0.0000  0.2000  0.1000  0.0000  0.0000  0.0000  0.0000  0.2000  0.1000
0.0000  0.0000  0.0000  0.0000
 210.  *  0.0000  0.2000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 220.  *  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 230.  *  0.0000  0.2000  0.1000  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 240.  *  0.0000  0.2000  0.1000  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 250.  *  0.0000  0.2000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 260.  *  0.0000  0.0000  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 270.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 280.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 290.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 300.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 310.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 320.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 330.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 340.  *  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000
 350.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000
 360.  *  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000

------*-------------------------------------------------------------------------
--------------------------
 MAX   *  0.3000  0.2000  0.1000  0.1000  0.1000  0.1000  0.1000  0.2000  0.1000
0.0000  0.1000  0.0000  0.0000
```

```
 DEGR. *     20     200      90      90      10     260     100     200     190
10      10      10      10

 THE HIGHEST CONCENTRATION OF   0.3000 PPM OCCURRED AT RECEPTOR     5.
```

```
Q,EPA,,F,,0,T,T,F,T,0.7,
3,2,4,3,2200,2200,2200,2200,2200,2200,2200,2200,1036.8,1036.8,103
6.8,1036.8,1036.8,1036.8,1036.8,1036.8,12,12,12,12,10,10,10,10,0,
0,-1200,1200,0,0,1200,-1200,-1200,1200,0,0,1200,-
1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
120,120,120,120,62,62,62,62,2,2,2,2,1600,1600,1600,1600,1,1,1,1,3
,3,3,3
'Orange Line Station CAL3QHC Run',60,175,0.0,0.0,28,0.3048,1,0
'N Leg, E Side-Corner',46.0,46.0,5.9
'N Leg, E Side - 25 m',46.0,118.0,5.9
'N Leg, E Side - 50 m',46.0,200.0,5.9
'N Leg, E Side-Midblk',46.0,636.0,5.9
'N Leg, W Side-Corner',-34.0,46.0,5.9
'N Leg, W Side - 25 m',-34.0,118.0,5.9
'N Leg, W Side - 50 m',-34.0,200.0,5.9
'N Leg, W Side-Midblk',-34.0,636.0,5.9
'S Leg, E Side-Corner',46.0,-58.0,5.9
'S Leg, E Side - 25 m',46.0,-130.0,5.9
'S Leg, E Side - 50 m',46.0,-212.0,5.9
'S Leg, E Side-Midblk',46.0,-648.0,5.9
'S Leg, W Side-Corner',-34.0,-58.0,5.9
'S Leg, W Side - 25 m',-34.0,-130.0,5.9
'S Leg, W Side - 50 m',-34.0,-212.0,5.9
'S Leg, W Side-Midblk',-34.0,-648.0,5.9
'E Leg, N Side - 25 m',118.0,46.0,5.9
'E Leg, N Side - 50 m',200.0,46.0,5.9
'E Leg, N Side-Midblk',636.0,46.0,5.9
'W Leg, N Side - 25 m',-106.0,46.0,5.9
'W Leg, N Side - 50 m',-188.0,46.0,5.9
'W Leg, N Side-Midblk',-624.0,46.0,5.9
'E Leg, S Side - 25 m',118.0,-58.0,5.9
'E Leg, S Side - 50 m',200.0,-58.0,5.9
'E Leg, S Side-Midblk',636.0,-58.0,5.9
'W Leg, S Side - 25 m',-106.0,-58.0,5.9
'W Leg, S Side - 50 m',-188.0,-58.0,5.9
'W Leg, S Side-Midblk',-624.0,-58.0,5.9
'US RT1 and Lambert 2037 Build AM',12,1,0,'CO'
1
'N Leg App - FreeFlow','AG',-12,0,-12,1200,294,0.69,0.0,43.7
2
'N Leg App - Queue','AG',-12,36,-12,1200,0.0,24.0,2
150,130,2,294,3.35,1600,1,3
1
'N Leg Dep - FreeFlow','AG',18,0,18,1200,604,0.74,0.0,55.7
1
'S Leg App - FreeFlow','AG',18,0,18,-1200,517,1.38,0.0,55.7
2
'S Leg App - Queue','AG',18,-48,18,-1200,0.0,36.0,3
150,120,2,517,3.35,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-12,0,-12,-1200,167,1.46,0.0,43.7
1
```

```
'E Leg App - FreeFlow','AG',0,18,1200,18,403,1.1,0.0,55.7
2
'E Leg App - Queue','AG',36,18,1200,18,0.0,36.0,3
150,135,2,403,3.35,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-24,1200,-24,608,1.02,0.0,67.7
1
'W Leg App - FreeFlow','AG',0,-24,-1200,-24,557,0.88,0.0,67.7
2
'W Leg App - Queue','AG',-24,-24,-1200,-24,0.0,48.0,4
150,135,2,557,3.35,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,18,-1200,18,392,0.83,0.0,55.7
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2037 Build AM

DATE : 11/16/16
TIME : 17: 5:48

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1. N Leg App - FreeFlow	*	-12.0	0.0	-12.0	1200.0	*	1200.	360.	AG	294.	0.7	0.0	43.7		
2. N Leg App - Queue	*	-12.0	36.0	-12.0	163.2	*	127.	360.	AG	16.	100.0	0.0	24.0	0.86	6.5
3. N Leg Dep - FreeFlow	*	18.0	0.0	18.0	1200.0	*	1200.	360.	AG	604.	0.7	0.0	55.7		
4. S Leg App - FreeFlow	*	18.0	0.0	18.0	-1200.0	*	1200.	180.	AG	517.	1.4	0.0	55.7		
5. S Leg App - Queue	*	18.0	-48.0	18.0	-160.9	*	113.	180.	AG	22.	100.0	0.0	36.0	0.62	5.7
6. S Leg Dep - FreeFlow	*	-12.0	0.0	-12.0	-1200.0	*	1200.	180.	AG	167.	1.5	0.0	43.7		
7. E Leg App - FreeFlow	*	0.0	18.0	1200.0	18.0	*	1200.	90.	AG	403.	1.1	0.0	55.7		
8. E Leg App - Queue	*	36.0	18.0	362.6	18.0	*	327.	90.	AG	24.	100.0	0.0	36.0	1.15	16.6
9. E Leg Dep - FreeFlow	*	0.0	-24.0	1200.0	-24.0	*	1200.	90.	AG	608.	1.0	0.0	67.7		
10. W Leg App - FreeFlow	*	0.0	-24.0	-1200.0	-24.0	*	1200.	270.	AG	557.	0.9	0.0	67.7		
11. W Leg App - Queue	*	-24.0	-24.0	-405.7	-24.0	*	382.	270.	AG	32.	100.0	0.0	48.0	1.19	19.4
12. W Leg Dep - FreeFlow	*	0.0	18.0	-1200.0	18.0	*	1200.	270.	AG	392.	0.8	0.0	55.7		

JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2037 Build AM

DATE : 11/16/16
TIME : 17: 5:48

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. N Leg App - Queue	*	150	130	2.0	294	1600	3.35	1	3
5. S Leg App - Queue	*	150	120	2.0	517	1600	3.35	1	3
8. E Leg App - Queue	*	150	135	2.0	403	1600	3.35	1	3
11. W Leg App - Queue	*	150	135	2.0	557	1600	3.35	1	3

RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (FT) X	Y	Z	*
1. N Leg, E Side-Corner	*	46.0	46.0	5.9	*
2. N Leg, E Side - 25 m	*	46.0	118.0	5.9	*
3. N Leg, E Side - 50 m	*	46.0	200.0	5.9	*
4. N Leg, E Side-Midblk	*	46.0	636.0	5.9	*
5. N Leg, W Side-Corner	*	-34.0	46.0	5.9	*
6. N Leg, W Side - 25 m	*	-34.0	118.0	5.9	*
7. N Leg, W Side - 50 m	*	-34.0	200.0	5.9	*
8. N Leg, W Side-Midblk	*	-34.0	636.0	5.9	*
9. S Leg, E Side-Corner	*	46.0	-58.0	5.9	*
10. S Leg, E Side - 25 m	*	46.0	-130.0	5.9	*
11. S Leg, E Side - 50 m	*	46.0	-212.0	5.9	*
12. S Leg, E Side-Midblk	*	46.0	-648.0	5.9	*
13. S Leg, W Side-Corner	*	-34.0	-58.0	5.9	*
14. S Leg, W Side - 25 m	*	-34.0	-130.0	5.9	*
15. S Leg, W Side - 50 m	*	-34.0	-212.0	5.9	*
16. S Leg, W Side-Midblk	*	-34.0	-648.0	5.9	*
17. E Leg, N Side - 25 m	*	118.0	46.0	5.9	*
18. E Leg, N Side - 50 m	*	200.0	46.0	5.9	*
19. E Leg, N Side-Midblk	*	636.0	46.0	5.9	*
20. W Leg, N Side - 25 m	*	-106.0	46.0	5.9	*
21. W Leg, N Side - 50 m	*	-188.0	46.0	5.9	*
22. W Leg, N Side-Midblk	*	-624.0	46.0	5.9	*
23. E Leg, S Side - 25 m	*	118.0	-58.0	5.9	*
24. E Leg, S Side - 50 m	*	200.0	-58.0	5.9	*
25. E Leg, S Side-Midblk	*	636.0	-58.0	5.9	*
26. W Leg, S Side - 25 m	*	-106.0	-58.0	5.9	*
27. W Leg, S Side - 50 m	*	-188.0	-58.0	5.9	*
28. W Leg, S Side-Midblk	*	-624.0	-58.0	5.9	*

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10.	* 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000
20.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
30.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
40.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
50.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.1000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
60.	* 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
70.	* 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000
80.	* 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
90.	* 0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
100.	* 0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
110.	* 0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
120.	* 0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
130.	* 0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
140.	* 0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
150.	* 0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
160.	* 0.1000	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
170.	* 0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
180.	* 0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
190.	* 0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
200.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
210.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
220.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
230.	* 0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000
240.	* 0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000
250.	* 0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000
260.	* 0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000
270.	* 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2000						

```
0.1000  0.0000  0.0000  0.1000  0.0000  0.0000
 280.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000
0.1000  0.0000  0.0000  0.1000  0.0000  0.0000
 290.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000
0.2000  0.0000  0.0000  0.2000  0.0000  0.0000
 300.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.2000  0.0000  0.0000  0.1000  0.1000  0.0000
 310.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.2000  0.0000  0.0000  0.1000  0.1000  0.0000
 320.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.1000  0.0000  0.0000  0.1000  0.1000  0.0000
 330.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.1000  0.0000  0.0000  0.1000  0.1000  0.0000
 340.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.1000  0.1000  0.0000  0.1000  0.0000  0.0000
 350.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.0000  0.1000  0.0000  0.0000
 360.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.1000  0.0000  0.0000

------*-------------------------------------------------------------------------
-----------------------------------------
 MAX   *  0.1000  0.0000  0.0000  0.0000  0.1000  0.1000  0.0000  0.0000  0.2000
0.2000  0.1000  0.0000  0.2000  0.1000  0.0000
 DEGR. *     90      10      10      10      20      40      10      10     270
290     340      10     290     300      10
```


JOB: Orange Line Station CAL3QHC Run RUN: US RT1 and Lambert 2037 Build AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

```
WIND  * CONCENTRATION
ANGLE *     (PPM)
(DEGR)*      16      17      18      19      20      21      22      23      24
25      26      27      28

------*-------------------------------------------------------------------------
--------------------------
  10.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.1000  0.0000
  20.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.1000  0.0000
  30.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.1000  0.0000
  40.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.1000  0.0000
  50.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.1000  0.0000
  60.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.1000  0.0000
  70.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.1000  0.1000  0.0000
```

80.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000
90.	*	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
100.	*	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000
110.	*	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
120.	*	0.0000	0.1000	0.1000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
130.	*	0.0000	0.1000	0.1000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
140.	*	0.0000	0.1000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
150.	*	0.0000	0.1000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
160.	*	0.0000	0.1000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
170.	*	0.0000	0.1000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
180.	*	0.0000	0.1000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
190.	*	0.0000	0.1000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
200.	*	0.0000	0.1000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
210.	*	0.0000	0.1000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
220.	*	0.0000	0.1000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
230.	*	0.0000	0.1000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
240.	*	0.0000	0.1000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250.	*	0.0000	0.2000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
260.	*	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
270.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.1000	0.1000
280.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.1000	0.1000
290.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000
300.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000
310.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000
320.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000
330.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000
340.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000
350.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000
360.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.1000
MAX	*	0.0000	0.2000	0.1000	0.0000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.1000	0.1000

DEGR. * 10 250 100 10 140 120 100 270 10
10 10 10 10

THE HIGHEST CONCENTRATION OF 0.2000 PPM OCCURRED AT RECEPTOR 17.

```
Q,EPA,,F,,0,T,T,F,T,0.7,
3,2,4,3,2200,2200,2200,2200,2200,2200,2200,2200,1036.8,1036.8,103
6.8,1036.8,1036.8,1036.8,1036.8,1036.8,12,12,12,12,10,10,10,10,0,
0,-1200,1200,0,0,1200,-1200,-1200,1200,0,0,1200,-
1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
120,120,120,120,62,62,62,62,2,2,2,2,1600,1600,1600,1600,1,1,1,1,3
,3,3,3
'Orange Line Station CAL3QHC Run',60,175,0.0,0.0,28,0.3048,1,0
'N Leg, E Side-Corner',46.0,46.0,5.9
'N Leg, E Side - 25 m',46.0,118.0,5.9
'N Leg, E Side - 50 m',46.0,200.0,5.9
'N Leg, E Side-Midblk',46.0,636.0,5.9
'N Leg, W Side-Corner',-34.0,46.0,5.9
'N Leg, W Side - 25 m',-34.0,118.0,5.9
'N Leg, W Side - 50 m',-34.0,200.0,5.9
'N Leg, W Side-Midblk',-34.0,636.0,5.9
'S Leg, E Side-Corner',46.0,-58.0,5.9
'S Leg, E Side - 25 m',46.0,-130.0,5.9
'S Leg, E Side - 50 m',46.0,-212.0,5.9
'S Leg, E Side-Midblk',46.0,-648.0,5.9
'S Leg, W Side-Corner',-34.0,-58.0,5.9
'S Leg, W Side - 25 m',-34.0,-130.0,5.9
'S Leg, W Side - 50 m',-34.0,-212.0,5.9
'S Leg, W Side-Midblk',-34.0,-648.0,5.9
'E Leg, N Side - 25 m',118.0,46.0,5.9
'E Leg, N Side - 50 m',200.0,46.0,5.9
'E Leg, N Side-Midblk',636.0,46.0,5.9
'W Leg, N Side - 25 m',-106.0,46.0,5.9
'W Leg, N Side - 50 m',-188.0,46.0,5.9
'W Leg, N Side-Midblk',-624.0,46.0,5.9
'E Leg, S Side - 25 m',118.0,-58.0,5.9
'E Leg, S Side - 50 m',200.0,-58.0,5.9
'E Leg, S Side-Midblk',636.0,-58.0,5.9
'W Leg, S Side - 25 m',-106.0,-58.0,5.9
'W Leg, S Side - 50 m',-188.0,-58.0,5.9
'W Leg, S Side-Midblk',-624.0,-58.0,5.9
'US RT1 and Lambert 2037 Build PM',12,1,0,'CO'
1
'N Leg App - FreeFlow','AG',-12,0,-12,1200,188,0.69,0.0,43.7
2
'N Leg App - Queue','AG',-12,36,-12,1200,0.0,24.0,2
150,130,2,188,3.35,1600,1,3
1
'N Leg Dep - FreeFlow','AG',18,0,18,1200,617,0.74,0.0,55.7
1
'S Leg App - FreeFlow','AG',18,0,18,-1200,1113,1.38,0.0,55.7
2
'S Leg App - Queue','AG',18,-48,18,-1200,0.0,36.0,3
150,120,2,1113,3.35,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-12,0,-12,-1200,478,1.46,0.0,43.7
1
```

```
'E Leg App - FreeFlow','AG',0,18,1200,18,761,1.1,0.0,55.7
2
'E Leg App - Queue','AG',36,18,1200,18,0.0,36.0,3
150,135,2,761,3.35,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-24,1200,-24,1189,1.02,0.0,67.7
1
'W Leg App - FreeFlow','AG',0,-24,-1200,-24,1196,0.88,0.0,67.7
2
'W Leg App - Queue','AG',-24,-24,-1200,-24,0.0,48.0,4
150,135,2,1196,3.35,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,18,-1200,18,974,0.83,0.0,55.7
1.0,0,5,1000,0.0,'Y',10,1,36
```

CAL3QHC Results (ppm CO)

1-hr Avg, Rec, Conc, Dir
, 1,0.30000,180
, 2,0.20000,180
, 3,0.00000,0
, 4,0.00000,0
, 5,0.20000,160
, 6,0.20000,170
, 7,0.00000,0
, 8,0.00000,0
, 9,0.20000,60
, 10,0.30000,310
, 11,0.20000,180
, 12,0.20000,180
, 13,0.30000,170
, 14,0.30000,170
, 15,0.30000,170
, 16,0.30000,10
, 17,0.20000,100
, 18,0.20000,100
, 19,0.20000,100
, 20,0.20000,260
, 21,0.20000,260
, 22,0.20000,100
, 23,0.20000,60
, 24,0.20000,60
, 25,0.20000,60
, 26,0.30000,280
, 27,0.30000,280
, 28,0.30000,70

Maximum 1-hr Average CO Conc = 0.3 ppm at Receptor 1

8-hr Avg, Rec, Conc, Dir
, 1,0.21,180
, 2,0.14,180
, 3,0,0
, 4,0,0
, 5,0.14,160
, 6,0.14,170
, 7,0,0
, 8,0,0
, 9,0.14,60
, 10,0.21,310
, 11,0.14,180
, 12,0.14,180
, 13,0.21,170
, 14,0.21,170
, 15,0.21,170
, 16,0.21,10
, 17,0.14,100
, 18,0.14,100
, 19,0.14,100
, 20,0.14,260
, 21,0.14,260
, 22,0.14,100
, 23,0.14,60
, 24,0.14,60
, 25,0.14,60
, 26,0.21,280

```
,              27,0.21,280
,              28,0.21,70

Maximum 8-hr Average CO Conc =              0.21          ppm at Receptor
1
```

```
Q,EPA,,F,,0,T,T,T,T,0.7,
1,1,1,1,2200,2200,2200,2200,2200,2200,2200,2200,1037,1037,1037,10
37,1037,1037,1037,1037,12,12,12,12,10,10,10,10,0,0,-
1200,1200,0,0,1200,-1200,-1200,1200,0,0,1200,-
1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
0,120,120,120,0,62,62,62,0,2,2,2,0,1600,1600,1600,0,1,1,1,0,3,3,3
'Orange Line Station',60,175,0.0,0.0,23,0.3048,1,0
'N Leg, E Side-Corner',22.0,22.0,5.9
'N Leg, E Side - 0 m',0.0,22.0,5.9
'N Leg, W Side-Corner',-22.0,22.0,5.9
'S Leg, E Side-Corner',22.0,-22.0,5.9
'S Leg, E Side - 25 m',22.0,-94.0,5.9
'S Leg, E Side - 50 m',22.0,-176.0,5.9
'S Leg, E Side-Midblk',22.0,-612.0,5.9
'S Leg, W Side-Corner',-22.0,-22.0,5.9
'S Leg, W Side - 25 m',-22.0,-94.0,5.9
'S Leg, W Side - 50 m',-22.0,-176.0,5.9
'S Leg, W Side-Midblk',-22.0,-612.0,5.9
'E Leg, N Side - 25 m',94.0,22.0,5.9
'E Leg, N Side - 50 m',176.0,22.0,5.9
'E Leg, N Side-Midblk',612.0,22.0,5.9
'W Leg, N Side - 25 m',-94.0,22.0,5.9
'W Leg, N Side - 50 m',-176.0,22.0,5.9
'W Leg, N Side-Midblk',-612.0,22.0,5.9
'E Leg, S Side - 25 m',94.0,-22.0,5.9
'E Leg, S Side - 50 m',176.0,-22.0,5.9
'E Leg, S Side-Midblk',612.0,-22.0,5.9
'W Leg, S Side - 25 m',-94.0,-22.0,5.9
'W Leg, S Side - 50 m',-176.0,-22.0,5.9
'W Leg, S Side-Midblk',-612.0,-22.0,5.9
'Woodmont-Jones 2037 Build AM',9,1,0,'CO'
1
'S Leg App - FreeFlow','AG',6,6,6,-1200,362,0.86,0.0,31.7
2
'S Leg App - Queue','AG',6,-12,6,-1200,0.0,12.0,1
81,58,2,362,3.35,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-6,6,-6,-1200,466,1.29,0.0,31.7
1
'E Leg App - FreeFlow','AG',0,6,1200,6,336,1.03,0.0,31.7
2
'E Leg App - Queue','AG',12,6,1200,6,0.0,12.0,1
81,76,2,336,3.35,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-6,1200,-6,429,1.85,0.0,31.7
1
'W Leg App - FreeFlow','AG',0,-6,-1200,-6,376,0.55,0.0,31.7
2
'W Leg App - Queue','AG',-12,-6,-1200,-6,0.0,12.0,1
81,41,2,376,3.35,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,6,-1200,6,179,2.69,0.0,31.7
```

```
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station RUN: Woodmont-Jones 2037 Build AM

DATE : 11/16/16
TIME : 16:29: 3

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)		(G/MI)	(FT)	(FT)		(VEH)	
1. S Leg App - FreeFlow	*	6.0	6.0	6.0	-1200.0	*	1206.	180.	AG	362.	0.9	0.0	31.7		
2. S Leg App - Queue	*	6.0	-12.0	6.0	-196.4	*	184.	180.	AG	6.	100.0	0.0	12.0	0.97	9.4
3. S Leg Dep - FreeFlow	*	-6.0	6.0	-6.0	-1200.0	*	1206.	180.	AG	466.	1.3	0.0	31.7		
4. E Leg App - FreeFlow	*	0.0	6.0	1200.0	6.0	*	1200.	90.	AG	336.	1.0	0.0	31.7		
5. E Leg App - Queue	*	12.0	6.0	3650.1	6.0	*	3638.	90.	AG	8.	100.0	0.0	12.0	****	184.8
6. E Leg Dep - FreeFlow	*	0.0	-6.0	1200.0	-6.0	*	1200.	90.	AG	429.	1.9	0.0	31.7		
7. W Leg App - FreeFlow	*	0.0	-6.0	-1200.0	-6.0	*	1200.	270.	AG	376.	0.6	0.0	31.7		
8. W Leg App - Queue	*	-12.0	-6.0	-96.3	-6.0	*	84.	270.	AG	5.	100.0	0.0	12.0	0.53	4.3
9. W Leg Dep - FreeFlow	*	0.0	6.0	-1200.0	6.0	*	1200.	270.	AG	179.	2.7	0.0	31.7		

JOB: Orange Line Station RUN: Woodmont-Jones 2037 Build AM

DATE : 11/16/16
TIME : 16:29: 3

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

```
------------------------*-------------------------------------------------------------
--------------------
       2. S Leg App - Queue   *      81       58       2.0       362       1600
 3.35      1        3
       5. E Leg App - Queue   *      81       76       2.0       336       1600
 3.35      1        3
       8. W Leg App - Queue   *      81       41       2.0       376       1600
 3.35      1        3

       RECEPTOR LOCATIONS
       ------------------
                              *           COORDINATES (FT)          *
         RECEPTOR             *      X          Y          Z         *
     -------------------------*-------------------------------------*
      1. N Leg, E Side-Corner *        22.0       22.0        5.9   *
      2. N Leg, E Side - 0 m  *         0.0       22.0        5.9   *
      3. N Leg, W Side-Corner *       -22.0       22.0        5.9   *
      4. S Leg, E Side-Corner *        22.0      -22.0        5.9   *
      5. S Leg, E Side - 25 m *        22.0      -94.0        5.9   *
      6. S Leg, E Side - 50 m *        22.0     -176.0        5.9   *
      7. S Leg, E Side-Midblk *        22.0     -612.0        5.9   *
      8. S Leg, W Side-Corner *       -22.0      -22.0        5.9   *
      9. S Leg, W Side - 25 m *       -22.0      -94.0        5.9   *
     10. S Leg, W Side - 50 m *       -22.0     -176.0        5.9   *
     11. S Leg, W Side-Midblk *       -22.0     -612.0        5.9   *
     12. E Leg, N Side - 25 m *        94.0       22.0        5.9   *
     13. E Leg, N Side - 50 m *       176.0       22.0        5.9   *
     14. E Leg, N Side-Midblk *       612.0       22.0        5.9   *
     15. W Leg, N Side - 25 m *       -94.0       22.0        5.9   *
     16. W Leg, N Side - 50 m *      -176.0       22.0        5.9   *
     17. W Leg, N Side-Midblk *      -612.0       22.0        5.9   *
     18. E Leg, S Side - 25 m *        94.0      -22.0        5.9   *
     19. E Leg, S Side - 50 m *       176.0      -22.0        5.9   *
     20. E Leg, S Side-Midblk *       612.0      -22.0        5.9   *
     21. W Leg, S Side - 25 m *       -94.0      -22.0        5.9   *
     22. W Leg, S Side - 50 m *      -176.0      -22.0        5.9   *
     23. W Leg, S Side-Midblk *      -612.0      -22.0        5.9   *

                            PAGE  3
      JOB: Orange Line Station                                RUN: Woodmont-Jones
2037 Build AM

       MODEL RESULTS
       -------------

       REMARKS : In search of the angle corresponding to
                 the maximum concentration, only the first
                 angle, of the angles with same maximum
                 concentrations, is indicated as maximum.

 WIND ANGLE RANGE:  10.-360.

 WIND  * CONCENTRATION
 ANGLE *     (PPM)
 (DEGR)*       1        2        3        4        5        6        7        8        9
 10       11       12       13       14       15

------*-------------------------------------------------------------------------------
-----------------------------------------
  10.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  20.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
```

```
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  30.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  40.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  50.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  60.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  70.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  80.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  90.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 100.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 110.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 120.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 130.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 140.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 150.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 160.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 170.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 180.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 190.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 200.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 210.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 220.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 230.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 240.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 250.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 260.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 270.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 280.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 290.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 300.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 310.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 320.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 330.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
```

340.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
350.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
360.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MAX	*	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
DEGR.	*	10	10	10	70	10	10	10	80	10	10	10	10	10	10

JOB: Orange Line Station RUN: Woodmont-Jones 2037 Build AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	*	CONCENTRATION (PPM) 16	17	18	19	20	21	22	23
10.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
30.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
40.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
50.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
60.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
70.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
80.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
90.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
100.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
110.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
120.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
130.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
140.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
150.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
160.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
170.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
180.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
190.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
200.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
210.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
220.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
230.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
240.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
260.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
270.	*	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000
280.	*	0.0000	0.0000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000
290.	*	0.0000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000
300.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

310.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
320.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
330.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
340.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
350.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
360.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MAX	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
DEGR.	*	10	10	70	70	70	10	10	10

THE HIGHEST CONCENTRATION OF 0.1000 PPM OCCURRED AT RECEPTOR 4.

```
Q,EPA,,F,,0,T,T,T,T,0.7,
1,1,1,1,2200,2200,2200,2200,2200,2200,2200,2200,1037,1037,1037,10
37,1037,1037,1037,1037,12,12,12,12,10,10,10,10,0,0,-
1200,1200,0,0,1200,-1200,-1200,1200,0,0,1200,-
1200,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
0,120,120,120,0,62,62,62,0,2,2,2,0,1600,1600,1600,0,1,1,1,0,3,3,3
'Orange Line Station',60,175,0.0,0.0,23,0.3048,1,0
'N Leg, E Side-Corner',22.0,22.0,5.9
'N Leg, E Side - 0 m',0.0,22.0,5.9
'N Leg, W Side-Corner',-22.0,22.0,5.9
'S Leg, E Side-Corner',22.0,-22.0,5.9
'S Leg, E Side - 25 m',22.0,-94.0,5.9
'S Leg, E Side - 50 m',22.0,-176.0,5.9
'S Leg, E Side-Midblk',22.0,-612.0,5.9
'S Leg, W Side-Corner',-22.0,-22.0,5.9
'S Leg, W Side - 25 m',-22.0,-94.0,5.9
'S Leg, W Side - 50 m',-22.0,-176.0,5.9
'S Leg, W Side-Midblk',-22.0,-612.0,5.9
'E Leg, N Side - 25 m',94.0,22.0,5.9
'E Leg, N Side - 50 m',176.0,22.0,5.9
'E Leg, N Side-Midblk',612.0,22.0,5.9
'W Leg, N Side - 25 m',-94.0,22.0,5.9
'W Leg, N Side - 50 m',-176.0,22.0,5.9
'W Leg, N Side-Midblk',-612.0,22.0,5.9
'E Leg, S Side - 25 m',94.0,-22.0,5.9
'E Leg, S Side - 50 m',176.0,-22.0,5.9
'E Leg, S Side-Midblk',612.0,-22.0,5.9
'W Leg, S Side - 25 m',-94.0,-22.0,5.9
'W Leg, S Side - 50 m',-176.0,-22.0,5.9
'W Leg, S Side-Midblk',-612.0,-22.0,5.9
'Woodmont-Jones 2037 Build PM',9,1,0,'CO'
1
'S Leg App - FreeFlow','AG',6,6,6,-1200,661,0.86,0.0,31.7
2
'S Leg App - Queue','AG',6,-12,6,-1200,0.0,12.0,1
81,58,2,661,3.35,1600,1,3
1
'S Leg Dep - FreeFlow','AG',-6,6,-6,-1200,233,1.29,0.0,31.7
1
'E Leg App - FreeFlow','AG',0,6,1200,6,320,1.03,0.0,31.7
2
'E Leg App - Queue','AG',12,6,1200,6,0.0,12.0,1
81,76,2,320,3.35,1600,1,3
1
'E Leg Dep - FreeFlow','AG',0,-6,1200,-6,701,1.85,0.0,31.7
1
'W Leg App - FreeFlow','AG',0,-6,-1200,-6,328,0.55,0.0,31.7
2
'W Leg App - Queue','AG',-12,-6,-1200,-6,0.0,12.0,1
81,41,2,328,3.35,1600,1,3
1
'W Leg Dep - FreeFlow','AG',0,6,-1200,6,375,2.69,0.0,31.7
```

```
1.0,0,5,1000,0.0,'Y',10,1,36
```

*** EPA CAL3QHC Model Run implemented using the FHWA Resource Center CAL3i graphical user interface

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 13045

JOB: Orange Line Station RUN: Woodmont-Jones 2037 Build PM

DATE : 11/16/16
TIME : 16:56: 2

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)		(G/MI)	(FT)	(FT)		(VEH)	
1. S Leg App - FreeFlow	*	6.0	6.0	6.0	-1200.0	*	1206.	180.	AG	661.	0.9	0.0	31.7		
2. S Leg App - Queue	*	6.0	-12.0	6.0	-3203.2	*	3191.	180.	AG	6.	100.0	0.0	12.0	1.76	162.1
3. S Leg Dep - FreeFlow	*	-6.0	6.0	-6.0	-1200.0	*	1206.	180.	AG	233.	1.3	0.0	31.7		
4. E Leg App - FreeFlow	*	0.0	6.0	1200.0	6.0	*	1200.	90.	AG	320.	1.0	0.0	31.7		
5. E Leg App - Queue	*	12.0	6.0	3467.9	6.0	*	3456.	90.	AG	8.	100.0	0.0	12.0	****	175.6
6. E Leg Dep - FreeFlow	*	0.0	-6.0	1200.0	-6.0	*	1200.	90.	AG	701.	1.9	0.0	31.7		
7. W Leg App - FreeFlow	*	0.0	-6.0	-1200.0	-6.0	*	1200.	270.	AG	328.	0.6	0.0	31.7		
8. W Leg App - Queue	*	-12.0	-6.0	-85.5	-6.0	*	74.	270.	AG	5.	100.0	0.0	12.0	0.46	3.7
9. W Leg Dep - FreeFlow	*	0.0	6.0	-1200.0	6.0	*	1200.	270.	AG	375.	2.7	0.0	31.7		

JOB: Orange Line Station RUN: Woodmont-Jones 2037 Build PM

DATE : 11/16/16
TIME : 16:56: 2

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

```
-----------------------*-------------------------------------------------------------
--------------------
       2. S Leg App - Queue   *      81       58       2.0       661       1600
 3.35      1        3
       5. E Leg App - Queue   *      81       76       2.0       320       1600
 3.35      1        3
       8. W Leg App - Queue   *      81       41       2.0       328       1600
 3.35      1        3

       RECEPTOR LOCATIONS
       ------------------
                              *           COORDINATES (FT)          *
         RECEPTOR             *      X          Y          Z         *
     -------------------------*-------------------------------------*
      1. N Leg, E Side-Corner *        22.0       22.0        5.9    *
      2. N Leg, E Side - 0 m  *         0.0       22.0        5.9    *
      3. N Leg, W Side-Corner *       -22.0       22.0        5.9    *
      4. S Leg, E Side-Corner *        22.0      -22.0        5.9    *
      5. S Leg, E Side - 25 m *        22.0      -94.0        5.9    *
      6. S Leg, E Side - 50 m *        22.0     -176.0        5.9    *
      7. S Leg, E Side-Midblk *        22.0     -612.0        5.9    *
      8. S Leg, W Side-Corner *       -22.0      -22.0        5.9    *
      9. S Leg, W Side - 25 m *       -22.0      -94.0        5.9    *
     10. S Leg, W Side - 50 m *       -22.0     -176.0        5.9    *
     11. S Leg, W Side-Midblk *       -22.0     -612.0        5.9    *
     12. E Leg, N Side - 25 m *        94.0       22.0        5.9    *
     13. E Leg, N Side - 50 m *       176.0       22.0        5.9    *
     14. E Leg, N Side-Midblk *       612.0       22.0        5.9    *
     15. W Leg, N Side - 25 m *       -94.0       22.0        5.9    *
     16. W Leg, N Side - 50 m *      -176.0       22.0        5.9    *
     17. W Leg, N Side-Midblk *      -612.0       22.0        5.9    *
     18. E Leg, S Side - 25 m *        94.0      -22.0        5.9    *
     19. E Leg, S Side - 50 m *       176.0      -22.0        5.9    *
     20. E Leg, S Side-Midblk *       612.0      -22.0        5.9    *
     21. W Leg, S Side - 25 m *       -94.0      -22.0        5.9    *
     22. W Leg, S Side - 50 m *      -176.0      -22.0        5.9    *
     23. W Leg, S Side-Midblk *      -612.0      -22.0        5.9    *

                            PAGE  3
      JOB: Orange Line Station                                RUN: Woodmont-Jones
2037 Build PM

       MODEL RESULTS
       -------------

       REMARKS : In search of the angle corresponding to
                 the maximum concentration, only the first
                 angle, of the angles with same maximum
                 concentrations, is indicated as maximum.

 WIND ANGLE RANGE:  10.-360.

 WIND  * CONCENTRATION
 ANGLE *     (PPM)
 (DEGR)*       1        2        3        4        5        6        7        8        9
 10       11       12       13       14       15

------*-------------------------------------------------------------------------------
-----------------------------------------
  10.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  20.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
```

```
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  30.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  40.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  50.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  60.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  70.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  80.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
  90.  *  0.1000  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.1000  0.0000  0.0000  0.0000
 100.  *  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.1000  0.1000  0.1000  0.0000
 110.  *  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.1000  0.1000  0.1000  0.1000
 120.  *  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.1000  0.1000  0.1000  0.1000
 130.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 140.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 150.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 160.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 170.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 180.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 190.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 200.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 210.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 220.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 230.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 240.  *  0.0000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.1000  0.1000  0.1000
 250.  *  0.0000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.1000  0.1000  0.1000
 260.  *  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.1000  0.1000
 270.  *  0.1000  0.1000  0.1000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.1000
 280.  *  0.0000  0.0000  0.0000  0.1000  0.0000  0.0000  0.0000  0.1000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 290.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 300.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 310.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 320.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
 330.  *  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
```

340.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
350.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
360.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

MAX	*	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.1000	0.0000	0.0000	0.0000	0.1000	0.1000	0.1000
DEGR.	*	90	90	90	40	10	10	10	70	10	10	10	90	100	100

110

JOB: Orange Line Station RUN: Woodmont-Jones 2037 Build PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 10.-360.

WIND ANGLE (DEGR)	*	CONCENTRATION (PPM) 16	17	18	19	20	21	22	23
10.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
30.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
40.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
50.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
60.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
70.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
80.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
90.	*	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000
100.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
110.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
120.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
130.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
140.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
150.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
160.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
170.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
180.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
190.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
200.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
210.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
220.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
230.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
240.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
260.	*	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
270.	*	0.1000	0.1000	0.0000	0.1000	0.1000	0.0000	0.0000	0.0000
280.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0000
290.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
300.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000

310.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
320.	*	0.0000	0.0000	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000
330.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
340.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
350.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
360.	*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MAX	*	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0000
DEGR.	*	100	90	40	40	40	90	280	10

THE HIGHEST CONCENTRATION OF 0.1000 PPM OCCURRED AT RECEPTOR 4.

Appendix D CAL3QHC Receptors

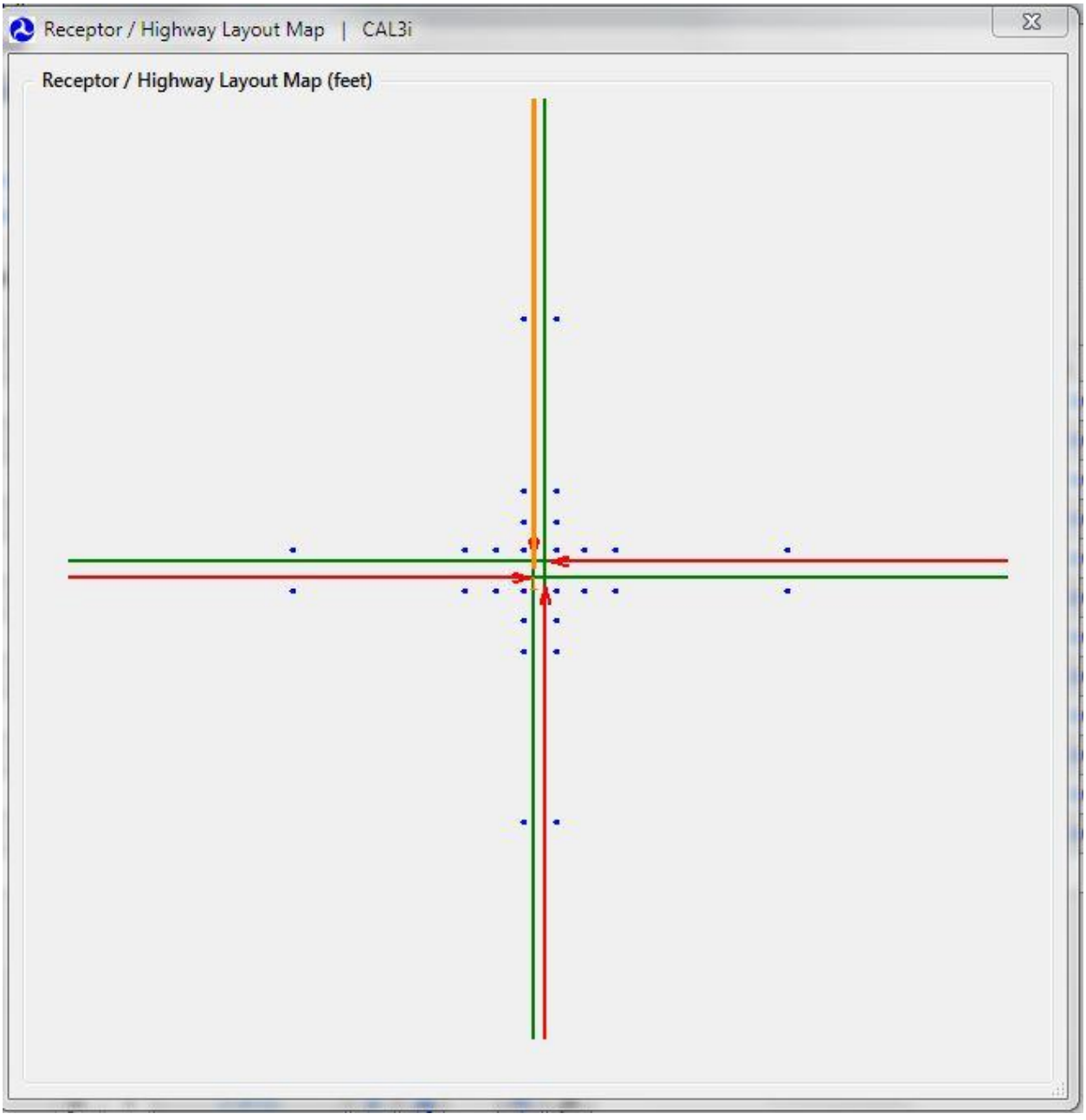

Figure D-1: CAL3i Generated CAL3QHC Receptor Locations for U.S. Route 1 at Lambert Road

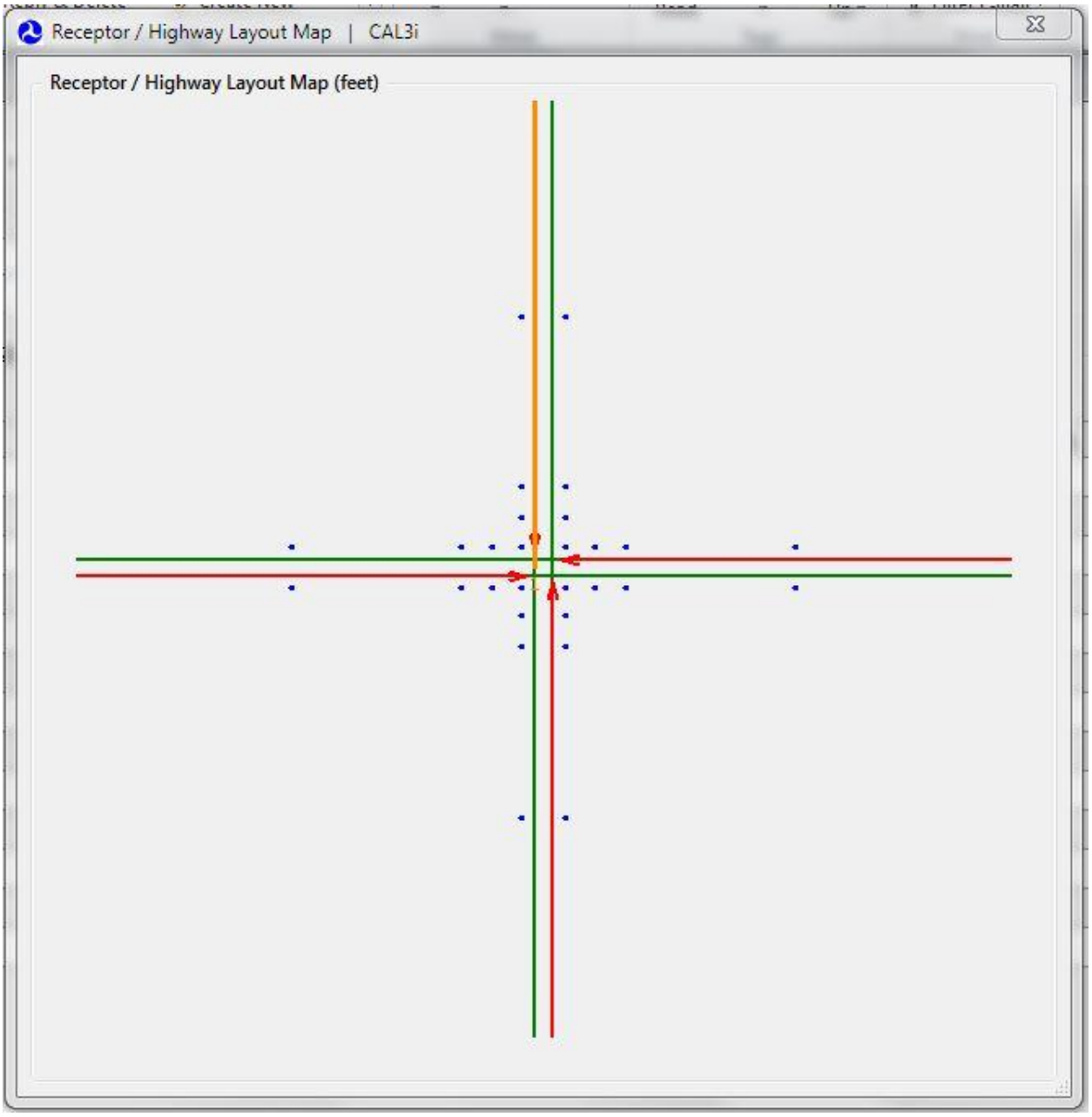

Figure D-2: CAL3i Generated CAL3QHC Receptor Locations for Marsh Hill Road at I-95 SB Ramps

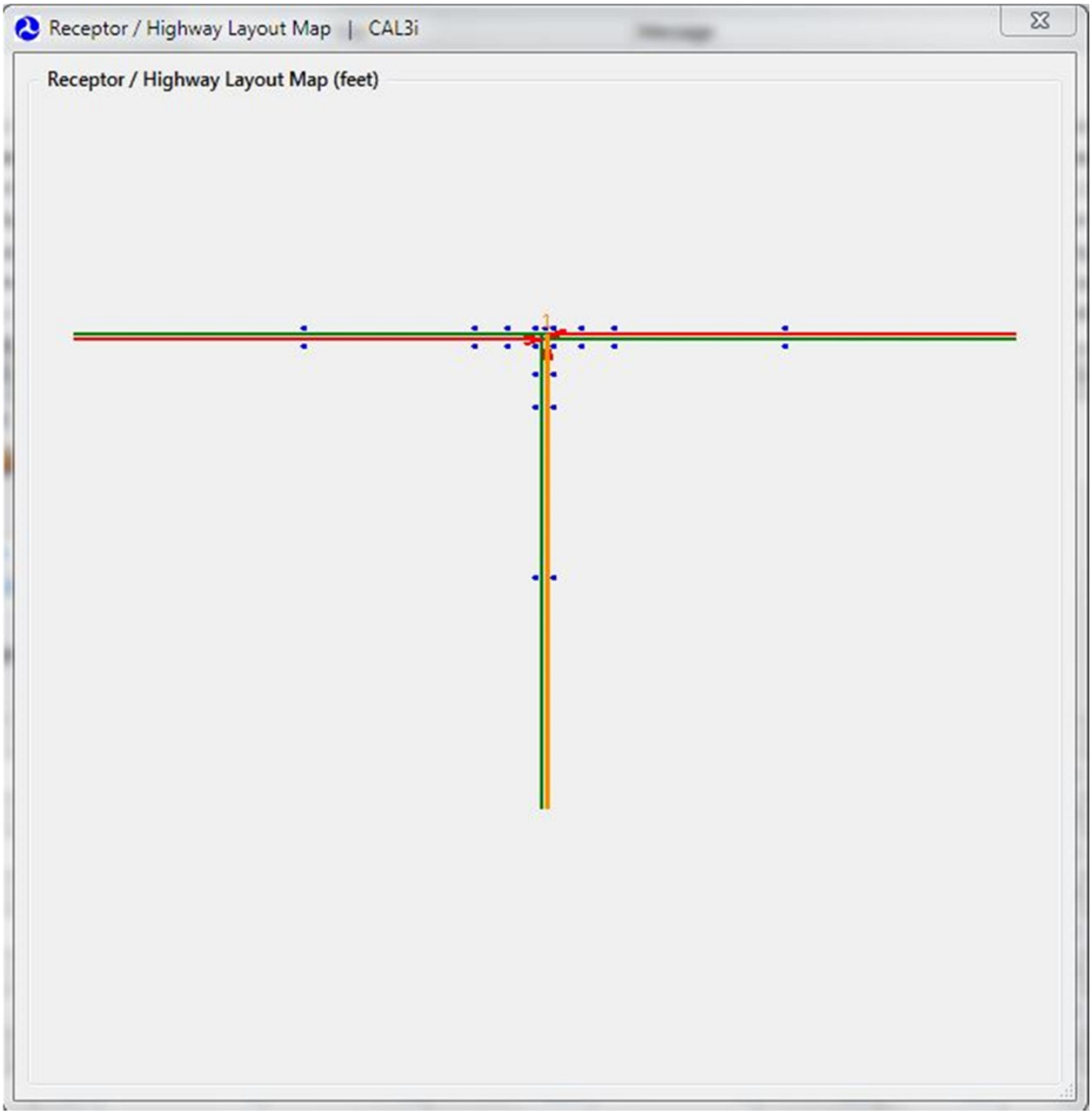

Figure D-3: CAL3i Generated CAL3QHC Receptor Locations for Route 162 at Woodmont Road

Appendix D

Noise Impact Analysis Documentation

Site #1:	LT#1
Address:	109 Perry Merrill Dr.
Town, State:	West Haven, CT.
Noise Sources:	Distant Traffic; wind in trees; trains; birds
Noise Monitor:	B&K 2250 #3

Site #2:	LT#2
Address:	30 Twin Circle Rd.
Town, State:	West Haven, CT.
Noise Sources:	Distant equipment/ traffic to NW; wind in trees; birds; aircraft
Noise Monitor:	B&K 2250 #4

Site #3:	LT#3
Address:	15 Salemme Ln.
Town, State:	Orange, CT.
Noise Sources:	Traffic on Marsh Hill Rd.; Traffic on I-95; Activity at 10 Salemme; insects; wind in trees
Noise Monitor:	B&K 2250 #5

Site #4:	LT#4
Address:	96 Wendy Rd.
Town, State:	Milford, CT.
Noise Sources:	Distant traffic; wind in trees; birds; industrial site to north; distant wind chimes.
Noise Monitor:	B&K 2250 #6

308350 Site LT1 (000)

308350 Site LT1 (001)

308350 Site LT1 (002)

308350 Site LT1 (003)

308350 Site LT1 (004)

308350 Site LT1 (005)

308350 Site LT1 (006)

308350 Site LT1 (007)

308350 Site LT2 (000)

308350 Site LT2 (001)

308350 Site LT2 (002)

308350 Site LT2 (003)

308350 Site LT2 (004)

308350 Site LT2 (005)

308350 Site LT2 (006)

308350 Site LT2 (007)

308350 Site LT3 (001)

308350 Site LT3 (002)

308350 Site LT3 (003)

308350 Site LT3 (004)

308350 Site LT3 (005)

308350 Site LT3 (006)

308350 Site LT3 (007)

308350 Site LT3 (008)

308350 Site LT4 (000)

308350 Site LT4 (001)

308350 Site LT4 (002)

308350 Site LT4 (003)

308350 Site LT4 (004)

308350 Site LT4 (005)

Site#1: LT1

Start Time	LASmax	LAeq	LAS10.0	LAS90.0
11/1/2016 12:00	68.15	47.76	46.45	41.86
11/1/2016 13:00	74.47	51.85	47.4	42.2
11/1/2016 14:00	67.92	48.97	49.56	42.55
11/1/2016 15:00	67.85	49.39	48.84	42.25
11/1/2016 16:00	68.54	49.83	48.43	41.82
11/1/2016 17:00	74.21	51.14	48.18	43.06
11/1/2016 18:00	69.21	51.06	48.94	45.84
11/1/2016 19:00	71.78	53.26	50.44	46.04
11/1/2016 20:00	66.08	51.29	51.57	46.03
11/1/2016 21:00	70.63	53.1	52.17	47.32
11/1/2016 22:00	65.41	51.05	51.35	48.16
11/1/2016 23:00	69.26	54.26	52.06	46.6
11/2/2016 0:00	68.24	48.98	48.94	44.87
11/2/2016 1:00	63.87	47.74	49.07	45.11
11/2/2016 2:00	67.58	48.01	48.77	44.7
11/2/2016 3:00	65.76	48.99	49.73	46.18
11/2/2016 4:00	64.89	49.19	50.2	46.09
11/2/2016 5:00	67.89	53.39	53.96	49.63
11/2/2016 6:00	61.89	53.83	54.73	52.26
11/2/2016 7:00	70.09	54.01	53.94	51.46
11/2/2016 8:00	68.57	52.77	52.56	50.19
11/2/2016 9:00	73.72	52.18	51.51	48.73
11/2/2016 10:00	64.48	51.72	52.96	49.21
11/2/2016 11:00	66.91	51.55	52.19	47.3

Site#2: LT2

Start Time	LASmax	LAeq	LAS10.0	LAS90.0
11/1/2016 14:00	84.25	71.95	77.1	50.3
11/1/2016 15:00	76.7	61.65	65.62	42.61
11/1/2016 16:00	68	50.63	50.5	43.13
11/1/2016 17:00	70.14	50.39	50.73	45.54
11/1/2016 18:00	66.4	50.48	50.32	47.45
11/1/2016 19:00	73.14	52.78	51.29	48.08
11/1/2016 20:00	63.8	51.56	52.28	47.84
11/1/2016 21:00	68.53	53.39	53.27	49.71
11/1/2016 22:00	65.99	52.66	53.54	50.46
11/1/2016 23:00	67.69	54.74	54.65	50.91
11/2/2016 0:00	66.85	51.64	52.83	49.63
11/2/2016 1:00	61.7	50.69	51.98	48.91
11/2/2016 0:00	66.28	51.25	52.35	49.2
11/2/2016 3:00	63.1	51.26	52.27	49.67
11/2/2016 4:00	64.97	51.39	52.48	49.13
11/2/2016 5:00	67.27	54.44	55.42	51.93
11/2/2016 6:00	63.22	54.52	55.29	53.26
11/2/2016 7:00	69.76	55.31	56.35	52.56
11/2/2016 8:00	66.11	54.62	57.16	51.82
11/2/2016 9:00	71.47	52.98	54.41	50.11
11/2/2016 10:00	62.88	53.03	54.41	50.98
11/2/2016 11:00	65.72	51.52	52.78	48.44
11/2/2016 12:00	67.65	52.94	54.22	50.1
11/2/2016 13:00	70.94	52.08	52.6	47.8

Site#3: LT3

Start Time	LASmax	LAeq	LAS10.0	LAS90.0
11/1/2016 15:00	65.02	54.1	55.39	52.21
11/1/2016 16:00	66.39	54.83	56.22	52.85
11/1/2016 17:00	74.11	55.57	56.81	53.09
11/1/2016 18:00	72.73	56.31	57.31	54.85
11/1/2016 19:00	78.21	57.83	57.22	54.34
11/1/2016 20:00	64.78	55.66	56.86	53.81
11/1/2016 21:00	61.91	55.96	57.15	54.49
11/1/2016 22:00	72.06	57.25	58.44	55.37
11/1/2016 23:00	62.76	56.29	57.98	54.05
11/2/2016 0:00	60.11	53.51	55.26	51.24
11/2/2016 1:00	59.11	52.76	54.62	50.04
11/2/2016 2:00	58.65	51.9	53.62	49.47
11/2/2016 3:00	59.42	53.5	54.97	51.45
11/2/2016 4:00	59.05	54.58	56.12	52.23
11/2/2016 5:00	62.19	57.55	59.11	55.5
11/2/2016 6:00	67.43	58.76	59.97	57.29
11/2/2016 7:00	66.53	58.4	59.41	57.19
11/2/2016 8:00	68.36	57.59	58.67	56.17
11/2/2016 9:00	63.19	57.02	58.36	55.46
11/2/2016 10:00	67.08	57.47	58.8	55.77
11/2/2016 11:00	62.77	55.64	56.9	54.18
11/2/2016 12:00	72.96	57.04	57.84	54.85
11/2/2016 13:00	68.28	55.65	56.66	53.59
11/2/2016 14:00	67.69	56.18	57.23	54.47

Site#4: LT4

Start Time	LASmax	LAeq	LAS10.0	LAS90.0
11/1/2016 16:00	66.29	48.37	49.92	42.84
11/1/2016 17:00	64.72	46.6	48.35	42.49
11/1/2016 18:00	60.17	46.26	47.45	44.82
11/1/2016 19:00	72.1	51.12	47.46	44.19
11/1/2016 20:00	52.98	45.17	46.51	43.71
11/1/2016 21:00	56.6	46.19	48.03	44.02
11/1/2016 22:00	55.82	46.56	47.87	44.9
11/1/2016 23:00	53.2	45.67	47.17	44.01
11/2/2016 0:00	53.29	44.95	46.67	42.72
11/2/2016 1:00	54.88	45.12	46.28	43.4
11/2/2016 2:00	55.42	44.17	45.03	42.62
11/2/2016 3:00	56.45	44.97	46.18	43.37
11/2/2016 4:00	51.34	45.56	46.81	43.86
11/2/2016 5:00	56.74	48.71	50.45	45.71
11/2/2016 6:00	55.38	51.08	52.29	49.64
11/2/2016 7:00	59.83	51.75	52.97	50.42
11/2/2016 8:00	59.27	50.03	51.5	48.07
11/2/2016 9:00	56.04	47.5	48.54	46.16
11/2/2016 10:00	57.77	48.17	49.74	46.43
11/2/2016 11:00	63.09	47.71	49.37	44.99
11/2/2016 12:00	72.43	50.38	51.36	45.56
11/2/2016 13:00	61.4	48.36	50.17	45.14
11/2/2016 14:00	58.63	47.46	49.13	45.69
11/2/2016 15:00	80.37	65.05	70.02	45.69

Brüel & Kjær
North America Inc.

The Brüel & Kjær Calibration Laboratory
2815 Colonnades Court
Norcross, GA 30071-1588
Telephone: 770/209-6907
Fax: 770/447-4033
Web site address: http://www.bkhome.com

ACCREDITED Calibration Certificate Number 1568.01

CERTIFICATE OF CALIBRATION

Certificate No: CAS-153416-J6R6X9-101

CALIBRATION OF:

Model Number	3050-A-040	Serial Number:	101265
Description	Pulse LAN-XI		
Detachable Front:	UA-2101-040	Serial Number:	100146

CUSTOMER:

Harris Miller Miller & Hanson Inc.
77 South Bedford Street
Burlington, MA 01803

CALIBRATION CONDITIONS:

Preconditioning:	4 hours at 23 ± 3°C	
Environment conditions:	Air temperature:	24.0 °C
	Air pressure:	982.0 mbar
	Relative Humidity:	41.0 %RH

SPECIFICATIONS:

This document certifies that the instrument as listed under "Model Number" has been calibrated and unless otherwise indicated under "Final Data", meets acceptance criteria as prescribed by the referenced Procedure. Statements of compliance, where applicable, are based on calibration results falling within specified criteria with no reduction by the uncertainty of the measurement. The calibration of the listed instrumentation, was accomplished using a test system which conforms with the requirements of ISO/IEC 17025, ANSI/NCSL Z540-1, and the guidelines of ISO 10012-1. For "as received" and/or "final" data, see the attached page(s). Items marked with one asterisk (*) are not covered by the scope of the current A2LA accreditation. This Certificate and attached data pages shall not be reproduced, except in full, without the written approval of the Brüel and Kjær Calibration Laboratory-Norcross, GA. Results relate only to the items tested. This instrument has been calibrated using Measurement Standards with values traceable to the National Institute of Standards and Technology, National Measurement Institutes or derived from natural physical constants.

PROCEDURE:

The measurements have been performed with the assistance of a Brüel & Kjær ATAC System Model 150120 with application software type 170647 ver. 1.9 and the test collection 3050-A-040 in accordance with the requirements of the calibration procedure P3660-A01.

RESULTS:

[X]	"As Received" calibration	[ ]	Inoperative "as received"
[X]	"Final" calibration	[ ]	Limited Calibration - See attached report

The reported expanded uncertainty is based on the standard uncertainty multiplied by a coverage factor $k = 2$ providing a level of confidence of approximately 95 %. The uncertainty evaluation has been carried out in accordance with EA-4/02 from elements originating from the standards, calibration method, effect of environmental conditions and any short term contribution from the device under calibration.

Date of Calibration: 02 Aug. 2016

Certificate issued: 03 Aug. 2016

John Avitabile
Calibration Technician

Quality Representative

TEAC AMERICA, INC.

CERTIFICATE OF CALIBRATION

Certificate Issued To: HMMH

MODEL: LX-110-16BL

SERIAL#: 535142

CUST.P.O.:

CARD TYPE: PA100

DESCRIPTION: DATA RECORDER

CARD S/N: 340171

DATE RECVD: 7/29/2016

TEMPERATURE: +27°C ±10°C

CAL DATE: 8/10/2016

HUMIDITY: ROOM AMBIENT UP TO 90%

CAL DUE: 8/10/2017

COND. RCVD.: IN TOLERANCE

CERT#: ARA 9752

COND. RETURNED: IN TOLERANCE

The inspection / test equipment, or equivalent, utilized in the performance of the Environmental Tests, is calibrated in accordance with MIL-STD-45662A, traceable to National Institute of Standards and Technology (NIST). The uncertainty in the D.C. voltage measurements of the above intrument is stated as 1.50mv. The reported uncertainty is based upon a standard uncertainty multiplied by a coverage factor of k=2, which provides a level of confidence of approximately 95%

TEST EQUIPMENT USED

DESCRIPTION	MANUFACTURER	MODEL	SERIAL NO.	CAL DUE DATE
Function Generator	BK Precision	3020	89-13934	8/12/2016
Digital Multimeter	Hewlett-Packard	34401A	3146A33775	8/12/2016
AC Voltmeter	Leader	186A	1337069	8/12/2016
Frequency Counter	Leader	LDC-822	4050043	8/12/2016
Dig. Oscilloscope	Hitachi	VC-6545	8062208	8/12/2016
Voltage Generator	Advantest	R6142	110201652	8/12/2016

TECHNICIAN: DAVID FARRELL **TITLE:** APPLICATIONS ENGINEER

SIGNATURE:

TEAC AMERICA, INC.

CERTIFICATE OF CALIBRATION

Certificate Issued To: HMMH

MODEL: LX-110-16BL

SERIAL#: 535142

CUST.P.O.:

CARD TYPE: PA100

DESCRIPTION: DATA RECORDER

CARD S/N: 340488

DATE RECVD: 7/29/2016

TEMPERATURE: +27°C ±10°C

CAL DATE: 8/10/2016

HUMIDITY: ROOM AMBIENT UP TO 90%

CAL DUE: 8/10/2017

COND. RCVD.: IN TOLERANCE

CERT#: ARA 9752

COND. RETURNED: IN TOLERANCE

The inspection / test equipment, or equivalent, utilized in the performance of the Environmental Tests, is calibrated in accordance with MIL-STD-45662A, traceable to National Institute of Standards and Technology (NIST). The uncertainty in the D.C. voltage measurements of the above intrument is stated as 1.50mv. The reported uncertainty is based upon a standard uncertainty multiplied by a coverage factor of k=2, which provides a level of confidence of approximately 95%

TEST EQUIPMENT USED

DESCRIPTION	MANUFACTURER	MODEL	SERIAL NO.	CAL DUE DATE
Function Generator	BK Precision	3020	89-13934	8/12/2016
Digital Multimeter	Hewlett-Packard	34401A	3146A33775	8/12/2016
AC Voltmeter	Leader	186A	1337069	8/12/2016
Frequency Counter	Leader	LDC-822	4050043	8/12/2016
Dig. Oscilloscope	Hitachi	VC-6545	8062208	8/12/2016
Voltage Generator	Advantest	R6142	110201652	8/12/2016

TECHNICIAN: DAVID FARRELL **TITLE:** APPLICATIONS ENGINEER

SIGNATURE: 

Appendix E

Land Use & Social Impact Analysis Report

RKG ASSOCIATES INC

ANALYSIS OF LAND USE & SOCIAL IMPACTS FOR THE PROPOSED ORANGE RAILROAD STATION AND TOD PROJECT AS PART OF THE ENVIRONMENTAL IMPACT EVALUATION

ORANGE, CONNECTICUT

SEPTEMBER 2016

Prepared for:

The Connecticut Department
of Transportation
State Project No. 106-120
Task Order Agreement No. 5.21-03(08)

in co-operation with

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and
Real Estate
Consultants

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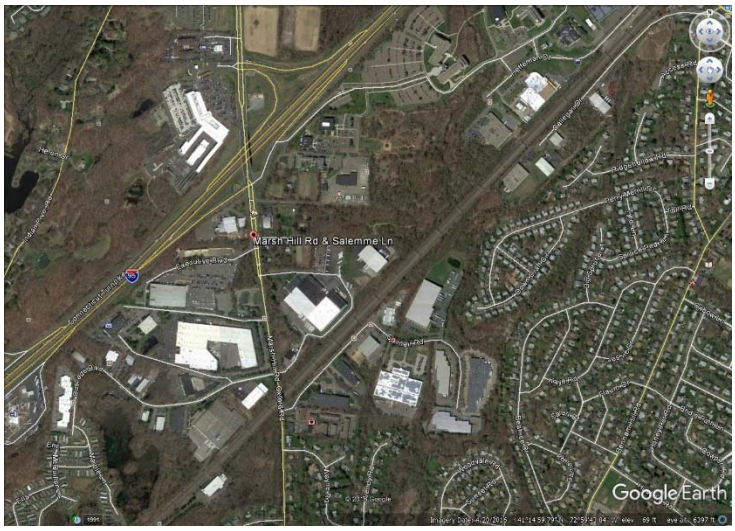
I. EXECUTIVE SUMMARY

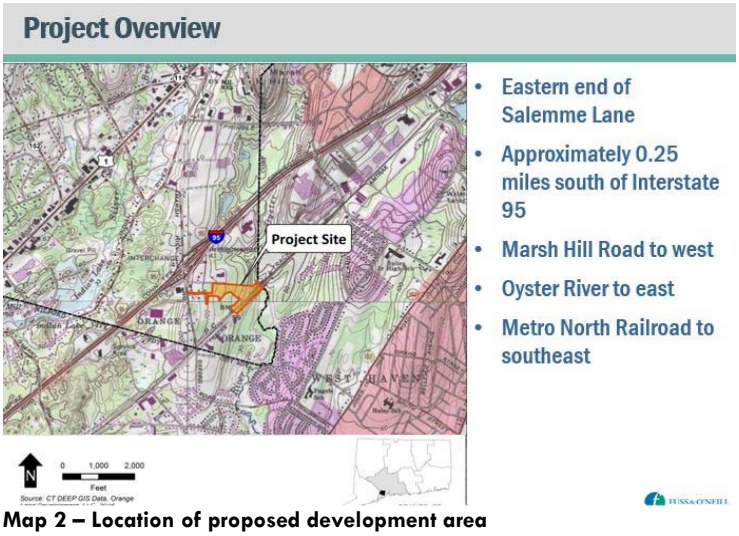
A. Introduction and Overview

The Connecticut Department of Transportation (CTDOT) proposes to construct a New Haven Line Railroad station in the Town of Orange. The project is to be financed with federal/state funds and is subject to both the National Environmental Policy Act and the Connecticut Environmental Policy Act. As such, the project requires preparation of an Environmental Impact Evaluation (EIE) for state compliance[1]. RKG Associates, Inc. (RKG), working as a sub-consultant to Fuss & O'Neill, has been retained to revise a previously prepared (*dated March 24, 2011*) economic analysis of the land use and social impacts that may be associated with the proposed development of the Orange Railroad Station (Map 1) and mixed-use development.



Map 1 – Aerial view of proposed development area

The proposed commuter station is approximately one quarter mile from the diamond interchange 41 on Interstate 95, near the end of Salemme Lane (Map 2) and accessed from Marsh Hill Road. The proposed commuter rail station is to include two (2) new 1,020 feet long, canopied platform stations; a covered pedestrian bridge connecting the platforms via tower stairways and elevators; and, a service access road within the existing railroad right-of-way.



Map 2 – Location of proposed development area

Per the developer's (Orange Land Development, LLC or OLD) submission[2] *"access to the property is from Salemme Lane, which connects to Marsh Hill Road to the west. Salemme Lane is a two-lane street maintained by the Town of Orange that has a pavement width of approximately 20 feet. At present, the street*

[1] Information and data presented throughout this memorandum reflects the most current available at the time of the analyses.
[2] Petition for Change of Zone, Transit Oriented Development District, Orange, CT, dated February 2016.

extends approximately 400 feet from Marsh Hill Road with the balance of the right-of-way being unimproved. The town has acquired fee title to the unimproved portion of Salemme Lane lying between the improved portion of Salemme Lane and the boundary of the property."

1. Proposed Mixed-Use Development

Included with the proposed Orange Railroad Station is a proposed mixed-use development including four (4) residential buildings with 200 apartments (mostly one-bedroom units) and 21,500 square feet (FT) of retail/commercial uses, excluding parking structures. The proposed development will accommodate 922 parking spaces including a mix of structured garage(s), surface lots and street parking (Table 1 and Figure 1). OLD is "*proposing that 10% of the residential units are to be affordable units in accordance with the standards set forth in the proposed amendment to the affordable housing provision of the TODD regulation submitted concurrently with* [their] *application.*[3]"

Build-Out	**Apts**	**Res SF**	**Comm SF**
Building A	49	62,000	3,450
Building B	57	57,500	0
Building C	32	45,000	2,050
Building D	24	26,500	6,900
Building E	14	18,000	3,700
Building F	24	25,000	5,400
Comm/Commuter Garage			186,750
TOTAL	**200**	**234,000**	**208,250**

Bedroom Mix	**Studio**	**1-BR**	**2-BR**	**Total**
percent	12.5%	50.0%	37.5%	100.0%
units	25	100	75	**200**

Parking Mix / Spaces				
TOD Garage	TOD Lot and Surface	TOD Street	Commuter Garage	**Total Parking**
233	80	43	566	**922**

Source : Milone & MacBroom, Fuss & O'Neill and RKG Associates (2016)

Table 1: Proposed Mixed-Use Development

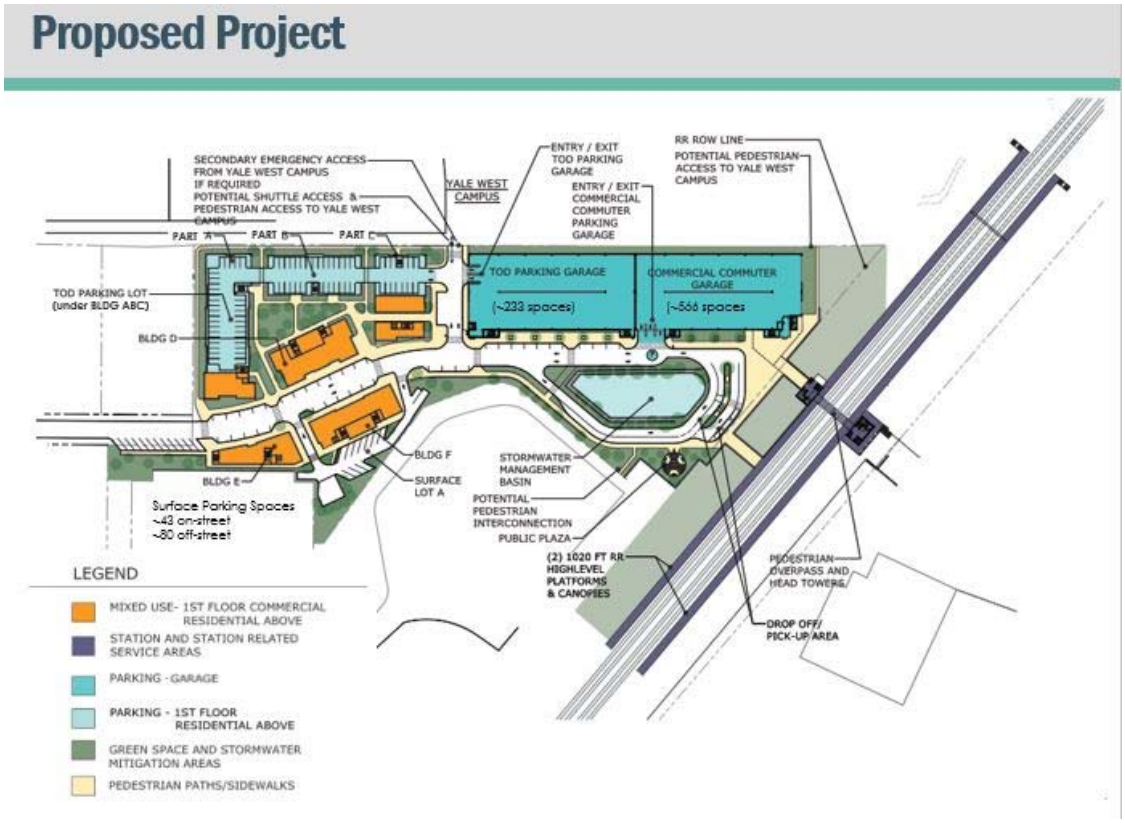


Figure 1 – Conceptual rendering of proposed Orange Railroad Station and mixed-use development

[3] Conversations with Orange Zoning Department indicate that the local subdivision plan for the TOD development co-located with the Orange Commuter Railroad Station was approved September 20, 2016.

2. Zoning and Surrounding Land Use

The proposed Orange Railroad Station site is bounded on the west by Marsh Hill Road, on the east by the Oyster River, on the southeast by the New Haven Line, on the north by property owned by Yale University and several residential properties, and on the south by commercial property. Marsh Hill Road continues south of the railroad, where it intersects a private way known as Conair Drive, while Salemme Drive, a residential street immediately south of the interstate and interchange 41, extends from Marsh Hill Road to the site. Existing zoning (Figure 2) about the proposed site (approximately 8-acres) includes the following:

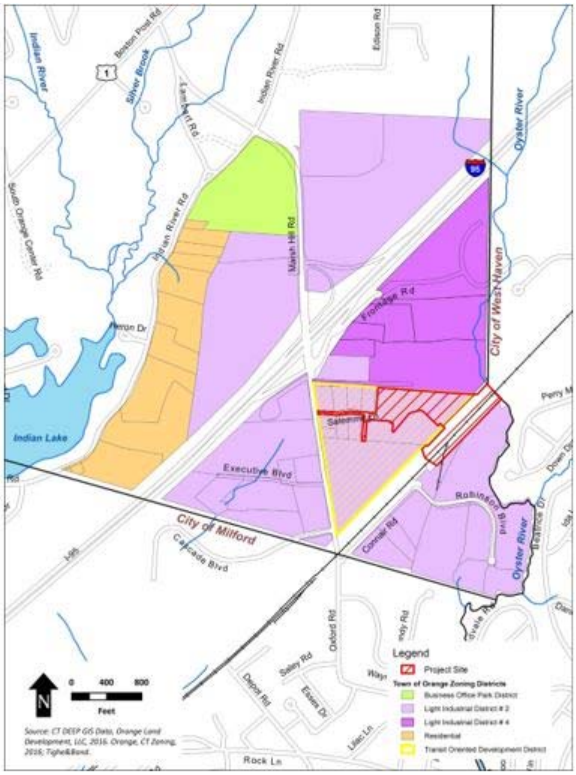


Figure 2 – Surrounding zoning

- **Business Office Park** – permitted uses include buildings, each having a ground coverage of not less than 20,000 SF, containing administrative, business and professional offices, including banks and other financial institutions, and research facilities for development and testing of products, management systems and services.

- **Light Industrial #2** – permitted uses include manufacturing, processing or assembling of goods; laboratories for research, testing and development; printing and publishing establishments; office buildings for business and professional establishments, excluding those establishments which primarily provide services to customers and clients on the premises; warehousing of goods or materials manufactured on the same lot or warehoused for distribution and sale or resale and wholesale business; freight and materials trucking businesses when clearly accessory and subordinate to another permitted use on the same lot; repairing and servicing of motor vehicles when clearly accessory and subordinate to another permitted use on the same lot; public utility substations, telephone equipment buildings and switching stations; water supply pump stations and storage facilities; public utility transmission lines; public utility maintenance facilities; buildings and facilities of the Town of Orange, State of Connecticut, and federal government, excluding corporate or proprietary uses unless otherwise permitted above; and, railroad rights-of-way and storage sidings.

    - Hotel uses are also permitted *(as a special permit)* providing they contain not less than 100 sleeping rooms for transient lodging; the hotel has frontage on I-95 and Marsh Hill Road; the maximum height of structures shall not exceed four stories or 60 feet, whichever is less; and, the hotel shall provide function space consisting of conference facilities and/or banquet rooms at the rate of not less than 15 SF feet per room, with a minimum requirement of 2,000 SF.

- **Light Industrial #4** – permitted uses include, but are not necessarily limited to universities or colleges, including related facilities; medical offices, clinics, health care facilities, and inpatient and outpatient treatment facilities; natural resource education areas and facilities, nature preserves, trails and walkways; storage or warehousing related to university or college use; laboratories for research, testing and development; printing and publishing establishments; and, data centers or facilities.
    - Hotel uses are also permitted *(as a special permit)* with conditions similar to Light Industrial #2 **and** an accompanying full-service restaurant/bar may be included.
- **Residential** – permitted uses are primarily for a single detached dwelling for one family and not more than one such dwelling per lot.

The proposed development site is in the Light Industrial #2 District, but is also a part of the **Transit Oriented Development District (TODD)**, an approximate 37-acre overlay site. In 2009, a "zoning review study" prepared for the Town Plan and Zoning Commission recommended consideration of high density mixed- use development in this location provided that such development was "firmly tied" to the construction of the railroad station. On December 7, 2010, the Commission adopted a Transit-Oriented Development District regulation (codified as Section 383-216 of the Zoning Regulations) and indicating *"the purpose of the Transit Oriented Development District is to create a high density mixed use, transit oriented development adjacent to a Metro North Rail Station. It is further the intent to provide a range of housing, businesses and services specifically geared towards commuters and users of the rail road, designed in an aesthetically pleasing, environmentally conscious and pedestrian scaled manner. The properties within a Transit Oriented Development District shall be a regulated by an approved Concept Plan, which includes any additional standards or requirements deemed appropriate by the Commission."*

Permitted uses include retail; indoor restaurants; business and professional uses (including medical); railroad transit stations; structured parking; multi-family residential; and, hotels with accessory restaurants and/or conference centers. Additional requirements of note include:

- *"Multi-family residential units, subject to the following conditions:*
    - *No unit shall contain more than two bedrooms.*
    - *No units shall be located on the ground floor of a structure.*
    - *There shall be a maximum of 250 units.*
    - *Multi-family residential units shall only be permitted in conjunction with the development of office, hotels or other similar uses. There shall be a minimum of 1,000 square feet nonresidential use for each residential dwelling unit. The Commission may require the phasing of development to assure that the minimum non-residential development occurs prior to the residential development.*
- *At least 20% of all housing units constructed within this district shall be made affordable for the life of the project as per the requirements of Section 8-30g of the General Statues of Connecticut and U.S. Department of Housing and Urban Development (HUD). Units shall be mixed throughout the development and the*

proportion of affordable units by bedroom shall be identical to that of the overall project.

- *Retail uses, including retail banks, subject to the following:*
  - *No retail uses shall exceed 5,000 square feet of building area.*
  - *All retail uses shall be within a building used primarily for one of the other permitted uses."*

The regulation was subsequently amended April 19, 2016 with an effective date of May 3, 2016 to further discuss applicability and site design issues.

a) Surrounding Land Uses

In their change of zone submission (February 2016) OLD indicated the following from discussions with representatives of the Town of Orange and CTDOT regarding any other area developments:

- The Northeast Beverage Expansion (OSTA AD #252), located at 32 Robinson Boulevard, involves a 37,450 SF expansion of warehouse space.
- Aurora Products Expansion (OSTA AD #264), located at 205 Edison Road, involves a 40,280 SF expansion of warehouse space.
- An approximate 80,000 SF general office building is proposed on the southeast corner of Marsh Hill Road and Edison Road.

Across Marsh Hill Road from the site there is a Southern Connecticut Gas (SCG) operations center and a small office complex. Adjacent to the site is the land formerly owned by Bayer and now by Yale University (southeast quadrant of diamond interchange), which reportedly has expansion/redevelopment plans for a clinical research facility. Also adjacent to the site is a small cluster of older single family homes which do not conform to the current zoning regulations, and are isolated from other residential neighborhoods which are more than a quarter mile distant. The Hope Academy, a private special education school also abuts the site and has frontage on Marsh Hill Road. South along Marsh Hill Road the roadway narrows and property uses turn residential. United Illuminating is building a new headquarters and operations center at the northwest quadrant of the diamond interchange, and according to Town of Orange officials, when complete, may employ over 1,300 persons on site.

Interstate 95 is to the north of the site and at the diamond interchange (northeast quadrant) there is an approximate 41-acre site available. Conversations with representatives of the Town of Orange Zoning Department indicate that some interest has been expressed in this site from a veteran's support group after Stew Leonard opted to not develop a grocery and a subsequent proposal for an 87,000 SF office complex failed to come to fruition. The zoning representative also indicated that some interest has been expressed for a hotel development, near the Yale campus, but not part of the TODD zone.

In this analysis, the Orange Railroad Station impact area is an approximate ½-mile radius around the site, representing those parcels which may be impacted by future development or redevelopment. The impact area is a mixed suburban setting with single family neighborhoods, low density light industrial development and highway-oriented commercial activity. The

property is zoned for and includes a mix of light industrial, warehouse/distribution and service businesses.

Whether any of these properties would convert to other uses, given the development and auto traffic to the railroad station is questionable. Many of the surrounding parcels of land, particularly with visibility and access to the interstate, via a diamond interchange, are either developed, developing or planned for development. Retail and other consumer uses are abundant to the north of the site along Route 1 and to the south of the site the roadway and land uses quickly turn residential. However, possible future uses, such as convenience stores, coffee shops and those attracted to high consumer/commuter traffic counts may have an interest in acquiring and assembling these parcels, providing visibility and access could be improved and that they are developed in accordance with the recently adopted/amended TODD. Considering the existing and possible development activity around the proposed Orange RR Station site, coupled with the recently adopted TODD by the Town of Orange, the appropriateness of a rail station at this location is an entirely compatible use.

B. Summary Findings

The key findings of the market analysis are summarized below, and are presented in more detail and specifics elsewhere in the report.

1. Demographic Indicators

- Since 2000, there has been little population change in the Orange Study Area, an approximate ½-mile radius about the proposed Orange Railroad Station site. This is in contrast to the town which realized growth during the decade and after a slight decline in population is projected to realize growth from 2015 to 2020.
    - If all of the 200 residential units at the proposed TOD development are occupied, and assuming the town-wide average household size, this equates to an estimated population increase of 545 persons, representing a near four percent increase over the 2015 population.
- Although the overall population in the Orange Study Area is nominal, there has been a decline among those aged 35 to 54 years, typically considered to be in their peak earning and spending years. This loss is projected to continue through 2020. This pattern is similar for the town, county and state. In contrast, all areas have, and are projected to continue, to realize growth in the 65 and older population.
- The number of housing units in the Orange Study Area has grown since 2000, primarily among renter-occupied units, and is projected to continue to do so. The 2015 to 2020 projected town-wide housing growth is 180± units, with about twice as many owner-occupied units as compared to renter-occupied units.
    - The proposed TOD development includes 200 renter units, representing a four percent increase to town-wide housing (over the 2015 level) and specifically a 34 percent increase over 2015 renter-occupied units. The proposed TOD residential development exceeds the town-wide projected housing growth, without the development.

- Households earning $100,000 or more are projected to increase for the Orange Study Area, the town, county and state. The number of households earning less is projected to decline for all areas.

- In 2015, the average household income for the Orange Study Area was $99,700, similar to the state and above the county ($85,100) but well below the town ($142,400). These relationships are projected to hold for 2020, with the town average household income at nearly $152,200.

- Of the population aged 25 and over, approximately 43 percent in the Orange Study Area have college degrees, similar to the state and more than county (39 percent) but well below the town at 61 percent.

2. Economic Indicators

- In 2015, approximately 60 percent of the population aged 16 and over in the Orange Study Area was employed. This is projected to remain constant through 2020. The town, county and state all also exhibit employment rates at around 60 percent of the 16 and over population.

- However, since August 2014, the unemployment rate for the Town of Orange has consistently been less than that for the county and for the state. The unemployment rate for September 2015 was four percent for the town compared with 5.2 percent (state) and 5.6 percent (New Haven County).

- Between 2010 and 2014 there was a 7.6 percent growth in the number of businesses in the town, compared to a 3.3 percent and three percent growth in the number of businesses in the county and the state, respectively. However, the number of businesses utilizing industrial type space (such as wholesalers or warehousing) increased by nearly 27 percent in the town compared to declines in the county and state. The town, similar to the state, experienced a decline in retail businesses.

- Since 2009, the town, county and state have all experienced employment growth across nearly all industrial sectors, with the universal exception of the manufacturing sector. The town also realized an employment decline among finance and insurance, as well as the retail trade sectors.

- In terms of a location quotient there are several industry sectors where the town outperforms the state, including wholesale trade, real estate, retail (despite some employment declines) arts/entertainment and accommodations. The town woefully under-performs the state in the education, health care, professional/technical and information services sectors.

- In 2010, approximately 86 percent of the employment in the Town of Orange was from commuters residing outside of the town. In a similar comparison, approximately 83 percent of the Town of Orange workforce commuted out of town to their place of employment.

3. Real Estate Indicators

According to the Orange Economic Development Corporation (OEDC), as of September 30, 2015, there was slightly more than 6.1 million SF of commercial space in Orange, with a vacancy rate of 4.1 percent (195,700 SF). This is down from a peak of 11.2 percent (613,500 SF) in March of 2011. Summaries of commercial sectors are presented next.

- **Industrial** There is 46.5 million SF of industrial space in the county (through the 3rd quarter of 2015), with the town accounting for 3.4 percent, or nearly 1.6 million SF. Vacancy (3rd quarter of 2015) in the town is 5.7 percent, well below the 13.1 percent of 2009. Both the town and the county realized negative absorption in 2009 with positive improvements more currently. New industrial construction generally occurs as vacancy levels stabilize around five percent, similar to the town but with more than double that vacancy countywide.
    - The greater New Haven industrial market continued to experience moderate leasing activity throughout 2014 as such Fortune 500 companies as Coca-Cola (Waterbury), FedEx (North Haven) and Macy's (Cheshire) all completed lease transactions. Continued, albeit moderate, growth is projected for New Haven County, particularly in the submarket which includes the Town of Orange, benefiting from I-95 access and proximity the Fairfield County and New York City markets.
    - According to the OEDC, as of September 30, 2015, there was nearly 2.5 million SF of industrial space in Orange, with a vacancy rate of 2.2 percent (53,900SF). This is down from a peak of 15.5 percent (339,600 SF) in March of 2011.
- **Office** The office space in the town represents less than two percent of the office space throughout the county, the town vacancy rate was nearly 22 percent in 2009 and has declined to no measured vacancy as of the 3rd quarter of 2015. Office vacancy countywide held steady at 14 to 15 percent. In both time periods the town realized positive absorption of office space while the county did not. Asking lease rates in the town lag those of the county.
    - A sampling of existing office properties for lease in the Town of Orange indicates a little more than 178,200 SF available with an average asking lease rate of $12.64/SF and/or an asking selling price $123/SF.
    - According to the OEDC, as of September 30, 2015, there was nearly 584,900 SF of office space in Orange, with a vacancy rate of 3.1 percent (18,400 SF). This is down from a peak of 18.1 percent (105,700 SF) in June of 2013.
- **Retail** A sample of offered retail space indicates a nominal availability of 25,725 SF with an average asking lease of $12.51/SF and/or asking selling price of $54/SF. According to information on shopping centers, compiled by the National Research Bureau, there is more than 1.2 million SF of shopping center space in the town, much of it proximate to the development site.
    - According to the OEDC, as of September 30, 2015, there was slightly more than 3.0 million SF of retail space in Orange, with a vacancy rate of 4.1 percent

(123,400 SF). This is down from a peak of 10.9 percent (329,300 SF) in June of 2009.

- Conversations with a representative of the Orange Zoning Department indicate that an approximate 63,500 SF ShopRite grocery store is expected to open in late 2016[4] at 259 Bull Hill Lane (not part of the TODD), the site of a former Stop & Shop grocery.

- **Residential** Between 2000 and 2009 there were approximately 1,535 single-family residential sales in the Town of Orange, averaging 153 annually and sales of condominium units was less, averaging seven annually or less than five percent of single-family activity. The average selling price for a single-family was $353,800, more than $90,000 greater than for a condominium. Over the 2010 to 2014 period, single-family sales have averaged 110-units annually with a price of $336,700, less than the previous decade. The average price for a condominium unit rose to $354,500 surpassing that for a single-family unit and now averaging about ten percent of the annual sales volume and a selling price greater than that for single-family units

  - Since 2000, the town has averaged 15 single-family residential permits, annually. Single-family residential construction was robust prior to 2004, but since that time there has been only a handful of single-family permits issued annually. The estimated construction value of these permits peaked at $306,000 in 2009, but that is from a small sample of permits. Over the entire time period (2000 through July 2010) the average estimated construction value was $247,000.

4. Environmental Justice

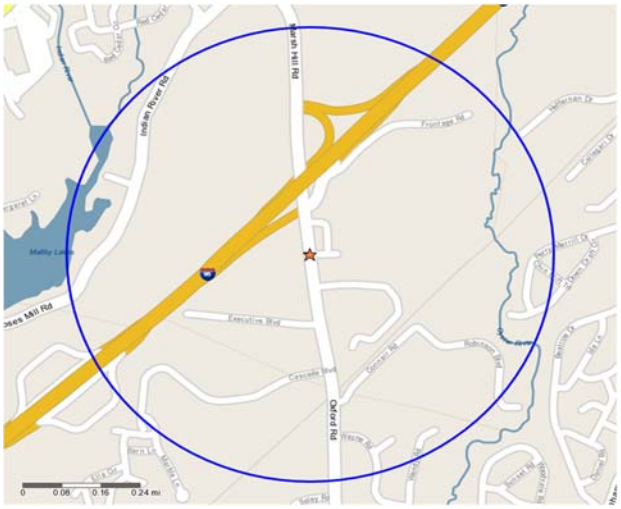
Four (4) properties south of Salemme Drive had previously been acquired by Sixty-Five Marsh Hill Road LLC, as part of the prior proposed development. It is RKG's understanding that these parcels are no longer a part of the current proposed development (although within the Orange TODD zone) and that ownership is retained by Sixty-Five Marsh Hill Road, LLC. To the north of Salemme Road there are three (3) residential properties and a parcel owned by the Hope Academy, LLC (with frontage to Marsh Hill Road). These properties are also within the Orange TODD zone, but are not a part of the currently proposed development.

While development and completion of the currently proposed project may foster interest in these other parcels, their eventual development (if any) would be on their own merits and submissions to the Town of Orange in accordance with the TODD regulations and guidelines. In either event, potential repositioning of these other parcels is not assumed to adversely impact low income or minority populations. The current proposed development (approved by Town zoning September 20, 2016) includes 20 units of affordable rental housing, which coupled with the overall proximity and convenience of the proposed Orange Railroad Station to the Orange Study Area population may improve access to public transportation, and hence employment opportunities, for the population (households) not having access to a private passenger vehicle, irrespective of whether these households are of low income or minority.

[4] Subsequent follow-ups indicated that the store opened October 30, 2016.

II. MARKET INDICATORS

This chapter presents an overview of baseline demographic and economic conditions in the Town of Orange, comparing them with New Haven County and Connecticut. Additionally, where applicable, similar baseline data is presented for the specific Orange Study Area, represented by an approximate one-half mile radius about the proposed site (Map 3).



Map 3 – ½ Mile radius about Orange RR Station/TOD Site

A. Socio-Demographics

This section presents trends in selected socio-demographic characteristics, including population, age, housing, income, employment and education.

1. Population

There has been little population[5] change in the Orange Study Area (Table 2) since 2000. This is in contrast to the town which realized growth during the decade and after a slight decline in population is projected to realize growth from 2015 to 2020.

Table 2: Selected Population Trends

Comparative Population Trends	1/2 Mile Site	Town of Orange	New Haven County	Connecticut State
Total Population				
2000	160	13,233	823,388	3,404,761
2010	159	13,956	862,478	3,574,098
2015	159	13,931	862,236	3,605,635
2020	161	14,205	876,058	3,676,141
% change 2000 - 2010	-0.6%	5.5%	4.7%	5.0%
% change 2010 - 2015	0.0%	-0.2%	0.0%	0.9%
% change 2015 - 2020	1.3%	2.0%	1.6%	2.0%
Race - % White				
2000	90.5%	94.1%	79.4%	81.6%
2010	89.0%	89.0%	74.8%	77.6%
2015	87.9%	88.1%	73.4%	76.0%
2020	86.2%	86.5%	72.2%	74.8%
Ethnicity - % Hispanic/Latino				
2000	2.3%	1.2%	10.0%	9.4%
2010	5.0%	2.9%	15.0%	13.4%
2015	5.6%	3.2%	16.4%	14.9%
2020	6.3%	3.6%	17.6%	16.0%

Source : US Census, Alteryx and RKG Associates, Inc.

This pattern is similar for New Haven County and the state, with growth during the last decade, followed by a slight decline or stagnation (2010 to 2015) and then nominal projected growth

[5] Reference for much of the population and other demographic data is the US Census with estimate and projections developed by Alteryx, a national vendor of socioeconomic data and proprietary estimates and projection modeling.

from 2015 to 2020. Both the Orange Study Area and the Town of Orange are less racially diverse when compared with New Haven County and the state. Similarly, both the study area and town have a lesser presence of Hispanic/Latino population (or ethnic diversity) when compared with the county and state. However, the percent Hispanic population in the study area is greater than that of the town and is projected to increase at a faster pace to 2020.

2. Age Distribution

While change in the overall population of the Orange Study Area is negligible, the population aged 20 to 64 years, typically family-formation and peak earning and spending years, declined over the last decade (refer to Table 3) and continued declines are projected for those aged 35 to 54 years.

Table 3: Age Distribution Trends

Comparative Age Distribution	1/2 Mile Site	Town of Orange	New Haven County	Connecticut State
Population < 5 Years				
2000	5	741	52,092	220,861
2010	6	589	48,663	202,106
2015	6	516	46,229	193,206
2020	5	479	45,695	191,474
% change 2000 - 2010	20.0%	-20.5%	-6.6%	-8.5%
% change 2010 - 2015	0.0%	-12.4%	-5.0%	-4.4%
% change 2015 - 2020	-16.7%	-7.2%	-1.2%	-0.9%
Population - 5 to 19 Years				
2000	26	2,708	170,462	700,344
2010	27	2,901	170,364	713,670
2015	27	2,881	165,759	705,418
2020	26	2,661	158,774	676,767
% change 2000 - 2010	3.5%	7.1%	-0.1%	1.9%
% change 2010 - 2015	0.4%	-0.7%	-2.7%	-1.2%
% change 2015 - 2020	-1.5%	-7.6%	-4.2%	-4.1%
Population - 20 to 34 Years				
2000	24	1,365	160,927	635,845
2010	23	1,497	167,530	648,275
2015	24	1,601	171,566	674,322
2020	25	1,864	175,276	696,746
% change 2000 - 2010	-3.5%	9.7%	4.1%	2.0%
% change 2010 - 2015	3.0%	6.9%	2.4%	4.0%
% change 2015 - 2020	5.1%	16.4%	2.2%	3.3%
Population - 35 to 54 Years				
2000	55	4,389	248,632	1,068,950
2010	47	4,327	246,630	1,060,036
2015	45	4,027	235,423	1,013,845
2020	45	3,609	225,259	967,602
% change 2000 - 2010	-14.9%	-1.4%	-0.8%	-0.8%
% change 2010 - 2015	-2.8%	-6.9%	-4.5%	-4.4%
% change 2015 - 2020	-1.8%	-10.4%	-4.3%	-4.6%
Population - 55 to 64 Years				
2000	23	1,395	71,946	308,665
2010	23	1,978	105,318	443,452
2015	23	2,133	112,084	475,760
2020	24	2,344	120,074	516,185
% change 2000 - 2010	-0.7%	41.8%	46.4%	43.7%
% change 2010 - 2015	1.3%	7.8%	6.4%	7.3%
% change 2015 - 2020	4.0%	9.9%	7.1%	8.5%
Population 65+				
2000	27	2,635	119,328	470,095
2010	33	2,664	123,972	506,559
2015	34	2,773	131,174	543,083
2020	37	3,248	150,979	627,366
% change 2000 - 2010	20.6%	1.1%	3.9%	7.8%
% change 2010 - 2015	3.1%	4.1%	5.8%	7.2%
% change 2015 - 2020	9.0%	17.1%	15.1%	15.5%

Source : US Census, Alteryx and RKG Associates, Inc.

Note - Sum of cohorts may differ from total due to rounding.

In contrast, the retirement population (aged 65 and older) has grown and is projected to continue to grow through 2020. Also, the pre-retirement population of those aged 55 to 64 has grown since 2010 and is projected to continue to do so. The Town of Orange is projected to lose population in the younger cohorts (those aged 19 and under), as well as those in peak earning and spending years (35 to 54). The family-formation, pre-retirement and retirement aged populations have grown and are projected to continue to grow. This is a pattern similar to that for New Haven County and the state.

3. Housing Units and Tenure

Between 2000 and 2010 there was an approximate 15 percent increase in the number of housing units in the Orange Study Area (Table 4) with a nominal growth projected to 2020. This rate of growth in housing units in the study area, over the last decade, albeit from a small base, surpasses that for the town, county and state.

Table 4: Selected Housing Trends

Comparative Housing Trends	1/2 Mile Site	Town of Orange	New Haven County	Connecticut State
Total Housing Units				
2000	53	4,870	340,463	1,385,631
2010	61	5,345	362,003	1,487,894
2015	61	5,343	362,714	1,492,411
2020	64	5,526	371,458	1,533,193
% change 2000 - 2010	15.1%	9.8%	6.3%	7.4%
% change 2010 - 2015	0.0%	0.0%	0.2%	0.3%
% change 2015 - 2020	4.9%	3.4%	2.4%	2.7%
Owner Occupied Units				
2000	43	4,392	201,438	870,152
2010	43	4,529	212,169	925,288
2015	43	4,530	208,109	917,269
2020	44	4,639	212,410	939,619
% change 2000 - 2010	0.0%	3.1%	5.3%	6.3%
% change 2010 - 2015	0.0%	0.0%	-1.9%	-0.9%
% change 2015 - 2020	2.3%	2.4%	2.1%	2.4%
Renter Occupied Units				
2000	8	347	117,358	431,207
2010	14	594	122,333	445,801
2015	14	588	126,869	466,728
2020	15	639	129,961	479,402
% change 2000 - 2010	75.0%	71.2%	4.2%	3.4%
% change 2010 - 2015	-0.7%	-1.0%	3.7%	4.7%
% change 2015 - 2020	7.9%	8.7%	2.4%	2.7%
Vacant Units				
2000	2	131	21,668	84,272
2010	4	222	27,502	116,804
2015	4	225	27,737	108,413
2020	5	248	29,088	114,171
% change 2000 - 2010	100.0%	69.5%	26.9%	38.6%
% change 2010 - 2015	0.0%	1.4%	0.9%	-7.2%
% change 2015 - 2020	25.0%	10.2%	4.9%	5.3%

Source : US Census, Alteryx and RKG Associates, Inc.

Owner-occupied housing in the study area represented nearly 83 percent of the households in 2000, surpassed only by the near 93 percent representation in the Town of Orange. Owner-occupied housing in the county and the state, in 2000, accounted for 63 percent and 67 percent, respectively. The owner-occupancy rates are projected to decline for all four areas by 2020, although more so for the study area and the town. Rates for the county and the state are projected to decline marginally, to 62 percent and 66 percent, respectively. Between 2015 and 2020, the number of vacant housing units are projected to increase everywhere except statewide. In 2000, the vacancy rate in the study area was near four percent and is projected

to be near eight percent in 2020, again albeit from a small base. In contrast, the vacancy rate for the town is projected to increase from nearly three percent to 4.5 percent, while increases for the county and state are more modest at slightly more than one percentage point.

4. Households and Income

There was nearly a ten percent growth in households (reflecting occupied housing units, only) in the Orange Study Area during the last census decade (Table 5). This rate of growth exceeded that for the town, county and state. The projected rate of growth in households, for all areas, is reasonably similar for the 2015 to 2020 period.

All areas realized a better than 30 percent growth in average household income during the last census decade, with the study area experiencing a 39 percent growth, the greatest. In all instances the rates of growth in average household income exceed the approximate 27 percent inflation over the census decade. Since 2010, all areas have continued to realize growth in average household income and this is a trend projected to continue through 2020.

Table 5: Household and Income Trends

Comparative HH & Income Trends	1/2 Mile Site	Town of Orange	New Haven County	Connecticut State
Total Households 1/				
2000	52	4,739	318,795	1,301,359
2010	57	5,123	334,501	1,371,089
2015	57	5,118	334,977	1,383,997
2020	59	5,278	342,370	1,419,021
% change 2000 - 2010	9.6%	8.1%	4.9%	5.4%
% change 2010 - 2015	0.0%	-0.1%	0.1%	0.9%
% change 2015 - 2020	3.5%	3.1%	2.2%	2.5%
Average HH Income				
2000	$70,473	$101,893	$62,279	$74,212
2010	$98,095	$140,094	$84,528	$96,946
2015	$99,725	$142,366	$85,112	$99,830
2020	$111,602	$156,164	$95,122	$111,804
% change 2000 - 2010	39.2%	37.5%	35.7%	30.6%
% change 2010 - 2015	1.7%	1.6%	0.7%	3.0%
% change 2015 - 2020	11.9%	9.7%	11.8%	12.0%
HH Earning <$35,000				
2000	15	874	114,600	413,638
2010	17	790	99,950	359,946
2015	17	825	102,647	366,750
2020	15	735	93,545	334,831
% change 2000 - 2010	13.1%	-9.6%	-12.8%	-13.0%
% change 2010 - 2015	1.4%	4.4%	2.7%	1.9%
% change 2015 - 2020	-9.1%	-10.9%	-8.9%	-8.7%
HH Earning $35,000 to $100,000				
2000	27	2,094	154,109	625,928
2010	21	1,713	142,034	583,400
2015	21	1,624	139,335	570,627
2020	21	1,531	136,638	547,589
% change 2000 - 2010	-21.3%	-18.2%	-7.8%	-6.8%
% change 2010 - 2015	-1.3%	-5.2%	-1.9%	-2.2%
% change 2015 - 2020	-0.2%	-5.7%	-1.9%	-4.0%
HH Earning $100,000+				
2000	11	1,783	50,388	262,387
2010	19	2,620	92,518	427,742
2015	19	2,669	92,996	446,619
2020	23	3,012	112,188	536,601
% change 2000 - 2010	67.8%	46.9%	83.6%	63.0%
% change 2010 - 2015	0.6%	1.9%	0.5%	4.4%
% change 2015 - 2020	21.4%	12.9%	20.6%	20.1%

Source : US Census, Alteryx and RKG Associates, Inc.

1/ Excludes vacant housing units.

In 2000, the average household income for the study area accounted for 69 percent that of the Town of Orange and is projected to increase to a near 71.5 percent representation by 2020. By comparison, the average household income for the Town of Orange far exceeds that for the county as a whole. In 2000, the representation was nearly 164 percent that for the county. The countywide average household income has (and is projected) to lag that for the state by about 15 percentage points. For all areas, the number of households earning less than $100,000 annually is projected to decline from 2015 to 2020, while the number of households earning more than $100,000 is projected to increase.

5. Education Status

There was nearly a 25 percent increase in the population aged 25-years and over, with a college degree, in the Orange Study Area from 2000 to 2010, exceeding the growth rates for the town, county and state (Table 6). Since 2010 the growth rates have been more in parity at three to five percent. In general, the growth rate of those with college degrees has surpassed the growth rate of the population 25 and older. The percent of this population with a college degree is greatest in the Town of Orange, generally similar in the study area and statewide, and typically less in New Haven County.

Table 6: Education Status

Comparative Education Status	1/2 Mile Site	Town of Orange	New Haven County	Connecticut State
Population (age 25+)				
2000	115	9,434	551,296	2,295,093
2010	119	9,895	583,812	2,430,424
2015	120	9,915	590,841	2,472,189
2020	123	10,362	613,250	2,570,188
% change 2000 - 2010	3.5%	4.9%	5.9%	5.9%
% change 2010 - 2015	0.8%	0.2%	1.2%	1.7%
% change 2015 - 2020	2.5%	4.5%	3.8%	4.0%
With a College Degree				
2000	40	5,014	187,442	871,605
2010	49	5,867	224,142	1,036,333
2015	52	6,041	231,498	1,069,406
2020	54	6,342	241,673	1,116,234
% change 2000 - 2010	23.7%	17.0%	19.6%	18.9%
% change 2010 - 2015	4.4%	3.0%	3.3%	3.2%
% change 2015 - 2020	4.1%	5.0%	4.4%	4.4%
% with a College Degree				
2000	34.8%	53.1%	34.0%	38.0%
2010	41.6%	59.3%	38.4%	42.6%
2015	43.0%	60.9%	39.2%	43.3%
2020	43.7%	61.2%	39.4%	43.4%

Source : US Census, Alteryx and RKG Associates, Inc.

6. Employment Trends

The population aged 16-years and over decreased for the study area (2000 to 2010) while increasing by about seven to eight percent for the town, county and state (Table 7). However, since 2010 the population aged 16 and older has increased across all geographies. Despite declines in employment of this population, for all areas, from 2010 to 2015, growth is universally projected for the 2015 to 2020 period. As a result, the civilian labor force participation rate for all areas has (and is projected) to be around 60± percent.

Table 7: Employment Trends

Comparative Employment Trends	1/2 Mile Site	Town of Orange	New Haven County	Connecticut State
Population (age 16+)				
2000	135	10,362	643,466	2,652,529
2010	132	11,117	693,808	2,859,208
2015	134	11,323	699,839	2,911,356
2020	138	11,875	718,983	3,004,996
% change 2000 - 2010	-2.2%	7.3%	7.8%	7.8%
% change 2010 - 2015	1.5%	1.9%	0.9%	1.8%
% change 2015 - 2020	3.0%	4.9%	2.7%	3.2%
Employed (age 16+ and civilian)				
2000	85	6,456	396,026	1,664,272
2010	83	7,031	424,202	1,764,830
2015	80	6,781	410,220	1,750,785
2020	83	7,119	424,436	1,811,874
% change 2000 - 2010	-2.4%	8.9%	7.1%	6.0%
% change 2010 - 2015	-3.6%	-3.6%	-3.3%	-0.8%
% change 2015 - 2020	3.8%	5.0%	3.5%	3.5%
Employed as a % Population				
2000	63.0%	62.3%	61.5%	62.7%
2010	62.9%	63.2%	61.1%	61.7%
2015	59.7%	59.9%	58.6%	60.1%
2020	60.1%	59.9%	59.0%	60.3%

Source : US Census, Alteryx and RKG Associates, Inc.

Since August of 2014 the unemployment rate in the Town of Orange has been well below that for the county, state and the nation (Figure 3). In comparison, the monthly unemployment rate in New Haven County has generally been the highest of all areas, except in December of 2014.

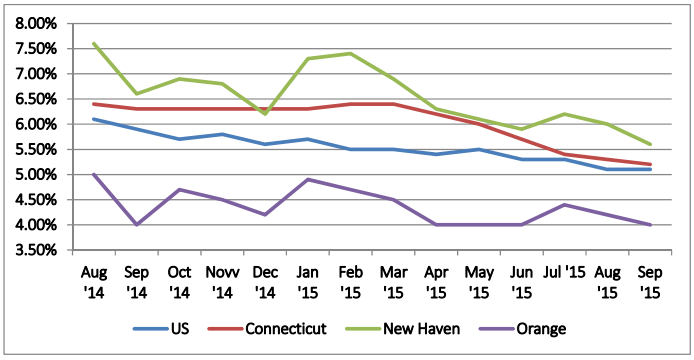


Figure 3 – Comparative Unemployment Rates

B. Economic Indicators

This section presents an overview of changes in establishments and employment, by industry sector, for the Town of Orange, the county and the state, over the 2010 to 2014-time period, as the economy continues to emerge from the Great Recession. The changes in employment are compared and then presented as a location quotient. Lastly, journey to work (commute) information for 2010 is offered.

1. Trends in Establishments by Industry Sector

In 2010 there were 579 businesses establishments in the Town of Orange (Table 8). This increased by nearly eight percent, or to 623 establishments, by 2014. In comparison, there was a 3.3 percent and three percent growth in the number of establishments in the county and state, respectively. Similar to the county and the state, the Town of Orange realized a loss of establishments in the construction and manufacturing sectors. The town also experienced a decline in retail establishments. However, overall, the town realized a growth in businesses in all other industry sectors, dissimilar to the county and the state.

Notably, the Town of Orange witnessed growth in the number of finance, insurance and real estate establishments, albeit three in total. Nonetheless, this compares with a countywide loss

of 78 establishments in these two sectors and a statewide decline of more than 200 establishments in the same two sectors.

Table 8: Business Counts by Industry Sector by Building Type/Use

Economic Trends	Town of Orange, CT		New Haven County		Connecticut		Percent Change 2010 - 2014		
ESTABLISHMENTS	2010	2014	2010	2014	2010	2014	Orange, CT	New Haven	Connecticut
Total	**579**	**623**	**22,375**	**23,117**	**111,294**	**114,608**	**7.6%**	**3.3%**	**3.0%**
Industrial/Flex Building									
Construction	43	33	2,038	1,894	9,909	9,229	-23.3%	-7.1%	-6.9%
Manufacturing	14	12	1,269	1,197	4,906	4,588	-14.3%	-5.7%	-6.5%
Wholesale Trade	36	58	1,614	1,750	9,665	10,088	61.1%	8.4%	4.4%
Transportation and Warehousing	NA	15	420	404	1,913	1,897	NA	-3.8%	-0.8%
Subtotal	**93**	**118**	**5,341**	**5,245**	**26,393**	**25,802**	**26.9%**	**-1.8%**	**-2.2%**
Office/Flex; Institutional									
Information	4	6	323	324	1,773	2,002	50.0%	0.3%	12.9%
Finance and Insurance	34	35	1,126	1,070	7,170	7,023	2.9%	-5.0%	-2.1%
Real Estate	18	20	732	710	3,534	3,479	11.1%	-3.0%	-1.6%
Professional and Technical	51	56	2,267	2,412	12,883	13,558	9.8%	6.4%	5.2%
Management	5	7	109	129	768	1,015	40.0%	18.3%	32.2%
Administration and Waste Services	NA	35	1,152	1,223	6,807	7,371	NA	6.2%	8.3%
Educational Service	8	13	333	353	1,556	1,708	62.5%	6.0%	9.8%
Health Care and Social Assistance	36	40	2,357	2,451	9,955	10,372	11.1%	4.0%	4.2%
Subtotal	**156**	**212**	**8,399**	**8,672**	**44,446**	**46,528**	**35.9%**	**3.3%**	**4.7%**
Commercial									
Retail Trade	121	115	2,854	2,882	12,732	12,725	-5.0%	1.0%	-0.1%
Arts and Entertainment	10	12	285	322	1,695	1,786	20.0%	13.0%	5.4%
Accommodations and Food Services	60	66	1,798	1,953	7,723	8,277	10.0%	8.6%	7.2%
Other excluding Public Administration	63	77	2,932	3,261	13,895	14,877	22.2%	11.2%	7.1%
Subtotal	**254**	**270**	**7,869**	**8,418**	**36,045**	**37,665**	**6.3%**	**7.0%**	**4.5%**

Source: Connecticut Department of Labor and RKG Associates, Inc.

2. Trends in Employment by Industry Sector

In 2010, employment in the Town of Orange, was nearly 8,500 (Table 9), increasing to slightly more than 9,900 by 2014, or by 17 percent. This compares with a four percent increase in employment in New Haven County and a 2.5 percent growth statewide over the same time. While all areas realized a decline in manufacturing employment, the losses in other industry sectors were more diverse and generally limited to two or three other industry sectors, such finance/insurance and retail trade for the town.

Table 9: Employment Counts by Industry Sector by Building Type/Use

Economic Trends	Town of Orange, CT		New Haven County		Connecticut		Percent Change 2010-2014		
EMPLOYMENT	2010	2014	2010	2014	2010	2014	Orange, CT	New Haven	Connecticut
Total	**8,476**	**9,906**	**345,577**	**359,104**	**1,596,050**	**1,635,545**	**16.9%**	**3.9%**	**2.5%**
Industrial/Flex Building									
Construction	123	148	11,516	12,655	49,987	55,856	20.3%	9.9%	11.7%
Manufacturing	696	598	33,542	30,917	165,637	159,607	-14.1%	-7.8%	-3.6%
Wholesale Trade	461	537	14,244	13,965	62,752	63,096	16.5%	-2.0%	0.5%
Transportation and Warehousing	0	321	7,209	8,081	38,545	42,152	NA	12.1%	9.4%
Subtotal	**1,280**	**1,604**	**66,511**	**65,618**	**316,921**	**320,711**	**25.3%**	**-1.3%**	**1.2%**
Office/Flex; Institutional									
Information	8	15	6,398	5,119	31,735	31,968	87.5%	-20.0%	0.7%
Finance and Insurance	291	271	11,018	11,078	115,608	107,596	-6.9%	0.5%	-6.9%
Real Estate	175	200	4,828	5,196	19,024	19,276	14.3%	7.6%	1.3%
Professional and Technical	133	210	15,286	16,654	85,910	95,314	57.9%	8.9%	10.9%
Management	124	607	3,532	4,688	27,658	31,855	389.5%	32.7%	15.2%
Administration and Waste Services	0	582	16,635	19,035	77,699	85,735	NA	14.4%	10.3%
Educational Service	72	116	24,000	26,079	52,882	56,936	61.1%	8.7%	7.7%
Health Care and Social Assistance	418	550	65,266	68,027	246,340	260,480	31.6%	4.2%	5.7%
Subtotal	**1,221**	**2,551**	**146,963**	**155,876**	**656,856**	**689,160**	**108.9%**	**6.1%**	**4.9%**
Commercial									
Retail Trade	2,212	2,147	40,595	42,265	178,250	184,910	-2.9%	4.1%	3.7%
Arts and Entertainment	217	238	3,599	4,305	23,463	26,313	9.7%	19.6%	12.1%
Accommodations and Food Services	1,165	1,494	23,991	26,980	110,068	123,984	28.2%	12.5%	12.6%
Other excluding Public Administration	324	372	12,596	13,476	56,637	60,408	14.8%	7.0%	6.7%
Subtotal	**3,918**	**4,251**	**80,781**	**87,026**	**368,418**	**395,615**	**8.5%**	**7.7%**	**7.4%**

Source: Connecticut Department of Labor and RKG Associates, Inc.

a) Location Quotient

A reasonable reflection of how a local economy is performing is measured by comparing employment growth, by specific industry sectors, to a larger economy. In this instance, the changes in employment in the Town of Orange are compared with those of Connecticut over

the 2010 to 2014 period (Table 10). If the ratio, or location quotient, is near 1.0, this indicates that the Town of Orange is performing similar to the larger area in terms of employment in an industry sector and if less than 1.0, then the Town of Orange is under-performing. If the location quotient is greater than 1.0, the Town of Orange out-performs the state. RKG considers an industry sector to be out-performing the state when the location quotient is 1.2 or greater and under-performing 0.80 or less. There are several industry sectors where the Town of Orange out-performs the state, indicating "strengths" of the local economy. These include wholesale trade, for both 2010 and 2014 (strengthening over that time); real estate (slightly diminishing); and, most industry sectors in the "commercial" building use category, although less in 2014 compared with 2010.

Table 10: Location Quotients for the Town of Orange *vs.* Connecticut

LOCATION QUOTIENTS Town of Orange vs. Connecticut	2010	2014	Point Change	% Employee Change Town of Orange
Industrial/Flex Building				
Construction	0.463	0.437	(0.026)	20.3%
Manufacturing	0.791	0.619	(0.173)	-14.1%
Wholesale Trade	1.383	1.405	0.022	16.5%
Transportation and Warehousing	0.000	1.257	1.257	NA
Subtotal	**0.761**	**0.826**	**0.065**	**25.3%**
Office/Flex; Institutional				
Information	0.047	0.077	0.030	87.5%
Finance and Insurance	0.474	0.416	(0.058)	-6.9%
Real Estate	1.732	1.713	(0.019)	14.3%
Professional and Technical	0.292	0.364	0.072	57.9%
Management	0.844	3.146	2.302	389.5%
Administration and Waste Services	0.000	1.121	1.121	NA
Educational Service	0.256	0.336	0.080	61.1%
Health Care and Social Assistance	0.320	0.349	0.029	31.6%
Subtotal	**0.350**	**0.611**	**0.261**	**108.9%**
Commercial				
Retail Trade	2.337	1.917	(0.420)	-2.9%
Arts and Entertainment	1.742	1.493	(0.248)	9.7%
Accommodations and Food Services	1.993	1.990	(0.004)	28.2%
Other excluding Public Administration	1.077	1.017	(0.060)	14.8%
Subtotal	**2.003**	**1.774**	**(0.228)**	**8.5%**

Source: Connecticut Department of Labor and RKG Associates, Inc. *Exceeds state average*

3. Commuting Patterns

Commuting patterns for 2010 (developed by the American Community Survey) indicate that there were nearly 6,900 employed residents of the Town of Orange, with approximately 17 percent working in the town (Table 11).

Table 11: Commuting Patterns for 2010

WORKERS IN RESIDENCE & PLACE WHERE THEY WORK					JOBS IN PLACE & PLACE WHERE WORKERS RESIDE				
Workers in Residence	#	Workplace of Employed Town of Orange (CT) Residents	#	% of Residents	Local Jobs	#	Jobs in Town of Orange (CT) Held by Workers from	#	% of Jobs
Town of Orange, CT	6,889	Town of Orange	1,177	17.1%	Town of Orange, CT	8,557	Town of Orange	1,177	13.8%
		Top after Town of Orange	3,221	46.8%			Top after Town of Orange	4,151	48.5%
		New Haven town	1,042	15.1%			West Haven town	1,537	18.0%
		Milford town	851	12.4%			New Haven town	876	10.2%
		West Haven town	389	5.6%			Milford town	634	7.4%
		Stratford town	364	5.3%			Hamden town	408	4.8%
		Bridgeport town	346	5.0%			Bridgeport town	358	4.2%
		Hamden town	229	3.3%			East Haven town	338	3.9%
		Selected Other	1,172	17.0%			Selected Other	1,319	15.4%
		Shelton town	197	2.9%			Branford town	282	3.3%
		Fairfield town	154	2.2%			Wallingford town	186	2.2%
		Trumbull town	154	2.2%			Shelton town	168	2.0%
		New York County	145	2.1%			Waterbury town	156	1.8%
		Wallingford town	144	2.1%			Stratford town	144	1.7%
		North Haven town	143	2.1%			Seymour town	136	1.6%
		East Haven town	119	1.7%			Ansonia town	125	1.5%
		Norwalk town	116	1.7%			Woodbridge town	122	1.4%
		Remainder	1,319	19.1%			Remainder	1,910	22.3%

Source: American Community Survey (2006-2010); & RKG Associates, Inc.

This was followed by town residents working in New Haven, compromising 15 percent of the town's employed residents, and then workers in Milford, compromising 12 percent. Cumulatively, another 15 percent of the town's employed residents commuted to West Haven, Stratford and Bridgeport, combined. All other localities accounted for less than five percent, individually, of the town's employed residents. Nonetheless, 83 percent of the employed residents of the Town of Orange worked outside of the town. Conversely, in 2010 there were approximately 8,600 jobs in the Town of Orange, with 14 percent being filled by town residents. The greatest source of employment in the Town of Orange, at 18 percent, was from the 1,540 residents of West Haven. In other words, slightly more of the employment in the Town of Orange originated from West Haven as compared to internally. In total, 86 percent of the employment in the Town of Orange commuted from outside of the town.

C. Real Estate Indicators

This section discusses a variety of real estate indicators for the Town of Orange and compares them with the greater market of New Haven County. Specifically, the industrial, commercial and residential markets are presented in order to consider any future development in the Town of Orange, near the proposed Orange Railroad Station, that may come about as a result of the station and the proximity of a location near to it, excluding the proposed TOD development on-site of 200 residential units and approximately 21,500 SF of commercial uses.

1. Industrial

There was nearly 46.8 million SF of industrial space (Table 12) in New Haven County in 2009, with the Town of Orange accounting for 3.3 percent of that inventory, or 1.6 million SF. In the 3rd quarter of 2015, industrial space remained the same in the town but had diminished slightly to 46.5 million SF countywide. Vacant industrial space, at the end of 2009, in the town was slightly more than 205,000 SF accounting for a 13 percent vacancy rate. Through the 3rd quarter of 2015, vacancy in the town declined to less than 90,000 SF with a vacancy rate of less than six percent (*this varies from the data reported by the OEDC*). In contrast, the vacancy rate in New Haven County remained more or less the same at 12.6 percent (2009) and 12 percent (3rd quarter of 2015). Actual countywide vacancy declined by 287,600 SF, or by slightly more than the actual SF decline of 240,800 SF.

Table 12: 2009 / 2015 Industrial Market Sector

Industrial Sector	Town of Orange, CT			New Haven County			Town as % County	
Metrics	2009	3Q 2015	%Δ	2009	3Q 2015	%Δ	2009	3Q 2015
Total Bldgs	28	28	NA	953	950	-0.3%	2.9%	2.9%
Total SF	1,565,198	1,565,198	NA	46,776,140	46,535,323	-0.5%	3.3%	3.4%
Vacant SF	205,095	89,216	-56.5%	5,871,841	5,584,239	-4.9%	3.5%	1.6%
% Vacant	13.1%	5.7%	NA	12.6%	12.0%	951.4%	NA	NA
YTD Absorption	(138,357)	0	NA	(1,420,579)	351,032	NA	9.7%	NA
Ask $/SF	$6.89	$7.88	14.4%	$5.63	$5.38	-4.4%	122.4%	146.5%

Source : CB Richard Ellis and RKG Associates, Inc.

Both the town and the county realized negative absorption in 2009, indicating excess supply relative to demand. The county also experienced negative absorption in 2015, while the town was a positive 351,000 SF. Asking lease rates for industrial space in the town surpass those for the county, both in 2009 and in 2015, with the town realizing an increase in asking lease rates and the county a decline.

According to CBRE,[6] the greater New Haven industrial market continued to experience moderate leasing activity throughout 2014 as such Fortune 500 companies as Coca-Cola (Waterbury), FedEx (North Haven) and Macy's (Cheshire) all completed lease transactions. Continued, albeit moderate, growth is projected for New Haven County, particularly in the submarket which includes the Town of Orange, benefiting from I-95 access and proximity to the Fairfield County and New York City markets. A sample (Table 13) of available industrial properties in the Town of Orange indicates 143,500 SF available with an average asking lease rate of $5.51/SF or asking selling price of $155/SF. As of this analysis, the proposed development at the Orange Railroad Station site does not propose any industrial (SF) space.

Table 13: Sample of Available Industrial Properties in Orange, CT

Location	Address	Size	$/SF (lease)	Terms	$/SF (sale)
Available					
181	Marsh Hill Road	97,412	$5.25	NNN	
206a	Boston Post Rd	8,596	NA	NA	$232
210	Boston Post Rd	7,620	NA	NA	$69
273	Indian River Road	2,500	$8.64		
5	Connair Road	21,000	$4.95		
374	Boston Post Rd	6,400	$10.00	NNN	
Total		**143,528**	**$5.51**		**$155**

Source : Orange Economic Development Commission and RKG Associates, Inc. (2016)

2. Office

Office space in the Town of Orange represented less than two percent of the countywide inventory in both 2009 and through the 3rd quarter of 2015 (Table 14) and declined by about 2,000 SF to a total of 161,100 SF. In New Haven County there was a loss of 366,600 SF accounting for a countywide inventory of 11.5 million SF in the 3rd quarter of 2015. There was no measurable vacancy in the Town of Orange in 2015, dropping from a vacancy rate of more the 21 percent in 2009 (*this varies from the data reported by the OEDC*). Countywide vacancy increased by nearly 76,000 SF to a 15.6 percent vacancy rate in 2015. In both 2009 and through the 3rd quarter of 2015, there was positive office space absorption in the town and negative absorption in the county. Asking lease rates in the town remain below those for the county. According to CBRE the 2014 greater New Haven office market remains competitive, reflecting large blocks of vacancy in the central business district and prompting landlord concessions and declining lease rates. In general, improvements in the greater New Haven office market are expected to be tied with improvements in the overall economy.

Table 14: 2009 / 2015 Office Market Sector

Office Sector	Town of Orange, CT			New Haven County			Town as % County	
Metrics	2009	3Q 2015	%Δ	2009	3Q 2015	%Δ	2009	3Q 2015
Total Bldgs	5	5	0.0%	241	240	-0.4%	2.1%	2.1%
Total SF	163,085	161,117	-1.2%	11,914,769	11,548,132	-3.1%	1.4%	1.4%
Vacant SF	35,000	0	-100.0%	1,726,219	1,801,509	4.4%	2.0%	0.0%
% Vacant	21.5%	0.0%	NA	14.5%	15.6%	NA	NA	NA
YTD Absorption	1,846	27,985	1416.0%	(17,992)	(30,910)	71.8%	-10.3%	-90.5%
Ask $/SF	$15.00	$14.67	-2.2%	$19.58	$18.32	-6.4%	76.6%	80.1%

Source : CB Richard Ellis and RKG Associates, Inc.

[6] CB Richard Ellis *2015 Market Outlook.*

A sampling of office properties (Table 15), indicates a little more than 178,200 SF available with an average asking lease rate of $12.64/SF and/or an asking selling price of $123/SF.

Table 15: Sample of Available Office Properties in Orange, CT

Location	Address	Size	$/SF (lease)	Terms	$/SF (sale)
Available					
109	Boston Post Road	5,500	$16.50		
12	Cascade Boulevard	13,558	$12.50	NNN	
185	Boston Post Road	1,500	$14.95	NNN	
308	Racebrook Road	12,780	$12.00	NNN	
308	Racebrook Road	52,000	NA	NA	$106
312	Boston Post Road	2,100	$16.00		
477	Boston Post Road	22,625	$10.00	NNN	$84
240	Indian River Road	1,250	$16.50		
15	Executive Boulevard	12,908	$12.50	NNN	
370	Boston Post Road	2,070	$16.50		
297	Boston Post Road	6,520	$19.50	NNN	
477	Boston Post Road	6,400	$10.00	NNN	
233	Boston Post Road	1,000	$12.00		
109	Boston Post Road	38,000	NA	NA	$171
Total		**178,211**	**$12.64**		**$123**

Source : Orange Economic Development Commission and RKG Associates, Inc. (2016)

3. Retail

A sample of offered retail space (Table 16) indicates a nominal availability of 25,725 SF with an average asking lease of $12.51/SF and/or asking selling price of $54/SF.

Table 16: Sample of Retail for Lease in Orange, CT

Location	Address	Size	$/SF (lease)	Terms	$/SF (sale)
Available					
150	Boston Post Road	4,500	$15.00	NNN	
521-547	Boston Post Road	1,350	$15.00	NNN	
500	Boston Post Road	3,000	$8.80		
385	Boston Post Road	8,000	$8.00		
199	Boston Post Road	3,175	NA	NA	$54
153	Boston Post Road	1,200	$17.95	NNN	
516	Boston Post Road	2,000	$20.00		
517-519	Boston Post Road	2,500	$17.00	NNN	
Total		**25,725**	**$12.51**		**$54**

Source : Orange Economic Development Commission and RKG Associates, Inc. (2016)

While it is possible that there could be some retail growth, or additional development, in direct response to the proposed Orange Railroad Station, development of retail other than convenience, personal services or limited service food establishments may be unlikely. These represent the types of retail uses that would capitalize on increased auto-traffic, resulting from improved commuter rates (usage), and potentially from the additional spending demand as a result of the proposed 200-unit residential development. Other destination-type retail or retail that would attract a broader consumer demographic and level of development appears unlikely in direct response to the proposed Orange Railroad Station, but rather reflecting access, visibility and improved traffic counts near the I-95 interchange, noting that such visibility and access (and improved traffic counts) could encourage retail development. This could include redevelopment of the previously noted former Stew Leonard site of 41-acres for retail uses as such uses in the TODD have SF restrictions and must be tied in to non-retail uses.

4. Selected Sales Activity

As presented in Table 17, there have been nearly 50 commercial property sales in the Town of Orange since 2004, for office, industrial and retail uses. In total, these sales (and sometimes re-sales) account for a transfer of more than 2.7 million SF and represent nearly $245.5 million in real estate activity (averaging $90/SF). Notable among these is the purchase of the former Bayer complex (with 136-acres of land) by Yale University at the end of 2009. Also, the 2008 purchase of the former Showcase Cinemas, by United Illuminating, likely more for the land and location rather than for the building SF.

Paired sales activity (Table 18) in the Town of Orange of note include following:

- The sale and re-sale of the 17,400 SF office/industrial properties, located at 273 Indian River Road in 2004 (after a presumed internal transfer), again in 2016, increasing from $40/SF to $60/SF.
- The sale and re-sale of 307 Racebrook Road, from 2007 to 2013, declining from $82/SF to $69/SF.
- The sale, subsequent expansion and re-sale of 339 Boston Post Road, declining in price/SF by more than 43 percent from 2004 and 2015.

Table 18: Paired Sales Activity

Selected Sales Activity Town of Orange, CT	Year	SF / Units	$	$ / SF or Unit
PAIRED SALES				
307 Racebrook Rd	**2007**	9,120	$750,000	$82
307 Racebrook Rd	**2013**	9,120	$625,000	$69
% Change				**-16.7%**
273 Indian River Rd	**2004**	17,400	$700,000	$40
273 Indian River Rd	**2004**	17,400	$900,000	$52
273 Indian River Rd	**2016**	17,000	$1,013,000	$60
% Change				**48.1%**
339 Boston Post Rd	**2004**	31,154	$3,075,000	$99
339 Boston Post Rd	**2014**	38,224	$1,450,000	$38
339 Boston Post Rd	**2015**	38,224	$2,140,000	$56
% Change				**-43.3%**
477 Boston Post Rd	**2005**	13,000	$1,315,000	$101
477 Boston Post Rd	**2008**	13,000	$1,835,000	$141
% Change				**39.5%**

Source : LoopNet and RKG Associates, Inc. (2016)

Table 17: Selected Commercial Sales Activity

Selected Sales Activity Town of Orange, CT	Use	SF / Units	$	$ / SF or Unit
2004				
295 Indian River Rd	Office	19,650	$1,210,000	$62
273 Indian River Rd	Office	17,400	$700,000	$40
300 Boston Post Rd	Industrial	10,195	$485,000	$48
273 Indian River Rd	Industrial	17,400	$900,000	$52
339 Boston Post Rd	Office	31,154	$3,075,000	$99
291 S Lambert Rd	Office	19,872	$2,050,000	$103
Total		**115,671**	**$8,420,000**	**$73**
2005				
34 Prindle Hill Rd	Industrial	23,040	$1,375,000	$60
400 Boston Post Rd	Retail	44,000	$5,800,000	$132
521-547 Boston Post Rd	Retail	38,000	$5,000,000	$132
477 Boston Post Rd	Office	13,000	$1,315,000	$101
440 Boston Post Rd	Retail	221,752	$28,054,285	$127
55 Boston Post Rd	Retail	65,114	$11,742,000	$180
Total		**404,906**	**$53,286,285**	**$132**
2006				
80 Prindle Hill Rd	Industrial	17,560	$780,000	$44
311 Racebrook Rd	Retail	3,500	$770,000	$220
Total		**21,060**	**$1,550,000**	**$74**
2007				
307 Racebrook Rd	Retail	9,120	$750,000	$82
363 Boston Post Rd	Retail	15,273	$1,475,000	$97
137 Frontage Rd	R & D	1,425,000	$109,000,000	$76
Total		**1,449,393**	**$111,225,000**	**$77**
2008				
60 Marsh Hill Rd	Industrial	105,140	$11,085,200	$105
308 Peck Lane	Office	9,108	$1,450,000	$159
22 Prindle Hill Rd	Industrial	21,160	$1,548,056	$73
100 Marsh Hill Rd	Cinemas	79,823	$20,250,000	$254
477 Boston Post Rd	Office	13,000	$1,835,000	$141
Total		**228,231**	**$36,168,256**	**$158**
2010				
292 Boston Post Rd	Retail	10,020	$1,500,000	$150
657 Orange Center Rd	Office	5,100	$550,000	$108
196 Boston Post Rd	Retail	10,000	$885,000	$89
401 Boston Post Rd	Retail	30,000	$2,700,000	$90
472 Boston Post Rd #5	Office	1,102	$187,000	$170
250 Indian River Rd	Commercial	18,738	$1,336,000	$71
Total		**74,960**	**$7,158,000**	**$95**
2012				
480 Boston Post Rd	Restaurant	2,521	$540,000	$214
486 Boston Post Rd	Restaurant	2,740	$300,000	$109
449 Boston Post Rd	Commercial	13,660	$1,450,000	$106
Total		**18,921**	**$2,290,000**	**$121**
2013				
307 Racebrook Rd	Commercial	9,120	$625,000	$69
472 Boston Post Rd #5	Med Office	5,500	$175,000	$32
Total		**14,620**	**$800,000**	**$55**
2014				
512 Boston Post Rd	Retail	19,552	$940,000	$48
339 Boston Post Rd	Retail	38,224	$1,450,000	$38
472 Boston Post Rd #4	Office Condo	2,204	$175,000	$79
57 Boston Post Rd	Retail	10,754	$210,000	$20
Total		**70,734**	**$2,775,000**	**$39**
2015				
153 Boston Post Rd	Retail	11,924	$400,000	$34
292 Boston Post Rd	Retail	29,496	$5,420,000	$184
339 Boston Post Rd	Retail	38,224	$2,140,000	$56
285 Boston Post Rd	Retail	10,848	$1,680,000	$155
111 Boston Post Rd	Restaurant	2,868	$810,000	$282
374 Boston Post Rd	Commercial	17,200	$1,190,000	$69
163 Boston Post Rd	Retail	8,660	$525,000	$61
Total		**289,928**	**$19,315,000**	**$67**
2016				
347 Boston Post Rd	Retail	3,360	$472,500	$141
273 Indian River Rd	Off/Whse	17,000	$1,013,000	$60
320 Boston Post Rd	Commercial	9,540	$800,000	$84
472 Boston Post Rd #2	Office	5,500	$166,000	$30
Total		**35,400**	**$2,451,500**	**$69**
GRAND TOTAL		**2,723,824**	**$245,439,041**	**$90**

Source : LoopNet and RKG Associates, Inc. (2016)

5. Residential

Between 2000 and 2009 there were approximately 1,535 single-family residential sales in the Town of Orange, averaging 153 units annually (Table 19). Sales of condominium units was less, averaging seven annually or less than five percent of the single-family activity. The average selling price for a single-family unit was $353,800, more than $90,000 greater than for a condominium. On a per year basis, sales of single-family homes peaked in 2004 (at 193 units) and bottomed out at 102 units in 2009. Condominium sales were at a high of 20 units in 2000 and have not attained double-digit status since that time, with a low of four sales in both 2002 and 2008. Over the last five years (2010 through 2014) single-family sales have averaged 110 units annually with a price of $336,700, less than the previous decade. On the other hand, the average price for a condominium unit rose to $354,500 surpassing that for a single-family unit and now averaging about ten percent of the annual sales volume and a selling price greater than that for single-family units.

Table 19: Residential Sales Activity – Town of Orange, CT

Residential Sales Activity Town of Orange, CT	Annual Avg 2000-2009	2010	2011	2012	2013	2014	Annual Avg 2010-2014
UNITS							
Single Family	**153**	94	73	130	115	137	**110**
Condominiums	**7**	17	10	8	13	5	**11**
Condo as % of Total	**4.5%**						**8.8%**
MEDIAN SALES $/UNIT							
Single Family	**$353,780**	$355,500	$330,000	$322,500	$340,000	$338,000	**$336,681**
Condominiums	**$261,215**	$310,000	$555,520	$292,000	$289,000	$373,597	**$354,456**
Condo as % of SF	**73.8%**						**105.3%**

Source : The Warren Group and RKG Associates, Inc.

Between 2000 and 2009, the Town of Orange averaged 15 single-family residential permits, annually (Table 20). The estimated construction value of these permits peaked at $306,000 in 2009, but that is from a small sample of permits. Over the entire time period the average estimated construction value was $233,700. Permit activity for other residential development was more limited with 168 units in 2004 and five units in 2009, with an annual average of 17 units. The average value was $75,100 well below that for a single-family unit.

Table 20: Residential Building Permit Activity – Town of Orange, CT

Residential Permit Activity Town of Orange, CT	Annual Avg 2000-09	2010	2011	2012	2013	2014	Annual Avg 2010-14
UNITS							
Single Family	**15**	8	6	18	20	26	**16**
All Other	**17**						**0**
All Other as % of Total	**53.2%**						**0.0%**
AVERAGE CONSTRUCTION $							
Single Family	**$233,723**	$242,403	$231,315	$253,924	$375,668	$295,903	**$296,213**
All Other	**$75,132**						**$0**
All Other as % of SF	**32.1%**						**0.0%**

Source : US Census Bureau and RKG Associates, Inc.

Over the 2010 through 2014 period, permits for single-family homes averaged 16 annually in the town, with an average permit value of $292,200. This is greater than the average of the prior ten years but less than the $375,700 in 2013 and the prior 2009 peak of $306,000. In the more recent five years there has been no multi-family permit activity noted.

6. Conclusions

As of the end of 2009, there was an ample inventory of industrial space in New Haven County and reportedly more than 205,000 SF vacant in the Town of Orange, accounting for a 13 percent vacancy factor. Absorption of industrial space was negative in 2009. Through the 3rd quarter of 2015, vacancy in the town declined to less than 90,000 SF with a vacancy rate of less than six percent, indicative of an overall improving economy since the Great Recession.

Reported office vacancy rates for the county and town, in 2009, were 14 percent and 21 percent, respectively. Absorption of office space was negative for New Haven County and nominal (less than 2,000 SF) for the Town of Orange. Currently (3rd quarter of 2015), there was no measurable office vacancy in the Town of Orange while the countywide vacancy increased by nearly 76,000 SF to a 15.6 percent vacancy rate.

In general, residential sales and building permit activity continue to recover from the fallout of the Great Recession, with signs of upward trends in volume, although not back to where they once were pre-recession. Pricing and permit values continue to improve but at a lesser pace than volume, indicating more activity at lower price (or dollar) points.

D. Environmental Justice

In accordance with *Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Population and Low Income Populations*, and subsequent procedures developed by the US Department of Transportation, activities that have potential to generate an effect on human health or the environment must include explicit consideration of their effects on minority and low-income populations ("Environmental Justice" effects or impacts). These regulations aim to prevent minority and low-income populations from exposure to disproportionately high adverse human health or environmental effects as a result of USDOT programs, policies, and activities are disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.

1. Socio-demographics

Selected socio-demographics are compared, for the Orange Study Area, the Town of Orange, New Haven County and Connecticut (refer to Table 21). The total population of the Orange Study Area has remained stable since 2010, compared to a modest decline town-wide and modest increases at the county and state levels. The non-white population has increased since 2010 for all areas.

Noted in Table 21, despite the Orange Study Area exhibiting a per capita income less than that for the Town of Orange, it was greater than the per capita income for either New Haven County or the state. The number of persons aged 25 or older who do not have a high school diploma held constant in the Orange Study Area, increased for the town as a whole and decreased at the county and state levels.

Finally, the number of households in the Orange Study Area without a vehicle held constant between 2010 and 2015, dissimilar to the Town of Orange, the county and the state where the number of households without vehicles all increased.

Table 21: Selected Socio-demographics

Selected Socio-demographics	1/2 Mile Site	Town of Orange	New Haven County	Connecticut State
Total Population				
2010	159	13,956	862,478	3,574,098
2015	159	13,931	862,236	3,605,635
% change	0.0%	-0.2%	0.0%	0.9%
Nonwhite Population				
2010	18	1,538	217,733	801,688
2015	19	1,659	229,355	864,271
% change	9.7%	7.9%	5.3%	7.8%
Per Capita Income				
2010	$35,333	$51,486	$33,200	$37,597
2015	$35,864	$52,364	$33,489	$38,722
% change	1.5%	1.7%	0.9%	3.0%
Population Aged 25+ no High School diploma				
2010	7	481	69,815	276,964
2015	7	497	69,374	275,320
% change	0.0%	3.3%	-0.6%	-0.6%
Households with no Vehicle available				
2010	4	182	37,690	123,944
2015	4	190	37,981	126,343
% change	0.0%	4.4%	0.8%	1.9%

Source : US Census, Alteryx and RKG Associates, Inc.

2. Impact Assessment

Impacts to environmental justice populations are assessed based on anticipated changes to community cohesion, access to transportation options, access to community resources and institutions, safety, and economic opportunity. There are seven (7) properties along Salemme Road, which while in the Orange TODD zone, are not a part of the currently proposed development. While development and completion of the currently proposed project may foster interest in these other parcels, their eventual development (if any) would be on their own merits and submissions to the Town of Orange in accordance with the TODD regulations and guidelines.

In either event, potential repositioning of these other parcels is not assumed to adversely impact low income or minority populations. The current proposed development (approved by Town zoning September 20, 2016) includes 20 units of affordable rental housing, which coupled with the overall proximity and convenience of the proposed Orange Railroad Station to the Orange Study Area population may improve access to public transportation, and hence employment opportunities, for the population (households) not having access to a private passenger vehicle, irrespective of whether these households are low income or minority.

Appendix F

Endangered Species Documentation

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
PHONE: (603)223-2541 FAX: (603)223-0104
URL: www.fws.gov/newengland

Consultation Code: 05E1NE00-2017-SLI-0678 January 18, 2017
Event Code: 05E1NE00-2017-E-01114
Project Name: Orange Railroad Station

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: Orange Railroad Station

Official Species List

Provided by:

New England Ecological Services Field Office
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
(603) 223-2541
http://www.fws.gov/newengland

Consultation Code: 05E1NE00-2017-SLI-0678
Event Code: 05E1NE00-2017-E-01114

Project Type: TRANSPORTATION

Project Name: Orange Railroad Station
Project Description: The Connecticut Department of Transportation (CTDOT) is proposing to construct a new
commuter rail station along the Metro-North New Haven Line in Orange, Connecticut through a public-private partnership agreement that will include a Transit Oriented Development (TOD) constructed by Orange Land Development LLC (OLD). The Proposed Action refers to the actions specifically funded by state and federal funds and includes the following elements:
· Two new approximately 1,020-foot long and approximately 10-foot wide canopied station platforms, one on the eastbound side and one on the westbound side
· A covered pedestrian bridge connecting the platforms via stairtowers and elevators
· A gated emergency access driveway along the south side of the railroad right-of-way connecting to Conair Drive, a private way that parallels the railway corridor on the south side.

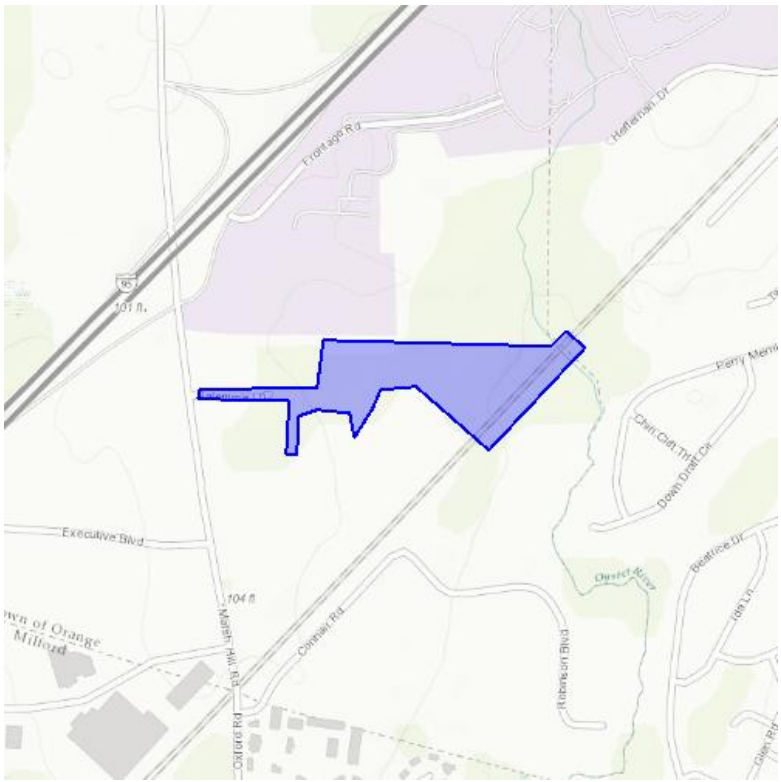
In addition, the following elements, which are anticipated to be shared with the adjacent TOD, are also considered part of the Proposed Action:
· Commuter drop-off/pick-up, taxi stand and bus stop areas
· 6-level, 566-space commercial TOD/commuter parking structure that will serve the rail station
· Stormwater management system
· Utility infrastructure.

The following elements are considered actions associated with the TOD, which is subject to local review and approval, and are not part of the Proposed Action, but are considered in the assessment of indirect and cumulative impacts, as appropriate:
· Improvements/extension of the existing Salemme Lane and cul-de-sac terminating at the new station
· 4 new buildings (200 residential units and 21,500 square feet of retail/office space)
· 3-level, 233-space garage that will be dedicated parking for the TOD
· Approximately 123 surface parking spaces
· Site improvements, including the opportunity for future pedestrian connection with Yale West Campus to the north and Dichello Distributors Inc. to the south.

Construction is anticipated to start as early as 2017.

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-72.9969620704651 41.251564413682694, -72.9924237728119 41.251475685720706, -72.99210190773012 41.25170960463326, -72.99173712730409 41.25143535478907, -72.99365758895875 41.249910827314665, -72.99511671066286 41.25085458661265, -72.99581408500673 41.2508223215626, -72.99597501754762 41.25054000169478, -72.99632906913759 41.25009635372333, -72.99644708633424 41.25046740496015, -72.99708008766176 41.25051580279221, -72.99744486808778 41.250427073406044, -72.99749851226808 41.2498382298809, -72.99771308898927 41.24984629626641, -72.99764871597291 41.250660996073236, -72.99947261810304 41.25066906235717, -72.9994297027588 41.25081425529759, -72.99803495407106 41.25084652035164, -72.9970693588257 41.25083038782659, -72.9969620704651 41.251564413682694)))

Project Counties: New Haven, CT

Endangered Species Act Species List

There are a total of 2 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Birds	**Status**	**Has Critical Habitat**	**Condition(s)**
Red Knot *(Calidris canutus rufa)* Population: Wherever found	Threatened		
Mammals			
Northern long-eared Bat *(Myotis septentrionalis)* Population: Wherever found	Threatened		

Critical habitats that lie within your project area

There are no critical habitats within your project area.

IPaC **U.S. Fish & Wildlife Service**

Regulatory review / Endangered species / Species determinations

Species determinations

For listed species[1] not covered by determination keys, an impact analysis should be performed to reach a conclusion about how this project will impact the species. These conclusions will result in *determinations* for each species, which will be used in consultation with the U.S. Fish and Wildlife Service.

Birds

Red Knot Calidris canutus rufa	None

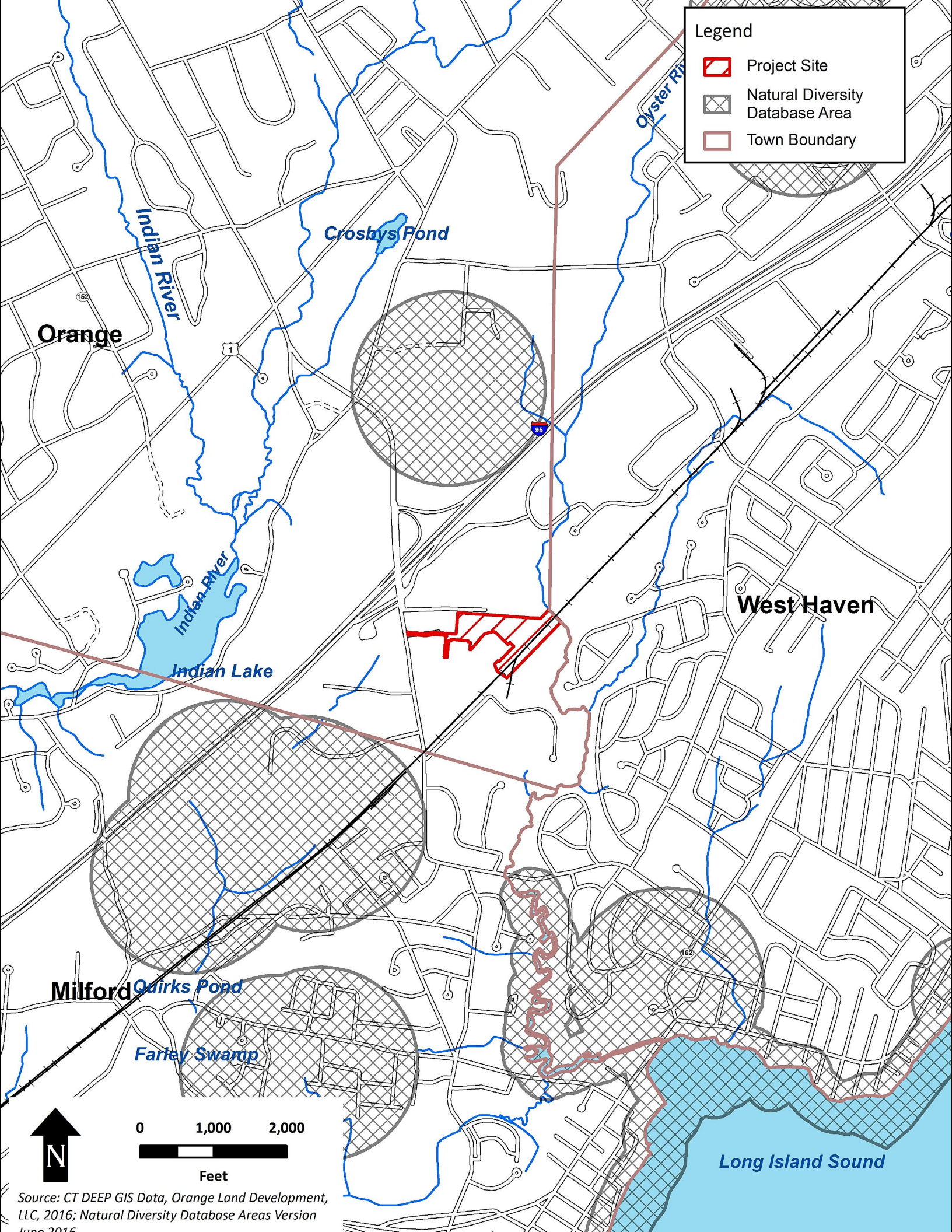
Mammals

Northern Long-eared Bat Myotis septentrionalis	None

Critical habitats

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.



Source: CT DEEP GIS Data, Orange Land Development, LLC, 2016; Natural Diversity Database Areas Version June 2016

Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form

Federal agencies should use this form for the optional streamlined consultation framework for the northern long-eared bat (NLEB). This framework allows federal agencies to rely upon the U.S. Fish and Wildlife Service's (USFWS) January 5, 2016, intra-Service Programmatic Biological Opinion (BO) on the final 4(d) rule for the NLEB for section 7(a)(2) compliance by: (1) notifying the USFWS that an action agency will use the streamlined framework; (2) describing the project with sufficient detail to support the required determination; and (3) enabling the USFWS to track effects and determine if reinitiation of consultation is required per 50 CFR 402.16.

This form is not necessary if an agency determines that a proposed action will have no effect to the NLEB or if the USFWS has concurred in writing with an agency's determination that a proposed action may affect, but is not likely to adversely affect the NLEB (i.e., the standard informal consultation process). Actions that may cause prohibited incidental take require separate formal consultation. Providing this information does not address section 7(a)(2) compliance for any other listed species.

Information to Determine 4(d) Rule Compliance:	**YES**	**NO**
1. Does the project occur wholly outside of the WNS Zone[1]?	☐	☒
2. Have you contacted the appropriate agency[2] to determine if your project is near known hibernacula or maternity roost trees?	☒	☐
3. Could the project disturb hibernating NLEBs in a known hibernaculum?	☐	☒
4. Could the project alter the entrance or interior environment of a known hibernaculum?	☐	☒
5. Does the project remove any trees within 0.25 miles of a known hibernaculum at any time of year?	☐	☒
6. Would the project cut or destroy known occupied maternity roost trees, or any other trees within a 150-foot radius from the maternity roost tree from June 1 through July 31.	☐	☒

You are eligible to use this form if you have answered yes to question #1 **or** yes to question #2 **and** no to questions 3, 4, 5 and 6. The remainder of the form will be used by the USFWS to track our assumptions in the BO.

Agency and Applicant[3] (Name, Email, Phone No.): Federal Transit Administration

Project Name: Orange Railroad Station – New Haven Line

Project Location (include coordinates if known): East of Marsh Hill Road, South of I-95, Orange, CT (41.252634, -72.99364)

Basic Project Description (provide narrative below or attach additional information): The Connecticut Department of Transportation is proposing to construct a new commuter rail station along the Metro-North New Haven Line in Orange, Connecticut through a public-private partnership agreement that will include a Transit Oriented Development constructed by Orange Land Development LLC.

[1] http://www.fws.gov/midwest/endangered/mammals/nleb/pdf/WNSZone.pdf
[2] See http://www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html
[3] If applicable - only needed for federal actions with applicants (e.g., for a permit, etc.) who are party to the consultation.

General Project Information	YES	NO
Does the project occur within 0.25 miles of a known hibernaculum?	☐	☒
Does the project occur within 150 feet of a known maternity roost tree?	☐	☒
Does the project include forest conversion[4]? (if yes, report acreage below)	☒	☐
Estimated total acres of forest conversion	6.65	
If known, estimated acres[5] of forest conversion from April 1 to October 31		
If known, estimated acres of forest conversion from June 1 to July 31[6]		
Does the project include timber harvest? (if yes, report acreage below)	☐	☒
Estimated total acres of timber harvest		
If known, estimated acres of timber harvest from April 1 to October 31		
If known, estimated acres of timber harvest from June 1 to July 31		
Does the project include prescribed fire? (if yes, report acreage below)	☐	☒
Estimated total acres of prescribed fire		
If known, estimated acres of prescribed fire from April 1 to October 31		
If known, estimated acres of prescribed fire from June 1 to July 31		
Does the project install new wind turbines? (if yes, report capacity in MW below)	☐	☒
Estimated wind capacity (MW)		

Agency Determination:

By signing this form, the action agency determines that this project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule.

If the USFWS does not respond within 30 days from submittal of this form, the action agency may presume that its determination is informed by the best available information and that its project responsibilities under 7(a)(2) with respect to the NLEB are fulfilled through the USFWS January 5, 2016, Programmatic BO. The action agency will update this determination annually for multi-year activities.

The action agency understands that the USFWS presumes that all activities are implemented as described herein. The action agency will promptly report any departures from the described activities to the appropriate USFWS Field Office. The action agency will provide the appropriate USFWS Field Office with the results of any surveys conducted for the NLEB. Involved parties will promptly notify the appropriate USFWS Field Office upon finding a dead, injured, or sick NLEB.

Signature: _____ Date Submitted: _____

[4] Any activity that temporarily or permanently removes suitable forested habitat, including, but not limited to, tree removal from development, energy production and transmission, mining, agriculture, etc. (see page 48 of the BO).
[5] If the project removes less than 10 trees and the acreage is unknown, report the acreage as less than 0.1 acre.
[6] If the activity includes tree clearing in June and July, also include those acreage in April to October.

Appendix G

Archaeological and Historical Documentation

Department of Economic and Community Development

Connecticut
still revolutionary

January 23, 2013

Mr. Kevin Fleming
Office of Environmental Planning
Department of Transportation
2800 Berlin Turnpike
P.O. Box 317546
Newington, CT 06131-7546

Subject: Project No. 106-120
Proposed Orange Railroad Station in
Orange, Connecticut

Dear Mr. Fleming,

The State Historic Preservation Office (SHPO) has reviewed the Phase II archeological survey prepared by Archaeological and Historical Services, Inc. concerning the above project. The Office of Environmental Planning (OEP) at DOT has completed a review of the potential project effects to historic properties in accordance with Section 106 of the National Historic Preservation Act, as amended, and the Connecticut Environmental Policy Act. This well-written and comprehensive report meets the standards set forth in the *Environmental Review Primer for Connecticut's Archaeological* Resources.

In the opinion of the SHPO, prehistoric archeological Sites 107-15 and 107-16 are not eligible for the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]). Because these sites lacked research potential and integrity, this office concurs with the findings of the investigation and OEP's opinion that no historic properties will be affected by this undertaking. Although it does not impact the findings of the investigation, the SHPO notes that figures referenced in the historical context section of the report were not included. In addition, page 28 of the report states that artifacts recovered from Site 107-15 originated from five shovel tests, but the artifact inventory and site plan suggest that artifacts were identified in six shovel tests. This office requests two hardcopies of the report prepared by Archaeological and Historical Services, Inc., as well as unbound copies of the updated State of Connecticut archaeological site forms.

The SHPO appreciates the opportunity to review and comment upon this project. These comments are provided in accordance with the Connecticut Environmental Policy Act and Section 106 of the National Historic Preservation Act, as amended. For additional information, please contact Catherine Labadia, Environmental Reviewer, at (860) 256-2764 or catherine.labadia@ct.gov.

Sincerely,

Daniel T. Forrest
State Historic Preservation Officer

REPORT

PHASE I ARCHAEOLOGICAL RECONNAISSANCE SURVEY

PROPOSED ORANGE RAILROAD STATION
NEW HAVEN LINE

ORANGE, CONNECTICUT

CONNECTICUT DEPARTMENT OF TRANSPORTATION
STATE PROJECT NO. 106-120

Prepared for

Fuss and O'Neill, Inc.
78 Interstate Drive
West Springfield, MA 01080

By

Archaeological and Historical Services, Inc.
569 Middle Turnpike
P.O. Box 543
Storrs, CT 06268

March 3, 2011

Authors:

Mary Harper
Timothy Ives
Bruce Clouette

ABSTRACT/MANAGEMENT SUMMARY

The Connecticut Department of Transportation proposes to construct a New Haven Line Railroad station in the town of Orange. The proposed new commuter rail station will be located on a 28.1-acre site between Marsh Hill Road and the train tracks along the Oyster River. The Connecticut State Historic Preservation Office reviewed the proposed planned project and determined that the project area, on a terrace overlooking the Oyster River about two miles west of New Haven Harbor/Long Island Sound, is archaeologically sensitive; a Phase I Archaeological Reconnaissance Survey was therefore recommended in order to identify and evaluate any archaeological (subsurface) sites or above-ground historical resources.

Archaeological and Historical Services, Inc. conducted a Phase I Archaeological Reconnaissance Survey of the entire affected property. Three archaeological sites were identified. Site 107-14 is comprised of a low-density scatter of mid- to late 19th-century domestic (household-related) artifacts likely associated with a 19th-century house which once stood nearby. The relatively small number of artifacts were found in partially disturbed contexts, and the structural house remains were likely destroyed by the construction of the housing subdivision along Salemme Lane on the western border of the project area. Additional archaeological testing at Site 107-14 is unlikely to produce significant information, and the disturbance and limited information potential make the site an unlikely candidate for inclusion in the National Register of Historic Places.

Two prehistoric sites were identified. Site 107-15 is in the east-central portion of the project area, adjacent to the proposed location of the new rail station. This site produced a quartz Lamoka-like projectile point, and, 15 meters away, a quartz retouched flake. This site has the potential to yield information important to understanding prehistoric lifeways in the region. Phase II Intensive Archaeological Survey is recommended at Site 107-15 in order to collect sufficient data to permit a conclusive determination of its eligibility for the National Register of Historic Places.

In the northeast portion of the project area, about 80 meters north of Site 107-15, a quartz drill and possible feature, represented by a charred botanical fragment, were found in a deep, undisturbed soil context. Site 107-16 may contain additional information that could elucidate prehistoric lifeways in the Orange area. Additional testing in the form of a Phase II Intensive Archaeological survey is recommended at Site 107-16.

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I. INTRODUCTION AND SCOPE OF WORK

A. Introduction

The Connecticut Department of Transportation (CTDOT) proposes to construct a New Haven Line railroad station in the Town of Orange (State Project No. 106-120). The new proposed railroad station site is located approximately 0.25 miles from I-95 Interchange 41 on primarily undeveloped land (Figure 1). The 28.1-acre project area consists of six parcels, which would be accessed from Marsh Hill Road along a new access road to be constructed as part of the project. The six parcels include four residential lots along the south side of Salemme Lane, comprising approximately 2.3 acres, a 13.75-acre lot owned by Yale University (part of Yale's West Campus), a 9.3-acre lot immediately south of the Yale lot, owned by DiChello Distributors, Inc., and a 2.75-acre strip along the railroad tracks (Figure 2). The Yale and DiChello properties are separated by a sewer main (Figure 2).

The proposed 3,000-square-foot station will include a ticket office, waiting room, restrooms, and a newsstand/kiosk. Proposed parking will consist of a four-level structure with 470 spaces and three separate surface lots totaling 630 spaces. Two new inbound and outbound station platforms, each 1,080 feet long by 10 feet wide, are proposed, and the outbound platform will connect with the parking area and station via a pedestrian tunnel under the railroad embankment. Proposed vehicle access and circulation includes a single entrance from Marsh Hill Road, immediately south of an existing cul-de-sac, Salemme Lane; relocated access to Salemme Lane; an access loop roadway with passenger vehicle and bus drop-off lanes and pedestrian walkways; two new cul-de-sacs providing access to properties on Salemme Lane; and a gated driveway providing emergency access to the outbound platform from Conair Drive (Figure 3).

The proposed project will be financed with state and federal funds, thus it must comply with the National Environmental Protection Act (NEPA) and the Connecticut Environmental Protection Act (CEPA). NEPA requires preparation of an Environmental Assessment (EA); CEPA mandates preparation of an Environmental Impact Evaluation (EIE). A joint EA/EIE will be prepared for the Orange Railroad station project. The federal funding also requires the project to comply with Section 106 of the National Historic Preservation Act (NHPA), which requires that federally assisted undertakings take into account their effect on possibly significant archaeological or historical resources. Significant resources are those which meet one or more of the National Park Service eligibility criteria for nomination to the National Register of Historic Places:

A. Association with events that have made a significant contribution to the broad patterns of our history;

B. Association with the lives of persons significant in our past;

C. Distinctive design or physical characteristics, including representation of a significant entity whose individual components may lack distinction;

D. Demonstrated ability, or potential to yield important information about prehistory or history.

In compliance with the NHPA, CEPA and NEPA, the State Historic Preservation Office (SHPO) reviewed the proposed project and determined that the project area "possesses moderate to high sensitivity for prehistoric and historic archaeological resources" (Loether 2004a and 2004b). The SHPO therefore recommended that a "professional reconnaissance survey be undertaken to identify and evaluate archaeological resources which may exist within proposed project limits, including equipment storage and associated work areas" (Loether 2004a). According to the CTDOT's 2009 Final State Environmental Impact Evaluation (FSEIE) of the alternatives originally considered for the train station, the SHPO's assessment of the archaeological sensitivity of the Orange alternative was based "on the proximity of the Oyster River, a review of general soil properties, and a review of historic mapping for the vicinity. In addition, stone walls associated with 19th-century farmsteads" were noted by SHPO in a 2004 site visit (FSEIE 5-64).

Archaeological and Historical Services, Inc. (AHS) conducted the requested Phase I Archaeological Reconnaissance Survey of the proposed project area, under contract to Fuss and O'Neill, Inc., on-call environmental consultants to CTDOT. The results of the survey are presented in this report. Cultural resources and archaeological sites identified in the project area and potential impacts to these resources from the proposed undertaking are also described in the EA/EIE, as are possible mitigation measures.

B. Scope of Work

The purpose of a Phase I Archaeological Reconnaissance Survey is to locate and identify all archaeological sites or historic resources which may be affected by a project. Archaeological sites are the buried remains of human activity and can range from pre-colonial Native American sites that are thousands of years old, to historic-period houses or industrial sites. Historic resources include standing structures such as houses, above-ground mill remains, engineering features such as dams and bridges, and historic landscapes. A combination of documentary research, informant interviews, visual inspection and subsurface testing is used to determine the sites and resources within a project area. According to the *Environmental Review Primer for Connecticut's Archaeological Resources* (hereafter *Primer*), the standards for archaeological survey conducted in Connecticut, the following tasks must be conducted as part of the Phase I survey, which includes two steps, Phase IA and Phase IB:

B.1 Phase IA Survey

The first steps of a Phase I Archaeological Reconnaissance Survey are known as a Phase IA, or assessment-level survey, and include background research, informant interviews, and walkover inspection. The purpose of the Phase IA survey is to assess the areas of pre-colonial Native American and post-colonial archaeological sensitivity within the project area and to identify any above-ground historic resources that may be affected by the project.

Background Research. In this task, the archaeological site files maintained by the SHPO and Office of State Archaeology (OSA) were checked to see if any archaeological sites have been reported in or near the project area. Environmental resources are also consulted, because prehistoric archaeological sites are often associated with particular environmental features. The project area sits on a terrace above the Oyster River. Most of it is wooded and comprised of Agawam fine sandy loam, and there are numerous small wetland areas throughout; such

conditions and proximity to the Oyster River and New Haven Harbor likely attracted prehistoric peoples to the area.

As part of the background research, reports of state or federally-mandated archaeological investigations in the area were read in order to glean more information about the archaeological site sensitivity of the project area. A few archaeological surveys conducted in the Orange area have identified prehistoric sites (Raber and Wiegand 1992, ACS 1996).

The project historian and senior archaeologist reviewed local-history sources, such as Brilvitch (2007), Barber (1836) and Woodruff (1949). A series of historical maps and aerial photographs (Figures 5 - 11) were consulted to identify buildings and other historic uses within or adjacent to the project area. The purpose of this background research was to establish a historic context for the project area and to better interpret any historic-period artifacts that were encountered.

Also part of the background research, persons or institutions with knowledge of the area's prehistory and history were contacted for germane information.

Walkover Inspection. The entire project area was examined via windshield and walkover survey to look for evidence of historic resources (standing buildings, for example) or archaeological sites (mill ruins or apparently undisturbed areas close to wetlands or streams). Areas of pervasive ground disturbance were noted; such areas would not be subjected to Phase IB testing because the likelihood of finding intact archaeological sites is extremely low. The walkover/windshield inspection refined the estimates of archaeologically sensitive areas based on the background and informant research.

B.2 Phase IB Survey

B.2.1 Subsurface Testing

Phase IB subsurface testing was conducted in areas confirmed in the Phase IA as having the potential to contain intact (i.e., undisturbed) prehistoric or historic-period sites. SHPO guidelines recommend testing at a maximum of 15-meter intervals. Based on a review of readily available mapping only, not on a field review, it appeared that approximately 18 acres of the project area could merit testing. AHS eliminated portions of lawn areas around the houses to be taken along Marsh Hill Road and Salemme Lane, areas identified as wetlands or developed areas in Figure 5.12-2 of the FSEIE (Figure 4), and areas identified as disturbed soils by the USDA. These areas are not likely to contain intact archaeological remains. We also eliminated the 2.75-acre portion of the project area along the railroad tracks as disturbed. It was possible that additional areas would be eliminated from subsurface testing based on disturbance, following the walkover survey. Possible areas of earthmoving were suggested by mapped topographic anomalies near the industrial development on the south, in the DiChello Distributors property.

AHS placed test pits at 15-meter intervals along transects laid across the apparently undisturbed portions of the project area. Judgment pits were placed in areas of apparent particularly high archaeological potential that were not covered by the transect test pits, and additional pits were placed as arrays around transect pits that yielded potentially significant artifacts or features.

The test pits measured 2x2 feet (50x50 centimeters) square and were excavated until sterile glacial soils were reached or impenetrable objects such as rocks precluded continuation of

the test pit. All of the test pits were dug by hand with shovel and trowel, in 10 to 20-centimeter levels, with all soil screened through ¼-inch mesh for maximum artifact recovery. All artifacts were bagged and transported to AHS's laboratory for cleaning and identification. Stratigraphic profiles of every test pit were drawn, and the pits were mapped into project plans (Figures 13-16). The pits were backfilled immediately upon completion and the ground surface contours restored.

B.2.2 Artifact Processing

All recovered artifacts were cleaned in AHS's laboratories in accordance with *Primer* standards. After cleaning they were placed in plastic ziplock bags with an acid-free label noting test pit number, artifact type, and provenience information. The artifacts were catalogued and entered into our database program, which permits accurate and efficient analysis of the subsurface testing results. The artifacts were boxed for long-term curation and are being stored by AHS until they are transferred to CTDOT's curation facilities.

C. Personnel

James Poetzinger served as Senior Field Archaeologist and directed the field investigations. Field archaeologists included Heather Alexson, Ben Kelsey, and Mandy Ranslow. Senior Archaeologist Timothy Ives conducted the prehistoric and contact-period background research. Senior Historian Bruce Clouette carried out the post-contact historical background research. Mary Harper served as project manager.

II. ENVIRONMENTAL CONTEXT

The purpose of this section is to provide general information on the environmental context of the project area. Even in a small state such as Connecticut, significant variations in topography, climate, and geology on the local level are expressed in many subtle and not so subtle ways. Variations in habitat can yield complex and dynamic mosaics of distinctive plant and animal communities. Humans, like most species, are sensitive to these variations, and can be generally expected to settle in areas providing both reliable and predictable resources. While climate change over the course of the last 11,000 years has repeatedly transformed the environment in the Northeast, many basic characteristics of the landscape itself have remained relatively stable. Local geology and topography present important controls on the development and potential reorganization of habitats, and thus provide archaeologists with one means of identifying enduring features of the landscape around which people in the past would have organized themselves.

A. Geology, Hydrology, and Topography

Bedrock in the town of Orange consists of schist, gneiss, and phyllite of the Orange-Milford belt of the Connecticut Valley Synclinorium (Rodgers 1985). These metamorphosed sedimentary and igneous rocks formed during the Middle to Early Paleozoic age (350-500 million years BP [Before Present]) as oceanic terrain that was subsequently deformed and metamorphosed by the collision of crustal plates that formed Pangaea. The process reversed during the Mesozoic Era (ca. 235 million years BP), causing rift basins to form as Pangaea fragmented. The Orange-Milford belt of the Connecticut Valley Synclinorium bounds part of the western edge of the former rift basin that runs north-south through central Connecticut.

During the last glacial maximum (ca. 18,000 ^{14}C BP), the project area was beneath the Connecticut Valley Lobe of the Laurentide Ice Sheet as it deposited its terminal moraine, which constitutes Long Island (Uchupi et al. 2001). The glacier retreated from what is now the Connecticut coastline at ca. 17,500 ^{14}C BP, leaving proglacial Lake Connecticut in its wake. Impounded by Long Island and the Harbor Hill Moraine (on the east side of Long Island Sound), this lake occupied most of what is now Long Island Sound until it drained rapidly at ca. 15,500 ^{14}C BP. According to eustatic shifts, the Long Island Sound basin was slowly inundated during the early to middle Holocene, gradually reducing the gradients of streams and rivers along the paleocoastline. Sea level stabilized along southern New England's coast by ca. 4000 BP, which enabled the development of highly productive marshlands and floodplains (Lavin 1988). Hence, the rich salt marshes and smaller estuarine environments in the lower portions of the Housatonic and Quinnipiac rivers probably experienced most of their development during the Late Holocene.

Orange is located on Connecticut's Coastal Slope, where topography is relatively gentle and the average elevation drops by about 50 feet per mile (Bell 1985). The generally rocky and ragged outline of the state's shoreline is, in part, a reflection of this relatively steep incline. Also, Long Island and Fisher's Island provide natural breakwaters that hinder the development of straight-bordered barrier beaches and large streamers of sand. The major river basins that empty into Long Island Sound here tend to be long and straight with few branches because they are confined to north-to-south bedrock channels carved by glacial ice that have become "drowned" by post-glacial sea-level rise. Soils in the Coastal Slope from New Haven westward are particularly fertile because they contain a significant proportion of glacially deposited lime that

originated from the Marble Valley to the north.

The project area is located near the western edge of the South Central Coast Drainage Basin (Connecticut DEP 2010) which is generally centered on the Quinnipiac River. The Quinnipiac River (to the east of the project area) and the Housatonic River (to the west) have been flooded to a significant distance inland (Bell 1985). Thus, their levels fluctuate with the rise and fall of tides. The Wheeler Marsh at the mouth of the Housatonic River is among the largest along the state's coastline. The coastline immediately south of Orange (in the towns of Milford and West Haven) features a fairly regular pattern of rocky headlands interspersed with pocket beaches. Smaller marshland complexes are also present along the mouths of lesser rivers here. Natural sandy spits occur along shore, with the largest at the mouths of the Quinnipiac and Housatonic rivers.

On a more precise scale, the project area is located approximately one mile from the coastline, specifically from the inlet known as Oyster River Beach in Milford where the Oyster River empties into Long Island Sound. It occupies a near-coastal area between the Quinnipiac and Housatonic River systems which is drained by a system of wetlands, streams and small rivers that empty into Long Island Sound to the south. The low-relief, glacially-eroded terrain here features till-covered ridges and hills with intervening cavities filled with glacial outwash. Soils in the central and eastern portions of the project area consist of Agawam fine sandy loam with 3 to 8 percent slopes, which is a gently sloped and well drained type that occurs on outwash terraces of stream valleys (USDA 2010). Soils in the westernmost portion of the project area consist of Charlton fine sandy loam with 3 to 8 percent slopes. This gently sloping soil occurs on hilltops, ridge tops, and glacial till plains. Two small rivers run near the project area: Oyster River (immediately to the east) and Indian River (2500 feet to the west). Both are fed at fairly regular intervals by small streams, and both feature marshland complexes near their mouths. The project area vicinity can be viewed as an ecotone because it would have afforded prehistoric populations convenient access to saltwater, brackish water, and freshwater environments.

B. Ecological Context

The project area falls within the Western Coastal Ecoregion, as defined by Dowhan and Craig (1976). The Western Coastal Ecoregion generally lies within five miles of the coast of western Long Island Sound, and is characterized by complex coastlines, tidal marshes, sand beaches, and estuaries. Near-shore topography trends towards level to gently rolling landscapes, with more markedly rugged terrain found along the interior portions of the ecoregion. Mean annual temperature is approximately 50.5°F, with an average winter temperature of 31°F, and an average monthly temperature of 23°F for the coldest month. Average snowfall is generally less than 30 inches, the lowest in the state. The frost-free period is among the longest in southern New England, at 180 days. Mean temperature during the warmest month is 83°F.

Major forest vegetation is of the Coastal hardwoods type, with an abundance of black, red, and white oaks, mockernut hickory, tulip poplar, and eastern hemlock. Open forest areas within this region are often covered in a very dense understory of shrubs and vines, particularly catbrier and greenbrier. A number of warm-adapted species reach their northern range limits within this ecoregion, including sweet gum and persimmon.

Major terrestrial game species within the region during the Holocene period would have included white-tailed deer, moose, black bear, wolf, gray fox, woodchuck, and possibly raccoon. Aquatic species such as beaver, muskrat, painted turtle, and snapping turtle were readily available in many lacustrine and riverine environments. Economically important marine

shellfish included softshell clam, quahog, and eastern oyster. Finfish potentially available along the southern reaches of the Housatonic River would have included Atlantic sturgeon, Atlantic salmon, American shad, brown bullhead catfish, American eel, and sea lamprey.

Naturally occurring plant foods available in the project are or surrounding landscape would have included a variety of tree nuts such as hickories, American chestnut, black walnut, and butternut. Edible weeds growing in floodplain contexts would have included chenopodium, amaranth, and sumpweed. Wetland species included cattail, bulrush, and blue flag. Tropical cultigens such as maize, beans, and squash, introduced to the region by horticulturalists during the Woodland period, may have been grown on local floodplains.

III. REGIONAL PREHISTORY - THE CULTURAL CONTEXT

Although a relatively large number of Native American archaeological sites have been identified in costal Connecticut, the understanding of prehistoric cultures in the area remains superficial in certain regards. This is primarily due to the small percentage of sites that have been subject to detailed professional investigation, limiting the conclusions that might otherwise be drawn from the materials recovered. Despite this circumstance, the data accumulated to date suggests that Native Americans living within the area adapted their settlement and subsistence patterns to the complex and dynamic ecological conditions over the course of the last 11,000 years.

The regional prehistory of coastal Connecticut is fairly well known from numerous site excavations and archaeological surveys within and immediately adjacent to coastal areas. Archaeologically, Connecticut traditionally focused on single site-excavations of large coastal and riverine sites because of their accessibility, visibility, and the high densities of artifacts (Coffin 1937, 1938, 1940, 1946, 1951; Praus 1942; Russell 1942; Glynn 1953; Lavin 1988). Important coastal sites that have greatly contributed to our understanding of the coastal prehistory of the region include Grannis Island (Site 93-3) in New Haven Harbor (Glynn 1953; Lavin 1988), the Old Lyme Shell Heap (Lavin 1988), Mago Point in Waterford (McBride 1984a), Fort Shantok and Shantok Cove in Montville (Salwen 1966; Salwen and Ottesen 1972; Williams 1972), the Thomas Site in Groton (Butler 1946), and the Davis Farm Site in Stonington (Griffin 1946). A number of regional archaeological surveys have also been conducted in coastal areas of Connecticut, and have provided a great deal of information on the nature and distribution of archaeological sites in these areas (McBride 1984a).

The summary of culture history, which follows, draws on the current local archaeological record for Connecticut and the greater Northeast. The prehistoric era is subdivided into several major periods coinciding with broad technological and settlement patterns observed in the archaeological record. This section provides a very brief overview of the cultural developments over the course of the eleven millennia of Native American life in the region predating the arrival of Europeans on New England's shores.

A. Paleoindian Period (11,000-9500 BP) (Before Present).

Human occupation of New England began during the onset of the Younger Dryas Cold Interval of the Terminal Pleistocene Period. As to why this region does not appear to have been colonized by Clovis Culture populations in earlier, more environmentally favorable circumstances remains a mystery, but they may have preferred now-submerged portions of the Atlantic Continental Shelf, or perhaps their sites are present but insufficiently visible in the terrestrial archaeological record. Adapting to local woodland and tundra regimes, New England's Paleoindian foragers established a settlement system characterized by restricted wandering as their bands fissioned and/or new bands arrived from elsewhere (Snow 1980:150). Paleoindian lifeways may have resembled ethnographic examples from the Subarctic that feature "caribou hunting, small mammal trapping, and seasonal plant use in a region which straddles the treeline" (Speiss et al. 1998: 227) A focal strategy of transhumant caribou hunting has been proposed, and the use of high-quality, exotic chert suggests high mobility. Unusually large sites, such as Vail and Bull Brook, may represent major, seasonally-scheduled social aggregations (Pelletier and Robinson 2005:165; Robinson et al. 2009); however, the relatively higher occurrence of smaller Paleoindian encampments (Jones and Forrest 2003) supports the proposition that New England

Paleoindians generalized in their subsistence strategies, adjusting to resources that were not always predictable.

Data reflecting Paleoindian Period land-use patterns and subsistence activities in the Northeast is relatively scarce (Speiss et al. 1998), though it has been confirmed that Paleoindians exploited the lower (Ritchie 1957), middle (Moeller 1980), and upper reaches of the Housatonic River drainage. Few intact Paleoindian sites have been found in Connecticut, and only two have been investigated and published in detail: the Templeton Site in Washington (Moeller 1980, 1984) and the Hidden Creek Site on the Mashantucket Pequot Reservation in Ledyard (Jones 1997). A handful of other sites have received more cursory attention. State archaeologist Nicholas Bellantoni states that about 50 fluted points have been recovered as isolated finds across Connecticut (Bellantoni 1995). The scarcity of sites indicates that population density was likely very low at this time. Poor site visibility is also likely a factor of small site size and a high degree of landscape disturbance over the past 10,000 years.

B. Archaic Period (10,000-2700 BP).

The Archaic Period dates from 10,000 to 2700 BP in the Northeast and is characterized by hunter-gatherer populations utilizing a variety of seasonally available resources. The period is subdivided into the Early, Middle and Late Archaic periods on the basis of associated changes in environment, projectile point styles and inferred adaptations (Snow 1980; McBride 1984a). Each subperiod is discussed briefly below.

B.1 The Early Archaic Period (9500-8000 BP).

During Early Archaic Period, warm-climate tree species began to flourish in southern New England, and by 9000 BP a closed-forest canopy was established that included white pine, oak, elm, ash, birch, ironwood, and sugar maple (Davis 1983). By this time, an expanse of wetland mosaics had likely developed that afforded "local areas of high resource diversity, productivity, and reliability within the northeastern interior" (Nicholas 1987:105). The Early Archaic archaeological record currently appears to constitute a thin but surprisingly complex fabric featuring three cultural traditions: the Late Paleoindian, Piedmont, and Gulf of Maine Archaic traditions (Ives 2006; Jones 2006).

Little is known about Late Paleoindian occupation in New England. Late Paleoindian sites tend to contain local, non-chert lithics (Petersen et al. 2000:122), which suggests reduced mobility and the constriction of social networks (Jones 2004). Some tool forms suggest the presence of an Eastern Lanceolate complex that evolved, *in situ*, from local Paleoindian predecessors, while an intrusive Plano-derived complex is evidenced as well (Dumais 2000; Petersen et al. 2000). The scarcity of Late Paleoindian sites across the region suggests a low population density, and most Late Paleoindian point finds are from northern New England, suggesting a correspondingly northern occupation.

Originating from a geographic center in the Carolinas, highly mobile foragers associated with the Piedmont Tradition ranged into New England's forested landscape during the Early Archaic, as evidenced by the recovery of diagnostic point types (Funk 1996:13). Having become established in southern New England by the mid-9th millennium BP, core areas for this tradition appear to be centered on wetland complexes, such as northwestern Connecticut's Robbins Swamp (Nicholas 1988), southeastern Connecticut's Great Cedar Swamp at Mashantucket (Forrest 1999), and eastern Massachusetts Taunton and Titicut river basins (Taylor 1976; Johnson 1993). Despite an increasing exploitation of local lithic sources for tool manufacture

(Snow 1980:172), high mobility is inferred by the continued exploitation of exotic lithics, as demonstrated at the Dill Farm Site in East Haddam (Pfeiffer 1986). Piedmont Tradition foragers probably took advantage of large populations of deer and wild turkey, in addition to other interior food sources such as nuts and freshwater fish (Lavin 1988). Root/tuber exploitation, inferred by the recovery of choppers or digging tools (Snow 1980:170), suggests a more diffuse subsistence strategy than that of Paleoindian foragers. Population densities associated with these highly mobile Piedmont Tradition foragers were likely low throughout southern New England, and most associated sites reflect short-term occupations lacking features.

The third cultural tradition in evidence is the Gulf of Maine Archaic, which lasted from ca. 9500 to 6000 BP (Petersen and Putnam 1992). It is distinguished by its microlithic industry, which may be associated with the production of compound tools (Robinson and Peterson 1993). Assemblages from Maine (Petersen et al. 1986; Petersen 1991; Sanger et al. 1992) and Connecticut (Forrest 1999) reflect the selection of local, coarse-grained stones. Large choppers and hoe-like forms from southeastern Connecticut's Sandy Hill Site likely functioned as digging implements. Woodworking tools, including adzes, celts, and gull-channeled gouges, recovered at the Brigham and Sharrow sites in Maine (Robinson and Petersen 1993:68), may have been used for dugout canoe manufacture. The deeply stratified Sandy Hill (Forrest 1999; Jones and Forrest 2003) and Sharrow sites (Petersen 1991), with their overlapping lenses of "black sand" floor deposits, suggest intensive site re-occupations according to an adaptation that relied, in part, on seasonally available wetland resources. Thus far, sites from this tradition have only been identified within coastal and near-coastal territories along the Gulf of Maine and in southeastern Connecticut.

B.2 The Middle Archaic Period (8000-6000 BP).

The Middle Archaic Period witnessed higher temperatures and fluctuating environments (McWeeney 1999:9) driven by the Holocene Climatic Maximum (Deevey and Flint 1957). By 8000 BP, an increase in herbaceous plants and decline in forest trees (McWeeney 1999) fostered a mosaic of openland vegetation and pine-oak forests across southern New England (Faison et al. 2006). Water levels dropped, shrinking lakes and turning shallow ponds into swamps or meadows (McWeeney 1999), and forest fires became more frequent (Thorson and McBride 1988). Sea-level rise inundated the southern New England coastline, reducing the gradients of stream and river drainages which likely fostered the development of floodplains.

Dincauze (1971, 1976) envisions "the entire Atlantic coastal area from North Carolina to New Hampshire" as a single culture area by the eighth millennium B.P, and refers to this geographically extended manifestation of the Piedmont Tradition as the Atlantic Slope Macrotradition. This tradition persisted in New England through the Middle Archaic, with associated populations following generalized subsistence strategies and concentrating their settlement around waterfalls, river rapids, major river drainages, wetlands, and coastal settings (Dincauze 1976; Bunker 1992; Doucette and Cross 1997). Large interior wetlands in Connecticut's upland settings appear to have been seasonally reused over a long period of time (McBride 1984b; Jones 1999), as indicated by data from the Dill Farm Site and sites around the Great Cedar Swamp at Mashantucket. Netsinkers and plummets appear in the region's archaeological record for the first time, and elevated levels of mercury in the soil at the Neville Site in southern New Hampshire suggest harvesting of anadromous fish. This orientation toward interior aquatic resources may indicate that forests were of limited productivity. Foragers along the Lower Hudson River exploited shellfish during the Middle Archaic (Brennan 1974);

however, this resource probably contributed little to daily dietary requirements (Lavin 1988). Coastal and riverine sites may be poorly documented because of rising sea levels that have resulted in deep alluvial burial.

Archaeological signatures of the Gulf of Maine Archaic Tradition continue into the Middle Archaic, but according to current knowledge, only in the Gulf of Maine core territory. Though this tradition appears to have disappeared by the Late Archaic, associated elements of burial ceremonialism, such as cremation and the interment of ground-stone objects, appear to have endured within the subsequent Moorehead Tradition of the Northeast's Maritime Areas (Robinson 1992).

B.3 The Late Archaic Period (6000-2700 BP).

The cooler conditions of the Late Archaic Period fostered environmental changes that increased southern New England's human carrying capacity. While dryness and lowered inland water levels persisted for some time, significant changes in vegetation occurred (Lavin 1988: 106; Yu et al. 1997; Foster et al. 2006). Hickory trees, an important element of the region's mast forests, became locally established at ca. 5500 BP (Davis 1969), and the forest canopy continued to diversify (McWeeney 1999: 11). The stabilization of southern New England's coastline at ca. 4000 BP enabled the development of highly productive marshlands and floodplains (Lavin 1988). The high density of Late Archaic sites and reliance on locally available lithic materials suggest relatively large populations (Dincauze 1975). Three archaeological traditions are in evidence - the Laurentian, Narrow Stemmed, and Susquehanna traditions – though interpretations of what they may represent have become more varied and flexible over time (Funk 1988).

The oldest of these is the Laurentian Tradition (Ritchie 1965), which is generally identified by the presence of diagnostic side-notched and corner-notched projectile points, often in association with adzes, axes, gouges, ulus, and slate knives. Originally viewed as the reflection of a hunting and fishing culture that expanded from the upper St. Lawrence Valley, its local manifestations may merely represent the adoption of Laurentian technological traits by local residents (Hoffman 1990; Ives 2009). This tradition reflects a central-based wandering pattern (*sensu* Beardsley et al. 1956) in which numerous, but relatively small, communities exploited a wide variety of settings (Snow 1980:230). Laurentian sites are more abundant in interior southern New England than along the coast, which has led several archaeologists to argue that Laurentian groups were primarily adapted to riverine and upland environments, with coastal zones exploited on a more limited basis (e.g. Snow 1980, Kingsley and Roulette 1990).

The Narrow Stemmed Tradition, the dominant archaeological manifestation of New England's Late Archaic, is distinguished by a quartz cobble lithic industry employing bipolar reduction techniques (McBride 1984b). While this tradition may be intrusive (Ritchie 1965), originating in the Middle Atlantic (Dincauze 1968: 214, 219; Dincauze 1976:128), it may reflect a continuation of trends established during the Middle Archaic (McBride 1984b). Exploitation of a wide variety of coastal regimes and interior forest regimes are evidenced (Hoffman 1985; Sgarlata 2009). Base camps are projected to occur at lakeside winter (Dincauze 1974), riverine summer/fall (McBride 1978), and summer coastal settings (Snow 1980), while smaller, temporary camps are anticipated in a variety of other micro-environments (McBride 1984b). For example, evidence from southeastern Connecticut indicates that small groups of foragers associated with the Narrow Stemmed and Laurentian traditions centered some of their short-term residences on tree throw hollows during the fall (Ives 2010).

The more notable Narrow Stemmed sites in Connecticut's coastal zones include the Archaic Midden Site in Haddam and the Grannis Island Site in New Haven (Glynn 1953; Lavin 1988). The Archaic Midden Site has been partially submerged by rising sea levels and is only visible at low tide. This may be typical of many Late Archaic sites in the region, indicating the potential of encountering sites under salt marshes or in coves or bays. Recent research interprets the Cover River Site in West Haven to represent a seasonal base camp associated with the Narrow Stemmed Tradition (Cuzzone et al. 2009).

The Susquehanna Tradition is the third and latest Late Archaic cultural tradition in southern New England, and is often described within the context of the Transitional Archaic Period (ca. 3600-2800 BP), which bridges the Archaic and Woodland periods. Most associated sites reveal a focus on riverine and coastal environments (Pfeiffer 1984; Lavin 1988), while the use of heavy steatite vessels suggests increased sedentism. Broadspear points, which are widely accepted as diagnostic of Susquehanna Tradition occupations, appear to have been innovated in the American Southeast and spread rapidly along the Atlantic coast into New England. This has been argued to reflect the revolutionary spread of a coastal/riverine adaptation (Turnbaugh 1975), though it might merely reflect the diffusion of technological traits (Cook 1976). The Susquehanna tradition is best known in southern New England for cremation cemetery complexes that echo those of the preceding Moorehead Burial Tradition of Maine. Susquehanna cemetery complexes are consistently marked by the presence of dark, greasy pits containing calcined bone fragments, grave goods, broken or "killed" blades, ground-stone tools and steatite bowls, and red ochre (Dincauze 1968; Robinson 1996; Leveillee 2002).

C. The Woodland Period (2700-450 BP).

During the Woodland Period New England's population further diversified its subsistence base, increasingly relying on shellfish and horticulture and eventually establishing year-round coastal and riverine settlements. This period has been traditionally subdivided into Early, Middle, and Late periods on the basis of ceramic styles, settlement and subsistence patterns, and political and social developments (Ritchie 1969; Snow 1980; Lavin and Russell 1984). Despite these changes, most recent scholars see the Woodland as a period well-rooted in the traditions and lifeways of the preceding Archaic Period (Feder 1984, 1999).

<u>C.1 The Early Woodland Period (2700-2000 BP).</u>

Early Woodland occupation in the Northeast is potentially complex but poorly understood due to a paucity of data (Versaggi 1999). Associated sites are commonly identified by the presence of Meadowood, Lagoon, and Rossville points, as well as grit-tempered, cord-marked Vinette I ceramics, and exotic trade goods are often found on larger sites. Several indigenous plants appear to have been cultured, including goosefoot, sumpweed, sunflower, pigweed, and knotweed (Streuver and Vickery 1973; McBride 1978) though the relative importance of these taxa in the Native economy has yet to be determined. While Early Woodland sites exhibit a cultural continuity to Late Archaic sites (Feder 1990; Concannan 1993), their sparse distribution is thought to reflect a population decline that may have resulted from environmental shifts (Fiedel 2001). Conversely, the apparent paucity of Early Woodland sites may simply reflect the biases of site-recognition strategies (Juli and McBride 1984). Direct association of Narrow Stemmed projectile points with Woodland Period radiocarbon-dated contexts (Herbster and Chereau 1999, 2001, 2003; Herbster 2004), as well as stratigraphic association of Narrow Stemmed points with Woodland types (Lavin and Russell 1985; Cuzzone

and Hartenberger 2009), alert us to the possibility that Woodland Period assemblages are frequently misidentified as Late Archaic.

Most recorded sites in Connecticut containing Early Woodland components are situated along the coast or at the mouths of major rivers such as the Quinnipiac, Connecticut, Thames and Mystic Rivers, but a number of interior upland locations have also been documented. Recent research suggests that year-round habitation of some sites was established by the late Early Woodland Period (Ceci 1980; Bernstein 1990). For example, complex storage pits suggesting increased sedentism were identified at the Scabbletown Brook Site (RI 670), in North Kingstown, Rhode Island. These contained the remains of berries, seeds, and nuts (Morenon 1986). Southern New England's islands were also utilized by Early Woodland populations (e.g., Ritchie 1969; Kingsley and Roulette 1990). For example, year-round occupations are evidenced at Block Island's Site RI-1428, where a broad spectrum of salt marsh, estuarine, and deepwater resources were exploited (Tveskov 1992).

C.2 The Middle Woodland Period (2000-1200 BP).

Diagnostic Middle Woodland artifacts include Jack's Reef Pentagonal and Corner-Notched points, Fox Creek points, and rocker and dentate-stamped ceramics. Middle Woodland assemblages commonly feature exotic lithic materials such as Pennsylvania jasper (Luedtke 1987; Goodby 1988), which reflect long-distance exchange networks extending from Labrador to Pennsylvania (Dragoo 1976; Fitting 1978; Snow 1980). During this period, exploitation of coastal environments intensified and a growing trend towards sedentism is in evidence according to an increased frequency and size of storage facilities (Ritchie 1965; Snow 1980; McManamon 1984).

Middle Woodland sites are relatively rare outside of coastal and near-coastal contexts. Settlement patterns in Connecticut indicate an increased frequency of large sites adjacent to tidal marshes and wetlands along the Connecticut River, a decrease in large upland occupations, and a corresponding increase in upland temporary camps (McBride 1984a). This may indicate reduced residential mobility from earlier time periods and is likely due to the development of modern tidal marshes in low-lying riverine areas by 2000 BP. The tidal marshes would have supported a wide variety of terrestrial and aquatic animal and plant resources, allowing longer residential stays (McBride 1984a).

C.3 Late Woodland Period (1200-450 BP).

Late Woodland sites are typically located in coastal environments, around interior freshwater ponds and wetlands, and near large tributary streams. Interior groups remained small and highly mobile (Thorbahn and Cox 1988; Chilton et al. 2000:41), though there may have been an increasing focus on semi-sedentary horticulture (Heckenberger et al. 1992). Although Connecticut River Valley sites clearly demonstrate the use of tropical cultigens such as corn, beans, and squash, wild plant and animal resources were still a primary component of the aboriginal diet (Lavin and Russell 1984; McBride 1984a). The use of imported cherts increases over time in the Connecticut River Valley, suggesting possible social, economic, and/or political ties to the Hudson Valley region. Diagnostic artifacts include Madison and Levanna points and cord-wrapped, stick-impressed, and incised ceramics.

The Late Woodland settlement pattern suggests a trend toward fewer and larger villages near the coast and along major rivers, reflecting a continued reduction in residential mobility and increased sedentism. During this time southern New England's islands appear to have hosted

significantly larger populations than the mainland, which may reflect higher ratios of productive shallow-water habitats to land (Nixon 2004:16). Abundant marine foods included oceanic fish and seals as well as shallow-water fin and shellfish. Some mainland coastal settings, such as Rhode Island's Greenwich Cove, indicate year-round settlement during the final centuries before contact with Europeans (Bernstein 1990). Corn cultivation may have played a relatively minor role in the diet of southern New Englanders prior to European contact (Nixon 2004), with year-round village life and a heavier dependence on corn arising in response to historic economic activities (Ceci 1980:80).

D. Contact and Historic Native American Period

During the Contact Period, Connecticut's Native American cultural landscape was significantly transformed as a result of a variety of external influences, including the introduction of European material culture, the spread of epidemic diseases, and the establishment of a market economy. These transformations were expressed in Native economies, politics, demographics, and long-term survival strategies.

Archaeological data from Late Woodland sites in southern New England suggests a fairly stable population base along the Connecticut River Valley, Thames, and Housatonic Rivers by ca. 1300 AD The local settlement pattern features large semi-sedentary villages and specialized seasonal occupations in inland settings; a pattern that was probably developing during the Middle Woodland Period and solidly established by Late Woodland times. The relationship between coastal occupations and upland lacustrine occupations, particularly those away from major riverways, is not well understood. Groups may have utilized these settings differently within a seasonally timed cycle of population aggregations and dispersals. However, some suggest that occupations found in upland settings may reflect distinctive adaptations from those found in coastal areas, recognizing the possibility that local populations may have had diverse lifeways (Feder 1990; Leveillee and Van Coughyen 1990).

After 1400 AD, coastal populations split into smaller socio-political entities, as inferred by a diversification in ceramic styles, for reasons that are not yet understood (McBride 1984a). The depletion of coastal resources from overexploitation and a successive shift towards horticultural practices might have driven the fragmentation of large groups along the coast (Bragdon 1996: 86). Some propose that, under conditions of population stress, social groups that come to rely on horticulture tend to reorganize themselves into family households, where input of labor is rewarded by a direct return of food staples (Bragdon 1996: 88).

At the time of European contact in the early 17th century, the project area was likely occupied by Native Americans, though their political affiliation cannot be confidently inferred. It has recently been argued that there is no evidence of political groups larger than towns at first contact or shortly thereafter in Western Connecticut (Rudes 2005: 44); thus the term "tribe," as currently used, may not apply to discussions of early native political geography. Accordingly, the project area is probably best envisioned as between two historic territorial cores - that of the Quinnipiac, centered on the Quinnipiac River to the east, and that of the Paugussett, centered on the Housatonic River to the west.

The Paugussetts and allied communities were largely dispossessed of their land and relegated to a number of small reservations. One, known as the Turkey Hill Reservation, was located on the east side of the Housatonic River in Derby (Woodruff 1949). This 100-acre tract was set aside in 1671 for local Paugussett/Wepawaug Indians who used it as a residential base. A 17th-century fort and historic burying ground existed nearby. This reservation was eventually

sold off by 1826 (Brilvitch 2007). The Paugussetts have retained a reservation in the nearby town of Trumbull into the present, though it has been reduced to merely a quarter of an acre in size. They also possess a reservation of slightly over 100 acres in Colchester. The Paugussetts have been formally recognized by the State of Connecticut as a tribe, by statute, since the 1970s but were denied Federal Recognition by the Bureau of Indian Affairs in 2004 (Koenig and Stein 2007).

During the Pequot War of 1637, the Quinnipiacs were allied with the English. After the war, in 1638, colonial settlement began in the project vicinity. Land was purchased from the Quinnipiacs, who by this time were decimated by European-introduced disease. A 1200-acre reservation was set aside on the east side of New Haven Harbor for the estimated 150 surviving Quinnipiacs (Carlson 1987; Engineering-Science, Inc. 1991). The Quinnipiac population declined over the years so that by 1740 there were only 15 to 20 families on the reservation. Reservation land was gradually sold to colonists, with the final 30 acres purchased in 1773 (Engineering-Science, Inc. 1991). The decline of the reservation appears to reflect, in part, the reorganization of Quinnipiac people within the regions greater social network. By 1759 a small number of Quinnipiac families had already left New Haven and settled among the Farmington Indians, and by 1774 the majority of Quinnipiacs had followed (Menta 1994: 339-345).

The Schaghticokes, another native community of western Connecticut, were historically dispossessed of their land though they still retain a reservation in Kent. They have been formally recognized by the State of Connecticut as a tribe, by statute, since the 1970s. The Schaghticokes were granted Federal Recognition by the Bureau of Indian Affairs in 2004, only to have the decision reversed in 2005 (Koenig and Stein 2007). The Schaghticoke community furnished warriors who served in the Revolutionary War, and at about that time a portion of the community relocated from Kent to Orange (Woodruff 1949). The Indian Hill Cemetery Site (107-12), which overlooks the Maltby Lakes to the east, is a Native American burial ground that likely dates from the late 18th century to the early 20th century. This burial ground is associated with the historic native community inhabiting the Dogburn Road – Indian Hill section of Orange.

E. Reported Local Prehistoric Archaeological Resources

Review of the SHPO/OSA site files indicate no prehistoric sites have been reported within a 1 ½-mile radius of the project area. Only 11 prehistoric sites have been reported in Orange. This apparent lack of archaeological sites is likely reflective of the relatively small amount of professional archaeological work conducted in Orange, coupled with fairly intensive development, which may have destroyed sites. Certainly the southwest Connecticut coast is well-established as an important draw for prehistoric peoples, but many archaeological sites reported on the early 20th century have been destroyed. Cultural resource management-mandated archaeological surveys in Orange include reconnaissance surveys of sanitary sewer systems (CAS 1979), cell-tower sites (ACS 1996, Brown 2001), and potential cemetery locations (Raber and Wiegand 1992).

The closest reported prehistoric site to the project area is Site 107-05, nearly two miles to the northwest along Silver Brook. This ½-acre Late Archaic site, evidenced by Small-stemmed points, a side-notched point, a chopper and a scraper, was reported in a golf course as destroyed in 1979. Site 107-07 was identified one mile west of 107-05 as containing Small-stemmed and Squibnocket points. Other sites are further west, along the Wepawaug River and Lake Wepawaug, and further west along the Housatonic River, dozens of sites have been reported, including an reported possible Native American fort. To the north/northeast of the project area a

number of prehistoric sites have been reported along the West River, and, 167-12, the Indian Hill Cemetery Site, is located to the northwest along Maltby Lakes, but dates to the 18th century. It is clear that virtually all of the reported prehistoric site locations are on watercourses or waterbodies; this likely reflects Native use of these important water resources, but there may also be a bias in that riverine sites are often found by avocational archaeologists.

IV. HISTORICAL CONTEXT

The project historian reviewed previously published works on the history of Orange (e.g., Barber 1838, Woodruff 1949) and consulted a series of historical maps that show buildings and other features (Figures 5-11). In addition to the maps, which range in publication date from 1848 to 1893, aerial photographs from 1934 and 1965 were also examined. Biographical information on early owners was obtained from the manuscript returns of the U.S. Census. The purposes of the historical research were to construct a historic context for the project area, to identify significant ground-disturbance activities (such as the relocation of the railroad line in the 1890s), and to help interpret any historic-period artifacts and/or features that were encountered in the subsurface testing.

A limited amount of title research was undertaken; however, because of the repeated division of towns, Orange's land records are held by three separate town clerks: Milford, West Haven, and Orange, making it difficult and time-consuming to reconstruct a complete title chain, a task that was outside the scope of work for the Phase I Archaeological Reconnaissance Survey.

A. Results of Historical Background Research

The project area and surrounding vicinity were primarily agricultural in character from the first years of English settlement until the very recent past. Orange was originally part of Milford. Although Milford was settled by the English immediately following the Pequot War of 1637-1638, most activity occurred in the southern part of the town, closest to Long Island Sound. Very little if any settlement occurred in the part of Milford that would become Orange before 1700. After that date, the area, which was known as "Bryans' Farms"` after early residents Alexander and Richard Bryan, saw a slow but steady increase in population, and in 1750, the Town of Milford provided a public school for the area, "it being so well settled that one is deemed necessary" (Woodruff 1949: 9ff). The next milestone in creating an identity for Orange occurred in 1804, when a separate Congregational parish, known as the North Milford Society, was organized. In 1822, Orange was divided off from Milford and made a separate town. It was named in honor of William III of England, whose earlier title had been the Prince of Orange (an area in southern France), because he restored Connecticut's liberties after Sir Edmund Andros had tried to suspend the colony's charter. For almost a hundred years, the town of Orange also included West Haven, which had existed as a separate parish within the town of New Haven since 1720, but in 1921 West Haven was split off and Orange assumed the boundaries it has today.

Orange, like most Connecticut towns of the period, was characterized by widely dispersed family farms carrying on generalized agriculture. In describing the town in 1836, Barber commented, "the face of the township is hilly, and the soil productive. The inhabitants are generally farmers" (Barber 1836: 245). (In the context of 19th-century agriculture, "hilly" was a good thing, since it meant good drainage, and sloping land was no more difficult to plow with draft animals than flat land.) The output of the Orange farms was generally consumed within the community and the family itself, with little extra in the way of a marketable surplus. Industrial enterprises were limited to the blacksmith shops and small water-powered grist, saw, and fulling mills that supported the agricultural economy.

The vicinity of the proposed railroad station remained relatively sparsely populated throughout the 19th century. Although close to the Orange-Milford town line, the built-up part of Milford was not close by, and the small villages at West Haven and in Orange Center were about

equally distant. Along the Boston Post Road (Route 1) were a small hotel, a few shops, and the town's poorhouse, but otherwise the vicinity was characterized by scattered farmsteads.

The earliest detailed map of the area, published in 1855 but based upon topography compiled in 1837, shows the project area as divided into open fields (except for wooded areas along the Oyster River), with a house at the extreme western end, fronting on Marsh Hill Road (Figure 5). This was the homestead of Daniel Merwin (1778-1862). It is likely that Merwin resided here since the early 1800s; he married his first wife, Mary Tomlinson, in 1801 and they started their family shortly thereafter (Miles Merwin Association 1978: 180). Agricultural statistics from 1850 (U.S. Census Office 1850) indicate that the 100-acre Daniel Merwin farm was typical for the period. His livestock numbered a dozen sheep, a horse, a yoke of oxen, and two pigs. Most of the farm's production—178 bushels of rye, corn, buckwheat, and oats and 20 tons of hay—was probably consumed by the livestock. Some of the corn and other grains may have provided meal for the family's use, along with 200 lbs. of butter and 100 bushels of potatoes. The value of meat slaughtered for the year was estimated at $30. The 40 lbs. of wool shorn from Merwin's flock may have represented a marketable surplus, though in earlier days it would have been used for making homespun for the family. Not reflected in the agricultural census but recorded in his probate inventory at the time of his death in 1862 were 30 hens and garden produce (a bushel of turnips). Merwin also had a part interest in a fishery, probably a haul-seine operation (see probate inventory in Appendix III).

Except for five silver teaspoons, little among Daniel Merwin's possessions indicated any sort of material consumption beyond what was necessary to run his household and farm. Farm wagons, farming implements, and tools made up most of his personal estate, along with objects related to family production (a churn, cheese press, and spinning wheel). His furniture consisted of one table, eight chairs, a stand, a cupboard, and two chests. The only "luxuries": one carpet, a hand mirror, and a clock. Despite his plain lifestyle, Merwin could not be considered a poor man: he had considerable savings in the bank and money out at interest in the form of loans to his neighbors (see Appendix III).

In 1847, the New York and New Haven Railroad began acquiring land in order to build its line along the Long Island shore. Farmers were generally content to sell their land, since by law the railroads could acquire it at fair market value anyway by going to court. Daniel Merwin sold a strip passing diagonally through his farmland, in the eastern part of the project area (see 1852 Whiteford map, Figure 6), with the understanding that the railroad would build and maintain a suitable fence along the tracks (Orange Land Records [hereafter OLR], Vol. 7, p. 387). This was not, however, the present location of the railroad tracks. The original alignment curved southward just at the point of the proposed new railroad station, crossing the Orange-Milford town line where there was a station stop called Woodmont. In the 1890s, the railroad undertook a massive rebuilding effort to upgrade its mainline between New York and New Haven, widening the right-of-way in order to accommodate four parallel tracks and, where possible, eliminating curves like that near the project area. The old alignment was kept in service for some time as a spur line, and even as late as 1965, the roadbed for the original alignment was still visible from the air (Figure 12). The realignment of the rail line in the 1890s makes it almost certain that the south side of the present tracks, where station construction is contemplated, is completely disturbed by the two episodes of railroad construction that converged at this point.

After his death, Daniel Merwin's farmstead passed to his children, and in 1864 his widow Clarissa quitclaimed her interest in the property to them (OLR 11: 457). Clarissa Munson was

Daniel Merwin's second wife. They married in 1836, fifteen years after his first wife died. Because she had substantial assets of her own, including $1,000 loaned out at interest, Clarissa Munson and Daniel Merwin executed a prenuptial agreement that guaranteed she would have the use of her own money after the marriage, as well as receiving the usual dower right of use of one-third of his estate at the time of his death, provided she survived him. Once the widow released her rights in the estate, the Merwin heirs sold the house and 27 acres of land to Robert K. Beach of New Haven (OLR 12:305). Beginning with Beach, the former Merwin homestead went through a succession of absentee owners until 1874, when it was acquired by James R. and Eliza Ayres, who owned the farm just to the south that formerly belonged to John P. Strong (see 1868 map, Figure 7). It is likely that the Ayres consolidated the former Merwin farm with their own holdings. When the U.S.G.S. surveyed the area in 1889 and 1890, the Merwin house was no longer standing (see Figure 8). In the 1890s and early 1900s, the land went through another quick succession of owners, including men who lived in New York City, Bridgeport, and Rochester, N.Y.; presumably they leased the property to local people for use as farmland.

In 1915, the property was sold to the Elm City Nursery Company, which also operated under the name of Woodmont Nurseries. The company's main location was in the Edgewood section of New Haven; presumably, it used the farmland within the project area in support of its operations. The Elm City Nursery Company advertised widely in national horticultural magazines and solicited mail-order business from all over the country. In addition to providing plants, the company also offered landscape design services for parks, suburban subdivisions, and even urban housing projects. The company owned a substantial portion of the project area at least into the early 1930s (see 1931 map, Figure 9).

In the 1930s, Alessandro and Filomena Salemme acquired a farm on Marsh Hill Road just north of the project area, including the portion of the western part of the project area that lies adjacent to the road (Figure 10). The Salemmes were immigrants from Italy and had formerly lived in Derby, where Alessandro (Alex) Salemme worked as a factory laborer. Filomena (also spelled Philomena) Salemme became the sole owner of the property in 1949 after her husband's death, and in 1953 she laid out a half-dozen house lots along a new street, present-day Salemme Lane, with six houses going up shortly thereafter (Figure 11).

Despite this small incursion of the postwar housing boom, and the proximity of the Connecticut Turnpike (I-95), constructed in the 1950s, most of the project area remained farmland for many years (see Figure 11). Some portions started to become overgrown, but major changes did not occur until the final decades of the century when intensive industrial-park development took place to the south and north. Within the project area, large warehouses were built at the northwest corner, just east of Salemme Lane, and in the south half, where DiChello, a beverage distributor, has its operations. Although undeveloped, the northeast part of the project area was part of a huge biomedical research facility built by Miles Laboratories in 1965, across the Oyster River in West Haven. Miles Laboratories was acquired by Bayer AG in 1979, and in 2007, the Bayer research complex, including this part of the project area, became Yale University's West Campus (Figures 2 and 16).

B. Reported Historic Archaeological Resources

One historic period site, Site 107-13, was reported about one mile northwest of the project area (Figure 1), along Tavern Road. This is the site of the Bryan-Andrews House, an 18th-century house, still standing, owned by the Orange Historical Society. Southern Connecticut State University archaeological field schools have been conducted on the house

grounds, recovering architectural material. The only other reported historic-period site in the Indian Hill Cemetery Site (107-12), discussed in the previous section.

V. RESULTS OF THE ARCHAEOLOGICAL FIELDWORK

A. Walkover Inspection

The entire 28.1-acre project area was walked over and inspected for surface evidence relative to archaeological potential. At the western end of the project area, where the railroad station and entrance will enter from Marsh Hill Road, three house lots on Marsh Hill Road and Salemme Lane were inspected for possible evidence of the early 19th-century Merwin-Beach-Ayers house. This house was documented as standing in the vicinity of 65 and 69 Marsh Hill Road and 15 Salemme Lane, and an abutting undeveloped residential lot east of 15 Salemme Lane (Figure 14). The house appears first on a 1837 (1855) map, as well as on 1852 and 1868 maps (Figures 5-7), but was gone by 1889 (see Figure 8). The area of the historically documented house is now occupied by 20th-century houses and suburban lawn, and no visible evidence of a historic structure was noted (Photographs 1-3).

Moving eastward into the two large lots owned by Yale on the north and DiChello Distributors on the south, the project area slopes very gently downward to the Oyster River (Figure 2). The area is covered with a mixed hardwood forest including areas of dense scrub in the east and north. Sections of dry-laid fieldstone walls throughout are testaments to the area's agricultural past (Photograph 4). The land had been used as a dump in the 20th century, as evidenced by debris such as a abandoned automobiles, a water heater, gutters and storm windows, lawn chairs, and the like. Earthmoving was manifested by small dirt piles throughout the area, and most significantly, a very large area of machine-made disturbance in about one half of the DiChello property (Figures 13 and 15; Photographs 5 and 6). The southern third of the Yale property was disturbed and made inaccessible for archaeological testing by the creation of very large dirt and construction debris piles (Figure 16). The large area of disturbance on the DiChello property was mostly eliminated from Phase IB subsurface testing, with the exception of some judgment test pits placed on the edged to confirm the suspected disturbance (see below and Figures 13 and 15).

B. Subsurface Testing

Phase IB subsurface testing was conducted in all portions of the project area, with the exception of the large areas of disturbance and debris piles on the Yale and DiChello lots. Test pits were placed at 15-meter intervals along transects laid out across the property 15 meters apart. In some cases a test pit was shifted slightly to avoid a rock or tree. Off-transect judgment test pits were placed in areas of apparent particularly high archaeological sensitivity missed by the transect pits, and to confirm areas of suspected subsurface disturbance. Array pits were placed around significant artifact-bearing transect pits where necessary to characterize possible archaeological sites. The pits were mapped onto project plans (Figures 13-16). A total of 198 test pits were excavated.

The subsurface testing began in the southwestern portion of the project area, in the undeveloped lot in between the DiChello parking area and 15 Salemme Lane (Figure 14). Testing had been planned to start in the extreme western edge of the project, in the three house lots on Salemme Lane and Marsh Hill Road, but permission from the owner of these lots was delayed until arrangements could be made with the tenants occupying the three houses. Eighteen test pits were placed along three transects running north-south through this lot (T1, T2 and T3, six pits per transect). As indicated in the test pit profiles in Appendix IV, this area was generally undisturbed except for historic plowzones; the profiles show Ao, Ap (plowzone), B and C

Horizons in all but one pit (that pit, T3-1 in the southeast corner of the lot, is closest to the DiChello parking lot, and is missing a B Horizon, indicating disturbance). None of the test pits in this lot produced cultural material with the exception of modern debris such as bottle glass and caps in the top levels, which were not collected. The C Horizon was reached generally between 48 and 60 centimeters below surface and soils were fine and sandy but compact.

The testing then moved eastward to the DiChello property, south of the sewer main separating the property from the Yale lot to the north. Six transects (T4 through T9) were laid out oriented east-west, parallel to a stone wall, and were of varying lengths (Figures 13-15); each terminated at the large disturbed area on the DiChello lot. A total of 56 pits were excavated in this area. T4 included nine pits (T4-1 through T4-9), T5 included nine pits (T5-3 through T5-11, T5-1 and T5-2 were not dug), T6 included five pits (T6-1 through T6-5, truncated by a small wetland), T7 included six pits (T7-1 through T7-6), T8 included 11 pits, and T9, along the sewer line perimeter, included 16 pits (T9-1 through T9-16). The 20 pits along T4 and T5 were sterile, yielding no prehistoric or historic-period cultural material. The test pit profiles (see Appendix IV) indicate that Transect 4, in the southern part of this area, contained intact soils, with the Ao, Ap, B and C Horizons in place. Soils were fine sands and gravel, with the C Horizon reached at around 52 centimeters below surface. Transect 5, 15 meters to the north of Transect 4, showed considerable soil disturbance in most of the pits, with A Horizons directly over fill or C Horizons; only two pits (T5-5 and T5-7) contained a sequence of A, B and C Horizons. Coal and coal ash found in the top 20 centimeters of the pits.

Transect T6, 15 meters north of T5, included four pits (T6-1 through T6-4) west of a small wetland (Figure 13); all were sterile. T6-1, at the western end of the transect, was disturbed, with Ap plowzone directly over the C Horizon at 13 centimeters below surface. Pits T6-2 and T6-3, however, contained Ap, B and C Horizons, but were very compact; the C Horizon was reached at 30 centimeters below surface. T6-4, on the edge of a wetland, contained an intact soil sequence of Ap, B and C Horizons, the latter reached at 60 centimeters; soils were sandy gravels. The last pit in Transect T6 was placed about 60 meters to the east, on the opposite side of the wetland and on the western edge of the large disturbed area (Figure 13). Pit T6-5, however, manifested a profile of 24 centimeters of fill over a plowzone, which contained two sherds of whiteware (1820-1900+); a B Horizon extended beneath to 78 centimeters before terminating in rock.

To the north of Transect 6, Transect 7 included six pits. Pits T7-1 through T7-3 were sterile. The profiles of T7-1 and T7-2 show intact stratigraphy, but T7-3 was comprised of fill (inclusive of coal, coal ash, safety glass and bottle glass) overlying B and C Horizons. Pits T7-4 and T7-5, however, contained historic-period cultural material. Pit T7-4 was comprised of intact A, Ap, B and C Horizons, and produced 11 artifacts from the plowzone (5-32 centimeters below surface): five green bottle base/body fragments, one clear curved glass fragment, one blue-green window glass fragment, and one blue-green curved glass fragment, along with two sherds of whiteware (manufactured 1820-1900+). Pit T7-5 was disturbed, with fill overlying the C Horizon; four clear bottle glass fragments were found in the fill horizon 6-15 centimeters below surface. Pit T7-6 was sterile, although its stratigraphic profile was perfectly intact.

Transect 8 included 11 pits (Figure 13). Pits T8-1 and T8-2, on the western end of the transect, were sterile and missing A or B Horizons; Pits T8-10 (disturbed) and T8-11 (intact) on the eastern end, were also sterile, as was Pit T8-5 (which had intact stratigraphy) (Photograph 7). Pits T8-3, T8-4, T8-6, T8-7, T8-8, and T8-9 contained a total of 22 historic-period artifacts, including sherds of whiteware (1820-1900+), refined earthenware, pearlware (1780-1820),

yellowware (1820-1900+), and a sherd of Canton porcelain (1800-1830), plus curved glass fragments, and clear window glass. All were found in fill or plowzone contexts (see artifact inventory lists in Appendix V).

Transect 9, on the northern edge of the DiChello lot along the sewer line (Figures 13 and 15), included 16 test pits, ten of which were sterile; six pits (T9-3, T9-4, T9-5, T9-7, T9-8 and T9-9) yielded 24 pieces historic-period cultural material: clear window glass, white sherds, a medicine bottle fragment, curved glass, and a flow-blue transfer-printed whiteware sherd (1840-1900+). All of the cultural material from the T9 pits were found in shallow plowzone or fill contexts. Most of the T9 transect pits were disturbed, with fill replacing natural soil horizons. Only Pits T9-6, T9-8, T9-10, T9-12, T9-13, T9-14, T9-15 and T9-16 were intact, and none of these were artifact-bearing.

The light-density "concentration" of 19th-century domestic artifacts found in Transects T6, T7, T8 and T9 appear to represent field scatter, possibly associated with the former historic house which once stood a bit westward. It was designated Site 107-14, Locus 1 (Figure 13; Photograph 8).

The testing then moved to the eastern/southeastern portion of the project area, within the DiChello parcel. Six transects, oriented north-south, were placed south and east of the large area of disturbance on the parcel, between the terrace edge above the railroad tracks northward to the southern border of the Yale property (defined by a sewer line easement) (Figure 15). The transects included T10 (two pits), T11 (two pits), T12 (six pits), T13 (four pits), T14 (three pits), and T21 (two pits). Sixteen of the 19 pits were sterile. Pits T10-1 and T10-2 contained a plowzone over B2/1, with subsoil ending at rock at 58 centimeters below surface, a fairly typical profile for 17 of the 19 test pits. Two pits, T11-2, on the edge of the large area of disturbance, and T13-2, east of the disturbance area, contained fill soils levels intermixed with coal and safety glass.

One prehistoric site was found centered around Pits T12-4 and T12-5, in the eastern part of the DiChello parcel. Pit T12-4 produced a quartz Lamoka-like projectile point (missing the tip) from the plowzone (6-35 centimeters below surface); five pieces of bottle and window glass were also found in the plowzone. Fifteen meters to the north, Pit T12-5 produced a quartz bifacial retouch flake in the 6-25 centimeters below surface plowzone level. This site was designated Site 107-15 (Figure 15; Photograph 9).

A single sherd of domestic salt-glazed stoneware (1730-1900) was found in the plowzone of Pit T11-1; it is considered isolated field scatter, likely associated with the historic house once in the vicinity (it was inventoried as part of "Site" 107-FSORR; see artifact inventory list in Appendix V).

We then left the DiChello property and moved north across the sewer line to the Yale parcel (Photograph 10). Avoiding a large area of disturbance and debris pile in the southern part of this parcel, we placed 52 test pits along Transects 15 through 20 (Figure 16). The vast majority of the test pits contained intact natural stratigraphy, comprised of Ap/plowzone over B2/1 and sometimes B/2 Horizons, over C Horizons. The C Horizon depth was reached at an average of 50 centimeters below surface. In 17 pits, such as T15-2, on the northwest edge of the debris pile/disturbance area, the pit was comprised of Fill over rock, inclusive of plastic, coal and safety glass, evidence of dumping. None of the pits along Transect 16 was disturbed, but along T17, 15 meters to the north, four pits (T17-2, T17-3, T17-7 and T17-8) were comprised of fill soils overlying C Horizon, with modern nails, glass, brick and linoleum in the fill; in Pit T17-5 the upper soil levels were missing. Along Transect 18 to the north, fill soils over C Horizons

characterized Pits T18-1, T18-4, T18-7, T18-9 and T18-13; the subsoil (B Horizon) was absent in Pit T18-3. Transect 19, 15 meters north, fill characterized Pits T19-2, T19-4, and T19-10, and in T19-9 the A Horizon was missing. In the northeast corner of the Yale parcel, Pit T20-1 included fill over Ap, B2/1 and C Horizons (see profiles in Appendix IV).

All but two of the 52 test pits in the Yale area were sterile, and most contained modern trash in the upper level. In Pit T15-4, in the southeast portion of the Yale parcel, one whiteware sherd (1820-1900+) and two clear curved glass fragments were recovered; these isolated finds, inventoried as 107-FSORR, are considered field scatter which may be associated with the 19th-century house that was once in the vicinity.

A second prehistoric site was identified in Pit T18-12, which yielded a quartz drill from the B2/2 lower subsoil (35-60 centimeters below surface); a charred unidentified botanical fragment, suggesting a possible feature, was also found (Figure 16; Photograph 11). The site was designated Site 107-16. AHS excavated an array of four test pits (A1, A2, A3, A4) at two meters distance from T18-12, in the four cardinal directions. A2 produced a sherd of whiteware from a fill context; the remaining pits were sterile but were stratigraphically intact.

After completing the transect testing on the Yale parcel, we moved to the extreme western part of the project area, in the three suburban house lots at the corner of Salemme Lane and Marsh Hill Road (Figure 14). Somewhere in this vicinity stood the 19th-century Merwin-Munson-Beach house (the historic map scales do not permit precise location). Transects T22 through T28 were placed north to south over the three lots, 15 meters apart (Figure 14). Thirty test pits were placed along these six transects; 12 of them contained historic-period cultural material, mostly concentrated in the back and east side yards of #15 Salemme Lane (Photograph 1). Twenty-three artifacts and 17 shell and bone fragments were found in the 12 pits. The artifacts include sherds of creamware (1762-1820), whiteware (1820-1900+), transfer-printed ironstone, clear curved glass, clear window glass, and window glass; the shell is quahog and the three animal bone fragments are non-calcined; one is sawn. The artifacts and ecofacts were found in fill and plowzone contexts, generally no deeper than 30 centimeters below surface.

The stratigraphic contexts of the test pits in this area were mixed. Twelve of the 30 pits were completely disturbed, comprised entirely of fill soils. The T28 pits, the line closest to Marsh Hill Road, all were completely full of fill. A number of the historic-artifact-bearing pits were also comprised, at least in part, of fill; these include Pits T28-3, T25-4 (in which an I-beam is buried in fill overlying C Horizon soils), and T22-1, T22-2, T22-3, and T22-5.

AHS concluded that the historic-period artifacts and ecofacts from this area are likely associated with the historic house formerly on the property. No structural evidence of the house was observed; it was likely destroyed by construction of the suburban homes here in the 20th century. Because AHS believes that this artifact "cluster" is related to the house, as is Site 107-14 to the northeast, the northern component of Site 107-14 was labeled as Locus 1, and the component along Marsh Hill Road and Salemme Lane was designated Site 107-14, Locus 2 (Figures 13-14).

The transect testing completed, AHS placed 12 judgment pits in the eastern part of the project area in order to confirm suspected subsurface disturbance near the large visible areas of disturbance in the DiChello and Yale parcels. Pits J1, J2, J3, J4, J5, J6, J10, J11 and J12 were placed around the DiChello disturbance area (Figures 13 and 15). All but J11 were sterile; J11 contained fill but it included historic window glass, whiteware, and curved glass (three artifacts) and was thus considered field scatter likely associated with the historic house once on the property (it was inventoried under 107-FSORR). Pits J1, J2, and J3 were comprised entirely of

fill, as were J6, J9 and J10. Pit J5, on the northern edge of a small wetland on the terrace edge over the railroad tracks, was surprisingly intact, with an intact B2/1 Horizon beneath topsoil.

Two judgment pits were placed on the eastern edge of the disturbed area/debris pile on the Yale parcel (Figure 16). Pit J7 contained fill directly over the C Horizon, but J8 contained intact A, B2/1, and B2/2 levels beneath a shallow fill layer. The two pits were sterile.

VI. CONCLUSIONS AND RECOMMENDATIONS

The Phase I Archaeological Reconnaissance Survey determined that the proposed new railroad station project area had prehistoric and archaeological sensitivity. The historic-period sensitivity was derived from the early 19th-century house that stood in the western portion of the project until sometime between 1868 and 1889. The prehistoric sensitivity was based on the area's terrace location overlooking the Oyster River. Over one-third of the project area was found to have been disturbed by deep earthmoving and huge trash-pile formation, and suburban development, obviating any archaeological potential in these areas. Modern trash was scattered over the surface of much of the Yale and DiChello parcels.

Three archaeological sites were identified in the subsurface testing (Figure 17):

- **Site 107-14** includes two discrete loci comprised of light-density field scatters of artifacts likely associated with the historic house formerly on the property. The artifact scatters are domestic (i.e., household) in nature, and include ceramics, glass, and other items from the period of occupation of the historic house. Distribution of domestic artifacts near and away from a house in the 19th century was extremely common, a result of refuse and privy waste disposal. No evidence of a foundation, cellar or other structural remains such as a well were identified. It is likely that the house and outbuildings were destroyed by the 20th-century suburban development of the house lots on Salemme Lane and Marsh Hill Road. The very small amount of the cultural material was found in disturbed or plowzone contexts, indicating the site has no stratigraphic integrity. Site 107-14 is very unlikely to yield information important to history, and is not a viable candidate for listing in the National Register of Historic Places. No additional archaeological testing is recommended at Site 107-14.

- **Site 107-15** In the eastern part of the DiChello property, adjacent to the proposed location of the new railroad station, a Late Archaic period site was identified. A Lamoka-like projectile point and quartz bifacial retouch flake were recovered from two test pits at this site. This site has the potential, in AHS's opinion, to contain additional cultural material that could elucidate prehistoric lifeways in Orange and may be eligible for inclusion in the National Register of Historic Places. AHS recommends that a Phase II Intensive Archaeological Survey be conducted at Site 107-15 in order to gather sufficient information to make a conclusive determination of the site's National Register eligibility.

- **Site 107-16** In the northeast corner of the project area, on the Yale parcel, a quartz drill and charred botanical fragment were found in a single test pit, in a deep subsoil context. About 50 meters north of Site 107-15, this site is potentially eligible for listing in the National Register. Phase II Intensive Archaeological Survey is recommended to definitively assess the site's significance relative to National Register eligibility criteria.

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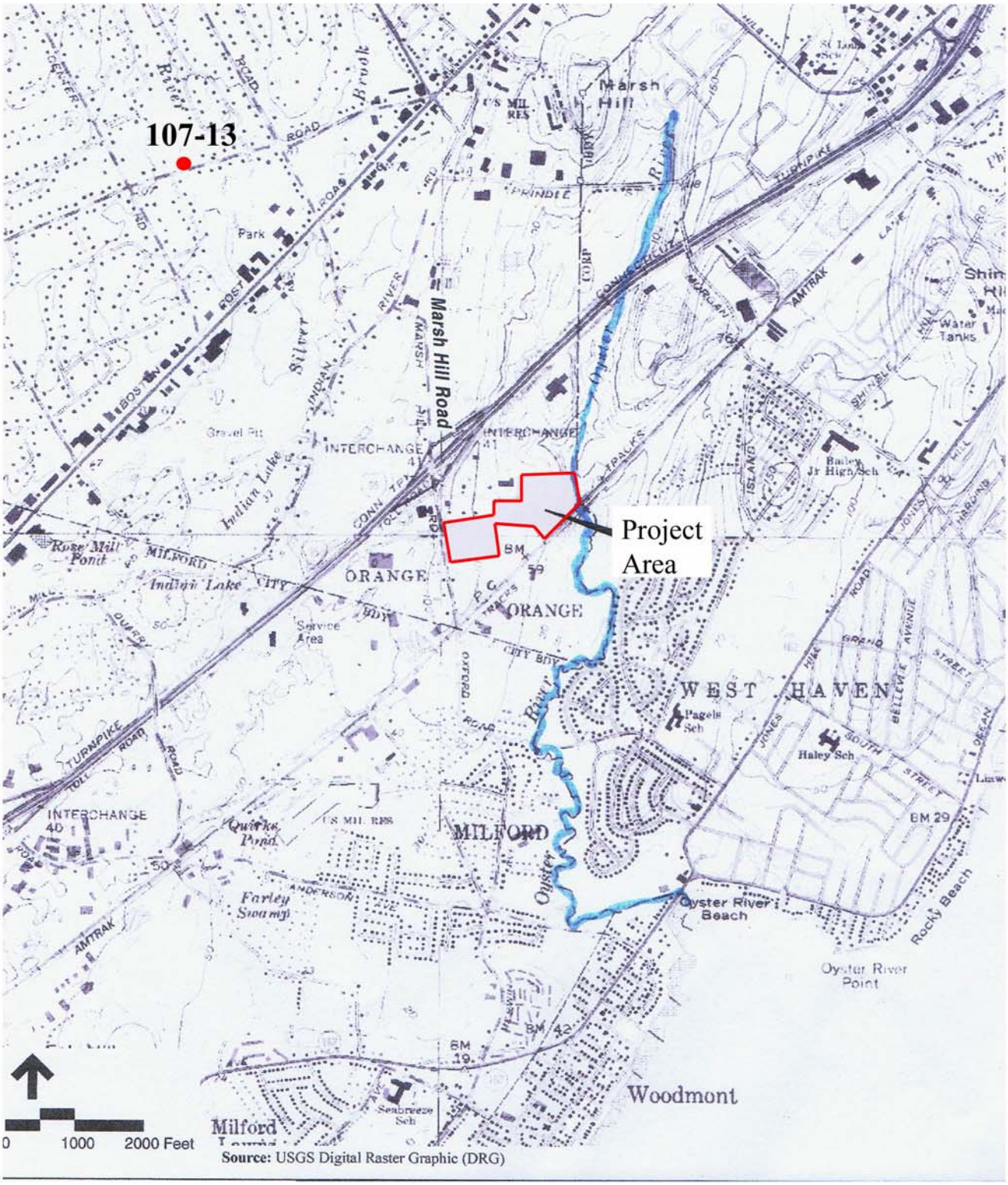
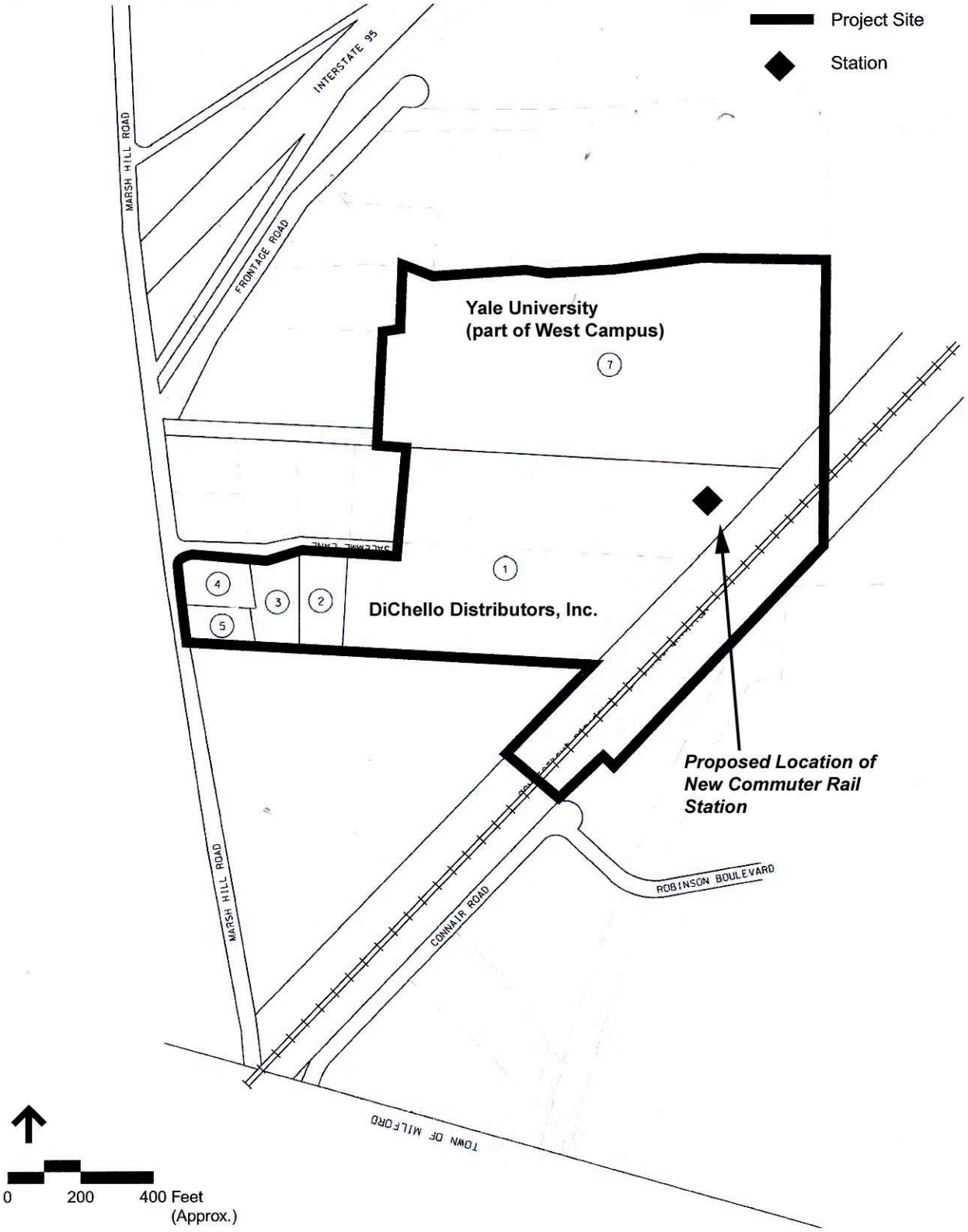
APPENDIX I

Figures



Known Archaeological Sites in the Vicinity of the Project Area, on U.S.G.S. 7.5 minute series topographic map.

Figure 1



Property Acquisition
Orange Alternative

From 2007 FSEIE

Figure 2

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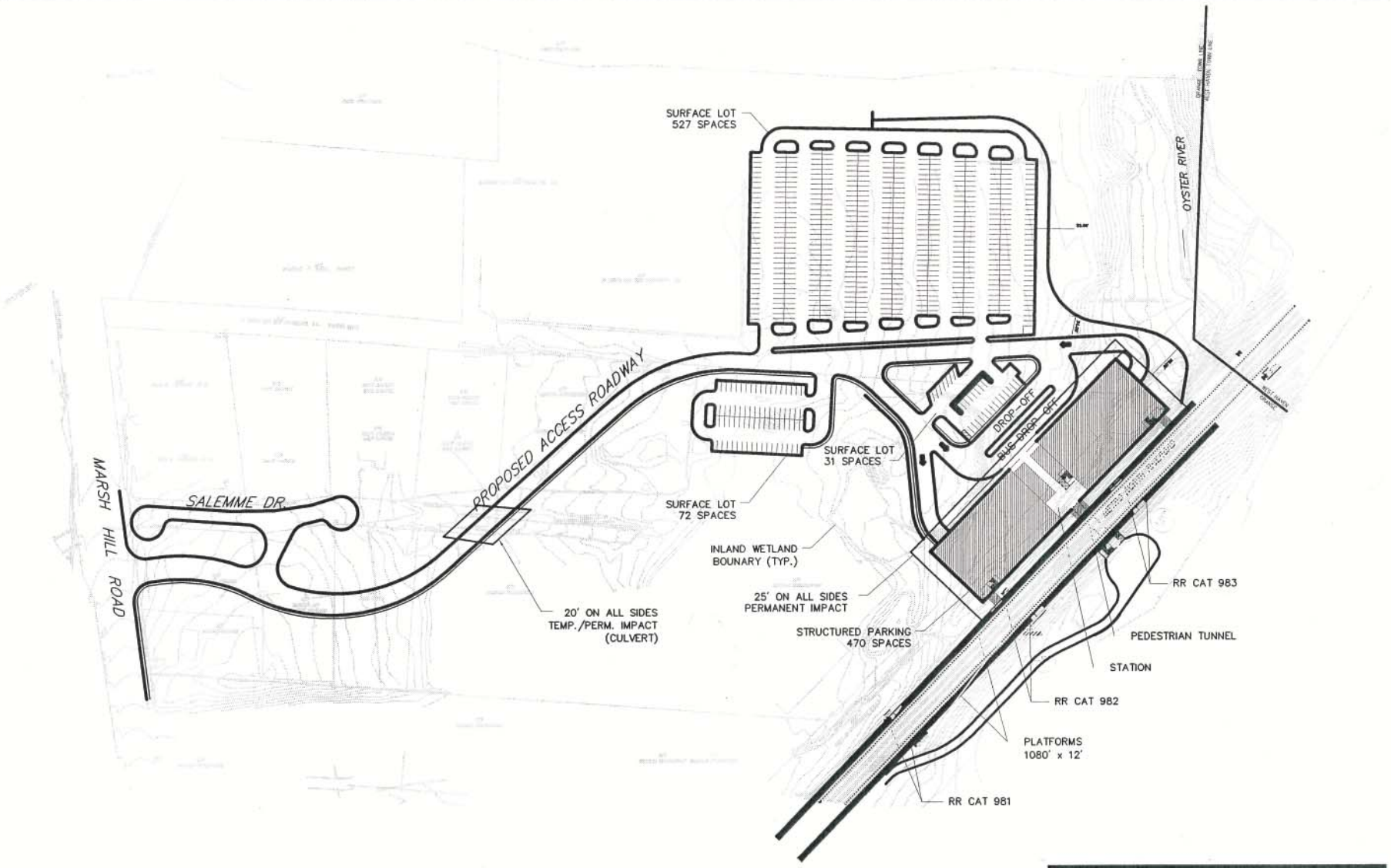


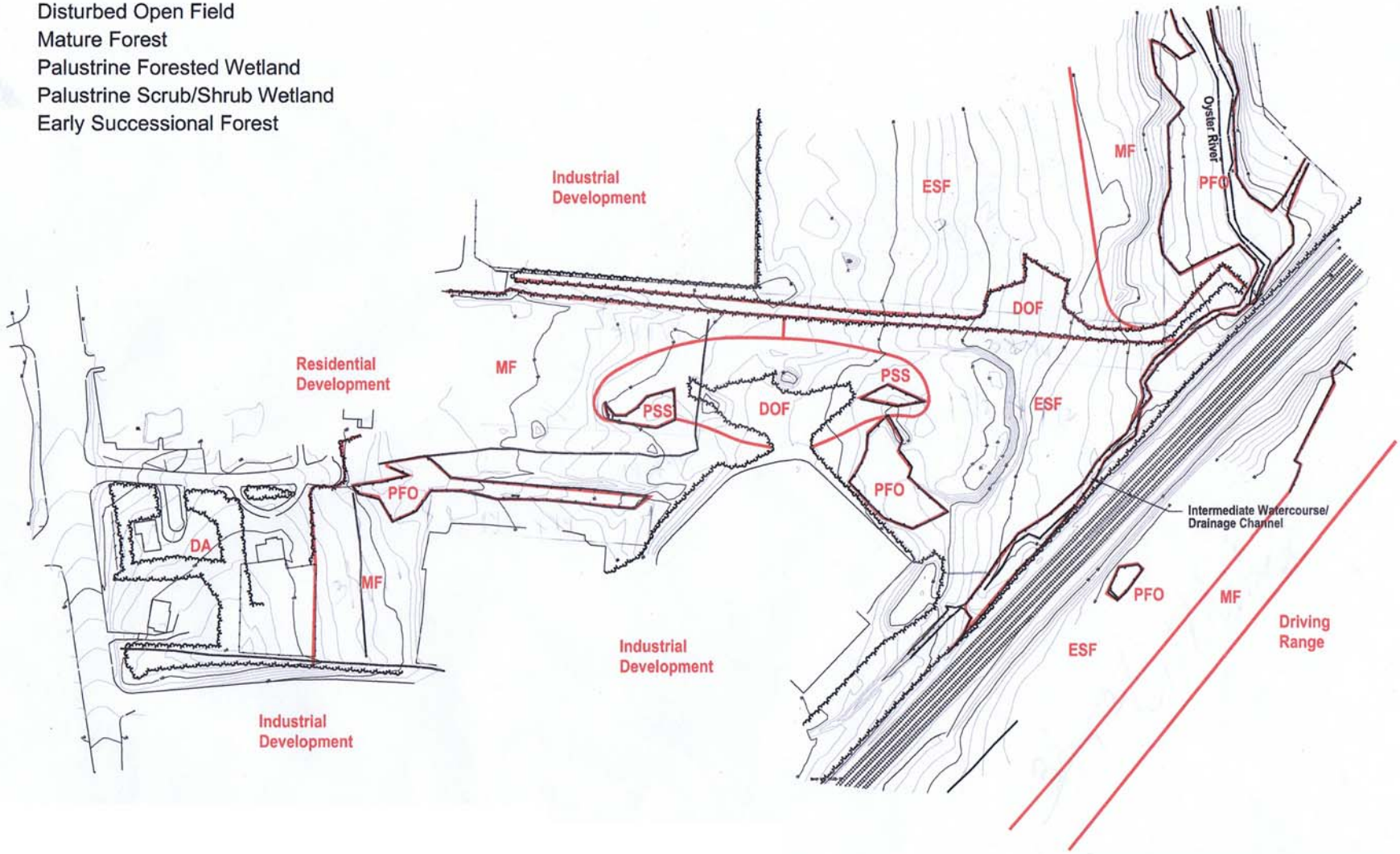
0 125 250 Feet

Site Sketch
Orange Alternative

From 2007 FSEIE

Figure 3

DA Developed Area
DOF Disturbed Open Field
MF Mature Forest
PFO Palustrine Forested Wetland
PSS Palustrine Scrub/Shrub Wetland
ESF Early Successional Forest



0 125 250 Feet

Existing Vegetation
Orange Alternative

From 2007 FSEIE

Figure 4

Figure 5: **Project area (shaded) plotted on the 1855 U.S. Coast Survey chart of Long Island Sound; the topography for the chart was compiled in 1837.**

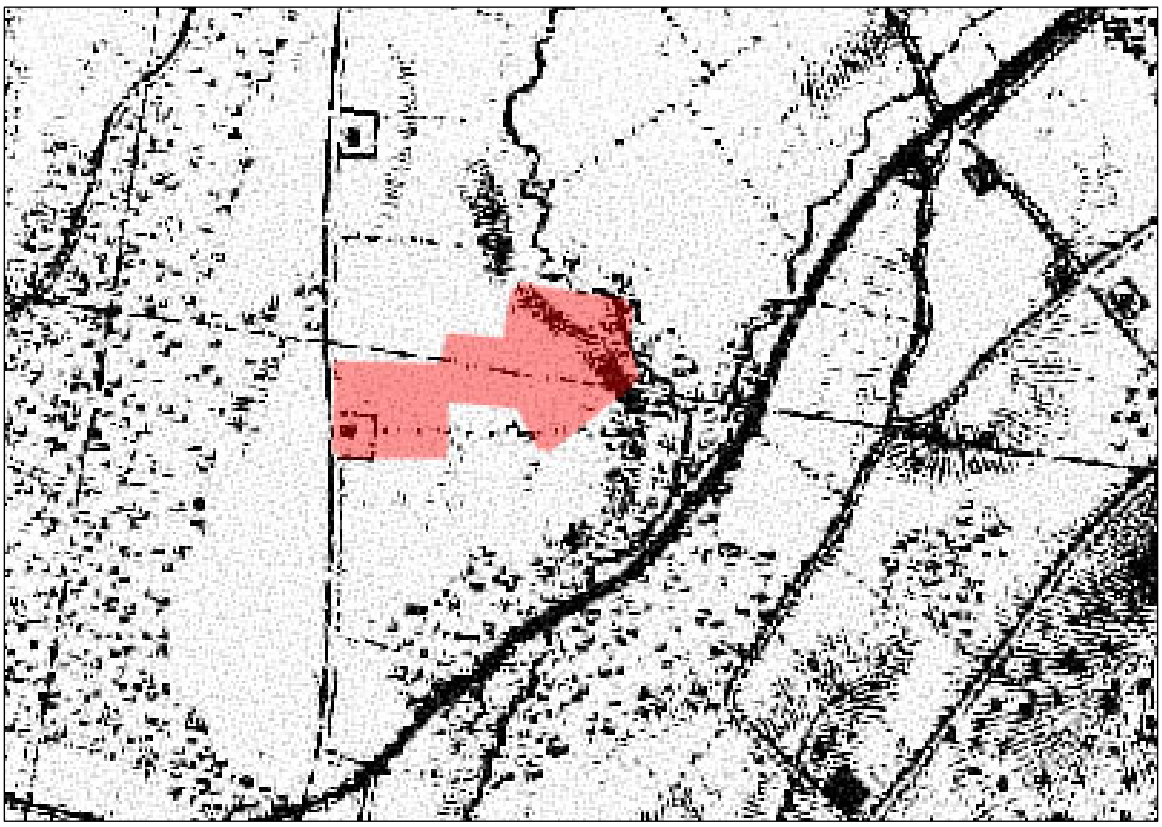


Figure 6: **Project area (shaded) plotted on the 1852 Whiteford map of New Haven County. The notation D. Merwin indicated the homestead of Daniel Merwin (1778-1862), a farmer. His acreage extended eastward across the Oyster River to the next north-south road.**

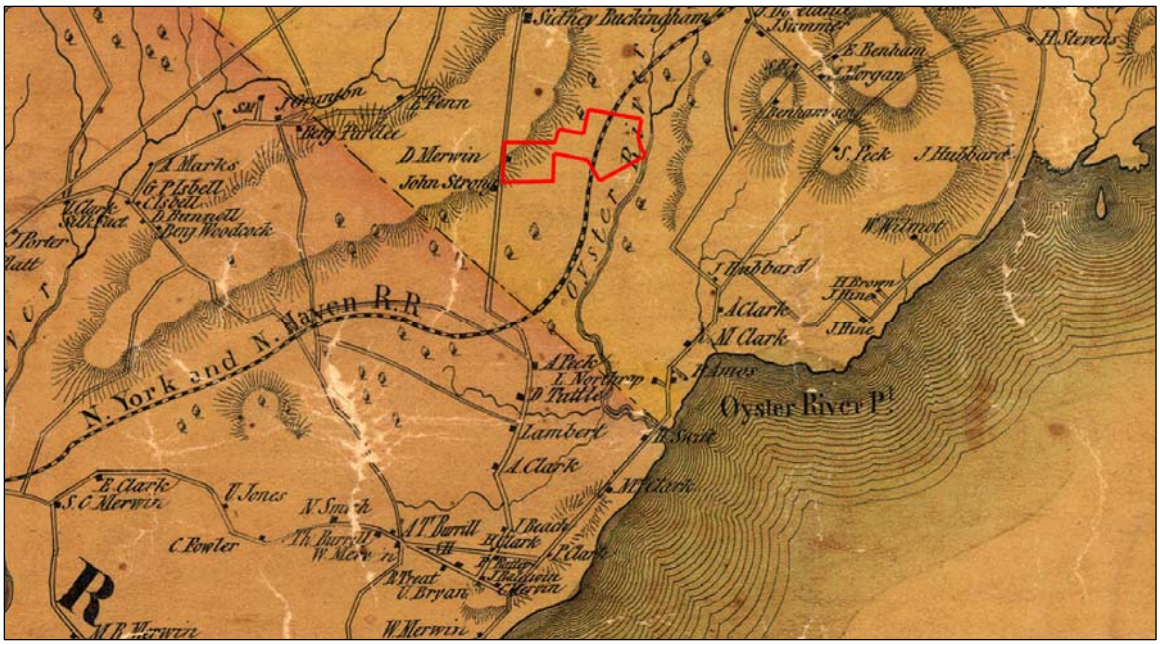


Figure 7: **Project area (shaded) plotted on the 1868 Beers atlas map of Orange County. The property is shown as owned by R. H. Beach.**

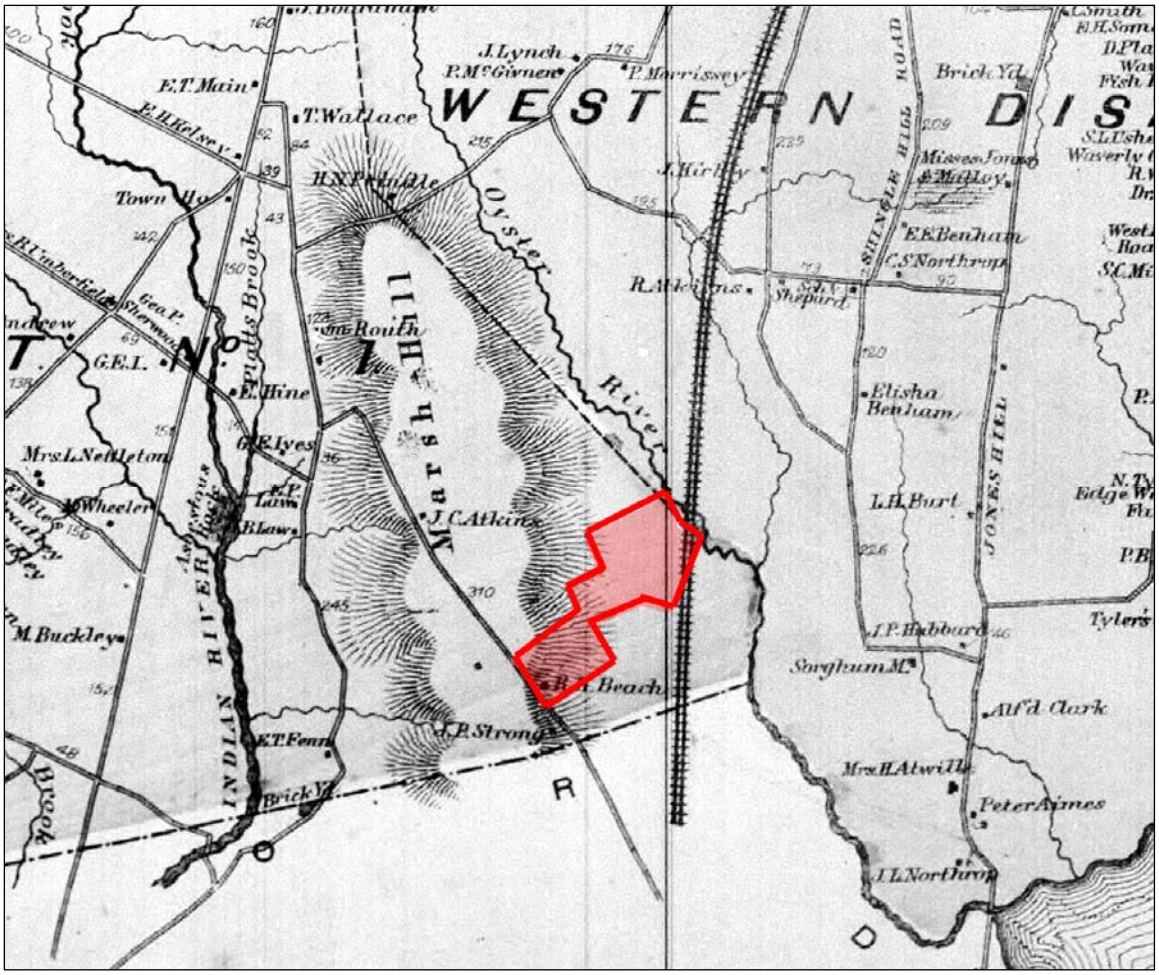


Figure 8: **Project area (shaded) plotted on the 1893 U.S.G. New Haven, Derby, and Bridgeport quadrangle. The topography for these quadrangles was surveyed in 1889 and 1890. No house shows within the project area.**

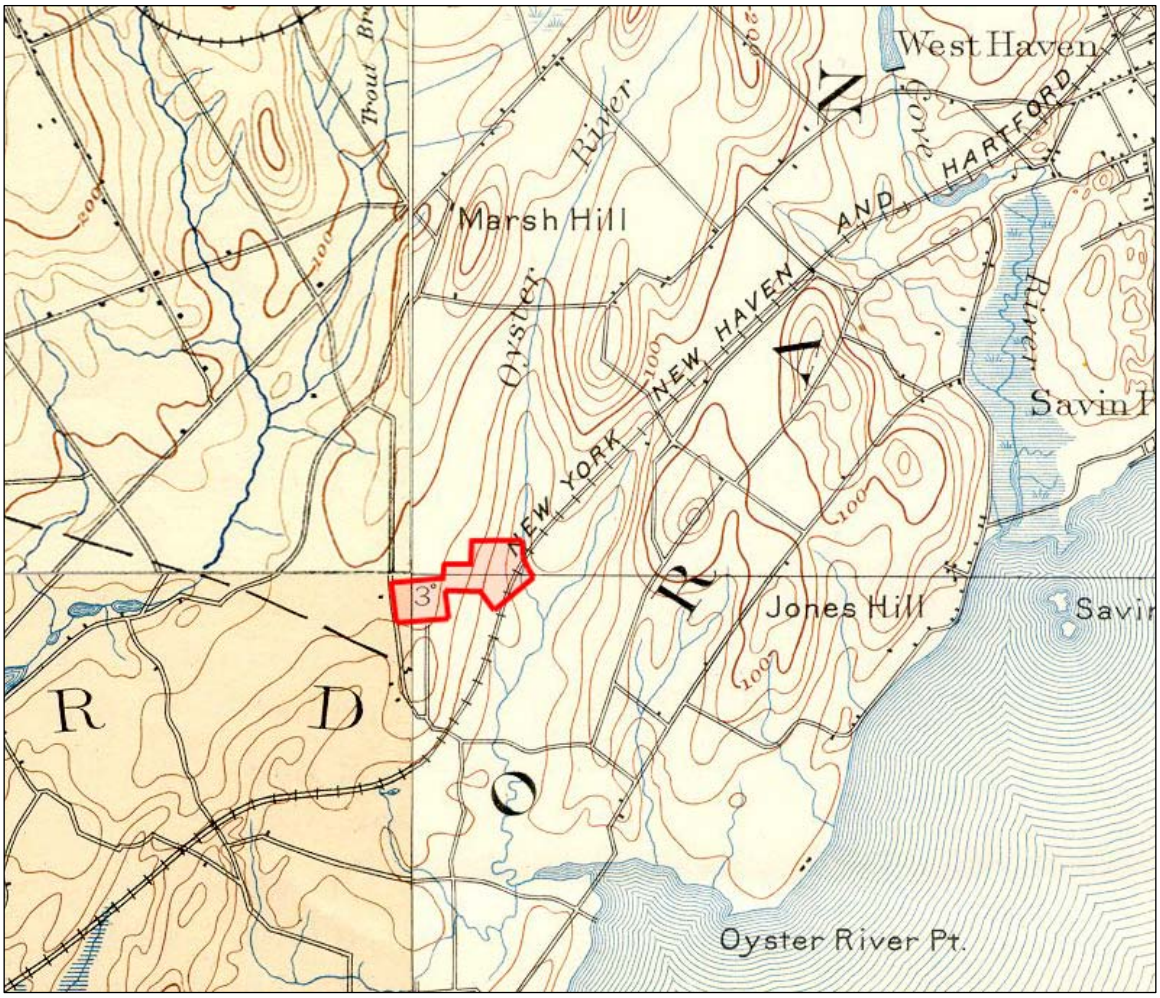


Figure 9: **The project area as shown on the 1931 Dolph & Stewart atlas map. The property owner is shown as the Elm City Nursery (print enhanced for legibility).**

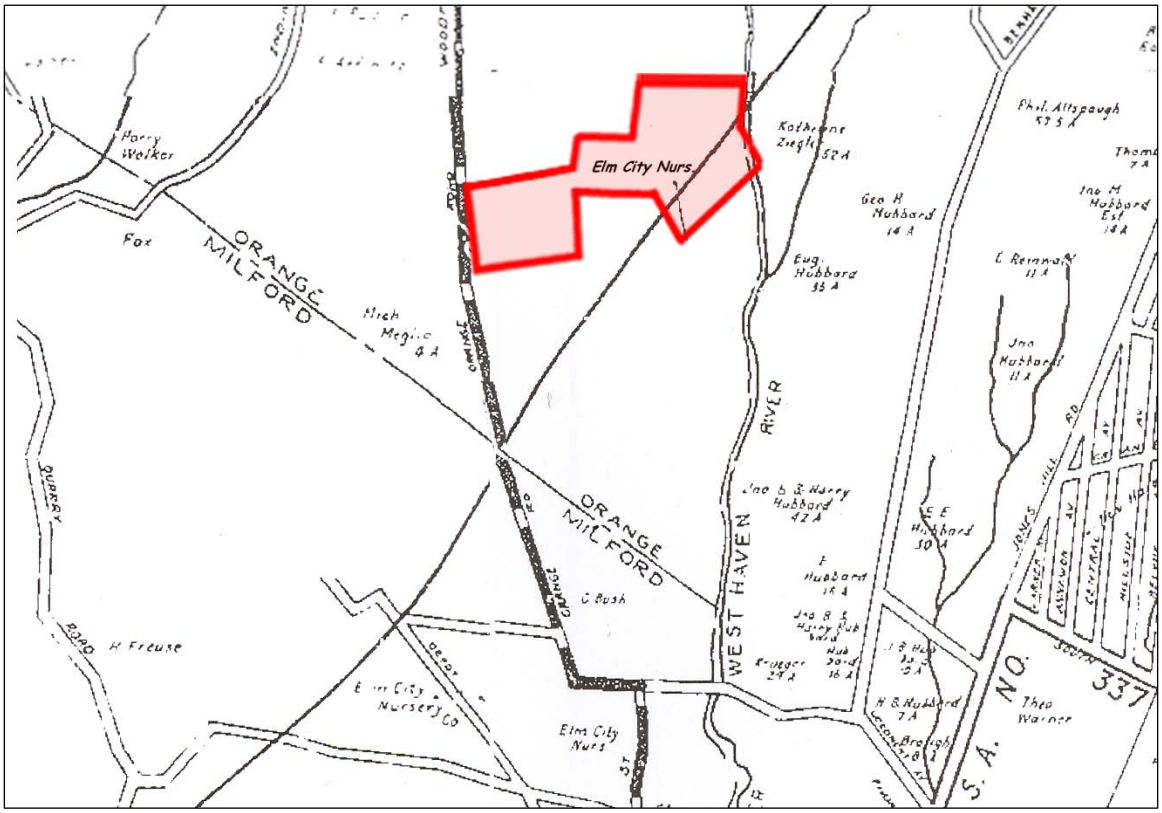
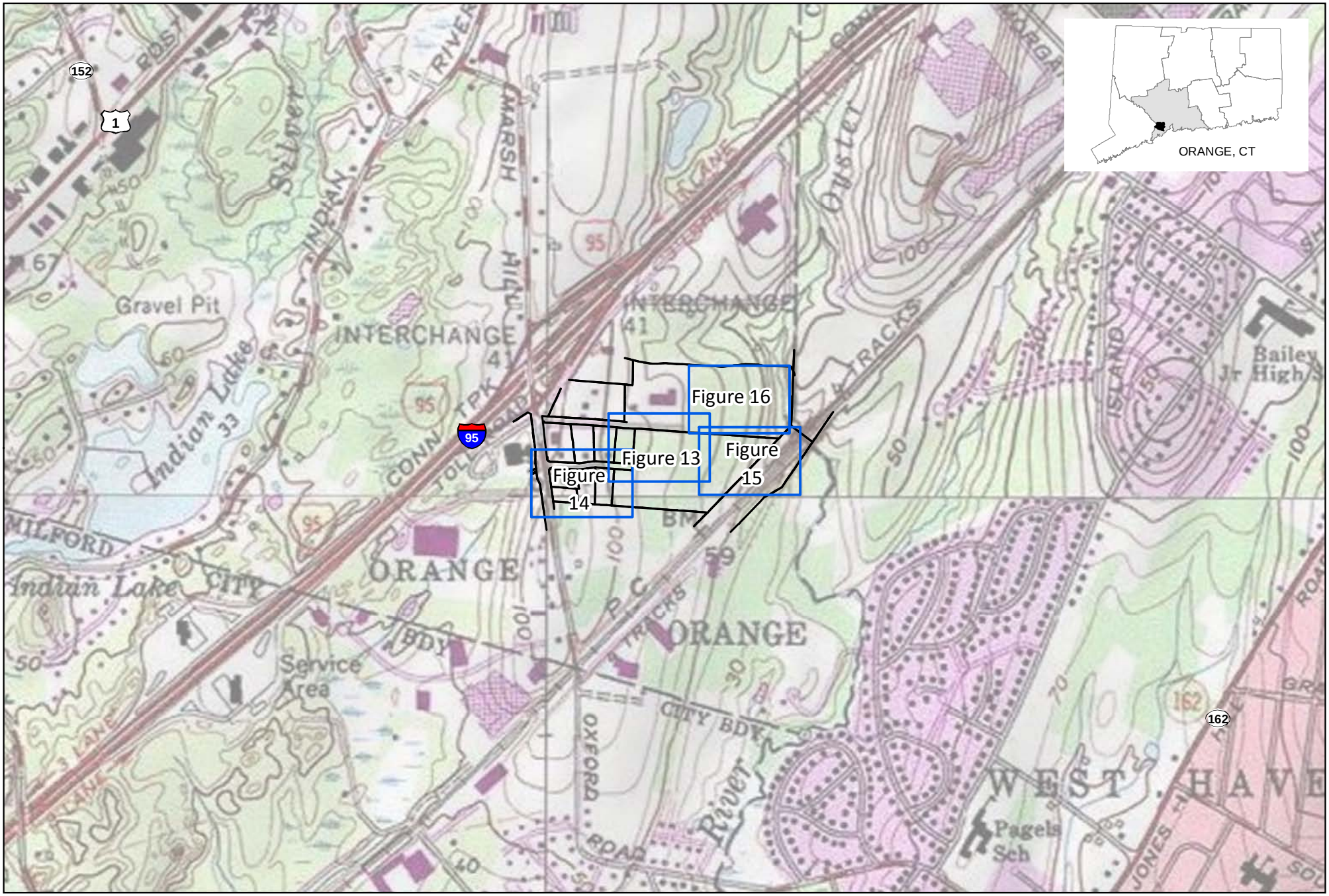


Figure 10: **Project area (shaded) plotted on the 1934 Fairchild aerial photograph. Except for a few trees near the road and along the Oyster River, the entire area appears to be open and still in agricultural use. The four-track electrified main line of the New Haven Railroad is visible, as are traces of the former alignment curving off to the south.**

Figure 11: **Project area (shaded) plotted on the 1965 Connecticut Department of Public Works aerial photograph. Although most of the project area still appears to be open farmland, the houses on Salemme Drive are visible as well.**



Source: Survey by AI Engineers, 1996; Updates to building and curb outlines digitized by Fuss & O'Neill, based on 2008 Orthophotography. Wetland boundaries based on lines provided by AI Engineers, 1996 and confirmed by Fuss & O'Neill, Inc. on Nov. 15, 2010.

N

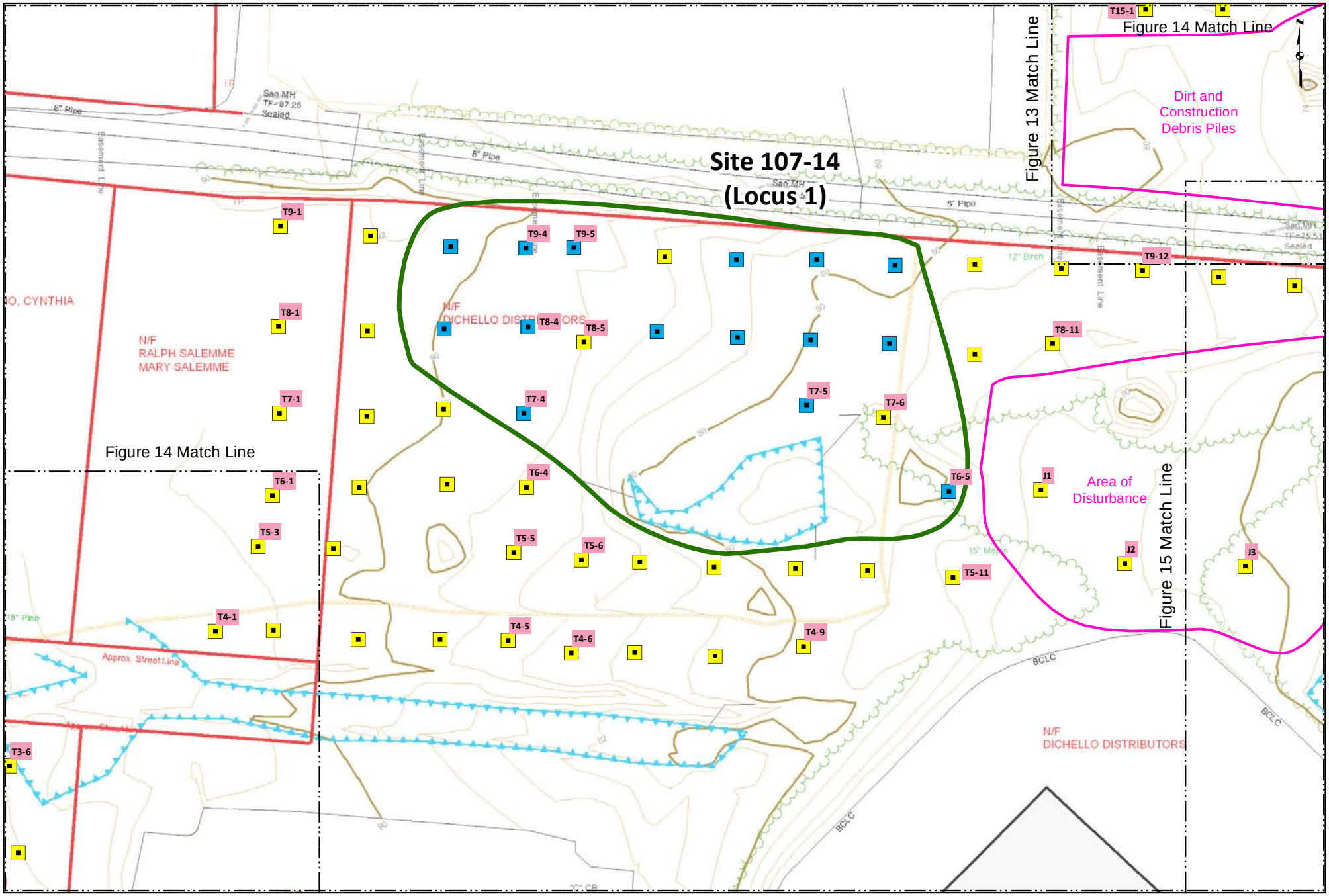
0 1,000 2,000

Feet

Legend

Figure Index — Site Property Boundary

Figure 12



Source: Survey by AI Engineers, 1996; Updates to building and curb outlines digitized by Fuss & O'Neill, based on 2008 Orthophotography. Wetland boundaries based on lines provided by AI Engineers, 1996 and confirmed by Fuss & O'Neill, Inc. on Nov. 15, 2010.

LEGEND

Historic Resources
- Historic & Prehistoric Material
- Historic Material
- No Cultural Material
- Prehistoric Material
- Archaeological Site Boundary

Site Features
- Building
- Site Property Boundary
- Watercourse
- wetland_clean
- Railroad
- Tree Line
- Fence
- Curb
- 10-Foot Topographic Contour Line
- 2-Foot Topographic Contour Line

Figure 13

Source: Survey by AI Engineers, 1996; Updates to building and curb outlines digitized by Fuss & O'Neill, based on 2008 Orthophotography. Wetland boundaries based on lines provided by AI Engineers, 1996 and confirmed by Fuss & O'Neill, Inc. on Nov. 15, 2010.

0 50 100

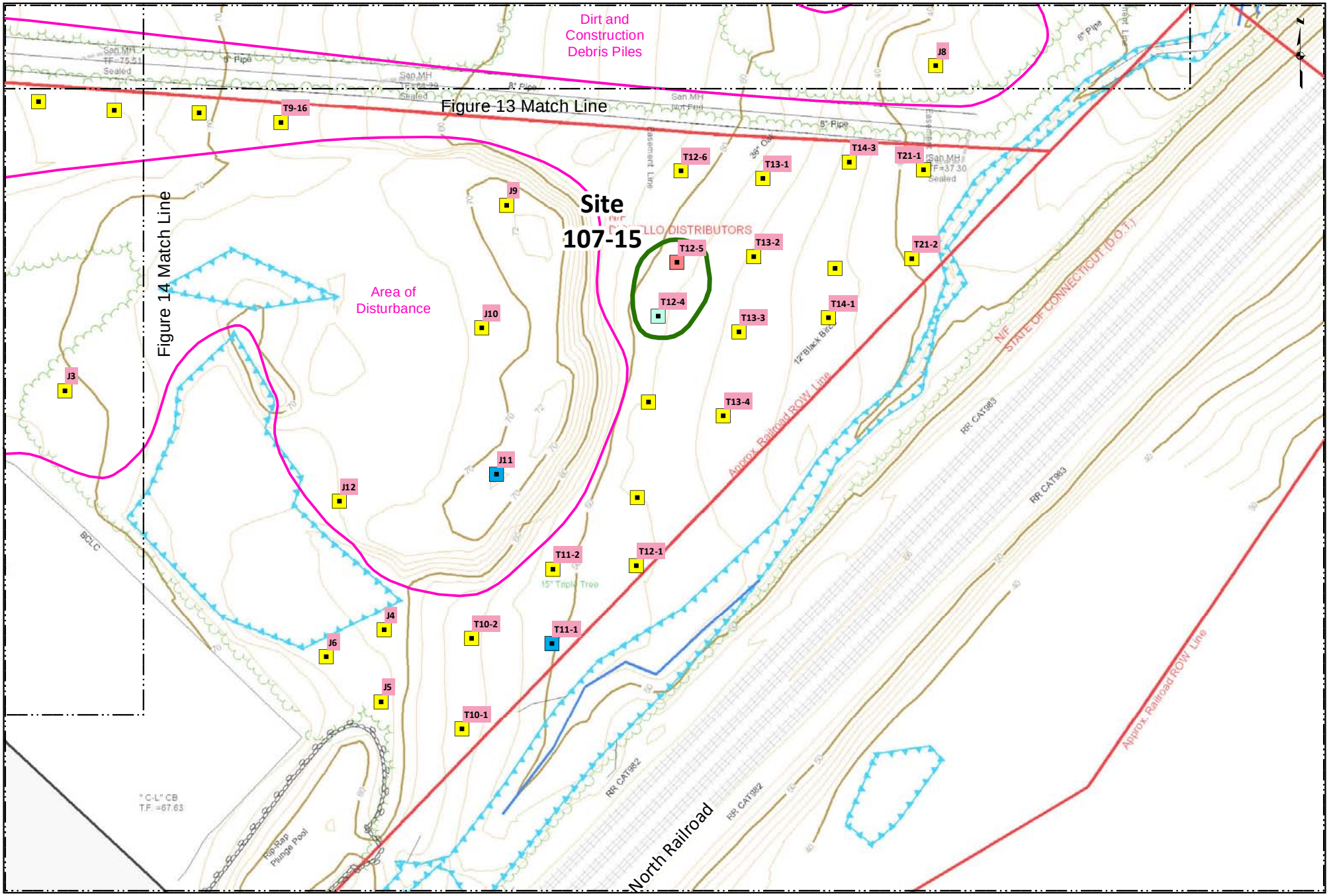
Feet

LEGEND

Historic Resources
- Historic & Prehistoric Material
- Historic Material
- No Cultural Material
- Prehistoric Material
- Archaeological Site Boundary

Site Features
- Building
- Site Property Boundary
- Watercourse
- wetland_clean
- Railroad
- Tree Line
- Fence
- Curb
- 10-Foot Topographic Contour Line
- 2-Foot Topographic Contour Line

Figure 14



Source: Survey by AI Engineers, 1996; Updates to building and curb outlines digitized by Fuss & O'Neill, based on 2008 Orthophotography. Wetland boundaries based on lines provided by AI Engineers, 1996 and confirmed by Fuss & O'Neill, Inc. on Nov. 15, 2010.

0 50 100

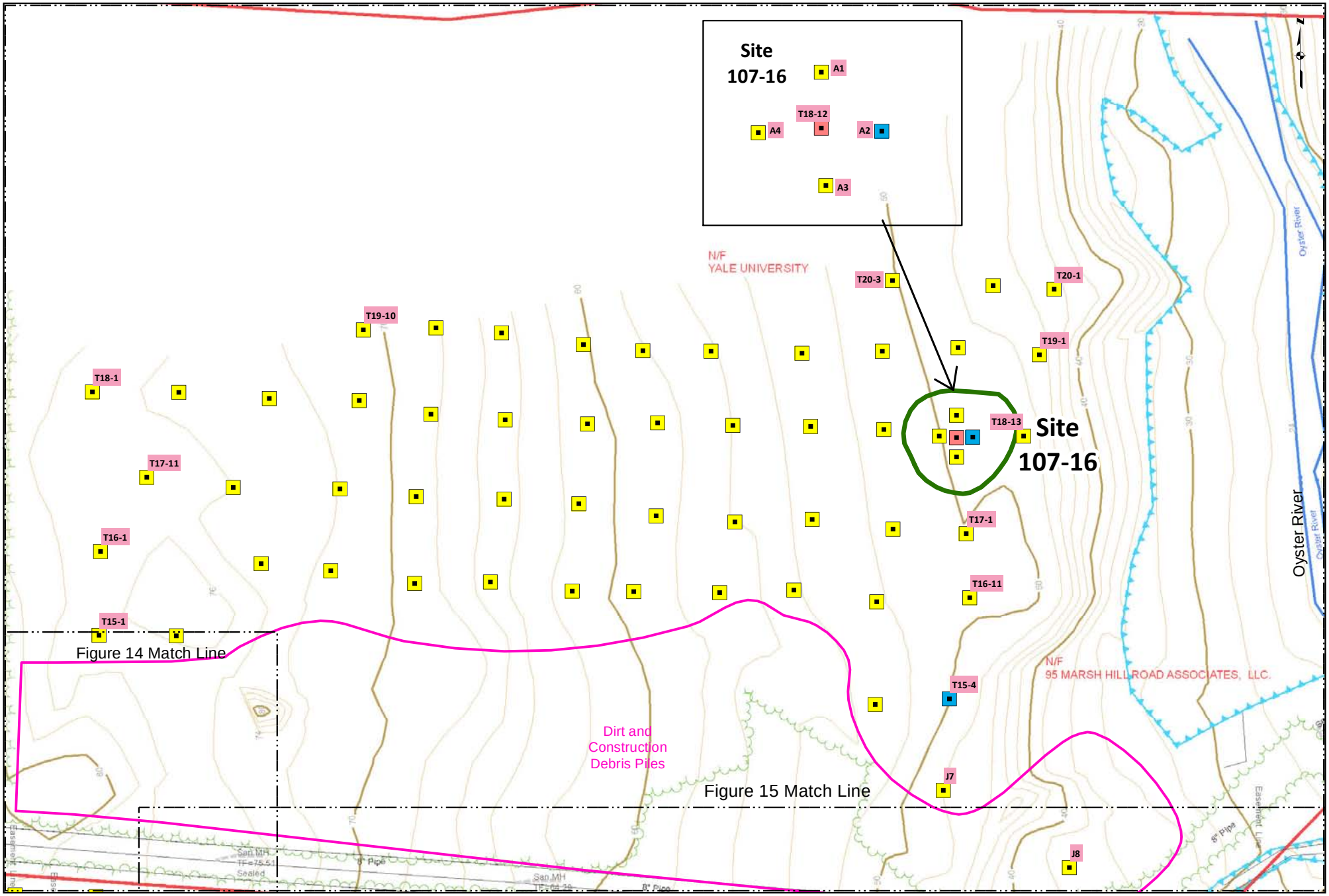
Feet

LEGEND

Historic Resources
- Historic & Prehistoric Material
- Historic Material
- No Cultural Material
- Prehistoric Material
- Archaeological Site Boundary

Site Features
- Building
- Site Property Boundary
- Watercourse
- wetland_clean
- Railroad
- Tree Line
- Fence
- Curb
- 10-Foot Topographic Contour Line
- 2-Foot Topographic Contour Line

Figure 15



Source: Survey by AI Engineers, 1996; Updates to building and curb outlines digitized by Fuss & O'Neill, based on 2008 Orthophotography. Wetland boundaries based on lines provided by AI Engineers, 1996 and confirmed by Fuss & O'Neill, Inc. on Nov. 15, 2010.

0 50 100

Feet

LEGEND

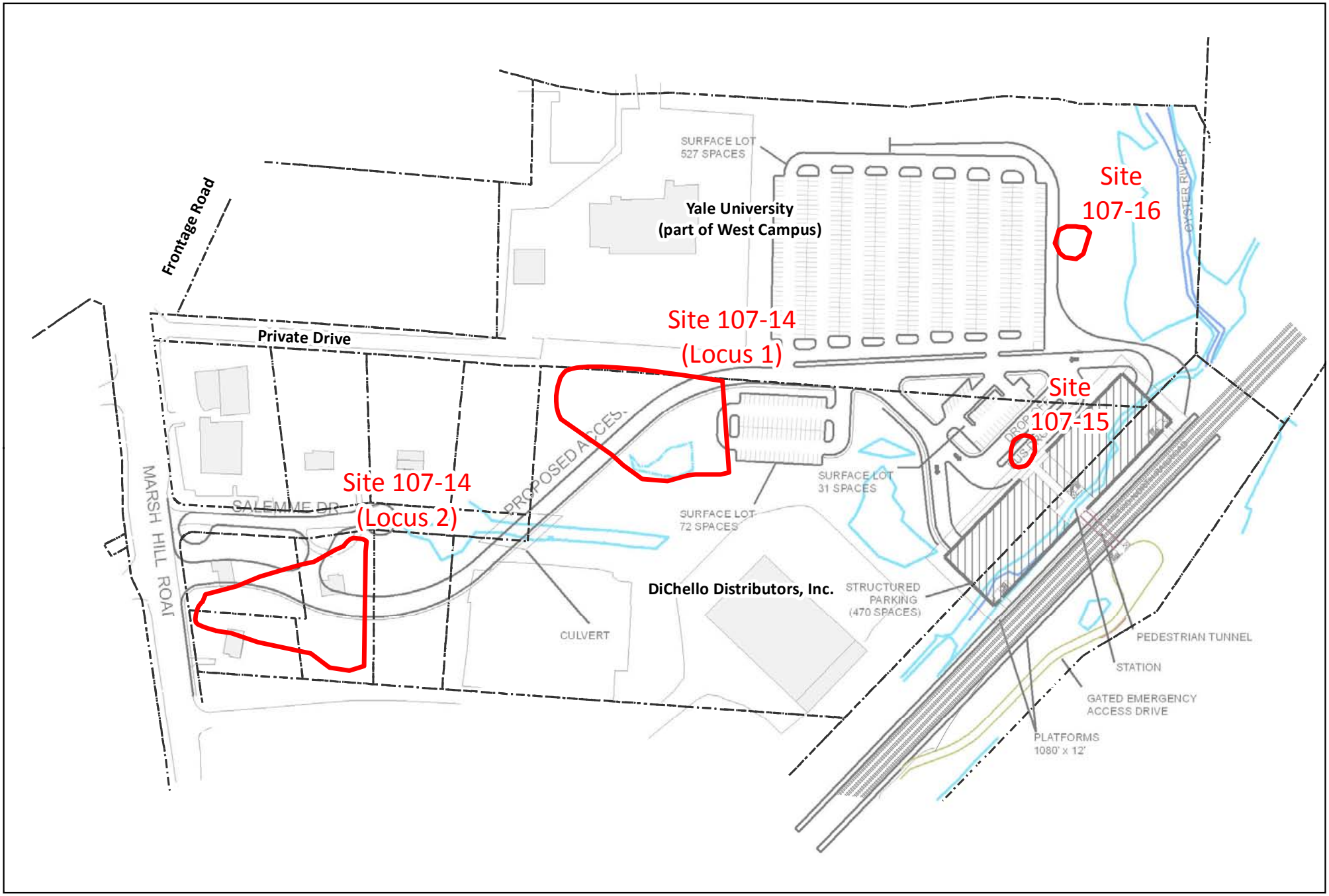
Historic Resources

- Historic & Prehistoric Material
- Historic Material
- No Cultural Material
- Prehistoric Material
- Archaeological Site Boundary

Site Features

- Building
- Site Property Boundary
- Watercourse
- wetland_clean
- Railroad
- Tree Line
- Fence
- Curb
- 10-Foot Topographic Contour Line
- 2-Foot Topographic Contour Line

Figure 16



Source: Survey by AI Engineers, 1996; Updates to building and curb outlines digitized by Fuss & O'Neill, based on 2008 Orthophotography. Wetland boundaries based on lines provided by AI Engineers, 1996 and confirmed by Fuss & O'Neill, Inc. on Nov. 15, 2010.

N

0 200 400

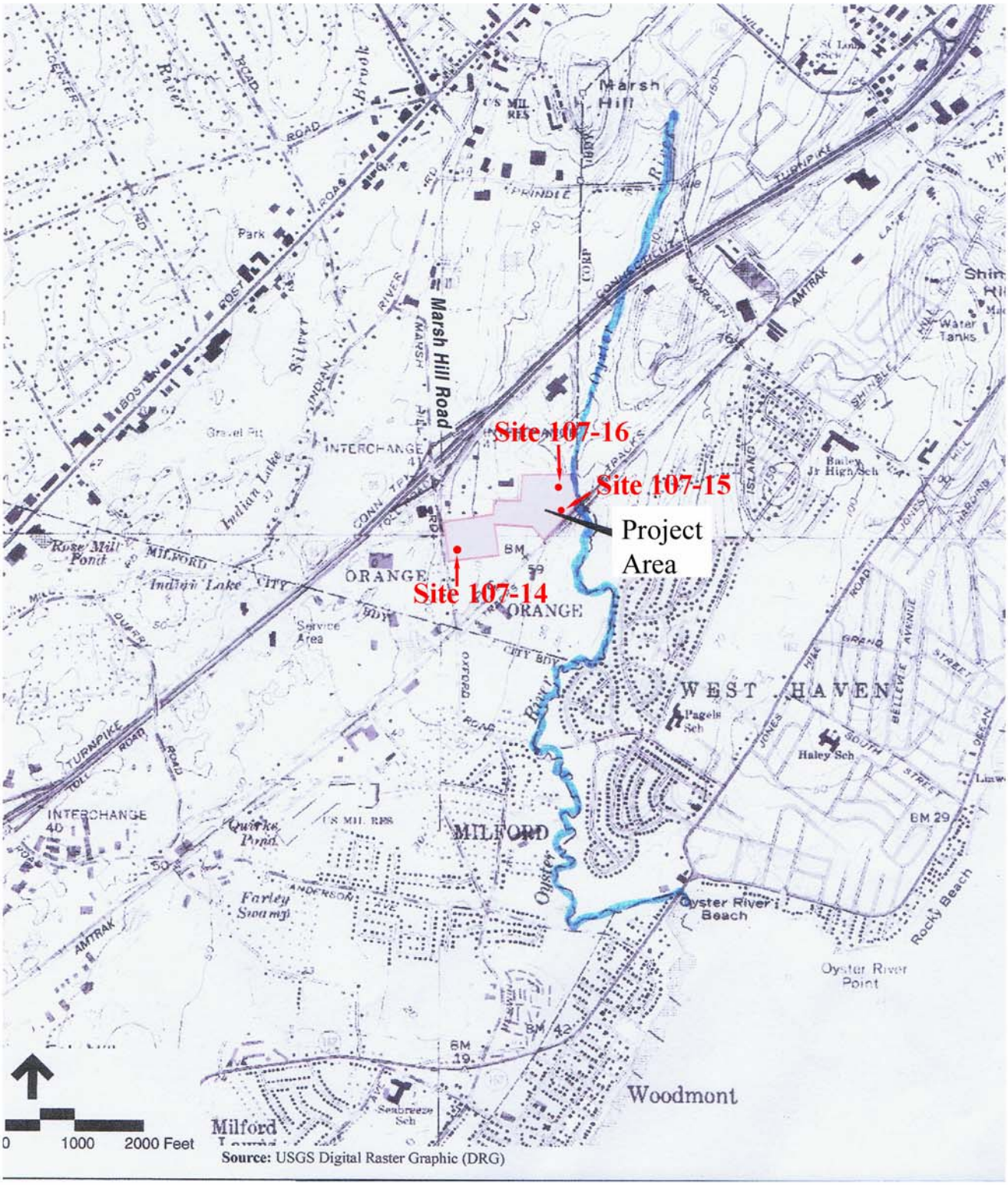
Feet

Legend

Archaeological Site Boundary

Site Property Boundary

Figure 17



Archaeological Sites Identified in Project Area
on U.S.G.S.7.5 minute series topographic map

Figure 18

APPENDIX II

Photographs

Photograph 1: House at 15 Salemme Lane, view southeast.

Photograph 2: Front yard of 65 Marsh Hill Road showing approximate location of former house associated with Site 107-14, Locus 2, view south.

Photograph 3: House at 69 Marsh Hill Road, view northeast.

Photograph 4: Stone wall north of Transect 4 on DiChello parcel, view northeast.

Photograph 5: Dirt piles along sewer easement, between the Yale and DiChello parcels, view northeast.

Photograph 6: Dirt and concrete piles in Yale parcel, view northeast.

Photograph 7: Trash pile south of test pit T8-8, on DiChello parcel, view south.

Photograph 8: Vicinity of Site 107-14, Locus 1, on DiChello parcel, view south from test pit T8-1.

Photograph 9: Site 107-15, on DiChello parcel, in lower left of photograph, view west.

Photograph 10: Yale parcel, view south from test pit T16-6.

Photograph 11: Site 107-16, on Yale parcel, view northeast.

APPENDIX III

Probate Inventory of Estate of Daniel Merwin, 1863

Inventory of Estate of Daniel Merwin, 1863

Dwelling house	450.00
Barn, cow house, & corn house	150.00
75 acres homestead	2,550.00
10 acres Treat land	455.00
3 acres Laws lot	165.00
Personal Estate	
1 ox cart & rigging	15.00
1 wagon $10, 1 horse rake $1.50	11.50
2 cows $45, hay in the barn $60	105.00
3 meat barrels $.75, pork and hams $15.75	16.50
1 brass kettle $1, pewter $3.50	4.50
1 bushel turnips $.25, vinegar cask $.25	.50
1 wash tub $.12, lot of old casks $.25	.42
1 dining table $1.00, 7 chairs $.87	1.87
1 chair in the hall $1.50, 1 clock $.50	2.00
1 churn $.50, 1 iron pail $.50, tinware $1.33	2.33
½ bbl. wheat flour $4.75, corn meal $1.75	6.50
5 silver teaspoons $3.00, 1 oil can $.37	3.37
1 stone jug $.12, 1 stone jar $.25, crockery $.40	.77
1 lot of old tool[s] & nails $.50, 2 bucksaws $1.00	1.50
2 axes $1.00, 1 work stand $1.00, 1 carpet $6.25	8.25
1 toilet glass [hand mirror] $.75, 1 bedstead $.25	1.00
1 cupboard $.25, 1 bedstead $.12, 1 saddle $.50	.87
1 rope $.75, spinning wheel & hatchel $.25	1.00
1 cheese press $.50, 1 crosscut saw $.50	1.00
1 chest with drawers $.12, 4 hoes $.68	.80
1 lot of shovels & spades $1.50, hay fork $.75	2.25
1 dung fork $.25, lot of augers $.50	.75
1 grindstone $.75, set of harrow teeth $1.25	2.00
1 lot of old chain $1.00, 2 hand saws $.50	2.00
1 lot of old iron $1.00, 1 whiffletree & chain $.50	1.50
2 old ploughs $1.00, 20 bush. ears corn $7.00	8.00
1 ox yoke $1.00, 1 sleigh bottom $1.00	2.00
1 hay cutter $.12, 1 old cart tire $.80	.92
1 lot of corn stalks $2.00, 30 hens $7.50	9.51
1 hay knife $.38, 1 chest $.50, 1 reel $.06	1.06
1 razor & strop $.25, wearing apparel $14.15	14.40
	3,949.06

Orange, Jany. 27, 1863
Benj. T. Clark
John P. Strong, appraisers

Choses belonging to said Estate, viz.:

2 shares in Milford & New Haven Turnpike	6.66
1 share in Cedar Island Fishery	5.00
E. Benjamin's note	862.37
R. A. Cowe's	731.84
Beach Burwell's	632.00
J. P. Hubbard's	229.75
In savings bank	534.85
	3,062.47

Miles T. Merwin
Administrator
Received, sworn to and accepted, March 2, 1863

APPENDIX IV

Test Pit Profiles

APPENDIX V

Artifact Inventory List

Archaeological and Historical Services, Inc.

Detailed Site Summary Report

03/08/11 **Site: 107-14**

Material	Description	Count
Historic Ceramic	untyped creamware	1
Historic Ceramic	modern ceramic tile	1
Historic Ceramic	ironstone	1
Historic Ceramic	refined earthenware (with glaze)	3
Historic Ceramic	yellowware	2
Historic Ceramic	blue hand painted underglaze pearlware	1
Historic Ceramic	canton porcelain	1
Historic Ceramic	porcellaneous ware	2
Historic Ceramic	flow blue transfer printed whiteware	1
Historic Ceramic	untyped whiteware	14
Historic Ceramic	untyped whiteware plate/platter	1
Faunal	northern quahog (Mercenaria mercenaria)	13
Faunal	unidentified non calcined bone	4
Metal	iron possible chain link	1
Metal	iron strap	1
Glass	blue-green window glass	2
Glass	blue-green unidentified curved glass	2
Glass	clear window glass	13
Glass	clear glass medicine bottle	1
Glass	clear unidentified curved glass	25
Glass	green glass unidentified bottle	5
Glass	green unidentified curved glass	1
Glass	opaque white/milk glass button	1
Glass	opaque white/milk unidentified curved glass	2
Glass	purple unidentified curved glass	3

Total Artifacts: 102

Archaeological and Historical Services, Inc.

Mean Ceramic Date Report

03/08/11

Site: 107 - 14

Class	Sum of Count	Date	Count*date
blue hand painted underglaze pearlware	1.00	1800	1800
canton porcelain	1.00	1815	1815
flow blue transfer printed whiteware	1.00	1870	1870
ironstone	1.00	1857	1857
modern ceramic tile	1.00		0
porcellaneous ware	2.00	1860	3720
refined earthenware (with glaze)	3.00		0
untyped creamware	1.00	1791	1791
untyped whiteware	15.00	1860	27900
yellowware	2.00	1860	3720

Mean Ceramic Date: 1853

Archaeological and Historical Services, Inc. | Artifact Inventory | Site: 107 - 14

03/08/11 | Site Name: | Scatter Name: | Page 1

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag
1.00		T6-5		24-39	cm bs	Buried Ap	I		1	untyped whiteware sherd *recent break; 2 fragments mend to form one sherd*		1820-1900+	1
2.00		T7-4		5-32	cm bs	Ap (Plowzone)	I		5	green glass unidentified bottle base/body fragment *mends*			1
3.00		T7-4		5-32	cm bs	Ap (Plowzone)	I		1	clear unidentified curved glass fragment			1
4.00		T7-4		5-32	cm bs	Ap (Plowzone)	I		1	blue-green window glass fragment			1
5.00		T7-4		5-32	cm bs	Ap (Plowzone)	I		1	blue-green unidentified curved glass fragment			1
6.00		T7-4		5-32	cm bs	Ap (Plowzone)	I		2	untyped whiteware sherd		1820-1900+	1
7.00		T7-5		6-15	cm bs	Fill 1	I		1	clear unidentified curved glass rim fragment			1
8.00		T7-5		6-15	cm bs	Fill 1	I		3	clear unidentified curved glass fragment			1
9.00		T8-3		6-26	cm bs	Ap (Plowzone)	I		1	clear unidentified curved glass fragment			1
10.00		T8-3		6-26	cm bs	Ap (Plowzone)	I		1	untyped whiteware sherd		1820-1900+	1
11.00		T8-4		4-30	cm bs	Fill 1	I		1	untyped whiteware sherd		1820-1900+	1
12.00		T8-4		4-30	cm bs	Fill 1	I		1	untyped whiteware rim sherd		1820-1900+	1
13.00		T8-4		4-30	cm bs	Fill 1	I		2	clear unidentified curved glass fragment			1
14.00		T8-4		4-30	cm bs	Fill 1	I		1	opaque white/milk unidentified curved glass fragment			1
15.00		T8-6		5-26	cm bs	Ap (Plowzone)	I		1	clear window glass fragment			1
16.00		T8-6		5-26	cm bs	Ap (Plowzone)	I		1	blue-green window glass fragment			1
17.00		T8-6		5-26	cm bs	Ap (Plowzone)	I		1	blue-green unidentified curved glass fragment			1
18.00		T8-6		5-26	cm bs	Ap (Plowzone)	I		1	untyped whiteware light pink sherd		1820-1900+	1
19.00		T8-6		5-26	cm bs	Ap (Plowzone)	I		1	refined earthenware (with glaze) decorated sherd			1
20.00		T8-7		0-34	cm bs	A0/Fill 1	I		2	clear unidentified curved glass fragment			1
21.00		T8-7		0-34	cm bs	A0/Fill 1	I		2	clear window glass fragment *one possibly worked tool*			1

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag
22.00		T8-7		0-34	cm bs	A0/Fill 1	I		1	iron strap fragment			1
23.00		T8-8		4-27	cm bs	Ap (Plowzone)	I		1	yellowware sherd		1820-1900+	1
24.00		T8-8		4-27	cm bs	Ap (Plowzone)	I		1	untyped whiteware sherd		1820-1900+	1
25.00		T8-9		5-38	cm bs	Ap (Plowzone)	I		1	blue hand painted underglaze pearlware sherd		1780-1820	1
26.00		T8-9		5-38	cm bs	Ap (Plowzone)	I		1	canton porcelain sherd		1800-1830	1
27.00		T8-9		5-38	cm bs	Ap (Plowzone)	I		1	clear unidentified curved glass fragment			1
28.00		T9-3		5-28	cm bs	Ap (Plowzone)	I		3	clear unidentified curved glass fragment			1
29.00		T9-3		5-28	cm bs	Ap (Plowzone)	I		2	clear window glass fragment			1
30.00		T9-3		5-28	cm bs	Ap (Plowzone)	I		1	opaque white/milk four hole glass button whole			1
31.00		T9-3		5-28	cm bs	Ap (Plowzone)	I		1	untyped whiteware sherd		1820-1900+	1
32.00		T9-4		0-24	cm bs	Fill 1	I		1	untyped whiteware sherd		1820-1900+	1
33.00		T9-4		0-24	cm bs	Fill 1	I		1	clear window glass fragment			1
34.00		T9-4		0-24	cm bs	Fill 1	I		1	clear glass medicine bottle fragment *with raised letters; ..."NFECTI.. and ..."MPANY"*			1
35.00		T9-5		4-20	cm bs	Ap (Plowzone)	I		1	iron possible chain link whole			1
36.00		T9-5		4-20	cm bs	Ap (Plowzone)	I		3	purple unidentified curved glass fragment			1
37.00		T9-5		4-20	cm bs	Ap (Plowzone)	I		1	clear window glass fragment			1
38.00		T9-5		4-20	cm bs	Ap (Plowzone)	I		1	refined earthenware (with glaze) light pink sherd			1
39.00		T9-7		4-27	cm bs	Fill 1	I		1	untyped whiteware plate/platter rim sherd		1820-1900+	1
40.00		T9-7		4-27	cm bs	Fill 1	I		2	clear window glass fragment			1
41.00		T9-8		4-15	cm bs	Ap (Plowzone)	I		1	clear unidentified curved glass fragment			1
42.00		T9-8		4-15	cm bs	Ap (Plowzone)	I		1	green unidentified curved glass fragment			1

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag
43.00		T9-9		0-37	cm bs	Fill 1	I		1	clear unidentified curved glass fragment			1
44.00		T9-9		0-37	cm bs	Fill 1	I		1	untyped whiteware sherd		1820-1900+	1
45.00		T9-9		0-37	cm bs	Fill 1	I		1	flow blue transfer printed whiteware sherd		1840-1900+	1
46.00		T9-9		0-37	cm bs	Fill 1	I		1	yellowware sherd		1820-1900+	1
47.00		T22-1		7-46	cm bs	Fill 1	I		1	untyped creamware sherd		1762-1820	1
48.00		T22-1		7-46	cm bs	Fill 1	I		2	clear unidentified curved glass fragment			1
49.00		T22-1		7-46	cm bs	Fill 1	I		1	clear window glass fragment			1
50.00		T22-2		10-20	cm bs	Fill 1	I		1	refined earthenware (with glaze) sherd *recent break: 2 fragments mend to form 1 sherd; light tan body*			1
51.00		T22-3		5-24	cm bs	Fill 1	I		1	clear window glass fragment			1
52.00		T22-3		5-24	cm bs	Fill 1	I		2	clear unidentified curved glass fragment			1
53.00		T22-3		5-24	cm bs	Fill 1	I		1	untyped whiteware green edged rim sherd		1820-1900+	1
54.00		T22-3		24-66	cm bs	Fill 2	I		3	northern quahog (Mercenaria mercenaria) fragment	1.48 gm		2
55.00		T22-4		6-40	cm bs	Ap (Plowzone)	I		1	clear window glass fragment			1
56.00		T22-4		6-40	cm bs	Ap (Plowzone)	I		1	ironstone polychrome transfer printed sherd		1813-1900+	1
57.00		T22-5		2-27	cm bs	Fill 1	I		2	clear unidentified curved glass fragment			1
58.00		T22-5		2-27	cm bs	Fill 1	I		1	northern quahog (Mercenaria mercenaria) fragment	0.86 gm		1
59.00		T23-1		0-24	cm bs	Ap (Plowzone)	I		8	northern quahog (Mercenaria mercenaria) fragment	8.10 gm		1
60.00		T23-1		0-24	cm bs	Ap (Plowzone)	I		1	untyped whiteware decorated sherd		1820-1900+	1
61.00		T23-1		0-24	cm bs	Ap (Plowzone)	I		1	untyped whiteware sherd *recent break; 4 fragments mend to form 1 sherd*		1820-1900+	1
62.00		T23-1		0-24	cm bs	Ap (Plowzone)	I		1	modern ceramic tile fragment			1
63.00		T23-2		0-25	cm bs	Ap (Plowzone)	I		1	clear unidentified curved glass fragment *with raised letters*			1

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag
64.00		T23-2		0-25	cm bs	Ap (Plowzone)	I		1	clear mold decorated unidentified curved glass fragment			1
65.00		T23-2		0-25	cm bs	Ap (Plowzone)	I		1	porcellaneous ware decorated sherd		1820-1900	1
66.00		T23-2		0-25	cm bs	Ap (Plowzone)	I		1	northern quahog (Mercenaria mercenaria) fragment	0.96 gm		1
67.00		T23-2		0-25	cm bs	Ap (Plowzone)	I		1	unidentified non calcined bone fragment sawn	11.90 gm		1
68.00		T23-3		3-22	cm bs	Ap (Plowzone)	I		1	clear window glass fragment			1
69.00		T23-3		3-22	cm bs	Ap (Plowzone)	I		1	opaque white/milk unidentified curved glass fragment			1
70.00		T24-2		0-20	cm bs	Ap (Plowzone)	I		2	unidentified non calcined bone fragment	8.88 gm		1
71.00		T25-2		3-30	cm bs	Ap (Plowzone)	I		1	clear unidentified curved glass fragment			1
72.00		T25-4		5-40	cm bs	Fill 1	I		1	unidentified non calcined bone fragment	39.26 gm	1820-1900	1
73.00		T28-3		5-43	cm bs	Fill 1	I		1	porcellaneous ware rim sherd		1820-1900	1

Archaeological and Historical Services, Inc.

Detailed Site Summary Report

03/08/11 **Site: 107-15**

Material	Description	Count
Lithic	quartz bifacial retouch flake	1
Lithic	quartz projectile point	1
Glass	clear window glass	1
Glass	clear glass unidentified bottle	2
Glass	clear unidentified curved glass	2

Total Artifacts: 7

Archaeological and Historical Services, Inc. | Artifact Inventory | Site: 107 - 15

03/08/11 | Site Name: | Scatter Name: | Page 1

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag #
1.00		T12-4		6-35	cm bs	Ap (Plowzone)	I		2	clear glass unidentified bottle base/body fragment *mends; with raised letters on base "918"*			1
2.00		T12-4		6-35	cm bs	Ap (Plowzone)	I		2	clear unidentified curved glass fragment			1
3.00		T12-4		6-35	cm bs	Ap (Plowzone)	I		1	clear window glass fragment			1
4.00		T12-4		6-35	cm bs	Ap (Plowzone)	I		1	quartz Lamoka-like projectile point without tip			1
5.00		T12-5		6-25	cm bs	Ap (Plowzone)	I		1	quartz bifacial retouch flake			1

Archaeological and Historical Services, Inc.

Detailed Site Summary Report

03/08/11 **Site: 107-16**

Material	Description	Count
Lithic	quartz drill	1
Historic Ceramic	untyped whiteware	1
Botanical	unidentified botanical charred	1

Total Artifacts: 3

Archaeological and Historical Services, Inc. | Artifact Inventory | Site: 107 - 16

03/08/11 | Site Name: | Scatter Name: | Page 1

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag
1.00		T18-12		35-60	cm bs	B22 (Lower Subsoil)	I		1	quartz drill without tip			1
2.00		T18-12		35-60	cm bs	B22 (Lower Subsoil)	I		1	charred unidentified botanical fragment	0.06 gm		1
3.00		A2		2-14	cm bs	Fill 1	I		1	untyped whiteware sherd		1820-1900+	1

Archaeological and Historical Services, Inc.

Detailed Site Summary Report

03/08/11

Site: 107-FSORR

Material	Description	Count
Historic Ceramic	Domestic salt glazed stoneware	1
Historic Ceramic	untyped whiteware	2
Glass	clear window glass	1
Glass	clear unidentified curved glass	3

Total Artifacts: 7

Archaeological and Historical Services, Inc. Artifact Inventory Site: 107 - FSORR

03/08/11 Site Name: Scatter Name: Page 1

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag
1.00		T11-1		5-20	cm bs	Ap (Plowzone)	I		1	Domestic salt glazed stoneware sherd		1730-1900	1
2.00		T15-4		6-23	cm bs	Ap (Plowzone)	I		1	untyped whiteware sherd		1820-1900+	1
										recent break; 2 fragments mend to form 1 sherd			
3.00		T15-4		6-23	cm bs	Ap (Plowzone)	I		2	clear unidentified curved glass fragment			1
4.00		J11		19-40	cm bs	Fill 2	I		1	clear unidentified curved glass fragment			1
5.00		J11		19-40	cm bs	Fill 2	I		1	clear window glass fragment			1
6.00		J11		19-40	cm bs	Fill 2	I		1	untyped whiteware sherd		1820-1900+	1

APPENDIX VI

Site Inventory Forms

HISTORIC RESOURCES INVENTORY
HISTORIC ARCHAEOLOGICAL SITES
HIST-5 NEW 9/77

STATE OF CONNECTICUT
CONNECTICUT HISTORICAL COMMISSION
59 SOUTH PROSPECT STREET, HARTFORD, CONNECTICUT, 06106

FOR OFFICE USE ONLY														
Town No.:107							**Site no.:**14							
UTM:	1	8	6	6	7	7	5	0	4	5	6	8	3	0	0
QUAD: New Haven														**DISTRICT** ☐**YES** ☐**NO**
NR: ☐ACT ☐ELIG. ☐NO														
SR: ☐ACT ☐ELIG. ☐NO														

IDENTIFICATION

1. SITE NAME
Merwin-Beach House Scatter

STATE SITE NO.

CAS NO.

2. TOWN/CITY
Orange

VILLAGE

COUNTY
New Haven

3. STREET AND NUMBER (and/or location)
69 Marsh Hill Road

4. OWNER(S)
65 Marsh Hill Road LLC and DiChello Distributors

☐ **PUBLIC** ☒ **PRIVATE**

5. ATTITUDE TOWARD EXCAVATION
favorable

6. USE *(Present)*
modern houses and wood lots

(Historic)
farmstead

DESCRIPTION

7A. PERIOD
☐Contact ☐17th C. ☐18th C. ☒19th C. ☐20th C. ☐Unknown ☐Other*(specify)*

7B. ESTIMATED OCCUPATION RANGE
c.1830-1890

8. DATING METHOD	**DOCUMENTS**	**COMPARATIVE MATERIALS**	**OTHER**
	historic maps	ceramics	

9. SITE TYPE
☐Contact ☐Commercial ☐Rural ☐Other*(specify)*
☒Agrarian ☐Industrial ☐Urban ☐Unknown

10. APPROXIMATE SIZE AND BOUNDARIES
two discrete light-density scatters: one 2200 square meters and one 3000 square meters

11. STRATIGRAPHY
☐No Visible evidence ☐Standing Ruins ☐Stratified ☐Not Stratified ☒Other*(specify)*stone wall system
☐Surface finds ☐Cellar hole ☐Plowed ☒Major Disturbance

ENVIRONMENT

12. SOIL

USDA SOIL SERIES: Paxton and Montauk

CONTOUR ELEVATION: 100'

SLOPE %: ☒ 0-5 ☐ 5-15 ☐ 15-25 ☐ over 25

TEXTURE: ☐Sand ☐Clay ☒Silt ☒Other *(specify)*sandy loam

ACIDITY: ☐ less than 4.5 ☐ 4.5-5.5 ☐ 5.6-6.5 ☐ 6.6-7.3 ☐ 7.4-8.4

13. WATER

NEAREST WATER SOURCE: Oyster River

SIZE AND SPEED: small

DISTANCE FROM SITE: 400 meters

SEASONAL AVAILABILITY: year round

14. VEGETATION

PRESENT: Oak, Maple, Birch, Beech

PAST: unknown

CONDITION

15. SITE INTEGRITY
☐ Undisturbed ☐ Good ☐ Fair ☒ Destroyed

16. THREATS TO SITE
☐ None Known ☐ Highways ☐ Vandalism ☒ Developers ☐ Other *(specify)* ☐ Renewal
☐ Private ☐ Deterioration ☐ Zoning ☐ Unknown

17. SURROUNDING ENVIRONMENT
☐ Open Land ☒ Woodland ☒ Residential ☐ Scattered Buildings visible from site
☐ Commercial ☐ Industrial ☐ Rural ☐ High Building Density ☐ Coastal ☐ Isolated

18. ACCESSIBILITY TO PUBLIC – VISIBLE FROM PUBLIC ROAD
☒ Yes ☐ No

RESEARCH POTENTIAL

19. PREVIOUS EXCAVATIONS

☐ SURFACE COLLECTED	*BY WHOM/AFFILIATION*	*DATE*
☐ POT HUNTED	*BY WHOM/AFFILIATION*	*DATE*
☒ TESTED	*BY WHOM/AFFILIATION* AHS Phase I	*DATE* 10/2010
☐ EXCAVATION	*BY WHOM/AFFILIATION*	*DATE*

20. PRESENT LOCATION OF MATERIALS
AHS Labs, Storrs, Ct

21. PUBLISHED REFERENCES
Harper, M., T. Ives and B. Clouette (2011) Report: Phase I Archaeological Reconnaissance Survey of the Proposed Orange Railroad Station, New Haven Line, Orange, Connecticut, CTDOT State Project No. 106-120. Storrs, CT: AHS, Inc.

22. RECOVERED DATA *(Identify in DETAIL, including features, burials, faunal material, etc.)*
102 historic artifacts recovered, including creamware, whiteware, ironstone, yellowware, porcelain, shell, bone, window and bottle glass, glass button, and iron fragments.

SIGNIFICANCE

23. ARCHAEOLOGICAL OR HISTORICAL IMPORTANCE
Two discrete light-density scatters of 19th-century domestic (household-related) artifacts were found in relatively disturbed contexts: one in a 20th-century suburban lawn and one in a beer distributor's commercial lot. Both scatters, comprised of the same cultural material, are likely field scatter assocaited with the 19th-century Merwin-Munson-Beach house, which once stood in this vicinity. Structural remains of this house site are believed to have been destroyed by development. The site does not meet National Register of Historic Places eligibility criteria.

PHOTOGRAPH

PHOTOGRAPHER	**Place 35 mm contact print here**
DATE	
VIEW	
NEGATIVE ON FILE	

ADDITIONAL INFORMATION

REPORTED BY

NAME Mary G. Harper	**ADDRESS** 569 Middle Tpke, Storrs, Ct., 06268
ORGANIZATION AHS, Inc.	**DATE** 10/2010

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FIELD EVALUATION

COMMENTS

HISTORIC RESOURCES INVENTORY
PREHISTORIC ARCHAEOLOGICAL SITES
HIST-7 NEW 9/77

STATE OF CONNECTICUT
CONNECTICUT HISTORICAL COMMISSION
59 SOUTH PROSPECT STREET, HARTFORD, CONNECTICUT, 06106

FOR OFFICE USE ONLY														
Town No.:107							**Site no.:**15							
UTM:	1	8	6	6	8	0	2	0	4	5	6	8	3	7	0
QUAD: New Haven														**DISTRICT** ☐**YES** ☐**NO**
NR: ☐ACT ☐ELIG. ☐NO														
SR: ☐ACT ☐ELIG. ☐NO														

IDENTIFICATION

1. SITE NAME
107-15

STATE SITE NO.

CAS NO.

2. TOWN/CITY
Orange

VILLAGE

COUNTY
New Haven

3. STREET AND NUMBER (and/or location)
250 meters east of Marsh Hill Road and 100 meters west of Oyster River

4. OWNER(S)
Dichello Distributors
☐ **PUBLIC** ☒ **PRIVATE**

5. ATTITUDE TOWARD EXCAVATION
favorable

6. USE *(Present)*
woods

(Historic)

DESCRIPTION

7. PERIOD
☐Paleo ☐ Early Archaic ☐ Middle Archaic ☒ Late Archaic ☐ Early Woodland ☐ Middle Woodland ☐ Late Woodland ☐ Contact ☐ Unknown ☐ Other*(specify)*

8. DATING METHOD
C-14 ☐ Intuition ☐Other*(specify)*
Comparative Materials

9. SITE TYPE
☐Quarry ☐Camp ☐Rockshelter ☐Shell Midden ☐Cemetery ☐Village ☒Other*(specify)*unknown

10. APPROXIMATE SIZE AND BOUNDARIES
75 square meters estimated, unknown without Phase II Intensive Archaeological Survey

11. STRATIGRAPHY
☐Surface finds ☒Plowed ☐Not Stratified ☐Stratified ☐Major Disturbance ☐Other*(specify)*

ENVIRONMENT

12. SOIL

USDA SOIL SERIES
Agawam

CONTOUR ELEVATION
60'

SLOPE %
☒ 0-5 ☐ 5-15 ☐ 15-25 ☐ over 25

TEXTURE
☐Sand ☐Clay ☐Silt ☒Other *(specify)*sandy loam

ACIDITY
☐ less than 4.5 ☐ 4.5-5.5 ☒ 5.6-6.5 ☐ 6.6-7.3 ☐ 7.4-8.4

13. WATER

NEAREST WATER SOURCE
Oyster River

SIZE AND SPEED
small

DISTANCE FROM SITE
100 meters

SEASONAL AVAILABILITY
year round

14. VEGETATION

PRESENT
Oak, Maple, Wild Rose

PAST
unknown

CONDITION

15. SITE INTEGRITY
☐ Undisturbed ☒ Good ☐ Fair ☐ Destroyed

16. THREATS TO SITE
☐ None Known ☐ Highways ☐ Vandalism ☒ Developers ☐ Other *(specify)* ☐ Renewal ☐ Private ☐ Deterioration ☐ Zoning ☐ Unknown

17. SURROUNDING ENVIRONMENT
☐ Open Land ☒ Woodland ☐ Residential ☐ Scattered Buildings visible from site ☐ Commercial ☐ Industrial ☐ Rural ☐ High Building Density ☐ Coastal ☐ Isolated

18. ACCESSIBILITY TO PUBLIC – VISIBLE FROM PUBLIC ROAD
☐ Yes ☒ No

RESEARCH POTENTIAL

19. PREVIOUS EXCAVATIONS

	BY WHOM/AFFILIATION	DATE
☐ SURFACE COLLECTED	*BY WHOM/AFFILIATION*	*DATE*
☐ POT HUNTED	*BY WHOM/AFFILIATION*	*DATE*
☒ TESTED	AHS Phase I	10/2010
☐ EXCAVATION	*BY WHOM/AFFILIATION*	*DATE*

20. PRESENT LOCATION OF MATERIALS
AHS labs, Storrs, CT.

21. PUBLISHED REFERENCES
Harper, M., T. Ives and B. Clouette (2011) Report: Phase I Archaeological Reconnaissance Survey of the Proposed Orange Railroad Station, New Haven Line, Orange, Connecticut, CTDOT State Project No. 106-120. Storrs, CT: AHS, Inc.

22. RECOVERED DATA *(Identify in DETAIL, including features, burials, faunal material, etc.)*
1 quartz Lamoka-like projectile point, 1 quartz bifacial retouch flake, 2 bottle glass, and 1 window glass fragment

SIGNIFICANCE

23. ARCHAEOLOGICAL OR HISTORICAL IMPORTANCE
This Late Archaic period site was identified 50 meters south of 107-16, a prehistoric locus in the same project area. No disturbance other than plowing was present.

PHOTOGRAPH

PHOTOGRAPHER

DATE

VIEW

NEGATIVE ON FILE

Place 35 mm contact print here

ADDITIONAL INFORMATION

This site may be eligible for the National Register. Phase II Intensive Archaeological Survey was recommended to collect sufficient data to make a National Register-eligibility determination.

REPORTED BY

NAME	ADDRESS
Mary G. Harper	569 Middle Tpke, Storrs, CT. 06268
ORGANIZATION	**DATE**
AHS, Inc.	10/2010

FOR OFFICE USE ONLY

FIELD EVALUATION

COMMENTS

HISTORIC RESOURCES INVENTORY
PREHISTORIC ARCHAEOLOGICAL SITES
HIST-7 NEW 9/77

STATE OF CONNECTICUT
CONNECTICUT HISTORICAL COMMISSION
59 SOUTH PROSPECT STREET, HARTFORD, CONNECTICUT, 06106

FOR OFFICE USE ONLY															
Town No.:107								**Site no.:**16							
UTM:	1	8	6	6	8	0	5	0	4	5	6	8	5	0	0
QUAD: New Haven														**DISTRICT**	
NR: ☐ACT ☐ELIG. ☐NO														☐**YES**	
SR: ☐ACT ☐ELIG. ☐NO														☐**NO**	

IDENTIFICATION

1. SITE NAME
107-16

STATE SITE NO.

CAS NO.

2. TOWN/CITY
Orange

VILLAGE

COUNTY
New Haven

3. STREET AND NUMBER (and/or location)
250 meters east of Marsh Hill Road and 70 meters west of Oyster River

4. OWNER(S)
Yale University West Campus
☐ **PUBLIC** ☒ **PRIVATE**

5. ATTITUDE TOWARD EXCAVATION
favorable

6. USE *(Present)*
woods

(Historic)

DESCRIPTION

7. PERIOD
☐Paleo ☐ Early Archaic ☐ Middle Archaic ☐ Late Archaic ☐ Early Woodland ☐ Middle Woodland ☐ Late Woodland ☐ Contact ☒ Unknown ☐ Other*(specify)*

8. DATING METHOD
C-14 ☐ Intuition ☐Other*(specify)*
Comparative Materials

9. SITE TYPE
☐Quarry ☐Camp ☐Rockshelter ☐Shell Midden ☐Cemetery ☐Village ☒Other*(specify)*

10. APPROXIMATE SIZE AND BOUNDARIES
25 square meters estimated, unknown without Phase II Intensive Archaeological Survey

11. STRATIGRAPHY
☐Surface finds ☒Plowed ☐Not Stratified ☐Stratified ☐Major Disturbance ☐Other*(specify)*

ENVIRONMENT

12. SOIL
USDA SOIL SERIES: Agawam
CONTOUR ELEVATION: 60'
SLOPE %: ☒ 0-5 ☐ 5-15 ☐ 15-25 ☐ over 25
TEXTURE: ☐Sand ☐Clay ☐Silt ☒Other *(specify)*sandy loam
ACIDITY: ☐ less than 4.5 ☐ 4.5-5.5 ☒ 5.6-6.5 ☐ 6.6-7.3 ☐ 7.4-8.4

13. WATER
NEAREST WATER SOURCE: Oyster River
SIZE AND SPEED: small
DISTANCE FROM SITE: 70 meters
SEASONAL AVAILABILITY: year round

14. VEGETATION
PRESENT: Maple, Oak, Russian Olive
PAST: unknown

CONDITION

15. SITE INTEGRITY
☐ Undisturbed ☒ Good ☐ Fair ☐ Destroyed

16. THREATS TO SITE
☐ None Known ☐ Highways ☐ Vandalism ☒ Developers ☐ Other *(specify)* ☐ Renewal ☐ Private ☐ Deterioration ☐ Zoning ☐ Unknown

17. SURROUNDING ENVIRONMENT
☐ Open Land ☒ Woodland ☐ Residential ☐ Scattered Buildings visible from site ☐ Commercial ☐ Industrial ☐ Rural ☐ High Building Density ☐ Coastal ☐ Isolated

18. ACCESSIBILITY TO PUBLIC – VISIBLE FROM PUBLIC ROAD
☐ Yes ☒ No

RESEARCH POTENTIAL

19. PREVIOUS EXCAVATIONS

	BY WHOM/AFFILIATION	DATE
☐ SURFACE COLLECTED	*BY WHOM/AFFILIATION*	*DATE*
☐ POT HUNTED	*BY WHOM/AFFILIATION*	*DATE*
☒ TESTED	AHS Phase I	10/2010
☐ EXCAVATION	*BY WHOM/AFFILIATION*	*DATE*

20. PRESENT LOCATION OF MATERIALS

AHS labs, Storrs, CT.

21. PUBLISHED REFERENCES

Harper, M., T. Ives and B. Clouette (2011) Report: Phase I Archaeological Reconnaissance Survey of the Proposed Orange Railroad Station, New Haven Line, Orange, Connecticut, CTDOT State Project No. 106-120. Storrs, CT: AHS, Inc.

22. RECOVERED DATA *(Identify in DETAIL, including features, burials, faunal material, etc.)*

1 quartz drill and charred unidentified botanical fragment

SIGNIFICANCE

23. ARCHAEOLOGICAL OR HISTORICAL IMPORTANCE

This small prehistoric locus sits on a terrace overlooking the Oyster River. It is 50 meters north of Site 107-15, a Late Archaic period site found in the same survey. The charred botanical fragment may suggest a feature is present.

PHOTOGRAPH

PHOTOGRAPHER	**Place 35 mm contact print here**
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ADDITIONAL INFORMATION

Phase II Intensive Archaeological Survey was recommended to determine whether Site 107-16 meets the criteria for listing in the National Register of Historic Places. The site has excellent integrity, with the cultural material found in dep subsoil contexts.

REPORTED BY

NAME Mary G. Harper	**ADDRESS** 569 Middle Tpke, Storrs, CT. 06268
ORGANIZATION AHS, Inc.	**DATE** 10/2010

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FIELD EVALUATION

COMMENTS

REPORT

PHASE II INTENSIVE ARCHAEOLOGICAL INVESTIGATION

PROPOSED ORANGE RAILROAD STATION
NEW HAVEN LINE

ORANGE, CONNECTICUT

CONNECTICUT DEPARTMENT OF TRANSPORTATION
STATE PROJECT NO. 106-120

Prepared for

Fuss and O'Neill, Inc.
78 Interstate Drive
West Springfield, MA 01080

By

Archaeological and Historical Services, Inc.
569 Middle Turnpike
P.O. Box 543
Storrs, CT 06268

May 10, 2012
Revised January 31, 2014

Authors:

Timothy Ives
Brian Jones

ABSTRACT/MANAMGEMENT SUMMARY

The Connecticut Department of Transportation proposes to construct a New Haven Line Railroad station in the town of Orange. The proposed new commuter rail station will be located on a 28.1-acre site between Marsh Hill Road and the train tracks along the Oyster River. The Connecticut State Historic Preservation Office (SHPO) reviewed the proposed planned project and determined that the project area, on a terrace overlooking the Oyster River about two miles west of New Haven Harbor/Long Island Sound, is archaeologically sensitive; a Phase I Archaeological Reconnaissance Survey was therefore recommended in order to identify and evaluate any archaeological (subsurface) sites or above-ground historical resources.

Archaeological and Historical Services, Inc. (AHS) conducted a Phase I Archaeological Reconnaissance Survey of the entire affected property. Three archaeological sites were identified. Site 107-14 is comprised of a low-density scatter of mid- to late 19th-century domestic (household-related) artifacts likely associated with a 19th-century house which once stood nearby. The relatively small number of artifacts was found in partially disturbed contexts, and the structural house remains were likely destroyed by the construction of the housing subdivision along Salemme Lane on the western border of the project area. Additional archaeological testing at Site 107-14 is unlikely to produce significant information, thus this site is not eligible for listing in the National Register of Historic Places; the SHPO concurred with this assessment.

Two pre-Colonial Native American sites were identified in the project area. Site 107-15 is in the east-central portion of the project area, adjacent to the proposed location of the new rail station. Phase I survey of this site produced a quartz Lamoka-like projectile point, and, 15 meters away, a quartz retouched flake, indicating the site may have the potential to yield information important to understanding prehistoric lifeways in the region. Phase II Intensive Archaeological Survey was recommended at Site 107-15 in order to collect sufficient data to permit a conclusive determination of its eligibility for the National Register of Historic Places.

In the northeast portion of the project area, about 80 meters north of Site 107-15, a Native American quartz drill and possible feature, represented by a charred botanical fragment, were found in a deep, undisturbed soil context in the Phase I survey. Site 107-16 appeared potentially eligible for listing in the National Register, thus additional testing in the form of a Phase II Intensive Archaeological survey was recommended.

AHS conducted Phase II Intensive surveys at Sites 107-15 and 107-16. Both sites produced lithics indicative of occupation during the Late Archaic period, specifically associated with the Narrow-stemmed tradition (c. 4500-4000 years ago). Only a small number of lithic artifacts were found in the Phase II survey, with no features identified. Pervasive soil disturbance was noted, which had compromised the integrity and information potential of both sites. No further archaeological survey is recommended, as Sites 107-15 and 107-16 are unlikely to yield information important to prehistory and are not eligible for listing in the National Register of Historic Places.

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I. INTRODUCTION AND SCOPE OF WORK

A. Project History

The Connecticut Department of Transportation (CTDOT) proposes to construct a New Haven Line railroad station in the Town of Orange (State Project No. 106-120). The new proposed railroad station site is located approximately 0.25 miles from I-95 Interchange 41 on primarily undeveloped land (Figure 1). The 28.1-acre project area or Area of Potential Effect (APE) consists of six parcels, which would be accessed from Marsh Hill Road along a new access road to be constructed as part of the project. The six parcels include four residential lots along the south side of Salemme Lane, comprising approximately 2.3 acres, a 13.75-acre lot owned by Yale University (part of Yale's West Campus), a 9.3-acre lot immediately south of the Yale lot, owned by DiChello Distributors, Inc., and a 2.75-acre strip along the railroad tracks (Figure 2). The Yale and DiChello properties are separated by a sewer main.

The project includes construction of a new station and parking. Two new inbound and outbound station platforms, each 1,080 feet long by 10 feet wide, are proposed, and the outbound platform will connect with the parking area and station via a pedestrian tunnel under the railroad embankment. Proposed vehicle access and circulation includes a single entrance from Marsh Hill Road, immediately south of an existing cul-de-sac, Salemme Lane; relocated access to Salemme Lane; an access loop roadway with passenger vehicle and bus drop-off lanes and pedestrian walkways; two new cul-de-sacs providing access to properties on Salemme Lane; and a gated driveway providing emergency access to the outbound platform from Conair Drive (Figure 3).

The proposed project will be financed with state and federal funds, thus it must comply with the National Environmental Protection Act (NEPA) and the Connecticut Environmental Protection Act (CEPA). NEPA requires preparation of an Environmental Assessment (EA); CEPA mandates preparation of an Environmental Impact Evaluation (EIE). A joint EA/EIE will be prepared for the Orange Railroad station project. The federal funding also requires the project to comply with Section 106 of the National Historic Preservation Act (NHPA), which requires that federally assisted undertakings take into account their effect on possibly significant archaeological or historical resources. Significant resources are those which meet one or more of the National Park Service eligibility criteria for nomination to the National Register of Historic Places:

A. Association with events that have made a significant contribution to the broad patterns of our history;

B. Association with the lives of persons significant in our past;

C. Distinctive design or physical characteristics, including representation of a significant entity whose individual components may lack distinction;

D. Demonstrated ability, or potential to yield important information about prehistory or history.

In compliance with the NHPA, CEPA and NEPA, the State Historic Preservation Office (SHPO) reviewed the proposed project and determined that the project area "possesses moderate to high sensitivity for prehistoric and historic archaeological resources" (Loether 2004a and 2004b). The SHPO therefore recommended that a "professional reconnaissance survey be undertaken to identify and evaluate archaeological resources which may exist within proposed project limits, including equipment storage and associated work areas" (Loether 2004a). According to the CTDOT's 2009 Final State Environmental Impact Evaluation (FSEIE) of the alternatives originally considered for the train station, the SHPO's assessment of the archaeological sensitivity of the Orange alternative was based "on the proximity of the Oyster River, a review of general soil properties, and a review of historic mapping for the vicinity. In addition, stone walls associated with 19th-century farmsteads" were noted by SHPO in a 2004 site visit (FSEIE 5-64).

Archaeological and Historical Services, Inc. (AHS) conducted the requested Phase I Archaeological Reconnaissance Survey of the APE, under contract to Fuss and O'Neill, Inc., on-call environmental consultants to CTDOT (Harper et al. 2011). Three archaeological sites were identified in the Phase I survey: 107-14, 107-15, 107-16 (Figures 4 and 5).

Site 107-14, identified in the DiChello property, is represented by two discrete loci comprised of light-density field scatters of artifacts likely associated with the historic house formerly on the property. The artifact scatters are domestic (i.e., household) in nature, and include ceramics, glass, and other items from the period of occupation of the historic house. Distribution of domestic artifacts near and away from a house in the 19th century was extremely common, a result of refuse and privy waste disposal. No evidence of a foundation, cellar or other structural remains such as a well was identified. It is likely that the house and outbuildings were destroyed by the 20th-century suburban development of the house lots on Salemme Lane and Marsh Hill Road. The very small amount of the cultural material was found in disturbed or plowzone contexts, indicating the site has no stratigraphic integrity. Site 107-14 is very unlikely to yield information important to history, and is not a viable candidate for listing in the National Register of Historic Places. No additional archaeological testing was recommended at Site 107-14. The SHPO concurred with this assessment (Bahlman 2011).

Site 107-15 was identified in the eastern part of the DiChello property, adjacent to the proposed location of the new railroad station. This Late Archaic-period site included a Lamoka-like projectile point and quartz bifacial retouch flake, recovered from two test pits. This site had the potential, in AHS's opinion, to contain additional cultural material that could elucidate prehistoric lifeways in the Orange area, thus was considered potentially eligible for listing in the National Register of Historic Places. AHS recommended that a Phase II Intensive Archaeological Survey be conducted at Site 107-15 in order to gather sufficient information to make a conclusive determination of the site's National Register eligibility. The SHPO concurred with our recommendation (Bahlman 2011).

Site 107-16 was identified in the northeast corner of the project area, on the Yale parcel. A quartz drill and charred botanical fragment, suggestive of a possible prehistoric-period cultural feature, were found in a single test pit, in a deep subsoil context. Located about 50 meters north of Site 107-15, this site was considered potentially eligible for listing in the National Register. Phase II Intensive Archaeological Survey was recommended to definitively assess the site's significance relative to National Register eligibility criteria. The SHPO concurred with this assessment (Bahlman 2011).

AHS conducted the Phase II Intensive Surveys at Sites 107-15 and 107-16. The results of the survey were summarized in an end-of-fieldwork memorandum (Harper 2011) and are presented more fully in this report.

B. Scope of Work

The purpose of Phase II Intensive Archaeological survey is to collect sufficient information about a site's horizontal and vertical boundaries as well as its age, function, and integrity. This information is necessary for the SHPO to make a conclusive determination of the National Register eligibility or lack thereof of each of the two sites. The Phase II investigations were also designed to provide sufficient information to permit CTDOT to develop impact-avoidance or mitigation measures should either or both sites be determined to be eligible for listing in the National Register. The survey work was conducted in accordance with the SHPO's *Environmental Review Primer for Connecticut's Archaeological Resources* (hereafter *Primer*). The scope of work for the Phase II Intensive Survey included archaeological testing in the form of shovel test pit excavations, laboratory processing, data analysis and report preparation, and project management.

C. Project Personnel

James Poetzinger served as Senior Field Archaeologist. The field crew included Heather Alexson, Brian Jones, Ben Kelsey, Eric Pomo, and Mandy Ranslow. James Poetzinger inventoried the recovered artifacts. Timothy Ives and Brian Jones evaluated the site data and Mary Guillette Harper served as project administrator.

D. Disposition of Materials

All artifacts, field notes, and other paperwork associated with the archaeological survey of the Orange Railroad Station project area are currently being curated at AHS's facilities in Storrs until arrangements are made for transfer to the Office of State Archaeology (OSA), for permanent curation.

II. RESEARCH TASKS AND METHODOLOGY

According to the *Primer*, the goal of a Phase II Intensive Archaeological Survey is to collect sufficient data from a site to determine its eligibility for listing in the National Register of Historic Places. The usual collected data includes horizontal and vertical site limits, age or cultural affiliation, function (i.e., site type), and integrity. An intensive survey is generally conducted by the excavation of standard-sized (50-x-50cm in plan) test pits along a grid over the site at five-meter intervals. Testing continues across the grid until the horizontal bounds (within the project limits) are determined by sterile (i.e., non-artifact-bearing) test pits or natural or cultural barriers such as rivers or roads. The grid-sampling is multi-functional: it establishes the site's spatial limits and at the same time it obtains a representative sample of the site's contents. One-meter-square excavation units are sometimes added to a Phase II excavation strategy to explore features such as cooking hearths. In this project, the SHPO specifically requested that an allowance be made for a small number of excavation units in addition to close-interval shovel test pit sampling "to provide for a more detailed evaluation" of the sites (Bahlman 2011). The tasks and methodologies outlined here were tailored and implemented to determine the National Register eligibility, or lack thereof, of Sites 107-15 and 107-16, specifically in regard to their potential to yield important information about prehistory (Criterion D of the National Register of Historic Places eligibility criteria).

A. Subsurface Testing

AHS followed standard Phase II procedure, excavating shovel test pits at five-meter intervals over the site areas as defined in the Phase I survey (in which testing was conducted at 15-meter intervals). When two consecutive test pits in every direction were sterile (i.e., non-artifact-bearing), or testing was precluded by disturbance, development or natural barriers, the physical boundaries of the sites were considered determined, horizontally and vertically. The five meter grid-sampling also collected a sample of the site contents which enabled an assessment of stratigraphic integrity, occupation dates, and site type.

Separate five-meter-grids were established to guide the investigations of Sites 107-15 and 107-16 (Figures 6 and 7). Grid points at five-meter intervals were marked in the field with stakes or pin-flags and labeled according to their grid coordinates. AHS uses a binomial labeling system in which the Y coordinate is preceded by an "N" or "S" prefix (northing), indicating whether it is north or south of the grid origin, and the X coordinate is preceded by an "E" or "W" prefix (easting), indicating whether it is east or west of the grid origin. For example "N20W5" indicates a point 20 meters north and 5 meters west of the grid origin (N0E0). All coordinates refer to the southwest corner of the test pit or excavation unit.

In addition to the five-meter test pit sampling, one to two one-by-one-meter excavation units were proposed at each site in order to investigate possible features and/or artifact concentrations. The meters would only be used after the test pit sampling was complete, and if warranted, based on AHS's judgment. As in the Phase I survey, Phase II test pits were dug by hand with shovel and trowel, and measured 50 x 50 centimeters (2 x 2 feet) in plan. Soil within test pits was excavated in 10 to 20-centimeter levels within natural strata to a depth at which a sterile subsoil (C-Horizon) was reached or impenetrable objects (large rocks or roots) prevented further excavation. All excavated soil was screened through ¼-inch mesh hardware cloth to recover small artifacts. Collected artifacts were bagged and labeled by test pit and stratigraphic

unit. Soil profiles of each excavated test pit were drawn on standardized field forms prior to backfilling. (The test pit profiles are included in Appendix III.) The one-by-one excavation units were excavated in 10-cm levels, and soils in each 10-cm level were excavated by quarter-meter quadrant and screened separately. Soil plans and relevant observations were recorded for each level on forms that are presented in Appendix IV. Recovered artifacts from test pits and excavation units were bagged and transported to AHS's laboratories in Storrs for cleaning, cataloguing, curation, and analysis.

B. Laboratory Processing and Data Analysis

After appropriate cleaning, all artifacts were rebagged into clear plastic zipper bags; included in each bag is an acid-free label identifying the artifact, the pit number in which it was found, its stratigraphic provenience, the designated site number, and the project. Each artifact was then identified by specialists in Pre-Colonial and Historic Period archaeology and entered into AHS's database inventory program. All artifacts were assigned unique identification numbers and identified to type and date to the degree possible (e.g., creamware sherd, 1762-1820). Also included in the inventory are provenience data and project identification. Artifact catalogues are site-specific when possible rather than project-general in order to facilitate analysis (see Appendix V for artifact inventory catalogues for Sites 107-15 and 107-16).

C. Data Synthesis and Report Preparation

Data gathered in the Phase II archaeological investigations are synthesized in Section III of this report. The results are discussed, the boundaries of archaeological sites are defined, artifacts described and an assessment of the significance of each site is made relative to the criteria for nomination to the National Register of Historic Places. In accordance with the *Primer*, recommendations are presented in Section IV relative to avoidance or mitigation of project impacts to the sites, if warranted.

III. ENVIRONMENTAL CONTEXT

The purpose of this section is to provide general information on the environmental context of the project area. Even in a small state such as Connecticut, significant variations in topography, climate, and geology on the local level are expressed in many subtle and not so subtle ways. Variations in habitat can yield complex and dynamic mosaics of distinctive plant and animal communities. Humans, like most species, are sensitive to these variations, and can be generally expected to settle in areas providing both reliable and predictable resources. While climate change over the course of the last 11,000 years has repeatedly transformed the environment in the Northeast, many basic characteristics of the landscape itself have remained relatively stable. Local geology and topography present important controls on the development and potential reorganization of habitats, and thus provide archaeologists with one means of identifying enduring features of the landscape around which people in the past would have organized themselves.

A. Geology, Hydrology, and Topography

Bedrock in the town of Orange consists of schist, gneiss, and phyllite of the Orange-Milford belt of the Connecticut Valley Synclinorium (Rodgers 1985). These metamorphosed sedimentary and igneous rocks formed during the Middle to Early Paleozoic age (350-500 million years BP [Before Present]) as oceanic terrain that was subsequently deformed and metamorphosed by the collision of crustal plates that formed Pangaea. The process reversed during the Mesozoic Era (ca. 235 million years BP), causing rift basins to form as Pangaea fragmented. The Orange-Milford belt of the Connecticut Valley Synclinorium bounds part of the western edge of the former rift basin that runs north-south through central Connecticut.

During the last glacial maximum (ca. 18,000 ^{14}C BP), the project area was beneath the Connecticut Valley Lobe of the Laurentide Ice Sheet as it deposited its terminal moraine, which constitutes Long Island (Uchupi et al. 2001). The glacier retreated from what is now the Connecticut coastline at ca. 17,500 ^{14}C BP, leaving proglacial Lake Connecticut in its wake. Impounded by Long Island and the Harbor Hill Moraine (on the east side of Long Island Sound), this lake occupied most of what is now Long Island Sound until it drained rapidly at ca. 15,500 ^{14}C BP. According to eustatic shifts, the Long Island Sound basin was slowly inundated during the early to middle Holocene, gradually reducing the gradients of streams and rivers along the paleocoastline. Sea level stabilized along southern New England's coast by ca. 4000 BP, which enabled the development of highly productive marshlands and floodplains (Lavin 1988). Hence, the rich salt marshes and smaller estuarine environments in the lower portions of the Housatonic and Quinnipiac rivers probably experienced most of their development during the Late Holocene.

Orange is located on Connecticut's Coastal Slope, where topography is relatively gentle and the average elevation drops by about 50 feet per mile (Bell 1985). The generally rocky and ragged outline of the state's shoreline is, in part, a reflection of this relatively steep incline. Also, Long Island and Fisher's Island provide natural breakwaters that hinder the development of straight-bordered barrier beaches and large streamers of sand. The major river basins that empty into Long Island Sound here tend to be long and straight with few branches because they are confined to north-to-south bedrock channels carved by glacial ice that have become "drowned" by post-glacial sea-level rise. Soils in the Coastal Slope from New Haven westward are

particularly fertile because they contain a significant proportion of glacially deposited lime that originated from the Marble Valley to the north.

The project area is located near the western edge of the South Central Coast Drainage Basin (Connecticut DEP 2010) which is generally centered on the Quinnipiac River. The Quinnipiac River (to the east of the project area) and the Housatonic River (to the west) have been flooded to a significant distance inland (Bell 1985). Thus, their levels fluctuate with the rise and fall of tides. The Wheeler Marsh at the mouth of the Housatonic River is among the largest along the state's coastline. The coastline immediately south of Orange (in the towns of Milford and West Haven) features a fairly regular pattern of rocky headlands interspersed with pocket beaches. Smaller marshland complexes are also present along the mouths of lesser rivers here. Natural sandy spits occur along shore, with the largest at the mouths of the Quinnipiac and Housatonic rivers.

On a more precise scale, the project area is located approximately one mile from the coastline, specifically from the inlet known as Oyster River Beach in Milford where the Oyster River empties into Long Island Sound. It occupies a near-coastal area between the Quinnipiac and Housatonic River systems which is drained by a system of wetlands, streams and small rivers that empty into Long Island Sound to the south. The low-relief, glacially-eroded terrain here features till-covered ridges and hills with intervening cavities filled with glacial outwash. Soils in the central and eastern portions of the project area consist of Agawam fine sandy loam with 3 to 8 percent slopes, which is a gently sloped and well drained type that occurs on outwash terraces of stream valleys (USDA 2010). Soils in the westernmost portion of the project area consist of Charlton fine sandy loam with 3 to 8 percent slopes. This gently sloping soil occurs on hilltops, ridge tops, and glacial till plains. Two small rivers run near the project area: Oyster River (immediately to the east) and Indian River (2500 feet to the west). Both are fed at fairly regular intervals by small streams, and both feature marshland complexes near their mouths. The project area vicinity can be viewed as an ecotone because it would have afforded prehistoric populations convenient access to saltwater, brackish water, and freshwater environments.

B. Ecological Context

The project area falls within the Western Coastal Ecoregion, as defined by Dowhan and Craig (1976). The Western Coastal Ecoregion generally lies within five miles of the coast of western Long Island Sound, and is characterized by complex coastlines, tidal marshes, sand beaches, and estuaries. Near-shore topography trends towards level to gently rolling landscapes, with more markedly rugged terrain found along the interior portions of the ecoregion. Mean annual temperature is approximately 50.5°F, with an average winter temperature of 31°F, and an average monthly temperature of 23°F for the coldest month. Average snowfall is generally less than 30 inches, the lowest in the state. The frost-free period is among the longest in southern New England, at 180 days. Mean temperature during the warmest month is 83°F.

Major forest vegetation is of the Coastal hardwoods type, with an abundance of black, red, and white oaks, mockernut hickory, tulip poplar, and eastern hemlock. Open forest areas within this region are often covered in a very dense understory of shrubs and vines, particularly catbrier and greenbrier. A number of warm-adapted species reach their northern range limits within this ecoregion, including sweet gum and persimmon.

Major terrestrial game species within the region during the Holocene period would have included white-tailed deer, moose, black bear, wolf, gray fox, woodchuck, and possibly raccoon.

Aquatic species such as beaver, muskrat, painted turtle, and snapping turtle were readily available in many lacustrine and riverine environments. Economically important marine shellfish included softshell clam, quahog, and eastern oyster. Finfish potentially available along the southern reaches of the Housatonic River would have included Atlantic sturgeon, Atlantic salmon, American shad, brown bullhead catfish, American eel, and sea lamprey.

Naturally occurring plant foods available in the project are or surrounding landscape would have included a variety of tree nuts such as hickories, American chestnut, black walnut, and butternut. Edible weeds growing in floodplain contexts would have included chenopodium, amaranth, and sumpweed. Wetland species included cattail, bulrush, and blue flag. Tropical cultigens such as maize, beans, and squash, introduced to the region by horticulturalists during the Woodland period, may have been grown on local floodplains.

IV. REGIONAL PREHISTORY - THE CULTURAL CONTEXT

Although a relatively large number of Native American archaeological sites have been identified in costal Connecticut, the understanding of prehistoric cultures in the area remains superficial in certain regards. This is primarily due to the small percentage of sites that have been subject to detailed professional investigation, limiting the conclusions that might otherwise be drawn from the materials recovered. Despite this circumstance, the data accumulated to date suggests that Native Americans living within the area adapted their settlement and subsistence patterns to the complex and dynamic ecological conditions over the course of the last 11,000 years.

The regional prehistory of coastal Connecticut is fairly well known from numerous site excavations and archaeological surveys within and immediately adjacent to coastal areas. Archaeologically, Connecticut traditionally focused on single site-excavations of large coastal and riverine sites because of their accessibility, visibility, and the high densities of artifacts (Coffin 1937, 1938, 1940, 1946, 1951; Praus 1942; Russell 1942; Glynn 1953; Lavin 1988). Important coastal sites that have greatly contributed to our understanding of the coastal prehistory of the region include Grannis Island (Site 93-3) in New Haven Harbor (Glynn 1953; Lavin 1988), the Old Lyme Shell Heap (Lavin 1988), Mago Point in Waterford (McBride 1984a), Fort Shantok and Shantok Cove in Montville (Salwen 1966; Salwen and Ottesen 1972; Williams 1972), the Thomas Site in Groton (Butler 1946), and the Davis Farm Site in Stonington (Davis 1986). A number of regional archaeological surveys have also been conducted in coastal areas of Connecticut, and have provided a great deal of information on the nature and distribution of archaeological sites in these areas (McBride 1984a).

The summary of culture history, which follows, draws on the current local archaeological record for Connecticut and the greater Northeast. The prehistoric era is subdivided into several major periods coinciding with broad technological and settlement patterns observed in the archaeological record. This section provides a very brief overview of the cultural developments over the course of the eleven millennia of Native American life in the region predating the arrival of Europeans on New England's shores.

A. Paleoindian Period (11,000-9500 BP) (Before Present).

Human occupation of New England began during the onset of the Younger Dryas Cold Interval of the Terminal Pleistocene Period. As to why this region does not appear to have been colonized by Clovis Culture populations in earlier, more environmentally favorable circumstances remains a mystery, but they may have preferred now-submerged portions of the Atlantic Continental Shelf, or perhaps their sites are present but insufficiently visible in the terrestrial archaeological record. Adapting to local woodland and tundra regimes, New England's Paleoindian foragers established a settlement system characterized by restricted wandering as their bands fissioned and/or new bands arrived from elsewhere (Snow 1980:150). Paleoindian lifeways may have resembled ethnographic examples from the Subarctic that feature "caribou hunting, small mammal trapping, and seasonal plant use in a region which straddles the treeline" (Speiss et al. 1998: 227) A focal strategy of transhumant caribou hunting has been proposed, and the use of high-quality, exotic chert suggests high mobility. Unusually large sites, such as Vail and Bull Brook, may represent major, seasonally-scheduled social aggregations (Pelletier and Robinson 2005:165; Robinson et al. 2009); however, the relatively higher occurrence of smaller

Paleoindian encampments (Jones and Forrest 2003) supports the proposition that New England Paleoindians generalized in their subsistence strategies, adjusting to resources that were not always predictable.

Data reflecting Paleoindian Period land-use patterns and subsistence activities in the Northeast is relatively scarce (Speiss et al. 1998), though it has been confirmed that Paleoindians exploited the lower (Ritchie 1957), middle (Moeller 1980), and upper reaches of the Housatonic River drainage. Few intact Paleoindian sites have been found in Connecticut, and only two have been investigated and published in detail: the Templeton Site in Washington (Moeller 1980, 1984) and the Hidden Creek Site on the Mashantucket Pequot Reservation in Ledyard (Jones 1997). A handful of other sites have received more cursory attention. State archaeologist Nicholas Bellantoni states that about 50 fluted points have been recovered as isolated finds across Connecticut (Bellantoni 1995). The scarcity of sites indicates that population density was likely very low at this time. Poor site visibility is also likely a factor of small site size and a high degree of landscape disturbance over the past 10,000 years.

B. Archaic Period (10,000-2700 BP).

The Archaic Period dates from 10,000 to 2700 BP in the Northeast and is characterized by hunter-gatherer populations utilizing a variety of seasonally available resources. The period is subdivided into the Early, Middle and Late Archaic periods on the basis of associated changes in environment, projectile point styles and inferred adaptations (Snow 1980; McBride 1984a). Each subperiod is discussed briefly below.

B.1 The Early Archaic Period (9500-8000 BP).

During Early Archaic Period, warm-climate tree species began to flourish in southern New England, and by 9000 BP a closed-forest canopy was established that included white pine, oak, elm, ash, birch, ironwood, and sugar maple (Davis 1983). By this time, an expanse of wetland mosaics had likely developed that afforded "local areas of high resource diversity, productivity, and reliability within the northeastern interior" (Nicholas 1987:105). The Early Archaic archaeological record currently appears to constitute a thin but surprisingly complex fabric featuring three cultural traditions: the Late Paleoindian, Piedmont, and Gulf of Maine Archaic traditions (Ives 2006; Jones 2006).

Little is known about Late Paleoindian occupation in New England. Late Paleoindian sites tend to contain local, non-chert lithics (Petersen et al. 2000:122), which suggests reduced mobility and the constriction of social networks (Jones 2004). Some tool forms suggest the presence of an Eastern Lanceolate complex that evolved, *in situ*, from local Paleoindian predecessors, while an intrusive Plano-derived complex is evidenced as well (Dumais 2000; Petersen et al. 2000). The scarcity of Late Paleoindian sites across the region suggests a low population density, and most Late Paleoindian point finds are from northern New England, suggesting a correspondingly northern occupation.

Originating from a geographic center in the Carolinas, highly mobile foragers associated with the Piedmont Tradition ranged into New England's forested landscape during the Early Archaic, as evidenced by the recovery of diagnostic point types (Funk 1996:13). Having become established in southern New England by the mid-9th millennium BP, core areas for this tradition appear to be centered on wetland complexes, such as northwestern Connecticut's Robbins Swamp (Nicholas 1988), southeastern Connecticut's Great Cedar Swamp at Mashantucket

(Forrest 1999), and eastern Massachusetts Taunton and Titicut river basins (Taylor 1976; Johnson 1993). Despite an increasing exploitation of local lithic sources for tool manufacture (Snow 1980:172), high mobility is inferred by the continued exploitation of exotic lithics, as demonstrated at the Dill Farm Site in East Haddam (Pfeiffer 1986). Piedmont Tradition foragers probably took advantage of large populations of deer and wild turkey, in addition to other interior food sources such as nuts and freshwater fish (Lavin 1988). Root/tuber exploitation, inferred by the recovery of choppers or digging tools (Snow 1980:170), suggests a more diffuse subsistence strategy than that of Paleoindian foragers. Population densities associated with these highly mobile Piedmont Tradition foragers were likely low throughout southern New England, and most associated sites reflect short-term occupations lacking features.

The third cultural tradition in evidence is the Gulf of Maine Archaic, which lasted from ca. 9500 to 6000 BP (Petersen and Putnam 1992). It is distinguished by its microlithic industry, which may be associated with the production of compound tools (Robinson and Peterson 1993). Assemblages from Maine (Petersen et al. 1986; Petersen 1991; Sanger et al. 1992) and Connecticut (Forrest 1999) reflect the selection of local, coarse-grained stones. Large choppers and hoe-like forms from southeastern Connecticut's Sandy Hill Site likely functioned as digging implements. Woodworking tools, including adzes, celts, and gull-channeled gouges, recovered at the Brigham and Sharrow sites in Maine (Robinson and Petersen 1993:68), may have been used for dugout canoe manufacture. The deeply stratified Sandy Hill (Forrest 1999; Jones and Forrest 2003) and Sharrow sites (Petersen 1991), with their overlapping lenses of "black sand" floor deposits, suggest intensive site re-occupations according to an adaptation that relied, in part, on seasonally available wetland resources. Thus far, sites from this tradition have only been identified within coastal and near-coastal territories along the Gulf of Maine and in southeastern Connecticut.

B.2 The Middle Archaic Period (8000-6000 BP).

The Middle Archaic Period witnessed higher temperatures and fluctuating environments (McWeeney 1999:9) driven by the Holocene Climatic Maximum (Deevey and Flint 1957). By 8000 BP, an increase in herbaceous plants and decline in forest trees (McWeeney 1999) fostered a mosaic of openland vegetation and pine-oak forests across southern New England (Faison et al. 2006). Water levels dropped, shrinking lakes and turning shallow ponds into swamps or meadows (McWeeney 1999), and forest fires became more frequent (Thorson and McBride 1988). Sea-level rise inundated the southern New England coastline, reducing the gradients of stream and river drainages which likely fostered the development of floodplains.

Dincauze (1971, 1976) envisions "the entire Atlantic coastal area from North Carolina to New Hampshire" as a single culture area by the eighth millennium B.P, and refers to this geographically extended manifestation of the Piedmont Tradition as the Atlantic Slope Macrotradition. This tradition persisted in New England through the Middle Archaic, with associated populations following generalized subsistence strategies and concentrating their settlement around waterfalls, river rapids, major river drainages, wetlands, and coastal settings (Dincauze 1976; Bunker 1992; Doucette and Cross 1997). Large interior wetlands in Connecticut's upland settings appear to have been seasonally reused over a long period of time (McBride 1984b; Jones 1999), as indicated by data from the Dill Farm Site and sites around the Great Cedar Swamp at Mashantucket. Netsinkers and plummets appear in the region's archaeological record for the first time, and elevated levels of mercury in the soil at the Neville

Site in southern New Hampshire suggest harvesting of anadromous fish. This orientation toward interior aquatic resources may indicate that forests were of limited productivity. Foragers along the Lower Hudson River exploited shellfish during the Middle Archaic (Brennan 1974); however, this resource probably contributed little to daily dietary requirements (Lavin 1988). Coastal and riverine sites may be poorly documented because of rising sea levels that have resulted in deep alluvial burial.

Archaeological signatures of the Gulf of Maine Archaic Tradition continue into the Middle Archaic, but according to current knowledge, only in the Gulf of Maine core territory. Though this tradition appears to have disappeared by the Late Archaic, associated elements of burial ceremonialism, such as cremation and the interment of ground-stone objects, appear to have endured within the subsequent Moorehead Tradition of the Northeast's Maritime Areas (Robinson 1992).

B.3 The Late Archaic Period (6000-2700 BP).

The cooler conditions of the Late Archaic Period fostered environmental changes that increased southern New England's human carrying capacity. While dryness and lowered inland water levels persisted for some time, significant changes in vegetation occurred (Lavin 1988: 106; Yu et al. 1997; Foster et al. 2006). Hickory trees, an important element of the region's mast forests, became locally established at ca. 5500 BP (Davis 1969), and the forest canopy continued to diversify (McWeeney 1999: 11). The stabilization of southern New England's coastline at ca. 4000 BP enabled the development of highly productive marshlands and floodplains (Lavin 1988). The high density of Late Archaic sites and reliance on locally available lithic materials suggest relatively large populations (Dincauze 1975). Three archaeological traditions are in evidence - the Laurentian, Narrow Stemmed, and Susquehanna traditions – though interpretations of what they may represent have become more varied and flexible over time (Funk 1988).

The oldest of these is the Laurentian Tradition (Ritchie 1965), which is generally identified by the presence of diagnostic side-notched and corner-notched projectile points, often in association with adzes, axes, gouges, ulus, and slate knives. Originally viewed as the reflection of a hunting and fishing culture that expanded from the upper St. Lawrence Valley, its local manifestations may merely represent the adoption of Laurentian technological traits by local residents (Hoffman 1990; Ives 2009). This tradition reflects a central-based wandering pattern (*sensu* Beardsley et al. 1956) in which numerous, but relatively small, communities exploited a wide variety of settings (Snow 1980:230). Laurentian sites are more abundant in interior southern New England than along the coast, which has led several archaeologists to argue that Laurentian groups were primarily adapted to riverine and upland environments, with coastal zones exploited on a more limited basis (e.g. Snow 1980, Kingsley and Roulette 1990).

The Narrow Stemmed Tradition, the dominant archaeological manifestation of New England's Late Archaic, is distinguished by a quartz cobble lithic industry employing bipolar reduction techniques (McBride 1984b). While this tradition may be intrusive (Ritchie 1965), originating in the Middle Atlantic (Dincauze 1968: 214, 219; Dincauze 1976:128), it may reflect a continuation of trends established during the Middle Archaic (McBride 1984b). Exploitation of a wide variety of coastal regimes and interior forest regimes are evidenced (Hoffman 1985; Sgarlata 2009). Base camps are projected to occur at lakeside winter (Dincauze 1974), riverine summer/fall (McBride 1978), and summer coastal settings (Snow 1980), while smaller,

temporary camps are anticipated in a variety of other micro-environments (McBride 1984b). For example, evidence from southeastern Connecticut indicates that small groups of foragers associated with the Narrow Stemmed and Laurentian traditions centered some of their short-term residences on tree throw hollows during the fall (Ives 2010).

The more notable Narrow Stemmed sites in Connecticut's coastal zones include the Archaic Midden Site in Haddam and the Grannis Island Site in New Haven (Glynn 1953; Lavin 1988). The Archaic Midden Site has been partially submerged by rising sea levels and is only visible at low tide. This may be typical of many Late Archaic sites in the region, indicating the potential of encountering sites under salt marshes or in coves or bays. Recent research interprets the Cover River Site in West Haven to represent a seasonal base camp associated with the Narrow Stemmed Tradition (Cuzzone et al. 2009).

The Susquehanna Tradition is the third and latest Late Archaic cultural tradition in southern New England, and is often described within the context of the Transitional Archaic Period (ca. 3600-2800 BP), which bridges the Archaic and Woodland periods. Most associated sites reveal a focus on riverine and coastal environments (Pfeiffer 1984; Lavin 1988), while the use of heavy steatite vessels suggests increased sedentism. Broadspear points, which are widely accepted as diagnostic of Susquehanna Tradition occupations, appear to have been innovated in the American Southeast and spread rapidly along the Atlantic coast into New England. This has been argued to reflect the revolutionary spread of a coastal/riverine adaptation (Turnbaugh 1975), though it might merely reflect the diffusion of technological traits (Cook 1976). The Susquehanna tradition is best known in southern New England for cremation cemetery complexes that echo those of the preceding Moorehead Burial Tradition of Maine. Susquehanna cemetery complexes are consistently marked by the presence of dark, greasy pits containing calcined bone fragments, grave goods, broken or "killed" blades, ground-stone tools and steatite bowls, and red ochre (Dincauze 1968; Robinson 1996; Leveillee 2002).

C. The Woodland Period (2700-450 BP).

During the Woodland Period New England's population further diversified its subsistence base, increasingly relying on shellfish and horticulture and eventually establishing year-round coastal and riverine settlements. This period has been traditionally subdivided into Early, Middle, and Late periods on the basis of ceramic styles, settlement and subsistence patterns, and political and social developments (Ritchie 1969; Snow 1980; Lavin and Russell 1984). Despite these changes, most recent scholars see the Woodland as a period well-rooted in the traditions and lifeways of the preceding Archaic Period (Feder 1984, 1999).

C.1 The Early Woodland Period (2700-2000 BP).

Early Woodland occupation in the Northeast is potentially complex but poorly understood due to a paucity of data (Versaggi 1999). Associated sites are commonly identified by the presence of Meadowood, Lagoon, and Rossville points, as well as grit-tempered, cord-marked Vinette I ceramics, and exotic trade goods are often found on larger sites. Several indigenous plants appear to have been cultured, including goosefoot, sumpweed, sunflower, pigweed, and knotweed (Streuver and Vickery 1973; McBride 1978) though the relative importance of these taxa in the Native economy has yet to be determined. While Early Woodland sites exhibit a cultural continuity to Late Archaic sites (Feder 1990; Concannan 1993), their sparse distribution is thought to reflect a population decline that may have resulted from

environmental shifts (Fiedel 2001). Conversely, the apparent paucity of Early Woodland sites may simply reflect the biases of site-recognition strategies (Juli and McBride 1984). Direct association of Narrow Stemmed projectile points with Woodland Period radiocarbon-dated contexts (Herbster and Chereau 1999, 2001, 2003; Herbster 2004), as well as stratigraphic association of Narrow Stemmed points with Woodland types (Lavin and Russell 1985; Cuzzone and Hartenberger 2009), alert us to the possibility that Woodland Period assemblages are frequently misidentified as Late Archaic.

Most recorded sites in Connecticut containing Early Woodland components are situated along the coast or at the mouths of major rivers such as the Quinnipiac, Connecticut, Thames and Mystic Rivers, but a number of interior upland locations have also been documented. Recent research suggests that year-round habitation of some sites was established by the late Early Woodland Period (Ceci 1980; Bernstein 1990). For example, complex storage pits suggesting increased sedentism were identified at the Scabbletown Brook Site (RI 670), in North Kingstown, Rhode Island. These contained the remains of berries, seeds, and nuts (Morenon 1986). Southern New England's islands were also utilized by Early Woodland populations (e.g., Ritchie 1969; Kingsley and Roulette 1990). For example, year-round occupations are evidenced at Block Island's Site RI-1428, where a broad spectrum of salt marsh, estuarine, and deepwater resources were exploited (Tveskov 1992).

C.2 The Middle Woodland Period (2000-1200 BP).

Diagnostic Middle Woodland artifacts include Jack's Reef Pentagonal and Corner-Notched points, Fox Creek points, and rocker and dentate-stamped ceramics. Middle Woodland assemblages commonly feature exotic lithic materials such as Pennsylvania jasper (Luedtke 1987; Goodby 1988), which reflect long-distance exchange networks extending from Labrador to Pennsylvania (Dragoo 1976; Fitting 1978; Snow 1980). During this period, exploitation of coastal environments intensified and a growing trend towards sedentism is in evidence according to an increased frequency and size of storage facilities (Ritchie 1965; Snow 1980; McManamon 1984).

Middle Woodland sites are relatively rare outside of coastal and near-coastal contexts. Settlement patterns in Connecticut indicate an increased frequency of large sites adjacent to tidal marshes and wetlands along the Connecticut River, a decrease in large upland occupations, and a corresponding increase in upland temporary camps (McBride 1984a). This may indicate reduced residential mobility from earlier time periods and is likely due to the development of modern tidal marshes in low-lying riverine areas by 2000 BP. The tidal marshes would have supported a wide variety of terrestrial and aquatic animal and plant resources, allowing longer residential stays (McBride 1984a).

C.3 Late Woodland Period (1200-450 BP).

Late Woodland sites are typically located in coastal environments, around interior freshwater ponds and wetlands, and near large tributary streams. Interior groups remained small and highly mobile (Thorbahn and Cox 1988; Chilton et al. 2000:41), though there may have been an increasing focus on semi-sedentary horticulture (Heckenberger et al. 1992). Although Connecticut River Valley sites clearly demonstrate the use of tropical cultigens such as corn,

beans, and squash, wild plant and animal resources were still a primary component of the aboriginal diet (Lavin and Russell 1984; McBride 1984a). The use of imported cherts increases over time in the Connecticut River Valley, suggesting possible social, economic, and/or political ties to the Hudson Valley region. Diagnostic artifacts include Madison and Levanna points and cord-wrapped, stick-impressed, and incised ceramics.

The Late Woodland settlement pattern suggests a trend toward fewer and larger villages near the coast and along major rivers, reflecting a continued reduction in residential mobility and increased sedentism. During this time southern New England's islands appear to have hosted significantly larger populations than the mainland, which may reflect higher ratios of productive shallow-water habitats to land (Nixon 2004:16). Abundant marine foods included oceanic fish and seals as well as shallow-water fin and shellfish. Some mainland coastal settings, such as Rhode Island's Greenwich Cove, indicate year-round settlement during the final centuries before contact with Europeans (Bernstein 1990). Corn cultivation may have played a relatively minor role in the diet of southern New Englanders prior to European contact (Nixon 2004), with year-round village life and a heavier dependence on corn arising in response to historic economic activities (Ceci 1980:80).

D. Contact and Historic Native American Period

During the Contact Period, Connecticut's Native American cultural landscape was significantly transformed as a result of a variety of external influences, including the introduction of European material culture, the spread of epidemic diseases, and the establishment of a market economy. These transformations were expressed in Native economies, politics, demographics, and long-term survival strategies.

Archaeological data from Late Woodland sites in southern New England suggests a fairly stable population base along the Connecticut River Valley, Thames, and Housatonic Rivers by ca. 1300 AD The local settlement pattern features large semi-sedentary villages and specialized seasonal occupations in inland settings; a pattern that was probably developing during the Middle Woodland Period and solidly established by Late Woodland times. The relationship between coastal occupations and upland lacustrine occupations, particularly those away from major riverways, is not well understood. Groups may have utilized these settings differently within a seasonally timed cycle of population aggregations and dispersals. However, some suggest that occupations found in upland settings may reflect distinctive adaptations from those found in coastal areas, recognizing the possibility that local populations may have had diverse lifeways (Feder 1990; Leveillee and Van Coughyen 1990).

After 1400 AD, coastal populations split into smaller socio-political entities, as inferred by a diversification in ceramic styles, for reasons that are not yet understood (McBride 1984a). The depletion of coastal resources from overexploitation and a successive shift towards horticultural practices might have driven the fragmentation of large groups along the coast (Bragdon 1996: 86). Some propose that, under conditions of population stress, social groups that come to rely on horticulture tend to reorganize themselves into family households, where input of labor is rewarded by a direct return of food staples (Bragdon 1996: 88).

At the time of European contact in the early 17th century, the project area was likely occupied by Native Americans, though their political affiliation cannot be confidently inferred. It has recently been argued that there is no evidence of political groups larger than towns at first contact or shortly thereafter in Western Connecticut (Rudes 2005: 44); thus the term "tribe," as

currently used, may not apply to discussions of early native political geography. Accordingly, the project area is probably best envisioned as between two historic territorial cores - that of the Quinnipiac, centered on the Quinnipiac River to the east, and that of the Paugussett, centered on the Housatonic River to the west.

The Paugussetts and allied communities were largely dispossessed of their land and relegated to a number of small reservations. One, known as the Turkey Hill Reservation, was located on the east side of the Housatonic River in Derby (Woodruff 1949). This 100-acre tract was set aside in 1671 for local Paugussett/Wepawaug Indians who used it as a residential base. A 17th-century fort and historic burying ground existed nearby. This reservation was eventually sold off by 1826 (Brilvitch 2007). The Paugussetts have retained a reservation in the nearby town of Trumbull into the present, though it has been reduced to merely a quarter of an acre in size. They also possess a reservation of slightly over 100 acres in Colchester. The Paugussetts have been formally recognized by the State of Connecticut as a tribe, by statute, since the 1970s but were denied Federal Recognition by the Bureau of Indian Affairs in 2004 (Koenig and Stein 2007).

During the Pequot War of 1637, the Quinnipiacs were allied with the English. After the war, in 1638, colonial settlement began in the project vicinity. Land was purchased from the Quinnipiacs, who by this time were decimated by European-introduced disease. A 1200-acre reservation was set aside on the east side of New Haven Harbor for the estimated 150 surviving Quinnipiacs (Carlson 1987; Engineering-Science, Inc. 1991). The Quinnipiac population declined over the years so that by 1740 there were only 15 to 20 families on the reservation. Reservation land was gradually sold to colonists, with the final 30 acres purchased in 1773 (Engineering-Science, Inc. 1991). The decline of the reservation appears to reflect, in part, the reorganization of Quinnipiac people within the regions greater social network. By 1759 a small number of Quinnipiac families had already left New Haven and settled among the Farmington Indians, and by 1774 the majority of Quinnipiacs had followed (Menta 1994: 339-345).

The Schaghticokes, another native community of western Connecticut, were historically dispossessed of their land though they still retain a reservation in Kent. They have been formally recognized by the State of Connecticut as a tribe, by statute, since the 1970s. The Schaghticokes were granted Federal Recognition by the Bureau of Indian Affairs in 2004, only to have the decision reversed in 2005 (Koenig and Stein 2007). The Schaghticoke community furnished warriors who served in the Revolutionary War, and at about that time a portion of the community relocated from Kent to Orange (Woodruff 1949). The Indian Hill Cemetery Site (107-12), which overlooks the Maltby Lakes to the east, is a Native American burial ground that likely dates from the late 18th century to the early 20th century. This burial ground is associated with the historic native community inhabiting the Dogburn Road – Indian Hill section of Orange.

E. Reported Local Prehistoric Archaeological Resources

Review of the SHPO/OSA site files indicate no prehistoric sites have been reported within a 1 ½-mile radius of the project area. Only 11 prehistoric sites have been reported in Orange. This apparent lack of archaeological sites is likely reflective of the relatively small amount of professional archaeological work conducted in Orange, coupled with fairly intensive development, which may have destroyed sites. Certainly the southwest Connecticut coast is well-established as an important draw for prehistoric peoples, but many archaeological sites reported on the early 20th century have been destroyed. Cultural resource management-mandated

archaeological surveys in Orange include reconnaissance surveys of sanitary sewer systems (CAS 1979), cell-tower sites (ACS 1996, Brown 2001), and potential cemetery locations (Raber and Wiegand 1992).

The closest reported prehistoric site to the project area is Site 107-05, nearly two miles to the northwest along Silver Brook. This ½-acre Late Archaic site, evidenced by Small-stemmed points, a side-notched point, a chopper and a scraper, was reported in a golf course as destroyed in 1979. Site 107-07 was identified one mile west of 107-05 as containing Small-stemmed and Squibnocket points. Other sites are further west, along the Wepawaug River and Lake Wepawaug, and further west along the Housatonic River, dozens of sites have been reported, including an reported possible Native American fort. To the north/northeast of the project area a number of prehistoric sites have been reported along the West River, and, 167-12, the Indian Hill Cemetery Site, is located to the northwest along Maltby Lakes, but dates to the 18th century. It is clear that virtually all of the reported prehistoric site locations are on watercourses or waterbodies; this likely reflects Native use of these important water resources, but there may also be a bias in that riverine sites are often found by avocational archaeologists.

V. HISTORICAL CONTEXT

The project historian reviewed previously published works on the history of Orange (e.g., Barber 1838, Woodruff 1949) and consulted a series of historical maps that show buildings and other features (Figures 6-11). In addition to the maps, which range in publication date from 1848 to 1893, aerial photographs from 1934 and 1965 were also examined. Biographical information on early owners was obtained from the manuscript returns of the U.S. Census. The purposes of the historical research were to construct a historic context for the project area, to identify significant ground-disturbance activities (such as the relocation of the railroad line in the 1890s), and to help interpret any historic-period artifacts and/or features that were encountered in the subsurface testing.

A limited amount of title research was undertaken; however, because of the repeated division of towns, Orange's land records are held by three separate town clerks – Milford, West Haven, and Orange – making it difficult and time-consuming to reconstruct a complete title chain, a task that was outside the scope of work for the Phase I Archaeological Reconnaissance Survey.

A. Results of Historical Background Research

The project area and surrounding vicinity were primarily agricultural in character from the first years of English settlement until the very recent past. Orange was originally part of Milford. Although Milford was settled by the English immediately following the Pequot War of 1637-1638, most activity occurred in the southern part of the town, closest to Long Island Sound. Very little if any settlement occurred in the part of Milford that would become Orange before 1700. After that date, the area, which was known as "Bryans' Farms"` after early residents Alexander and Richard Bryan, saw a slow but steady increase in population, and in 1750, the Town of Milford provided a public school for the area, "it being so well settled that one is deemed necessary" (Woodruff 1949: 9ff). The next milestone in creating an identity for Orange occurred in 1804, when a separate Congregational parish, known as the North Milford Society, was organized. In 1822, Orange was divided off from Milford and made a separate town. It was named in honor of William III of England, whose earlier title had been the Prince of Orange (an area in southern France), because he restored Connecticut's liberties after Sir Edmund Andros had tried to suspend the colony's charter. For almost a hundred years, the town of Orange also included West Haven, which had existed as a separate parish within the town of New Haven since 1720, but in 1921 West Haven was split off and Orange assumed the boundaries it has today.

Orange, like most Connecticut towns of the period, was characterized by widely dispersed family farms carrying on generalized agriculture. In describing the town in 1836, Barber commented, "the face of the township is hilly, and the soil productive. The inhabitants are generally farmers" (Barber 1836: 245). (In the context of 19th-century agriculture, "hilly" was a good thing, since it meant good drainage, and sloping land was no more difficult to plow with draft animals than flat land.) The output of the Orange farms was generally consumed within the community and the family itself, with little extra in the way of a marketable surplus. Industrial enterprises were limited to the blacksmith shops and small water-powered grist, saw, and fulling mills that supported the agricultural economy.

The vicinity of the proposed railroad station remained relatively sparsely populated throughout the 19th century. Although close to the Orange-Milford town line, the built-up part of Milford was not close by, and the small villages at West Haven and in Orange Center were about equally distant. Along the Boston Post Road (Route 1) were a small hotel, a few shops, and the town's poorhouse, but otherwise the vicinity was characterized by scattered farmsteads.

The earliest detailed map of the area, published in 1855 but based upon topography compiled in 1837, shows the project area as divided into open fields (except for wooded areas along the Oyster River), with a house at the extreme western end, fronting on Marsh Hill Road (Figure 6). This was the homestead of Daniel Merwin (1778-1862). It is likely that Merwin resided here since the early 1800s; he married his first wife, Mary Tomlinson, in 1801 and they started their family shortly thereafter (Miles Merwin Association 1978: 180). Agricultural statistics from 1850 (U.S. Census Office 1850) indicate that the 100-acre Daniel Merwin farm was typical for the period. His livestock numbered a dozen sheep, a horse, a yoke of oxen, and two pigs. Most of the farm's production—178 bushels of rye, corn, buckwheat, and oats and 20 tons of hay—was probably consumed by the livestock. Some of the corn and other grains may have provided meal for the family's use, along with 200 lbs. of butter and 100 bushels of potatoes. The value of meat slaughtered for the year was estimated at $30. The 40 lbs. of wool shorn from Merwin's flock may have represented a marketable surplus, though in earlier days it would have been used for making homespun for the family. Not reflected in the agricultural census but recorded in his probate inventory at the time of his death in 1862 were 30 hens and garden produce (a bushel of turnips). Merwin also had a part interest in a fishery, probably a haul-seine operation (see probate inventory in Harper et al. 2011, Appendix III).

Except for five silver teaspoons, little among Daniel Merwin's possessions indicated any sort of material consumption beyond what was necessary to run his household and farm. Farm wagons, farming implements, and tools made up most of his personal estate, along with objects related to family production (a churn, cheese press, and spinning wheel). His furniture consisted of one table, eight chairs, a stand, a cupboard, and two chests. The only "luxuries": one carpet, a hand mirror, and a clock. Despite his plain lifestyle, Merwin could not be considered a poor man: he had considerable savings in the bank and money out at interest in the form of loans to his neighbors (see Harper et al. 2011, Appendix III).

In 1847, the New York and New Haven Railroad began acquiring land in order to build its line along the Long Island shore. Farmers were generally content to sell their land, since by law the railroads could acquire it at fair market value anyway by going to court. Daniel Merwin sold a strip passing diagonally through his farmland, in the eastern part of the project area (see 1852 Whiteford map, Figure 7), with the understanding that the railroad would build and maintain a suitable fence along the tracks (Orange Land Records [hereafter OLR], Vol. 7, p. 387). This was not, however, the present location of the railroad tracks. The original alignment curved southward just at the point of the proposed new railroad station, crossing the Orange-Milford town line where there was a station stop called Woodmont. In the 1890s, the railroad undertook a massive rebuilding effort to upgrade its mainline between New York and New Haven, widening the right-of-way in order to accommodate four parallel tracks and, where possible, eliminating curves like that near the project area. The old alignment was kept in service for some time as a spur line, and even as late as 1965, the roadbed for the original alignment was still visible from the air (Figure 11). The realignment of the rail line in the 1890s makes it almost certain that the south side of the present tracks, where station construction is

contemplated, is completely disturbed by the two episodes of railroad construction that converged at this point.

After his death, Daniel Merwin's farmstead passed to his children, and in 1864 his widow Clarissa quitclaimed her interest in the property to them (OLR 11: 457). Clarissa Munson was Daniel Merwin's second wife. They married in 1836, fifteen years after his first wife died. Because she had substantial assets of her own, including $1,000 loaned out at interest, Clarissa Munson and Daniel Merwin executed a prenuptial agreement that guaranteed she would have the use of her own money after the marriage, as well as receiving the usual dower right of use of one-third of his estate at the time of his death, provided she survived him. Once the widow released her rights in the estate, the Merwin heirs sold the house and 27 acres of land to Robert K. Beach of New Haven (OLR 12:305). Beginning with Beach, the former Merwin homestead went through a succession of absentee owners until 1874, when it was acquired by James R. and Eliza Ayres, who owned the farm just to the south that formerly belonged to John P. Strong (see 1868 map, Figure 8). It is likely that the Ayres consolidated the former Merwin farm with their own holdings. When the U.S.G.S. surveyed the area in 1889 and 1890, the Merwin house was no longer standing (see Figure 9). In the 1890s and early 1900s, the land went through another quick succession of owners, including men who lived in New York City, Bridgeport, and Rochester, N.Y.; presumably they leased the property to local people for use as farmland.

In 1915, the property was sold to the Elm City Nursery Company, which also operated under the name of Woodmont Nurseries. The company's main location was in the Edgewood section of New Haven; presumably, it used the farmland within the project area in support of its operations. The Elm City Nursery Company advertised widely in national horticultural magazines and solicited mail-order business from all over the country. In addition to providing plants, the company also offered landscape design services for parks, suburban subdivisions, and even urban housing projects. The company owned a substantial portion of the project area at least into the early 1930s.

In the 1930s, Alessandro and Filomena Salemme acquired a farm on Marsh Hill Road just north of the project area, including the portion of the western part of the project area that lies adjacent to the road (Figure 10). The Salemmes were immigrants from Italy and had formerly lived in Derby, where Alessandro (Alex) Salemme worked as a factory laborer. Filomena (also spelled Philomena) Salemme became the sole owner of the property in 1949 after her husband's death, and in 1953 she laid out a half-dozen house lots along a new street, present-day Salemme Lane, with six houses going up shortly thereafter (Figure 11).

Despite this small incursion of the postwar housing boom, and the proximity of the Connecticut Turnpike (I-95), constructed in the 1950s, most of the project area remained farmland for many years (see Figure 11). Some portions started to become overgrown, but major changes did not occur until the final decades of the century when intensive industrial-park development took place to the south and north. Within the project area, large warehouses were built at the northwest corner, just east of Salemme Lane, and in the south half, where DiChello, a beverage distributor, has its operations. Although undeveloped, the northeast part of the project area was part of a huge biomedical research facility built by Miles Laboratories in 1965, across the Oyster River in West Haven. Miles Laboratories was acquired by Bayer AG in 1979, and in 2007, the Bayer research complex, including this part of the project area, became Yale University's West Campus.

B. Reported Historic Archaeological Resources

One historic period site, Site 107-13, was reported about one mile northwest of the project area (Figure 1), along Tavern Road. This is the site of the Bryan-Andrews House, an 18th-century house, still standing, owned by the Orange Historical Society. Southern Connecticut State University archaeological field schools have been conducted on the house grounds, recovering architectural material. The only other reported historic-period site in the Indian Hill Cemetery Site (107-12), discussed in the previous section.

VI. RESULTS OF PHASE II INTENSIVE ARCHAEOLOGICAL SURVEY

Site 107-15 is located on the DiChello property within the footprint of the proposed station and platform, and Site 107-16 is located approximately 100 meters north on the Yale parcel (Figures 4 and 5). The Phase I Archaeological Reconnaissance Survey identified these two potentially significant prehistoric sites, which were recommended for Phase II Intensive Archaeological survey testing to determine their vertical and horizontal limits, internal compositions, temporal and cultural affiliations, and contextual integrity, in order to assess whether they met National Register of Historic Places eligibility criteria. The Phase II survey results for each site are summarized below.

A. Site 107-15

Site 107-15 is located on the east/southeast border of the proposed railroad station project area, within the footprint of the proposed station and platform (Figures 4 and 5). Seated at approximately 48 feet above sea level on a terrace overlooking the Oyster River, the site area features a mixed hardwood forest of ash, cherry, maple, and oak, in addition to an understory of scrub, including briars and rose bushes (Photograph 1). This vegetation is secondary growth following the disuse of the property for historic-period agricultural purposes. The terrace is composed of the glacial outwash that is typically found along the margins of local streams and riverways. Soils at the site consist of Agawam fine sandy loam with 3 to 8 percent slopes, which is very gently sloped and well drained (USDA 2010). Twentieth-century ground disturbances, primarily associated with the construction of the adjacent rail line, are evident in the area, though Phase I testing indicated areas of relatively intact or buried soil horizons. In the Phase I survey, artifacts were recovered from two consecutive test pits (T12-4 and T12-5) spaced at 15-meter intervals (Figure 12). Archaeological testing (inclusive of Phase I and Phase II investigations) has resulted in the collection of 21 artifacts, six of which are lithic artifacts of pre-Colonial Native American cultural affiliation, specifically the Narrow-stemmed tradition of the Late Archaic period (c. 4500-4000 years ago) (Table 1).

Table 1: Artifact Summary, Site 107-15

Survey Phase	Material	Description	Count
I	Lithic	quartz Lamoka-like projectile point without tip	1
		quartz bifacial retouch flake	1
	Glass	clear unidentified curved glass	2
		clear unidentified bottle base/body	2
		clear window glass	1
		Total:	*7*
II	Lithic	quartz flake	3
		possible quartz flake	1
	Historic Ceramic	red earthenware (no glaze)	1
		untyped whiteware	1
	Metal	iron railroad spike	1
	Glass	blue-green unidentified curved glass	7
		Total:	*14*
		Combined Total:	***21***

The area of Site 107-15 is surfaced with a veneer of organic duff that has accumulated since this land fell out of agricultural use. Soil profiles from across the Phase II grid area reveal a sharply defined plowed topsoil layer. The bottom of this layer, marking the maximum depth of historic plowing activities, ranged between 25 and 40 cm below surface (cmbs) in most of the test pits. Its matrix was very consistent, featuring a dark yellowish-brown fine sandy loam with a small proportion of gravel. A remnant (plow-truncated) upper subsoil horizon lay immediately beneath, which typically consisted of a dark yellowish brown to strong brown fine sandy loam with a significant proportion of gravel. This subsoil extended to the bottom of many of the test pits, most of which were terminated due to impedance by large rocks. These rocks were encountered at a wide range of depths, as shallow as 28 cmbs (as in N5E10) and as deep as 84 cmbs (as in N14W11, SE quad). A smaller proportion of test pits (such as N25E5 and N30E0) fortuitously missed these rocks, revealing a fuller view of the soil column. A lower subsoil layer was noted (as in N25E5), consisting of brownish-yellow loamy very fine sand with gravel. C-Horizon soils appear at varying depths across the site area, as shallow as 55 cmbs (as in N25W5) and as deep as 92 cmbs (as in N25E5) (see test pit profiles in Appendix III).

The Phase II grid area encompasses the two consecutive test pits (spaced 15 meters apart) from the Phase I survey that yielded pre-Colonial cultural material from topsoil contexts (Figure 12). These were T12-4, which contained a quartz Lamoka-like projectile point (Photograph 2), and T12-5, which contained a quartz bifacial retouch flake (both artifacts were found in the plowzone, 6-35 cmbs, and the point was found in the same level as a few fragments of glass). Forty-eight test pits were excavated during the Phase II investigation of Site 107-15 (Figure 12). Only four of the Phase II test pits contained additional pre-Colonial cultural material (N10E0, N10W15, N15W1, N20W16) (Figure 12). Ten test pits contained modern material (culturally insignificant refuse) that was noted in the field but not collected. A few historic-period artifacts were also recovered, but are not considered to represent an archaeologically significant component: a single fragment of redware from plowed topsoil of test pit N10EO, and a fragment of whiteware from the plowed topsoil of test pit N10W5. These Euro-American artifacts may reflect the historic practice of spreading of nightsoil (and domestic refuse included therein)

across agricultural fields to boost their fertility, but are considered insignificant field scatter common to Connecticut's former farmland.

One 1-x-1 meter unit (N7W14) was excavated adjacent to (and immediately east of) T12-4, the Phase I test pit that contained the Lamoka-like projectile point. No additional pre-Colonial artifacts were recovered from this unit, the southern edge of which penetrated the margins of a modern trench oriented in an east-west direction. The trench fill was identical in character to the plowed topsoil that it truncated, and it contained only historic artifacts: an iron railroad spike and curved glass fragments. This trench was clearly excavated by machine, as indicated by its sharp edges and angular morphology (Photograph 3).

The horizontal extent of Site 107-15 could not be conclusively delineated due to historic-period disturbance and modification of the landscape. All of the pre-Colonial material found at Site 107-15 was recovered from an area measuring less than 20 x 20 meters (400 m^2), and came from a total depth range of 0-30 cmbs. The western edge of the site is bounded by the steep slope of an artificial hill that has buried the original terrace surface. While site materials may exist beneath this hill so few artifacts were identified during the survey that this now appears unlikely.

The pre-Colonial material from Site 107-15 was recovered from an area that possesses a significant degree of horizontal integrity. The topography of the terrace, in this vicinity, maintains the natural, gently sloping surface that preserves its post-glacial character. Furthermore, the consistent presence of a historic plowzone over intact subsoils also indicates that significant horizontal earth-moving activities are relatively limited in the area investigated. Though the artifacts have been horizontally shifted by plowing activities to some degree, they have probably not moved very far from their original places of deposition, and thus reflect culturally meaningful depositional patterns. However, all of the prehistoric artifacts were found in plowed topsoil from a depth range of 0-30 cmbs, which means that they have been vertically displaced and can yield little or no information about their original stratigraphic relationships.

The pre-Colonial artifacts from Site 107-15 are of Native American cultural affiliation and likely date to the Late Archaic Period (6000-2700 BP). The most informative artifact in the small assemblage composing Site 107-15 is the Lamoka-like projectile point recovered during the Phase I survey. The style and manufacturing technique of this point is typical of the "Narrow Stemmed" Phase of the Late Archaic Period of southern New England (ca. 4,500 – 4,000 years ago). In particular, the bottom of this point features a crude, flat platform that was not "erased" through the removal of diminutive flakes (Ritchie 1961: 29). This manufacturing nuance is typical of Late Archaic Narrow Stemmed points, particularly ones tailored according to a Lamoka style template. The five quartz flakes, byproducts of stone tool manufacture, are likely of Late Archaic origin, and may be associated with this point.

Unfortunately, the low density of the artifactual materials at Site 107-15 precludes the definition of spatial clustering that would permit a more specific assessment of site organization and structure. The low-density character of the artifact assemblage suggests that this site was not intensively occupied by its pre-Colonial Native American inhabitants. There is no evidence of deep features, such as storage pits or pit hearths, that clearly indicate intensive use or modification of this locale. Shallower features, such as small surface hearths, may have existed but would have been disaggregated beyond recognition by historic plowing.

B. Site 107-16

Located approximately 100 meters north of Site 107-15, the setting of Site 107-16 is similar in many regards (Figures 4 and 5). It is located about 50 feet above sea level on the same glacial outwash terrace overlooking the Oyster River, and is approximately 60 meters west of the river's edge. Vegetation at Site 107-16 also consists mostly of hardwoods such as birch, cherry, hickory, maple, and oak, in addition to scrub undergrowth (Photograph 4). The parent material of soil here is also Agawam fine sandy loam with 3 to 8 percent slopes (USDA 2010), but evidence of dumping and earthmoving were evident by hummocked topography, modern refuse, and irregularly distributed boulders (Photograph 5). The railroad alignment is located to the southeast of the site, and a building and parking lot are located approximately 180 meters to the west. Unlike Site 107-15, this site is located right by the terrace edge. Archaeological testing (including Phase I and Phase II excavations) has resulted in the collection of 28 artifacts from the site, three of which are Pre-Colonial lithic artifacts of Native American cultural affiliation (Table 2) (see detailed artifact inventory list in Appendix V).

Table 2: Artifact Summary, Site 107-16

Survey Phase	Material	Description	Count
I	Lithic	quartz drill without tip	1
	Botanical	charred unidentified botanical	1
	Historic Ceramic	untyped whiteware	1
		Total:	*3*
II	Lithic	quartz bipolar flake	1
		quartz small angular debris	1
	Historic Ceramic	Ironstone	1
		yellowware	1
		annular pearlware	1
		untyped whiteware	2
	Faunal	northern quahog (M. mercenaria)	5
		unidentified noncalcined bone	3
	Glass	blue-green window glass	3
		clear window glass	6
		clear unidentified curved glass	1
		Total:	*25*
		Combined Total:	***28***

Test pit profiles (Appendices III and IV) revealed that there is substantial variation in stratigraphy across the Phase II testing area, which largely reflects modern disturbances. Most of the test pits located north and east of the zero line contained fill (redeposited sediments) (Figure 13). The entire exposed profile in some pits consisted of redeposited sediments, with some pits featuring stratified layers of fill (such as N10E0 and S5E8) and some featuring one deep horizon of ground disturbance (such as N4E10 and N15W5). Still others feature redeposited sediments capping a plowed soil column in its entirety (as in N0E5) or a fill horizon that lies directly over intact subsoil (as in N15E6, SW quad). These variations in stratigraphy reveal a topography that

has been manipulated by heavy machinery in the past, probably according to a cut-and-fill process meant to level the ground surface. Numerous rock and dirt piles were located along the E10 line. These appeared relatively modern and were clearly oriented along the adjacent terrace edge, which runs in a north-south orientation. Soil was noted as being particularly compact in several test pits (such as S5W5, N0W5, and N15E6) from across the Phase II testing area, which probably reflects compression by heavy machinery on the ground surface (see test pit profiles in Appendix III).

Test pits in the southern and western reaches of the grid tended to exhibit soil profiles that were less disturbed, as in the NW quad of S11W5. This test pit is representative of an undisturbed profile. It was surfaced with a thin veneer of duff over a plowed topsoil layer of dark yellowish-brown fine sandy loam with gravel extending to 13 centimeters below ground surface. An upper subsoil layer extended beneath to a depth of 32 centimeters below ground surface, consisting of a light yellowish-brown loamy sand with gravel and cobbles. This layer transitioned to a lower subsoil stratum extending to the bottom of the pit at 45 centimeters, where excavations were impeded by a large rock. The lower subsoil here consisted of a dark yellowish-brown fine to medium sand with gravel and cobbles.

Twenty-seven test pits were excavated during the Phase II investigation of Site 107-16 (Figure 13). The testing grid was centered on the test pit from the Phase I survey that yielded cultural material, T18-12. T18-12 yielded one artifact from a lower subsoil horizon (35-60 cm) that is clearly Native American. This quartz bifacial tool is tentatively identified as a drill, though it may be an unusually slender or heavily reworked Narrow Stemmed projectile point (Photograph 6). An unidentified charred botanical specimen (possibly wood) was recovered from the same level. One historic artifact was recovered from this site during the Phase I survey.

Only one test pit, N5W1, yielded additional Pre-Colonial material during the Phase II investigations. Both items were recovered from plowed topsoil, in a depth range of 4-22 centimeters. One consists of a small piece of quartz angular debris, which is likely a byproduct of stone tool manufacturing. The other item is a fragment of a quartz flake that bears a crushing pattern on its distal end that reflects a bipolar stone reduction process. In other words, this type of crushing pattern reflects the physics of vertically fracturing a stone core by holding it against a large anvil stone while striking it from above with a hammerstone. This technique was widely used throughout southern New England during the Late Archaic period to reduce quartz cobbles during the early stages of refining them into stone tools (Hoffman 1985; McBride 1984). However, the technique was also used during other periods of prehistory, such as the Early Woodland Period, so it is not considered a diagnostic technological trait.

Ten test pits contained modern material (culturally insignificant refuse) that was noted in the field but not collected. Historic-period artifacts were recovered as well, but are not considered to represent an archaeologically significant component: a single fragment of redware was recovered from plowed topsoil of test pit N10E0, while a fragment of whiteware was recovered from the plowed topsoil of test pit N10W5. These Euro-American artifacts likely reflect the typical incorporation of night soil (and domestic refuse included therein) into agricultural fields.

Two one-meter-square units were excavated during the Phase II investigation (Figure 13). The first, N0W1, was excavated to determine if there were any features or additional artifacts associated with the quartz biface and charred botanical fragment recovered in T18-12. No feature was detected in this excavation unit; however, a portion of a root burn was recorded in

the subsoil, which suggests that the charred botanical fragment recovered during the Phase I survey is attributed to this root burn. No pre-Colonial artifacts were recovered from this excavation unit, though two historic artifacts were found from the plowed topsoil - a yellowware sherd and a clear window glass fragment. The second unit, N3E0, was positioned between the two test pits containing prehistoric material (Figure 13; Photograph 7). Two historic ceramic fragments were found in the plowed topsoil, in addition to modern refuse that was not collected. No prehistoric artifacts were recovered from this unit, nor were any cultural features detected.

In sum, the pre-Colonial Native American materials recovered from Site 107-16 were constrained within a very small and discrete locale. The minimal quartz artifact assemblage was recovered from only two shovel test pits (T18-12 and N5W1) that are located 5 meters apart, and from a total depth range of 4 to 60 centimeters. The archaeological sampling results indicate that this artifact scatter is contained within an area measuring less than 10 x 5 meters in plan (50 m^2). The fact that an array pit (A1) and excavation unit (N3E0) centrally located in this site yielded no Pre-Colonial cultural material indicates that this artifact scatter is of very low density.

VII. CONCLUSIONS AND RECOMMENDATIONS

The objective of the Phase II intensive archaeological surveys of Sites 107-15 and 107-16 was to collect sufficient data to assess the significance of the sites relative to their eligibility for listing in the National Register of Historic Places. These surveys were designed to obtain data necessary for such evaluations, including information on horizontal and vertical site boundaries, integrity, configuration and complexity. These aspects were considered together to make a judgment regarding each site's research potential and its significance relative to the study of the broader cultural context for the region.

A. Site 107-15

This site likely represents a short-term occupation by a small group of people who briefly refined their toolkits during foraging activities in this near-shore environment. Investigations here to date have yielded a combined total of six Pre-Colonial Native American artifacts – one quartz Lamoka-like projectile point and five pieces of quartz chipping debris. These were recovered from a cluster of six test pits over a limited area, although the western edge was artificially truncated by a manmade hill (Figure 12). The material and technological attributes of these artifacts indicate that the site was likely occupied during the Late Archaic Period and that it is associated specifically with the Narrow Stemmed Tradition (ca. 4,500 – 4,000 years ago). Archaeological sampling indicates that the Native American component of this site occupies a relatively small area, measuring less than 400 m^2, and that its artifact density is very low. All pre-Colonial artifacts were in relatively shallow contexts, confined to a total depth range of 0-30 cm. Though this site may extend to the west beneath an artificial hill the results of the survey indicate that this is unlikely as only a single artifact was located near its base. The site does not harbor complex data sets, as it was found to contain only one artifact class (lithics) and there were no associated features discovered. This site possesses poor physical integrity, as indicated by disturbed/hummocked topography and soil profiles that demonstrate variable grading of the topsoil at the site. Modern earthmoving disturbances have certainly compromised the vertical and horizontal orientation of cultural materials here. It is unlikely that future investigations of this site could yield many, if any, further insights into its character.

The historic-period component of this site consists of a typical low-density scatter of 19th-century domestic refuse confined to the topsoil. This site component is not considered to be culturally significant, and likely extends beyond the project area as a generalized "field scatter" along the formerly cultivated/farmed banks of the Oyster River.

In view of the information gathered during the Phase II investigation of Site 107-15, AHS has determined that this site does not possess the potential to yield additional information that will significantly contribute to our knowledge of regional prehistory. **Accordingly, no further archaeological investigations are recommended for any portion of Site 107-15.**

B. Site 107-16

Site 107-16 likely represents a short-term occupation by a small group of people who briefly refined their toolkits during foraging activities in this near-shore environment. Investigations here yielded a combined total of three prehistoric Native American artifacts – one quartz drill and two pieces of quartz chipping debris. These were recovered from two test pits located 5 meters apart, and were confined to a depth range of 4-60 centimeters (Figure 13). The

material and technological attributes of the recovered lithic artifacts indicate that the site was likely occupied during the Late Archaic Period and that it is probably associated with the Narrow Stemmed Tradition. Archaeological sampling indicates that the Pre-Colonial component of this site occupies a very small area, measuring less than 50 m^2, and that its internal artifact density is very low. The site was found to contain only one artifact class (lithics) and no associated features were discovered. The horizontal integrity of the site is only somewhat compromised through historic plowing, which resulted in moderate lateral displacement of artifacts. If any shallow features (such as surface hearths) existed as contemporary site elements, they have likely been tilled beyond archaeological recognition. It is unlikely that future investigations of this site could yield much, if any, further insights into its character.

The historic-period component of this site consists of a low-density scattering of 19th-century domestic refuse confined to topsoil. This is considered to be culturally insignificant "field scatter" along the formerly cultivated/farmed banks of the Oyster River.

In view of the information gathered during the Phase II investigation of Site 107-16, AHS has determined that this site does not possess the potential to yield additional information that will significantly contribute to knowledge of regional prehistory. **Accordingly, no further archaeological investigations are recommended for any portion of Site 107-16.**

Though no further investigations of Sites 107-15 and 107-16 are recommended, it is important to recognize that the results of the investigations made an incremental but valuable contribution to our knowledge of local prehistory. We may be more confident that the apparent lack of archaeological sites immediately surrounding the project area is indeed the reflection of the relatively small amount of professional archaeological work conducted locally, and that despite the substantial impacts of development there are areas of land that still preserve the prehistoric archaeological record.

The character of both sites suggests they were occupied for short periods of time by small groups of people who refurbished their stone tool kits. The use of quartz and aspects of technology inferred from their limited artifact assemblages allows us to reasonably conclude that they date to the Late Archaic Period, and are likely associated with the Narrow Stemmed Tradition (ca. 4,500 – 4,000 years ago). Their geography is significant, as they are both located on an outwash terrace near the banks of the Oyster River. We may reasonably project that similar outwash terraces along this tributary have a high probability of containing additional archaeological sites, some of which may be larger and more complex. The discovery of these sites indicates that the Oyster River served as a local corridor for mobile foraging groups during the Late Archaic Period, perhaps during their travels between inland and coastal resource zones.

VIII. REFERENCES

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APPENDIX I

Figures

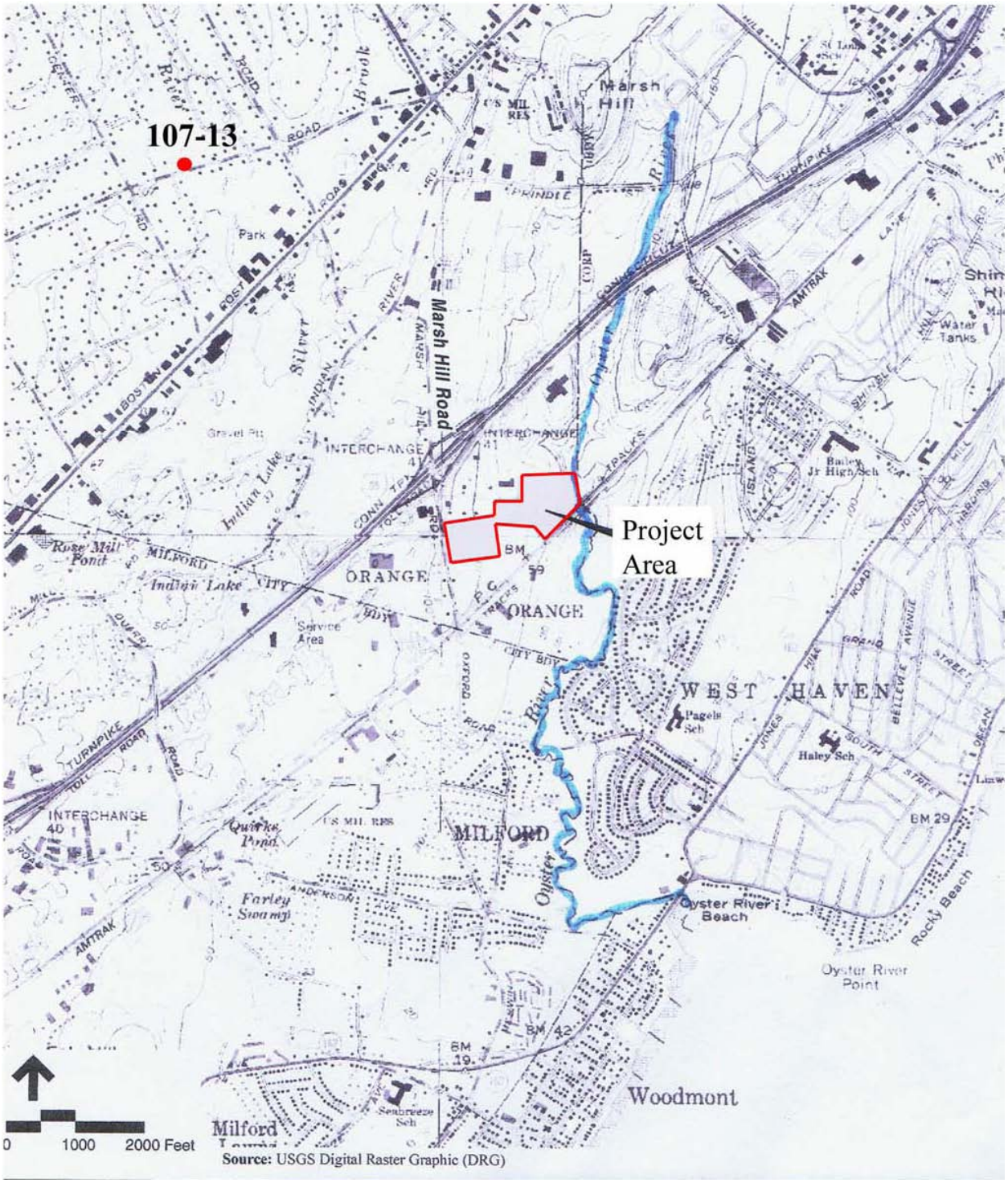
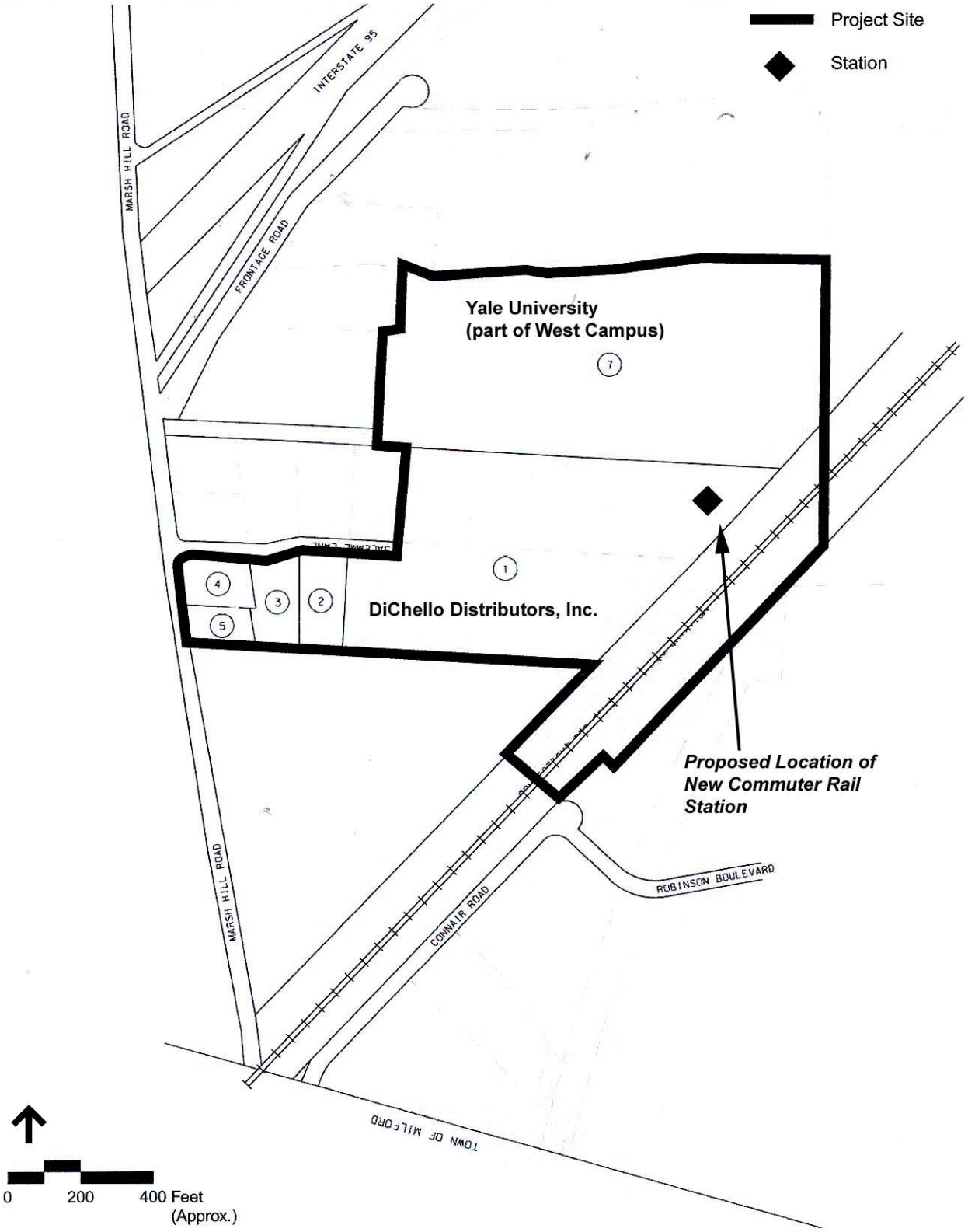


Figure 1. Project area depicted on USGS 7.5-minute series topographic map, Ansonia quadrangle.



Property Acquisition
Orange Alternative

From 2007 FSEIE

Figure 2

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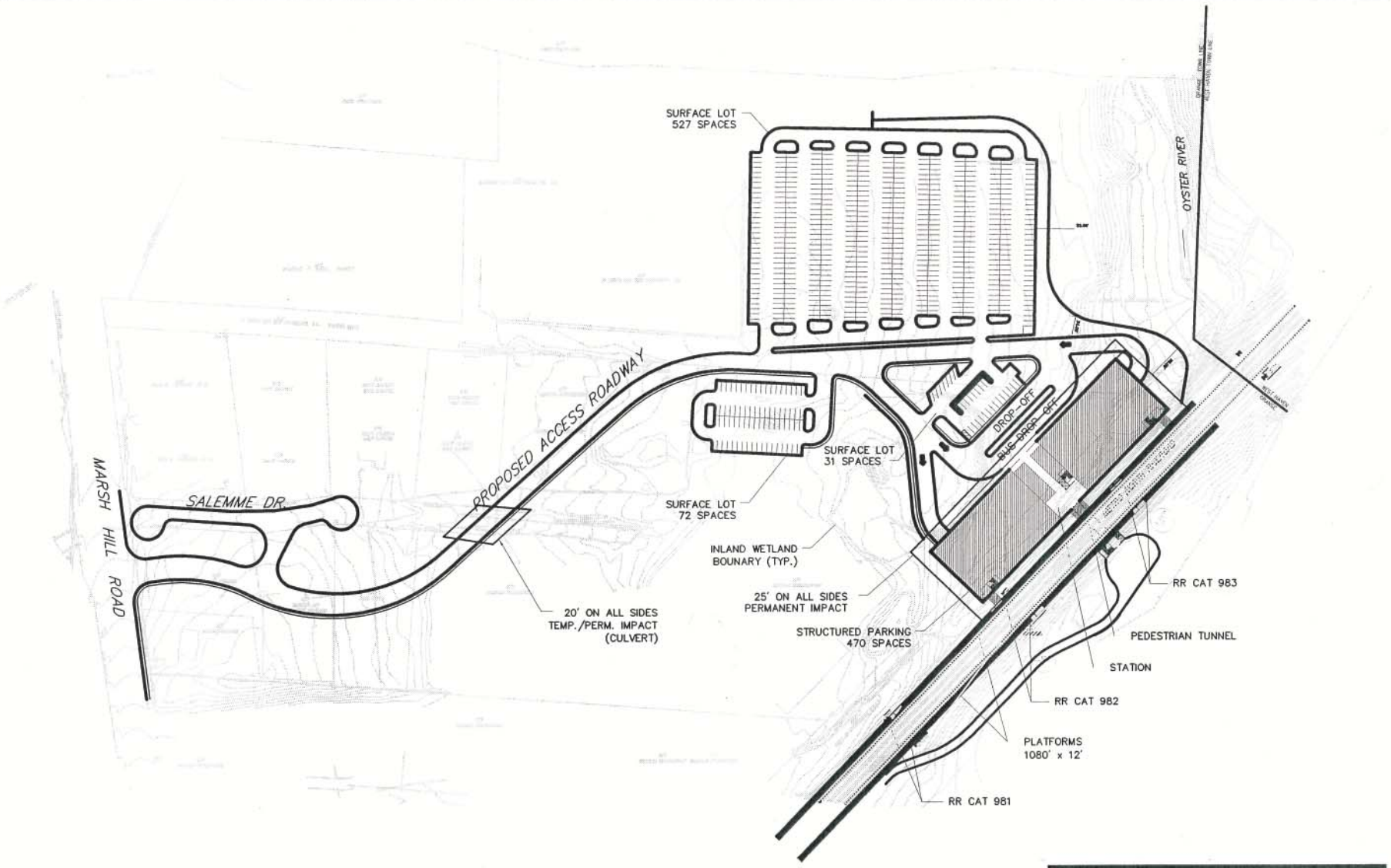
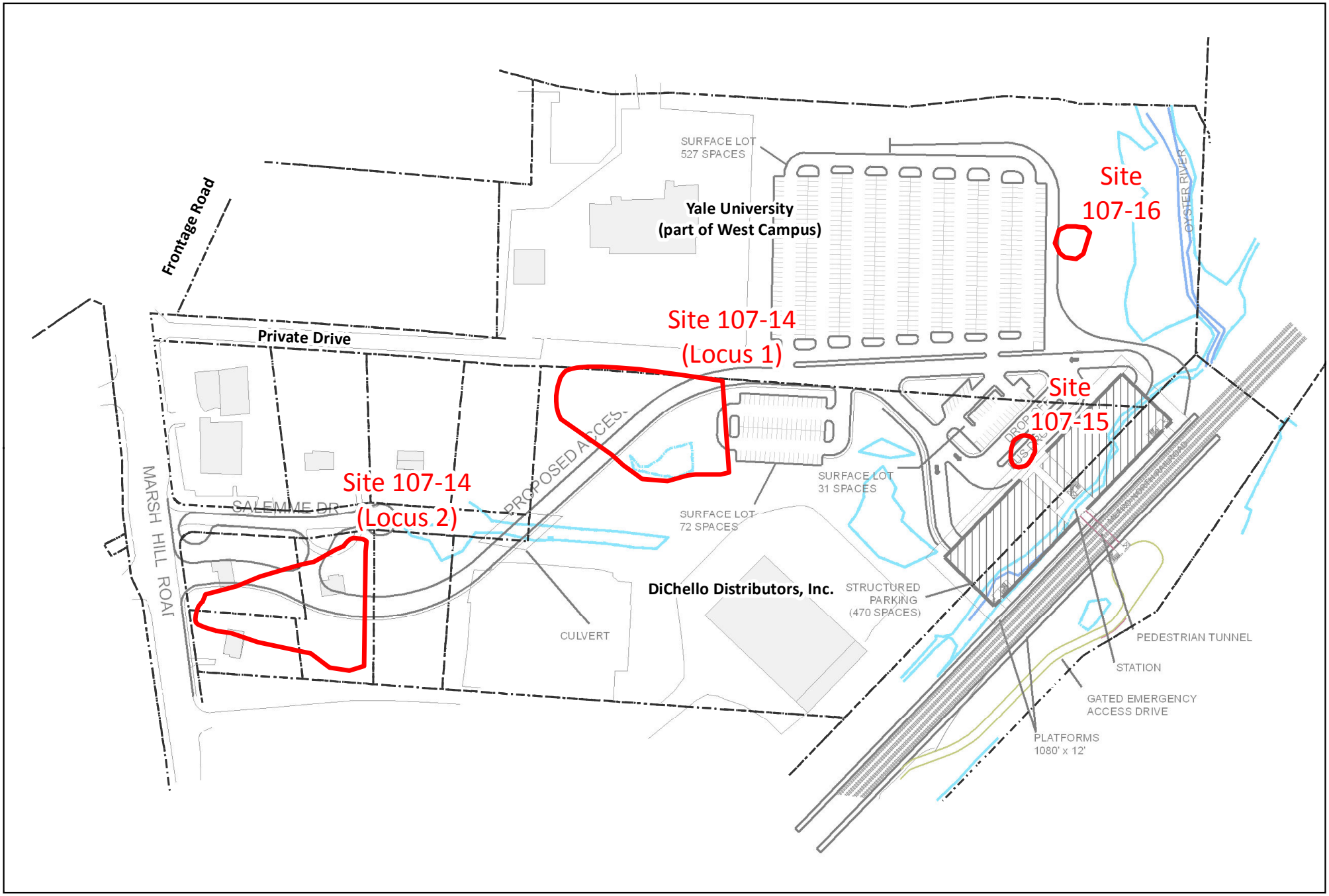


0 125 250 Feet

Site Sketch
Orange Alternative

From 2007 FSEIE

Figure 3



Source: Survey by AI Engineers, 1996; Updates to building and curb outlines digitized by Fuss & O'Neill, based on 2008 Orthophotography. Wetland boundaries based on lines provided by AI Engineers, 1996 and confirmed by Fuss & O'Neill, Inc. on Nov. 15, 2010.

Figure 4

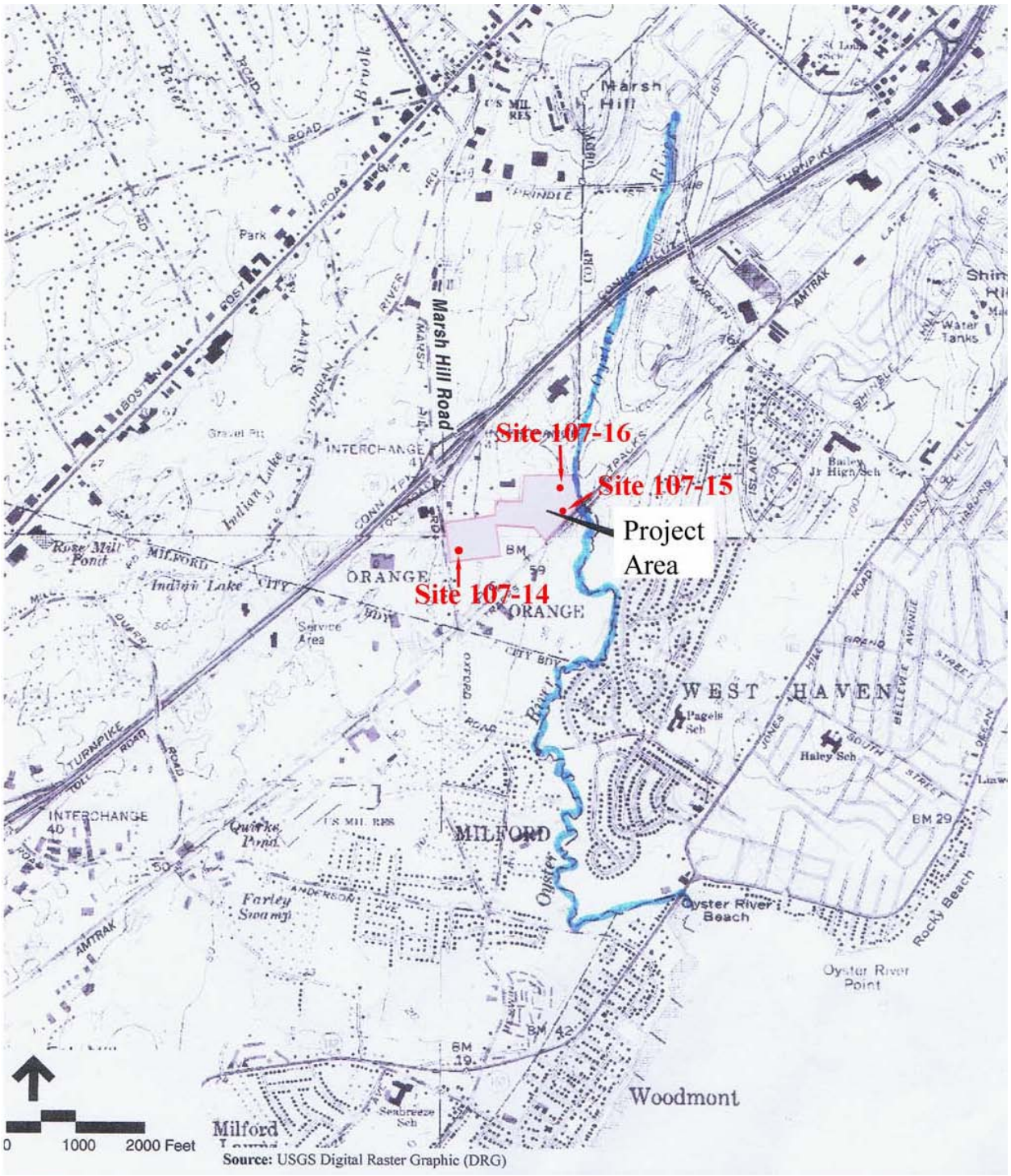


Figure 5. USGS topographic map, Ansonia quadrangle, showing archaeological sites identified in the project area.

Figure 6: **Project area (shaded) plotted on the 1855 U.S. Coast Survey chart of Long Island Sound; the topography for the chart was compiled in 1837.**

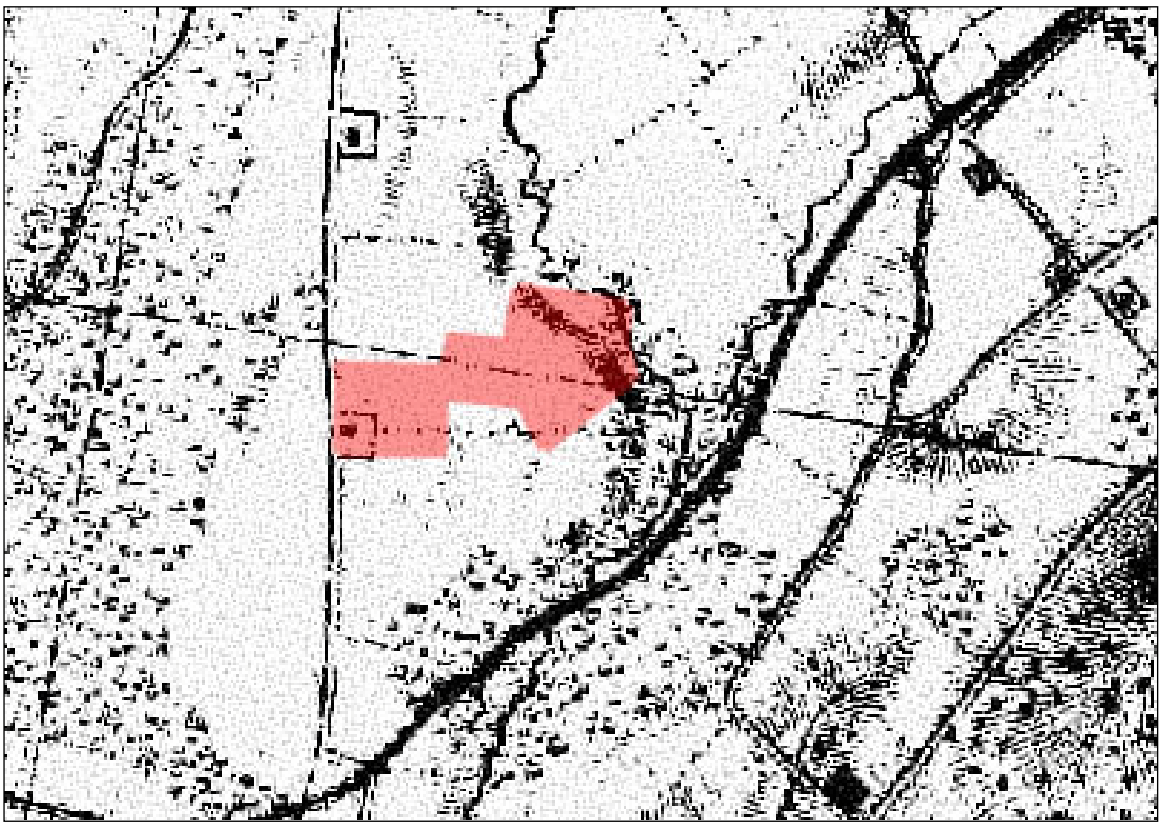


Figure 7: **Project area (shaded) plotted on the 1852 Whiteford map of New Haven County. The notation D. Merwin indicated the homestead of Daniel Merwin (1778-1862), a farmer. His acreage extended eastward across the Oyster River to the next north-south road.**

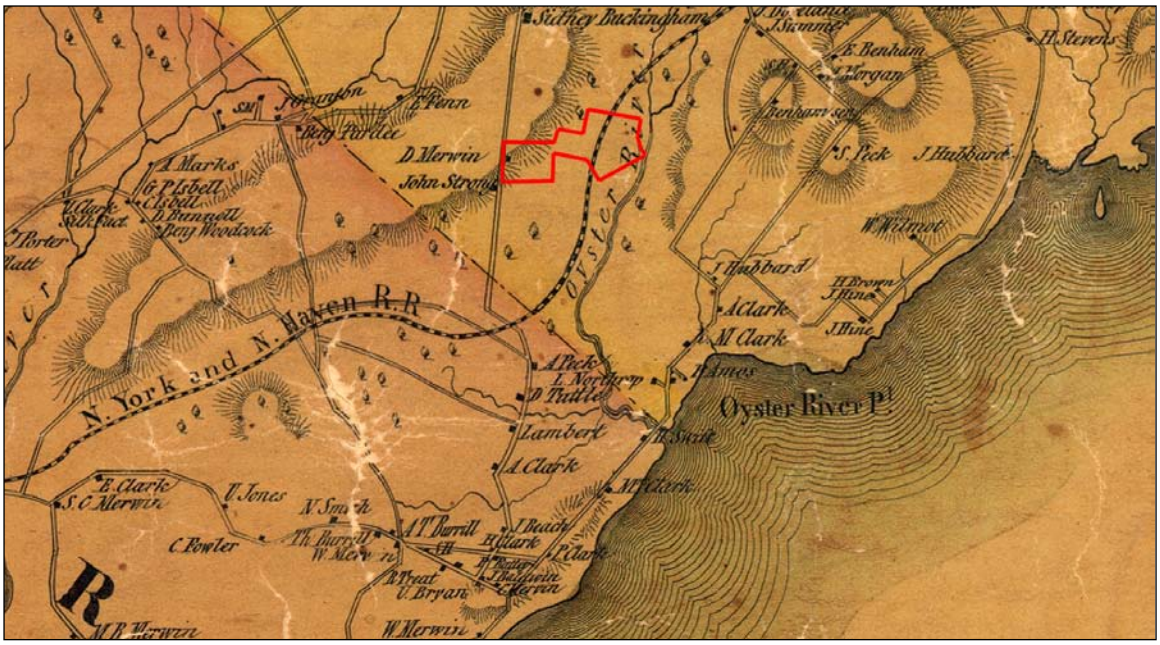


Figure 8: **Project area (shaded) plotted on the 1868 Beers atlas map of Orange County. The property is shown as owned by R. H. Beach.**

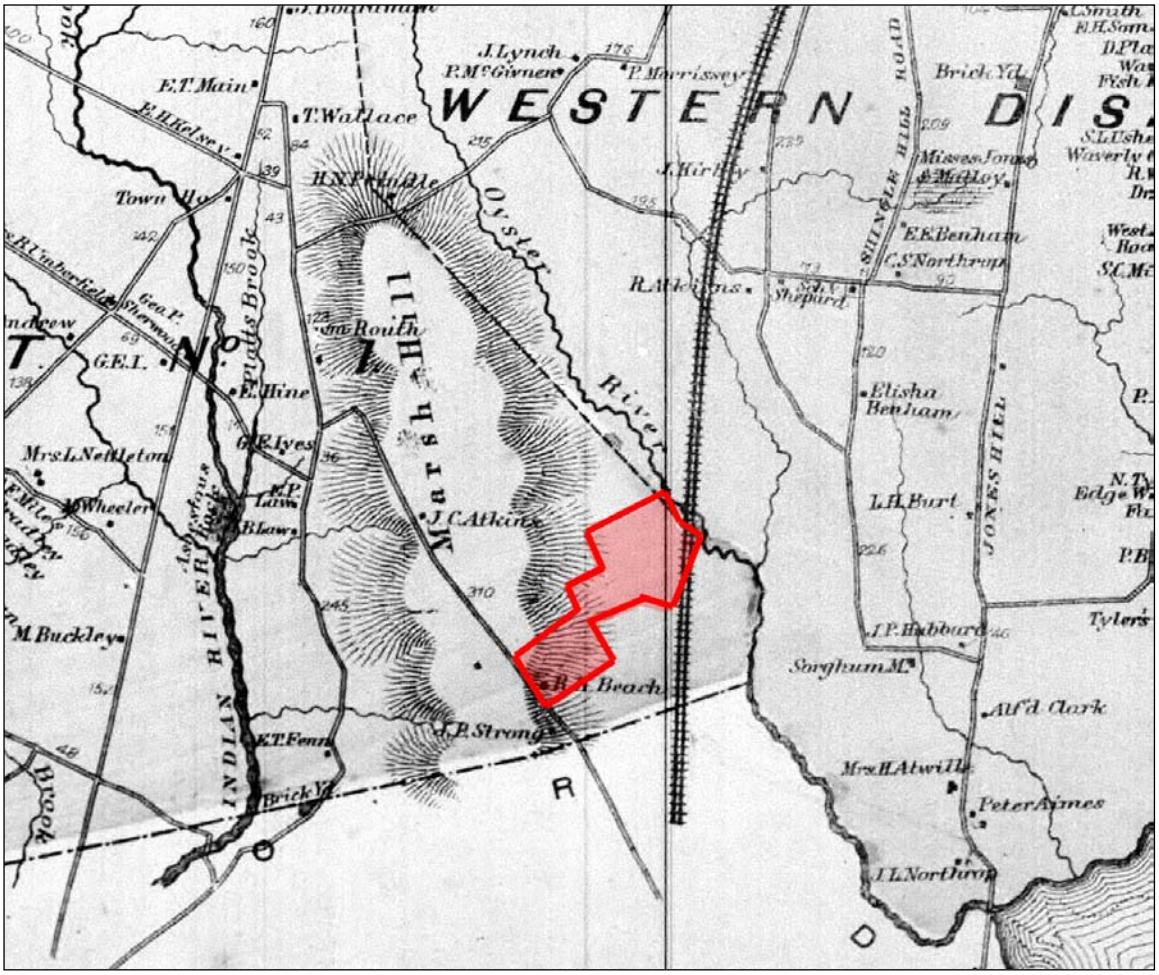


Figure 9: **Project area (shaded) plotted on the 1893 U.S.G.S. New Haven, Derby, and Bridgeport quadrangle. The topography for these quadrangles was surveyed in 1889 and 1890. No house shows within the project area.**

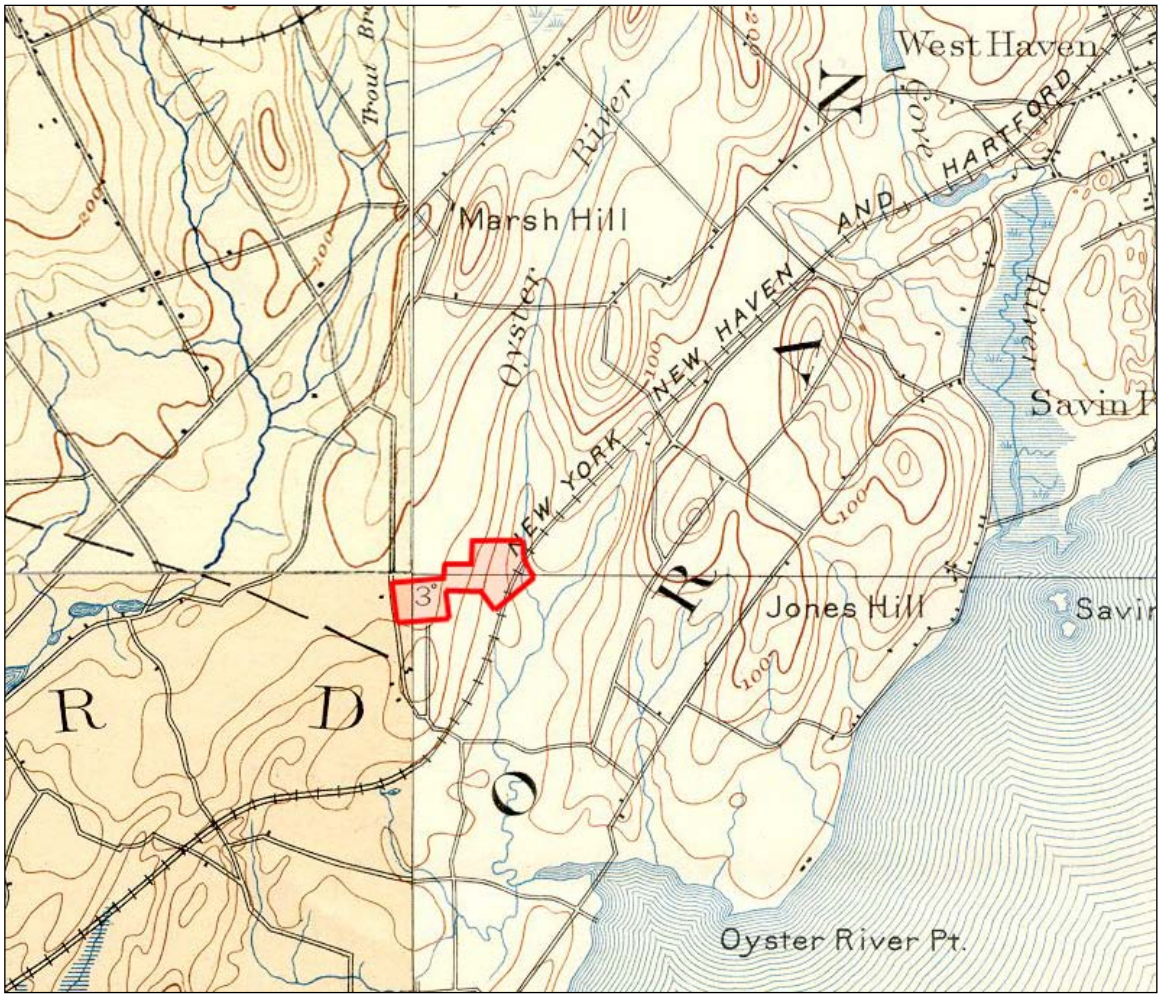


Figure 10: **Project area (shaded) plotted on the 1934 Fairchild aerial photograph. Except for a few trees near the road and along the Oyster River, the entire area appears to be open and still in agricultural use. The four-track electrified main line of the New Haven Railroad is visible, as are traces of the former alignment curving off to the south.**

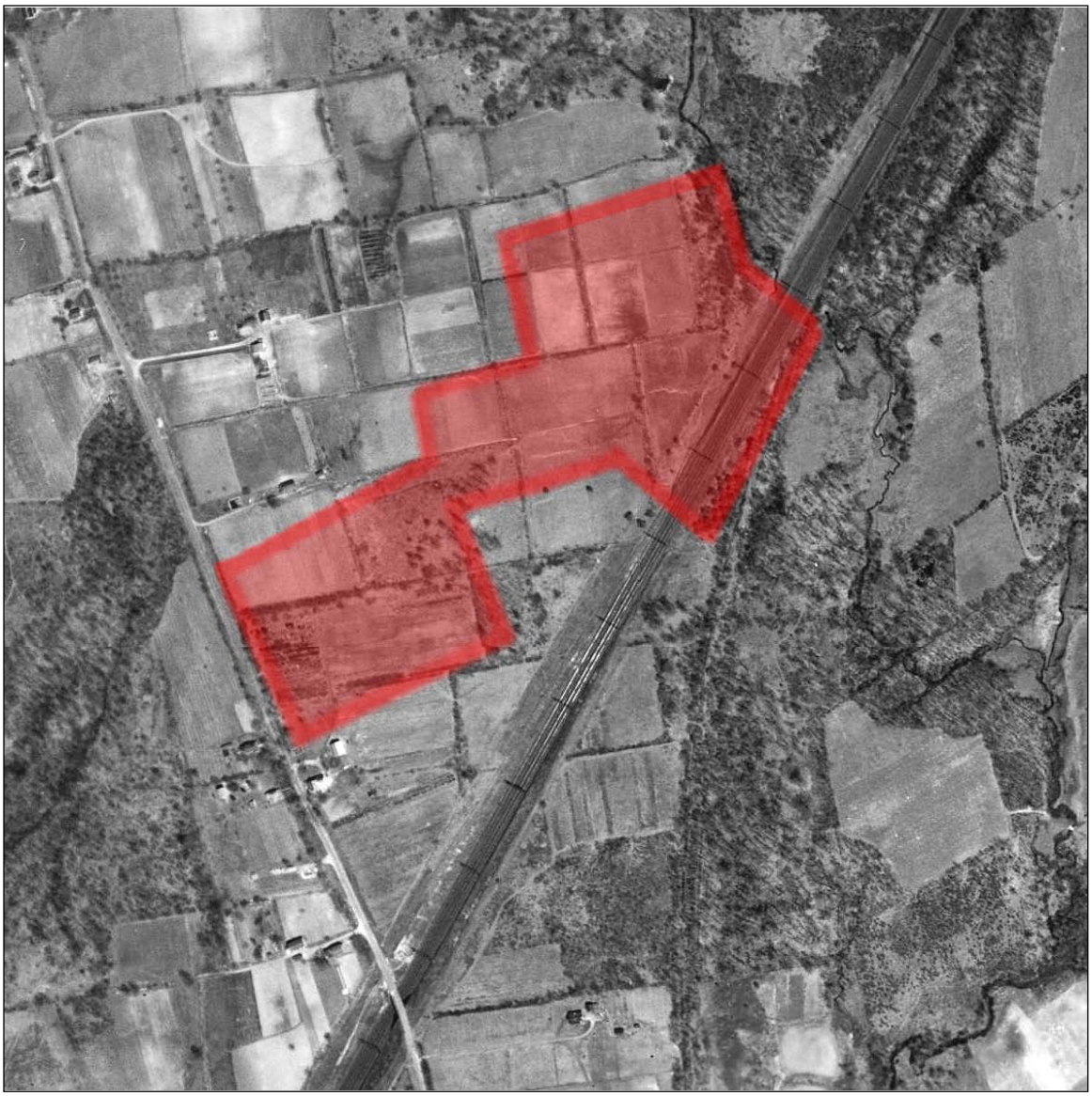


Figure 11: **Project area (shaded) plotted on the 1965 Connecticut Department of Public Works aerial photograph. Although most of the project area still appears to be open farmland, the houses on Salemme Drive are visible as well.**

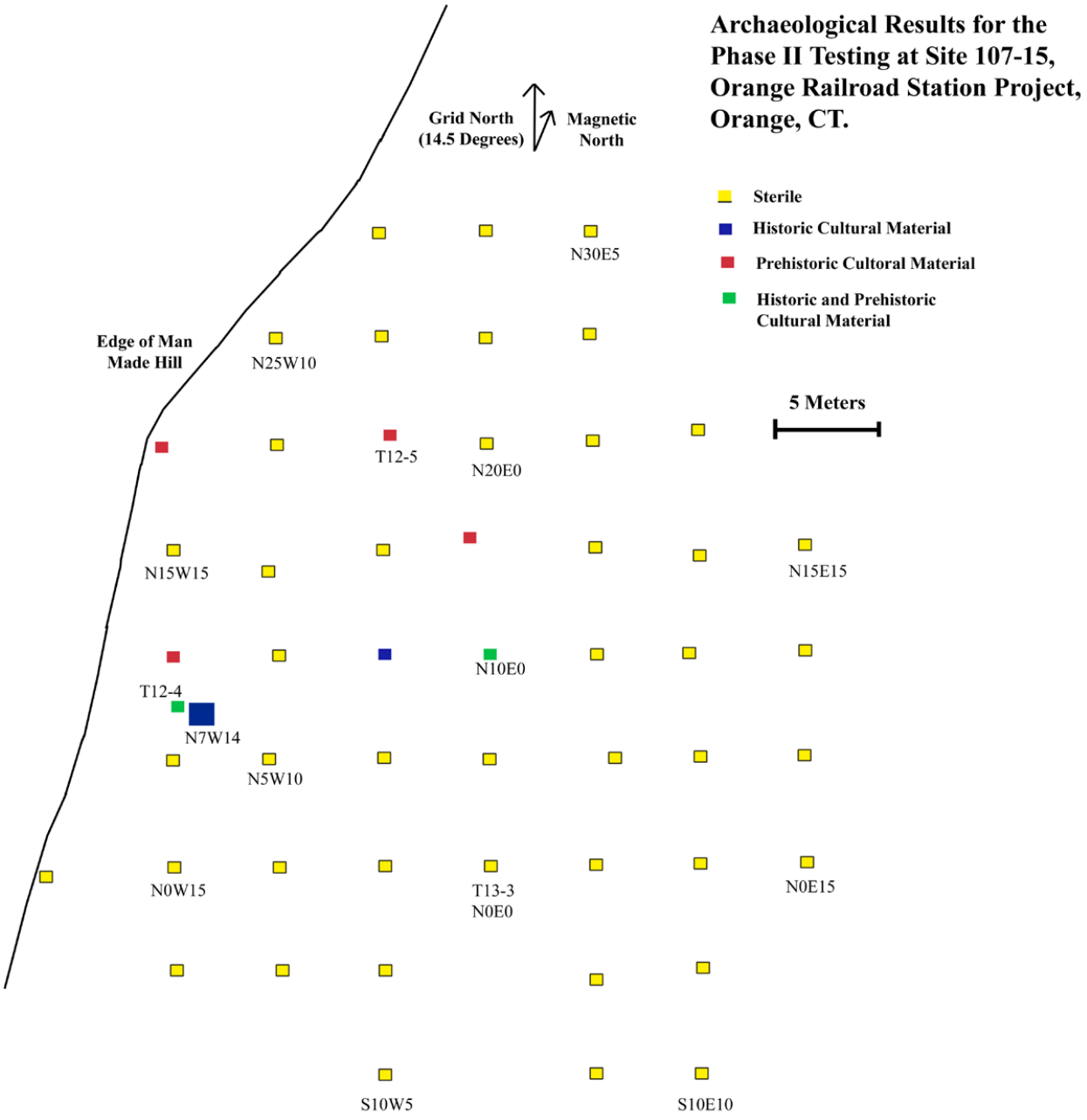


Figure 12. Phase II Archaeological test units at Site 107-15.

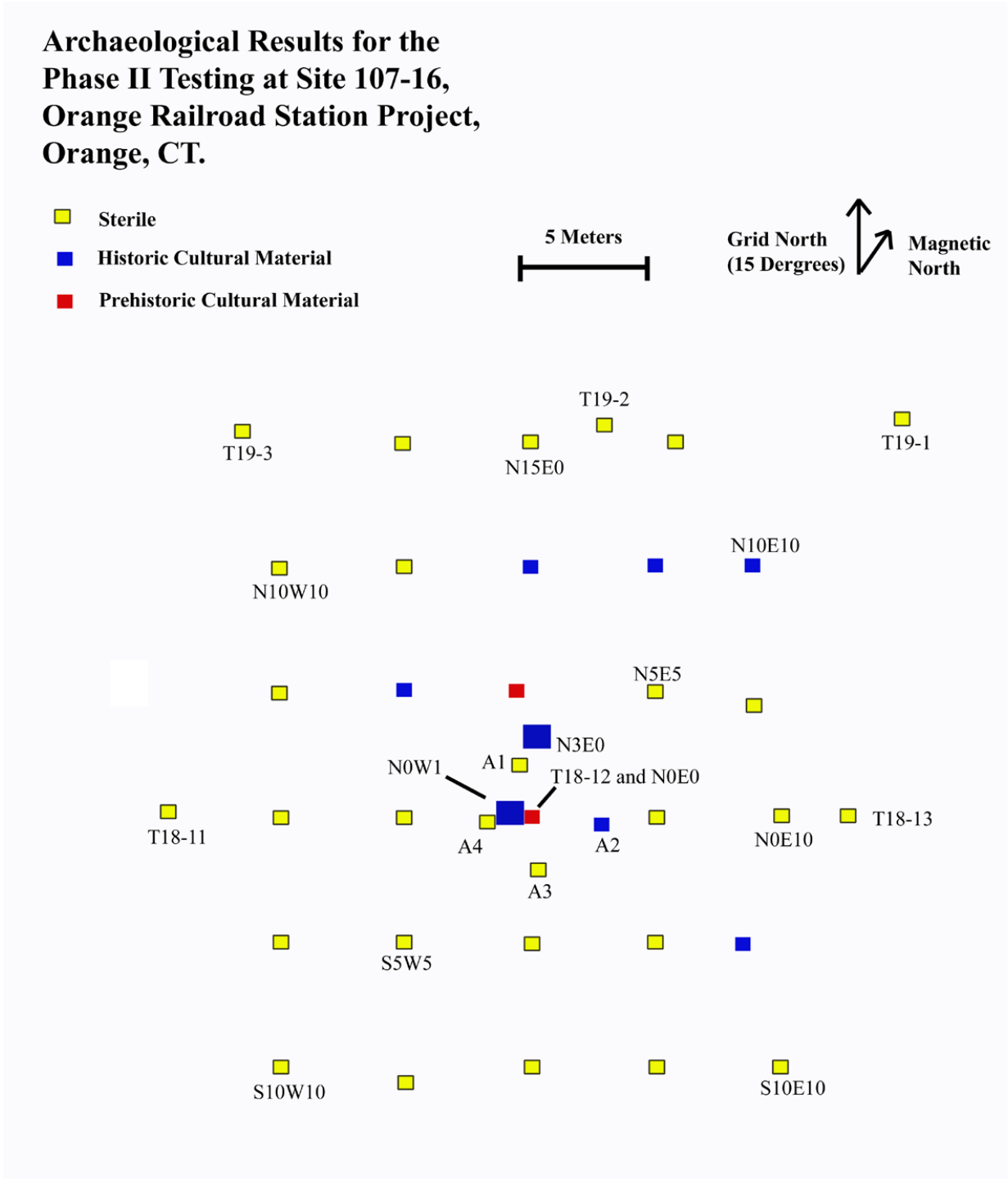


Figure 13. Phase II Archaeological test units at Site 107-16.

APPENDIX II

Photographs

Photograph 1. Site 107-15, looking south over area of the Phase II survey from test unit N10E5.

Photograph 2. Quartz Lamoka-like projectile point recovered during Phase I Archaeological Reconnaissance Survey of Site 107-15.

Photograph 3. East wall profile of test unit N7W14, Site 107-15. Machine-excavated trench is visible in right half of photograph.

Photograph 4. Site 107-16, archaeologists excavating test unit S10E10, view south.

Photograph 5. Rock pile at test unit N7E10, Site 107-16, view south.

Photograph 6. Quartz possible drill with broken tip (or possible narrow-stemmed point with a reworked blade) from Site 107-16, recovered during Phase I Archaeological Reconnaissance Survey.

Photograph 7. East wall profile of test unit N3E0, Site 107-16.

APPENDIX III

Test Unit Profiles

Site 107-15

Project: ORANGE R.R. **Site:** 107-15 **Town:** ORANGE, CT. **Phase:** II **Exc.** EP.BK **Date:** 7.26.11

Vegetation:	P.I; Raspberry; SASSAFRAS; MAPLE	Vegetation:	"
Landform:	UPLAND TERR.	Landform:	"
Slope (%):	1-30	Slope (%):	"
Screen:	☒ 1/4" ☐ 1/8"	Screen:	☒ 1/4" ☐ 1/8"
	N5E0		N10E0 ✓
Contents	Ncm 3	Contents	10-20 CLAY TR FRAGS TR

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Ft. 1 ...
Feature	Fe.

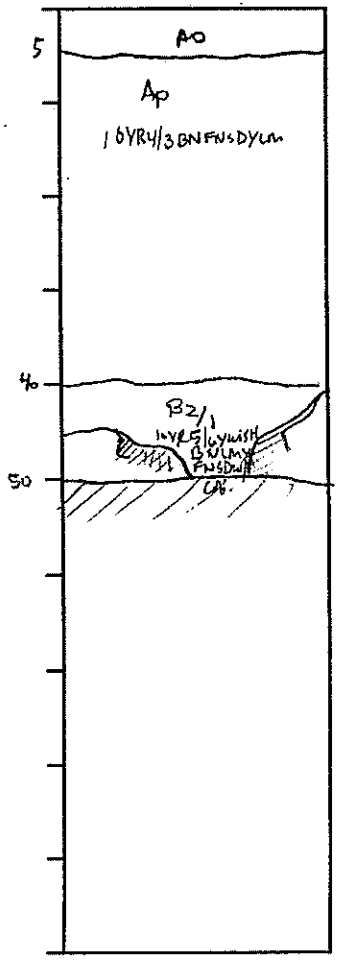
Texture

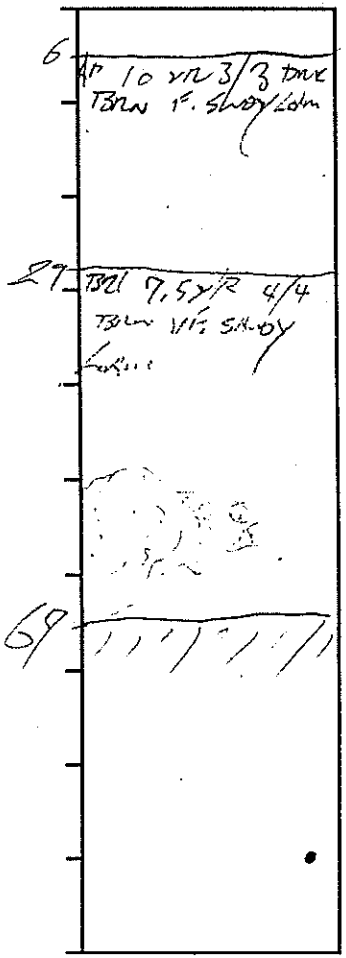
Clay	Cl
Silt	Slt
Loam	Lm
Sand	Sd
Gravel	Gr .4 - 6.4cm
Cobble	Cob 6.5 - 25.6cm
Boulder	Bdr 25.7cm

Fine	Fn
Medium	Md
Coarse	Crs
Very	V

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

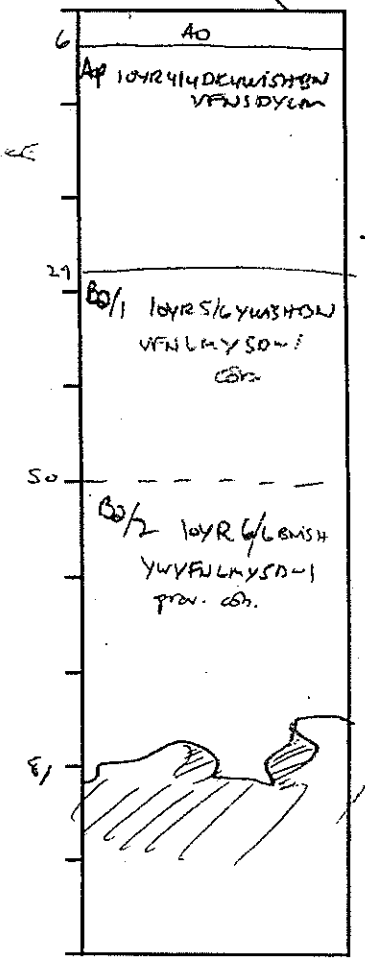




Reason for Term.:	ROOT/ROCK
Notes:	

Reason for Term.:	ROCK
Notes:	

Vegetation:	"
Landform:	"
Slope (%):	"
Screen:	☒ 1/4" ☐ 1/8"
	N15E0 (NW QUAD) ✓
Contents	20-29 cmbs 1 pcs. QTZ FLKS

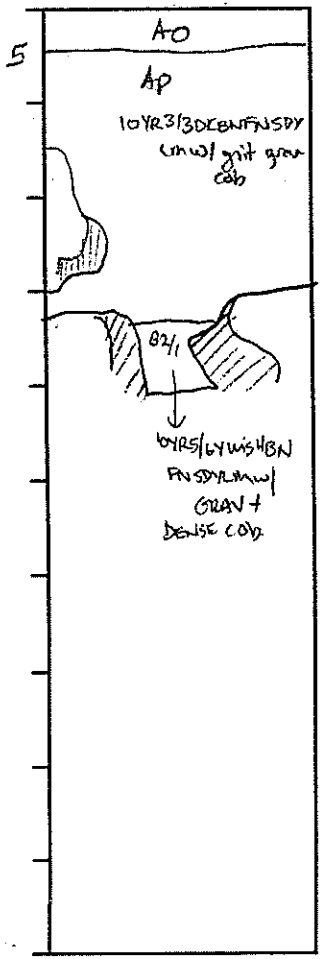


Reason for Term.:	ROCKS
Notes:	* PIT MOVED BECAUSE OF TREE

Project: ORANGE R.R **Site:** 107-15 **Town:** ORANGE, CT. **Phase:** II **Exc.** EP **Date:** 7.27.11

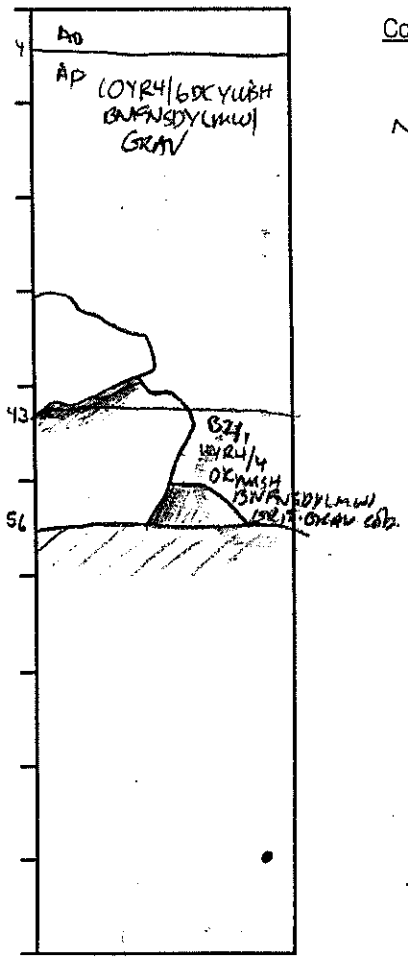
Vegetation:	RASPBERRY; Fruit weed; P.I; GRAPE	Vegetation:		Vegetation:	
Landform:	UPLAND TERRACE	Landform:		Landform:	
Slope (%):	1°-3° Screen: ☒ 1/4" ☐ 1/8"	Slope (%):	Screen: ☒ 1/4" ☐ 1/8"	Slope (%):	Screen: ☒ 1/4" ☐ 1/8"

N5W11 (SE QUAD)



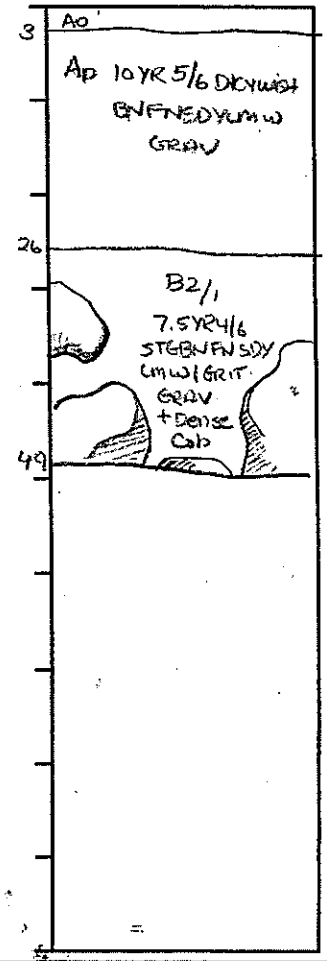
Contents: NUM 3

N0W5



Contents: NUM 2

S1W21 (NE QUAD)



Contents: NUM 3

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

Texture

Clay	Cl
Silt	Slt
Loam	Lm
Sand	Sd
Gravel	Gr .4 - 6.4cm
Cobble	Cob 6.5 - 25.6cm
Boulder	Bdr 25.7cm

Fine	Fn
Medium	Md
Coarse	Crs
Very	V

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

Reason for Term.: ROCK	Reason for Term.: ROCK	Reason for Term.:
Notes:	Notes:	Notes:

7-26-11

Project: ORANGE RR. **Site:** 107-15 **Town:** ORANGE CT **Phase:** II **Exc:** BK FP **Date:**

Vegetation: P.I; Bittersweet; MAPLE	Vegetation: "	Vegetation: "
Landform: UPLAND TERR.	Landform: "	Landform: "
Slope (%): 1-30 Screen: ☑ 1/4" ☐ 1/8"	Slope (%): " Screen: ☑ 1/4" ☐ 1/8"	Slope (%): " Screen: ☑ 1/4" ☐ 1/8"

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

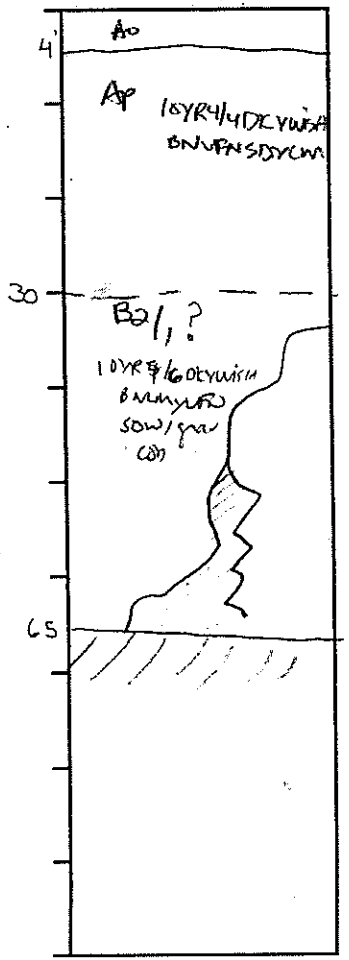
Texture

Clay	Cl	
Silt	Slt	
Loam	Lm	
Sand	Sd	
Gravel	Gr	.4 - 6.4cm
Cobble	Cob	6.5 - 25.6cm
Boulder	Bdr	25.7cm
Fine	Fn	
Medium	Md	
Coarse	Crs	
Very	V	

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

N10E5

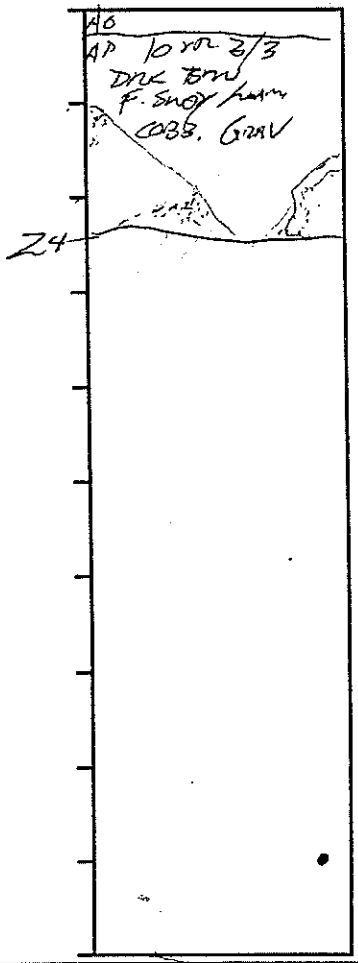


Contents: NCM 3

Reason for Term.: ROCK

Notes:

N5E6 (SW QUAD)

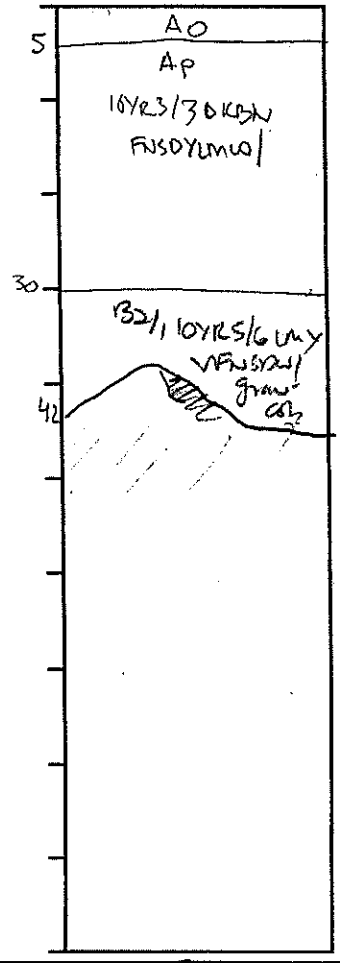


Contents: NCM 3

Reason for Term.: Rock

Notes:

N0E5



Contents: NCM 3

Reason for Term.: ROCK

Notes:

Project: Alive RR **Site:** 107.15 **Town:** Granby CT **Phase:** II **Exc.** BK JP **Date:** 7.27.11

Vegetation:	Grape Vine Maple Oak Brk Wood	Vegetation:	4
Landform:	Upland Terr.	Landform:	1
Slope (%):	0-1%	Slope (%):	1
Screen:	☑ 1/4" ☐ 1/8"	Screen:	☑ 1/4" ☐ 1/8"

NOW 15

4 Ao
Ap: 10 YR 3/3 Dark Brn VF Sandy Loam Grav. Cobs
37 B21: 7.5 YR 5/6 Strong Brn VF Sandy Loam Grav Cobs.
62

Contents: N cm

NSW 15

5 Ao
Ap 10YR 4/4 Dk Yw Brn Fri Sdy L/Gr
26 Brn 7.5YR 5/6 St Brn Fri Sdy Lm Gr, Cobble
67 Rock

Contents: N cm

Vegetation:	1		
Landform:			
Slope (%):	6	Screen:	☑ 1/4" ☐ 1/8"

SSW 15

5 Ao
Ap: 10 YR 3/3 Brn. VF Sandy Sandy Loam Grav
40 B21: 7.5 YR 5/6 Strong Brn VF Sand/Loam Grav
63

Contents: N cm

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

Texture

Clay	Cl	
Silt	Slt	
Loam	Lm	
Sand	Sd	
Gravel	Gr	.4 - 6.4cm
Cobble	Cob	6.5 - 25.6cm
Boulder	Bdr	25.7cm

Fine	Fn
Medium	Md
Coarse	Crs
Very	V

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

Reason for Term.: Rock
Notes:

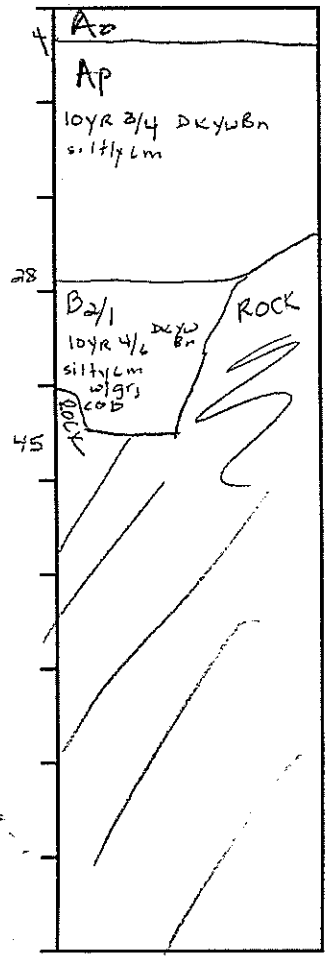
Reason for Term.: Rock
Notes:

Reason for Term.: Rock
Notes:

Project: Orange RR **Site:** 107-15 **Town:** Orange CT **Phase:** II **Exc.** BJ·HA **Date:** 7·26·2011

Vegetation: m. rose, p. ivy, birch, sassafras, maple	Vegetation: "	Vegetation: "
Landform: terrace	Landform: "	Landform: "
Slope (%): 0-3% Screen: ☒ 1/4" ☐ 1/8"	Slope (%): " Screen: ☒ 1/4" ☐ 1/8"	Slope (%): " Screen: ☒ 1/4" ☐ 1/8"

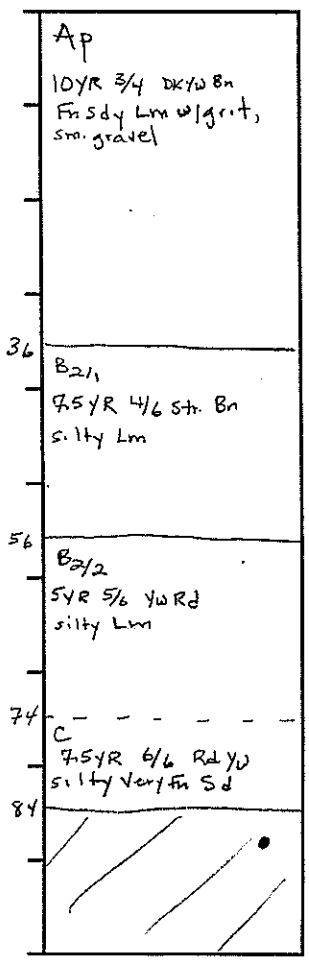
N5 E10



Contents

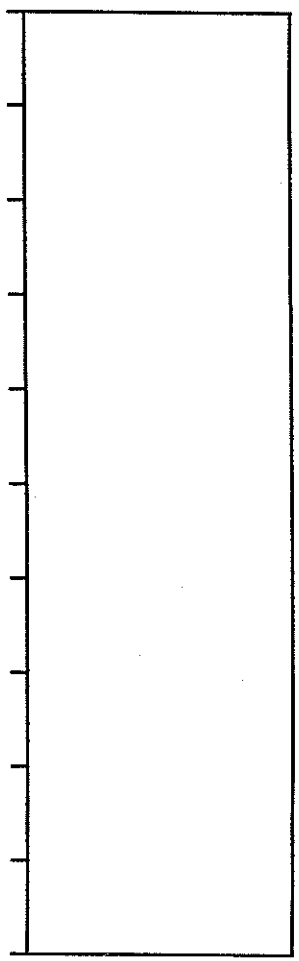
NCM

N0W10



Contents

NCM



Contents

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

Texture

Clay	Cl	
Silt	Slt	
Loam	Lm	
Sand	Sd	
Gravel	Gr	.4 - 6.4cm
Cobble	Cob	6.5 - 25.6cm
Boulder	Bdr	25.7cm

Fine	Fn
Medium	Md
Coarse	Crs
Very	V

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

Reason for Term.: ROCK
Notes:

Reason for Term.: C soil
Notes:

Reason for Term.:
Notes:

Project: ORANGE R.R. **Site:** 107-15 **Town:** ORANGE, CT. **Phase:** II **Exc.** EP **Date:** 7.27.11

Vegetation: P.T.; multi-flora rose, maple, grass	Vegetation:	Vegetation:
Landform: UPLAND TERRACE	Landform:	Landform:
Slope (%): 1-3° Screen: ☒ 1/4" ☐ 1/8"	Slope (%): Screen: ☒ 1/4" ☐ 1/8"	Slope (%): Screen: ☒ 1/4" ☐ 1/8"

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

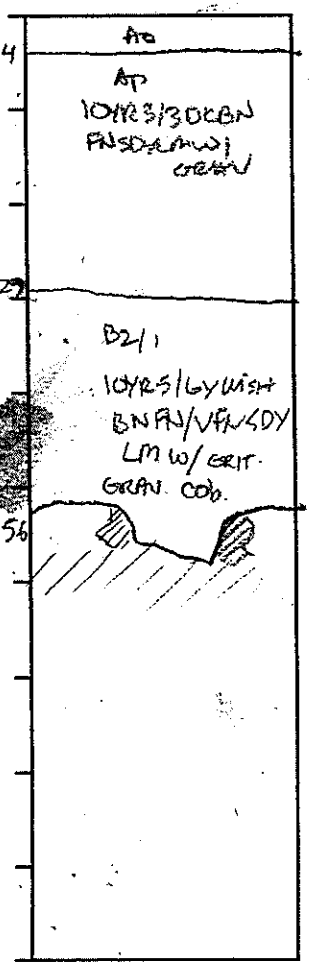
Texture

Clay	Cl
Silt	Slt
Loam	Lm
Sand	Sd
Gravel	Gr .4 - 6.4cm
Cobble	Cob 6.5 - 25.7cm
Boulder	Bdr 25.7cm
Fine	Fn
Medium	Md
Coarse	Crs
Very	V

Color

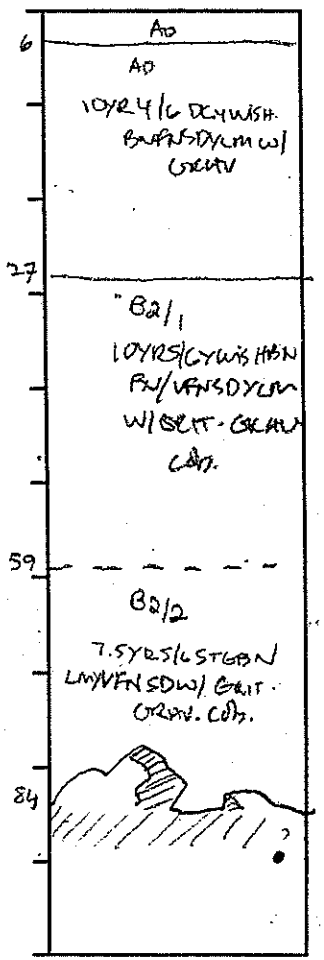
Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

N10W10



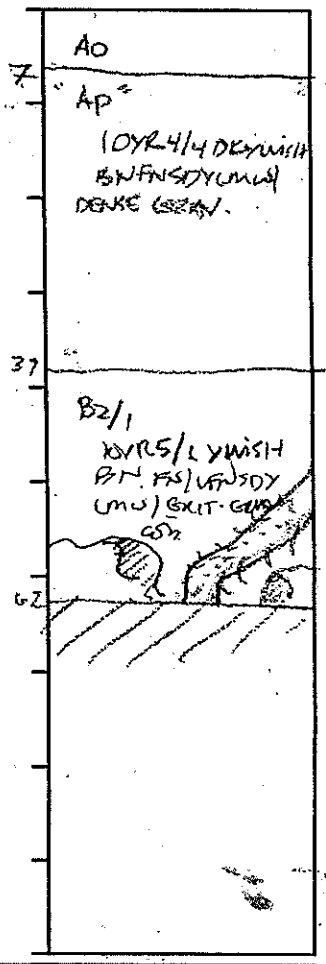
Contents: NCM 5

N14W10 (SE)



Contents: NCM 5

N20W10



Contents: Ap had coal/charcoal, brick, glass/stone NCM 2 NOT collected

Reason for Term.: ROCK	Reason for Term.: ROCK	Reason for Term.: ROCK + ROOT
Notes:	Notes:	Notes:

Project: Orange RR **Site:** 107-15 **Town:** Orange CT **Phase:** II **Exc.** BK JP **Date:** 7.27.11

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

Texture

Clay	Cl
Silt	Slt
Loam	Lm
Sand	Sd
Gravel	Gr .4 - 6.4cm
Cobble	Cob 6.5 - 25.6cm
Boulder	Bdr 25.7cm

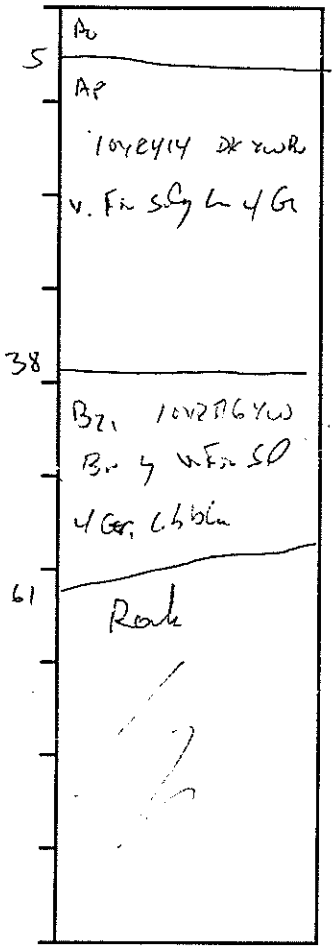
Fine	Fn
Medium	Md
Coarse	Crs
Very	V

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

Vegetation: Dense Scrub, Oak, Myrtle, Birch
Landform: Rim Terrace
Slope (%): 0-3° **Screen:** ☒ 1/4" ☐ 1/8"

N10W15 ✓

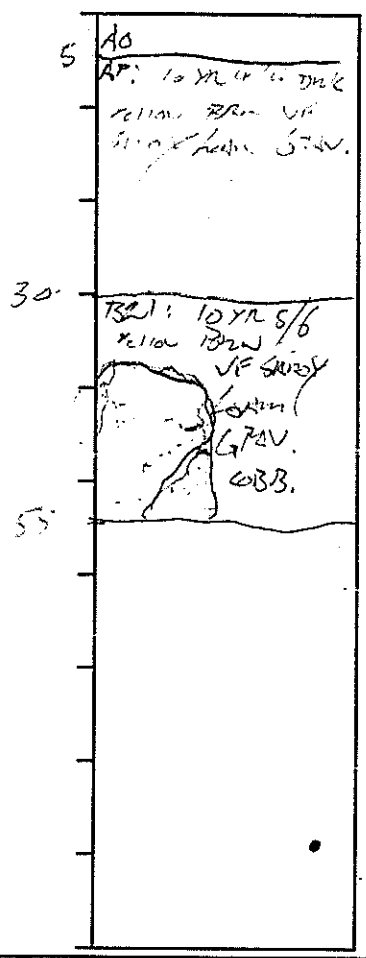


Contents ✓
10-20cm
10YR

Reason for Term.: Rock
Notes:

Vegetation: 1
Landform:
Slope (%): **Screen:** ☐ 1/4" ☐ 1/8"

N15W15

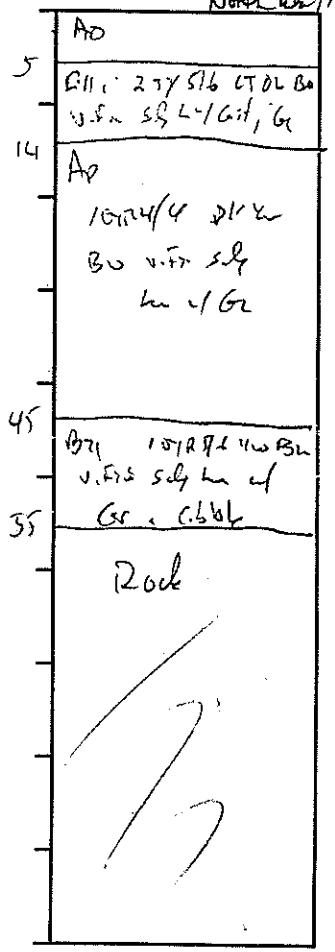


Contents
NCM

Reason for Term.: Rock
Notes:

Vegetation: 4
Landform:
Slope (%): **Screen:** ☒ 1/4" ☐ 1/8"

N20W16 SE end North wall ✓



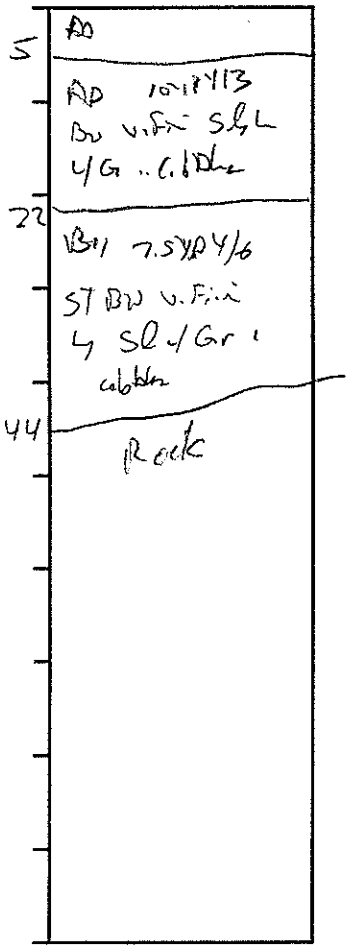
Contents ✓
20-30cm
10YR

Reason for Term.: Rock
Notes:
Pit at base of Hill
Moved because of Rock

Project: Orange 2R **Site:** **Town:** Orange CT **Phase:** II **Exc.** JP **Date:** 7-26-11

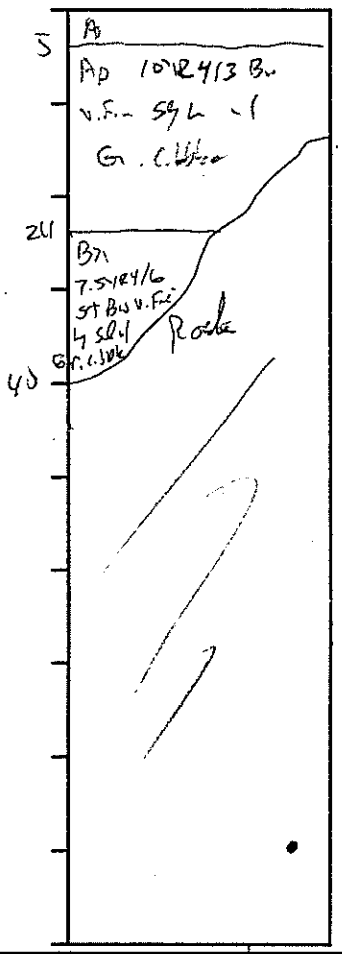
Vegetation: Oak, Myrtle, Scrub, PI	Vegetation:	Vegetation:
Landform: River Terrace	Landform:	Landform:
Slope (%): 0 - 3% Screen: ☑ 1/4" ☐ 1/8"	Slope (%): Screen: ☐ 1/4" ☐ 1/8"	Slope (%): Screen: ☑ 1/4" ☐ 1/8"

N5E15



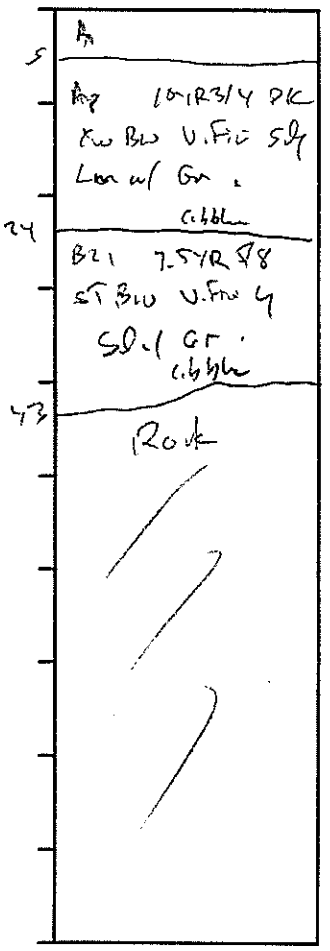
Contents: NCm

N10E15



Contents: NCm

N5E15



Contents: NCm

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

Texture

Clay	Cl
Silt	Slt
Loam	Lm
Sand	Sd
Gravel	Gr .4 - 6.4cm
Cobble	Cob 6.5 - 25.6cm
Boulder	Bdr 25.7cm

Fine	Fn
Medium	Md
Coarse	Crs
Very	V

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

Reason for Term.: Rock
Notes:

Reason for Term.: Rock
Notes:

Reason for Term.: Rock
Notes:

Project: Orange RR **Site:** 107-15 **Town:** Orange CT **Phase:** II **Exc.** Y **Date:** 7.26.11

Vegetation: Oak, Maple, Sassafras, Scrub
Landform: River Terrace
Slope (%): 0-3° Screen: ☒ 1/4" ☐ 1/8"

NISWS

Vegetation: (illegible)
Landform: (illegible)
Slope (%): (illegible) Screen: ☒ 1/4" ☐ 1/8"

Vegetation: (illegible)
Landform: (illegible)
Slope (%): (illegible) Screen: ☒ 1/4" ☐ 1/8"

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

Texture

Clay	Cl	
Silt	Slt	
Loam	Lm	
Sand	Sd	
Gravel	Gr	.4 - 6.4cm
Cobble	Cob	6.5 - 25.6cm
Boulder	Bdr	25.7cm

Fine	Fn
Medium	Md
Coarse	Crs
Very	V

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

Contents

4 — A

Ap
10YR 4/3 Brn
v Fri sgl
& Gr

NSWS

27 — Bw1

10YR 5/6 Yw Brn
v. Fri sy sl
& Gr, r. cbl

70 — Rock

Contents

Contents

Reason for Term.: Rock
Notes:

Reason for Term.:
Notes:

Reason for Term.:
Notes:

Project: Orange RR **Site:** 107-15 **Town:** Granby CT **Phase:** 1 **Exc.** Rick Ed **Date:** 7.26.11

Vegetation: Sassafras; Vine; Pine; Maple	**Vegetation:** "	**Vegetation:** "
Landform: Upland Terr.	**Landform:** "	**Landform:** "
Slope (%): 0-1 % **Screen:** ☒ 1/4" ☐ 1/8"	**Slope (%):** " **Screen:** ☐ 1/4" ☐ 1/8"	**Slope (%):** " **Screen:** ☒ 1/4" ☐ 1/8"

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

Texture

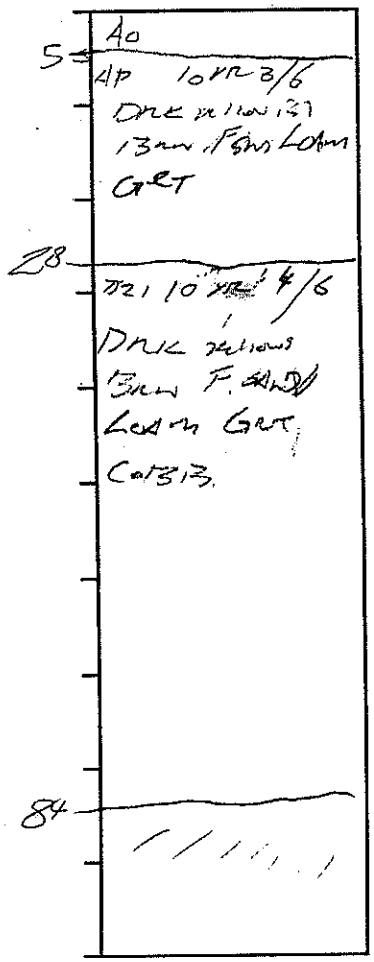
Clay	Cl
Silt	Slt
Loam	Lm
Sand	Sd
Gravel	Gr .4 - 6.4cm
Cobble	Cob 6.5 - 25.6cm
Boulder	Bdr 25.7cm

Fine	Fn
Medium	Md
Coarse	Crs
Very	V

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

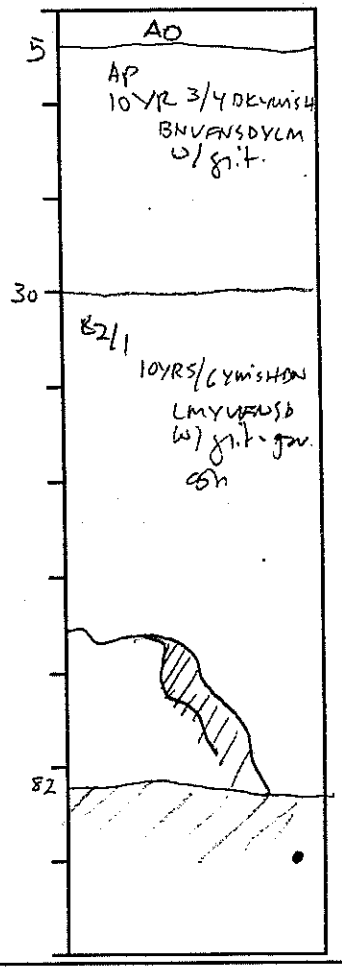
N20E0 SW QUAD



Contents

NCM

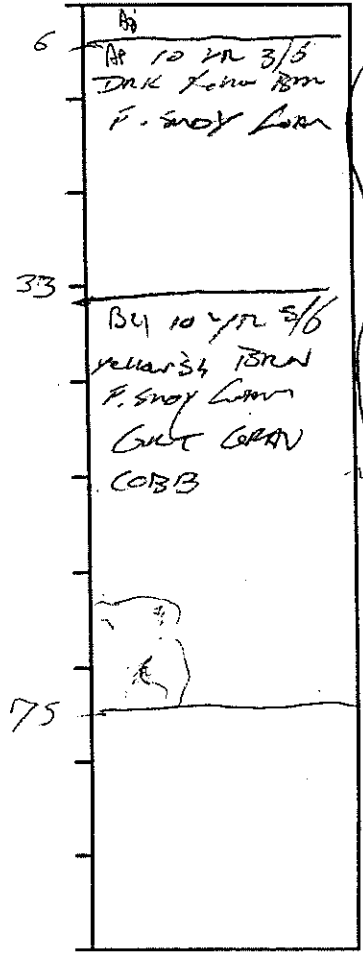
N20E5



Contents

NCM

N15 E5



Contents

0-20
MOD GLASS
STYROFOAM
PLASTIC
Not Sooted

20-33
GLASS
Not Sooted

Reason for Term.: Rock
Notes:

Reason for Term.: Rock
Notes:

Reason for Term.: Rock
Notes:

Project: Orange RR **Site:** 107-15 **Town:** Orange **Phase:** I **Exc.:** JP **Date:** 7-26-11

Vegetation: Oak, Hick, Scrub, PI.	Vegetation:	Vegetation:
Landform: Rim Terrace	Landform:	Landform:
Slope (%): 0-3% Screen: ☑ 1/4" ☐ 1/8"	Slope (%): Screen: ☐ 1/4" ☐ 1/8"	Slope (%): Screen: ☐ 1/4" ☐ 1/8"
N20E10 NW qd	N14E10 NW qd	N10E9. SE

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

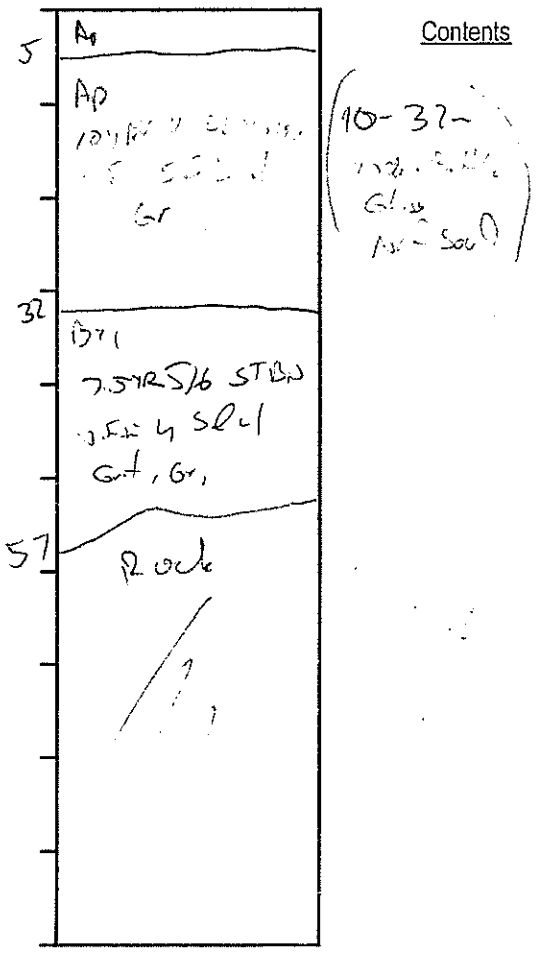
Texture

Clay	Cl
Silt	Slt
Loam	Lm
Sand	Sd
Gravel	Gr .4 - 6.4cm
Cobble	Cob 6.5 - 25.6cm
Boulder	Bdr 25.7cm

Fine	Fn
Medium	Md
Coarse	Crs
Very	V

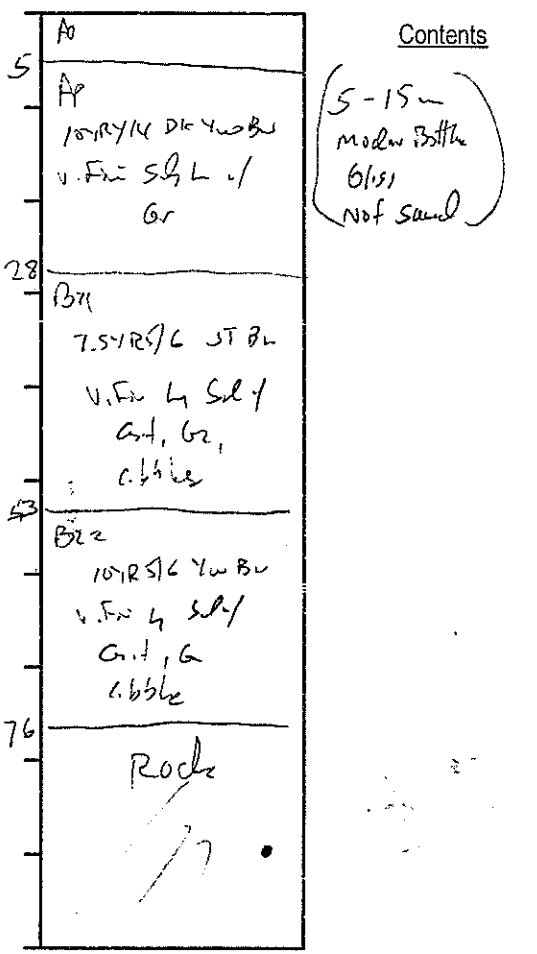
Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg



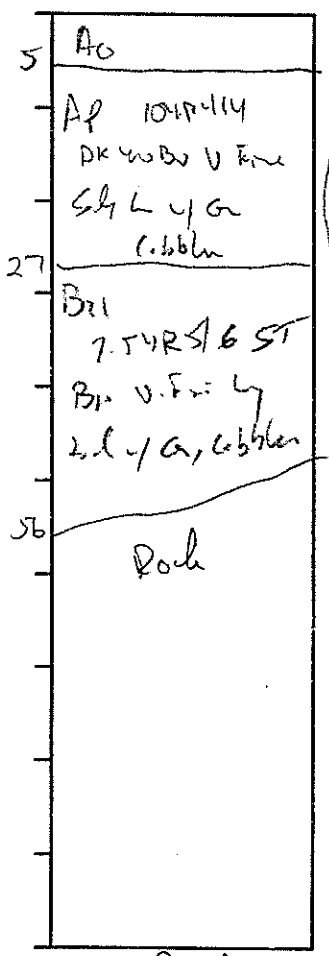
Contents

(10-32 cm Mod Bottle Glass Not Saved)



Contents

(5-15 cm Mod Bottle Glass Not Saved)



Contents

(5-27 cm Lower Charcoal Parts Not Saved)

Reason for Term.: Rock

Notes:

Pit moved because of Rocks & edge of large Fire pit(?) 3m in diameter. Trench to North & East - 2 meters away

Reason for Term.: Rock

Notes:

Moved because of a Tree

Reason for Term.: Rock

Notes:

Moved because of a Tree

Project: Orange RR **Site:** 107-15 **Town:** Orange CT **Phase:** II **Exc.** BK JP **Date:** 7-27-11

Vegetation: Cherry, Maple, Oak, Scrub
Landform: River Terrace
Slope (%): 0-3' Screen: ☑ 1/4" ☐ 1/8"

N25E5

5
Ap
10YR4/4 Dk Yw Bn
Fn Sdy L - l cf Gr
34
B21
10YR 5/6 Yw Bn
V.F. Sdy L - l cf, Gr
62
B22
10YR6/6 Bn Yw
Sdy V.Fn Sdy L - l Gr
80
C 10YR7/3
V. Pale Bn Sdy V.Fn Sdy L w/ Gr
92

Contents
NCM

Reason for Term.: C Soil
Notes:

Vegetation:
Landform:
Slope (%): Screen: ☑ 1/4" ☐ 1/8"

N10W5 ✓

5
Ap
Ap 10YR 3/4 Dark Yellow Bn VF Sandy Loam Grav Cobs.
27
B21 10YR 3/6 Dark Yellow Bn VF Sandy Loam Grav Cobs
45
Rock

Contents
5-27 cm NW

Reason for Term.: Rock
Notes:

Vegetation:
Landform:
Slope (%): Screen: ☑ 1/4" ☐ 1/8"

N5W5

5
Ap
Ap 10YR 3/4 Dk Yw Bn Fine Sdy Lm w/ Gr
35
Bm 10YR 4/6 Dk Yw Bw V. Fine Sdy L Y Gr, Rocks
48
Rock

Contents
NCM

Reason for Term.: Rock
Notes:

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

Texture

Clay	Cl	
Silt	Slt	
Loam	Lm	
Sand	Sd	
Gravel	Gr	.4 - 6.4cm
Cobble	Cob	6.5 - 25.6cm
Boulder	Bdr	25.7cm

Fine	Fn
Medium	Md
Coarse	Crs
Very	V

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

Project: Orange **Site:** 107-15 **Town:** Orange CT **Phase:** II **Exc.** Bk JP **Date:** 7 27 11

Vegetation: Blackberry, Maple Ox, Scrub	Vegetation:	Vegetation:
Landform: Ring Terrace	Landform:	Landform:
Slope (%): 0-50 Screen: ☑ 1/4" ☐ 1/8"	Slope (%): Screen: ☑ 1/4" ☐ 1/8"	Slope (%): Screen: ☑ 1/4" ☐ 1/8"

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

Texture

Clay	Cl	
Silt	Slt	
Loam	Lm	
Sand	Sd	
Gravel	Gr	.4 - 6.4cm
Cobble	Cob	6.5 - 25.6cm
Boulder	Bdr	25.7cm
Fine	Fn	
Medium	Md	
Coarse	Crs	
Very	V	

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

N25W6

5 Ap: 10 YR 4/4 Dark Yellow Brn VF. Sandy Loam Gravel.

30 Bw 10 YR 5/6 Yellow Brn VF Sandy Loam Grit. Gravel.

55 C 2.5Y 6/4 Light Yellow Brn Loamy VF Sand

65

Contents: NCM

Gry Sand Compact

N30W5

5 A

Ap 10 YR 4/6 Dk Yw Brn Fri Sdy Lm w/ Gr

35 Bw 10 YR 6/6 Brn Yw V.F. Sdy L w/ Gr

72 Bw 10 YR 5/4 Yw Brn y V.F. Sd y Gvl, Gr

130

Contents: NCM

N30E5

5 Ap 10 YR 5/4 Dark Yellow Brn VF Sandy Loam w/ Grav.

25 Bw 10 YR 5/6 Yellow Brn VF Sandy Loam Grit Grav.

60 C 2.5Y 5/3 Light Yellow Brn Loamy VF Sandy Grvly Grav.

70

Contents: 5-25 (Glass chips NOT SAVED)

Reason for Term.: C Soil	Reason for Term.: Rock	Reason for Term.: C Soil
Notes:	Notes: Colors in the Subsoil seem Reversed. Unclear why	Notes:

Project: ORANGE R.R. **Site:** 107-15 **Town:** ORANGE, CT **Phase:** II **Exc.** EP **Date:** 7.27.11

Vegetation: BEECH; P.I; MULTI-FLORA ROSE	Vegetation:	Vegetation:
Landform: UPLAND TERR.	Landform:	Landform:
Slope (%): 1-3° Screen: ☑ 1/4" ☐ 1/8"	Slope (%): Screen: ☑ 1/4" ☐ 1/8"	Slope (%): Screen: ☑ 1/4" ☐ 1/8"

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

Texture

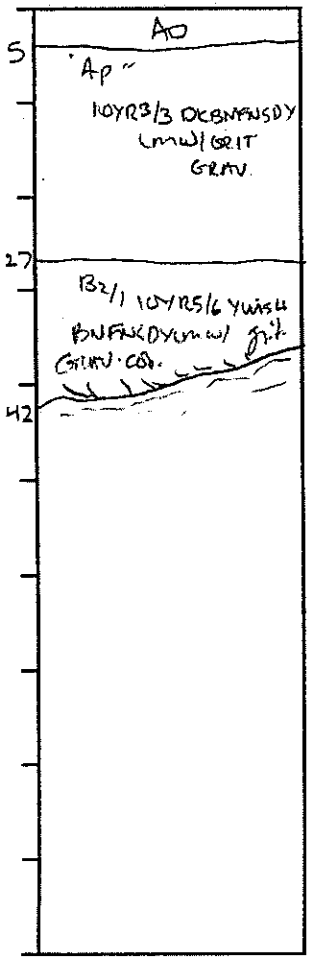
Clay	Cl
Silt	Slt
Loam	Lm
Sand	Sd
Gravel	Gr .4 - 6.4cm
Cobble	Cob 6.5 - 25.6cm
Boulder	Bdr 25.7cm

Fine	Fn
Medium	Md
Coarse	Crs
Very	V

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

N25W10

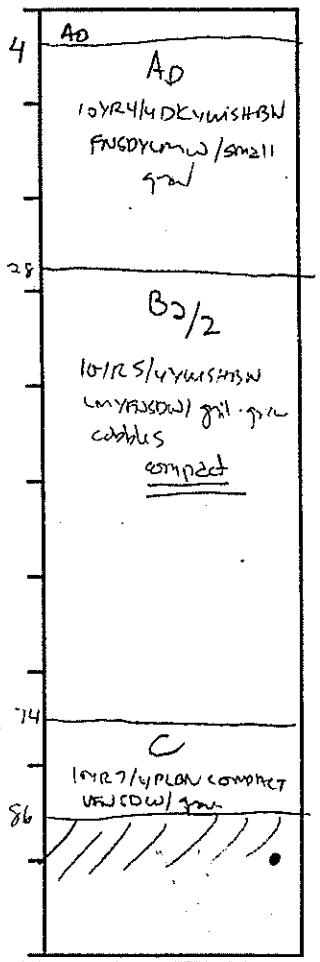


Contents: NLM 3

Reason for Term.: ROOT (BEECH)

Notes:

N30E8

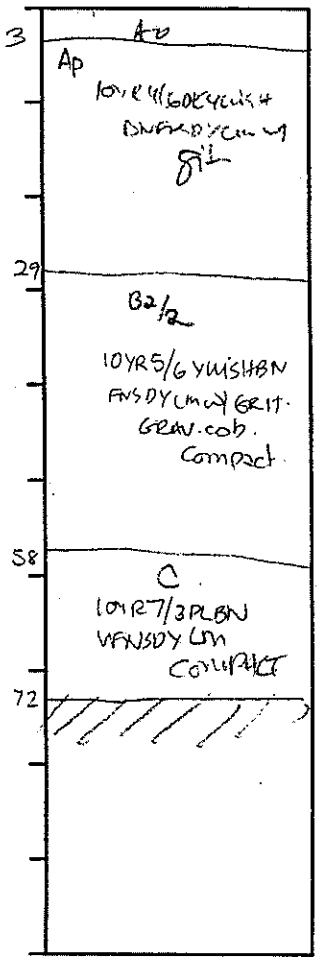


Contents: NCM 3

Reason for Term.: C

Notes:

N25E0



Contents: NLM 3

Reason for Term.: C

Notes:

Project: ORANGE RR **Site:** 107-15 **Town:** SPRINGFIELD **Phase:** II **Exc.** EX OK **Date:** 7/26/11

Vegetation: RASPBERRY; P.I.	Vegetation: "	Vegetation: "
Landform: UPLAND TERR.	Landform: "	Landform: "
Slope (%): 1:3° Screen: ☒ 1/4" ☐ 1/8"	Slope (%): " Screen: ☒ 1/4" ☐ 1/8"	Slope (%): 4 Screen: ☒ 1/4" ☐ 1/8"

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

Texture

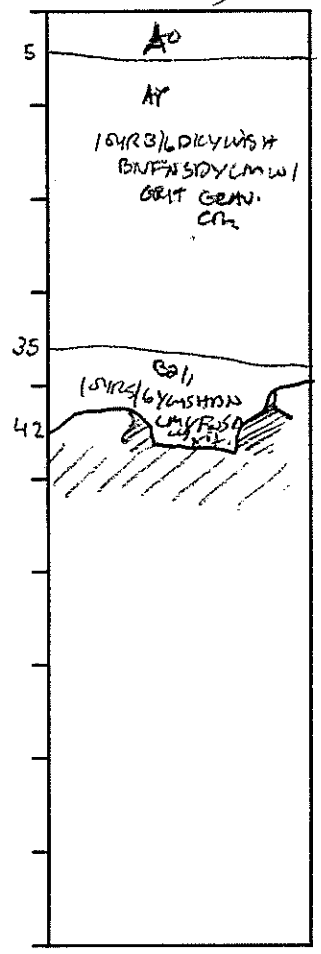
Clay	Cl	
Silt	Slt	
Loam	Lm	
Sand	Sd	
Gravel	Gr	.4 - 6.4cm
Cobble	Cob	6.5 - 25.6cm
Boulder	Bdr	25.7cm

Fine	Fn
Medium	Md
Coarse	Crs
Very	V

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

55W5



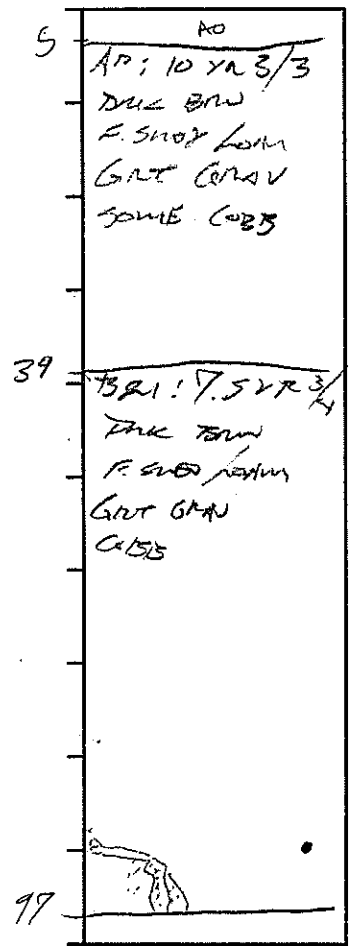
Contents

NCM

Reason for Term.: ROCK

Notes:

510W5



Contents

NCM

Reason for Term.: ROCK

Notes:

Contents

Reason for Term.:

Notes:

Project: ORANGE R.R. **Site:** 107-15 **Town:** ORANGE, CT. **Phase:** II **Exc.** EP **Date:** 7-27-11

Vegetation: RASPBERRY; P.I; SASSAFRAS | Vegetation: | Vegetation:

Landform: UPLAND TERR. | Landform: | Landform:

Slope (%): 1-3° Screen: ☑ 1/4" ☐ 1/8" | Slope (%): Screen: ☐ 1/4" ☐ 1/8" | Slope (%): Screen: ☐ 1/4" ☐ 1/8"

S5W10

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

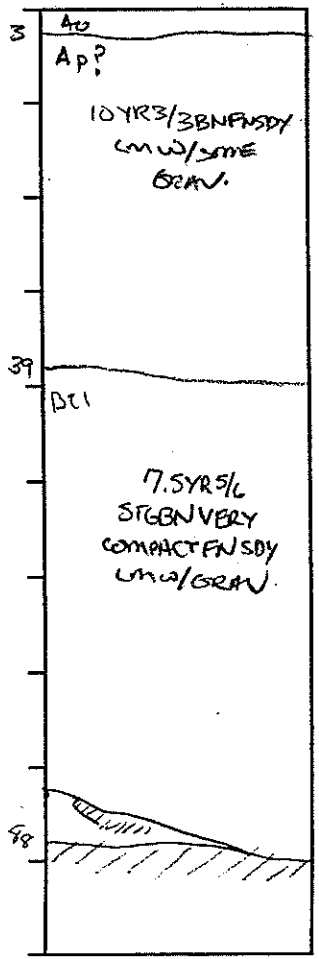
Texture

Clay	Cl
Silt	Slt
Loam	Lm
Sand	Sd
Gravel	Gr .4 - 6.4cm
Cobble	Cob 6.5 - 25.6cm
Boulder	Bdr 25.7cm

Fine	Fn
Medium	Md
Coarse	Crs
Very	V

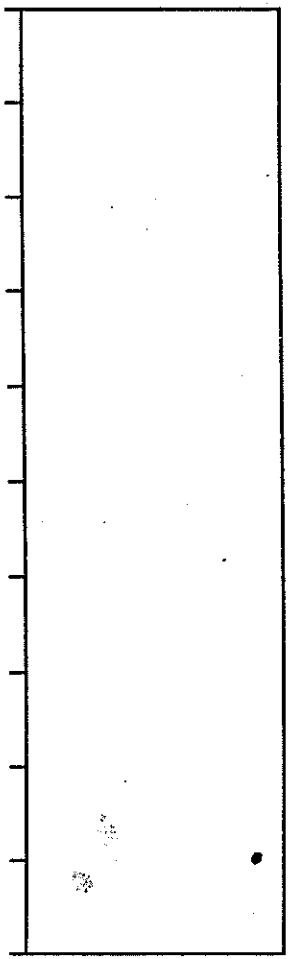
Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg



Contents

NUM
3



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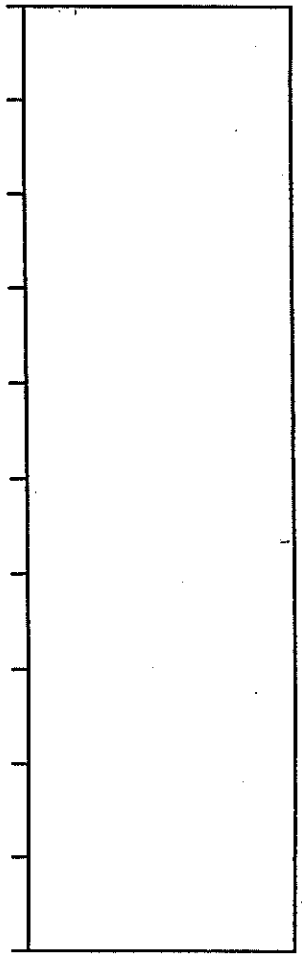


Contents

Reason for Term.: ROCK
Notes:

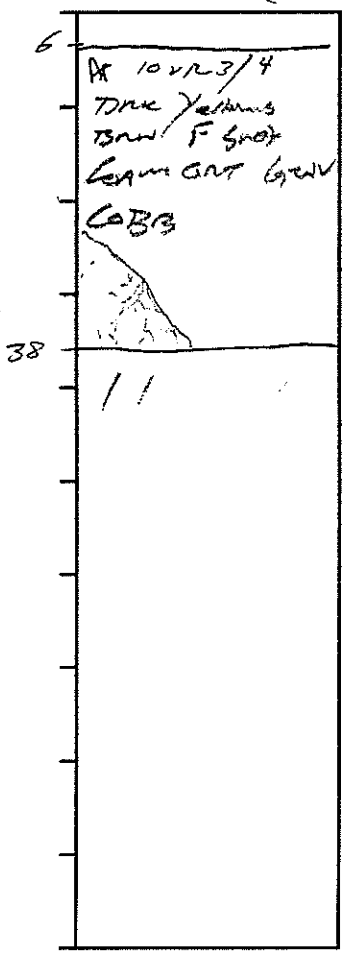
Reason for Term.:
Notes:

Reason for Term.:
Notes:

Project: ORANGE RR **Site:** 107-15 **Town:** ORANGE, CT **Phase:** II **Exc.** BK EP **Date:** 7.26.11

Vegetation: P.T.; MAPLE; SASSAFRAS; GRAPE
Landform: UPLAND TERR.
Slope (%): 1-30 Screen: ☒ 1/4" ☐ 1/8"

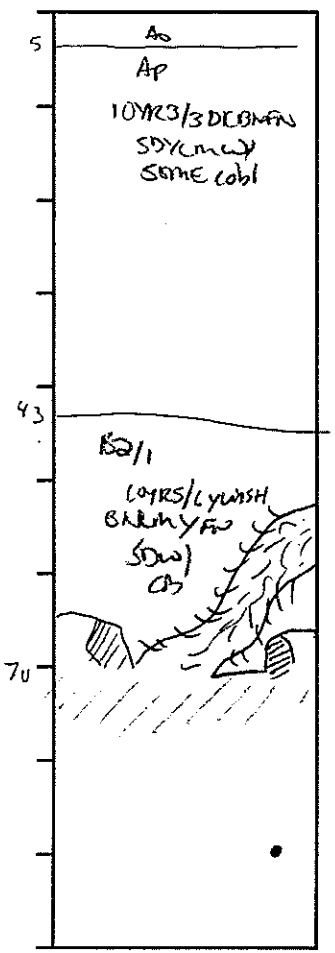
S6E5 (NW QUAD)



Contents: 6-20 (WIRE MODERN) NOT SAVED

Vegetation: "
Landform: "
Slope (%): " Screen: ☒ 1/4" ☐ 1/8"

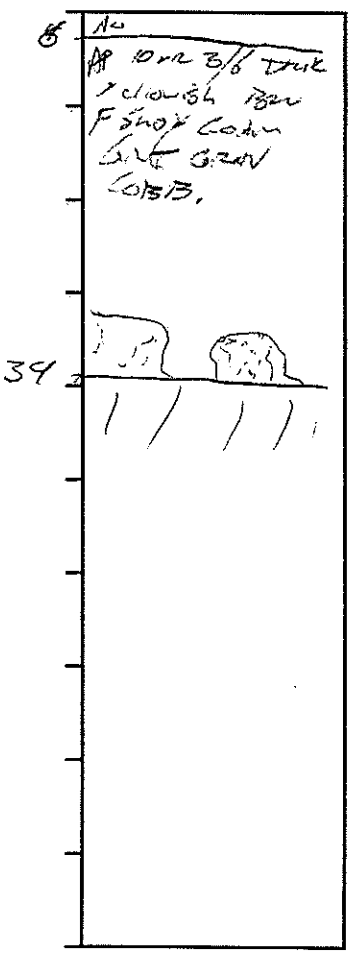
S10E5



Contents: NUM 3

Vegetation: "
Landform: "
Slope (%): 4 Screen: ☒ 1/4" ☐ 1/8"

N0E15



Contents: NUM

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

Texture

Clay	Cl
Silt	Slt
Loam	Lm
Sand	Sd
Gravel	Gr .4 - 6.4cm
Cobble	Cob 6.5 - 25.6cm
Boulder	Bdr 25.7cm

Fine	Fn
Medium	Md
Coarse	Crs
Very	V

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

Reason for Term.: ROCK
Notes:

Reason for Term.: ROCK + ROOT
Notes:

Reason for Term.: ROOT ROCK
Notes:

Project: Orange RR **Site:** 107-15 **Town:** Orange CT **Phase:** II **Exc.** HA/1B1 **Date:** 7.26.2011

Vegetation: regrowth forest	Vegetation: "	Vegetation: "
Landform: terrace	Landform: "	Landform: "
Slope (%): 0 Screen: ☒ 1/4" ☐ 1/8"	Slope (%): " Screen: ☒ 1/4" ☐ 1/8"	Slope (%): " Screen: ☒ 1/4" ☐ 1/8"

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

Texture

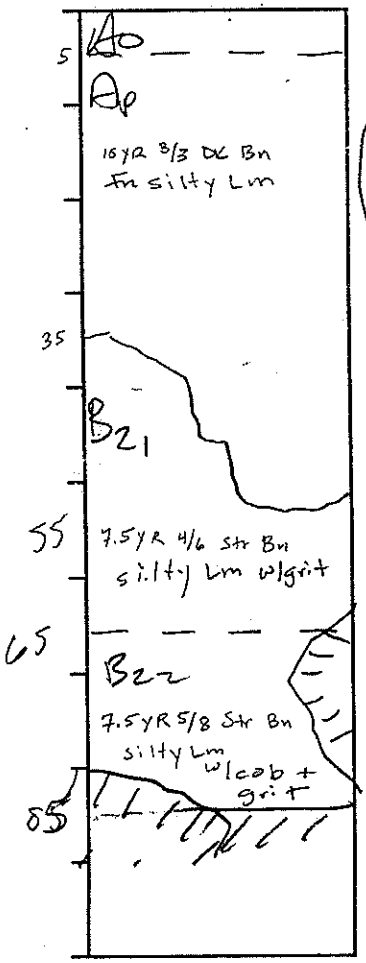
Clay	Cl	
Silt	Slt	
Loam	Lm	
Sand	Sd	
Gravel	Gr	.4 - 6.4cm
Cobble	Cob	6.5 - 25.6cm
Boulder	Bdr	25.7cm

Fine	Fn
Medium	Md
Coarse	Crs
Very	V

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

S10 E10



Contents

10-30

(Wire flags nails not saved)

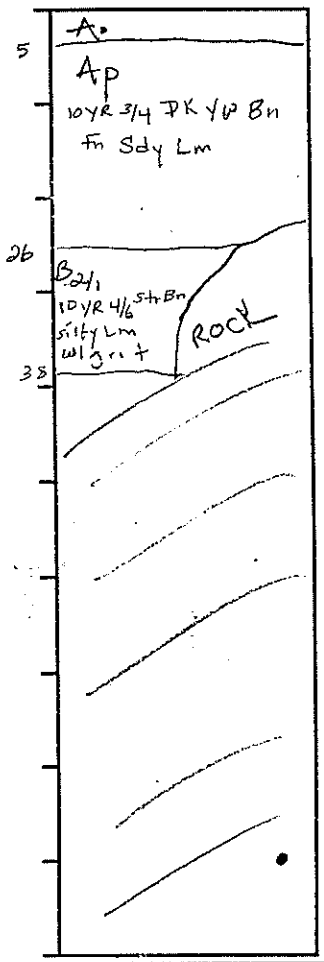
Reason for Term.: Rocky/compact

Notes:

Ap mottled below 30 cm → turbated by burrows.

pit ~10m North of drainage ditch

55 E10



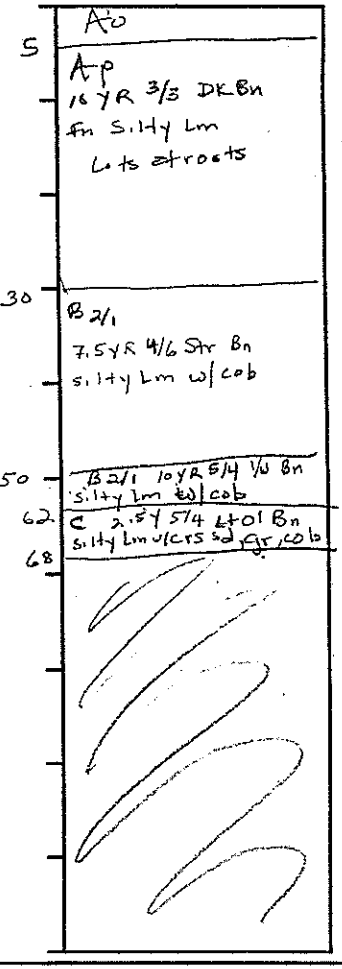
Contents

(10-20 cmbs
1 glass
Not saved)

Reason for Term.: ROCK

Notes:

N0 E10



Contents

5 - 30 cmbs

(mod. to glass - NOT SAVED)

Reason for Term.: C soil

Notes:

Site 107-16

Project: Orange RR **Site:** 107-16 **Town:** Orange CT **Phase:** II **Exc.** JP **Date:** 8/11/11

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

Texture

Clay	Cl	
Silt	Slt	
Loam	Lm	
Sand	Sd	
Gravel	Gr	.4 - 6.4cm
Cobble	Cob	6.5 - 25.6cm
Boulder	Bdr	25.7cm
Fine	Fn	
Medium	Md	
Coarse	Crs	
Very	V	

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

Vegetation: Oak, Maple, Birch, Hickory
Landform: River Terrace
Slope (%): 0-3°
Screen: ☑ 1/4" ☐ 1/8"

C N5W1 SE ✓

Depth	Horizon
4	Ao
22	Ap 10YR4/6 DK Yw Bn Fn sly L w/ Gr
56	Bw 10YR5/6 Yw Bn Fn Sly L w/ Gr — compact
66	C 10YR6/4 Lt Yw Bn Fn Lm Sd w/ Gr, cobbles - v. compact

Contents ✓
4-22 cm
1 Olz Bottle
1 Olz
(Modern Bottle Glass - not saved)

Reason for Term.: C Soil
Notes:
Moved because of tree

Vegetation: 〃
Landform: 〃
Slope (%): 〃
Screen: ☑ 1/4" ☐ 1/8"

C N5W5 ✓

Depth	Horizon
4	Ao
18	Ap 10YR4/4 DK Yw Bn Fn sly Lm w/ Gr
34	Bz1 7.5YR4/6 St Bn Fn sly L w/ Gr compact
46	Bz2 7.5YR7/6 St Bn Fn Sly L w/ Gr - v. compact
	Rock

Contents ✓
4-18 cm
4 Shell
(Plastic, Coal Ash, Modern Bottle Glass Not Saved)

Reason for Term.: Rock
Notes:

Vegetation: 〃
Landform: 〃
Slope (%): 〃
Screen: ☑ 1/4" ☐ 1/8"

C N0W5

Depth	Horizon
5	AO
23	Ap 10YR4/4 DK Yw Bn Sd Lm w/ Gravel
40	B2/1 10YR5/4 Yw Bn Fn Sd Lm w/ Grit Gravel compacted
54	C 10YR6/6 Bn Yw Fn Sd Lm w/ grit, gravel very common / oxid.

Contents
NCM

Reason for Term.: C Soil
Notes:

Project: ORANGE RR. **Site:** 107-16 **Town:** ORANGE, CT **Phase:** II **Exc.** JP **Date:** 8.11.11

Vegetation:	OAK, MAPLE, BIRCH, HICKORY	Vegetation:	"	Vegetation:	
Landform:	RIVER TERRACE	Landform:	"	Landform:	
Slope (%):	0-3°	Slope (%):		Slope (%):	
Screen:	☑ 1/4" ☐ 1/8"	Screen:	☐ 1/4" ☐ 1/8"	Screen:	☐ 1/4" ☐ 1/8"

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

Texture

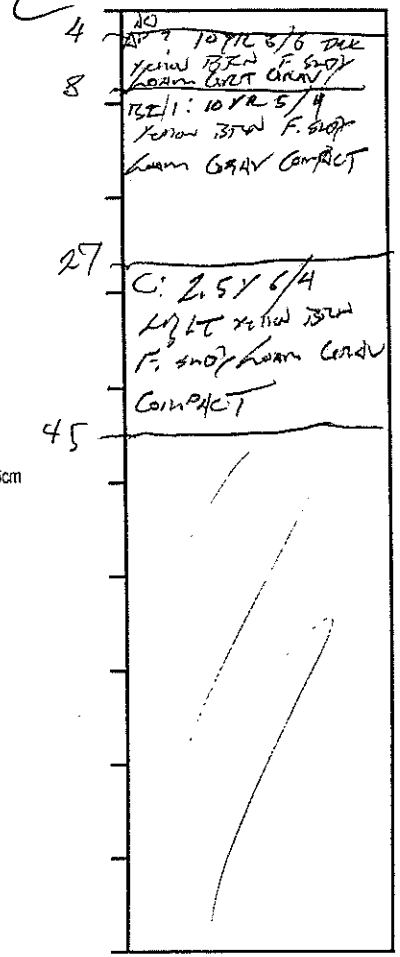
Clay	Cl
Silt	Slt
Loam	Lm
Sand	Sd
Gravel	Gr .4 - 6.4cm
Cobble	Cob 6.5 - 25.6cm
Boulder	Bdr 25.7cm

Fine	Fn
Medium	Md
Coarse	Crs
Very	V

Color

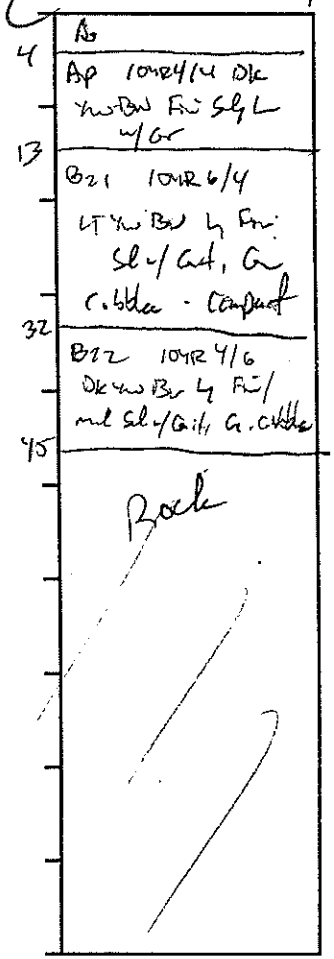
Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

S.560S



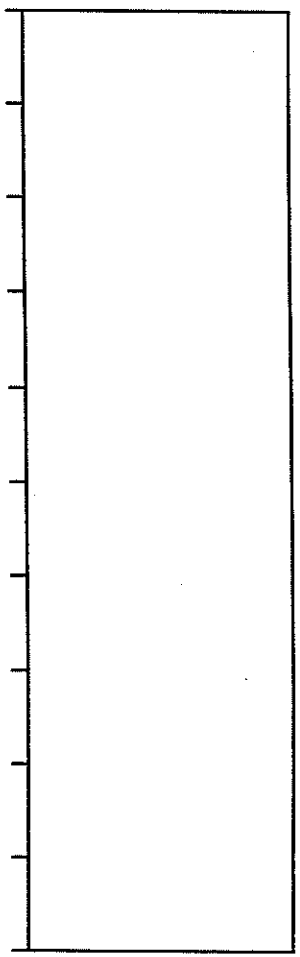
Contents: Ncm

S.160S NWgd



Contents: NCm

Contents:



Reason for Term. :	Soil	Reason for Term. :	Rock	Reason for Term. :	
Notes:		Notes:		Notes:	

Project: Orange RR **Site:** 107-16 **Town:** Orange CT **Phase:** II **Exc.** JP-HA **Date:** 8.12.201

Vegetation: Oak, Maple, Russian Olive
Landform: River Terrace
Slope (%): 0-3° Screen: ☐ 1/4" ☐ 1/8"

NSE6 SW Fill

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

Texture

Clay	Cl	
Silt	Slt	
Loam	Lm	
Sand	Sd	
Gravel	Gr	.4 - 6.4cm
Cobble	Cob	6.5 - 25.6cm
Boulder	Bdr	25.7cm

Fine	Fn
Medium	Md
Coarse	Crs
Very	V

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

Depth	Profile	Contents
4	Ap Fill 10YR3/4 Dk YwBn Fri slyL w/ Grvl, Gravel	(4-30 — Modern Glass Brick Not Saved)
30	Bw1 10YR5/6 YwBn silty Fri sly Lm w/ Grvl, Cos. cobbles Compact	
72	Rock	

Reason for Term.: Rock
Notes: Dirt & Rock pile at N5E5

Vegetation:
Landform:
Slope (%): Screen: ☐ 1/4" ☐ 1/8"

Contents

Reason for Term.:
Notes:

Vegetation:
Landform:
Slope (%): Screen: ☐ 1/4" ☐ 1/8"

Contents

Reason for Term.:
Notes:

Project: Orange RR **Site:** 107-16 **Town:** Orange CT **Phase:** II **Exc.** MMR-HA **Date:** 8.11.2011

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

Texture

Clay	Cl
Silt	Slt
Loam	Lm
Sand	Sd
Gravel	Gr .4 - 6.4cm
Cobble	Cob 6.5 - 25.6cm
Boulder	Bdr 25.7cm

Fine	Fn
Medium	Md
Coarse	Crs
Very	V

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

N10E0 ✓

Vegetation: russian olives, oak, bittersweet
Landform: upland terrace
Slope (%): 0-5% Screen: ☒ 1/4" ☐ 1/8"

FN ✓

0 – 21 Fill 1: 10 YR 3/4 Dk Yw Bn Fn Sdy Lm

21 – 39 Fill 2: 10YR 5/6 Yw Bn Lmy Fn-Md Sd w/grit

39 – 70 Fill 3 ?: 2.5Y 5/6 Lt Ol Bn Lmy fn-Md Sd w/grit, cob

70 – 84 Fill 4 ?: 10YR 7/1 Lt Gy Fn Md Sd & mottled w/ 7.5YR 5/6 Str Bn Fn-Md Sd w/gr

84 –

Contents: 0 – 21 cmbs; 1 w.w

(Styrofoam, m.bglass, aluminum tab – NOT SAVED)

Reason for Term.: compact
Notes: Very compact 70-80

N10W5

Vegetation: "
Landform: "
Slope (%): " Screen: ☒ 1/4" ☐ 1/8"

FN

0 – 15 Fill 1: 10YR 4/4 DK Yw Bn silty Fn Sdy Lm w/grit

15 – 30 Fill 2: 10YR 5/6 Yw Bn Fn Sdy Lm w/grit, cob

30 – ROCK ROCK

Contents: 0-15 cmbs

(m.b glass – NOT SAVED)

Reason for Term.: ROCK
Notes:

N10W10

Vegetation: "
Landform: "
Slope (%): " Screen: ☐ 1/4" ☐ 1/8"

FN

0 – 19 Fill 1: 10YR 3/4 DK Yw Bn silty Fn Sdy Lm

19 – 77 B_{21} ?: 10YR 6/6 Br Yw Lmy silty Fn Sd w/grit

77 – 81 B_{21} ?: 10YR 5/4 Yw Bn Lmy silty Fn Sd w/grit, gr

81 – ROCK ROCK

Contents: 0-19 cmbs

(plastic, industrial tile – NOT SAVED)

Reason for Term.: ROCK
Notes:

Project: Orange RR **Site:** 107-16 **Town:** Orange CT **Phase:** II **Exc.** SP **Date:** 8/11/11

Vegetation: Oak, Birch, Hickory, Maple, Cherry
Landform: River Terrace
Slope (%): 0-3 Screen: ☒ 1/4" ☐ 1/8"

S5E0

Contents

Ao
9
Bw 10YR5/6 YwBw Fw/U.F.- Sd/L w/ Gr - moist
22
Bw 2.5Y5/4 LT OL Bw V Fn L Sd w/ Gr - compact
34
C 2.5Y6/4 LT Yw Bw V.Fn L Sd w/ Gr, Gr Compact
60

NCM

Reason for Term.: C Soil
Notes:

Vegetation: "
Landform: "
Slope (%): Screen: ☒ 1/4" ☐ 1/8"

S10E0

Contents

Ao
5
Ap 10YR4/6 DK YwBr S.Fh V.Fn Sd w/ Gr
26
Bw 7.5YR5/6 ST BW S.Fh V. Fn Sd w/ Gr compact
32
C 10YR4/6 Fn L Sd w/ Gr.t, Gr, Cobble
64

NCM

Reason for Term.: C Soil
Notes:

Vegetation: "
Landform: "
Slope (%): Screen: ☒ 1/4" ☐ 1/8"

S10E5

Contents

Ao
4
Ap 10YR3/6 DK YwBW S.Fh V. Fn Sd w/ Gr
20
Bw 10YR5/4 Yw BW S.Fh V.Fn Sd w/ Gr
37
C?/Bw2 7.5YR4/6 ST BW S.Fh V.Fn Sd w/ Gr
55
Rock

4-20 L Plastic not saved

Reason for Term.: Rock / C?
Notes:

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

Texture

Clay	Cl
Silt	Slt
Loam	Lm
Sand	Sd
Gravel	Gr .4 - 6.4cm
Cobble	Cob 6.5 - 25.6cm
Boulder	Bdr 25.7cm

Fine	Fn
Medium	Md
Coarse	Crs
Very	V

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

Project: Orange RR **Site:** 107-16 **Town:** Orange, CT **Phase:** II **Exc.** JP **Date:** 8-11-11

Vegetation: Oak, Hickory, Maple, Cherry, Birch	Vegetation:	Vegetation:
Landform: River Terrace	Landform:	Landform:
Slope (%): 0-3 SSES	Screen: ☑ 1/4" ☐ 1/8"	Slope (%): NOES
	Screen: ☑ 1/4" ☐ 1/8"	Slope (%): NSES
		Screen: ☑ 1/4" ☐ 1/8"

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

Texture

Clay	Cl
Silt	Slt
Loam	Lm
Sand	Sd
Gravel	Gr .4 - 6.4cm
Cobble	Cob 6.5 - 25.6cm
Boulder	Bdr 25.7cm

Fine	Fn
Medium	Md
Coarse	Crs
Very	V

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

4	Ao			3	Ao			4	Ao		
	Ap 10YR3/4 DK YW BN S Hy V. Fn Sd w/ Gr	4-24 Modern Bottle Glass Not saved	Contents		Fill 10YR4/4 DK YW BN S-Hy V. Fn Sd w/ Gr	3-34 – Brick, Modern Bottle Glass Not saved	Contents		Ap. ? 10YR3/4 DK YW BN Fn Sdy Lm w Gr	4-35 – Brick, Plastic Modern Bottle Glass Not saved	Contents
24	Bw1 10YR5/6 YW BN S. Hy V. Fn Sd w/ Gr			34	Ap? 10YR3/3 DK BN Fn Sdy Lm w Gr			35	Roots		
54	Root / wet			42	Bw1 7.5YR4/6 St BN Fn Sdy Lm w Gr						
				61	Bw2 10YR5/4 YW BN Fn Sdy Lm w Gr						
				78	C 10YR6/6 BN YW Lm V. Fn Sd w Gr						
				85							

Reason for Term.: Root	Reason for Term.: C Soil	Reason for Term.: Roots
Notes:	Notes:	Notes:

Project: Orange RR **Site:** 107-16 **Town:** Orange CT **Phase:** II **Exc.** HA JP **Date:** 8.12.2011

Vegetation: Russian olive, oak, bittersweet | Landform: upland terrace. | Slope (%): 0-3% | Screen: ☒ 1/4" ☐ 1/8"

N5W10

Ap
Bw1 10YR4/6 DkYwBn Fn sdy L w/cit, Gr
5
30
Bw2 7.5YR4/6 St,Bn S.Th Fn Sdy L w/bt. G. Cbbl. compct
45
C 2.5Y5/6 LtOli Bn Fn/md Sdy L Gr, Cbbles. Compct
53

Contents: (5-20cm Tar paper Not Saved)

Reason for Term.: C soil

Notes:

Vegetation: " | Landform: " | Slope (%): ^ | Screen: ☒ 1/4" ☐ 1/8"

N0W10

Ao
6
Ba1 10YR 5/6 YwBn Fn Sdy Lm w/gvit, gr
29
B2/2 2.5Y 5/4 LtOlBn V fn Sdy Lm w/gr
43
C 2.5Y 6/4 LtYwBn Lmy V Fn Sd w/gr E oxidation
52

Contents: 6-20cembs (mod. b.glass - NOT SAVED)

Reason for Term.: C soil

Notes:

Vegetation: " | Landform: " | Slope (%): 1 | Screen: ☒ 1/4" ☐ 1/8"

S5W10

Ao
6
Bw1 10YR4/4 DkYwBn S.Th Fn Sdy L w/ cit, Gr
25
Bw2 10YR5/6 YwBn S.Th Fn Sd w/ Cit, Gr, compct. moist
64
wet

Contents: NCM

Reason for Term.: wet

Notes:

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B..
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

Texture

Clay	Cl
Silt	Slt
Loam	Lm
Sand	Sd
Gravel	Gr .4 - 6.4cm
Cobble	Cob 6.5 - 25.6cm
Boulder	Bdr 25.7cm

Fine	Fn
Medium	Md
Coarse	Crs
Very	V

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Oli
Dark	Dk
Light	Lt
Strong	Stg

Project: Orange RR **Site:** 107-16 **Town:** Orange CT **Phase:** II **Exc.** HA, MMR **Date:** 8-11-2011

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

Texture

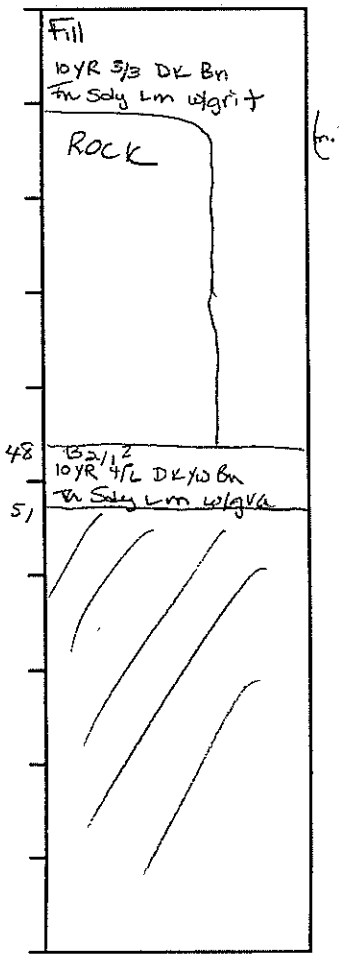
Clay	Cl
Silt	Slt
Loam	Lm
Sand	Sd
Gravel	Gr .4 - 6.4cm
Cobble	Cob 6.5 - 25.6cm
Boulder	Bdr 25.7cm
Fine	Fn
Medium	Md
Coarse	Crs
Very	V

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

S10E10

Vegetation: Russian olive, oak, birch
Landform: upland terrace
Slope (%): 0-5% Screen: ☒ 1/4" ☐ 1/8"

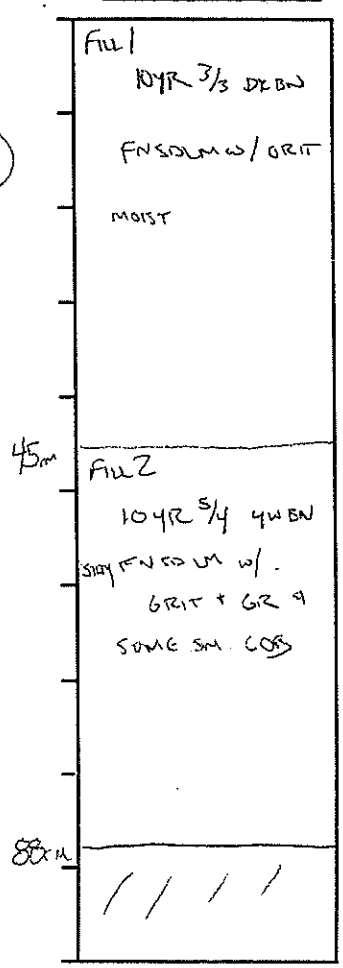


Contents
0-48 cmbs
(m.b.glass, brick — NOT SAVED)

Reason for Term.: ROCK
Notes:

S5E8 SEQUAD ✓

Vegetation: "
Landform: "
Slope (%): " Screen: ☒ 1/4" ☐ 1/8"

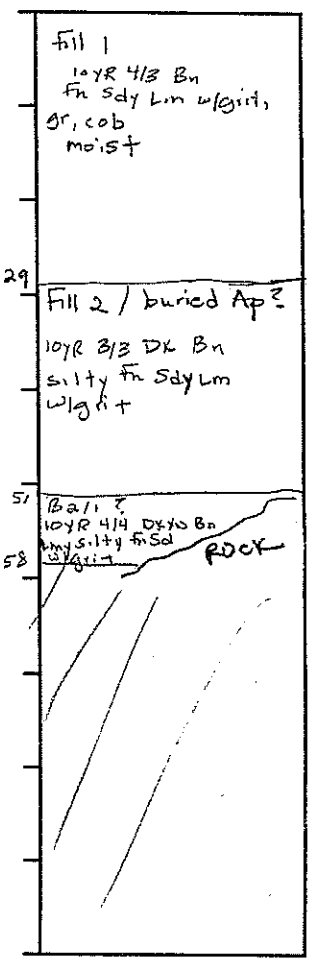


Contents
BAG 1
0-20 cmbs
4 FLAT GLASS
3 BONE
1 SHELL
(2 COAL - NOT SAVED)

Reason for Term.: ROCK
Notes:
T.P. MOVED OFF BERM

N0E10

Vegetation: "
Landform: "
Slope (%): Screen: ☐ 1/4" ☐ 1/8"



Contents
0-29 cmbs
(plastic, brick, m.b.glass, aluminium tab, coal — NOT SAVED)

Reason for Term.: ROCK
Notes:

Project: ORANGE RR **Site:** 107-16 **Town:** ORANGE, CT **Phase:** II **Exc.** HA, MW **Date:** 8-11-2011

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

Texture

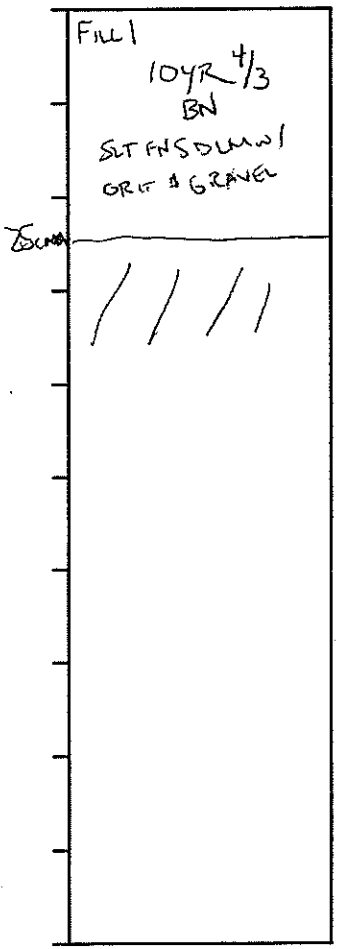
Clay	Cl
Silt	Slt
Loam	Lm
Sand	Sd
Gravel	Gr .4 - 6.4cm
Cobble	Cob 6.5 - 25.6cm
Boulder	Bdr 25.7cm
Fine	Fn
Medium	Md
Coarse	Crs
Very	V

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

N4E10 NW QUAD

Vegetation: ROSSIAN OLIVE, OAK, BIRCH
Landform: UPLAND TERRACE
Slope (%): 0-5% Screen: [X] 1/4" [ ] 1/8"

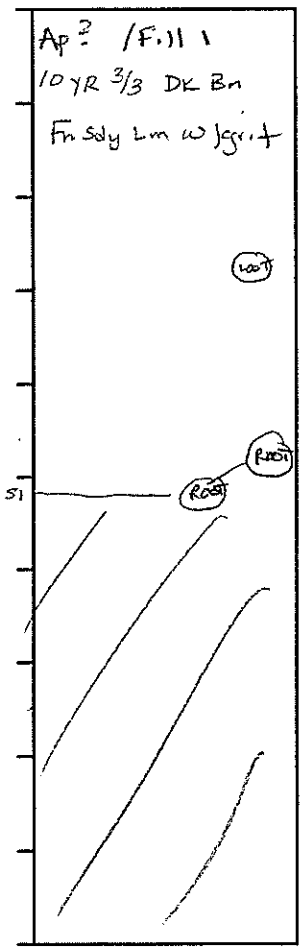


Contents
0-20 cmbs
MODERN GLASS
TERRACOTTA
NOT SAVED

Reason for Term.: ROCK
Notes:
T.P. HALTED BECAUSE OF A ROCK ON THE SURFACE

N1ØE9 SW ✓

Vegetation: "
Landform: "
Slope (%): 0-5% Screen: [X] 1/4" [ ] 1/8"

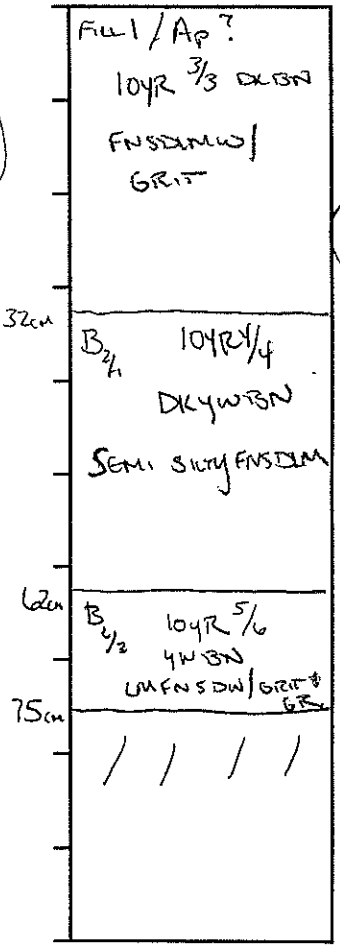


Contents
0-40 cmbs
brick, coal ash, m.b glass, coal
NOT SAVED
40-51 cmbs
1 UW.
1 W glass

Reason for Term.: ROOT
Notes:

N1ØE5

Vegetation: "
Landform: "
Slope (%): " Screen: [X] 1/4" [ ] 1/8"



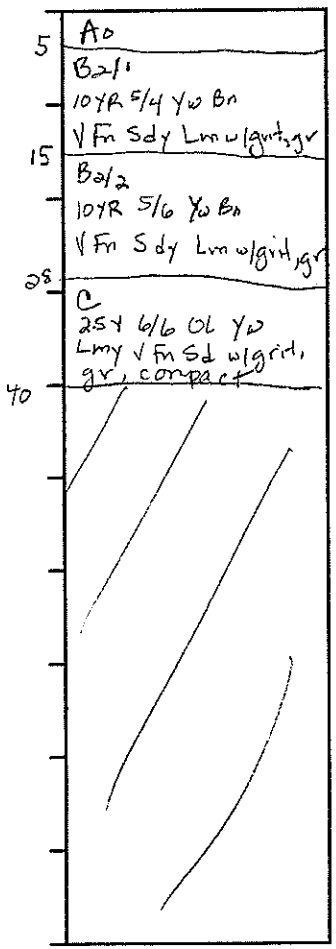
Contents
0-70 cmbs
BAG 1
4 FLAT GLASS
MODERN PLASTIC
NOT SAVED

Reason for Term.: ROCK & ROOT
Notes:

Project: Orange RR **Site:** 107-16 **Town:** Orange G **Phase:** II **Exc.** #4 JP **Date:** 8-12-11

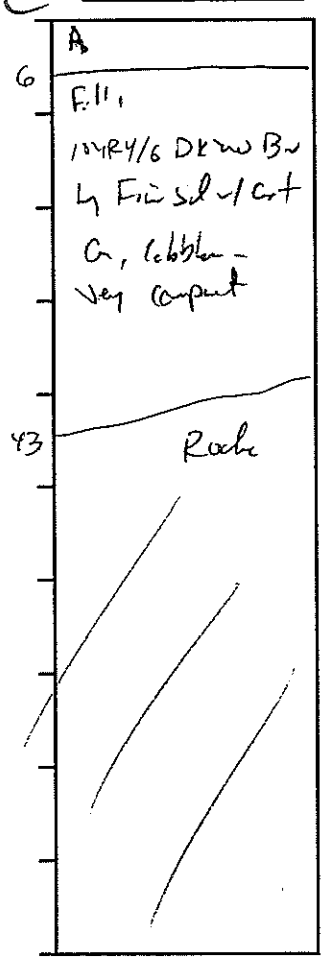
Vegetation: Oak, Maple, Birch, Russian Olive	Vegetation:	Vegetation:
Landform: River Terrace	Landform:	Landform:
Slope (%): 0-3° Screen: ☒ 1/4" ☐ 1/8"	Slope (%): Screen: ☐ 1/4" ☐ 1/8"	Slope (%): Screen: ☑ 1/4" ☐ 1/8"

S10W10



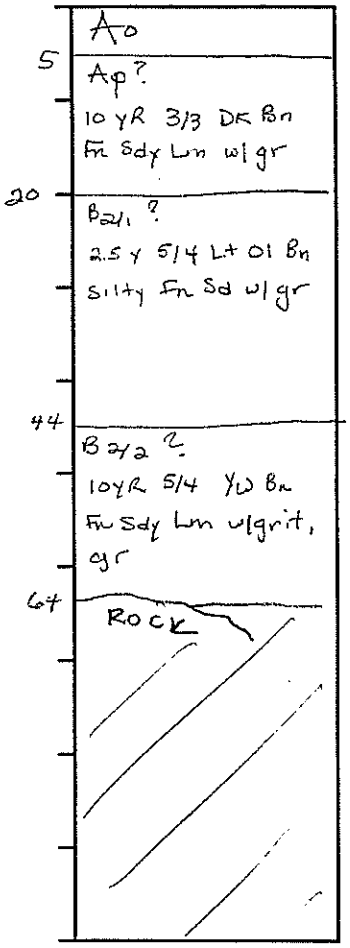
Contents: NCM

C N15W5 Fill



Contents: NCM

N15E0



Contents: 5 - 20 cmbs (mod b. glass — NOT SAVED)

Soil Key:

Pedogenic and Anthropogenic Horizons

Duff	Ao
Podzol	Ae
A horizons	A1, A...
Plowzone	Ap
B horizons	B1, B...
B (under Ap)	B2/1, ...
C horizons	C1, C...
Fill	Fl. 1 ...
Feature	Fe.

Texture

Clay	Cl
Silt	Slt
Loam	Lm
Sand	Sd
Gravel	Gr .4 - 6.4cm
Cobble	Cob 6.5 - 25.6cm
Boulder	Bdr 25.7cm

Fine	Fn
Medium	Md
Coarse	Crs
Very	V

Color

Black	Blk
Brown	Bn
Red	Rd
Yellow	Yw
Grey	Gy
Olive	Ol
Dark	Dk
Light	Lt
Strong	Stg

Reason for Term.: C soil
Notes:

Reason for Term.: Rock
Notes:

Reason for Term.: ROCK
Notes:

APPENDIX IV

Excavation Unit Level Forms

Site 107-15

Excavation Level Form

Project ORANGE RAIL ROAD Town ORANGE, CT

Site 107-15 Phase (circle) I (II) III Date 7.27.11

Excavator(s) JP EP BK Crew Chief JP Stripping ☐

Unit N7W14 ☐ = 10 cm sq.

Depth

Below Surface 0 - 30 cmbs

Above/Below Datum _____

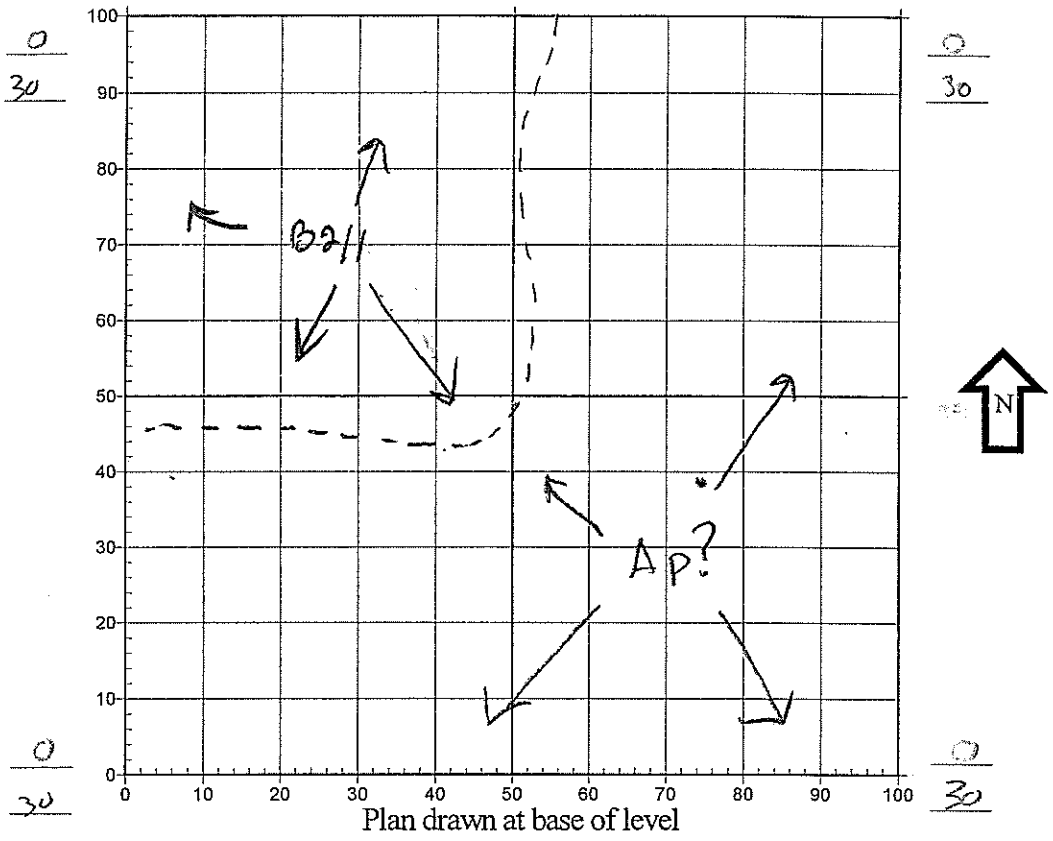
Below Strat/Stripping _____

Map Key

B2/1 – 7.5YR 4/6 STRONG BROWN/FRIABLY SDWL GRIT + GRAV

Ap? – 10YR 3/4 DK YELLOWISH BRN VFN SDY LM W/ GRIT - GRAV

Feature # _____



Plan drawn at base of level

Notes: Ap is being excavated in one level. Meter is being excavated because of a point being removed in T12-4. T12-4 is located in the Meter directly TO THE WEST AND WAS A PH I STP.

* Level was strike. B2/1 is showing in the NW QUAD SO THE UNIT WAS levelled and will be taken to complete interface. Interface appears to be very uneven and we do not know why that is.

Surface of unit slops down to the south and East

Shovel Shaved ☑ Trowelled ☑ Other _____

By Quad ☑ Half-meter ☐ Meter ☐

20 cm level ☐ 10 cm level ☐ 5 cm level ☐ Natural ☑

1/4" mesh ☐ 1/8" mesh ☐ Other _____

Bag #										
Quad										
Fea #/Soil Type										
Depth Range										
Quartz										
Quartzite										
Chert										
Argillite / Slate										
Rhyolite										
Basalt										
Jasper										
Other Lithics										
Other Prehistoric										
Bone/Cal. Bone										
Shell										
Botanical										
Whiteware										
Pearlware										
Creamware										
Stoneware										
Red Earthenware										
Other Ceramic										
Kaolin										
Bottle Glass										
Window Glass										
Nails										
Other Metal										
Other Historic										
Soil Sample & Vol.										

✤ = Items pulled, see Temporary Artifact Inventory

Excavation Level Form

Project ORANGE R.R. Town ORANGE, CT.

Date 7.28.11

Site 107-5 Phase (circle) I (II) III

Excavator(s) EP. JP, BK Crew Chief JP Stripping ☐

☐ = 10 cm sq.

Depth

Below Surface 30 - 54 cmbs

Above/Below Datum

Below Strat/Stripping

Unit N7W14

Map Key

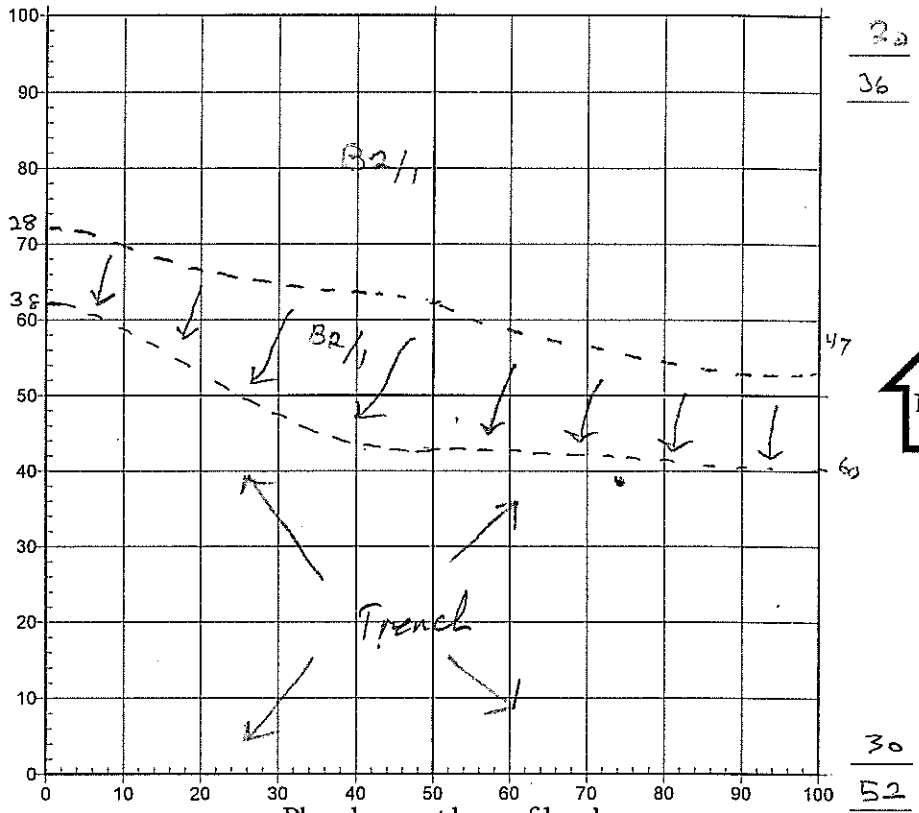
B2/1 7.5YR 4/6 STRONG BROWN SOIL / SOME GRIT GRAVEL

Trench → 10YR 3/4 DARK YELLOWISH BROWN HANDY LENS W/ GRIT GRAVEL.

Feature # _____

30 / 32

30 / 54



Plan drawn at base of level

Notes: B2/1 soil to the NORTH was screened down some more to reveal a distinct trench in the southern 2 quads mostly. Bot glass & (+ coal) is here removed from whatever I believe is a modern trench. NEXT level will be a leveling (sp) of the B2/1 soil down to the same level of the 'Ap' trench in order to get a better look @ the trench delineation.

Ap soil and trench soil seem exactly the same

Shovel Shaved ☐ Trowelled ☑ Other _____

By Quad ☑ Half-meter ☐ Meter ☐

20 cm level ☐ 10 cm level ☐ 5 cm level ☐ Natural ☑

1/4" mesh ☐ 1/8" mesh ☐ Other _____

Bag #	1	2								
Quad	SE	SW								
Fea #/Soil Type	Trench Fill	Trench Fill								
Depth Range	30-52 cmbs	30-54 cmbs								
Quartz										
Quartzite										
Chert										
Argillite / Slate										
Rhyolite										
Basalt										
Jasper										
Other Lithics										
Other Prehistoric										
Bone/Cal. Bone										
Shell										
Botanical										
Whiteware										
Pearlware										
Creamware										
Stoneware										
Red Earthenware										
Other Ceramic										
Kaolin										
Bottle Glass	6	1								
Window Glass										
Nails										
Other Metal										
Other Historic		1 (coal) NOT collected								
Soil Sample & Vol.										

✤ = Items pulled, see Temporary Artifact Inventory

Excavation Level Form

Project ORANGE R.R. Town ORANGE, CT.

Date 7.28.11

Site 107-15 Phase (circle) I (II) III

Excavator(s) JP. EP. BK Crew Chief JP Stripping ☐

Unit N7W14 ☐ = 10 cm sq.

Depth

Below Surface 32 – 54 cmbs

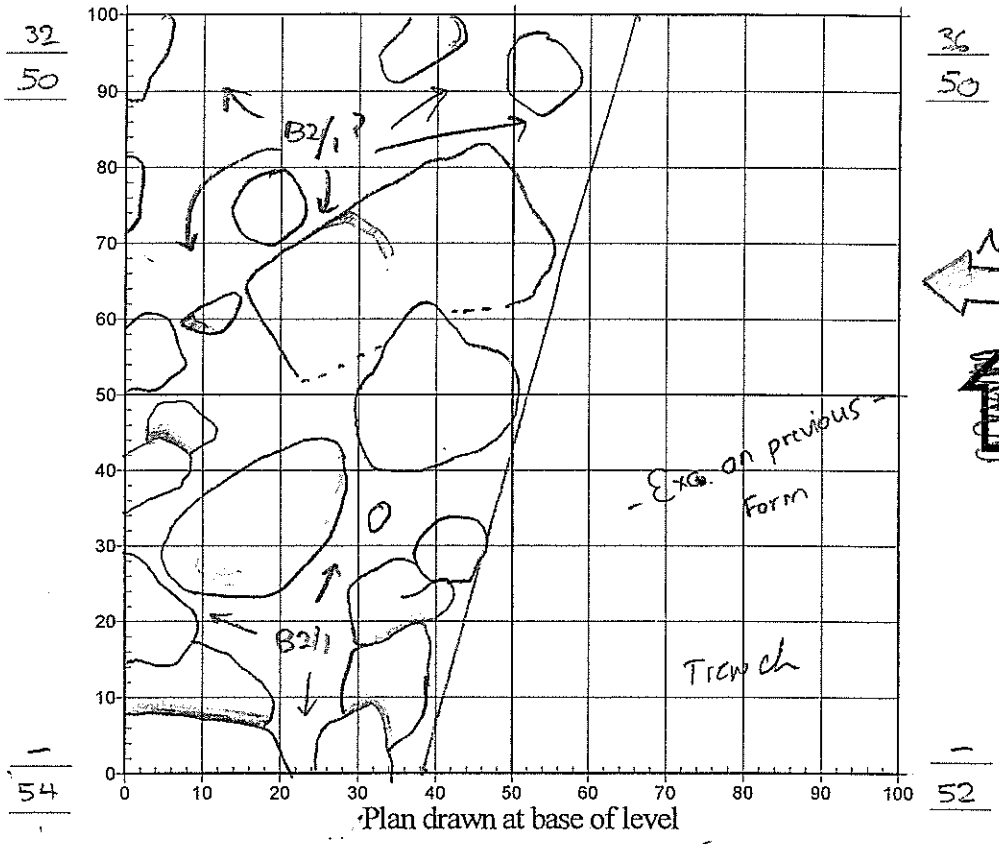
Above/Below Datum

Below Strat/Stripping

Map Key

B2/1? → 7.5YR5/6 STG BN VFN SDY SDO / Cbb

Feature #



Plan drawn at base of level

Notes: NORTH PART OF UNIT WAS EXC. DOWN TO 50cmbs to even up the level. B soil HAS DENSE Cobble. THE TRENCH SOIL HAS A VERY STRAIGHT LINE W/ The soil not having cobble, but small semi-processed gravels instead. NCM WAS RECOVERED FROM THE B soil

Shovel Shaved ☑ Trowelled ☑ Other ☐

By Quad ☑ Half-meter ☐ Meter ☐

20 cm level ☐ 10 cm level ☐ 5 cm level ☐ Natural ☐

1/4" mesh ☐ 1/8" mesh ☐ Other ☐

Bag #										
Quad										
Fea #/Soil Type										
Depth Range										
Quartz										
Quartzite										
Chert										
Argillite / Slate										
Rhyolite										
Basalt										
Jasper										
Other Lithics										
Other Prehistoric										
Bone/Cal. Bone										
Shell										
Botanical										
Whiteware										
Pearlware										
Creamware										
Stoneware										
Red Earthenware										
Other Ceramic										
Kaolin										
Bottle Glass										
Window Glass										
Nails										
Other Metal										
Other Historic										
Soil Sample & Vol.										

= Items pulled, see Temporary Artifact Inventory

Excavation Level Form

Project ORANGE R.R. Town ORANGE, CT

Date 7.28.11

Site 107-15 Phase (circle) I (II) III

Excavator(s) EP, JP, BK Crew Chief JP Stripping ☐

Unit N7W14

☐ = 10 cm sq.

Depth

Below Surface 50-72 cmbs

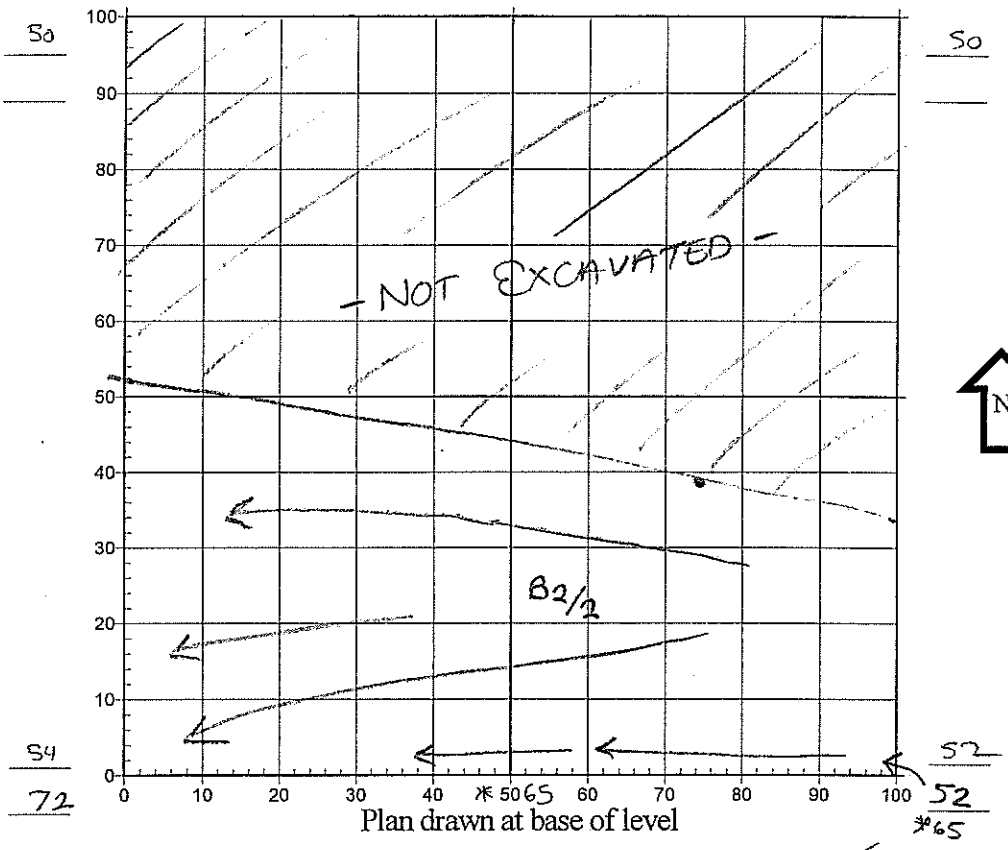
Above/Below Datum

Below Strat/Stripping

Map Key

B2/2? 7.5YR5/6 STRONG BROWN SAND w/ rob.

Feature #



Notes: We may be in the "B2/2" soil noted in the southern 1/2 of the meter. ~~Trench~~ Trench soil has been excavated out with the trench sloping to the west where it was deeper. 1 IRON "SPIKE" WAS RECOVED FROM THE TRENCH SOIL (bag 3).

Trench looks modern - the straight line on the plan and the slope in the east, west profile strongly suggest a machine excavation.

Shovel Shaved ☐ Trowelled ☑ Other

By Quad ☑ Half-meter ☐ Meter ☐

20 cm level ☐ 10 cm level ☐ 5 cm level ☐ Natural ☐

1/4" mesh ☐ 1/8" mesh ☐ Other

Bag #	3									
Quad	SE									
Fea #/Soil Type	Trench Fill									
Depth Range	50 - 65 cmbs									
Quartz										
Quartzite										
Chert										
Argillite / Slate										
Rhyolite										
Basalt										
Jasper										
Other Lithics										
Other Prehistoric										
Bone/Cal. Bone										
Shell										
Botanical										
Whiteware										
Pearlware										
Creamware										
Stoneware										
Red Earthenware										
Other Ceramic										
Kaolin										
Bottle Glass										
Window Glass										
Nails										
Other Metal	1 IRON "SPIKE"									
Other Historic										
Soil Sample & Vol.										

✤ = Items pulled, see Temporary Artifact Inventory

Excavation Level Form

Project ORANGE R.R. Town ORANGE, CT.

Date 7.29.11

Site 107-15 Phase (circle) I (II) III

Excavator(s) EP JP EK Crew Chief JP Stripping ☐

Unit N74014

☐ = 10 cm sq.

Depth

Below Surface 50 - 72 cmbs

Above/Below Datum

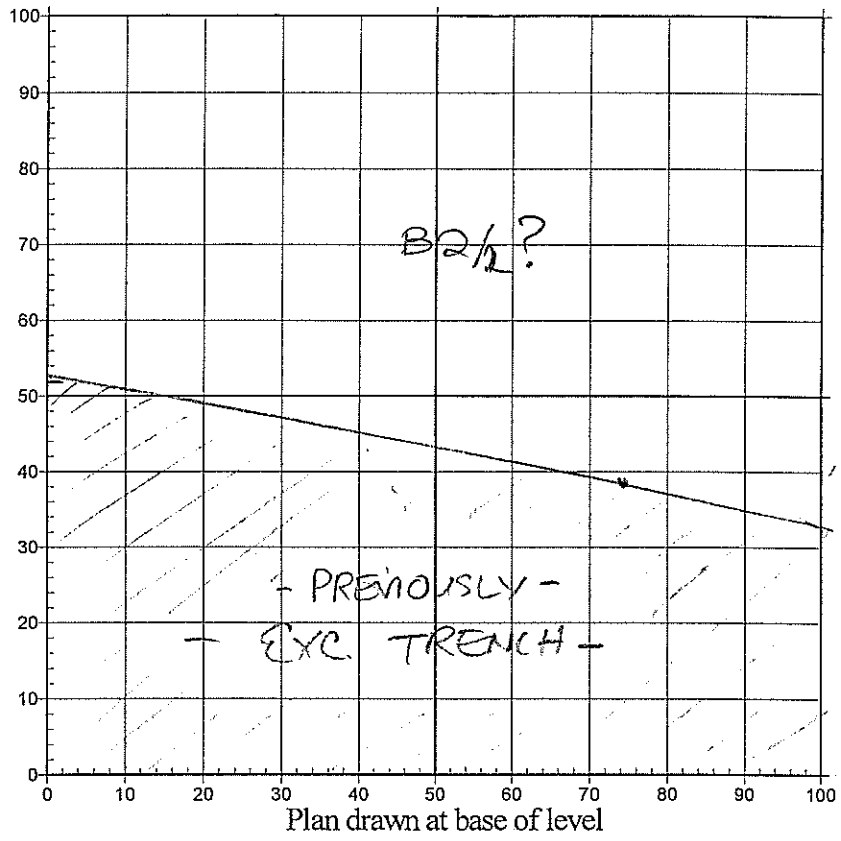
Below Strat/Stripping

Map Key

B2/2? → 7.5YR5/6 STG BNV ANLMY SDW/ LGSS cobbles.

Feature #

50 / 70



50 / 70

— / 72

— / 52

Plan drawn at base of level

Notes: METER was leveled (to some extent) to ~70 cmbs. THE EXCEPTION BEING THE SE QUAD where the interface between trench soil and B2/2? was reached (see last form). It has been decided to screen the Southern soils for the next level, which will be brought to 90 cmbs; due to the previous presence of the trench.

Shovel Shaved ☑ Trowelled ☑ Other _____

By Quad ☑ Half-meter ☐ Meter ☐

20 cm level ☐ 10 cm level ☐ 5 cm level ☐ Natural ☐

1/4" mesh ☐ 1/8" mesh ☐ Other _____

Bag #										
Quad										
Fea #/Soil Type										
Depth Range										
Quartz										
Quartzite										
Chert										
Argillite / Slate										
Rhyolite										
Basalt										
Jasper										
Other Lithics										
Other Prehistoric										
Bone/Cal. Bone										
Shell										
Botanical										
Whiteware										
Pearlware										
Creamware										
Stoneware										
Red Earthenware										
Other Ceramic										
Kaolin										
Bottle Glass										
Window Glass										
Nails										
Other Metal										
Other Historic										
Soil Sample & Vol.										

✤ = Items pulled, see Temporary Artifact Inventory

Excavation Level Form

Project ORANGE R.R. Town ORANGE, CT.

Date 7.28.11

Site 107-15 Phase (circle) I (II) III

Excavator(s) EP BK JP Crew Chief JP Stripping ☐

Unit N7W14 ☐ = 10 cm sq.

Depth

Below Surface *52-90 cmbs

Above/Below Datum ____

Below Strat/Stripping ____

Map Key

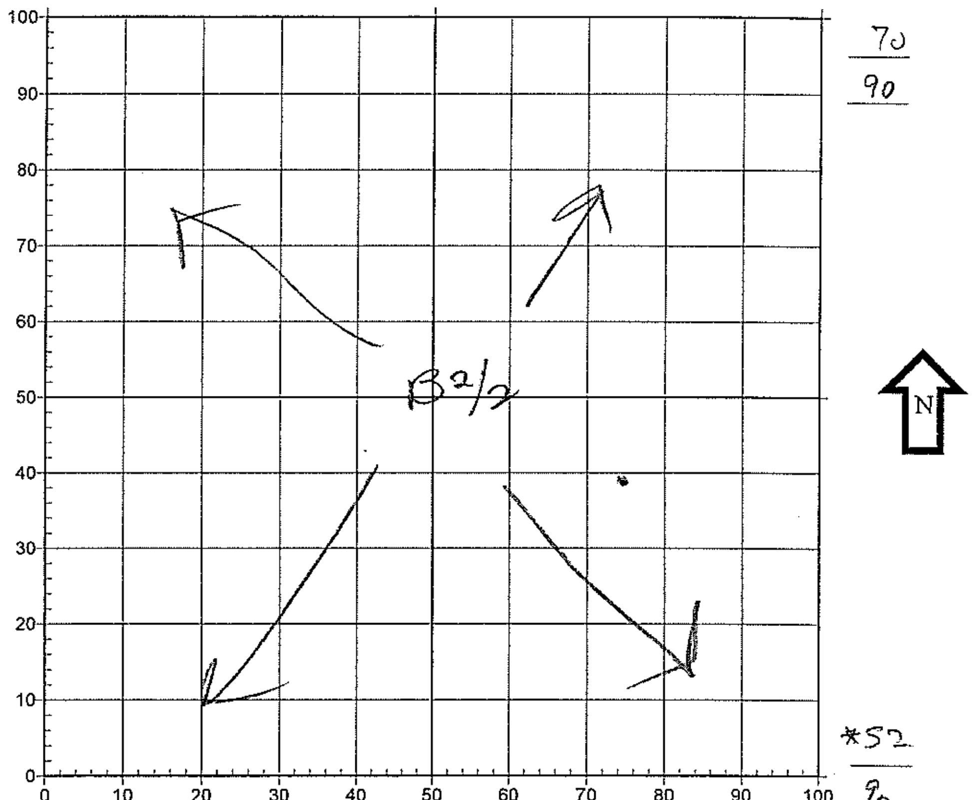
B2/2 →

7.5YR5/6 [illegible]

[illegible]

Feature # ____

70/90 (NW) 70/90 (NE) 72/90 (SW) *52/90 (SE)



Plan drawn at base of level

Notes: level was brought down to 90 and Terminated, NO cultural material was recovered.

Both East & west profiles cleaned, photoed, and drawn

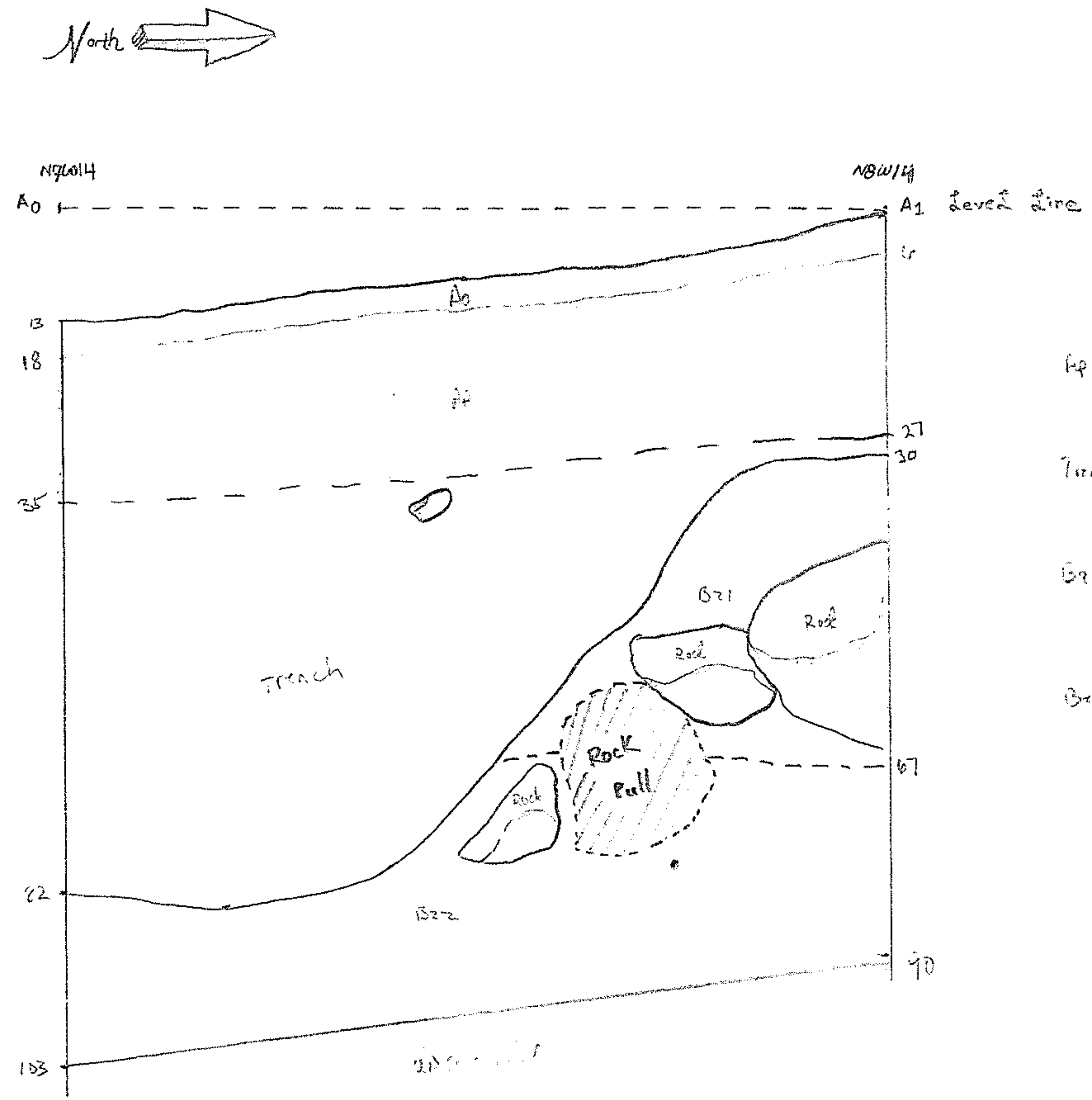
Shovel Shaved ☑ Trowelled ☑ Other ____
By Quad ☑ Half-meter ☐ Meter ☐
20 cm level ☐ 10 cm level ☐ 5 cm level ☐ Natural ☐
1/4" mesh ☐ 1/8" mesh ☑ Other ARBITRARY

Bag #										
Quad										
Fea #/Soil Type										
Depth Range										
Quartz										
Quartzite										
Chert										
Argillite / Slate										
Rhyolite										
Basalt										
Jasper										
Other Lithics										
Other Prehistoric										
Bone/Cal. Bone										
Shell										
Botanical										
Whiteware										
Pearlware										
Creamware										
Stoneware										
Red Earthenware										
Other Ceramic										
Kaolin										
Bottle Glass										
Window Glass										
Nails										
Other Metal										
Other Historic										
Soil Sample & Vol.										

✤ = Items pulled, see Temporary Artifact Inventory

107-15
P#II
ORANGE R R
ORANGE CT.
EP JP BK 7 28 11
N7W14
WEST WALL PROFILE
0 10cm 20cm

Key:



Ap 10YR3/4 Dk Yel Br V. Fine Sdy Lm w/ Grt, Grvl

Trench 10YR 3/4 Dk Yel Br V Fine Sdy Lm w/ Grt, Grvl

Bt1 7.5YR 4/6 St Brn V. Fine Lmy Sd w/ Grt, Gr, Loose Cobbles

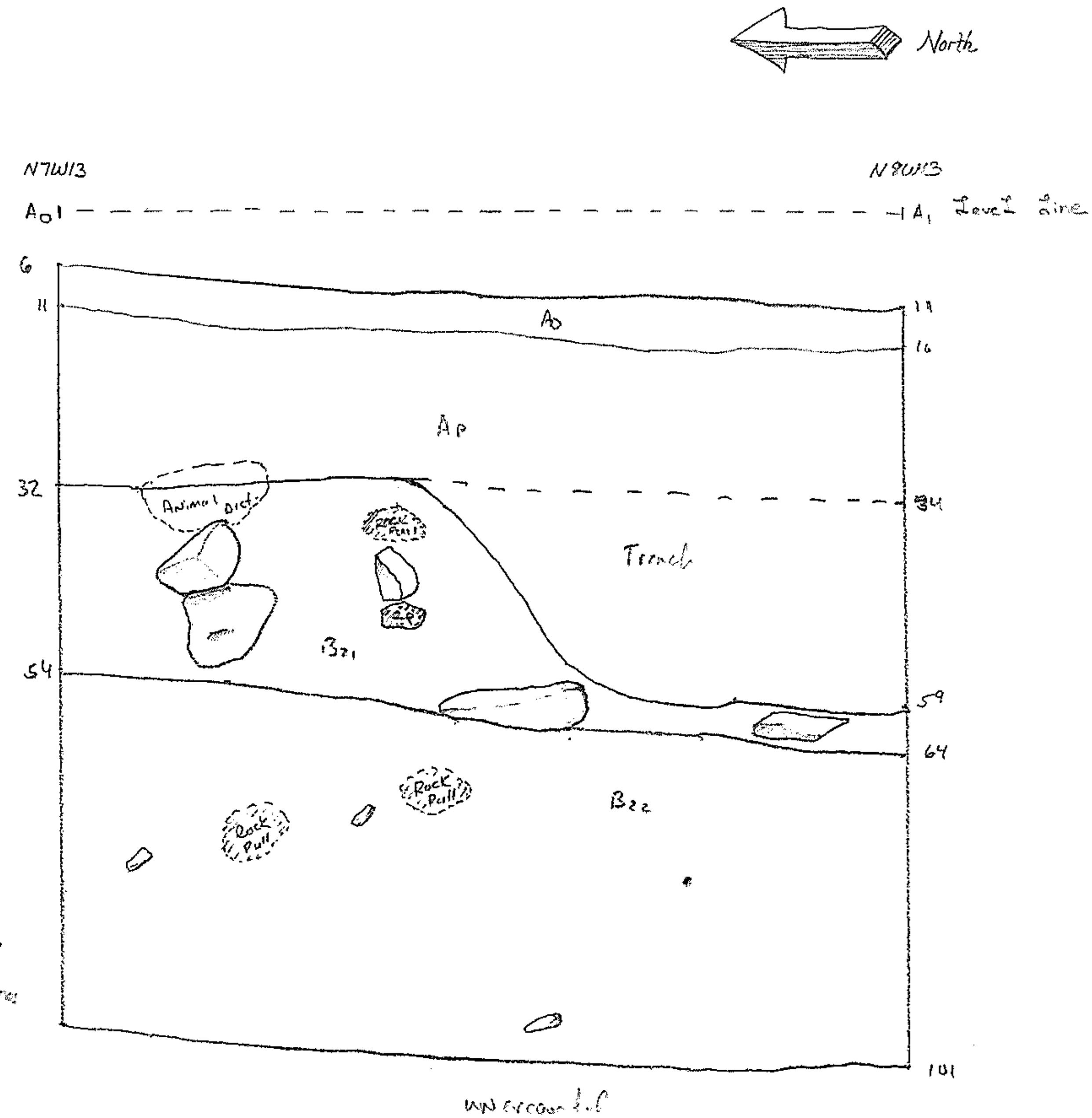
Bt2 7.5YR 5/6 St Brn V Fine Lmy Sd w/ Grt, Gr, Cobbles

15
P4 II
ORANGE R.P.
GRANGE ST.
SP TP BK
N7W14
EAST WALL PROFILE

0 10cm 20cm

Key:

- Rock



Ap - 10YR3/4 Dk Yw Bn V. Fine Sdy Lm w/ Grit, Gravel

Trench. 10YR3/4 Dk Yw Bn V. Fine Sdy Lm w/ Grit, Gravel Slight mottling w/ B21 soil

B21 - 7.5YR4/6 St. Bn V. Fine Lmy Sd w/ Grit, Gravel, Dense Cobbles

B22 - 7.5YR5/6 St Bn V. Fine Lmy Sd w/ Grit, Gravel, Cobbles

Site 107-16

Excavation Level Form

Project: ORANGE RR Town: ORANGE CT

Site: 107-16 Phase (circle): I II III Date: 8/11/11

Excavator(s): BK ET Crew Chief: JP Stripping ☐

Unit: NOW1 ☐ = 10 cm sq.

Depth

Below Surface: 0-21 cmbs

Above/Below Datum: _____

Below Strat/Stripping: _____

Map Key

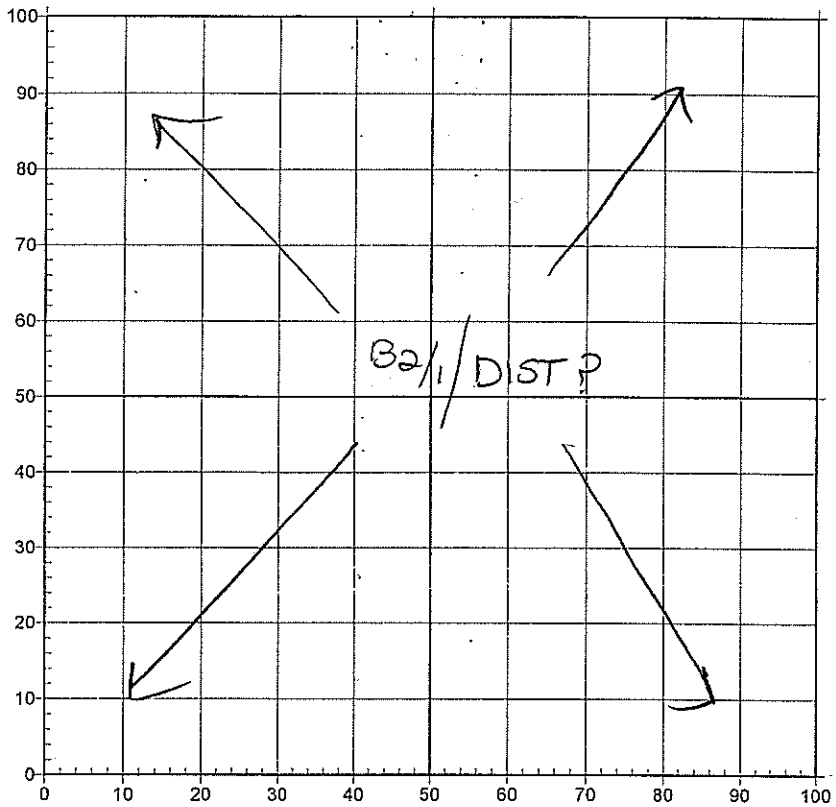
B2/1? DIST?

B2/1 10YR4/6 DK YEL BRN FN SDY LM W/ GRITTY GRAVEL MAT. W/ POCKETS

AP 10YR3/3 DK BRN FN SDY LM W/ GRITTY GRAV.

Feature # _____

0 / 19 (top left) 0 / 19 (top right)



0 / 20 (bottom left) 0 / 21 (bottom right)

Plan drawn at base of level

Notes: * h. glass + window glass in NW, NE, AND SW NOT collected.

Soil seemed to be an Ap soil but may have been a fill. B2/1/DIST soil is VERY COMPACT with small gravel and is heavily mottled.

Shovel Shaved ☑ Trowelled ☑ Other _____

By Quad ☑ Half-meter ☐ Meter ☐

20 cm level ☐ 10 cm level ☐ 5 cm level ☐ Natural ☑

1/4" mesh ☐ 1/8" mesh ☐ Other _____

Bag #	1									
Quad	56									
Fea #/Soil Type	Ap soil									
Depth Range	0-21 cmbs									
Quartz										
Quartzite										
Chert										
Argillite / Slate										
Rhyolite										
Basalt										
Jasper										
Other Lithics										
Other Prehistoric										
Bone/Cal. Bone										
Shell										
Botanical										
Whiteware										
Pearlware										
Creamware										
Stoneware										
Red Earthenware										
Other Ceramic	1 YW.									
Kaolin										
Bottle Glass										
Window Glass	1									
Nails										
Other Metal										
Other Historic										
Soil Sample & Vol.										

= Items pulled, see Temporary Artifact Inventory

Excavation Level Form

Project ORANGE R.R. Town ORANGE, CT.

Date 8-11-11

Site 107-16 Phase (circle) I (II) III

Excavator(s) BK, EP Crew Chief JP Stripping ☐

Unit N0W1

☐ = 10 cm sq.

Depth

Below Surface 19-40 cmbs

Above/Below Datum

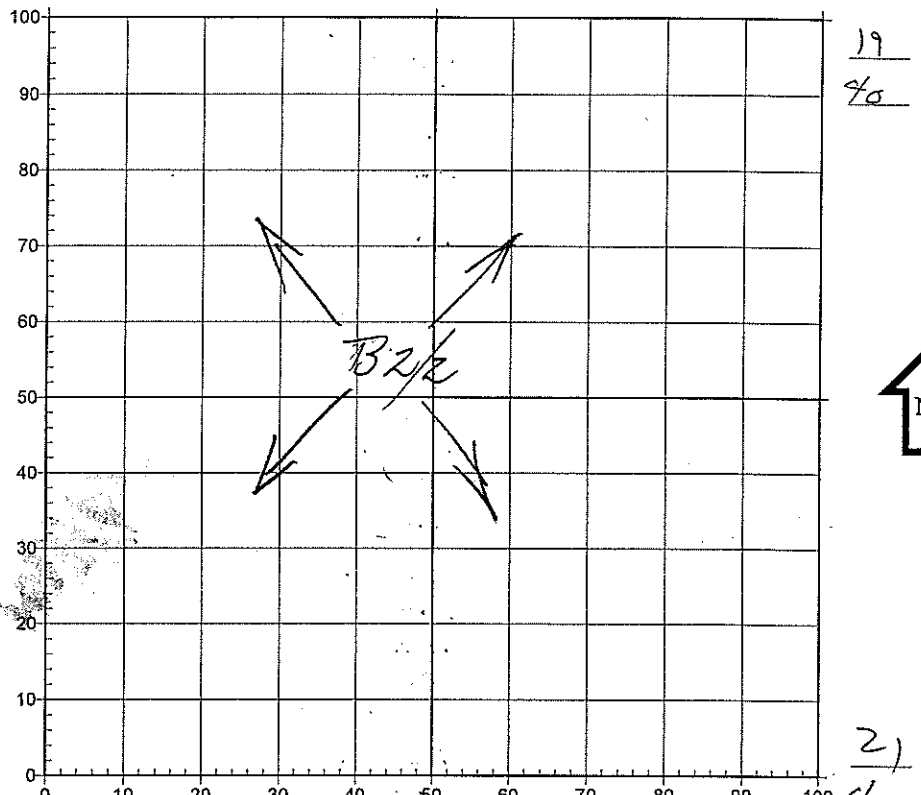
Below Strat/Stripping

Map Key

B2/2 2.5Y 6/6
OLIVE YELLOW
SILTY FINE SAND
GRT GRAV
CONTACT SOME COBB

Feature #

19/40



19/40

20/40

21/40

Plan drawn at base of level

Notes: N/CM

SOIL SEEMS TO HAVE CHANGED IN THE 35-40 RANGE TO A LIGHTER COLOR IE SUBTLE TRANSITION TO B2/2 SOIL

Shovel Shaved ☑ Trowelled ☑ Other ____

By Quad ☐ Half-meter ☐ Meter ☐

20 cm level ☑ 10 cm level ☐ 5 cm level ☐ Natural ☐

1/4" mesh ☑ 1/8" mesh ☐ Other ____

Bag #										
Quad										
Fea #/Soil Type										
Depth Range										
Quartz										
Quartzite										
Chert										
Argillite / Slate										
Rhyolite										
Basalt										
Jasper										
Other Lithics										
Other Prehistoric										
Bone/Cal. Bone										
Shell										
Botanical										
Whiteware										
Pearlware										
Creamware										
Stoneware										
Red Earthenware										
Other Ceramic										
Kaolin										
Bottle Glass										
Window Glass										
Nails										
Other Metal										
Other Historic										
Soil Sample & Vol.										

✤ = Items pulled, see Temporary Artifact Inventory

Excavation Level Form

Project ORANGE R.R. Town ORANGE, CT.

Date 8.11.11

Site 107-16 Phase (circle) I (II) III

Excavator(s) EP, BK Crew Chief JP Stripping ☐

☐ = 10 cm sq.

Unit NOW1

Depth

Below Surface 40-60cmbs

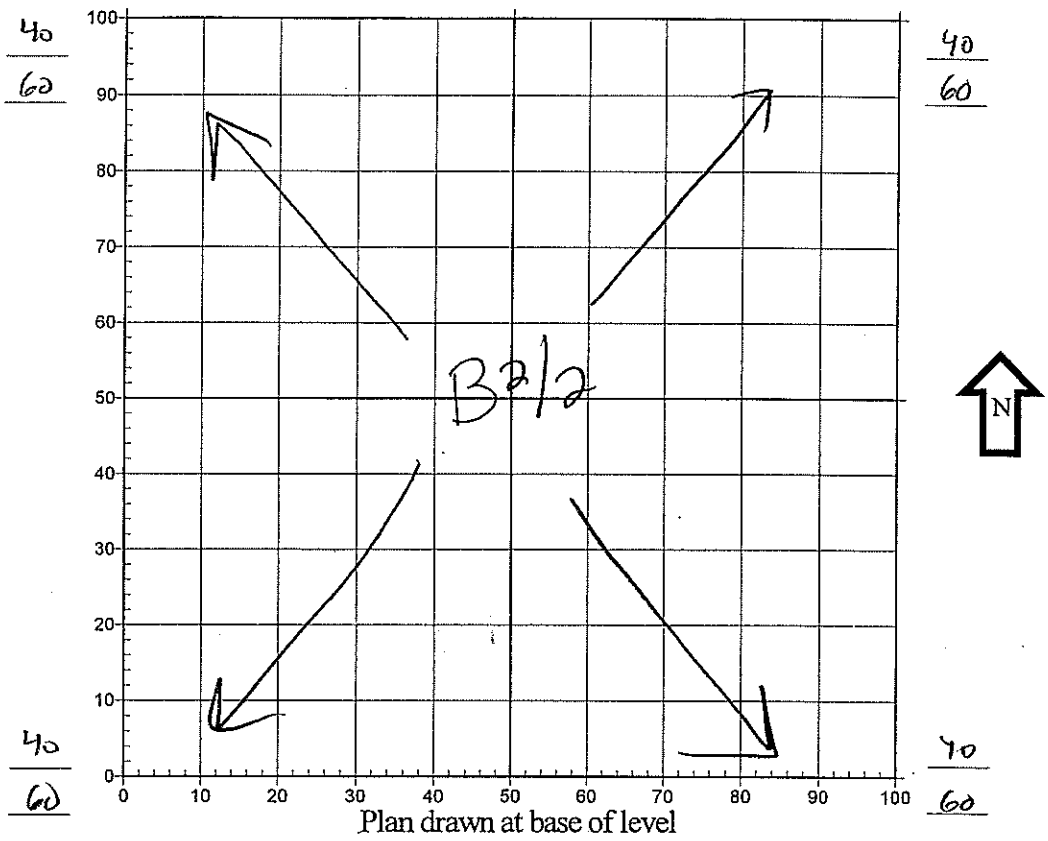
Above/Below Datum

Below Strat/Stripping

Map Key

B2/2 2.5Y6/6 OLYWSTYFN SD w/grit. grav very compact.

Feature # 40/60



Plan drawn at base of level

Notes: level was exc. to 60 mbs. No artifacts were recovered. soil Appears to be a B2/2 that is VERY compact

Shovel Shaved ☐ Trowelled ☐ Other

By Quad ☐ Half-meter ☐ Meter ☐

20 cm level ☐ 10 cm level ☐ 5 cm level ☐ Natural ☐

1/4" mesh ☐ 1/8" mesh ☐ Other

Bag #										
Quad										
Fea #/Soil Type										
Depth Range										
Quartz										
Quartzite										
Chert										
Argillite / Slate										
Rhyolite										
Basalt										
Jasper										
Other Lithics										
Other Prehistoric										
Bone/Cal. Bone										
Shell										
Botanical										
Whiteware										
Pearlware										
Creamware										
Stoneware										
Red Earthenware										
Other Ceramic										
Kaolin										
Bottle Glass										
Window Glass										
Nails										
Other Metal										
Other Historic										
Soil Sample & Vol.										

= Items pulled, see Temporary Artifact Inventory

Excavation Level Form

Project ORANGE R.R. Town ORANGE, CT.

Date 8.11.11

Site 107-16 Phase (circle) I (II) III

Excavator(s) EP. BK Crew Chief JP Stripping ☐

Unit NØW1

☐ = 10 cm sq.

Depth

Below Surface 40-60 cmbs

Above/Below Datum

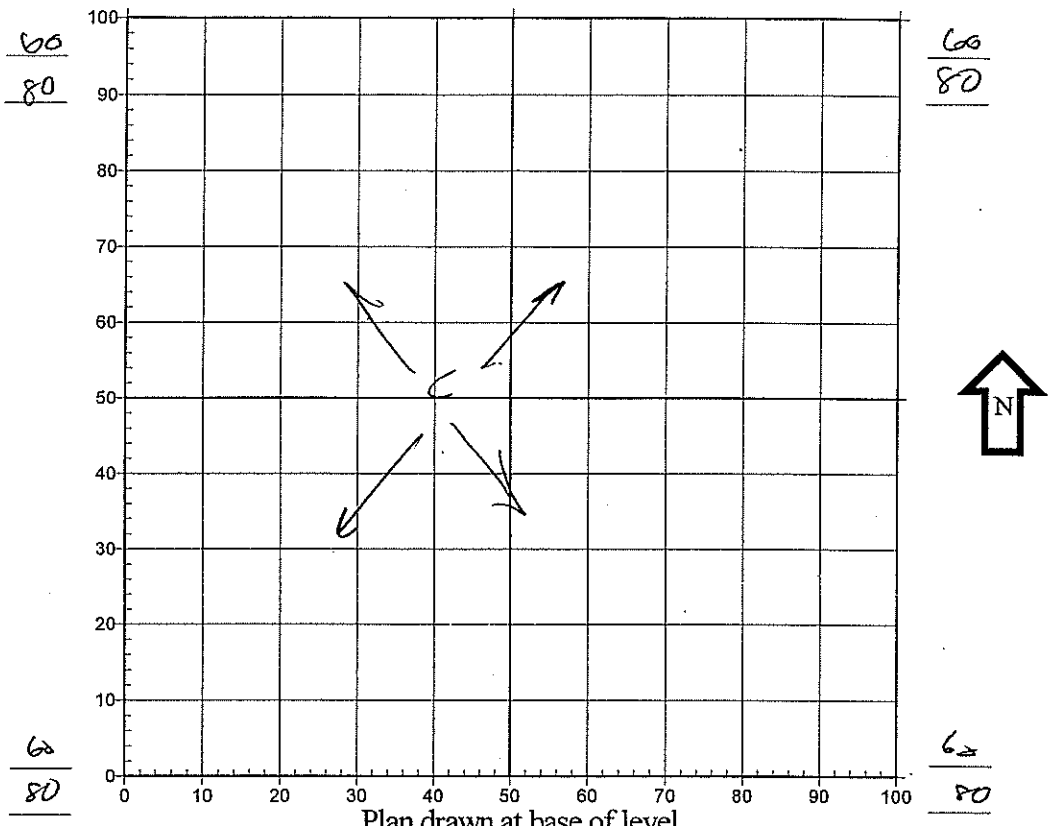
Below Strat/Stripping

Map Key

C: 2.5Y 7/3 pale yellow

Loamy V.F. sand w/ GRT w/oxidized

Feature #



Plan drawn at base of level

Notes: C soil is heavily mottled and extremely compact.

2103-2104-2105 NORTH WALL CLEANED PROFILE Photo's.

UNIT WAS TERMINATED @ THIS LEVEL.

Shovel Shaved ☐ Trowelled ☑ Other ☐

By Quad ☑ Half-meter ☐ Meter ☐

20 cm level ☐ 10 cm level ☐ 5 cm level ☐ Natural ☐

1/4" mesh ☐ 1/8" mesh ☐ Other ☐

Bag #										
Quad										
Fea #/Soil Type										
Depth Range										
Quartz										
Quartzite										
Chert										
Argillite / Slate										
Rhyolite										
Basalt										
Jasper										
Other Lithics										
Other Prehistoric										
Bone/Cal. Bone										
Shell										
Botanical										
Whiteware										
Pearlware										
Creamware										
Stoneware										
Red Earthenware										
Other Ceramic										
Kaolin										
Bottle Glass										
Window Glass										
Nails										
Other Metal										
Other Historic										
Soil Sample & Vol.										

✤ = Items pulled, see Temporary Artifact Inventory

10/-16

PH II

ORANGE RR.

ORANGE, CT.

BKEP

8.11.11

0cm 10 20cm

Key:

Ap • 10YR3/3 DKBNFNSDYLM w/ GRIT + GRAV.

Pos. DIST. • 2.5Y4/4 OLBN SLTYFNSD mot w/ 2.5Y 6/3 LTYLWSH BN SLTYFNSD

B2/1 / B2/2? • 2.5Y 6/6 OLYW SLTY FNSD w/ GRIT. GRAV ✓ VERY COMPACT

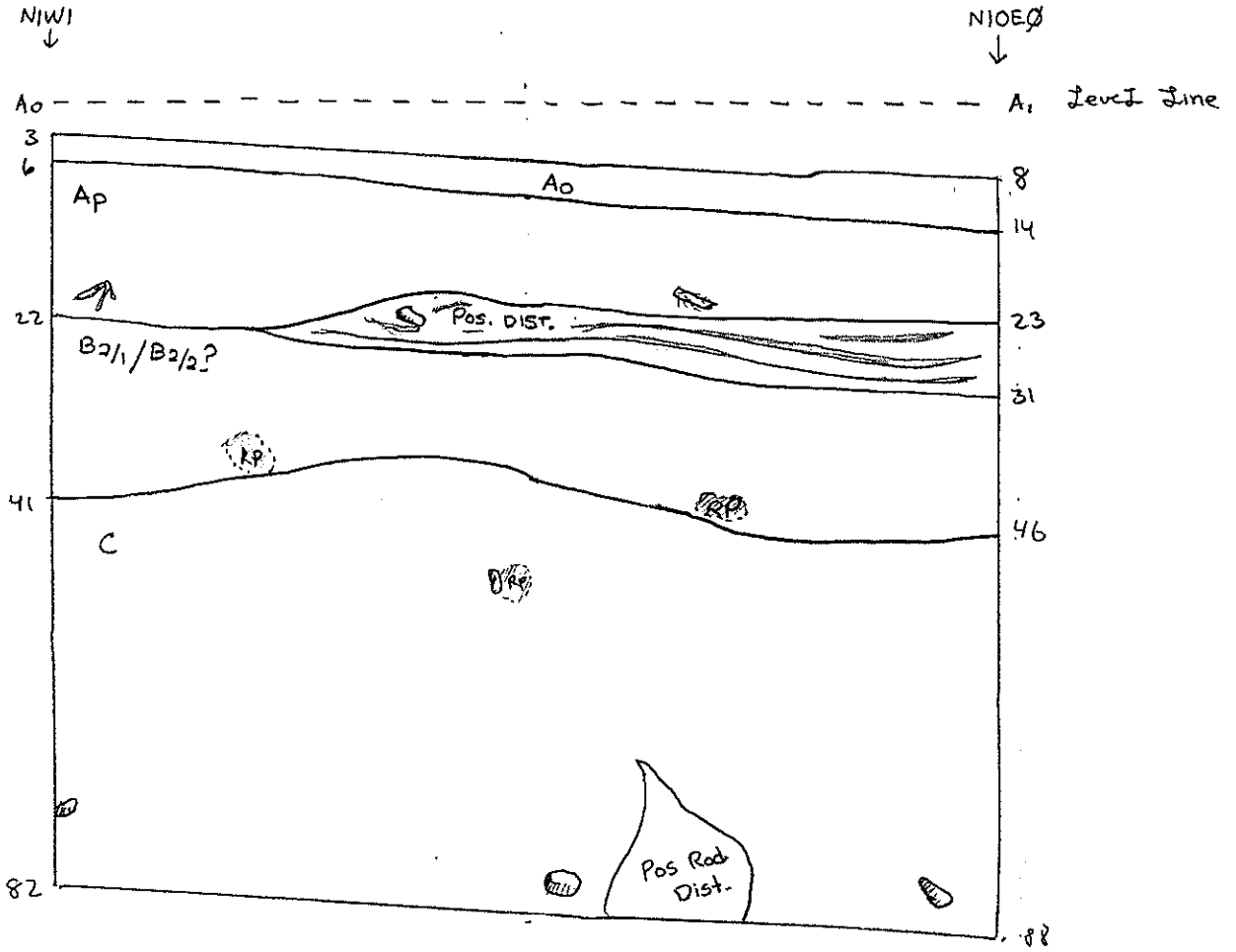
C • 2.5Y7/3 PLYW VFNSD w/ grit + oxid VERY COMPACT

N1W1 NORTH WALL PROFILE

NOTES:

• The "pos. dist" noted above almost looks like a water deposit. It may be a filled in Rodent dist?

• METER N1W1 YIELDED NO Pre-historic artifacts.



Excavation Level Form

Project ORANGE RR Town ORANGE, CT

Site 107-116 Phase (circle) I II III

Date 8-12-2011

Excavator(s) BK, MMR, EP Crew Chief JP Stripping ☐

Unit N3E0

☐ = 10 cm sq.

Depth

Below Surface 0 - 21 cmbs

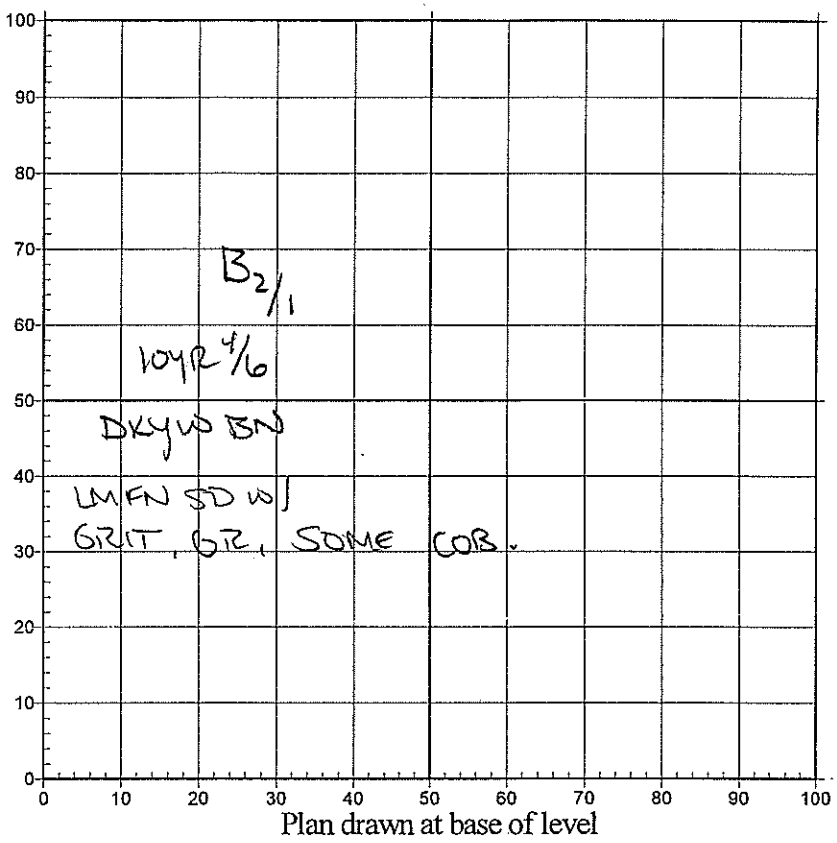
Above/Below Datum _____

Below Strat/Stripping _____

Map Key

F.11 /Ap soil -
10YR3/3 BN Fine Sly
Lm w/ Grit, Gravel

Feature # _____



Plan drawn at base of level

Notes:

Shovel Shaved ☒ Trowelled ☐ Other _____

By Quad ☒ Half-meter ☐ Meter ☐

20 cm level ☐ 10 cm level ☐ 5 cm level ☐ Natural ☒

1/4" mesh ☒ 1/8" mesh ☐ Other _____

1 PIECE CLEAR BOTTLE GLASS (MODERN) IN NW QUAD → NOT SAVED

1 PIECE CLEAR BOTTLE GLASS (MODERN) IN E QUAD → NOT SAVED

F.11 /Ap layer excavated down to B2/1 subsoil

Bag #	1									
Quad	NE									
Fea #/Soil Type	F, II, / Ap									
Depth Range	0-17									
Quartz										
Quartzite										
Chert										
Argillite / Slate										
Rhyolite										
Basalt										
Jasper										
Other Lithics										
Other Prehistoric										
Bone/Cal. Bone										
Shell										
Botanical										
Whiteware	2									
Pearlware										
Creamware										
Stoneware										
Red Earthenware										
Other Ceramic										
Kaolin										
Bottle Glass										
Window Glass										
Nails										
Other Metal										
Other Historic										
Soil Sample & Vol.										

✻ = Items pulled, see Temporary Artifact Inventory

Excavation Level Form

Project ORANGE KR Town ORANGE, CT

Date 8-12-2011

Site 107-16 Phase (circle) I (II) III

Excavator(s) BK, EP, NMR Crew Chief JP Stripping ☐

Unit N3E0

☐ = 10 cm sq.

Depth

Below Surface 17-40 cmbs

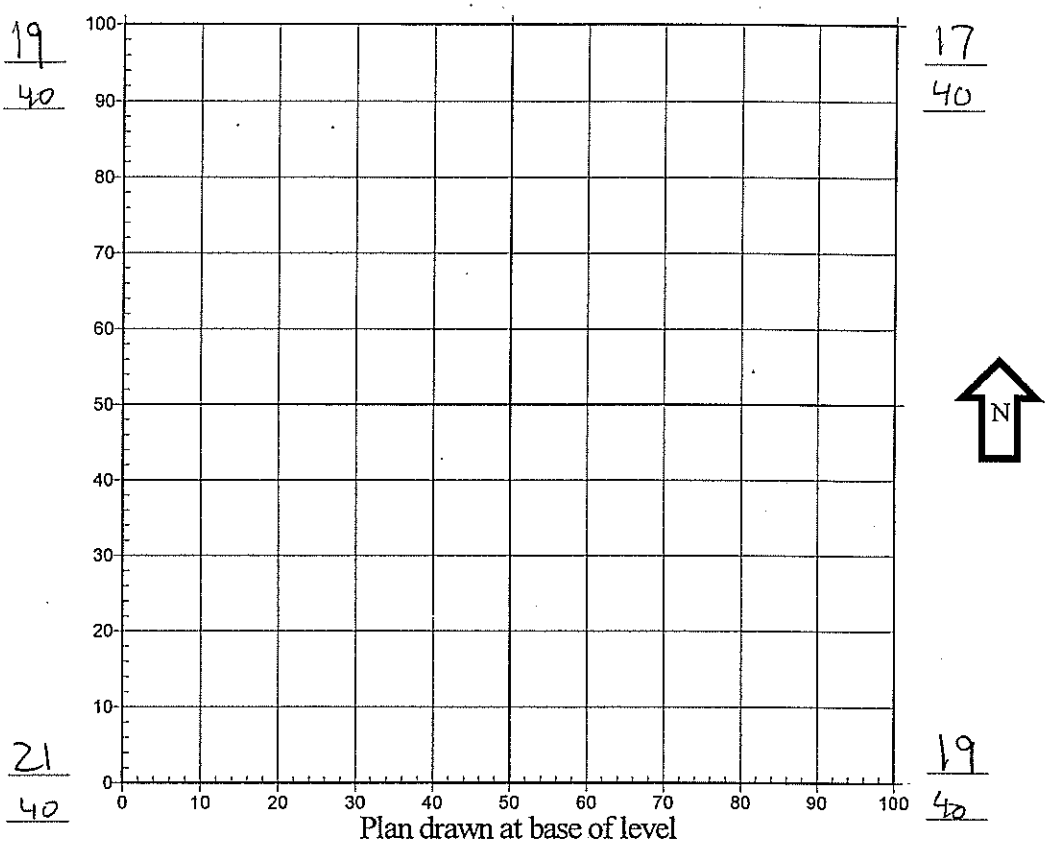
Above/Below Datum

Below Strat/Stripping

Map Key

$B2_1$ / $B2_2$ → 10YR5/6 YWISHBN FINSDYLM W/ grit. cob. compact.

Feature # _____



Plan drawn at base of level

Notes: • unit was taken down to an Even 40 cmbs.

Soil appears to be transitioning to a $b2_2$ soil.

NO CULTURAL MATERIAL FOUND

Shovel Shaved ☒ Trowelled ☐ Other _____

By Quad ☒ Half-meter ☐ Meter ☐

20 cm level ☐ 10 cm level ☐ 5 cm level ☐ Natural ☐

1/4" mesh ☒ 1/8" mesh ☐ Other _____

Bag #										
Quad										
Fea #/Soil Type										
Depth Range										
Quartz										
Quartzite										
Chert										
Argillite / Slate										
Rhyolite										
Basalt										
Jasper										
Other Lithics										
Other Prehistoric										
Bone/Cal. Bone										
Shell										
Botanical										
Whiteware										
Pearlware										
Creamware										
Stoneware										
Red Earthenware										
Other Ceramic										
Kaolin										
Bottle Glass										
Window Glass										
Nails										
Other Metal										
Other Historic										
Soil Sample & Vol.										

✤ = Items pulled, see Temporary Artifact Inventory

Excavation Level Form

Project ORANGE IV-FR Town ORANGE, CT.

Site 107 16 Phase (circle) I (II) III

Date 8/12/11

Excavator(s) EP EK · MMR Crew Chief JP Stripping ☐

☐ = 10 cm sq.

Depth

Below Surface 40-60 cmbs

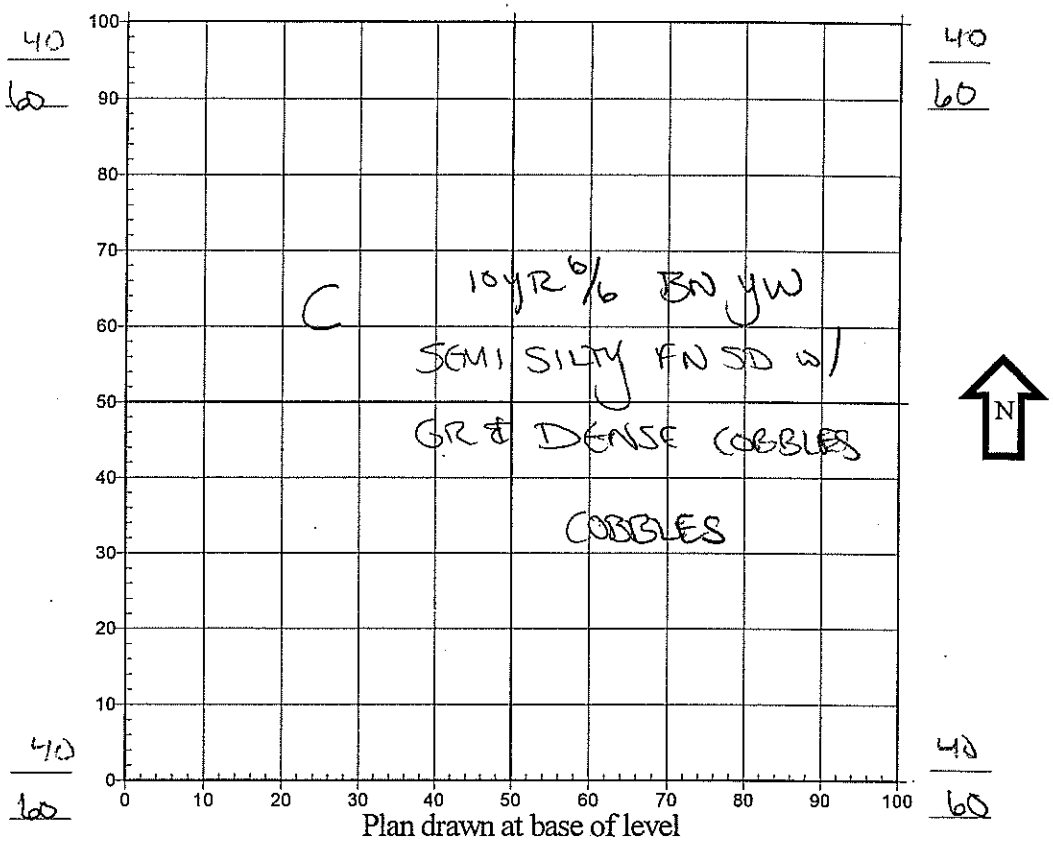
Above/Below Datum _____

Below Strat/Stripping _____

Unit N3E0

Map Key

Feature # _____



Plan drawn at base of level

Notes:

NO CULTURAL MATERIAL FOUND

Shovel Shaved ☒ Trowelled ☐ Other _____

By Quad ☒ Half-meter ☐ Meter ☐

20 cm level ☐ 10 cm level ☐ 5 cm level ☐ Natural ☐

1/4" mesh ☒ 1/8" mesh ☐ Other _____

Bag #										
Quad										
Fea #/Soil Type										
Depth Range										
Quartz										
Quartzite										
Chert										
Argillite / Slate										
Rhyolite										
Basalt										
Jasper										
Other Lithics										
Other Prehistoric										
Bone/Cal. Bone										
Shell										
Botanical										
Whiteware										
Pearlware										
Creamware										
Stoneware										
Red Earthenware										
Other Ceramic										
Kaolin										
Bottle Glass										
Window Glass										
Nails										
Other Metal										
Other Historic										
Soil Sample & Vol.										

= Items pulled, see Temporary Artifact Inventory

107-16
ORANGE R.R.
ORANGE, CT
PH II
BK-EP-MMR
N3EØ
8-12-11

EAST WALL PROFILE

North

0 cm 10 cm 20 cm

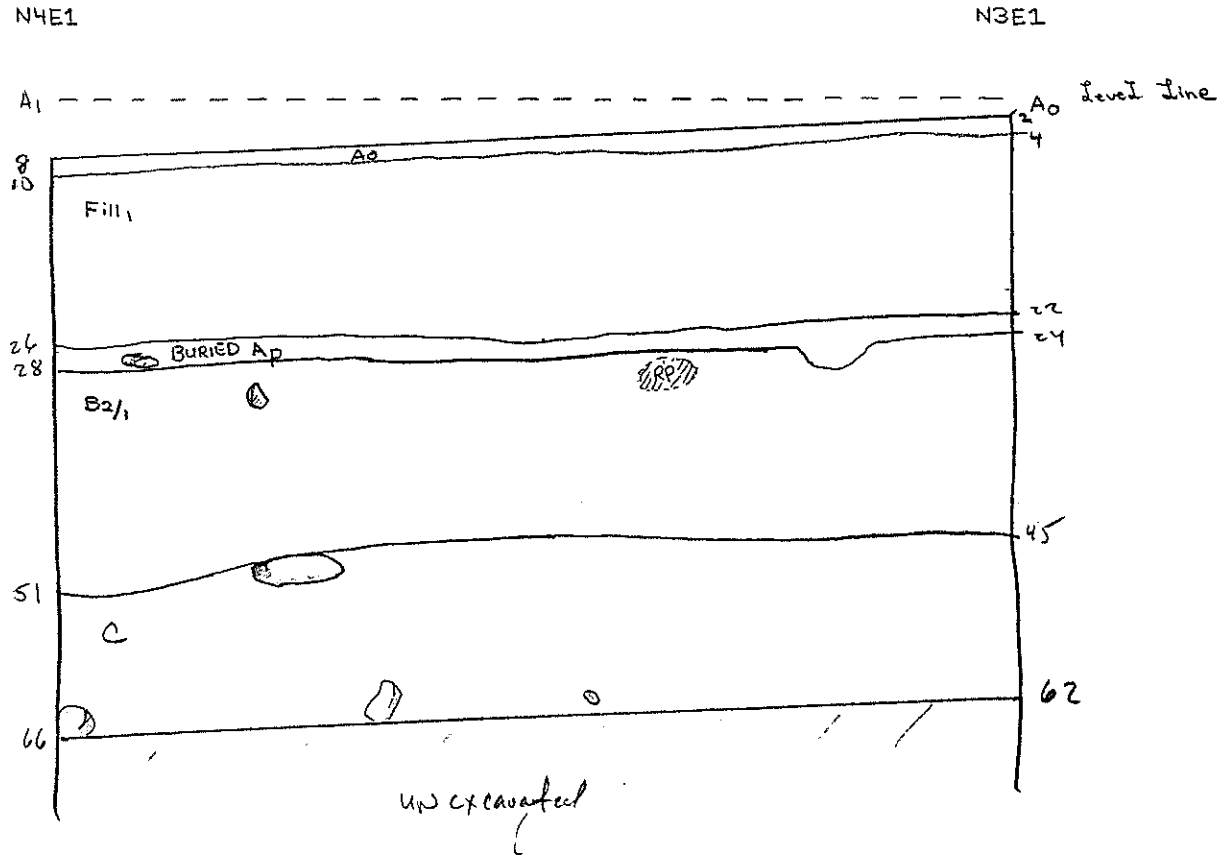
KEY:

Fill$_1$ - 10YR 4/3 BN Fine Sdy Lm w/ Grit Gravel

Ap - 10YR 3/3 DK BN Fine Sdy Lm

B21 - 10YR 4/6 DK Yel BN S.Hy Fine Sdy w/ Grit, Gr, cobbles - compact mottled w/ C soil

C - 2.5Y 5/6 LT OLBN Hy Fine Sdy w/ Grit, Gravel, Dense cobbles V. compact



APPENDIX V

Artifact Inventory Lists

Site 107-15

Archaeological and Historical Services, Inc.

Site Summary Report

Site: 107-15 05/02/12

Material	Total
Lithic	6
Historic Ceramic	2
Metal	1
Glass	12

Total Artifacts: 21

Archaeological and Historical Services, Inc.

Detailed Site Summary Report

Material	Description	Count
Lithic	quartz bifacial retouch flake	1
Lithic	quartz flake	3
Lithic	quartz possible flake	1
Lithic	quartz projectile point	1
Historic Ceramic	red earthenware (no glaze)	1
Historic Ceramic	untyped whiteware	1
Metal	iron railroad spike	1
Glass	blue-green unidentified curved glass	7
Glass	clear window glass	1
Glass	clear glass unidentified bottle	2
Glass	clear unidentified curved glass	2

Total Artifacts: 21

Archaeological and Historical Services, Inc.

Mean Ceramic Date Report

05/02/12 **Site: 107 - 15**

Class	Sum of Count	Date	Count*date
red earthenware (no glaze)	1.00		0
untyped whiteware	1.00	1860	1860

Mean Ceramic Date: 1860

Archaeological and Historical Services, Inc. — Artifact Inventory — Site: 107 - 15

05/02/12 — Site Name: — Scatter Name: —

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag #
1.00		T12-4		6-35	cm bs	Ap (Plowzone)	I		2	clear glass unidentified bottle base/body fragment *mends; with raised letters on base "918"*			1
2.00		T12-4		6-35	cm bs	Ap (Plowzone)	I		2	clear unidentified curved glass fragment			1
3.00		T12-4		6-35	cm bs	Ap (Plowzone)	I		1	clear window glass fragment			1
4.00		T12-4		6-35	cm bs	Ap (Plowzone)	I		1	quartz Lamoka-like projectile point without tip			1
5.00		T12-5		6-25	cm bs	Ap (Plowzone)	I		1	quartz bifacial retouch flake			1
6.00		N10E0	SW	10-20	cm bs	Ap (Plowzone)	II		1	quartz flake			1
7.00		N10E0	SW	10-20	cm bs	Ap (Plowzone)	II		1	red earthenware (no glaze) sherd			1
8.00		N10W5	SW	5-27	cm bs	Ap (Plowzone)	II		1	untyped whiteware sherd		1820-1900+	1
9.00		N10W15	SW	10-20	cm bs	Ap (Plowzone)	II		1	quartz flake			1
10.00		N15W1	NW	20-29	cm bs	Ap (Plowzone)	II		1	quartz possible flake			1
11.00		N20W16	SE	20-30	cm bs	Ap (Plowzone)	II		1	quartz flake			1
12.00		N7W14	SE	30-52	cm bs	Trench Fill	II		6	blue-green unidentified curved glass fragment			1
13.00		N7W14	SW	30-54	cm bs	Trench Fill	II		1	blue-green unidentified curved glass fragment			2
14.00		N7W14	SE	50-65	cm bs	Trench Fill	II		1	iron railroad spike shank			2

Site 107-16

Archaeological and Historical Services, Inc.

Site Summary Report

Site: 107-16 05/02/12

Material	Total
Lithic	3
Historic Ceramic	6
Botanical	1
Faunal	8
Glass	10

Total Artifacts: 28

Archaeological and Historical Services, Inc.

Detailed Site Summary Report

Material	Description	Count
Lithic	quartz bipolar flake	1
Lithic	quartz small angular debris	1
Lithic	quartz drill	1
Historic Ceramic	ironstone	1
Historic Ceramic	yellowware	1
Historic Ceramic	annular pearlware	1
Historic Ceramic	untyped whiteware	3
Botanical	unidentified botanical charred	1
Faunal	northern quahog (Mercenaria mercenaria)	5
Faunal	unidentified non calcined bone	3
Glass	blue-green window glass	3
Glass	clear window glass	6
Glass	clear unidentified curved glass	1

Total Artifacts: **28**

Archaeological and Historical Services, Inc.

Mean Ceramic Date Report

05/02/12 **Site: 107 - 16**

Class	Sum of Count	Date	Count*date
annular pearlware	1.00	1805	1805
ironstone	1.00	1857	1857
untyped whiteware	3.00	1860	5580
yellowware	1.00	1860	1860

Mean Ceramic Date: 1850

Archaeological and Historical Services, Inc. — Artifact Inventory — Site: 107 - 16

05/02/12 — Site Name: — Scatter Name: — Page 1

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag #
1.00		T18-12		35-60	cm bs	B22 (Lower Subsoil)	I		1	quartz drill without tip			1
2.00		T18-12		35-60	cm bs	B22 (Lower Subsoil)	I		1	charred unidentified botanical fragment	0.06 gm		1
3.00		A2		2-14	cm bs	Fill 1	I		1	untyped whiteware sherd		1820-1900+	1
4.00		N0W1	SE	0-21	cm bs	Ap (Plowzone)	II		1	clear window glass fragment			1
5.00		N0W1	SE	0-21	cm bs	Ap (Plowzone)	II		1	yellowware sherd		1820-1900+	1
6.00		N3E0	NE	0-17	cm bs	Ap (Plowzone)/Fill 1	II		1	ironstone sherd		1813-1900+	1
7.00		N3E0	NE	0-17	cm bs	Ap (Plowzone)/Fill 1	II		1	untyped whiteware sherd		1820-1900+	1
8.00		N5W1	SE	4-22	cm bs	Ap (Plowzone)	II		1	quartz small angular debris			1
9.00		N5W1	SE	4-22	cm bs	Ap (Plowzone)	II		1	quartz bipolar flake fragment *distal end shows evidence of bipolar reduction, crushing*			1
10.00		N5W5	SW	4-18	cm bs	Ap (Plowzone)	II		4	northern quahog (Mercenaria mercenaria) fragment *mends*	5.86 gm		1
11.00		N10E0	SW	0-21	cm bs	Fill 1	II		1	annular pearlware rim sherd		1790-1820	1
12.00		N10E5	SW	0-20	cm bs	Fill 1/Ap?	II		3	blue-green window glass fragment			1
13.00		N10E5	SW	0-20	cm bs	Fill 1/Ap?	II		1	clear unidentified curved glass fragment			1
14.00		N10E9	SW	0-40	cm bs	Fill 1/Ap?	II		1	clear window glass fragment			1
15.00		N10E9	SW	0-40	cm bs	Fill 1/Ap?	II		1	untyped whiteware sherd		1820-1900+	1
16.00		S5E8	SE	0-20	cm bs	Fill 1	II		4	clear window glass fragment			1
17.00		S5E8	SE	0-20	cm bs	Fill 1	II		1	northern quahog (Mercenaria mercenaria) fragment	0.56 gm		1
18.00		S5E8	SE	0-20	cm bs	Fill 1	II		3	unidentified non calcined bone fragment	1.68 gm		1

APPENDIX VI

Archaeological Site Forms

HISTORIC RESOURCES INVENTORY
PREHISTORIC ARCHAEOLOGICAL SITES
HIST-7 NEW 9/77

STATE OF CONNECTICUT
CONNECTICUT HISTORICAL COMMISSION
59 SOUTH PROSPECT STREET, HARTFORD, CONNECTICUT, 06106

FOR OFFICE USE ONLY														
Town No.:107							**Site no.:**15							
UTM:	1	8	6	6	8	0	2	0	4	5	6	8	3	7	0
QUAD: New Haven														**DISTRICT** ☐**YES** ☐**NO**
NR: ☐ACT ☐ELIG. ☐NO														
SR: ☐ACT ☐ELIG. ☐NO														

IDENTIFICATION

1. SITE NAME
107-15

STATE SITE NO.

CAS NO.

2. TOWN/CITY
Orange

VILLAGE

COUNTY
New Haven

3. STREET AND NUMBER (and/or location)
250 meters east of Marsh Hill Road and 100 meters west of Oyster River

4. OWNER(S)
Dichello Distributors
☐ **PUBLIC** ☒ **PRIVATE**

5. ATTITUDE TOWARD EXCAVATION
favorable

6. USE *(Present)*
woods

(Historic)

DESCRIPTION

7. PERIOD
☐Paleo ☐ Early Archaic ☐ Middle Archaic ☒ Late Archaic ☐ Early Woodland ☐ Middle Woodland ☐ Late Woodland ☐ Contact ☐ Unknown ☐ Other*(specify)*

8. DATING METHOD
C-14 ☐ Intuition ☐Other*(specify)*
Comparative Materials

9. SITE TYPE
☐Quarry ☐Camp ☐Rockshelter ☐Shell Midden ☐Cemetery ☐Village ☒Other*(specify)*unknown

10. APPROXIMATE SIZE AND BOUNDARIES
75 square meters estimated, unknown without Phase II Intensive Archaeological Survey

11. STRATIGRAPHY
☐Surface finds ☒Plowed ☐Not Stratified ☐Stratified ☐Major Disturbance ☐Other*(specify)*

ENVIRONMENT

12. SOIL
USDA SOIL SERIES: Agawam
CONTOUR ELEVATION: 60'
SLOPE %: ☒ 0-5 ☐ 5-15 ☐ 15-25 ☐ over 25
TEXTURE: ☐Sand ☐Clay ☐Silt ☒Other *(specify)*sandy loam
ACIDITY: ☐ less than 4.5 ☐ 4.5-5.5 ☒ 5.6-6.5 ☐ 6.6-7.3 ☐ 7.4-8.4

13. WATER
NEAREST WATER SOURCE: Oyster River
SIZE AND SPEED: small
DISTANCE FROM SITE: 100 meters
SEASONAL AVAILABILITY: year round

14. VEGETATION
PRESENT: Oak, Maple, Wild Rose
PAST: unknown

CONDITION

15. SITE INTEGRITY
☐ Undisturbed ☒ Good ☐ Fair ☐ Destroyed

16. THREATS TO SITE
☐ None Known ☐ Highways ☐ Vandalism ☒ Developers ☐ Other *(specify)* ☐ Renewal ☐ Private ☐ Deterioration ☐ Zoning ☐ Unknown

17. SURROUNDING ENVIRONMENT
☐ Open Land ☒ Woodland ☐ Residential ☐ Scattered Buildings visible from site ☐ Commercial ☐ Industrial ☐ Rural ☐ High Building Density ☐ Coastal ☐ Isolated

18. ACCESSIBILITY TO PUBLIC – VISIBLE FROM PUBLIC ROAD
☐ Yes ☒ No

RESEARCH POTENTIAL

19. PREVIOUS EXCAVATIONS

	BY WHOM/AFFILIATION	*DATE*
☐ SURFACE COLLECTED	*BY WHOM/AFFILIATION*	*DATE*
☐ POT HUNTED	*BY WHOM/AFFILIATION*	*DATE*
☒ TESTED	AHS Phase I	10/2010
	BY WHOM/AFFILIATION	*DATE*
☐ EXCAVATION	AHS Phase II	8/2011

20. PRESENT LOCATION OF MATERIALS

AHS labs, Storrs, CT.

21. PUBLISHED REFERENCES

Harper, M., T. Ives and B. Clouette (2011) Report: Phase I Archaeological Reconnaissance Survey of the Proposed Orange Railroad Station, New Haven Line, Orange, Connecticut, CTDOT State Project No. 106-120. Storrs, CT: AHS, Inc.

22. RECOVERED DATA *(Identify in DETAIL, including features, burials, faunal material, etc.)*

1 quartz Lamoka-like projectile point, 5 quartz bifacial retouch flake, and a low-density of late historic materials (not significant)

SIGNIFICANCE

23. ARCHAEOLOGICAL OR HISTORICAL IMPORTANCE

This Late Archaic period site was identified 50 meters south of 107-16, a prehistoric locus in the same project area. No disturbance other than plowing was present.

PHOTOGRAPH

PHOTOGRAPHER	**Place 35 mm contact print here**
DATE	
VIEW	
NEGATIVE ON FILE	

ADDITIONAL INFORMATION

Phase II Intensive Archaeological Survey was undertaken to collect sufficient data to make a National Register-eligibility determination. The site was found to posess an extremely low density of materials with overall poor context. No further work was recommended.

REPORTED BY

NAME Mary G. Harper	**ADDRESS** 569 Middle Tpke, Storrs, CT. 06268
ORGANIZATION AHS, Inc.	**DATE** 10/2010

FOR OFFICE USE ONLY

FIELD EVALUATION

COMMENTS

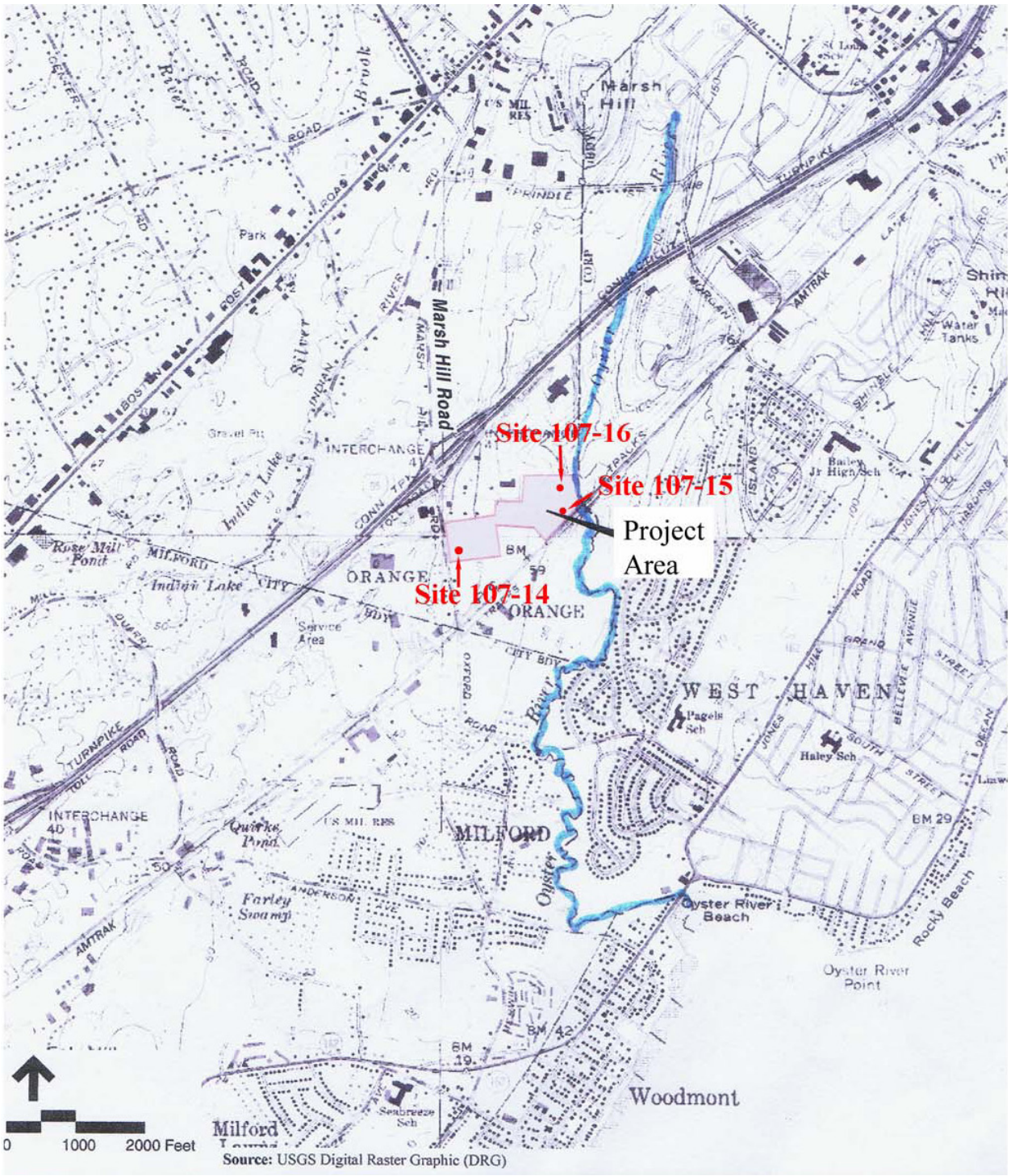


Figure 5. USGS topographic map, Ansonia quadrangle, showing archaeological sites identified in the project area.

HISTORIC RESOURCES INVENTORY
PREHISTORIC ARCHAEOLOGICAL SITES
HIST-7 NEW 9/77

STATE OF CONNECTICUT
CONNECTICUT HISTORICAL COMMISSION
59 SOUTH PROSPECT STREET, HARTFORD, CONNECTICUT, 06106

FOR OFFICE USE ONLY														
Town No.:107							**Site no.:**16							
UTM:	1	8	6	6	8	0	5	0	4	5	6	8	5	0	0

QUAD: New Haven
NR: ☐ACT ☐ELIG. ☐NO
SR: ☐ACT ☐ELIG. ☐NO
DISTRICT ☐**YES** ☐**NO**

IDENTIFICATION

1. SITE NAME
107-16

STATE SITE NO.

CAS NO.

2. TOWN/CITY
Orange

VILLAGE

COUNTY
New Haven

3. STREET AND NUMBER (and/or location)
250 meters east of Marsh Hill Road and 70 meters west of Oyster River

4. OWNER(S)
Yale University West Campus
☐ **PUBLIC** ☒ **PRIVATE**

5. ATTITUDE TOWARD EXCAVATION
favorable

6. USE *(Present)*
woods

(Historic)

DESCRIPTION

7. PERIOD
☐Paleo ☐Early Archaic ☐Middle Archaic ☐Late Archaic ☐Early Woodland ☐Middle Woodland ☐Late Woodland ☐Contact ☒Unknown ☐Other*(specify)*

8. DATING METHOD
C-14 ☐ Intuition ☐Other*(specify)*
Comparative Materials

9. SITE TYPE
☐Quarry ☐Camp ☐Rockshelter ☐Shell Midden ☐Cemetery ☐Village ☒Other*(specify)*

10. APPROXIMATE SIZE AND BOUNDARIES
25 square meters estimated, unknown without Phase II Intensive Archaeological Survey

11. STRATIGRAPHY
☐Surface finds ☒Plowed ☐Not Stratified ☐Stratified ☐Major Disturbance ☐Other*(specify)*

ENVIRONMENT

12. SOIL
USDA SOIL SERIES: Agawam
CONTOUR ELEVATION: 60'
SLOPE %: ☒ 0-5 ☐ 5-15 ☐ 15-25 ☐ over 25
TEXTURE: ☐Sand ☐Clay ☐Silt ☒Other *(specify)*sandy loam
ACIDITY: ☐ less than 4.5 ☐ 4.5-5.5 ☒ 5.6-6.5 ☐ 6.6-7.3 ☐ 7.4-8.4

13. WATER
NEAREST WATER SOURCE: Oyster River
SIZE AND SPEED: small
DISTANCE FROM SITE: 70 meters
SEASONAL AVAILABILITY: year round

14. VEGETATION
PRESENT: Maple, Oak, Russian Olive
PAST: unknown

CONDITION

15. SITE INTEGRITY
☐ Undisturbed ☒ Good ☐ Fair ☐ Destroyed

16. THREATS TO SITE
☐ None Known ☐ Highways ☐ Vandalism ☒ Developers ☐ Other *(specify)* ☐ Renewal ☐ Private ☐ Deterioration ☐ Zoning ☐ Unknown

17. SURROUNDING ENVIRONMENT
☐ Open Land ☒ Woodland ☐ Residential ☐ Scattered Buildings visible from site ☐ Commercial ☐ Industrial ☐ Rural ☐ High Building Density ☐ Coastal ☐ Isolated

18. ACCESSIBILITY TO PUBLIC – VISIBLE FROM PUBLIC ROAD
☐ Yes ☒ No

RESEARCH POTENTIAL

19. PREVIOUS EXCAVATIONS

	BY WHOM/AFFILIATION	*DATE*
☐ SURFACE COLLECTED		
☐ POT HUNTED	*BY WHOM/AFFILIATION*	*DATE*
☒ TESTED	*BY WHOM/AFFILIATION* AHS Phase I	*DATE* 10/2010
☐ EXCAVATION	*BY WHOM/AFFILIATION* AHS Phase II	*DATE* 9/2011

20. PRESENT LOCATION OF MATERIALS
AHS labs, Storrs, CT.

21. PUBLISHED REFERENCES
Harper, M., T. Ives and B. Clouette (2011) Report: Phase I Archaeological Reconnaissance Survey of the Proposed Orange Railroad Station, New Haven Line, Orange, Connecticut, CTDOT State Project No. 106-120. Storrs, CT: AHS, Inc.

22. RECOVERED DATA *(Identify in DETAIL, including features, burials, faunal material, etc.)*
1 quartz drill, 2 quartz flakes, charred unidentified botanical fragment, 5 quahog, and late historic scatter (not significant)

SIGNIFICANCE

23. ARCHAEOLOGICAL OR HISTORICAL IMPORTANCE
This small prehistoric locus sits on a terrace overlooking the Oyster River. It is 50 meters north of Site 107-15, a Late Archaic period site found in the same survey. The charred botanical fragment may suggest a feature is present, though none was identified during the survey.

PHOTOGRAPH

PHOTOGRAPHER	**Place 35 mm contact print here**
DATE	
VIEW	
NEGATIVE ON FILE	

ADDITIONAL INFORMATION

Phase II Intensive Archaeological Survey was recommended to determine whether Site 107-16 meets the criteria for listing in the National Register of Historic Places. The site expressed integrity, with the initial cultural material found in deep subsoil contexts. Phase II finds expressed an extremely low-density lithic scatter with no additional diagnostic artifacts or features. The site does not appear to meet National Register criteria. No further work recommended.

REPORTED BY

NAME Mary G. Harper	**ADDRESS** 569 Middle Tpke, Storrs, CT. 06268
ORGANIZATION AHS, Inc.	**DATE** 10/2010

FOR OFFICE USE ONLY

FIELD EVALUATION

COMMENTS

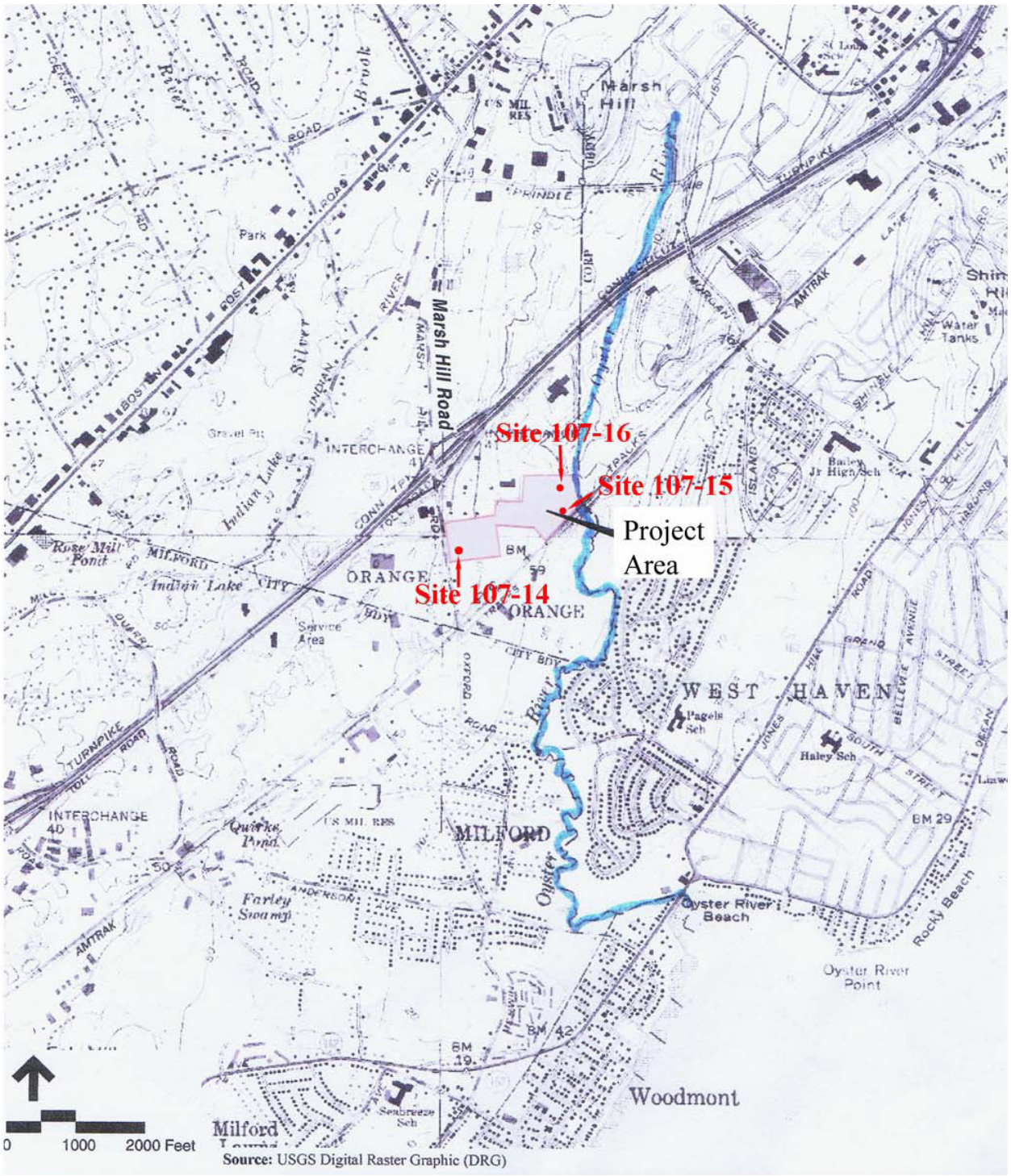


Figure 5. USGS topographic map, Ansonia quadrangle, showing archaeological sites identified in the project area.

Appendix H

Hazardous Materials Documentation

APPENDIX A

REFERENCES

References

ArcExplorer. Using town, road, hydrology, bedrock, natural diversity, water quality, and leachate and wastewater discharge layers from the CTDEP.

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DEEP, *Connecticut Aquifer Protection Areas*, January 19, 2012.

DEEP, *Connecticut Inland Wetland Soils*, *Orange, Connecticut*, October 2009.

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DEEP, *Q3 Flood Zone Data*, Orange, Connecticut, September 2010.

DEEP, *Quaternary Geology, Orange, Connecticut*, December 2010.

DEEP, 2007a *Site Characterization Guidance Document*, September 2007 updated December 2010.

DEEP, in cooperation with the U.S. Geological Survey, Connecticut Geological and Natural History Survey, *Bedrock Geology of Connecticut*, data format: shapefile, file name: bedrock, downloaded from: http://magic.lib.uconn.edu/cgi-bin/MAGIC_DBsearch2.pl?Geography=37800&Loc=0000 on 9/18/2003, scale 1:50,000, 2000.

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EDR, Certified Sanborn Map Report, Inquiry number 3415482.9: 0 Marsh Hill Road, September 21, 2012.

EDR, Historical Topographic Map Report, Inquiry number 3415482.10: 0 Marsh Hill Road, September 21, 2012.

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APPENDIX B

Previous Environmental Reports

CFG PRELIMINARY
ENVIRONMENTAL SITE ASSESSMENT

CITIZENS ENVIRONMENTAL FILE #22201124225

0 AND 55 MARSH HILL ROAD
ORANGE, CONNECTICUT
APRIL 14, 2011

PREPARED BY:

CATALYST ENVIRONMENTAL CONSULTING, INC.
7B HERMAN DRIVE
SIMSBURY, CT
(860) 651-6900
CATALYST PROJECT #11-153

Catalyst Environmental Consulting, Inc.
7B Herman Drive
Simsbury, Connecticut 06070
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April 14, 2011

Mr. Garry Kikutis
c/o Ms. Inez Robinson
RNS Citizens, NA
Real Estate Risk Services
1701 JFK Boulevard, 22nd Floor
Philadelphia, PA 19103

RE: PESA (Attachment A)
0 and 55 Marsh Hill Road, Orange, CT
RERS File #22201124225
Catalyst Project #11-153

Dear Mr. Kikutis,

Enclosed are the results of the Preliminary Environmental Site Assessment (PESA), performed in conformance with the scope and limitations of the ASTM Practice E1527-00 and the Citizens "Master Environmental Consulting Agreement," for 0 and 55 Marsh Hill Road, Orange, CT. Any exceptions to, or deletions from this practice are described in **Section 1.0** of this report. This assessment has revealed evidence of recognized environmental conditions in connection with the property as detailed in **Sections 1.1 and 1.2**. This ESA also conforms to the State of Connecticut Transfer Act Site Assessment (TASA) Guidelines.

Please feel free to contact us if you have any questions or require any explanations or clarifications.

Sincerely,

Peter J. Prey
Environmental Scientist

Reviewed by:

Mark A. Gottlieb, LEP
President

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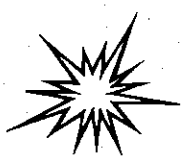
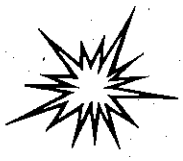




1.0 EXECUTIVE SUMMARY

1.1 Purpose

In April of 2011 Catalyst Environmental Consulting Inc. (Catalyst) conducted a CFG Preliminary Environmental Site Assessment of 0 and 55 Marsh Hill Road in Orange, CT. This assessment was performed in conformance with the scope and limitations of ASTM Practice E1527-00 and the Citizens "Master Environmental Consulting Agreement." The assessment also conforms to the State of Connecticut Guidelines for Transfer Act Site Assessments.

The purpose of this assessment was to determine the likelihood of an existing or historical release, or a threatened release, of hazardous substances or petroleum products into structures at the site, or into the soil, groundwater or surface water at the site. In addition, an opinion was formed regarding the status of the site as an "Establishment" as defined in Connecticut General Statutes (Conn. Gen. Stat.) §22a-134. Limitations to our work product are discussed in **Section 8.0**.

1.2 Scope of Services

The Scope of Services for this project included:

a site visit,
a historical review of the site usage,
a review of Federal, State, and Municipal records, and
the generation of a report.

This report was prepared by Peter Prey, Environmental Professional, and exceeds the standards set forth in ASTM E1527-00 as follows:

review of additional databases and files, and
additional historical research.

1.3 Findings

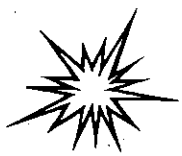
- The 28.88-acre site was originally occupied by a dwelling, a barn and farmland. The site has been occupied by a beverage distribution and can reclamation facility since 1980. Currently the site consists of approximately 21 acres of commercially developed land, and approximately 8 acres of vacant land.

- The site is listed on the State UST, LUST and Spills databases. See AOC list below for additional information.

- A fleet vehicle repair garage has been present at the southwesternmost portion of the site since 1980. Auto body repairs have also been conducted in the repair garage since the mid- to late-1980s.

- A list of the Areas of Concern (AOCs) identified at the site are detailed below. See **Figure 3** in **Attachment 1** for a copy of the site plan. AOCs 1-7 are pertain to the repair garage and AOCs 8-14 pertain to other AOCs located throughout the site.

#	AOC	DESCRIPTION
1	Repair Garage	• Automotive and body repairs conducted • Paint spray booth and vent present • Spray gun cleaner present • Storage of 55-gallon drums of hazardous waste, waste oil, engine oil, antifreeze and auto body related materials • Minor to heavy floor staining noted throughout
2	Former Gasoline and Diesel USTs	• Two 10,000-gallon diesel USTs removed in 1997 • One 2,500-gallon gasoline UST removed in 1990 • Limited to no clearance sampling data
3	Oil-Water Separator System	• Vehicle wash bay formerly present in auto body bay • Sealed floor drain formerly discharged to a an abandoned 5,000-gallon oil-water separator on garage's southwestern side
4	Repair Garage Septic System	• The repair garage has been served by a septic system since its construction in 1980 • One slop sink with minor staining in garage
5	Pump Island	• Diesel and gasoline pump island located east of repair garage • Minor to moderate staining noted
6	10,000-Gallon AST	• One 10,000-gallon gasoline and diesel AST located northeast of the repair garage • Piping from the AST to the pump island is underground • Scrap metal dumpster also stored in the area
7	2009 Diesel Fuel Spill	• 09/29/09 - 5 gallon spill of diesel fuel due to overflow of the 10,000-gallon AST
8	Disposal Areas	• Several disposal areas located at the northern portion of the site • Contents include piles of soil, asphalt, brick, concrete and asphalt shingles, and discarded televisions, motor oil cans, furniture, tires and rusted metal • Area of disturbed soil noted in 1970 aerial photograph
9	Former Agricultural Use	• Site occupied by a farm and farmland until 1980
10	Former Septic System	• Distribution warehouse formerly served by a septic system until the mid to late-1980s, when it was connected to the municipal sewer
11	Detention Basins	• Catch basins present throughout the site discharge to one of two detention basins located at the site's eastern portion • Basins drain to an off-site gully
12	Fork Lift Battery Charging Area	• Battery charging and cleaning area present in the northwest corner of the distribution warehouse • Minor to moderate floor staining noted
13	Former Waste USTs	• 1,000-gallon and 3,000-gallon "waste" USTs removed in 1997; tanks reported to have been septic tanks for the distribution warehouse and repair garage



#	AOC	DESCRIPTION
14	Diesel Generator	• 275-gallon diesel AST present in utility room at southeast corner of distribution warehouse • Moderate floor staining noted in the adjacent generator room • Former 275-gallon diesel AST located outside generator room with buried fuel lines running to building
15	Drinking Water Well	• Can reclamation warehouse served by a drinking water well

Potential Off-Site Sources of Contamination

Numerous potentially high-risk businesses are present in the immediate site vicinity; however, those to the west, south and southeast are not likely to have an impact on the site, as they are located down-gradient of the site.

The most-significant potentially high risk property is the northern abutter (11 Frontage Road/95 Marsh Hill Road). This property, which is topographically cross-gradient of the site, was previously occupied by a trucking terminal and Aviation Components Support Co., a helicopter maintenance facility. The property is listed on the State Site Discovery and Assessment database, and the Spills and UST databases.

1.4 Conclusions

1.4.1 Citizens Risk Rating

According to Citizen's Risk Rating the site is a **HIGH RISK** property.

1.4.2 Property Transfer Requirements

The site is an "Establishment" pursuant to Conn. Gen. Stat. §22a-134 *et seq.* and subject to the CT Transfer Act, due to the auto body repair shop that has operated at the site since the mid- to late-1980s.

1.5 Recommendations

1) A Phase II ESA is recommended for the site to determine if there has been an impact to the site's soil and groundwater. The estimated cost is $25,000 to $35,000.

As an "Establishment," transfer of the property would require conducting a Phase II ESA in accordance with the CT DEP Site Characterization Guidance Document. Based on the outcome of the Phase II ESA, additional assessment and possible remediation would be required under the Transfer Act. The price for the additional assessment and possible remediation would be largely dependent on the results of the Phase II.

2.0 SITE DESCRIPTION

2.1 Site Location and Legal Description

The subject site, 0 and 55 Marsh Hill Road in Orange, CT, is 350 ft. south of the intersection of Marsh Hill Road and Salemme Street. The 28.88-acre site is identified in the Orange Assessor's records as **Map 3, Block 1, Lots 1** and **10**; refer to **Figures 1-4** in **Attachment 1**. The Orange Town Clerk's office records identify the site as **Volume 274, Page 227 (Lot 10), and Volume 277, Page 688 (Lot 1)**.

2.2 Site and Vicinity Characteristics

The site, which is located in a mixed-use commercial/light industrial and residential area of Orange, is bounded by Marsh Hill Road to the west and railroad tracks to the southeast. Numerous potentially high-risk businesses abut the site in all directions; however, those to the west, south and southeast are not likely to have an impact on the site, as they are located down-gradient of the site.

The most-significant potentially high risk property is the northern abutter (11 Frontage Road/95 Marsh Hill Road). This property, which is topographically cross-gradient of the site, was previously occupied by a trucking terminal and Aviation Components Support Co., a helicopter maintenance facility. The property is listed on the State Site Discovery and Assessment database, and the Spills and UST databases.

See the enclosed **Environmental FirstSearch Report** in **Attachment 3.**

2.3 Site Improvements

2.3.1 Structures & Improvements

The site is currently occupied by Dichello Distributors, a beverage distribution and can recycling facility. Valenti Leasing Inc. also operates a fleet vehicle and auto body shop for Dichello. Site improvements include three buildings, paved parking lots and landscaping. The buildings include the following:

1) *Distribution Warehouse and Offices (55 Marsh Hill Road, Lot 10)*: The 186,826-square-foot, one-story, steel-truss warehouse was constructed on a concrete slab in 1980.

2) *Automotive Repair Garage (55 Marsh Hill Road, Lot 10)*: The 6,400-square-foot, one-story, steel-truss automotive repair garage was constructed on-slab in 1980. An auto body repair bay with a paint booth is present in the garage. Adjacent to the repair garage is a gasoline and diesel pump island, also constructed in 1980.

3) *Recycling Warehouse (0 Marsh Hill Road, Lot 1)*: The 38,400-square-foot, one-story, steel truss warehouse was constructed on a concrete slab in 1987.

See **Photographs 1-5** in **Attachment 2**, and **Figure 3** in **Attachment 1** for the site plan.

2.3.2 Roads

The site is accessed via a paved driveway at the site's westernmost portion. Paved parking areas surround the distribution warehouse, and are present on the northeastern, northwestern and southwestern sides of the recycling warehouse, and on the northwestern and southwestern sides of the repair garage. The northernmost parking lot is used for employee parking and the storage of semi-trailers. Paved roadways also connect between the three buildings. Pavement in the parking areas and roadways was in fair condition with numerous cracks and repair patches noted.

A total of twenty loading bays and twelve mechanical lift docks are located on the northeastern and southeastern sides of the distribution warehouse. Nine loading bays and eight mechanical lift docks are also located on the northeastern and southwestern sides of the recycling warehouse.

No exterior storage areas are present at the site; however, a large, empty fenced-off trailer storage area is present at the southeastern corner of the distribution warehouse. Several areas of dumping were noted in the north end of the site (see **Section 7.6**).

See **Figure 3** in **Attachment 1** for a site sketch.

2.3.3 Heating Source

All three of the buildings are and have been heated with ceiling-suspended natural gas-fired furnaces since their construction. Heat for the repair garage is supplemented with a waste oil burner supplied from an AST. Natural gas meters are located at the western corners of the three buildings.

No evidence of prior heating sources (i.e. ASTs, USTs, vent pipes or fill pipes) was noted during the site inspection. According to Mr. Frank Pascale, the Director of Facility and Grounds for Dichello Distributors, no fuel oil USTs have been present at the site.

2.3.4 Sanitary Sewer Disposal

The recycling warehouse has been connected to the municipal sewer system since its construction in 1987. The distribution warehouse is currently connected to the

municipal sewer system, but was served by an on-site septic system from 1980 to 02/05/90. The repair garage has been served by a septic system since 1980.

2.3.5 Water Supply

The distribution warehouse and the repair garage have been served by the municipal water system since 1980. The recycling warehouse is served by a drinking water well located approximately 75 ft. north of the building.

2.4 Information from Site Contacts

Mr. Frank Pascale, Director of Facility and Grounds for Dichello Distributors, was interviewed on April 4, 2011, during the site inspection. According to Mr. Pascale, the only oils, chemicals and wastes handled at the site are associated with the repair garage. They consist of engine oil, antifreeze, auto body paints and thinners, and waste oil and antifreeze. He noted that less than 50 gallons of hazardous waste (waste spray gun cleaner fluid) is generated per year. He also noted that waste oil generated from fleet repairs is burned to supplement the natural gas heat for the garage. Additional information supplied by Mr. Pascale is discussed in **Section 7.2-7.4**.

According to Mr. Pascale, there are no issues at the site regarding lead-based paint or asbestos.

2.5 Present Ownership and Use

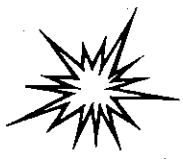
The current owner of record is Dichello Distributors Inc., as indicated by records in the Orange Town Clerk's office (**Volume 274/Page 227** and **Volume 277/Page 688**). The site is currently occupied by Dichello Distributors Inc., a beverage distribution facility, and Valenti Leasing Co. Inc, the fleet vehicle repair shop.

2.6 Adjoining Properties

The site, which is located in a mixed-use industrial and residential area of Orange, is bound by Marsh Hill Road to the west, and railroad tracks to the southeast. Site abutters include dwellings, Bright Horizons-Yale West Campus and vacant land to the north; Remarketing Solutions and Roebic Laboratories (supplier of plumbing treatments and cleaners) to the south; Krell Industries Inc. (manufacturer of audio equipment) and Magna Rosetta Ceramica (a tile and granite wholesale distributor) to the southeast; and Southern Connecticut Gas Company, Tamaro Oil Company and Executive Campus Business Park (a commercial and light-industrial park) to the west.

2.7 Environmental Permits and/or Violations

There are no current environmental violations or permits associated with the site. According to Mr. Frank Pascale, Director of Facility and Grounds for Dichello Distributors, the site is a Conditionally Exempt Small Quantity Generator (CESQG), due to the hazardous waste generation of the repair/auto body garage, which consists of



flammable wastes (paints) and paint thinners. Other wastes generated on site include waste oil and antifreeze from fleet vehicle repairs. Housekeeping at the site was good, as evidenced by neatly stored oils, chemicals, and wastes, no floor or ground staining, and no exterior storage areas.

Two temporary hazardous waste generator identification numbers are associated with the site (#CTP000011043, Dichello Distributors, and #CTP000008901, Valenti Leasing Auto Body). Based on review of CT DEP hazardous waste summary reports, Dichello Distributors generated 2,600-gallons of waste flammable liquid on 05/15/1990. This date corresponds with the removal of a 2,500-gallon gasoline UST.

The hazardous waste summary report for Valenti Leasing lists nine shipments of waste paint related materials between 02/07/89 and 03/08/90. The quantity of the wastes ranged from approximately 12 kg to 147 kg.

See **Attachment 7** for copies of the hazardous waste summary reports.

3.0 SITE HISTORY

3.1 Information from Site Operator

Mr. Frank Pascale, Director of Facility and Grounds for Dichello Distributors, was interviewed on April 4, 2011, during the site inspection. Mr. Pascale stated that Dichello Distributors has occupied the site since 1980, and that the site was vacant land prior to 1980. According to Mr. Pascale, the only oils, chemicals and wastes handled at the site are associated with the repair garage. They consist of engine oil, antifreeze, auto body paints and thinners, and waste oil and antifreeze. He noted that less than 50 gallons of hazardous waste (waste spray gun cleaner fluid) is generated per year. He also noted that waste oil generated from fleet repairs is burned to supplement the natural gas heat for the garage.

3.2 Previous Environmental Reports

No previous environmental reports were provided to Catalyst for review.

3.3 Building Department Records

Files at the Orange Building Department were reviewed for the site. Based on review of these documents, a dwelling (35 Marsh Hill Road) and a barn were at one time located at the site's western portion, along Marsh Hill Road. The following relevant additional information was noted:

Date	*Permit #*	*Permit Description*
07/18/79	7244	Construction of a 168,418 sq. ft. warehouse and distribution center
08/02/79	--	Site plan showing a house and barn at the site's western portion
09/19/79	5153	Installation of a septic system for the distribution warehouse
04/07/80	7244	Certificate of Occupancy issued for the warehouse and distribution center
05/06/80	7318	Construction of a 6,400 sq. ft. truck maintenance and wash building
05/29/80	--	Letter from the CT DEP allowing a truck washing system at the site, but requesting the installation of a holding tank
09/19/86	8520	Construction of a 160 ft. x 240 ft. beverage recycling warehouse served by municipal sewer
01/09/87	--	Approval from the Connecticut Department of Transportation for Dichello Distributors' detention pond to drain onto the railroad right of way
07/07/87	123523	Drinking water well installed for the recycling warehouse
09/03/87	8526	Certificate of Occupancy issued for the recycling warehouse
07/11/90	--	Documentation for the removal of a 2,500-gallon tank by Liberty Auto & Electric
03/21/97	10741	Installation of a ConVault 10,000-gallon diesel and gasoline AST

See **Attachment 5** for copies of the related documents.

3.4 Title Records

A chain of title was obtained from records in the Orange Town Clerk's office. This chain of title is to be used for purposes of an Environmental Site Assessment only and is not

suitable for real estate transactions. No environmental liens were noted from 01/01/1980 through 04/04/11.

Based on the title search and information from the Orange Assessor's office, the site consists of two lots (Lots 1 and 10).The results of the title search were as follows:

Date	*Vol:Pg.*	*Grantor*	*Grantee*	*Deed Type*
0 Marsh Hill Road (Lot 1)				
11/07/49	156:507	Estate of Alesandro Salemme	Philomena Salemme	Probate
06/09/81	277:690	Philomena Salemme	Joseph Salemme, et. al.	Certificate of Devise
06/10/81	277:691	Joseph Salemme, et. al.	Dichello Distributors Inc.	Quit Claim
55 Marsh Hill Road (Lot 10)				
07/15/58	179:96	Charles J. Collins	Vallerie M. Collins	Probate
06/15/64	206:144	Estate of Valerie M. Collins	John Jerome Collins and Charles Collins	Probate
02/17/78	265:640	Estate of Charles D. Collins (a.ka. Charles Collins)	John J. Collins (a.k.a. John Jerome Collins)	Probate
03/06/79	269:79	John Jerome Collins	Firestone Properties	Quit Claim
05/07/80	274:227	Firestone Properties	Dichello Distributors Inc.	Quit Claim

A copy of a 1979 site survey obtained from the Town Clerk's office is enclosed in **Attachment 5**. The survey depicts a dwelling and barn at the site's western portion. No environmental liens, Activity and Use Limitations (AULs), or deed restrictions were identified for the site.

3.5 Local Records

A review of Orange Town Hall records was conducted by Peter Prey of Catalyst Environmental Consulting Inc. The following environmentally related information was obtained.

3.5.1 Fire Department

Files at the Orange Fire Marshal's office contained 1986 and 1990 CT DEP UST registrations, a 1997 CT DEP spill report, and a 2009 chemical inventory for the repair garage. The following information was noted on the UST registrations:

Dichello Distributors (55 Marsh Hill Road, Orange, CT)					
Tank ID	Capacity (gals.)	Contents	Construction	Installed	Status
A1	10,000	Fuel Oil	Steel	03/1980	Removed
A2	10,000	Fuel Oil	Steel	03/1980	Removed
A3	2,500	Gasoline	Steel	03/1980	Removed
B4	1,000	Waste	Steel	08/1980	Removed
C5	5,000	Waste	Steel	08/1980	Removed
D6	3,000	Waste	Steel	08/1980	Removed

Note: The type of waste was not specified.

Mr. Frank Pascale, Director of Facilities and Grounds for Dichello Distributors, was queried regarding the USTs. According to Mr. Pascale, the two 10,000-gallon fuel oil USTs were actually diesel USTs for fuel trucks. He noted that to the best of his knowledge the 3,000-gallon waste tank was most likely the septic system tank for the distribution building and the 1,000-gallon tank was the septic tank for the repair garage. The 3,000-gallon tank he believed to be the former oil-water separator for the former wash bay in the repair garage.

According to the 04/16/97 spill report, the two 10,000-gallon USTs were removed from the site. No sheens or free product were noted; however, total petroleum hydrocarbons (TPH) were detected in the soil at 780 parts per million (ppm). An unspecified amount of contaminated soil was removed. A laboratory report for a final clearance sample was also noted; TPH was detected at 72 ppm. Prior to the excavation of the contaminated soil, storm water filled the tank grave and 6 ppm of TPH were detected in the water. The water was treated with an air stripper and discharged as storm water.

The 2009 repair garage inventory contained a building sketch showing the locations of the following chemicals, oils and wastes in the garage:

275 gallons of engine oil
500 gallons of waste oil
55 gallons of antifreeze
120 lbs of Mobil Line H.D. Plus
55 gallons of Zep 940E Cleaner
55 gallons of Mobil ATF
8 gallons of thinner
3 gallons of primer/sealer
2 gallons of acrylic enamel
2 gallons of Variprime
55-gallons of waste thinner/paint
1 gallon of Fiber Strand Filler

See **Attachment 5** for copies of the relate documents.

3.5.2 Assessor's Office

The site is identified in the Orange Tax Assessor's records as 0 and 55 Marsh Hill Road, **Map 3, Block 1, Lots 1 and 10**, respectively. A copy of the assessors' map is enclosed as **Figure 2** in **Attachment 1**. The current owner of record is Dichello Distributors Inc. According to the cards, the 28.88-acre site is improved with a distribution warehouse (c. 1980), and an automotive repair garage (c. 1980) on Lot 10, and a recycling warehouse (c. 1987) on Lot 1.

No historical assessor's cards were on file for the site.

See **Attachment 5** for assessor card copies.

3.5.3 Health Department

No files for the site were obtained from this source.

3.5.4 Zoning Department

According to the Orange Commercial and Industrial Zone map (v. 08/2004), the site is located in an LI-2 (Light Industrial) zone. Information reviewed in this department was similar to that of the Orange Building Department.

3.5.5 Wetlands Department

No files were obtained from the Orange Inland Wetlands and Watercourses Commission. According to Mr. Richard Mangione, the Orange Wetlands Commissioner, there are no wetlands violations associated with the site. Mr. Mangione noted that the site was historically a farm field.

According to the Flood Insurance Rate Maps (FIRM), community panels 090009C0438H and 09009C0551H (12/17/10), the site is located in Zone X (areas determined to be outside of the 0.2% annual chance floodplain).

3.5.6 Engineering Department

Records in the Orange Engineering Department indicate that the site was connected to the municipal sewer system on 02/05/90. This connection would have been for the distribution warehouse, as Mr. Frank Pascale, Director of Facility and Grounds for Dichello Distributors, indicated that the recycling warehouse has always been connected to the municipal sewer system.

3.6 Historical Sources

3.6.1 Sanborn Fire Insurance Atlases

There are no Sanborn Fire Insurance Atlases for the town of Orange. See **Figure 5** in **Attachment 1** for a "No Coverage Sheet."

3.6.2 Aerial Photographs

Aerial photographs for the years 1934, 1951, 1965, 1970, 1975, 1980, 1986, 1990, 1995 and 2000 were reviewed at the CT State Library in Hartford, Connecticut, by Catalyst personnel. In addition, a 2004 aerial photograph was also reviewed at Connecticut Environmental Conditions Online (ECO) website. The following information was obtained:

1934 – The site is bound by Marsh Hill Road to the west and railroad tracks to the southeast. A dwelling and small barn are located at the site's western portion. The majority of the site is occupied by farmland. Site abutters include farm land to the north, southeast and west. Dwellings and barns are also located at the western abutter. (Photograph 3184, Scale 1:18,000)

1951 – The northern, southwestern and eastern portions of the site have filled in with trees. No additional site or abutter changes were noted. (Photograph CNG-3H-107, Scale 1:20,000)

1965 – No significant site changes were noted. Abutter changes were limited to the presence of dwellings at the northwestern abutters. (Photograph 11-33, Scale 1:5,280)

1970 – A large area of disturbed soil is visible at the site's northern portion. Two commercial buildings are present at the northern abutter. No additional site or abutter changes were noted. (Photograph 47-586, Scale 1:6,000)

1975 – No significant site changes were noted. Abutter changes were limited to the presence of commercial buildings at the southern and southeastern abutters, and a large commercial building at the western abutter. (Photograph 47-7153, Scale 1:12,000)

1980 – The present-day beverage distribution warehouse has been constructed. A railroad stop and loading platform are located immediately southeast of the site. No additional site or abutter changes were noted. (Photograph 33-1510, Scale 1:12,000)

1986 – The present-day repair garage has been constructed. Numerous tractor trailers are visible at the site. Additional commercial buildings are located at the western abutter. No additional site or abutter changes were noted. (Photograph 32-7083, Scale 1:12,000)

1990 – The present-day recycling warehouse has been constructed. A large swath of bare vegetation is present at the northeast portion of the site. Large commercial buildings have been constructed at the southeastern and western abutters. No additional site or abutter changes were note. (Photograph 33-223, Scale 1:12,000).

1995 – The swath of bare vegetation appears smaller. No additional site or abutter changes were noted (Photograph 31-85, Scale 1:12,000).

2000 – No additional site or abutter changes were noted (Photograph 59-25, Scale 1:12,000)

2004 – No significant site or abutter changes were noted.

See **Figures 6A-6K** in **Attachment 1**.

3.6.3 Historic Atlases/USGS Topographic Maps

The 1889, 1943, 1951-1954, 1960-1967 and 1971-1972 USGS topographic maps were also reviewed at the CT State Library. Note: The site and abutters are located on the corners of four different topographic maps, and the years of coverage differ for each map in the 1950s, 1960s and 1970s. The following information was noted:

1889 – The site and abutters are vacant land. Railroad tracks bound the site to the southeast.

1943 – A barn and dwelling are located at the site's western portion. Site abutters include vacant land to the north, south and southeast and dwellings to the west.

1951-1954 – No significant site changes were noted. Abutter changes were limited to the presence of a dwelling and two barns at the northern abutter.

1960-1967 – No significant site changes were noted. Several dwellings are present at the northern abutter, and an industrial building is present at the western abutter.

1971-1972 – No significant site changes were noted. Abutter changes were limited to the presence of three commercial buildings at the southern and southeastern abutters.

See **Figures 7A-7E** in **Attachment 1**.

3.6.4 City Directories

City directories for the town of Orange were reviewed at the CT State Library by Catalyst personnel for the years 1940, 1945, 1951, 1960, 1965-1972, 1974-1975, 1977, 1979, 1982-1983, 1985-1991 and 1993-2010. Interpretations have been made to the best of the researcher's ability with regard to alterations in address listings of the property.

Subject Site

The site was listed as residential prior to 1982. Dichello Distributors Inc. and Valenti Leasing Co. Inc. (the repair garage) were listed at the site from 1982-2010.

Potentially High-Risk Abutters

The following potentially high-risk businesses were noted at the northern abutter:

Northern Abutter (11 Frontage Road)	Years
Eastern Express	1974-1979
Preston Trucking Company Inc.	1982-1983
Aviation Components Support Co.	1982-1986
Sanborn Motor Express Inc.	1982-1986
Raiders Express Inc.	1989
Con-Way Eastern Express Inc.	1989
CBL Trucking	1990-1997
Now Transportation Inc.	1998-2004

The site is located in a mixed-use light industrial portion of Orange. Numerous high-risk businesses were noted during the city directory review at the western abutting industrial park, and at the southern and southeastern abutters. As these properties are down-gradient of the site, they are not likely to have a significant impact on the site, and a list of the businesses has been omitted.

3.6.5 Additional Historical Sources

No additional historical sources were consulted for this project.

3.6.6 Summary of Historical Information

The first known improvements at the site were a dwelling and barn that were present by 1934. From at least 1934 to approximately 1980, the site was occupied

by a dwelling, barn and farmland. In 1979, the site was purchased by Dichello Distributors Inc., a beverage distribution company. Dichello Distributors erected the distribution warehouse and fleet vehicle repair garage in 1980, and the can recycling warehouse in 1987. The site continues to be occupied by Dichello Distributors to the present day.

4.0 ENVIRONMENTAL SETTING

4.1 Topography

The site is located on the Woodmont and New Haven, CT, U.S.G.S. Topographic Quadrangles. The site topography ranges from 30 ft. above sea level at the site's eastern portion to 120 ft. at the western portion. On the eastern side of Marsh Hill Road the regional topography slopes downward to the east toward the Oyster River, and on the western side of the road the topography slopes downward to the west and southwest toward the Indian Hill River (**Figures 1 and 3** in **Attachment 1**).

4.2 Hydrology

4.2.1 Surface Water

The site is located in the Farm River Sub-Basin of the South Central Coast Major Basin. According to the "Adopted Water Quality Classifications" map (CT DEP, 2009), the closest surface water feature is the Oyster River, located approximately 100 ft. east of the site. Water quality in this river is classified B/A. This designation indicates that the water quality has been impaired, and the goal is A. Please refer to the enclosed "Introduction to Connecticut's Water Quality Classifications for Surface and Groundwater" (**Attachment 6**).

Storm water at the site is collected in several catch basins, which drain to one of two detention basins at the site's eastern portion. The detention basins then discharge to an off-site gully located on the railroad right of way.

4.2.2 Wetlands

No wetlands are located on-site.

4.2.3 Hydrogeology

According to the "Adopted Water Quality Classifications" map (CT DEP, 2009), groundwater at the site is classified "GA." The GA designation indicates that groundwater is presumed suitable for direct human consumption without treatment. Please refer to the enclosed "Introduction to Connecticut's Water Quality Classifications for Surface and Groundwater" (**Attachment 6**).

Based on topography, the regional hydrologic gradient is generally to the east toward the Oyster River; however, local variations may exist. If a precise determination is desired, actual field measurements in the form of a groundwater leveling survey are required.

4.3 Geology

4.3.1 Bedrock Geology

According to the "Bedrock Geological Map of Connecticut" (Rodgers, 1985), the site is underlain by the Oronoque Schist. This metamorphic rock is a gray to silvery medium-to fine-grained schist and granofels. No bedrock outcrops were observed at the site.

4.3.2 Surficial Geology

According to the "Surficial Materials Map of Connecticut" (Stone et al., 1992), surficial material beneath the western three-quarters of the site is composed of thick till, and the materials beneath the eastern quarter is thin till. Thick till consists of areas where till is greater than 10-15 ft. thick and includes drumlins in which till thickness can exceed 100 ft. Thin till consists of areas where till is generally less than 10-15 ft. thick, including areas of bedrock outcrops where till is absent. No surficial materials were observed at the site.

5.0 RECORDS REVIEW

5.1 Federal Databases

Federal databases as outlined in the ASTM E1527-00 document, and other databases, were searched using **Environmental FirstSearch** software. The databases searched, the search radii and the results are listed below.

FEDERAL DATABASE SUMMARY CHART

Databases	Search Radii	Number of Facilities
NPL and Delisted NPL Sites	1.0 mile	0
CERCLIS Listing	0.5 mile	1
RCRA CORRACTS	1.0 mile	0
RCRA non-CORRACTS TSD	0.5 mile	0
RCRA Generator and NLR	Subject site and abutters	0
ERNS Sites	Subject site	0
FINDS	Subject site	Subject Site

Notes: NPL – National Priority Listings
CERCLIS – Comprehensive Environmental Response Compensation and Liability Information System
RCRA – Resource Conservation and Recovery Act
CORRACTs – Corrective Action sites under RCRA
TSD – Treatment, Storage and Disposal Facilities
NLR – Generators that are no longer regulated under RCRA
ERNS – Emergency Response Notification System
FINDS – The Facility Index System

Dichello Distributors is listed on the FINDS database due to the company's listing on the State UST database. A copy of the **Environmental FirstSearch** report is enclosed in **Attachment 3**.

5.2 State Databases

State databases as outlined in the ASTM E1527-00 document, and other databases, were searched using **Environmental FirstSearch** software. The databases searched, the search radii and the results are listed below.

STATE DATABASE SUMMARY CHART

Databases	Search Radii	Number of Facilities
State-listed Sites	1.0 mile	12
Registered Underground Storage Tanks	Subject site and abutters	4
Leaking Underground Storage Tanks	0.5 mile	2
Solid Waste Facilities and Landfills	0.5 mile	0
Spill Sites (1990-present)	0.25 mile	16

The subject site is listed on the Spills, LUST and UST databases. Details pertaining to these listings are discussed in **Section 5.4**.

A copy of the **Environmental FirstSearch** report is enclosed in **Attachment 3**.

5.3 Non-Geocoded Properties

The subject site and its abutters were not identified on the database list of non-geocoded properties.

5.4 CT DEP File Review

A file review was conducted at the CT DEP in Hartford, CT, and included a review of the files listed below for the site address, current and former occupants, and potentially high-risk abutting properties.

Contaminated or Potentially Contaminated Sites – A review of CT DEP's List of Contaminated or Potentially Contaminated Sites was conducted on the CT DEP website. The site is listed on the LUST database for two leaking fuel oil USTs removed in 1997. The northern, southeastern and western abutters filed Form III Property Transfers and are currently being investigated. Details pertaining to these properties are discussed below.

Hazardous Waste Manifests – The most recent CT DEP Hazardous Waste Manifest Database (01/01/84 through 12/31/07) was reviewed for the site address and current occupants. According to CT DEP staff, manifests after December 2007 are not available for review either through the database or through FOIA request. Catalyst can therefore make no representations for 2008 to the present. See **Attachment 8** for correspondence regarding this issue.

Two temporary hazardous waste generator identification numbers are associated with the site (#CTP000011043, Dichello Distributors, and #CTP000008901, Valenti Leasing Auto Body). Based on review of CT DEP hazardous waste summary reports, Dichello Distributors generated 2,600-gallons of waste flammable liquid on 05/15/1990. This corresponds with the removal of a 2,500-gallon gasoline UST.

The hazardous waste summary report for Valenti Leasing lists nine shipments of waste paint related materials between 02/07/89 and 03/08/90. The quantity of the wastes ranged from approximately 12 kg to 147 kg.

According to Mr. Frank Pascale, Director of Facilities and Grounds for Dichello Distributors, the only hazardous waste generated on-site is from the auto body repair operations; it consists of waste paint and thinners.

See **Attachment 7** for copies of the hazardous waste summary reports.

Oil and Chemical Spills and Correspondence – The oil and chemical spill and correspondence files were reviewed from 1971 through 1997, and the oil and chemical spills electronic database was reviewed from 1997 through the present for the site and abutters. The following spills reports were noted for the site:

04/16/97 – Two 10,000-gallon diesel USTs were removed from the site. No sheens or free product was noted in the tank grave; however, TPH was detected in the soil at 780 ppm. Storm water had accumulated in the tank grave over the weekend, and TPH (6 ppm) was detected in the water. An air stripping unit was installed to deal with the potential contamination and the water discharged as storm water.

06/09/97 – An anonymous complaint was made to CT DEP that tanks were removed and dumped in a marsh behind the building. CT DEP investigated the report and found no evidence to support the complaint.

09/29/09 – Five gallons of diesel fuel were released to the ground surface. No additional information was provided in the report. According to Mr. Pascale, Director of Facility and Grounds for Dichello Distributors, the spill occurred as a result of an overflow at the 10,000-gallon diesel AST.

The following spills were noted at the abutters:

Northern Abutter (11 Frontage Road)

06/30/90 – Fifty gallons of diesel fuel were released to the pavement during truck fueling. The spill was contained with Speedi Dri.

02/14/97 – Approximately 50 cubic yards of soil contaminated with diesel fuel were removed during excavation of a leaking UST.

07/15/99 – Diesel fuel was released due to pump failure. Two cubic yards of impacted soil and leaf debris were removed.

Western Abutter (60 Marsh Hill Road)

11/21/01 – Unidentified white powder found at the property.

12/03/04 – Suspected hydraulic oil leak from garage lifts. The lifts were scheduled to be excavated.

11/22/06 – Fourteen gallons of hydraulic oil released due to equipment failure inside the building.

Intersection of Marsh Hill Road and Cascade Boulevard

09/21/01 – Seventy-five gallons of diesel fuel were released due to a tractor trailer accident. The spill was sanded and a vacuum truck was used to removed diesel fuel from the catch basins and drainage ditch.

See **Attachment 7** for copies of the related documents.

P-5 Audits – No P-5 Industrial Audits were obtained for the site.

UST Registrations – 1996, 1990 and 2007 UST registrations were on file for the site. The following USTs were present at the site:

Dichello Distributors (55 Marsh Hill Road, Orange, CT)					
Tank ID	Capacity (gals.)	Contents	Construction	Installed	Status
A1	10,000	Fuel Oil	Steel	03/1980	Removed 04/16/97
A2	10,000	Fuel Oil	Steel	03/1980	Removed 04/16/97
A3	2,500	Gasoline	Steel	03/1980	Removed 05/1990
B4	1,000	Waste	Concrete	08/1980	Removed 04/16/97
C5	5,000	Waste	Concrete	08/1980	Removed 04/16/97
D6	3,000	Waste	Concrete	03/1980	Removed 04/16/97

Mr. Frank Pascale, Director of Facilities and Grounds for Dichello Distributors, was queried regarding the USTs. According to Mr. Pascale, the two 10,000-gallon fuel oil USTs were actually diesel USTs for fuel trucks. He noted that to the best of his knowledge the 3,000-gallon waste tank was most likely the septic system tank for the distribution building and the 1,000-gallon tank was the septic tank for the repair garage. The 3,000-gallon tank he believed to be the former oil-water separator for the former wash bay in the repair garage.

Contaminated soil was encountered during the removal of the two 10,000-gallon USTs. No sheens or free product were observed in the tank grave; however, TPH was detected in the soil at 780 ppm. An unknown quantity of impacted soil was excavated from the site. The only clearance sample documentation obtained was for a final soil sample, in which TPH was detected at 72 ppm. See **Attachment 7** for registration copies and related UST documents.

Southeastern Abutter (25 Connair Road)

This property had a 2,000-gallon gasoline UST that has since been removed.

Western Abutter (60 Marsh Hill Road)

According to the registration for the western abutter 10,000-gallon diesel and gasoline USTs are present at the property, and were temporarily out of service.

Consent Orders and Notice of Violations (NOVs): No Consent Orders or Notices of Violation were on file for the site.

Other Files – Town miscellaneous files were reviewed in the Department of Water Management and the Department of Waste Management. In addition, Hazardous Waste files were reviewed in the Department of Waste Management, and Property Transfer and

Remediation files were reviewed in the Department of Water Management. No files were on record for the site address or occupants.

Information pertaining to potentially high risk abutting properties that are likely to impact the site was limited to the northern abutter (11 Frontage Road/95 Marshal Hill Road). This property, which is topographically cross-gradient of the site, was previously part of Aviation Components Support Co. The property contains a warehouse that was formerly used as a trucking terminal, and a garage that was formerly used as a helicopter maintenance facility.

Numerous environmental investigations have been conducted at the property since the early-1990s. Releases of halogenated VOCs, petroleum, lead and cadmium have been detected. The releases were associated with a diesel fuel UST, plating and solvent rinse water UST, a vapor degreaser, a paint booth, the storage of hazardous wastes, and loading docks. Intermittent pump and treat remediation was conducted in the 1990s, considerably reducing the halogenated VOC concentrations.

A Property Transfer Form III and Environmental Condition Assessment Form (ECAF) were filed in 1998, and oversight retained by CT DEP. In 2000, another Form III and ECAF were submitted to CT DEP; the site was then delegated to Licensed Environmental Professional (LEP) oversight. The site was again Transfered on a Form III in 2007, and oversight remained with an LEP. DEP indicated that recent investigations indicate that VOC concentrations were below RSR criteria.

Since 2000, the certifying party has undertaken follow up remedial investigations, soil vapor surveys, groundwater investigations and remediation of approximately 1,730 tons of contaminated soil. In March of 2007, a request to reclassify the groundwater to GB was submitted to CT DEP. Additional remediation and assessment is on going.

See **Attachment 7** for copies of the related documents.

6.0 MOLD EVALUATION

6.1 Interview of Site Contact

Mr. Frank Pascale, Director of Facility and Grounds for Dichello Distributors Inc., was interviewed on April 4, 20111, regarding mold at the site. According to Mr. Pascale, there have never been issues at the site pertaining to mold growth.

6.1.1 Question: Is there, or has there been, any visual mold growth or moldy odors identified within the Site building? Response: "*No.*"

6.1.2 Question: Is there, or has there been, any moisture, condensation or high humidity problems within the Site building? Response: "*No.*"

6.1.3 Question: Have any areas of the Site building been impacted by a flood, plumbing/sewer leak, roof/window leak, groundwater intrusion or discharge of a sprinkler system? Response: *"No."*

6.1.4 Question: Is a sump pump located within the basement of the Site building? Response: "*There is no basement.*"

6.1.5 Question: Have any occupants of the Site building complained as to water intrusion or moldy odors within their tenant spaces or reported any adverse health problems that have been alleged to be related to the Site building? Response: "*No.*"

6.1.6 Questions: Does the HVAC system have any drip pans or other open discharge of blow-down water, steam or other moisture? Response: "*No.*"

6.1.7 Question: Has a state or local health agency issued any notices of violation to the Site building as to indoor air quality, odors, moisture or mold growth? Response: "*No.*"

6.1.8 Question: Have any moisture surveys, indoor air quality reports or mold surveys been conducted for the Site building? Response: "*Not that he is aware.*"

6.1.9 Question: Has an insurance claim ever been filed for water or mold-related damage to the Site building? Response: "*No.*"

6.2 Visual Assessment

A limited visual and olfactory assessment of readily accessible areas of the site building was conducted by Peter Prey of Catalyst to determine the presence of mold growth.

6.2.1 Question: Did the Consultant observe evidence of significant amounts of suspected mold growth within the Site building? Response: *No.*

6.2.2 Question: Did the Consultant note any moldy odors within the Site building? Response: *No.*

6.2.3 Question: Did the Consultant observe evidence of ponding on the roof of the Site building? Response: *Not Accessible.*

6.2.4 Question: Did the Consultant observe evidence of excessive patching on the roof of the Site building? Response: *Not Accessible.*

6.2.5 Question: Did the Consultant observe any water staining, standing water or discoloration on any walls, floors, ceilings or other building materials? Response: *No.*

6.2.6 Question: Did the Consultant observe any evidence of flooding, plumbing/sewer leaks, roof/window leaks, groundwater intrusion or discharge of a sprinkler system within the Site building? Response: *Yes. Minor staining on the ceiling and walls of the distribution warehouse was noted.*

6.2.7 Question: Did the Consultant observe any areas of high humidity located within the Site building? Response: *No.*

6.2.8 Question: Did the Consultant observe any heat exchangers/cooling towers within any mechanical areas of the Site building? Response: *No.*

7.0 SITE RECONNAISSANCE

Peter Prey of Catalyst Environmental Consulting Inc. conducted the site reconnaissance on April 4, 2011, accompanied by Mr. Frank Pascale, Director of Facility and Grounds for Dichello Distributor's Inc. Mr. Pascale has worked at the site since 1980. Site reconnaissance consisted of an exterior inspection of the site, an interior inspection of the building, and a drive-by inspection of the site's immediately surrounding area. All areas of the site were accessible during the site reconnaissance.

The site is occupied by Dichello Distributors, and Valenti Leasing Inc., a contracted fleet vehicle repair shop. Improvements to the 28.88-acre site include a beverage distribution warehouse and office building (c. 1980) located at the center of the site; a fleet vehicle repair garage/auto body shop (c. 1980) with a diesel and gasoline pump island in the southwestern corner of the site; and a beverage can recycling warehouse (c. 1987) in the eastern portion of the site. **(Photographs 1-5)**

Additional site improvements include paved parking lots and driveways. Approximately, 21 acres of the site are covered by the improvements; the remaining 8 acres are vacant land.

7.1 Underground Storage Tanks

No underground storage tanks (USTs) are reported to be present at the site; however, a set of UST vent and fill pipes are located at the northeast corner of the repair garage **(Photograph 6)**. Employees of Valenti Leasing noted during the site visit that pipes are associated with an abandoned oil-water separator that was connected to a former vehicle wash bay. The drain in the wash bay was sealed and the bay converted to an auto body paint booth in the mid- to late-1980s.

One gasoline UST was removed from the eastern side of the repair garage in 1990. Two 10,000-gallon diesel USTs were removed from the same area in 1997. A large square asphalt patch was noted in this area **(Photograph 7)**, during the site visit.

7.2 Aboveground Storage Tanks

A 10,000-gallon dual compartment aboveground storage tank (AST) is located off the northeast corner of the repair garage **(Photograph 8)**. The tank contains a 2,000-gallon gasoline reservoir and an 8,000-gallon diesel reservoir. The tank is encased in a secondary concrete containment. No spillage or evidence of leakage was noted in the tank vicinity.

A 500-gallon waste oil AST is located in the northeast corner of the repair garage and a 275-gallon engine oil AST is located in the garage's southern portion **(Photographs 9-10)**. Neither tank has a secondary containment. Heavy floor staining and absorbents were noted around the base of the waste oil AST, and dry absorbents were noted around the base of the engine oil AST.

A 275-gallon diesel AST is located in a generator room located at the southern corner of the distribution warehouse (**Photograph 11**). Moderate staining of the concrete floor was noted in this room. Additionally, a set of copper fuel lines protrudes through the southeastern wall of this room, and enter the ground on the exterior side (**Photograph 12**). According to Mr. Pascale, a 275-gallon diesel generator AST was formerly present on the southeastern exterior side of the room. No stressed vegetation was noted in this area.

7.3 Hazardous Substances

The only potentially hazardous materials area associated with the distribution warehouse is a fork lift battery charging and cleaning area (**Photograph 13**), which is located in the northwest corner of the warehouse. Minor to moderate acid stained concrete floors were noted in this area. Mr. Pascale indicated that Exide Battery cleans the batteries every six months. He noted that the wastes are collected in drip pans and taken away by Exide for disposal.

Hazardous substances are stored and used in the repair garage. In the northeast corner of the garage are two 55-gallon drums of antifreeze, a 55-gallon drum of transmission fluid, a 55-gallon drum of windshield washer concentrate, two 55 gallon drums of Zep floor cleaner, a 55-gallon drum of waste oil and a 55-gallon drum of waste oil filters (**Photographs 14-15**). A 275-gallons engine oil AST is also located in the southeastern portion of the garage. None of the drums or the AST had a secondary containment. Moderate floor staining was noted in these areas.

The auto body repair bay contains three 5-gallon containers of paint thinner, and two flammable material storage cabinets are present in the bay (**Photograph 16**). The cabinets contained several (< 50 gallons aggregate) small containers (< 1 gallon) of primer, epoxy sealer, acrylic enamel, thinner, activator, adhesive, spray paint cans, acrylic lacquer thinner, Chroma System 717SS, PrepSol Solvent, Dupont Final Klean 390A, and One-Strip Paint and Varnish Remover. All the substances were neatly stored and no evidence of spillage or leakage was observed. A list of hazardous substances stored and used on-site was requested; however, none was provided. See **Section 3.5.1** for a 2009 inventory submitted to the Fire Marshal.

No hazardous substances are stored or used in the recycling warehouse.

7.4 Hazardous Waste

No hazardous waste is generated in the distribution or recycling warehouses. Hazardous waste is, however, generated in the repair garage's auto body bay. The hazardous waste generation is from a paint spray gun cleaner located in the southeastern portion of the bay (**Photograph 17**). A 55-gallon drum and two 5-gallon containers of paint related wastes were also noted in this area (**Photograph 18**). No secondary containment was used for the drum or containers, and no significant floor staining was noted in the area. No

hazardous waste manifests were on file in the garage. Details pertaining to historical hazardous waste shipments are discussed in **Section 5.4.**

7.5 Polychlorinated Biphenyls

No equipment labeled as PCB-containing was noted at the site; however, four large utility-owned transformers (**Photograph 19**), which could potentially contain PCBs, are located at the southern corner of the distribution warehouse. No staining, evidence of leakage or stressed vegetation was noted in this area.

7.6 Solid Waste Disposal

Solid waste generated at the site is collected in a dumpster on the western side of the distribution warehouse. Cardboard and metal cans are compacted in the recycling warehouse and shipped off-site for recycling (**Photograph 20**). A scrap metal dumpster is also present on the northeastern side of the repair garage. No pavement staining was noted in the vicinity.

The property was littered with plastic bottles, metal cans and paper and plastic packaging materials. Numerous areas of dumping and improper disposal were noted at the northern portion of the site. These areas included randomly scattered piles of discarded tires, furniture, building materials, motor oil containers, televisions, scrap wood, concrete, asphalt shingles, brick, asphalt fragments and dirt (**Photographs 21-24**). An empty unlabeled 55-gallon drum was also noted in the easternmost detention basin (**Photograph 25**). Mr. Pascale had no knowledge pertaining to the dumping, but thought it may have been associated from the construction of the recycling warehouse.

7.7 Stained Surfaces and Distressed Vegetation

Numerous areas of staining were noted in the two warehouses; however, the staining appeared to be the result of beverage leakages rather than oil or other potentially hazardous substances.

Heavy floor staining was noted in the repair garage, particularly in the vicinity of the waste oil AST and waste oil burner, and in the vicinity of the motor oil and antifreeze drums. Minor pavement staining was also observed in the vicinity of the gasoline and diesel pump island.

Areas of stressed vegetation were limited to the vicinity of the disposal areas noted in **Section 7.6**.

7.8 Underground Structures & Sanitary Wastewater Disposal

Numerous catch basins are located throughout the site, and drain to one of two detention basins located at the site's eastern portion (**Photographs 26-27**). The basins then discharge to a drainage gully located off-site.

The distribution warehouse was formerly served by a septic system. The septic tank and pump chamber were located near the building's western corner with the leach fields located further west. Mr. Pascale stated that the warehouse was connected to the municipal sewer system in the mid- to late-1980s, and the tanks were converted to pump chambers to pump the sanitary wastes up to the street level.

The interior of the distribution warehouse is lined with numerous trench drains (**Photograph 28**). According to Mr. Pascale, the drains were installed when the building was constructed and were intended to discharge to the first detention basin; however, the drains were sealed at CT DEP's request.

A septic system for the repair garage is located at the garage's northern corner. The system is comprised of a 1,000-gallon septic tank, a 1,000-gallon pump chamber and leach field. A sealed floor drain is also present in the auto body repair bay (**Photograph 29**). According to Mr. Pascale, the bay was originally used to wash vehicles. He noted that the drain discharged to an oil water separator. The drain was sealed and the separator abandoned in the mid- to late-1980s, when the bay was converted to an auto body repair bay.

A drinking water well is located approximately 75 ft. north of the recycling warehouse, and serves this building only. Approximately 20 floor drains are located in the recycling warehouse. According to Mr. Pascale the drains discharge to the municipal sewer system. The original plans for the building show the drains discharging to the municipal storm water system.

7.9 Additional Issues of Environmental Concern

7.9.1 Asbestos-Containing Material

An asbestos survey was not included in the Scope of Work for this project. The use of mechanical insulation and plaster ceilings containing asbestos was banned in 1978, and in 1989, EPA started phasing out nearly all uses of asbestos. Based on the age of the building (1980), asbestos-containing materials may be present.

7.9.2 Lead-Based Paint

A lead-based paint survey was not included in the Scope of Work for this project. Based on the age of the building (1980), lead-based paint is not likely to be present.

8.0 LIMITATIONS AND CONDITIONS

1. This preliminary assessment was performed in accordance with generally accepted practices of other consulting firms undertaking similar studies at the same time and in the same geographical area. Catalyst's findings and conclusions must not be considered scientific certainties, but probabilities based on our professional judgment concerning the significance of the limited data gathered during the course of the site assessment. Specifically, Catalyst does not and cannot warrant or guarantee that the site does not contain hazardous materials or oil beyond that observed during the above described assessment. This report is also subject to the Terms and Conditions of our contract.

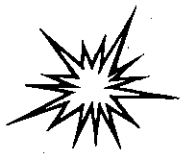
2. This study and report were prepared on behalf of and for the exclusive use of the Client in environmental evaluation of the site. This report and findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, nor used by any other party, without the prior written consent of Catalyst. Catalyst acknowledges and agrees that completed copies of the report may be conveyed to the site owner, Client's legal counsel, and the potential buyer associated with the proximate sale and/or financing of the site by our Client. Catalyst's aggregate liability to all parties who may come to rely on this report is limited to the amount set forth in the Terms and Conditions of our contract and is not hereby expanded.

3. The information obtained from subcontractors, personal interviews, maps, and databases is subject to the personal recollection of the persons interviewed, and the availability and accuracy of the records on file with the State, Federal, and municipal agencies. Catalyst will not be held responsible for errors resulting from a lack of information or incorrect information provided by these sources.

4. This report was designed to assess the physical characteristics of the site with regard to recognized environmental conditions; no attempt was made to investigate the regulatory compliance of the Site regarding Federal, State or local laws and regulations.

5. Catalyst's conclusions are based on the contents of this report and are a result of the interpretation of the existing data that was compiled. If additional historical or analytical data becomes available, Catalyst reserves the right to review this material to determine if the conclusions of this report are to be modified or updated.

6. Conn. Gen. Stat. §22a-450 requires that the owners of a property, on which an ongoing spill, release, seepage, loss, or disposal of oil or hazardous materials is occurring, must report the situation to the Oil and Chemical Spills Section of the State of Connecticut DEP. Catalyst recommends that legal counsel be consulted regarding any reporting obligation that the client may have.



9.0 SOURCES AND REFERENCES

INTERVIEWS:

NAME	AFFILIATION	TELEPHONE
Mr. Frank Pascale	Director of Facilities & Grounds	(203) 891-2100

Publications:

"Adopted Groundwater Classifications," 2009. Hartford, Connecticut: DEP.

FirstSearch Technology Corporation, 2009. Environmental FirstSearch Report.

Rodgers, 1995. "Bedrock Geological Maps of Connecticut." Connecticut Geological and Natural History Survey, Hartford, Connecticut.

"Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process," 2000. American Society for Testing and Materials, Philadelphia, PA.

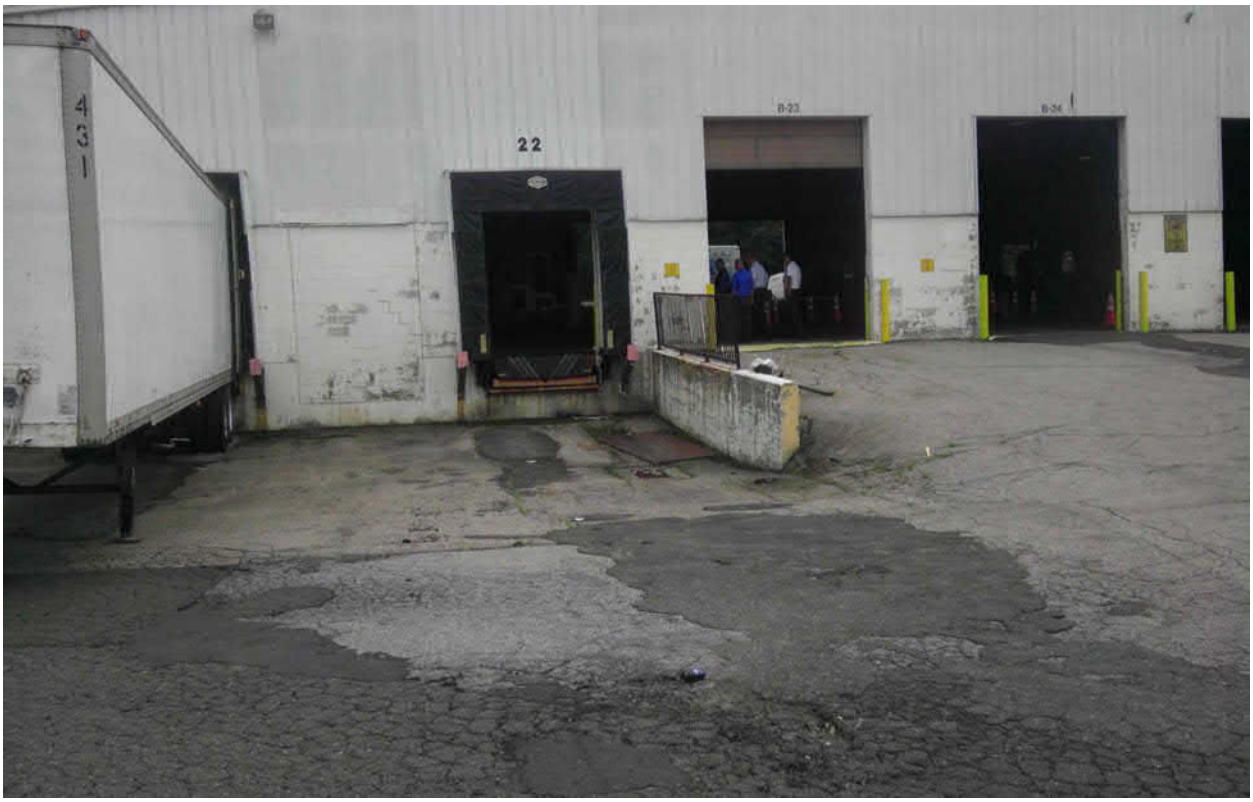
Stone, et al., 1992. "Surficial Materials of Connecticut." Reston, VA: USGS.

Other Documentation Sources:

NAME	LOCATION
Aerial Photographs	Connecticut State Library, Hartford, CT
Aerial Photograph	http://clear.uconn.edu/data/imageryBW.htm
City Directories	Connecticut State Library, Hartford, CT
Sanborn Fire Insurance Maps	Connecticut State Library, Hartford, CT
Assessor's Records	Orange Town Hall, Orange, CT
Land Records	Orange Town Hall, Orange, CT
Building Department Records	Orange Town Hall, Orange, CT
Planning and Zoning Records	Orange Town Hall, Orange, CT
Wetland Records	Orange Town Hall, Orange, CT
Fire Marshal's Records	Orange Fire Department, Orange, CT
Health Department	Orange Town Hall, Orange, CT
Oil and Chemical Spills	Connecticut DEP, Hartford, CT
UST Registrations	Connecticut DEP, Hartford, CT
P-5 Industrial Audits	Connecticut DEP, Hartford, CT
Site Remediation Files	Connecticut DEP, Hartford, CT
RCRA Files	Connecticut DEP, Hartford, CT

APPENDIX C

Photographic Documentation



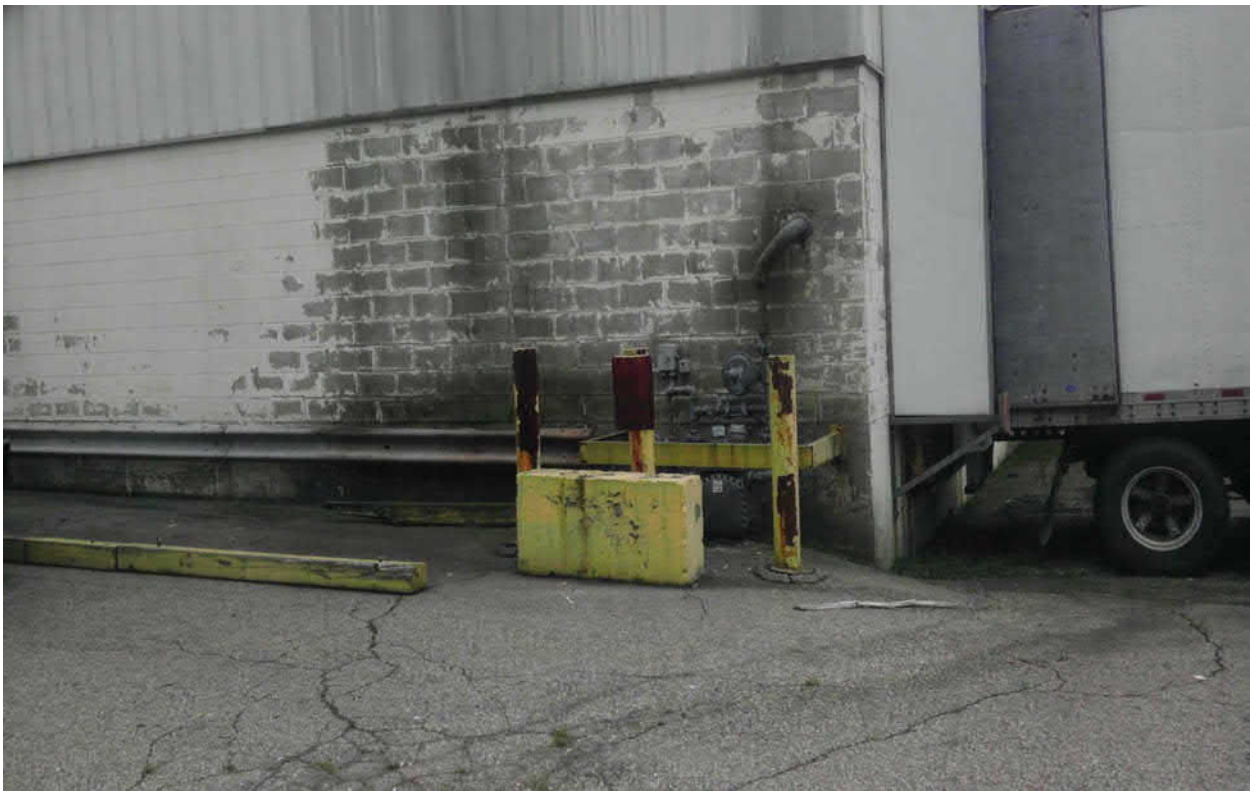
Loading docks, southwest side of can recycling center building

Loading docks, northeast side of can recycling center building

Loading docks, northeast side of can recycling center building

Northeast side of can recycling center building

Paved parking lot, east side of Site



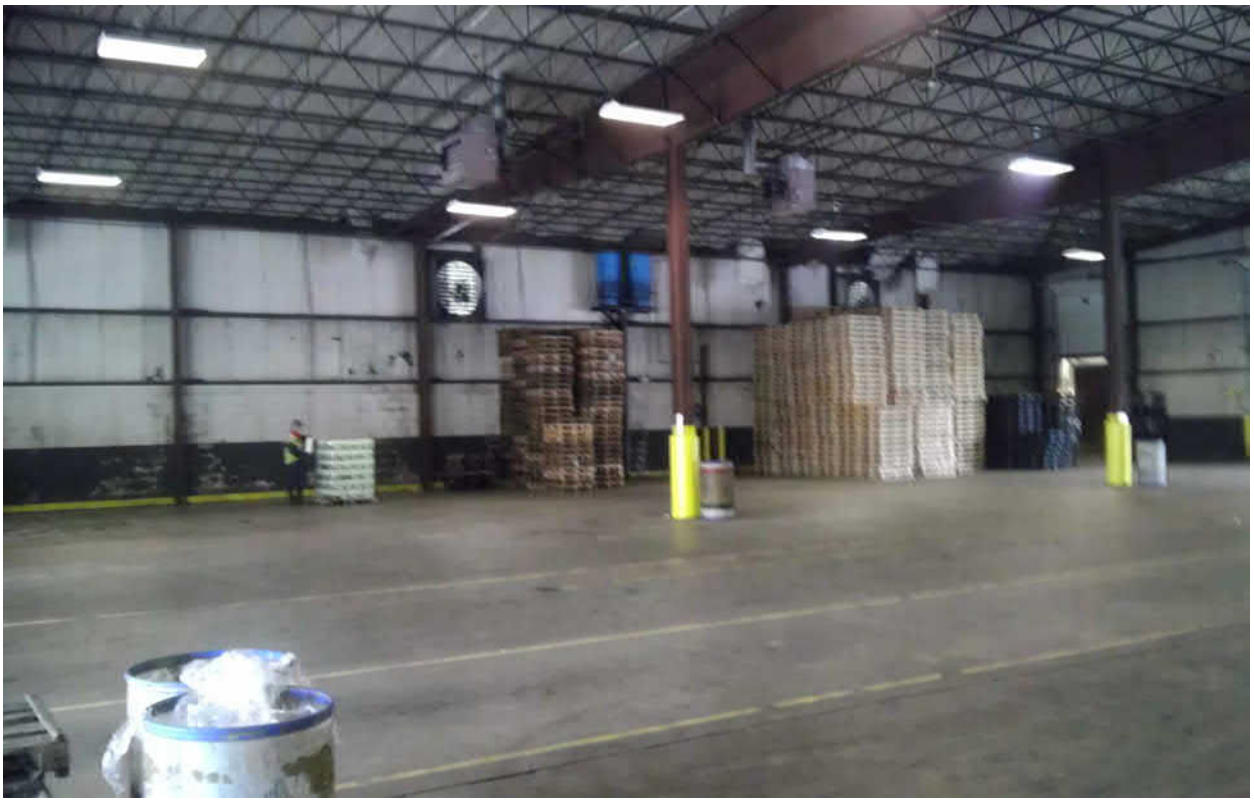
Natural gas meter located on north corner of can recycling center building

Water supply well located northwest of can recycling center building

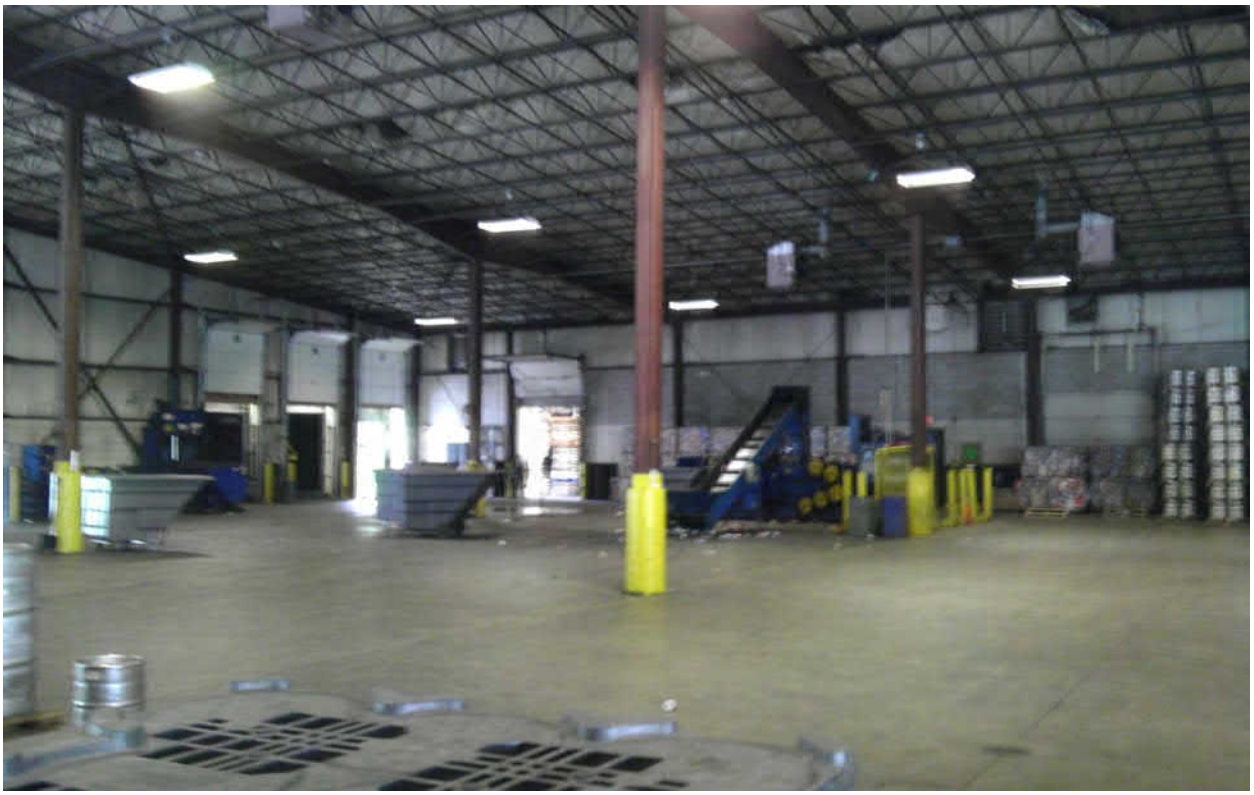
Wooded area north of can recycling center building, scrap metal and debris in background

Detention basin located northeast of can recycling center building

Detention basin located northeast of can recycling center building

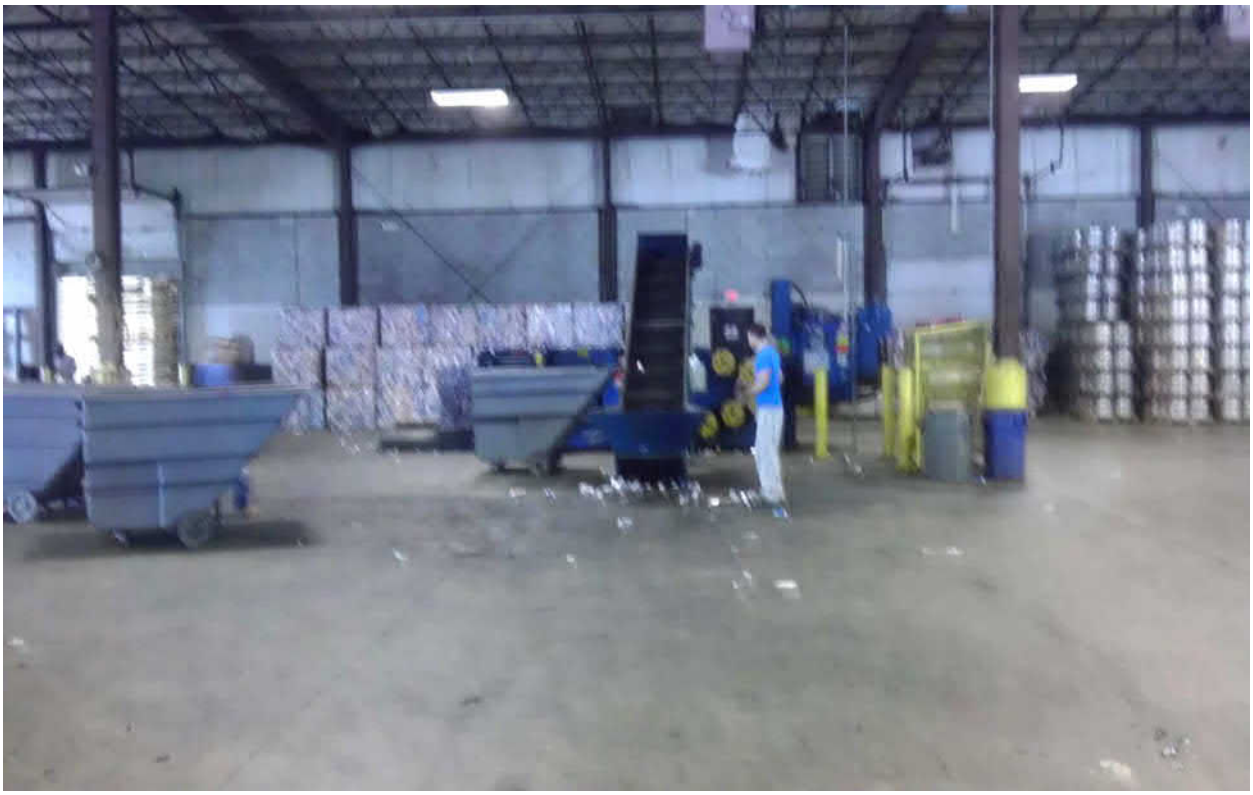


Northwest side of can recycling center building



Northwest side of can recycling center building

Southeast side of can recycling center building



Can crusher and cubes of crushed cans, southeast side of can recycling center building

Typical floor drain inside can recycling center building

Metro North rail line southeast of the Site

Residence along Salemme Lane, west of Site

Residence along Salemme Lane, west of Site

Residence along Salemme Lane, west of Site

Dichello Distributors warehouse and detention basin south of Site (55 Marsh Hill Road)

Dichello Distributors warehouse south of Site (55 Marsh Hill Road)

Valenti repair garage and auto body repair south of Site (55 Marsh Hill Road)

APPENDIX D

Municipal Records

State of California }
County of SAN FRANCISCO } ss.

On this 27th day of OCT.
in the year one thousand nine hundred and 73, before me,
William O. Dark
a Notary Public, State of California, duly commissioned and sworn, personally appeared
Donald C. Salemme

known to me to be the person described in and whose name subscribed to the within instrument, and acknowledged to me that HE executed the same.

In Witness Whereof, I have hereunto set my hand and affixed my official seal in the County of SAN FRANCISCO the day and year in this certificate first above written.

William O. Dark WILLIAM O. DARK
Notary Public, State of California.
My commission expires

OFFICIAL SEAL
WILLIAM O. DARK
NOTARY PUBLIC-CALIFORNIA
SAN FRANCISCO COUNTY
My Commission Expires May 27, 1975

Received for Record 6/10/81
at 11 h 4 m A M. and recorded by
Gina E. Lavery Town Clerk

VOL. 277 PAGE 690

CERTIFICATE OF DEVISE, DESCENT OR DISTRIBUTION

PRC-58 NEW 7-74 [C.G.S. Sec. 45-286]

STATE OF CONNECTICUT
COURT OF PROBATE

[Note: File certificate with town clerk where real property is situated.]

FOR COURT USE ONLY

DATE:

ORIGINAL TO:

Court of Probate, District of New Haven District No. 093

ESTATE OF
Philomena Salemme aka Filomena Salemme
LATE OF New Haven , DECEASED

DATE OF DEATH
February 20,1963

THIS CERTIFIES that as appears from the records of this Court said deceased died on the date above written and his estate has been duly settled in this Court; and there is distributed, set out or divided or descends:

[Give name, place of residence and share of each distributee]

TO Frank Salemme, Ralph Salemme, Sylvester Salemme Joseph Salemme, Charles Salemme and Anthony R. Salemme, The Following described Real Estate consisting of a right of way known as "SALEMME LANE", and more particularly described as follows:

All that certain piece or parcel of land with all the improvements thereon situated in the Town of Orange, County of New Haven and State of Connecticut, Known as"Salemme Lane" and as shown on a survey entitled "Property of Philomena Salemme" surveyed by Charles A. Cahn, Civil Engineer and Surveyer dated December, 1953, Revised March 1954 Scale one (1) inch equals 60 feet and filed with the Orange Town Clerk's Office as Map #407.

Reference to the records of said Probate Court being hereby had for a more particular description.

SEAL

IN TESTIMONY WHEREOF, on this 9th day of June , 19 81 . I have hereunto set my hand and affixed the SEAL of this Court to this certificate.

Received for Record 6/10/81 Elsie M. DelGrego , Clerk

at 11 h 47m A.M. and recorded by Elsie M. DelGrego

June E. Larson Asst Town Clerk

CERTIFICATE OF DEVISE, DESCENT OR DISTRIBUTION

Recorded Probate Records
Vol.
Page

Ass't. Clerk

KNOW YE THAT, We, JOSEPH SALEMME, of the Town of New Haven, ANTHONY F. INZERO, PASQUALE J. INZERO, ANTHONY INZERO, JR., RICHARD P. INZERO and RAYMOND T. INZERO, being the heirs of MARY INZERO, all of the Town of Hamden, RALPH SALEMME, of the Town of Orange, FRANK SALEMME, of the Town of Orange, SYLVESTER SALEMME, of the Town of Orange, ANTHONY SALEMME a/k/a ANTHONY R. SALEMME, of the Town of Orange, CHARLES SALEMME, of the Town of North Haven, ROSE COLATOSTI, of the Town of Hamden, JENNIE DeFELICE, also known as MARIE GIOVANNA DeFELICE, of the Town of Hamden, ANNA NACCA, of the Town of West Haven, ELIZABETH SMITH, of the Town of Milford, all of the County of New Haven and State of Connecticut, and DONALD SALEMME a/k/a DONALD C. SALEMME, of the Town of San Francisco County of San Francisco and State of California acting herein by Marion G. Salemme of the Town of New Haven, County of New Haven and State of Connecticut, and ARNOLD SMITH, JR. a/k/a ARNOLD W. SMITH, JR., of the Town of North Kingstown, County of and State of Rhode Island, and EILEEN GAITES, of Travis Air Force Base in the State of California, and MARIE GLYNN, of ~~Hamden~~, Connecticut, herein referred to as GRANTORS, for the consideration of ONE ($1.00) DOLLAR and other valuable consideration, received to their full satisfaction of DiCHELLO DISTRIBUTORS, INC., a corporation organized under and pursuant to the laws of the State of Connecticut, with a principal place of business in the Town of Orange, County of New Haven and STate of Connecticut, do give, grant, bargain, sell and confirm unto the said DiCHELLO DISTRIBUTORS, INC., and unto its successors and assigns forever

All those three (3) certain pieces or parcels of land, with the buildings and all other improvements thereon, situated in the Town of Orange, County of New Haven and State of Connecticut, all as shown on a certain map entitled, "Property of Philomena Salemme" surveyed by Charles A. Cahn, Civil Engineer and Surveyor, dated December, 1953, Revised March, 1954, Scale 1" = 60' and filed with the Orange Town Clerk's Office as Map No. 407, said premises being bounded and described as follows:

No. 4/85 19 Conveyance Tax received
Joyce E. Larson, Asst
Town Clerk of Orange

THE FIRST PIECE

Being Lots No. 8, 13, 15, 17, 19, 18, 16, 14, 12, 7 and 6, all of said lots as shown on the above map.

THE SECOND PARCEL

Known as the roadway called "Salemme Lane" and as shown on a survey entitled, "Property of Philomena Salemme" surveyed by Charles A. Cahn, Civil Engineer and Surveyor, dated December, 1953, Revised March, 1954, Scale 1" = 60' and filed with the Orange Town Clerk's Office as Map No. 407. Said premises being bounded and described as follows:

WEST:	by Salemme Lane;
NORTH:	by Lots No. 8, 13, 15, 17, and 19, as shown on said map;
EAST:	by land shown on said map as being dedicated for "Reserved for Park Purposes";
SOUTH:	by Lots No. 18, 16, 14, 12, 7 and a 10 foot (more or less) portion of Lot No. 6 as shown on said map.

Being all of the roadway known as Salemme Lane shown as being transferred to DiChello Distributors, Inc. on a certain survey entitled, "Map of Property Prepared for DiChello Distributors, Inc., Orange, Connecticut, Scale 1" = 60', October 27, 1980 by Shaughnessy and Plain Land Surveyors - Fairfield" said map to be filed with the Orange Town Clerk's Office.

THE THIRD PARCEL

Designated as "Reserved for Park Purposes" on a certain survey entitled, "Property of Philomena Salemme" surveyed by Charles A. Cahn, Civil Engineer and Land Surveyor, dated December, 1953, Revised March, 1954, Scale 1" = 60' and filed with the Orange Town Clerk's Office as Map No. 407. Said premises being bounded and described as follows:

NORTH:	by land of owners unknown, 332 feet, more or less;
SOUTH EAST:	by land now or formerly of the New York, New Haven and Hartford Railroad Company, 587 feet;
WEST:	by Lot No. 18 on said map, 162 feet, more or less;
WEST AGAIN:	by Lot No. 19 on said map, 285 feet, more or less.

Together with a right of way for all purposes whatsoever across "Salemme Lane" as shown on said map.

Together said premises are more particularly bounded and described as follows:

All that certain piece or parcel of land, with the buildings and all other improvements thereon, situated in the Town of Orange, County of New Haven and State of Connecticut, bounded and described as follows:

Beginning at a point in the most southerly extremity of the easterly boundary line of Lot No. 5 as shown on the map in part entitled "Dichello Distributors, Inc.", said point being 464.99 feet easterly of the easterly street line of Marsh Hill Road; thence, running North 4° 19' 45" East along Lot No. 5 on said Salemme map, 289.10 feet; thence, running South 85° 40' 15" East along the southerly boundary line of "Salemme Lane", 138.94 feet; thence, running North 4° 19' 45" East, in part along the easterly boundary line of "Salemme Lane" and in part along the easterly boundary line of Lot No. 9 as shown on the Salemme map, in all, 329.31 feet; thence, running South 88° 36' 52" East along land now or formerly of Orange Properties, a distance of 28.02 feet; thence, running South 85° 52' 23" East along land now or formerly of Orange Properties, a distance of 603.20 feet; thence, running South 85° 45' 17" East along land now or formerly of Orange Properties, a distance of 308.57 feet; thence, running South 87° 09' 27" East, along land now or formerly of Orange Properties, a distance of 195.77 feet; thence, running South 43° 58' 36"W along land now or formerly of the Penn Central Railroad Company, a distance of 810.60 feet; thence, running North 85° 55' 28" West, along land now or formerly of Dichello Distributors, Inc., a distance of 757.19 feet to the point and place of beginning.

Said premises are shown as comprising 581,906 square feet on a certain map entitled, "Map of Property Prepared for Dichello Distributors, Inc. Orange, Connecticut Scale 1" = 60' October 27, 1980 by Shaughnessy and Plain Land Surveyors - Fairfield" said map to be filed on the Orange Town Clerk's Office. SAID MAP BEARS FILE # 1007

The above grantors warranty to only those portions or parcels of land owned by them and not to parcels owned by other Grantors.

TO HAVE AND TO HOLD the premises hereby conveyed with the appurtenances thereof, unto the said Grantee, its successors and assigns forever, to them and their own proper use and behoof.

AND ALSO, the Grantors do for themselves, their heirs, successors and assigns, covenant with the Grantee, its successors and assigns, that at and until the ensealing of these presents, the Grantors are well seized of the premises as a good indefeasible estate in FEE SIMPLE; have good right to bargain and sell the same in manner and form as is above written; and that the same is free from all encumbrances whatsoever, except as above stated.

AND FURTHERMORE, the Grantors do by these presents, bind themselves and their heirs and assigns forever, to WARRANT and DEFEND the premises hereby conveyed to the Grantee, its successors and assigns, against all claims and demands whatsoever, except as above stated.

IN ALL REFERENCES herein to any parties, persons, entities or corporations, the use of any particular gender or the plural or singular number is intended to include the appropriate gender or number as the text of the within instrument may require.

IN WITNESS WHEREOF, the Grantors have hereunto set their respective hands and seals, this 8th day of June, 1981.

SIGNED, SEALED AND DELIVERED IN THE PRESENCE OF:

Joseph H. Pellegrino
William H Gaites III

as to: JS, AS, CS, RC, JDE, AN, ES, EG

Joseph Salemme
JOSEPH SALEMME

Anthony Finzero
ANTHONY FINZERO

Ralph Salemme
RALPH SALEMME

Frank Salemme
FRANK SALEMME

Frank M. Morgillo
Joseph H. Pellegrino

as to: RS, FS, SS

Sylvester Salemme
SYLVESTER SALEMME

Anthony R. Salemme
ANTHONY SALEMME a/k/a ANTHONY R. SALEMME

Charles Salemme
CHARLES SALEMME

Rose Colatosti
ROSE COLATOSTI

Jennie DeFelice
JENNIE DeFELICE a/k/a MARIE GIOVANNA DeFELICE

Anna Nacca
ANNA NACCA

Veronica Blackie
Veronica Blackie
Joseph H. Pellegrino

As to: MGS Atty for DS

Elizabeth Smith
ELIZABETH SMITH

Marion G Salemme attorney in fact for Donald Salemme
DONALD SALEMME a/k/a DONALD C. SALEMME

Frank M. Morgillo
Joseph H. Pellegrino

As to: AS, Jr.

Arnold W. Smith Jr.
ARNOLD SMITH, JR. a/k/a ARNOLD W. SMITH, JR.

Eileen Gaites
EILEEN GAITES

Joseph H. Pellegrino
George H. Pellegrino

SS-4-MG

Marie Glynn
MARIE GLYNN

PELLEGRINO
PELLEGRINO & PELLEGRINO
PROFESSIONAL CORPORATION

Frank M. Morgillo

Joseph H. Pellegrino

PASQUALE J. INZERO

ANTHONY INZERO, JR.

RICHARD P. INZERO

RAYMOND T. INZERO

STATE OF CONNECTICUT)
) ss: New Haven June 8, 1981
COUNTY OF NEW HAVEN)

Personally appeared, JOSEPH SALEMME, ANTHONY SALEMME a/k/a ANTHONY R. SALEMME, CHARLES SALEMME, ROSE COLATOSTI, JENNIE DeFELICE, ANNA NACCA, ELIZABETH SMITH and MARION G. SALEMME, Attorney in Fact for DONALD SALEMME a/k/a DONALD C. SALEMME and EILEEN GAITES, signers and sealers of the foregoing instrument, and acknowledged the same to be their free act and deed before me.

JOSEPH H. PELLEGRINO
COMMISSIONER OF SUPERIOR COURT

STATE OF CONNECTICUT)
) ss: Mystic June 8, 1981
COUNTY OF NEW LONDON)

Personally appeared, ARNOLD W. SMITH, JR., signer and sealer of the foregoing instrument, and acknowledged the same to be his free act and deed before me.

JOSEPH H. PELLEGRINO
COMMISSIONER OF SUPERIOR COURT

STATE OF CONNECTICUT)
) ss: Hamden June 9, 1981
COUNTY OF NEW HAVEN)

Personally appeared, ANTHONY F. INZERO, PASQUALE J. INZERO, ANTHONY P. INZERO, JR., RICHARD P. INZERO and RAYMOND T. INZERO, signers and sealers of the foregoing instrument, and acknowledged the same to be their free act and deed before me.

FRANK M. MORGILLO
COMMISSIONER OF SUPERIOR COURT

STATE OF CONNECTICUT)
) ss: New Haven June 9, 1981
COUNTY OF NEW HAVEN)

Personally appeared, SYLVESTER SALEMME, signer and sealer of the foregoing instrument, and acknowledged the same to be his free act and deed, before me.

FRANK M. MORGILLO
COMMISSIONER OF SUPERIOR COURT

STATE OF CONNECTICUT)
) ss: New Haven June 10, 1981
COUNTY OF NEW HAVEN)

Personally appeared, RALPH SALEMME and FRANK SALEMME, signers and sealers of the foregoing instrument, and acknowledged the same to be their free act and deed, before me.

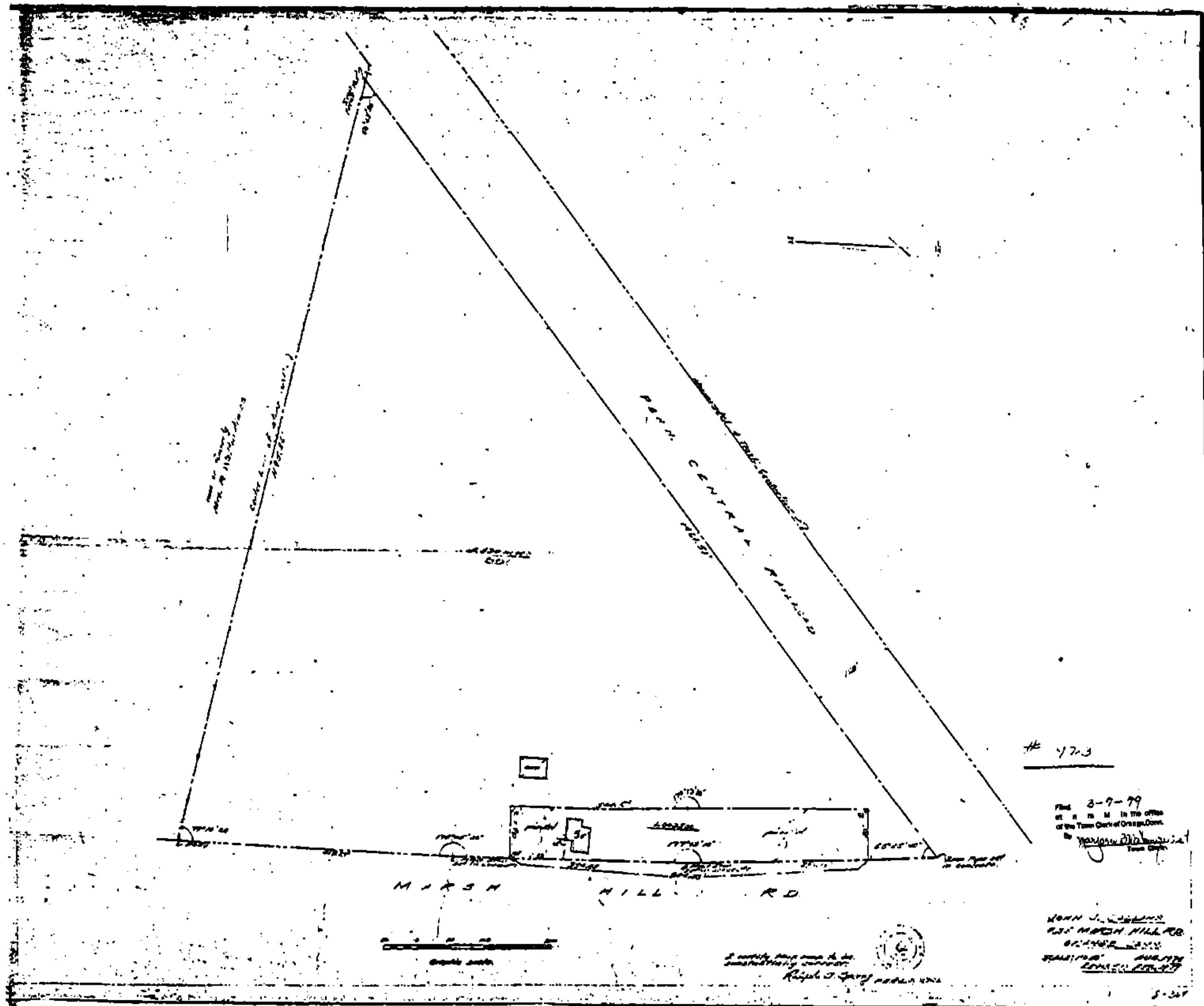
FRANK M. MORGILLO
COMMISSIONER OF SUPERIOR COURT

STATE OF CONNECTICUT)
) ss: Hamden June 10, 1981
COUNTY OF NEW HAVEN)

Personally appeared, MARIE GLYNN, signer and sealer of the foregoing instrument, and acknowledged the same to be her free act and deed, before me.

JOSEPH H. PELLEGRINO
COMMISSIONER OF SUPERIOR COURT

Received for Record 6/10/81
at 11 h 44 m A.M. and recorded by
Irene E. Larson, Asst. Town Clerk



PENN CENTRAL RAILROAD
MARSH HILL RD
923
Filed 3-7-79
in the office of the Town Clerk of Orange, Conn.
Town Clerk
Graphic scale

923

923


LI-2
CITY OF WE
Residential Area
BOP
CONNECTICUT TPKE
FRONTAGE RD.
SALEMME LA.
Railroad
ROBINSON BLVD.
CONNAR RD.
EXECUTIVE BLVD.
TY OF MILFORD
Zoning Legend
C-1 Commercial 1 District
C-2 Commercial 2 District
LI-1 Light Industrial 1 District
LI-2 Light Industrial 2 District
LI-3 Light Industrial 3 District
LSC Local Shopping Center
BOP Business Office Park
SOURCE OF BASE MAP:
TOWN OF ORANGE ENGINEERING MAP
THIS MAP WAS DEVELOPED FOR USE
PLANNING DOCUMENT. DELINEATION MAY
NOT BE EXACT.


Commercial &
Industrial Zoned Land
Town Plan and Zoning Commission
Orange, Connecticut
O'Brien & Marmo Associates
400 0 400 600 1200 Feet
1 inch = Approx. 400 feet
August 2004
BOSTON POST RD.
PECK LA
CITY OF MILFOR

45 69 000m N

41 °15'00.00"

41 °15'00.00"

45 68 000m N

ZONE A

ZONE X

ZONE AE (EL 10)

LX0918

LX0362

TOWN OF ORANGE 090087

CITY OF MILFORD 090082

Oyster River

Oyster River

LIMIT OF DETAILED STUDY

LIMIT OF STUDY

FRONTAGE ROAD

HEFFERNAN DRIVE

GALLICARI DRIVE

FRANKLIN ROAD

MILLS DRIVE

MOUNT PLEASANT ROAD

BAILEY DRIVE

FARM HILL ROAD

WOODRIDGE ROAD

RIDGE HOLLOW ROAD

SUNFLOWER CIRCLE

PIERSON

TOLL ROAD

BIG SPRUCE PEAK LANE

TYROL PEAK LANE

SPRUCE

SUN ST

COYLE

DONNA

MORGAN

CHIN CLIFT CIRCLE

PERRY MERRILL DRIVE

DOWN DRAFT CIRCLE

RAILROAD

SHERMAN LANE

MARSH HILL ROAD

ROBINSON BOULEVARD

CASCADE BOULEVARD

CONNAIR ROAD

TOWN OF ORANGE

CITY OF MILFORD

BEATRICE DRIVE

IDA LANE

KANE ROAD

JESSIE DRIVE

OXBOW LANE

HAYSTACK ROAD

PEPPERMILL DRIVE

Brook

APPLE TREE TERRACE

Jones Hill Road

BRIDLE PATH LANE

HOMESTEADER LANE

HONEYPOT ROAD

SARAH CT

GLEN ROAD

PETER LANE

GERTRUDE LANE

BENHAM HILL

DANIEL ROAD

FLUM

AVENUE

95

162

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

NEW HAVEN COUNTY, CONNECTICUT

(ALL JURISDICTIONS)

PANEL 438 OF 635

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ORANGE, TOWN OF	090087	0438	H
WEST HAVEN, CITY OF	090092	0438	H

Notice to User. The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
09009C0438H

EFFECTIVE DATE
DECEMBER 17, 2010

Federal Emergency Management Agency

FEET

METE

0 150 300

PANEL 0551H

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

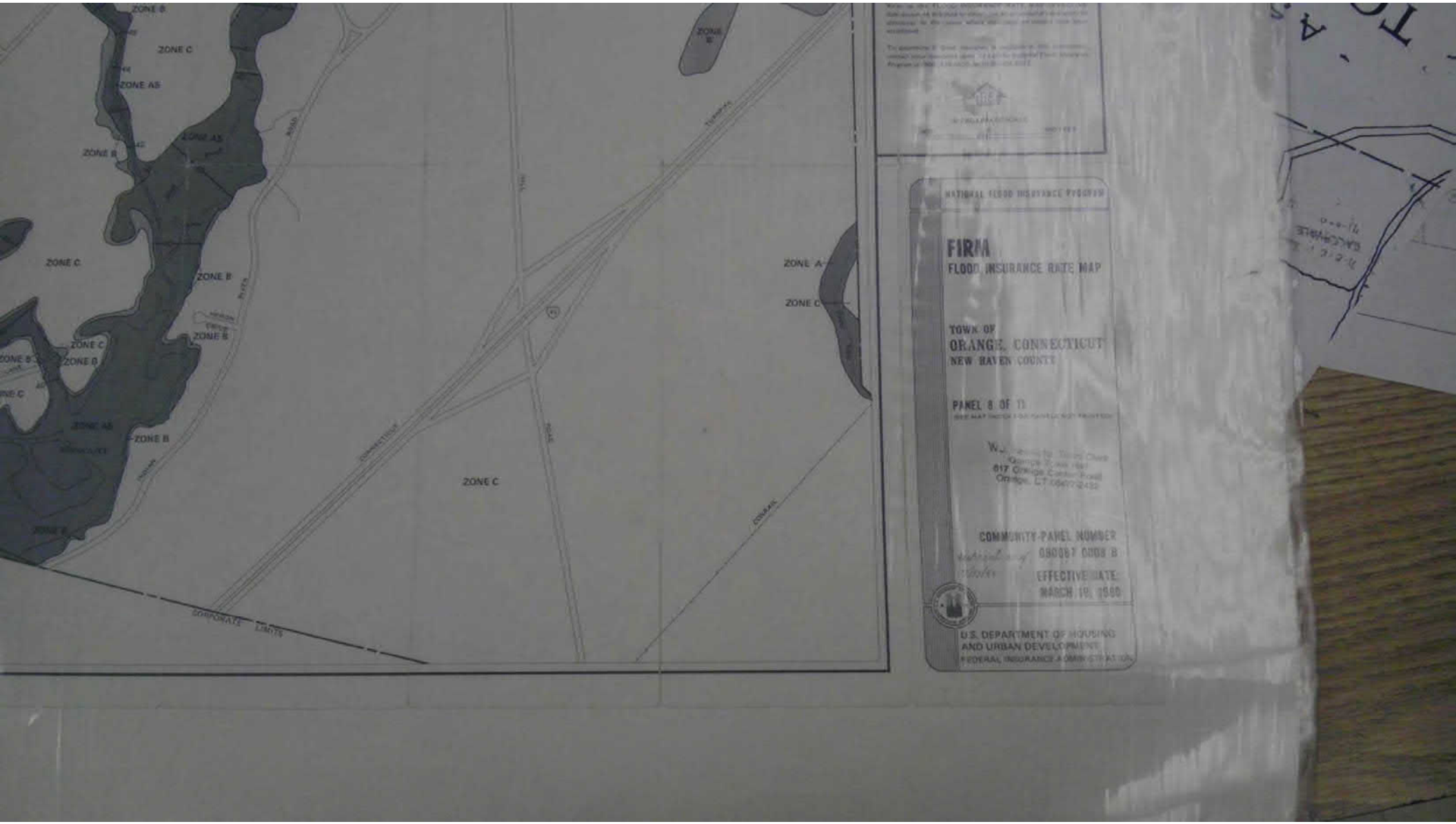
NEW HAVEN COUNTY, CONNECTICUT

(ALL JURISDICTIONS)

PANEL 551 OF 635

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:


ZONE B
ZONE C
ZONE AS
ZONE A5
ZONE B
ZONE C
ZONE B
ZONE B
ZONE C
ZONE B
ZONE AS
ZONE B
ZONE C
ZONE A-
ZONE C
ZONE C
CORPORATE LIMITS
NATIONAL FLOOD INSURANCE PROGRAM
FIRM
FLOOD INSURANCE RATE MAP
TOWN OF
ORANGE, CONNECTICUT
NEW HAVEN COUNTY
PANEL 8 OF 11
COMMUNITY-PANEL NUMBER
090067 0008 B
EFFECTIVE DATE:
MARCH 19, 1980
U.S. DEPARTMENT OF HOUSING
AND URBAN DEVELOPMENT
FEDERAL INSURANCE ADMINISTRATION


ORANGE
CONNECTICUT
MAP
B-1c
B-1d
B-1e
B-2
B-3
C - UPLAND SOILS - OVER COMPACT
C-1a
C-1b
C-1d
C-2
D - UPLAND SOILS - ROCKY AND
D-1
D-2
FLOODPLAIN SOILS
B-2

A - UPLAND SOILS - OVER SANDS AND GRAVELS

A-1b Mostly excessively drained soils with slopes less than 15 percent but including some well drained soils.

A-1d Mostly well drained soils with slopes less than 8 percent but including some excessively drained and moderately well drained soils.

A-1e Mostly well drained soils with slopes between 8 and 15 percent but including some excessively drained and moderately well drained soils.

A-2 Mostly moderately well drained soils but including some poorly drained and some floodplain soils.

A-3 Mostly poorly and very poorly drained soils but including some organic and some floodplain soils.

B - UPLAND SOILS - OVER FRIABLE TO FIRM GLACIAL TILL

B-1a Mostly well drained non-stony and stony soils with slopes less than 8 percent but including some moderately well drained soils and some well drained soils over very slowly permeable till.

B-1b Mostly well drained non-stony and stony soils with slopes between 8 and 15 percent but including some moderately well drained soils.

B-1c Mostly well drained very stony soils with slopes less than 15 percent but including some well drained non-stony and stony soils.

B-1d Mostly well drained non-stony and stony soils with slopes more than 15 percent but including some well drained very stony soils.

B-1e Mostly well drained very stony soils with slopes more than 15 percent but including some rocky and very rocky soils.

B-2 Mostly moderately well drained soils over friable to firm glacial till but including some well drained soils.

B-3 Mostly poorly and very poorly drained soils but including some organic soils.

C - UPLAND SOILS - OVER COMPACT GLACIAL TILL

C-1a Mostly well drained non-stony and stony soils with slopes less than 8 percent but including some moderately well drained soils over very slowly permeable till.

C-1b Mostly well drained non-stony and stony soils with slopes between 8 and 15 percent but including some moderately well drained soils over very slowly permeable till.

C-1d Mostly well drained non-stony and stony soils with slopes more than 15 percent but including some non-stony and stony soils over permeable till.

C-2 Mostly moderately well drained non-stony, stony and very stony soils with slopes less than 15 percent but including some moderately well drained soils over permeable till.

D - UPLAND SOILS - ROCKY AND SHALLOW TO BEDROCK

D-1 Mostly rocky and very rocky soils with slopes less than 15 percent but including some well drained soils over permeable till.

D-2 Mostly rocky and very rocky soils with slopes more than 15 percent, extremely rocky soils and Rockland but including some well drained soils over permeable till.

FLOODPLAIN SOILS

F-2 Mostly moderately well drained soils but including some well drained soils and some poorly drained soils.

F-3 Mostly poorly and very poorly drained soils but including some moderately well drained and some organic soils.

MISCELLANEOUS

W Urban Land

PERMIT # 8520

TOWN OF ORANGE, CONN.

Application for Building Permit Under Building Ordinance

Date November 19 1986

Application is hereby made to the Building Official to erect a structure

Warehouse & Storage Bldg.

Location of Property 55 Marsh Hill Road, Orange, CT 06477

Name of Owner Dichello Distributors Inc Present Address Same as Above

Zone LI2 Width of Lot * Depth of Lot * Area of Lot *

Size of Building 160 x 240 * Area of Building 384,000 * Stories (1) one *

Front Yard * Rear Yard * Side Yard *

Use of Buildings recycling of beverage containers

Remarks Will connect to Public Sewer, Water & Well

Comply with all Town specs. Pre-structure on inspection.

Use space below for plot plan of property.

*See plot plan on file

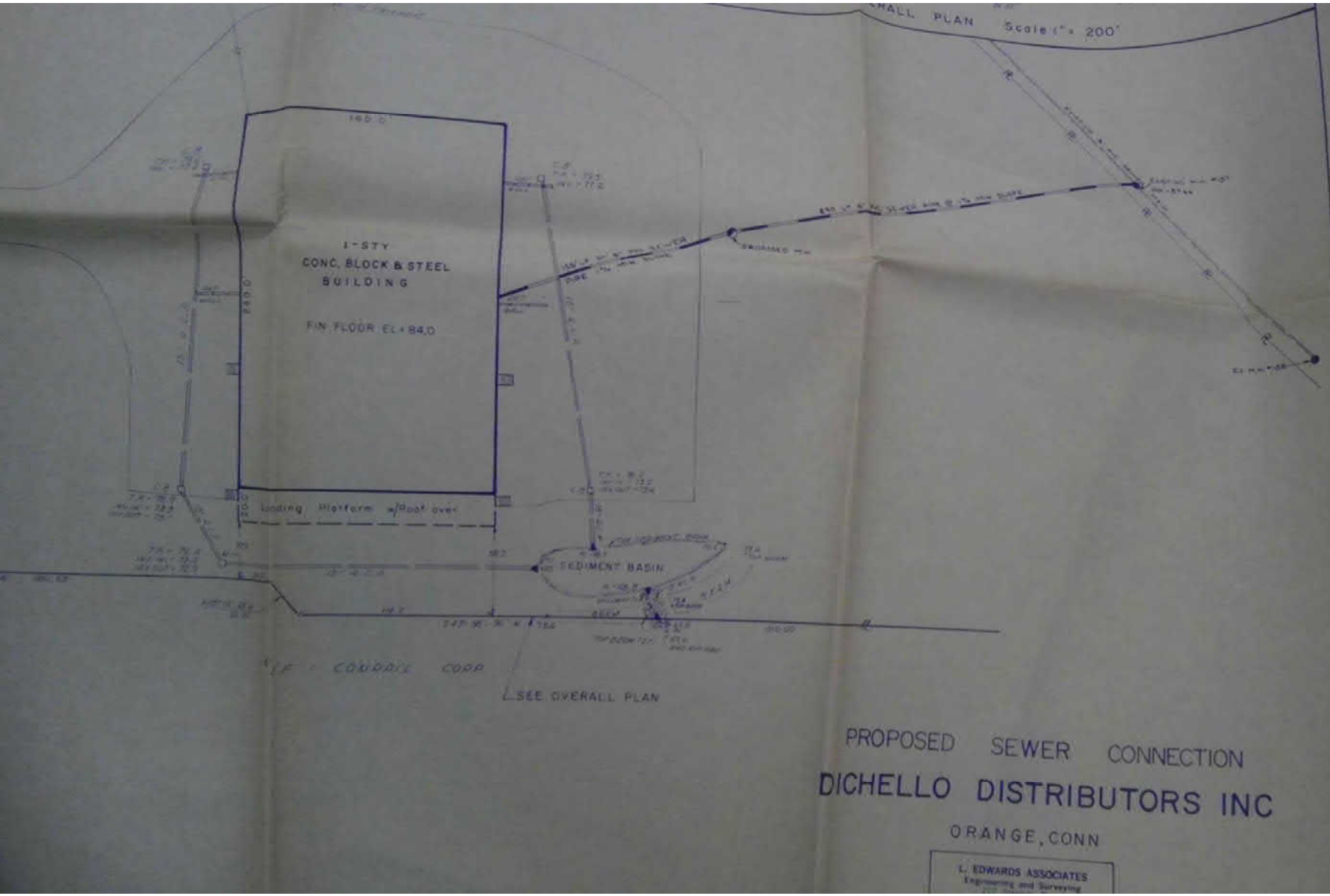
#697

Approved and Permit issued Dec 16 1986

Applicant Atlantic Design & Construction, Inc.
61 Industrial Park Road Ext.
Plymouth, MA 02360
617-746-8700

Urban J. Cloran, President

Building Official

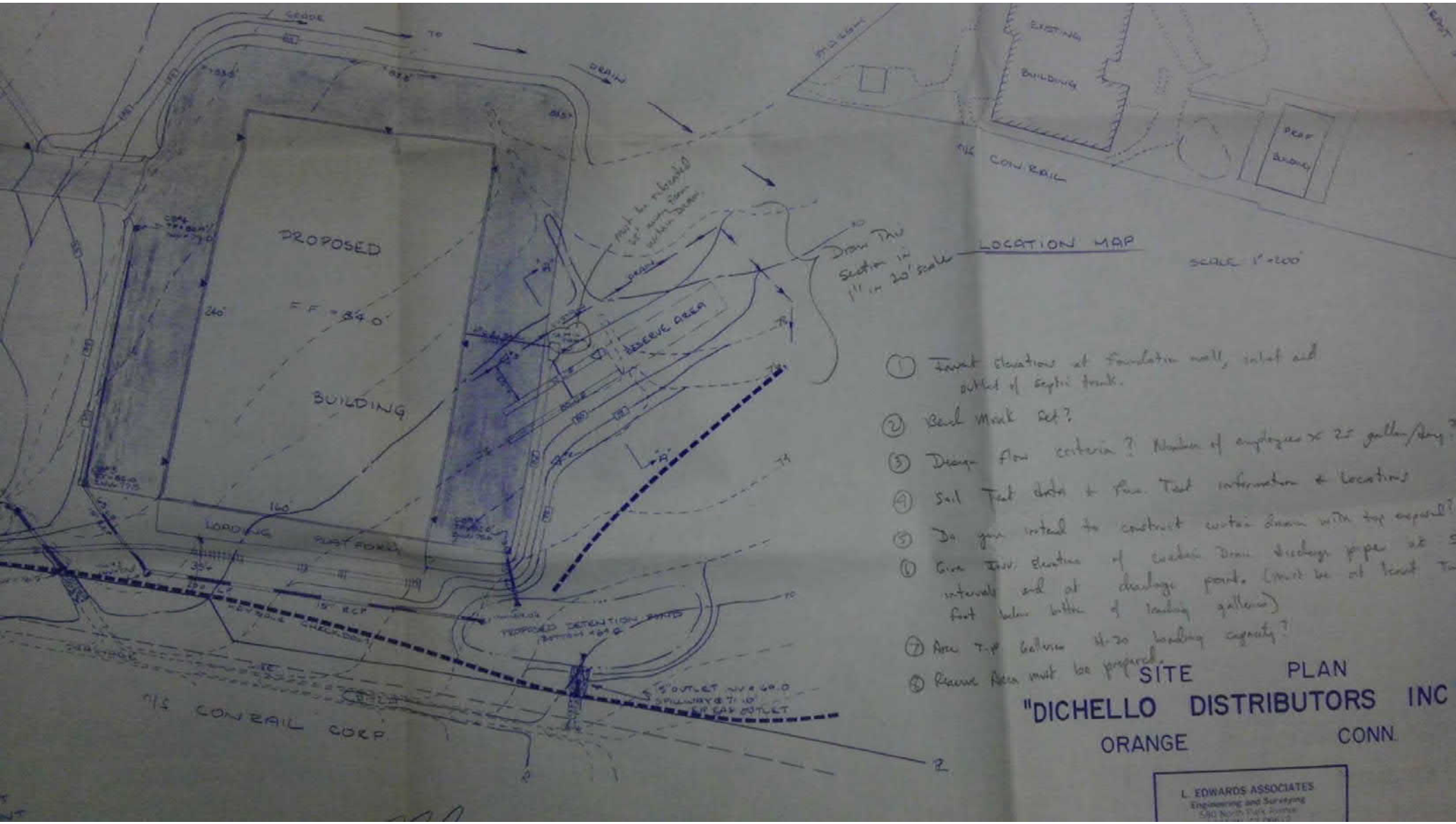


PROPOSED SEWER CONNECTION

DICHELLO DISTRIBUTORS INC

ORANGE, CONN

L. EDWARDS ASSOCIATES
Engineering and Surveying



1. Invert elevations at foundation wall, inlet and outlet of septic tank.
2. Bench Mark Set?
3. Design flow criteria? Number of employees x 25 gallons/day?
4. Soil Test data & Perc. Test information & locations
5. Do you intend to construct curtain drain with top exposed?
6. Give Inv. Elevation of Curtain Drain discharge pipe at intervals and at discharge points. (Must be at least 1 foot below bottom of loading galleries)
7. Area T.P. believes H-20 loading capacity?
8. Reserve Area must be prepared.

SITE PLAN

"DICHELLO DISTRIBUTORS INC

ORANGE CONN.

L. EDWARDS ASSOCIATES
Engineering and Surveying

LETTER OF TRANSMITTAL

DATE 7/6/87 Mach 1A Dist.

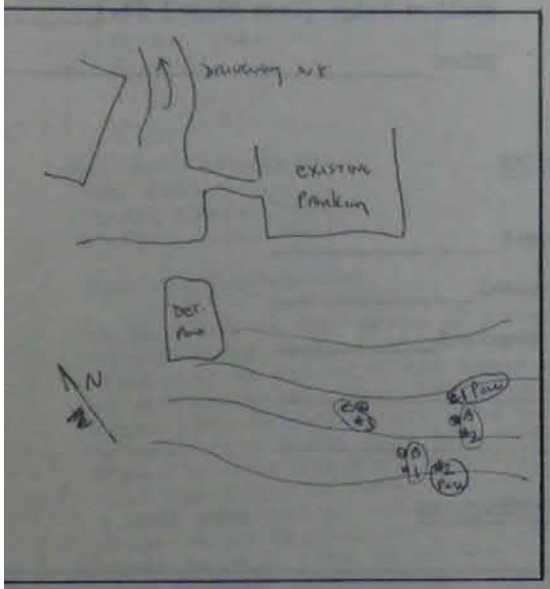
INVESTIGATION FOR SEWAGE DISPOSAL SYSTEM

MARSH HILL ROAD

ation: 55 DeChello Distributors - Return Bottle Building Date: 9/26/84

er: DeChello Dist. Tests conducted by: Larry Edwards / Arc

Diagram: Slopes, water courses, ledge outcrops, storm & footing drains, water supply locations.



Percolation Tests

Hole #1		Hole #2	
Depth: 37"		Depth: 26"	
Presoak Time: 2 hours		Presoak Time: 2 hours	
Time	Reading	Time	REading
0	1¼	0	10"
10	1⅞	10	11⅛"
20	2¼	20	12¾"
30	2¾	30	13½"
40	3"	40	14"
50	3¼"	50	14½

servation Pits: Depth, ledge at, ground water at, mottling at:

PIT A

0-18" organic top soil
18"-30" rusty mottled thick fine sand + silt
30"-4½' reddish brown compact silt/stones
4½'-10' med compact coarse to fine sand/silt
water at 9'
mottling at 18"

PIT B

0-8" top soil
8"-16" orange brown fine sandy loam
16"-24" mottled fine silt
24"-5' thick mottled compact silt
5'-7' med. compact coarse to fine sand + silt

PIT C

0-8" top soil
8"-18" orange brown fine sandy loam
18"-44" mottled very compact fine sand/silt
44"-6½' med compact sand + silt
6½'-8' coarse sand + silt
roots to 18" / mottled 18"

PIT D

Stand pipe in each hole to monitor water table in spring

emarks: Suitability of land for subsurface sewage disposal system.

...ING BOARD
-82

STATE OF CONNECTICUT
DEPARTMENT OF CONSUMER PROTECTION
WELL DRILLING PERMIT
165 CAPITOL AVE., HARTFORD, CONNECTICUT 06106

PERMIT NUMBER
123523

ORANGE | 55 MARSH HILL ROAD | DATE 7/7/87
LOCATION OF WELL (Town) (Street) (Lot Number)

ATLANTIC DESIGN & CONSTRUCTION INC. FOR DICHELLO BEER DISTRIBUTOR
OWNER OF WELL
☐ INDIVIDUAL ☒ BUILDER ☐ OTHER (Specify)

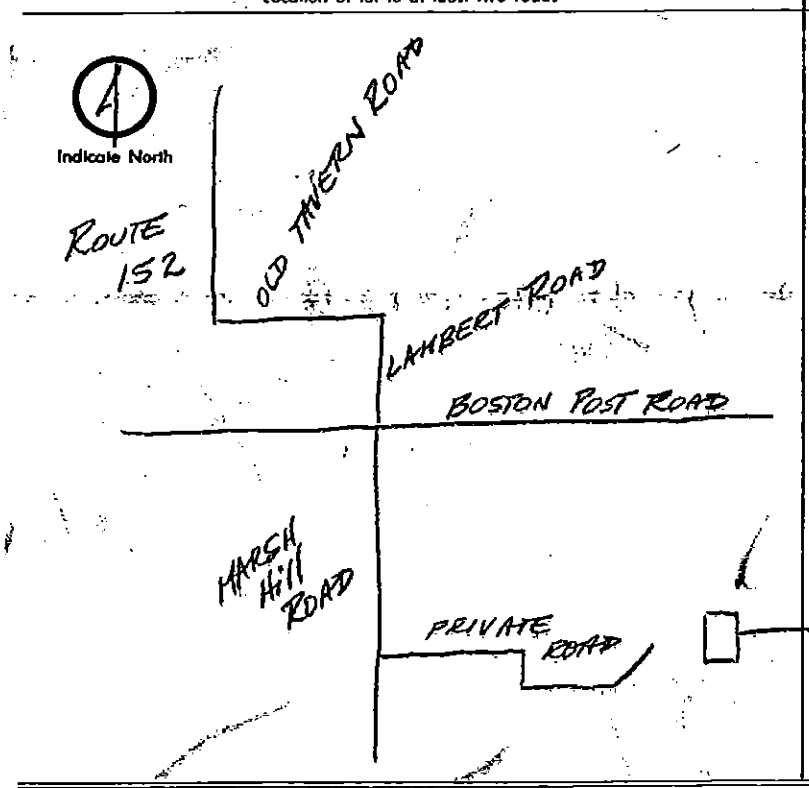
OWNER'S ADDRESS
61 INDUSTRIAL PARK ROAD EXTENSION, PLYMOUTH, MASS. 02360

PROPOSED USE OF WELL					Est. No. of People being served.
	☐ DOMESTIC	☐ BUSINESS ESTABLISHMENT	☐ FARM	☐ TEST WELL	
	☐ PUBLIC SUPPLY	☒ INDUSTRIAL	☐ AIR CONDITIONING	☐ OTHER (Specify)	10±

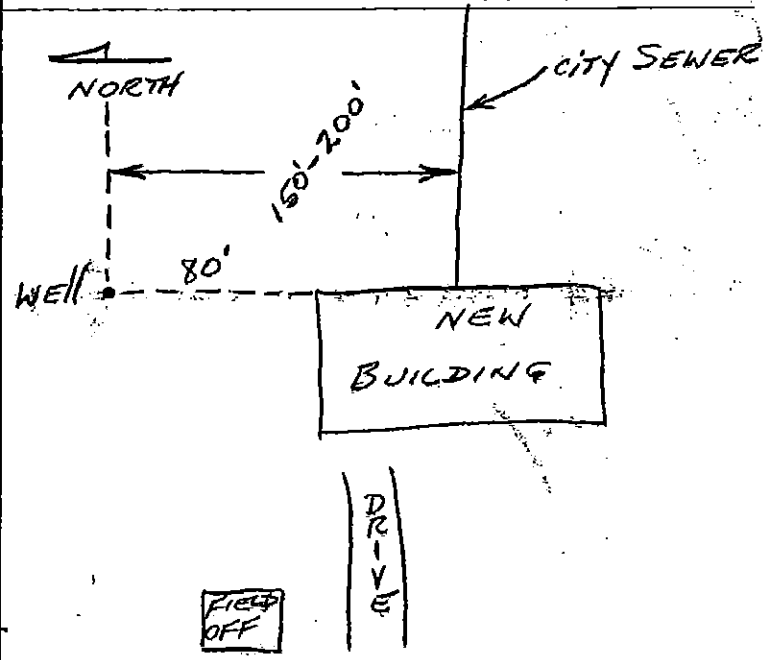
SKETCH OF WELL LOCATION

Locate well with respect to at least two roads, showing distance from intersection and front of lot

Location of lot to at least two roads



Well location on lot and to house (if present)



Approximate number of feet from well to nearest source of possible contamination: 150'+

The undersigned is aware that upon completion of the well, a "Well Completion Report" containing construction details and information required under Section 25-131 of the 1969 Supplement to the General Statutes must be sent to the owner, the Board and the Water Resources Commission on the form provided by the Board. This permit is not valid until all information is filled in and it has been counter-signed by the Director of Health or his agent.

APPLICANT (Signature)	APPLICANT'S ADDRESS	REGISTRATION NO.
J Ellis EASTERN WATER DEVEL CO	5 BENSON ROAD, OXFORD, CONN. 06483	33
☒ APPROVED ☐ REJECTED	BY (Town Health Officer or Agent) Frederick C. Schumacher, R-S.	DATE 7/24/87

REMARKS

DIRECTOR OF HEALTH

MPLETION REPORT

.1-82

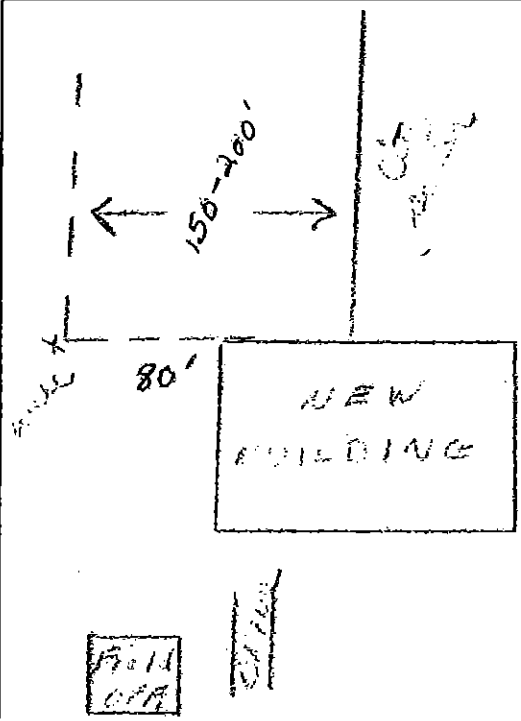
STATE OF CONNECTICUT
DEPARTMENT OF CONSUMER PROTECTION
WELL DRILLING BOARD
165 CAPITOL AVE.
HARTFORD, CONNECTICUT 06106

Do NOT fill in
STATE WELL NO.
OTHER NO.

OWNER	NAME: Atlantic Design & Const.	ADDRESS: 61 Industrial Park Ext. Plymouth Mass. 02360	
LOCATION OF WELL	(No. & Street): 55 Marsh Hill Road	(Town): Orange	(Lot Number):
PROPOSED USE OF WELL	☐ DOMESTIC ☐ BUSINESS ESTABLISHMENT ☐ FARM ☐ TEST WELL	☐ PUBLIC SUPPLY ☒ INDUSTRIAL ☐ AIR CONDITIONING ☐ OTHER (Specify)	
DRILLING EQUIPMENT	☐ ROTARY ☒ COMPRESSED AIR PERCUSSION ☐ CABLE PERCUSSION ☐ OTHER (Specify)		
CASING DETAILS	LENGTH (feet): 42	DIAMETER (inches): 6	WEIGHT PER FOOT: 17 ☒ THREADED ☐ WELDED
	DRIVE SHOE: ☒ YES ☐ NO	WAS CASING GROUTED? ☒ YES ☐ NO	
YIELD TEST	☐ BAILED ☐ PUMPED ☒ COMPRESSED AIR	HOURS: 4	YIELD (G.P.M.): 3½
WATER LEVEL	MEASURE FROM LAND SURFACE—STATIC (Specify feet): 17	DURING YIELD TEST (feet): 500	Depth of Completed Well in feet below land surface: 505
SCREEN DETAILS	MAKE		LENGTH OPEN TO AQUIFER (feet)
	SLOT SIZE	DIAMETER (inches)	IF GRAVEL PACKED: Diameter of well including gravel pack (inches): GRAVEL SIZE (inches) FROM (feet) TO (feet)

DEPTH FROM LAND SURFACE FEET TO FEET		FORMATION DESCRIPTION
0	30	clay sand gravel
31	505	granite

Sketch exact location of well with distances, to at least two permanent landmarks.



If yield was tested at different depths during drilling, list below

FEET	GALLONS PER MINUTE
505	3.5

ORANGE HEALTH DEPT.
DIV. OF ENVIRONMENTAL HEALTH
Rec'd 9/14/87

DATE WELL COMPLETED	PERMIT NO.	REGISTRATION NO.	DATE OF REPORT	WELL DRILLER (Signature)
7/29/87	123523	33	7/30/87	

LOCAL DIRECTOR OF HEALTH

ATER CONTROL LABORATORIES
HOPKINTON INDUSTRIAL PARK
106 SOUTH ST.
HOPKINTON, MA 01748
617-435-6824

WORK ID #		
72517404	000035	T02 1

SAMPLE IDENTIFICATION INFORMATION

ATLANTIC DESIGN
55 MARSH HILL RD.

ORANGE CT

REFERRED BY:

EASTERN WATER DEVELOPMENT CO.,
ATTN: BOB GRANT
ADD'S BENSON RD.
OXFORD, CT. 06483

COLLECTED	RECEIVED	REPORTED
09/08/87 11:00	09/09/87 10:11	09/09/87 22:45

EPORT: FINAL REPORT

COMMENT:

TESTS	RESULTS	UNITS	REFERENCE RANGE	LOW	ACCEPTABLE RANGE GRAPHIC RESULTS	HIGH
*** GENERAL INFORMATION						
COLLECTOR: EASTERN WATER DEV.						
*** ROUTINE QUALITY TESTING						
COLIFORM BACTERIA	0.	/100 ML				
ODOR	NONE					
TURBIDITY	0.39	NTU				
COLOR	0.		0. - 15.			
PH	7.5		5.0 - 9.0			
ALKALINITY	86.	MG/L				
HARDNESS-CALCULATED	114.	MG/L				
HARDNESS MAY BE EVALUATED USING THE FOLLOWING INFORMATION: SOFT:0-75 MOD HARD:76-150 HARD:151-300 VERY HARD:300+						
SODIUM	7.	MG/L	0. - 20.			
AMMONIA	<0.1	MG/L				
NITRATE	0.0	MG/L	0.0 - 10.0			
CHLORIDE	8.	MG/L	0. - 250.			
IRON	0.01	MG/L	0.00 - 0.30			
MANGANESE	0.02	MG/L	0.00 - 0.05			
*** MINERALS						
CALCIUM	33.4	MG/L				
MAGNESIUM	7.6	MG/L				
*** MISCELLANEOUS TESTING						
SULFATE	28.	MG/L	0. - 250.			
SOLIDS, T. DISSOLVED	250.	MG/L				
*** FINAL COMMENTS:	RESULTS FOR THE TEST(S) PERFORMED ON THIS SAMPLE MEET THE EPA CRITERIA FOR SAFE DRINKING WATER. *** THIS IS A FINAL REPORT. ***					

ORANGE HEALTH DEPT.
DIV. OF ENVIRONMENTAL HEALT
Rcv'd 9/14/87

WELL APPROVAL CERTIFICATE

SOURCE OF SAMPLE 55 Marsh Hill road DATE TAKEN 9/8/87

OWNER OF PROPERTY DiChello Distributors, Inc.

ADDRESS OF PROPERTY OWNER 55 Marsh Hill Road, Orange, CT.

BACTERIOLOGICAL TEST RESULTS: COLIFORM COLONIES/100 ML 0

X The results of the analysis for this well meet the requirements for a potable water supply.

__ The results of the analysis for this well are satisfactory for a potable water supply but certain of the chemical or physical constituents are above recommended levels.

__ The analysis indicates water is not suitable as a potable water supply.

COMMENTS:

Signed Frederick C Schumacher, R.S.
Frederick C. Schumacher, R.S.

Date September 14, 1987

TOWN OF ORANGE, CONNECTICUT

OFFICE OF BUILDING OFFICIAL

CERTIFICATE OF OCCUPANCY

Zone LI-2 . Date September 3 19 87

This is to certify that building at 55 Marsh Hill Road

as Built under Permit No. 8526 conforms substantially to the requirements of the Building Code and Zoning and Sanitary Regulations of the Town of Orange and is hereby approved for occupancy as indicated below.

Approved for occupancy For LI-2 Use

Paul G. Dinse

Zoning Enforcement Officer

Frederick C. Schumacher, R.S. *

Sanitarian

Building Official

NOTICE: Any change or extension of the use herein approved requires a new certificate of occupancy.

* See "Well Approval Certificate"

WELL APPROVAL CERTIFICATE

SOURCE OF SAMPLE 55 Marsh Hill road DATE TAKEN 9/8/87

OWNER OF PROPERTY DiChello Distributors, Inc.

ADDRESS OF PROPERTY OWNER 55 Marsh Hill Road, Orange, CT.

BACTERIOLOGICAL TEST RESULTS: COLIFORM COLONIES/100 ML 0

X The results of the analysis for this well meet the requirements for a potable water supply.

__ The results of the analysis for this well are satisfactory for a potable water supply but certain of the chemical or physical constituents are above recommended levels.

__ The analysis indicates water is not suitable as a potable water supply.

COMMENTS: .....

Signed Frederick C. Schumacher, R.S.
Frederick C. Schumacher, R.S.

Date September 14, 1987

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

24 WOLCOTT HILL ROAD, P.O. DRAWER A
WETHERSFIELD, CONNECTICUT 06109-0801

Phone : 566-3010

January 9, 1987

Mr. Burton L. Zempsky
Executive Vice President
and General Manager
DiChello Distributors, Inc.
P. O. Box 562
55 Marsh Hill Road
Orange, Connecticut 06477

Dear Mr. Zempsky:

Subject: Proposed Building on
DiChello Property
Orange, Ct.

I had received your letter of November 18, 1986, and directed it to the attention of Mr. William J. Lynch, Director of Rail Operations, for investigation and reply. I regret that you have not had a formal reply from Mr. Lynch, however, this has not affected the review of your site plan indicating the proposed detention pond and spillway. The plan has been under review by our Hydraulics & Drainage engineer and I am advised that additional information will be necessary from Mr. Lawrence Edwards, your engineer.

In our conversation on January 8, 1987, you advised me that DiChello Distributors is prepared to go forward with a 40,000 square foot building which will require a detention pond and spillway to enter the channel. Your engineer's calculations, however, did not include the impact that would result from the original detention pond for your previous building of 180,000 square feet.

I am granting approval for the installation of the detention pond and spillway, however, DiChello Distributors, Inc., must accept the responsibility to perform whatever construction is necessary, as determined by our Hydraulics engineer, in the event that the previous detention pond affects

the proposed installation and would require alterations to your present plans. It is, therefore, requested that you indicate your acceptance of the terms and conditions contained herein by signing in the space indicated below and return a copy of this letter.

Very truly yours,

Donald G. Leavitt
Deputy Commissioner
Bureau of Highways

Conditions Accepted By:

Burton L. Zempsky
Executive Vice President
and General Manager
DiChello Distributors, Inc.

Date Jan 12, 1987

DICHELLO DISTRIBUTORS, INC.
P.O. BOX 562 55 MARSH HILL ROAD ORANGE, CONNECTICUT 06477
PHONE: (203) 865-7700

January 12, 1987

Ms. Diane Mull, Chairperson
Town Plan & Zoning Commission
Town Hall
Orange, CT 06477

Dear Ms. Mull:

Enclosed is photocopy of January 9, 1987 letter from the State of Connecticut Department of Transportation permitting us to drain onto the railroad right-of-way as requested in your October 27, 1986 letter.

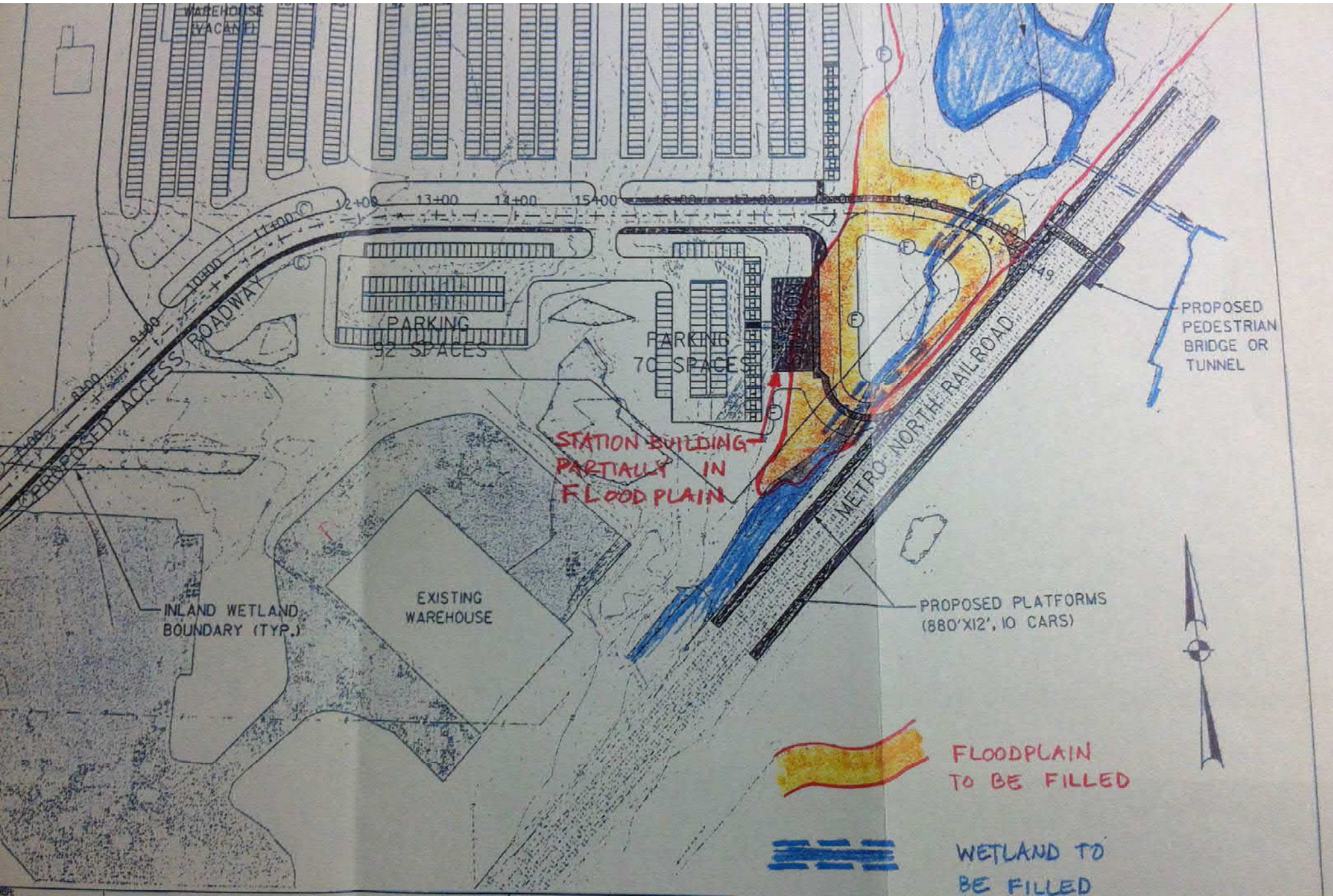
In the pursuit of that goal we have been side-tracked from Conrail to the Metropolitan Transportation Authority to Metro-North to the Department of Transportation. The foregoing information may save a future applicant the bureaucratic shuffle we endured.

Our thanks to you and all the members of your commission for the courtesy and consideration extended to us.

Very truly yours,

Burton L. Zempsky
Executive Vice President
and General Manager

CC: Bill Converse, Assessor
Tony Marchitto, Building Inspector
Bob Hiza, Town Engineer
Fred Schumacher, Sanitarian
enclosure
BLZ:jap



STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ENGINEER:

APPROVED BY:

DATE: 5-29-01

SEAL:

PROJECT TITLE:
SITE SELECTION STUDY
NEW TRAIN STATION
ORANGE, CONNECTICUT

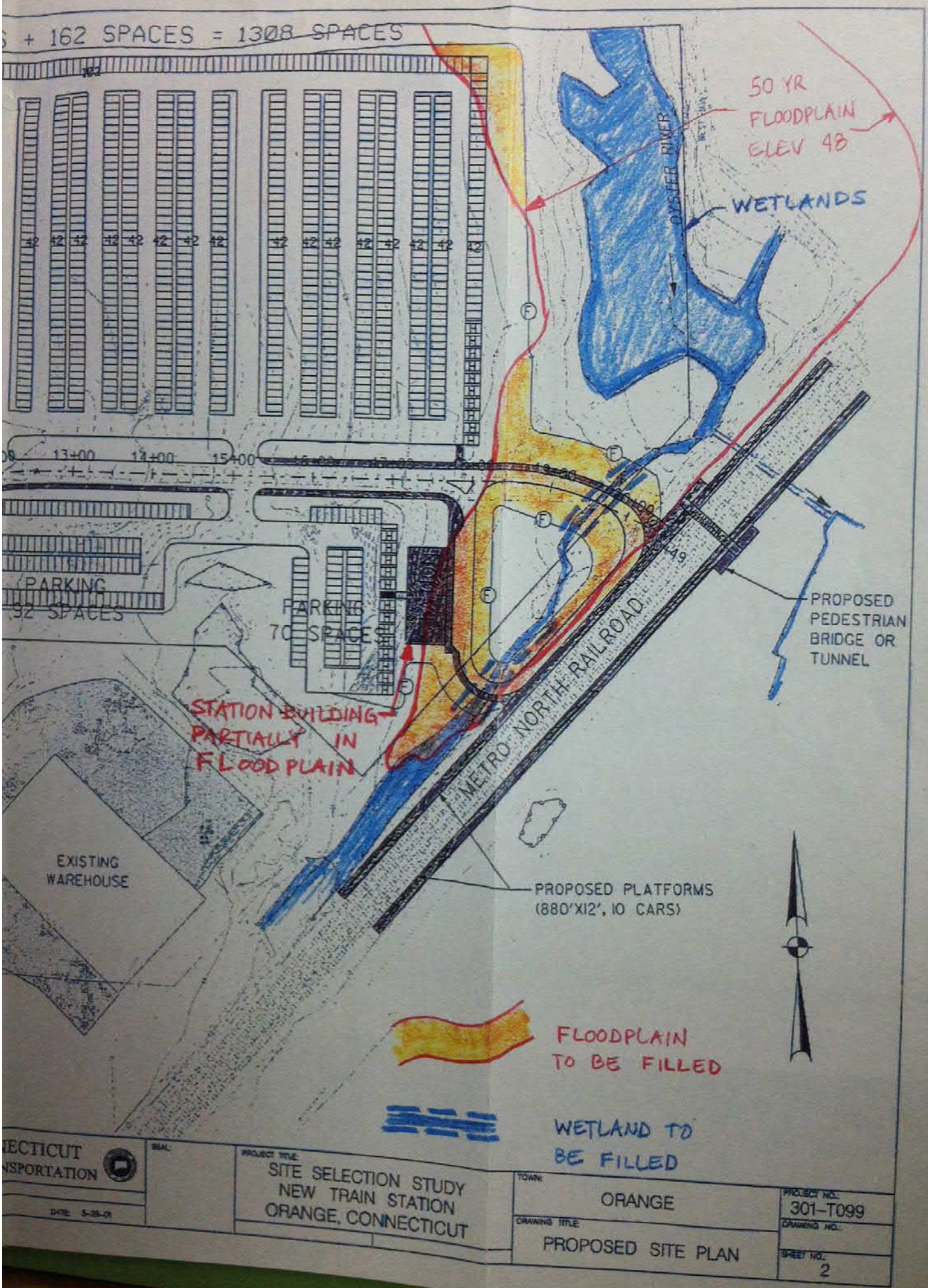
TOWN: ORANGE

DRAWING TITLE: PROPOSED SITE PLAN

PROJECT NO.: 301-T099

DRAWING NO.:

SHEET NO.: 2



NECTICUT
NSPORTATION

DATE: 5-28-01

SEAL:

PROJECT TITLE:
SITE SELECTION STUDY
NEW TRAIN STATION
ORANGE, CONNECTICUT

TOWN: ORANGE

DRAWING TITLE: PROPOSED SITE PLAN

PROJECT NO.: 301-T099

DRAWING NO.:

SHEET NO.: 2

B. Environmental Impact

The mantra among state (CTDEP) and federal (Army Corps of Engineers – ACOE) regulators regarding environmental impacts is "avoidance, minimization and mitigation". Before any project of this scale is approved, an Environmental Assessment must be conducted under CEPA. Impacts to wetlands, flora and fauna, floodplains, water quality and hazardous waste risk must be considered. Permits for regulated activities will then be required.

The ConnDOT Site Study has determined that wetlands and flora/fauna will be impacted by the Orange site but not by the West Haven site. The Site Study failed to identify some additional CTDEP and ACOE permits that will likely be required. In additional, the Site Study did not recognize that the Orange Site, including the proposed Train Station itself, is proposed within the 50-year floodplain of the Oyster River. The likelihood of achieving permit approvals from state and federal regulators is in question given these facts and with the West Haven site representing a reasonable and prudent alternative.

The Site Study also identified the Orange Site as having greater area of risk to encounter hazardous waste.

A summary of these Environmental Impacts:

ENVIRONMENTAL IMPACTS

	ORANGE	WEST HAVEN
Wetlands Filling	5,280 sq. ft.	-0-
Flora and Fauna	Greater Impact (Undeveloped, forested)	Less impact
Floodplain Impacts	Oyster River 50 yr. Floodplain	-0-
Hazardous Waste Risk Area	18.6 acres	12.6 acres

Excerpts from the ConnDOT Site Study and Figures showing Environmental Impacts follow:

APPENDIX E

User Provided Information

AMERICAN LAND TITLE ASSOCIATION COMMITMENT

ALTA Standard Form (2006)

Chicago Title Insurance Company

Chicago Title Insurance Company
ALTA COMMITMENT FOR TITLE INSURANCE

Chicago Title Insurance Company, herein call the Company, for a valuable consideration, hereby commits to issue its policy or policies of title insurance, as identified in Schedule A, in favor of the Proposed Insured named in Schedule A, as owner or mortgagee of the estate or interest covered hereby in the land described or referred to in Schedule A, upon payment of the premiums and charges therefor; all subject to the provisions of Schedules A and B and to the Conditions and Stipulations hereof.

This Commitment shall be effective only when the identity of the Proposed Insured and the amount of the policy or policies committed for have been inserted in Schedule A hereof by the Company, either at the time of the issuance of this Commitment or by subsequent endorsement.

This Commitment is preliminary to the issuance of such policy or policies of title insurance and all liability and obligations hereunder shall cease and terminate six (6) months after the effective date hereof or when the policy or policies committed for shall issue, whichever first occurs, provided that the failure to issue such policy or policies is not the fault of the Company.

IN WITNESS WHEREOF, Chicago Title Insurance Company has caused this Commitment to be signed and sealed as of the Effective Date shown in Schedule A, this Commitment to become valid when countersigned by an authorized signatory.

Issued By:

Denise Zinolli

Authorized Signatory/Denise Zinolli

Commitment No..: 5356180

Chicago Title Insurance Company

ALTA COMMITMENT FOR TITLE INSURANCE (6/17/06)

AMERICAN LAND TITLE ASSOCIATION COMMITMENT

ALTA Standard Form (2006)

Conditions

1. The term "mortgage," when used herein, shall include charge, mortgage, hypotheque, deed of trust, trust deed, or other security instrument.

2. If the Proposed Insured has or acquires actual knowledge of any defect, lien, encumbrance, adverse claim or other matter affecting the estate or interest or mortgage thereon covered by this Commitment other than those shown in Schedule B hereof, and shall fail to disclose such knowledge to the Company in writing, the Company shall be relieved from liability for any loss or damage resulting from any act of reliance hereon to the extent the Company is prejudiced by failure to so disclose such knowledge. If the Proposed Insured shall disclose such knowledge to the Company, or if the Company otherwise acquires actual knowledge of any such defect, lien, encumbrance, adverse claim or other matter, the Company at its option may amend Schedule B of this Commitment accordingly, but such amendment shall not relieve the Company from liability previously incurred pursuant to paragraph 3 of these Conditions and Stipulations.

3. Liability of the Company under this Commitment shall be only to the named Proposed Insured and such parties included under the definition of Insured in the form of policy or policies committed for and only for actual loss incurred in reliance hereon in undertaking in good faith (a) to comply with the requirements hereof, or (b) to eliminate exceptions shown in Schedule B, or (c) to acquire or create the estate or interest or mortgage thereon covered by this Commitment. In no event shall such liability exceed the amount stated in Schedule A for the policy or policies committed for and such liability is subject to the insuring provisions, the Exclusions from Coverage and the Conditions and Stipulations of the form of policy or policies committed for in favor of the Proposed Insured which are hereby incorporated by reference and are made a part of this Commitment except as expressly modified herein.

4. Any action or actions or rights of action that the Proposed Insured may have or may bring against the Company arising out of the status of the title to the estate or interest or the status of the mortgage thereon covered by this Commitment must be based on and are subject to the provisions of this Commitment.

Chicago Title Insurance Company
ALTA COMMITMENT FOR TITLE INSURANCE (6/17/06)

Chicago Title Insurance Company
10 Columbus Boulevard Suite 600
Hartford, CT 06106
Phone: 860-249-1661
Fax: 860-246-9484

SCHEDULE A

Effective Date and Time: 06/24/2015 at 8:00am

1. Policy or Policies to be Issued:

   Policy to be Issued:
   ALTA Owners 2006
   Proposed Insured: Orange Land Development LLC, a Connecticut limited liability company
   Amount of Insurance: $10,000.00

   Policy to be Issued:
   ALTA Loan 2006
   Proposed Insured: To be determined
   Amount of Insurance: $10,000.00

2. The estate or interest in the land described or referred to in this Commitment is: **Fee Simple**

3. Title to the estate or interest in the land at the Effective Date vested in:

   Di CHELLO DISTRIBUTORS, INCORPORATED a/k/a Di CHELLO DISTRIBUTORS, INC. by virtue of a Warranty Deed from Joseph Salemme, et al, dated June 8, 1981 and recorded in Volume 277 at Page 691 of the Orange Land Records.

   The land referred to in this Commitment is described as follows.
   See attached Exhibit "A"

   For Information Purposes Only:

   0 March Hill Road
   Orange, CT

Chicago Title Insurance Company
ALTA COMMITMENT FOR TITLE INSURANCE (6/17/06)

SCHEDULE B I

REQUIREMENTS

This Title Insurance Commitment (the "Commitment") is issued pursuant to the Agreement to Issue Policy contained on the American Land Title Insurance Commitment (2006) front cover form (the "Form") and is subject to the Conditions stated therein. Any title search and examination conducted by or for the Company in connection with the issuance of this Commitment is solely for the benefit of the Company. The sole liability of Company and its agent shall arise under and be governed by the Commitment and/or Policy subsequently issued. If this copy of the Commitment is not accompanied by the Form, a copy of the Form may be obtained from this Company upon request.

PLEASE BE ADVISED THAT A CONTINUATION SEARCH WILL BE MADE AT THE TIME OF CLOSING TO UPDATE THE EFFECTIVE DATE OF THE COMMITMENT AND THAT THE EARLIER EFFECTIVE DATE SHOWN AT THE BEGINNING OF THIS COMMITMENT WILL NOT AFFECT THE DATE OF COVERAGE OF THE POLICY. THE DATE OF THE POLICY WILL BE THE DATE OF RECORDING OF THE INSURED INSTRUMENT AND WILL COVER THE GAP BETWEEN THE LAST DATE COVERED BY THE OFFICIAL RECORD AT THE TIME OF CLOSING AND THE DATE OF RECORDING.

The following requirements must be complied with prior to the policy or policies being issued:

1. Payment of the full consideration to, or for the account of, the grantors or mortgagors of the full consideration for the estate or interest to be insured.

2. Payment of all premiums and charges for the policy.

3. The Company's receipt of written notification of anyone not referred to in this Report who will obtain an estate or interest in the land or make a mortgage thereon.

4. Instrument(s) creating the estate or interest to be insured must be approved, executed and duly recorded.

5. All outstanding real estate taxes, water, sewer and other municipal assessments and charges to be paid at or prior to closing.

6. The actual value of the estate or interest to be insured must be disclosed to the Company, and subject to approval by the Company, entered as the Amount of Insurance in said policy. Until the Amount of Insurance of the policy to be issued is determined and entered as aforesaid, it is agreed that as between the Company, the applicant for this Report and every person relying on this Commitment, the Company cannot be required to approve any such valuation in excess of $1,000.00 and the total liability of the Company on account of this Commitment shall not exceed said amount.

7. Duly executed Title/Owner's Affidavit.

8. Entity Documentation:

   A. If title is held by an LLC, the Company requires for its review a satisfactory copy of the "Articles of Organization", the Operating Agreement and the regulations of the limited liability company, any amendments thereof, a certificate of good standing, and satisfactory evidence of authority of the officers, managers, or members to execute the documents.

   B. If title is held by a corporation, the Company requires satisfactory evidence of the authority of the corporation to sell/mortgage the land, including:
   1) A properly authenticated Certificate of Incorporation, along with a Resolution of the managing directors authorizing the conveyance/mortgage to be insured and authorizing a managing director to execute the deed/mortgage, is required;
   2) If the deed/mortgage is to be executed by an attorney-in-fact, then a duly executed Power of Attorney in form for recording must be produced and recorded with proof from the managing directors stating the said Power of Attorney is valid and binding and duly authorized and
   3) Certificate of Good Standing.

   C. If title is held by a trustee, the Company requires proof of power to sell satisfactory to Company.

   D. If title is held by an executor or administrator, the Company requires proof of power to sell satisfactory to Company and a certificate from Probate or the IRS that no succession taxes are due.

Chicago Title Insurance Company
ALTA COMMITMENT FOR TITLE INSURANCE (6/17/06)

SCHEDULE B I (Continued)

9. If the land is a Common Interest Community:
   a) All common interest community fees should be current;
   b) A statement from the organization of unit owners setting forth the amount of unpaid common expenses and any other sums which have been assessed against a unit owner;
   c) A waiver of any right of first refusal must be duly recorded.

10. Note: Notwithstanding anything to the contrary in this Report, if the policy to be issued is other than an ALTA Owner's Policy (6/17/06) or ALTA Loan Policy (6/17/06), the policy may not contain an arbitration clause, or the terms of the arbitration clause may be different from those set forth in this Report. If the policy does contain an arbitration clause, and the Amount of Insurance is less than the amount, if any, set forth in the arbitration clause, then all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties.

11. If a Zoning Endorsement with or without parking is required, any of the following must be submitted to the Company prior to closing:
   a) a Zoning Compliance Letter signed by the Town of the Zoning Officer; or
   b) a Zoning Opinion Letter from an attorney; or
   c) a Zoning and Site Requirements Summary prepared by the Planning & Zoning Resource Corporation or any other similar company acceptable to the Company.
   d) a current survey depicting the number of parking spaces on the premises must be submitted prior to closing.
   Either of Items a), b) or c) above must state:
      1) The zone in which the property is located;
   2) The current use, and that that use is permitted in that zone (either by itself or by virtue of a special use permit, etc.)
   3) That there are no violations.

Chicago Title Insurance Company
ALTA COMMITMENT FOR TITLE INSURANCE (6/17/06)

SCHEDULE B II

Schedule B of the policy or policies to be issued will contain exceptions to the following matters unless they are disposed of to the Company's satisfaction:

1. Defects, liens, encumbrances, adverse claims or other matters, if any, created first appearing in the public records or attaching subsequent to the effective date hereof but prior to the date of the Proposed Insured acquires for value of record the estate or interest or mortgage thereon covered by this Report.

2. Rights of the present tenants, lessees or parties in possession not shown by the public records.

3. Any lien, or right to a lien, for services, labor or material, heretofore or hereafter furnished, imposed by law and not shown by the public records.

4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land. Paragraph 2 (c) of the Covered Risks is hereby deleted in its entirety.

5. Taxes to the Town of Orange on the Grand List of October 1, 2014 not yet due and payable (see copy of tax printout enclosed).

6. Sewer assessment lien in favor of the Town of Orange recorded on March 28, 1999 n Volume 336 at Page 3 of the Orange Land Records.

7. Right of First Offer Agreement by and between Dichello Distributors, Inc. a/k/a DiChello Distributors, Inc.) and Edward M. Crowley dated December 28, 2012 and recorded in Volume 625 at Page 680 of the Orange Land Records; as affected by an Assignment and Assumption of Right of First Offer Agreement from Edward M. Crowley to Orange Land Development LLC dated December 28, 2012 and recorded in Volume 625 at Page 930 of the said Land Records. See also Affidavit of Facts by Edward M. Crowley dated October 4, 2013 and recorded in Volume 635 at Page 358 of the said Land Records.

8. Terms and provisions of an Option Agreement by and between Dichello Distributors, Inc., a/k/a DiChello Distributors, Inc., and Edward M. Crowley dated December 28, 2012 and recorded in Volume 625 at Page 534 of the Orange Land Records; as affected by an Assignment and Assumption of Option Agreement from Edward M. Crowley to Orange Land Development LLC dated December 28, 2012 and recorded in Volume 625 at Page 924 of the said Land Records. See also Affidavit of Facts by Edward M. Crowley dated October 4, 2013 and recorded in Volume 635 at Page 358 of the said Land Records.

9. Open-End Mortgage Deed and Security Agreement from DiChello Distributors, Inc. (a/k/a DiChello Distributors, Incorporated) to RBS Citizens, National Association in the aggregate amount of $35,500,000.00 dated December 28, 2012 and recorded in Volume 625 at Page 598 of the Orange Land Records; amended by virtue of a First Amendment to Open-End Mortgage Deed and Security Agreement dated December 4, 2014 and recorded in Volume 644 at Page 467 of the said Land Records.

NOTES:

Any covenant, condition or restriction based on race, religion, color, sex, handicap, familial status or national origin is omitted unless, and only to the extent that, the restriction is not in violation of a state or federal law or relates to a handicap but does not discriminate against handicapped people.

The Company assumes no liability hereunder or under any policy issued pursuant hereto, any closing instructions or insured closing service for compliance with the requirements of any consumer credit protection or truth in lending law.

Governmental regulations, including, but not limited to, wetlands, subdivision, building and zoning regulations, are excluded from policy coverage.

The coverage provided by this Commitment and any policy issued pursuant hereto shall not commence prior to the date on which all charges billed by the Company in connection with this Commitment and/or such policy have been fully paid.

Chicago Title Insurance Company
ALTA COMMITMENT FOR TITLE INSURANCE (6/17/06)

Schedule BII (continued)

The Company may have additional requirements or make additional exceptions as maybe appropriate after additional disclosures are made.

Chicago Title Insurance Company
ALTA COMMITMENT FOR TITLE INSURANCE (6/17/06)

EXHIBIT "A"

The land referred to in this Commitment is described as follows:

PROPOSED DESCRIPTION: SURVEY REFERENCED TO BE FILED IN THE ORANGE LAND RECORDS.

All that certain piece or parcel of real property located in the Town of Orange, County of New Haven and State of Connecticut shown as "O Marsh Hill Road" on that certain map entitled "Resubdivision Map Of: 0 Marsh Hill Road & 55 Marsh Hill Road Orange, Connecticut Prepared For: Orange Land Development LLC, 130 Montowese Street, Branford, Connecticut Property Owned By: Dichello Distributors, Inc. 55 Marsh Hill Road, Orange, Connecticut", prepared by Milone & MacBroom, Inc., Scale 1" = 100', dated March 5, 2015, Sheet No. 1 of 1, Project No. 4329-02, which map is on file or to be filed in the Orange Town Clerk's Office, and being more particularly described as follows:

Beginning at a point on the southerly streetline of Salemme Lane at the division line between land now or formerly of Sixty Five Marsh Hill Road, LLC and the parcel herein described;

Thence running South 85° 40' 15" East 138.94 feet along the southerly streetline of Salemme Lane to a point;

Thence running North 04° 19' 45" East 329.31 feet along the easterly terminus of Salemme Lane and land now or formerly of Cynthia Salemme-Riccio, each in a part, to a point;

Thence running South 88° 36' 52" East 28.02 feet to a point;

Thence turning and running South 85° 52' 23" East 603.20 feet to a point;

Thence turning and running South 85° 45' 17" East 308.57 feet to a point;

Thence turning and running South 87° 09' 27" East 195.77 feet, all along land now or formerly of Yale University, to a point;

Thence running South 43° 58' 36" West 532.00 feet along land now or formerly of the State of Connecticut to a point;

Thence running North 46° 01' 24" West 75.00 feet to a point;

Thence turning and running South 43° 58' 36" West 35.00 feet to a point;

Thence turning and running North 46° 00' 34" West 236.00 feet to a point;

Thence turning and running North 67° 31' 25" West 24.44 feet to a point;

Thence turning and running South 88° 58' 12" West 30.00 feet to a point;

Thence turning and running South 73° 17' 37" West 108.73 feet to a point;

Thence turning and running South 40° 08' 59" West 277.31 feet to a point;

Thence turning and running North 85° 40' 15" West 16.69 feet to a point;

Thence turning and running North 04° 19' 45" East 100.00 feet to a point;

Thence turning and running North 85° 40' 15" West 32.00 feet to a point;

Thence turning and running North 04° 19' 45" East 18.00 feet to a point;

Thence turning and running North 85° 40' 15" West 233.00 feet to a point;

Thence turning and running South 04° 19' 45" West 18.00 feet to a point;

Thence turning and running North 85° 40' 15" West 34.64 feet to a point;

Thence turning and running South 04° 19' 45" West 230.15 feet, all along the Proposed Division Line between proposed 55 Marsh Hill Road and proposed 0 Marsh Hill Road, to a point;

Chicago Title Insurance Company
ALTA COMMITMENT FOR TITLE INSURANCE (6/17/06)

Exhibit “A” (continued)

Thence running North 85° 55' 28" West 40.00 feet along the Existing Division Line between 55 Marsh Hill Road and 0 Marsh Hill Road to a point;

Thence running North 04° 19' 45" East 289.10 feet along land now or formerly of Sixty Five Marsh Hill Road, LLC to the point of beginning.

Together with a right of way for all purposes whatsoever across "Salemme Lane" as shown on a certain survey entitled, "Property of Philomina Salemme" surveyed by Charles A. Cahn, Civil Engineer and Surveyor, dated December, 1953, Revised March, 1954, Scale 1"=60' and filed with the Orange Town Clerk's Office as Map No. 407.

APPENDIX F

Federal Records

http://iaspub.epa.gov/enviro/fii_foia.fii_retrieve

MyPropertyInfo -*Powered by FRS*

Property Search Results

Report an Error

A search of the databases did not locate any environmental records using the search criteria provided below.

Search Criteria
Street Number: 0
Street Name: MARSH HILL
City Name: ORANGE
State: CT
Zip Code: 06477
Query executed at: Thu 16-Jul-2015 14:14:27

Databases Searched

Please contact appropriate state agency(s) who may have additional information.

Disclaimer
This summary report is provided solely for informational purposes. It does not provide legal advice, have legally binding effect, or expressly or implicitly create, expand, or limit any legal rights, obligations, responsibilities, expectations, or benefits in regard to any person. EPA maintains the application to enhance public access to environmental information. This service has continual data updates, and we will correct errors brought to our attention, as appropriate.

Last updated on 7/16/2015

http://iaspub.epa.gov/enviro/fii_foia.fii_retrieve

MyPropertyInfo -*Powered by FRS*

Property Search Results

Report an Error

Search Criteria
Street Number: 55
Street Name: MARSH HILL
City Name: ORANGE
State: CT
Zip Code: 06477
Query executed at: Thu 16-Jul-2015 14:15:42
Your selection returned 1 facility which is listed below.

FACILITY NAME	LOCATION ADDRESS	CITY NAME	COUNTY NAME	STATE	ZIP CODE
DICHELLO DISTRIBUTORS, INC.	55 MARSH HILL RD	ORANGE	NEW HAVEN	CT	06477-3612

Databases Searched

Please contact appropriate state agency(s) who may have additional information.

Disclaimer
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Last updated on 7/16/2015

Envirofacts

FRS Facility Detail Report

FRS

DICHELLO DISTRIBUTORS, INC.
55 MARSH HILL RD
ORANGE, CT 06477-3612
EPA Registry Id: 110030364530

Facilty Registry Service Links

- Search
  - FRS Facility Query
  - FRS EZ Search
  - Organization Search
- FRS Physical Data Model
- FRS Geospatial Model
- Contact Us
- Facility Registry Service (FRS) Home

Report an Error

Legend

- Selected Facility
- EPA Facility of Interest
- State/Tribe Facility of Interest

The facility locations displayed come from the FRS Spatial Coordinates tables. They are the best representative locations for the displayed facilities based on the accuracy of the collection method and quality assurance checks performed against each location. The North American Datum of 1983 is used to display all coordinates.

Environmental Interests

Information System	System Facility Name	Information System Id/Report Link	Environmental Interest Type	Data Source	Last Updated Date	Supplemental Environmental Inter
CT - SITE INFORMATION MANAGEMENT SYSTEM	DICHELLO DISTRIBUTORS, INC.	1525264	STATE MASTER	SIMS		**SIMS**-107-5812 UNDERGROUND STORAGE TAN PROGRAM

Additional EPA Reports: MyEnvironment Site Demographics Facility Coordinates Viewer Environmental Justice Map Viewer Watershed Report

Standard Industrial Classification Codes (SIC)

No SIC Codes returned.

National Industry Classification System Codes (NAICS)

No NAICS Codes returned.

Facility Codes and Flags

EPA Region:	01
Duns Number:	
Congressional District Number:	03
Legislative District Number:	14
HUC Code/Watershed:	01100004 / QUINNIPIAC
US Mexico Border Indicator:	
Federal Facility:	
Tribal Land:	NO

Facility Mailing Addresses

Affiliation Type	Delivery Point	City Name	State	Postal Code	Information Sy
ORGANIZATION	55 MARSH HILL RD	ORANGE	CT	06477-3612	SIMS
UNKNOWN	55 MARSH HILL RD	ORANGE	CT	06477-3612	SIMS

Alternative Names

No Alternative Names returned.

Contacts

No Contacts returned.

Organizations

Affiliation Type	Name	DUNS Number	Information System	Mailing Address
UNKNOWN	BURTON L. ZEMPSKY		SIMS	View
ORGANIZATION	DICHELLO DISTRIBUTORS, INC.		SIMS	View

Click to hideNews Bulletins

- July 9, 2015 - The NWIS Mapper is back online
- Try our new Mobile-friendly water data site from your mobile device!
- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 411451072595301

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 411451072595301 CT-O 410

New Haven County, Connecticut
Latitude 41°14'51", Longitude 72°59'53" NAD27
Land-surface elevation 95.00 feet above NGVD29
The depth of the well is 180 feet below land surface.
This well is completed in the New York and New England crystalline-rock aquifers (N600NECRSN) national aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1958-08-01		D	30.00			2		R		S	A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	R	Reported, method not known.
Measuring agency		Not determined
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Accessibility Plug-Ins FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

Title: Groundwater for USA: Water Levels
URL: http://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2015-07-16 15:54:43 EDT
0.42 0.39 nadww01

45 69 000m N

41 °15'00.00"

41 °15'00.00"

45 68 000m N

ZONE A

ZONE X

ZONE AE (EL 10)

LX0918

LX0362

TOWN OF ORANGE 090087

CITY OF MILFORD 090082

Oyster River

Oyster River

LIMIT OF DETAILED STUDY

LIMIT OF STUDY

FRONTAGE ROAD

HEFFERNAN DRIVE

GALLICARI DRIVE

FRANKLIN ROAD

MILLS DRIVE

MOUNT PLEASANT ROAD

BAILEY DRIVE

FARM HILL ROAD

WOODRIDGE ROAD

RIDGE HOLLOW ROAD

SUNFLOWER CIRCLE

PIERSON

TOLL ROAD

BIG SPRUCE PEAK LANE

TYROL PEAK LANE

SPRUCE

SUN ST

COYLE

DONNA

MORGAN

CHIN CLIFT CIRCLE

PERRY MERRILL DRIVE

DOWN DRAFT CIRCLE

RAILROAD

SHERMAN LANE

MARSH HILL ROAD

ROBINSON BOULEVARD

CASCADE BOULEVARD

CONNAIR ROAD

TOWN OF ORANGE

CITY OF MILFORD

BEATRICE DRIVE

IDA LANE

KANE ROAD

JESSIE DRIVE

OXBOW LANE

HAYSTACK ROAD

PEPPERMILL DRIVE

Brook

APPLE TREE TERRACE

Jones Hill Road

BRIDLE PATH LANE

HOMESTEADER LANE

HONEYPOT ROAD

SARAH CT

GLEN ROAD

PETER LANE

GERTRUDE LANE

BENHAM HILL

DANIEL ROAD

FLUM

AVENUE

95

162

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

NEW HAVEN COUNTY, CONNECTICUT

(ALL JURISDICTIONS)

PANEL 438 OF 635

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ORANGE, TOWN OF	090087	0438	H
WEST HAVEN, CITY OF	090092	0438	H

Notice to User. The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
09009C0438H

EFFECTIVE DATE
DECEMBER 17, 2010

Federal Emergency Management Agency

FEET

METE

0 150 300

PANEL 0551H

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

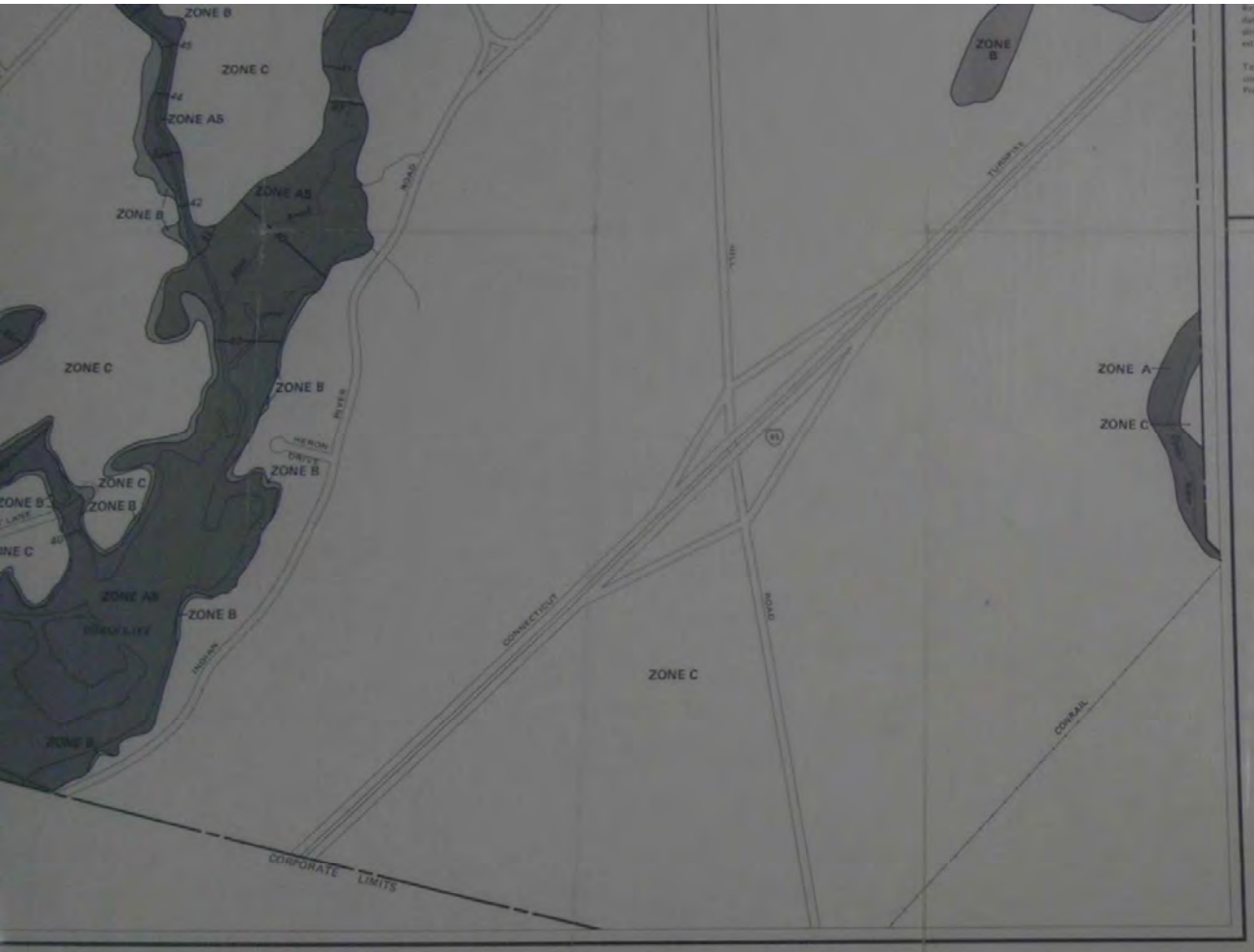
NEW HAVEN COUNTY, CONNECTICUT

(ALL JURISDICTIONS)

PANEL 551 OF 635

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

TOWN OF
ORANGE, CONNECTICUT
NEW HAVEN COUNTY

PANEL 8 OF 11

W... Town Clerk
Orange Town Hall
617 Orange Center Road
Orange, CT 06477-2433

COMMUNITY-PANEL NUMBER
090067 0008 B

EFFECTIVE DATE:
MARCH 18, 1980

U.S. DEPARTMENT OF HOUSING
AND URBAN DEVELOPMENT
FEDERAL INSURANCE ADMINISTRATION

FACILITY INFORMATION	AFS	ACRES
ASEA BROWN BOVERI88 MARSH HILL RD ORANGE, CT 06477 Latitude: 41.25095 Longitude: -72.99968		
AVIATION COMPONENTS SUPPORT CO11 FRONTAGE RD ORANGE, CT 06477 Latitude: 41.253376 Longitude: -72.998633		
CYRO IND25 EXECUTIVE BLVD ORANGE, CT 06477 Latitude: 41.24872 Longitude: -73.00309		

LIGHT SOURCES LCD LIGHTING37 ROBINSON BLVD ORANGE, CT 06477-3623 Latitude: 41.2478 Longitude: -72.99364	ViewReport: http://oaspub.epa.gov/enviro/efsystemquery.airs?fac_search=facility_uin&fac_value=110030399593&fac_search_type=Beginning+With&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&epa_region_code=&sic_code_desc=&sic_code=&all_programs=YES&chem_name=&chem_search=Beginning+With&cas_num=&program_search=1&report=1&page_no=1&output_sql_switch=TRUE&database_type=AIRS%2FAFS	
NORTHEAST PACKAGING INC25 CONNAIR RD ORANGE, CT 06477 Latitude: 41.24727 Longitude: -72.99688		

ROEBIC LABORATORIES, INC.25 CONNAIR ROAD ORANGE, CT 06477-3601 Latitude: 41.24727 Longitude: -72.99688		
SIGMA INSTRUMENT INTERNATIONAL INSTR DIV88 MARSH HILL RD ORANGE, CT 06477 Latitude: 41.25095 Longitude: -72.99968		
SOUTHERN CONNECTICUT GAS OPERATIONS CTR60 MARSH HILL RD ORANGE, CT 06477-3663 Latitude: 41.25052 Longitude: -72.9996		

UNITED ILLUMINATING CO THE OPERATIONS CTR100 MARSH HILL RD ORANGE, CT 06477 Latitude: 41.251837 Longitude: -72.99982		

BR	CERCLIS	GHG	PCS/ICIS	RADInfo

ViewReport: http://iaspub.epa.gov/enviro/brs_query_v2.brs_main?fac_search=1&fac_value=CTD983866187&fac_search_type=1&postal_code=&location_address=&add_search_type=1&city_name=&county_name=&state_code=&naic_code_desc=&naic_code=&yvalue=2013&mopt=0&mmopt=&wst_search=0&keyword1=&keyword2=&keyword3=&RValue1=&RValue2=&RValue3=&CValue1=&CValue2=&CValue3=&page=1&total_rows_found=&last_fac_name=				

		ViewReport: http://oaspub.epa.gov/enviro/ghgreport.html?pFacId=1005674&pSp=1&pReportingYear=2013		

ViewReport: http://iaspub.epa.gov/enviro/brs_query_v2.brs_main?fac_search=1&fac_value=CTR000511345&fac_search_type=1&postal_code=&location_address=&add_search_type=1&city_name=&county_name=&state_code=&naic_code_desc=&naic_code=&yvalue=2013&mopt=0&mmopt=&wst_search=0&keyword1=&keyword2=&keyword3=&RValue1=&RValue2=&RValue3=&CValue1=&CValue2=&CValue3=&page=1&total_rows_found=&last_fac_name=				

RCRAInfo	TRI	TSCA
ViewReport: http://oaspub.epa.gov/enviro/efsystemquery.rcrainfo?fac_search=facility_uin&fac_value=110005967953&fac_search_type=Beginning+With&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&epa_region_code=&sic_code_desc=&sic_code=&all_programs=YES&chem_name=&chem_search=Beginning+With&cas_num=&program_search=1&report=1&page_no=1&output_sql_switch=TRUE&database_type=RCRAINFO		
ViewReport: http://oaspub.epa.gov/enviro/efsystemquery.rcrainfo?fac_search=facility_uin&fac_value=110003019554&fac_search_type=Beginning+With&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&epa_region_code=&sic_code_desc=&sic_code=&all_programs=YES&chem_name=&chem_search=Beginning+With&cas_num=&program_search=1&report=1&page_no=1&output_sql_switch=TRUE&database_type=RCRAINFO		
ViewReport: http://oaspub.epa.gov/enviro/efsystemquery.rcrainfo?fac_search=facility_uin&fac_value=110002480574&fac_search_type=Beginning+With&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&epa_region_code=&sic_code_desc=&sic_code=&all_programs=YES&chem_name=&chem_search=Beginning+With&cas_num=&program_search=1&report=1&page_no=1&output_sql_switch=TRUE&database_type=RCRAINFO		

ViewReport: http://oaspub.epa.gov/enviro/efsystemquery.rcrainfo?fac_search=facility_uin&fac_value=110030399593&fac_search_type=Beginning+With&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&epa_region_code=&sic_code_desc=&sic_code=&all_programs=YES&chem_name=&chem_search=Beginning+With&cas_num=&program_search=1&report=1&page_no=1&output_sql_switch=TRUE&database_type=RCRAINFO	ViewReport: http://oaspub.epa.gov/enviro/efsystemquery.tri?fac_search=facility_uin&fac_value=110030399593&fac_search_type=Beginning+With&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&epa_region_code=&sic_code_desc=&sic_code=&all_programs=YES&chem_name=&chem_search=Beginning+With&cas_num=&program_search=1&report=1&page_no=1&output_sql_switch=TRUE&database_type=TRIS	
ViewReport: http://oaspub.epa.gov/enviro/efsystemquery.rcrainfo?fac_search=facility_uin&fac_value=110006360491&fac_search_type=Beginning+With&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&epa_region_code=&sic_code_desc=&sic_code=&all_programs=YES&chem_name=&chem_search=Beginning+With&cas_num=&program_search=1&report=1&page_no=1&output_sql_switch=TRUE&database_type=RCRAINFO		

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ViewReport: http://oaspub.epa.gov/enviro/efsystemquery.rcrainfo?fac_search=facility_uin&fac_value=110002494131&fac_search_type=Beginning+With&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&epa_region_code=&sic_code_desc=&sic_code=&all_programs=YES&chem_name=&chem_search=Beginning+With&cas_num=&program_search=1&report=1&page_no=1&output_sql_switch=TRUE&database_type=RCRAINFO		

ViewReport: http://oaspub.epa.gov/enviro/efsystemquery.rcrainfo?fac_search=facility_uin&fac_value=110045535104&fac_search_type=Beginning+With&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&epa_region_code=&sic_code_desc=&sic_code=&all_programs=YES&chem_name=&chem_search=Beginning+With&cas_num=&program_search=1&report=1&page_no=1&output_sql_switch=TRUE&database_type=RCRAINFO		

Menu

Detailed Facility Report

Facility Summary

DICHELLO DISTRIBUTORS, INC.
55 MARSH HILL RD, ORANGE, CT 06477

Facility Information (FRS)

FRS ID: 110030364530
EPA Region: 01
Latitude: 41.24864
Longitude: -72.99923
Locational Data Source: FRS
Industry:
Indian Country: N

Regulatory Interests

Clean Air Act: No Information
Clean Water Act: No Information
Resource Conservation and Recovery Act: No Information
Safe Drinking Water Act: No Information

Also Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information

Enforcement and Compliance Summary

Statute	Insp (5 Years)	Date of Last Inspection	Current Compliance Status	Qtrs in NC (of 12)	Qtrs in Significant Violation	Informal Enforcement Actions (5 years)	Formal Enforcement Actions (5 years)	Penalties from Formal Enforcement Actions (5 years)	EPA Cases (5 years)	Penalties from EPA Cases (5 years)
No data records returned										

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110030364530					N	41.24864	-72.99923

Facility Address

System	Statute	Identifier	Facility Name	Facility Address
FRS		110030364530	DICHELLO DISTRIBUTORS, INC.	55 MARSH HILL RD, ORANGE, CT 06477

Facility SIC Codes

System	Identifier	SIC Code	SIC Desc
No data records returned			

Facility NAICS Codes

System	Identifier	NAICS Code	NAICS Desc
No data records returned			

Facility Tribe Information

Tribal Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned		

Enforcement and Compliance

Compliance Monitoring History (5 years)

Statute	Source ID	System	Inspection Type	Lead Agency	Date	Finding
No data records returned						

Entries in italics are not considered inspections in official counts.

Compliance Summary Data

Statute	Source ID	Current SNC/HPV	Description	Current As Of	Qtrs in NC (of 12)
No data records returned					

Three Year Compliance Status by Quarter

Informal Enforcement Actions (5 Years)

Statute	Source ID	Type of Action	Lead Agency	Date
No data records returned				

Formal Enforcement Actions (5 Years)

Statute	Source ID	Type of Action	Lead Agency	Date	Penalty	Penalty Description
No data records returned						

ICIS Case History (5 years)

Primary Law/Section	Case No.	Case Type	Lead Agency	Case Name	Issued/Filed Date	Settlement Date	Federal Penalty	State/Local Penalty	SEP Cost	Comp Action Cost
No data records returned										

Environmental Conditions

Water Quality

Permit ID	Watershed (HUC 8)	Watershed Name (HUC 8)	Watershed (HUC 12)	Watershed Name (HUC 12)	Receiving Waters	Impaired Waters	Combined Sewer System?
No data records returned							

Air Quality

Non-Attainment Area?	Pollutant(s)
Yes	Ozone
No	Lead
Yes	Particulate Matter

Pollutants

TRI History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs	Underground Injections	Releases to Land	Total On-site Releases	Total Off-site Releases
No data records returned								

TRI Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Demographic Profile

Demographic Profile of Surrounding Area (3 Miles)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 US Census and American Community Survey data, and are accurate to the extent that the facility latitude and longitude listed below are correct. The latitude and longitude are obtained from the EPA Locational Reference Table (LRT) when available.

Radius of Area:	3	Land Area:	76%	Households in Area:	22,902
Center latitude:	41.24864	Water Area:	24%	Housing Units in Area:	24,113
Center Longitude:	-72.99923	Population Density:	2,583/sq.mi.	Households on Public Assistance:	334
Total Persons:	56,682	Percent Minority:	27%	Persons Below Poverty Level:	8,807

Race Breakdown	Persons (%)	Age Breakdown	Persons (%)
White:	45,004 (79.4%)	Child 5 years and younger:	2,897 (5.11%)
African-American:	5,938 (10.48%)	Minors 17 years and younger:	11,681 (20.61%)
Hispanic-Origin:	5,797 (10.23%)	Adults 18 years and older:	45,001 (79.39%)
Asian/Pacific Islander:	2,662 (4.7%)	Seniors 65 years and older:	9,427 (16.63%)
American Indian:	120 (.21%)		
Other/Multiracial:	2,959 (5.22%)		

Education Level (Persons 25 & older)	Persons (%)	Income Breakdown	Households (%)
Less than 9th Grade:	1,241 (3.05%)	Less than $15,000:	1,422 (6.26%)
9th through 12th Grade:	2,392 (5.88%)	$15,000 - $25,000:	2,175 (9.57%)
High School Diploma:	13,249 (32.57%)	$25,000 - $50,000:	4,565 (20.09%)
Some College/2-yr:	10,859 (26.7%)	$50,000 - $75,000:	4,357 (19.18%)
B.S./B.A. or More:	12,933 (31.8%)	Greater than $75,000:	10,203 (44.9%)

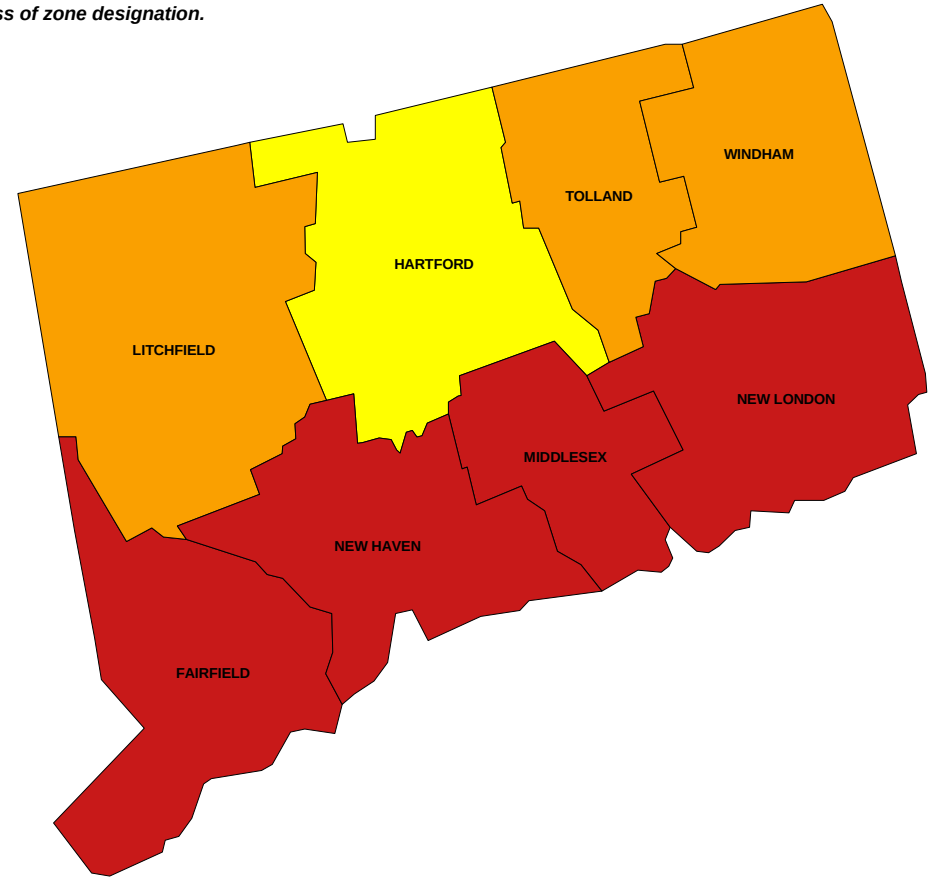
CONNECTICUT - EPA Map of Radon Zones

http://www.epa.gov/radon/zonemap.html

The purpose of this map is to assist National, State and local organizations to target their resources and to implement radon-resistant building codes.

This map is not intended to determine if a home in a given zone should be tested for radon. Homes with elevated levels of radon have been found in all three zones.

All homes should be tested, regardless of zone designation.



Zone 1 Zone 2 Zone 3

IMPORTANT: Consult the publication entitled "Preliminary Geologic Radon Potential Assessment of Connecticut" (USGS Open-file Report 93-292-A) before using this map. http://energy.cr.usgs.gov/radon/grpinfo.html This document contains information on radon potential variations within counties. EPA also recommends that this map be supplemented with any available local data in order to further understand and predict the radon potential of a specific area.

APPENDIX G

Environmental Professional Resumes

Loureiro Engineering Associates, Inc.

JOSEPH T. TRZASKI, L.E.P.

Senior Project Scientist

Education

Bachelor of Science, Natural Resources
University of Connecticut, 1996

Professional Licenses/Registrations

Licensed Environmental Professional, Connecticut, #529

Professional Affiliations

Environmental Professional's Organization of Connecticut

Key Practice Areas

Site investigation/remediation; remediation system design, installation, operation and maintenance, environmental regulatory compliance support

Summary Biography

Mr. Trzaski has over 16 years of experience in a broad range of civil, environmental, and hazardous waste projects for commercial, industrial, and government clients. His services performed include soil and groundwater investigations and remediation programs, underground storage tank removal oversight and inspection, construction oversight and inspection, field activities, proposal preparation, report preparation, and the handling and treating of hazardous chemicals and wastes. He has also managed a portfolio of over 25 sites for a major retail petroleum vendor.

His remediation experience includes: the development of remedial action plans and reports, remedial alternatives evaluations for contaminated soil and groundwater, design and supervision of disposal/excavation and on-site capping activities for soil remediation projects, the management of in-situ chemical oxidation injection programs, and management of various contaminated groundwater and soil vapor recovery systems.

Mr. Trzaski's soil and groundwater investigation and remediation field activity experience includes a full range of services. These services include installation of groundwater monitoring wells and soil borings, installation of micro wells, Screenpoint® samplers, and soil borings with LEA's Geoprobe®, soil and groundwater sampling and monitoring, soil vapor surveys, logging of geologic borings, well development activities, surveying activities, supervision and training of field personnel, and a variety of contaminated-soil excavation and removal activities.

Mr. Trzaski's reporting and regulatory interfacing experience includes development of Phase I, Phase II and Phase III site assessments, remedial action plans, site conceptual models, groundwater reclassification requests, and tank excavation assessment reports.

Specific Project Experience:

Subsurface Investigation, Industrial / Aerospace Facility, Middletown, CT

Performed Phase II subsurface investigation activities to develop future remediation costs for client. Managed all facets of field and office tasks associated with the investigation activities. Evaluated data and made technical decisions regarding the implementation of multiple phases of project work and delineation of impacted soils.

Soil Vapor Extraction System Design & Installation, Industrial / Aerospace Facility, Middletown, CT

Soil vapor extraction system pilot testing, installation of extraction wells and system design for remediation of petroleum impacted soils at a former bulk fuel storage area. Evaluated historical site analytical data and geologic information to determine release areas and appropriate pilot test and monitoring point locations. Prepared pilot test work plan, designed pilot test, coordinated and managed the installation of pilot test wells and performance of SVE pilot test, designed SVE system based on results of pilot test, coordinated and managed installation of SVE wells, prepared bid specification and selected system vendor for construction of proposed system. Coordinate and managed the installation and successful start-up of SVE system.

Superfund Site, Groundwater Investigation and Remedy, Performing Settling Defendants, Southington, CT

Prepared Remedial Design / Remedial Action Work Plan for Limited Action and Project Operations Plan (including Field Sampling Plan, Quality Assurance Project Plan, and Health and Safety Plan) for Superfund site located in Southington, CT for submittal to US EPA and DEP. Associated work to include additional groundwater investigations for chlorinated solvent groundwater plume, implementation of Environmental Land Use Restrictions, and potential installation and operation/maintenance of vapor intrusion mitigation controls (sub-slab depressurization systems, sub-slab vapor barriers, etc.).

Sub-Slab Soil Vapor Extraction System Design & Installation, Industrial / Brownsfields/Redevelopment, South Norwalk, CT

Performed sub-slab depressurization and soil vapor extraction system pilot testing at former chemical manufacturing facility for redevelopment as athletic complex. Prepared pilot test work plan, designed pilot test, coordinated and managed the installation of pilot test wells and performance of SVE pilot test, designed sub-slab SVE system to mitigate vapor intrusion based on results of pilot test, prepared bid specification and selected components for construction of proposed system. Coordinated and managed the installation and successful start-up of sub-slab depressurization and SVE system.

Groundwater – Surface Water Interaction Study Industrial / Aerospace, East Hartford, CT

Conducted comprehensive groundwater and surface water interaction investigation and study of a chlorinated solvent groundwater plume migrating towards a water body at a large scale industrial / aerospace manufacturing facility. Obtained necessary wetlands permits, installed stream piezometers and surface water gauging stations, conducted groundwater sampling, and evaluated groundwater and surface water data and groundwater sampling data over a six-month period to evaluate groundwater conditions and determine compliance with Connecticut RSRs. Prepared report to include recommendations for additional investigations and risk evaluation.

In-Situ Chemical Oxidation Injection, Retail Petroleum, Retail gas station in Farmington, CT

Performed treatment of petroleum impacted groundwater from a retail gas station in Farmington, CT with chemical oxidation injection of hydrogen peroxide, sodium persulfate and ozone. Petroleum release from a retail gas station, petroleum impacts in groundwater, included diving petroleum plume. Remedial action included in installation of multiple levels of injection wells, including angle-drilled injection wells under a major road to inject chemical oxidants in the center of mass of the plume. Obtained temporary authorization and eventually an underground injection permit for the injection of hydrogen peroxide, sodium persulfate and ozone to remediate impacted groundwater at the site. Multiple injections performed at the site.

Site Investigation, Remedial Soil Excavation, Retail Petroleum, Retail gas station in Ridgefield, CT

Investigate and remediate former retail gas station at property located in Ridgefield, CT. Reviewed historical documentation prepared by previous consultants and provided client with comprehensive evaluation of data and identification of data gaps. Prepared work plan for additional site investigations. Managed performance of subsurface investigations, reported Significant Environmental Hazard to DEP relating to groundwater impacts in the vicinity of potable supply wells. Prepared Remedial Action Plan for excavation of impacted soils, managed and oversaw excavation of impacted soils in former tank field, dispenser area, fuel oil UST and near former hydraulic lifts.

Site Investigation, Remedial Soil Excavation, Retail Petroleum, Retail gas station in New London, CT

Investigate and remediate former retail gas station as part of ongoing Consent Order investigation in New London, CT. DEP Consent Order site from 1980s, performed additional subsurface delineation investigations at offsite properties. Prepared remedial action plans for both petroleum impacts migrating offsite, as well as for NAPL/used oil area remediation. Managed all facets of field and office tasks associated with the investigation and remediation activities. Primary contact with client and DEP. Coordinated with legal counsel for client, offsite property owners for access to perform work. Prepared and reviewed reports for project.

Divestment Assessments (Phase I/Phase II ESAs), Retail Petroleum, Virginia

Conducted Phase I and Phase II ESAs for the divestment of 55 retail petroleum sites in the Richmond and Virginia Beach areas, including the removal of underground storage tanks at 7 sites. Managed all facets of field and office tasks associated with the Phase I, Phase II and tank removal projects. Directed 3 to 4 geologist/scientist/engineering staff during performance of the investigations and remediation activities.

Phase I & Phase II ESAs, Industrial / Printing, Florida

Managed and performed Phase I and Phase II ESAs at two large scale printing facilities in South Daytona and St. Petersburg, Florida as part of potential sale of properties. Performed Phase I ESA activities to determine areas of concern and develop Phase II scopes of work for both sites. Managed all facets of field and office tasks associated with the investigation activities. Made technical decisions regarding the proposed phase II activities to client, provided recommendations and conclusions for the two sites with regard to the local Florida regulations. Developed and tracked budget for work. Evaluated data, prepared and finalized reports.

APPENDIX C

Photographic Documentation

Select Site Photographs

0 Marsh Hill Road

Orange, Connecticut 06477

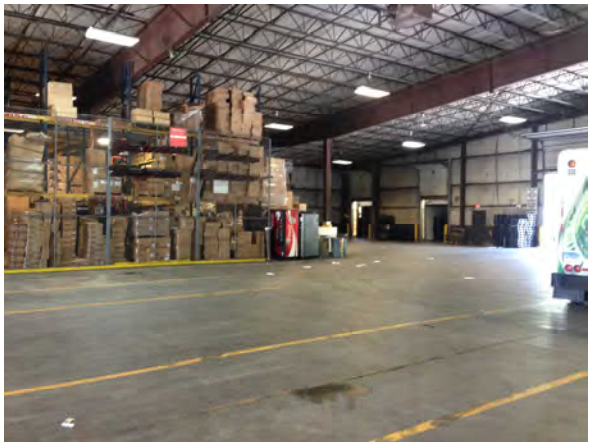
Photo 1: View of entrance to Site building (facing northeast)

Photo 2: View of entrance to Site building (facing northeast)

Photo 3: View of west side of Site building (facing northeast)

Photo 4: View of gas meter along western side of building (facing southeast)

		
Photo 5: View of west side of building and bedrock water supply well (facing southeast)		Photo 6: View of north side of the building (facing south)
		
Photo 7: View of north side of building and paved area (facing northwest)		Photo 8: View of north side of building and east side of building (facing southwest)

		
Photo 9: View along east side of building (facing southwest)		Photo 10: Detention pond (facing northeast)
		
Photo 11: View along eastern side of building under covered storage area (facing southwest)		Photo 12: Interior of Site building (facing northwest)

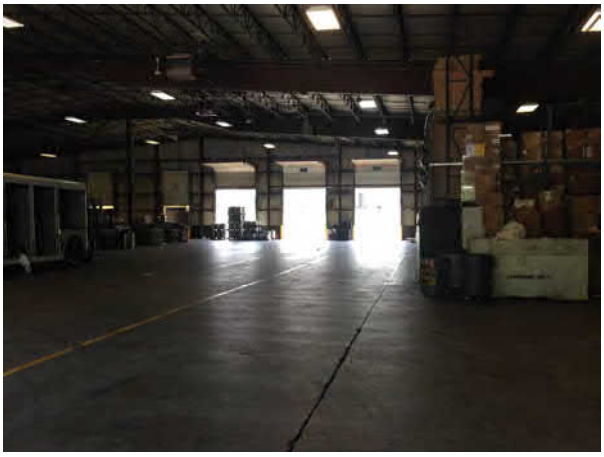


Photo 13: Overhead doors for large trucks (facing southwest)		Photo 14: Machinery inside Site building
		
Photo 15: Aluminum can crushing machine inside Site building		Photo 16: Interior view of Site building (facing northwest)

		
Photo 17: Representative floor drain inside building		Photo 18: Representative ceiling air heaters inside building
		
Photo 19: Entrance area to AOC-3, former cleared area, area of debris (facing northwest)		Photo 20: Truck that collects recycled glass outside the building (facing northeast)

		
Photo 21: Drainage ditch from detention basin (facing northwest)		Photo 22: Close-up of drainage ditch from detention basin (facing northwest)
		
Photo 23: USGS well 411451072595301 and USGS site Name: CT-O 410		Photo 24: Representative forested area surrounding the Site building

APPENDIX D

Municipal Records

Property Location: MARSH HILL RD | MAP ID: 3/ 1/ 1/ / | Bldg Name: | State Use: 301

Vision ID: 27 | Account #296900 | Bldg #: 1 of 1 | Sec #: 1 of 1 | Card 1 of 1 | Print Date: 07/07/2015 10:02

CURRENT OWNER	TOPO.	UTILITIES	STRT./ROAD	LOCATION
DICHELLO DISTRIBUTORS INC	1 Level	1 All Public	1 Paved	1 Average
			1 Public	3 3
55 MARSH HILL RD				0 N/A
ORANGE, CT 06477				
Additional Owners:				

SUPPLEMENTAL DATA			
Other ID:	3-1-1	CB	R
Class	Warehouse-Storage	DM	
Type	Commercial	Builder's lo	
Nbhd	Town	SFLA	38400
Zoning	LI-2	Lot Size	13.35
Census	1571		
GIS ID: 3-1-1		ASSOC PID#	

CURRENT ASSESSMENT

Description	Code	Appraised Value	Assessed Value
IND LAND	3-1	702,100	491,500
IND BLDG	3-2	719,400	503,600
IND IMPR	3-3	52,500	36,800
	Total	1,474,000	1,031,900

6108
Orange, CT

VISION

RECORD OF OWNERSHIP	BK-VOL/PAGE	SALE DATE	q/u	v/i	SALE PRICE	V.C.
DICHELLO DISTRIBUTORS INC	277/ 688	06/10/1981	Q		0	00

PREVIOUS ASSESSMENTS (HISTORY)

Yr.	Code	Assessed Value	Yr.	Code	Assessed Value	Yr.	Code	Assessed Value
2014	3-1	491,500	2014	3-1	491,500	2013	3-1	491,500
2014	3-2	503,600	2014	3-2	503,600	2013	3-2	503,600
2014	3-3	36,800	2014	3-3	36,800	2013	3-3	36,800
	Total:	1,031,900		Total:	1,031,900		Total:	1,031,900

EXEMPTIONS

Year	Type	Description	Amount
		Total:	

OTHER ASSESSMENTS

Code	Description	Number	Amount	Comm. Int.

This signature acknowledges a visit by a Data Collector or Assessor

ASSESSING NEIGHBORHOOD

NBHD/ SUB	NBHD Name	Street Index Name	Tracing	Batch
0001/A				

NOTES

APPRAISED VALUE SUMMARY

Appraised Bldg. Value (Card)	719,400
Appraised XF (B) Value (Bldg)	0
Appraised OB (L) Value (Bldg)	52,500
Appraised Land Value (Bldg)	702,100
Special Land Value	0
Total Appraised Parcel Value	1,474,000
Valuation Method:	C
Adjustment:	0
Net Total Appraised Parcel Value	**1,474,000**

BUILDING PERMIT RECORD

Permit ID	Issue Date	Type	Description	Amount	Insp. Date	% Comp.	Date Comp.	Comments

VISIT/ CHANGE HISTORY

Date	Type	IS	ID	Cd.	Purpose/Result
08/22/2012			ES	09	Total Refusal
11/07/2011			MBB	80	Data Review
02/16/2001			AO	70	Prior Inspection

LAND LINE VALUATION SECTION

B #	Use Code	Use Description	Zone	D	Front	Depth	Units		Unit Price	I. Factor	S.A.		C. Factor	ST. Idx	Adj.	Notes- Adj	Special Pricing		S Adj Fact	Adj. Unit Price	Land Value
1	301	Industrial	LI-2				3.00	AC	162,000.00	1.0000	C		0.90	C10	1.25	REAR LAND, ABUTS			1.00		546,800
1	301	Industrial	LI-2				10.35	AC	15,000.00	1.0000	0		1.00		0.00				1.00		155,300

Total Card Land Units: 13.35 AC | Parcel Total Land Area: 13.35 AC | Total Land Value: 702,100

Property Location: MARSH HILL RD **MAP ID:** 3/ 1/ 1/ / **Bldg Name:** **State Use:** 301

Vision ID: 27 **Account #** 296900 **Bldg #:** 1 of 1 **Sec #:** 1 of 1 **Card** 1 of 1 **Print Date:** 07/07/2015 10:02

CONSTRUCTION DETAIL

Element	Cd.	Ch.	Description
Style	76		Warehouse
Model	96		Ind/Comm
Grade	12		C-
Stories	1		
Occupancy	1		
Exterior Wall 1	10		Metal
Exterior Wall 2			
Roof Structure	33		DP -Stl Truss
Roof Cover	4		Metal
Interior Wall 1	02		Paint
Interior Wall 2			
Interior Floor 1	02		Concrete
Interior Floor 2			
Heating Fuel	03		Gas
HVAC	04		Force Air Unit
Ceilings	01		Unfinished
Partitions	2		Typical
Bldg Use	301		Industrial
Full Baths	0		
Half Baths	0		
Total Fixtures	6		
% Sprinkler	0		
Elevator	0		
Basement	1		Slab
Foundation	1		Concrete
Park Spaces	0		
Frame Type	2		Fire Resistant
Footprint			
Wall Height	24		
Bldg Adj	1		

CONSTRUCTION DETAIL (CONTINUED)

Element	Cd.	Ch.	Description

MIXED USE

Code	Description	Percentage
301	Industrial	100

COST/MARKET VALUATION

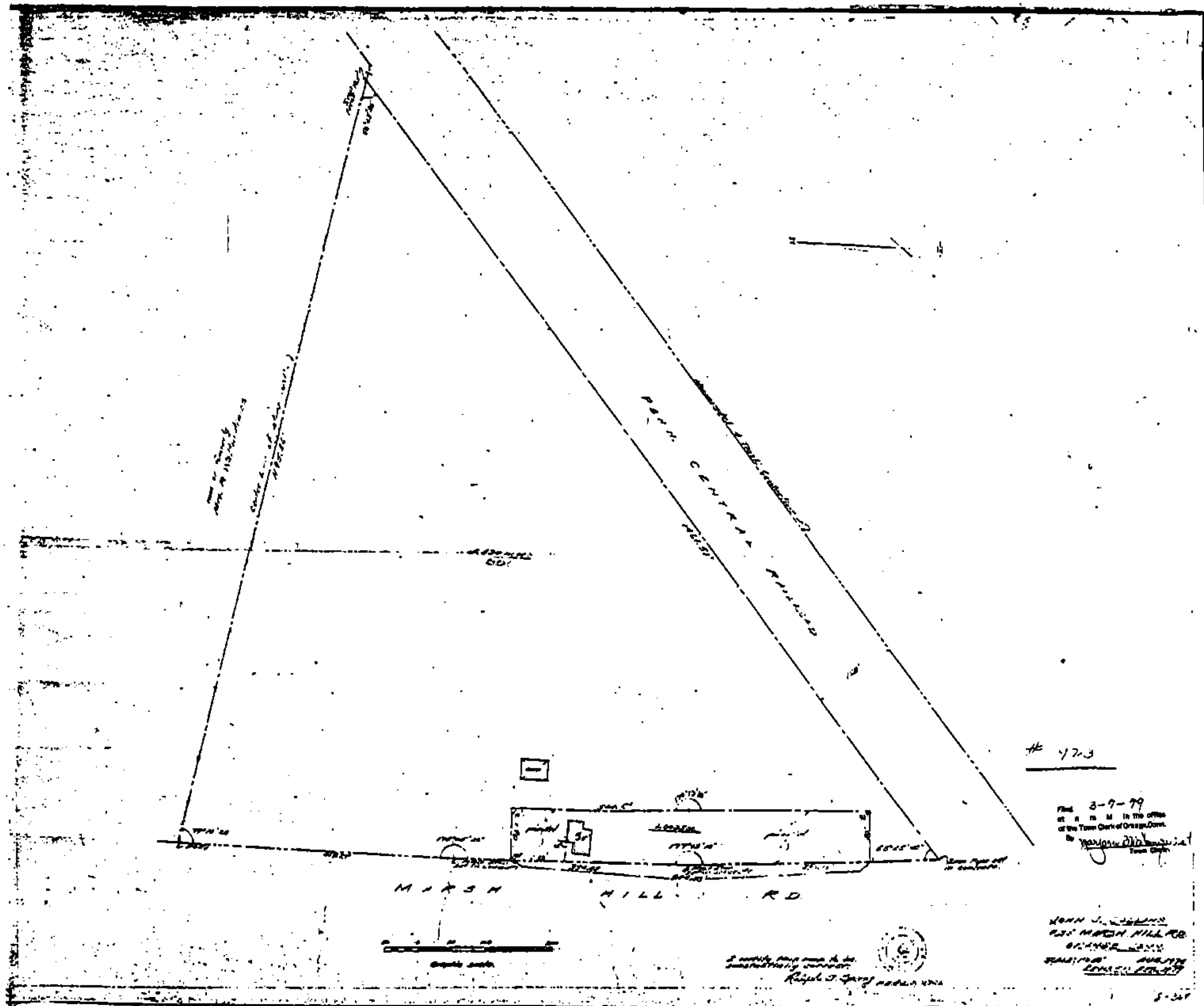
Adj. Base Rate:	32.46
AYB	1987
Dep Code	A
Remodel Rating	
Year Remodeled	
Dep %	18
Functional Obslnc	
External Obslnc	25
Cost Trend Factor	
Condition	
% Complete	
Overall % Cond	57
Apprais Val	719,400
Dep % Ovr	0
Dep Ovr Comment	
Misc Imp Ovr	0
Misc Imp Ovr Comment	
Cost to Cure Ovr	0
Cost to Cure Ovr Comment	

OB-OUTBUILDING & YARD ITEMS(L) / XF-BUILDING EXTRA FEATURES(B)

Code	Description	Sub	Sub Descript	L/B	Units	Unit Price	Yr	Gde	Dp Rt	Cnd	%Cnd	Apr Value
PAV1	Concrete Pavin			L	70,000	1.50	1988	3		3	50	52,500

BUILDING SUB-AREA SUMMARY SECTION

Code	Description	Living Area	Gross Area	Eff. Area	Unit Cost	Undeprec. Value
BAS	First Floor	38,400	38,400			
LDK	Loading Dock	0	3,200			
SLB	Slab	0	41,600			
	Ttl. Gross Liv/Lease Area:	38,400	83,200			


PENN CENTRAL RAILROAD
MARSH HILL RD
923
Filed 3-7-79
at M in the office
of the Town Clerk of Orange, Conn.
By
Town Clerk
MARSH HILL RD.
S-347

923

923

PERMIT # 8520

TOWN OF ORANGE, CONN.

Application for Building Permit Under Building Ordinance

Date November 19 1986

Application is hereby made to the Building Official to erect a structure

Warehouse & Storage Bldg.

Location of Property 55 Marsh Hill Road, Orange, CT 06477

Name of Owner Dichello Distributors Inc Present Address Same as Above

Zone LI2 Width of Lot * Depth of Lot * Area of Lot *

Size of Building 160 x 240 Area of Building 384,000 Stories (1) one

Front Yard * Rear Yard * Side Yard *

Use of Buildings recycling of beverage containers

Remarks Will connect to Public Sewer Manhole & Well

Comply with all Town specs. Pre-construction conference

Use space below for plot plan of property.

*See plot plan on file

#697

Approved and Permit issued Dec 16 1986

Applicant Atlantic Design & Construction, Inc.
61 Industrial Park Road Ext.
Plymouth, MA 02360
617-746-8700

Urban J. Cloran, President

Building Official

DICHELLO DISTRIBUTORS, INC.
P.O. BOX 562 55 MARSH HILL ROAD ORANGE, CONNECTICUT 06477
PHONE: (203) 865-7700

January 12, 1987

Ms. Diane Mull, Chairperson
Town Plan & Zoning Commission
Town Hall
Orange, CT 06477

Dear Ms. Mull:

Enclosed is photocopy of January 9, 1987 letter from the State of Connecticut Department of Transportation permitting us to drain onto the railroad right-of-way as requested in your October 27, 1986 letter.

In the pursuit of that goal we have been side-tracked from Conrail to the Metropolitan Transportation Authority to Metro-North to the Department of Transportation. The foregoing information may save a future applicant the bureaucratic shuffle we endured.

Our thanks to you and all the members of your commission for the courtesy and consideration extended to us.

Very truly yours,

Burton L. Zempsky
Executive Vice President
and General Manager

CC: Bill Converse, Assessor
Tony Marchitto, Building Inspector
Bob Hiza, Town Engineer
Fred Schumacher, Sanitarian
enclosure
BLZ:jap

Revised 2/10

TOWN OF ORANGE
TOWN PLAN & ZONING COMMISSION
APPLICATION FOR SUBDIVISION OR RESUBDIVISION APPROVAL

NAME OF APPLICANT: Orange Land Development LLC

Mailing Address: 130 Montowese St., Branford, CT 06405

Telephone: (203)208-2481 **Fax:** (203)208-2478

PROPERTY OWNER: Dichello Distributors, Inc.

Mailing Address: 55 Marsh Hill Road (PO BOX 562), Orange, CT 06477

Telephone: (203)891-2100 **Fax:** (203)795-6875

TYPE OF APPLICATION: Subdivision _____ **Resubdivision** X
(public hearing required)

Name of (Re)Subdivision Re-Subdivision of 0 Marsh Hill Road & 55 Marsh Hill Road

Location 55 & 0 Marsh Hill Road **Map/Block/Lot** 3-1-10 & 3-1-1

Total Acres 29.031 **Zoning District** LI-2 **Number of lots** 2

Open Spaces/Parks/Playgrounds:

No. of Acres Proposed N/A **Percent of Tract** N/A

Payment in Lieu of Proposed: Yes _____ **No** X

Water Supply: On-site _____ **Public** X

Sewage Disposal: On-site _____ **Central** X

Attach the following:
- X **Checklist (pages 3 & 4)**
- X **Narrative Statements (page 5)**
- X **Referral Checklist with Signatures (page 6)**
- X **Individual Lot Specifications (page 7)**
- X **List of Abutting Property Owners for Notice (page 8)**

RECEIVED
APR 08 2015
BY: A Zoning

ORIGINAL

NOTE: FAILURE TO COMPLETE ALL THE INFORMATION REQUESTED WILL BE AN INCOMPLETE APPLICATION AND GROUNDS FOR DISAPPROVAL OF THE APPLICATION.

APPLICATION FEE: Base fee of $580, plus $55 per lot $690

PLEASE MAKE CHECK PAYABLE TO: *TOWN OF ORANGE*

PLEASE SUBMIT SIX (6) COPIES OF ALL MAPS, PLANS, APPLICATIONS, ETC.

NAME/ADDRESS OF LAND SURVEYOR AND PROFESSIONAL ENGINEER:

Engineer:
Thomas J. Daly
Milone & MacBroom, Inc.
99 Realty Drive
Cheshire, CT 06410
CT License # 19509
Phone # (203)271-1773
Fax # (203)272-9733

Surveyor:
Robert Jackson
Milone & MacBroom, Inc.
Realty Drive
Cheshire, CT 06410
CT License # 11347
Phone # (203)271-1773
Fax # (203)272-9733

Name/Address of Individual designated to receive all official correspondence concerning the Application:

Edward M. Crowley
Orange Land Development LLC
130 Montowese St.
Branford, CT 06405
Phone # (203)208-2481
Fax # (203)-208-2478

All maps and plans submitted for formal consideration must conform to the standards specified on Schedules A and B of the Subdivision Regulations and be signed, stamped, and sealed by the land surveyor and/or engineer, as applicable.

(Signed) See Attached
Owner

(Signed) See Attached
Applicant

(Acknowledged and Signed) Milone & MacBroom, Inc. PLS
Land Surveyor for Subdivision

Diana C Berriman

Diana C. Berriman
Notary Public-Connecticut
My Commission Expires
October 31, 2018

CHECKLIST (to be completed by the Applicant):

A copy of Schedules A and B from the Subdivision Regulations may be substituted and attached hereto, with each line item on the Schedules as checked off as provided or not provided. (Yes; No; NA – not applicable)

Name of Development Re-Subdivision of 0 Marsh Hill Road & 55 Marsh Hill Road

(Site Plan # _____**)**

Proposed Use _____
Proposed 55 Marsh Hill Road: Existing Office/Warehouse/Bottle Facility Operations of Dichello Distributors, Inc.
Proposed 0 Marsh Hill Road: To be determined.

(Zoning LI-2 _____**)**

PLEASE CHECK IF THE PLAN COMPLIES, OR INDICATE N/A IF NOT APPLICABLE.

Yes **1. Title of the (re)subdivision.**
Yes **2. Name and address of owner, name and address of applicant (developer).**
Yes **3. Date, graphic scale, north point, Town and State.**
Yes **4. Existing and proposed property and street lines, the names of all adjacent subdivisions or property owners from the current assessor's records.**
Yes **5. Existing and proposed water courses, ponds, easements and rights-of-way.**
Yes **6. Proposed lots and lot numbers; existing and proposed open spaces for parks and playgrounds; square footage of all lots and open spaces, and the total acreage of land included in the subdivision.**
Yes **7. Existing permanent building and structures.**
Yes **8. Dimensions on all lines to the hundredth of a foot and all bearings or deflection angles on all street lines; the central angle, tangent distance and radius of all arcs.**
Yes **9. The width of all streets, rights-of-way and easements; street names.**
Yes **10. Existing and proposed monuments; any Town property line or zoning boundary line.**
Yes **11. A location map (scale 1" – 500').**
N/A **12. An index map.**
N/A **13. The accurate horizontal relationship of proposed streets to nearby monumented Town streets or State Highways.**
Yes **14. The words "Approved by the Orange Town Plan and Zoning Commission" with a designated place for the signature of the Chairman and date of signing.**
Yes **15. The words "Approved by the Director of Health" with a designated place for a signature of the Director or Agent.**
Yes **16. Delineate Flood Hazard Areas, Floodways and Base Flood Elevations.**

Yes 17. Existing zoning in the area together with any zoning boundary lines.
Yes 18. Building setback lines or other building restriction lines.
Yes 19. Seal and certificate of Registered Land Surveyor.
N/A 20. Connecticut Department of Transportation Traffic Approval.
N/A 21. Connecticut Department of Environmental Protection Approval
N/A 22. Rights to Drain.
N/A 23. Environmental Impact Statement.
N/A 24. Approval from the Inland Wetlands & Watercourses Commission.
N/A 25. If applicable, an application for Sedimentation and Erosion Control must be filed.
N/A 26. Underground Utilities must be illustrated on the construction plan and profile or a work print of the construction plans. This includes street lights and principal appurtenances.

This checklist sheet is intended as an aid to expedite the work of the Town staff, the Town Plan and Zoning Commission, and the applicant. It is not intended as a substitute for, nor does it contain all of the information and requirements in the Subdivision Regulations, Zoning Regulations, and other applicable Town codes, ordinances and procedures.

NARRATIVE IN SUPPORT OF APPLICATION

A. Describe what considerations have been made to obtain solar access on the proposed lots (See Par. 3.12, Subdivision Regulations):
N/A

B. Describe the proposals for reservation of land for open spaces, parks and playgrounds or for payment in lieu of, or combined reservation and payment (See Par. 3.13, Subdivision Regulations):

Acres to be reserved: N/A Ac.: % of tract: N/A

Relationship to Comprehensive Plan, other guidelines: N/A

Proposal for combined reservation and payment: N/A

Name and address of appraiser proposed: N/A

C. Describe what measures have been taken to minimize disturbance to the environment and what landscaping will be provided in the development area (See also Par. 3.3.2; 3.5.4; 3.5.15; 3.9; 3.11.7; 3.13, etc.)

N/A

D. If applicable, the development proposal must be submitted to the Orange Inland Wetlands and Watercourses Commission prior to or simultaneously with submission to the Town Plan and Zoning Commission. Briefly describe the status of the Inland Wetlands and Watercourses proceedings:

The proposed plan of resubdivision is being submitted to the Orange Inland Wetlands and Water Courses Commission pursuant to § 382-13.F of the Orange Subdivision Regulations and General Statutes § 8-26(e). No regulated activities are proposed. Existing improvements at proposed 55 Marsh Hill Road are to remain and will not be modified in connection with this application. There is no specific development proposal for proposed 0 Marsh Hill Road at this time.

EVIDENCE OF APPLICATION REFERRAL

The following signatures must be obtained prior to submission of the Application to the Town Plan & Zoning Commission. The signatures, however, may be obtained at the time of the review conference, if any, scheduled as provided under Par. 2.4.3g, Subdivision Regulations.

SIGNATURE	DATE
Public Works Director	
Building Official	
Fire Marshal	
Inland Wetlands Officer	
Sanitarian	
Zoning Enforcement Officer	
Traffic Authority	

Conservation Commission

NOTE: **Referral and signing does not imply approval by the Town Officials.**

INDIVIDUAL LOT SPECIFICATIONS:

The following information shall be provided for each proposed lot within the plan of subdivision. Please make copies of this page for each individual lot.

Lot # 3-1-1 **Frontage** 138 ft. and 50 ft.
Area 8.091 AC. **Dimension of Square** 200 ft.

Lot # 3-1-10 **Frontage** 1151 ft.
Area 20.940 AC. **Dimension of Square** 200 ft.

Zoning Variance required, if any: N/A

Briefly explain any easements or encumbrances on the lot: Proposed drainage easement in favor of proposed 55 Marsh Hill Road in north eastern corner of proposed 0 Marsh Hill Road. Sanitary sewer easement in favor of proposed 55 Marsh Hill Road traversing proposed 0 Marsh Hill Road. Easement in favor of the State of Connecticut on western edge of proposed 55 Marsh Hill Road.

APPLICANT NOTICE TO PROPERTY OWNERS

NOTICE has been given, in the manner specified in Par. 2.3.1 of the Subdivision Regulations, to the following property owners, at the addresses listed, who are all of the owners of land adjoining and directly across the street from the subdivision. Current Town Assessor's records may be used for identification of owners and addresses.

USPS or Notice Receipt Received by

NAME Yale University c/o Robert Herr
ADDRESS Controllers Office
155 Whitney Ave. New Haven, CT 06511

NAME Sixty Five Marsh Hill Road LLC
ADDRESS 506 Racebrook Road, Orange, CT 06477

NAME Sixty Five Marsh Hill Road LLC
ADDRESS 284 Racebrook Road, Orange, CT 06477

NAME Marsh Hill Farms LLC
ADDRESS PO BOX 1239, Orange, CT 06477

NAME Cynthia Salemme-Riccio
ADDRESS 125 Maple Road, Easton, CT 06612

Continued:

USPS Receipt or **Notice Received by**

NAME CT DOT Office of Rail
ADDRESS 50 Union Ave.
4th Floor West, New Haven, CT 06511

NAME Bead Industries
ADDRESS 11 Cascade Blvd., Milford, CT 06460

NAME Southern Connecticut Gas Company
c/o Iberdrola USA Management Corp – Loca
ADDRESS 70 Farm View Drive, New Gloucester, ME 04260

NAME WU/LH 22 Marsh Hill LLC
Attn: Paul Cooper c/o Lighthouse R.E. Ventures Inc.
ADDRESS 60 Hempstead Rd. Suite 718
West Hempstead, NY 11552

NAME Town of Orange
(for Salemme Lane road segment taken by eminent domain)
ADDRESS 617 Orange Center Road, Orange, CT 06477

NAME FEZ LLC
ADDRESS 75 Cascade Blvd., Milford, CT 06477

Attach U.S. Postal Service receipts or copies. Use additional pages as needed.

Certified by Signature of Applicant:

Signature of Applicant
Orange Land Development LLC
By: Edward M. Crowley, Manager

OWNER'S SIGNATURE PAGE TO APPLICATION FOR RESUBDIVISION APPROVAL

0 MARSH HILL ROAD AND 55 MARSH HILL ROAD, ORANGE, CONNECTICUT

OWNER:

DICHELLO DISTRIBUTORS, INC.

By: _____

Name: Robert F. Simon

Title: Vice President

APPLICANT'S SIGNATURE PAGE TO APPLICATION FOR RESUBDIVISION APPROVAL

0 MARSH HILL ROAD AND 55 MARSH HILL ROAD, ORANGE, CONNECTICUT

APPLICANT:

ORANGE LAND DEVELOPMENT LLC

By: _____

Name: Edward M. Crowley
Title: Manager

Revised 2/10

APPLICATION FOR SITE PLAN REVIEW
ORANGE ZONING DEPARTMENT

It is strongly recommended that prior to the submission of a Site Plan Application, a pre-submission meeting is held with the Zoning Enforcement Officer, and all applicable Municipal Department Heads. To schedule a meeting, please call Paul Dinice at 203-891-2122, ext. 743.

Eight (8) copies of this application, including the original and eight copies of the site plan, must be submitted by the applicant to the Zoning Enforcement Officer. Upon receipt, the Z.E.O. will affix signature and comment lines to a set of the Site Plan Drawings for the following Municipal Departments:

- -Town Engineer/Public Works Director
- -Fire Marshal
- -Orange Health Department
- -Building Inspector
- -Orange Police Commission
- -Flood Zone
- -Inland Wetlands
- -W.P.C.A.
- -CT D.O.T.

The Applicant must then meet with the above listed department heads and obtain their comments and signatures. Once this process has been completed, the applicant must re-submit the site plan to the Zoning Enforcement Officer prior to the meeting.

The Orange Town Plan and Zoning Commission meets on the 1st and 3rd Tuesday of each month at the Orange Town Hall.

FEE: $730 plus $55 for every 10 new or additional parking spaces or fraction thereof. Please make check payable to the **TOWN OF ORANGE**. *(Includes final inspection fee of $250 for Certificate of Occupancy.)*

FOR OFFICE USE ONLY:

Date Received _____ Application Fee Paid _____

Meeting Scheduled _____ Action Taken _____

Applicant Notified _____ Date of Publication _____

RECEIVED
APR 08 2015
BY: Paul Dinice

ORIGINAL

DEPARTMENT HEAD SIGNATURES

(Please use additional sheet if necessary)

Town Engineer/Director of Public Works

_____

Fire Marshal

_____

Town Sanitarian/Health Dept.

_____

Building Inspector

_____

Traffic Commission

_____

Name of Property Owner Dichello Distributors, Inc.

Mailing Address 55 Marsh Hill Road, P.O. Box 562, Orange, CT 06477

Telephone # (203) 891-2100 Fax # (203) 795-6875

Name of Engineering or Architectural Firm that prepared the site plan Milone & MacBroom, Inc.

Mailing Address 99 Realty Drive, Cheshire, CT 06410

Telephone # (203) 271-1773 Fax # (203) 272-9733

Contact person for all Official Correspondence
Thomas J. Daly

Mailing Address Milone & MacBroom, Inc., 99 Realty Drive, Cheshire, CT 06410

Telephone # (203) 271-1773 Fax # (203) 272-9733

Project Name N/A

Site Address 55 Marsh Hill Road

Zoning District LI-2 Assessor's M-B-P 3-1-10

Total Acres of Affected Parcel 20.9

Square footage of Proposed Building N/A

Statement of Use See Attachment A

List sections of the Orange Zoning Regulations which the Site Plan does not comply with N/A

If applicable, Inland Wetlands approval must be obtained prior to action by the Orange Town Plan and Zoning Commission.
-If Inland Wetlands approval has been obtained, a copy of the Letter of Approval must be attached to this application.

Please list the Date of Inland Wetlands approval See Attachment A

ZONING CHECK LIST

Note: Improvements are existing.

	Required	Provided
1. Minimum lot area	2 acres	20.9 acres
2. Minimum dimension of square	200 feet	200 feet
3. Maximum number of stories	N/A	N/A
4. Minimum frontage	50 feet	1151 feet
5. Maximum height	60 feet	28.5 feet
6. Setback from street line	50 feet	85.2 feet
7. Setback from rear property line	35 feet	125.0 feet
8. Setback from other property line	35 feet	54.5 feet
9. Setback from Residence district line	N/A	
10. Maximum floor area	80%	25.7%
11. Maximum ground coverage (buildings and structures)	40%	25.7%
12. Number of parking spaces	4/1,000 sf office; 3/loading bay	No change from existing
13. Number of loading spaces	1/40,000 sf	No change from existing
14. Maximum total coverage (B.O.P. & LI - II districts only, Section 383-124 Building & Paving of the Orange Zoning Regs.)	65%	64.2%
15. Minimum number trees in parking area	N/A	N/A

SITE PLAN CHECK LIST

	YES	NO
Has a site location map drawn to a scale of 1"=500' been provided?	X	
Have sidewalks been installed along the entire side of any building or structure on the site where an entrance or exit is located?		N/A
Subsurface drainage including catch basins or trench drains. Also, Contour lines at intervals of two (2) feet, based on U.S.C.G.S. datum.		N/A
Location and size of all lighting on the site as well as the type and intensity of the lighting element. Exterior lighting does not exceed ½-foot candle power at grade at the property line.		N/A
Location of all trash receptacles, as well as outdoor storage areas, if permitted.		N/A
All utilities servicing buildings and structures are located underground.		N/A
Access and egress driveways do not exceed a grade of 4%.		N/A
If applicable, Flood Zones with elevations have been displayed.		N/A
Landscaped green areas are serviced by underground irrigation.		N/A
All plans are sealed with live signature of architect or engineer.	X	

The following notes and information must appear on the submitted Site Plan:

Numerical property street address.	X	
Date when site plan was drawn and/or last revised.	X	
Notation requiring that the lining of all parking spaces be double striped.	N/A	
All information displayed on page 5 (Zoning Check List) of this application must be displayed in a condensed form on the site plan.	X	

The following schedules must be submitted and attached to this application.

	YES	NO
Tentative schedule for all proposed site and building construction.	N/A	
Tentative schedule for the maintenance of all site landscaping.	N/A	
Tentative schedule for the maintenance of all parking areas. (sweeping, refuse control, etc.) Also include provisions for the removal of on-site refuse.	N/A	

Certificate of Occupancy and/or Certificate of Zoning Compliance:

Please note that once a site plan has been approved and construction has commenced a Certificate of Occupancy/Certificate of Zoning Compliance will not be issued until all site work is completed in accordance with the approved site plan.

Prior to the issuance of a Certificate of Occupancy and/or Certificate of Zoning Compliance, two (2) mylar "As Built" site plans, prepared by an engineer, must be submitted to the Zoning Enforcement Officer. Said site plan must display the following:

1. Building location and distances to street and property lines.

2. Location of all drainage facilities including pipes and catch basins.

3. Location of all lighting fixtures, refuse containers, and utility boxes.

4. Location of paved areas, parking spaces, and sidewalks.

5. "As Built" land contours to determine compliance with the approved site plan.

6. Location of all freestanding signs and distances to all property lines.

See Attached

Signature of property owner **Date**

See Attached

Signature of Engineer or Architect preparing plan **Date**

State of Connecticut License #

Please note that a copy of the Connecticut License for the Architect or Engineer preparing the site plan must be affixed to this application.

CHECK LIST FOR SITE PLAN REVIEW

	YES	NO
1. Has the zone of the affected property been determined?	X	
2. Has a Statement of Use been submitted, and is it a permitted use in the district?	N/A See Attachment A	
3. Have the drainage facilities been reviewed by the Town Engineer, and are they displayed on the site plan?	N/A	
4. Have all the lighting fixtures been identified on the site plan?	N/A	
5. Building and Site entrances and exits have been displayed on the site plan?	N/A	
6. Has all new signage been located on the site plan, and have signage details, sizings and renderings been submitted?	N/A	
7. Are contours displayed on the site plan as required?	N/A	
8. Have underground utilities been displayed on the site plan?	N/A	
9. If more than 400 cubic yards of earth materials are to be disturbed, has a Special Use Permit Application been submitted?	N/A	
10. Has a Traffic Impact Report been submitted if required?	N/A	
11. Has a report been received from the Inland Wetlands Commission as required by State Statute?	See Attachment A	
12. Has the site plan been referred to all applicable department heads for their approval signatures?		

13. Have the minimum requirements for the number of parking spaces and sizing been met? N/A

14. If required, has a Sedimentation and Erosion Control Plan Application been submitted and certified? N/A

15. Has a landscaping plan been submitted with the following:
    - 20' Green Strip? N/A
    - One (1) tree per 20 cars in the parking area? N/A
    - 30' residential buffer, if required? N/A
    - Planting Schedule? N/A
    - Maintenance Schedule? N/A

16. Is there an architect's or engineer's seal on the site plan? X ____

The Commission may request the submission of such additional information that it deems necessary in order to decide on the application. The Commission, upon written request by the applicant, may also by resolution waive the required submission of all or part or the information required under Section 383-117, Subsections B through I of the Orange Zoning Regulations, if the Commission finds that the information is not necessary in order to decide on the application.

See Attached _____ _____

Signature of Applicant or Agent **Date**

OWNER'S SIGNATURE PAGE TO APPLICATION FOR SITE PLAN REVIEW

55 MARSH HILL ROAD, ORANGE, CONNECTICUT

OWNER:

DICHELLO DISTRIBUTORS, INC.

By: _____

Name: Robert P. Simon

Title: Vice President

Date: March 16, 2015

APPLICANT'S SIGNATURE PAGE TO APPLICATION FOR SITE PLAN REVIEW

55 MARSH HILL ROAD, ORANGE, CONNECTICUT

APPLICANT:

ORANGE LAND DEVELOPMENT LLC

By: _____

Name: Edward M. Crowley
Title: Manager

Date: March 23, 2015

ENGINEER'S SIGNATURE PAGE TO APPLICATION FOR SITE PLAN REVIEW

55 MARSH HILL ROAD, ORANGE, CONNECTICUT

ENGINEER:

By: _____

Name: Thomas J. Daly
Title: Professional Engineer
Milone & MacBroom, Inc.

Date: March 25, 2015

Attachment A

The applicant, Orange Land Development LLC, is submitting an application for resubdivision to the Orange Planning and Zoning Commission seeking approval for the reconfiguration of two existing lots, 55 Marsh Hill Road (Assessor's Lot 3-1-10) and 0 Marsh Hill Road (Assessor's Lot 3-1-1), into two reconfigured lots. In conjunction with that application, the applicant is submitting this site plan application as to the 55 Marsh Hill Road lot for the sole purpose of seeking confirmation that the existing improvements located on the reconfigured lot will be in compliance with applicable requirements of the Town of Orange Zoning Regulations. A copy of the site plan is submitted herewith.

The site plan is being submitted to the Orange Inland Wetlands and Water Courses Commission pursuant to General Statutes § 8-3(g)(1). No regulated wetlands activities are proposed. The existing improvements on the proposed lot designated as 55 Marsh Hill Road, office/warehouse/bottle facility, are not to be modified through the site plan application.


LI-2
BOP
Residential Area
CONNECTICUT TPK.
FRONTAGE RD.
SALEMME LA.
Railroad
ROBINSON BLVD.
CONNAIR RD.
EXECUTIVE BLVD.
CITY OF MILFORD
CITY OF WE
Zoning Legend
C-1 Commercial 1 District
C-2 Commercial 2 District
LI-1 Light Industrial 1 District
LI-2 Light Industrial 2 District
LI-3 Light Industrial 3 District
LSC Local Shopping Center
BOP Business Office Park
SOURCE OF BASE MAP:
TOWN OF ORANGE ENGINEERING MAP
THIS MAP WAS DEVELOPED FOR USE AS A PLANNING DOCUMENT. DELINEATION MAY NOT BE EXACT.


BOSTON POST RD.
RICK LA
CITY OF MILFOR
Commercial &
Industrial Zoned Land
Town Plan and Zoning Commission
Orange, Connecticut
O'Brien & Marmo Associates
400 0 400 800 1200 Feet
1 inch = Approx. 400 feet
August 2004

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

24 WOLCOTT HILL ROAD, P.O. DRAWER A
WETHERSFIELD, CONNECTICUT 06109-0801

Phone : 566-3010

January 9, 1987

Mr. Burton L. Zempsky
Executive Vice President
and General Manager
DiChello Distributors, Inc.
P. O. Box 562
55 Marsh Hill Road
Orange, Connecticut 06477

Dear Mr. Zempsky:

Subject: Proposed Building on
DiChello Property
Orange, Ct.

I had received your letter of November 18, 1986, and directed it to the attention of Mr. William J. Lynch, Director of Rail Operations, for investigation and reply. I regret that you have not had a formal reply from Mr. Lynch, however, this has not affected the review of your site plan indicating the proposed detention pond and spillway. The plan has been under review by our Hydraulics & Drainage engineer and I am advised that additional information will be necessary from Mr. Lawrence Edwards, your engineer.

In our conversation on January 8, 1987, you advised me that DiChello Distributors is prepared to go forward with a 40,000 square foot building which will require a detention pond and spillway to enter the channel. Your engineer's calculations, however, did not include the impact that would result from the original detention pond for your previous building of 180,000 square feet.

I am granting approval for the installation of the detention pond and spillway, however, DiChello Distributors, Inc., must accept the responsibility to perform whatever construction is necessary, as determined by our Hydraulics engineer, in the event that the previous detention pond affects

the proposed installation and would require alterations to your present plans. It is, therefore, requested that you indicate your acceptance of the terms and conditions contained herein by signing in the space indicated below and return a copy of this letter.

Very truly yours,

Donald G. Leavitt
Deputy Commissioner
Bureau of Highways

Conditions Accepted By:

Burton L. Zempsky
Executive Vice President
and General Manager
DiChello Distributors, Inc.

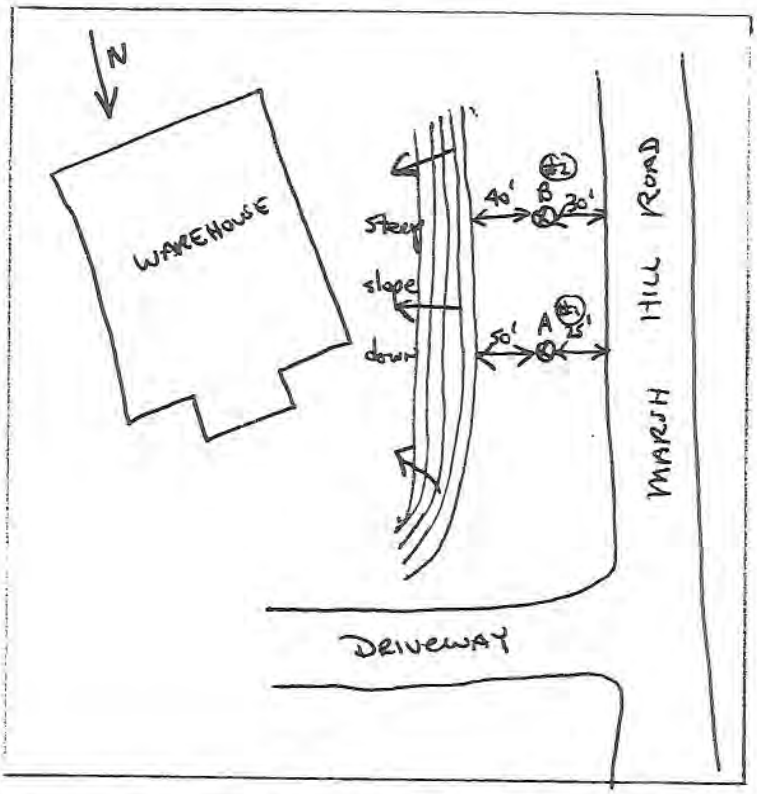
Date Jan 12, 1987

INVESTIGATION FOR SEWAGE DISPOSAL SYSTEM

Location: 55 Marsh Hill Road Date: 6/5/79

Owner: Dechello Distributor (Firestone) Tests conducted by: Bob McKay + AJC

Lot Diagram: Slopes, water courses, ledge outcrops, storm & footing drains, water supply locations.



Percolation Tests

Hole #1		Hole #2	
Depth: 30"		Depth: 28"	
Presoak Time: overnight		Presoak Time: overnight	
Time	Reading (12" head)	Time	Reading (20" head)
11:03	15 7/8"	11:08	12"
11:13	17"	11:18	15 1/4"
11:23	18"	11:28	17 7/8"
11:33	18 3/4"	11:38	19 3/8"
11:43	19 1/2"	11:48	20 3/8"
11:53	20"	11:58	21 1/8"
12:03	20 1/2"	12:08	21 7/8"
1" in 20 min		1" in 15 min	
USE			

Observation Pits: Depth, ledge at, ground water at, mottling at:

PIT A

0-6" TOP SOIL
6"-30" REDDISH SANDY/SILTY SUBSOIL
30"-7½' MOD. TIGHT SANDY/SILTY LOAM
NO WATER
NO Seepage
Root structure to 5'
No ledge

PIT B

0-8" TOP SOIL
8"-28" Reddish SANDY/SILTY SUBSOIL
28"-60" SANDY/SILTY LOAM
60"-88" MOD. TIGHT SILTY-SAND
NO WATER
FAINT MOTTLING AT 5½'
NO LEDGE

PIT C

PIT D

Remarks: Suitability of land for subsurface sewage disposal system.

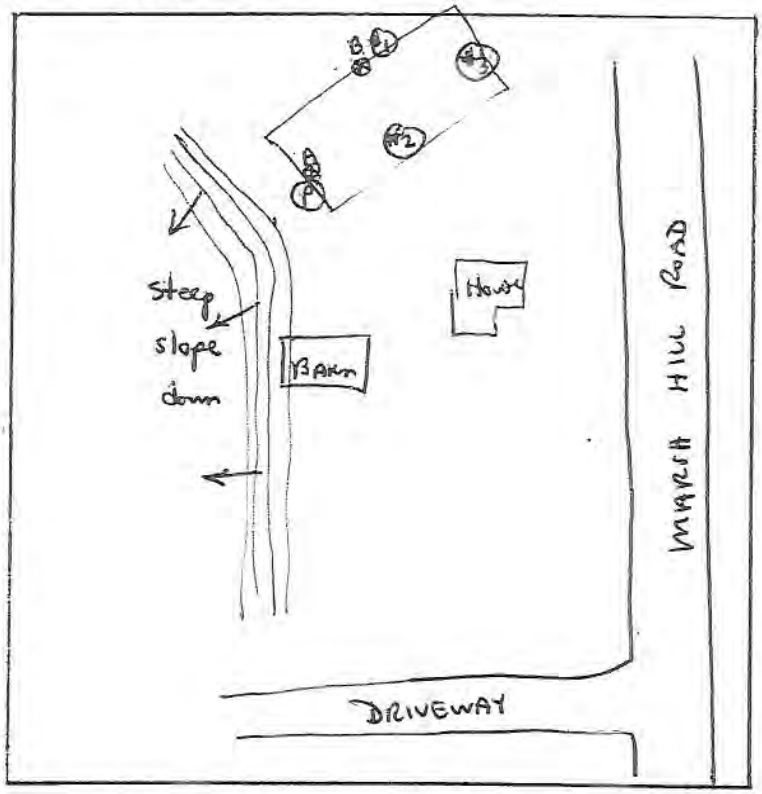
Greatest concern will be the effect of the severe cut proposed to the EAST of the system.

INVESTIGATION FOR SEWAGE DISPOSAL SYSTEM

Location: Dichello Dist. - (55) Marsh Hill Road Date: 8/2/79

Owner: Firestone Properties Tests conducted by: ATC

Lot Diagram: Slopes, water courses, ledge outcrops, storm & footing drains, water supply locations.



Percolation Tests

Hole #2 — Depth: 26" — Presoak Time:

Time	Reading
2:12	13"
2:22	15"
2:32	16½"
2:42	17⅜"
2:52	18⅜"
3:02	19⅛"

1" in 15 min

Hole # 3 — Depth: 32" — Presoak Time:

Time	REading
2:09	15½"
2:19	16"
2:29	16½"
2:39	17"
2:49	17⅜"
2:59	17⅝"

1" in 26 min

Observation Pits: Depth, ledge at, ground water at, mottling at:

PIT A

0-6" TOP SOIL
6"-18" FINE SANDY LOAM
18"-5' COMPACT FINE SILT
5'-8' MOD. TIGHT SAND+SILT
MOTTLING AT 30"
ROOTS TO 36"

Perc Rate 1" in 50

PIT B

0-6" TOP SOIL
6"-18" BROWN FINE SANDY LOAM
18"-5½' COMPACT SILTY TILL
MOTTLING AT 18"
WATER Seepage at 8'

Perc. Rate 1" in 80 min

PIT C

PIT D

Remarks: Suitability of land for subsurface sewage disposal system.

Design shall include curtain drain upslope from system. Use application rate of .7 gallons per day for each effective square foot of leaching area.

WELL APPROVAL CERTIFICATE

SOURCE OF SAMPLE 55 Marsh Hill road **DATE TAKEN** 9/8/87

OWNER OF PROPERTY DiChello Distributors, Inc.

ADDRESS OF PROPERTY OWNER 55 Marsh Hill Road, Orange, CT.

BACTERIOLOGICAL TEST RESULTS: COLIFORM COLONIES/100 ML 0

X **The results of the analysis for this well meet the requirements for a potable water supply.**

__ **The results of the analysis for this well are satisfactory for a potable water supply but certain of the chemical or physical constituents are above recommended levels.**

__ **The analysis indicates water is not suitable as a potable water supply.**

COMMENTS:

Signed Frederick C Schumacher, R.S.
Frederick C. Schumacher, R.S.

Date September 14, 1987

CONSUMER PROTECTION
WELL DRILLING BOARD
CPR-8 REV. 11-82

STATE OF CONNECTICUT
DEPARTMENT OF CONSUMER PROTECTION
WELL DRILLING PERMIT
165 CAPITOL AVE., HARTFORD, CONNECTICUT 06106

PERMIT NUMBER
123523

ORANGE — 55 MARSH HILL ROAD
LOCATION OF WELL (Town) (Street) (Lot Number) | DATE 7/7/87

ATLANTIC DESIGN & CONSTRUCTION INC. FOR DICHELO BEER DISTRIBUTOR
OWNER OF WELL

☐ INDIVIDUAL ☒ BUILDER ☐ OTHER (Specify)

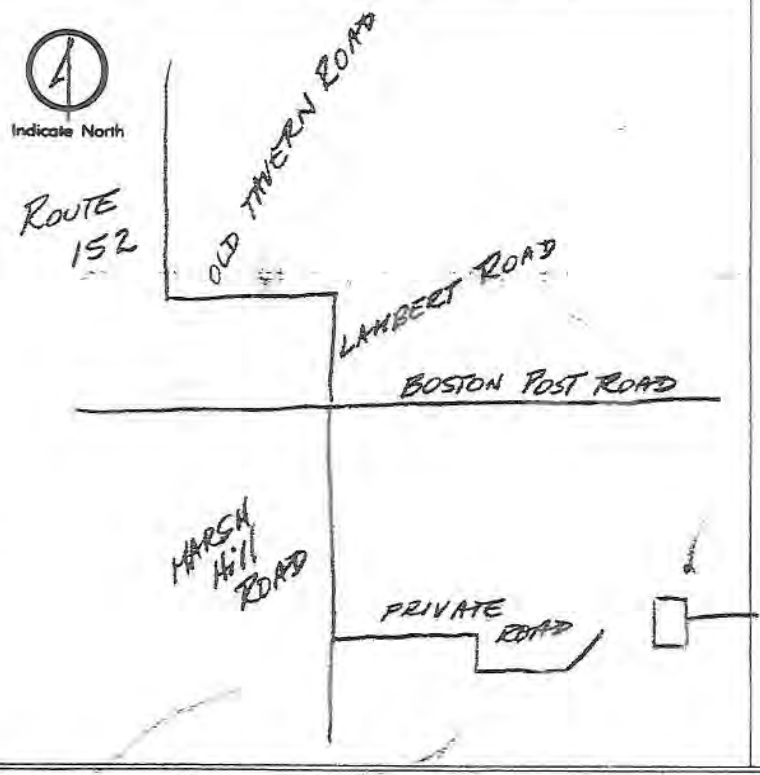
OWNER'S ADDRESS
61 INDUSTRIAL PARK ROAD EXTENSION, PLYMOUTH, MASS. 02360

PROPOSED USE OF WELL					Est. No. of People being served.
	☐ DOMESTIC	☐ BUSINESS ESTABLISHMENT	☐ FARM	☐ TEST WELL	
	☐ PUBLIC SUPPLY	☒ INDUSTRIAL	☐ AIR CONDITIONING	☐ OTHER (Specify)	10±

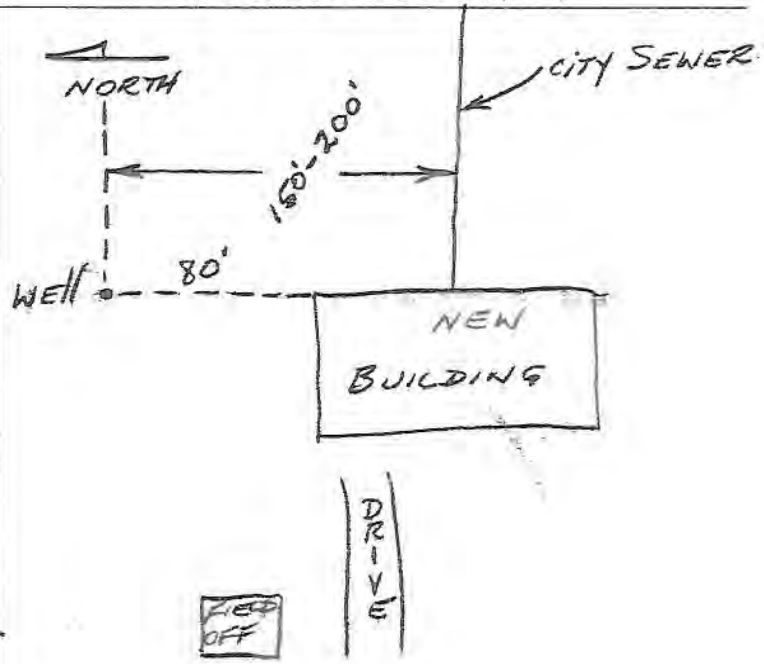
SKETCH OF WELL LOCATION

Locate well with respect to at least two roads, showing distance from intersection and front of lot

Location of lot to at least two roads



Well location on lot and to house (if present)



Approximate number of feet from well to nearest source of possible contamination: 150'+

The undersigned is aware that upon completion of the well, a "Well Completion Report" containing construction details and information required under Section 25-131 of the 1969 Supplement to the General Statutes must be sent to the owner, the Board and the Water Resources Commission on the form provided by the Board. This permit is not valid until all information is filled in and it has been counter-signed by the Director of Health or his agent.

APPLICANT (Signature)	APPLICANT'S ADDRESS	REGISTRATION NO.
EASTERN WATER DEVEL CO	5 BENSON ROAD, OXFORD, CONN. 06483	33
☒ APPROVED ☐ REJECTED	BY (Town Health Officer or Agent) Frederick C. Schumacher, R.S.	DATE 7/24/87

REMARKS

DIRECTOR OF HEALTH

WELL COMPLETION REPORT

CPR-9 REV. 11-82

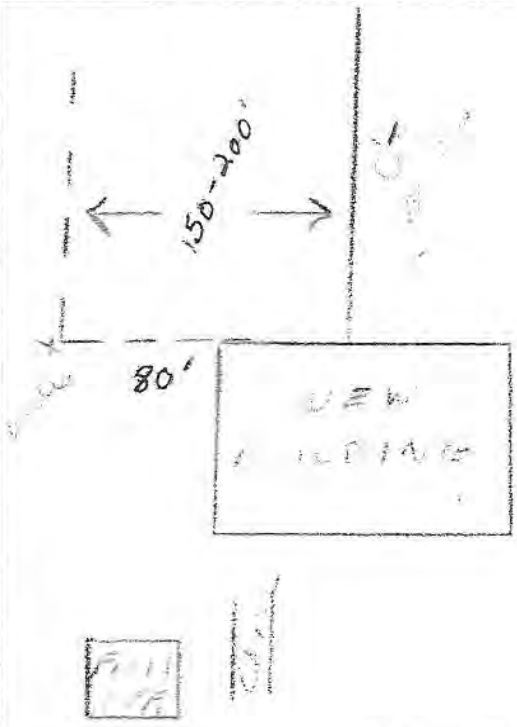
STATE OF CONNECTICUT
DEPARTMENT OF CONSUMER PROTECTION
WELL DRILLING BOARD
165 CAPITOL AVE.
HARTFORD, CONNECTICUT 06106

Do NOT fill in
STATE WELL NO.
OTHER NO.

OWNER	NAME: Atlantic Design & Const.	ADDRESS: 61 Industrial Park Ext. Plymouth Mass. 02360	
LOCATION OF WELL	(No. & Street): 55 Marsh Hill Road	(Town): Orange	(Lot Number):
PROPOSED USE OF WELL	☐ DOMESTIC ☐ BUSINESS ESTABLISHMENT ☐ FARM ☐ TEST WELL ☐ PUBLIC SUPPLY ☒ INDUSTRIAL ☐ AIR CONDITIONING ☐ OTHER (Specify)		
DRILLING EQUIPMENT	☐ ROTARY ☒ COMPRESSED AIR PERCUSSION ☐ CABLE PERCUSSION ☐ OTHER (Specify)		
CASING DETAILS	LENGTH (feet): 42	DIAMETER (inches): 6	WEIGHT PER FOOT: 17
	☒ THREADED ☐ WELDED	DRIVE SHOE: ☒ YES ☐ NO	WAS CASING GROUTED? ☒ YES ☐ NO
YIELD TEST	☐ BAILED ☐ PUMPED ☒ COMPRESSED AIR	HOURS: 4	YIELD (G.P.M.): 3½
WATER LEVEL	MEASURE FROM LAND SURFACE—STATIC (Specify feet): 17	DURING YIELD TEST (feet): 500	Depth of Completed Well in feet below Land surface: 505
SCREEN DETAILS	MAKE		LENGTH OPEN TO AQUIFER (feet)
	SLOT SIZE	DIAMETER (inches)	IF GRAVEL PACKED: Diameter of well including gravel pack (inches):
	GRAVEL SIZE (inches)	FROM (feet)	TO (feet)

DEPTH FROM LAND SURFACE FEET TO FEET		FORMATION DESCRIPTION
0	30	clay sand gravel
31	505	granite

Sketch exact location of well with distances, to at least two permanent landmarks.



If yield was tested at different depths during drilling, list below

FEET	GALLONS PER MINUTE
505	3.5

ORANGE HEALTH DEPT.
DIV. OF ENVIRONMENTAL HEALTH
Rec'd 9/14/87

DATE WELL COMPLETED	PERMIT NO.	REGISTRATION NO.	DATE OF REPORT	WELL DRILLER (Signature)
7/29/87	123523	33	7/30/87	

LOCAL DIRECTOR OF HEALTH

WATER CONTROL LABORATORIES
HOPKINTON INDUSTRIAL PARK
106 SOUTH ST.
HOPKINTON, MA 01748
617-435-6824

WCL ID #	ACCOUNT #	CODE	PAGE #
7251 '43%	000035	T02	1

SAMPLE IDENTIFICATION INFORMATION

ATLANTIC DESIGN
55 MARSH HILL RD.

ORANGE CT

REFERRED BY:

EASTERN WATER DEVELOPMENT CO.,
ATTN. BOB GRANT
S BENSON RD.
OXFORD, CT. 06483

COLLECTED	RECEIVED	REPORTED
09/08/87 11:00	09/08/87 18:11	09/09/87 22:45

EPORT: FINAL REPORT

COMMENT:

TESTS	RESULTS	UNITS	REFERENCE RANGE	LOW	ACCEPTABLE RANGE GRAPHIC RESULTS	HIGH
*** GENERAL INFORMATION						
(COLLECTOR: EASTERN WATER DEV.)						
*** ROUTINE QUALITY TESTING						
COLIFORM BACTERIA	0.	/100 ML				
ODOR	NONE					
TURBIDITY	0.39	NTU				
COLOR	0.		0. - 15.			
PH	7.5		5.0 - 9.0			
ALKALINITY	86.	MG/L				
HARDNESS-CALCULATED	114.	MG/L				
	HARDNESS MAY BE EVALUATED USING THE FOLLOWING INFORMATION:					
	SOFT:0-75 MOD HARD:76-150 HARD:151-300 VERY HARD:300+					
SODIUM	7.	MG/L	0. - 20.			
AMMONIA	<0.1	MG/L				
NITRATE	0.0	MG/L	0.0 - 10.0			
CHLORIDE	8.	MG/L	0. - 250.			
IRON	0.01	MG/L	0.00 - 0.30			
MANGANESE	0.02	MG/L	0.00 - 0.05			
*** MINERALS						
CALCIUM	33.4	MG/L				
MAGNESIUM	7.6	MG/L				
*** MISCELLANEOUS TESTING						
SULFATE	28.	MG/L	0. - 250.		*----	
SOLIDS, T. DISSOLVED	250.	MG/L				
*** FINAL COMMENTS:	RESULTS FOR THE TEST(S) PERFORMED ON THIS SAMPLE MEET THE EPA CRITERIA FOR SAFE DRINKING WATER.					
	*** THIS IS A FINAL REPORT. ***					

ORANGE HEALTH DEPT
DIV. OF ENVIRONMENTAL HEALTH
Rec'd 9/14/87

TOWN OF ORANGE, CT

PERMIT

0906

Fee $ 70.00 Check # 33465 Date 3/2/12

☑ Electrical ☐ Plumbing ☐ Residential
☐ H.V.A.C. ☐ Mechanical ☑ Commercial
☐ Industrial

Permit issued to All Brite Electric Lic. No. E1125198
To Wire 10,000. g. tank + pump sys.
Street Marsh Hill Rd. No. 55 Owner Diehello Dist.

This permit is issued on the condition that the recipient as owner or agent of the owner, agrees to comply with the Building Code of the State of Connecticut. This permit is invalid if work is not started within six (6) months of date of issue. This permit is void if all required inspections are not made and approved.

Phone: 203-937-7211

Issued by: [signature] Const. Value $ 4,800.

☐ Bldg. Official ☑ Electrical Insp.

revised 1-2001

TOWN OF ORANGE, CONNECTICUT

ELECTRICAL - PERMIT APPLICATION

UI # _____
Released _____

Permit # 0906 Building Permit # _____ Date _____

Job Location ~~35~~ Marsh Hill Rd.

Owner Dichello Distributors Tenant _____

Type of Building: Res ____ Comm ____ Ind ✓ Other ____

Type of Work: New ____ Add ✓ Remodel ____

Service Size of: Main Amp ____ Circuits ____ Conduit ____ Wire ____
Sub Main ____ Circuits ____ Conduit ____ Wire ____

	Basement	1st	2nd	Attic	Total
Plug Receptacle					
Lights					
SW's					
Total Outlets					

K.W. Size of: Range ____ Dryer ____ Water Heater ____
Heat ____ Garbage Disposal ____ DW ____ A/C ____ Other ____

Description of work to be performed
To wire New 10,000 gal Tank & pump System.
480V 3φ 2 HP. motor. & controls

Contractor's Name (Please print) All Brite electric
Address P.O Box 26064 City West Haven
State CT Zip 06516 Telephone 203 937-7211

Estimated Cost of Work 4,800.00 Fee 70.00 Paid Check # 33465
License Type E1 # 125198

Signature of Applicant

Signature of Inspector

Bldg Elecapp.doc

0275

ESTIMATED COST:
Structural ..... $ 29,000.
Plumbing ..... $ _____
Wiring ..... $ _____
H.V.A.C. ..... $ _____
FINAL COST: ... $ _____

Town of Orange, Connecticut

BUILDING PERMIT

Check # 25335

FEE $ 310 Date 2/17/12

Building Permit issued to Pat Munger Constr. Co. / David A. Demaio, agent

for the purpose of Installation of power wash system.

Street Marsh Hill Rd. No. 55 Owner Dichello Distributors Inc.

Type Const.	Size	M.B.P. 3-1-10	Phone 203-483-3645

Remarks

The recipient of this permit accepts it on the condition that the owner or the agent of the owner, agrees to comply with the Building Code of the State of Connecticut regarding the use, occupancy and type of building to be constructed. This permit is subject to review or reissue six (6) months from the date of issue. If all required inspections are not made and approved, this permit is revoked.

Signature of Applicant _____ Issued by _____ B.O.
Building Official

For additional information see Application

TOWN OF ORANGE, CT

#25335

APPLICATION FOR BUILDING PERMIT

Date Feb, 1 12 Permit # 0275 Est. Cost $ 29,000 Fee $ 310

Description of work to be performed FLOOR WASH WATER TREATMENT SYSTEM SELF CONTAINED

Location of Property 35 MARSH HILL ROAD
Name of Owner DIGIULIO DISTRIBUTORS, INC.
Present Address 35 MARSH HILL ROAD

Zone _____ Lot Width _____ Lot Depth _____ Area of Lot _____

Size of Building EXISTING Area of Building NO CHANGE TO EXTERIOR OF BUILDING

Front Yard _____ Rear Yard _____ Side Yard _____

Map/Block/Parcel 3-1-10

Type of Construction _____ Use Group _____

Remarks PROJECT CONSISTS OF INSTALLATION OF FLOOR WASH WATER TREATMENT AND CONVEYING SYSTEM TO AVOID WATER FROM BEING DISPOSED ON SITE.

Basic Building Code of the State of Connecticut must be adhered to as well as all building and zoning ordinances of the Town of Orange and the statutes of the State of Connecticut regarding the use, occupancy and type of building to be constructed. Permit is subject to review or reissue six (6) months from date of issue.

PRESIDENT
Signature of Owner or Authorized Applicant

MCO.0900273
State License or Registration #

PAT MUNGER CONST. CO INC.
Name of Builder

N/A
dba

750 EAST MAIN STREET
BRANFORD, CT 06405
Address

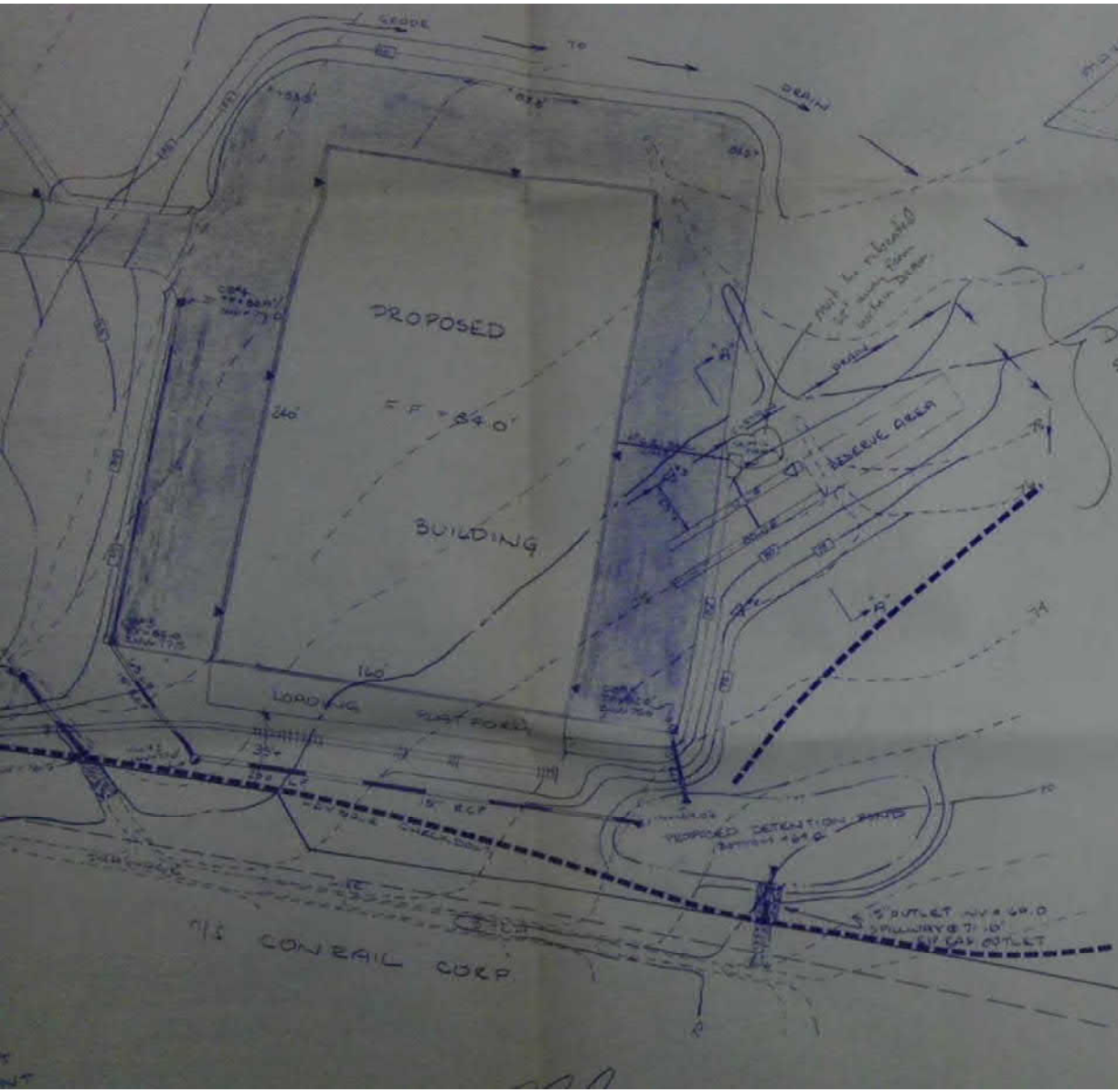
BRANFORD CT 06405
City State Zip

DAVID A. DEMAIO
PLEASE PRINT - Applicant's Name

Issued by Building Official

203-483-3645
Phone-Area Code

Revised February 2006



LOCATION MAP

SCALE 1" = 200'

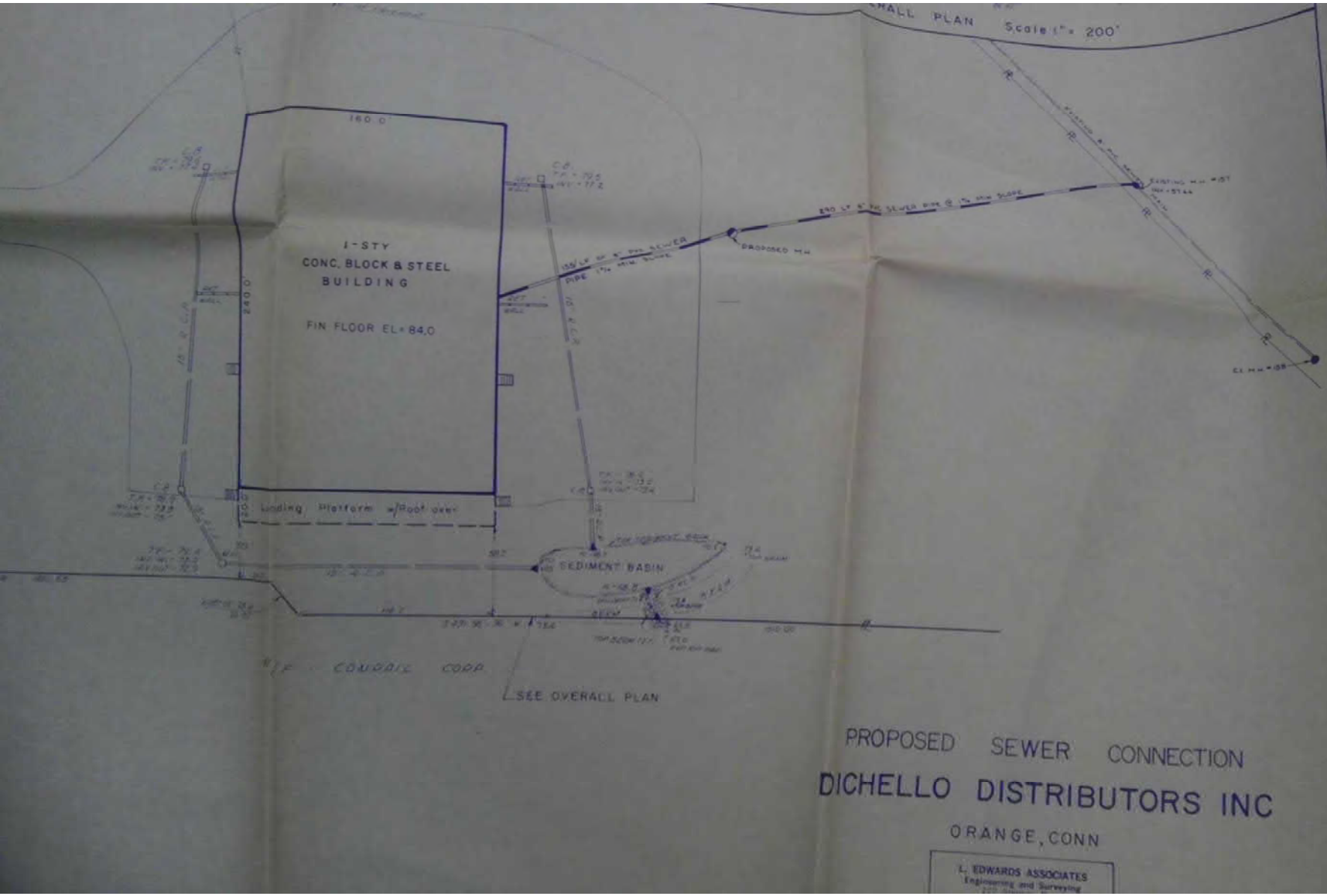
1. Invert elevations at foundation wall, inlet and outlet of septic tank.
2. Bench Mark Set?
3. Design flow criteria? Number of employees x 25 gallon/day
4. Soil Test data & Perc Test information & locations
5. Do you intend to construct curtain drain with top exposed?
6. Give Inv. Elevation of curtain drain discharge pipe at intervals and at discharge ponds. (must be at least 1 foot below bottom of leaching galleries)
7. Area T.P. between H-20 loading capacity?
8. Reserve Area must be prepared.

SITE PLAN

"DICHELLO DISTRIBUTORS INC

ORANGE CONN.

L. EDWARDS ASSOCIATES
Engineering and Surveying

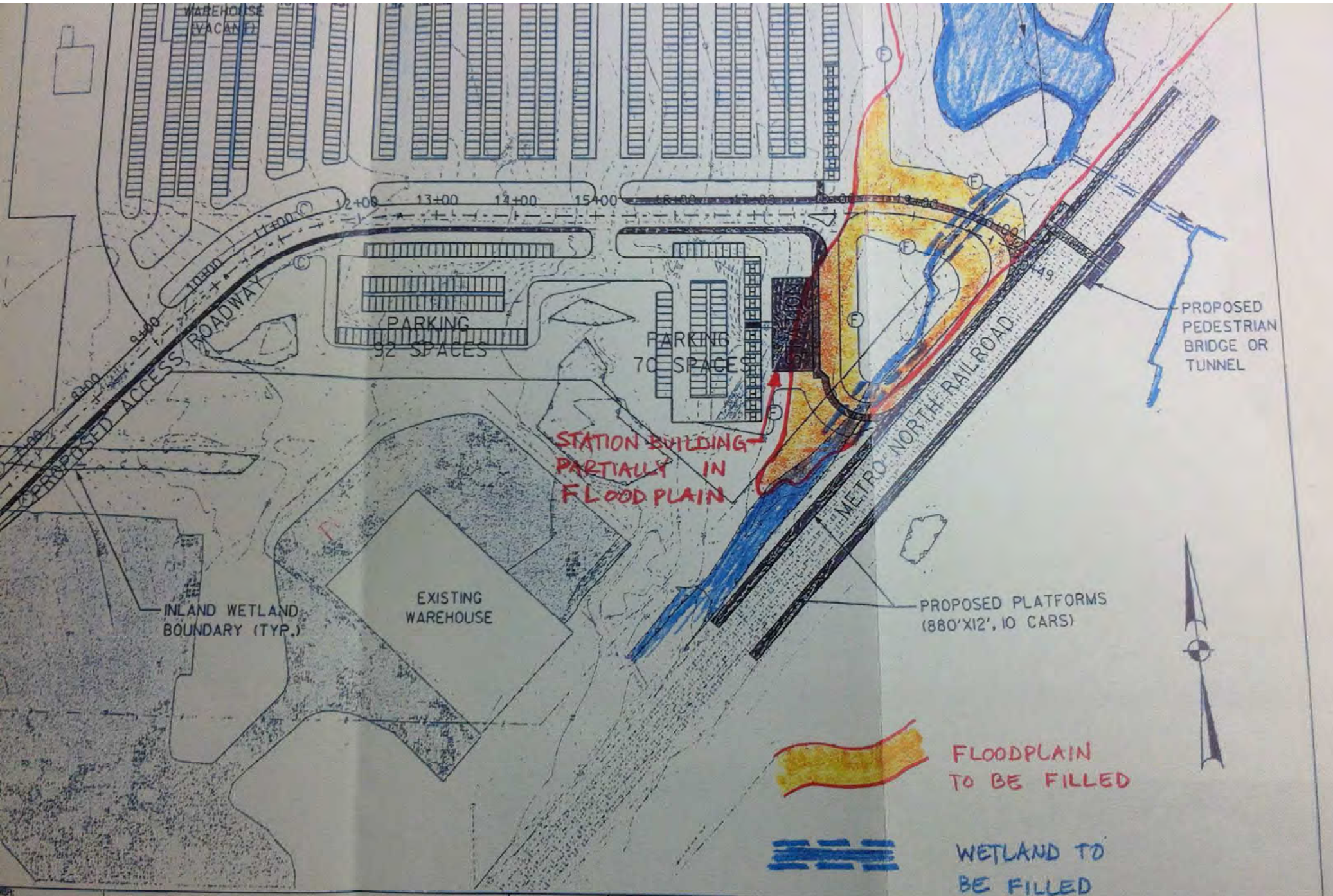


PROPOSED SEWER CONNECTION

DICHELLO DISTRIBUTORS INC

ORANGE, CONN

L. EDWARDS ASSOCIATES
Engineering and Surveying



STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ENGINEER:

APPROVED BY: DATE: 5-29-01

SEAL:

PROJECT TITLE:
SITE SELECTION STUDY
NEW TRAIN STATION
ORANGE, CONNECTICUT

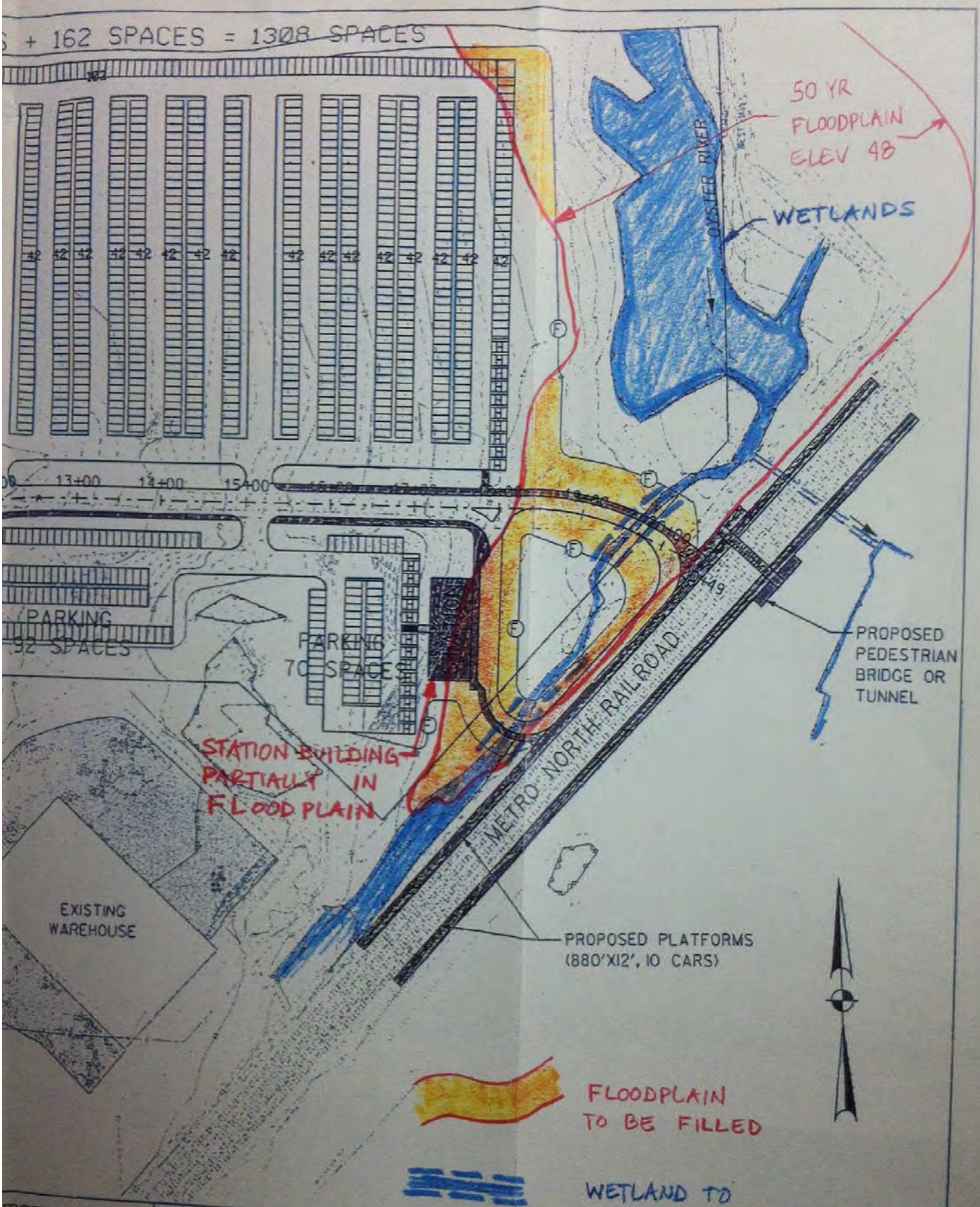
TOWN: ORANGE

DRAWING TITLE: PROPOSED SITE PLAN

PROJECT NO.: 301-T099

DRAWING NO.:

SHEET NO.: 2



NECTICUT NSPORTATION	SEAL:	PROJECT TITLE: SITE SELECTION STUDY NEW TRAIN STATION ORANGE, CONNECTICUT	TOWN: ORANGE	PROJECT NO.: 301-T099
DATE: 5-25-01			DRAWING TITLE: PROPOSED SITE PLAN	DRAWING NO.:
				SHEET NO.: 2

B. Environmental Impact

The mantra among state (CTDEP) and federal (Army Corps of Engineers – ACOE) regulators regarding environmental impacts is "avoidance, minimization and mitigation". Before any project of this scale is approved, an Environmental Assessment must be conducted under CEPA. Impacts to wetlands, flora and fauna, floodplains, water quality and hazardous waste risk must be considered. Permits for regulated activities will then be required.

The ConnDOT Site Study has determined that wetlands and flora/fauna will be impacted by the Orange site but not by the West Haven site. The Site Study failed to identify some additional CTDEP and ACOE permits that will likely be required. In additional, the Site Study did not recognize that the Orange Site, including the proposed Train Station itself, is proposed within the 50-year floodplain of the Oyster River. The likelihood of achieving permit approvals from state and federal regulators is in question given these facts and with the West Haven site representing a reasonable and prudent alternative.

The Site Study also identified the Orange Site as having greater area of risk to encounter hazardous waste.

A summary of these Environmental Impacts:

ENVIRONMENTAL IMPACTS

	ORANGE	WEST HAVEN
Wetlands Filling	5,280 sq. ft.	-0-
Flora and Fauna	Greater Impact (Undeveloped, forested)	Less impact
Floodplain Impacts	Oyster River 50 yr. Floodplain	-0-
Hazardous Waste Risk Area	18.6 acres	12.6 acres

Excerpts from the ConnDOT Site Study and Figures showing Environmental Impacts follow:

...ING BOARD
-82

STATE OF CONNECTICUT
DEPARTMENT OF CONSUMER PROTECTION
WELL DRILLING PERMIT
165 CAPITOL AVE., HARTFORD, CONNECTICUT 06106

PERMIT NUMBER
123523

ORANGE | 55 MARSH HILL ROAD | DATE 7/7/87
LOCATION OF WELL (Town) (Street) (Lot Number)

ATLANTIC DESIGN & CONSTRUCTION INC. FOR DICHELLO BEER DISTRIBUTOR
OWNER OF WELL
☐ INDIVIDUAL ☒ BUILDER ☐ OTHER (Specify)

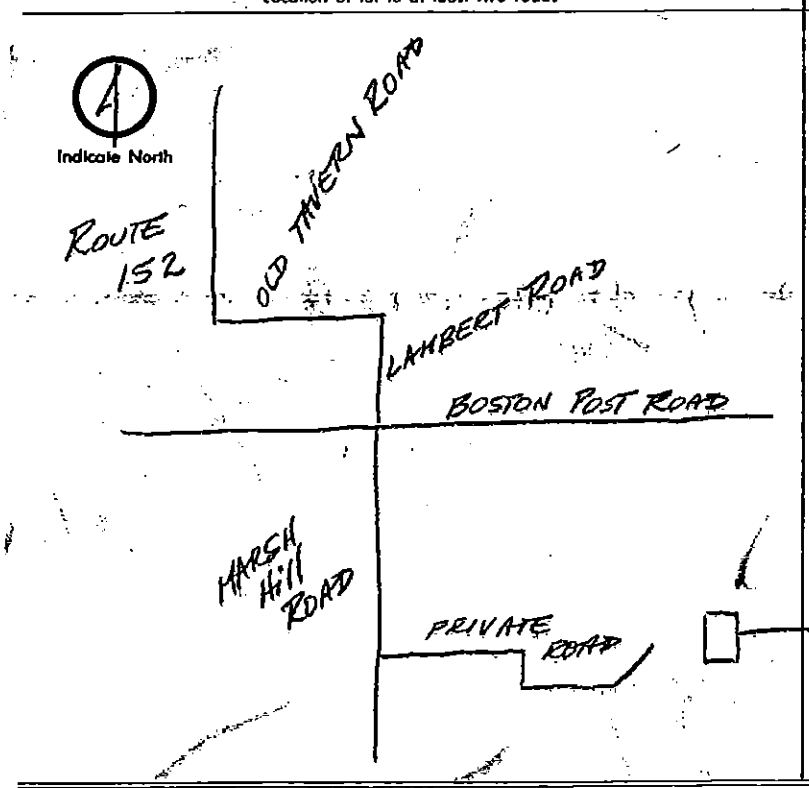
OWNER'S ADDRESS
61 INDUSTRIAL PARK ROAD EXTENSION, PLYMOUTH, MASS. 02360

PROPOSED USE OF WELL					Est. No. of People being served.
	☐ DOMESTIC	☐ BUSINESS ESTABLISHMENT	☐ FARM	☐ TEST WELL	
	☐ PUBLIC SUPPLY	☒ INDUSTRIAL	☐ AIR CONDITIONING	☐ OTHER (Specify)	10±

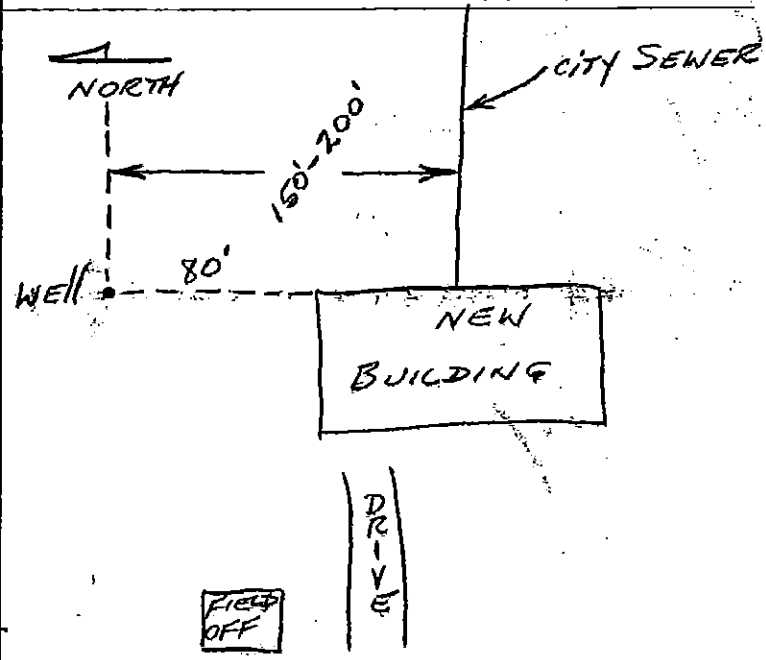
SKETCH OF WELL LOCATION

Locate well with respect to at least two roads, showing distance from intersection and front of lot

Location of lot to at least two roads



Well location on lot and to house (if present)



Approximate number of feet from well to nearest source of possible contamination: 150'+

The undersigned is aware that upon completion of the well, a "Well Completion Report" containing construction details and information required under Section 25-131 of the 1969 Supplement to the General Statutes must be sent to the owner, the Board and the Water Resources Commission on the form provided by the Board. This permit is not valid until all information is filled in and it has been counter-signed by the Director of Health or his agent.

APPLICANT (Signature)	APPLICANT'S ADDRESS	REGISTRATION NO.
J Ellis EASTERN WATER DEVEL CO	5 BENSON ROAD, OXFORD, CONN. 06483	33
☒ APPROVED ☐ REJECTED	BY (Town Health Officer or Agent) Frederick C. Schumacher, R-S.	DATE 7/24/87

REMARKS

DIRECTOR OF HEALTH

MPLETION REPORT

.1-82

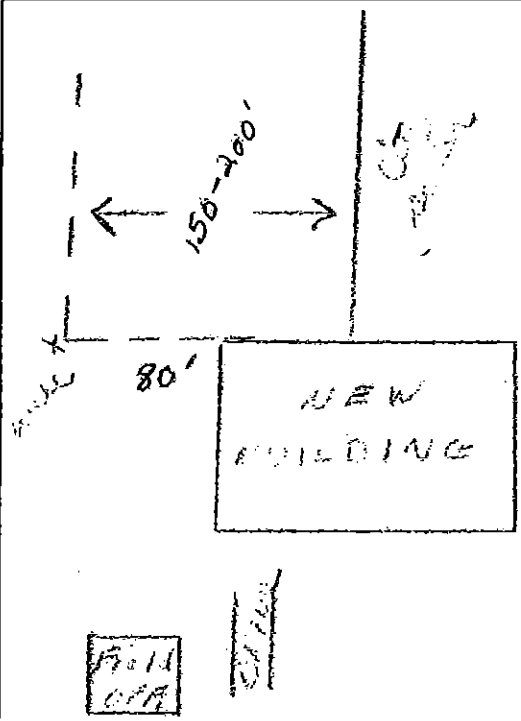
STATE OF CONNECTICUT
DEPARTMENT OF CONSUMER PROTECTION
WELL DRILLING BOARD
165 CAPITOL AVE.
HARTFORD, CONNECTICUT 06106

Do NOT fill in
STATE WELL NO.
OTHER NO.

OWNER	NAME: Atlantic Design & Const.	ADDRESS: 61 Industrial Park Ext. Plymouth Mass. 02360	
LOCATION OF WELL	(No. & Street): 55 Marsh Hill Road	(Town): Orange	(Lot Number):
PROPOSED USE OF WELL	☐ DOMESTIC ☐ BUSINESS ESTABLISHMENT ☐ FARM ☐ TEST WELL	☐ PUBLIC SUPPLY ☒ INDUSTRIAL ☐ AIR CONDITIONING ☐ OTHER (Specify)	
DRILLING EQUIPMENT	☐ ROTARY ☒ COMPRESSED AIR PERCUSSION ☐ CABLE PERCUSSION ☐ OTHER (Specify)		
CASING DETAILS	LENGTH (feet): 42	DIAMETER (inches): 6	WEIGHT PER FOOT: 17 ☒ THREADED ☐ WELDED
	DRIVE SHOE: ☒ YES ☐ NO	WAS CASING GROUTED? ☒ YES ☐ NO	
YIELD TEST	☐ BAILED ☐ PUMPED ☒ COMPRESSED AIR	HOURS: 4	YIELD (G.P.M.): 3½
WATER LEVEL	MEASURE FROM LAND SURFACE—STATIC (Specify feet): 17	DURING YIELD TEST (feet): 500	Depth of Completed Well in feet below land surface: 505
SCREEN DETAILS	MAKE		LENGTH OPEN TO AQUIFER (feet)
	SLOT SIZE	DIAMETER (inches)	IF GRAVEL PACKED: Diameter of well including gravel pack (inches): GRAVEL SIZE (inches) FROM (feet) TO (feet)

DEPTH FROM LAND SURFACE FEET TO FEET		FORMATION DESCRIPTION
0	30	clay sand gravel
31	505	granite

Sketch exact location of well with distances, to at least two permanent landmarks.



If yield was tested at different depths during drilling, list below

FEET	GALLONS PER MINUTE
505	3.5

ORANGE HEALTH DEPT.
DIV. OF ENVIRONMENTAL HEALTH
Rec'd 9/14/87

DATE WELL COMPLETED	PERMIT NO.	REGISTRATION NO.	DATE OF REPORT	WELL DRILLER (Signature)
7/29/87	123523	33	7/30/87	

LOCAL DIRECTOR OF HEALTH

ATER CONTROL LABORATORIES
HOPKINTON INDUSTRIAL PARK
106 SOUTH ST.
HOPKINTON, MA 01748
617-435-6824

WORK ID #		
72517404	000035	T02 1

SAMPLE IDENTIFICATION INFORMATION

ATLANTIC DESIGN
55 MARSH HILL RD.

ORANGE CT

REFERRED BY:

EASTERN WATER DEVELOPMENT CO.,
ATTN: BOB GRANT
ADD'S BENSON RD.
OXFORD, CT. 06483

COLLECTED	RECEIVED	REPORTED
09/08/87 11:00	09/09/87 10:11	09/09/87 22:45

EPORT: FINAL REPORT

COMMENT:

TESTS	RESULTS	UNITS	REFERENCE RANGE	LOW	ACCEPTABLE RANGE GRAPHIC RESULTS	HIGH
*** GENERAL INFORMATION						
COLLECTOR: EASTERN WATER DEV.						
*** ROUTINE QUALITY TESTING						
COLIFORM BACTERIA	0.	/100 ML				
ODOR	NONE					
TURBIDITY	0.39	NTU				
COLOR	0.		0. - 15.			
PH	7.5		5.0 - 9.0			
ALKALINITY	86.	MG/L				
HARDNESS-CALCULATED	114.	MG/L				
HARDNESS MAY BE EVALUATED USING THE FOLLOWING INFORMATION: SOFT:0-75 MOD HARD:76-150 HARD:151-300 VERY HARD:300+						
SODIUM	7.	MG/L	0. - 20.			
AMMONIA	<0.1	MG/L				
NITRATE	0.0	MG/L	0.0 - 10.0			
CHLORIDE	8.	MG/L	0. - 250.			
IRON	0.01	MG/L	0.00 - 0.30			
MANGANESE	0.02	MG/L	0.00 - 0.05			
*** MINERALS						
CALCIUM	33.4	MG/L				
MAGNESIUM	7.6	MG/L				
*** MISCELLANEOUS TESTING						
SULFATE	28.	MG/L	0. - 250.			
SOLIDS, T. DISSOLVED	250.	MG/L				
*** FINAL COMMENTS:	RESULTS FOR THE TEST(S) PERFORMED ON THIS SAMPLE MEET THE EPA CRITERIA FOR SAFE DRINKING WATER. *** THIS IS A FINAL REPORT. ***					

ORANGE HEALTH DEPT.
DIV. OF ENVIRONMENTAL HEALT
Rcv'd 9/14/87

WELL APPROVAL CERTIFICATE

SOURCE OF SAMPLE 55 Marsh Hill road DATE TAKEN 9/8/87

OWNER OF PROPERTY DiChello Distributors, Inc.

ADDRESS OF PROPERTY OWNER 55 Marsh Hill Road, Orange, CT.

BACTERIOLOGICAL TEST RESULTS: COLIFORM COLONIES/100 ML 0

X The results of the analysis for this well meet the requirements for a potable water supply.

__ The results of the analysis for this well are satisfactory for a potable water supply but certain of the chemical or physical constituents are above recommended levels.

__ The analysis indicates water is not suitable as a potable water supply.

COMMENTS:

Signed Frederick C Schumacher, R.S.
Frederick C. Schumacher, R.S.

Date September 14, 1987

TOWN OF ORANGE, CONNECTICUT

OFFICE OF BUILDING OFFICIAL

CERTIFICATE OF OCCUPANCY

Zone LI-2 . Date September 3 19 87

This is to certify that building at 55 Marsh Hill Road

as Built under Permit No. 8526 conforms substantially to the requirements of the Building Code and Zoning and Sanitary Regulations of the Town of Orange and is hereby approved for occupancy as indicated below.

Approved for occupancy For LI-2 Use

Paul G. Dinse

Zoning Enforcement Officer

Frederick C. Schumacher, R.S. *

Sanitarian

Building Official

NOTICE: Any change or extension of the use herein approved requires a new certificate of occupancy.

* See "Well Approval Certificate"

WELL APPROVAL CERTIFICATE

SOURCE OF SAMPLE 55 Marsh Hill road DATE TAKEN 9/8/87

OWNER OF PROPERTY DiChello Distributors, Inc.

ADDRESS OF PROPERTY OWNER 55 Marsh Hill Road, Orange, CT.

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X The results of the analysis for this well meet the requirements for a potable water supply.

__ The results of the analysis for this well are satisfactory for a potable water supply but certain of the chemical or physical constituents are above recommended levels.

__ The analysis indicates water is not suitable as a potable water supply.

COMMENTS: .....

Signed Frederick C. Schumacher, R.S.
Frederick C. Schumacher, R.S.

Date September 14, 1987

LIBERTY AUTO & ELECTRIC COMPANY, INC.

SERVICING THE PETROLEUM INDUSTRY
SINCE 1920

MEMBER PEI PETROLEUM EQUIPMENT INSTITUTE

38 GURDON STREET
P.O. BOX 6217
BRIDGEPORT, CT 06606
(203) 333-4112

E-1 Lic No. 102015
P 9 Lic No. 205556
F-3 Lic No. P80025

July 11, 1990

Town of Orange
Fire Marshall's Office
Orange Center Road
Orange, Connecticut 06477

ATTN: Tim Smith

RE: Dichello Distributors
55 Marsh Hill Road
Orange, CT

This is to certify that Liberty Auto & Electric Co., removed and legally disposed of one (1) 2500 gallon tank, in accordance with Section 29-62-88 of Fire Marshall's Code of the State of Connecticut 1-75 and N.F.P.A. 30, Appendix B 1984.

Yours very truly,
Liberty Auto & Electric Co., Inc.

Brian H. Hulse
Vice President & Treasurer

BHH/ed
c:c: State of Connecticut D.E.P.
c:c: Dichello's Distributors, Orange, CT

LETTER OF TRANSMITTAL

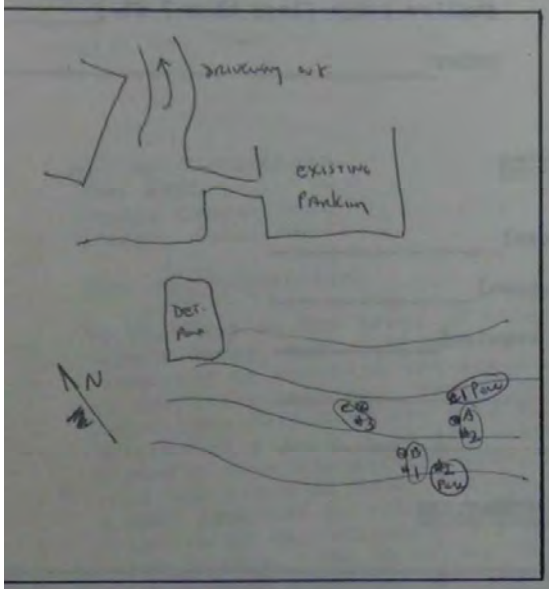
DATE 7/6/87 NO. Land Dist.

INVESTIGATION FOR SEWAGE DISPOSAL SYSTEM

ation: 55 MARSH HILL ROAD DeChello Distributors - Retail Bottle Building Date: 9/26/84

er: DeChello Dist. Tests conducted by: Larry Edwards / Arc

Diagram: Slopes, water courses, ledge outcrops, storm & footing drains, water supply locations.



Percolation Tests

Hole #1		Hole #2	
Depth: 37"		Depth: 26"	
Presoak Time: 2 hours		Presoak Time: 2 hours	
Time	Reading	Time	REading
0	1¼	0	10"
10	1⅞	10	11½"
20	2¼	20	12¾"
30	2¾	30	13½"
40	3"	40	14"
50	3¼"	50	14½

servation Pits: Depth, ledge at, ground water at, mottling at:

PIT A

0-18" organic top soil
18"-30" rusty mottled thick fine sand + silt
30"-4½' reddish brown compact silt/stones
4½'-10' mod. compact coarse to fine sand/silt
water at 9'
mottling at 18"

PIT B

0-8" top soil
8"-16" orange brown fine sandy loam
16"-24" mottled fine silt
24"-5' thick mottled compact silts
5'-7' mod. compact coarse to fine sand + silt

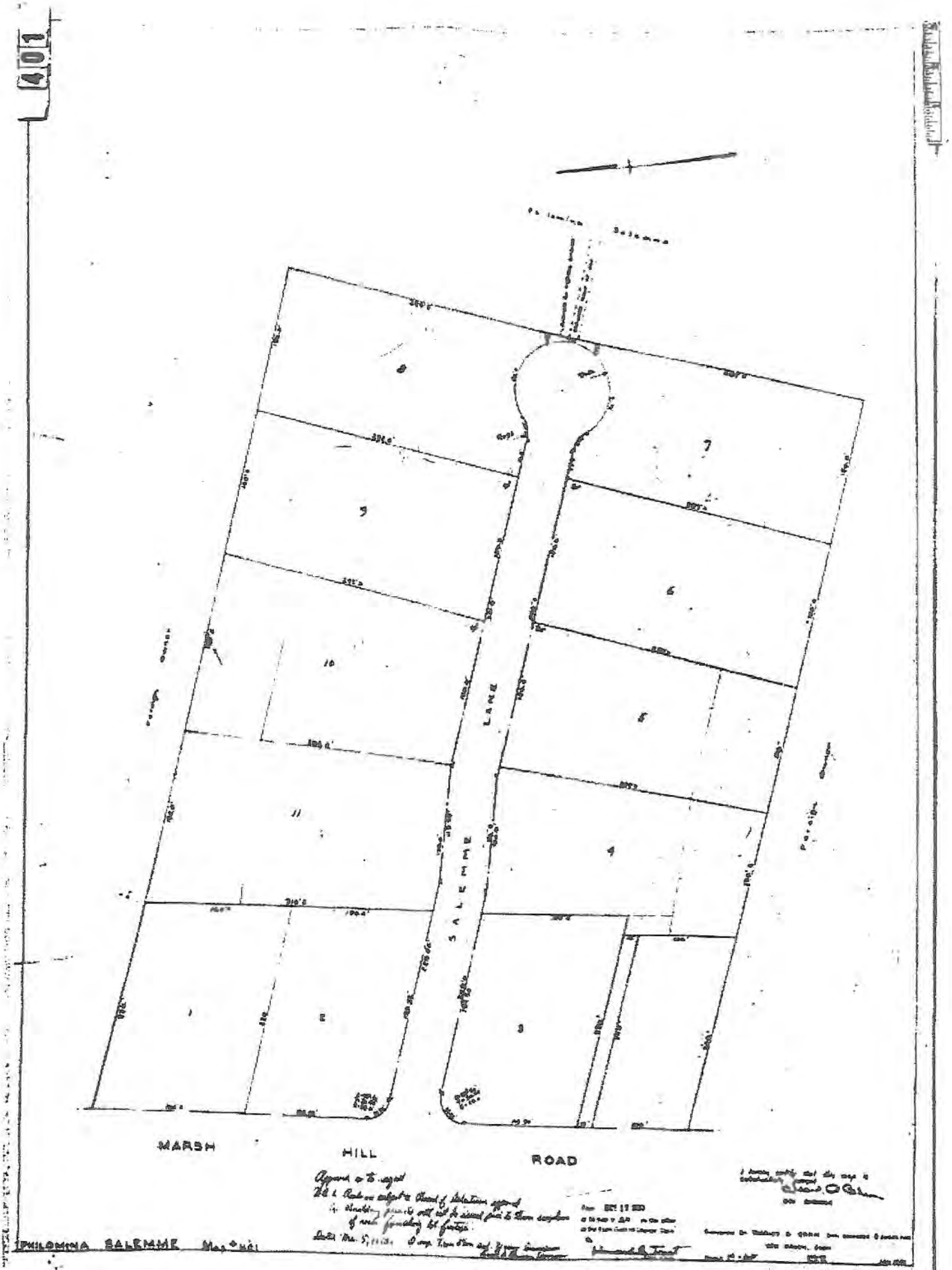
PIT C

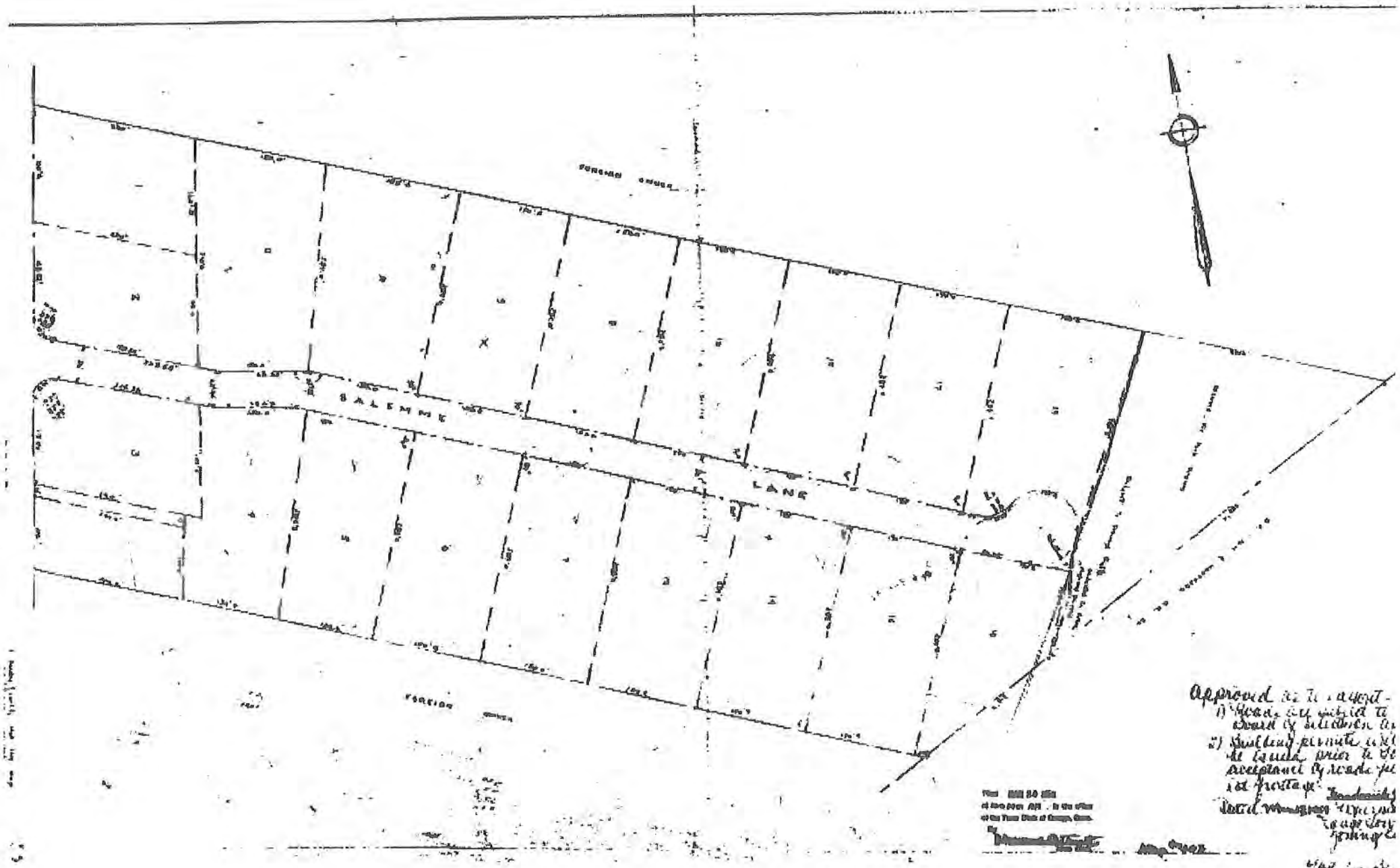
0-8" top soil
8"-18" orange brown fine sandy loam
18"-44" mottled very compact fine sand/silt
44"-6½" mod. compact sand + silt
6½'-8' coarse sand + silt
roots to 18" / mottling at 18"

PIT D

Steel pipe in each hole to monitor water table in spring

emarks: Suitability of land for subsurface sewage disposal system.


401
SALEMME LANE
MARSH HILL ROAD
PHILOMINA SALEMME


SALEMME
LANE


ORANGE
CONNECTICUT
MAP
B-1c
B-1d
C-1e
B-2
B-3
C - UPLAND SOILS - OVER COMPACT
C-1a
C-1b
C-1d
C-2
D - UPLAND SOILS - ROCKY AND
D-1
D-2
FLOODPLAIN SOILS
E-2

A - UPLAND SOILS - OVER SANDS AND GRAVELS

A-1b — Mostly excessively drained soils with slopes less than 15 percent but including some well drained soils.

A-1d — Mostly well drained soils with slopes less than 8 percent but including some excessively drained and moderately well drained soils.

A-1e — Mostly well drained soils with slopes between 8 and 15 percent but including some excessively drained and moderately well drained soils.

A-2 — Mostly moderately well drained soils but including some poorly drained and some floodplain soils.

A-3 — Mostly poorly and very poorly drained soils but including some organic and some floodplain soils.

B - UPLAND SOILS - OVER FRIABLE TO FIRM GLACIAL TILL

B-1a — Mostly well drained non-stony and stony soils with slopes less than 8 percent but including some moderately well drained soils and some well drained soils over very slowly permeable till.

B-1b — Mostly well drained non-stony and stony soils with slopes between 8 and 15 percent but including some moderately well drained soils.

B-1c — Mostly well drained very stony soils with slopes less than 15 percent but including some well drained non-stony and stony soils.

B-1d — Mostly well drained non-stony and stony soils with slopes more than 15 percent but including some well drained very stony soils.

B-1e — Mostly well drained very stony soils with slopes more than 15 percent but including some rocky and very rocky soils.

B-2 — Mostly moderately well drained soils over friable to firm glacial till but including some well drained soils.

B-3 — Mostly poorly and very poorly drained soils but including some organic soils.

C - UPLAND SOILS - OVER COMPACT GLACIAL TILL

C-1a — Mostly well drained non-stony and stony soils with slopes less than 8 percent but including some moderately well drained soils over very slowly permeable till.

C-1b — Mostly well drained non-stony and stony soils with slopes between 8 and 15 percent but including some moderately well drained soils over very slowly permeable till.

C-1d — Mostly well drained non-stony and stony soils with slopes more than 15 percent but including some non-stony and stony soils over permeable till.

C-2 — Mostly moderately well drained non-stony, stony and very stony soils with slopes less than 15 percent but including some moderately well drained soils over permeable till.

D - UPLAND SOILS - ROCKY AND SHALLOW TO BEDROCK

D-1 — Mostly rocky and very rocky soils with slopes less than 15 percent but including some well drained soils over permeable till.

D-2 — Mostly rocky and very rocky soils with slopes more than 15 percent, extremely rocky soils and Rockland but including some well drained soils over permeable till.

FLOODPLAIN SOILS

F-2 — Mostly moderately well drained soils but including some well drained soils and some poorly drained soils.

F-3 — Mostly poorly and very poorly drained soils but including some moderately well drained and some organic soils.

MISCELLANEOUS

W — Urban land

State of California } ss.
County of SAN FRANCISCO }

On this 27th day of OCT.
in the year one thousand nine hundred and 73, before me,
William O. Dark
a Notary Public, State of California, duly commissioned and sworn, personally appeared
Donald C. Salemme

known to me to be the person described in and whose name subscribed to the within instrument, and acknowledged to me that HE executed the same.

In Witness Whereof, I have hereunto set my hand and affixed my official seal in the County of SAN FRANCISCO the day and year in this certificate first above written.

William O. Dark WILLIAM O. DARK
Notary Public, State of California.
My commission expires

OFFICIAL SEAL
WILLIAM O. DARK
NOTARY PUBLIC-CALIFORNIA
SAN FRANCISCO COUNTY
My Commission Expires May 27, 1975

Received for Record 6/10/81
at 11 h 4 m A M. and recorded by
Jean E. Lavery Town Clerk

VOL. 277 PAGE 690

CERTIFICATE OF DEVISE, DESCENT OR DISTRIBUTION

PRC-58 NEW 7-74 [C.G.S. Sec. 45-286]

STATE OF CONNECTICUT
COURT OF PROBATE

[Note: File certificate with town clerk where real property is situated.]

FOR COURT USE ONLY

DATE:

ORIGINAL TO:

Court of Probate, District of New Haven District No. 093

ESTATE OF
Philomena Salemme aka Filomena Salemme
LATE OF New Haven , DECEASED

DATE OF DEATH
February 20,1963

THIS CERTIFIES that as appears from the records of this Court said deceased died on the date above written and his estate has been duly settled in this Court; and there is distributed, set out or divided or descends:

[Give name, place of residence and share of each distributee]

TO Frank Salemme, Ralph Salemme, Sylvester Salemme Joseph Salemme, Charles Salemme and Anthony R. Salemme, The Following described Real Estate consisting of a right of way known as "SALEMME LANE", and more particularly described as follows:

All that certain piece or parcel of land with all the improvements thereon situated in the Town of Orange, County of New Haven and State of Connecticut, Known as"Salemme Lane" and as shown on a survey entitled "Property of Philomena Salemme" surveyed by Charles A. Cahn, Civil Engineer and Surveyer dated December, 1953, Revised March 1954 Scale one (1) inch equals 60 feet and filed with the Orange Town Clerk's Office as Map #407.

Reference to the records of said Probate Court being hereby had for a more particular description.

SEAL

IN TESTIMONY WHEREOF, on this 9th day of June , 19 81 , I have hereunto set my hand and affixed the SEAL of this Court to this certificate.

Received for Record 6/10/81 Elsie M. DelGrego , Clerk

at 11 h 47m A.M. and recorded by Elsie M. DelGrego

June E. Larson Asst Town Clerk

CERTIFICATE OF DEVISE, DESCENT OR DISTRIBUTION

Recorded Probate Records
Vol.
Page

Ass't. Clerk

KNOW YE THAT, We, JOSEPH SALEMME, of the Town of New Haven, ANTHONY F. INZERO, PASQUALE J. INZERO, ANTHONY INZERO, JR., RICHARD P. INZERO and RAYMOND T. INZERO, being the heirs of MARY INZERO, all of the Town of Hamden, RALPH SALEMME, of the Town of Orange, FRANK SALEMME, of the Town of Orange, SYLVESTER SALEMME, of the Town of Orange, ANTHONY SALEMME a/k/a ANTHONY R. SALEMME, of the Town of Orange, CHARLES SALEMME, of the Town of North Haven, ROSE COLATOSTI, of the Town of Hamden, JENNIE DeFELICE, also known as MARIE GIOVANNA DeFELICE, of the Town of Hamden, ANNA NACCA, of the Town of West Haven, ELIZABETH SMITH, of the Town of Milford, all of the County of New Haven and State of Connecticut, and DONALD SALEMME a/k/a DONALD C. SALEMME, of the Town of San Francisco County of San Francisco and State of California acting herein by Marion G. Salemme of the Town of New Haven, County of New Haven and State of Connecticut, and ARNOLD SMITH, JR. a/k/a ARNOLD W. SMITH, JR., of the Town of North Kingstown, County of and State of Rhode Island, and EILEEN GAITES, of Travis Air Force Base in the State of California, and MARIE GLYNN, of ~~Hamden~~, Connecticut, herein referred to as GRANTORS, for the consideration of ONE ($1.00) DOLLAR and other valuable consideration, received to their full satisfaction of DiCHELLO DISTRIBUTORS, INC., a corporation organized under and pursuant to the laws of the State of Connecticut, with a principal place of business in the Town of Orange, County of New Haven and STate of Connecticut, do give, grant, bargain, sell and confirm unto the said DiCHELLO DISTRIBUTORS, INC., and unto its successors and assigns forever

All those three (3) certain pieces or parcels of land, with the buildings and all other improvements thereon, situated in the Town of Orange, County of New Haven and State of Connecticut, all as shown on a certain map entitled, "Property of Philomena Salemme" surveyed by Charles A. Cahn, Civil Engineer and Surveyor, dated December, 1953, Revised March, 1954, Scale 1" = 60' and filed with the Orange Town Clerk's Office as Map No. 407, said premises being bounded and described as follows:

$485.19 Conveyance Tax received
Irene E. Larsen, Asst
Town Clerk of Orange

THE FIRST PIECE

Being Lots No. 8, 13, 15, 17, 19, 18, 16, 14, 12, 7 and 6, all of said lots as shown on the above map.

THE SECOND PARCEL

Known as the roadway called "Salemme Lane" and as shown on a survey entitled, "Property of Philomena Salemme" surveyed by Charles A. Cahn, Civil Engineer and Surveyor, dated December, 1953, Revised March, 1954, Scale 1" = 60' and filed with the Orange Town Clerk's Office as Map No. 407. Said premises being bounded and described as follows:

WEST:	by Salemme Lane;
NORTH:	by Lots No. 8, 13, 15, 17, and 19, as shown on said map;
EAST:	by land shown on said map as being dedicated for "Reserved for Park Purposes";
SOUTH:	by Lots No. 18, 16, 14, 12, 7 and a 10 foot (more or less) portion of Lot No. 6 as shown on said map.

Being all of the roadway known as Salemme Lane shown as being transferred to DiChello Distributors, Inc. on a certain survey entitled, "Map of Property Prepared for DiChello Distributors, Inc., Orange, Connecticut, Scale 1" = 60', October 27, 1980 by Shaughnessy and Plain Land Surveyors - Fairfield" said map to be filed with the Orange Town Clerk's Office.

THE THIRD PARCEL

Designated as "Reserved for Park Purposes" on a certain survey entitled, "Property of Philomena Salemme" surveyed by Charles A. Cahn, Civil Engineer and Land Surveyor, dated December, 1953, Revised March, 1954, Scale 1" = 60' and filed with the Orange Town Clerk's Office as Map No. 407. Said premises being bounded and described as follows:

NORTH:	by land of owners unknown, 332 feet, more or less;
SOUTH EAST:	by land now or formerly of the New York, New Haven and Hartford Railroad Company, 587 feet;
WEST:	by Lot No. 18 on said map, 162 feet, more or less;
WEST AGAIN:	by Lot No. 19 on said map, 285 feet, more or less.

Together with a right of way for all purposes whatsoever across "Salemme Lane" as shown on said map.

Together said premises are more particularly bounded and described as follows:

All that certain piece or parcel of land, with the buildings and all other improvements thereon, situated in the Town of Orange, County of New Haven and State of Connecticut, bounded and described as follows:

Beginning at a point in the most southerly extremity of the easterly boundary line of Lot No. 5 as shown on the map in part entitled "Dichello Distributors, Inc.", said point being 464.99 feet easterly of the easterly street line of Marsh Hill Road; thence, running North 4° 19' 45" East along Lot No. 5 on said Salemme map, 289.10 feet; thence, running South 85° 40' 15" East along the southerly boundary line of "Salemme Lane", 138.94 feet; thence, running North 4° 19' 45" East, in part along the easterly boundary line of "Salemme Lane" and in part along the easterly boundary line of Lot No. 9 as shown on the Salemme map, in all, 329.31 feet; thence, running South 88° 36' 52" East along land now or formerly of Orange Properties, a distance of 28.02 feet; thence, running South 85° 52' 23" East along land now or formerly of Orange Properties, a distance of 603.20 feet; thence, running South 85° 45' 17" East along land now or formerly of Orange Properties, a distance of 308.57 feet; thence, running South 87° 09' 27" East, along land now or formerly of Orange Properties, a distance of 195.77 feet; thence, running South 43° 58' 36"W along land now or formerly of the Penn Central Railroad Company, a distance of 810.60 feet; thence, running North 85° 55' 28" West, along land now or formerly of Dichello Distributors, Inc., a distance of 757.19 feet to the point and place of beginning.

Said premises are shown as comprising 581,906 square feet on a certain map entitled, "Map of Property Prepared for Dichello Distributors, Inc. Orange, Connecticut Scale 1" = 60' October 27, 1980 by Shaughnessy and Plain Land Surveyors - Fairfield" said map to be filed on the Orange Town Clerk's Office. SAID MAP BEARS FILE # 1007

The above grantors warranty to only those portions or parcels of land owned by them and not to parcels owned by other Grantors.

TO HAVE AND TO HOLD the premises hereby conveyed with the appurtenances thereof, unto the said Grantee, its successors and assigns forever, to them and their own proper use and behoof.

AND ALSO, the Grantors do for themselves, their heirs, successors and assigns, covenant with the Grantee, its successors and assigns, that at and until the ensealing of these presents, the Grantors are well seized of the premises as a good indefeasible estate in FEE SIMPLE; have good right to bargain and sell the same in manner and form as is above written; and that the same is free from all encumbrances whatsoever, except as above stated.

AND FURTHERMORE, the Grantors do by these presents, bind themselves and their heirs and assigns forever, to WARRANT and DEFEND the premises hereby conveyed to the Grantee, its successors and assigns, against all claims and demands whatsoever, except as above stated.

IN ALL REFERENCES herein to any parties, persons, entities or corporations, the use of any particular gender or the plural or singular number is intended to include the appropriate gender or number as the text of the within instrument may require.

IN WITNESS WHEREOF, the Grantors have hereunto set their respective hands and seals, this 8th day of June, 1981.

SIGNED, SEALED AND DELIVERED IN THE PRESENCE OF:

Joseph H. Pellegrino
William H Gaites III

as to: JS, AS, CS, RC, JDF, AN, ES, EG

Joseph Salemme — JOSEPH SALEMME
Anthony F Inzero — ANTHONY F INZERO
Ralph Salemme — RALPH SALEMME
Frank Salemme — FRANK SALEMME

Frank M. Morgillo
Joseph H. Pellegrino

as to: RS, FS, SS

Sylvester Salemme — SYLVESTER SALEMME
Anthony R. Salemme — ANTHONY SALEMME a/k/a ANTHONY R. SALEMME
Charles Salemme — CHARLES SALEMME
Rose Colatosti — ROSE COLATOSTI
Jennie DeFelice — JENNIE DeFELICE a/k/a MARIE GIOVANNA DeFELICE
Anna Nacca — ANNA NACCA

Veronica Blackie
Joseph H. Pellegrino

As to: MGS Atty for DS

Elizabeth Smith — ELIZABETH SMITH
Marion G Salemme attorney in fact for Rosario Salemme — DONALD SALEMME a/k/a DONALD C. SALEMME

Frank M. Morgillo
Joseph H. Pellegrino

As to: AS, Jr.

Arnold W. Smith Jr. — ARNOLD SMITH, JR. a/k/a ARNOLD W. SMITH, JR.
Eileen Gaites — EILEEN GAITES
Marie Glynn — MARIE GLYNN

Joseph H. Pellegrino
George H. Pellegrino

SS-4-MG

PELLEGRINO
PELLEGRINO & PELLEGRINO
PROFESSIONAL CORPORATION

Frank M. Morgillo

Joseph H. Pellegrino

PASQUALE J. INZERO

ANTHONY INZERO, JR.

RICHARD P. INZERO

RAYMOND T. INZERO

STATE OF CONNECTICUT)
) ss: New Haven June 8, 1981
COUNTY OF NEW HAVEN)

Personally appeared, JOSEPH SALEMME, ANTHONY SALEMME a/k/a ANTHONY R. SALEMME, CHARLES SALEMME, ROSE COLATOSTI, JENNIE DeFELICE, ANNA NACCA, ELIZABETH SMITH and MARION G. SALEMME, Attorney in Fact for DONALD SALEMME a/k/a DONALD C. SALEMME and EILEEN GAITES, signers and sealers of the foregoing instrument, and acknowledged the same to be their free act and deed before me.

JOSEPH H. PELLEGRINO
COMMISSIONER OF SUPERIOR COURT

STATE OF CONNECTICUT)
) ss: Mystic June 8, 1981
COUNTY OF NEW LONDON)

Personally appeared, ARNOLD W. SMITH, JR., signer and sealer of the foregoing instrument, and acknowledged the same to be his free act and deed before me.

JOSEPH H. PELLEGRINO
COMMISSIONER OF SUPERIOR COURT

STATE OF CONNECTICUT)
) ss: Hamden June 9, 1981
COUNTY OF NEW HAVEN)

Personally appeared, ANTHONY F. INZERO, PASQUALE J. INZERO, ANTHONY P. INZERO, JR., RICHARD P. INZERO and RAYMOND T. INZERO, signers and sealers of the foregoing instrument, and acknowledged the same to be their free act and deed before me.

FRANK M. MORGILLO
COMMISSIONER OF SUPERIOR COURT

STATE OF CONNECTICUT)
) ss: New Haven June 9, 1981
COUNTY OF NEW HAVEN)

Personally appeared, SYLVESTER SALEMME, signer and sealer of the foregoing instrument, and acknowledged the same to be his free act and deed, before me.

FRANK M. MORGILLO
COMMISSIONER OF SUPERIOR COURT

STATE OF CONNECTICUT)
) ss: New Haven June 10, 1981
COUNTY OF NEW HAVEN)

Personally appeared, RALPH SALEMME and FRANK SALEMME, signers and sealers of the foregoing instrument, and acknowledged the same to be their free act and deed, before me.

FRANK M. MORGILLO
COMMISSIONER OF SUPERIOR COURT

STATE OF CONNECTICUT)
) ss: Hamden June 10, 1981
COUNTY OF NEW HAVEN)

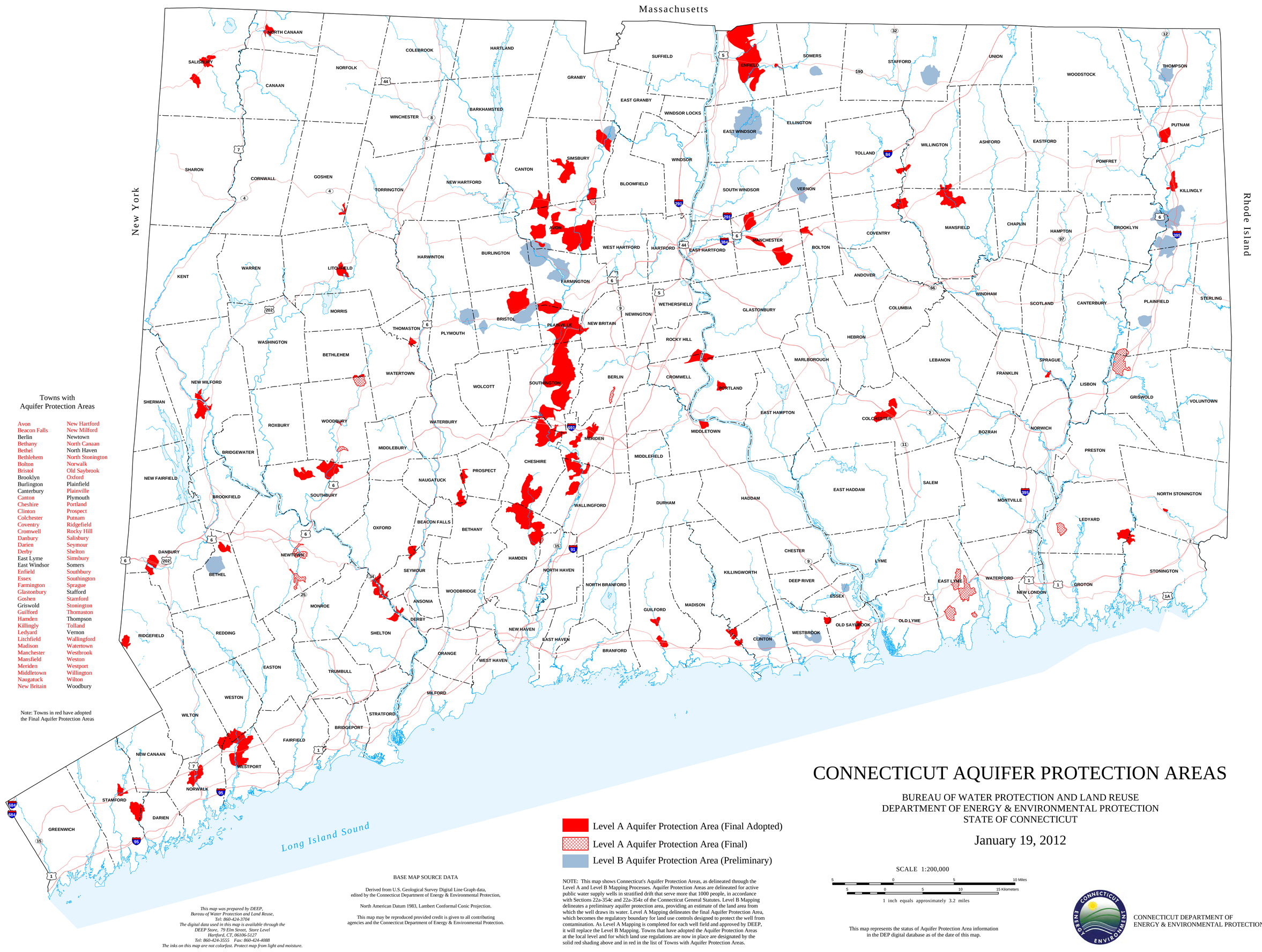
Personally appeared, MARIE GLYNN, signer and sealer of the foregoing instrument, and acknowledged the same to be her free act and deed, before me.

JOSEPH H. PELLEGRINO
COMMISSIONER OF SUPERIOR COURT

Received for Record 6/10/81
at 11 h 44 m A.M. and recorded by
Jane E. Larson, Asst. Town Clerk

APPENDIX H

State Records



Towns with
Aquifer Protection Areas

Avon	New Hartford
Beacon Falls	New Milford
Berlin	Newtown
Bethany	North Canaan
Bethel	North Haven
Bethlehem	North Stonington
Bolton	Norwalk
Bristol	Old Saybrook
Brooklyn	Oxford
Burlington	Plainfield
Canterbury	Plainville
Canton	Plymouth
Cheshire	Portland
Clinton	Prospect
Colchester	Putnam
Coventry	Ridgefield
Cromwell	Rocky Hill
Danbury	Salisbury
Darien	Seymour
Derby	Shelton
East Lyme	Simsbury
East Windsor	Somers
Enfield	Southbury
Essex	Southington
Farmington	Sprague
Glastonbury	Stafford
Goshen	Stamford
Griswold	Stonington
Guilford	Thomaston
Hamden	Thompson
Killingly	Tolland
Ledyard	Vernon
Litchfield	Wallingford
Madison	Watertown
Manchester	Westbrook
Mansfield	Weston
Meriden	Westport
Middletown	Willington
Naugatuck	Wilton
New Britain	Woodbury

Note: Towns in red have adopted
the Final Aquifer Protection Areas

This map was prepared by DEEP,
Bureau of Water Protection and Land Reuse,
Tel: 860-424-3704
The digital data used in this map is available through the
DEEP Store, 79 Elm Street, Store Level
Hartford, CT, 06106-5127
Tel: 860-424-3555 Fax: 860-424-4088
The inks on this map are not colorfast. Protect map from light and moisture.

Level A Aquifer Protection Area (Final Adopted)

Level A Aquifer Protection Area (Final)

Level B Aquifer Protection Area (Preliminary)

BASE MAP SOURCE DATA

Derived from U.S. Geological Survey Digital Line Graph data,
edited by the Connecticut Department of Energy & Environmental Protection,

North American Datum 1983, Lambert Conformal Conic Projection.

NOTE: This map shows Connecticut's Aquifer Protection Areas, as delineated through the Level A and Level B Mapping Processes. Aquifer Protection Areas are delineated for active public water supply wells in stratified drift that serve more that 1000 people, in accordance with Sections 22a-354c and 22a-354z of the Connecticut General Statutes. Level B Mapping delineates a preliminary aquifer protection area, providing an estimate of the land area from which the well draws its water. Level A Mapping delineates the final Aquifer Protection Area, which becomes the regulatory boundary for land use controls designed to protect the well from contamination. As Level A Mapping is completed for each well field and approved by DEEP, it will replace the Level B Mapping. Towns that have adopted the Aquifer Protection Areas at the local level and for which land use regulations are now in place are designated by the solid red shading above and in red in the list of Towns with Aquifer Protection Areas.

CONNECTICUT AQUIFER PROTECTION AREAS

BUREAU OF WATER PROTECTION AND LAND REUSE
DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION
STATE OF CONNECTICUT

January 19, 2012

SCALE 1:200,000

5 0 5 10 Miles
5 0 5 10 15 Kilometers

1 inch equals approximately 3.2 miles

This map represents the status of Aquifer Protection Area information
in the DEP digital database as of the date of this map.

CONNECTICUT DEPARTMENT OF
ENERGY & ENVIRONMENTAL PROTECTION

Natural Diversity Data Base Areas

ORANGE, CT

June 2012

State and Federal Listed Species & Significant Natural Communities

Town Boundary

NOTE: This map shows general locations of State and Federal Listed Species and Significant Natural Communities. Information on listed species is collected and compiled by the Natural Diversity Data Base (NDDB) from a number of data sources . Exact locations of species have been buffered to produce the general locations. Exact locations of species and communities occur somewhere in the shaded areas, not necessarily in the center.

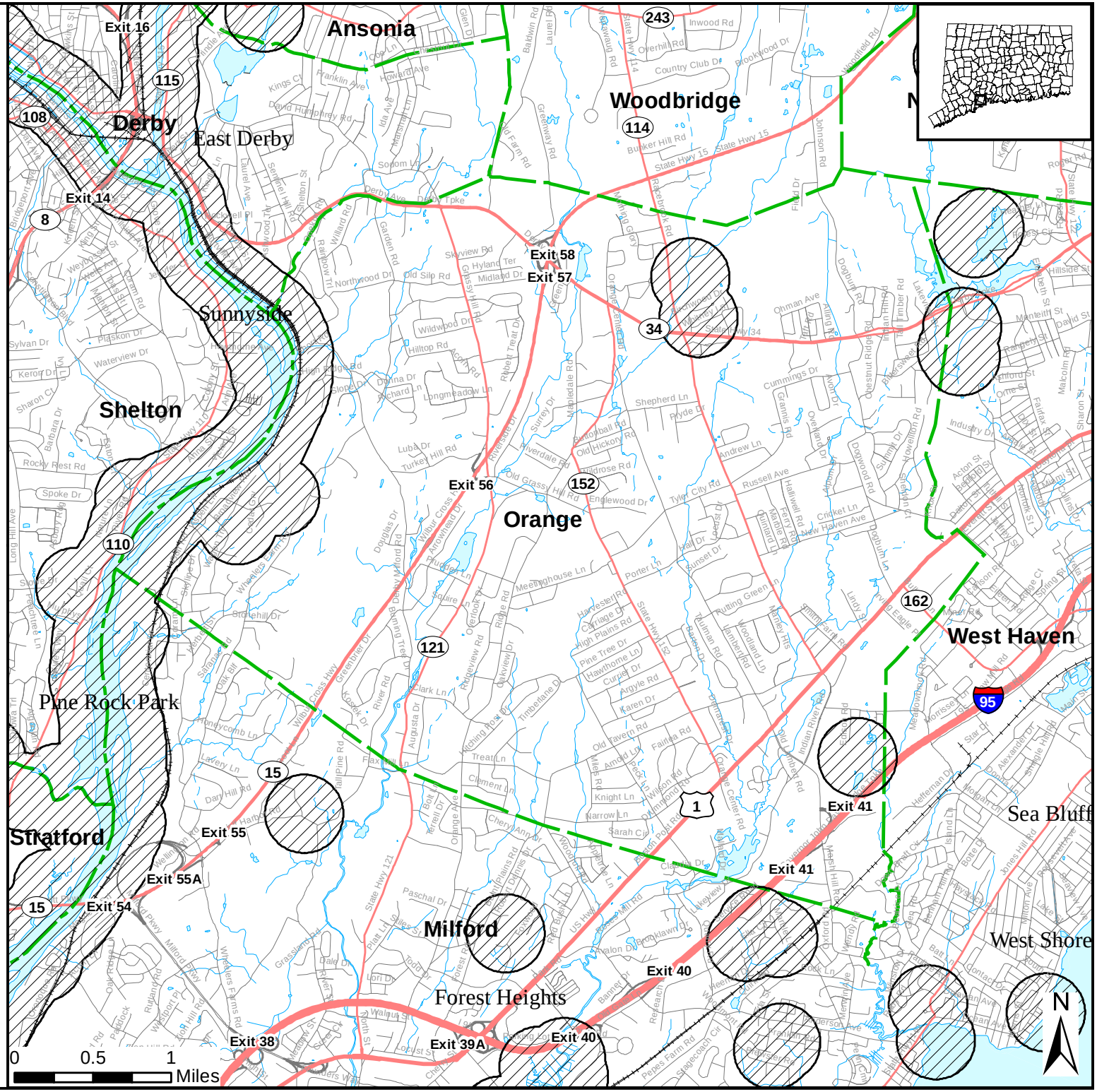
This map is intended for use as a preliminary screening tool for conducting a Natural Diversity Data Base Review Request. To use the map, locate the project boundaries and any additional affected areas. If the project is within a shaded area; or over-lapping a lake, pond or wetland that has shading; or upstream or downstream (by less than 1/2 mile) from a shaded area, the project may have a potential conflict with a listed species. For more information, complete a Request for Natural Diversity Data Base State Listed Species Review form (DEP-APP-007), and submit it to the NDDB along with the required maps and information. More detailed instructions are provided with the request form on our website.

www.ct.gov/deep/nddbrequest

This file has PDF Layers. Look for the Layers tab on the left. Expand the layers and use the "eye" icons to change visibility.

QUESTIONS: Department of Energy and Environmental Protection (DEEP)
79 Elm St., Hartford CT 06106
Phone (860) 424-3011

Connecticut Department of Energy & Environmental Protection
Bureau of Natural Resources
Wildlife Division



Q3 Flood Zone Data
Orange, CT

Legend

- 100 Year Flood Zone
- 100 Year Flood Zone, COBRA
- 500 Year Flood Zone
- 500 Year Flood Zone, COBRA
- Floodway in Zone AE
- Other Flood Areas

Explanation

The Q3 Flood Data are derived from Flood Insurance Rate Maps, (FIRMs). They offer floodplain management, mitigation and provide insurance information for the National Flood Insurance Program (NFIP). 100 Year Flood Zones indicate that there is 1 out of 100 chances that the area will be flooded every year, while 500 Year Flood Zones indicate that there is 1 out of 500 chances that the area will be flooded every year. NOTE: The Q3 Flood Zone Data is the best flood zone mapping data available statewide. However, it is dated and may not represent current flood zone mapping. It is available for all towns except Windham. More accurate flood zone mapping data may be available for this town from FEMA. Refer to the National Flood Hazard Layer (NFHL) Database, which supercedes the Q3 Flood Data. The NFHL Database is not available for every county.

Data Sources

Q3 FLOOD DATA- Provided by the Federal Emergency Management Agency (FEMA).

BASE MAP DATA - Based on data originally from 1:24,000-scale USGS 7.5 minute topographic quadrangle maps published between 1969 and 1992. It includes political boundaries and important geographic places and names. Streets and street names are from Tele Atlas copyrighted data. Base map information is neither current nor complete.

MAPS AND DIGITAL DATA - Visit the CT ECO website for this map and a variety of others. Visit the NRCS soils website for the soils data shown on this map. Visit the CT DEP website to download the base map digital spatial data shown on this map.

0 0.05 0.1 0.2 0.3 0.4 Miles
0 405 810 1,620 2,430 3,240 Feet
0 0.05 0.1 0.2 0.3 0.4 Kilometers

MAP LOCATION

State Plane Coordinate System of 1983, Zone 3526
Lambert Conformal Conic Projection
North American Datum of 1983

STATE OF CONNECTICUT
DEPARTMENT OF
ENVIRONMENTAL PROTECTION
79 Elm Street
Hartford, CT 06106-5127

Map prepared by CT DEP
September 2010
Map is not colorfast
Protect from light and moisture

QUATERNARY GEOLOGY
ORANGE, CONNECTICUT

LIST OF MAP UNITS

POSTGLACIAL DEPOSITS - late Holocene, late Wisconsinan
- Artificial Fill
- Coastal Beach and Dune Deposits
- Tidal Marsh Deposits
- Floodplain Alluvium
- Swamp Deposits
- Talus

EARLY POSTGLACIAL DEPOSITS - early Holocene, late Wisconsinan
- Stream Terrace Deposits
- Inland Dune Deposits

GLACIAL MELTWATER DEPOSITS - late Wisconsinan
- Undifferentiated Meltwater Deposits
- Deposits of Major Ice-Dammed Lakes
- Deposits of Major Sediment-Dammed Lakes
- Deposits of Related Series of Major Ice-Dammed Ponds
- Deposits of Related Series of Major Sediment-Dammed Ponds
- Deposits of Proximal Meltwater Streams
- Deposits of Distal Meltwater Streams

GLACIAL ICE-LAID DEPOSITS - late Wisconsinan, Illinoian
- Thin Till Deposits
- Thick Till Deposits
- End Moraine Deposits

Elevation Contours
- 100 Ft. Interval
- 50 Ft. Interval

Explanation of Map Symbols
- Ice Margin Position
- Inferred Ice Margin Position
- Esker
- Glacial Striation or Groove
- Drumlin Axis and Center
- Meltwater Channel
- Glacial Lake Spillway
- Inferred Glacial Spillway
- Location of Lower Till
- Two-Till Outcrop
- Deltaic Bedding Locality
- Weathered Bedrock Outcrop
- Radiocarbon-Dated Locality

Explanation of Map Symbols
- Area of glaciofluvial deposits grading to glacial lake
- Area of lake-bottom sediments
- Drainage Divide -- Boundary between major geologic basins.
- Drainage Divide -- Boundary within major geologic basin dividing it into north-draining and south-draining regions

EXPLANATION

Quaternary Geology is 1:24,000-scale data that illustrates the geologic features formed in Connecticut during the Quaternary Period, which spans from 2.588 ± 0.005 million years ago to the present and includes the Pleistocene (glacial) and Holocene (postglacial) Epochs. The Quaternary Period has been a time of development of many details of the Connecticut landscape and all surficial deposits. At least twice in the last Pleistocene, continental ice sheets swept across Connecticut from the north. Their effects are of pervasive importance to present-day occupants of the land.

The Quaternary Geology information illustrates the geologic history and the distribution of depositional environments during the emplacement of unconsolidated glacial and postglacial surficial deposits and the landforms resulting from those events in Connecticut. These deposits range from a few feet to several hundred feet in thickness, overlie the bedrock surface and underlie the organic soil layer of Connecticut. Quaternary Geology is mapped without regard for any organic soil layer that may overly the deposit.

The Connecticut Quaternary Geology information was initially compiled at 1:24,000 scale (1 inch = 2,000 feet) then recompiled for a statewide 1:125,000-scale map. Quaternary Geology Map of Connecticut and Long Island Sound Basin. A companion map, the Surficial Materials Map of Connecticut, emphasizes the surface and subsurface texture (grain-size distribution) of these materials. The quaternary geology and surficial material features portrayed on these two maps are very closely related; each contributes to the interpretation of the other.

Most of Connecticut's surficial material is glacially derived, and can be divided into two broad depositional categories: Glacial Ice-Laid Deposits (nonsorted and generally nonstratified thin till, thick till, and end moraine) which are generally exposed in the uplands, and are the most widespread surficial deposit in Connecticut; and Glacial Meltwater Deposits (sorted and stratified deltaic, river bottom, lake bottom, and inland dune deposits) which are most commonly concentrated in valleys and lowlands.

Particular attention has been paid to understanding the distribution and characteristics of stratified meltwater deposits because they have historically influenced development patterns and groundwater availability throughout the state. Within the meltwater category, six classes of deposits have been recognized based on the conditions that prevailed during their emplacement. Four of the seven indicate whether previously deposited sediment, or the glacier itself, impounded the lake or pond where emplacement occurred (see the meltwater deposit discussion below). Meltwater stream deposits are differentiated based on their distance (proximal or distal) from the ice sheet when they were emplaced, and a separate meltwater map unit is reserved for deposits of undetermined provenance (uncorrelated).

Postglacial Deposits were emplaced by various processes after the melt back of the last ice sheet. Some of these deposits were emplaced early in post-glacial time and have been grouped together as Early Postglacial Deposits. Later deposits, resulting from processes that are still active (or are manmade), have been grouped together as Postglacial Deposits.

Glacial Ice-Laid Deposits (nonsorted and generally nonstratified thin till, thick till, and end moraine); Glacial Meltwater Deposits (sorted and stratified deltaic, river bottom, lake bottom, and inland dune deposits); and Postglacial Deposits (flood-plain alluvium and swamp deposits, but also including stream-terrace, talus, dune, tidal-marsh, beach, channel fill, marine delta deposits, and artificial fill) that were emplaced in comparable topographic and depositional settings, and therefore share similar characteristics, are categorized and color coded in the Legend Description. Related Map Elements include eskers, drumlin axes, ice-margin positions, scarps, drainage divides, glacial lake spillways, meltwater channels, striations/grooves, dated sample locations, glaciofluvial and lake-bottom facies as overlays on glacial lake map units and various types of exposures.

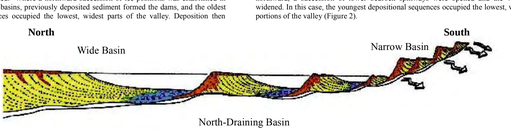


Figure 1: A morphosequence is a body of meltwater deposits composed of a continuum of land forms, grading from ice-contact forms (eskers, kames) to non-ice-contact forms (flat valley terrace, delta plains), that were deposited simultaneously at and beyond the margin of a glacier, graded to a specific base level. Grain-size decreases from coarse gravel at ice-contact heads, through sand and gravel and sand beneath delta plains and foreset slopes to silt and clay in lake-bottom deposits (after Stone and others, 2005).

Deposition of the morphosequences that progressively filled bedrock valleys and lowlands as the last glacier melted northward required the presence of impounded lakes and ponds. The nature of the impoundments and the resulting distribution of the meltwater deposits on the landscape were controlled by the topography of the area being deglaciated. Where a northward succession of ice positions was established in south-draining basins, previously deposited sediment formed the dams, and the oldest morphosequences occupied the lowest, widest parts of the valley. Deposition then progressed up valley, with the youngest depositional sequences occupying higher, narrower portions of the valley (Figure 2). In north-draining systems the opposite is true. The ice itself was the impoundment, and the oldest morphosequences were emplaced in the higher, narrower portions of the basin. As the ice front retreated northward, a succession of lower bedrock spillways were opened and the valleys widened. In this case, the youngest depositional sequences occupied the lowest, widest portions of the valley (Figure 2).

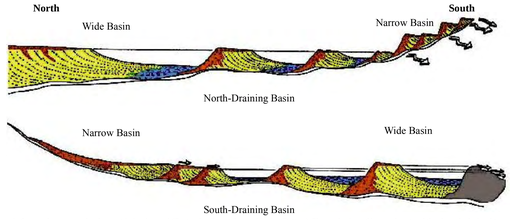


Figure 2: Scenario for morphosequence development in ice-dammed (Top) and sediment-dammed basins (Bottom). The mechanism of impoundment and the chronological and topographic positions of the deposits are related to the orientation of the basins relative to the direction of ice retreat. These relationships are reflected in the organization and color coding of the List of Map Units (after Stone and others, 2005).

Postglacial Deposits (flood-plain alluvium and swamp deposits, but also including stream-terrace, talus, dune, tidal-marsh, beach, channel fill, marine delta deposits, and artificial fill) are less widely distributed and are typically thinner than the glacial deposits that they overlie. The oldest postglacial deposits occur in Long Island Sound and in southeastern Connecticut because these areas were deglaciated first. Many of the depositional processes that were initiated as postglacial conditions began to prevail are still operative today.

Postglacial deposits provide locally important ecological, agricultural, commercial, and recreational resources. Talus, a result of rockfall at the base of steep bedrock (primarily trap rock) cliffs, and inland dune deposits, that developed as winds swept across newly exposed glacial lake beds, provide ecological niches that are atypical for Connecticut. Beach, dune, marsh and swamp deposits are key ecological elements of coastal and poorly drained inland settings. Deposits of floodplain alluvium are largely composed of sands, gravels and silts that have been reworked from glacial deposits and mixed with organic matter which increases their fertility. Despite their flood-prone nature, low, flat, fertile floodplains have historically been attractive for agricultural uses and development related to water-dependant commerce.

DATA SOURCES

QUATERNARY GEOLOGY DATA – Quaternary Geology shown on this map are from the Quaternary Geology Poly, Point Feature, and Line Feature dataset intended to be used at 1:24,000 scale. Based on Connecticut Quaternary Geology digital spatial data published in 2005 by the U.S. Geologic Survey, in cooperation with the Connecticut Department of Environmental Protection. These data were digitized from the 1:24,000-scale compilation sheets prepared for the statewide Quaternary Geology Map of Connecticut, (Stone, J.R., Schafer, J.P., London, E.H., DiGiacomo-Cohen, M. L., Lewis R.S, and Thompson, W.B., 2005, U.S. Geological Survey special map, 2 sheets, scale 1:125,000).

BASE MAP DATA - Based on data originally from 1:24,000-scale USGS 7.5 minute topographic quadrangle maps published between 1969 and 1992. It includes political boundaries, railroads, airports, hydrography, geographic names and geographic places. Streets and street names are from Tele Atlas® copyrighted data. Base map information is neither current nor complete.

CONTOUR DATA - Derived from Connecticut's 2000 statewide LiDAR, (Light Detection And Ranging), dataset by the University of Connecticut, College of Agriculture and Natural Resources, Department of Natural Resources and the Environment. These data are a Beta product intended for research and demonstration purposes. NOTE: Contour line data is known to be incorrect in some areas due to anomalies in the underlying elevation data used to generate those specific contour lines. Areas where contour lines are too straight or angular, do not naturally curve where expected, or don't exist where they probably should are good indications of erroneous data.

RELATED INFORMATION
This map is intended to be printed at its original dimensions, (48 x 36 in), in order to maintain the 1:24,000 scale (1 inch = 2,000 feet).

QUATERNARY GEOLOGY AND SURFICIAL MATERIALS DATA - 1:24,000-scale digital spatial data of Connecticut Quaternary Geology and Surficial Materials combined into one dataset, published by the Connecticut Department of Environmental Protection, in cooperation with the U.S. Geological Survey. These data were digitized from the 1:24,000-scale compilation sheets prepared for both the Surficial Materials Map of Connecticut, (Stone, J.R., Schafer, J.P., London, E.H. and Thompson, W.B., 1992, U.S. Geological Survey Special Map, 2 sheets, scale 1:125,000, map and pamphlet, 71 p.) and the Quaternary Geologic Map of Connecticut and Long Island Sound Basin, (Stone, J.R., Schafer, J.P., London, E.H., DiGiacomo-Cohen, M.L., Lewis, R.L., and Thompson, W.B., 2005, U.S. Geological Survey Scientific Investigation Map 2784, 2 sheets, scale 1:125,000).

OTHER GEOLOGIC MAPS - This map is also available for individual USGS topographic quadrangles of Connecticut. This map is intended to be used with other bedrock, surficial, and quaternary (glacial) geology town maps and reports published by the Connecticut Geological and Natural History Survey, USGS, and others. Those maps are reports are also available from CT DEP.

MAPS AND DIGITAL DATA - Go to the CT ECO website for this map and a variety of others. Go to the CT DEP website for the digital spatial data shown on this map.

0 0.25 0.5 1 1.5 2 Miles
0 1,125 2,250 4,500 6,750 9,000 Feet
0 0.25 0.5 1 1.5 2 Kilometers

SCALE 1:24,000 (1 inch = 2,000 feet) when map is printed at original size (48 x 36 in)

MAP LOCATION

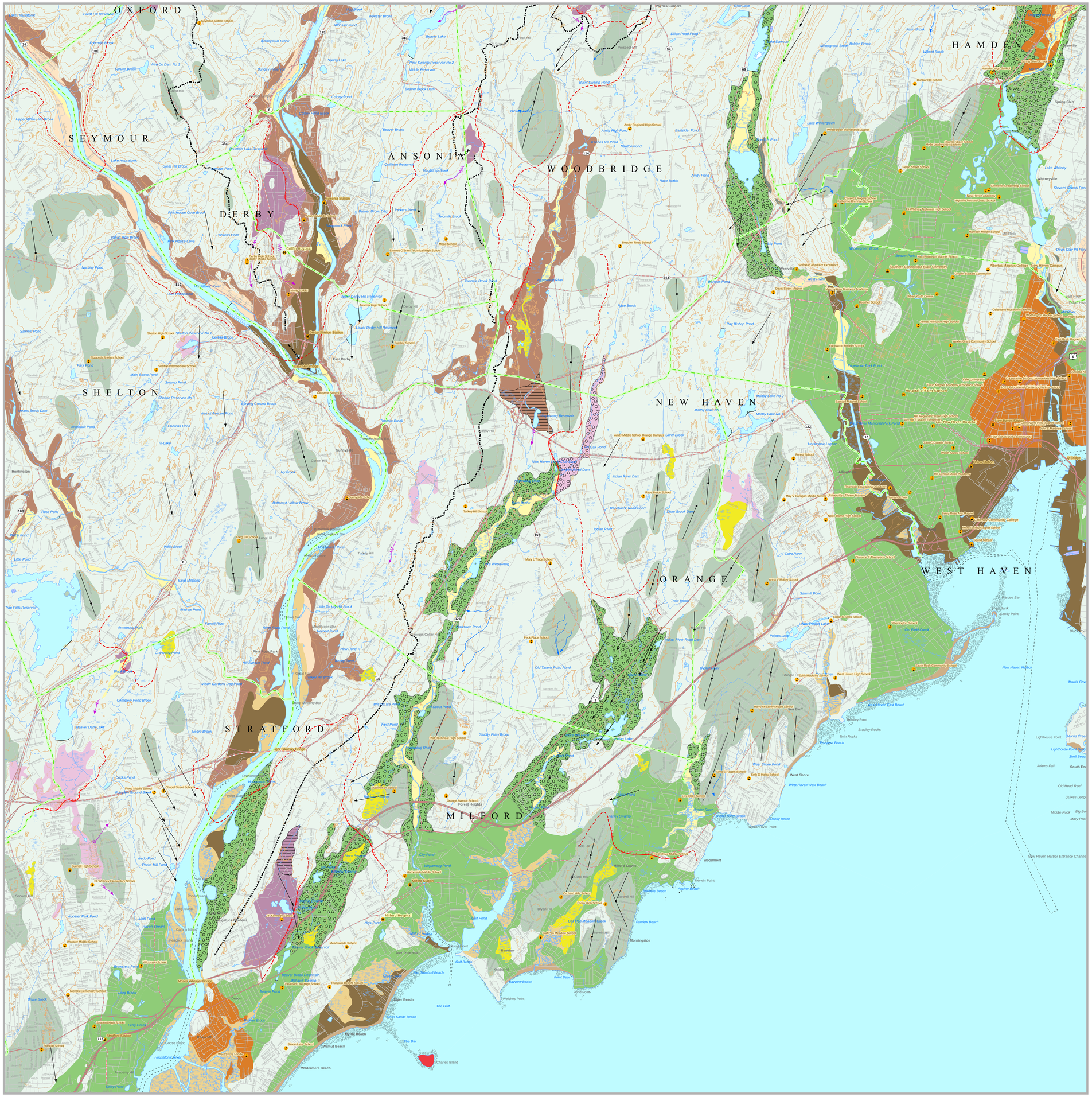
State Plane Coordinate System of 1983, Zone 3526
Lambert Conformal Conic Projection
North American Datum of 1983

STATE OF CONNECTICUT
DEPARTMENT OF
ENVIRONMENTAL PROTECTION
79 Elm Street
Hartford, CT 06106-5127

Map created by CT DEP
December 2010

Map is not colorfast
Protect from light and moisture

USGS science for a changing world



CONNECTICUT INLAND WETLAND SOILS

ORANGE, CONNECTICUT

LEGEND

Poorly Drained and Very Poorly Drained soils - **Poorly drained** soils occur where the water table is at or just below the ground surface, usually from late fall to early spring. The land where poorly drained soils occur is nearly level or gently sloping. Many of our red maple swamps are on those soils. **Very poorly drained** soils generally occur on level land or in depressions. In these areas, the water table lies at or above the surface during most of the growing season. Most of our marshes and bogs are on these soils.

Alluvial and Floodplain soils occur along watercourses occupying nearly all level areas subject to periodic flooding. These soils are formed when material is deposited by flowing water. Such material can be composed of clay, silt, sand or gravel. Alluvial and floodplain soils range from excessively drained to very poorly drained.

- Open Water
- River, Brook, Stream
- Town Boundary
- State Boundary
- County Boundary
- Interstate Highway
- US Route Highway
- State Route Highway
- Highway Ramp
- Local Road
- Railroad

EXPLANATION

This map is prepared as a guide to assist town commissions and the public in identifying the general location of areas that may be designated as Inland Wetland Soils as defined in the Inland Wetlands and Watercourses Act, Connecticut General Statutes Section 22a-38. Wetland soils include "any of the soil types designated as poorly drained, very poorly drained, alluvial, and floodplain by the National Cooperative Soil Survey, as may be amended from time to time, of the Natural Resources Conservation Service of the United States Department of Agriculture."

The minimum size delineation is approximately 3 acres. This map does not show all the soils designated as Inland Wetland. There may be Inland Wetlands as large as 3 acres as inclusions in Non-wetland map units. Conversely, there may be Non-Wetlands as inclusions in soils designated as Inland Wetlands. The presence or absence of water on the soil surface does not necessarily designate an area as Inland Wetlands. Long narrow drainage delineations, which may have been designated as Inland Wetlands, may have been slightly enlarged cartographically in order to show them at the mapped scale.

As Inland Wetlands are determined by soil type, an on-site examination of the soil profile, horizons and features, by a certified Soil Scientist, is necessary to confirm the presence or absence of soils designated as Inland Wetlands.

This map does not indicate the locations of regulated tidal areas, upland review areas, nor all permanent or intermittent water courses.

DATA SOURCES

SOIL DATA - Soil map units shown on this map are from the 2007 Soil Survey Geographic Database (SSURGO) database produced by the USDA, Natural Resources Conservation Service (NRCS). The soils were mapped at a scale of 1:12,000 with a minimum size delineation of three acres. Enlargement of this map beyond the original source scale will not show additional detail and can cause misunderstanding of the detail of mapping. For the most recent soils data contact the NRCS.

BASE MAP DATA - Based on data originally from 1:24,000-scale USGS 7.5 minute topographic quadrangle maps published between 1969 and 1992. It includes political boundaries, railroads, airports, hydrography, geographic names and geographic places. Streets and street names are from Tele Atlas copyrighted data. Base map information is neither current nor complete.

RELATED INFORMATION
This map is intended to be printed at its original dimensions in order to maintain the 1:24,000 scale (1 inch = 2000 feet).

MAPS AND DIGITAL DATA - Visit the CT ECO website for this map and a variety of others. Visit the NRCS soils website for the soils data shown on this map. Visit the CT DEP website to download the base map digital spatial data shown on this map.

0 0.5 1 2 MILES
0 2000 4000 8000 FEET
0 0.5 2 KILOMETERS

SCALE 1:24,000 when map is printed at original size (48 x 36 in)

MAP LOCATION

State Plane Coordinate System of 1983, Zone 3526
Lambert Conformal Conic Projection
North American Datum of 1983

STATE OF CONNECTICUT
DEPARTMENT OF
ENVIRONMENTAL PROTECTION
79 Elm Street
Hartford, CT 06106-5127

Map prepared by CT DEP
October 2009
Map is not colorfast
Protect from light and moisture

U.S. Department of Agriculture
NRCS Natural Resources Conservation Service

WATER QUALITY CLASSIFICATIONS
ORANGE, CT

SURFACE WATER QUALITY CLASSES

A	A
AA	AA
B, B*	B, B*
SA	SA
SB	SB

NOTES:
Surface Water Classifications beginning with S refer to Coastal and Marine Surface Water.
B* is a subset of Class B where no direct wastewater discharges are allowed other than those consistent with Class AA, A and SA surface waters.

GROUND WATER QUALITY CLASSES

- GA (white background)
- GAA, GAAs
- GA, GAA may not meet current standards
- GB
- GC
- Area of Contribution to Public Supply Well
- Final Aquifer Protection Area (Level A)
- Major Basin Boundary

EXPLANATION

WATER QUALITY CLASSIFICATIONS (WQC) MAPS are one of the elements of the Water Quality Standards (WQS) for the State of Connecticut. The WQS are a part of Connecticut's clean water program and are essential for protecting and improving water quality. The WQS follow the principles of Connecticut's Clean Water Act which is in Chapter 446K of the Connecticut General Statutes. The WQS provide policy guidance in many areas, for example decisions on acceptable discharges to water resources, siting of landfills, remediation or prioritization of municipal sewerage system projects. The first two elements of the WQS are the Standards, which set an overall policy for management of water quality, and the Criteria, which are descriptive and numerical standards that describe the allowable parameters and goals for various water quality classifications. A discussion of these two elements is found in the Water Quality Standards document available on the CT DEEP website. The third element is the Classifications and the Water Quality Classification Maps which show the Classification assigned to each surface and groundwater resource throughout the State. The WQS are adopted using a public participation process. The WQC maps are also adopted using a public participation process but go through hearings separately from the Standards and Criteria hearings. Revision and adoption of the WQC data occurs in accordance with the public participation procedures contained in Section 22a-426 of the Connecticut General Statutes. Ground WQC is subject to Connecticut regulation and changes must be reviewed and adopted. All changes to the Surface WQC require an adoption process which is subject to federal review and approval in addition to CT regulation. The adoption dates for the WQC by major drainage basin are: Housatonic River, Hudson River and Southwest Coastal Basins - March 1999; Connecticut River and South Central Coastal Basins - February 1993; Thames River, Pawcatuck River and Southeast Coastal Basins - December 1986. Surface Water Classifications do not change after the adoption date until the next major revision. Ground Water Classifications may change after the adoption date under specific circumstances. The map may have more than one WQC adoption date because a town may be in more than one major drainage basin.

SURFACE WATERS in Connecticut are divided into freshwater classified as AA, A, B or B* and saline waters classified as SA or SB. Class AA designated uses are existing or proposed drinking water supplies; habitat for fish and other aquatic life and wildlife; recreation; and water supply for industry and agriculture. Class A designated uses are habitat for fish and other aquatic life and wildlife; potential drinking water supplies; recreation; navigation; and water supply for industry and agriculture. Class SA designated uses are habitat for marine fish, other aquatic life and wildlife; shellfish harvesting for direct human consumption; recreation; industrial water supply; and navigation. Class B designated uses are habitat for fish and aquatic life and wildlife; recreation; navigation; and industrial and agricultural water supply. Class B*, applicable to Candlewood Lake, is a subset of Class B and is identical in all ways to the designated uses, criteria and standards for Class B waters except for the restriction on direct discharges. Class SB designated uses are habitat for marine fish and aquatic life and wildlife; commercial shellfish harvesting; recreation; industrial water supply; and navigation.

Surface waters which are not specifically classified shall be considered as Class A or Class AA. Surface waters in GA ground water areas are assumed Class A or Class SA unless otherwise indicated. Surface waters in GAA ground water areas are assumed Class AA unless otherwise indicated.

On the WQC map a surface water quality goal of A is represented by blue colored water bodies. Surface water quality goal of AA is represented by purple colored water bodies. Surface water quality goal of B is represented by gold colored water bodies.

GROUND WATERS in Connecticut are classified as GAA, GA, GB and GC. Class GAA designated uses are existing or potential public supply of water suitable for drinking without treatment and baseflow for hydraulically-connected surface water bodies. The Class GAAs is a subclass of GAA for ground water that is tributary to a public water supply reservoir. The area of contribution to a public water supply well is represented by a 500-foot radius around the well and is assumed to be Class GAA unless otherwise classified. Class GA designated uses are existing private and potential public or private supplies of water suitable for drinking without treatment and baseflow for hydraulically-connected surface water bodies. All ground waters not specifically classified are considered as Class GA. Class GB designated uses are industrial process water and cooling waters and baseflow for hydraulically-connected water bodies and is presumed not suitable for human consumption without treatment. Class GC designated uses are assimilation of discharges authorized by the Commissioner pursuant to Section 22a-430 of the General Statutes.

On the WQC map GA is represented by white colored land areas. Class GAA and class GAAs are represented by blue colored land areas. The area of contribution to a public water supply well is shown by a blue cross-hatch overprint. A notation of GAA followed by a state abbreviation indicates a watershed that contributes to the public water supply for a state other than Connecticut. Class GA or Class GAA areas that currently may not be meeting the GA or GAA standards are represented on the WQC maps by tan colored land areas. Class GB is represented by green colored land areas. Class GC is represented by magenta colored land areas.

FINAL AQUIFER PROTECTION AREAS (Level A) are included on the WQC maps for informational purposes. These areas are anticipated to be reclassified GAA during the next major basin updates, subject to public participation. The Aquifer Protection Program helps protect Connecticut's public drinking water resources by delineating aquifer protection areas (also called wellhead protection areas) for public supply wells and establishing land use regulations within these areas. These areas represent the land area contributing ground water to active public water supply wells or well fields that serve more than 1000 people and are set in sand and gravel aquifers (stratified drift deposits).

DATA SOURCES

WATER QUALITY CLASSIFICATIONS DATA – Water quality classifications shown on this map are based on information from the following digital spatial datasets that are digitally shown together – Ground Water Quality Classifications Poly, Surface Water Quality Classifications Line, and Surface Water Quality Classifications Poly. The map legend above reflects the content of these three data sources. These WQC data were initially compiled on 1:24,000-scale 7.5 minute USGS topographic quadrangle maps and later digitized at 1:24,000 scale. For example, the Surface Water Quality Classifications Line and Surface Water Quality Classifications Poly digital data assigns surface water quality classifications to water bodies such as rivers, streams, reservoirs, lakes, ponds and coves found in 1:24,000-scale hydrography data available from CT DEEP. The hydrography may not include all the waterbodies in Connecticut. The Ground Water Quality Classifications Poly data assigns ground water quality classifications, at 1:24,000 scale, to the remaining land areas in Connecticut.

AQUIFER PROTECTION AREA DATA – Aquifer Protection Areas shown on this map are from the Aquifer Protection Area digital dataset which contains polygon data intended to be used at 1:24,000 scale. The dataset contains regulated areas classified as Level A Aquifer Protection Area (Final) and Level B Aquifer Protection Area (Preliminary). The Level B areas are not shown on the WQC maps. The data was collected from 1991 to the present and is actively updated as Final area mapping replaces earlier Preliminary areas. The Aquifer Protection Areas are delineated by the individual water companies owning the well fields and submitted to the CT DEEP for approval. Preliminary mapping provides a general estimate of the area contributing ground water to the well field. Final mapping is based on extensive, site-specific, detailed modeling of the ground water flow system. CT DEEP may adjust Final area boundaries to be consistent with 1:24,000 scale topography and base map data where appropriate during the approval process.

MAJOR DRAINAGE BASIN DATA – Major drainage basins shown on this map are from Major Basin Line data developed by CT DEEP and intended to be used at 1:24,000 scale.

BASE MAP DATA - Based on data originally from 1:24,000-scale USGS 7.5 minute topographic quadrangle maps published between 1969 and 1992. It includes political boundaries, railroads, airports, hydrography, geographic names and geographic places. Streets and street names are from Tele Atlas® copyrighted data. Base map information is neither current nor complete.

RELATED INFORMATION
This map is intended to be printed at its original dimensions in order to maintain the 1:24,000 scale (1 inch = 2000 feet).
WATER QUALITY STANDARDS - Go to the CT DEEP website for a summary and the full text of the "Water Quality Standards" and for other information on water quality.
AQUIFER PROTECTION AREAS - Go to the CT DEEP website for more information.

ADOPTED DATES

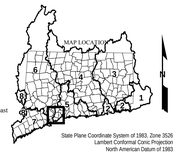
Water Quality Standards
February 25, 2011

Thames River, Pawcatuck River and Southeast Coastal Basins: December 1986

Connecticut River and South Central Coastal Basins: February 1993

Housatonic River, Hudson River and Southwest Coastal Basins: March 1999

MAJOR BASINS
1 Pawcatuck
2 Southeast Coast
3 Thames
4 Connecticut
5 South Central Coast
6 Housatonic
7 Southwest Coast
8 Hudson



State Plane Coordinate System of 1983, Zone 3526
Lambert Conformal Conic Projection
North American Datum of 1983

1 0.5 0 1 Miles
1000 0 1000 2000 3000 4000 5000 6000 7000 Feet
1 0.5 0 1 Kilometers

SCALE 1:24,000 (1 inch = 2000 feet) when map is printed at original size

STATE OF CONNECTICUT
DEPARTMENT OF
ENERGY & ENVIRONMENTAL PROTECTION
79 Elm Street
Hartford, CT 06106-5127

Map created by CT DEEP
August 2012

Map is not colorfast
Protect from light and moisture

799-2922

795-9477
795-9647

795-5877

795-5350

795-4986

795-3030
795-9453
795-4933
795-9566
795-9566

795-9924
799-2987
795-4227
799-2059

CENTER
GHT

S
799-2812

795-4925

795-9460
795-9560

799-2508

S

795-0657

212 HILDEBRAND RAYMOND W
* 795-3172

213 VACANT
* 795-6389

- - - - - - - - - - - - - - - - - -

MARSH HILL RD FR MILFORD TOWN LINE N TO 179 INDIAN RIVER RD (RIGHT ODD)

- 13 CONRAIL CROSSES

22 VACANT
35 COLLINS JOHN J * 799-2257
36 GRECO ANNE M MRS * 795-9074
38 VAUGHN EDGAR L * 799-2725
VAUGHN NURSERIES INC
799-2414
65 SALEMME ANTHONY * 799-2708
69 SALEMME SYLVESTER J
* 799-2804

- 70 SAAB DR BEGINS
- 71 SALEMME LA ENDS

88 INTERNATIONAL INSTRUMENTS 795-4711
89 HELICOPTER SUPPORT INC 795-6051

- 95 FRONTAGE RD BEGINS

99 FARINA A J MRS * 795-4478
MARKET GARDENER
- 3 M BUSINESS PRODUCTS SALES INC 795-0511
- SHOWCASE CINEMA ONE TWO THREE FOUR AND FIVE 795-6081

- ENTRANCE TO CONN TPK
- (EASTBOUND)
- EXIT FR CONN TPK
- (EASTBOUND)
- CONN TPK (EASTBOUND)

549

552
555
558
563
568
568

- - - -
MEETING
CENTE
RD TH
BEY M
GRASS

205

205
205

209

218
226

-

282
290
296
302

308

-
-

315
316
322

0 Dario R Dr ® (4) 795-9647
Siegmond ®
Steven ® (5) 795-5877
nna 799-2589
ames J ® 799-2589
ohn F ® 799-2589
osemary F ® 799-2589
ation
N Blanche 795-5350
s I ® 795-4986
T Thomas L ® (4) 795-3030
Z Herman ® 795-9453
Donald E ® (2) 795-4933
Laurie 795-4933
ohn J ® (2) 795-9566
Patricia 795-9566
PATRICIA A 795-9566
LLTTA Maurice 795-9566
A Frank A Jr ® (2) . 795-9924
G ® 799-2987
eRoy ® 795-4227
Stella ® 795-1094
Louis J ® 799-2059

(3160)
ANGE CENTER RD N TO
K
haron A
N Marie J ® 799-2812

FROM MILFORD TOWN LINE N TO 179
INDIAN RIVER RD

SHOWCASE CINEMA ONE
TWO THREE FOUR FIVE
AND SIX 795-6081
22 Vacant
35 COLLINS John J ● 799-2257
38 VAUGHN Edgar L ● (2) 799-2725
38 VAUGHN NURSERIES INC 799-2414
55 DICHELLO DISTRIBUTORS 865-7700
55 VALENTI LEASING CO INC 795-0044
65 SALEMME Anthony ● (2) 799-2708
69 SALEMME Sylvester J ● 799-2804
88 INTERNATIONAL
INSTRUMENTS DIVISION OF
SIGMA INSTRUMENTS INC ... 795-4711
88 SHURITE METER 795-4711
88 SIGMA INTERNATIONAL
INSTRUMENTS DIVISION 795-4711
89 HELICOPTER SUPPORT INC ... 795-6051
99 FARINA Anna J ● 795-4478
99 FARINA Domenico F 795-4478
100 PUCILLO Catello ● 799-2498
110 PUCILLO Frank (4) 795-9558
110 PUCILLO Frank P ● (4) 795-9558
110 PUCILLO John (4) 795-9558
114 VOLPE Alexander J ● (2) 799-2430
115 PUCILLO Angelina M ● 799-2690
123 SMITH Marshall Terry 795-3845
136 No Information
795-9018

308 MARZULLO G 795-4
315 MOSCARDINI Leo ● 799-2
316 HOLCOMBE Henry R ● 795-9
322 PETERSON Eric T 795-0
332 DUFFY John H ● 799-2
382 HEINLY Theodore H ● (2) 795-3

FROM BOSTON POST RD SE TO W
HAVEN LINE

MELOY RD (3320)
30 FANNING Stephen G Jr ● 932-
40 FANNING John W 933-

MERRY CIR (3340)
FROM 315 ORANGE CENTER RD N
TO DEAD END
283 DeNEGRE John M ● (2) 795-
288 PIAZZA George J Dr ● (2) 799-
295 POSENER George G 795-
296 POULIMAS James D ●
389 MONTEGUT F J ● 795-

CONNECTICUT INLAND WETLAND SOILS

ORANGE, CONNECTICUT

LEGEND

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0 0.5 1 2 MILES
0 2000 4000 8000 FEET
0 0.5 2 KILOMETERS

SCALE 1:24,000 when map is printed at original size (48 x 36 in)

MAP LOCATION

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Lambert Conformal Conic Projection
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STATE OF CONNECTICUT
DEPARTMENT OF
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79 Elm Street
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Map prepared by CT DEP
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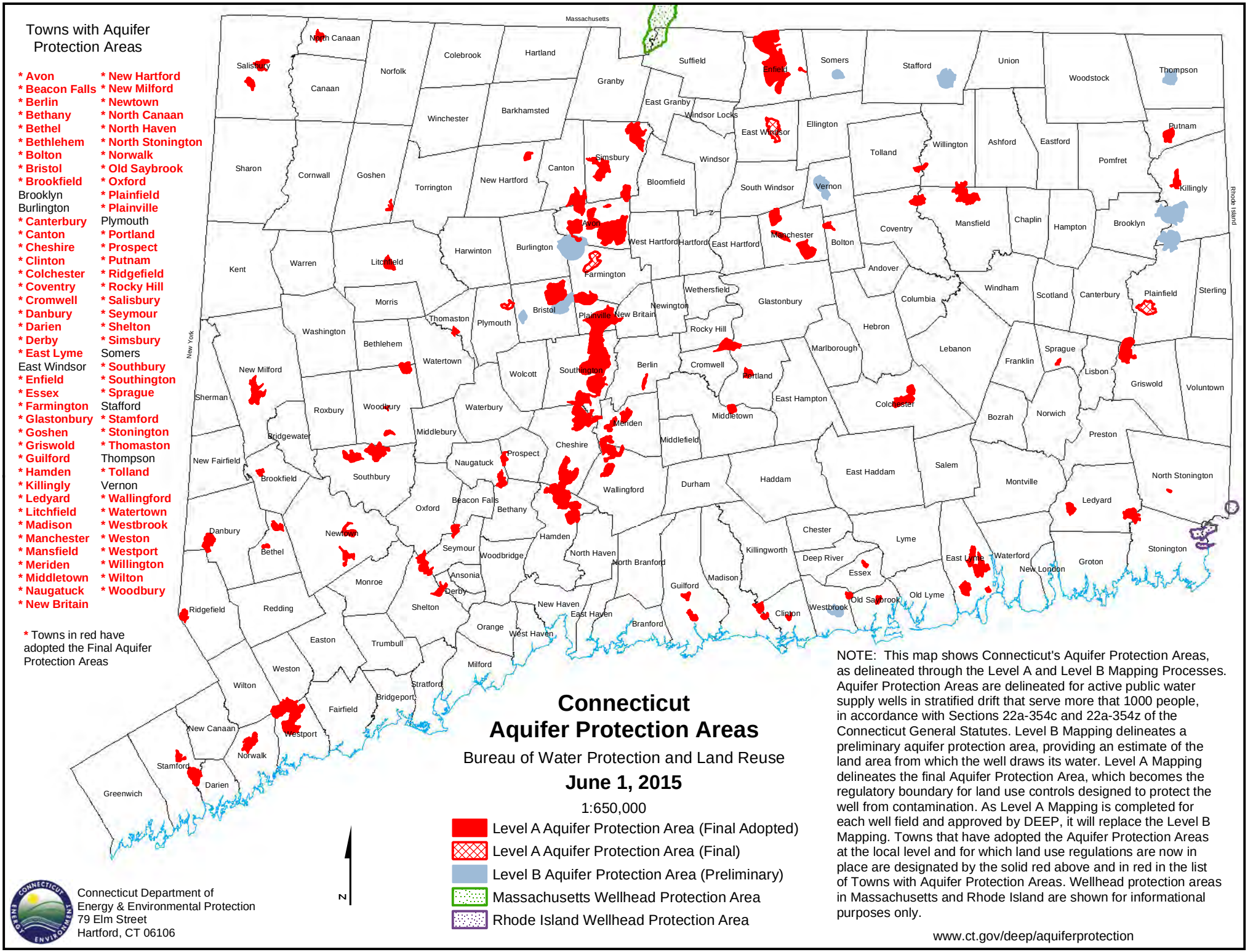
U.S. Department of Agriculture
NRCS Natural Resources Conservation Service


Towns with Aquifer Protection Areas
* Avon
* Beacon Falls
* Berlin
* Bethany
* Bethel
* Bethlehem
* Bolton
* Bristol
* Brookfield
Brooklyn
Burlington
* Canterbury
* Canton
* Cheshire
* Clinton
* Colchester
* Coventry
* Cromwell
* Danbury
* Darien
* Derby
* East Lyme
East Windsor
* Enfield
* Essex
* Farmington
* Glastonbury
* Goshen
* Griswold
* Guilford
* Hamden
* Killingly
* Ledyard
* Litchfield
* Madison
* Manchester
* Mansfield
* Meriden
* Middletown
* Naugatuck
* New Britain
* New Hartford
* New Milford
* Newtown
* North Canaan
* North Haven
* North Stonington
* Norwalk
* Old Saybrook
* Oxford
* Plainfield
* Plainville
Plymouth
* Portland
* Prospect
* Putnam
* Ridgefield
* Rocky Hill
* Salisbury
* Seymour
* Shelton
* Simsbury
Somers
* Southbury
* Southington
* Sprague
Stafford
* Stamford
* Stonington
* Thomaston
Thompson
* Tolland
Vernon
* Wallingford
* Watertown
* Westbrook
* Weston
* Westport
* Willington
* Wilton
* Woodbury
* Towns in red have adopted the Final Aquifer Protection Areas
Massachusetts
Rhode Island
New York
North Canaan
Salisbury
Norfolk
Colebrook
Hartland
Canaan
Granby
Suffield
Enfield
Somers
Stafford
Union
Woodstock
Thompson
Winchester
Barkhamsted
East Granby
Windsor Locks
East Windsor
Ellington
Tolland
Willington
Ashford
Eastford
Pomfret
Putnam
Killingly
Sharon
Cornwall
Goshen
Torrington
New Hartford
Canton
Simsbury
Bloomfield
Windsor
South Windsor
Vernon
Coventry
Mansfield
Chaplin
Hampton
Brooklyn
Kent
Warren
Litchfield
Harwinton
Burlington
Avon
West Hartford
Hartford
East Hartford
Manchester
Bolton
Andover
Farmington
Morris
Bristol
Plainville
New Britain
Newington
Wethersfield
Glastonbury
Columbia
Windham
Scotland
Canterbury
Plainfield
Sterling
Washington
Thomaston
Plymouth
Rocky Hill
Hebron
Marlborough
Lebanon
Franklin
Sprague
Lisbon
Griswold
Voluntown
Bethlehem
Watertown
Wolcott
Southington
Berlin
Cromwell
Portland
East Hampton
Colchester
Bozrah
Norwich
Preston
New Milford
Sherman
Roxbury
Woodbury
Waterbury
Middlebury
Meriden
Middletown
Middlefield
Bridgewater
New Fairfield
Brookfield
Southbury
Naugatuck
Prospect
Cheshire
Wallingford
Durham
Haddam
East Haddam
Salem
Montville
North Stonington
Ledyard
Beacon Falls
Oxford
Bethany
Danbury
Newtown
Seymour
Woodbridge
Hamden
North Haven
North Branford
Chester
Lyme
Killingworth
Deep River
Essex
East Lyme
Waterford
New London
Groton
Stonington
Monroe
Ansonia
Derby
Madison
Guilford
Ridgefield
Redding
Shelton
New Haven
East Haven
Branford
Westbrook
Old Saybrook
Old Lyme
Clinton
Orange
West Haven
Easton
Trumbull
Milford
Weston
Stratford
Wilton
Bridgeport
Fairfield
New Canaan
Westport
Norwalk
Stamford
Darien
Greenwich
N
Connecticut
Aquifer Protection Areas
Bureau of Water Protection and Land Reuse
June 1, 2015
1:650,000
Level A Aquifer Protection Area (Final Adopted)
Level A Aquifer Protection Area (Final)
Level B Aquifer Protection Area (Preliminary)
Massachusetts Wellhead Protection Area
Rhode Island Wellhead Protection Area
NOTE: This map shows Connecticut's Aquifer Protection Areas, as delineated through the Level A and Level B Mapping Processes. Aquifer Protection Areas are delineated for active public water supply wells in stratified drift that serve more that 1000 people, in accordance with Sections 22a-354c and 22a-354z of the Connecticut General Statutes. Level B Mapping delineates a preliminary aquifer protection area, providing an estimate of the land area from which the well draws its water. Level A Mapping delineates the final Aquifer Protection Area, which becomes the regulatory boundary for land use controls designed to protect the well from contamination. As Level A Mapping is completed for each well field and approved by DEEP, it will replace the Level B Mapping. Towns that have adopted the Aquifer Protection Areas at the local level and for which land use regulations are now in place are designated by the solid red above and in red in the list of Towns with Aquifer Protection Areas. Wellhead protection areas in Massachusetts and Rhode Island are shown for informational purposes only.
www.ct.gov/deep/aquiferprotection
Connecticut Department of
Energy & Environmental Protection
79 Elm Street
Hartford, CT 06106

SURFICIAL MATERIALS
GLACIAL AND POSTGLACIAL DEPOSITS
ORANGE, CONNECTICUT

GLACIAL ICE-LAID DEPOSITS

- t — Thin Till
- tt — Thick Till
- ts — End Moraine deposits

GLACIAL MELTWATER DEPOSITS

Fine Deposits

- f — Fines (very fine sand, silt, and clay)

Coarse Deposits

- g — Gravel
- sg — Sand and Gravel
- s — Sand

Stacked Coarse Deposits

- g/sg — Gravel overlying Sand and Gravel
- g/s — Gravel overlying Sand
- sg/s — Sand and Gravel overlying Sand
- sg/s/sg — Sand and Gravel overlying Sand overlying Sand and Gravel
- s/g — Sand overlying Gravel
- s/sg — Sand overlying Sand and Gravel

Stacked Coarse Deposits Overlying Fine Deposits

- g/s/f — Gravel overlying Sand overlying Fines
- g/f — Gravel overlying Fines
- sg/s/f — Sand and Gravel overlying Sand overlying Fines
- sg/f — Sand and Gravel overlying Fines
- s/f — Sand overlying Fines

Stacked Fine Deposits Overlying Coarse Deposits

- f/sg — Fines overlying Sand and Gravel
- f/s — Fines overlying Sand

POSTGLACIAL DEPOSITS

- a — Floodplain Alluvium
- a/sg * — Alluvium overlying undifferentiated Coarse deposits (g, sg, s)
- a/s — Alluvium overlying Sand
- a/f — Alluvium overlying Fines
- a/s/f * — Alluvium overlying undifferentiated Coarse deposits overlying Fine deposits
- a/f/g * — Alluvium overlying undifferentiated Fine deposits overlying Coarse deposits
- sw — Swamp deposits
- sw/s — Swamp deposits overlying Sand
- sw/f — Swamp deposits overlying Fines
- sw/s/f — Swamp deposits overlying Sand overlying Fines
- sw/f/s — Swamp deposits overlying Fines overlying Sand
- sm — Salt-Marsh and Tidal-Marsh deposits
- sm/s/f — Salt-Marsh and Tidal-Marsh deposits overlying Sand
- sm/f — Salt-Marsh and Tidal-Marsh deposits overlying Fines
- ta — Talus
- b — Beach deposits
- af — Artificial Fill

* Alluvium may be overlying any of the Coarse deposits (g, sg, s)

- w — Water

PARTICLE DIAMETER												
10	2.5	.16	.08	.04	.02	.01	.005	.0025	.00015	in		
256	64	4	2	1	.5	.25	.125	.068	.004	mm		
Boulders	Cobbles	Pebbles	Granules	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay		
GRAVEL PARTICLES				SAND PARTICLES				FINE PARTICLES				

Grain-size classification (modified from Wentworth, 1922)

EXPLANATION

Unconsolidated glacial and postglacial deposits, that range from a few feet to several hundred feet in thickness, overlie the bedrock surface of Connecticut (see Block Diagram).This map portrays the areal extent and subsurface grain-size (textural) distributions of these surficial materials. The map legend is designed to highlight the relationship between the depositional origins and the distribution and character of the materials portrayed. Most of Connecticut's surficial material is glacially derived, and can be divided into two broad depositional categories: Glacial Ice-Laid deposits (tills and moraine) which are generally exposed in the uplands, and are the most widespread surficial deposit in Connecticut; and Glacial Meltwater deposits (stratified deposits) which are most commonly concentrated in valleys and lowlands. A mapping emphasis is placed on stratified meltwater deposits because their distribution and character have historically influenced development patterns throughout the state.

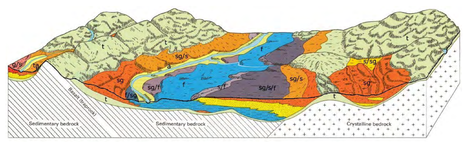
For a complete description of surficial materials map units, and further information concerning their thickness and modes of occurrence, please refer to the published Surficial Materials Map of Connecticut and the companion Quaternary Geologic Map of Connecticut and Long Island Sound Basin (see Data Sources).

Glacial Ice-Laid deposits (tills and moraine) were derived directly from the ice and consist of nonsorted, generally nonstratified mixtures of grain-sizes ranging from clay to large boulders. The matrix of most tills is predominantly sand and silt and boulders can be sparse to abundant. Some tills contain lenses of sorted sand and gravel and occasionally masses of laminated fine-grained sediment. The lack of sorting and stratification typical of ice-laid deposits often makes them poorly drained, difficult to dig in or plow, mediocre sources of groundwater and unsuited for septic systems. Till blankets the bedrock surface in variable thicknesses and commonly underlies stratified meltwater deposits (see Block Diagram). End moraine deposits (primarily ablation till) occur principally in southeastern Connecticut.

Glacial Meltwater deposits (stratified deposits) were laid down in glacial streams, lakes and ponds which occupied the valleys and lowlands of Connecticut as the last ice sheet melted away to the north. They are often composed of layers of well-to-poorly sorted sands, gravels, silts and clays with few to no boulders, and owing to their water-related depositional origins they have many characteristics that are favorable for development. Because water is a better sorting agent than ice, glacial meltwater deposits are commonly better sorted, more permeable, and better aquifers than ice-laid deposits. They can be good sources of construction aggregate, and are relatively easy to excavate and build highways and buildings on.

Meltwater deposits are depicted using four basic texturally-based map units: gravel, sand and gravel, sand, and fines. To the extent that it is known or can be inferred, the subsurface textural composition of meltwater deposits is shown for their entire vertical thickness. In many places similar conditions persisted for the entire time that a meltwater deposit was being laid down, and a single map unit (e.g. s- sand) is sufficient to describe the entire meltwater section. Areal and vertical textural variability can occur within the meltwater deposits because the amount of energy available to carry sediment varies with each meltwater setting (stream, delta, lake, etc.), and settings can change over time. High-energy depositional environments near glacial margins (proximal) tend to favor deposition of coarse material but as time passes, and the glacial margins melt back, less energy is available and finer grained distal deposits can become predominant. Where more complex stratigraphic relationships existed because of changing conditions during deposition, "stacked" map units are used to characterize the subsurface (e.g. sg/s/f - sand and gravel overlying sand overlying fines). Where postglacial deposits overlie meltwater deposits, this relationship is also shown (e.g. a/s - alluvium overlying sand).

Postglacial Sediments (primarily floodplain alluvium and swamp deposits) are less widely distributed and are typically thinner than the glacial deposits that they overlie, but they are locally important ecological, agricultural, commercial, and recreational resources. Talus, a result of rockfall at the base of steep bedrock (primarily trap rock) cliffs, provides a cool damp ecological niche. Beach, marsh and swamp deposits are key ecological elements of coastal and poorly drained inland settings. Deposits of floodplain alluvium are largely composed of sands, gravels and silts that have been reworked from glacial deposits and mixed with organic matter which increases their fertility. Despite their flood-prone nature, low, flat, fertile floodplains have historically been attractive for agricultural uses and development related to water-dependant commerce.



EXPLANATION OF CROSS-SECTION VIEW

- Gravel deposits
- Sand and gravel deposits
- Sand deposits
- Fine deposits
- a — Alluvium
- t — Till
- ta — Talus

EXPLANATION OF SURFACE VIEW

- sg — Sand and gravel deposits
- f — Fine deposits
- g/s — Gravel overlying sand
- sg/s — Sand and gravel overlying sand
- s/sg — Sand overlying sand and gravel
- sg/s/f — Sand and gravel overlying sand overlying fines
- sg/f — Sand and gravel overlying fines
- s/f — Sand overlying fines
- f/sg — Fines overlying sand and gravel
- a — Alluvium
- Alluvium overlying fines
- t — Till and bedrock
- Thick till

DATA SOURCES

SURFICIAL MATERIALS DATA – Surficial Materials shown on this map are from the Surficial Material Poly dataset which contains polygon data intended to be used at 1:24,000 scale. Based on Connecticut Surficial Materials digital data published in 1995 by the Connecticut Department of Environmental Protection, in cooperation with the U.S. Geological Survey. These data were digitized from the 1:24,000-scale compilation sheets prepared for the statewide Surficial Materials Map of Connecticut, (Stone, J.R., Schafer, J.P., London, E.H. and Thompson, W.B., 1992, U.S. Geological Survey special map, 2 sheets, scale 1:125,000).

BASE MAP DATA - Based on data originally from 1:24,000-scale USGS 7.5 minute topographic quadrangle maps published between 1969 and 1992. It includes political boundaries, railroads, airports, hydrography, geographic names and geographic places. Streets and street names are from Tele Atlas® copyrighted data. Base map information is neither current nor complete.

RELATED INFORMATION
This map is intended to be printed at its original dimensions in order to maintain the 1:24,000 scale (1 inch = 2000 feet).

QUATERNARY GEOLOGY AND SURFICIAL MATERIALS DATA - 1:24,000-scale digital spatial data of Connecticut Quaternary Geology and Surficial Materials combined into one dataset, published by the Connecticut Department of Environmental Protection, in cooperation with the U.S. Geological Survey. These data were digitized from the 1:24,000-scale compilation sheets prepared for both the Surficial Materials Map of Connecticut, Stone and others, 1992, 1:125,000 and the Quaternary Geologic Map of Connecticut and Long Island Sound Basin, Stone and others, 2005, 1:125,000.

OTHER GEOLOGIC MAPS - This map is also available for individual USGS topographic quadrangles of Connecticut. Other bedrock, surficial, and quaternary (glacial) geology quadrangle maps and reports published by the Connecticut Geological and Natural History Survey, USGS, and others are also available from CT DEP.

MAPS AND DIGITAL DATA - Go to the CT ECO website for this map and a variety of others. Go to the CT DEP website for the digital spatial data shown on this map.

1 0 0.5 1 Miles
1000 0 1000 2000 3000 4000 5000 6000 7000 Feet
1 0 1 2 Kilometers

SCALE 1:24,000 (1 inch = 2000 feet) when map is printed at original size

MAP LOCATION

State Plane Coordinate System of 1983, Zone 3526
Lambert Conformal Conic Projection
North American Datum of 1983

STATE OF CONNECTICUT
DEPARTMENT OF
ENVIRONMENTAL PROTECTION
79 Elm Street
Hartford, CT 06106-5127

Map created by CT DEP
August 2009

Map is not colorfast
Protect from light and moisture

USGS science for a changing world

WATER QUALITY CLASSIFICATIONS
ORANGE, CT

SURFACE WATER QUALITY CLASSES

A	A
AA	AA
B, B*	B, B*
SA	SA
SB	SB

NOTES:
Surface Water Classifications beginning with S refer to Coastal and Marine Surface Water.
B* is a subset of Class B where no direct wastewater discharges are allowed other than those consistent with Class AA, A and SA surface waters.

GROUND WATER QUALITY CLASSES

GA (white background)

GAA, GAAs

GA, GAA may not meet current standards

GB

GC

Area of Contribution to Public Supply Well

Final Aquifer Protection Area (Level A)

Major Basin Boundary

EXPLANATION

WATER QUALITY CLASSIFICATIONS (WQC) MAPS are one of the elements of the Water Quality Standards (WQS) for the State of Connecticut. The WQS are a part of Connecticut's clean water program and are essential for protecting and improving water quality. The WQS follow the principles of Connecticut's Clean Water Act which is in Chapter 446K of the Connecticut General Statutes. The WQS provide policy guidance in many areas, for example decisions on acceptable discharges to water resources, siting of landfills, remediation or prioritization of municipal sewerage system projects. The first two elements of the WQS are the Standards, which set an overall policy for management of water quality, and the Criteria, which are descriptive and numerical standards that describe the allowable parameters and goals for various water quality classifications. A discussion of these two elements is found in the Water Quality Standards document available on the CT DEEP website. The third element is the Classifications and the Water Quality Classification Maps which show the Classification assigned to each surface and groundwater resource throughout the State. The WQS are adopted using a public participation process. The WQC maps are also adopted using a public participation process but go through hearings separately from the Standards and Criteria hearings. Revision and adoption of the WQC data occurs in accordance with the public participation procedures contained in Section 22a-426 of the Connecticut General Statutes. Ground WQC is subject to Connecticut regulation and changes must be reviewed and adopted. All changes to the Surface WQC require an adoption process which is subject to federal review and approval in addition to CT regulation. The adoption dates for the WQC by major drainage basin are: Housatonic River, Hudson River and Southwest Coastal Basins - March 1999; Connecticut River and South Central Coastal Basins - February 1993; Thames River, Pawcatuck River and Southeast Coastal Basins - December 1986. Surface Water Classifications do not change after the adoption date until the next major revision. Ground Water Classifications may change after the adoption date under specific circumstances. The map may have more than one WQC adoption date because a town may be in more than one major drainage basin.

SURFACE WATERS in Connecticut are divided into freshwater classified as AA, A, B or B* and saline waters classified as SA or SB. Class AA designated uses are existing or proposed drinking water supplies; habitat for fish and other aquatic life and wildlife; recreation; and water supply for industry and agriculture. Class A designated uses are habitat for fish and other aquatic life and wildlife; potential drinking water supplies; recreation; navigation; and water supply for industry and agriculture. Class SA designated uses are habitat for marine fish, other aquatic life and wildlife; shellfish harvesting for direct human consumption; recreation; industrial water supply; and navigation. Class B designated uses are habitat for fish and aquatic life and wildlife; recreation; navigation; and industrial and agricultural water supply. Class B*, applicable to Candlewood Lake, is a subset of Class B and is identical in all ways to the designated uses, criteria and standards for Class B waters except for the restriction on direct discharges. Class SB designated uses are habitat for marine fish and aquatic life and wildlife; commercial shellfish harvesting; recreation; industrial water supply; and navigation.

Surface waters which are not specifically classified shall be considered as Class A or Class AA. Surface waters in GA ground water areas are assumed Class A or Class SA unless otherwise indicated. Surface waters in GAA ground water areas are assumed Class AA unless otherwise indicated.

On the WQC map a surface water quality goal of A is represented by blue colored water bodies. Surface water quality goal of AA is represented by purple colored water bodies. Surface water quality goal of B is represented by gold colored water bodies.

GROUND WATERS in Connecticut are classified as GAA, GA, GB and GC. Class GAA designated uses are existing or potential public supply of water suitable for drinking without treatment and baseflow for hydraulically-connected surface water bodies. The Class GAAs is a subclass of GAA for ground water that is tributary to a public water supply reservoir. The area of contribution to a public water supply well is represented by a 500-foot radius around the well and is assumed to be Class GAA unless otherwise classified. Class GA designated uses are existing private and potential public or private supplies of water suitable for drinking without treatment and baseflow for hydraulically-connected surface water bodies. All ground waters not specifically classified are considered as Class GA. Class GB designated uses are industrial process water and cooling waters and baseflow for hydraulically-connected water bodies and is presumed not suitable for human consumption without treatment. Class GC designated uses are assimilation of discharges authorized by the Commissioner pursuant to Section 22a-430 of the General Statutes.
On the WQC map GA is represented by white colored land areas. Class GAA and class GAAs are represented by blue colored land areas. The area of contribution to a public water supply well is shown by a blue cross-hatch overprint. A notation of GAA followed by a state abbreviation indicates a watershed that contributes to the public water supply for a state other than Connecticut. Class GA or Class GAA areas that currently may not be meeting the GA or GAA standards are represented on the WQC maps by tan colored land areas. Class GB is represented by green colored land areas. Class GC is represented by magenta colored land areas.

FINAL AQUIFER PROTECTION AREAS (Level A) are included on the WQC maps for informational purposes. These areas are anticipated to be reclassified GAA during the next major basin updates, subject to public participation. The Aquifer Protection Program helps protect Connecticut's public drinking water resources by delineating aquifer protection areas (also called wellhead protection areas) for public supply wells and establishing land use regulations within these areas. These areas represent the land area contributing ground water to active public water supply wells or well fields that serve more than 1000 people and are set in sand and gravel aquifers (stratified drift deposits).

DATA SOURCES

WATER QUALITY CLASSIFICATIONS DATA – Water quality classifications shown on this map are based on information from the following digital spatial datasets that are typically shown together – Ground Water Quality Classifications Poly, Surface Water Quality Classifications Line, and Surface Water Quality Classifications Poly. The map legend above reflects the content of these three data sources. These WQC data were initially compiled on 1:24,000-scale 7.5 minute USGS topographic quadrangle maps and later digitized at 1:24,000 scale. For example, the Surface Water Quality Classifications Line and Surface Water Quality Classifications Poly digital data assigns surface water quality classifications to water bodies such as rivers, streams, reservoirs, lakes, ponds and coves found in 1:24,000-scale hydrography data available from CT DEEP. The hydrography may not include all the waterbodies in Connecticut. The Ground Water Quality Classifications Poly data assigns ground water quality classifications, at 1:24,000 scale, to the remaining land areas in Connecticut.

AQUIFER PROTECTION AREA DATA – Aquifer Protection Areas shown on this map are from the Aquifer Protection Area digital dataset which contains polygon data intended to be used at 1:24,000 scale. The dataset contains regulated areas classified as Level A Aquifer Protection Area (Final) and Level B Aquifer Protection Area (Preliminary). The Level B areas are not shown on the WQC maps. The data was collected from 1991 to the present and is actively updated as Final area mapping replaces earlier Preliminary areas. The Aquifer Protection Areas are delineated by the individual water companies owning the well fields and submitted to the CT DEEP for approval. Preliminary mapping provides a general estimate of the area contributing ground water to the well field. Final mapping is based on extensive, site-specific, detailed modeling of the ground water flow system. CT DEEP may adjust Final area boundaries to be consistent with 1:24,000 scale topography and base map data where appropriate during the approval process.

MAJOR DRAINAGE BASIN DATA – Major drainage basins shown on this map are from Major Basin Line data developed by CT DEEP and intended to be used at 1:24,000 scale.

BASE MAP DATA - Based on data originally from 1:24,000-scale USGS 7.5 minute topographic quadrangle maps published between 1969 and 1992. It includes political boundaries, railroads, airports, hydrography, geographic names and geographic places. Streets and street names are from Tele Atlas® copyrighted data. Base map information is neither current nor complete.

RELATED INFORMATION
This map is intended to be printed at its original dimensions in order to maintain the 1:24,000 scale (1 inch = 2000 feet).
WATER QUALITY STANDARDS - Go to the CT DEEP website for a summary and the full text of the "Water Quality Standards" and for other information on water quality.
AQUIFER PROTECTION AREAS - Go to the CT DEEP website for more information.

ADOPTED DATES

Water Quality Standards
February 25, 2011

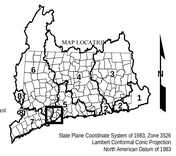
Thames River, Pawcatuck River and Southeast Coastal Basins: December 1986

Connecticut River and South Central Coastal Basins: February 1993

Housatonic River, Hudson River and Southwest Coastal Basins: March 1999

MAJOR BASINS

1 Pawcatuck
2 Southeast Coast
3 Thames
4 Connecticut
5 South Central Coast
6 Housatonic
7 Southwest Coast
8 Hudson



State Plane Coordinate System of 1983. Zone 3526
Lambert Conformal Conic Projection
North American Datum of 1983

SCALE 1:24,000 (1 inch = 2000 feet) when map is printed at original size

STATE OF CONNECTICUT
DEPARTMENT OF
ENERGY & ENVIRONMENTAL PROTECTION
79 Elm Street
Hartford, CT 06106-5127

Map created by CT DEEP
August 2014

Map is not colorfast
Protect from light and moisture

UST Data Report

Owner ID: **6385**

Owner

6385

OwnerType: Private
Name: **SOUTHERN CONNECTICUT GAS CO.**
Address: **855 MAIN ST.**
City, ST Zip: Bridgeport CT 06604
Contact: Phone: (203) 382-8111
OwnerDesc: Private Fax:
Comment:

Facility

Owner ID: 6385 Alt Fac ID: 107-11037

Facility ID:	FacilityType:	OperFirstNam	OperLastName	Phone
Facility Name:	Street Address:	City:	State	ZIP:
Comments:				
11037	Not Listed	PAUL	ALFONSI	
SOUTHERN CONNECTICUT GAS CO				
60 MARSH HILL RD		Orange	CT	06477

Site Owner GSA #:
Site Basin Name: NO LAT/LONG
Site Proprietary Code: N
Site Grid X: 1
Site Grid Y: 1
Intersecting Street: FRONTAGE RD
Check ZIP code...may not be correct!

Date of Receipt: 1/9/2007

LatDeg: +04
LatMin: 11
LatSec: 51.00

LongDeg: 007
LongMin: 34
LongSec: 51.00

Facility Contacts:

Last Name:	Phone:
MIKE WASILNAK/ P. ALFONSI	(203) 795-7782
SOUTHERN CONN. GAS CO.	(203) 795-7782

Tank

Fac ID: 11037

Tank Status: (•) All Tanks ( ) In Use ( ) Perm Out of Use ( ) Temp Out of Use

TankID	Tank Stat Desc:	Closure Status Desc	Capacity:
Overfill inst	Spill Inst	CP Met	FedRegd?	Tank Mat Desc:
Subs.Desc:	Dt Lst Usd:	TankModsDesc:	PipeMatDe	PipeModDesc:
1	Temporarily Out of Us			10000
☑	☐	☑	☑	Fiberglass Reinforced Plastic
Gasoline	12/06/06	Double-Walled	Fiberglass Reinfor	Double-Wall
2	Temporarily Out of Us			10000
☑	☐	☑	☑	Fiberglass Reinforced Plastic
Gasoline	12/06/06	Double-Walled	Fiberglass Reinfor	Double-Wall

UST Data Report

Owner ID: **1735**

Owner 1735

OwnerType: Private
Name: **DICHELLO DISTRIBUTORS, INC.**
Address: **55 MARSH HILL RD.**
City, ST Zip: Orange CT 06477
Contact: Phone: (203) 865-7700
OwnerDesc: Private Fax:
Comment:

Facility

Owner ID: 1735 Alt Fac ID: 107-5812

Facility ID: FacilityType: OperFirstNam OperLastName Phone
Facility Name: Street Address: City: State ZIP:
Comments:
5812 Not Listed PATRICIA OATES
DICHELLO DISTRIBUTORS, INC.
55 MARSH HILL ROAD Orange CT 06477

Site Owner GSA #:
Site Basin Name: SOUTH CENTRAL SHORELINE
Site Proprietary Code: N
Site Grid X: 1
Site Grid Y: 1
Intersecting Street: CASCADE BLVD

Date of Receipt: 5/8/2007

LatDeg: +04
LatMin: 11
LatSec: 54.00
LongDeg: 072
LongMin: 59
LongSec: 58.00

Facility Contacts:

Last Name:	Phone:
BURTON L. ZEMPSKY	(203) 865-7700
DICHELLO DISTRIBUTORS, INC.	(203) 865-7700

Tank

Tank Status: (●) All Tanks ( ) In Use ( ) Perm Out of Use ( ) Temp Out of Use

Fac ID: 5812

TankID Tank Stat Desc: Closure Status Desc Capacity:
Overfill inst Spill Inst CP Met FedRegd? Tank Mat Desc:
Subs.Desc: Dt Lst Usd: TankModsDesc: PipeMatDe PipeModDesc:

1 Permanently Out of U Tank removed from ground 10000
☐ ☐ ☐ ☐ Asphalt Coated or Bare Steel
Heating Oil 06/01/97 None Bare Steel None

2 Permanently Out of U Tank removed from ground 10000
☐ ☐ ☐ ☐ Asphalt Coated or Bare Steel
Heating Oil 06/01/97 None Bare Steel None

3 Permanently Out of U Removed 2500
☐ ☐ ☐ ☑ Asphalt Coated or Bare Steel
Gasoline 05/01/90 None Bare Steel None

4 Permanently Out of U Tank removed from ground 1000
☐ ☐ ☐ ☑ Concrete
Gasoline 06/01/97 None Other None

5 Permanently Out of U Tank removed from ground 5000
☐ ☐ ☐ ☑ Concrete
Gasoline 06/01/97 None Other None

6 Permanently Out of U Tank removed from ground 3000
☐ ☐ ☐ ☑ Concrete
Gasoline 06/01/97 None Other None

UST Data Report

Owner ID: **6385**

Owner

6385

OwnerType: Private
Name: **SOUTHERN CONNECTICUT GAS CO.**
Address: 855 MAIN ST.
City, ST Zip: Bridgeport CT 06604
Contact: Phone: (203) 382-8111
OwnerDesc: Private Fax:
Comment:

Facility

Owner ID: 6385 Alt Fac ID: 107-11037

Facility ID: FacilityType: OperFirstNam OperLastName Phone
Facility Name: Street Address: City: State ZIP:
Comments:

11037 Not Listed PAUL ALFONSI

SOUTHERN CONNECTICUT GAS CO

60 MARSH HILL RD Orange CT 06477

Site Owner GSA #:
Site Basin Name: NO LAT/LONG
Site Proprietary Code: N
Site Grid X: 1
Site Grid Y: 1
Intersecting Street: FRONTAGE RD
Check ZIP code...may not be correct!

Date of Receipt: 1/9/2007

LatDeg: +04
LatMin: 11
LatSec: 51.00
LongDeg: 007
LongMin: 34
LongSec: 51.00

Facility Contacts:

Last Name:	Phone:
MIKE WASILNAK/ P. ALFONSI	(203) 795-7782
SOUTHERN CONN. GAS CO.	(203) 795-7782

Tank

Tank Status: (•) All Tanks ( ) In Use ( ) Perm Out of Use ( ) Temp Out of Use

Fac ID: 11037

TankID Tank Stat Desc: Closure Status Desc Capacity:
Overfill inst Spill Inst CP Met FedRegd? Tank Mat Desc:
Subs.Desc: Dt Lst Usd: TankModsDesc: PipeMatDe PipeModDesc:

1 Temporarily Out of Us 10000
☑ ☐ ☑ ☑ Fiberglass Reinforced Plastic
Gasoline 12/06/06 Double-Walled Fiberglass Reinfor Double-Wall

2 Temporarily Out of Us 10000
☑ ☐ ☑ ☑ Fiberglass Reinforced Plastic
Gasoline 12/06/06 Double-Walled Fiberglass Reinfor Double-Wall

UST Data Report

Owner ID: **1735**

Owner

1735

OwnerType: Private
Name: **DICHELLO DISTRIBUTORS, INC.**
Address: **55 MARSH HILL RD.**
City, ST Zip: Orange | CT 06477
Contact: | Phone: (203) 865-7700
OwnerDesc: Private | Fax:
Comment:

Facility

Owner ID: 1735 Alt Fac ID: 107-5812

Facility ID: FacilityType: OperFirstNam OperLastName Phone
Facility Name: Street Address: City: State ZIP:
Comments:
5812 Not Listed PATRICIA OATES

DICHELLO DISTRIBUTORS, INC.
55 MARSH HILL ROAD | Orange CT 06477

Site Owner GSA #:
Site Basin Name: SOUTH CENTRAL SHORELINE
Site Proprietary Code: N
Site Grid X: 1
Site Grid Y: 1
Intersecting Street: CASCADE BLVD

Date of Receipt: 5/8/2007

LatDeg: +04
LatMin: 11
LatSec: 54.00
LongDeg: 072
LongMin: 59
LongSec: 58.00

Facility Contacts:

Last Name:	Phone:
BURTON L. ZEMPSKY	(203) 865-7700
DICHELLO DISTRIBUTORS, INC.	(203) 865-7700

Tank

Fac ID: 5812

Tank Status: (●) All Tanks ( ) In Use ( ) Perm Out of Use ( ) Temp Out of Use

TankID	Tank Stat Desc:	Closure Status Desc	Capacity:
Overfill inst	Spill Inst	CP Met	FedRegd?	Tank Mat Desc:
Subs.Desc:	Dt Lst Usd:	TankModsDesc:	PipeMatDe	PipeModDesc:
1	Permanently Out of U	Tank removed from ground		10000
☐	☐	☐	☐	Asphalt Coated or Bare Steel
Heating Oil	06/01/97	None	Bare Steel	None
2	Permanently Out of U	Tank removed from ground		10000
☐	☐	☐	☐	Asphalt Coated or Bare Steel
Heating Oil	06/01/97	None	Bare Steel	None
3	Permanently Out of U	Removed		2500
☐	☐	☐	☑	Asphalt Coated or Bare Steel
Gasoline	05/01/90	None	Bare Steel	None
4	Permanently Out of U	Tank removed from ground		1000
☐	☐	☐	☑	Concrete
Gasoline	06/01/97	None	Other	None
5	Permanently Out of U	Tank removed from ground		5000
☐	☐	☐	☑	Concrete
Gasoline	06/01/97	None	Other	None
6	Permanently Out of U	Tank removed from ground		3000
☐	☐	☐	☑	Concrete
Gasoline	06/01/97	None	Other	None

UST Data Report

Owner ID: **406**

Owner

406

OwnerType: Private
Name: **ASARCO**
Address: **180 MAIDEN LANE**
City, ST Zip: New York NY 10038
Contact: Phone: (212) 510-2000
OwnerDesc: Private Fax:
Comment:

Facility

Owner ID: 406 Alt Fac ID: 107-10214

Facility ID: FacilityType: OperFirstNam OperLastName Phone
Facility Name: Street Address: City: State ZIP:
Comments:
10214 Not Listed

ENTHONE - OMI, INC.
193 MARSH HILL ROAD Orange CT 06477

Site Owner GSA #:
Site Basin Name: NO LAT/LONG
Site Proprietary Code: N
Site Grid X: 1
Site Grid Y: 1
Intersecting Street: INDIAN RIVER ROAD
Check ZIP code...may not be correct!

Date of Receipt: 1/17/2006

LatDeg: +04
LatMin: 04
LatSec: 51.00
LongDeg: 007
LongMin: 14
LongSec: 51.00

Facility Contacts:

Last Name:	Phone:
BRENDA A. WHALEN	(203) 934-8611
ENTHONE, INCORPORATED	(203) 934-8611

Tank

Fac ID: 10214

Tank Status: (●) All Tanks ( ) In Use ( ) Perm Out of Use ( ) Temp Out of Use

TankID Tank Stat Desc: Closure Status Desc Capacity:
Overfill inst Spill Inst CP Met FedRegd? Tank Mat Desc:
Subs.Desc: Dt Lst Usd: TankModsDesc: PipeMatDe PipeModDesc:
1 Permanently Out of U Tank removed from ground 2800
☐ ☐ ☐ ☐ Asphalt Coated or Bare Steel
Heating Oil 06/01/90 None Bare Steel None

Connecticut Department of Energy and Environmental Protection
Emergency Response and Spill Prevention Division
Emergency Incident Report

Case No.: 2015-00380
Staff Receiving Call: 202 LANDRY, ROBIN Assigned To: 000 NO RESPONSE
Date Reported: 01/23/2015 Time Reported: 14:24
Date of Release: 01/23/2015 Time of Release: UNKNOWN
Town of Release: ORANGE State of Release: CT
Location of Reported Release: 60 MARSH HILL ROAD
Reported By: PAUL SLAWSKI Phone: (860) 428-2446 Ext:
Representing: SOUTHERN CT GAS
Responsible Party: SAME Phone:
Street Address:
Town: State: Zip Code:
Does the Responsible Party Accept Financial Responsibility?
Release Type: PETROLEUM
Release Substance: MOTOR OIL
Media: GROUND SURFACE
Total Quantity: ~2 Gallons 0 Cubic Yards 0 Cubic Feet 0 Drums 0 Pounds
Emergency Measures:
Has the Release Been Terminated?: YES
Type of Waterbody Affected: NONE
Name of Waterbody Affected:
Total Quantity Recovered: 0 Total Quantity in Water: 0
Corrective Actions Taken: CONTAINED CONTRACTED
CLEANED

Discharge Class: COMMERCIAL
Cause of Incident: OVERFILL
Agencies Notified: DEP DISPATCH
Status: CLOSED

Connecticut Department of Energy and Environmental Protection
Emergency Response and Spill Prevention Division
Emergency Incident Report

Case No.: 2011-06134
Staff Receiving Call: 209 WELCH, THOMAS Assigned To: 918 LECLERC, KEN
Date Reported: 10/01/2011 Time Reported: 11:23
Date of Release: 10/01/2011 Time of Release: UNKNOWN
Town of Release: ORANGE State of Release: CT
Location of Reported Release: MARSH HILL ROAD TO RTE 34
Reported By: SGT ANDERSON Phone: (203) 891-2130 Ext:
Representing: PD
Responsible Party: CHERRY HILL CONSTRUCTION Phone: (203) 488-7929
Street Address: 51 CIRO ROAD
Town: NORTH BRANFORD State: CT Zip Code: 06471-
Does the Responsible Party Accept Financial Responsibility? NO
Release Type: PETROLEUM
Release Substance: DIESEL FUEL
Media: SURFACE WATER GROUND SURFACE
Total Quantity: ~25 Gallons 0 Cubic Yards 0 Cubic Feet 0 Drums 0 Pounds
Emergency Measures: 2' wide slick by a couple miles long.
Has the Release Been Terminated?: NO
Type of Waterbody Affected: CATCH BASIN
Name of Waterbody Affected:
Total Quantity Recovered: 0 Total Quantity in Water: 0
Corrective Actions Taken: FD RESPONDING

Discharge Class: TRANSPORTATION COMMERCIAL
Cause of Incident: UNKNOWN
Agencies Notified: LOCAL POLICE
DEP DISPATCH
LOCAL FIRE DEPARTMENT
Status: CLOSED

Connecticut Department of Energy and Environmental Protection
Emergency Response and Spill Prevention Division
Emergency Incident Report

Case No.: 2014-04998
Staff Receiving Call: 205 COX, MICHAEL Assigned To: 000 NO RESPONSE
Date Reported: 10/03/2014 Time Reported: 8:07
Date of Release: 10/03/2014 Time of Release: UNKNOWN
Town of Release: ORANGE State of Release: CT
Location of Reported Release: 100 MARSH HILL ROAD
Reported By: SEAN CROSBIE Phone: (860) 904-8551 Ext:
Representing: UNITED ILLUMINATING
Responsible Party: SAA Phone:
Street Address:
Town: State: Zip Code:
Does the Responsible Party Accept Financial Responsibility? YES
Release Type: PETROLEUM
Release Substance: HYDRAULIC OIL
Media: GROUND SURFACE
Total Quantity: 3 Gallons 0 Cubic Yards 0 Cubic Feet 0 Drums 0 Pounds
Emergency Measures: contained
Has the Release Been Terminated?: YES
Type of Waterbody Affected: NONE
Name of Waterbody Affected: N/A
Total Quantity Recovered: 0 Total Quantity in Water: 0
Corrective Actions Taken: CONTAINED CONTRACTED
CLEAN HARBORS

Discharge Class: UTILITY
Cause of Incident: HOSE FAILURE
Agencies Notified: DEP DISPATCH
Status: CLOSED

Connecticut Department of Energy and Environmental Protection
Emergency Response and Spill Prevention Division
Emergency Incident Report

Case No.: 2012-06830
Staff Receiving Call: 205 COX, MICHAEL Assigned To: 000 NO RESPONSE
Date Reported: 11/21/2012 Time Reported: 14:05
Date of Release: 11/21/2012 Time of Release: 13:30
Town of Release: ORANGE State of Release: CT
Location of Reported Release: 100 MARSH HILL ROAD
Reported By: BO KATRECZKO Phone: (203) 926-4737 Ext:
Representing: UNITED ILLUMINATING
Responsible Party: SAA Phone:
Street Address:
Town: State: Zip Code:
Does the Responsible Party Accept Financial Responsibility? YES
Release Type: DIELECT
Release Substance: TRANSFORMER OIL
Media: INSIDE BUILDING
Total Quantity: 0.5 Gallons 0 Cubic Yards 0 Cubic Feet 0 Drums 0 Pounds
Emergency Measures: non pcb
Has the Release Been Terminated?: YES
Type of Waterbody Affected: NONE
Name of Waterbody Affected: N/A
Total Quantity Recovered: 0 Total Quantity in Water: 0
Corrective Actions Taken: REMOVED CONTAINED

Discharge Class: UTILITY
Cause of Incident: CONTAINER FAILURE
Agencies Notified: DEP DISPATCH
Status: CLOSED

Connecticut Department of Energy and Environmental Protection
Emergency Response and Spill Prevention Division
Emergency Incident Report

Case No.: 2013-06783
Staff Receiving Call: 205 COX, MICHAEL Assigned To: 000 NO RESPONSE
Date Reported: 12/24/2013 Time Reported: 8:58
Date of Release: 12/24/2013 Time of Release: 8:24
Town of Release: ORANGE State of Release: CT
Location of Reported Release: 60 MARSH HILL ROAD
Reported By: KEN QUIRKE Phone: (203) 623-9214 Ext:
Representing: SOUTHERN CT GAS
Responsible Party: SAA Phone:
Street Address:
Town: State: Zip Code:
Does the Responsible Party Accept Financial Responsibility? YES
Release Type: PETROLEUM
Release Substance: MOTOR OIL
Media: GROUND SURFACE
Total Quantity: <7 Gallons 0 Cubic Yards 0 Cubic Feet 0 Drums 0 Pounds
Emergency Measures:
Has the Release Been Terminated?:
Type of Waterbody Affected: NONE
Name of Waterbody Affected: N/A
Total Quantity Recovered: 0 Total Quantity in Water: 0
Corrective Actions Taken: CONTRACTED CT TANK

Discharge Class: COMMERCIAL
Cause of Incident: CONTAINER FAILURE
Agencies Notified: DEP DISPATCH
Status: CLOSED

Connecticut Department of Energy and Environmental Protection
Emergency Response and Spill Prevention Division
Emergency Incident Report

Case No.: 2013-02008
Staff Receiving Call: 205 COX, MICHAEL Assigned To: 000 NO RESPONSE
Date Reported: 04/29/2013 Time Reported: 11:24
Date of Release: 04/29/2013 Time of Release: UNKNOWN
Town of Release: ORANGE State of Release: CT
Location of Reported Release: 100 MARSH HILL ROAD
Reported By: QUIRKE Phone: (203) 623-9214 Ext:
Representing: UNITED ILLUMINATING
Responsible Party: SAA Phone:
Street Address:
Town: State: Zip Code:
Does the Responsible Party Accept Financial Responsibility? YES
Release Type: DIELECT
Release Substance: TRANSFORMER OIL
Media: GROUND SURFACE
Total Quantity: ~10 Gallons 0 Cubic Yards 0 Cubic Feet 0 Drums 0 Pounds
Emergency Measures: non pcb
Has the Release Been Terminated?: YES
Type of Waterbody Affected: NONE
Name of Waterbody Affected: N/A
Total Quantity Recovered: 0 Total Quantity in Water: 0
Corrective Actions Taken: CONTAINED

Discharge Class: UTILITY
Cause of Incident: CONTAINER FAILURE
Agencies Notified: DEP DISPATCH
Status: CLOSED

Connecticut Department of Energy and Environmental Protection
Emergency Response and Spill Prevention Division
Emergency Incident Report

Case No.: 2012-02911
Staff Receiving Call: 205 COX, MICHAEL Assigned To: 000 NO RESPONSE
Date Reported: 06/08/2012 Time Reported: 12:42
Date of Release: 06/08/2012 Time of Release: 12:00
Town of Release: ORANGE State of Release: CT
Location of Reported Release: 60 MARSH HILL ROAD
Reported By: ARNOLD KOEHLER Phone: (203) 525-6623 Ext:
Representing: SLM
Responsible Party: SAA Phone:
Street Address:
Town: State: Zip Code:
Does the Responsible Party Accept Financial Responsibility? YES
Release Type: PETROLEUM
Release Substance: HYDRAULIC OIL
Media: GROUND SURFACE
Total Quantity: ~5 Gallons 0 Cubic Yards 0 Cubic Feet 0 Drums 0 Pounds
Emergency Measures: Speedi dry
Has the Release Been Terminated?: YES
Type of Waterbody Affected: NONE
Name of Waterbody Affected: N/A
Total Quantity Recovered: 0 Total Quantity in Water: 0
Corrective Actions Taken: CONTAINED CONTRACTED
MCVAC

Discharge Class: INDUSTRIAL
Cause of Incident: HOSE FAILURE
Agencies Notified: DEP DISPATCH
Status: CLOSED

Connecticut Department of Energy and Environmental Protection
Emergency Response and Spill Prevention Division
Emergency Incident Report

Case No.: 97-02998
Staff Receiving Call: 922 ACETO, JOHN Assigned To: 917 EMANUELSON, BRIAN
Date Reported: 06/09/1997 Time Reported: 14:42
Date of Release: 05/30/1997 Time of Release: 9:00
Town of Release: ORANGE State of Release: CT
Location of Reported Release: 55 MARSH HILL ROAD
Reported By: UNKNOWN Phone: (203) 555-5555 Ext:
Representing: SELF
Responsible Party: DICHELLO BEER DISTIBUTORS Phone:
Street Address: 55 MARSH HILL ROAD
Town: ORANGE State: CT Zip Code: 06477-
Does the Responsible Party Accept Financial Responsibility? NO
Release Type: PETROLEUM
Release Substance: GASOLINE
Media: GROUND SURFACE
Total Quantity: 0 Gallons 0 Cubic Yards 0 Cubic Feet 0 Drums 0 Pounds
Emergency Measures: BASED AN ANONYMOUS REPORT-- TANKS REPORTED TO BE REMOVED AND DUMPED IN MARSH BEHIND BUILDING
Has the Release Been Terminated?: YES
Type of Waterbody Affected: MARSH
Name of Waterbody Affected: MARSH
Total Quantity Recovered: 0 Total Quantity in Water: 0
Corrective Actions Taken: INVESTIGATED INVESTIGATED

Discharge Class: COMMERCIAL
Cause of Incident: INGROUND TANK FAILURE DUMPING
Agencies Notified: BUREAU OF WASTE MANAGEMENT - OIL AND CHEMICAL SPILL RESPONSE
Status: CLOSED

Connecticut Department of Energy and Environmental Protection
Emergency Response and Spill Prevention Division
Emergency Incident Report

Case No.: 2012-04931
Staff Receiving Call: 205 COX, MICHAEL Assigned To: 000 NO RESPONSE
Date Reported: 09/10/2012 Time Reported: 14:02
Date of Release: 09/10/2012 Time of Release: 8:45
Town of Release: ORANGE State of Release: CT
Location of Reported Release: 100 MARSH HILL ROAD
Reported By: KEN QUIRKE Phone: (203) 926-4729 Ext:
Representing: UNITED ILLUMINATING
Responsible Party: SAA Phone:
Street Address:
Town: State: Zip Code:
Does the Responsible Party Accept Financial Responsibility? YES
Release Type: DIELECT
Release Substance: TRANSFORMER OIL
Media: GROUND SURFACE
Total Quantity: <1 Gallons 0 Cubic Yards 0 Cubic Feet 0 Drums 0 Pounds
Emergency Measures: non pcb
Has the Release Been Terminated?: YES
Type of Waterbody Affected: NONE
Name of Waterbody Affected: N/A
Total Quantity Recovered: 0 Total Quantity in Water: 0
Corrective Actions Taken: CLEANED

Discharge Class: UTILITY
Cause of Incident: CONTAINER FAILURE
Agencies Notified: DEP DISPATCH
Status: CLOSED

Connecticut Department of Energy and Environmental Protection
Emergency Response and Spill Prevention Division
Emergency Incident Report

Case No.: 2012-05010
Staff Receiving Call: 202 LANDRY, ROBIN Assigned To: 000 NO RESPONSE
Date Reported: 09/14/2012 Time Reported: 13:54
Date of Release: 09/14/2012 Time of Release: UNKNOWN
Town of Release: ORANGE State of Release: CT
Location of Reported Release: 100 MARSH HILL ROAD
Reported By: BO KATRECZKO Phone: (203) 926-4737 Ext:
Representing: UNITED ILLUMINATING
Responsible Party: SAME Phone:
Street Address:
Town: State: Zip Code:
Does the Responsible Party Accept Financial Responsibility?
Release Type: PETROLEUM
Release Substance: HYDRAULIC OIL
Media: GROUND SURFACE
Total Quantity: ~12 Gallons 0 Cubic Yards 0 Cubic Feet 0 Drums 0 Pounds
Emergency Measures:
Has the Release Been Terminated?: YES
Type of Waterbody Affected: NONE
Name of Waterbody Affected:
Total Quantity Recovered: 0 Total Quantity in Water: 0
Corrective Actions Taken: CONTAINED CONTRACTED
SANDED CLEANED

Discharge Class: TRANSPORTATION UTILITY
Cause of Incident: HOSE FAILURE
Agencies Notified: DEP DISPATCH
Status: CLOSED

Natural Diversity Data Base Areas

ORANGE, CT

December 2014

State and Federal Listed Species & Significant Natural Communities

Town Boundary

NOTE: This map shows general locations of State and Federal Listed Species and Significant Natural Communities. Information on listed species is collected and compiled by the Natural Diversity Data Base (NDDB) from a number of data sources . Exact locations of species have been buffered to produce the general locations. Exact locations of species and communities occur somewhere in the shaded areas, not necessarily in the center. A new mapping format is being employed that more accurately models important riparian and aquatic areas and eliminates the need for the upstream/downstream searches required in previous versions.

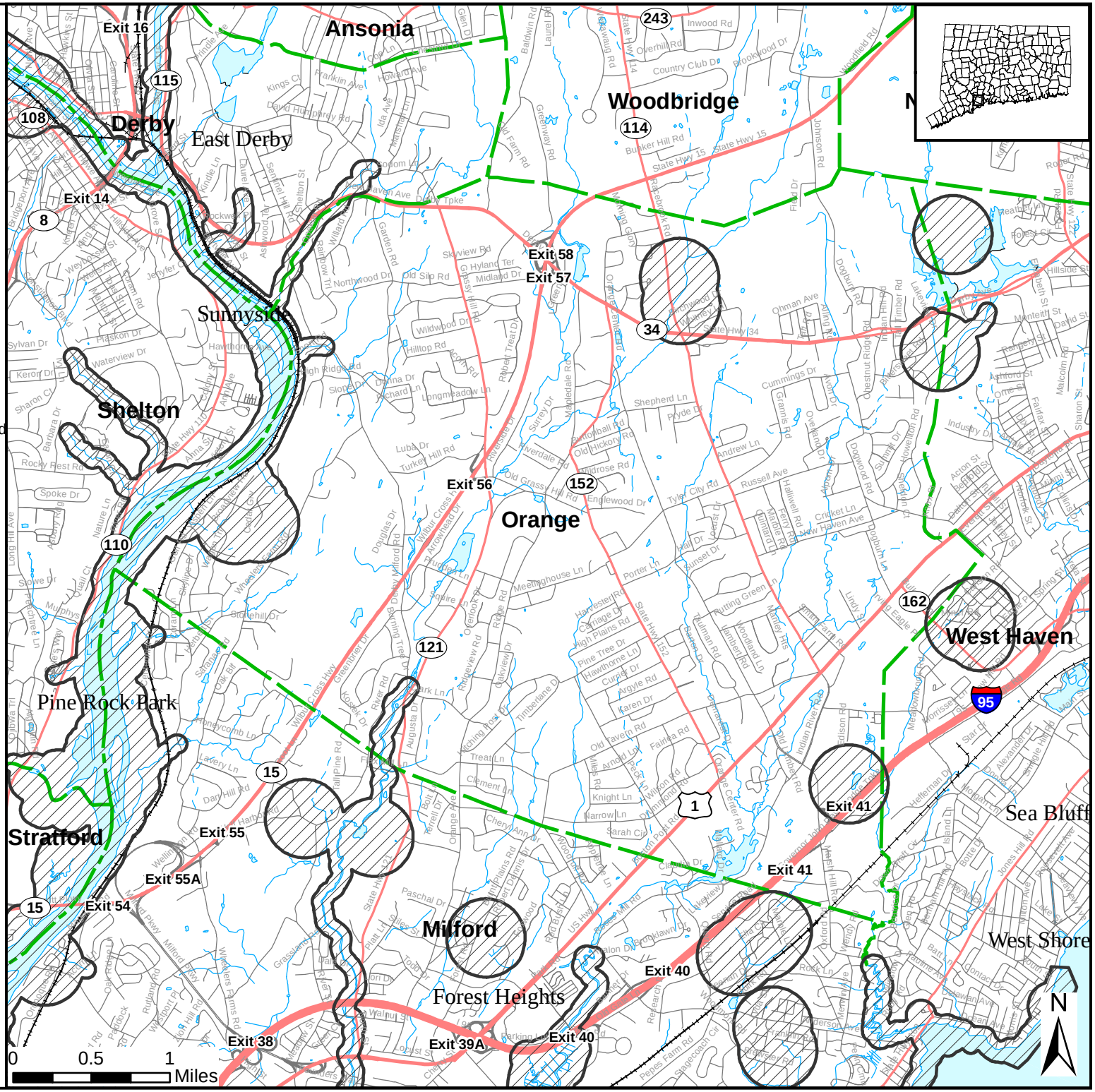
This map is intended for use as a preliminary screening tool for conducting a Natural Diversity Data Base Review Request. To use the map, locate the project boundaries and any additional affected areas. If the project is within a shaded area there may be a potential conflict with a listed species. For more information, complete a Request for Natural Diversity Data Base State Listed Species Review form (DEP-APP-007), and submit it to the NDDB along with the required maps and information. More detailed instructions are provided with the request form on our website.

www.ct.gov/deep/nddbrequest

Use the CTECO Interactive Map Viewers at www.cteco.uconn.edu to more precisely search for and locate a site and to view aerial imagery with NDDB Areas.

QUESTIONS: Department of Energy and Environmental Protection (DEEP)
79 Elm St., Hartford CT 06106
Phone (860) 424-3011

Connecticut Department of Energy & Environmental Protection
Bureau of Natural Resources
Wildlife Division



University Libraries
Map and Geographic Information Center

Neighborhood Change in Connecticut, 1934 to Present

Prefer to use the previous version of the 1934 Fairchild Aerial Photography map mash-up? View Previous Version of this Interface

Attention ArcGIS and other GIS software users! The 1934 Aerial Photography layer is available via MAGIC's WMS.

Use the search box below to locate an address in Connecticut.

55 marsh hill rd, orange, ct Find Address

Toggle map layers

CT Towns

Chicago 16th edition [author-date]

8-2-51

CNG-3H-107

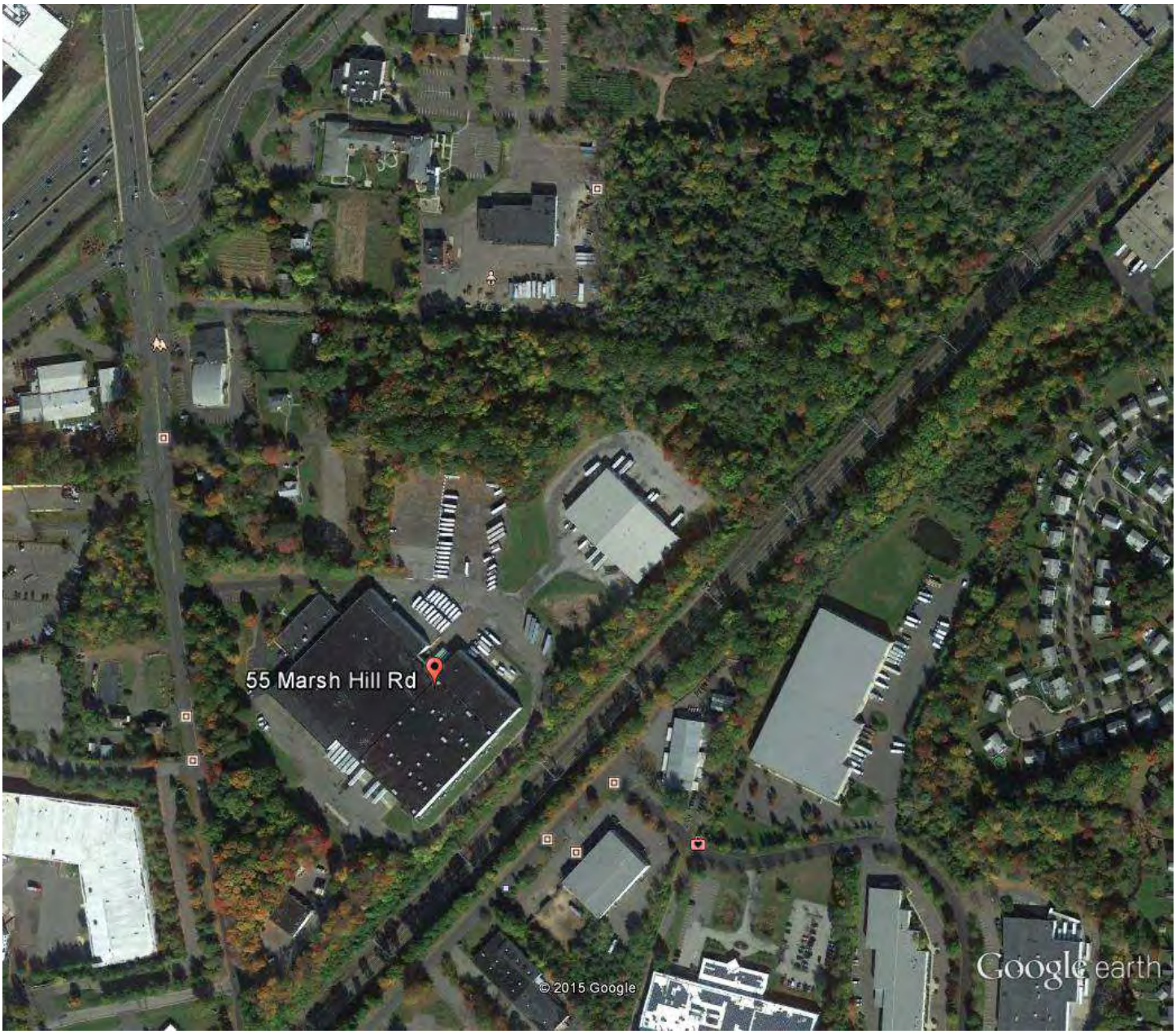

2-26-70 586

3-29-86 153.017 CT-DEP 39-32-7083

NH 13078 153.02


3-13-90
153.026
CT-DEP
1-33-223


04-18-95
1"=1000'
State of Connecticut
32-84



Google earth

feet 1000
meters 400

APPENDIX I

Environmental Professional Resumes

Loureiro
Engineering • Construction • EH&S • Energy • Waste

JOSEPH T. TRZASKI, L.E.P.

Senior Project Scientist

Education

Bachelor of Science, Natural Resources
University of Connecticut, 1996

Professional Licenses/Registrations

Licensed Environmental Professional, Connecticut, #529

Professional Affiliations

Environmental Professional's Organization of Connecticut

Key Practice Areas

Site investigation/remediation; remediation system design, installation, operation and maintenance, environmental regulatory compliance support

Summary Biography

Mr. Trzaski has over 14 years of experience in a broad range of civil, environmental, and hazardous waste projects for commercial, industrial, and government clients. His services performed include soil and groundwater investigations and remediation programs, underground storage tank removal oversight and inspection, construction oversight and inspection, field activities, proposal preparation, report preparation, and the handling and treating of hazardous chemicals and wastes. He has also managed a portfolio of over 25 sites for a major retail petroleum vendor.

His remediation experience includes: the development of remedial action plans and reports, remedial alternatives evaluations for contaminated soil and groundwater, design and supervision of disposal/excavation and on-site capping activities for soil remediation projects, the management of in-situ chemical oxidation injection programs, and management of various contaminated groundwater and soil vapor recovery systems.

Mr. Trzaski's soil and groundwater investigation and remediation field activity experience includes a full range of services. These services include installation of groundwater monitoring wells and soil borings, installation of micro wells, Screenpoint® samplers, and soil borings with LEA's Geoprobe®, soil and groundwater sampling and monitoring, soil vapor surveys, logging of geologic borings, well development activities, surveying activities, supervision and training of field personnel, and a variety of contaminated-soil excavation and removal activities.

Mr. Trzaski's reporting and regulatory interfacing experience includes development of Phase I, Phase II and Phase III site assessments, remedial action plans, site conceptual models, groundwater reclassification requests, and tank excavation assessment reports.

Specific Project Experience:

Subsurface Investigation, Industrial / Aerospace Facility, Middletown, CT

Performed Phase II subsurface investigation activities to develop future remediation costs for client. Managed all facets of field and office tasks associated with the investigation activities. Evaluated data and made technical decisions regarding the implementation of multiple phases of project work and delineation of impacted soils.

Soil Vapor Extraction System Design & Installation, Industrial / Aerospace Facility, Middletown, CT

Soil vapor extraction system pilot testing, installation of extraction wells and system design for remediation of petroleum impacted soils at a former bulk fuel storage area. Evaluated historical site analytical data and geologic information to determine release areas and appropriate pilot test and monitoring point locations. Prepared pilot test work plan, designed pilot test, coordinated and managed the installation of pilot test wells and performance of SVE pilot test, designed SVE system based on results of pilot test, coordinated and managed installation of SVE wells, prepared bid specification and selected system vendor for construction of proposed system. Coordinate and managed the installation and successful start-up of SVE system.

Superfund Site, Groundwater Investigation and Remedy, Performing Settling Defendants, Southington, CT

Prepared Remedial Design / Remedial Action Work Plan for Limited Action and Project Operations Plan (including Field Sampling Plan, Quality Assurance Project Plan, and Health and Safety Plan) for Superfund site located in Southington, CT for submittal to US EPA and DEP. Associated work to include additional groundwater investigations for chlorinated solvent groundwater plume, implementation of Environmental Land Use Restrictions, and potential installation and operation/maintenance of vapor intrusion mitigation controls (sub-slab depressurization systems, sub-slab vapor barriers, etc.).

Sub-Slab Soil Vapor Extraction System Design & Installation, Industrial / Brownsfields/Redevelopment, South Norwalk, CT

Performed sub-slab depressurization and soil vapor extraction system pilot testing at former chemical manufacturing facility for redevelopment as athletic complex. Prepared pilot test work plan, designed pilot test, coordinated and managed the installation of pilot test wells and performance of SVE pilot test, designed sub-slab SVE system to mitigate vapor intrusion based on results of pilot test, prepared bid specification and selected components for construction of proposed system. Coordinated and managed the installation and successful start-up of sub-slab depressurization and SVE system.

Groundwater – Surface Water Interaction Study Industrial / Aerospace, East Hartford, CT

Conducted comprehensive groundwater and surface water interaction investigation and study of a chlorinated solvent groundwater plume migrating towards a water body at a large scale industrial / aerospace manufacturing facility. Obtained necessary wetlands permits, installed stream piezometers and surface water gauging stations, conducted groundwater sampling, and evaluated groundwater and surface water data and groundwater sampling data over a six-month period to evaluate groundwater conditions and determine compliance with Connecticut RSRs. Prepared report to include recommendations for additional investigations and risk evaluation.

In-Situ Chemical Oxidation Injection, Retail Petroleum, Retail gas station in Farmington, CT

Performed treatment of petroleum impacted groundwater from a retail gas station in Farmington, CT with chemical oxidation injection of hydrogen peroxide, sodium persulfate and ozone. Petroleum release from a retail gas station, petroleum impacts in groundwater, included diving petroleum plume. Remedial action included in installation of multiple levels of injection wells, including angle-drilled injection wells under a major road to inject chemical oxidants in the center of mass of the plume. Obtained temporary authorization and eventually an underground injection permit for the injection of hydrogen peroxide, sodium persulfate and ozone to remediate impacted groundwater at the site. Multiple injections performed at the site.

Site Investigation, Remedial Soil Excavation, Retail Petroleum, Retail gas station in Ridgefield, CT

Investigate and remediate former retail gas station at property located in Ridgefield, CT. Reviewed historical documentation prepared by previous consultants and provided client with comprehensive evaluation of data and identification of data gaps. Prepared work plan for additional site investigations. Managed performance of subsurface investigations, reported Significant Environmental Hazard to DEP relating to groundwater impacts in the vicinity of potable supply wells. Prepared Remedial Action Plan for excavation of impacted soils, managed and oversaw excavation of impacted soils in former tank field, dispenser area, fuel oil UST and near former hydraulic lifts.

Site Investigation, Remedial Soil Excavation, Retail Petroleum, Retail gas station in New London, CT

Investigate and remediate former retail gas station as part of ongoing Consent Order investigation in New London, CT. DEP Consent Order site from 1980s, performed additional subsurface delineation investigations at offsite properties. Prepared remedial action plans for both petroleum impacts migrating offsite, as well as for NAPL/used oil area remediation. Managed all facets of field and office tasks associated with the investigation and remediation activities. Primary contact with client and DEP. Coordinated with legal counsel for client, offsite property owners for access to perform work. Prepared and reviewed reports for project.

Divestment Assessments (Phase I/Phase II ESAs), Retail Petroleum, Virginia

Conducted Phase I and Phase II ESAs for the divestment of 55 retail petroleum sites in the Richmond and Virginia Beach areas, including the removal of underground storage tanks at 7 sites. Managed all facets of field and office tasks associated with the Phase I, Phase II and tank removal projects. Directed 3 to 4 geologist/scientist/engineering staff during performance of the investigations and remediation activities.

Phase I & Phase II ESAs, Industrial / Printing, Florida

Managed and performed Phase I and Phase II ESAs at two large scale printing facilities in South Daytona and St. Petersburg, Florida as part of potential sale of properties. Performed Phase I ESA activities to determine areas of concern and develop Phase II scopes of work for both sites. Managed all facets of field and office tasks associated with the investigation activities. Made technical decisions regarding the proposed phase II activities to client, provided recommendations and conclusions for the two sites with regard to the local Florida regulations. Developed and tracked budget for work. Evaluated data, prepared and finalized reports.

Loureiro
Engineering • Construction • EH&S • Energy • Waste

Curtis Romanchok
Senior Geologist

Education

Bachelor of Science, Geology
University of Delaware, 2009

Professional Affiliations

Geological Society of America

Key Practice Areas

Site investigation and remediation; collection and screening of air, soil and groundwater samples for environmental investigations

Summary Biography

Curtis Romanchok is a Senior Geologist with Loureiro Engineering Associates, Inc. who specializes in the environmental site investigation and remediation arena. He has conducted numerous Phase I, II, and III Environmental Site Assessment activities under federal and state regulatory programs in Connecticut.

Mr. Romanchok has performed site investigation activities involving the collection and field screening of air, soil vapor, soil, sediment, surface water, and groundwater samples. As a senior geologist, he has provided geologic oversight on various projects in complex hydrogeologic settings and physiographic provinces for which groundwater monitoring wells have been installed in unconsolidated deposits. Mr. Romanchok has led numerous soil boring assessments in the field using a variety of soil boring and drilling techniques, including hollow-stem auger and direct-push techniques. He has also led assessments conducted with the use of hand augers and other manual soil sampling tools.

Mr. Romanchok has also conducted numerous soil vapor surveys to identify the source and extent of volatile organic compounds (VOCs) in the subsurface. In addition, he has conducted soil vapor extraction tests and pressure field extension tests to design and install remediation and mitigation systems to cleanup contaminated soil and eliminate the potential for vapor intrusion of VOCs into buildings.

Prior to joining Loureiro, Mr. Romanchok used aquifer modeling software to aid in the analysis of results obtained during groundwater studies, including conducting slug/bail tests for groundwater to estimate hydrogeologic properties for the design of remediation strategies at various sites, as well as LNAPL slug/bail tests to determine LNAPL transmissivity. Mr. Romanchok has also provided emergency response and spill clean up services and follow-up services involving the decontamination, waste characterization, and transportation of contaminated property.

10.0 ATTACHMENTS

ATTACHMENT 1

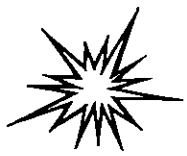


FIGURE 1: USGS TOPOGRAPHIC MAP

NEW HAVEN, WOODMONT, ANSONIA AND MILFORD, CT QUADRANGLES

SCALE 1"=2000'

400 0 2000

Catalyst Environmental Consulting, Inc.

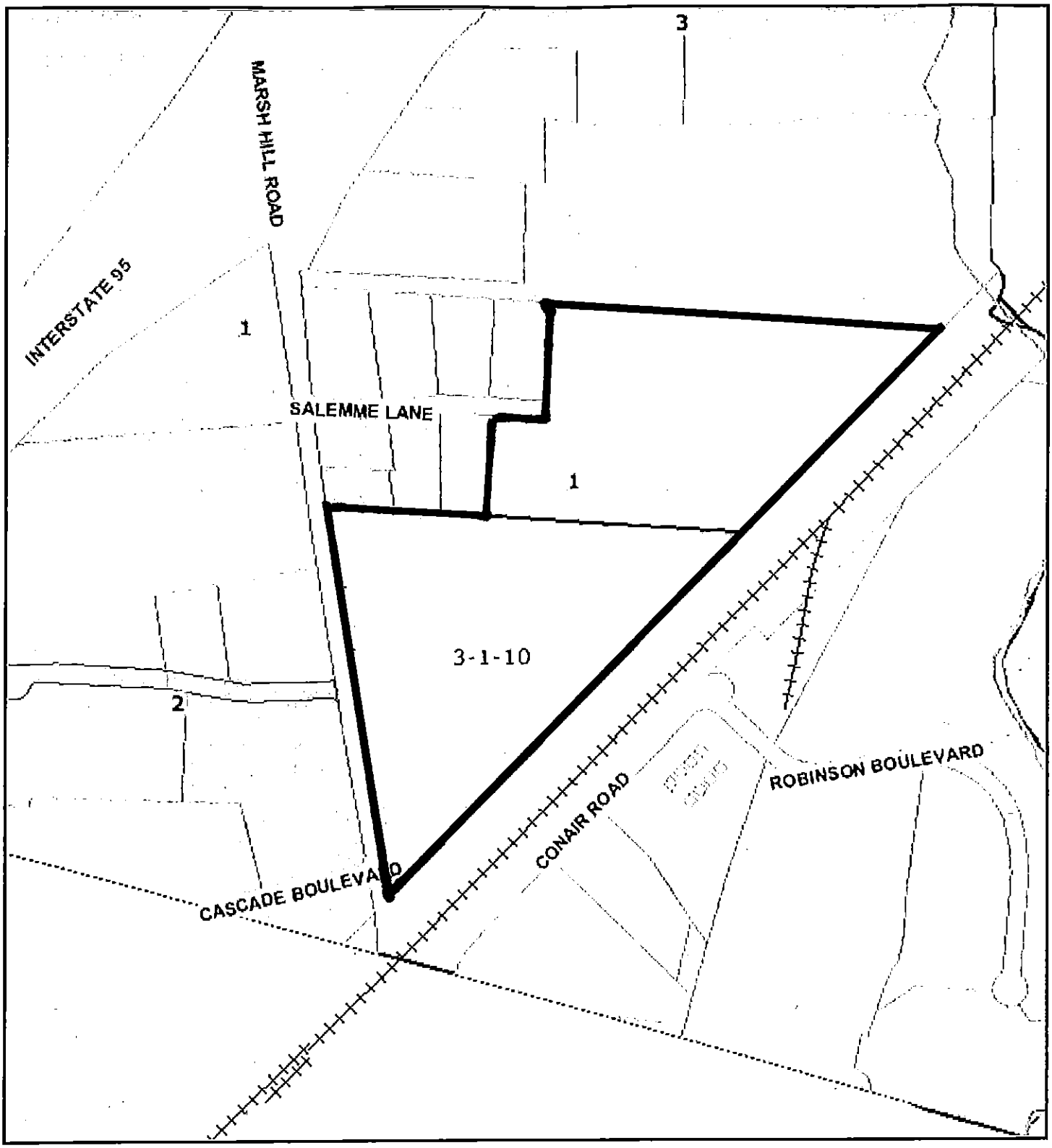
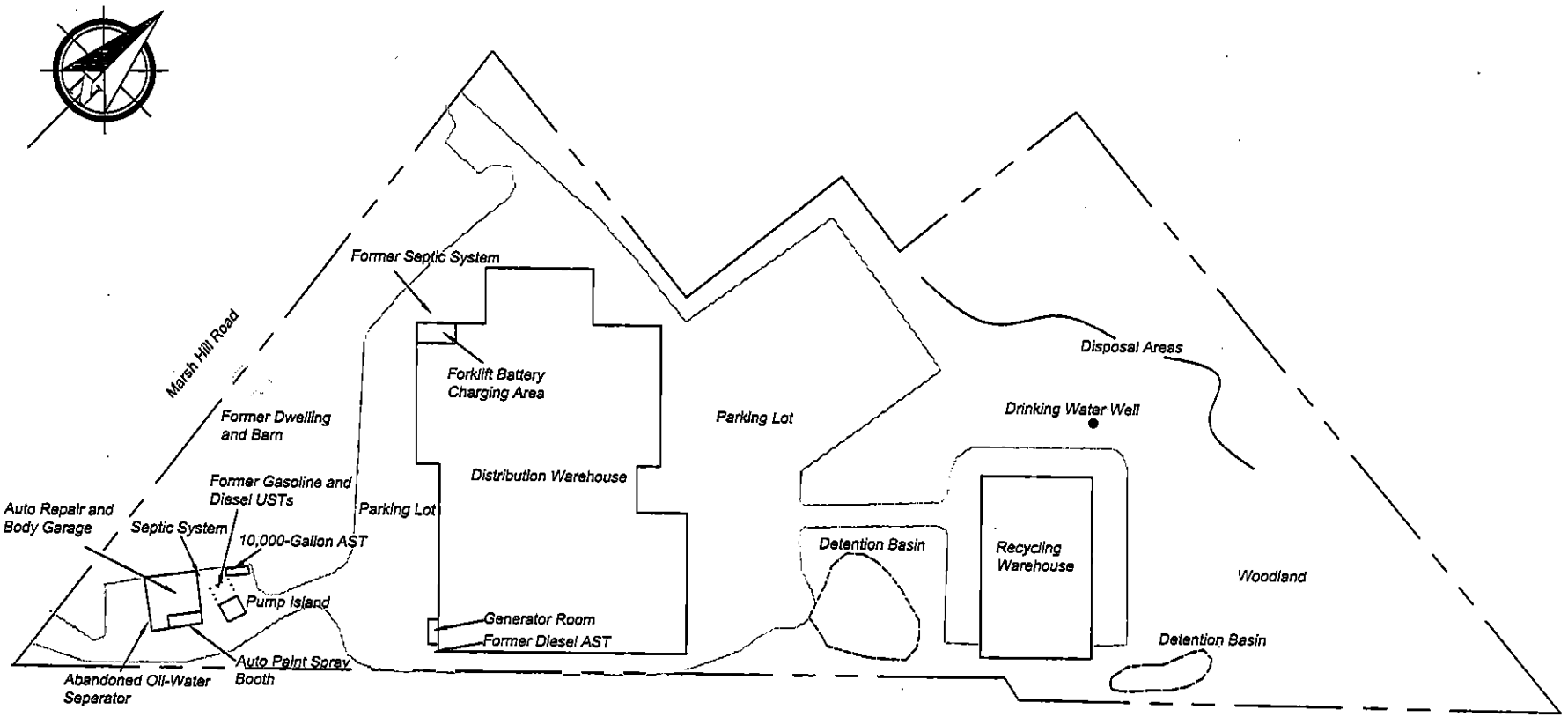


FIGURE 2: ORANGE ASSESSOR'S MAP

APPROXIMATE SCALE 1" = 400'

80 0 400

Catalyst Environmental Consulting, Inc.



Catalyst Environmental Consulting, Inc.

FIGURE 3: SITE SKETCH

0 and 55 MARSH HILL ROAD, ORANGE, CT

DATE: 04/14/11

APPROXIMATE SCALE: 1"=250'

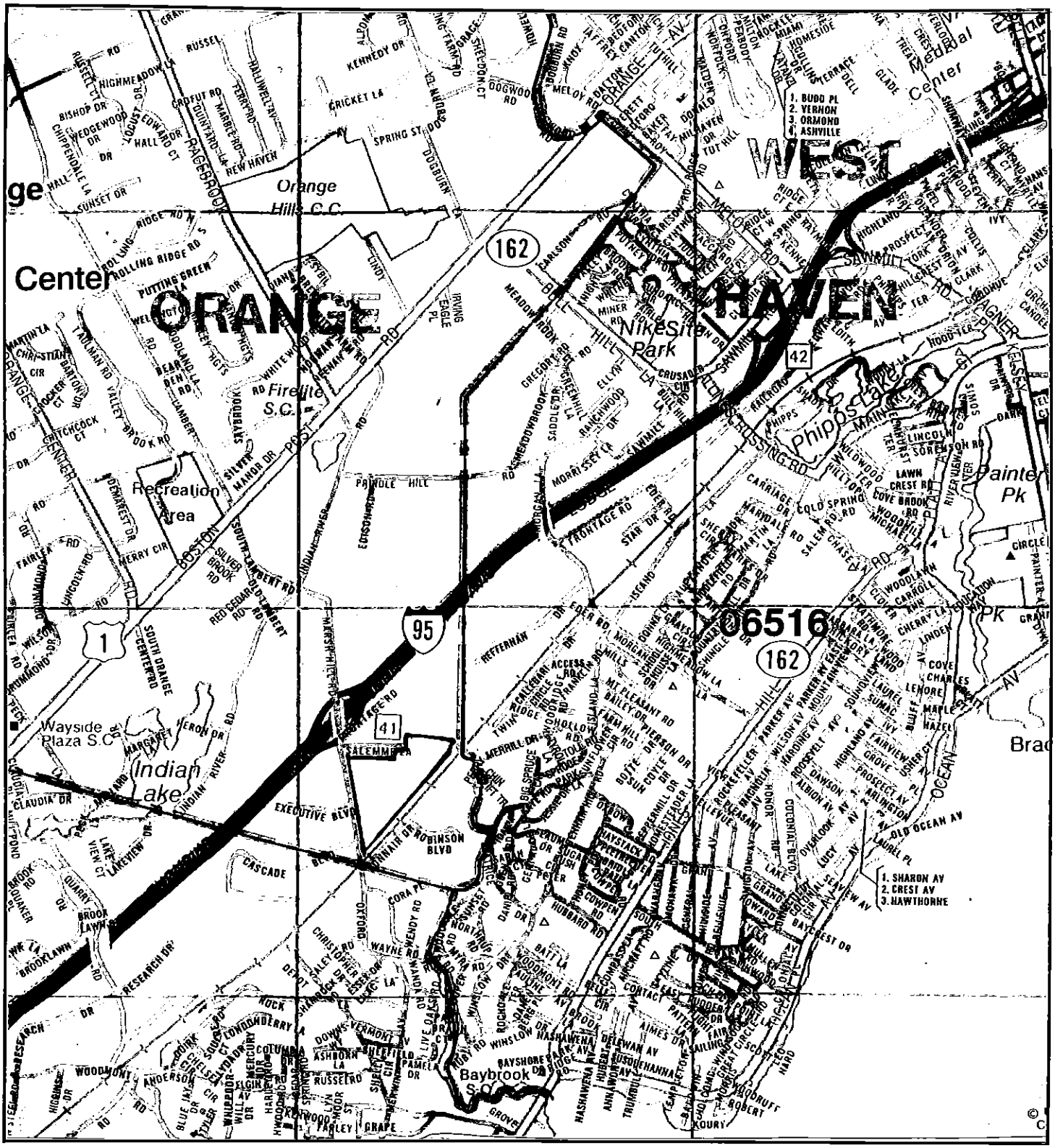


FIGURE 4: ORANGE, CT STREET MAP

APPROXIMATE SCALE 1" = 0.40 MILE

Catalyst Environmental Consulting, Inc.

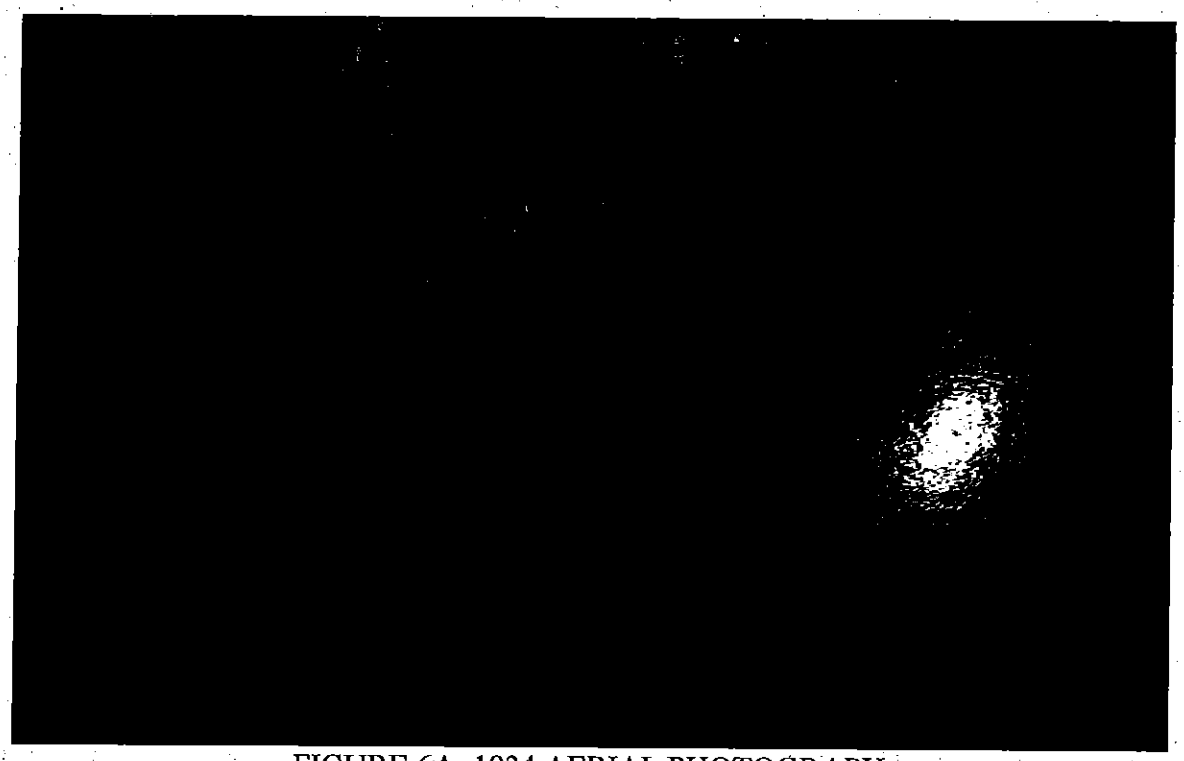


FIGURE 6A: 1934 AERIAL PHOTOGRAPH

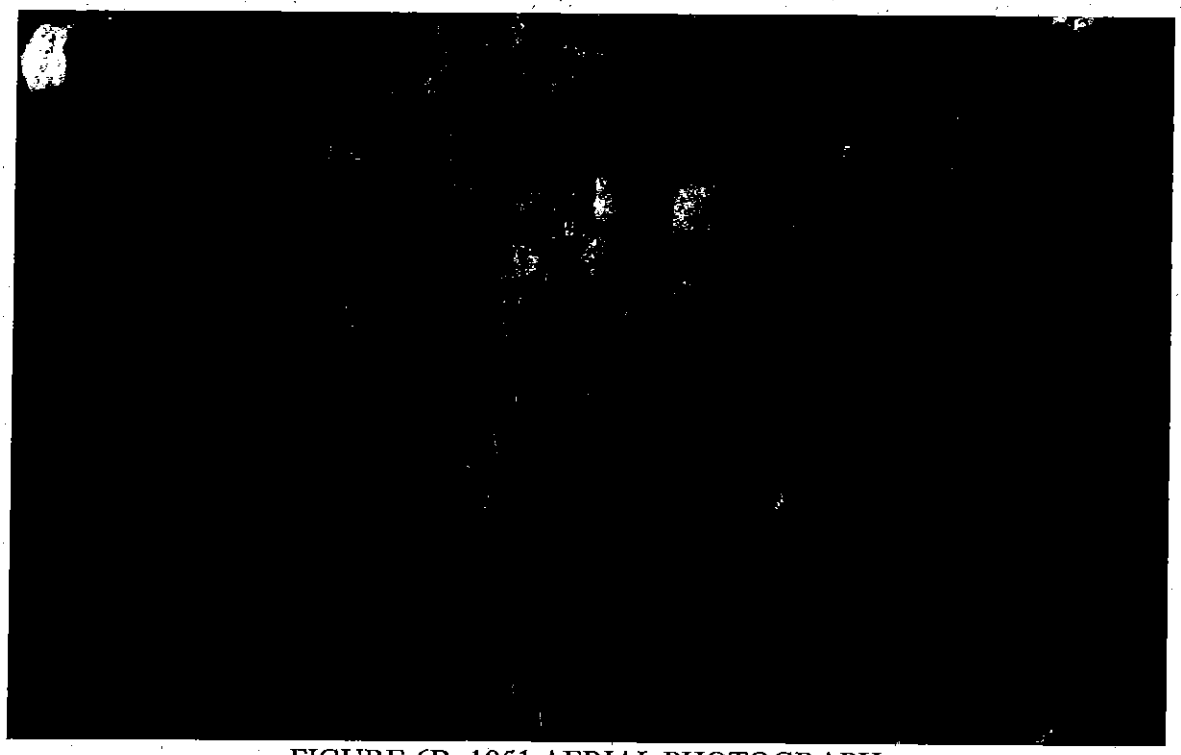


FIGURE 6B: 1951 AERIAL PHOTOGRAPH

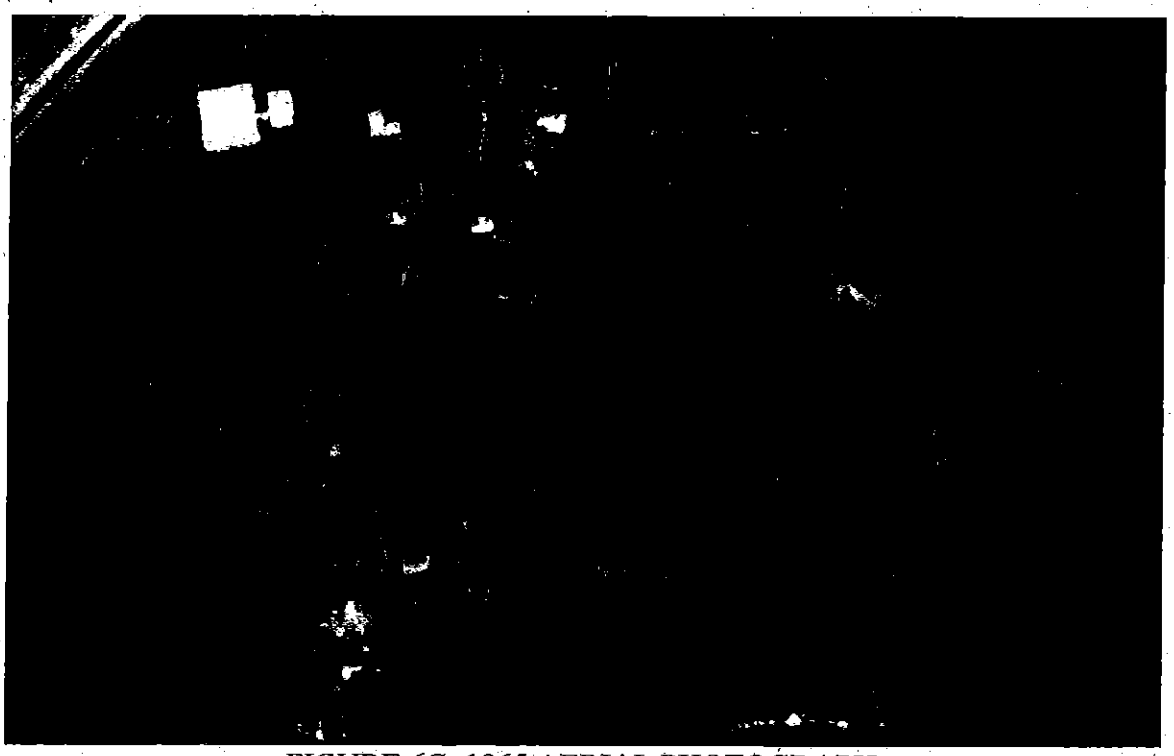


FIGURE 6C: 1965 AERIAL PHOTOGRAPH

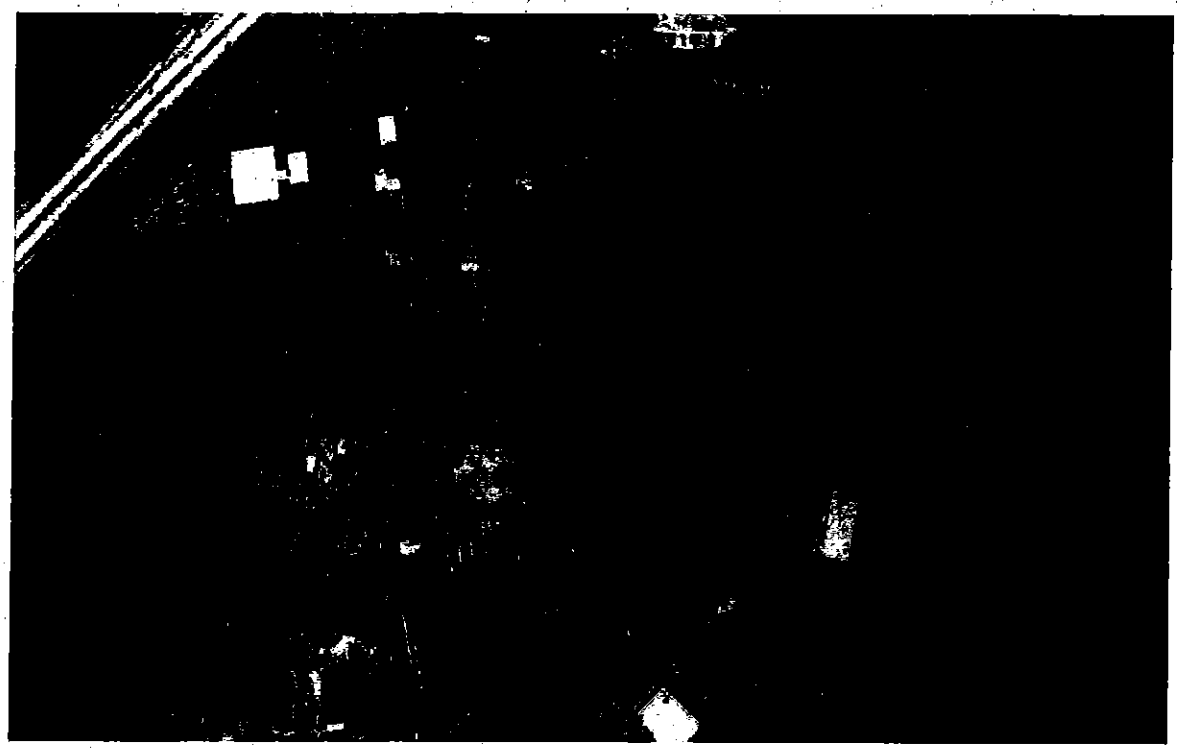


FIGURE 6D: 1970 AERIAL PHOTOGRAPH

FIGURE 6E: 1975 AERIAL PHOTOGRAPH

FIGURE 6F: 1980 AERIAL PHOTOGRAPH

FIGURE 6G: 1986 AERIAL PHOTOGRAPH

FIGURE 6H: 1990 AERIAL PHOTOGRAPH

FIGURE 6I: 1995 AERIAL PHOTOGRAPH

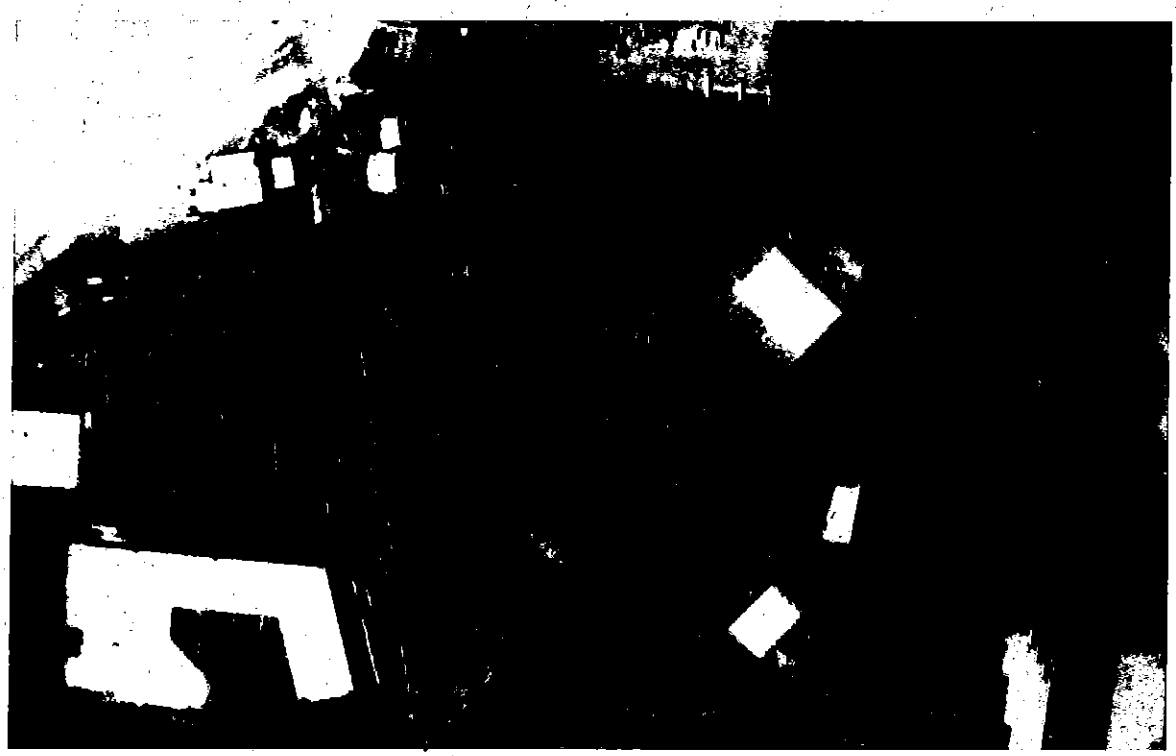


FIGURE 6J: 2000 AERIAL PHOTOGRAPH

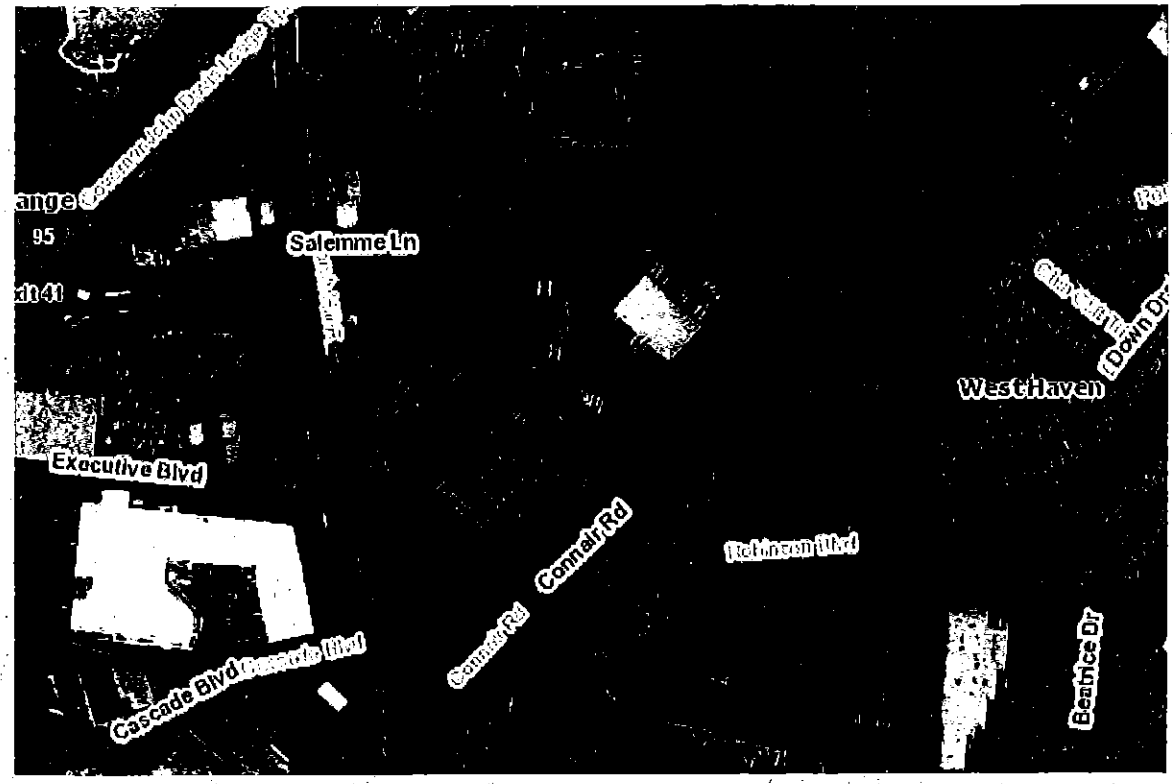
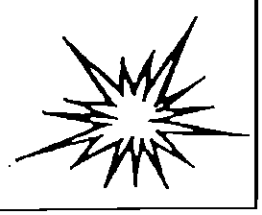


FIGURE 6K: 2004 AERIAL PHOTOGRAPH

FIGURE 5:
ORANGE SANBORN ATLASES
NO COVERAGE



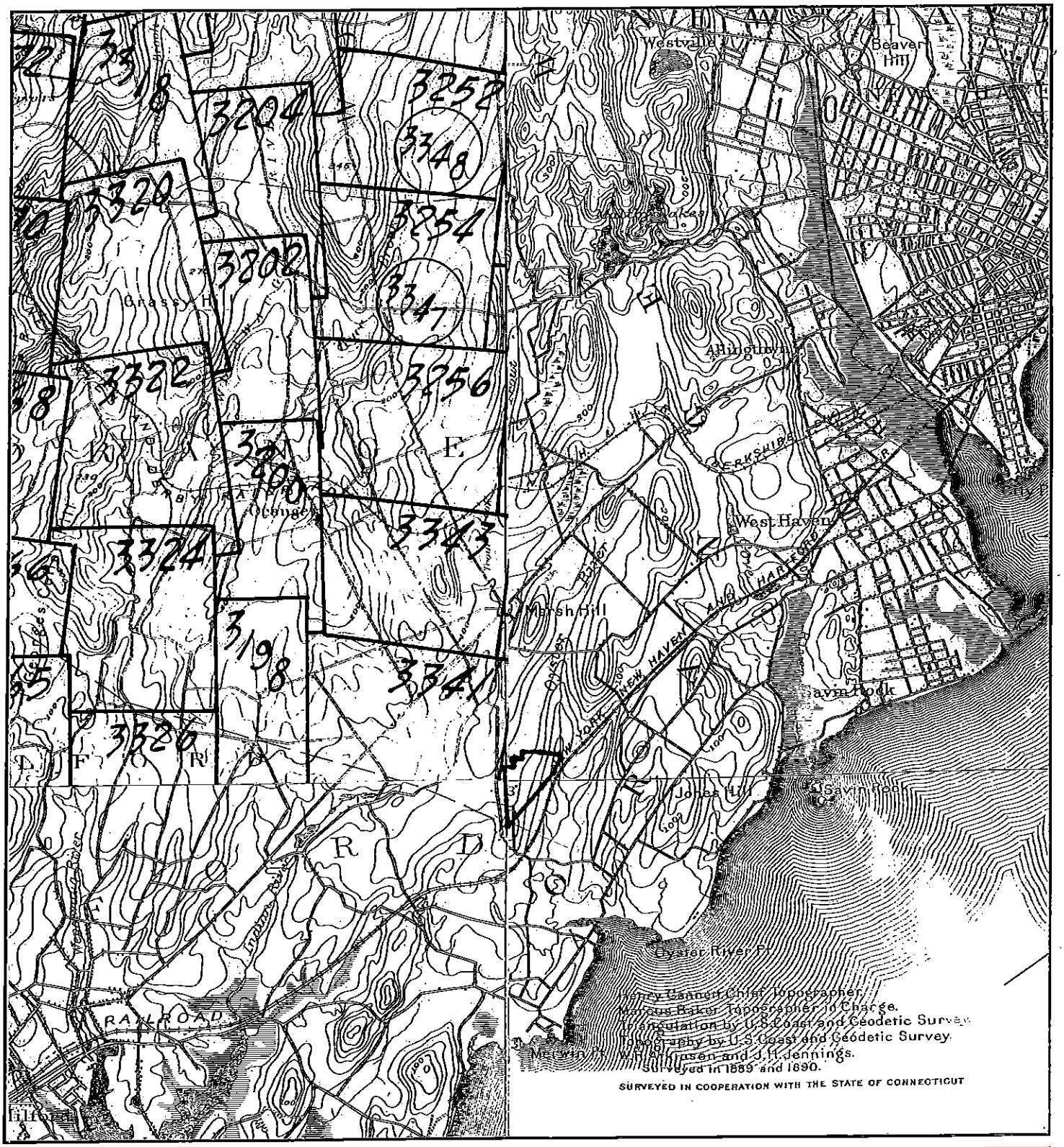


FIGURE 7A: HISTORICAL TOPOGRAPHIC MAP - 1889

(APPROXIMATE SCALE: 1 IN. = 5,208 FT.)

Catalyst Environmental Consulting, Inc.

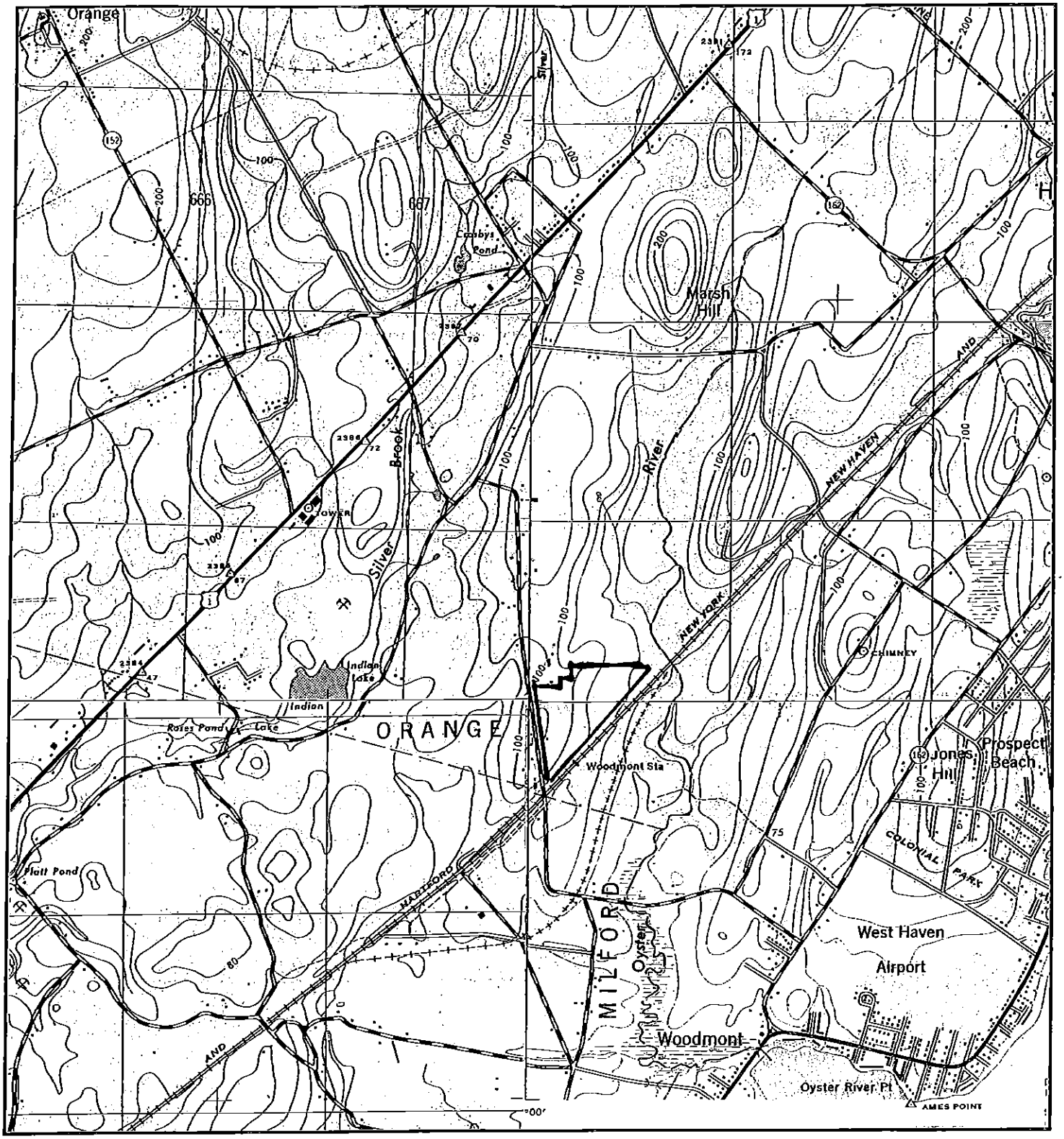


FIGURE 7B: 1943 HISTORICAL TOPOGRAPHIC MAP

(APPROXIMATE SCALE: 1 IN. = 2,100 FT.)

Catalyst Environmental Consulting, Inc.

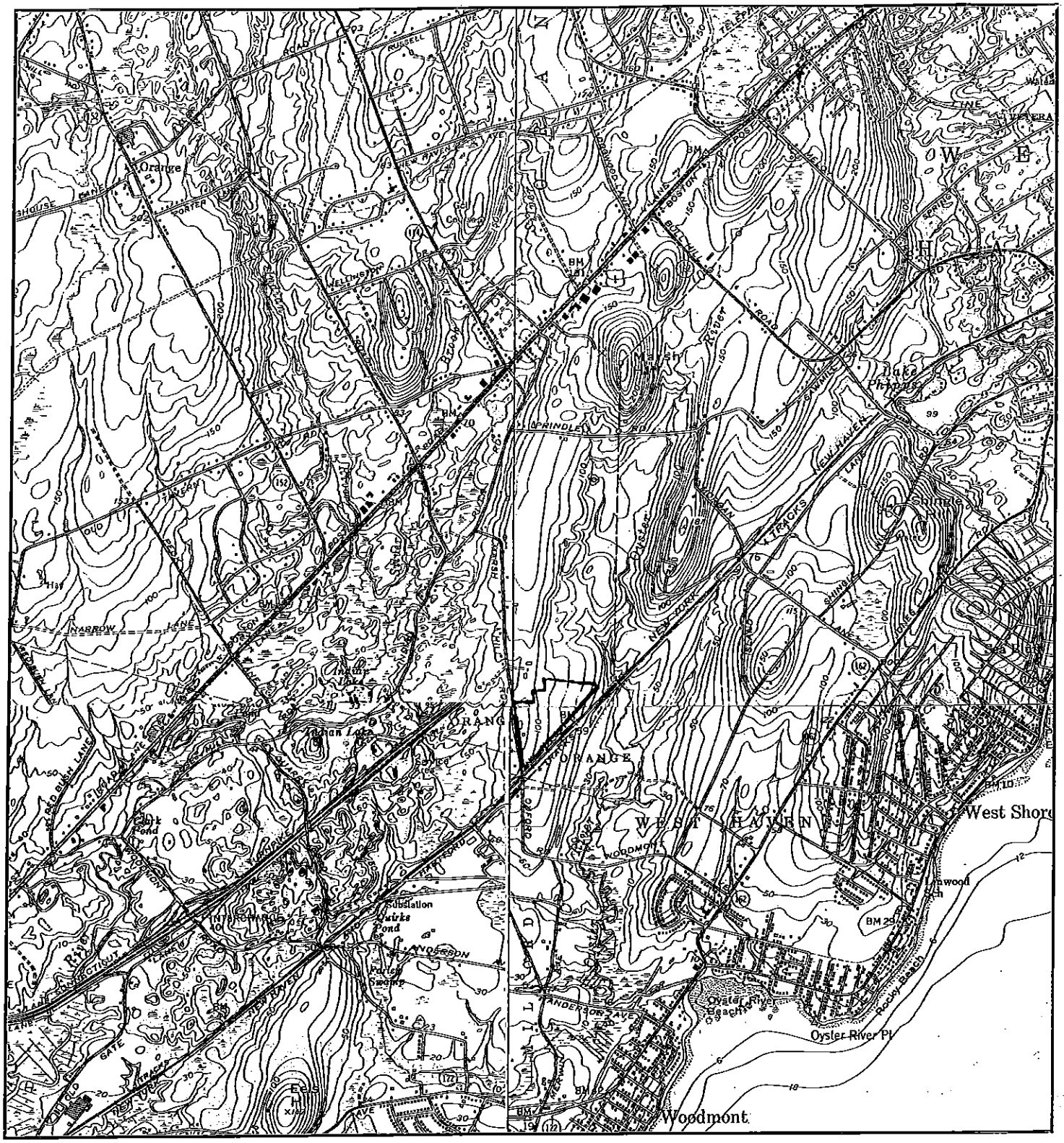


FIGURE 7C: 1950s HISTORICAL TOPOGRAPHIC MAP

(APPROXIMATE SCALE: 1 IN. = 2,640 FT.)

Catalyst Environmental Consulting, Inc.

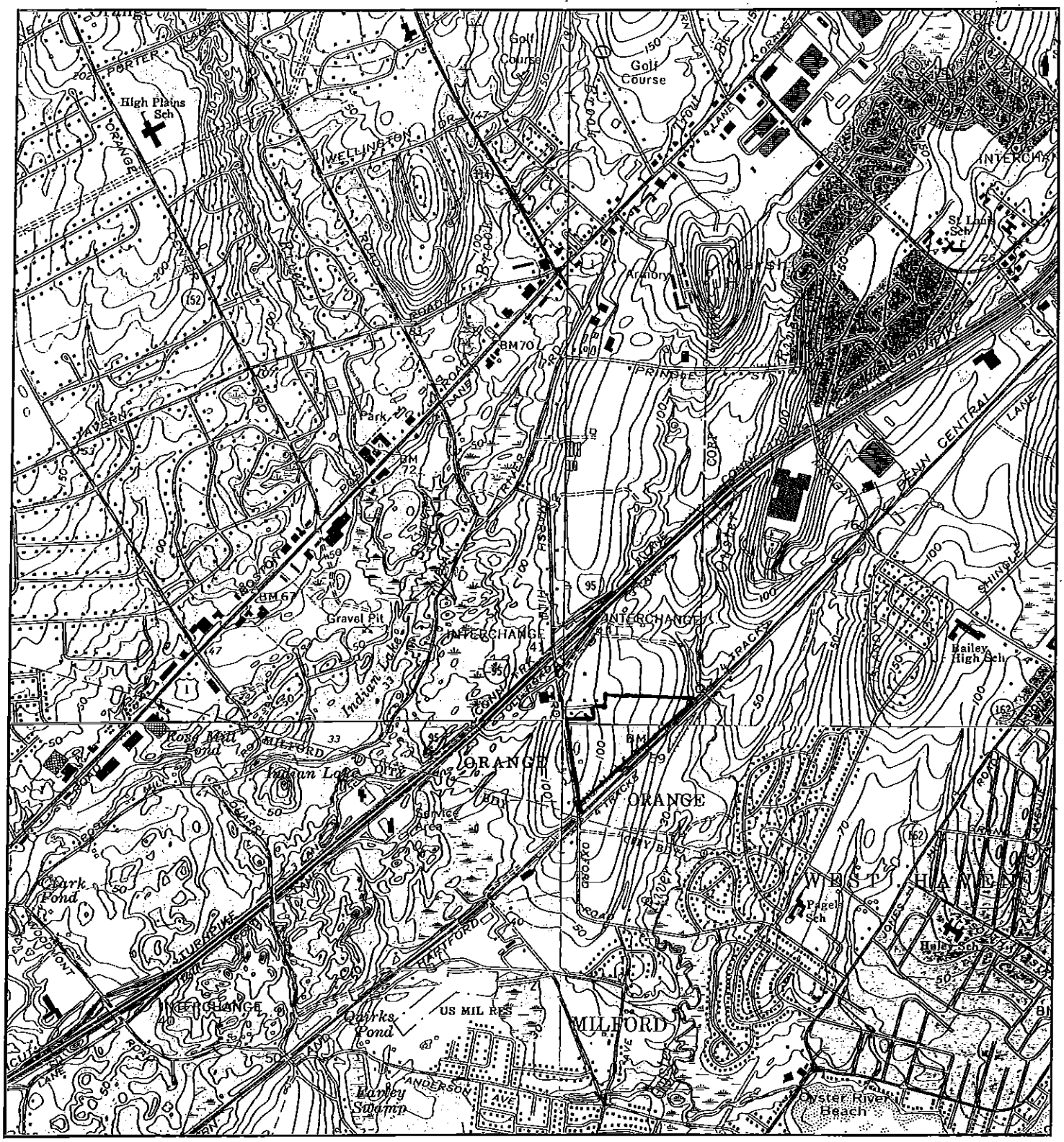


FIGURE 7D: 1960s HISTORICAL TOPOGRAPHIC MAP

(APPROXIMATE SCALE: 1 IN. = 2,000 FT.)

Catalyst Environmental Consulting, Inc.

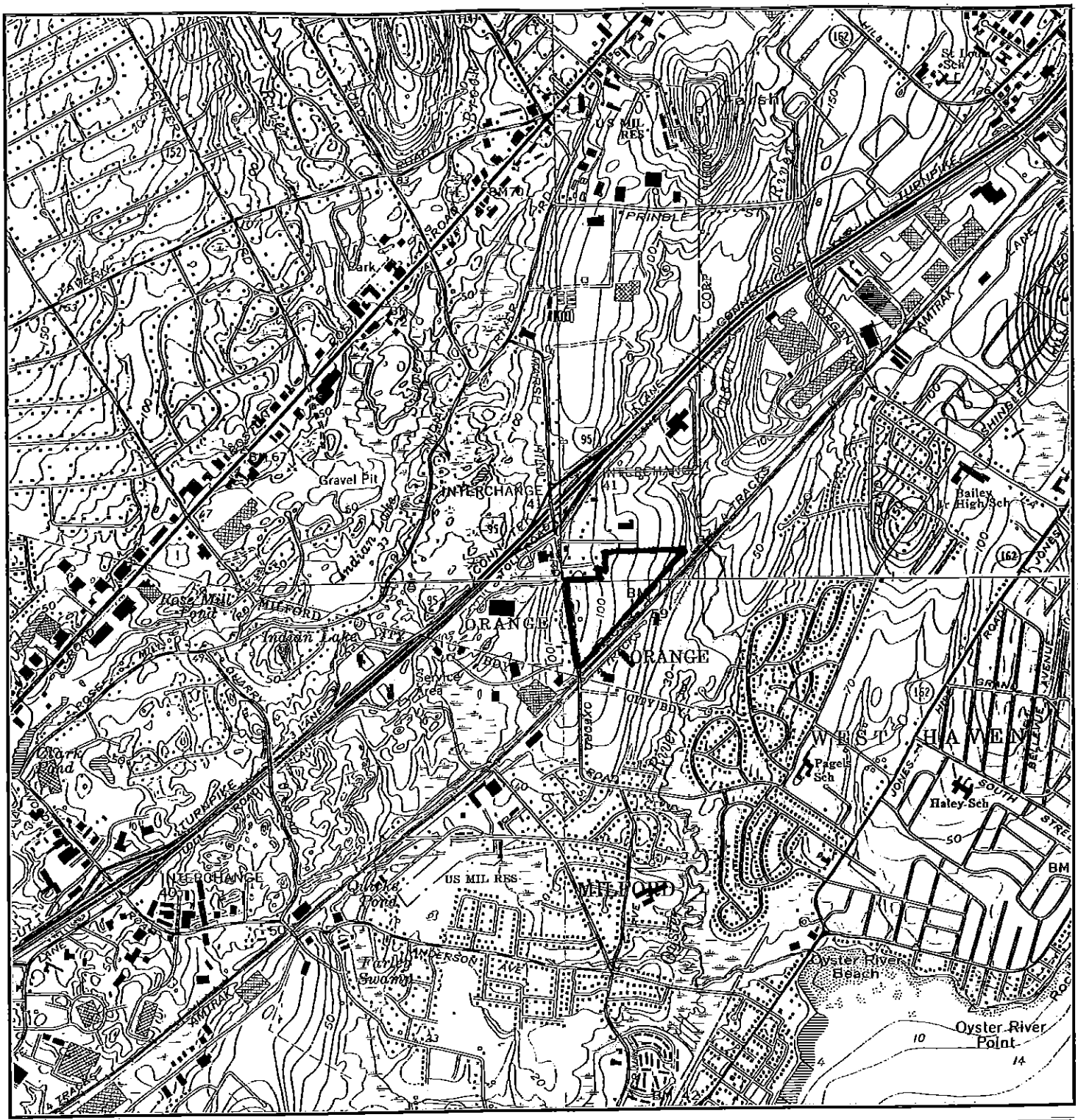
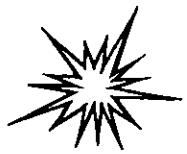


FIGURE 7E: 1970s HISTORICAL TOPOGRAPHIC MAP

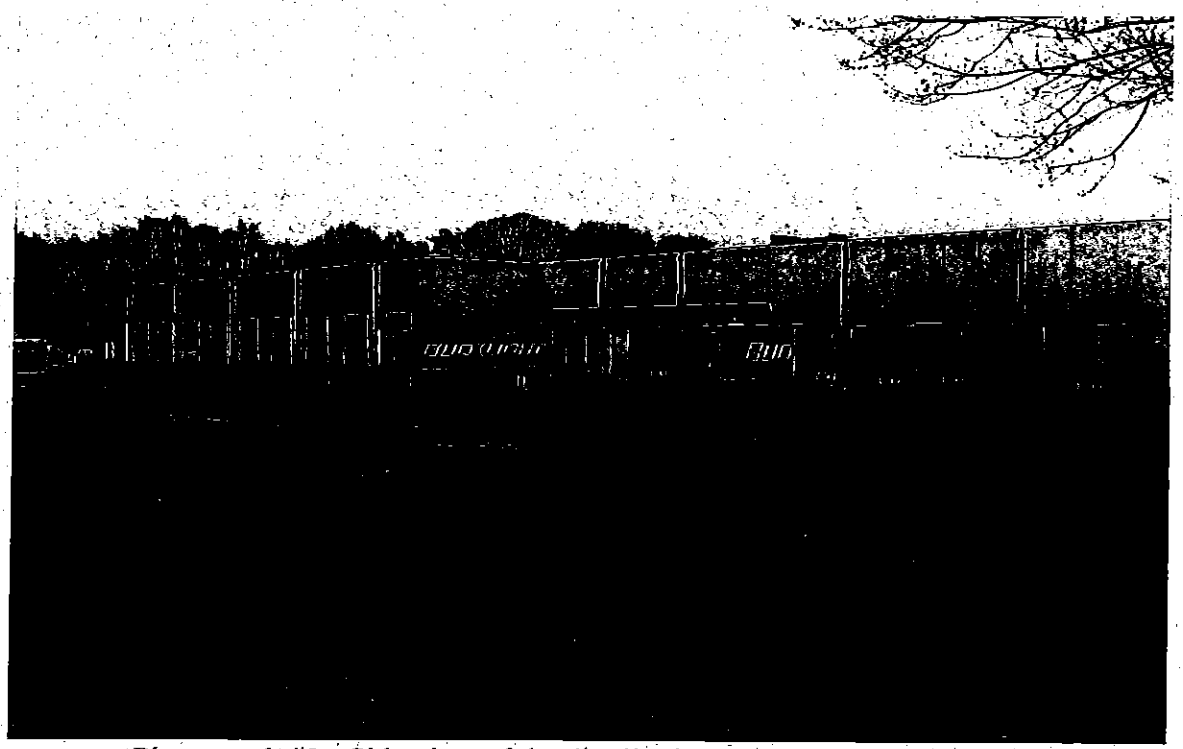
(APPROXIMATE SCALE: 1 IN. = 2,000 FT.)

Catalyst Environmental Consulting, Inc.

ATTACHMENT 2



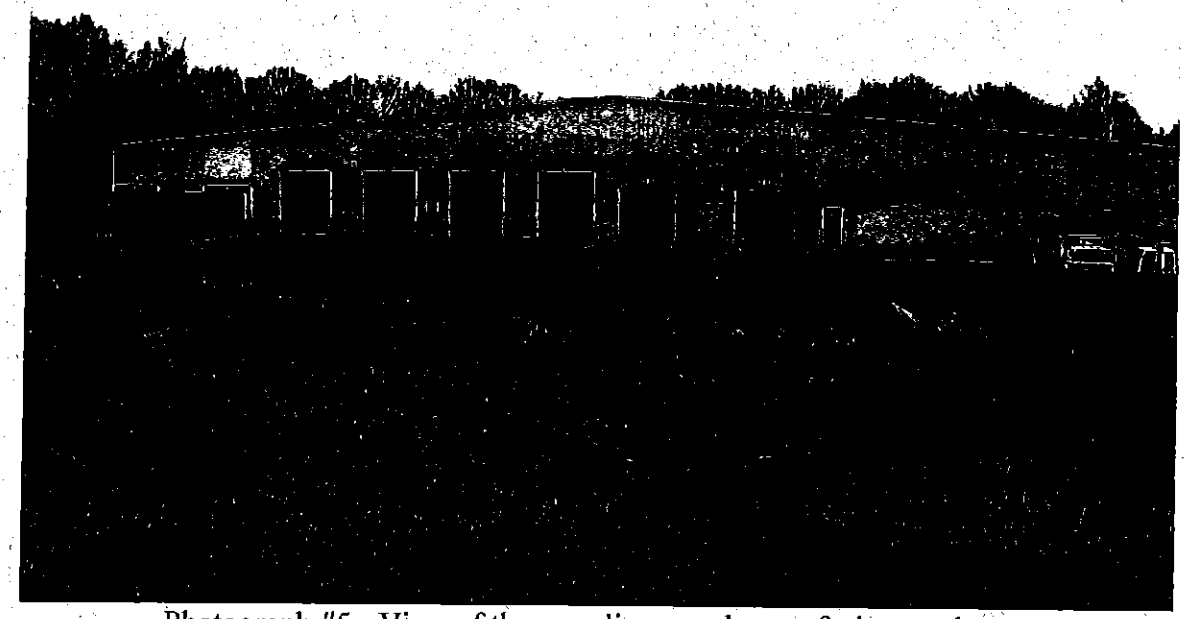
Photograph #1 - Front view of the distribution warehouse, facing southeast.



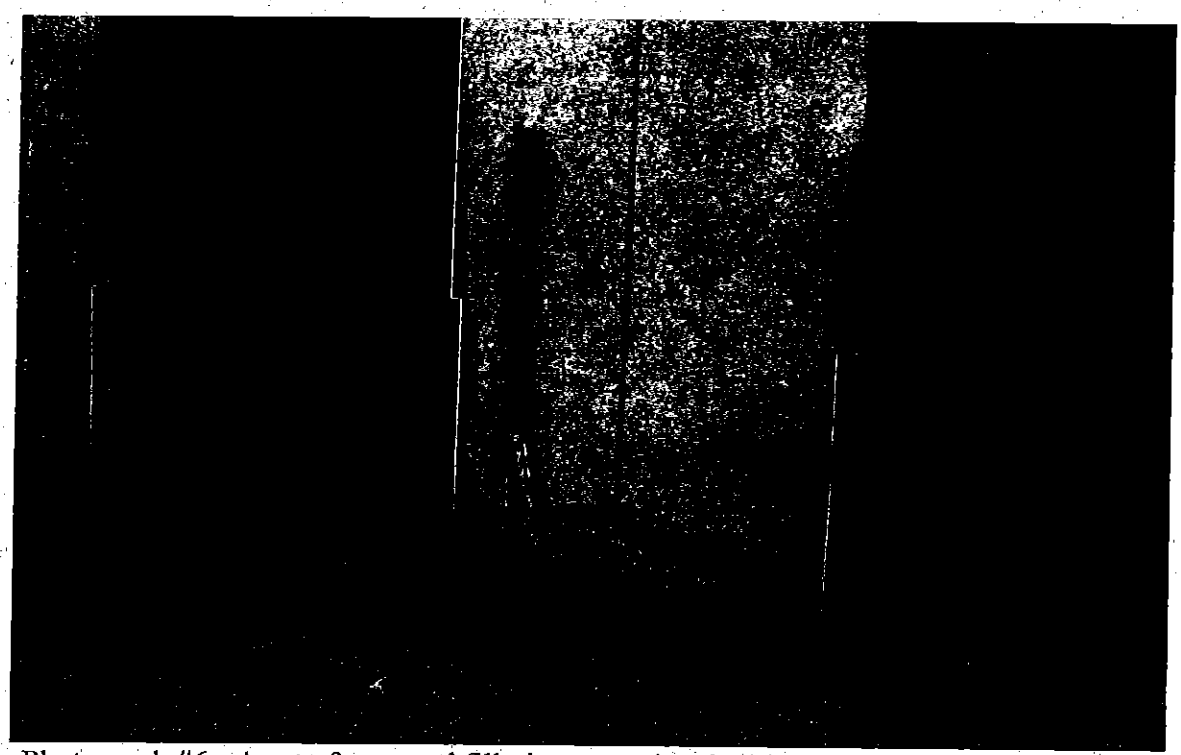
Photograph #2 - Side view of the distribution warehouse, facing north.

Photograph #3 - View of the northeastern side of the distribution warehouse.

Photograph #4 - View of the repair garage and pump island, facing southwest.

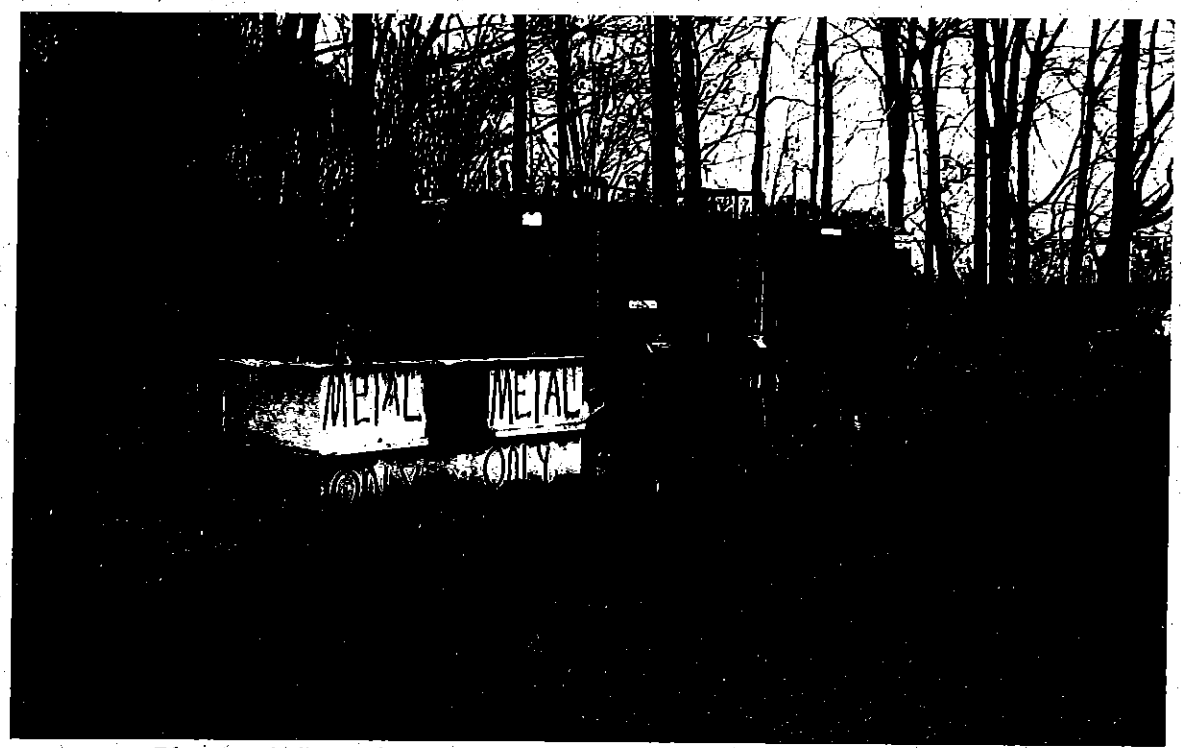


Photograph #5 - View of the recycling warehouse, facing northeast.

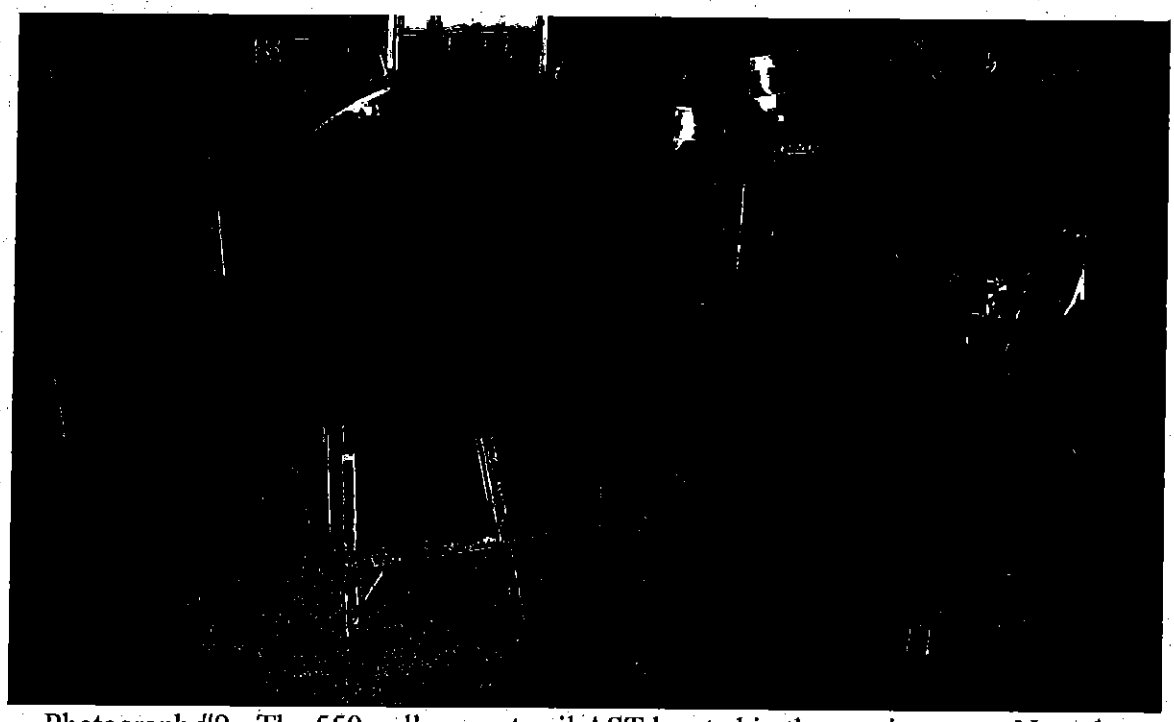


Photograph #6 - A set of vent and fill pipes associated with a former oil/water seperator.

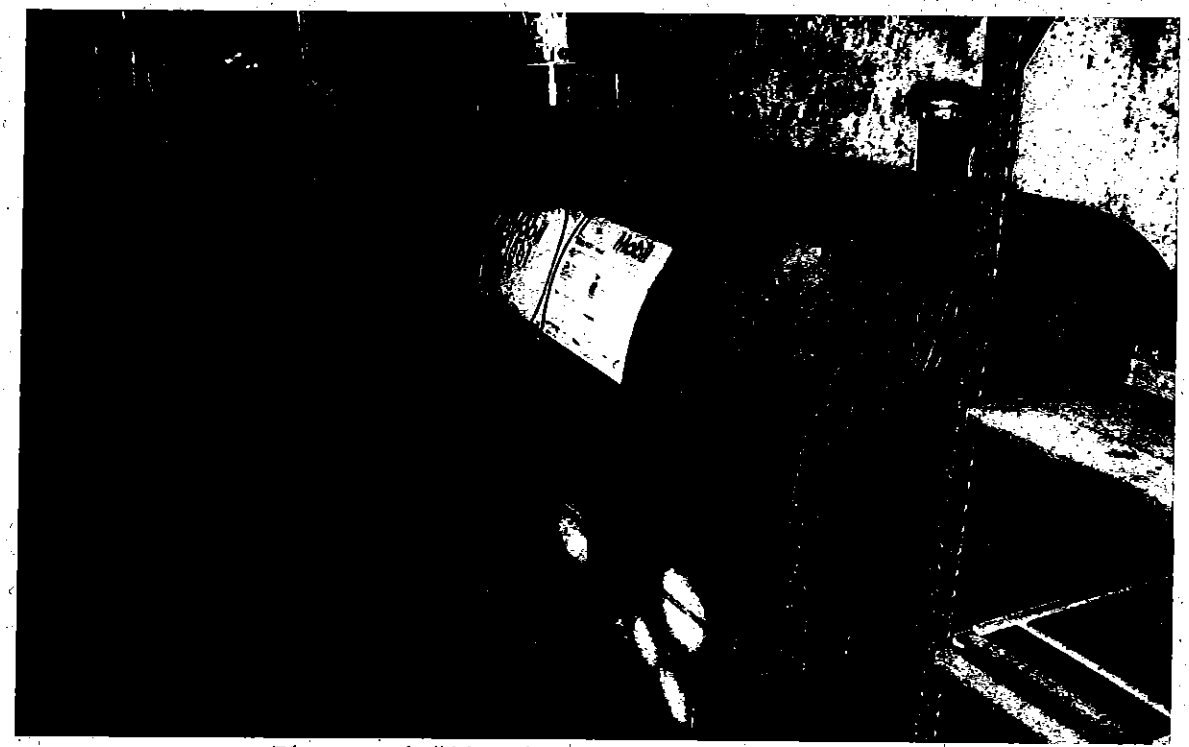
Photograph #7 - Location of the former gasoline and diesel USTs. Note the large patch in front of the pump island.



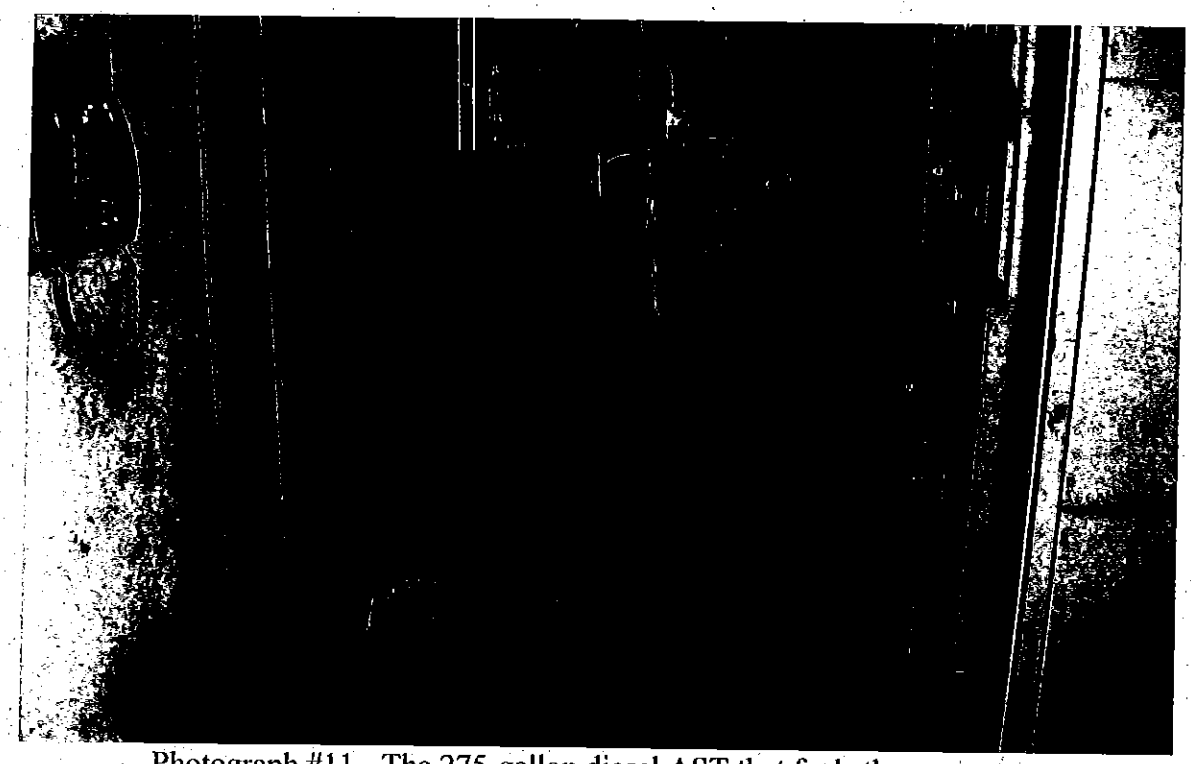
Photgraph #8 - View of the 10,000-gallon gasoline and diesel AST.



Photograph #9 - The 550-gallon waste oil AST located in the repair garage. Note the absorbent material on the floor.

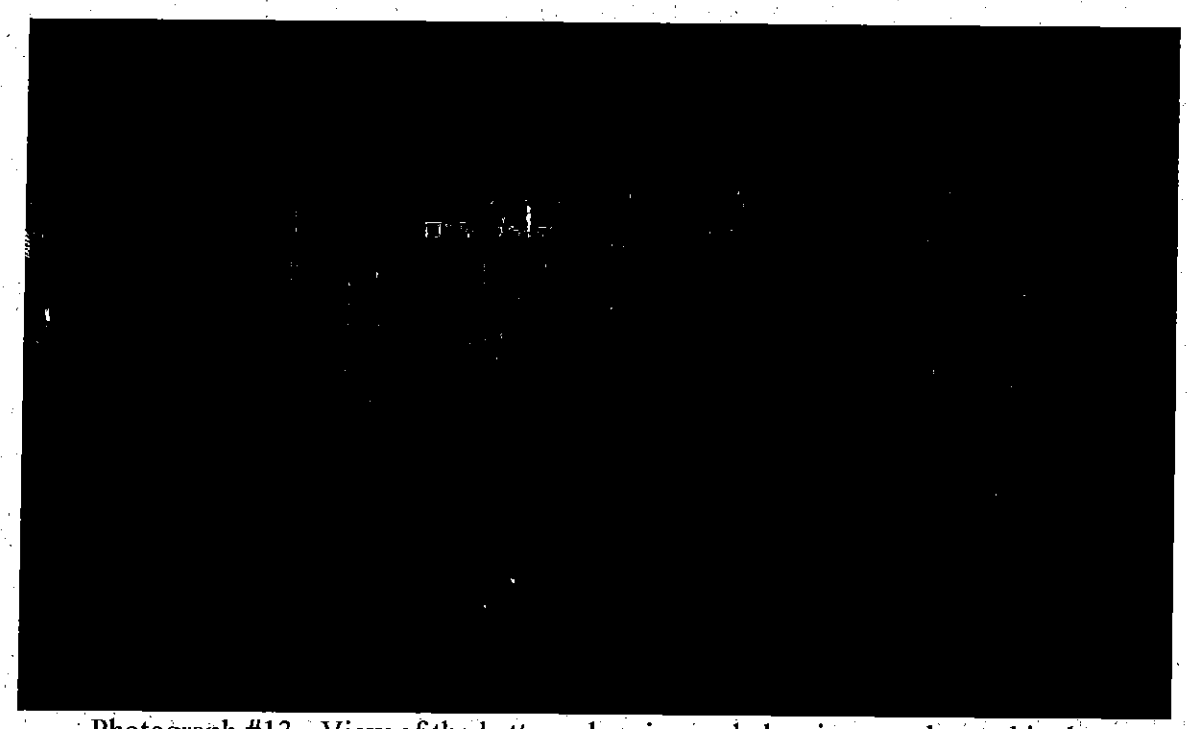


Photograph #10 - The 275-gallon engine oil AST.

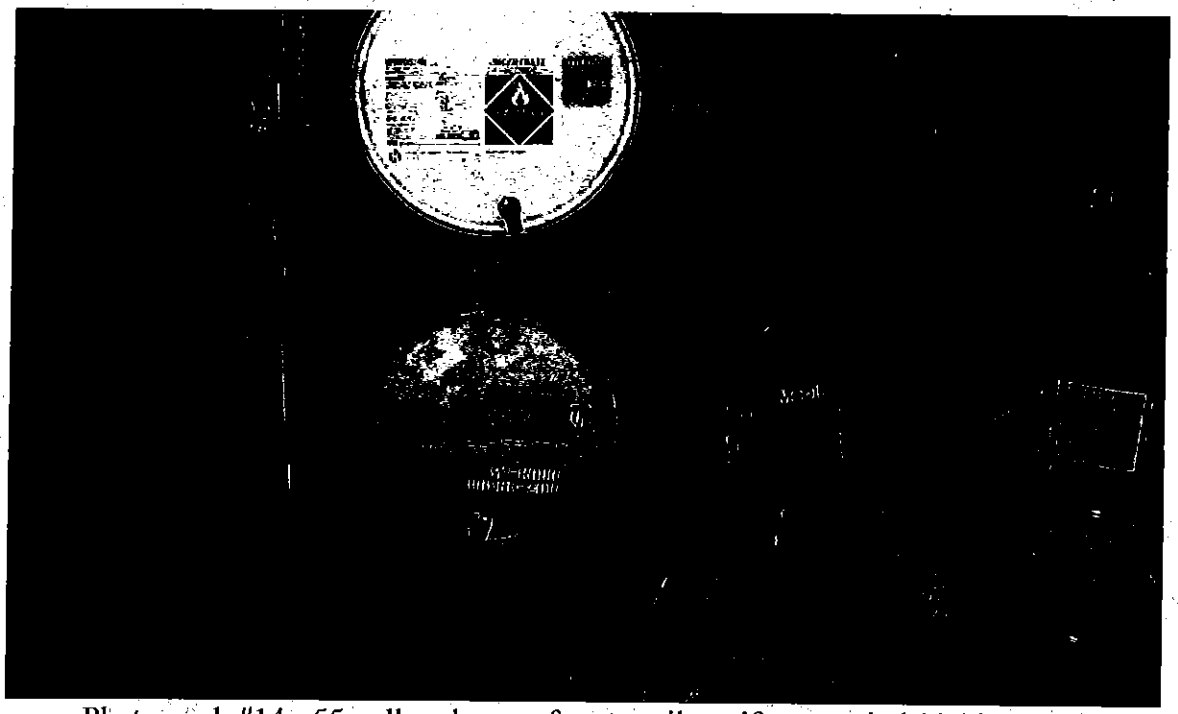


Photograph #11 - The 275-gallon diesel AST that fuels the generator.

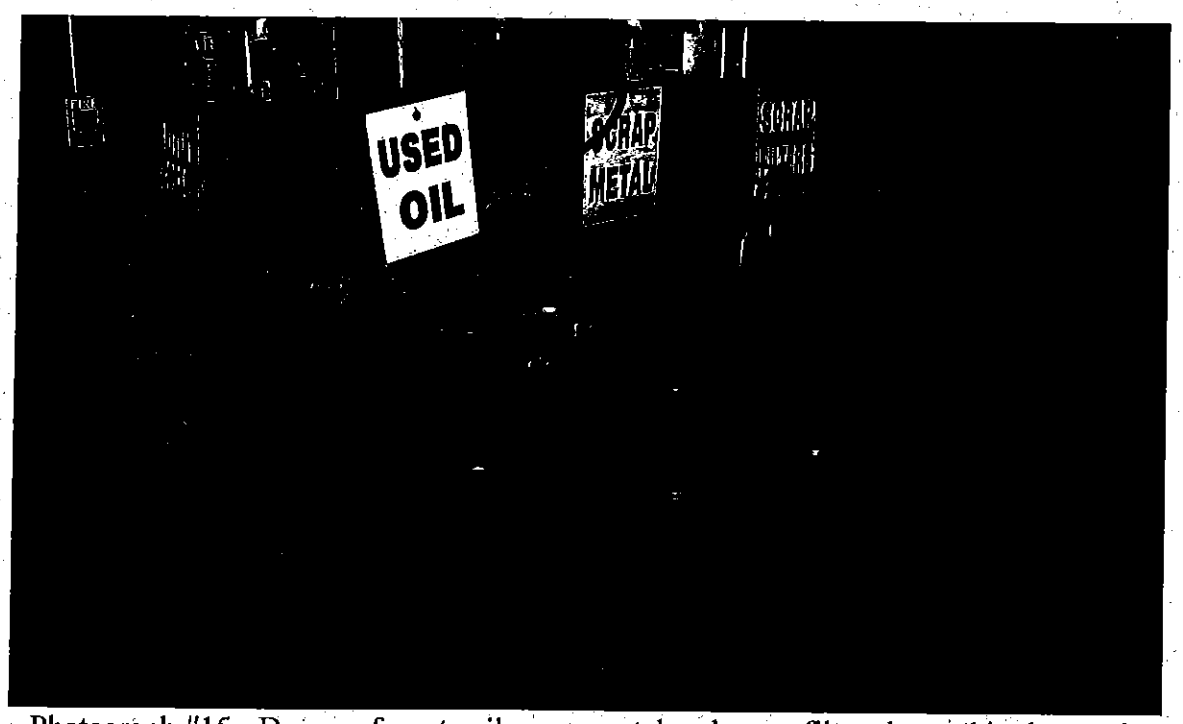
Photograph #12 - Severed copper fuel lines associated with a former diesel AST.



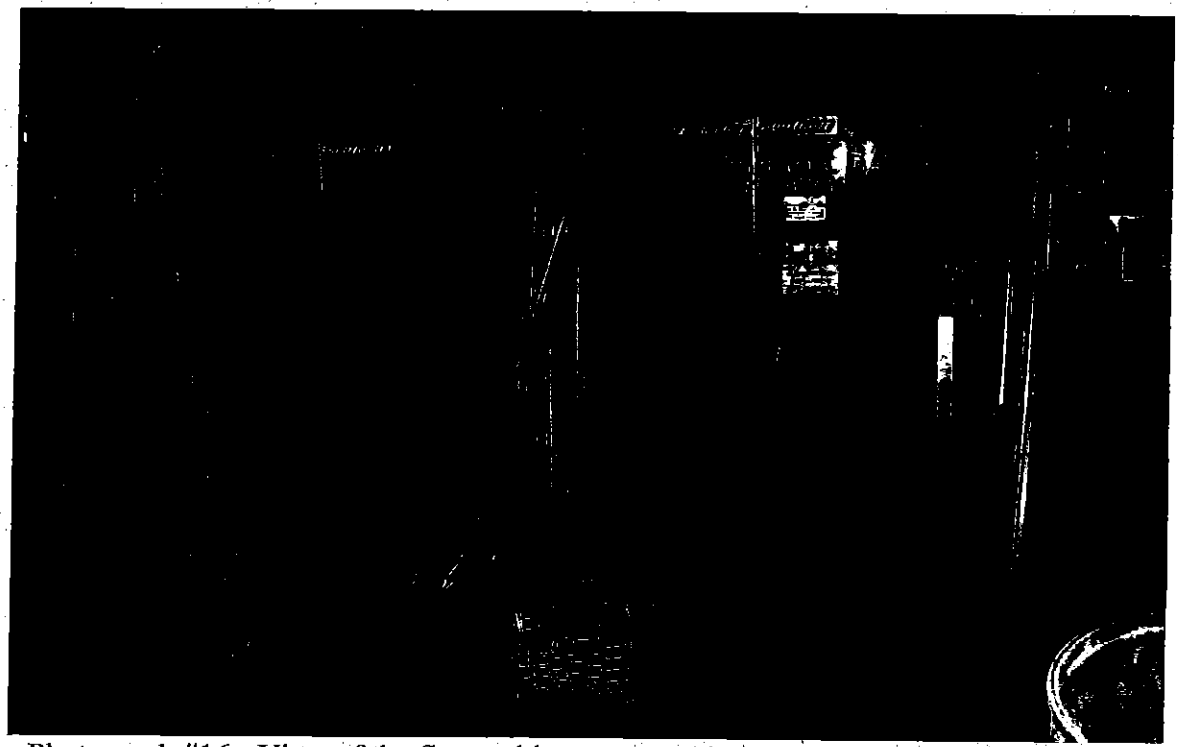
Photograph #13 - View of the battery charging and cleaning area located in the distribution warehouse.



Photograph #14 - 55-gallon drums of motor oil, antifreeze, windshield washer concentrate and floor cleaner located in the repair garage.

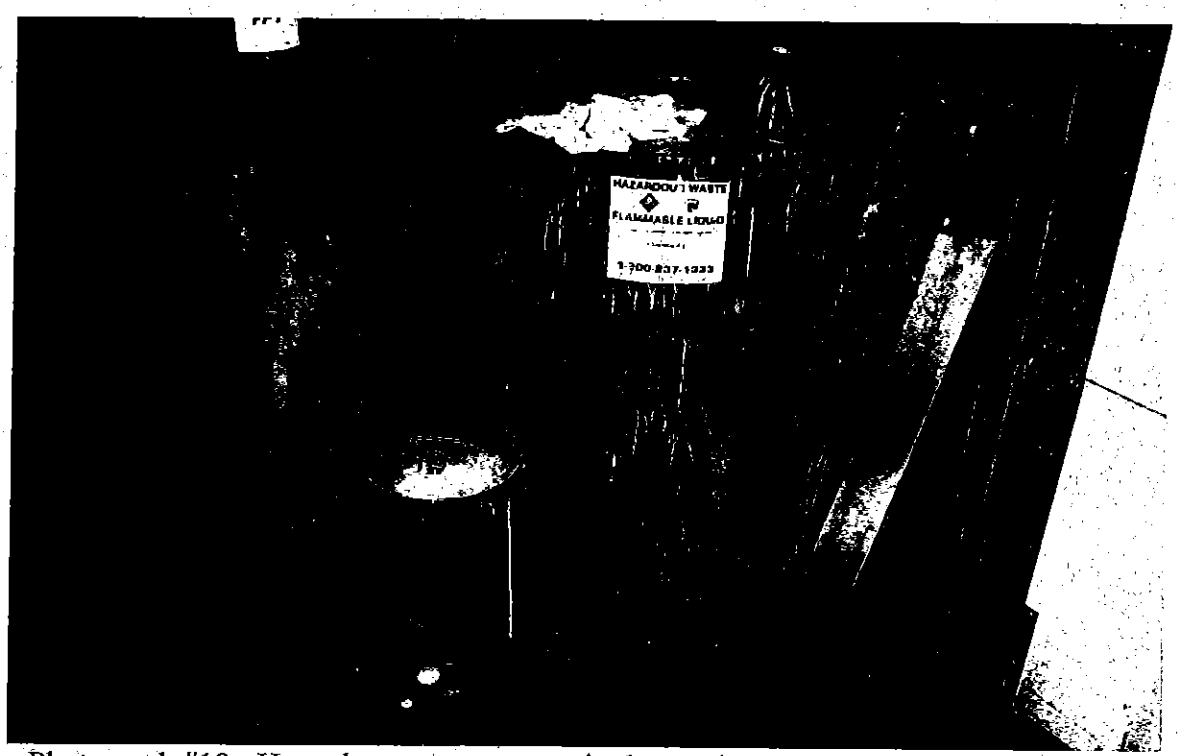


Photograph #15 - Drums of waste oil, scrap metal and scrap filters located in the repair garage.

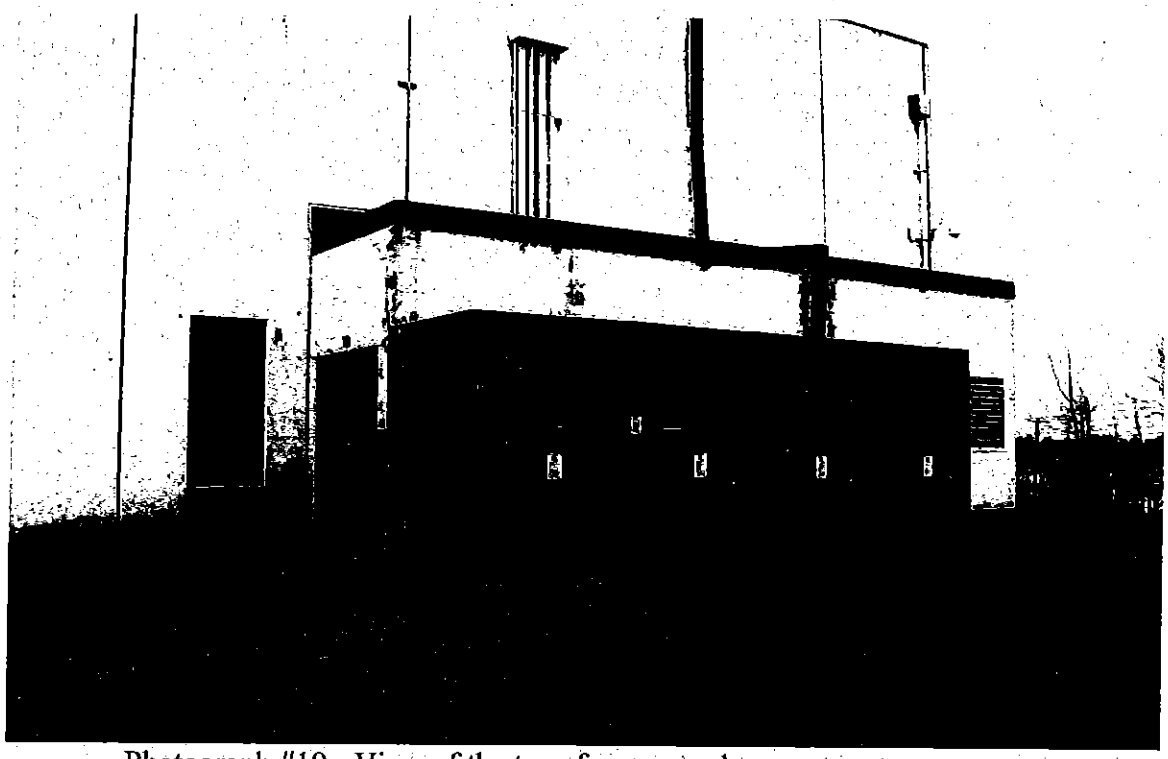


Photograph #16 - View of the flammable storage cabinets located in the auto body bay.

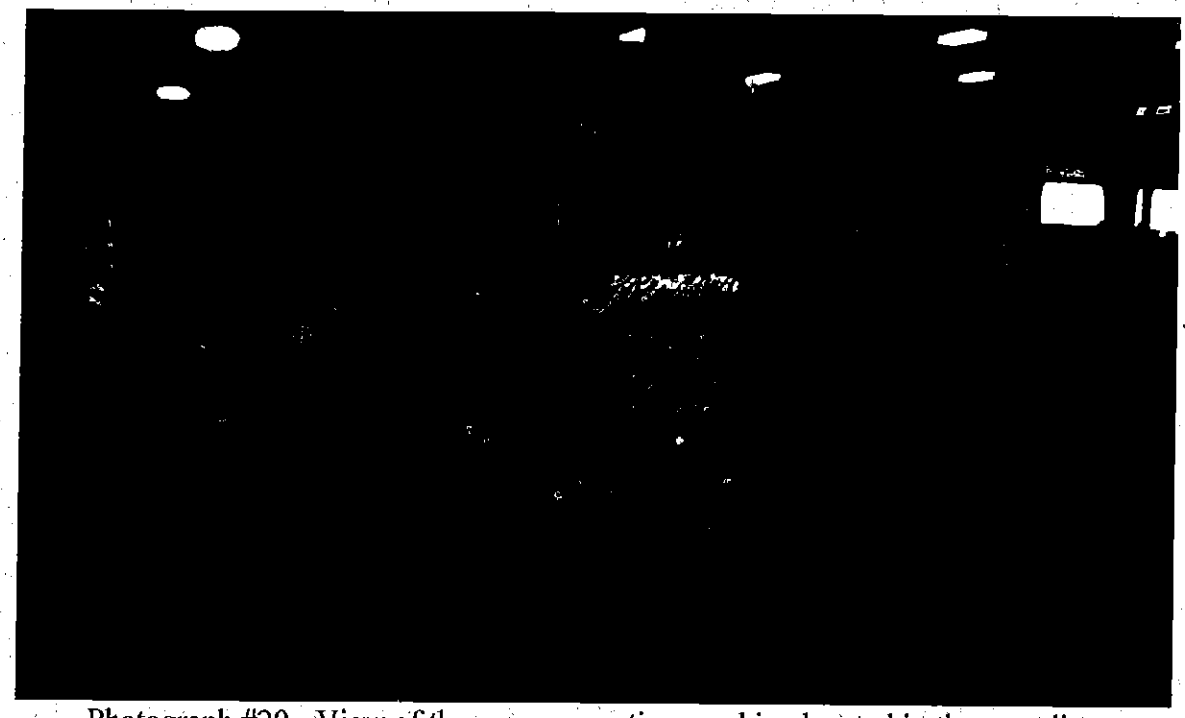
Photograph #17 - The paint spray gun cleaner and containers of paint thinner.



Photograph #18 - Hazardous waste storage in the southern corner of the auto body bay.



Photograph #19 - View of the transformers and generator storage room.



Photograph #20 - View of the can compacting machine located in the recycling warehouse.

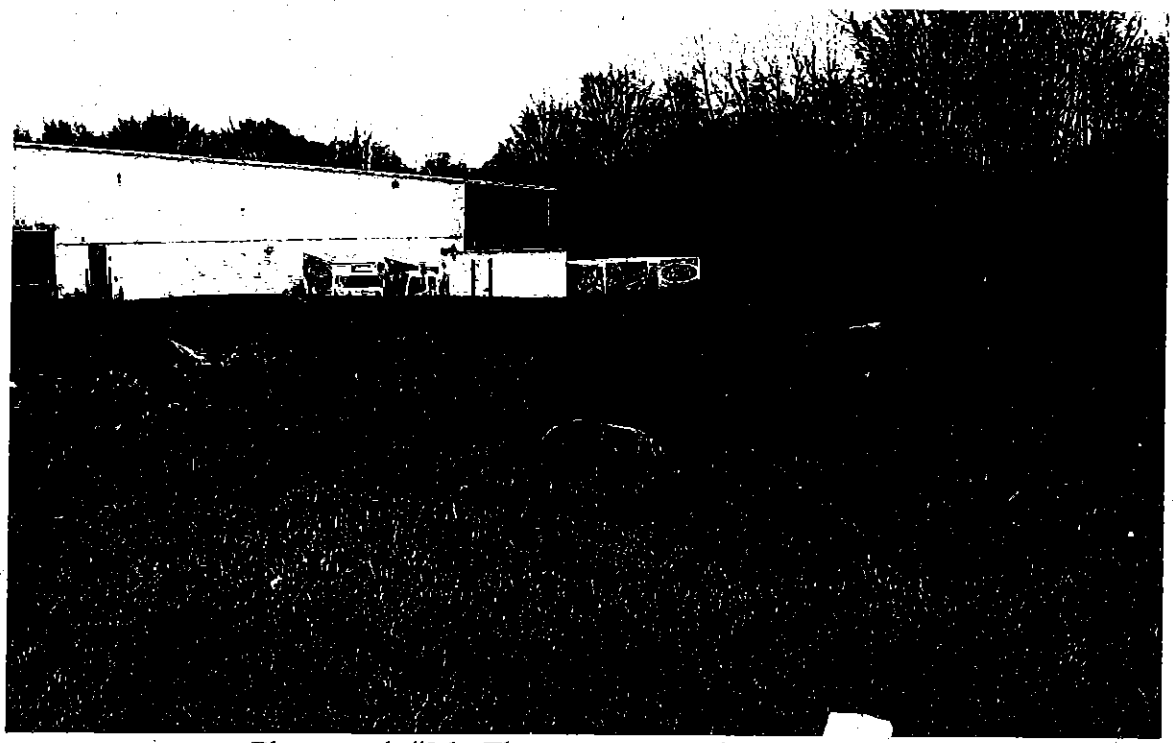
Photograph #21 - Dumping noted in the northern portion of the site.

Photograph #22 - Dumping located in the northern portion of the site.

Photograph #23 - A pile of concrete and asphalt shingles noted in the site's northen portion.

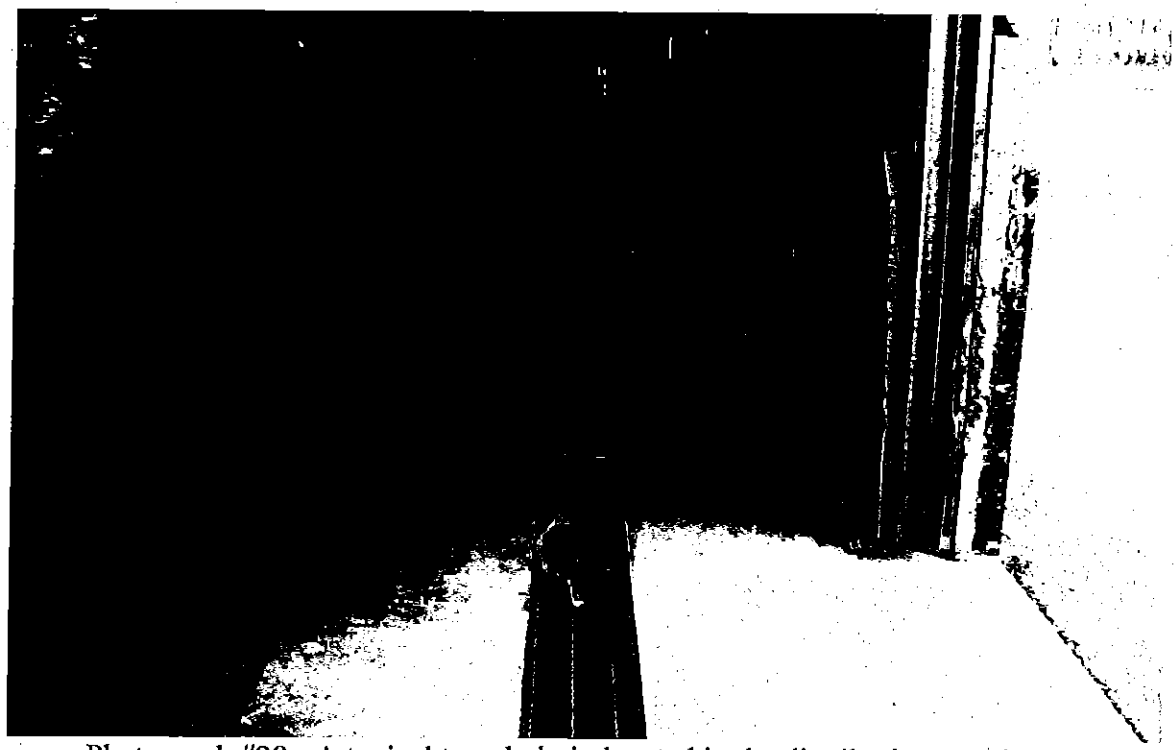
Photograph #24 - A pile of bricks located in the site's northern portion.

Photograph #25 - A discarded 55-gallon drum and municipal solid waste located in the easternmost detention basin.

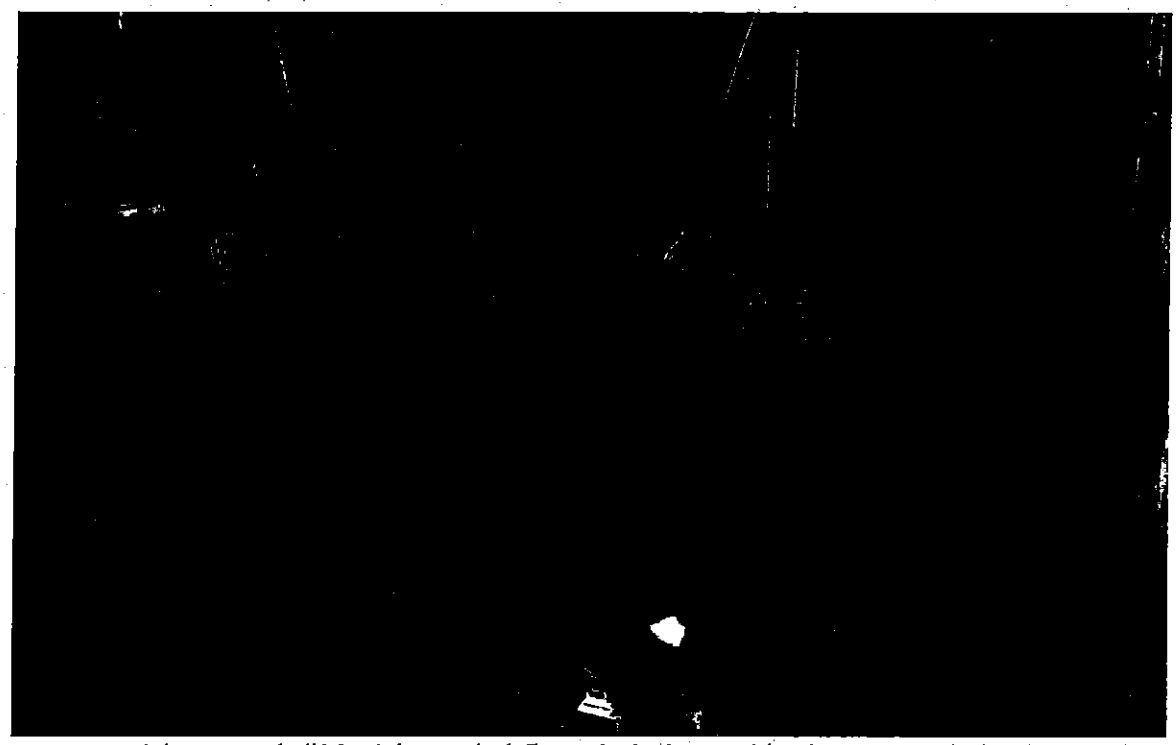


Photograph #26 - The westernmost detention basin.

Photograph #27 - View of the eastern detention basin.



Photograph #28 - A typical trench drain located in the distribution warehouse.



Photograph #29 - The sealed floor drain located in the auto body bay.

ATTACHMENT 3

FirstSearch Technology Corporation

Environmental FirstSearch™ Report

Target Property:

55 MARSH HILL ROAD

ORANGE CT 06477

Job Number: 11-153

PREPARED FOR:

Catalyst Environmental Consulting, Inc.

7B Herman Drive

Simsbury, Connecticut 06070

04-06-11

Tel: (781) 551-0470 *Fax: (781) 551-0471*

Environmental FirstSearch
Search Summary Report

Target Site: 55 MARSH HILL ROAD
ORANGE CT 06477

FirstSearch Summary

Database	Sel	Updated	Radius	Site	1/8	1/4	1/2	1/2>	ZIP	TOTALS
NPL	Y	01-14-11	1.00	0	0	0	0	0	0	0
NPL Delisted	Y	01-14-11	0.75	0	0	0	0	0	0	0
CERCLIS	Y	01-26-11	0.75	0	0	0	0	0	0	0
NFRAP	Y	01-26-11	0.75	0	0	1	0	0	0	1
RCRA COR ACT	Y	11-10-10	1.00	0	0	0	0	0	0	0
RCRA TSD	Y	01-11-11	0.50	0	0	0	0	-	0	0
RCRA GEN	Y	01-11-11	0.50	0	0	2	4	-	1	7
RCRA NLR	Y	01-11-11	0.50	0	0	7	4	-	0	11
Federal Brownfield	Y	03-01-11	0.50	0	0	0	0	-	5	5
ERNS	Y	01-24-11	0.25	0	0	2	-	-	57	59
Tribal Lands	Y	12-01-05	1.00	0	0	0	0	0	4	4
State/Tribal Sites	Y	04-23-10	1.00	0	0	2	2	8	10	22
State Spills 90	Y	03-22-11	0.25	0	8	8	-	-	402	418
State/Tribal SWL	Y	12-16-09	0.50	0	0	0	0	-	1	1
State/Tribal LUST	Y	03-29-11	0.50	0	3	0	1	-	47	51
State/Tribal UST/AST	Y	01-05-11	0.50	0	2	2	3	-	8	15
State/Tribal EC	Y	NA	0.25	0	0	0	-	-	0	0
State/Tribal IC	Y	01-01-05	0.25	0	0	0	-	-	0	0
State/Tribal VCP	Y	04-23-10	0.50	0	0	1	0	-	2	3
State/Tribal Brownfields	Y	05-01-08	0.50	0	0	0	0	-	6	6
FINDS	Y	05-29-09	0.25	0	3	22	-	-	144	169
State Other	Y	04-23-10	0.25	0	1	9	-	-	4	14
Federal IC/EC	Y	02-07-11	0.50	0	0	0	0	-	0	0
HW Manifest	Y	01-01-08	0.50	0	0	3	8	-	54	65
- TOTALS -				0	17	59	22	8	745	851

Notice of Disclaimer

Due to the limitations, constraints, inaccuracies and incompleteness of government information and computer mapping data currently available to FirstSearch Technology Corp., certain conventions have been utilized in preparing the locations of all federal, state and local agency sites residing in FirstSearch Technology Corp.'s databases. All EPA, NPL and state landfill sites are depicted by a rectangle approximating their location and size. The boundaries of the rectangles represent the eastern and western most longitudes, the northern and southern most latitudes. As such, the mapped areas may exceed the actual areas and do not represent the actual boundaries of these properties. All other sites are depicted by a point representing their approximate address location and make no attempt to represent the actual areas of the associated property. Actual boundaries and locations of individual properties can be found in the files residing at the agency responsible for such information.

Waiver of Liability

Although FirstSearch Technology Corp. uses its best efforts to research the actual location of each site, FirstSearch Technology Corp. does not and can not warrant the accuracy of these sites with regard to exact location and size. All authorized users of FirstSearch Technology Corp.'s services proceeding are signifying an understanding of FirstSearch Technology Corp.'s searching and mapping conventions, and agree to waive any and all liability claims associated with search and map results showing incomplete and or inaccurate site locations.

Environmental FirstSearch
Site Information Report

Request Date: 04-06-11
Requestor Name: Peter Prey
Standard: ASTM-05

Search Type: COORD
Job Number: 11-153

Target Site: 55 MARSH HILL ROAD
ORANGE CT 06477

Demographics

Sites: 851 **Non-Geocoded:** 745 **Population:** NA
Radon: 0.9 - 5.7 PCi/L

Site Location

	Degrees (Decimal)	Degrees (Min/Sec)		UTMs
Longitude:	-72.997483	-72:59:51	**Easting:**	667788.187
Latitude:	41.249089	41:14:57	**Northing:**	4568130.256
Elevation:	85		**Zone:**	18

Comment

Comment:

Additional Requests/Services

Adjacent ZIP Codes: 1 Mile(s)

ZIP Code	City Name	ST	Dist/Dir	Sel
06460	MILFORD	CT	0.21 SW	Y
06516	WEST HAVEN	CT	0.28 SE	Y
06461	Milford	CT		Y
06460	MILFORD	CT		Y

Services:

	Requested?	Date
Fire Insurance Maps	No	
Aerial Photographs	No	
Historical Topos	No	
City Directories	No	
Title Search/Env Liens	No	
Municipal Reports	No	
Online Topos	No	

Environmental FirstSearch
Sites Summary Report

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

TOTAL: 851 **GEOCODED:** 106 **NON GEOCODED:** 745 **SELECTED:** 240

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
	BROWNFIELD	*JORDAN REALTY, LLC CTBF-0601-106/POLLUTION ABATEMENT*	*SHELLAND ST MILFORD CT 06460*	*NON GC*	*N/A*	*1*
	BROWNFIELD	*PATRICIA MCGANNON CTBF-0601-88/POLLUTION ABATEMENT*	*UNKNOWN MILFORD CT 06460*	*NON GC*	*N/A*	*1*
	BROWNFIELD	*JORDAN REALTY, LLC CTBF-0601-106/POLLUTION ABATEMENT*	*SHELLAND ST MILFORD CT 06460*	*NON GC*	*N/A*	*2*
	BROWNFIELD	*JEANNE SHINER CTBF-0604-33/POLLUTION ABATEMENT*	*UNKNOWN WEST HAVEN CT 06516*	*NON GC*	*N/A*	*3*
	BROWNFIELD	FORMER DAIRY MART 1708 CTBF-0604-229/VOLUNTARY REMEDIATIO	1709 BOSTON POST RD WEST HAVEN CT 06516	NON GC	N/A	N/A
	BROWNFIELD	*PATRICIA MCGANNON CTBF-0601-88/POLLUTION ABATEMENT*	*UNKNOWN MILFORD CT 06460*	*NON GC*	*N/A*	*5*
12	*ERNS*	*179998/UNKNOWN (NRC)*	*88 MARSH HILL RD ORANGE CT 06477*	*0.19 NW*	*+17*	*5*
13	*ERNS*	*NRC-711343/STORAGE TANK*	*89 MARSH HILL RD ORANGE, CT 06477*	*0.19 NW*	*+1*	*6*
	ERNS	PARKING LOT NRC-722951/MOBILE	NORTH ST MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	POPES ISLAND, HOUSATONIC RIVER NRC-795144/STORAGE TANK	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	RIGHT OF WAY TRACK 4 MILEPOST NRC-43131/RAILROAD NON-RELEASE	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	*UNKNOWN 581369/HIGHWAY RELATED*	*I-95 MOSES WHEELER BRIDGE MILFORD CT 06460*	*NON GC*	*N/A*	*8*
	ERNS	*UNKNOWN 599758/UNKNOWN (NRC)*	*I-95 SOUTHBOUND BEFORE EXIT MILFORD CT 06460*	*NON GC*	*N/A*	*9*
	ERNS	USCG - GROUP LONG ISLAND 366934/FIXED FACILITY	13 A LN MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	RIGHT OF WAY TRACK 4 MILEPOST NRC-43131/RAILROAD NON-RELEASE	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	MUCHERINO BROS 430093/HIGHWAY RELATED	60 BOARDMAN RD MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	POPES ISLAND, HOUSATONIC RIVER NRC-795144/STORAGE TANK	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	PARKING LOT NRC-722951/MOBILE	NORTH ST MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	*UNKNOWN 581369/HIGHWAY RELATED*	*I-95 MOSES WHEELER BRIDGE MILFORD CT 06460*	*NON GC*	*N/A*	*10*
	ERNS	*OZBURN HESSEY 530745/HIGHWAY RELATED*	*I-95 MILE MARKER UNKNOWN MILFORD CT 06460*	*NON GC*	*N/A*	*11*
	ERNS	*OZBURN HESSEY 530745/HIGHWAY RELATED*	*I-95 MILE MARKER UNKNOWN MILFORD CT 06460*	*NON GC*	*N/A*	*11*

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	ERNS	NEAR MILEPOST J 4 NRC-393504/RAILROAD NON-RELEASE	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	MUCHERINO BROS 430093/HIGHWAY RELATED	60 BOARDMAN RD MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	MORAN TOWING and TRANS 574153/UNKNOWN	HOUSATAONIC RIVER MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	MILLFORD STATION / MP 63.3 / N NRC-778328/RAILROAD NON-RELEASE	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	MILFORD STATION NRC-747388/RAILROAD NON-RELEASE	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	MILEPOST 6 NRC-628233/RAILROAD NON-RELEASE	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	NRC-388816/RAILROAD	NEAR THE CORNER OF BOSTON P MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	INTERSTATE 95 NJ EXIT 39 NRC-610994/MOBILE	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	I-95 NORTHBOUND BETWEEN EXITS NRC-710042/MOBILE	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	OFF OF HEENAN DRIVE NRC-608626/MOBILE	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	NRC-712318/FIXED	700 NAUGAPUCK MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	NRC-711066/STORAGE TANK	32 PINE POINT RD MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	NRC-712318/FIXED	700 NAUGAPUCK MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	*NRC-453606/MOBILE*	*I-95 N* *MILFORD CT 06460*	*NON GC*	*N/A*	*11*
	ERNS	NRC-534119/RAILROAD	ORONOQUE RD MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	USCG - GROUP LONG ISLAND 564934/FIXED FACILITY	13 A LN MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	*UNKNOWN* *599756/UNKNOWN (NRC)*	*I-95 SOUTHBOUND BEFORE EXIT* *MILFORD CT 06460*	*NON GC*	*N/A*	*16*
	ERNS	MILEPOST 6 NRC-628233/RAILROAD NON-RELEASE	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	MARIANNE SHOAL, ONE MILE FROM NRC-637405/VESSEL	LONG ISLAND SOUND MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	INTERSTATE 95 NJ EXIT 39 NRC-510994/MOBILE	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A

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	ERNS	I-95 NORTHBOUND BETWEEN EXITS NRC-710042/MOBILE	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	CT 500 / SUBDIVISION WATERBURY NRC-585536/RAILROAD NON-RELEASE	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	*C WHITE AND SON* *584131/HIGHWAY RELATED*	*I-95 N* *MILFORD CT 06460*	*NON GC*	*N/A*	*11*
	ERNS	OFF OF HEENAN DRIVE NRC-609626/MOBILE	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	NRC-711066/STORAGE TANK	32 PINE POINT RD MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	CT 500 / SUBDIVISION WATERBURY NRC-585536/RAILROAD NON-RELEASE	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	*NRC-453606/MOBILE*	*I-95 N* *MILFORD CT 06460*	*NON GC*	*N/A*	*19*
	ERNS	NRC-534119/RAILROAD	ORONOQUE RD MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	NRC-642561/PIPELINE	530 SERRY RD ORANGE CT 06477	NON GC	N/A	N/A
	ERNS	*C&L FUCKING CO.* *433304/HIGHWAY RELATED*	*I-95 NORTH, BETWEEN EXITS 3* *ORANGE CT 06477*	*NON GC*	*N/A*	*21*
	ERNS	DICHELLO GAS STATION 539156/FIXED FACILITY	CALLER RPTS WITHIN ONE MILE ORANGE CT 06477	NON GC	N/A	N/A
	ERNS	*EXIT 41 RAMP INTERSTATE 95* *NRC-864951/MOBILE*	*I-95 EXIT 41* *ORANGE CT 06477*	*NON GC*	*N/A*	*33*
	ERNS	INTERSECTION OF RT 34 AND FERN NRC-799115/MOBILE	UNKNOWN ORANGE CT 06477	NON GC	N/A	N/A
	ERNS	RTE 114 AND US HWY 1 NRC-543377/MOBILE	UNKNOWN ORANGE CT 06477	NON GC	N/A	N/A
	ERNS	MILFORD STATION NRC-747388/RAILROAD NON-RELEASE	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	MILLFORD STATION / MP 63.3 / N NRC-778328/RAILROAD NON-RELEASE	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	MORAN TOWING and TRANS 574153/UNKNOWN	HOUSATAONIC RIVER MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	MARIANNE SHOAL, ONE MILE FROM NRC-637405/VESSEL	LONG ISLAND SOUND MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	NEAR MILEPOST 3.4 NRC-393504/RAILROAD NON-RELEASE	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	ERNS	NRC-388816/RAILROAD	NEAR THE CORNER OF BOSTON P MILFORD CT 06460	NON GC	N/A	N/A

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	ERNS	*C WHITE AND SON* *584131/HIGHWAY RELATED*	*I-95 N* *MILFORD CT 06460*	*NON GC*	*N/A*	*11*
	ERNS	NRC-726906/STORAGE TANK	TURKEY HILL RD ORANGE CT 06477	NON GC	N/A	N/A
	ERNS	931294/HIGHWAY	UNKNOWN ORANGE CT 06477	NON GC	N/A	N/A
	ERNS	RTE 95 NORTH NRC-761996/MOBILE	UNKNOWN ORANGE CT 06477	NON GC	N/A	N/A
	FEDRF	FORMER STOWE FARM 699981844-74521/EPA BROWNFIELD	64 STOWE ST MILFORD CT 06460	NON GC	N/A	N/A
	FEDRF	BILCO SITE 110362/EPA BROWNFIELD	3 ,3,37,43, AND 63 WATER ST WEST HAVEN CT 06516	NON GC	N/A	N/A
	FEDRF	FOREST THEATER 110342/EPA BROWNFIELD	10 FOREST ROAD WEST HAVEN CT 06516	NON GC	N/A	N/A
	FEDRF	LAND FILL SITE 110361/EPA BROWNFIELD	239 FRONT 243 FRONT AVE WEST HAVEN CT 06516	NON GC	N/A	N/A
	FEDRF	FORMER STOWE FARM 699981844-74521/EPA BROWNFIELD	64 STOWE ST MILFORD CT 06460	NON GC	N/A	N/A
1	*FINDS*	*SOUTHERN CONNECTICUT GAS COMPA* *1100393333334/FRS*	*60 MARSH HILL RD* *ORANGE CT 06477*	*0.11 NW*	*+11*	*25*
2	*FINDS*	*SCG OPERATIONS CENTER* *1100583366667/FRS*	*60 MARSH HILL RD* *ORANGE CT 06477*	*0.11 NW*	*+11*	*26*
3	*FINDS*	*DICHELLO DISTRIBUTORS, INC.* *1100383433367/FRS*	*35 MARSH HILL RD* *ORANGE CT 06477*	*0.12 SW*	*+10*	*27*
5	*FINDS*	*NORTHEAST PACKAGING INC* *CTD948331199*	*15 CONNAIR RD* *ORANGE CT 06477*	*0.15 SE*	*-11*	*28*
5	*FINDS*	*NORTHEAST PACKAGING INCORPORAT* *1100483484767/FRS*	*15 CONNAIR RD* *ORANGE CT 06477*	*0.15 SE*	*-11*	*29*
5	*FINDS*	*ROEBIC LABORATORIES, INC.* *1100483156717/FRS*	*15 CONNAIR RD* *ORANGE CT 06477*	*0.15 SE*	*-11*	*31*
5	*FINDS*	*ROEBIC LABORATORIES INC* *CTD948371331*	*15 CONNAIR RD* *ORANGE CT 06477*	*0.15 SE*	*-11*	*32*
6	*FINDS*	*REXHAM CORP* *CTD948354187*	*37 ROBINSON BLVD* *ORANGE CT 06477*	*0.16 SE*	*-11*	*33*
8	*FINDS*	*LCD LIGHTING INC* *1100383955887/FRS*	*37 ROBINSON BLVD* *ORANGE CT 06477*	*0.16 SE*	*-11*	*34*
8	*FINDS*	*LIGHT SOURCES, INC.* *1100483483367/FRS*	*37 ROBINSON BLVD* *ORANGE CT 06477*	*0.16 SE*	*-11*	*36*
9	*FINDS*	*DATA SWITCH CORP* *CTD981045818*	*12 CASCADE BLVD* *ORANGE CT 06477*	*0.16 SW*	*+11*	*37*

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9	*FINDS*	*DATA SWITCH CORP* *1100630819667/FRS*	*12 CASCADE BLVD* *ORANGE CT 06477*	*0.16 SW*	*+11*	*38*
11	*FINDS*	*ESSEX FRANCE COMPANY* *1100641758397/FRS*	*CONNAIR RD* *ORANGE CT 06477*	*0.17 SE*	*-16*	*39*
11	*FINDS*	*ESSEX FRANCE CO* *CTD067014381*	*CONNAIR RD* *ORANGE CT 06477*	*0.17 SE*	*-16*	*40*
10	*FINDS*	*L C D LIGHTING INCORPORATED* *1100641533157/FRS*	*11 CASCADE BLVD* *ORANGE CT 06477*	*0.17 SW*	*+6*	*41*
10	*FINDS*	*L S NEON INC* *1100140773/FRS*	*11 CASCADE BLVD* *ORANGE CT 06477*	*0.17 SW*	*+6*	*42*
10	*FINDS*	*L C D LIGHTING INC* *CTD981066215*	*11 CASCADE BLVD* *ORANGE CT 06477*	*0.17 SW*	*+6*	*43*
10	*FINDS*	*L S NEON INC* *CTD981543818*	*11 CASCADE BLVD* *ORANGE CT 06477*	*0.17 SW*	*+6*	*44*
11	*FINDS*	*SIGMA INSTRUMENT INTERNATIONAL* *1100249113/FRS*	*88 MARSH HILL RD* *ORANGE CT 06477*	*0.19 NW*	*+17*	*45*
12	*FINDS*	*SIGMA INSTRUMENT INTL INSTR DI* *CTD990851917*	*88 MARSH HILL RD* *ORANGE CT 06477*	*0.19 NW*	*+11*	*46*
13	*FINDS*	*ABB DRIVES INC* *CTD948183356*	*88 MARSH HILL RD* *ORANGE CT 06477*	*0.19 NW*	*+11*	*47*
13	*FINDS*	*ASEA BROWN BOVERI* *1100639679357/FRS*	*88 MARSH HILL RD* *ORANGE CT 06477*	*0.19 NW*	*+17*	*48*
13	*FINDS*	*HELICOPTER SUPPORT, INC* *1100483431172/FRS*	*39 MARSH HILL RD* *ORANGE CT 06477*	*0.19 NW*	*-6*	*49*
13	*FINDS*	*FORMER ABB INDUSTRIAL SYSTEMS F* *1100383573067/FRS*	*88 MARSH HILL RD* *ORANGE CT 06477*	*0.19 NW*	*+17*	*50*
14	*FINDS*	*NORTHEAST BEVERAGE* *1100383383367/FRS*	*33 ROBINSON BLVD* *ORANGE CT 06477*	*0.21 SE*	*-64*	*51*
	FINDS	VI POLE 27,7 1100119623797/FRS	SEASIDE AVE MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	SAINT GABRIEL SCHOOL 1100270446507/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	SAINT MARY SCHOOL 1100254997347/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	SBS INVESTMENT ASSOC 1100173771587/FRS	ADDRESS NOT IN PCS MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	SEABREEZE SCHOOL 1100271104277/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	*SILVER SANDS LANDFILL* *1100155721007/FRS*	*ADDRESS NOT IN NCDB* *MILFORD CT 06460*	*NON GC*	*N/A*	*53*

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	FINDS	SIMON LAKE SCHOOL 1100266119791/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	WILCOXSON SCHOOL 1100270465?3/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	VI POLE 27,7 CT0000179182	SEASIDE AVE MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	WEST SHORE MIDDLE SCHOOL 1100270465?3/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	SAINT GABRIEL CHURCH 1100226176?7/FRS	36 SHOREFRONT ST MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	MATHEWSON SCHOOL 1100269863136/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	ORCHARD HILLS SCHOOL 1100253877?3/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	OSAUGE AVENUE SCHOOL 1100253877?3/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	SO. CENTRAL CT REGIONAL WATER 1100304203?5/FRS	LANSDALE AVE MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	*SILVER SANDS LANDFILL 1100113371?6/FRS*	*ADDRESS NOT IN NCDB MILFORD CT 06460*	*NON GC*	*N/A*	*55*
	FINDS	MILFORD ACADEMY 1100265907?9/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	PERRY FARM 1100209512?8/FRS	ADDRESS NOT IN AQS MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	PLATT REGIONAL VOCATIONAL TECH 1100256223?3/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	PUMPKIN DELIGHT SCHOOL 1100269972?6/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	SAINT ANNS SCHOOL 1100254133?/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	SAINT GABRIEL CHURCH 1100226479?7/FRS	36 SHOREFRONT ST MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	SAINT GABRIEL SCHOOL 1100270463?7/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	SAINT MARY SCHOOL 1100254149?5/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	CALF PEN MEADOW SCHOOL 1100237112?4/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	SEABREEZE SCHOOL 1100271104?7/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A

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	FINDS	CHAPEL STREET SCHOOL 1100270353?/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	SIMON LAKE SCHOOL 1100266195?1/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	SO. CENTRAL CT REGIONAL WATER 1100304203?3/FRS	LANSDALE AVE MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	VI POLE 27,7 CT0000179182	SEASIDE AVE MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	VI POLE 27,7 1100117623?9/FRS	SEASIDE AVE MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	WEST SHORE MIDDLE SCHOOL 1100270465?3/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	WILCOXSON SCHOOL 1100270465?3/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	CALF PEN MEADOW SCHOOL 1100213804?4/FRS	395 S WELCH POINT RD MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	LOZZ ACRES 1100338337?2/FRS	INDIAN RIVER RD ORANGE CT 06477	NON GC	N/A	N/A
	FINDS	SBS INVESTMENT ASSOC 1100193715?3/FRS	ADDRESS NOT IN PCS MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	JOSEPH A FORAN HIGH SCHOOL 1100253516?3/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	MILFORD HIGH SCHOOL 1100309531?1/FRS	W RIVER ST MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	MILFORD CROSSING 1100304822?2/FRS	BOSTON POST RD MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	NIKE SITE 1100117957?7/FRS	EELS HILL RD MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	MEADOWSIDE SCHOOL 1100259866?6/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	MILFORD HOUSING AUTHORITY 1100218473?5/FRS	75 DEMAID DR MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	LITTLE WHITE HOUSE LEARNING 1100226543?7/FRS	69 WOODMONT RD MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	LENNOX AVENUE SCHOOL 1100259642?1/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	LAW HIGH SCHOOL, JONATHAN 1100303?26?9/FRS	LANSDALE AVE MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	CALF PEN MEADOW SCHOOL 1100226543?9/FRS	395 S WELCH POINT RD MILFORD CT 06460	NON GC	N/A	N/A

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	FINDS	JOSEPH A. FORAN HIGH SCHOOL 1100213961?3/FRS	80 FORAN DR MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	MILFORD HOUSING AUTHORITY 1100218473?5/FRS	75 DEMAID DR MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	DEVON COMMUNITY CENTER 1100208145?4/FRS	NAUGATUCK AVE MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	CUBCO 1100359429?4/FRS	NAUGATUCK AVE MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	CT DOT PROJECT 136-137 1100290744?3/FRS	I95 MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	CONNECTICUT DOT 1100291001?9/FRS	RT 1 HOUSITONIC RIVER MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	CONECTICUT DOT 1100292949?0/FRS	VARIOUS STRUCTURES MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	CONDUCTRON CORP CT0001094358	OLD WILTON RD MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	COMPLETE CONSTRUCTION 1100303?59?2/FRS	BIC DR MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	CLam?P-DEVON STATION 1100290868?9/FRS	NAUGATUCK AVE MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	KAY AVENUE SCHOOL 1100304238?6/FRS	KAY AVE MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	JD S TEXACO 1100265659?6/FRS	316 POST RD MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	DOT-SIKORSKY 1100137254?/FRS	ROUTE 15 MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	ORCHARD HILLS SCHOOL 1100253877?3/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	NIKE SITE 1100117957?7/FRS	EELS HILL RD MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	NIKE SITE CT0002026342	EELS HILL RD MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	NATIONAL CAR RENTAL SYSTEMS 1100289307?9/FRS	WOODMONT AVE MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	NAME NOT IN AQS 1100209531?2/FRS	ATWOOD DR MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	NAME NOT IN AQS 1100209534?6/FRS	SASSACUS DR MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	MOBIL OIL CORP T/A TANKNOLOGY 1100291434?5/FRS	I095 WESTBOUND MILFORD CT 06460	NON GC	N/A	N/A

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Sites Summary Report

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

TOTAL: 851 **GEOCODED:** 106 **NON GEOCODED:** 745 **SELECTED:** 240

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
	FINDS	*PERRY FARM 1100209512?8/FRS*	*ADDRESS NOT IN AQS MILFORD CT 06460*	*NON GC*	*N/A*	*56*
	FINDS	JOHN F KENNEDY SCHOOL 1100261624?6/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	PLATT REGIONAL VOCATIONAL TECH 1100256223?3/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	JF KENNEDY 1100117604?3/FRS	WEST AVE MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	HEALTH DEPT 1100209974?9/FRS	EELS HILL DR MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	HARRY B FLOOD MIDDLE SCHOOL 1100237369?4/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	HARRY B FLOOD HIGH SCHOOL 1100259534?6/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	HARBORSIDE MIDDLE SCHOOL 1100278?32?5/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	GREAT NECK SCHOOL 1100265314?9/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	FORAN HIGH SCHOOL, JOSEPH A 1100978?82?/FRS	FORAN DR MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	NAME NOT IN AQS 1100209524?6/FRS	SASSACUS DR MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	JONATHAN LAW HIGH SCHOOL 1100259634?6/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	BURNDY CORP 1100290?6?09/FRS	WAMPUS LN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	CONNECTICUT DOT 1100291001?9/FRS	RT 1 HOUSITONIC RIVER MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	CT DOT PROJECT 136-137 1100290744?3/FRS	I95 MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	CONECTICUT DOT 1100292949?0/FRS	VARIOUS STRUCTURES MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	CONDUCTRON CORP CT0001094358	OLD WILTON RD MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	COMPLETE CONSTRUCTION 1100303?59?2/FRS	BIC DR MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	CLam?P-DEVON STATION 1100290868?9/FRS	NAUGATUCK AVE MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	CHAPEL STREET SCHOOL 1100270353?5/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A

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Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
	FINDS	CALF PEN MEADOW SCHOOL 110023718294/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	OSAUGE AVENUE SCHOOL 110023187905/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	CALF PEN MEADOW SCHOOL 110071380496/FRS	395 S WELCH POINT RD MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	BURNDY CORP 110029078509/FRS	WAMPUS LN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	BRIDGESTONE FIRESTONE INC 110029079379/FRS	CHERRY ST MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	BIC PEN CORP 110029003003/FRS	WILEY ST MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	ARNOLD COLLEGE 110026784176/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	AEROSOL TECHNIQUES INC CTD990669501	OLD GATE LN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	ACADEMY OF OUR LADY OF MERCY 110027902529/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	TUCCINARDI TOPSOIL and SUPPLY 110039429653/FRS	RATON DR MILFORD CT 06461	NON GC	N/A	N/A
	FINDS	SAINT ANNS SCHOOL 110025811336/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	PUMPKIN DELIGHT SCHOOL 110026897260/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	CALF PEN MEADOW SCHOOL 110022654345/FRS	399 S WELCH POINT RD MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	MATHEWSON SCHOOL 110026843856/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	ED S MOBIL SERVICE CENTER 110001808762/FRS	516 POST RD MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	JD S TEXACO 110020836916/FRS	516 POST RD MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	JOHN F KENNEDY SCHOOL 110026152426/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	JONATHAN LAW HIGH SCHOOL 110029628666/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	JOSEPH A FORAN HIGH SCHOOL 110035851683/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	JOSEPH A. FORAN HIGH SCHOOL 110021596134/FRS	89 FORAN DR MILFORD CT 06460	NON GC	N/A	N/A

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Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
	FINDS	KAY AVENUE SCHOOL 110030423906/FRS	KAY AVE MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	LAW HIGH SCHOOL, JONATHAN 110030338267/FRS	LANSDALE AVE MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	HEALTH DEPT 110020695246/FRS	EELS HILL DR MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	LITTLE WHITE HOUSE LEARNING 110022654657/FRS	69 WOODMONT RD MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	HARRY B FLOOD MIDDLE SCHOOL 110025736074/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	MEADOWSIDE SCHOOL 110025986509/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	MILFORD ACADEMY 110026390749/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	MILFORD CROSSING 110030412752/FRS	BOSTON POST RD MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	MILFORD HIGH SCHOOL 110020953191/FRS	W RIVER ST MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	MOBIL OIL CORP T/A TANKNOLOG 110028345465/FRS	1095 WESTBOUND MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	SUNRISE HILL ESTATES 110037116297/FRS	INTERSECTION OF RT 34 and R ORANGE CT 06477	NON GC	N/A	N/A
	FINDS	NAME NOT IN AQS 110029953182/FRS	ATWOOD DR MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	NATIONAL CAR RENTAL SYSTEMS 110028910799/FRS	WOODMONT AVE MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	LENNOX AVENUE SCHOOL 110029964231/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	ED S MOBIL SERVICE CENTER 110001808762/FRS	516 POST RD MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	BRIDGESTONE-FIRESTONE INC 110029079379/FRS	CHERRY ST MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	BIC PEN CORP 110029003003/FRS	WILEY ST MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	ARNOLD COLLEGE 110026784176/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	AEROSOL TECHNIQUES INC CTD990669501	OLD GATE LN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	ACADEMY OF OUR LADY OF MERCY 110027902529/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A

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Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
	FINDS	USAF-ANG ORANGE AGS CT0001021134	ORANGE ANG STATION ORANGE CT 06477	NON GC	N/A	N/A
	FINDS	CURCIO 110037942914/FRS	NAUGATUCK AVE MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	DEVON COMMUNITY CENTER 110028684314/FRS	NAUGATUCK AVE MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	FF KENNEDY 110011766133/FRS	WEST AVE MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	DOT-SIKORSKY 110015732545/FRS	ROUTE 15 MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	NIKE SITE CT0002026312	EELS HILL RD MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	FORAN HIGH SCHOOL, JOSEPH A 110007978819/FRS	FORAN DR MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	GREAT NECK SCHOOL 110026531490/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	HARBORSIDE MIDDLE SCHOOL 110027937363/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	HARRY B FLOOD HIGH SCHOOL 110025963410/FRS	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	FINDS	RECHAM PACKAGING INC 110017409113/FRS	31 BENSON BLVD ORANGE CT 06477	NON GC	N/A	N/A
	FINDS	RACEBROOK GREEN 110019732976/FRS	RACEBROOK RD ORANGE CT 06477	NON GC	N/A	N/A
	FINDS	ORANGE MS4 STORMWATER PERMIT 110030137066/FRS	MS4 PERMIT ORANGE CT 06477	NON GC	N/A	N/A
	FINDS	NIKE SITE 110029866203/FRS	OFF RT 1 ORANGE CT 06477	NON GC	N/A	N/A
	FINDS	LINDY STREET 110015333430/FRS	LINDY ST ORANGE CT 06477	NON GC	N/A	N/A
	FINDS	KX TECHNOLOGIES LLC 110033247527/FRS	269 S LAMBERT RD ORANGE CT 06477	NON GC	N/A	N/A
	FINDS	AMITY JUNIOR HIGH SCHOOL 110025335947/FRS	ORMAN AVE ORANGE CT 06477	NON GC	N/A	N/A
	FINDS	KX INDUSTRIES, L.P. 110033239264/FRS	269 S LAMBERT RD ORANGE CT 06477	NON GC	N/A	N/A
8	*HWMANIFEST LIGHT SOURCES INC CTD983416111*	*17 ROBINSON BLVD ORANGE CT 06477*	*0.16 SE*	*-41*	*58*	
9	*HWMANIFEST DATA SWITCH CORP CT3000000413*	*12 CASCADE BLVD ORANGE CT 06477*	*0.16 SW*	*+21*	*63*	

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Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
12	*HWMANIFEST ASEA BROWN BOVERI CTD043413536*	*88 MARSH HILL RD ORANGE CT 06477*	*0.18 NW*	*+17*	*64*	
20	*HWMANIFEST CYRO IND CTD981743581*	*25 EXECUTIVE BLVD ORANGE CT 06477*	*0.21 SW*	*-29*	*66*	
21	*HWMANIFEST L C D LIGHTING INC CTD980907323*	*11 CASCADE BLVD MILFORD CT 06460*	*0.28 SW*	*-31*	*67*	
22	*HWMANIFEST L S NEON INC CT5000000618*	*11 CASCADE BLVD MILFORD CT 06460*	*0.28 SW*	*-31*	*69*	
23	*HWMANIFEST LIGHT SOURCES INC CTD983873100*	*70 CASCADE BLVD MILFORD CT 06460*	*0.33 SW*	*-35*	*73*	
24	*HWMANIFEST BARNES IND INC CTD983983469*	*124 CASCADE BLVD MILFORD CT 06460*	*0.36 SW*	*-43*	*79*	
25	*HWMANIFEST ORANGE RESEARCH INC BARNES CTD042285153*	*140 CASCADE BLVD MILFORD CT 06460*	*0.38 SW*	*-41*	*81*	
26	*HWMANIFEST AVIATION COMPONENTS SUPPORT CO CTD093607111*	*11 FRONTAGE RD ORANGE CT 06477*	*0.43 NE*	*-25*	*83*	
28	*HWMANIFEST CARRIER CORP CTD982711815*	*300 CASCADE BLVD MILFORD CT 06460*	*0.48 SW*	*-46*	*89*	
	HWMANIFEST	CT STATE OF DOT CTP000029606	CLARK ST and METRO NORTH MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	BYK CHEMIE CTP000029453	199 N KIMBERLY AVE WEST HAVEN CT 06516	NON GC	N/A	N/A
	HWMANIFEST	CLIMET PARTNERS CTP000025475	922 BRIDGEPORT AVE MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	CT POST LIMITED PARTNERSHIP CTP000028486	1210 BOSTON POST RD MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	CT STATE OF DOT CTP000028353	RT 1 and HOUSETONIC RIVER MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	MILFORD TOWN OF RD OF ED CTP000029109	86 SEAMANS LN MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	DOUGLAS SHARAF SANDWICH CTP000029310	163 HOUSATONIC DR MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	EXXONMOBIL CTP000028102	I 95 MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	MILFORD AUTO RECYCLING CTP000029239	70 S WASHINGTON ST MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	CT STATE OF DOT CTP000028099	41 DANNER DR MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	MILFORD CITY OF CTP000028913	139 NORTH ST MILFORD CT 06460	NON GC	N/A	N/A

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Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
	HWMANIFEST	MILFORD TOWN OF BD OF ED CTP000029191	21 ART ST MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	CT HOMES LLC CTP000030194	38 DONALD ST WEST HAVEN CT 06516	NON GC	N/A	N/A
	HWMANIFEST	MILFORD TOWN OF BD OF ED CTP000029153	80 FOREIGN RD MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	MILFORD TOWN OF BD OF ED CTP000029134	20 LANCE LN MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	MILFORD CITY OF BD OF ED CTP000029150	200 CHAPEL ST MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	MILFORD CITY OF CTP000021985	139 NORTH ST MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	MILFORD AUTO RECYCLING CTP000029239	70 S WASHINGTON ST MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	ORANGE POLICE DEPT CTP000028286	301 LAMBERT RD ORANGE CT 06477	NON GC	N/A	N/A
	HWMANIFEST	MILD TO WILD AUTOMOTIVE CTP000029014	213 DERBY TPKE ORANGE CT 06477	NON GC	N/A	N/A
	HWMANIFEST	KNIGHTS CTP000028463	286 BOSTON POST RD ORANGE CT 06477	NON GC	N/A	N/A
	HWMANIFEST	CT STATE OF DOT CTP000027945	RT 34 ORANGE CT 06477	NON GC	N/A	N/A
	HWMANIFEST	AMITY REGIONAL SCHOOL DISTRICT CTP000028763	130 OSBMAN AVE ORANGE CT 06477	NON GC	N/A	N/A
	HWMANIFEST	MILFORD TOWN OF BD OF ED CTP000029194	65 DEVONSHIRE RD MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	CT STATE OF DOT CTP000027560	I 95 and ALLINGS CROSSING WEST HAVEN CT 06516	NON GC	N/A	N/A
	HWMANIFEST	MILFORD CITY OF BD OF ED CTP000029150	200 CHAPEL ST MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	MILFORD TOWN OF BD OF ED CTP000029191	21 ART ST MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	MILFORD TOWN OF BD OF ED CTP000029190	80 SEAMANS LN MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	MILFORD TOWN OF BD OF ED CTP000029153	80 FOREIGN RD MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	YALE UNIVERSITY CTP000028818	249 DERBY AVE WEST HAVEN CT 06516	NON GC	N/A	N/A
	HWMANIFEST	WEST ELM ASSOC CTP000028579	3451 ELM ST WEST HAVEN CT 06516	NON GC	N/A	N/A

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TOTAL: 851 **GEOCODED:** 106 **NON GEOCODED:** 745 **SELECTED:** 240

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
	HWMANIFEST	VILLAGE LEASING CO CTP000030130	59 LOCUST ST NEW HAVEN CT 06516	NON GC	N/A	N/A
	HWMANIFEST	REGIONAL WATER AUTHORITY CTP000030175	43 SHINGLE HILL RD WEST HAVEN CT 06516	NON GC	N/A	N/A
	HWMANIFEST	REGIONAL WATER AUTHORITY CTP000028923	25 MORRIS AVE WEST HAVEN CT 06516	NON GC	N/A	N/A
	HWMANIFEST	MARTIN RABACH CTP000030056	11 TEMPLETON ST WEST HAVEN CT 06516	NON GC	N/A	N/A
	HWMANIFEST	KENSEAL CONSTRUCTION PRODUCTS CTP000029158	673 1ST AVE WEST HAVEN CT 06516	NON GC	N/A	N/A
	HWMANIFEST	FIRST VIEW LLC CTP000027851	1110 1ST AVE WEST HAVEN CT 06516	NON GC	N/A	N/A
	HWMANIFEST	WENDY'S RESTAURANT CTP000023563	775 BRIDGEPORT AVE MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	CYCLE SALVAGE CTP000029426	172 FRONTAGE ROAD WEST HAVEN CT 06516	NON GC	N/A	N/A
	HWMANIFEST	CT STATE OF DOT CTP000028099	44 DANNER DR MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	MILFORD TOWN OF BD OF ED CTP000029154	20 LANCE LN MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	ORANGE TOWN OF POLICE DEPARTM CTP000030033	301 LAMBERT RD ORANGE CT 06477	NON GC	N/A	N/A
	HWMANIFEST	ORANGE TOWN OF BD OF ED CTP000028263	615 SCHOOLHOUSE LN ORANGE CT 06477	NON GC	N/A	N/A
	HWMANIFEST	OYSTER RIVER PETROLEUM CTP000029003	240 INDIAN RIVER RD ORANGE CT 06477	NON GC	N/A	N/A
	HWMANIFEST	WEST HAVEN RENTAL EQUIPMENT CTP000005937	174 BOSTON POST RD ORANGE CT 06477	NON GC	N/A	N/A
	HWMANIFEST	D P EAST LLC CTP000028711	470 ELM ST WEST HAVEN CT 06516	NON GC	N/A	N/A
	HWMANIFEST	CT POST LIMITED PARTNERSHIP CTP000028486	1210 BOSTON POST RD MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	CT STATE OF DOT CTP000029333	RT 1 and HOUSATONIC RIVER MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	MILFORD TOWN OF BD OF ED CTP000029194	65 DEVONSHIRE RD MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	CT STATE OF DOT CTP000029806	CLARK ST and METRO NORTH MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	WENDY'S RESTAURANT CTP000029563	775 BRIDGEPORT AVE MILFORD CT 06460	NON GC	N/A	N/A

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Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
	HWMANIFEST	DOUGLAS SHARAFANOWICH CTP000029310	168 HOUSATONIC DR MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	EXXONMOBIL CTP000028102	191 MILFORD CT 06460	NON GC	N/A	N/A
	HWMANIFEST	CLIMET PARTNERS CTP000025475	922 BRIDGEPORT AVE MILFORD CT 06460	NON GC	N/A	N/A
J	LUST	DICHELLO BEER DISTRIBUTORS 9901598/CLOSED	55 MARSH HILL RD ORANGE CT 06477	0.12 SW	+ 19	90
J	LUST	DICHELLO DISTRIBUTORS 9701831/CLOSED	55 MARSH HILL RD ORANGE CT 06477	0.12 SW	+ 19	91
J	LUST	DICHELLO BEER DISTRIBUTORS 3309605/LUST COMPLETED (PROG	55 MARSH HILL RD ORANGE CT 06477	0.12 SW	+ 19	92
27	LUST	CITY OF WEST HAVEN - S T P 9905016/CLOSED	171 BEATRICE LN WEST HAVEN CT 06516	0.14 SE	- 63	94
	LUST	EGINO GIORDANO 9909033/CLOSED	54 DEVONSHIRE ROADE MILFORD CT 06460	NON GC	N/A	95
	LUST	SAAB SCANIA 1334-1331/YES	EDISON RD MILFORD CT 06460	NON GC	N/A	96
	LUST	STATEWIDE CLEANERS 1347-1348/NO	GOLDEN HILL RD MILFORD CT 06460	NON GC	N/A	98
	LUST	STATEWIDE CLEANERS 3018/INVESTIGATION	GOLDEN HILL RD MILFORD CT 06460	NON GC	N/A	97
	LUST	TOWN OF MILFORD 9911011306/CLOSED	WEST MAYFLOWER BROADWAY PU MILFORD CT 06460	NON GC	N/A	98
	LUST	VIC CORPORATION 9803118/CLOSED	563 VIC DR MILFORD CT 06460	NON GC	N/A	99
	LUST	9802803/CLOSED	SUNNY SIDE CT MILFORD CT 06460	NON GC	N/A	100
	LUST	DEUTSCHE BANK JOHN PERSSE 9911011803/CLOSED	40 STCAWAY ST WEST HAVEN CT 06516	NON GC	N/A	101
	LUST	ORANGE LANDING CONDOS 9910907779/CLOSED	337 BULL HILL LANE WEST HAVEN CT 06516	NON GC	N/A	103
	LUST	REGIONAL WATER AUTHORITY 3013047/LUST COMPLETED (PROG	BURWELL ST WEST HAVEN CT 06516	NON GC	N/A	105
	LUST	RESIDENTIAL NEIGHBORHOOD 13416/PENDING	COLLINS DR WEST HAVEN CT 06516	NON GC	N/A	104
	LUST	VOLVO 158/YES	795 GRANGE AVE WEST HAVEN CT 06516	NON GC	N/A	105
	LUST	VOLVO 3866/LUST COMPLETED (PROG	793 GRANGE AVE WEST HAVEN CT 06516	NON GC	N/A	106

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TOTAL: 851 **GEOCODED:** 106 **NON GEOCODED:** 745 **SELECTED:** 240

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
	LUST	DANIELS RESIDENCE 13132/PENDING	BARTON RD MILFORD CT 06460	NON GC	N/A	107
	LUST	ESTATE OF LOMBARD 9909054/CLOSED	7 TER MILFORD CT 06460	NON GC	N/A	108
	LUST	GLENN KRUGER 9909322/CLOSED	2 WEPAWAUG AVE MILFORD CT 06460	NON GC	N/A	109
	LUST	RICK S SERVICE BP 3031/INVESTIGATION	BOSTON POST RD MILFORD CT 06460	NON GC	N/A	110
	LUST	RICK S AUTO SERVICE 1331-1333/NO	BOSTON POST RD MILFORD CT 06460	NON GC	N/A	111
	LUST	RICK S SERVICE BP 1333-1337/NO	BOSTON POST RD MILFORD CT 06460	NON GC	N/A	111
	LUST	RICK S SERVICE BP 3031/INVESTIGATION	BOSTON POST RD MILFORD CT 06460	NON GC	N/A	111
	LUST	SAAB SCANIA 1334-1335/YES	EDISON RD MILFORD CT 06460	NON GC	N/A	113
	LUST	STATEWIDE CLEANERS 1347-1349/NO	GOLDEN HILL RD MILFORD CT 06460	NON GC	N/A	113
	LUST	STATEWIDE CLEANERS 3018/INVESTIGATION	GOLDEN HILL RD MILFORD CT 06460	NON GC	N/A	111
	LUST	TOWN OF MILFORD 9911011306/CLOSED	WEST MAYFLOWER BROADWAY PU MILFORD CT 06460	NON GC	N/A	115
	LUST	VIC CORPORATION 9803118/CLOSED	563 VIC DR MILFORD CT 06460	NON GC	N/A	116
	LUST	9802803/CLOSED	SUNNY SIDE CT MILFORD CT 06460	NON GC	N/A	117
	LUST	WEST HAVEN S.T.P. 3013047/LUST COMPLETED (PROG	BLOHM ST WEST HAVEN CT 06516	NON GC	N/A	118
	LUST	MARTY ZWERDLING 20110813/OPEN	339 MANLEY HEIGHTS ROAD ORANGE CT 06477	NON GC	N/A	119
	LUST	PAUL DANIELS 20081133/CLOSED	143 KING HWY MILFORD CT 06460	NON GC	N/A	120
	LUST	RICK S SERVICE BP 1333-1337/NO	BOSTON POST RD MILFORD CT 06460	NON GC	N/A	121
	LUST	CHADDERTON 20100713/CLOSED	515 TREAT LANE ORANGE CT 06477	NON GC	N/A	122
	LUST	GINO ALFANO 20110674/CLOSED	435 SOUTH GREEN BRIAR DR ORANGE CT 06477	NON GC	N/A	123
	LUST	MOBIL STATION NORTH AND SOUTHB 3122/CLEANUP INITIATED	MERRITT PKY ORANGE CT 06477	NON GC	N/A	124

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	LUST	RICHARD BASILE 200905310/CLOSED	171 WILD ROSE DR ORANGE CT 06477	NON GC	N/A	125
	LUST	RICHETELLI REAL ESTATE 2233-2134/NO	109 BRIDGEPORT ORANGE CT 06477	NON GC	N/A	126
	LUST	RICHETELLI REAL ESTATE 3033/ANT/ESTIGATION	109 BRIDGEPORT ORANGE CT 06477	NON GC	N/A	127
	LUST	U 2134/NO	BULL HILL LN ORANGE CT 06477	NON GC	N/A	128
	LUST	WENDY FLINN 200903648/CLOSED	343 HARTLAND TER ORANGE CT 06477	NON GC	N/A	129
	LUST	9840/NO/CLOSED	ORCHARD RD ORANGE CT 06477	NON GC	N/A	130
	LUST	DANIELS RESIDENCE 25193/PENDING	BARTON RD MILFORD CT 06460	NON GC	N/A	131
	LUST	EGIDIO GIORDANO 200903931/CLOSED	54 DEVONSHIRE ROADE MILFORD CT 06460	NON GC	N/A	132
	LUST	RICK S AUTO SERVICE 1341-1343/NO	BOSTON POST RD MILFORD CT 06460	NON GC	N/A	133
	LUST	ESTATE OF LOMBARD 200905410/CLOSED	9 TER MILFORD CT 06460	NON GC	N/A	134
	LUST	PAUL DANIELS 200801939/CLOSED	163 KING HWY MILFORD CT 06460	NON GC	N/A	135
	LUST	GLYNN RUGER 200903117/CLOSED	2 WEPAWAUG AVE MILFORD CT 06460	NON GC	N/A	136
	LUST	UNKNOWN 3043/ANT/ESTIGATION	BULL HILL LN ORANGE CT 06477	NON GC	N/A	137
	LUST	ELAINE GLASS 200905139/CLOSED	210 OLD GRASSY HILL ROAD ORANGE CT 06477	NON GC	N/A	138
11	NFRAP	ABB INDUSTRIAL SYSTEMS, INC. CTD981917819/NFRAP-N	55 MARSH HILL RD ORANGE CT 06477	0.19 NW	+ 13	139
2	OTHER	THE SOUTHERN CT GAS COMPANY CTOT-8509-1976/PTP	60 MARSH HILL RD ORANGE CT 06477	0.11 NW	+ 13	140
3	OTHER	BOEBIC LABORATORIES INC. CTOT-8509-916/PTP	25 CONNAIR RD ORANGE CT 06477	0.13 SE	- 19	140
6	OTHER	RICHARD BARRY FRANCIS, INC. (F CTOT-8509-115/PTP	15 EXECUTIVE BLVD ORANGE CT 06477	0.15 SW	+ 11	140
8	OTHER	REXAM INDUSTRIES CORP. 4830/PTP	37 ROBINSON BLVD ORANGE CT 06477	0.16 SE	- 41	141
8	OTHER	REXHAM CORPORATION CTOT-8509-1353/PTP	37 ROBINSON BLVD ORANGE CT 06477	0.16 SE	- 41	141

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9	OTHER	DATA SWITCH CORP. (FORMER) CTOT-8509-1128/PTP	11 CASCADE BLVD ORANGE CT 06477	0.16 SW	+ 11	142
13	OTHER	ABB INDUSTRIAL SYSTEMS, INC 932/PTP	55 MARSH HILL RD ORANGE CT 06477	0.19 NW	+ 17	144
17	OTHER	AVIATION COMPONENTS/CABL TRUCKI CTOT-87-A-342	95 MARSH HILL RD ORANGE CT 06477	0.33 NW	+ 1	145
19	OTHER	AVIATION COMPONENT SUPPORT COM CTOT-8509-2127/PTP	95 MARSH HILL RD ORANGE CT 06477	0.33 NW	+ 1	145
17	OTHER	AVIATION COMPONENT SUPPORT COM CTOT-87-A-345	95 MARSH HILL RD ORANGE CT 06477	0.33 NW	+ 1	146
	OTHER	WESTFIELD INC. 4834/PTP	MARSH HILL RD ORANGE CT 06477	NON GC	N/A	147
	OTHER	AVIATION COMPONENTS / CBL TRUC CTOT-8509-2126/PTP	95 MARSH HILL / 61 FRONTAGE ORANGE CT 06477	NON GC	N/A	148
	OTHER	ORANGE DOT (HART 09)GARAGE CTOT-1003-98	RTE 34 ORANGE CT 06477	NON GC	N/A	N/A
	OTHER	BAYER PHARMACEUTICALS CORPORAT CTOT-8509-1128/PTP	11 VI FRONTAGE ROAD and 95 ORANGE CT 06477	NON GC	N/A	148
8	RCRAGN	L C D LIGHTING CTD913844118/LGN	37 ROBINSON BLVD ORANGE CT 06477	0.16 SE	- 41	150
10	RCRAGN	L S NEON INC CT5000000141/LGN	11 CASCADE BLVD ORANGE CT 06477	0.15 SW	+ 0	151
10	RCRAGN	CYRO IND CTD981183341/SGN	15 EXECUTIVE BLVD ORANGE CT 06477	0.18 SW	- 29	151
23	RCRAGN	LIGHT SOURCES INC CTD983877100/SGN	70 CASCADE BLVD MILFORD CT 06460	0.33 SW	- 35	159
24	RCRAGN	ORANGE RESEARCH INC CTD983903448/SGN	134 CASCADE BLVD MILFORD CT 06460	0.36 SW	- 43	161
25	RCRAGN	ORANGE RESEARCH INC CTD981253153/SGN	140 CASCADE BLVD MILFORD CT 06460	0.38 SW	- 42	164
	RCRAGN	WALMART 3803 CTR000500903/SGN	915 SAWMILL RD WEST HAVEN CT 06516	NON GC	N/A	N/A
5	RCRANLR	NORTHEAST PACKAGING INC CTD980314199/NLR	25 CONNAIR RD ORANGE CT 06477	0.15 SE	- 17	167
9	RCRANLR	DATA SWITCH CORP CT5000000413/NLR	11 CASCADE BLVD ORANGE CT 06477	0.16 SW	+ 11	168
11	RCRANLR	ESSEX FRANCE CO CTD047083384/NLR	CONNAIR RD ORANGE CT 06477	0.13 SE	- 18	169
10	RCRANLR	L S NEON INC CT5000000142/NLR	11 CASCADE BLVD ORANGE CT 06477	0.15 SW	+ 0	171

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10	RCRANLR	L C D LIGHTING INC CTD980002135/NLR	11 CASCADE BLVD ORANGE CT 06477	0.15 SW	+ 6	173
13	RCRANLR	SIGMA INSTRUMENT INTERNATIONAL CTD990831911/NLR	84 MARSH HILL RD ORANGE CT 06477	0.19 NW	+ 12	174
11	RCRANLR	ASEA BROWN BOVERI CTD934383536/NLR	88 MARSH HILL RD ORANGE CT 06477	0.19 NW	+ 13	175
20	RCRANLR	CYRO IND CTD911951541/NLR	15 EXECUTIVE BLVD ORANGE CT 06477	0.21 SW	- 29	176
23	RCRANLR	LIGHT SOURCES INC CTD983877100/NLR	70 CASCADE BLVD MILFORD CT 06460	0.33 SW	- 35	176
26	RCRANLR	AVIATION COMPONENTS SUPPORT CO CTD943647711/NLR	21 FRONTAGE RD ORANGE CT 06477	0.43 NE	- 23	180
28	RCRANLR	CARRIER CORP CTD981777815/NLR	200 CASCADE BLVD MILFORD CT 06460	0.48 SW	- 46	181
1	SPILLS	911824/CLOSED	53 ROBINSON ORANGE CT 06477	0.07 SE	- 11	183
1	SPILLS	200109859/CLOSED	60 MARSH HILL RD ORANGE CT 06477	0.11 NW	+ 17	184
2	SPILLS	SAA 200409813/CLOSED	60 MARSH HILL RD ORANGE CT 06477	0.11 NW	+ 13	185
2	SPILLS	SAA 200607133/CLOSED	60 MARSH HILL RD ORANGE CT 06477	0.11 NW	+ 13	185
4	SPILLS	UNKNOWN 9903813/CLOSED	END OF ROBINSON BLVD ORANGE CT 06477	0.13 SE	- 18	186
5	SPILLS	200005514/CLOSED	55 MARSH HILL RD ORANGE CT 06477	0.15 SW	+ 10	187
3	SPILLS	DICHELLO DISTRIBUTORS 9701834/CLOSED	53 MARSH HILL RD ORANGE CT 06477	0.12 SW	+ 10	188
3	SPILLS	DICHELLO BEER DISTRIBUTORS 9701996/CLOSED	53 MARSH HILL RD ORANGE CT 06477	0.12 SW	+ 10	189
7	SPILLS	200107164/CLOSED	MARSH HILL and CASSCADE BLV ORANGE CT 06477	0.13 SW	+ 13	190
6	SPILLS	SAA 200406479/CLOSED	15 EXECUTIVE BLVD ORANGE CT 06477	0.15 SW	+ 11	191
13	SPILLS	DHL DELIVERY 200106039/CLOSED	89 MARSH HILL RD ORANGE CT 06477	0.19 NW	- 4	193
13	SPILLS	CT. REFINING CO. 200106031/CLOSED	89 MARSH HILL RD ORANGE CT 06477	0.19 NW	- 4	193
15	SPILLS	NONE 9901373/CLOSED	135 FRONTAGE BEHIND D ALARM ORANGE CT 06477	0.21 NW	- 3	194

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14	SPILLS	NORTHEAST BEVERAGE CO 201008818/CLOSED	31 ROBINSON BLVD ORANGE CT 06431	0.21 SE	- 64	195
16	SPILLS	YALE UNIVERSITY 200709419/CLOSED	35 FRONTAGE RD ORANGE CT 06477	0.33 NW	+ 12	196
18	SPILLS	200109079/CLOSED	I - 95 NB EXIT ORANGE CT 06477	0.24 NW	+ 20	197
	SPILLS	PAR ELECTRIC CONTRACTING 200703553/CLOSED	STATE HIGHWAY 34 ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	TOWN OF ORANGE 200203653/CLOSED	OLD TAVERN PARK K and RECRE ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	TIAN WENLAI 200504750/CLOSED	200 BITTER SWEET RD ORANGE CT 06473	NON GC	N/A	N/A
	SPILLS	TESTA EXCAVATING, TRITEC GENER 200103311/CLOSED	WELLINGTON RD ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	SAA 200703764/CLOSED	DOGBURN RD ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	ROBERT OPEKUN 200505829/CLOSED	1021 OPEKUN RD ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	PETRO PLUS 9703371/CLOSED	PETRO PLUS ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	LEIGH BARNES 201101106/OPEN	837 SHAG BARK DR ORANGE CT	NON GC	N/A	N/A
	SPILLS	PAR ELECTRIC CONTRACTORS INC. 200703084/CLOSED	STATE HIGHWAY 34 ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	JOHNS REFUSE - 203-891-2137 200205945/CLOSED	S ORANGE CENTER RD ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	MARTY ZWERDLING 201101396/OPEN	329 MANLEY HEIGHTS ROAD ORANGE CT	NON GC	N/A	N/A
	SPILLS	TRISTATE DRILLING 200702412/CLOSED	DOGBURN RD ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	UNKNOWN 9709253/CLOSED	RTE 152 RD ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	JOYCE LUIS 200604506/CLOSED	6442 BOSTON POST RD ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	PEP BOYS AUTO 200504912/CLOSED	POST RD ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	UNKNOWN 9807145/CLOSED	BULL HILL RD ORANGE CT 06473	NON GC	N/A	N/A
	SPILLS	200702934/CLOSED	RUSSELL AVE ORANGE CT 06477	NON GC	N/A	N/A

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	SPILLS	9903929/CLOSED	ORCHARD RD ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	201101234/OPEN	NORTH DERBY-MILFORD AT INTE ORANGE CT	NON GC	N/A	N/A
	SPILLS	201100959/CLOSED	938 RED FOX ROAD ORANGE CT	NON GC	N/A	N/A
	SPILLS	201006082/OPEN	2 BOSTON POST SANS PARKING ORANGE CT	NON GC	N/A	N/A
	SPILLS	UNKNOWN 200500037/CLOSED	DOG BURN ROAD, NEAR WOODBRI ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	UNK 200600311/CLOSED	ROUTE 34 and ROUTE 114 ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	UNKNOWN 200501193/CLOSED	COMMUTER LOT STATE HIGHWAY ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	UNDETERMINED 200204290/CLOSED	RED CEDAR RD./SILVER BROOK ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	UNKNOWN 200503635/CLOSED	213 MARGRETT RD ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	UNKNOWN 9707067/CLOSED	BULL HILL LN ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	DOT 942917/CLOSED	RTE 15 S/B ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	UNK 200000204/CLOSED	DOUGBURN RD ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	GINO ALFARO 201100747/CLOSED	637 SOUTH GREEN BRIAR DR ORANGE CT	NON GC	N/A	N/A
	SPILLS	UNK 200005360/CLOSED	PINE TREE RIDGE ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	UNKNOWN 201006410/CLOSED	301 301 BOSTON POST RD ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	SAA 200505750/CLOSED	MARRIOTT CORP and WHEELER MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	ADAMS HOMETOWN MARKET 201006464/CLOSED	DERBY TO SODOM (TWO MILE BR ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	AAIS CORP 200206336/CLOSED	16 HAMILTON DR ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	SAME 200007110/CLOSED	S CENTRAL REGIONAL WATER AU MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	SAA 200305046/CLOSED	POST REDBUSH LN MILFORD CT 06460	NON GC	N/A	N/A

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	SPILLS	SAA 200403403/CLOSED	NORTH ST MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	ED DUNN 200902273/CLOSED	527 HOWELTON RD ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	*SAA* *200304918/CLOSED*	*I-95 N AFTER REST AREA* *MILFORD CT 06460*	*NON GC*	*N/A*	*198*
	SPILLS	ALLIANCE ENERGY 201100196/CLOSED	404 POST ROAD ORANGE CT	NON GC	N/A	N/A
	SPILLS	SAA 200701133/CLOSED	101 LANDSDALE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	SAA 200704221/CLOSED	POST MALL SHOPPING CENTER MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	SAA 200905946/CLOSED	300 W MAIN ST NEW BRITAIN CT 06460	NON GC	N/A	N/A
	SPILLS	SAA 201005112/CLOSED	PROSPECT ST MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*SAA* *200501994/CLOSED*	*MILFORD I-95 CONNECTOR NEAR* *MILFORD CT 06460*	*NON GC*	*N/A*	*194*
	SPILLS	SAA 200200951/CLOSED	BRIDGEPORT AVE, MILFORD CEN MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	SAA 200102011/CLOSED	BOSTON POST - GLORIAS FLORI MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	SAA 200004311/CLOSED	BREAK NECK LN MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*ROADLINK USA JOHN DEHOLL* *200403731/CLOSED*	*I-95 N BETWEEN EXIT 37 and* *MILFORD CT 06460*	*NON GC*	*N/A*	*193*
	SPILLS	*SAA* *200304918/CLOSED*	*I-95 N AFTER REST AREA* *MILFORD CT 06460*	*NON GC*	*N/A*	*196*
	SPILLS	*UNKNOWN* *200703999/CLOSED*	*I-95 BETWEEN EXIT 38 and EX* *MILFORD CT 06460*	*NON GC*	*N/A*	*201*
	SPILLS	9702920/CLOSED	W POND ON RIVER MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 9708494/CLOSED	NELLS ISLAND MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 9608337/CLOSED	POINT LOOKOUT AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 9803684/CLOSED	CASWELL COVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 9505138/CLOSED	LONG ISLAND SOUND MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 9503219/CLOSED	HERBERT TO DIRT TO GOLF COU MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 9505187/CLOSED	CHARLES ISLAND MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 200202088/CLOSED	LOT 17 ACROSS FROM MILFORD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	TOWN OF MILFORD 9907343/CLOSED	1 GOLDEN ST MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 200903437/CLOSED	MILFORD HARBOR MILFORD CT 06460	NON GC	N/A	N/A

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	SPILLS	ALLIANCE ENERGY 201100104/CLOSED	SOUTH ROUTE 15 EXIT 53-54 ORANGE CT	NON GC	N/A	N/A
	SPILLS	GLYNN KRUGER 200503221/CLOSED	2 WEPAWAUG AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*CBL TRUCKING* *911139/CLOSED*	*I-95 N EXIT 34 and EXIT 41* *ORANGE CT 06477*	*NON GC*	*N/A*	*191*
	SPILLS	CATHERINE MARATHAS 200804512/CLOSED	145 ROBERT ST EXT ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	ASSISTANT CHIEF ROGER PATRICK 200504612/CLOSED	8 MERRITT JUST OF EXIT PKY ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	ALLIANCE ENERGY 201100134/CLOSED	404 BOSTON POST SUNOCO ROAD ORANGE CT	NON GC	N/A	N/A
	SPILLS	*FREIGHT MASTER TRANSPORTATION* *200406411/CLOSED*	*MARSH HILL ROAD, AT I-95 OF* *ORANGE CT 06477*	*NON GC*	*N/A*	*203*
	SPILLS	CONNECTICUT LIGHT SOURCE 200410382/CLOSED	37 ROBERTSON BLVD. ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	SAA 200701118/CLOSED	101 LANDSDALE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	STEVE ROUSSEAU 9700313/CLOSED	BROWNS MARINA MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	STATE DOT 200205397/CLOSED	INTERSTATE 195 MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	ST OF CT DOT 926479/CLOSED	WILBUR CROSS MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	SIKORSKY AIRCRAFT 956708/CLOSED	WALNUT BEACH MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	SAME 200007510/CLOSED	S CENTRAL REGIONAL WATER AU MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	SAA 200305046/CLOSED	POST REDBUSH LN MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	SAA 200403405/CLOSED	NORTH ST MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	SAA 200401621/CLOSED	CUMBERLAND FARMS MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*UNKNOWN TRUCKING COMPANY* *200500712/CLOSED*	*I-95 BETWEEN EXIT 39 and EX* *MILFORD CT 06460*	*NON GC*	*N/A*	*203*
	SPILLS	SAA 200505750/CLOSED	MARRIOTT CORP and WHEELER MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNITED ILLUMINATING 951881/CLOSED	SETTLE RIDGE MILFORD CT 06460	NON GC	N/A	N/A

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	SPILLS	UNITED ILLUMINATING 9411672/CLOSED	FOREST RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 20020065/CLOSED	ORONQUE RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 9906439/CLOSED	ERNA AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 9604396/CLOSED	MILFORD HARBOR MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 9702923/CLOSED	W RIVER ST MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKN 20060545/CLOSED	MILFORD HARBOR MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNK 20030321/CLOSED	ROSES MILL RD, MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNITED RENTAL 20060052/CLOSED	BRIGAID ST MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNITED ILLUMINATING 20000237/CLOSED	OLD GATE LN MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	PETER FERRARO 936021/CLOSED	WOODMONT RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 20020412/CLOSED	CAMDEN - MOSES WHEELER BRID MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	ABSOLUTE TANK REMOVAL 20030419/CLOSED	ROWE AVE EXT MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	REDSTONE DEVELOPMENT 20010572/CLOSED	N SOUTHWICK COURT / SOUTHWI MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*DIRECT TRANSIT INC* *9406113/CLOSED*	*I-95 E EXIT 38 and EXIT 40* *MILFORD CT 06460*	*NON GC*	*N/A*	*209*
	SPILLS	F and N OIL 9401597/CLOSED	NAUGATUCK AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	COMPANY DOING ASPHALT PATCH WO 20000634/CLOSED	ATWATER ST/MERRIN POINT BEA MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	20050672/CLOSED	MARGARET LN ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	C. WHITE 9803753/CLOSED	N I 95 EXIT 33-34 MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	BOARD OF ED 20020709/CLOSED	EEL HILL RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	BATH FITTERS 20050736/CLOSED	QUARRY RD MILFORD CT 06460	NON GC	N/A	N/A

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	SPILLS	DUCCI 20030594/CLOSED	N METRO TRACK 967 MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	ATTORNEY GEORGE ADAMS 921153/OPEN	QUARRY RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	EXXON MOBIL ON DOT PROPERTY/MA 20050249?/CLOSED	I-REST AREA MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	SAME 20040603/CLOSED	146 HIGH ST MILFORD CT 06461	NON GC	N/A	N/A
	SPILLS	942665/CLOSED	NAUGATUCK AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	946460/CLOSED	ORONOQUE RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*911335/CLOSED*	*I-95 S/B* *MILFORD CT 06460*	*NON GC*	*N/A*	*211*
	SPILLS	91634/CLOSED	OLD GATE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*941119/CLOSED*	*I-95 N EXIT 33 and EXIT 34* *MILFORD CT 06460*	*NON GC*	*N/A*	*213*
	SPILLS	934596/CLOSED	OLD GATE LN MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	911534/CLOSED	FOREST RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	9704311/CLOSED	POST RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*B and J TRANSPORTATION* *20040619/CLOSED*	*I-95 S SOUTH OF EXIT 34* *MILFORD CT 06460*	*NON GC*	*N/A*	*214*
	SPILLS	LOGISTICS EXPRESS INC 20030599?/CLOSED	UNKNOWN MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	VIC CORPORATION 9803287/CLOSED	565 VIC DR MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	PAUL DANIELS 20030739?/CLOSED	163 KINGS HWY MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	NRG 20040757/CLOSED	NAUGATUCK AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	NPG 20030467?/CLOSED	SHELLAND RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	NOT JUST TRUCKING 20050779/CLOSED	WOODMONT RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*NORTHEAST UTILITIES* *20000411/CLOSED*	*NRG* *MILFORD CT 06460*	*NON GC*	*N/A*	*216*

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	SPILLS	*N/A* *20030451?/CLOSED*	*I-95, NEAR EXIT 38,* *MILFORD CT 06460*	*NON GC*	*N/A*	*219*
	SPILLS	*MOBIL GAS* *19010545/CLOSED*	*I-95 N* *MILFORD CT 06460*	*NON GC*	*N/A*	*218*
	SPILLS	DOC S TRUCKING 9427334/CLOSED	WOODMONT AVE, MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	METRO NORTH 926434/CLOSED	MILFORD-SHELTON TRAC MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	RAYMOND CAMARNO 20090485?/CLOSED	63 BERKLEY TER MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	JAMI BEARD 20060320?/CLOSED	ORONOQUE RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	GLYNN KRUGER 20090322?/CLOSED	7 WEPAWAUG AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	GLORIA S GARDEN CENTER 20040284/CLOSED	258 POST RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	F and N OIL 9411597/CLOSED	NAUGATUCK AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	EXXON MOBILE 20070518?/CLOSED	W MILFORD TPKE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	EXXON MOBILE 20070564/CLOSED	MILFORD TPKE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	EXXON MOBILE 20050634?/CLOSED	MILFORD TURNPIKE EAST MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	EXXON MOBILE 20030549?/CLOSED	E MILFORD TPKE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	EXXON MOBILE 20070639?/CLOSED	MILFORD TPKE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	METRO NORTH RAILROAD 20020373?/CLOSED	N METRO RAIL TRACKS - NEARS MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	9504694/CLOSED	NEW HAVEN - CT LIMO AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	20016482/CLOSED	BROADWAY MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	947716/CLOSED	WOODMONT RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	20010872?/CLOSED	OLD GATE LN MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	20010596?/CLOSED	HALE AVE MILFORD CT 06460	NON GC	N/A	N/A

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	SPILLS	20010802?/CLOSED	DEVON BOAT LAUNCH MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	20011067?/CLOSED	RAILROAD RIGHT OF OFF OF RO MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	20011693/CLOSED	95 SOUTH 36-38 MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	9501607/CLOSED	NAUGATUCK AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN TRUCKER 20030340?/CLOSED	S EXXON MOBIL SERVICE CENTE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	9504343/CLOSED	LONG ISLAND SOUND / WOODMON MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	20000636/CLOSED	ASHVILLE PARKING LOT MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	9505733/CLOSED	MILFORD TOWN DOCK/ WEPAWAUG MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	9504350/CLOSED	ROCK LANE RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	20000116/CLOSED	17 BRADLEY AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	20000706/CLOSED	IFO 20 APPLEWOOD RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	20000717/CLOSED	330 PARK AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	20020211?/CLOSED	TRUCK STOP EXIT MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*19030393/CLOSED*	*RD* *MILFORD CT 06460*	*NON GC*	*N/A*	*219*
	SPILLS	20020402?/CLOSED	NAUGATUCK AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	951150/CLOSED	NAUGATUCK AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	9802695/CLOSED	22101 OLD GATE DR MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	942465/CLOSED	NAUGATUCK AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	946460/CLOSED	ORONOQUE RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*911335/CLOSED*	*I-95 S/B* *MILFORD CT 06460*	*NON GC*	*N/A*	*221*

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Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
	SPILLS	91688/CLOSED	OLD GATE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*91141/CLOSED*	*I-95 N EXIT 33 and EXIT 34* *MILFORD CT 06460*	*NON GC*	*N/A*	*223*
	SPILLS	913499/CLOSED	OLD GATE LN MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	911354/CLOSED	FOREST RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	9704311/CLOSED	POST RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*9800661164/CLOSED*	*I-95 S* *MILFORD CT 06460*	*NON GC*	*N/A*	*224*
	SPILLS	9802976/CLOSED	HOUSATONIC RIVER MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*9701433/CLOSED*	*S I-95 BOUND OF EXIT* *MILFORD CT 06460*	*NON GC*	*N/A*	*225*
	SPILLS	9802901/CLOSED	SUNNY SIDE CT MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	9802963/CLOSED	I-95 MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	955644/CLOSED	FOREST COURT YARD ST MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	961634/OPEN	ANDERSON MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	961073/CLOSED	ROWE AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	94751/CLOSED	MILFORD METER STATION MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	912378/CLOSED	HOUSATONIC RIVER MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	9801173/CLOSED	BEAVER BROOK MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	20020/9610/CLOSED	I - 95 NB BETWEEN EXITS MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	970292/CLOSED	W POND ON RIVER MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200601186/CLOSED	RTE 15 S MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200205545/CLOSED	WHEELERS FARM RD MILFORD CT 06460	NON GC	N/A	N/A

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Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
	SPILLS	200703694/CLOSED	W MILFORD TPKE EXXON GAS ST MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200704096/CLOSED	MILFORD TPKE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200705801/CLOSED	PILOT TRAVEL MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200706178/CLOSED	W MILFORD TURNPIKE MIDDL ST MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200706904/CLOSED	SHELLAND ST and PLAINS RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200800412/CLOSED	NAUGATUCK AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200800766/CLOSED	WEST AVE BEAVER BROOK TRL MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200701342/CLOSED	65 CENTIAL HILL RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	2b1003085/CLOSED	2 PARIS ST MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200701062/CLOSED	ROSEMILL and WOODMOUNT RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200601831/CLOSED	RTE 195 S BETWEEN EXIT 32 a MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200601136/CLOSED	MILFORD TPKE W MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200605184/CLOSED	WOODMONT AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200605412/CLOSED	MILFORD HARBOR MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200605801/CLOSED	NORTH ST MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200607254/CLOSED	BIC ST and SHELTON ST MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200607771/CLOSED	BIC DR MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*200700158/CLOSED*	*I-95 N REST AREA* *MILFORD CT 06460*	*NON GC*	*N/A*	*226*
	SPILLS	9219926/CLOSED	WAMPUS LN MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	2910991302/CLOSED	65 OCEAN AVE MILFORD CT 06460	NON GC	N/A	N/A

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Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
	SPILLS	200503474/CLOSED	1 SHIPYARD RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*COMM. VEHICLE* *2901611/CLOSED*	*I-95 NB* *MILFORD CT 06460*	*NON GC*	*N/A*	*227*
	SPILLS	200303134/CLOSED	BOSTON POST RD and TURNPIKE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200303589/CLOSED	BOAT RAMP , SHIPYARD LANE, MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200307/04/CLOSED	46 ERWA AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*3904/0619/CLOSED*	*DEVON STATE BOAT LAUNCH UND* *MILFORD CT 06460*	*NON GC*	*N/A*	*228*
	SPILLS	200402/29/CLOSED	RESEARCH DR MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200401143/CLOSED	CT POST MALL MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*2904/4316/CLOSED*	*UNKNOWN* *MILFORD CT 06460*	*NON GC*	*N/A*	*229*
	SPILLS	200702114/CLOSED	HARBOR GULF STREAM MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200406348/CLOSED	23 SAMSON AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200302484/CLOSED	I - 95 SB BETWEEN EXITS MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200504117/CLOSED	MILFORD TPKE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200305338/CLOSED	100 YARDS OFF SHORE FROM I MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*2903073314/CLOSED*	*I-95 S BETWEEN EXIT 39A and* *MILFORD CT 06460*	*NON GC*	*N/A*	*230*
	SPILLS	200507/814/CLOSED	E TOWN RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200308063/CLOSED	POST RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200600574/CLOSED	OLD GATE RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200600815/CLOSED	NAUGATUCK AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200700743/CLOSED	N METRO RAILROAD MILEPOST 6 MILFORD CT 06460	NON GC	N/A	N/A

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	SPILLS	*2907911/24/CLOSED*	*I-95 N EXIT 1* *MILFORD CT 06460*	*NON GC*	*N/A*	*230*
	SPILLS	200401390/CLOSED	ORANOAK DR MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	NOT JUST TRUCKING 200500778/CLOSED	WOODMONT RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 9705134/CLOSED	LONG ISLAND SOUND MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	SAA 200004818/CLOSED	BREAK NECK LN MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*ROADLINK USA/ JOHN BEHOLL* *3800057/3/CLOSED*	*I-95 N BETWEEN EXIT 37 and* *MILFORD CT 06460*	*NON GC*	*N/A*	*231*
	SPILLS	REDSTONE DEVELOPMENT 200105292/CLOSED	N SOUTHWICK COURT / SOUTHWI MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	RAYMOND CAMARNO 200702855 CLOSED	65 BERKELEY TER MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	PETER FERRARO 934021 CLOSED	WOODMONT RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	PAUL DANIELS 200907391/CLOSED	162 KING HWY MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	SIKORSKY AIRCRAFT 9507/0/CLOSED	WALNUT BEACH MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	NPO 200504672/CLOSED	SHELLAND RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	ST OF CT DOT 926479/CLOSED	WILBUR CROSS MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*NORTHEAST UTILITIES* *2090643/3/CLOSED*	*NRG* *MILFORD CT 06460*	*NON GC*	*N/A*	*233*
	SPILLS	*MTA* *1901054/4/CLOSED*	*I-95, NEAR EXIT 36* *MILFORD CT 06460*	*NON GC*	*N/A*	*234*
	SPILLS	*MOBIL GAS* *2907954/5/CLOSED*	*I-95 N* *MILFORD CT 06460*	*NON GC*	*N/A*	*235*
	SPILLS	METRO NORTH RAILROAD 200703323/CLOSED	N METRO RAIL TRACKS - NEARE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	METRO NORTH 925434/CLOSED	MILFORD-SHELTON TRAC MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*LOGISTICS EXPRESS INC* *2903039/5/CLOSED*	*UNKNOWN* *MILFORD CT 06460*	*NON GC*	*N/A*	*236*
	SPILLS	JAME BEARD 200605/806/CLOSED	ORONOQUE RD MILFORD CT 06460	NON GC	N/A	N/A

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	SPILLS	GLORIA S GARDEN CENTER 2004072204/CLOSED	218 POST RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	NRG 2004075734/CLOSED	NAUGATUCK AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 9702923/CLOSED	W RIVER ST MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 9505219/CLOSED	HERBERT TO DIRT TO GOLF COU MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 9505117/CLOSED	CHARLES ISLAND MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 2003020437/CLOSED	LOT 17 ACROSS FROM MILFORD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 2003041234/CLOSED	CAMDEN - MOSES WHEELER BRID MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 2005034437/CLOSED	MILFORD HARBOR MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*UNKNOWN* *2007022095/CLOSED*	*I-95 BETWEEN EXIT 18 and EX* *MILFORD CT 06460*	*NON GC*	*N/A*	*239*
	SPILLS	UNKNOWN 2002090644/CLOSED	GRONQUE RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	SAA 2001023911/CLOSED	BOSTON POST - GLORIAS FLORI MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 9604396/CLOSED	MILFORD HARBOR MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	EXXON MOBILE 2009063468/CLOSED	MILFORD TURNPIKE EAST MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKN 2006054151/CLOSED	MILFORD HARBOR MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNK 2003032118/CLOSED	ROSES MILL RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNITED RENTAL 2006003124/CLOSED	BROAD ST MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	9882036/CLOSED	HOUSATONIC RIVER MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNITED ILLUMINATING 9517831/CLOSED	SETTLE RIDGE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	TOWN OF MILFORD 9907343/CLOSED	1 GOLDEN ST MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	STEVE ROUSSEAU 9709313/CLOSED	BROWNS MARINA MILFORD CT 06460	NON GC	N/A	N/A

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TOTAL: 851 **GEOCODED:** 106 **NON GEOCODED:** 745 **SELECTED:** 240

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
	SPILLS	STATE DOT 2002055597/CLOSED	INTERSTATE 95 MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 9806839/CLOSED	ERNA AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	9807981/CLOSED	1909 MAPLE DALE RD ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	9603471/CLOSED	INDIAN LAKE ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	*2007031364/CLOSED*	*I-95 EXIT 12* *ORANGE CT 06477*	*NON GC*	*N/A*	*238*
	SPILLS	2007079564/CLOSED	STATE HIGHWAY 114 ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	2008021740/CLOSED	290 TETROSE CIR ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	*2009013112/CLOSED*	*UNKNOWN* *ORANGE CT 06477*	*NON GC*	*N/A*	*238*
	SPILLS	2010000701/CLOSED	ROUTE 15 SOUTH EXXON MOBIL ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	2010008997/CLOSED	STATE HIGHWAY 15 S SADDLE CIA ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	EXXON MOBILE 2007055104/CLOSED	W MILFORD TPKE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	9803213/CLOSED	BULL HILL LN ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	9307122/CLOSED	BOSTON POST RD ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	9908023/CLOSED	N RT 13 AT THE TRUCK ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	9808743/CLOSED	73 ROLAND RIDGE ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	9903633/CLOSED	PRESTON TRUCKING RT ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	9506803/CLOSED	FORREST RD CARRIAGE DR ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	2002018084/CLOSED	W RT 34 1/8 MILE BEFORE RAC ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	2003000031/CLOSED	S WILBUR CROSS EXXON STATIO ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	2003041102/CLOSED	W RT 34 RT ORANGE CT 06477	NON GC	N/A	N/A

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	SPILLS	2004040972/CLOSED	ORANGE CENTER RD ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	2010026714/CLOSED	107 GRANNISS RD ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	BOARD OF ED 2002070911/CLOSED	EEL HILL RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNITED ILLUMINATING 2000072374/CLOSED	OLD GATE LN MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	EXXON MOBILE 2003053494/CLOSED	E MILFORD TPKE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	EXXON MOBILE 2007063970/CLOSED	MILFORD TPKE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	EXXON MOBIL ON DOT PROPERTY-MA 2005024977/CLOSED	I- REST AREA MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	DUCCI 2003035911/CLOSED	N METRO TRACK 967 MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	DOC S TRUCKING 9417734/CLOSED	WOODMONT AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*DIRECT TRANSIT INC* *9106114/CLOSED*	*I-95 E EXIT 11 and EXIT 10* *MILFORD CT 06460*	*NON GC*	*N/A*	*240*
	SPILLS	COMPANY DOING ASPHALT PATCH WO 2002064512/CLOSED	ATWATER STAMERUIN POINT BEA MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*9103568/CLOSED*	*MARSH HILL RD* *ORANGE CT 06477*	*NON GC*	*N/A*	*241*
	SPILLS	C WHITE 9803197/CLOSED	N I 95 EXIT 33-34 MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	9552212/CLOSED	MARSHALL ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	BATH FITTERS 2005079859/CLOSED	QUARRY RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*B and J TRANSPORTATION* *1900010174/CLOSED*	*I-95 S SOUTH OF EXIT 36* *MILFORD CT 06460*	*NON GC*	*N/A*	*243*
	SPILLS	ATTORNEY GEORGE ADAMS 9211533/OPEN	QUARRY RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	ABSOLUTE TANK REMOVAL 2003041819/CLOSED	ROWE AVE EXT MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	2010070304/CLOSED	131 NEW HAVEN AVE ORANGE CT	NON GC	N/A	N/A
	SPILLS	2011011954/CLOSED	RT. 34/DERBY AND PLAINFIELD ORANGE CT	NON GC	N/A	N/A

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	SPILLS	9216324/CLOSED	1 SAAB DR ORANGE CT 06477	NON GC	N/A	N/A
	SPILLS	EXXON MOBILE 2007053644/CLOSED	MILFORD TPKE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*COMM. VEHICLE* *2001021114/CLOSED*	*I-95 NB* *MILFORD CT 06460*	*NON GC*	*N/A*	*244*
	SPILLS	2004024234/CLOSED	RESEARCH DR MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	2006060814/CLOSED	NAUGATUCK AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	2000071794/CLOSED	330 PARK AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	2002071474/CLOSED	TRUCK STOP EXIT MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*2002043934/CLOSED*	*RD* *MILFORD CT 06460*	*NON GC*	*N/A*	*245*
	SPILLS	2002044012/CLOSED	NAUGATUCK AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	2002055414/CLOSED	WHEELERS FARM RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	2003024344/CLOSED	I - 95 SB BETWEEN EXITS MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	2003026164/CLOSED	I - 95 NB BETWEEN EXITS MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	2003021544/CLOSED	BOSTON POST RD and TURNPIKE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	2003053894/CLOSED	BOAT RAMP , SHIPYARD LANE, MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	2000011654/CLOSED	87 BRADLEY AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*2004006794/CLOSED*	*DEVON STATE BOAT LAUNCH UND* *MILFORD CT 06460*	*NON GC*	*N/A*	*246*
	SPILLS	9908350/CLOSED	ROCK LANE RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	2004041134/CLOSED	CT POST MALL MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*2004043334/CLOSED*	*UNKNOWN* *MILFORD CT 06460*	*NON GC*	*N/A*	*247*
	SPILLS	2004043909/CLOSED	ORANOAK DR MILFORD CT 06460	NON GC	N/A	N/A

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	SPILLS	200408340/CLOSED	23 SAMSON AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200503474/CLOSED	1 SHIPYARD RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200304417/CLOSED	MILFORD TPKE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200503334/CLOSED	100 YARDS OFF SHORE FROM I MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNITED ILLUMINATING 9411673/CLOSED	FOREST RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200307844/CLOSED	E TOWN RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 9902684/CLOSED	CASWELL COVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200600174/CLOSED	OLD GATE RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200307430/CLOSED	66 ERWA AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200104142/CLOSED	BROADWAY MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	9902695/CLOSED	22101 OLD GATE DR MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	9902901/CLOSED	SUNNY SIDE CT MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	9902863/CLOSED	LIS MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	953643/CLOSED	FOREST COURT YARD ST MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	961634/OPEN	ANDERSON MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	961075/CLOSED	ROWE AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	961351/CLOSED	MILFORD METER STATION MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	912378/CLOSED	HOUSATONIC RIVER MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	9801273/CLOSED	BEAVER BROOK MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200095434/CLOSED	ASHVILLE PARKING LOT MILFORD CT 06460	NON GC	N/A	N/A

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	SPILLS	20000 7069/CLOSED	BFO 20 APPLEWOOD RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*200608 184/CLOSED*	*I-95 S MILFORD CT 06460*	*NON GC*	*N/A*	*248*
	SPILLS	200508805/CLOSED	POST RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	947718/CLOSED	WOODMONT RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200108271/CLOSED	OLD GATE LN MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200105967/CLOSED	HALE AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200109023/CLOSED	DEVON BOAT LAUNCH MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200110673/CLOSED	RAILROAD RIGHT OF OFF OF RO MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200110938/CLOSED	95 SOUTH 36-38 MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	9501607/CLOSED	NAUGATUCK AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	951156/CLOSED	NAUGATUCK AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	9501343/CLOSED	LONG ISLAND SOUND / WOODMON MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	9504694/CLOSED	NEW HAVEN - CT LIMO AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	9503753/CLOSED	MILFORD TOWN DOCK/ WEPAWAUG MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*9701685/CLOSED*	*S I-95 BOUND OF EXIT MILFORD CT 06460*	*NON GC*	*N/A*	*249*
	SPILLS	200603184/CLOSED	WOODMONT AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200703694/CLOSED	W MILFORD TPKE EXXON GAS ST MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200704098/CLOSED	MILFORD TPKE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200705801/CLOSED	PILOT TRAVEL MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200706176/CLOSED	W MILFORD TURNPIKE MOBIL ST MILFORD CT 06460	NON GC	N/A	N/A

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	SPILLS	200706504/CLOSED	SHELLAND ST and PLAINS RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200808412/CLOSED	NAUGATUCK AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200807664/CLOSED	WEST AVE BEAVER BROOK TRL MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	201001702/CLOSED	65 OCEAN AVE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200601484/CLOSED	RTE 15 S MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*200613114/CLOSED*	*I-95 S BETWEEN EXIT 39A and MILFORD CT 06460*	*NON GC*	*N/A*	*250*
	SPILLS	200702118/CLOSED	HARBOR GULF STREAM MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200603136/CLOSED	MILFORD TPKE W MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	201405065/CLOSED	2 PADDS ST MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200603452/CLOSED	MILFORD HARBOR MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200603801/CLOSED	NORTH ST MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200607254/CLOSED	BIC ST and SHELLON ST MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200607771/CLOSED	BIC DR MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*200700358/CLOSED*	*I-95 N REST AREA MILFORD CT 06460*	*NON GC*	*N/A*	*251*
	SPILLS	921926/CLOSED	WAMPUS LN MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	VIC CORPORATION 9901287/CLOSED	565 VIC DR MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*UNKNOWN TRUCKING COMPANY 1001607/CLOSED*	*I-95 BETWEEN EXIT 39 and EX MILFORD CT 06460*	*NON GC*	*N/A*	*252*
	SPILLS	UNKNOWN TRUCKER 200503401/CLOSED	S EXXON MOBIL SERVICE CENTE MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 9703493/CLOSED	NELLS ISLAND MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	UNKNOWN 9606331/CLOSED	POINT LOOKOUT AVE MILFORD CT 06460	NON GC	N/A	N/A

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	SPILLS	200601031/CLOSED	RTE 195 S BETWEEN EXIT 32 a MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200701062/CLOSED	ROSEMILL and WOODMOUNT RD MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	*200701024/CLOSED*	*I-95 N EXIT 8 MILFORD CT 06460*	*NON GC*	*N/A*	*253*
	SPILLS	200700743/CLOSED	N METRO RAILROAD MILEPOST 6 MILFORD CT 06460	NON GC	N/A	N/A
	SPILLS	200701342/CLOSED	65 CENTIAL HILL RD MILFORD CT 06460	NON GC	N/A	N/A
8	*STATE*	*REXAM INDUSTRIES CORP. 1836/SUSPECTED*	*37 ROBINSON BLVD ORANGE CT 06477*	*0.16 SE*	*- 41*	*255*
12	*STATE*	*ABB INDUSTRIAL SYSTEMS, INC. 9300/NO ENTDAT*	*84 MARSH HILL RD ORANGE CT 06477*	*0.10 NW*	*+ 17*	*257*
13	*STATE*	*LIGHT SOURCES, INC. 5136/SUSPECTED*	*79 CASCADE BLVD MILFORD CT 06460*	*0.13 SW*	*- 35*	*138*
26	*STATE*	*NORTHEAST ENTERPRISES 1833/SUSPECTED*	*11 FRONTAGE RD ORANGE CT 06477*	*0.23 NE*	*- 25*	*259*
29	*STATE*	*MOBIL 06-917 2212/SUSPECTED*	*I-95 NORTHBOUND MILFORD CT 06460*	*0.66 SW*	*- 31*	*260*
30	*STATE*	*AMES LABORATORIES 9782/SUSPECTED*	*200 ROCK LN MILFORD CT 06460*	*0.73 SW*	*- 56*	*261*
31	*STATE*	*TOWN OF ORANGE 2154/SUSPECTED*	*LAMBERT SOUTH LN ORANGE CT 06477*	*0.81 NW*	*+ 21*	*262*
32	*STATE*	*BLASE MANUFACTURING CO. 4814/SUSPECTED*	*269 LAMBERT RD ORANGE CT 06477*	*0.83 NW*	*+ 17*	*264*
33	*STATE*	*BURNDY CORPORATION 8916/SUSPECTED*	*245 EDISON RD ORANGE CT 06477*	*0.91 NE*	*+ 27*	*265*
33	*STATE*	*SCANIA U.S.A. INC. 4831/SUSPECTED*	*245 EDISON RD ORANGE CT 06477*	*0.91 NE*	*+ 27*	*267*
34	*STATE*	*NOVACAN CHEMICALS INC 1161/SUSPECTED*	*315 MORGAN LN WEST HAVEN CT 06516*	*0.97 NE*	*- 9*	*269*
35	*STATE*	*PETROL PLUS AMOCO 1831/SUSPECTED*	*961 BOSTON POST RD ORANGE CT 06477*	*0.91 NW*	*- 11*	*271*
	STATE	*HOUSATONIC WWTP 5411*	*ORONOQUE RD MILFORD CT 06460*	*NON GC*	*N/A*	*273*
	STATE	*WESTFIELD INC. 4834/SUSPECTED*	*MARSH HILL RD ORANGE CT 06477*	*NON GC*	*N/A*	*275*
	STATE	*JORDAN REALTY 5009*	*SHELLAND ST MILFORD CT 06460*	*NON GC*	*N/A*	*196*

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Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
	STATE	RIVER HIGHLANDS DRIVE SUBDIVIS 5607	RIVER HIGHLANDS DR MILFORD CT 06460	NON GC	N/A	177
	STATE	PAINT MART 2176/SUSPECTED	ROUTE 34 WEST HAVEN CT 06516	NON GC	N/A	178
	STATE	STEINBERG REALTY 3166/SUSPECTED	FRONTAGE RD WEST HAVEN CT 06516	NON GC	N/A	180
	STATE	RIVER HIGHLANDS DRIVE SUBDIVIS 5603	RIVER HIGHLANDS DR MILFORD CT 06460	NON GC	N/A	181
	STATE	JORDAN REALTY 3409	SHELLAND ST MILFORD CT 06460	NON GC	N/A	182
	STATE	HOUSATONIC WWTP 5411	ORONOQUE RD MILFORD CT 06460	NON GC	N/A	183
	STATE	UNNAMED STREAM 2156/SUSPECTED	INDIAN RIVER RD ORANGE CT 06477	NON GC	N/A	184
	SWL	CTSW-CL-01-112/CLOSED	RTE 1, NEAR TOWN ORANGE CT	NON GC	N/A	185
	TRIBALLAND	BUREAU OF INDIAN AFFAIRS CONTA BIA-06460	UNKNOWN CT 06460	NON GC	N/A	186
	TRIBALLAND	BUREAU OF INDIAN AFFAIRS CONTA BIA-06477	UNKNOWN CT 06477	NON GC	N/A	186
	TRIBALLAND	BUREAU OF INDIAN AFFAIRS CONTA BIA-06460	UNKNOWN CT 06460	NON GC	N/A	187
	TRIBALLAND	BUREAU OF INDIAN AFFAIRS CONTA BIA-06516	UNKNOWN CT 06516	NON GC	N/A	187
2	UST	SOUTHERN CONNECTICUT GAS COMPA 1103/TEMP CLOSED	60 MARSH HILL RD ORANGE CT 06477	0.11 NW	+ 17	188
3	UST	DICHELLO DISTRIBUTORS, INC 0513/PERMANENTLY CLOSED	55 MARSH HILL RD ORANGE CT 06477	0.11 SW	+ 19	190
5	UST	BOEHRINGER LABORATORIES, INC 11339/PERMANENTLY CLOSED	25 CONNAIR RD ORANGE CT 06477	0.13 SE	- 17	191
12	UST	PARAMETRICS 0360/CURRENTLY IN USE	11 MARSH HILL RD ORANGE CT 06477	0.19 NW	+ 17	191
19	UST	GENERAL ACCIDENT 0530/PERMANENTLY CLOSED	137 FRONTAGE RD ORANGE CT 06477	0.26 NW	+ 23	192
22	UST	SMURFIT STONE CONTAINER CORPOR 04316/PERMANENTLY CLOSED	75 CASCADE BLVD. MILFORD CT 06460	0.32 SW	- 30	193
26	UST	YALE UNIVERSITY WEST CAMPUS 0301/PERMANENTLY CLOSED	11 FRONTAGE RD ORANGE CT 06477	0.43 NE	- 25	194
	UST	SPEZZANO PROPERTY 11134/PERMANENTLY CLOSED	1103 EASTPUTNAM AVE MILFORD CT 06460	NON GC	N/A	N/A

Environmental FirstSearch
Sites Summary Report

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

TOTAL: 851 **GEOCODED:** 106 **NON GEOCODED:** 745 **SELECTED:** 240

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
	UST	281 WINSTED ROAD LLC 12918/PERMANENTLY CLOSED	281 WINSTED RD ORANGE CT 06477	NON GC	N/A	N/A
	UST	MILFORD 005 473ABFED-68B7-4E74/CURRENTLY IN USE	305 NEW HAVEN AVE MILFORD CT 06460	NON GC	N/A	N/A
	UST	FIRE HEADQUARTERS 13034/CURRENTLY IN USE	72 NEW HAVEN AVE MILFORD CT 06460	NON GC	N/A	N/A
	UST	ROLLING RIDGE APARTMENTS 7868CA9E-E081-4DE	15 RIDGE COURT EAST CT WEST HAVEN CT 06516	NON GC	N/A	N/A
	UST	SPEZZANO PROPERTY 11134/PERMANENTLY CLOSED	1103 EASTPUTNAM AVE MILFORD CT 06460	NON GC	N/A	N/A
	UST	FIRE HEADQUARTERS 13034/CURRENTLY IN USE	72 NEW HAVEN AVE MILFORD CT 06460	NON GC	N/A	N/A
	UST	MILFORD 005 473ABFED-68B7-4E74/CURRENTLY IN USE	305 NEW HAVEN AVE MILFORD CT 06460	NON GC	N/A	N/A
13	ICP	ABB INDUSTRIAL SYSTEMS, INC. 83/VRP-133XSITES	88 MARSH HILL RD ORANGE CT 06477	0.19 NW	+ 17	196
	VCP	ORANGE DOT (HART 09) GARAGE CTBF-0604-127/VRP-133XSITES	ROUTE 34 ORANGE CT 06477	NON GC	N/A	N/A
	VCP	FORMER DAIRY MART 1708 CTBF-0506-23/VRP-133XSITES	1309 BOSTON POST RD WEST HAVEN CT 06516	NON GC	N/A	N/A

Environmental FirstSearch
Site Detail Report

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

BROWNFIELD

SEARCH ID: 781 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: JORDAN REALTY, LLC
ADDRESS: SHELLAND ST
MILFORD CT 06460

CONTACT:
SOURCE: CT DEP

REV: 10/12/04
ID1: CTBF-0604-109
ID2:
STATUS: POLLUTION ABATEMENT
PHONE:

SITE INFORMATION

STATUS: POLLUTION ABATEMENT ORDERS - These are sites for which the Commissioner has either issued an Administrative Order or entered into a Consent Order for the investigation and remediation of actual or potential sources of pollution to the waters of the State pursuant to CGS Sections 22a- 432 or 433.
INVESTIGATION START DATE:
REMEDIATION START DATE:
REMEDIATION COMPLETED DATE:
ENVIRONMENTAL LANDUSE RESTRICTIONS: -

BROWNFIELD

SEARCH ID: 786 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: PATRICIA MCGANNON
ADDRESS: UNKNOWN
MILFORD CT 06460

CONTACT:
SOURCE: CT DEP

REV: 10/12/04
ID1: CTBF-0604-89
ID2:
STATUS: POLLUTION ABATEMENT
PHONE:

SITE INFORMATION

STATUS: POLLUTION ABATEMENT ORDERS - These are sites for which the Commissioner has either issued an Administrative Order or entered into a Consent Order for the investigation and remediation of actual or potential sources of pollution to the waters of the State pursuant to CGS Sections 22a- 432 or 433.
INVESTIGATION START DATE:
REMEDIATION START DATE:
REMEDIATION COMPLETED DATE:
ENVIRONMENTAL LANDUSE RESTRICTIONS: -

Environmental FirstSearch
Site Detail Report

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

BROWNFIELD

SEARCH ID: 785 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: JORDAN REALTY, LLC
ADDRESS: SHELLAND ST
MILFORD CT 06460

CONTACT:
SOURCE: CT DEP

REV: 10/12/04
ID1: CTBF-0604-109
ID2:
STATUS: POLLUTION ABATEMENT
PHONE:

SITE INFORMATION

STATUS: POLLUTION ABATEMENT ORDERS - These are sites for which the Commissioner has either issued an Administrative Order or entered into a Consent Order for the investigation and remediation of actual or potential sources of pollution to the waters of the State pursuant to CGS Sections 22a- 432 or 433.
INVESTIGATION START DATE:
REMEDIATION START DATE:
REMEDIATION COMPLETED DATE:
ENVIRONMENTAL LANDUSE RESTRICTIONS: -

BROWNFIELD

SEARCH ID: 784 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: JEANNE SHINER
ADDRESS: UNKNOWN
WEST HAVEN CT 06516

CONTACT:
SOURCE: CT DEP

REV: 10/12/04
ID1: CTBF-0604-727
ID2:
STATUS: POLLUTION ABATEMENT
PHONE:

SITE INFORMATION

STATUS: POLLUTION ABATEMENT ORDERS - These are sites for which the Commissioner has either issued an Administrative Order or entered into a Consent Order for the investigation and remediation of actual or potential sources of pollution to the waters of the State pursuant to CGS Sections 22a- 432 or 433.
INVESTIGATION START DATE:
REMEDIATION START DATE:
REMEDIATION COMPLETED DATE:
ENVIRONMENTAL LANDUSE RESTRICTIONS: -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

BROWNFIELD

SEARCH ID: 782 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: PATRICIA MCGANNON
ADDRESS: UNKNOWN
MILFORD CT 06460
CONTACT:
SOURCE: CT DEP

REV: 10/12/94
ID1: CTBF-0604-89
ID2:
STATUS: POLLUTION ABATEMENT
PHONE:

SITE INFORMATION

STATUS: POLLUTION ABATEMENT ORDERS - Those sites for which the Commissioner has either
issued an Administrative Order or entered into a Consent Order for the investigation and remediation of actual or potential sources of pollution to the
waters of the State pursuant to CGS Sections 22a- 432 or 433.
INVESTIGATION START DATE:
REMEDIATION START DATE:
REMEDIATION COMPLETED DATE:
ENVIRONMENTAL LANDUSE RESTRICTIONS: -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

ERNS

SEARCH ID: 19 **DIST/DIR:** 0.19 NW **ELEVATION:** 102 **MAP ID:** 12

NAME:
ADDRESS: 55 MARSH HILL RD
ORANGE CT 06477
CONTACT:
SOURCE: EPA

REV: 6/1/90 0:0
ID1: 179099
ID2:
STATUS: UNKNOWN (NRC)
PHONE:

SPILL INFORMATION
DATE OF SPILL: 6/1/90 TIME OF SPILL: 0000

PRODUCT RELEASED (1): TETRACHLOROETHENE
QUANTITY (1): ?
UNITS (1): LBS

PRODUCT RELEASED (2):
QUANTITY (2):
UNITS (2):

PRODUCT RELEASED (3):
QUANTITY (3):
UNITS (3):

MEDIUM/MEDIA AFFECTED

AIR:	NO	GROUNDWATER:	NO
LAND:	YES	FIXED FACILITY:	NO
WATER:	NO	OTHER:	NO

WATERBODY AFFECTED BY RELEASE: DIRT

CAUSE OF RELEASE

DUMPING:	NO	EQUIPMENT FAILURE:	NO
NATURAL PHENOMENON:	NO	OPERATOR ERROR:	NO
OTHER CAUSE:	NO	TRANSP. ACCIDENT:	NO
UNKNOWN:	NO		

ACTIONS TAKEN: WORKING ON REMOVAL PLAN
RELEASE DETECTION: UNKNOWN / UNKNOWN - GROUND WATER CONTAMINATION
MISC. NOTES:

DISCHARGER INFORMATION
DISCHARGER ID: 179099 SUN and BRADSTREET ?
TYPE OF DISCHARGER:
NAME OF DISCHARGER:
ADDRESS:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

ERNS

SEARCH ID: 20 **DIST/DIR:** 0.19 NW **ELEVATION:** 81 **MAP ID:** 13

NAME:
ADDRESS: 89 MARSH HILL RD
ORANGE CT 06477
NEW HAVEN
CONTACT: LEE DEROSIER
SOURCE: NRC

REV: 12/31/94
ID1: NRC-712383
ID2:
STATUS: STORAGE TANK
PHONE: 8602905020

SITE INFORMATION

THIS INFORMATION WAS OBTAINED FROM THE NATIONAL RESPONSE CENTER

DATE RECEIVED: 2/4/2004 11:36:31 AM DATE COMPLETE: 2/4/2004
11:48:53 AM
CALL TAKER: YLM4341 CALL TYPE: INC

RESPONSIBLE PARTY: LEE DEROSIER
PHONE 1: 8602905020 PRIMARY
PHONE 2:
PHONE 3:

RESPONSIBLE COMPANY: AUTOMATIC TLC / CT REFINING
ORGANIZATION TYPE: PRIVATE ENTERPRISE

ADDRESS: 64 OAKLAND AVE
EAST HARTFORD CT 06108

SOURCE: TELEPHONE

INCIDENT INFORMATION

INCIDENT DESCRIPTION: CALLER STATED THAT, DUE TO OPERATOR ERROR, A FUEL TANK WAS OVERFILLED, RESULTING IN AN OVERFLOW SPILL ONTO THE CONTAINMENT AREA SURROUNDING THE TANK FILL.

INCIDENT TYPE: STORAGE TANK INCIDENT CAUSE: OPERATOR ERROR
INCIDENT DATE/ OCCURRED: 2/4/2004 10:30:00 AM INCIDENT DATE DESC:
DISTANCE FROM CITY: DISTANCE UNITS:
DIRECTION FROM CITY: LOCATION SECTION:
LOCATION TOWNSHIP: LOCATION RANGE:

AIRCRAFT TYPE: AIRCRAFT MODEL:
AIRCRAFT ID: AIRCRAFT FUEL CAPACITY:
AIRCRAFT FUEL CAPACITY UNITS: AIRCRAFT FUEL ON BOARD:
AIRCRAFT FUEL ON BOARD UNITS: AIRCRAFT SPOT NUMBER:
AIRCRAFT HANGER: AIRCRAFT RUNWAY NUM:
ROAD MILE MARKER: BUILDING ID:
TYPE OF FIXED OBJECT: POWER GEN FACILITY: U
GENERATING CAPACITY: TYPE OF FUEL:
NPDES: NPDES COMPLIANCE: U
PIPELINE TYPE: DOT REGULATED: U
PIPELINE ABOVE GROUND: ABOVE EXPOSED UNDERWATER: N
PIPELINE COVERED: U GRADE CROSSING: N
LOCATION SUBDIVISION: RAILROAD MILEPOST:
TYPE VEHICLE INVOLVED: CROSSING DEVICE TYPE:
DEVICE OPERATIONAL: Y

DOT CROSSING NUMBER: BRAKE FAILURE: N

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

ERNS

SEARCH ID: 20 **DIST/DIR:** 0.19 NW **ELEVATION:** 81 **MAP ID:** 13

NAME:
ADDRESS: 89 MARSH HILL RD
ORANGE CT 06477
NEW HAVEN
CONTACT: LEE DEROSIER
SOURCE: NRC

REV: 12/31/94
ID1: NRC-712383
ID2:
STATUS: STORAGE TANK
PHONE: 8602905020

TANK ABOVE GROUND:	BELOW	TRANSPORTABLE CONTAINER:	N
TANK REGULATED:	U	TANK REGULATED BY:	
TANK ID:	NONE	CAPACITY OF TANK:	1000
CAPACITY OF TANK UNITS:	GALLON(S)	ACTUAL AMOUNT:	1000
ACTUAL AMOUNT UNITS:	GALLON(S)	PLATFORM RIG NAME:	
PLATFORM LETTER:		LOCATION AREA ID:	
LOCATION BLOCK ID:			

DESCRIPTION OF TANK: 1000 GALLON IN-GROUND

OCSG NUMBER:		OCSP NUMBER:	
STATE LEASE NUMBER:		PIER DOCK NUMBER:	
BERTH SLIP NUMBER:		CONTIN RELEASE TYPE:	
INITIAL CONT RELEASE NUM:		CONT RELEASE PERMIT:	
ASLLISION:	N	TYPE OF STRUCTURE:	
STRUCTURE NAME:		STRUCT OPERATIONAL:	U
AIRBAG DEPLOYED:		DATE NORMAL SERVICE:	
SERVICE DISRUPT TIME:		SERVICE DISRUPT UNITS:	
TRANSIT BUS FLAG:		CR BEGIN DATE:	
CR END DATE:		CR CHANGE DATE:	
FIRE INVOLVED:	N	FIRE EXTINGUISHED:	U
ANY EVACUATIONS:	N	NUMBER EVACUATED:	
WHO EVACUATED:		RADIUS OF EVACUATION:	
ANY INJURIES:	N	NUMBER INJURED:	
NUMBER HOSPITALIZED:		ANY FATALITIES:	N
NUMBER FATALITIES:		ANY DAMAGES:	N
DAMAGE AMOUNT:		AIR CORRIDOR CLOSED:	N
AIR CORRIDOR DESC:		AIR CLOSURE TIME:	
WATERWAY CLOSED:	N	WATERWAY DESC:	
WATERWAY CLOSURE TIME:		ROAD CLOSED:	N
ROAD DESC:		ROAD CLOSURE TIME:	
CLOSURE DIRECTION:		MAJOR ARTERY:	N
TRACK CLOSED:	N	TRACK DESC:	
TRACK CLOSURE TIME:		MEDIA INTEREST:	NONE
MEDIUM DESC:	LAND	ADDTL MEDIUM INFO:	
BODY OF WATER:		TRIBUTARY OF:	
NEAREST RIVER MILE MARK:		RELEASE SECURED:	Y
EST DUR OF RELEASE:		RELEASE RATE:	
TRACK CLOSE DIR:		ST AGENCY ON SCENE:	
ST AGENCY RPT NUM:	2004-00713	OTHER AGENCY NOTIFIED:	
WEATHER CONDITIONS:	CLEAR	AIR TEMPERATURE:	44
WIND SPEED:		WIND DIRECTION:	
WATER SUPPLY CONTAM:	U	SHEEN SIZE:	
SHEEN COLOR:		DIR OF SHEEN TRAVEL:	
SHEEN ODOR DESCRIPTION:		WAVE CONDITION:	
CURRENT SPEED:		CURRENT DIRECTION:	
WATER TEMPERATURE:			

DESC OF REMEDIAL ACTION: MATERIAL CONTAINED, ISOLATED AREA, CLEAN UP CREW ON-SITE. CLEAN UP UNDERWAY, CONTRACTOR HAS BEEN HIRED

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

ERNS

SEARCH ID: 20 **DIST/DIR:** 0.19 NW **ELEVATION:** 81 **MAP ID:** 13

NAME:
ADDRESS: 89 MARSH HILL RD
ORANGE CT 06477
NEW HAVEN
CONTACT: LEE DEROSIER
SOURCE: NRC

REV: 12/31/94
ID1: NRC-712345
ID2:
STATUS: STORAGE TANK
PHONE: 8602905020

EMPL FATALITY:
COMMUNITY IMPACT: N
EMPLOYEE INQUIRIES:
OCCUPANT FATALITY:
ROAD CLOSURE UNITS:
SHEEN SIZE UNITS:
FED AGENCY NOTIFIED: NONE
SHEEN SIZE LENGTH:
SHEEN SIZE WIDTH:
OFFSHORE: N
RELEASE RATE UNIT:

PASS FATALITY:
WIND SPEED UNITS:
PASSENGER INJURIES:
CURRENT SPEED UNITS:
TRACK CLOSURE UNITS:
STATE AGENCY NOTIFIED: CT STATE DEP
NEAREST RIVER MILE MARK:
SHEEN SIZE LENGTH UNITS:
SHEEN SIZE WIDTH UNITS:
DURATION UNIT:
RELEASE RATE RATE:

ADDITIONAL INFO: NO FURTHER INFORMATION TO REPORT.

MATERIAL INFORMATION

CHRIS CODE: OTW
UN NUMBER:

CASE NUMBER: 000000-00-0
REACHED WATER: NO

NAME OF MATERIAL: OIL, FUEL: NO. 2
AMOUNT OF MATERIAL: 3 GALLON(S)
AMOUNT IN WATER:

OTHER MATERIAL INFORMATION

MOBILE DETAILS INFORMATION

TRAIN INFORMATION

VESSEL INFORMATION

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

ERNS

SEARCH ID: 133 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: UNKNOWN
ADDRESS: I-95 MOSES WHEELER BRIDGE
MILFORD CT
CONTACT:
SOURCE: EPA

REV: 6/14/1998
ID1: 581369
ID2:
STATUS: HIGHWAY RELATED
PHONE:

SPILL INFORMATION
DATE OF SPILL: 6/14/1998 TIME OF SPILL: 1930

PRODUCT RELEASED (1): GASOLINE: AUTOMOTIVE (4 2 G PB/G
QUANTITY (1): 8000
UNITS (1): GAL

PRODUCT RELEASED (2):
QUANTITY (2):
UNITS (2):

PRODUCT RELEASED (3):
QUANTITY (3):
UNITS (3):

MEDIUM/MEDIA AFFECTED
AIR: NO GROUNDWATER: NO
LAND: NO FIXED FACILITY: NO
WATER: YES OTHER: NO
WATERBODY AFFECTED BY RELEASE: HOUSATONIC RIVER

CAUSE OF RELEASE
DUMPING: NO EQUIPMENT FAILURE: NO
NATURAL PHENOMENON: NO OPERATOR ERROR: NO
OTHER CAUSE: NO TRANSP. ACCIDENT: YES
UNKNOWN: NO

ACTIONS TAKEN: MILFORD FD ON SCENE, MSO LISCP ENROUTE.
RELEASE DETECTION: TRUCK ACCIDENT FUEL TANK TRUCK ACCIDENT SPILLED 8,000 GALLONS GAS INTO HOUSATONIC RIVER.
MISC. NOTES: CALLER SAYS THAT LOCAL POLICE REPORT TRAFFIC BACKING UP,UNK WHAT DIRECTION AND IF I-95 IS ACTUALLY CLOSED.

DISCHARGER INFORMATION
DISCHARGER ID: 581369 DUN and BRADSTREET :
TYPE OF DISCHARGER: UNKNOWN
NAME OF DISCHARGER: UNKNOWN
ADDRESS: UNKNOWN
UNKNOWN

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

ERNS

SEARCH ID: 134 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: UNKNOWN
ADDRESS: I-95 SOUTHBOUND BEFORE EXIT 39
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 10/30/98
ID1: 599761
ID2:
STATUS: UNKNOWN (NRC)
PHONE:

SPILL INFORMATION
DATE OF SPILL: 10/30/98 TIME OF SPILL: 0550

PRODUCT RELEASED (1): DIESEL
QUANTITY (1): 1
UNITS (1): UNK

PRODUCT RELEASED (2):
QUANTITY (2):
UNITS (2):

PRODUCT RELEASED (3):
QUANTITY (3):
UNITS (3):

MEDIUM/MEDIA AFFECTED
AIR: NO GROUNDWATER: NO
LAND: YES FIXED FACILITY: NO
WATER: NO OTHER: NO
WATERBODY AFFECTED BY RELEASE: NEAR WETLAND AREA

CAUSE OF RELEASE
DUMPING: NO EQUIPMENT FAILURE: NO
NATURAL PHENOMENON: NO OPERATOR ERROR: NO
OTHER CAUSE: NO TRANSP. ACCIDENT: YES
UNKNOWN: NO

ACTIONS TAKEN: CTDEP HIRED EARTH TECHNOLOGIES OF NEW HAVEN/DRIVER FELL ASLEEP/SITE IS 25 FROM WETLAND
RELEASE DETECTION: A TRACTOR TRAILER TRUCK TRACTOR TRAILER ACCIDENT
MISC. NOTES: SADDLE TNK EMPTD FROM RSLT OF HITTING TREE/DEP IS GOING TO EMPTY OTHER SADDLE RICE COORDINATED RSPNS ACTNS W/DEP/RMVNG RMNNG DIESEL FROM TNKS,THEN WILL RTRN/LATER TO RMV OILY SOIL/SITUATION IS CMPLCTD BY PSSBL HAZARD MTRLS IN TRUCK.

DISCHARGER INFORMATION
DISCHARGER ID: 599761 DUN and BRADSTREET :
TYPE OF DISCHARGER: PRIVATE ENTERPRISE
NAME OF DISCHARGER: UNKNOWN
ADDRESS: UNKNOWN
LEBANON PA

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

ERNS

SEARCH ID: 157 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: UNKNOWN
ADDRESS: I-95 MOSES WHEELER BRIDGE
MILFORD CT
CONTACT:
SOURCE: EPA

REV: 6/14/1998
ID1: 581369
ID2:
STATUS: HIGHWAY RELATED
PHONE:

SPILL INFORMATION
DATE OF SPILL: 6/14/1998 TIME OF SPILL: 1930

PRODUCT RELEASED (1): GASOLINE: AUTOMOTIVE (4 2 G PB/G
QUANTITY (1): 8000
UNITS (1): GAL

PRODUCT RELEASED (2):
QUANTITY (2):
UNITS (2):

PRODUCT RELEASED (3):
QUANTITY (3):
UNITS (3):

MEDIUM/MEDIA AFFECTED
AIR: NO GROUNDWATER: NO
LAND: NO FIXED FACILITY: NO
WATER: YES OTHER: NO
WATERBODY AFFECTED BY RELEASE: HOUSATONIC RIVER

CAUSE OF RELEASE
DUMPING: NO EQUIPMENT FAILURE: NO
NATURAL PHENOMENON: NO OPERATOR ERROR: NO
OTHER CAUSE: NO TRANSP. ACCIDENT: YES
UNKNOWN: NO

ACTIONS TAKEN: MILFORD FD ON SCENE, MSO LISCP ENROUTE.
RELEASE DETECTION: TRUCK ACCIDENT FUEL TANK TRUCK ACCIDENT SPILLED 8,000 GALLONS GAS INTO HOUSATONIC RIVER.
MISC. NOTES: CALLER SAYS THAT LOCAL POLICE REPORT TRAFFIC BACKING UP,UNK WHAT DIRECTION AND IF I-95 IS ACTUALLY CLOSED.

DISCHARGER INFORMATION
DISCHARGER ID: 581369 DUN and BRADSTREET :
TYPE OF DISCHARGER: UNKNOWN
NAME OF DISCHARGER: UNKNOWN
ADDRESS: UNKNOWN
UNKNOWN

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

ERNS

SEARCH ID: 129 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: OZBURN HESSEY
ADDRESS: I-95 MILE MARKER UNKNOWN
MILFORD CT
CONTACT:
SOURCE: EPA

REV: 4/8/1997
ID1: 530745
ID2:
STATUS: HIGHWAY RELATED
PHONE:

SPILL INFORMATION
DATE OF SPILL: 4/8/1997 TIME OF SPILL: 2130

PRODUCT RELEASED (1): OIL: DIESEL
QUANTITY (1): 150
UNITS (1): GAL

PRODUCT RELEASED (2):
QUANTITY (2):
UNITS (2):

PRODUCT RELEASED (3):
QUANTITY (3):
UNITS (3):

MEDIUM/MEDIA AFFECTED
AIR: NO GROUNDWATER: NO
LAND: NO FIXED FACILITY: NO
WATER: YES OTHER: NO
WATERBODY AFFECTED BY RELEASE: UNKNOWN POND

CAUSE OF RELEASE
DUMPING: NO EQUIPMENT FAILURE: NO
NATURAL PHENOMENON: NO OPERATOR ERROR: NO
OTHER CAUSE: NO TRANSP. ACCIDENT: NO
UNKNOWN: NO

ACTIONS TAKEN: AN UNKNOWN AMOUNT ENTERED INTO A POND / CLEAN HARBORS IS ON-SCENE CLEANING UP THE MATERIAL / THE USCG WAS ALSO ON-SCENE LAST NIGHT
RELEASE DETECTION: FUEL TANK ON A TRACTER TRAILER / THE TANK WAS RUPTURED BY ROAD DEBRIS CAUSING THE RELEASE OF THE MATERIAL
MISC. NOTES: THE CALLER HAD NO OTHER INFORMATION REGARDING THE SPILL

DISCHARGER INFORMATION
DISCHARGER ID: 530745 DUN and BRADSTREET #:
TYPE OF DISCHARGER: PRIVATE ENTERPRISE
NAME OF DISCHARGER: OZBURN HESSEY
ADDRESS: 4601 POWELL AVE
NASHVILLE TN 37204

Environmental FirstSearch
Site Detail Report

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

ERNS

SEARCH ID: 153 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: OZBURN HESSEY
ADDRESS: I-95 MILE MARKER UNKNOWN
MILFORD CT
CONTACT:
SOURCE: EPA

REV: 4/8/1997
ID1: 530745
ID2:
STATUS: HIGHWAY RELATED
PHONE:

SPILL INFORMATION
DATE OF SPILL: 4/8/1997 TIME OF SPILL: 2130

PRODUCT RELEASED (1): OIL: DIESEL
QUANTITY (1): 150
UNITS (1): GAL

PRODUCT RELEASED (2):
QUANTITY (2):
UNITS (2):

PRODUCT RELEASED (3):
QUANTITY (3):
UNITS (3):

MEDIUM/MEDIA AFFECTED
AIR: NO GROUNDWATER: NO
LAND: NO FIXED FACILITY: NO
WATER: YES OTHER: NO
WATERBODY AFFECTED BY RELEASE: UNKNOWN POND

CAUSE OF RELEASE
DUMPING: NO EQUIPMENT FAILURE: NO
NATURAL PHENOMENON: NO OPERATOR ERROR: NO
OTHER CAUSE: NO TRANSP. ACCIDENT: NO
UNKNOWN: NO

ACTIONS TAKEN: AN UNKNOWN AMOUNT ENTERED INTO A POND / CLEAN HARBORS IS ON-SCENE CLEANING UP THE MATERIAL / THE USCG WAS ALSO ON-SCENE LAST NIGHT
RELEASE DETECTION: FUEL TANK ON A TRACTER TRAILER / THE TANK WAS RUPTURED BY ROAD DEBRIS CAUSING THE RELEASE OF THE MATERIAL
MISC. NOTES: THE CALLER HAD NO OTHER INFORMATION REGARDING THE SPILL

DISCHARGER INFORMATION
DISCHARGER ID: 530745 DUN and BRADSTREET #:
TYPE OF DISCHARGER: PRIVATE ENTERPRISE
NAME OF DISCHARGER: OZBURN HESSEY
ADDRESS: 4601 POWELL AVE
NASHVILLE TN 37204

Environmental FirstSearch
Site Detail Report

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

ERNS

SEARCH ID: 161 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: I-95 N
MILFORD CT 06460
NEW HAVEN
CONTACT: RANDY TUMBARELLO
SOURCE: NRC

REV: 12/31/03
ID1: NRC-613608
ID2:
STATUS: MOBILE
PHONE: 7147962004

SITE INFORMATION

THIS INFORMATION WAS OBTAINED FROM THE NATIONAL RESPONSE CENTER

DATE RECEIVED: 8/11/2003 6:22:30 PM
8/11/2003 6:16:06 PM
DATE COMPLETE:
CALL TAKEN: REC7955 CALL TYPE: INC

RESPONSIBLE PARTY: RANDY TUMBARELLO
PHONE 1: 7147962004 PRIMARY
PHONE 2:
PHONE 3:

RESPONSIBLE COMPANY: LOGISTICS EXPRESS INC
ORGANIZATION TYPE: PRIVATE ENTERPRISE

ADDRESS: 1100 TOWN AND COUNTRY RD
ORANGE CA 92868

SOURCE: TELEPHONE

INCIDENT INFORMATION

INCIDENT DESCRIPTION: A TANKER TRUCK CARRYING RESIDUAL LIQUID OXYGEN JACKKNIFED AND OVERTURNED ON THE SIDE OF THE ROADWAY, DUE TO THE ACCIDENT THE TRUCK SPILLED MOTOR OIL ONTO THE SOIL.

INCIDENT TYPE: MOBILE INCIDENT CAUSE: TRANSPORT ACCIDENT
INCIDENT DATE: 8/10/2003 1:20:00 AM INCIDENT DATE DESC:
OCCURRED
DISTANCE FROM CITY: DISTANCE UNITS:
DIRECTION FROM CITY: LOCATION SECTION:
LOCATION TOWNSHIP: LOCATION RANGE:

AIRCRAFT TYPE: AIRCRAFT MODEL:
AIRCRAFT ID: AIRCRAFT FUEL CAPACITY:
AIRCRAFT FUEL CAPACITY UNITS: AIRCRAFT FUEL ON BOARD:
AIRCRAFT FUEL ON BOARD UNITS: AIRCRAFT SPOT NUMBER:
AIRCRAFT HANGER: AIRCRAFT RUNWAY NUM:
ROAD MILE MARKER: BUILDING ID:
TYPE OF FIXED OBJECT: POWER GEN FACILITY: U
GENERATING CAPACITY: TYPE OF FUEL:
NPDES: NPDES COMPLIANCE: U
PIPELINE TYPE: DOT REGULATED: U
PIPELINE ABOVE GROUND: ABOVE EXPOSED UNDERWATER: N
PIPELINE COVERED: U GRADE CROSSING: N
LOCATION SUBDIVISION: RAILROAD MILEPOST:
TYPE VEHICLE INVOLVED: CROSSING DEVICE TYPE:
DEVICE OPERATIONAL: Y

DOT CROSSING NUMBER: BRAKE FAILURE: N

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

ERNS

SEARCH ID: 161 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: I-95 N
MILFORD CT 06460
NEW HAVEN
CONTACT: RANDY TUMBARELLO
SOURCE: NRC

REV: 12/31/03
ID1: NRC-613608
ID2:
STATUS: MOBILE
PHONE: 7147962004

TANK ABOVE GROUND: ABOVE TRANSPORTABLE CONTAINER: U
TANK REGULATED: U TANK REGULATED BY:
TANK ID: CAPACITY OF TANK:
CAPACITY OF TANK UNITS: ACTUAL AMOUNT:
ACTUAL AMOUNT UNITS: PLATFORM RIG NAME:
PLATFORM LETTER: LOCATION AREA ID:
LOCATION BLOCK ID:

DESCRIPTION OF TANK:

OCSG NUMBER: OCSP NUMBER:
STATE LEASE NUMBER: PIER DOCK NUMBER:
BERTH SLIP NUMBER: CONTIN RELEASE TYPE:
INITIAL CONT RELEASE NUM: CONT RELEASE PERMIT:
ALLISION: N TYPE OF STRUCTURE:
STRUCTURE NAME: STRUCT OPERATIONAL: U
AIRBAG DEPLOYED: DATE NORMAL SERVICE:
SERVICE DISRUPT TIME: SERVICE DISRUPT UNITS:
TRANSIT BUS FLAG: CR BEGIN DATE:
CR END DATE: CR CHANGE DATE:

FIRE INVOLVED: N FIRE EXTINGUISHED: U
ANY EVACUATIONS: N NUMBER EVACUATED:
WHO EVACUATED: RADIUS OF EVACUATION:
ANY INJURIES: N NUMBER INJURED:
NUMBER HOSPITALIZED: ANY FATALITIES: N
NUMBER FATALITIES: ANY DAMAGES: N
DAMAGE AMOUNT: AIR CORRIDOR CLOSED: N
AIR CORRIDOR DESC: AIR CLOSURE TIME:
WATERWAY CLOSED: N WATERWAY DESC:
WATERWAY CLOSURE TIME: ROAD CLOSED: N
ROAD DESC: ROAD CLOSURE TIME:
CLOSURE DIRECTION: MAJOR ARTERY: N

TRACK CLOSED: N TRACK DESC:
TRACK CLOSURE TIME: MEDIA INTERESTS: NONE
MEDIUM DESC: LAND ADDTL MEDIUM INFO: SOIL
BODY OF WATER: TRIBUTARY OF:
NEAREST RIVER MILE MARK: RELEASE SECURED: Y
EST DUR OF RELEASE: RELEASE RATE:
TRACK CLOSE DUR: ST AGENCY ON SCENE:
ST AGENCY RPT NUM: OTHER AGENCY NOTIFIED:
WEATHER CONDITIONS: OVERCAST AIR TEMPERATURE:
WIND SPEED: WIND DIRECTION:
WATER SUPPLY CONTAM: U SHEEN SIZE:
SHEEN COLOR: DIR OF SHEEN TRAVEL:
SHEEN ODOR DESCRIPTION: WAVE CONDITION:
CURRENT SPEED: CURRENT DIRECTION:
WATER TEMPERATURE:

DESC OF REMEDIAL ACTION: APPLIED ABORBENTS TO THE SOIL

EMPL FATALITY: PASS FATALITY:

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

ERNS

SEARCH ID: 161 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: I-95 N
MILFORD CT 06460
NEW HAVEN
CONTACT: RANDY TUMBARELLO
SOURCE: NRC

REV: 12/31/93
ID1: NRC-453608
ID2:
STATUS: MOBILE
PHONE: 7147962004

COMMUNITY IMPACT: N
EMPLOYEE INJURIES:
OCCUPANT FATALITY:
ROAD CLOSURE UNITS:
SHEEN SIZE UNITS:
FED AGENCY NOTIFIED:
SHEEN SIZE LENGTH:
SHEEN SIZE WIDTH:
OFFSHORE: N
RELEASE RATE UNIT:

WIND SPEED UNITS:
PASSENGER INJURIES:
CURRENT SPEED UNITS:
TRACK CLOSURE UNITS:
STATE AGENCY NOTIFIED:
NEAREST RIVER MILE MARK:
SHEEN SIZE LENGTH UNITS:
SHEEN SIZE WIDTH UNITS:
DURATION UNIT:
RELEASE RATE RATE:

ADDITIONAL INFO: NONE

MATERIAL INFORMATION

CHRIS CODE: OMT
UN NUMBER:

CASE NUMBER: 000000-00-0
REACHED WATER: NO

NAME OF MATERIAL: OIL, MISC: MOTOR
AMOUNT OF MATERIAL: 1 GALLON(S)
AMOUNT IN WATER:

OTHER MATERIAL INFORMATION

VEHICLE NUMBER: N/A
VEHICLE FUEL CAPACITY:
AMOUNT OF CARGO ON BOARD:
CARRIER LICENSED: Y
MOBILE TYPE: TANKER TRUCK
VEHICLE MAKE:

TRAILER NUMBER:
CARGO CAPACITY:
HAZMAT CARRIER: Y
NONCOMPLIANCE WITH HAZMAT: U
VEHICLE YEAR:
VEHICLE MODEL:

MOBILE DETAILS INFORMATION

TRAIN INFORMATION

VESSEL INFORMATION

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

ERNS

SEARCH ID: 158 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: UNKNOWN
ADDRESS: I-95 SOUTHBOUND BEFORE EXIT 39
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 10/30/98
ID1: 599768
ID2:
STATUS: UNKNOWN (NRC)
PHONE:

SPILL INFORMATION
DATE OF SPILL: 10/30/98 TIME OF SPILL: 0530

PRODUCT RELEASED (1): DIESEL
QUANTITY (1): 1
UNITS (1): UNK

PRODUCT RELEASED (2):
QUANTITY (2):
UNITS (2):

PRODUCT RELEASED (3):
QUANTITY (3):
UNITS (3):

MEDIUM/MEDIA AFFECTED
AIR: NO
LAND: YES
WATER: NO
WATERBODY AFFECTED BY RELEASE:

GROUNDWATER: NO
FIXED FACILITY: NO
OTHER: NO
NEAR WETLAND AREA

CAUSE OF RELEASE
DUMPING: NO
NATURAL PHENOMENON: NO
OTHER CAUSE: NO
UNKNOWN: NO

EQUIPMENT FAILURE: NO
OPERATOR ERROR: NO
TRANSP. ACCIDENT: YES

ACTIONS TAKEN: CTDEP HIRED EARTH TECHNOLOGIES OF NEW HAVEN/DRIVER FELL ASLEEP/SITE IS 75 FROM WETLAND
RELEASE DETECTION: A TRACTOR TRAILER TRUCK TRACTOR TRAILER ACCIDENT
MISC. NOTES: SADDLE TNK EMPTD FROM RSLT OF HITTING TREE/DEP IS GOING TO EMPTY OTHER SADDLE R/CE COORDINATED RSPNS ACTNS W/DEP-RMVNG R/MNNG DIESEL FROM TNKS,THEN WILL RTRN/LATER TO RMV OIL'Y SOIL/SITUATION IS CMPLCTD BY PSSBL HAZARD MTRLS IN TRUCK.

DISCHARGER INFORMATION
DISCHARGER ID: 599768
TYPE OF DISCHARGER: PRIVATE ENTERPRISE
NAME OF DISCHARGER: UNKNOWN
ADDRESS: UNKNOWN
LEBANON PA

DUN and BRADSTREET :

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

ERNS

SEARCH ID: 141 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: C.WHITE AND SON
ADDRESS: I-95 N
MILFORD CT
CONTACT:
SOURCE: EPA

REV: 6/14/1998
ID1: 544373
ID2:
STATUS: HIGHWAY RELATED
PHONE:

SPILL INFORMATION
DATE OF SPILL: 6/14/1998 TIME OF SPILL: 2000

PRODUCT RELEASED (1): GASOLINE: AUTOMOTIVE (4.23G PB/G)
QUANTITY (1): 8400
UNITS (1): GAL

PRODUCT RELEASED (2):
QUANTITY (2):
UNITS (2):

PRODUCT RELEASED (3):
QUANTITY (3):
UNITS (3):

MEDIUM/MEDIA AFFECTED
AIR: NO
LAND: NO
WATER: YES
WATERBODY AFFECTED BY RELEASE:

GROUNDWATER: NO
FIXED FACILITY: NO
OTHER: NO
HOOSATONIC RIVER

CAUSE OF RELEASE
DUMPING: NO
NATURAL PHENOMENON: NO
OTHER CAUSE: NO
UNKNOWN: NO

EQUIPMENT FAILURE: NO
OPERATOR ERROR: NO
TRANSP. ACCIDENT: YES

ACTIONS TAKEN: EARTH TECH ENVIRONMENTAL DISPATCHED BY CTDEP, COMPANY HAS CALLED AMERICAN ENVIRONMENTAL TECH TO RESPOND.
RELEASE DETECTION: TANK TRUCK ACCIDENT TANK TRUCK ACCIDENT - GASOLINE SPILL
MISC. NOTES: DRIVER SENT TO HOSPITAL SEVERITY OF INJURIES UNK/THIS SPILL REPORTED EARLIER BY USCG MSO LONG ISLAND SOUND

DISCHARGER INFORMATION
DISCHARGER ID: 544373
TYPE OF DISCHARGER: PRIVATE ENTERPRISE
NAME OF DISCHARGER: C.WHITE AND SON
ADDRESS: PO 105/EVANS ROAD
ROCKY HILL CT 06067

DUN and BRADSTREET :

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

ERNS

SEARCH ID: 137 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: I-95 N
MILFORD CT 06460
NEW HAVEN
CONTACT: RANDY TUMBARELLO
SOURCE: NRC

REV: 12/31/93
ID1: NRC-453608
ID2:
STATUS: MOBILE
PHONE: 7147962004

SITE INFORMATION

THIS INFORMATION WAS OBTAINED FROM THE NATIONAL RESPONSE CENTER

DATE RECEIVED: 8/11/2003 6:22:30 PM
CALL TAKER:
8/11/2003 6:16:06 PM
REC7953
DATE COMPLETE:
CALL TYPE: INC

RESPONSIBLE PARTY: RANDY TUMBARELLO
PHONE 1: 7147962004 PRIMARY
PHONE 2:
PHONE 3:

RESPONSIBLE COMPANY: LOGISTICS EXPRESS INC
ORGANIZATION TYPE: PRIVATE ENTERPRISE

ADDRESS: 1100 TOWN AND COUNTRY RD
ORANGE CA 92868

SOURCE: TELEPHONE

INCIDENT INFORMATION

INCIDENT DESCRIPTION: A TANKER TRUCK CARRYING RESIDUAL LIQUID OXYGEN BACKSIPHED AND OVERTURNED ON THE SIDE OF THE ROADWAY. DUE TO THE ACCIDENT THE TRUCK SPILLED MOTOR OIL ONTO THE SOIL.

INCIDENT TYPE: MOBILE
INCIDENT DATE: 8/10/2003 1:20:00 AM
OCCURED
DISTANCE FROM CITY:
DIRECTION FROM CITY:
LOCATION TOWNSHIP:

INCIDENT CAUSE: TRANSPORT ACCIDENT
INCIDENT DATE DESC:
DISTANCE UNITS:
LOCATION SECTION:
LOCATION RANGE:

AIRCRAFT TYPE:
AIRCRAFT ID:
AIRCRAFT FUEL CAPACITY UNITS:
AIRCRAFT FUEL ON BOARD UNITS:
AIRCRAFT HANGER:
ROAD MILE MARKER:
TYPE OF FIXED OBJECT:
GENERATING CAPACITY:
NPDES:
PIPELINE TYPE:
PIPELINE ABOVE GROUND: ABOVE
PIPELINE COVERED: U
LOCATION SUBDIVISION:
TYPE VEHICLE INVOLVED:
DEVICE OPERATIONAL: Y

AIRCRAFT MODEL:
AIRCRAFT FUEL CAPACITY:
AIRCRAFT FUEL ON BOARD:
AIRCRAFT SPOT NUMBER:
AIRCRAFT RUNWAY NUM:
BUILDING ID:
POWER GEN FACILITY: U
TYPE OF FUEL:
NPDES COMPLIANCE: U
DOT REGULATED: U
EXPOSED UNDERWATER: N
GRADE CROSSING: N
RAILROAD MILEPOST:
CROSSING DEVICE TYPE:

DOT CROSSING NUMBER:

BRAKE FAILURE: N

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

ERNS

SEARCH ID: 137 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: I-95 N
MILFORD CT 06460
NEW HAVEN
CONTACT: RANDY TUMBARELLO
SOURCE: NRC

REV: 12/31/93
ID1: NRC-453608
ID2:
STATUS: MOBILE
PHONE: 7147962004

TANK ABOVE GROUND:	ABOVE	TRANSPORTABLE CONTAINER:	U
TANK REGULATED:	U	TANK REGULATED BY:	
TANK ID:		CAPACITY OF TANK:	
CAPACITY OF TANK UNITS:		ACTUAL AMOUNT:	
ACTUAL AMOUNT UNITS:		PLATFORM RIG NAME:	
PLATFORM LETTER:		LOCATION AREA ID:	
LOCATION BLOCK ID:			
DESCRIPTION OF TANK:			
OCSG NUMBER:		OCSP NUMBER:	
STATE LEASE NUMBER:		PIER DOCK NUMBER:	
BERTH SLIP NUMBER:		CONTIN RELEASE TYPE:	
INITIAL CONT RELEASE NUM:		CONT RELEASE PERMIT:	
ALLISION:	N	TYPE OF STRUCTURE:	
STRUCTURE NAME:		STRUCT OPERATIONAL:	U
AIRBAG DEPLOYED:		RATE NORMAL SERVICE:	
SERVICE DISRUPT TIME:		SERVICE DISRUPT UNITS:	
TRANSIT BUS FLAG:		CR BEGIN DATE:	
CR END DATE:		CR CHANGE DATE:	
FIRE INVOLVED:	N	FIRE EXTINGUISHED:	U
ANY EVACUATIONS:	N	NUMBER EVACUATED:	
WHO EVACUATED:		RADIUS OF EVACUATION:	
ANY INJURIES:	N	NUMBER INJURED:	
NUMBER HOSPITALIZED:		ANY FATALITIES:	N
NUMBER FATALITIES:		ANY DAMAGES:	N
DAMAGE AMOUNT:		AIR CORRIDOR CLOSED:	N
AIR CORRIDOR DESC:		AIR CLOSURE TIME:	
WATERWAY CLOSED:	N	WATERWAY DESC:	
WATERWAY CLOSURE TIME:		ROAD CLOSED:	N
ROAD DESC:		ROAD CLOSURE TIME:	
CLOSURE DIRECTION:		MAJOR ARTERY:	N
TRACK CLOSED:	N	TRACK DESC:	
TRACK CLOSURE TIME:		MEDIA INTEREST:	NONE
MEDIUM DESC:	LAND	ADDTL MEDIUM INFO:	SOIL
BODY OF WATER:		TRIBUTARY OF:	
NEAREST RIVER MILE MARK:		RELEASE SECURED:	Y
EST DUR OF RELEASE:		RELEASE RATE:	
TRACK CLOSE DIR:		ST AGENCY ON SCENE:	
ST AGENCY RPT NUM:		OTHER AGENCY NOTIFIED:	
WEATHER CONDITIONS:	OVERCAST	AIR TEMPERATURE:	
WIND SPEED:		WIND DIRECTION:	
WATER SUPPLY CONTAM:	U	SHEEN SIZE:	
SHEEN COLOR:		HR OF SHEEN TRAVEL:	
SHEEN ODOR DESCRIPTION:		WAVE CONDITION:	
CURRENT SPEED:		CURRENT DIRECTION:	
WATER TEMPERATURE:			
DESC OF REMEDIAL ACTION:	APPLIED ABSORBENTS TO THE SOIL.		
EMPL FATALITY:		PASS FATALITY:	

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

ERNS

SEARCH ID: 137 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: I-95 N
MILFORD CT 06460
NEW HAVEN
CONTACT: RANDY TUMBARELLO
SOURCE: NRC

REV: 12/31/93
ID1: NRC-453608
ID2:
STATUS: MOBILE
PHONE: 7147962004

COMMUNITY IMPACT:	N	WIND SPEED UNITS:	
EMPLOYEE INJURIES:		PASSENGER INJURIES:	
OCCUPANT FATALITY:		CURRENT SPEED UNITS:	
ROAD CLOSURE UNITS:		TRACK CLOSURE UNITS:	
SHEEN SIZE UNITS:		STATE AGENCY NOTIFIED:	
FED AGENCY NOTIFIED:		NEAREST RIVER MILE MARK:	
SHEEN SIZE LENGTH:		SHEEN SIZE LENGTH UNITS:	
SHEEN SIZE WIDTH:		SHEEN SIZE WIDTH UNITS:	
OFFSHORE:	N	DURATION UNIT:	
RELEASE RATE UNIT:		RELEASE RATE RATE:	
ADDITIONAL INFO:	NONE		

MATERIAL INFORMATION

CHRIS CODE:	OSIT	CASE NUMBER:	000000-00-0
UN NUMBER:		REACHED WATER:	NO
NAME OF MATERIAL:	OIL, MISC: MOTOR		
AMOUNT OF MATERIAL:	1 GALLON(S)		
AMOUNT IN WATER:			

OTHER MATERIAL INFORMATION

VEHICLE NUMBER:	N/A	TRAILER NUMBER:	
VEHICLE FUEL CAPACITY:		CARGO CAPACITY:	
AMOUNT OF CARGO ON BOARD:		HAZMAT CARRIER:	Y
CARRIER LICENSED:	Y	NONCOMPLIANCE WITH HAZMAT:	U
MOBILE TYPE:	TANKER TRUCK	VEHICLE YEAR:	
VEHICLE MAKE:		VEHICLE MODEL:	

MOBILE DETAILS INFORMATION

TRAIN INFORMATION

VESSEL INFORMATION

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

ERNS

SEARCH ID: 109 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: CBL TUCKINO CO.
ADDRESS: I-95 NORTH, BETWEEN EXITS 31 and 41
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 6/23/93
ID1: 423364
ID2:
STATUS: HIGHWAY RELATED
PHONE:

SPILL INFORMATION

DATE OF SPILL:	6/23/93	TIME OF SPILL:	0000
PRODUCT RELEASED (1):	UNKNOWN CHEMICAL		
QUANTITY (1):	1		
UNITS (1):	UNK		
PRODUCT RELEASED (2):			
QUANTITY (2):			
UNITS (2):			
PRODUCT RELEASED (3):			
QUANTITY (3):			
UNITS (3):			

MEDIUM/MEDIA AFFECTED

AIR:	NO	GROUNDWATER:	YES
LAND:	YES	FIXED FACILITY:	NO
WATER:	NO	OTHER:	NO
WATERBODY AFFECTED BY RELEASE:			

CAUSE OF RELEASE

DUMPING:	NO	EQUIPMENT FAILURE:	YES
NATURAL PHENOMENON:	NO	OPERATOR ERROR:	NO
OTHER CAUSE:	NO	TRANSP. ACCIDENT:	NO
UNKNOWN:	NO		

ACTIONS TAKEN: TRUCK WAS UNLOADED BECAUSE OF CONCERN OF A FLASH FIRE. SPILL ON HIGHWAY WAS CLEANED UP BY DEPT. OF TRANSPORTATION PERSONNEL.
RELEASE DETECTION: TRACTOR-TRAILOR
MISC. NOTES: TRUCK WAS CARRYING 300 GAL. OF A PETROLEUM PRODUCT AS WELL AS CHLORINE AND OTHER NON HAZARDOUS MATERIALS. TRUCK WAS UNLOADED AT THEIR MARSH HILL RD. TERMINAL.

DISCHARGER INFORMATION

DISCHARGER ID:	423364	DUN and BRADSTREET #:	
TYPE OF DISCHARGER:	PRIVATE ENTERPRISE		
NAME OF DISCHARGER:	CBL TUCKINO CO.		
ADDRESS:			
	UNKNOWN NJ		

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

ERNS

SEARCH ID: 111 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: EXIT 41 RAMP INTERSTATE 95
ADDRESS: I-95 EXIT 41
ORANGE CT
NEW HAVEN
CONTACT:
SOURCE: NRC

REV: 7/1/98
ID1: NRC-864341
ID2:
STATUS: MOBILE
PHONE:

SITE INFORMATION

THIS INFORMATION WAS OBTAINED FROM THE NATIONAL RESPONSE CENTER

INCIDENT DATE:	22-JAN-2001 17:17
REPORTED DATE:	23-JAN-2001 15:56
TYPE OF INCIDENT:	MOBILE
CAUSE OF INCIDENT:	TRANSPORT ACCIDENT
MEDIUM AFFECTED:	LAND
MATERIAL NAME:	OIL, FUEL: NO. 2-D
LOCATION:	EXIT 41 RAMP INTERSTATE 95
SUSPECTED COMPANY:	SHOPPER EXPRESS

DESCRIPTION: CALLER IS REPORTING A DISCHARGE OF DIESEL FUEL FROM A SADDLE TANK OF A TRACTOR TRAILER DUE TO THE TRAILER STRIKING AN ABANDONED CAR ON THE ROAD. THE RELEASE WENT ONTO THE

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

ERNS

SEARCH ID: 117 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: C.WHITE AND SON
ADDRESS: I-95 N
MILFORD CT
CONTACT:
SOURCE: EPA

REV: 6/14/1998
ID1: 584373
ID2:
STATUS: HIGHWAY RELATED
PHONE:

SPILL INFORMATION
DATE OF SPILL: 6/14/1998 TIME OF SPILL: 2000

PRODUCT RELEASED (1): GASOLINE: AUTOMOTIVE (4 25G PR/G
QUANTITY (1): 5300
UNITS (1): GAL

PRODUCT RELEASED (2):
QUANTITY (2):
UNITS (2):

PRODUCT RELEASED (3):
QUANTITY (3):
UNITS (3):

MEDIUM/MEDIA AFFECTED

AIR:	NO	GROUNDWATER:	NO
LAND:	NO	FIXED FACILITY:	NO
WATER:	YES	OTHER:	NO

WATERBODY AFFECTED BY RELEASE: HOUSATONIC RIVER

CAUSE OF RELEASE

DUMPING:	NO	EQUIPMENT FAILURE:	NO
NATURAL PHENOMENON:	NO	OPERATOR ERROR:	NO
OTHER CAUSE:	NO	TRANSP. ACCIDENT:	YES
UNKNOWN:	NO		

ACTIONS TAKEN: EARTH TECH ENVIRONMENTAL DISPATCHED BY CTDEP, COMPANY HAS CALLED AMERICAN ENVIRONMENTAL TECH TO RESPOND.
RELEASE DETECTION: TANK TRUCK ACCIDENT TANK TRUCK ACCIDENT - GASOLINE SPILL
MISC. NOTES: DRIVER SENT TO HOSPITAL,SEVERITY OF INJURIES UNK/THIS SPILL REPORTED EARLIER BY USCG MSO LONG ISLAND SOUND

DISCHARGER INFORMATION
DISCHARGER ID: 584373 DUN and BRADSTREET r
TYPE OF DISCHARGER: PRIVATE ENTERPRISE
NAME OF DISCHARGER: C.WHITE AND SON
ADDRESS: PO 193/EVANS ROAD
ROCKY HILL CT 06067

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 45 **DIST/DIR:** 0.11 NW **ELEVATION:** 102 **MAP ID:** 2

NAME: SOUTHERN CONNECTICUT GAS COMPANY
ADDRESS: 60 MARSH HILL RD
ORANGE CT 06477
CONTACT:
SOURCE: EPA

REV: 5/22/09
ID1: 110030333333
ID2:
STATUS: FRS
PHONE:

FACILITY REGISTRATION INFORMATION:

PROGRAM:	SIMS	PROGRAM ID:	1502921
PROVIDED BY:	STATE AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	CONNECTICUT DEP
LAST REPORTED:		LAST EXTRACTED:	5/24/2007 11:27:56 AM
ENFORCEMENT ACT:			
REG PROGRAM:	STATE MASTER -		

PROGRAM:	FRS	PROGRAM ID:	110030333333
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	5/24/2007 11:27:56 AM
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	SIMS
LAST REPORTED:	5/24/2007 11:27:56 AM	LAST EXTRACTED:	
ENFORCEMENT ACT:			
REG PROGRAM:	FACILITY -		

PROGRAM:	SIMS	PROGRAM ID:	1530331
PROVIDED BY:	STATE AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	CONNECTICUT DEP
LAST REPORTED:		LAST EXTRACTED:	5/24/2007 11:50:38 AM
ENFORCEMENT ACT:			
REG PROGRAM:	STATE MASTER -		

SITE TYPE: STATIONARY
INTEREST STATUS: ACTIVE
DATA QUALITY: V
LOCATION DESC:
ADDRESS TYPE: REGULAR URBAN
LAST REPORTED:
POSTED TO DATABASE: 5/24/2007 11:27:56 AM
DATA UPDATED: 5/24/2007 11:50:38 AM
ENTERED PERSON/METHOD: REFRESH
PARENT REG ID:
CONFIDENCE IN ADDR:
ENFORCEMENT SENSITIVE:
REQ MANUAL REVIEW:
REASON MAN REVIEW:
SMALL BUS POLICY:
ENFORCEMENT ACTION:
DATA PUB ACCESS: YES
INTERNAL SYS ID:

FEDERAL FACILITY:
FEDERAL AGENCY:
TRIBAL LAND: NO

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 45 **DIST/DIR:** 0.11 NW **ELEVATION:** 102 **MAP ID:** 2

NAME: SOUTHERN CONNECTICUT GAS COMPANY
ADDRESS: 60 MARSH HILL RD
ORANGE CT 06477
CONTACT:
SOURCE: EPA

REV: 5/22/09
ID1: 110030333333
ID2:
STATUS: FRS
PHONE:

TRIBAL LAND NAME:
CONGRESSIONAL DIST: 03
LEGISLATIVE DIST: 14
HYDROLOGICAL UNITS: 01100004
EPA REGION: 01
AIRSHED:
CENSUS BLOCK:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 42 **DIST/DIR:** 0.11 NW **ELEVATION:** 102 **MAP ID:** 2

NAME: SCO OPERATIONS CENTER
ADDRESS: 60 MARSH HILL RD
ORANGE CT 06477
CONTACT:
SOURCE: EPA

REV: 5/22/09
ID1: 110030336660
ID2:
STATUS: FRS
PHONE:

FACILITY REGISTRATION INFORMATION:

PROGRAM:	FRS	PROGRAM ID:	110030336660
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	5/24/2007 11:31:43 AM
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	SIMS
LAST REPORTED:	5/24/2007 11:31:44 AM	LAST EXTRACTED:	
ENFORCEMENT ACT:			
REG PROGRAM:	FACILITY -		

PROGRAM:	SIMS	PROGRAM ID:	1519742
PROVIDED BY:	STATE AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	CONNECTICUT DEP
LAST REPORTED:		LAST EXTRACTED:	5/24/2007 11:31:44 AM
ENFORCEMENT ACT:			
REG PROGRAM:	STATE MASTER -		

SITE TYPE: STATIONARY
INTEREST STATUS: ACTIVE
DATA QUALITY: V
LOCATION DESC:
ADDRESS TYPE: REGULAR URBAN
LAST REPORTED:
POSTED TO DATABASE: 5/24/2007 11:31:44 AM
DATA UPDATED:
ENTERED PERSON/METHOD: REFRESH
PARENT REG ID:
CONFIDENCE IN ADDR:
ENFORCEMENT SENSITIVE:
REQ MANUAL REVIEW:
REASON MAN REVIEW:
SMALL BUS POLICY:
ENFORCEMENT ACTION:
DATA PUB ACCESS: YES
INTERNAL SYS ID:

FEDERAL FACILITY:
FEDERAL AGENCY:
TRIBAL LAND: NO
TRIBAL LAND NAME:
CONGRESSIONAL DIST:
LEGISLATIVE DIST:
HYDROLOGICAL UNITS:
EPA REGION: 01
AIRSHED:
CENSUS BLOCK:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 25 **DIST/DIR:** 0.12 SW **ELEVATION:** 104 **MAP ID:** 3

NAME: ORCHELLO DISTRIBUTORS, INC.
ADDRESS: 55 MARSH HILL RD
ORANGE CT 06477
CONTACT:
SOURCE: EPA

REV: 5/2/09
ID1: 110030364530
ID2:
STATUS: FRS
PHONE:

FACILITY REGISTRATION INFORMATION:

PROGRAM:	FRS	PROGRAM ID:	110030364530
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	5/24/2007 11:51:43 AM
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	SIMS
LAST REPORTED:	5/24/2007 11:51:43 AM	LAST EXTRACTED:	
ENFORCEMENT ACT:			
REG PROGRAM:	FACILITY -		

PROGRAM:	SIMS	PROGRAM ID:	1525264
PROVIDED BY:	STATE AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	CONNECTICUT DEP
LAST REPORTED:		LAST EXTRACTED:	5/24/2007 11:51:43 AM
ENFORCEMENT ACT:			
REG PROGRAM:	STATE MASTER -		

SITE TYPE: STATIONARY
INTEREST STATUS: ACTIVE
DATA QUALITY: V
LOCATION DESC:
ADDRESS TYPE: REGULAR URBAN
LAST REPORTED:
POSTED TO DATABASE: 5/24/2007 11:51:43 AM
DATA UPDATED:
ENTERED PERSON/METHOD: REFRESH
PARENT REG ID:
CONFIDENCE IN ADDR:
ENFORCEMENT SENSITIVE:
REQ MANUAL REVIEW:
REASON MAN REVIEW:
SMALL BUS POLICY:
ENFORCEMENT ACTION:
DATA PUB ACCESS: YES
INTERNAL SYS ID:

FEDERAL FACILITY:
FEDERAL AGENCY:
TRIBAL LAND: NO
TRIBAL LAND NAME:
CONGRESSIONAL DIST:
LEGISLATIVE DIST:
HYDROLOGICAL UNTIS:
EPA REGION: 01
AIRSHED:
CENSUS BLOCK:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 37 **DIST/DIR:** 0.15 SE **ELEVATION:** 68 **MAP ID:** 5

NAME: NORTHEAST PACKAGING INC
ADDRESS: 25 CONNAIR RD
ORANGE CT 06477
CONTACT:
SOURCE:

REV:
ID1: CTD980516199
ID2:
STATUS:
PHONE:

SCRLS : CTD980516199
FCS :
AFS/AIRS :
SSTS : 015746CT 001
CERCLIS :
NCDB :
ENF DOCKET :
CONTR LIST :
CRIM DOCKET :
FFIS :
CICIS :
STATE :
PADS :
TRIS :
DunsB :
UNKNOWN :

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 38 **DIST/DIR:** 0.15 SE **ELEVATION:** 68 **MAP ID:** 5

NAME: NORTHEAST PACKAGING INCORPORATED
ADDRESS: 25 CONNAIR RD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 5/22/09
ID1: 110006360491
ID2: CTD980516199
STATUS: FRS
PHONE:

FACILITY REGISTRATION INFORMATION:

PROGRAM:	FRS	PROGRAM ID:	110006360491
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	FRS
LAST REPORTED:		LAST EXTRACTED:	
ENFORCEMENT ACT:			
REG PROGRAM:	FACILITY -		

PROGRAM:	RCRAINFO	PROGRAM ID:	CTD980516199
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	NOTIFICATION
LAST REPORTED:	3/6/1981	LAST EXTRACTED:	5/15/2003 1:37:58 AM
ENFORCEMENT ACT:			
REG PROGRAM:	NOT IN A UNIVERSE - THE HANDLER IS NOT CURRENTLY IN ANY HAZARDOUS WASTE UNIVERSE.		

SITE TYPE: STATIONARY
INTEREST STATUS: ACTIVE
DATA QUALITY: V
LOCATION DESC:
ADDRESS TYPE: REGULAR URBAN
LAST REPORTED:
POSTED TO DATABASE: 3/1/2000
DATA UPDATED: 6/29/2001 2:23:21 PM
ENTERED PERSON/METHOD: BEAR
PARENT REG ID:
CONFIDENCE IN ADDR: MEDIUM
ENFORCEMENT SENSITIVE: N
REQ MANUAL REVIEW:
REASON MAN REVIEW:
SMALL BUS POLICY:
ENFORCEMENT ACTION:
DATA PUB ACCESS: YES
INTERNAL SYS ID:

FEDERAL FACILITY: NO
FEDERAL AGENCY:
TRIBAL LAND: NO
TRIBAL LAND NAME:
CONGRESSIONAL DIST: 03
LEGISLATIVE DIST:
HYDROLOGICAL UNTIS: 01100004
EPA REGION: 01
AIRSHED:
CENSUS BLOCK:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 41 **DIST/DIR:** 0.13 SE **ELEVATION:** 68 **MAP ID:** 5

NAME: ROEBIC LABORATORIES, INC.
ADDRESS: 25 CONNAIR RD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 5/2/09
ID1: 110000316471
ID2: IF-90-03
STATUS: FRS
PHONE:

FACILITY REGISTRATION INFORMATION:

PROGRAM:	TRIS	PROGRAM ID:	06477RCLB25CON
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	12/31/1987
AGENCY INT QUAL:	FIRST REPORTING YEAR	INTEREST ENDED:	1/1/2006
INT END QUAL:	YEAR REPORTING STOPPED	SOURCE OF DATA:	TRI REPORTING FORM
LAST REPORTED:	7/5/2006	LAST EXTRACTED:	
ENFORCEMENT ACT:			

REG PROGRAM: TRI REPORTER - A TOXIC RELEASE INVENTORY REPORTER IS A FACILITY WHICH: EMPLOYS THE EQUIVALENT OF 10 OR MORE FULL-TIME EMPLOYEES; AND IS INCLUDED IN STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES 10XX, 12XX, 20XX-39XX, 4911, 4931, 4939, 4953, 5169, 5171, OR 7389, AND MANUFACTURES (DEFINED TO INCLUDE IMPORTING), PROCESSES, OR OTHERWISE USES ANY EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT (EPCRA) SECTION 313 CHEMICAL IN QUANTITIES GREATER THAN THE ESTABLISHED THRESHOLD IN THE COURSE OF A CALENDAR YEAR (I.E., MANUFACTURES OR PROCESSES OVER 25,000 POUNDS OF THE APPROXIMATELY 600 DESIGNATED CHEMICALS OR 29 CHEMICAL CATEGORIES SPECIFIED IN THE REGULATIONS, OR USES MORE THAN 10,000 POUNDS OF ANY DESIGNATED CHEMICAL OR CATEGORY).

PROGRAM:	SIMS	PROGRAM ID:	1532560
PROVIDED BY:	STATE AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	CONNECTICUT DEP
LAST REPORTED:		LAST EXTRACTED:	5/24/2007 12:05:72 PM
ENFORCEMENT ACT:			
REG PROGRAM:	STATE MASTER -		

PROGRAM:	NCDB	PROGRAM ID:	C01 IF-90-03
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	NCDB
LAST REPORTED:		LAST EXTRACTED:	
ENFORCEMENT ACT:			

REG PROGRAM: COMPLIANCE ACTIVITY - A COMPLIANCE MONITORING OR ENFORCEMENT ACTIVITY, FROM THE TIME AN INSPECTOR CONDUCTS AN INSPECTION UNTIL THE TIME THE INSPECTOR CLOSES OR THE CASE SETTLES THE ENFORCEMENT ACTION.

PROGRAM:	FRS	PROGRAM ID:	110000316471
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	FRS
LAST REPORTED:		LAST EXTRACTED:	
ENFORCEMENT ACT:			
REG PROGRAM:	FACILITY -		

PROGRAM:	NCDB	PROGRAM ID:	C01 FIFRA-IF-91-01
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	NCDB

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 41 **DIST/DIR:** 0.15 SE **ELEVATION:** 68 **MAP ID:** 5

NAME: ROEBIC LABORATORIES, INC.
ADDRESS: 23 CONNAIR RD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 5/22/09
ID1: 110000316471
ID2: IF-90-03
STATUS: FRS
PHONE:

LAST REPORTED: LAST EXTRACTED:
ENFORCEMENT ACT:
REG PROGRAM: COMPLIANCE ACTIVITY - A COMPLIANCE MONITORING OR ENFORCEMENT ACTIVITY, FROM THE TIME AN INSPECTOR CONDUCTS AN INSPECTION UNTIL THE TIME THE INSPECTOR CLOSES OR THE CASE SETTLES THE ENFORCEMENT ACTION.

SITE TYPE: STATIONARY
INTEREST STATUS: ACTIVE
DATA QUALITY: V
LOCATION DESC:
ADDRESS TYPE: REGULAR URBAN
LAST REPORTED:
POSTED TO DATABASE: 5/1/2000
DATA UPDATED: 5/24/2007 12:05:22 PM
ENTERED PERSON/METHOD: REFRESH
PARENT REG ID:
CONFIDENCE IN ADDR: MEDIUM
ENFORCEMENT SENSITIVE: N
REQ MANUAL REVIEW:
REASON MAN REVIEW:
SMALL BUS POLICY:
ENFORCEMENT ACTION:
DATA PUB ACCESS: YES
INTERNAL SYS ID:

FEDERAL FACILITY: NO
FEDERAL AGENCY:
TRIBAL LAND: NO
TRIBAL LAND NAME:
CONGRESSIONAL DIST: 03
LEGISLATIVE DIST: 14
HYDROLOGICAL UNTIS: 01100004
EPA REGION: 01
AIRSHED:
CENSUS BLOCK:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 40 **DIST/DIR:** 0.15 SE **ELEVATION:** 68 **MAP ID:** 5

NAME: ROEBIC LABORATORIES INC
ADDRESS: 23 CONNAIR RD
ORANGE CT 06417
CONTACT:
SOURCE:

REV:
ID1: CTD983173381
ID2:
STATUS:
PHONE:

NCRIS :
PCS :
AFS/AIRS :
SSTS : 007792CT 001
CERCLIS :
NCDB : C01 IF-90-03
ENF DOCKET :
CONTR LIST :
CRIM DOCKET :
FFIS :
CICIS :
STATE :
PADS :
TRIS : 06417RBCLB250CN
DandB : 001165562
UNKNOWN :

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 39 **DIST/DIR:** 0.16 SE **ELEVATION:** 44 **MAP ID:** 8

NAME: REXHAM CORP
ADDRESS: 37 ROBINSON BLVD
ORANGE CT 06477
CONTACT:
SOURCE:

REV:
ID1: CTD983866187
ID2:
STATUS:
PHONE:

NCRIS : CTD983866187
PCS :
AFS/AIRS : 0900905971, 090095971
SSTS :
CERCLIS :
NCDB :
ENF DOCKET :
CONTR LIST :
CRIM DOCKET :
FFIS :
CICIS :
STATE :
PADS :
TRIS :
DandB : 178773321
UNKNOWN :

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 34 **DIST/DIR:** 0.16 SE **ELEVATION:** 44 **MAP ID:** 8

NAME: LCD LIGHTING INC.
ADDRESS: 37 ROBINSON BLVD
ORANGE CT 06477
CONTACT:
SOURCE: EPA

REV: 5/22/09
ID1: 110030399593
ID2:
STATUS: FRS
PHONE:

FACILITY REGISTRATION INFORMATION:

PROGRAM:	FRS	PROGRAM ID:	110030399593
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	5/24/2007 12:10:39 PM
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	SIMS
LAST REPORTED:	5/24/2007 12:10:39 PM	LAST EXTRACTED:	
ENFORCEMENT ACT:			
REG PROGRAM:	FACILITY -		
PROGRAM:	SIMS	PROGRAM ID:	1534034
PROVIDED BY:	STATE AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	CONNECTICUT DEP
LAST REPORTED:		LAST EXTRACTED:	5/24/2007 12:10:39 PM
ENFORCEMENT ACT:			
REG PROGRAM:	STATE MASTER -		

SITE TYPE: STATIONARY
INTEREST STATUS: ACTIVE
DATA QUALITY: V
LOCATION DESC:
ADDRESS TYPE: REGULAR URBAN
LAST REPORTED:
POSTED TO DATABASE: 5/24/2007 12:10:39 PM
DATA UPDATED:
ENTERED PERSON/METHOD: REFRESH
PARENT REG ID:
CONFIDENCE IN ADDR:
ENFORCEMENT SENSITIVE:
REQ MANUAL REVIEW:
REASON MAN REVIEW:
SMALL BUS POLICY:
ENFORCEMENT ACTION:
DATA PUB ACCESS: YES
INTERNAL SYS ID:

FEDERAL FACILITY:
FEDERAL AGENCY:
TRIBAL LAND: NO
TRIBAL LAND NAME:
CONGRESSIONAL DIST:
LEGISLATIVE DIST:
HYDROLOGICAL UNTIS:
EPA REGION: 01
AIRSHED:
CENSUS BLOCK:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 35 **DIST/DIR:** 0.16 SE **ELEVATION:** 44 **MAP ID:** 8

NAME: LIGHT SOURCES, INC.
ADDRESS: 33 ROBINSON BLVD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 5/22/09
ID1: 110001405387
ID2: CTD983666187
STATUS: FRS
PHONE:

FACILITY REGISTRATION INFORMATION:

PROGRAM:	SIMS	PROGRAM ID:	1530909
PROVIDED BY:	STATE AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	CONNECTICUT DEP
LAST REPORTED:		LAST EXTRACTED:	5/24/2007 12:09:33 PM
ENFORCEMENT ACT:			
REG PROGRAM:	STATE MASTER -		

PROGRAM:	AIRS/AFS	PROGRAM ID:	0900906111
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	AIRS/AFS
LAST REPORTED:	2/3/2000	LAST EXTRACTED:	
ENFORCEMENT ACT:			
REG PROGRAM:	AIR MINOR - A FACILITY IS CLASSIFIED AS A CLEAN AIR ACT STATIONARY SOURCE MINOR DISCHARGER OF AIR POLLUTANTS IF: (A) POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR; OR (B) MAJOR SOURCE THRESHOLDS ARE NOT DEFINED, OR CLASSIFICATION IS UNKNOWN		

PROGRAM:	FRS	PROGRAM ID:	110001803387
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	FRS
LAST REPORTED:		LAST EXTRACTED:	
ENFORCEMENT ACT:			
REG PROGRAM:	FACILITY -		

PROGRAM:	RCRAINFO	PROGRAM ID:	CTD983866187
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	NOTIFICATION (RCRA)
LAST REPORTED:	3/3/2004	LAST EXTRACTED:	
ENFORCEMENT ACT:			
REG PROGRAM:	LQG - HAZARDOUS WASTE LARGE QUANTITY GENERATORS GENERATE: (A) 1,000 KG OR MORE OF HAZARDOUS WASTE DURING ANY CALENDAR MONTH; OR (B) MORE THAN 1 KG OF ACUTELY HAZARDOUS WASTE DURING ANY CALENDAR MONTH; OR (C) MORE THAN 100 KG OF ANY RESIDUE OR CONTAMINATED SOIL, WASTE OR OTHER DEBRIS RESULTING FROM THE CLEANUP OF A SPILL, INTO OR ON ANY LAND OR WATER, OF ACUTELY HAZARDOUS WASTE DURING ANY CALENDAR MONTH; OR (D) 1 KG OR LESS OF ACUTELY HAZARDOUS WASTE DURING ANY CALENDAR MONTH, AND ACCUMULATE MORE THAN 1 KG OF ACUTELY HAZARDOUS WASTE AT ANY TIME; OR (E) 100 KG OR LESS OF ANY RESIDUE OR CONTAMINATED SOIL, WASTE OR OTHER DEBRIS RESULTING FROM THE CLEANUP OF A SPILL, INTO OR ON ANY LAND OR WATER, OF ACUTELY HAZARDOUS WASTE DURING ANY CALENDAR MONTH, AND ACCUMULATED MORE THAN 100 KG OF THAT MATERIAL AT ANY TIME.		

PROGRAM:	RCRAINFO	PROGRAM ID:	CTD983866187
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	12/31/1999
AGENCY INT QUAL:	FIRST REPORTING YEAR	INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	RCRAINFO

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 35 **DIST/DIR:** 0.16 SE **ELEVATION:** 44 **MAP ID:** 8

NAME: LIGHT SOURCES, INC.
ADDRESS: 33 ROBINSON BLVD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 5/22/09
ID1: 110001405387
ID2: CTD983666187
STATUS: FRS
PHONE:

LAST REPORTED:	2/21/2002	LAST EXTRACTED:	2/13/2004 6:29:33 PM
ENFORCEMENT ACT:			
REG PROGRAM:	HAZARDOUS WASTE BIENNIAL REPORTER - HAZARDOUS WASTE BIENNIAL REPORTER		

PROGRAM:	TRIS	PROGRAM ID:	06477LGHTSO7ROB
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	12/31/2000
AGENCY INT QUAL:	FIRST REPORTING YEAR	INTEREST ENDED:	1/1/2006
INT END QUAL:	YEAR REPORTING STOPPED	SOURCE OF DATA:	TRI REPORTING FORM
LAST REPORTED:	6/28/2006	LAST EXTRACTED:	9/23/2007 6:05:34 PM
ENFORCEMENT ACT:			
REG PROGRAM:	TRI REPORTER - A TOXIC RELEASE INVENTORY REPORTER IS A FACILITY WHICH: EMPLOYS THE EQUIVALENT OF 10 OR MORE FULL-TIME EMPLOYEES; AND IS INCLUDED IN STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES 10XX, 12XX, 20XX-39XX, 4911, 4931, 4939, 4953, 5169, 5171, OR 7389; AND MANUFACTURES (DEFINED TO INCLUDE IMPORTING), PROCESSES, OR OTHERWISE USES ANY EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT (EPCRA) SECTION 313 CHEMICAL IN QUANTITIES GREATER THAN THE ESTABLISHED THRESHOLD IN THE COURSE OF A CALENDAR YEAR (I.E., MANUFACTURES OR PROCESSES OVER 25,000 POUNDS OF THE APPROXIMATELY 600 DESIGNATED CHEMICALS OR 28 CHEMICAL CATEGORIES SPECIFIED IN THE REGULATIONS, OR USES MORE THAN 10,000 POUNDS OF ANY DESIGNATED CHEMICAL OR CATEGORY).		

SITE TYPE:	STATIONARY
INTEREST STATUS:	ACTIVE
DATA QUALITY:	V
LOCATION DESC:	
ADDRESS TYPE:	REGULAR URBAN
LAST REPORTED:	
POSTED TO DATABASE:	3/1/2000
DATA UPDATED:	5/24/2003 12:09:33 PM
ENTERED PERSON/METHOD:	REFRESH
PARENT REG ID:	
CONFIDENCE IN ADDR:	MEDIUM
ENFORCEMENT SENSITIVE:	N
REQ MANUAL REVIEW:	
REASON MAN REVIEW:	
SMALL BUS POLICY:	
ENFORCEMENT ACTION:	
DATA PUB ACCESS:	YES
INTERNAL SYS ID:	
FEDERAL FACILITY:	NO
FEDERAL AGENCY:	
TRIBAL LAND:	NO
TRIBAL LAND NAME:	
CONGRESSIONAL DIST:	03
LEGISLATIVE DIST:	14
HYDROLOGICAL UNIT#:	01100004
EPA REGION:	01
AIRSHED:	
CENSUS BLOCK:	

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 23 **DIST/DIR:** 0.16 SW **ELEVATION:** 106 **MAP ID:** 9

NAME: DATA SWITCH CORP
ADDRESS: 12 CASCADE BLVD
ORANGE CT 06477
CONTACT:
SOURCE:

REV:
ID1: CT0001045818
ID2:
STATUS:
PHONE:

RCRIS	: CT5000000612
PCS	:
AFS/AIRS	:
SSTS	:
CERCLIS	:
NCDB	:
ENF DOCKET	:
CONTR LIST	:
CRIM DOCKET	:
FTTS	:
CICIS	:
STATE	:
PADS	:
TRIS	:
DandB	:
UNKNOWN	:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 24 **DIST/DIR:** 0.16 SW **ELEVATION:** 106 **MAP ID:** 9

NAME: DATA SWITCH CORP
ADDRESS: 12 CASCADE BLVD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 3/2/09
ID1: 110003064766
ID2: CT5000000612
STATUS: FRS
PHONE:

FACILITY REGISTRATION INFORMATION:

PROGRAM:	FRS	PROGRAM ID:	110003064766
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	FRS
LAST REPORTED:		LAST EXTRACTED:	
ENFORCEMENT ACT:			
REG PROGRAM:	FACILITY -		

PROGRAM:	RCRAINFO	PROGRAM ID:	CT5000000612
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	NOTIFICATION
LAST REPORTED:	3/30/1994	LAST EXTRACTED:	5/15/2003 1:38:33 AM
ENFORCEMENT ACT:			
REG PROGRAM:	NOT IN A UNIVERSE - THE HANDLER IS NOT CURRENTLY IN ANY HAZARDOUS WASTE UNIVERSE.		

SITE TYPE:	STATIONARY
INTEREST STATUS:	ACTIVE
DATA QUALITY:	V
LOCATION DESC:	
ADDRESS TYPE:	REGULAR URBAN
LAST REPORTED:	
POSTED TO DATABASE:	3/1/2000
DATA UPDATED:	1/6/2006 9:31:26 AM
ENTERED PERSON/METHOD:	REFRESH
PARENT REG ID:	
CONFIDENCE IN ADDR:	MEDIUM
ENFORCEMENT SENSITIVE:	
REQ MANUAL REVIEW:	
REASON MAN REVIEW:	
SMALL BUS POLICY:	
ENFORCEMENT ACTION:	
DATA PUB ACCESS:	YES
INTERNAL SYS ID:	
FEDERAL FACILITY:	NO
FEDERAL AGENCY:	
TRIBAL LAND:	NO
TRIBAL LAND NAME:	
CONGRESSIONAL DIST:	03
LEGISLATIVE DIST:	
HYDROLOGICAL UNIT#:	01100004
EPA REGION:	01
AIRSHED:	
CENSUS BLOCK:	

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 26 **DIST/DIR:** 0.17 SE **ELEVATION:** 69 **MAP ID:** 11

NAME: ESSEX FRANCE COMPANY
ADDRESS: CONNAIR RD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 5/22/09
ID1: 110006179857
ID2: CTD067084384
STATUS: FRS
PHONE:

FACILITY REGISTRATION INFORMATION:

PROGRAM:	FRS	PROGRAM ID:	110006179857
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	FRS
LAST REPORTED:		LAST EXTRACTED:	
ENFORCEMENT ACT:			
REG PROGRAM:	FACILITY -		

PROGRAM:	RCRAINFO	PROGRAM ID:	CTD067084384
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	NOTIFICATION
LAST REPORTED:	7/9/1980	LAST EXTRACTED:	5/18/2003 1:34:07 AM
ENFORCEMENT ACT:			
REG PROGRAM:	NOT IN A UNIVERSE - THE HANDLER IS NOT CURRENTLY IN ANY HAZARDOUS WASTE UNIVERSE.		

SITE TYPE:	STATIONARY
INTEREST STATUS:	ACTIVE
DATA QUALITY:	V
LOCATION DESC:	
ADDRESS TYPE:	IRREGULAR
LAST REPORTED:	
POSTED TO DATABASE:	3/1/2000
DATA UPDATED:	6/11/2001 3:26:53 PM
ENTERED PERSON/METHOD:	BEAR
PARENT REG ID:	
CONFIDENCE IN ADDR:	MEDIUM
ENFORCEMENT SENSITIVE:	N
REQ MANUAL REVIEW:	
REASON MAN REVIEW:	
SMALL BUS POLICY:	
ENFORCEMENT ACTION:	
DATA PUB ACCESS:	YES
INTERNAL SYS ID:	
FEDERAL FACILITY:	NO
FEDERAL AGENCY:	
TRIBAL LAND:	NO
TRIBAL LAND NAME:	
CONGRESSIONAL DIST:	03
LEGISLATIVE DIST:	
HYDROLOGICAL UNTIS:	01100004
EPA REGION:	01
AIRSHED:	
CENSUS BLOCK:	

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 27 **DIST/DIR:** 0.17 SE **ELEVATION:** 69 **MAP ID:** 11

NAME: ESSEX FRANCE CO
ADDRESS: CONNAIR RD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE:

REV:
ID1: CTD067084384
ID2:
STATUS:
PHONE:

RCRIS	: CTD067084384
PCS	:
AFS/AIRS	:
SSTS	: 0104203CT 001
CERCLIS	:
NCDB	:
ENF DOCKET	:
CONTR LIST	:
CRIM DOCKET	:
FTTS	:
CICIS	:
STATE	:
PADS	:
TRIS	:
Dan&B	:
UNKNOWN	:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 31 **DIST/DIR:** 0.17 SW **ELEVATION:** 91 **MAP ID:** 10

NAME: L C D LIGHTING INCORPORATED
ADDRESS: 11 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 5/22/09
ID1: 110006115225
ID2: CTR000002733
STATUS: FRS
PHONE:

FACILITY REGISTRATION INFORMATION:

PROGRAM:	RCRAINFO	PROGRAM ID:	CTR000002733
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	IMPLEMENTER
LAST REPORTED:	12/18/1992	LAST EXTRACTED:	5/18/2003 1:37:59 AM
ENFORCEMENT ACT:			
REG PROGRAM:	NOT IN A UNIVERSE - THE HANDLER IS NOT CURRENTLY IN ANY HAZARDOUS WASTE UNIVERSE.		

PROGRAM:	FRS	PROGRAM ID:	110006115225
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	FRS
LAST REPORTED:		LAST EXTRACTED:	
ENFORCEMENT ACT:			
REG PROGRAM:	FACILITY -		

SITE TYPE:	STATIONARY
INTEREST STATUS:	ACTIVE
DATA QUALITY:	V
LOCATION DESC:	
ADDRESS TYPE:	REGULAR URBAN
LAST REPORTED:	
POSTED TO DATABASE:	3/1/2000
DATA UPDATED:	6/11/2001 1:42:07 PM
ENTERED PERSON/METHOD:	BEAR
PARENT REG ID:	
CONFIDENCE IN ADDR:	MEDIUM
ENFORCEMENT SENSITIVE:	N
REQ MANUAL REVIEW:	
REASON MAN REVIEW:	
SMALL BUS POLICY:	
ENFORCEMENT ACTION:	
DATA PUB ACCESS:	YES
INTERNAL SYS ID:	
FEDERAL FACILITY:	NO
FEDERAL AGENCY:	
TRIBAL LAND:	NO
TRIBAL LAND NAME:	
CONGRESSIONAL DIST:	03
LEGISLATIVE DIST:	
HYDROLOGICAL UNTIS:	01100004
EPA REGION:	01
AIRSHED:	
CENSUS BLOCK:	

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 33 **DIST/DIR:** 0.17 SW **ELEVATION:** 91 **MAP ID:** 10

NAME: L S NEON INC
ADDRESS: 11 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 5/22/09
ID1: 110001107718
ID2: CTR000005478
STATUS: FRS
PHONE:

FACILITY REGISTRATION INFORMATION:

PROGRAM:	RCRAINFO	PROGRAM ID:	CTR000005478
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	NOTIFICATION
LAST REPORTED:	10/7/1993	LAST EXTRACTED:	5/18/2003 1:38:13 AM
ENFORCEMENT ACT:			
REG PROGRAM:	NOT IN A UNIVERSE - THE HANDLER IS NOT CURRENTLY IN ANY HAZARDOUS WASTE UNIVERSE.		

PROGRAM:	FRS	PROGRAM ID:	110001107718
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	FRS
LAST REPORTED:		LAST EXTRACTED:	
ENFORCEMENT ACT:			
REG PROGRAM:	FACILITY -		

SITE TYPE:	STATIONARY
INTEREST STATUS:	ACTIVE
DATA QUALITY:	V
LOCATION DESC:	
ADDRESS TYPE:	REGULAR URBAN
LAST REPORTED:	
POSTED TO DATABASE:	3/1/2000
DATA UPDATED:	1/4/2007 5:27:33 PM
ENTERED PERSON/METHOD:	REFRESH
PARENT REG ID:	
CONFIDENCE IN ADDR:	MEDIUM
ENFORCEMENT SENSITIVE:	N
REQ MANUAL REVIEW:	
REASON MAN REVIEW:	
SMALL BUS POLICY:	
ENFORCEMENT ACTION:	
DATA PUB ACCESS:	YES
INTERNAL SYS ID:	
FEDERAL FACILITY:	NO
FEDERAL AGENCY:	
TRIBAL LAND:	NO
TRIBAL LAND NAME:	
CONGRESSIONAL DIST:	03
LEGISLATIVE DIST:	
HYDROLOGICAL UNTIS:	01100004
EPA REGION:	01
AIRSHED:	
CENSUS BLOCK:	

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 30 **DIST/DIR:** 0.17 SW **ELEVATION:** 91 **MAP ID:** 10

NAME: L C D LIGHTING INC
ADDRESS: 11 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE:

REV:
ID1: CTD002066315
ID2:
STATUS:
PHONE:

RCRIS : CTR000002733
PCS :
AFS/AIRS :
SSTS :
CERCLIS :
NCDB :
ENF DOCKET :
CONTR LIST :
CRIM DOCKET :
FFIS :
CIGIS :
STATE :
PADS :
TRIS :
DandB :
UNKNOWN :

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 32 **DIST/DIR:** 0.17 SW **ELEVATION:** 91 **MAP ID:** 10

NAME: L S NEON INC
ADDRESS: 11 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE:

REV:
ID1: CTD981045814
ID2:
STATUS:
PHONE:

RCRIS : CT5000000446
PCS :
AFS/AIRS :
SSTS :
CERCLIS :
NCDB :
ENF DOCKET :
CONTR LIST :
CRIM DOCKET :
FFIS :
CIGIS :
STATE :
PADS :
TRIS :
DandB :
UNKNOWN :

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 43 **DIST/DIR:** 0.19 NW **ELEVATION:** 102 **MAP ID:** 12

NAME: SIGMA INSTRUMENT INTERNATIONAL INSTR DIV
ADDRESS: 55 MARSH HILL RD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 5/7/99
ID1: 110002494131
ID2: CTD990851917
STATUS: FRS
PHONE:

FACILITY REGISTRATION INFORMATION:

PROGRAM:	RCRAINFO	PROGRAM ID:	CTD990851917
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	NOTIFICATION
LAST REPORTED:	1/1/1980	LAST EXTRACTED:	5/18/2003 1:37:30 AM
ENFORCEMENT ACT:			
REG PROGRAM:	NOT IN A UNIVERSE - THE HANDLER IS NOT CURRENTLY IN ANY HAZARDOUS WASTE UNIVERSE.		

PROGRAM:	FRS	PROGRAM ID:	110002494131
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	FRS
LAST REPORTED:		LAST EXTRACTED:	
ENFORCEMENT ACT:			
REG PROGRAM:	FACILITY -		

SITE TYPE:	STATIONARY
INTEREST STATUS:	ACTIVE
DATA QUALITY:	V
LOCATION DESC:	
ADDRESS TYPE:	REGULAR URBAN
LAST REPORTED:	
POSTED TO DATABASE:	3/1/2006
DATA UPDATED:	1/5/2006 1:44:03 PM
ENTERED PERSON/METHOD:	REFRESH
PARENT REG ID:	
CONFIDENCE IN ADDR:	MEDIUM
ENFORCEMENT SENSITIVE:	N
REQ MANUAL REVIEW:	
REASON MAN REVIEW:	
SMALL BUS POLICY:	
ENFORCEMENT ACTION:	
DATA PUB ACCESS:	YES
INTERNAL SYS ID:	
FEDERAL FACILITY:	NO
FEDERAL AGENCY:	
TRIBAL LAND:	NO
TRIBAL LAND NAME:	
CONGRESSIONAL DIST:	03
LEGISLATIVE DIST:	
HYDROLOGICAL UNTIS:	01100004
EPA REGION:	01
AIRSHED:	
CENSUS BLOCK:	

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 44 **DIST/DIR:** 0.19 NW **ELEVATION:** 102 **MAP ID:** 12

NAME: SIGMA INSTRUMENT INTL INSTR DIV
ADDRESS: 55 MARSH HILL RD
ORANGE CT 06477
CONTACT:
SOURCE:

REV:
ID1: CTD990851917
ID2:
STATUS:
PHONE:

RCRIS : CTD990851917
PCS :
AFS/AIRS :
SSTS :
CERCLIS :
NCDB :
ENF DOCKET :
CONTR LIST :
CRIM DOCKET :
FFIS :
CIGIS :
STATE :
PADS :
TRIS :
DandB :
UNKNOWN :

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 21 **DIST/DIR:** 0.19 NW **ELEVATION:** 102 **MAP ID:** 12

NAME: ABB DRIVES INC
ADDRESS: 88 MARSH HILL RD
ORANGE CT 06477
CONTACT:
SOURCE:

REV:
ID1: CTD036183556
ID2:
STATUS:
PHONE:

RCRIS : CTD036183556
PCS :
AFS/AIRS :
SSTS :
CERCLIS : CTD983876293
NCDB :
ENF DOCKET :
CONTA LIST :
CAIR DOCKET :
FFIS :
CICIS :
STATE :
PADS :
TRIS :
DandB :
UNKNOWN :

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 22 **DIST/DIR:** 0.19 NW **ELEVATION:** 102 **MAP ID:** 12

NAME: ASEA BROWN BOVERI
ADDRESS: 88 MARSH HILL RD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 5/22/09
ID1: 110005967953
ID2: CTD036183556
STATUS: FRS
PHONE:

FACILITY REGISTRATION INFORMATION:

PROGRAM:	FRS	PROGRAM ID:	110005967953
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	FRS
LAST REPORTED:		LAST EXTRACTED:	
ENFORCEMENT ACT:			
REG PROGRAM:	FACILITY -		

PROGRAM:	RCRAINFO	PROGRAM ID:	CTD036183556
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	NOTIFICATION
LAST REPORTED:	2/10/1983	LAST EXTRACTED:	5/13/2003 1:38:05 AM
ENFORCEMENT ACT:			
REG PROGRAM:	NOT IN A UNIVERSE - THE HANDLER IS NOT CURRENTLY IN ANY HAZARDOUS WASTE UNIVERSE.		

SITE TYPE:	STATIONARY
INTEREST STATUS:	ACTIVE
DATA QUALITY:	V
LOCATION DESC:	
ADDRESS TYPE:	REGULAR URBAN
LAST REPORTED:	
POSTED TO DATABASE:	3/1/2000
DATA UPDATED:	5/22/2004 10:24:43 AM
ENTERED PERSON/METHOD:	BEAR
PARENT REG ID:	
CONFIDENCE IN ADDR:	MEDIUM
ENFORCEMENT SENSITIVE:	N
REQ MANUAL REVIEW:	
REASON MAN REVIEW:	
SMALL BUS POLICY:	
ENFORCEMENT ACTION:	
DATA PUB ACCESS:	YES
INTERNAL SYS ID:	
FEDERAL FACILITY:	NO
FEDERAL AGENCY:	
TRIBAL LAND:	NO
TRIBAL LAND NAME:	
CONGRESSIONAL DIST:	03
LEGISLATIVE DIST:	
HYDROLOGICAL UNITS:	01100004
EPA REGION:	01
AIRSHED:	
CENSUS BLOCK:	

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 29 **DIST/DIR:** 0.19 NW **ELEVATION:** 84 **MAP ID:** 13

NAME: HELICOPTER SUPPORT, INC
ADDRESS: 89 MARSH HILL RD
ORANGE CT 06473
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 5/22/09
ID1: 110030334172
ID2:
STATUS: FRS
PHONE:

FACILITY REGISTRATION INFORMATION:

PROGRAM:	FRS	PROGRAM ID:	110030334172
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	5/24/2007 11:28:54 AM
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	SIMS
LAST REPORTED:	5/24/2007 11:28:55 AM	LAST EXTRACTED:	
ENFORCEMENT ACT:			
REG PROGRAM:	FACILITY -		

PROGRAM:	SIMS	PROGRAM ID:	1502343
PROVIDED BY:	STATE AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	CONNECTICUT DEP
LAST REPORTED:		LAST EXTRACTED:	5/24/2007 11:28:55 AM
ENFORCEMENT ACT:			
REG PROGRAM:	STATE MASTER -		

SITE TYPE:	STATIONARY
INTEREST STATUS:	ACTIVE
DATA QUALITY:	V
LOCATION DESC:	
ADDRESS TYPE:	REGULAR URBAN
LAST REPORTED:	
POSTED TO DATABASE:	5/24/2007 11:28:55 AM
DATA UPDATED:	
ENTERED PERSON/METHOD:	REFRESH
PARENT REG ID:	
CONFIDENCE IN ADDR:	
ENFORCEMENT SENSITIVE:	
REQ MANUAL REVIEW:	
REASON MAN REVIEW:	
SMALL BUS POLICY:	
ENFORCEMENT ACTION:	
DATA PUB ACCESS:	YES
INTERNAL SYS ID:	
FEDERAL FACILITY:	
FEDERAL AGENCY:	
TRIBAL LAND:	NO
TRIBAL LAND NAME:	
CONGRESSIONAL DIST:	
LEGISLATIVE DIST:	
HYDROLOGICAL UNITS:	
EPA REGION:	01
AIRSHED:	
CENSUS BLOCK:	

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 28 **DIST/DIR:** 0.19 NW **ELEVATION:** 102 **MAP ID:** 12

NAME: FORMER ABB INDUSTRIAL SYSTEMS FAC
ADDRESS: 88 MARSH HILL RD
ORANGE CT 06477
CONTACT:
SOURCE: EPA

REV: 5/22/09
ID1: 110030337908
ID2:
STATUS: FRS
PHONE:

FACILITY REGISTRATION INFORMATION:

PROGRAM:	SIMS	PROGRAM ID:	1513476
PROVIDED BY:	STATE AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	CONNECTICUT DEP
LAST REPORTED:		LAST EXTRACTED:	5/24/2007 11:46:56 AM
ENFORCEMENT ACT:			
REG PROGRAM:	STATE MASTER -		

PROGRAM:	FRS	PROGRAM ID:	110030337908
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	5/24/2007 11:46:56 AM
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	SIMS
LAST REPORTED:	5/24/2007 11:46:56 AM	LAST EXTRACTED:	
ENFORCEMENT ACT:			
REG PROGRAM:	FACILITY -		

SITE TYPE:	STATIONARY
INTEREST STATUS:	ACTIVE
DATA QUALITY:	V
LOCATION DESC:	
ADDRESS TYPE:	REGULAR URBAN
LAST REPORTED:	
POSTED TO DATABASE:	5/24/2007 11:46:56 AM
DATA UPDATED:	
ENTERED PERSON/METHOD:	REFRESH
PARENT REG ID:	
CONFIDENCE IN ADDR:	
ENFORCEMENT SENSITIVE:	
REQ MANUAL REVIEW:	
REASON MAN REVIEW:	
SMALL BUS POLICY:	
ENFORCEMENT ACTION:	
DATA PUB ACCESS:	YES
INTERNAL SYS ID:	
FEDERAL FACILITY:	
FEDERAL AGENCY:	
TRIBAL LAND:	NO
TRIBAL LAND NAME:	
CONGRESSIONAL DIST:	
LEGISLATIVE DIST:	
HYDROLOGICAL UNITS:	
EPA REGION:	01
AIRSHED:	
CENSUS BLOCK:	

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 36 **DIST/DIR:** 0.21 SE **ELEVATION:** 21 **MAP ID:** 14

NAME: NORTHEAST BEVERAGE
ADDRESS: 32 ROBINSON BLVD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 3/7/09
ID1: 110030336303
ID2:
STATUS: FRS
PHONE:

FACILITY REGISTRATION INFORMATION:

PROGRAM:	SIMS	PROGRAM ID:	1309498
PROVIDED BY:	STATE AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	CONNECTICUT DEP
LAST REPORTED:		LAST EXTRACTED:	9/24/2007 11:31:20 AM
ENFORCEMENT ACT:			
REG PROGRAM:	STATE MASTER -		

PROGRAM:	FRS	PROGRAM ID:	110030336303
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	9/24/2007 11:31:20 AM
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	SIMS
LAST REPORTED:	9/24/2007 11:31:20 AM	LAST EXTRACTED:	
ENFORCEMENT ACT:			
REG PROGRAM:	FACILITY -		

SITE TYPE: STATIONARY
INTEREST STATUS: ACTIVE
DATA QUALITY: V
LOCATION DESC:
ADDRESS TYPE: REGULAR URBAN
LAST REPORTED:
POSTED TO DATABASE: 9/24/2007 11:31:20 AM
DATA UPDATED:
ENTERED PERSON/METHOD: REFRESH
PARENT REG ID:
CONFIDENCE IN ADDR:
ENFORCEMENT SENSITIVE:
REQ MANUAL REVIEW:
REASON MAN REVIEW:
SMALL BUS POLICY:
ENFORCEMENT ACTION:
DATA PUB ACCESS: YES
INTERNAL SYS ID:

FEDERAL FACILITY:
FEDERAL AGENCY:
TRIBAL LAND: NO
TRIBAL LAND NAME:
CONGRESSIONAL DIST:
LEGISLATIVE DIST:
HYDROLOGICAL UNTIS:
EPA REGION: 01
AIRSHED:
CENSUS BLOCK:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 235 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: SILVER SANDS LANDFILL
ADDRESS: ADDRESS NOT IN NCDB
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 5/22/09
ID1: 110011357270
ID2: 19981027CT015 1
STATUS: FRS
PHONE:

FACILITY REGISTRATION INFORMATION:

PROGRAM:	FRS	PROGRAM ID:	110011357270
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	FRS
LAST REPORTED:		LAST EXTRACTED:	
ENFORCEMENT ACT:			
REG PROGRAM:	FACILITY -		

PROGRAM:	NCDB	PROGRAM ID:	ID: 19981027CT015 1
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	NCDB
LAST REPORTED:		LAST EXTRACTED:	
ENFORCEMENT ACT:			
REG PROGRAM:	COMPLIANCE ACTIVITY - A COMPLIANCE MONITORING OR ENFORCEMENT ACTIVITY, FROM THE TIME AN INSPECTOR CONDUCTS AN INSPECTION UNTIL THE TIME THE INSPECTOR CLOSES OR THE CASE SETTLES THE ENFORCEMENT ACTION.		

SITE TYPE: STATIONARY
INTEREST STATUS: ACTIVE
DATA QUALITY: V
LOCATION DESC:
ADDRESS TYPE: IRREGULAR
LAST REPORTED:
POSTED TO DATABASE: 3/1/2000
DATA UPDATED: 3/23/2003 10:50:28 AM
ENTERED PERSON/METHOD: KKB
PARENT REG ID:
CONFIDENCE IN ADDR: MEDIUM
ENFORCEMENT SENSITIVE: N
REQ MANUAL REVIEW:
REASON MAN REVIEW:
SMALL BUS POLICY:
ENFORCEMENT ACTION:
DATA PUB ACCESS: YES
INTERNAL SYS ID:

FEDERAL FACILITY:
FEDERAL AGENCY:
TRIBAL LAND: NO
TRIBAL LAND NAME:
CONGRESSIONAL DIST:
LEGISLATIVE DIST:
HYDROLOGICAL UNTIS:
EPA REGION: 01
AIRSHED:
CENSUS BLOCK:

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 235 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: SILVER SANDS LANDFILL
ADDRESS: ADDRESS NOT IN NCDB
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 5/22/09
ID1: 110011357270
ID2: 19981027CT015 1
STATUS: FRS
PHONE:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 302 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: SILVER SANDS LANDFILL
ADDRESS: ADDRESS NOT IN NCDB
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 3/7/09
ID1: 110011357270
ID2: 19981027CT015 1
STATUS: FRS
PHONE:

FACILITY REGISTRATION INFORMATION:

PROGRAM:	FRS	PROGRAM ID:	110011357270
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	FRS
LAST REPORTED:		LAST EXTRACTED:	
ENFORCEMENT ACT:			
REG PROGRAM:	FACILITY -		

PROGRAM:	NCDB	PROGRAM ID:	ID: 19981027CT015 1
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	NCDB
LAST REPORTED:		LAST EXTRACTED:	
ENFORCEMENT ACT:			
REG PROGRAM:	COMPLIANCE ACTIVITY - A COMPLIANCE MONITORING OR ENFORCEMENT ACTIVITY, FROM THE TIME AN INSPECTOR CONDUCTS AN INSPECTION UNTIL THE TIME THE INSPECTOR CLOSES OR THE CASE SETTLES THE ENFORCEMENT ACTION.		

SITE TYPE: STATIONARY
INTEREST STATUS: ACTIVE
DATA QUALITY: V
LOCATION DESC:
ADDRESS TYPE: IRREGULAR
LAST REPORTED:
POSTED TO DATABASE: 3/1/2000
DATA UPDATED: 3/23/2003 10:50:28 AM
ENTERED PERSON/METHOD: KKB
PARENT REG ID:
CONFIDENCE IN ADDR: MEDIUM
ENFORCEMENT SENSITIVE: N
REQ MANUAL REVIEW:
REASON MAN REVIEW:
SMALL BUS POLICY:
ENFORCEMENT ACTION:
DATA PUB ACCESS: YES
INTERNAL SYS ID:

FEDERAL FACILITY:
FEDERAL AGENCY:
TRIBAL LAND: NO
TRIBAL LAND NAME:
CONGRESSIONAL DIST:
LEGISLATIVE DIST:
HYDROLOGICAL UNTIS:
EPA REGION: 01
AIRSHED:
CENSUS BLOCK:

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 302 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: SILVER SANDS LANDFILL
ADDRESS: ADDRESS NOT IN NCOA
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 5/22/09
ID1: 110011337270
ID2: 19981027CT01B1
STATUS: FRS
PHONE:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

FINDS

SEARCH ID: 226 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: PERRY FARM
ADDRESS: ADDRESS NOT IN AQS
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 5/22/09
ID1: 110029952478
ID2:
STATUS: FRS
PHONE:

FACILITY REGISTRATION INFORMATION:

PROGRAM:	AIRS/AQS	PROGRAM ID:	2155
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	1/1/1974
AGENCY INT QUAL:	DATE MONITORING STARTED	INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	AQS SITES TRANSACTION
LAST REPORTED:		LAST EXTRACTED:	7/11/2006 1:20:50 PM
ENFORCEMENT ACT:			
REG PROGRAM:	AIR MONITORING SITE - A SITE ESTABLISHED TO MEASURE CONCENTRATIONS OF AIR POLLUTANTS.		

PROGRAM:	FRS	PROGRAM ID:	110029952478
PROVIDED BY:	FEDERAL AGENCY	AGENCY INTERESTED:	4/19/2005 7:08:53 PM
AGENCY INT QUAL:		INTEREST ENDED:	
INT END QUAL:		SOURCE OF DATA:	AIRS/AQS
LAST REPORTED:	4/19/2005 7:08:54 PM	LAST EXTRACTED:	
ENFORCEMENT ACT:			
REG PROGRAM:	FACILITY -		

SITE TYPE:	MONITORING STATION
INTEREST STATUS:	ACTIVE
DATA QUALITY:	V
LOCATION DESC:	
ADDRESS TYPE:	IRREGULAR
LAST REPORTED:	
POSTED TO DATABASE:	4/19/2005 7:08:54 PM
DATA UPDATED:	4/27/2005 11:14:14 AM
ENTERED PERSON/METHOD:	EKB
PARENT REG ID:	
CONFIDENCE IN ADDR:	
ENFORCEMENT SENSITIVE:	N
REQ MANUAL REVIEW:	
REASON MAN REVIEW:	
SMALL BUS POLICY:	
ENFORCEMENT ACTION:	
DATA PUB ACCESS:	YES
INTERNAL SYS ID:	
FEDERAL FACILITY:	
FEDERAL AGENCY:	
TRIBAL LAND:	NO
TRIBAL LAND NAME:	
CONGRESSIONAL DIST:	
LEGISLATIVE DIST:	
HYDROLOGICAL UNITS:	
EPA REGION:	01
AIRSHED:	
CENSUS BLOCK:	

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 105 **DIST/DIR:** 0.16 SE **ELEVATION:** 44 **MAP ID:** 8

NAME: LIGHT SOURCES INC
ADDRESS: 37 ROBINSON BLVD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/88
ID1: CTD983866187
ID2:
STATUS:
PHONE:

CT MANIFEST INFORMATION

MANIFEST ID	SHIPPED	TSD ID		TRANS ID	QTY	MATERIAL
CTF1047413		OHD000724153	MAD039322250			
CTF1047413		OHD000724153	MAD039322250	0479 P		FLAMMABLE LIQUIDS, N.O.S.
CTF1047413		OHD000724153	MAD039322250	0497 P		FLAMMABLE SOLIDS, ORGANIC, N.O.S.
MAC518002	05/16/1990	MAD000604447	MAD000604447	0110 G		WASTE PETRO NAPHTHA LIQ
MAF134460	03/21/1991	MAD000604447	MAD000604447	0055 G		WASTE NOS, METHYLENE CHLORIDE XYLENE
MAF134460	03/21/1991	MAD000604447	MAD000604447	0110 G		HAZARDOUS WASTE LIQUID NOS, LEAD CADMIUM
MAF574647	07/10/1991	MAD000604447	MAD000604447	0055 G		HAZARDOUS WASTE LIQUID, NOS
MAF565321	11/11/1991	MAD000604447	MAD000604447	0055 G		HAZARDOUS WASTE LIQUID, NOS
MAG585087	04/08/1992	MAD000604447	MAD000604447	0110 G		WASTE ORM-A,N.O.S.
MAG585313	06/02/1992	MAD000604447	MAD000604447	0110 G		RQ HAZARDOUS WASTE LIQUID NOS
MAH201069	01/27/1993	MAD000604447	MAD000604447	0055 G		WASTE ORM-A
MAH303792	03/10/1993	MAD000604447	MAD000604447	0055 G		WASTE METHYLENE CHLORIDE XYLENE, NOS
MAH308365	03/22/1993	MAD000604447	MAD000604447	0110 G		WASTE ORM-A
MAH550158	11/11/1993	MAD000604447	MAD000604447	0055 G		HAZARDOUS WASTE LIQUID
MAH550158	11/11/1993	MAD000604447	MAD000604447	0055 G		WASTE FLAMMABLE LIQUIDS
MAH543525	01/03/1994	MAD000604447	MAD000604447	0220 G		HAZARDOUS WASTE LIQUID NOS, LEAD
MAH540177	02/23/1994	MAD000604447	MAD000604447	0055 G		WASTE FLAMMABLE LIQUID
MAH540177	02/23/1994	MAD000604447	MAD000604447	0220 G		HAZARDOUS WASTE LIQUID
MAH709355	05/11/1994	MAD000604447	MAD000604447	0110 G		HAZARDOUS WASTE LIQUID
MAH709355	05/11/1994	MAD000604447	MAD000604447	0110 G		WASTE FLAMMABLE LIQUID
MAH571394	09/26/1994	MAD000604447	MAD000604447	0060 G		WASTE FLAMMABLE LIQUID
MAH571394	09/26/1994	MAD000604447	MAD000604447	0055 G		HAZARDOUS WASTE LIQUID
MAH181160	02/09/1995	MAD000604447	MAD000604447	0223 P		WASTE CORROSIVE LIQUID

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 105 **DIST/DIR:** 0.16 SE **ELEVATION:** 44 **MAP ID:** 8

NAME: LIGHT SOURCES INC
ADDRESS: 37 ROBINSON BLVD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/88
ID1: CTD983866187
ID2:
STATUS:
PHONE:

MAH581161	02/09/1995	MAD000604447	MAD000604447	0223 P	WASTE FLAMMABLE LIQUID
MAH581161	02/09/1995	MAD000604447	MAD000604447	0775 P	WASTE FLAMMABLE LIQUID
MAH375315	02/21/1995	MAD000604447	MAD000604447	0800 P	WASTE FLAMMABLE LIQUID
CTF9429245	10/23/1995	CTD072138960	NJD000174477	1200 P	WASTE FLAMMABLE LIQUID NOS
NYB1547813	04/24/1997	NY0000343859	CTD983183745	1200 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
NYB1547741	05/01/1997	NY0000343859	CTD983183745	1200 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
NYB1547752	05/08/1997	NY0000343859	CTD983183745	1900 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
NYB1547723	05/15/1997	NY0000343859	CTD983183745	1200 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
NYB1547689	05/22/1997	NY0000343859	CTD983183745	1200 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
NYB1547651	05/29/1997	NY0000343859	CTD983183745	0600 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
NYB1547452	06/05/1997	NY0000343859	CTD983183745	1950 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
NYB1548479	06/12/1997	NY0000343859	CTD983183745	1500 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
CTF9630335	06/19/1997	CT5000001495	CT5000001495	1600 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
CTF9630377	06/27/1997	CT5000001495	CT5000001495	1500 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
CTF9630403	07/10/1997	CT5000001495	CT5000001495	1500 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
CTF9630438	07/22/1997	CT5000001495	CT5000001495	3000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
CTF9630451	07/25/1997	CT5000001495	CT5000001495	3000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
CTF9630468	08/01/1997	CT5000001495	CT5000001495	3000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
CTF9630477	08/06/1997	CT5000001495	CT5000001495	3000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
CTF9535616	08/14/1997	MAD000604447	CTD983183745	1600 P	ENV. HAZARDOUS SUBSTANCE LIQUID NOS
CTF9630521	08/22/1997	CT5000001495	CT5000001495	3000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
CTF9630530	08/27/1997	CT5000001495	CT5000001495	3000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
CTF9630512	09/02/1997	CT5000001495	CT5000001495	3000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
CTF9537058	09/10/1997	MAD000604447	CTD983183745	0750 P	ENV. HAZARDOUS SUBSTANCE LIQUID NOS
CTF9639462	09/17/1997	CT5000001495	CT5000001495	3000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
CTF9633933	09/24/1997	CT5000001495	CT5000001495	3000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID

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Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 105 **DIST/DIR:** 0.16 SE **ELEVATION:** 44 **MAP ID:** 8

NAME: LIGHT SOURCES INC
ADDRESS: 37 ROBINSON BLVD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: CT DEP
REV: 1/1/98
ID1: CTD983866187
ID2:
STATUS:
PHONE:

CTF0383625	09/25/1997	MAD000604447	CTD983483715	0900 P	ENV. HAZARDOUS SUBSTANCE LIQUID NOS	
CTF0635979	10/02/1997	CT5000001495	CT5000001495	3000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0587096	10/13/1997	MAD000604447	CTD983483715	0220 G	WASTE BUTYL ACETATES	
CTF0636021	10/14/1997	CT5000001495	CT5000001495	2250 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0636056	10/28/1997	CT5000001495	CT5000001495	3000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0636076	11/03/1997	CT5000001495	CT5000001495	4000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0638903	11/17/1997	CT5000001495	CT5000001495	4000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0632794	11/24/1997	CTD000604488	MAD039322250	0110 G	FLAMMABLE LIQUID N.O.S.	
CTF0632794	11/24/1997	CTD000604488	MAD039322250	0055 G	ENV. HAZARDOUS SUBSTANCE LIQUID NOS	
CTF0638930	11/28/1997	CT5000001495	CT5000001495	3000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0638949	12/03/1997	CT5000001495	CT5000001495	3750 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0638963	12/18/1997	CT5000001495	CT5000001495	3750 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0638981	12/18/1997	CT5000001495	CT5000001495	3750 G	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0639001	12/20/1997	CT5000001495	CT5000001495	3750 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0639022	01/07/1998	CT5000001495	CT5000001495	3000 P	HAZARDOUS WASTE SOLID NOS	
CTF0639042	01/14/1998	CT5000001495	CT5000001495	3000 P	HAZARDOUS WASTE SOLID NOS	
IL6311478	01/21/1998	ILD000608471	MAD039322250	0055 G	ENV. HAZARDOUS SUBSTANCE LIQUID NOS	
CTF0639070	01/21/1998	CT5000001495	CT5000001495	3000 P	HAZARDOUS WASTE SOLID NOS	
CTF0634779	01/21/1998	CTD000604488	MAD039322250	0110 G	WASTE FLAMMABLE LIQUID NOS	
ILD6311478	01/21/1998	ILD000608471	MAD039322250	0055 G	ENV. HAZARDOUS SUBSTANCE LIQUID NOS	
CTF0639087	01/28/1998	CT5000001495	CT5000001495	3000 P	HAZARDOUS WASTE SOLID NOS	
CTF0639093	01/31/1998	CT5000001495	CT5000001495	4000 P	HAZARDOUS WASTE SOLID NOS	
CTF0692228	02/04/1998	CT5000001495	CT5000001495	0000 P	HAZARDOUS WASTE SOLID NOS	
CTF0692269	02/11/1998	CT5000001495	CT5000001495	2000 P	HAZARDOUS WASTE SOLID NOS	
CTF0692260	02/18/1998	CT5000001495	CT5000001495	5000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0692292	02/24/1998	CT5000001495	CT5000001495	3000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
IL7627092	03/03/1998	ILD000608471	MAD039322250	0055 G	ENV. HAZARDOUS SUBSTANCE LIQUID NOS	

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Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 105 **DIST/DIR:** 0.16 SE **ELEVATION:** 44 **MAP ID:** 8

NAME: LIGHT SOURCES INC
ADDRESS: 37 ROBINSON BLVD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: CT DEP
REV: 1/1/98
ID1: CTD983866187
ID2:
STATUS:
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IL7627092	03/03/1998	ILD000608471	MAD039322250	0110 G	FLAMMABLE LIQUID N.O.S.	
CTF0692304	03/04/1998	CT5000001495	CT5000001495	2300 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0692320	03/07/1998	CT5000001495	CT5000001495	3600 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0692355	03/11/1998	CT5000001495	CT5000001495	2250 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0692362	03/18/1998	CT5000001495	CT5000001495	3000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0692375	03/26/1998	CT5000001495	CT5000001495	2500 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0692381	03/26/1998	CT5000001495	CT5000001495	3750 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
IL7627273	03/31/1998	ILD000608471	MAD039322250	0115 G	ENV. HAZARDOUS SUBSTANCE LIQUID NOS	
IL7627275	03/31/1998	ILD000608471	MAD039322250	0345 G	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0692392	03/31/1998	CT5000001495	CT5000001495	2250 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
IL7627235	03/31/1998	ILD000608471	MAD039322250	0055 G	ENV. HAZARDOUS SUBSTANCE LIQUID NOS	
IL7627276	03/31/1998	ILD000608471	MAD039322250	0055 G	FLAMMABLE LIQUID N.O.S.	
CTF0691741	04/07/1998	CTD980667927	ILD984908202	0017 G	RQ WASTE COMBUSTIBLE LIQUID,N.O.S.	
CTF0692479	04/07/1998	CT5000001495	CT5000001495	0500 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0692479	04/07/1998	CT5000001495	CT5000001495	2500 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0692520	04/14/1998	CT5000001495	CT5000001495	3750 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0692521	04/15/1998	CT5000001495	CT5000001495	3000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
IL7627420	04/16/1998	ILD000608471	MAD039322250	1050 G	ENV. HAZARDOUS SUBSTANCE LIQUID NOS	
IL7627420	04/16/1998	ILD000608471	MAD039322250	0055 G	FLAMMABLE LIQUID N.O.S.	
IL7627420	04/16/1998	ILD000608471	MAD039322250	0110 G	ENV. HAZARDOUS SUBSTANCE LIQUID NOS	
CTF0692533	04/22/1998	CT5000001495	CT5000001495	3750 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0692545	04/25/1998	CT5000001495	CT5000001495	0375 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0710631	04/28/1998	CT5000001495	CT5000001495	2500 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0710643	05/02/1998	CT5000001495	CT5000001495	3750 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0710643	05/02/1998	CT5000001495	CT5000001495	0300 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0688622	05/03/1998	CTD980667927	ILD984908202	0013 G	WASTE COMBUSTIBLE LIQUID, N.O.S.	

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Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 105 **DIST/DIR:** 0.16 SE **ELEVATION:** 44 **MAP ID:** 8

NAME: LIGHT SOURCES INC
ADDRESS: 37 ROBINSON BLVD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: CT DEP
REV: 1/1/98
ID1: CTD983866187
ID2:
STATUS:
PHONE:

CTF0710635	05/06/1998	CT5000001495	CT5000001495	3750 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0710665	05/09/1998	CT5000001495	CT5000001495	4500 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0710674	05/13/1998	CT5000001495	CT5000001495	3750 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0712612	05/15/1998	CT5000001495	CT5000001495	3000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0712619	05/26/1998	CT5000001495	CT5000001495	3750 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0712629	05/26/1998	CT5000001495	CT5000001495	3000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0712649	05/29/1998	CT5000001495	CT5000001495	3750 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0712657	06/03/1998	CT5000001495	CT5000001495	3750 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0712671	06/03/1998	CT5000001495	CT5000001495	3750 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0504951	06/08/1998	CTD000604488	MAD039322250	0933 G	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0682472	06/08/1998	CTD000604488	MAD039322250	0055 G	FLAMMABLE SOLID, ORGANIC NOS	
CTF0682472	06/08/1998	CTD000604488	MAD039322250	0165 G	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
IL7694821	06/08/1998	ILD000608471	MAD039322250	0055 G	FLAMMABLE LIQUID TOXIC NOS	
IL7694821	06/08/1998	ILD000608471	MAD039322250	0110 G	FLAMMABLE LIQUID N.O.S.	
CTF0712688	06/10/1998	CT5000001495	CT5000001495	3750 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0712698	06/15/1998	CT5000001495	CT5000001495	3750 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0712709	06/17/1998	CT5000001495	CT5000001495	3750 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0712721	06/20/1998	CT5000001495	CT5000001495	3000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0712731	06/24/1998	CT5000001495	CT5000001495	2250 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0725950	07/01/1998	CTD980667927	ILD984908202	0014 G	RQ WASTE COMBUSTIBLE LIQUID,N.O.S.	
IL7694063	07/01/1998	ILD000608471	MAD039322250	0055 G	FLAMMABLE LIQUID N.O.S.	
CTF0712738	07/01/1998	CT5000001495	CT5000001495	3750 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0565167	07/01/1998	CTD000604488	MAD039322250	0550 G	ENV. HAZARDOUS SUBSTANCE LIQUID NOS	
CTF0565167	07/01/1998	CTD000604488	MAD039322250	0400 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0565167	07/01/1998	CTD000604488	MAD039322250	0100 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
MAR540843	07/01/1998	MAD053452637	MAD039322250	0075 P	FLAMMABLE SOLID, ORGANIC NOS	
CTF0712750	07/06/1998	CT5000001495	CT5000001495	2000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	

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Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 105 **DIST/DIR:** 0.16 SE **ELEVATION:** 44 **MAP ID:** 8

NAME: LIGHT SOURCES INC
ADDRESS: 37 ROBINSON BLVD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: CT DEP
REV: 1/1/98
ID1: CTD983866187
ID2:
STATUS:
PHONE:

CTF0712734	07/08/1998	CT5000001495	CT5000001495	2000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0712763	07/14/1998	CT5000001495	CT5000001495	2000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
IL7694723	07/15/1998	ILD000608471	MAD039322250	0100 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0712771	07/15/1998	CT5000001495	CT5000001495	0400 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0712774	07/15/1998	CT5000001495	CT5000001495	2250 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
IL7694723	07/15/1998	ILD000608471	MAD039322250	0055 G	ENV. HAZARDOUS SUBSTANCE LIQUID NOS	
CTF0712791	07/16/1998	CT5000001495	CT5000001495	2100 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0712802	07/22/1998	CT5000001495	CT5000001495	0800 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0712802	07/22/1998	CT5000001495	CT5000001495	2000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0712809	07/23/1998	CT5000001495	CT5000001495	0300 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0712809	07/23/1998	CT5000001495	CT5000001495	2100 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
IL7694465	07/27/1998	ILD000608471	MAD039322250	0400 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
IL7694465	07/27/1998	ILD000608471	MAD039322250	0600 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0712830	07/29/1998	CT5000001495	CT5000001495	3000 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0712836	08/05/1998	CT5000001495	CT5000001495	2800 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0712871	08/11/1998	CT5000001495	CT5000001495	2800 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0712895	08/13/1998	CT5000001495	CT5000001495	2500 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0569893	08/17/1998	CTD000604488	MAD039322250	0275 G	ENV. HAZARDOUS SUBSTANCE LIQUID NOS	
IL7732319	08/17/1998	ILD000608471	MAD039322250	0055 P	FLAMMABLE LIQUID N.O.S.	
IL7732319	08/17/1998	ILD000608471	MAD039322250	0100 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
IL7732319	08/17/1998	ILD000608471	MAD039322250	0500 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
IL7732319	08/17/1998	ILD000608471	MAD039322250	0500 P	FLAMMABLE SOLID, ORGANIC NOS	
IL7732320	08/17/1998	ILD000608471	MAD039322250	0055 G	ENV. HAZARDOUS SUBSTANCE LIQUID NOS	
IL5149189	08/19/1998	ILD000608471	MAD039322250	0400 P	MERCURY	
CTF0712915	08/22/1998	CT5000001495	CT5000001495	1500 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	
CTF0712915	08/22/1998	CT5000001495	CT5000001495	0300 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID	

- More Details Exist For This Site; Max Page Limit Reached -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 101 **DIST/DIR:** 0.16 SW **ELEVATION:** 106 **MAP ID:** 9

NAME: DATA SWITCH CORP
ADDRESS: 12 CASCADE BLVD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/98
ID1: CTS00000612
ID2:
STATUS:
PHONE:

CT MANIFEST INFORMATION

MANIFEST ID	SHIPPED	TSD ID	TRANS ID	QTY	MATERIAL
CTF0326833	09/27/1994	CTD980667927	ILD984904202	0438 P	WASTE ISOPROPANOL
CTF0326834	12/19/1994	CTD980667927	ILD984904202	0438 P	WASTE ISOPROPANOL
MAH266312	07/06/1995	MAD000604447	MAD000604447	0220 P	WASTE FLAMMABLE LIQUID NOS
MAH266312	07/06/1995	MAD000604447	MAD000604447	0033 P	WASTE POISONOUS LIQUIDS
MAH266312	07/06/1995	MAD000604447	MAD000604447	0013 P	WASTE AEROSOLS FLAMMABLE
MAH578123	07/06/1995	MAD000604447	MAD000604447	1800 P	WASTE FLAMMABLE LIQUID NOS

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 96 **DIST/DIR:** 0.19 NW **ELEVATION:** 102 **MAP ID:** 12

NAME: ASEA BROWN BOVERI
ADDRESS: 55 MARSH HILL RD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/98
ID1: CTD036183556
ID2:
STATUS:
PHONE:

CT MANIFEST INFORMATION

MANIFEST ID	SHIPPED	TSD ID	TRANS ID	QTY	MATERIAL
CTC0311266	03/15/1990	CTD072138969	CTD072138969	0055 G	WASTE COMBUSTIBLE LIQUID, NOS
CTC0311266	05/15/1990	CTD072138969	CTD072138969	0073 P	HAZARDOUS WASTE, NOS
CTC0311343	05/22/1990	CTD072138969	CTD072138969	0110 G	WASTE COMBUSTIBLE LIQUID, NOS

Target Property: 55 MARSH HILL ROAD
ORANOE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 100 **DIST/DIR:** 0.28 SW **ELEVATION:** 56 **MAP ID:** 20

NAME: CYRO IND
ADDRESS: 23 EXECUTIVE BLVD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/98
ID1: CTD981203581
ID2:
STATUS:
PHONE:

CT MANIFEST INFORMATION

MANIFEST ID	SHIPPED	TSD ID	TRANS ID	QTY	MATERIAL
NYB218086-2	02/23/1990	NYD049178296	NYD049178296	0160 P	WASTE, FLAMMABLE LIQUID
NYB218086-2	02/23/1990	NYD049178296	NYD049178296	0080 P	WASTE CORROSIVE LIQUID, NOS MATERIAL
NYB218086-2	02/23/1990	NYD049178296	NYD049178296	0160 P	WASTE LIQ NOS
NYB218086-2	02/23/1990	NYD049178296	NYD049178296	0080 P	WASTE LIQ MAT L NOS
NYB219270-6	09/20/1990	NYD049178296	NYD049178296	0350 P	WASTE FLAMMABLE LIQUID NOS
NYB219270-6	09/20/1990	NYD049178296	NYD049178296	0160 P	WASTE CORROSIVE LIQUID NOS
NYB221733-7	01/31/1991	NYD049178296	NYD049178296	0170 P	WASTE POISON-B, NOS LIQUID
NYB221733-7	01/31/1991	NYD049178296	NYD049178296	0723 P	WASTE LIQUID, NOS MATERIAL
NYB221733-7	01/31/1991	NYD049178296	NYD049178296	0150 P	WASTE FLAMMABLE LIQUID, NOS
NYB219133-6	06/27/1991	NYD049178296	NYD049178296	0033 P	WASTE ORGANIC PEROXIDE SOLUTION, NOS
NYB219133-6	06/27/1991	NYD049178296	NYD049178296	0400 P	WASTE FLAMMABLE LIQUID, NOS
NYB219133-6	06/27/1991	NYD049178296	NYD049178296	0200 P	WASTE CORROSIVE LIQUID, NOS
NYB378582-1	01/30/1992	NYD049178296	NYD049178296	0250 P	HZRD WST LIQUID NOS, CHLOROFORM METHANOL
NYB378582-1	01/30/1992	NYD049178296	NYD049178296	0150 P	WST LIQ NOS, ACETONE/TETRAHYDROFURAN
NYB378582-1	01/30/1992	NYD049178296	NYD049178296	0150 P	W LIQ NOS MTRL ACETIC/ACID/METHYLENE CHL
NYB400539-6	09/21/1992	NYD049178296	NYD049178296	0250 P	WASTE FLAMMABLE LIQUID
NYB400539-6	09/21/1992	NYD049178296	NYD049178296	0250 P	WASTE FLAMMABLE LIQUID, NOS
NYB400539-6	09/21/1992	NYD049178296	NYD049178296	0100 P	WASTE FLAMMABLE LIQUID, NOS
NYB4003396	09/21/1992	NYD049178296	NYD049178296	0100 P	WASTE FLAMMABLE LIQUID
MAH267856	04/21/1993	MAD980523203	MAD980523203	0001 P	WASTE AEROSOLS
MAH267856	04/21/1993	MAD980523203	MAD980523203	0043 G	WASTE FLAMMABLE LIQUID POISONOUS, NOS
MAH267856	04/21/1993	MAD980523203	MAD980523203	0003 G	WASTE FLAMMABLE LIQUID, NOS
MAH365722	03/17/1994	MAD980523203	MAD039322250	0040 G	WASTE METHYLENE CHLORIDE, LIQUID NOS

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 100 **DIST/DIR:** 0.28 SW **ELEVATION:** 56 **MAP ID:** 20

NAME: CYRO IND
ADDRESS: 23 EXECUTIVE BLVD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/98
ID1: CTD981203581
ID2:
STATUS:
PHONE:

MAH365722	03/17/1994	MAD980523203	MAD039322250	0030 G	W POISONOUS LIQ NOS, METHYLENE CHLORIDE
MAH365722	03/17/1994	MAD980523203	MAD039322250	0007 G	WASTE FLAMMABLE LIQUID NOS, ACETONE
MAH365722	03/17/1994	MAD980523203	MAD039322250	0003 G	WASTE FLAMMABLE LIQUID, NOS
MAH370672	09/09/1994	MAD980523203	MAD039322250	0020 G	WASTE CORROSIVE LIQUID
MAH370672	09/09/1994	MAD980523203	MAD039322250	0014 G	WASTE FLAMMABLE LIQUID
MAH370672	09/09/1994	MAD980523203	MAD039322250	0004 P	WASTE AEROSOLS
CTF0366521	09/09/1994	CTD000604418	MAD039322250	0050 G	WASTE FLAMMABLE LIQUID

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 102 **DIST/DIR:** 0.28 SW **ELEVATION:** 64 **MAP ID:** 21

NAME: L C D LIGHTING INC
ADDRESS: 11 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/98
ID1: CTR000002733
ID2:
STATUS:
PHONE:

CT MANIFEST INFORMATION

MANIFEST ID	SHIPPED	TSD ID	TRANS ID	QTY	MATERIAL
CTF12899591	06/28/2006	CTD021116489	CTD021116489	0110 P	PAINT OR PAINT RELATED MATERIAL

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 103 **DIST/DIR:** 0.28 SW **ELEVATION:** 64 **MAP ID:** 21

NAME: L S NEON INC
ADDRESS: 11 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/98
ID1: CT5000000448
ID2:
STATUS:
PHONE:

CT MANIFEST INFORMATION

MANIFEST ID	SHIPPED	TSD ID	TRANS ID	QTY	MATERIAL
CTF0241179	02/03-1994	CTD072138969	CTD983872748	0110 G	WASTE BUTYL ACETATE LIQUID, NOS
CTF0244180	02/17/1994	CTD072138969	CTD983872748	0165 G	WASTE BUTYL ACETATE LIQUID, NOS
CTF0250019	03/01/1994	CTD072138969	CTD983872748	0110 G	WASTE BUTYL ACETATE, LIQUID, NOS
CTF0250081	03/15/1994	CTD072138969	CTD983872748	0055 G	WASTE BUTYL ACETATE, LIQUID, NOS
CTF0005370	04/06/1994	CTD072138969	CTD983872748	0110 G	WASTE FLAMMABLE LIQUID
MAG127281	04/15/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
MAG128210	04/21/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0173160	05/02/1994	CTD072138969	CTD072138969	0055 G	WASTEBUTYL ACETATES
CTF0263233	05/11/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0263046	05/17/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
MAH398851	05/23/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
MAH407719	06/07/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0356736	06/21/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0356419	06/29/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0356851	07/07/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0356909	07/22/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0353004	08/10/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0357086	08/25/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETETE
CTF0357127	09/01/1994	CTD072138969	CTD072138969	0050 G	WASTE BUTYL ACETATE
CTF0370617	09/14/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0370703	09/26/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0370777	10/04/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0370852	10/12/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 103 **DIST/DIR:** 0.28 SW **ELEVATION:** 64 **MAP ID:** 21

NAME: L S NEON INC
ADDRESS: 11 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/98
ID1: CT5000000448
ID2:
STATUS:
PHONE:

CTF0370890	10/19/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0370995	10/28/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0372237	11/08/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0372406	11/15/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0372321	11/22/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0372369	12/05/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0372514	12/12/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0372383	12/28/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0372653	12/30/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0372736	01/13/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0372799	01/20/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0372643	02/03/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0398339	02/10/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0398389	02/17/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0415672	02/24/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0415445	03/03/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0415480	03/10/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0415555	03/17/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0415577	03/24/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0409410	03/31/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0409438	04/07/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0409446	04/21/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0409618	04/28/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0409747	05/05/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0409772	05/12/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0409810	05/19/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 103 **DIST/DIR:** 0.28 SW **ELEVATION:** 64 **MAP ID:** 21

NAME: L S NEON INC
ADDRESS: 11 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/98
ID1: CT5000000448
ID2:
STATUS:
PHONE:

CTF0409637	03/26/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0409894	06/02/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0409924	06/09/1995	CTD072138969	CTD072138969	0055 G	WASTE XYLENE
CTF0398216	06/13/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0420073	06/23/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0418847	06/30/1995	CTD072138969	CTD072138969	0600 P	WASTE BUTYL ACETATE
CTF0418859	07/14/1995	CTD072138969	CTD072138969	0360 P	WASTE BUTYL ACETATES
CTF0419009	07/21/1995	CTD072138969	CTD072138969	0480 P	WASTE BUTYL ACETATES
CTF0419972	07/28/1995	CTD072138969	CTD072138969	0450 P	WASTE BUTYL ACETATE
CTF0423331	08/11/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0423387	08/18/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0425393	08/25/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0425329	09/01/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0425548	09/08/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0429214	09/15/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0429270	09/22/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0429322	09/29/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0429411	10/13/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0429460	10/20/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0429502	10/27/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0429538	11/03/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0429537	11/10/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0429571	11/12/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0429725	12/01/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0391419	12/08/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0392963	12/22/1995	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
CTF0392996	01/05/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETAE

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 103 **DIST/DIR:** 0.28 SW **ELEVATION:** 64 **MAP ID:** 21

NAME: L S NEON INC
ADDRESS: 11 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/98
ID1: CT3000000448
ID2:
STATUS:
PHONE:

CTF0393077	01/12/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETAES
CTF0392907	01/19/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATEE
CTF0393160	01/26/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0510115	02/02/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0510907	02/09/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETAES
CTF0510950	02/16/1996	CTD072138969	CTD072138969	0055 G	BUTYL ACETATES
CTF0510988	02/23/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0511075	03/01/1996	CTD072138969	CTD072138969	0111 G	WASTE BUTYL ACETATE
CTF0511139	03/08/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0511173	03/15/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0511198	03/22/1996	CTD072138969	CTD072138969	0055 G	WASTE BETYL ACETATES
CTF0534612	04/05/1996	CTD072138969	CTD072138969	0053 G	WASTE BUTYL ACETATE
CTF0535597	04/12/1996	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0535660	04/19/1996	CTD072138969	CTD072138969	0053 G	WASTE BUTY; ACETATES
CTF0535691	04/03/1996	CTD072138969	CTD072138969	0053 G	WASTE BUTYL ACETATE
CTF0534748	05/10/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0534781	05/17/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTY; ACETATE
CTF0534896	05/31/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0534937	06/14/1996	CTD072138969	CTD072138969	0055 G	BUTYL ACETATES
CTF0534967	06/14/1996	CTD072138969	CTD072138969	0055 G	BUTYL ACETATES
CTF0534992	06/21/1996	CTD072138969	CTD072138969	0053 G	WASTER BUTYL ACETATE
CTF0535055	06/28/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0535037	07/12/1996	CTD072138969	CTD072138969	0165 G	WASTE BUTYL ACETATES
CTF0535122	07/19/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0534809	07/23/1996	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 104 **DIST/DIR:** 0.33 SW **ELEVATION:** 50 **MAP ID:** 23

NAME: LIGHT SOURCES INC
ADDRESS: 70 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/98
ID1: CTD983873100
ID2:
STATUS:
PHONE:

CT MANIFEST INFORMATION

MANIFEST ID	SHIPPED	TSD ID	TRANS ID	QTY	MATERIAL
CTC0214499	04/23/1990	CTD072138969	CTD980321280	0330 G	FLAMMABLE LIQUID, NOS
CTC0297237	06/04/1990	CTD072138969	CTD983872748	0275 G	WASTE FLAMMABLE LIQUID, NOS MATERIAL
CTC0303786	06/27/1990	CTD072138969	CTD983872748	0770 G	FALAMMABLE LIQUID, NOS
CTF0031183	08/17/1990	CTD072138969	CTD983872748	0330 G	WASTE FLAMMABLE LIQUID, NOS
CTF0061263	01/15/1991	CTD072138969	CTD983872748	0770 G	WASTE LIQ NOS BUTYL ACETATE
CTF0012910	04/24/1991	CTD072138969	CTD983872748	0550 G	WASTE BUTYL ACETATE, LIQUID, NOS
CTF0012910	04/24/1991	CTD072138969	CTD983872748	0550 G	WASTE LIQ NOS BUTYL ACETATE
CTF0012970	06/13/1991	CTD072138969	CTD983872748	0265 G	WASTE BUTYL ACET
CTF0012982	07/03/1991	CTD072138969	CTD983872748	0720 G	WASTE BUTYL ACETATE, LIQUID, NOS
CTF0012982	07/03/1991	CTD072138969	CTD983872748	0220 G	WASTE LIQUID NOS, BUTYL ACETATE
CTF0074992	08/29/1991	CTD072138969	CTD983872748	0220 G	WASTE LIQUID NOS, BUTYL ACETATE
CTF0074980	10/08/1991	CTD072138969	CTD983872748	0220 G	WASTE LIQUID NOS, BUTYL ACETATE
CTF0074936	11/13/1991	CTD072138969	CTD983872748	0165 G	WASTE LIQUID NOS, BUTYL ACETATE
CTF0148114	01/22/1992	CTD072138969	CTD983872748	0275 G	WASTE LIQUID NOS, BUTYL ACETATE
CTF0143176	02/27/1992	CTD021116179	CTD983872748	0550 G	WASTE FLAMMABLE LIQUID, NOS
CTF0148188	03/17/1992	CTD072138969	CTD983872748	0275 G	WASTE LIQUID NOS, BUTYL ACETATE
CTF0129348	05/13/1992	CTD072138969	CTD983872748	0275 G	WASTE FLAMMABLE LIQUID
CTF0129214	06/18/1992	CTD072138969	CTD983872748	0330 G	WASTE FLAMMABLE LIQUID, NOS
CTF0124510	07/21/1992	CTD072138969	CTD983872748	0330 G	WASTE FLAMMABLE LIQUID, NOS
CTF0124510	07/21/1992	CTD072138969	CTD983872748	0330 G	WASTE FLAMMABLE LIQUID
CTF0124534	08/19/1992	CTD072138969	CTD983872748	0330 G	WASTE LIQ NOS BUTYL ACETATE
CTF0124579	09/21/1992	CTD072138969	CTD983872748	0385 G	WASTE FLAMMABLE LIQUID, NOS
CTF0124579	09/21/1992	CTD072138969	CTD983872748	0385 G	WASTE FLAMMABLE LIQUID

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 104 **DIST/DIR:** 0.33 SW **ELEVATION:** 50 **MAP ID:** 23

NAME: LIGHT SOURCES INC
ADDRESS: 70 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/98
ID1: CTD983873100
ID2:
STATUS:
PHONE:

CTF0142443	11/11/1992	CTD980667927	ILD051060408	0066 P	WASTE COMBUSTIBLE LIQUID, NOS
CTF0121291	11/11/1992	CTD072138969	CTD983872748	0385 G	W FLAMMABLE LIQUID NOS, BUTYL ACETATE
CTF0131258	12/16/1992	CTD072138969	CTD983872748	0495 G	WASTE FLAMMABLE LIQUID, NOS
CTF0139704	01/08/1993	CTD980667927	ILD051060408	0019 G	WASTE COMBUSTIBLE LIQUID, NOS
CTF0123412	01/29/1993	CTD072138969	CTD983872748	0495 G	WASTE FLAMMABLE LIQUID, NOS
CTF0139073	02/26/1993	CTD980667927	ILD051060408	0016 G	WASTE COMBUSTIBLE LIQUID
CTF0226105	03/03/1993	CTD072138969	CTD983872748	0550 G	WASTE FLAMMABLE LIQUID
CTF0226140	04/02/1993	CTD072138969	CTD983872748	0440 G	WASTE BUTYL ACETATE LIQUID, NOS
CTF0012910	04/24/1993	CTD072138969	CTD983872748	0550 G	WASTE BUTYL ACETATE, LIQUID, NOS
CTF0012910	04/24/1993	CTD072138969	CTD983872748	0550 G	WASTE LIQ NOS BUTYL ACETATE
CTF0232964	04/27/1993	CTD980667927	ILD051060408	0016 G	WASTE PETROLEUM NAPHTHA LIQUID, NOS
CTF0211134	04/30/1993	CTD072138969	CTD983872748	0330 G	WASTE FLAMMABLE LIQUID, NOS
CTF0211094	06/01/1993	CTD072138969	CTD983872748	0440 G	WASTE BUTYL ACETATE, FLAMMABLE LIQUID
CTF0211995	06/22/1993	CTD980667927	ILD981908202	0016 G	WASTE COMBUSTIBLE LIQUID, NOS
CTF0012982	07/03/1993	CTD072138969	CTD983872748	0220 G	WASTE BUTYL ACETATE, LIQUID, NOS
CTF0012982	07/03/1993	CTD072138969	CTD983872748	0220 G	WASTE LIQUID NOS, BUTYL ACETATE
CTF0272342	07/08/1993	CTD072138969	CTD983872748	0440 G	WASTE FLAMMABLE LIQUID
CTF0272719	07/15/1993	CTD072138969	CTD983872748	0551 G	WASTE FLAMMABLE LIQUID
CTF0124510	07/21/1993	CTD072138969	CTD983872748	0330 G	WASTE FLAMMABLE LIQUID, NOS
CTF0124510	07/21/1993	CTD072138969	CTD983872748	0330 G	WASTE FLAMMABLE LIQUID
CTF0124579	07/21/1993	CTD072138969	CTD983872748	0385 G	WASTE FLAMMABLE LIQUID, NOS
CTF0124579	07/21/1993	CTD072138969	CTD983872748	0385 G	WASTE FLAMMABLE LIQUID
CTF0259272	08/18/1993	CTD980667927	ILD981908202	0016 G	WASTE PETROLEUM NAPHTHA LIQUID, NOS
CTF0266606	08/27/1993	CTD072138969	CTD983872748	0440 G	WASTE BUTYL ACETATE, FLAMMABLE LIQUID
MAF352224	09/10/1993	CTD072138969	CTD983872748	0165 G	WASTE FLAMMABLE LIQUID
CTF0312242	09/27/1993	CTD072138969	CTD983872748	0165 G	W BUTYL ACETATE, FLAMMABLE LIQUID, NOS

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 104 **DIST/DIR:** 0.33 SW **ELEVATION:** 50 **MAP ID:** 23

NAME: LIGHT SOURCES INC
ADDRESS: 70 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/98
ID1: CTD983873100
ID2:
STATUS:
PHONE:

CTF0312908	10/06/1993	CTD072138969	CTD983872748	0165 G	WASTE FLAMMABLE LIQUID, NOS
CTF0301138	10/13/1993	CTD980667927	ILD984908202	0016 G	WASTE COMBUSTIBLE LIQUID
CTF0312927	10/20/1993	CTD072138969	CTD983872748	0110 G	WASTE FLAMMABLE LIQUID, NOS
CTF0312838	11/01/1993	CTD072138969	CTD983872748	0165 G	WASTE FLAMMABLE LIQUIDS
CTF0257638	11/23/1993	CTD072138969	CTD983872748	0110 G	WASTE FLAMMABLE LIQUID
CTF0061329	11/26/1993	CTD072138969	CTD983872748	0495 G	FLAMMABLE LIQUID
CTF0257335	12/01/1993	CTD072138969	CTD983872748	0165 G	WASTE FLAMMABLE LIQUID
CTF0300462	12/09/1993	CTD980667927	ILD984908202	0016 G	WASTE COMBUSTIBLE LIQUID
CTF0233010	12/16/1993	CTD072138969	CTD983872748	0110 G	WASTE FLAMMABLE LIQUIDS
CTF0244121	01/06/1994	CTD072138969	CTD983872748	0220 G	WASTE FLAMMABLE LIQUID
CTF0244103	01/01/1994	CTD072138969	CTD983872748	0220 G	WASTE FLAMMABLE LIQUID
CTF0296393	02/01/1994	CTD980667927	ILD981908202	0033 G	WASTE COMBUSTIBLE LIQUID, NOS
CTF0244178	02/03/1994	CTD072138969	CTD983872748	0165 G	WASTE BUTYL ACETATE LIQUID, NOS
CTF0244189	02/17/1994	CTD072138969	CTD983872748	0220 G	WASTE BUTYL ACETATE LIQUID, NOS
CTF0208818	03/01/1994	CTD072138969	CTD983872748	0165 G	WASTE BUTYL ACETATE, LIQUID, NOS
CTF0208076	03/23/1994	CTD072138969	CTD983872748	0110 G	WASTE BUTYL ACETATE, LIQUID NOS
CTF0294328	04/04/1994	CTD980667927	ILD981908202	0033 G	WASTE COMBUSTIBLE LIQUID, NOS
CTF0005369	04/06/1994	CTD072138969	CTD983872748	0165 G	WASTE FLAMMABLE LIQUID
MAG128282	04/13/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
MAG128289	04/21/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0135180	03/02/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0263256	05/11/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
CTF0262350	05/17/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
MAH064710	05/24/1994	CTD980667927	ILD981908202	0033 G	WASTE COMBUSTIBLE LIQUID, NOS
MAH098775	05/25/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
MAH403788	06/07/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0336151	06/21/1994	CTD072138969	CTD072138969	0033 G	WASTE BUTYL ACETATES

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 104 **DIST/DIR:** 0.33 SW **ELEVATION:** 50 **MAP ID:** 23

NAME: LIGHT SOURCES INC
ADDRESS: 70 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/88
ID1: CTD983873100
ID2:
STATUS:
PHONE:

CTF0356818	06/28/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0356830	07/07/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0356878	07/14/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0326202	07/20/1994	CTD980667927	ILD981908202	0016 G	WASTE COMBUSTIBLE LIQUID, NOS
CTF0356908	07/22/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
CTF0357005	08/10/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
CTF0357085	08/25/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
CTF0357104	09/01/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0357136	09/09/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0335406	09/14/1994	CTD980667927	ILD981908202	0016 G	WASTE COMBUSTIBLE LIQUID, NOS
CTF0370616	09/14/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0370642	09/19/1994	CTD072138969	CTD072138969	0110 G	WASTE FLAMMABLE LIQUID, NOS
CTF0370702	09/26/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0370780	10/04/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
CTF0370851	10/12/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0370891	10/19/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0370994	10/28/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
MAH099999	11/07/1994	CTD980667927	ILD981908202	0016 G	WASTE COMBUSTIBLE LIQUID
CTF0372236	11/08/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
CTF0372305	11/15/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0372322	11/22/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0372368	12/05/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0372315	12/13/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0372514	12/20/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0372632	12/30/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
MAH111112	01/05/1995	CTD980667927	ILD981908202	0016 G	WASTE COMBUSTIBLE LIQUID, NOS

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 104 **DIST/DIR:** 0.33 SW **ELEVATION:** 50 **MAP ID:** 23

NAME: LIGHT SOURCES INC
ADDRESS: 70 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/88
ID1: CTD983873100
ID2:
STATUS:
PHONE:

CTF0327755	01/13/1995	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0398215	01/23/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0398277	02/03/1995	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0398356	02/10/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0398318	02/17/1995	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0413673	02/24/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0413849	03/03/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0413881	03/10/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0413954	03/17/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0413976	03/24/1995	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
CTF0409411	03/31/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0409439	04/07/1995	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0409548	04/21/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0409548	04/21/1995	CTD072138969	CTD072138969	0055 G	WASTE FLAMMABLE LIQUID NOS
CTF0409617	04/28/1995	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0467203	05/02/1995	CTD980667927	ILD981908202	0016 G	WASTE COMBUSTIBLE LIQUID NOS
CTF0409746	05/05/1995	CTD072138969	CTD072138969	0055 G	WASTE FLAMMABLE LIQUID NOS
CTF0409778	05/12/1995	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
CTF0409809	05/19/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0409491	05/26/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0409901	06/02/1995	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
CTF0409925	06/09/1995	CTD072138969	CTD072138969	0055 G	WASTE XYLENE
CTF0370640	06/16/1995	CTD072138969	CTD972138969	0055 G	WASTE FLAMMABLE LIQUID NOS
CTF0428078	06/23/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0430792	06/27/1995	CTD980667927	ILD981908202	0016 G	WASTE COMBUSTIBLE LIQUID NOS
CTF0410646	06/30/1995	CTD072138969	CTD072138969	0300 P	WASTE BUCYL ACETATES
CTF0410816	07/07/1995	CTD072138969	CTD072138969	0400 P	WASTE BUTYL ACETATES

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Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 104 **DIST/DIR:** 0.33 SW **ELEVATION:** 50 **MAP ID:** 23

NAME: LIGHT SOURCES INC
ADDRESS: 70 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/88
ID1: CTD983873100
ID2:
STATUS:
PHONE:

CTF0410838	07/14/1995	CTD072138969	CTD072138969	0300 P	WASTE BUTYL ACETATES
CTF0410908	07/28/1995	CTD072138969	CTD072138969	0300 P	WASTE BUTYL ACETATE
CTF0429161	08/04/1995	CTD072138969	CTD072138969	0165 G	WASTE BUTYL ACETATES
CTF0420198	08/11/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0423588	08/18/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0423436	08/23/1995	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0423528	09/01/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0423549	09/08/1995	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
CTF0429215	09/18/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0429271	09/22/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0429323	10/05/1995	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
CTF0431137	10/12/1995	CTD980667927	ILD981908202	0008 G	WASTE COMBUSTIBLE LIQUID NOS
CTF0429413	10/13/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0429441	10/20/1995	CTD072138969	CTD072138969	0155 G	WASTE BUTYL ACETATES
CTF0429459	10/27/1995	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0429542	11/03/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0429579	11/10/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0429729	12/01/1995	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
CTF0392995	01/12/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATEE
CTF0392908	01/19/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0472531	01/24/1996	CTD980667927	ILD981908202	0014 G	FLAMMABLE LIQUID N.O.S.
CTF0310114	02/02/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0310946	02/16/1996	CTD072138969	CTD072138969	0055 G	BUTYL ACETATES
CTF0310989	02/23/1996	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0311072	03/13/1996	CTD072138969	CTD072138969	0165 G	BUTYL ACETATE
CTF0311199	03/29/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE

- More Details Exist For This Site; Max Page Limit Reached -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 98 **DIST/DIR:** 0.36 SW **ELEVATION:** 42 **MAP ID:** 24

NAME: BARNES IND INC
ADDRESS: 134 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/88
ID1: CTD983983469
ID2:
STATUS:
PHONE:

CT MANIFEST INFORMATION

MANIFEST ID	SHIPPED	TSD ID	TRANS ID	QTY	MATERIAL
CTF0117268	12/04/1992	CTD980667927	ILD051060408	0344 P	WASTE COMBUSTIBLE LIQUID
CTF0218174	01/14/1993	CTD980667927	ILD051060408	0001 G	WASTE COMBUSTIBLE LIQUID
CTF0319076	02/26/1993	CTD980667927	ILD051060408	0073 G	WASTE COMBUSTIBLE LIQUID
CTF0217535	04/12/1993	CTD980667927	ILD051060408	0069 G	WASTE COMBUSTIBLE LIQUID
CTF0211302	05/26/1993	CTD980667927	ILD051060408	0063 G	WASTE COMBUSTIBLE LIQUID, NOS
CTF0221101	01/07/1994	CTD081156009	ILD981908202	0139 P	WASTE FLAMMABLE LIQUIDS NOS, OIL
CTF0215404	04/25/1994	CTD980667927	ILD981908202	0016 P	WASTE COMBUSTIBLE LIQUID, NOS
MAH066308	06/08/1994	CTD980667927	ILD981908202	0072 G	WASTE COMBUSTIBLE LIQUID
CTF0328482	09/01/1994	CTD980667927	ILD981908202	0068 G	WASTE COMBUSTIBLE LIQUID, NOS
MAH099961	11/07/1994	CTD980667927	ILD981908202	0049 G	WASTE COMBUSTIBLE LIQUID
MAH109461	12/13/1994	CTD980667927	ILD981908202	0300 P	WASTE FLAMMABLE LIQUID, NOS
CTF0472799	01/02/1995	CTD980667927	ILD981908202	0012 G	WASTE COMBUSTIBLE LIQUID NOS
CTF0472799	01/02/1995	CTD980667927	ILD981908202	0012 G	WASTE COMBUSTIBLE LIQUID, N.O.S.
MAH109860	01/31/1995	CTD980667927	ILD981908202	0306 P	WASTE FLAMMABLE LIQUID, NOS
MAH117952	01/31/1995	CTD980667927	ILD981908202	0048 G	WASTE COMBUSTIBLE LIQUID
CTF0331873	03/03/1995	CTD980667927	ILD981908202	0306 P	WASTE FLAMMABLE LIQUID, NOS
CTF0464989	04/14/1995	CTD980667927	ILD981908202	0030 G	WASTE COMBUSTIBLE LIQUID NOS
CTF0478317	04/28/1995	CTD980667927	ILD981908202	0034 G	WASTE COMBUSTIBLE LIQUID NOS
CTF0472743	04/05/1995	CTD980667927	ILD981908202	0048 G	WASTE COMBUSTIBLE LIQUID NOS
CTF0431139	10/12/1995	CTD980667927	ILD981908202	0048 G	WASTE COMBUSTIBLE LIQUID NOS
CTF0457533	11/21/1995	CTD980667927	ILD981908202	0048 G	WASTE COMBUSTIBLE LIQUID NOS
CTF0472799	01/02/1996	CTD980667927	ILD981908202	0012 G	WASTE COMBUSTIBLE LIQUID NOS
CTF0472799	01/02/1996	CTD980667927	ILD981908202	0012 G	WASTE COMBUSTIBLE LIQUID, N.O.S.

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Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 98 **DIST/DIR:** 0.36 SW **ELEVATION:** 42 **MAP ID:** 24

NAME: BARNES IND INC
ADDRESS: 134 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/98
ID1: CTD983903469
ID2:
STATUS:
PHONE:

CTF0435443	02/13/1996	CTD980667927	ILD984908202	0038 G	RQ WASTE COMBUSTIBLE LIQUID,N.O.S.
CTF0580171	03/13/1996	CTD980667927	ILD984908202	0064 G	HAZARDOUS WASTE, LIQUID, N.O.S. 9
CTF0329756	03/26/1996	CTD980667927	ILD984908202	0038 G	RQ WASTE COMBUSTIBLE LIQUID,N.O.S.
CTF0308905	04/10/1996	CTD980667927	ILD984908202	0064 G	HAZARDOUS WASTE, LIQUID, N.O.S. 9
CTF0328724	05/08/1996	CTD980667927	ILD984908202	0064 G	HAZARDOUS WASTE, LIQUID, N.O.S. 9
CTF0328224	05/08/1996	CTD980667927	ILD984908202	0038 G	RQ WASTE COMBUSTIBLE LIQUID,N.O.S.
CTF0523450	06/03/1996	CTD980667927	ILD984908202	0064 G	HAZARDOUS WASTE, LIQUID, N.O.S. 9
CTF0319138	06/17/1996	CTD980667927	ILD984908202	0033 G	RQ WASTE COMBUSTIBLE LIQUID,N.O.S.
CTF0522313	07/01/1996	CTD980667927	ILD984908202	0064 G	HAZARDOUS WASTE, LIQUID, N.O.S. 9
CTF0317421	07/31/1996	CTD980667927	ILD984908202	0064 G	HAZARDOUS WASTE, LIQUID, N.O.S. 9
CTF0517421	07/31/1996	CTD980667927	ILD984908202	0047 G	RQ WASTE COMBUSTIBLE LIQUID,N.O.S.
CTF0309933	08/26/1996	CTD980667927	ILD984908202	0064 G	HAZARDOUS WASTE, LIQUID, N.O.S. 9
CTF0312925	09/11/1996	CTD980667927	ILD984908202	0064 G	RQ WASTE COMBUSTIBLE LIQUID,N.O.S.
CTF0495296	09/27/1996	CTD980667927	ILD984908202	0064 G	HAZARDOUS WASTE, LIQUID, N.O.S. 9
CTF0496849	10/23/1996	CTD980667927	ILD984908202	0064 G	RQ WASTE COMBUSTIBLE LIQUID,N.O.S.
CTF0626318	12/04/1996	CTD980667927	ILD984908202	0038 G	RQ WASTE COMBUSTIBLE LIQUID,N.O.S.
CTF0305987	01/22/1997	CTD980667927	ILD984908202	0063 G	RQ WASTE COMBUSTIBLE LIQUID,N.O.S.
CTF0616026	02/28/1997	CTD980667927	ILD984908202	0038 G	RQ WASTE COMBUSTIBLE LIQUID,N.O.S.
CTF0617291	04/07/1997	CTD980667927	ILD984908202	0055 G	RQ WASTE COMBUSTIBLE LIQUID,N.O.S.
MAK195870	05/28/1997	CTD980667927	ILD984908202	0060 G	RQ WASTE COMBUSTIBLE LIQUID,N.O.S.
MAK209237	06/08/1997	CTD980667927	ILD984908202	0038 G	RQ WASTE COMBUSTIBLE LIQUID,N.O.S.
CTF0633405	08/14/1997	CTD980667927	ILD984908202	0050 G	RQ WASTE COMBUSTIBLE LIQUID,N.O.S.
CTF0633791	09/22/1997	CTD980667927	ILD984908202	0054 G	RQ WASTE COMBUSTIBLE LIQUID,N.O.S.
CTF0640597	10/21/1997	CTD980667927	ILD984908202	0017 G	HAZARDOUS WASTE LIQUID NOS
CTF0643682	11/03/1997	CTD980667927	ILD984908202	0064 G	RQ WASTE COMBUSTIBLE LIQUID,N.O.S.
CTF0641498	12/19/1997	CTD980667927	ILD984908202	0055 G	RQ WASTE COMBUSTIBLE LIQUID,N.O.S.

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Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 98 **DIST/DIR:** 0.36 SW **ELEVATION:** 42 **MAP ID:** 24

NAME: BARNES IND INC
ADDRESS: 134 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/98
ID1: CTD983903469
ID2:
STATUS:
PHONE:

CTF0643852	12/19/1997	CTD980667927	ILD984908202	0029 G	RQ WASTE COMBUSTIBLE LIQUID,N.O.S.
MAM046123	08/31/1999	MAD098787354	ILD984908202	0017 G	HAZARDOUS WASTE, LIQUID, N.O.S.

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 106 **DIST/DIR:** 0.38 SW **ELEVATION:** 43 **MAP ID:** 25

NAME: ORANGE RESEARCH INC BARNES
ADDRESS: 140 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/98
ID1: CTD042783153
ID2:
STATUS:
PHONE:

CT MANIFEST INFORMATION

MANIFEST ID	SHIPPED	TSD ID	TRANS ID	QTY	MATERIAL
CTF0098167	02/01/1991	CTD980667927	ILD051060408	0172 P	WASTE PETROLEUM NAPHTHA LIQUID
CTF0074318	02/14/1991	CTD980667927	ILD051060408	0172 P	WASTE PETROLEUM NAPHTHA LIQUID
CTF0046373	03/11/1991	CTD980667927	ILD051060408	0172 P	WASTE PETRO NAPHTHA LIQ
CTF0096065	04/03/1991	CTD980667927	ILD051060408	0172 P	WASTE PETROLEUM NAPHTHA LIQUID
CTF0096184	04/24/1991	CTD980667927	ILD051060408	0172 P	WASTE PETROLEUM NAPHTHA
CTF0085895	04/30/1991	CTD980667927	ILD051060408	0172 P	WASTE PETROLEUM NAPHTHA
CTF0019722	05/16/1991	CTD980667927	ILD051060408	0172 P	WASTE PETRO NAPHTHA LIQ
CTF0049229	05/30/1991	CTD980667927	ILD051060408	0217 P	WASTE PETRO NAPHTHA LIQ
CTF0049336	06/12/1991	CTD980667927	ILD051060408	0172 P	WASTE PETRO NAPHTHA LIQ
CTF0068956	06/26/1991	CTD980667927	ILD051060408	0172 P	WASTE PETROLEUM NAPHTHA LIQUID
MAF253317	07/03/1991	CTD980667927	ILD051060408	0172 P	WASTE PETROLEUM NAPHTHA LIQUID
MAF256039	07/24/1991	CTD980667927	ILD051060408	0172 P	WASTE PETROLEUM NAPHTHA LIQUID
MAF261036	08/08/1991	CTD980667927	ILD051060408	0172 P	WASTE PETRO NAPHTHA LIQ
MAF273720	08/21/1991	CTD980667927	ILD051060408	0172 P	WASTE PETROLEUM NAPHTHA
MAF612964	09/11/1991	CTD980667927	ILD051060408	0251 P	WASTE PETROLEUM NAPHTHA
MAF269037	10/17/1991	CTD980667927	ILD051060408	0158 P	WASTE PETROLEUM NAPHTHA
CTF0170926	11/06/1991	CTD980667927	ILD051060408	0303 P	WASTE PETROLEUM NAPHTHA
CTF0046845	12/11/1991	CTD980667927	ILD051060408	0251 P	WASTE PETROLEUM NAPHTHA LIQUID
CTF0154083	01/08/1992	CTD980667927	ILD051060408	0344 P	WASTE PETROLEUM NAPHTHA LIQUID
CTF0167838	02/06/1992	CTD980667927	ILD051060408	0251 P	WASTE PETROLEUM NAPHTHA LIQUID
CTF0173220	03/05/1992	CTD980667927	ILD051060408	0251 P	WASTE PETROLEUM NAPHTHA LIQUID
CTF0191933	04/01/1992	CTD980667927	ILD051060408	0711 P	WASTE PETROLEUM NAPHTHA
CTF0118958	05/14/1992	CTD980667927	ILD051060408	0344 P	WASTE PETROLEUM NAPHTHA

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 106 **DIST/DIR:** 0.38 SW **ELEVATION:** 43 **MAP ID:** 25

NAME: ORANGE RESEARCH INC BARNES
ADDRESS: 140 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/98
ID1: CTD042783153
ID2:
STATUS:
PHONE:

CTF0143247	05/20/1992	CTD980667927	ILD051060408	0045 P	WASTE COMBUSTIBLE LIQUID
CTF0190887	10/16/1992	CTD980667927	ILD051060408	0045 P	WASTE COMBUSTIBLE LIQUID
CTF0917267	12/04/1992	CTD980667927	ILD051060408	0045 P	WASTE COMBUSTIBLE LIQUID, NOS
CTF0316472	02/02/1993	CTD980667927	ILD051060408	0009 G	WASTE LIQUID NOS. MINERAL SPIRITS
CTF0211301	02/26/1993	CTD980667927	ILD051060408	0009 G	WASTE COMBUSTIBLE LIQUID, NOS
CTF0311337	03/24/1993	CTD980667927	ILD051060408	0009 G	WASTE PETROLEUM NAPHTHA LIQUID, NOS
CTF0727963	07/21/1993	CTD980667927	ILD984908202	0068 G	WASTE PETROLEUM NAPHTHA LIQUID, NOS
CTF0541739	04/24/1996	CTD072181969	CTD011844050	0053 G	FLAMMABLE LIQUID N.O.S.
CTF0625941	01/03/1997	CTD980667927	ILD984908202	0071 P	RQ WASTE FLAMMABLE LIQUIDS, N.O.S.
CTF0512362	03/19/1998	CTD980667927	ILD984908202	0074 P	RQ WASTE FLAMMABLE LIQUIDS, N.O.S.
CTF0706593	04/15/1998	CTD980667927	ILD984908202	0012 G	WASTE COMBUSTIBLE LIQUID, N.O.S.
MAK624348	10/13/1998	MAD096287354	ILD984908202	0012 G	WASTE COMBUSTIBLE LIQUID, N.O.S.
MAK629476	01/26/1999	MAD096287354	ILD984908202	0012 G	WASTE COMBUSTIBLE LIQUID, N.O.S.
NJA027231	04/14/1999	NJD002182897	ILD984908202	0034 P	RQ WASTE FLAMMABLE LIQUIDS, N.O.S.
MAK699050	05/13/1999	MAD096287354	ILD984908202	0010 G	WASTE COMBUSTIBLE LIQUID, N.O.S.
MAM046129	08/31/1999	MAD096287354	ILD984908202	0011 G	WASTE COMBUSTIBLE LIQUID, N.O.S.
MAM037130	12/16/1999	MAD096287354	ILD984908202	0011 G	WASTE COMBUSTIBLE LIQUID, N.O.S.
MAM032400	04/10/2000	MAD096287354	ILD984908202	0011 G	WASTE COMBUSTIBLE LIQUID, N.O.S.
MAM594533	07/31/2000	MAD096287354	SCR000075150	0011 G	WASTE COMBUSTIBLE LIQUID, N.O.S.
MAM611122	11/21/2000	MAD096287354	SCR000075150	0013 G	WASTE COMBUSTIBLE LIQUID, N.O.S.
MAM919193	03/23/2001	MAD096287354	SCR000075150	0012 G	WASTE COMBUSTIBLE LIQUID, N.O.S.
NJA009422	05/08/2001	NJD002182897	SCR000075150	0284 P	RQ WASTE FLAMMABLE LIQUIDS, N.O.S.
MAM561947	07/03/2001	MAD096287354	SCR000075150	0016 G	WASTE COMBUSTIBLE LIQUID, N.O.S.
MAQ047833	01/30/2002	MAD096287354	SCR000075150	0012 G	WASTE COMBUSTIBLE LIQUID, N.O.S.
MAQ729959	03/14/2002	MAD096287354	SCR000075150	0012 G	WASTE COMBUSTIBLE LIQUID, N.O.S.
CTF1021628	03/13/2003	KYD053341101	TXR000050930	0284 P	RQ WASTE FLAMMABLE LIQUIDS, N.O.S.

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Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 106 **DIST/DIR:** 0.38 SW **ELEVATION:** 43 **MAP ID:** 23

NAME: ORANGE RESEARCH INC BARNES
ADDRESS: 140 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/88
ID1: CTD042205153
ID2:
STATUS:
PHONE:

CTF1076914	04/12/2004	KYD053341108	FXR000030930	0110 P	RQ WASTE FLAMMABLE LIQUIDS, N.O.S.	

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 97 **DIST/DIR:** 0.43 NE **ELEVATION:** 60 **MAP ID:** 26

NAME: AVIATION COMPONENTS SUPPORT CO
ADDRESS: 11 FRONTAGE RD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/88
ID1: CTD093607711
ID2:
STATUS:
PHONE:

CT MANIFEST INFORMATION

MANIFEST ID	SHIPPED	TSD ID	TRANS ID	QTY	MATERIAL
CTC0284125	02/22/1990	CTD980667927	ILD051060408	0086 P	WASTE PETROLEUM NAPHTHA LIQ
MAC847843	04/26/1990	CTD980667927	ILD051060408	0086 P	WASTE PETRO NAPHTHA LIQ
MAF075489	06/14/1990	CTD980667927	ILD051060408	0172 P	WASTE PETROLEUM NAPHTHA LIQUID
CTF0027908	08/08/1990	CTD980667927	ILD051060408	0086 P	WASTE PETROLEUM NAPHTHA
CTF0093823	10/01/1990	CTD980667927	ILD051060408	0086 P	WASTE PETRO NAPHTHA LIQ
NJA0537236	10/02/1990	NJD002383236	CTD002593887	2000 G	RINSE WATER CONTAINING HAZ WASTE
CTF0000433	11/29/1990	CTD980667927	ILD051060408	0086 P	WASTE PETRO NAPHTHA LIQ
CTF0027103	01/24/1991	CTD980667927	ILD051060408	0086 P	WASTE PETRO NAPHTHA LIQ
CTF0046109	03/19/1991	CTD980667927	ILD051060408	0086 P	WASTE PETROLEUM NAPHTHA LIQUID
CTF0019738	05/15/1991	CTD980667927	ILD051060408	0086 P	WASTE PETRO NAPHTHA LIQ
NJA1148382	05/31/1991	NJD002182897	ILD051060408	1207 P	WASTE III TRIMEDIL/TO
MAF233308	07/09/1991	CTD980667927	ILD051060408	0086 P	WASTE PETROLEUM NAPHTHA LIQUID
MAC973670	08/13/1991	CTD980667927	ILD051060408	0718 P	WST PETROLEUM DISTILLATES NOS, ALIPHATIC
MAF264451	09/04/1991	CTD980667927	ILD051060408	0086 P	WASTE PETRO NAPHTHA LIQ
MAF248326	10/24/1991	CTD001156099	ILD051060408	1145 P	WASTE, 1,1,1, TRICHLOROETHANE
MAF619892	11/01/1991	CTD980667927	ILD051060408	0086 P	WASTE PETROLEUM NAPHTHA LIQUID
CTF0098638	11/26/1991	CTD002593887	CTD002593887	2000 G	HZRDS WASTE LIQUID NOS, CONTAIN CADMIUM
CTF0098618	12/06/1991	CTD002593887	CTD002593887	0130 G	W PETROLEUM OIL NOS, CHLORONATED SOLVENT
CTF0003472	12/19/1991	CTD980667927	ILD051060408	0086 P	WASTE PETROLEUM NAPHTHA
CTF0135427	02/10/1992	CTD980667927	ILD051060408	0086 P	WASTE PETROLEUM NAPHTHA
CTF0136518	03/13/1992	CTD002593887	CTD002593887	2000 G	HZRDS WASTE LIQUID NOS, CADMIUM/CHROMIUM
CTF0161990	04/01/1992	CTD980667927	ILD051060408	0086 P	WASTE PETROLEUM NAPHTHA
CTF0197262	04/15/1992	CTD980667927	ILD051060408	0123 P	WASTE PAINT RELATED MATERIAL, LIQUID

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 97 **DIST/DIR:** 0.43 NE **ELEVATION:** 60 **MAP ID:** 26

NAME: AVIATION COMPONENTS SUPPORT CO
ADDRESS: 11 FRONTAGE RD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/88
ID1: CTD093607711
ID2:
STATUS:
PHONE:

CTF0190712	05/01/1992	CTD001156099	ILD051060408	0631 P	WASTE TRICHLOROETHANE, 1,1,1
CTF0190743	06/10/1992	CTD980667927	ILD051060408	0027 P	WASTE PAINT RELATED MATERIAL
CTF0136320	07/21/1992	CTD980667927	ILD051060408	0086 P	WASTE PETROLEUM NAPHTHA
CTF0190739	08/04/1992	CTD980667927	ILD051060408	0027 P	WASTE PAINT RELATED MATERIAL, LIQUID
CTF0177214	08/14/1992	CTD000604188	CTD002593887	1900 G	HAZARDOUS WASTE LIQUID, NOS
CTF0139463	09/15/1992	CTD980667927	ILD051060408	0086 P	WASTE LIQUID NOS, MINERAL SPIRITS
CTF0138699	10/26/1992	CTD980667927	ILD051060408	0086 P	WASTE COMBUSTIBLE LIQUID
CTF0183596	11/16/1992	CTD002593887	CTD002593887	0700 G	HAZARDOUS WASTE LIQUID, NOS
CTF0196436	11/24/1992	CTD980667927	ILD051060408	0123 P	WASTE PAINT RELATED MATERIAL, LIQUID
CTF0117265	12/08/1992	CTD980667927	ILD051060408	0086 P	WASTE COMBUSTIBLE LIQUID, NOS
CTF0211169	01/20/1993	CTD980667927	ILD051060408	0017 G	WASTE COMBUSTIBLE LIQUID, NOS
CTF0213936	01/22/1993	CTD980667927	ILD051060408	0027 P	WASTE PAINT RELATED MATERIAL
CTF0171841	01/25/1993	CTD001156099	ILD051060408	1141 P	WASTE, 1,1,1, TRICHLOROETHANE
CTF0215965	03/03/1993	CTD980667927	ILD051060408	0015 G	WASTE COMBUSTIBLE LIQUID
CTF0101426	03/15/1993	CTD980667927	ILD051060408	0027 P	WASTE PAINT RELATED MATERIAL
CTF0217531	04/01/1993	CTD980667927	ILD051060408	0015 G	WASTE COMBUSTIBLE LIQUID
CTF0291361	04/27/1993	CTD021116889	CTD002593887	1260 G	HAZARDOUS WASTE LIQUID
CTF0101503	05/11/1993	CTD980667927	ILD051060408	0123 P	WASTE PAINT RELATED MATERIAL
CTF0285495	05/12/1993	CTD002593887	CTD002593887	0200 G	WASTE PETROLEUM OIL
CTF0285695	06/16/1993	CTD002593887	CTD002593887	0250 G	WASTE PETROLEUM OIL, LIQUID, NOS
CTF0234590	07/20/1993	CTD021116889	CTD002593887	0500 G	HAZARDOUS WASTE LIQUID, NOS
CTF0231194	08/03/1993	CTD980667927	ILD914908202	0054 P	WASTE PAINT RELATED MATERIAL
CTF0231273	08/06/1993	CTD980667927	ILD914908202	0013 G	WASTE COMBUSTIBLE LIQUID, NOS
CTF0255163	08/25/1993	CTD002593887	CTD002593887	0900 G	HW LIQUID NOS, CONTAINS CHROME and CADMIUM
CTF0312749	09/22/1993	CTD980667927	ILD914908202	0015 G	WASTE PETROLEUM NAPHTHA LIQUID, NOS
CTF0268714	09/30/1993	CTD002593887	CTD002593887	0200 G	WASTE PETROLEUM OIL

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 97 **DIST/DIR:** 0.43 NE **ELEVATION:** 60 **MAP ID:** 26

NAME: AVIATION COMPONENTS SUPPORT CO
ADDRESS: 11 FRONTAGE RD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/88
ID1: CTD093607711
ID2:
STATUS:
PHONE:

CTF0302704	11/04/1993	CTD980667927	ILD914908202	0015 G	WASTE COMBUSTIBLE LIQUID
CTF0238654	11/19/1993	CTD021116889	CTD002593887	0900 G	HAZARDOUS LIQUID NOS, CADMIUM and CHROME
CTF0297105	11/22/1993	CTD980667927	ILD914908202	0123 P	WASTE PAINT RELATED MATERIAL
CTF0301792	12/13/1993	CTD980667927	ILD914908202	0015 G	WASTE COMBUSTIBLE LIQUID
CTF0302531	01/17/1994	CTD980667927	ILD914908202	0027 P	WASTE PAINT RELATED MATERIAL
CTF0247936	02/15/1994	CTD021116889	CTD021116889	1600 G	HAZARDOUS WASTE LIQUID, NOS
CTF0308233	03/15/1994	CTD980667927	ILD914908202	0123 P	WASTE PAINT RELATED MATERIAL
CTF0311467	04/13/1994	CTD980667927	ILD914908202	0080 P	HAZARDOUS WASTE SOLID
MAH083652	04/21/1994	CTD980667927	ILD914908202	0024 G	WASTE PETROLEUM NAPHTHA LIQUID, NOS
MAH073206	05/11/1994	CTD980667927	ILD914908202	0027 P	WASTE PAINT RELATED MATERIAL
MAH083881	05/11/1994	CTD021116889	CTD021116889	1080 G	HAZARDOUS WASTE LIQUID, NOS
CTF0311832	06/08/1994	CTD980667927	ILD914908202	0160 P	HAZARDOUS WASTE SOLID, NOS
CTF0345023	06/20/1994	CTD021116889	CTD021116889	0650 G	HAZARDOUS WASTE LIQUID
MAH067534	06/22/1994	CTD980667927	ILD914908202	0021 G	WASTE COMBUSTIBLE LIQUID
CTF0327387	07/01/1994	CTD980667927	ILD914908202	0096 P	WASTE PAINT RELATED MATERIAL
CTF0333603	08/22/1994	CTD980667927	ILD914908202	0019 G	WASTE COMBUSTIBLE LIQUID
CTF0373937	08/30/1994	CTD021116889	CTD021116889	0850 G	HAZARDOUS WASTE LIQUID
CTF0320707	09/08/1994	CTD980667927	ILD914908202	0036 P	WASTE PAINT RELATED MATERIAL
CTF0320707	09/08/1994	CTD980667927	ILD914908202	0035 P	HAZARDOUS WASTE SOLID
CTF0364160	09/09/1994	CTD072135969	CTD983872748	0015 P	WASTE OXIDIZING SUBSTANCE SOLID
CTF0364460	09/09/1994	CTD072135969	CTD983872748	0008 G	HAZARDOUS WASTE LIQUID
CTF0364460	09/09/1994	CTD072135969	CTD983872748	0005 G	WASTE POISONOUS LIQUID
CTF0364491	10/13/1994	CTD072135969	CTD983872748	0030 G	WASTE CORROSIVE LIQUID
MAH092383	10/24/1994	CTD980667927	ILD914908202	0021 G	WASTE COMBUSTIBLE LIQUID
CTF0373759	10/25/1994	CTD021116889	CTD021116889	1640 G	HAZARDOUS WASTE LIQUID
MAH091475	10/26/1994	CTD980667927	ILD914908202	0036 P	WASTE PAINT RELATED MATERIAL
CTF0335817	12/01/1994	CTD980667927	ILD914908202	0036 P	WASTE PAINT RELATED MATERIAL

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 97 **DIST/DIR:** 0.43 NE **ELEVATION:** 60 **MAP ID:** 26

NAME: AVIATION COMPONENTS SUPPORT CO
ADDRESS: 11 FRONTAGE RD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/98
ID1: CTD093607711
ID2:
STATUS:
PHONE:

CTF0335817	12/01/1994	CTD980667927	ILD984908202	0035 P	HAZARDOUS WASTE SOLID, NOS
CTF0335817	12/01/1994	CTD980667927	ILD984908202	0224 P	WASTE PAINT RELATED MATERIAL
MAH108933	01/05/1995	CTD980667927	ILD984908202	0023 G	WASTE COMBUSTIBLE LIQUID NOS
MAD40513	02/13/1995	CTD980667927	ILD984908202	0036 P	WASTE PAINT RELATED MATERIAL
MA3035098	03/06/1995	CTD980667927	ILD984908202	0023 G	WASTE COMBUSTIBLE LIQUID NOS
CTF0476241	04/11/1995	CTD980667927	ILD984908202	0036 P	WASTE PAINT RELATED MATERIAL
CTF0473113	03/02/1995	CTD980667927	ILD984908202	0043 G	WASTE COMBUSTIBLE LIQUID NOS
CTF0473276	03/11/1995	CTD980667927	ILD984908202	0023 G	WASTE COMBUSTIBLE LIQUID NOS
CTF0465149	06/06/1995	CTD980667927	ILD984908202	0036 P	WASTE PAINT RELATED MATERIAL
CTF0471352	06/20/1995	CTD980667927	ILD984908202	0036 P	WASTE PAINT RELATED MATERIAL
CTF0471239	07/10/1995	CTD980667927	ILD984908202	0022 G	WASTE COMBUSTIBLE LIQUID NOS
CTF0480297	08/07/1995	CTD980667927	ILD984908202	0036 P	WASTE PAINT RELATED MATERIAL
CTF0473632	08/28/1995	CTD980667927	ILD984908202	0224 P	WASTE PAINT RELATED MATERIAL
CTF0473632	08/28/1995	CTD980667927	ILD984908202	0036 P	WASTE PAINT RELATED MATERIAL
MAJ274511	10/24/1995	MAD000604447	ARD981908551	0013 P	WASTE OXIDIZING LIQUID, NOS
MAJ274511	10/24/1995	MAD000604447	ARD981908551	0070 P	WASTE CAUSTIC ALKALI LIQUID NOS
MAJ274511	10/24/1995	MAD000604447	ARD981908551	0228 P	WASTE FLAMMABLE LIQUID NOS
CTF0430998	10/24/1995	CTD980667927	ILD984908202	0036 P	WASTE PAINT RELATED MATERIAL
MAJ274510	10/24/1995	MAD000604447	ARD981908551	0190 P	WASTE FLAMMABLE LIQUIDS, TOXIC NOS
MAJ274511	10/24/1995	MAD000604447	ARD981908551	0010 P	WASTE AEROSOLS, FLAMMABLE
CTF0432629	11/21/1995	CTD980667927	ILD984908202	0036 P	WASTE PAINT RELATED MATERIAL
CTF0433574	12/19/1995	CTD980667927	ILD984908202	0036 P	WASTE PAINT RELATED MATERIAL
CTF0433872	01/18/1996	CTD980667927	ILD984908202	0036 P	WASTE PAINT RELATED MATERIAL
CTF0433591	02/19/1996	CTD980667927	ILD984908202	0036 P	WASTE PAINT RELATED MATERIAL
CTF0519471	03/11/1996	CTD980667927	ILD984908202	0036 P	WASTE PAINT RELATED MATERIAL
MAJ274692	03/22/1996	MAD000604447	ARD981908551	0100 P	METHYL,ETYL

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 97 **DIST/DIR:** 0.43 NE **ELEVATION:** 60 **MAP ID:** 26

NAME: AVIATION COMPONENTS SUPPORT CO
ADDRESS: 11 FRONTAGE RD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/98
ID1: CTD093607711
ID2:
STATUS:
PHONE:

MAJ274692	03/22/1996	MAD000604447	ARD981908551	0225 P	FLAMMABLE LIQUID N.O.S.
MAJ274692	03/22/1996	MAD000604447	ARD981908551	0020 P	CORROSIVE LIQUID BASIC, ORGANIC NOS
MAJ274692	03/22/1996	MAD000604447	ARD981908551	0800 P	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
CTF0527506	04/11/1996	CTD980667927	ILD984908202	0036 P	WASTE PAINT RELATED MATERIAL
CTF0527506	04/11/1996	CTD980667927	ILD984908202	0035 P	HAZARDOUS WASTE, SOLID, N.O.S.
CTF0521341	05/08/1996	CTD980667927	ILD984908202	0036 P	PAINT RELATED MATERIAL, PAINT
CTF0529913	06/05/1996	CTD980667927	ILD984908202	0036 P	PAINT RELATED MATERIAL, PAINT
CTF0674628	06/17/1997	CTD021816889	CTD021816889	0450 G	ENV. HAZARDOUS SUBSTANCE LIQUID NOS
CTF0645632	12/03/1997	CTD021816889	CTD021816889	0075 G	ENV. HAZARDOUS SUBSTANCE LIQUID NOS
CTF0728171	08/10/1998	CTD021816889	CTD021816889	0055 G	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

HWMANIFEST

SEARCH ID: 99 **DIST/DIR:** 0.48 SW **ELEVATION:** 39 **MAP ID:** 28

NAME: CARRIER CORP
ADDRESS: 200 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 1/1/98
ID1: CTD982777815
ID2:
STATUS:
PHONE:

CT MANIFEST INFORMATION

MANIFEST ID	SHIPPED	TSD ID	TRANS ID	QTY	MATERIAL
MAC889961	01/18/1990	MAD053432637	NYD980769947	0010 G	WASTE OIL LIQ MIX
MAC889960	02/22/1990	MAD053432637	NYD980769947	0325 G	WASTE OIL MIXTURE, COMBUSTIBLE LIQUID
AR3901990	04/19/1990	ARD049748192	NYD980769947	0150 G	WASTE OIL MIX
AR3901989	06/18/1990	ARD049748192	NYD980769947	0120 G	WASTE OIL LIQ MIX

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 92 **DIST/DIR:** 0.12 SW **ELEVATION:** 104 **MAP ID:** 3

NAME: DICHELLO BEER DISTRIBUTORS
ADDRESS: 55 MARSH HILL RD
ORANGE CT 06477
CONTACT: EMANUELSON, BRIAN
SOURCE: CT DEP

REV: 3/29/11
ID1: 9702998
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 8/30/1997
TIME OF RELEASE: 9:00:00 AM

DISCHARGER: DICHELLO BEER DISTRIBUTORS
55 MARSH HILL ROAD
ORANGE CT 06477

DISCHARGER'S PHONE:
ACCEPTS RESPONSIBILITY: NO

MATERIAL RELEASED (GAL): GASOLINE 0

CAUSE OF INCIDENT: 3 - UNDERGROUND TANK FAILURE
OTHER:

CAUSE OF INCIDENT: 16 - DUMPING
OTHER:

REPORT TIME: 6/9/1997 2:42:30 PM
REPORTED BY: UNKNOWN
REPORTER'S PHONE: 5555555

AGENCY NOTIFIED: 9 - DEP
OTHER:
DEP BUREAU: BUREAU OF WASTE MANAGEMENT
DEP DIVISION: OIL AND CHEMICAL SPILL RESPONSE

ACTION TAKEN: 20 - OTHER
OTHER: INVESTIGATED

ACTION TAKEN: 21
OTHER:

EMERGENCY MEASURES: BASED AN ANONYMOUS REPORT -- TANKS REPORTED TO BE REMOVED AND DUMPED IN MARSH BEHIND BUILDING

RELEASE CLASS: 8 - COMMERCIAL

MEDIA AFFECTED: 4 - GROUND SURFACE

WATERBODY AFFECTED: 9 - OTHER

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 94 **DIST/DIR:** 0.12 SW **ELEVATION:** 104 **MAP ID:** 3

NAME: DICHELLO DISTRIBUTORS
ADDRESS: 55 MARSH HILL RD
ORANGE CT 06477
CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/29/11
ID1: 9701831
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 4/16/1997
TIME OF RELEASE:

DISCHARGER: DICHELLO DISTRIBUTORS
55 marsh hill rd
CT

DISCHARGER S PHONE: 203 8912100
ACCEPTS RESPONSIBILITY: YES

MATERIAL RELEASED (GAL): DIESEL FUEL 0

CAUSE OF INCIDENT: 3 - INGROUND TANK, FAILURE
OTHER:

REPORT TIME: 9:30:00 AM
REPORTED BY: SCOTT GRAVES
REPORTER S PHONE: 4268900

AGENCY NOTIFIED: 3 - LOCAL FIRE MARSHAL
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 11 - PUMPED OUT
OTHER:

ACTION TAKEN: 11 - SOIL REMOVED
OTHER:

EMERGENCY MEASURES: PULLED 2-10K DIESEL UST S, SOIL ANALYSIS TPH 730 PPM, HCG: 69PM TPH, NO SHEEN OR FREE PRODUCT, WILL VAC HOLE AND INSTALL WELL

MEDIA AFFECTED: 3 - GROUND WATER

MEDIA AFFECTED: 6 - OTHER

WATERBODY AFFECTED: 4 - GROUNDWATER

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 93 **DIST/DIR:** 0.12 SW **ELEVATION:** 104 **MAP ID:** 3

NAME: DICHELLO BEER DISTRIBUTORS
ADDRESS: 55 MARSH HILL RD
ORANGE CT 06477
CONTACT:
SOURCE: CT DEP

REV: 7/18/06
ID1: 33096
ID2: 4971
STATUS: LUST COMPLETED (PROGRAM NO LON
PHONE:

SITE INFORMATION

INCIDENT DATE: 6-9-1997
SPILL CASE ID:
SITS CASE ID: 9702998
UST SITE ID:

MATERIAL:

MOTOR FUEL: -1
DIESEL: 0
GASOLINE: 0
OTHER 0

CAUSE

LEAK 0
TANK: 0
PIPING: 0
OVERFILL 0
REMOVAL: 0

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 91 **DIST/DIR:** 0.44 SE **ELEVATION:** 23 **MAP ID:** 27

NAME: CITY OF WEST HAVEN - S.T.P
ADDRESS: 171 BEATRICE LN
WEST HAVEN CT 06516
CONTACT: WOFFORD, RON
SOURCE: CT DEP

REV: 3/29/11
ID1: 9903010
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 7/29/1999
TIME OF RELEASE:

DISCHARGER: CITY OF WEST HAVEN - S.T.P
171 BEATRICE LANE
WEST HAVEN CT 06516

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

MATERIAL RELEASED (GAL): 2 FUEL OIL 10

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

REPORT TIME: 7/29/1999 11:36:13 AM
REPORTED BY: SHAUN MAGEE
REPORTER S PHONE: 6463348

AGENCY NOTIFIED: 9 - DEP
OTHER:
DEP BUREAU: BUREAU OF WASTE MANAGEMENT
DEP DIVISION: OIL AND CHEMICAL SPILL RESPONSE

AGENCY NOTIFIED: 3 - LOCAL FIRE MARSHAL
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 11 - SOIL REMOVED
OTHER:

ACTION TAKEN: 4 - CONTRACTED
OTHER:

ACTION TAKEN: 12 - PUMPED OUT
OTHER:

ACTION TAKEN: 17 - REMOVED TANK
OTHER:

EMERGENCY MEASURES: REMOVAL OF A 500 - GALLON U.S.T / FREE PRODUCT IN HOLE / FIRE MARSHAL ON SITE

RELEASE CLASS: 5 - GOVERNMENTAL

MEDIA AFFECTED: 4 - GROUND SURFACE

MEDIA AFFECTED: 3 - GROUND WATER

WATERBODY AFFECTED: 4 - GROUNDWATER

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 91 **DIST/DIR:** 0.44 SE **ELEVATION:** 23 **MAP ID:** 27

NAME: CITY OF WEST HAVEN - S.T.P
ADDRESS: 171 BEATRICE LN
WEST HAVEN CT 06516
CONTACT: WOFFORD, RON
SOURCE: CT DEP

REV: 3/29/11
ID1: 9903010
ID2:
STATUS: CLOSED
PHONE:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 768 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: EGIDIO GIORDANO
ADDRESS: 54 DEVONSHIRE ROADE
MILFORD CT 06460

CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/29/11
ID1: 200903932
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 10/19/2009
TIME OF RELEASE:

DISCHARGER: EGIDIO GIORDANO

CT

DISCHARGER S PHONE: 203 17797 42
ACCEPTS RESPONSIBILITY: YES

MATERIAL RELEASED (GAL): 2 FUEL OIL 1

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

REPORT TIME: 10/19/2009 1:55:34 AM
REPORTED BY: MONROE HASSELL
REPORTER S PHONE: 3314811

AGENCY NOTIFIED: 8 - DEP DISPATCH
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 20 - OTHER
OTHER: CT Tank

ACTION TAKEN: 3 - CONTAINED
OTHER:

ACTION TAKEN: 4 - CONTRACTED
OTHER:

EMERGENCY MEASURES:

RELEASE CLASS: 6 - PRIVATE

MEDIA AFFECTED: 5 - INSIDE BUILDING

WATERBODY AFFECTED: 9 - OTHER

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 754 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: SAAB SCANIA
ADDRESS: EDSON RD
MILFORD CT 06460

CONTACT:
SOURCE: CT DEP

REV:
ID1: 1534-1537
ID2:
STATUS: YES
PHONE:

REPORT DATE: 01-05-90
MATERIAL: STEEL
LOW CAPACITY: 2000
PRODUCT: GAS/HF

FED REG: YES
NUMBER OF TANKS: 4
HIGH CAPACITY: 10000

TANK REMOVED: YES
TANK RELEASE:

UNCONTROLLED RELEASE: YES
PIPING RELEASE:

EMERGENCY: YES
OVERFILL RELEASE:

REMEDIATION: SOIL REMOVAL
REFERRED:
COMMENT:

COMPLETE: YES

LUST

SEARCH ID: 755 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: STATEWIDE CLEANERS
ADDRESS: GOLDEN HILL RD
MILFORD CT 06460

CONTACT:
SOURCE: CT DEP

REV:
ID1: 1547-1548
ID2:
STATUS: NO
PHONE:

REPORT DATE: 04-07-90
MATERIAL: STEEL
LOW CAPACITY: 550
PRODUCT: HF2

FED REG: NO
NUMBER OF TANKS: 2
HIGH CAPACITY: 550

TANK REMOVED: YES
TANK RELEASE:

UNCONTROLLED RELEASE: YES
PIPING RELEASE: YES

EMERGENCY: YES
OVERFILL RELEASE:

REMEDIATION: SOIL REMOVAL/HYDRO
REFERRED:
COMMENT:

COMPLETE: NO

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 756 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: STATEWIDE CLEANERS
ADDRESS: GOLDEN HILL RD
MILFORD CT 06460

CONTACT:
SOURCE: CT DEP

REV: 7/14/06
ID1: 30489
ID2: 7418
STATUS: INVESTIGATION
PHONE:

SITE INFORMATION

INCIDENT DATE: 8/7/1990
SPILL CASE ID:
SITS CASE ID:
LIST SITE ID:

MATERIAL:

MOTOR FUEL: 0
DIESEL: 0
GASOLINE: 0
OTHER 0

CAUSE

LEAK 0
TANK: 0
PIPING: 0
OVERFILL 0
REMOVAL: 0

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 757 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: TOWN OF MILFORD
ADDRESS: WEST MAYFLOWER BROADWAY PUMP PLC
MILFORD CT 06460

CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/29/11
ID1: 201101300
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 3/15/2011
TIME OF RELEASE: 2:00:00 PM

DISCHARGER: TOWN OF MILFORD

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

MATERIAL RELEASED (GAL): DIESEL FUEL 0

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

REPORT TIME: 3/16/2011 1:35:56 PM
REPORTED BY: JULIE WILLIAMS
REPORTER S PHONE: 2035843

AGENCY NOTIFIED: 8 - DEP DISPATCH
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 19 - SOIL REMOVED
OTHER:

ACTION TAKEN: 17 - REMOVED TANK
OTHER:

EMERGENCY MEASURES: 250 UST 40 TONS OF SOIL REMOVED

RELEASE CLASS: 5 - GOVERNMENTAL

MEDIA AFFECTED: 4 - GROUND SURFACE

WATERBODY AFFECTED: 9 - OTHER

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 758 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: VIC CORPORATION
ADDRESS: 565 VIC DR
MILFORD CT 06460

CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/29/11
ID1: 9805287
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 8/18/1998
TIME OF RELEASE: 2:34:00 PM

DISCHARGER: VIC CORPORATION

CT

DISCHARGER S PHONE: 203 7832237
ACCEPTS RESPONSIBILITY: YES

MATERIAL RELEASED (GAL): 4 FUEL OIL 6

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

REPORT TIME: 2:34:00 PM
REPORTED BY: SANTO MANICONE
REPORTER S PHONE: 2346765

AGENCY NOTIFIED: 9 - DEP
OTHER:
DEP BUREAU: BUREAU OF WASTE MANAGEMENT
DEP DIVISION: OIL AND CHEMICAL SPILL RESPONSE

AGENCY NOTIFIED: 3 - LOCAL FIRE MARSHAL
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 17 - REMOVED TANK
OTHER:

ACTION TAKEN: 18 - SOIL REMOVED
OTHER:

EMERGENCY MEASURES: REMOVING 10,000 GALLON UST, REMOVING CONTAMINATED SOIL, SAMPLES TAKEN

MEDIA AFFECTED: 4 - GROUND SURFACE

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 759 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: SUNNY SIDE CT
MILFORD CT 06460

CONTACT: CIASULLO RICH
SOURCE: CT DEP

REV: 3/29/11
ID1: 9907901
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 5/8/1998
TIME OF RELEASE:

DISCHARGER:

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

MATERIAL RELEASED (GAL): 2 FUEL OIL 6

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

REPORT TIME: 5/8/1998 8:37:35 PM
REPORTED BY: CHIEF ROSS
REPORTER S PHONE: 8785991

AGENCY NOTIFIED: 8 - DEP DISPATCH
OTHER:
DEP BUREAU:
DEP DIVISION:

AGENCY NOTIFIED: 14 - LOCAL FIRE DEPARTMENT
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 20 - OTHER
OTHER: boom oil

EMERGENCY MEASURES:

RELEASE CLASS: 8 - COMMERCIAL

MEDIA AFFECTED: 3 - GROUND WATER

WATERBODY AFFECTED: 3 - STREAM/BROOK

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 760 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: DEUTSCHE BANK JOHN PERSSE
ADDRESS: 40 STCAWAY ST
WEST HAVEN CT 06516

CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/29/11
ID1: 201101407
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 3/22/2011
TIME OF RELEASE:

DISCHARGER: DEUTSCHE BANK JOHN PERSSE

CT

DISCHARGER S PHONE: 203 933-9914
ACCEPTS RESPONSIBILITY: YES

MATERIAL RELEASED (GAL): 2 FUEL OIL 6

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

REPORT TIME: 3/22/2011 11:21:13 AM
REPORTED BY: TRISHA NIELSEN
REPORTER S PHONE: 8129391

AGENCY NOTIFIED: 3 - LOCAL FIRE MARSHAL
OTHER:
DEP BUREAU:
DEP DIVISION:

AGENCY NOTIFIED: 8 - DEP DISPATCH
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 17 - REMOVED TANK
OTHER:

EMERGENCY MEASURES: 2K UST

RELEASE CLASS: 6 - PRIVATE

MEDIA AFFECTED: 6 - OTHER

WATERBODY AFFECTED: 9 - OTHER

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 761 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: ORANGE LANDING CONDOS
ADDRESS: 153 BETTI HILL LANE
WEST HAVEN CT 06516

CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/29/11
ID1: 201007720
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 12/30/2010
TIME OF RELEASE:

DISCHARGER: ORANGE LANDING CONDOS

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

MATERIAL RELEASED (GAL): 2 FUEL OIL 6

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

REPORT TIME: 12/30/2010 11:19:31 AM
REPORTED BY: FIRE CHIEF DAVID COLLINS
REPORTER S PHONE: 8154526

AGENCY NOTIFIED: 8 - DEP DISPATCH
OTHER:
DEP BUREAU:
DEP DIVISION:

AGENCY NOTIFIED: 14 - LOCAL FIRE DEPARTMENT
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 4 - CONTRACTED
OTHER:

EMERGENCY MEASURES: 5000 LI/ST. NO GROUND WATER OR FREE PRODUCT. TANK REMOVED BY CITY POINT CONSTRUCTION. TESTING BY EARTHWISE.

RELEASE CLASS: 6 - PRIVATE

MEDIA AFFECTED: 4 - GROUND SURFACE

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 762 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: REGIONAL WATER AUTHORITY
ADDRESS: BURWELL ST
WEST HAVEN CT 06516
CONTACT:
SOURCE: CT DEP

REV: 7/1/06
ID1: 29280
ID2: 2209
STATUS: LUST COMPLETED (PROGRAM NO LON
PHONE:

SITE INFORMATION

INCIDENT DATE: 1/21/1992
SPILL CASE ID:
SITE CASE ID:
LST SITE ID:

MATERIAL:

MOTOR FUEL: 0
DIESEL: 0
GASOLINE: 0
OTHER 0

CAUSE

LEAK 0
TANK: 0
PIPING: 0
OVERFILL 0
REMOVAL: 0

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 763 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: RESIDENTIAL NEIGHBORHOOD
ADDRESS: COLLINS ER
WEST HAVEN CT 06516
CONTACT: TIM BARD - LUST
SOURCE: CT DEP

REV: 7/1/06
ID1: 45616
ID2: 0
STATUS: PENDING
PHONE:

SITE INFORMATION

INCIDENT DATE:
SPILL CASE ID: 0
SITE CASE ID: 0
LST SITE ID: 0

MATERIAL:

MOTOR FUEL: 0
DIESEL: 0
GASOLINE: 0
OTHER -1

CAUSE

LEAK 0
TANK: 0
PIPING: 0
OVERFILL 0
REMOVAL: 0

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 764 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: VOLVO
ADDRESS: 795 GRANGE AVE
WEST HAVEN CT 06516
CONTACT:
SOURCE: CT DEP

REV:
ID1: 4587
ID2:
STATUS: YES
PHONE:

REPORT DATE: 06-08-95
MATERIAL: STEEL
LOW CAPACITY: 2000
PRODUCT: HF2

FED REG: NO
NUMBER OF TANKS: 1
HIGH CAPACITY: 2000

TANK REMOVED: YES
TANK RELEASE:

UNCONTROLLED RELEASE:
PIPING RELEASE: YES

EMERGENCY:
OVERFILL RELEASE:

REMEDIATION: TANK AND SOIL REMVL
REFERRED:
COMMENT:

COMPLETE: YES

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 765 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: VOLVO
ADDRESS: 795 GRANGE AVE
WEST HAVEN CT 06516
CONTACT:
SOURCE: CT DEP

REV: 7/1/06
ID1: 30667
ID2: 2996
STATUS: LUST COMPLETED (PROGRAM NO LON
PHONE:

SITE INFORMATION

INCIDENT DATE: 6/2/1995
SPILL CASE ID:
SITE CASE ID:
LST SITE ID:

MATERIAL:

MOTOR FUEL: 0
DIESEL: 0
GASOLINE: 0
OTHER 0

CAUSE

LEAK 0
TANK: 0
PIPING: 0
OVERFILL 0
REMOVAL: 0

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 767 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: DANIELS RESIDENCE
ADDRESS: BARTON RD
MILFORD CT 06460

CONTACT: RON WOFFARD (OCSRD)
SOURCE: CT DEP

REV: 7/1/96
ID1: 43192
ID2: 0
STATUS: PENDING
PHONE:

SITE INFORMATION

INCIDENT DATE:
SPILL CASE ID: 0
SITS CASE ID:
UST SITE ID: 0

MATERIAL:

MOTOR FUEL: 0
DIESEL: 0
GASOLINE: 0
OTHER 0

CAUSE

LEAK 0
TANK: 0
PIPING: 0
OVERFILL 0
REMOVAL: 0

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 769 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: ESTATE OF LOMBARD
ADDRESS: 7 TER
MILFORD CT 06460

CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/29/11
ID1: 200905441
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 9/25/2009
TIME OF RELEASE:

DISHCHARGER: ESTATE OF LOMBARD

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

MATERIAL RELEASED (GAL): 2 FUEL OIL 0

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

REPORT TIME: 9/25/2009 3:06:03 PM
REPORTED BY: ANN MARIE ZINGARO
REPORTER S PHONE: 8829591

AGENCY NOTIFIED: 8 - DEP DISPATCH
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 11 - SOIL REMOVED
OTHER:

ACTION TAKEN: 17 - REMOVED TANK
OTHER:

EMERGENCY MEASURES: 150 UST

RELEASE CLASS: 6 - PRIVATE

MEDIA AFFECTED: 6 - OTHER

WATERBODY AFFECTED: 9 - OTHER

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 770 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: GLYNN KRUGER
ADDRESS: 2 WEPAWAUG AVE
MILFORD CT 06460

CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/29/11
ID1: 200903221
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 6/17/2009
TIME OF RELEASE:

DISHCHARGER: GLYNN KRUGER
73 hungry road
SEYMOUR CT 06483

DISCHARGER S PHONE: 203 881 7317
ACCEPTS RESPONSIBILITY: YES

MATERIAL RELEASED (GAL): 2 FUEL OIL 0

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

CAUSE OF INCIDENT: 26 - OTHER
OTHER: tank pulled previously unknown date

REPORT TIME: 6/17/2009 11:31:21 AM
REPORTED BY: ROBERT MENERE
REPORTER S PHONE: 7453511

AGENCY NOTIFIED: 8 - DEP DISPATCH
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 20 - OTHER
OTHER: remediate 06/15/09

EMERGENCY MEASURES: CONTAMINATED SOIL

RELEASE CLASS: 6 - PRIVATE

MEDIA AFFECTED: 6 - OTHER

WATERBODY AFFECTED: 9 - OTHER

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 753 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: RICK S SERVICE BP
ADDRESS: BOSTON POST RD
MILFORD CT 06460

CONTACT:
SOURCE: CT DEP

REV: 7/1/96
ID1: 30341
ID2: 2779
STATUS: INVESTIGATION
PHONE:

SITE INFORMATION

INCIDENT DATE: 5/6/1989
SPILL CASE ID:
SITS CASE ID:
UST SITE ID:

MATERIAL:

MOTOR FUEL: -1
DIESEL: 0
GASOLINE: -1
OTHER 0

CAUSE

LEAK 0
TANK: 0
PIPING: 0
OVERFILL 0
REMOVAL: 0

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 772 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: RICK S AUTO SERVICE
ADDRESS: BOSTON POST RD
MILFORD CT 06460

CONTACT:
SOURCE: CT DEP

REV:
ID1: 1341-1345
ID2:
STATUS: NO
PHONE:

REPORT DATE: 06-12-90
MATERIAL: STEEL
LOW CAPACITY: 4000
PRODUCT: GAS

FED REG: YES
NUMBER OF TANKS: 5
HIGH CAPACITY: 4000

TANK REMOVED: YES
TANK RELEASE:

UNCONTROLLED RELEASE: YES
PIPING RELEASE: YES

EMERGENCY: YES
OVERFILL RELEASE: YES

REMEDIATION: SOIL REMOVAL/HYDRO
REFERRED:
COMMENT:

COMPLETE: NO

LUST

SEARCH ID: 773 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: RICK S SERVICE BP
ADDRESS: BOSTON POST RD
MILFORD CT 06460

CONTACT:
SOURCE: CT DEP

REV:
ID1: 1323-1327
ID2:
STATUS: NO
PHONE:

REPORT DATE: 05-06-89
MATERIAL: STEEL
LOW CAPACITY: 4000
PRODUCT: GAS

FED REG: YES
NUMBER OF TANKS: 5
HIGH CAPACITY: 4000

TANK REMOVED:
TANK RELEASE:

UNCONTROLLED RELEASE: YES
PIPING RELEASE:

EMERGENCY:
OVERFILL RELEASE: YES

REMEDIATION: EA TO REMOVE
REFERRED:
COMMENT:

COMPLETE: NO

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 774 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: RICK S SERVICE BP
ADDRESS: BOSTON POST RD
MILFORD CT 06460

CONTACT:
SOURCE: CT DEP

REV: 7/1/96
ID1: 3823/1
ID2: 2230
STATUS: INVESTIGATION
PHONE:

SITE INFORMATION

INCIDENT DATE: 5/6/1989
SPILL CASE ID:
SITS CASE ID:
UST SITE ID:

MATERIAL:

MOTOR FUEL: -1
DIESEL: 0
GASOLINE: -1
OTHER 0

CAUSE

LEAK 0
TANK: 0
PIPING: 0
OVERFILL 0
REMOVAL: 0

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 775 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: SAAB SCANIA
ADDRESS: EDISON RD
MILFORD CT 06460

CONTACT:
SOURCE: CT DEP

REV:
ID1: 1334-1337
ID2:
STATUS: YES
PHONE:

REPORT DATE: 01-03-90
MATERIAL: STEEL
LOW CAPACITY: 3000
PRODUCT: GAS/HF

FED REG: YES
NUMBER OF TANKS: 4
HIGH CAPACITY: 10000

TANK REMOVED: YES
TANK RELEASE:

UNCONTROLLED RELEASE: YES
PIPING RELEASE:

EMERGENCY: YES
OVERFILL RELEASE:

REMEDIATION: SOIL REMOVAL
REFERRED:
COMMENT:

COMPLETE: YES

LUST

SEARCH ID: 776 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: STATEWIDE CLEANERS
ADDRESS: GOLDEN HILL RD
MILFORD CT 06460

CONTACT:
SOURCE: CT DEP

REV:
ID1: 1547-1548
ID2:
STATUS: NO
PHONE:

REPORT DATE: 08-07-90
MATERIAL: STEEL
LOW CAPACITY: 550
PRODUCT: HF2

FED REG: NO
NUMBER OF TANKS: 2
HIGH CAPACITY: 550

TANK REMOVED: YES
TANK RELEASE:

UNCONTROLLED RELEASE: YES
PIPING RELEASE: YES

EMERGENCY: YES
OVERFILL RELEASE:

REMEDIATION: SOIL REMOVAL/HYDRO
REFERRED:
COMMENT:

COMPLETE: NO

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 777 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: STATEWIDE CLEANERS
ADDRESS: GOLDEN HILL RD
MILFORD CT 06460

CONTACT:
SOURCE: CT DEP

REV: 7/1/96
ID1: 3648/9
ID2: 2118
STATUS: INVESTIGATION
PHONE:

SITE INFORMATION

INCIDENT DATE: 8/7/1990
SPILL CASE ID:
SITS CASE ID:
UST SITE ID:

MATERIAL:

MOTOR FUEL: 0
DIESEL: 0
GASOLINE: 0
OTHER 0

CAUSE

LEAK 0
TANK: 0
PIPING: 0
OVERFILL 0
REMOVAL: 0

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 778 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: TOWN OF MILFORD
ADDRESS: WEST MAYFLOWER BROADWAY PUMP PLC
MILFORD CT 06460

CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/29/11
ID1: 201101300
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 3/15/2011
TIME OF RELEASE: 2:00:00 PM

DISSCHARGER: TOWN OF MILFORD

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

MATERIAL RELEASED (GAL): DIESEL FUEL 0

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

REPORT TIME: 3/16/2011 1:55:56 PM
REPORTED BY: JULIE WILLIAMS
REPORTER S PHONE: 2633843

AGENCY NOTIFIED: 8 - DEP DISPATCH
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 18 - SOIL REMOVED
OTHER:

ACTION TAKEN: 17 - REMOVED TANK
OTHER:

EMERGENCY MEASURES: 250 UST 40 TONS OF SOIL REMOVED

RELEASE CLASS: 5 - GOVERNMENTAL

MEDIA AFFECTED: 4 - GROUND SURFACE

WATERBODY AFFECTED: 9 - OTHER

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 779 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: VIC CORPORATION
ADDRESS: 565 VIC DR
MILFORD CT 06460

CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/29/11
ID1: 9905217
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 8/10/1998
TIME OF RELEASE: 2:34:00 PM

DISSCHARGER: VIC CORPORATION

CT

DISCHARGER S PHONE: 203 7132237
ACCEPTS RESPONSIBILITY: YES

MATERIAL RELEASED (GAL): 4 FUEL OIL 0

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

REPORT TIME: 2:34:00 PM
REPORTED BY: SANTO MANICONE
REPORTER S PHONE: 2346715

AGENCY NOTIFIED: 9 - DEP
OTHER:
DEP BUREAU: BUREAU OF WASTE MANAGEMENT
DEP DIVISION: OIL AND CHEMICAL SPILL RESPONSE

AGENCY NOTIFIED: 3 - LOCAL FIRE MARSHAL
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 17 - REMOVED TANK
OTHER:

ACTION TAKEN: 18 - SOIL REMOVED
OTHER:

EMERGENCY MEASURES: REMOVING 10,000 GALLON UST, REMOVING CONTAMINATED SOIL, SAMPLES TAKEN

MEDIA AFFECTED: 4 - GROUND SURFACE

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 780 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: SUNNY SIDE CT
MILFORD CT 06460

CONTACT: CIASULLO, RICH
SOURCE: CT DEP

REV: 3/29/11
ID1: 9902801
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 5/8/1991
TIME OF RELEASE:

DISSCHARGER:

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

MATERIAL RELEASED (GAL): 2 FUEL OIL 9

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

REPORT TIME: 5/8/1991 3:17:33 PM
REPORTED BY: CHIEF ROSS
REPORTER S PHONE: 8715991

AGENCY NOTIFIED: 8 - DEP DISPATCH
OTHER:
DEP BUREAU:
DEP DIVISION:

AGENCY NOTIFIED: 11 - LOCAL FIRE DEPARTMENT
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 20 - OTHER
OTHER: boomed

EMERGENCY MEASURES:

RELEASE CLASS: 8 - COMMERCIAL

MEDIA AFFECTED: 3 - GROUND WATER

WATERBODY AFFECTED: 3 - STREAM/BROOK

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 766 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: WEST HAVEN S.T.P.
ADDRESS: BLOOM ST
WEST HAVEN CT 06516

CONTACT:
SOURCE: CT DEP

REV: 271304
ID1: 30714
ID2: 2645
STATUS: LUST COMPLETED (PROGRAM NO LON
PHONE:

SITE INFORMATION

INCIDENT DATE: 10/22/1993
SPILL CASE ID:
SITS CASE ID:
UST SITE ID:

MATERIAL:

MOTOR FUEL: 0
DIESEL: 0
GASOLINE: 0
OTHER 0

CAUSE

LEAK 0
TANK: 0
PIPING: 0
OVERFILL 0
REMOVAL: 0

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 737 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: MARTY ZWERDLING
ADDRESS: 329 MANLEY HEIGHTS ROAD
ORANGE CT 06477

CONTACT: ACETO, JOHN
SOURCE: CT DEP

REV: 3/29/11
ID1: 201101396
ID2:
STATUS: OPEN
PHONE:

SITE INFORMATION

DATE OF RELEASE: 3/21/2011
TIME OF RELEASE:

DISHCHARGER: MARTY ZWERDLING
CT

DISCHARGER S PHONE: 203 5430986
ACCEPTS RESPONSIBILITY: YES

MATERIAL RELEASED (GAL): 2 FUEL OIL 0

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

REPORT TIME: 3/21/2011 2:23:01 PM
REPORTED BY: STEPHINE FALCONE
REPORTER S PHONE: 3846020

AGENCY NOTIFIED: 3 - LOCAL FIRE MARSHAL
OTHER:
DEP BUREAU:
DEP DIVISION:

AGENCY NOTIFIED: 8 - DEP DISPATCH
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 17 - REMOVED TANK
OTHER:

EMERGENCY MEASURES: 7A UST GROUND WATER IMPACT

RELEASE CLASS: 6 - PRIVATE

MEDIA AFFECTED: 6 - OTHER

WATERBODY AFFECTED: 4 - GROUNDWATER

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 771 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: PAUL DANIELS
ADDRESS: 162 KING HWY
MILFORD CT 06460

CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/29/11
ID1: 200807391
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 11/21/2008
TIME OF RELEASE:

DISHCHARGER: PAUL DANIELS
406 ridge road
ORANGE CT 06477

DISCHARGER S PHONE: 203 7953868
ACCEPTS RESPONSIBILITY: YES

MATERIAL RELEASED (GAL): 2 FUEL OIL 0

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

REPORT TIME: 11/21/2008 2:03:59 PM
REPORTED BY: TRISHA NIELSON
REPORTER S PHONE: 8929591

AGENCY NOTIFIED: 3 - LOCAL FIRE MARSHAL
OTHER:
DEP BUREAU:
DEP DIVISION:

AGENCY NOTIFIED: 8 - DEP DISPATCH
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 17 - REMOVED TANK
OTHER:

EMERGENCY MEASURES: A 330 UST, AND CITY WATER.

RELEASE CLASS: 6 - PRIVATE

MEDIA AFFECTED: 6 - OTHER

WATERBODY AFFECTED: 9 - OTHER

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 752 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: RICK S SERVICE BP
ADDRESS: BOSTON POST RD
MILFORD CT 06460

CONTACT:
SOURCE: CT DEP

REV:
ID1: 1523-1527
ID2:
STATUS: NO
PHONE:

REPORT DATE: 05-06-09
MAYERIAL: STEEL
LOW CAPACITY: 4000
PRODUCT: GAS

FED REG: YES
NUMBER OF TANKS: 5
HIGH CAPACITY: 4000

TANK REMOVED:
TANK RELEASE:

UNCONTROLLED RELEASE: YES
PIPING RELEASE:

EMERGENCY:
OVERFILL RELEASE: YES

REMEDIATION: VA TO REMOVE
REFERRED:
COMMENT:

COMPLETE: NO

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 734 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: CHADDERTON
ADDRESS: 317 TREAT LANE
ORANGE CT 06477

CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/29/11
ID1: 201007195
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 12/3/2010
TIME OF RELEASE:

DISHCHARGER: CHADDERTON
CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

MATERIAL RELEASED (GAL): 2 FUEL OIL 0

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

REPORT TIME: 12/3/2010 1:49:35 PM
REPORTED BY: MATT KENNEDY
REPORTER S PHONE: 7162716

AGENCY NOTIFIED: 8 - DEP DISPATCH
OTHER:
DEP BUREAU:
DEP DIVISION:

AGENCY NOTIFIED: 3 - LOCAL FIRE MARSHAL
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 17 - REMOVED TANK
OTHER:

ACTION TAKEN: 18 - SOIL REMOVED
OTHER:

EMERGENCY MEASURES: 550 UST PULL, NO FREE PRODUCT, NO WATERWAYS IN THE AREA,

RELEASE CLASS: 6 - PRIVATE

MEDIA AFFECTED: 4 - GROUND SURFACE

WATERBODY AFFECTED: 9 - OTHER

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 736 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: GINO ALFARO
ADDRESS: 637 SOUTH GREEN BRIAR DR
ORANGE CT 06477

CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/29/11
ID1: 201100747
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 2/17/2011
TIME OF RELEASE:

DISCHARGER: GINO ALFARO
[illegible]
CT

DISCHARGER S PHONE: 917 [illegible]995
ACCEPTS RESPONSIBILITY: YES

MATERIAL RELEASED (GAL): 2 FUEL OIL 6

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

REPORT TIME:
REPORTED BY:
REPORTER S PHONE:

AGENCY NOTIFIED: 3 - LOCAL FIRE MARSHAL
OTHER:
DEP BUREAU:
DEP DIVISION:

AGENCY NOTIFIED: 8 - DEP DISPATCH
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 17 - REMOVED TANK
OTHER:

EMERGENCY MEASURES: 530 UST

RELEASE CLASS: 6 - PRIVATE

MEDIA AFFECTED: 6 - OTHER

WATERBODY AFFECTED: 9 - OTHER

Environmental FirstSearch
Site Detail Report

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 738 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: MOBIL STATION NORTH AND SOUTHBOUNDS
ADDRESS: MERRITT PKY
ORANGE CT 06477

CONTACT:
SOURCE: CT DEP

REV: 1/1/96
ID1: 32249
ID2: 4037
STATUS: CLEANUP INITIATED
PHONE:

SITE INFORMATION

INCIDENT DATE: 9/15/1993
SPILL CASE ID:
SITS CASE ID:
UST SITE ID:

MATERIALS

MOTOR FUEL: -1
DIESEL: 0
GASOLINE: -1
OTHER 0

CAUSE

LEAK 0
TANK: 0
PIPING: 0
OVERFILL 0
REMOVAL: 0

Environmental FirstSearch
Site Detail Report

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 739 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: RICHARD BASILE
ADDRESS: 171 WILD ROSE DR
ORANGE CT 06477

CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/29/11
ID1: 200905263
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 9/17/2009
TIME OF RELEASE:

DISCHARGER: RICHARD BASILE
[illegible]
CT

DISCHARGER S PHONE: 203 2170112
ACCEPTS RESPONSIBILITY: YES

MATERIAL RELEASED (GAL): 2 FUEL OIL 6

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

REPORT TIME: 9/17/2009 1:52:31 PM
REPORTED BY: DEB MOODY
REPORTER S PHONE: 2040109

AGENCY NOTIFIED: 8 - DEP DISPATCH
OTHER:
DEP BUREAU:
DEP DIVISION:

AGENCY NOTIFIED: 3 - LOCAL FIRE MARSHAL
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 17 - REMOVED TANK
OTHER:

EMERGENCY MEASURES: 530 UST
RELEASE CLASS: 6 - PRIVATE

MEDIA AFFECTED: 6 - OTHER

WATERBODY AFFECTED: 9 - OTHER

Environmental FirstSearch
Site Detail Report

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 740 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: RICHETELLI REAL ESTATE
ADDRESS: 109 BRIDGEPORT
ORANGE CT 06477

CONTACT:
SOURCE: CT DEP

REV:
ID1: 2233-2236
ID2:
STATUS: NO
PHONE:

REPORT DATE: 02-02-90
MATERIAL: STEEL
LOW CAPACITY: 1000
PRODUCT: GAS

FED REG: YES
NUMBER OF TANKS: 4
HIGH CAPACITY: 1000

TANK REMOVED: YES
TANK RELEASE:

UNCONTROLLED RELEASE: YES
PIPING RELEASE: YES

EMERGENCY: YES
OVERFILL RELEASE: YES

REMEDIATION: SOIL REMOVAL
REFERRED:
COMMENT:

COMPLETE: NO

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 741 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: RICHETELLI REAL ESTATE
ADDRESS: 109 BRIDGEPORT
ORANGE CT 06413
CONTACT:
SOURCE: CT DEP

REV: 7/13/06
ID1: 30338
ID2: 2267
STATUS: INVESTIGATION
PHONE:

SITE INFORMATION

INCIDENT DATE: 2/2/1990
SPILL CASE ID:
SITS CASE ID:
UST SITE ID:

MATERIALS

MOTOR FUEL: 1
DIESEL: 0
GASOLINE: -1
OTHER 0

CAUSE

LEAK 0
TANK: 0
PIPING: 0
OVERFILL 0
REMOVAL: 0

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 742 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: U
ADDRESS: BULL HILL LN
ORANGE CT 06477
CONTACT:
SOURCE: CT DEP

REV:
ID1: 2255
ID2:
STATUS: NO
PHONE:

REPORT DATE: 03-30-93
MATERIAL: STEEL
LOW CAPACITY: 5000
PRODUCT: DF

FED REG: YES
NUMBER OF TANKS: 1
HIGH CAPACITY: 5000

TANK REMOVED: YES
TANK RELEASE:

UNCONTROLLED RELEASE: YES
PIPING RELEASE: YES

EMERGENCY:
OVERFILL RELEASE: YES

REMEDIATION: SOIL REMOVAL
REFERRED:
COMMENT:

COMPLETE: NO

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 744 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: WENDY FLYNN
ADDRESS: 233 HARTLAND TER
ORANGE CT 06477
CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/29/11
ID1: 200903603
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 1/6/2009
TIME OF RELEASE:

DISHCHARGER: WENDY FLYNN
CT

DISCHARGER S PHONE: 203 7999283
ACCEPTS RESPONSIBILITY: YES

MATERIAL RELEASED (GAL): 2 FUEL OIL 0

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

REPORT TIME: 1/6/2009 10:31:35 AM
REPORTED BY: ANN MARIE ZINGARO
REPORTER S PHONE: 1029391

AGENCY NOTIFIED: 3 - LOCAL FIRE MARSHAL
OTHER:
DEP BUREAU:
DEP DIVISION:

AGENCY NOTIFIED: 8 - DEP DISPATCH
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 17 - REMOVED TANK
OTHER:

EMERGENCY MEASURES: 550 UST

RELEASE CLASS: 6 - PRIVATE

MEDIA AFFECTED: 6 - OTHER

WATERBODY AFFECTED: 9 - OTHER

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 745 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: ORCHARD RD
ORANGE CT 06477
CONTACT: WOFFORD, RON
SOURCE: CT DEP

REV: 3/29/11
ID1: 9903079
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 5/15/1990
TIME OF RELEASE: 9:30:00 AM

DISHCHARGER:
CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

MATERIAL RELEASED (GAL): 2 FUEL OIL 0

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

REPORT TIME: 5/15/1990 10:48:31 AM
REPORTED BY: FIRE MARSHALL S OFFICE ANN DAVIS
REPORTER S PHONE: 8911050

ACTION TAKEN: 12 - PUMPED OUT
OTHER:

ACTION TAKEN: 17 - REMOVED TANK
OTHER:

ACTION TAKEN: 18 - SOIL REMOVED
OTHER:

EMERGENCY MEASURES: FUEL OIL ODOR - ABANDONED HOUSE NEARBY HAD PROBLEM CIRCA 1996

MEDIA AFFECTED: 1 - AIR

WATERBODY AFFECTED: 6 - CATCH BASIN

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 746 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: DANIELS RESIDENCE
ADDRESS: BARTON RD
MILFORD CT 06460
CONTACT: RON WOFFARD (OCSRD)
SOURCE: CT DEP

REV: 7/18/06
ID1: 43192
ID2: 0
STATUS: PENDING
PHONE:

SITE INFORMATION

INCIDENT DATE:
SPILL CASE ID: 0
SITS CASE ID:
UST SITE ID: 0

MATERIAL:

MOTOR FUEL: 0
DIESEL: 0
GASOLINE: 0
OTHER 0

CAUSE

LEAK 0
TANK: 0
PIPING: 0
OVERFILL 0
REMOVAL: 0

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 747 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: EGIDIO GIORDANO
ADDRESS: 54 DEVONSHIRE ROADE
MILFORD CT 06460
CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/29/11
ID1: 200505932
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 10/19/2009
TIME OF RELEASE:

DISHCHARGER: EGIDIO GIORDANO

CT

DISCHARGER S PHONE: 203 877972
ACCEPTS RESPONSIBILITY: YES

MATERIAL RELEASED (GAL): 2 FUEL OIL 1

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

REPORT TIME: 10/19/2009 8:53:34 AM
REPORTED BY: MONROE HASSELL
REPORTER S PHONE: 3314881

AGENCY NOTIFIED: 8 - DEP DISPATCH
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 20 - OTHER
OTHER: CT Tank

ACTION TAKEN: 3 - CONTAINED
OTHER:

ACTION TAKEN: 4 - CONTRACTED
OTHER:

EMERGENCY MEASURES:

RELEASE CLASS: 6 - PRIVATE

MEDIA AFFECTED: 5 - INSIDE BUILDING

WATERBODY AFFECTED: 9 - OTHER

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 751 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: RICK S AUTO SERVICE
ADDRESS: BOSTON POST RD
MILFORD CT 06460
CONTACT:
SOURCE: CT DEP

REV:
ID1: 1541-1545
ID2:
STATUS: NO
PHONE:

REPORT DATE: 06-12-90
MATERIAL: STEEL
LOW CAPACITY: 4000
PRODUCT: GAS

FILE REG: YES
NUMBER OF TANKS: 5
HIGH CAPACITY: 4000

TANK REMOVED: YES
TANK RELEASE:
UNCONTROLLED RELEASE: YES
PIPING RELEASE: YES
EMERGENCY: YES
OVERFILL RELEASE: YES

REMEDIATION: SOIL REMOVAL/HYDRO
REFERRED:
COMMENT:
COMPLETE: NO

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 748 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: ESTATE OF LOMBARD
ADDRESS: 7 TER
MILFORD CT 06460
CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/29/11
ID1: 200505448
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 9/25/2009
TIME OF RELEASE:

DISHCHARGER: ESTATE OF LOMBARD

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

MATERIAL RELEASED (GAL): 2 FUEL OIL 0

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

REPORT TIME: 9/25/2009 3:06:03 PM
REPORTED BY: ANN MARIE ZINGARO
REPORTER S PHONE: 8129391

AGENCY NOTIFIED: 8 - DEP DISPATCH
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 18 - SOIL REMOVED
OTHER:

ACTION TAKEN: 17 - REMOVED TANK
OTHER:

EMERGENCY MEASURES: 350 UST

RELEASE CLASS: 6 - PRIVATE

MEDIA AFFECTED: 6 - OTHER

WATERBODY AFFECTED: 9 - OTHER

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 750 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: PAUL DANIELS
ADDRESS: 162 KING HWY
MILFORD CT 06460

CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/29/11
ID1: 200907391
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 11/21/2008
TIME OF RELEASE:

DISCHARGER: PAUL DANIELS
404 ridge road
ORANGE CT 06477

DISCHARGER S PHONE: 203 7953462
ACCEPTS RESPONSIBILITY: YES

MATERIAL RELEASED (GAL): 2 FUEL OIL 0

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

REPORT TIME: 11/21/2008 2:03:59 PM
REPORTED BY: TRISHA NIELSON
REPORTER S PHONE: 1029391

AGENCY NOTIFIED: 3 - LOCAL FIRE MARSHAL
OTHER:
DEP BUREAU:
DEP DIVISION:

AGENCY NOTIFIED: 8 - DEP DISPATCH
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 17 - REMOVED TANK
OTHER:

EMERGENCY MEASURES: A 330 UST, AND CITY WATER.

RELEASE CLASS: 6 - PRIVATE

MEDIA AFFECTED: 6 - OTHER

WATERBODY AFFECTED: 9 - OTHER

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 749 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: GLYNN KRUGER
ADDRESS: 2 WEPAWAUG AVE
Milford CT 06460

CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/29/11
ID1: 200903221
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 6/17/2009
TIME OF RELEASE:

DISCHARGER: GLYNN KRUGER
73 hungry road
SEYMOUR CT 06483

DISCHARGER S PHONE: 203 8887317
ACCEPTS RESPONSIBILITY: YES

MATERIAL RELEASED (GAL): 2 FUEL OIL 0

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

CAUSE OF INCIDENT: 26 - OTHER
OTHER: tank pulled previously unknown date

REPORT TIME: 6/17/2009 11:12:21 AM
REPORTED BY: ROBERT MENERE
REPORTER S PHONE: 7433111

AGENCY NOTIFIED: 8 - DEP DISPATCH
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 20 - OTHER
OTHER: remediate 06/18/09

EMERGENCY MEASURES: CONTAMINATED SOIL.

RELEASE CLASS: 6 - PRIVATE

MEDIA AFFECTED: 6 - OTHER

WATERBODY AFFECTED: 9 - OTHER

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 743 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: UNKNOWN
ADDRESS: BULL HILL LN
ORANGE CT 06477

CONTACT:
SOURCE: CT DEP

REV: 9/18/96
ID1: 30671
ID2: 2530
STATUS: INVESTIGATION
PHONE:

SITE INFORMATION

INCIDENT DATE: 3/30/1993
SPILL CASE ID:
SITE CASE ID:
UST SITE ID:

MATERIAL:

MOTOR FUEL: -1
DIESEL: -1
GASOLINE: 0
OTHER 0

CAUSE:

LEAK 0
TANK: 0
PIPING: 0
OVERFILL 0
REMOVAL: 0

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

LUST

SEARCH ID: 735 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: ELAINE GLASS
ADDRESS: 738 OLD GRASSY HILL ROAD
ORANGE CT 06477

CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/29/11
ID1: 200903291
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 9/18/2009
TIME OF RELEASE:

DISCHARGER: ELAINE GLASS
CT

DISCHARGER S PHONE: 203 3892422
ACCEPTS RESPONSIBILITY:

MATERIAL RELEASED (GAL): 2 FUEL OIL 0

CAUSE OF INCIDENT: 3 - INGROUND TANK FAILURE
OTHER:

REPORT TIME: 9/18/2009 2:21:40 PM
REPORTED BY: DEBRA MOODY
REPORTER S PHONE: 2540109

AGENCY NOTIFIED: 8 - DEP DISPATCH
OTHER:
DEP BUREAU:
DEP DIVISION:

ACTION TAKEN: 4 - CONTRACTED
OTHER:

EMERGENCY MEASURES: 1000 GALLON LUST, SOIL SAMPLE TAKEN

RELEASE CLASS: 6 - PRIVATE

MEDIA AFFECTED: 4 - GROUND SURFACE

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

NFRAP

SEARCH ID: 1 **DIST/DIR:** 0.19 NW **ELEVATION:** 102 **MAP ID:** 12

NAME: ABB INDUSTRIAL SYSTEMS, INC.
ADDRESS: 88 MARSH HILL RD
ORANGE CT 06477

REV: 1/26/31
ID1: CTD981436293
ID2: 0102267
STATUS: NFRAP-N
PHONE:

CONTACT:
SOURCE: EPA

DESCRIPTION:

ACTION/QUALITY	AGENCY/RPS	START/RAA	END
ARCHIVE SITE	EPA In-House		12/31/1991
DISCOVERY	EPA Fund-Financed		9/1/1990
PRELIMINARY ASSESSMENT	State, Fund Financed		12/31/1991

NFRAP: NO FURTHER REMEDIAL ACTION PLANNED

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

OTHER

SEARCH ID: 83 **DIST/DIR:** 0.11 NW **ELEVATION:** 102 **MAP ID:** 2

NAME: THE SOUTHERN CT GAS COMPANY
ADDRESS: 60 MARSH HILL RD
ORANGE CT
NEW HAVEN

REV: 4/23/10
ID1: CTOT-0509-1974
ID2:
STATUS: PTP
PHONE:

CONTACT:
SOURCE: CT DEP

DETAILS NOT AVAILABLE

OTHER

SEARCH ID: 82 **DIST/DIR:** 0.15 SE **ELEVATION:** 68 **MAP ID:** 5

NAME: ROEBIC LABORATORIES INC.
ADDRESS: 25 CONNAIR RD
ORANGE CT
NEW HAVEN

REV: 4/23/10
ID1: CTOT-0509-923
ID2:
STATUS: PTP
PHONE:

CONTACT:
SOURCE: CT DEP

DETAILS NOT AVAILABLE

OTHER

SEARCH ID: 81 **DIST/DIR:** 0.15 SW **ELEVATION:** 96 **MAP ID:** 6

NAME: RICHARD BARRY FRANCIS, INC. (FORMER)
ADDRESS: 13 EXECUTIVE BLVD
ORANGE CT
NEW HAVEN

REV: 4/23/10
ID1: CTOT-0509-813
ID2:
STATUS: PTP
PHONE:

CONTACT:
SOURCE: CT DEP

DETAILS NOT AVAILABLE

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

OTHER

SEARCH ID: 79 **DIST/DIR:** 0.16 SE **ELEVATION:** 44 **MAP ID:** 8

NAME: REXAM INDUSTRIES CORP.
ADDRESS: 37 ROBINSON BLVD
ORANGE CT

REV: 4/23/10
ID1: 4850
ID2:
STATUS: PTP
PHONE:

CONTACT:
SOURCE: CT DEP

INFORMATION
ESTABLISHMENT: REXAM INDUSTRIES CORP.
SELLER: REXAM INDUSTRIES, CORP.
BUYER: 37 ROBINSON BLVD., L.L.C.

FORM: FORM I
ACKNOWLEDGED: 4/27/1997
CERTIFIED:
ECAF RECEIVED:
RECEIVED: 9/19/1995
RETURNED:
REVISED:
ECAF REVIEWED:

STATUS:

STAFF:

CERTIFIER:

FIRST PAYMENT: $200
SECOND PAYMENT: $

COMMENTS:

INFORMATION
ESTABLISHMENT: REXHAM CORPORATION
SELLER: REXHAM CORP.
BUYER: BOWATER INDUSTRIES, PLC

FORM: FORM I
ACKNOWLEDGED: 2/3/1988
CERTIFIED:
ECAF RECEIVED:
RECEIVED: 12/7/1987
RETURNED:
REVISED:
ECAF REVIEWED:

STATUS:

STAFF:

CERTIFIER:

FIRST PAYMENT: $
SECOND PAYMENT: $

COMMENTS:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

OTHER

SEARCH ID: 80 **DIST/DIR:** 0.16 SE **ELEVATION:** 44 **MAP ID:** 8

NAME: REXHAM CORPORATION
ADDRESS: 37 ROBINSON BLVD
ORANGE CT
NEW HAVEN

REV: 4/23/10
ID1: CTOT-0509-1387
ID2:
STATUS: PTP
PHONE:

CONTACT:
SOURCE: CT DEP

DETAILS NOT AVAILABLE

OTHER

SEARCH ID: 78 **DIST/DIR:** 0.16 SW **ELEVATION:** 106 **MAP ID:** 9

NAME: DATA SWITCH CORP. (FORMER)
ADDRESS: 12 CASCADE BLVD
ORANGE CT
NEW HAVEN

REV: 4/23/10
ID1: CTOT-0509-212
ID2:
STATUS: PTP
PHONE:

CONTACT:
SOURCE: CT DEP

DETAILS NOT AVAILABLE

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

OTHER

SEARCH ID: 74 **DIST/DIR:** 0.19 NW **ELEVATION:** 102 **MAP ID:** 12

NAME: ABB INDUSTRIAL SYSTEMS, INC.
ADDRESS: 88 MARSH HILL RD
ORANGE CT
CONTACT:
SOURCE: CT DEP

REV: 4/23/10
ID1: 952
ID2:
STATUS: PTP
PHONE:

SITE INFORMATION

WASTE TYPE1: CHLR VOC - CHLORINATED VOLATILE ORGANIC COMPOUNDS
WASTE TYPE2: CHLR SOLVENTS
WASTE TYPE3:

DISPOSAL METHOD: SPILL/DUMP TO GROUND

SAMPLE AVAILABLE: ND
LOCATION METHOD: UNK
OTHER DEP: WASTE
UPDATED BY: ROBINSON, R.
UPDATED PROGRAM: PTP - PROPERTY TRANSFER PROGRAM
UPDATED: 1/28/1998
SW CLASSIFICATION:
GW CLASSIFICATION:

COMMENTS: ECAF FILED 11/12/97

SITE NAMES

COMMENTS:

FEDERAL INFORMATION

ON CERCLIS:	YES	EPI SITE:	NO
ARCHIVE:	NO	ARCHIVE DATE:	
EPA REMOVAL:	NO	DEFERRED:	NO
ON NPL:	NO	PART NPL:	NO
RCRA STAT:	NOTI	RCRA PERMIT:	
FED FAC:	NO		

INVENTORY INFORMATION

REQUEST STAFF:	TARTARIS, S.	PROGRAM:	DumpA
DATE ADDED:	11/15/1991	ON INVENTORY:	YES
ASSESSED:	YES	87 GROUP:	
87 ORIGIN:		ON 87:	NO

INFORMATION

ESTABLISHMENT:	ABB INDUSTRIAL SYSTEMS, INC.		
SELLER:	ABB INDUSTRIAL SYSTEMS, INC.		
BUYER:	HALEPAS REALTY, INC.		
FORM:	FORM III	RECEIVED:	11/12/1997
ACKNOWLEDGED:	11/26/1997	RETURNED:	
CERTIFIED:		REVISED:	
ECAF RECEIVED:		ECAF REVIEWED:	12/8/1997

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

OTHER

SEARCH ID: 74 **DIST/DIR:** 0.19 NW **ELEVATION:** 102 **MAP ID:** 12

NAME: ABB INDUSTRIAL SYSTEMS, INC.
ADDRESS: 88 MARSH HILL RD
ORANGE CT
CONTACT:
SOURCE: CT DEP

REV: 4/23/10
ID1: 952
ID2:
STATUS: PTP
PHONE:

STATES: 1

STAFF: ROBINSON, R.

CERTIFIER: ABB ENVIRONMENTAL SERVICES, INC., TRANSFEROR/SISTER COMPANY

FIRST PAYMENT: $2000 SECOND PAYMENT: $

COMMENTS: ECAF RECEIVED 11/11/97

REFERRAL INFORMATION

SOURCE:	RCRA - DEP WASTE BUREAU - WASTE ENGINEERING and ENFORCEMENT DIVISION
RECEIVED:	9/18/1990
STAFF:	TARTARIS, S
PROGRAM:	PTP - PROPERTY TRANSFER PROGRAM
ASSIGNED:	9/19/1991
COMPLETED:	11/15/1991
OUTCOME:	INVENTORY

ASSESS INFORMATION

TYPE:	PA	STAFF:	TATARIS, S.
PROGRAM:	FFRE	ASSIGNED:	
DRAFT:	5/12/1991	REVIEWER:	EPA
REVIEWED:		FINAL:	12/11/1991
NFA:	YES		

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

OTHER

SEARCH ID: 77 **DIST/DIR:** 0.23 NW **ELEVATION:** 89 **MAP ID:** 17

NAME: AVIATION COMPONENTS/CBL TRUCKING, INC
ADDRESS: 99 MARSH HILL RD
ORANGE CT 06477
CONTACT:
SOURCE: CT DEP

REV: 2/1/04
ID1: CTOT-07-4-343
ID2:
STATUS:
PHONE:

SITE INFORMATION

SITE TYPE: PROPERTY TRANSFER FORM III
INVESTIGATION START DATE: 6/19/1998
REMEDIATION START DATE:
REMEDIATION COMPLETED DATE:

COMMENTS: PROJECTS

OTHER

SEARCH ID: 76 **DIST/DIR:** 0.23 NW **ELEVATION:** 89 **MAP ID:** 17

NAME: AVIATION COMPONENT SUPPORT COMPANY, LLC
ADDRESS: 99 MARSH HILL RD
ORANGE CT
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 4/23/10
ID1: CTOT-0599-2427
ID2:
STATUS: PTP
PHONE:

DETAILS NOT AVAILABLE

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

OTHER

SEARCH ID: 75 **DIST/DIR:** 0.23 NW **ELEVATION:** 89 **MAP ID:** 17

NAME: AVIATION COMPONENT SUPPORT COMPANY, LLC
ADDRESS: 99 MARSH HILL RD
ORANGE CT 06477
CONTACT:
SOURCE: CT DEP

REV: 2/1/04
ID1: CTOT-07-4-343
ID2:
STATUS:
PHONE:

SITE INFORMATION

SITE TYPE: PROPERTY TRANSFER FORM III
INVESTIGATION START DATE:
REMEDIATION START DATE:
REMEDIATION COMPLETED DATE:
ENVIRO
COMMENTS: PROJECTS

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

OTHER

SEARCH ID: 725 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: WESTFIELD INC.
ADDRESS: MARSH HILL RD
ORANGE CT
CONTACT:
SOURCE: CT DEP

REV: 4/23/10
ID1: 4854
ID2:
STATUS: PTP
PHONE:

INFORMATION
ESTABLISHMENT: WESTFIELD INC.
SELLER: WESTFIELD, INC.
BUYER: BINDLEY-WESTERN IND.

FORM: FORM R
ACKNOWLEDGED:
CERTIFIED:
ECAF RECEIVED:
RECEIVED: 7/1/1992
RETURNED: 9/24/1992
REVISED: 10/26/1992
ECAF REVIEWED:

STATUS:

STATE:

CERTIFIER:

FIRST PAYMENT: $4500
SECOND PAYMENT: $

COMMENTS: SHOULD BE RI

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

OTHER

SEARCH ID: 722 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: AVIATION COMPONENTS / CBL TRUCKING, INC.
ADDRESS: 95 MARSH HILL / 11 FRONTAGE RD
ORANGE CT
CONTACT:
SOURCE: CT DEP

REV: 4/23/10
ID1: CTOT-0509-2426
ID2:
STATUS: PTP
PHONE:

DETAILS NOT AVAILABLE

OTHER

SEARCH ID: 723 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: BAYER PHARMACEUTICALS CORPORATION
ADDRESS: 11 11 FRONTAGE ROAD and 95 MARSH HILL RD RD
ORANGE CT
CONTACT:
SOURCE: CT DEP

REV: 6/23/10
ID1: CTOT-0509-140
ID2:
STATUS: PTP
PHONE:

DETAILS NOT AVAILABLE

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRAGN

SEARCH ID: 3 **DIST/DIR:** 0.16 SE **ELEVATION:** 44 **MAP ID:** 8

NAME: L C D LIGHTING
ADDRESS: 37 ROBINSON BLVD
ORANGE CT 06477
CONTACT:
SOURCE: EPA

REV: 1/1/11
ID1: CTD983866187
ID2:
STATUS: LGN
PHONE:

SITE INFORMATION

UNIVERSE INFORMATION:

GOVERNMENT PERFORMANCE AND RESULTS ACT (GPRA)

GPRA PERMIT: *N - NO*
GPRA POST CLOSURE: *N - NO*
GPRA CA: *N - NO*
GOVERNMENT PERFORMANCE AND RESULTS ACT (GPRA)

GPRA PERMIT: *N - NO*
GPRA POST CLOSURE: *N - NO*
GPRA CA: *N - NO*
GPRA COMPLIANCE MONITORING and ENFORCEMENT: *N - NO*

SUBJECT TO CORRECTIVE ACTION (SUBJCA)

SUBJCA: N - NO
SUBJCA TSD 3004: N - NO
SUBJCA NON TSD: N - NO

SIGNIFICANT NON-COMPLIANCE(SNC): N - NO
BEGINNING OF THE YEAR SNC: *N - NO*
PERMIT WORKLOAD: ---
CLOSURE WORKLOAD: ---
POST CLOSURE WORKLOAD: ---
PERMITTING /CLOSURE/POST-CLOSURE PROGRESS: ---
CORRECTIVE ACTION WORKLOAD: N - NO
GENERATOR STATUS: LQG - LARGE QUANTITY GENERATORS: GENERATES MORE THAN 1000 KG/MONTH OF HAZARDOUS WASTE

NAIC INFORMATION

33911 - ELECTRIC LAMP BULB AND PART MANUFACTURING

ENFORCEMENT INFORMATION:

AGENCY: S - STATE DATE: 3/23/1998
TYPE: 121 - FIELD NOTICE OF VIOLATION

AGENCY: S - STATE DATE: 7/16/1998
TYPE: 510 - CIVIL ACTION FOR COMPLIANCE

AGENCY: S - STATE DATE: 4/1/2003
TYPE: 620 - FINAL JUDICIAL ORDERS

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRAGN

SEARCH ID: 3 **DIST/DIR:** 0.16 SE **ELEVATION:** 44 **MAP ID:** 8

NAME: L C D LIGHTING
ADDRESS: 37 ROBINSON BLVD
ORANGE CT 06477
CONTACT:
SOURCE: EPA

REV: 1/1/11
ID1: CTD983866187
ID2:
STATUS: LGN
PHONE:

VIOLATION INFORMATION:

VIOLATION NUMBER: 0001 RESPONSIBLE: S - STATE
DETERMINED: 3/23/1998 DETERMINED BY: S - STATE
CITATION: 265.52(c) RESOLVED: 3/2/2001
TYPE: YCONTINGENCY PLAN

VIOLATION NUMBER: 0002 RESPONSIBLE: S - STATE
DETERMINED: 3/23/1998 DETERMINED BY: S - STATE
CITATION: 265.52(f) RESOLVED: 3/2/2001
TYPE: YCONTINGENCY PLAN

VIOLATION NUMBER: 0003 RESPONSIBLE: S - STATE
DETERMINED: 3/23/1998 DETERMINED BY: S - STATE
CITATION: 262.34(a)(2) RESOLVED: 3/2/2001
TYPE: CONTAINER MGT=SAT LITE ACCUMS/CONTAINER

VIOLATION NUMBER: 0004 RESPONSIBLE: S - STATE
DETERMINED: 3/23/1998 DETERMINED BY: S - STATE
CITATION: 270 RESOLVED: 3/2/2001
TYPE: TSD-GENERAL STANDARDS

VIOLATION NUMBER: 0005 RESPONSIBLE: S - STATE
DETERMINED: 3/23/1998 DETERMINED BY: S - STATE
CITATION: 262.11 RESOLVED: 3/2/2001
TYPE: HAZARDOUS WASTE DETERMINATIONS

VIOLATION NUMBER: 0006 RESPONSIBLE: S - STATE
DETERMINED: 3/23/1998 DETERMINED BY: S - STATE
CITATION: 262.34(a)(2) RESOLVED: 3/2/2001
TYPE: CONTAINER MGT=SAT LITE ACCUMS/CONTAINER

VIOLATION NUMBER: 0007 RESPONSIBLE: S - STATE
DETERMINED: 3/23/1998 DETERMINED BY: S - STATE
CITATION: 22a-449(c)-102(a)(2)(B) RESOLVED: 3/2/2001
TYPE: CONTAINER MGT=SAT LITE ACCUMS/CONTAINER

VIOLATION NUMBER: 0008 RESPONSIBLE: S - STATE
DETERMINED: 3/23/1998 DETERMINED BY: S - STATE
CITATION: 265.173(a) RESOLVED: 3/2/2001
TYPE: CONTAINER MGT=SAT LITE ACCUMS/CONTAINER

VIOLATION NUMBER: 0009 RESPONSIBLE: S - STATE
DETERMINED: 3/23/1998 DETERMINED BY: S - STATE
CITATION: 265.53(b) RESOLVED: 3/2/2001
TYPE: YCONTINGENCY PLAN

VIOLATION NUMBER: 0010 RESPONSIBLE: S - STATE
DETERMINED: 3/23/1998 DETERMINED BY: S - STATE
CITATION: 265.15(d) RESOLVED: 3/2/2001
TYPE: GENERATOR INSPECTION SCHEDULE and LOG

VIOLATION NUMBER: 0011 RESPONSIBLE: S - STATE

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRAGN

SEARCH ID: 3 **DIST/DIR:** 0.16 SE **ELEVATION:** 44 **MAP ID:** 8

NAME: L C D LIGHTING
ADDRESS: 33 ROBINSON BLVD
ORANGE CT 06477
CONTACT:
SOURCE: EPA

REV: 1/11/11
ID1: CTD983866187
ID2:
STATUS: LGN
PHONE:

DETERMINED: 3/23/1998 **DETERMINED BY:** S - STATE
CITATION: 270.1(c) **RESOLVED:** 3/2/2001
TYPE: TSD-GENERAL STANDARDS

VIOLATION NUMBER: 0012 **RESPONSIBLE:** S - STATE
DETERMINED: 3/2/2001 **DETERMINED BY:** S - STATE
CITATION: 262.34(c)(2) **RESOLVED:** 3/2/2001
TYPE: CONTAINER MGT-SAT LITE ACCUMS/CONTAINER

VIOLATION NUMBER: 0013 **RESPONSIBLE:** S - STATE
DETERMINED: 3/2/2001 **DETERMINED BY:** S - STATE
CITATION: 22a-449(c)-102(a)(2)(B) **RESOLVED:** 3/2/2001
TYPE: CONTAINER MGT-SAT LITE ACCUMS/CONTAINER

VIOLATION NUMBER: 0014 **RESPONSIBLE:** S - STATE
DETERMINED: 9/17/2002 **DETERMINED BY:** S - STATE
CITATION: 262.11 **RESOLVED:** 11/14/2002
TYPE: HAZARDOUS WASTE DETERMINATIONS

HAZARDOUS WASTE INFORMATION:

D009
Corrosive waste
Ignitable waste
The following spent non-halogenated solvents: Xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/ blends containing, before use, only the above spent
Mercury
Lead
Barium

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRAGN

SEARCH ID: 4 **DIST/DIR:** 0.17 SW **ELEVATION:** 91 **MAP ID:** 10

NAME: L S NEON INC
ADDRESS: 11 CASCADE BLVD
ORANGE CT 06477
NEW HAVEN
CONTACT: EUGENE CZAKO
SOURCE: EPA

REV: 10/3/02
ID1: CT5000000448
ID2:
STATUS: LGN
PHONE: 2038777877

CT MANIFEST INFORMATION

MANIFEST ID	SHIPPED	TSD ID	TRANS ID	QTY	MATERIAL
CTF0244179	02/03/1994	CTD072138969	CTD983872748	0110 G	WASTE BUTYL ACETATE LIQUID, NOS
CTF0244180	02/17/1994	CTD072138969	CTD983872748	0165 G	WASTE BUTYL ACETATE LIQUID, NOS
CTF0208019	03/01/1994	CTD072138969	CTD983872748	0110 G	WASTE BUTYL ACETATE, LIQUID, NOS
CTF0208081	03/23/1994	CTD072138969	CTD983872748	0055 G	WASTE BUTYL ACETATE, LIQUID, NOS
CTF0005370	04/06/1994	CTD072138969	CTD983872748	0110 G	WASTE FLAMMABLE LIQUID
MAG128281	04/15/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
MAG128210	04/21/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0175160	05/02/1994	CTD072138969	CTD072138969	0055 G	WASTEBUTYL ACETATES
CTF0263233	05/11/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0253046	05/17/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
MAH098151	05/25/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
MAH097769	06/07/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0336730	06/21/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0356419	06/29/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0356431	07/07/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0356909	07/22/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0357004	08/10/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0357036	08/25/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETETE
CTF0337123	09/01/1994	CTD072138969	CTD072138969	0050 G	WASTE BUTYL ACETATE
CTF0370617	09/14/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0370703	09/26/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0370777	10/04/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0370832	10/12/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRAGN

SEARCH ID: 4 **DIST/DIR:** 0.17 SW **ELEVATION:** 91 **MAP ID:** 10

NAME: L S NEON INC
ADDRESS: 11 CASCADE BLVD
ORANGE CT 06477
NEW HAVEN
CONTACT: EUGENE CZAKO
SOURCE: EPA

REV: 10/3/02
ID1: CT5000000448
ID2:
STATUS: LGN
PHONE: 2038777877

CTF0370850	10/19/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0370995	10/28/1994	CTD072138969	CTD072138969	0055 G	WASTE BUBTYL ACETATE
CTF0372237	11/08/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0372406	11/15/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0372321	11/22/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0372369	12/05/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0372514	12/13/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0372543	12/20/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0372653	12/30/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0372756	01/13/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0372799	01/20/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0372843	02/03/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0398337	02/10/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0398339	02/17/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0413672	02/24/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0413443	03/03/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0413420	03/10/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0413353	03/17/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0413577	03/24/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0409410	03/31/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0409435	04/07/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0409546	04/21/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0409618	04/28/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0409747	05/05/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0409777	05/12/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0409810	05/19/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE

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Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRAGN

SEARCH ID: 4 **DIST/DIR:** 0.17 SW **ELEVATION:** 91 **MAP ID:** 10

NAME: L S NEON INC
ADDRESS: 11 CASCADE BLVD
ORANGE CT 06477
NEW HAVEN
CONTACT: EUGENE CZAKO
SOURCE: EPA

REV: 10/3/02
ID1: CT5000000448
ID2:
STATUS: LGN
PHONE: 2038777877

CTF0409437	05/26/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0409894	06/02/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0409921	06/09/1995	CTD072138969	CTD072138969	0055 G	WASTE XYLENE
CTF0397216	06/13/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0420077	06/23/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0410847	06/30/1995	CTD072138969	CTD072138969	0400 P	WASTE BUTYL ACETATE
CTF0410859	07/14/1995	CTD072138969	CTD072138969	0300 P	WASTE BUTYL ACETATES
CTF0410909	07/21/1995	CTD072138969	CTD072138969	0400 P	WASTE BUTYL ACETATES
CTF0410972	07/28/1995	CTD072138969	CTD072138969	0450 P	WASTE BUTYL ACETATE
CTF0423511	08/11/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0425387	08/18/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0425501	08/25/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0423529	09/01/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0423548	09/08/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0429714	09/15/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0429270	09/22/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0429322	09/29/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0429414	10/13/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0429460	10/20/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0429502	10/27/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0429533	11/03/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0429577	11/10/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0429578	11/17/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0429725	12/01/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0398419	12/08/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0392963	12/22/1995	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
CTF0392996	01/05/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETAE

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Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRAGN

SEARCH ID: 4 **DIST/DIR:** 0.17 SW **ELEVATION:** 91 **MAP ID:** 10

NAME: L S NEON INC
ADDRESS: 11 CASCADE BLVD
ORANGE CT 06477
NEW HAVEN
CONTACT: EUGENE CZAKO
SOURCE: EPA

REV: 10/8/92
ID1: CTD000000441
ID2:
STATUS: LGN
PHONE: 2034777877

CTF0392077	01/12/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0392907	01/19/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATEE
CTF0393160	01/26/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0510115	02/02/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0510907	02/09/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0510930	02/16/1996	CTD072138969	CTD072138969	0055 G	BUTYL ACETATES
CTF0510988	02/23/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0511073	03/01/1996	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0511139	03/08/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0511173	03/15/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0511198	03/22/1996	CTD072138969	CTD072138969	0055 G	WASTE BETYL ACETATES
CTF0334612	04/05/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0335597	04/12/1996	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0335680	04/19/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTY; ACETATES
CTF0333591	04/03/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0334748	05/10/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0334781	05/17/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTY: ACETATE
CTF0334896	05/31/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0334967	06/14/1996	CTD072138969	CTD072138969	0055 G	BUTYL ACETATES
CTF0334937	06/14/1996	CTD072138969	CTD072138969	0055 G	BUTYL ACETATES
CTF0334992	06/21/1996	CTD072138969	CTD072138969	0055 G	WASTER BUTYL ACETATE
CTF0335055	06/28/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0335037	07/12/1996	CTD072138969	CTD072138969	0165 G	WASTE BUTYL ACETATES
CTF0335122	07/19/1996	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0521809	07/24/1996	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRAGN

SEARCH ID: 2 **DIST/DIR:** 0.28 SW **ELEVATION:** 56 **MAP ID:** 20

NAME: CYRO IND
ADDRESS: 23 EXECUTIVE BLVD
ORANGE CT 06477
CONTACT: ROBERT SIEGLER
SOURCE: EPA

REV: 9/22/95
ID1: CTD981203581
STATUS: VGN
PHONE: 2037956081

CT MANIFEST INFORMATION

MANIFEST ID	SHIPPED	TSD ID	TRANS ID	QTY	MATERIAL
NYB2118046-2	02/23/1990	NYD049178296	NYD049178296	0160 P	WASTE, FLAMMABLE LIQUID
NYB2118046-2	02/23/1990	NYD049178296	NYD049178296	0160 P	WASTE LIQ NOS
NYB2118046-2	02/23/1990	NYD049178296	NYD049178296	0080 P	WASTE CORROSIE LIQUID, NOS MATERIAL
NYB2118046-2	02/23/1990	NYD049178296	NYD049178296	0080 P	WASTE LIQ MAT L NOS
NYB2119270-6	09/26/1990	NYD049178296	NYD049178296	0100 P	WASTE CORROSIVE LIQUID NOS
NYB2119270-6	09/26/1990	NYD049178296	NYD049178296	0330 P	WASTE FLAMMABLE LIQUID NOS
NYB2217353-7	01/31/1991	NYD049178296	NYD049178296	0170 P	WASTE POISON-B, NOS LIQUID
NYB2217353-7	01/31/1991	NYD049178296	NYD049178296	0221 P	WASTE LIQUID, NOS MATERIAL
NYB2217353-7	01/31/1991	NYD049178296	NYD049178296	0150 P	WASTE FLAMMABLE LIQUID, NOS
NYB2119353-6	06/27/1991	NYD049178296	NYD049178296	0400 P	WASTE FLAMMABLE LIQUID, NOS
NYB2119353-6	06/27/1991	NYD049178296	NYD049178296	0200 P	WASTE CORROSIVE LIQUID, NOS
NYB2119353-6	06/27/1991	NYD049178296	NYD049178296	0033 P	WASTE ORGANIC PEROXIDE SOLUTION, NOS
NYB3793182-1	01/30/1992	NYD049178296	NYD049178296	0150 P	W LIQ NOS MTRL ACETIC/ACID-METHYLENE CHL
NYB3793182-1	01/30/1992	NYD049178296	NYD049178296	0150 P	WST LIQ NOS. ACETONE/TETRAHYDROFURAN
NYB3793182-1	01/30/1992	NYD049178296	NYD049178296	0250 P	HZRD WST LIQUID NOS, CHLOROFORM METHANOL
NYB4003396	09/21/1992	NYD049178296	NYD049178296	0250 P	WASTE FLAMMABLE LIQUID
NYB4008539-6	09/21/1992	NYD049178296	NYD049178296	0250 P	WASTE FLAMMABLE LIQUID, NOS
NYB4003396	09/21/1992	NYD049178296	NYD049178296	0100 P	WASTE FLAMMABLE LIQUID
NYB4008539-6	09/21/1992	NYD049178296	NYD049178296	0100 P	WASTE FLAMMABLE LIQUID, NOS
MAH267856	04/21/1993	MAD980523203	MAD980523203	0045 G	WASTE FLAMMABLE LIQUID POISONOUS, NOS
MAH267856	04/21/1993	MAD980523203	MAD980523203	0003 G	WASTE FLAMMABLE LIQUID, NOS
MAH267856	04/21/1993	MAD980523203	MAD980523203	0001 P	WASTE AEROSOLS
MAH343722	03/17/1994	MAD980523203	MAD039322250	0030 G	W POISONOUS LIQ NOS, METHYLENE CHLORIDE

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Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRAGN

SEARCH ID: 2 **DIST/DIR:** 0.28 SW **ELEVATION:** 56 **MAP ID:** 20

NAME: CYRO IND
ADDRESS: 23 EXECUTIVE BLVD
ORANGE CT 06477
CONTACT: ROBERT SIEGLER
SOURCE: EPA

REV: 9/22/95
ID1: CTD981203581
STATUS: VGN
PHONE: 2037956081

MAH343722	03/17/1994	MAD980523203	MAD039322250	0003 G	WASTE FLAMMABLE LIQUID, NOS
MAH343722	03/17/1994	MAD980523203	MAD039322250	0007 G	WASTE FLAMMABLE LIQUID NOS, ACETONE
MAH343722	03/17/1994	MAD980523203	MAD039322250	0040 G	WASTE METHYLENE CHLORIDE, LIQUID NOS
MAH370672	09/09/1994	MAD980523203	MAD039322250	0006 P	WASTE AEROSOLS
MAH370672	09/09/1994	MAD980523203	MAD039322250	0014 G	WASTE FLAMMABLE LIQUID
MAH370672	09/09/1994	MAD980523203	MAD039322250	0020 G	WASTE CORROSIVE LIQUID
CTF0366521	09/09/1994	CTD000684488	MAD039322250	0050 G	WASTE FLAMMABLE LIQUID

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRAGN

SEARCH ID: 5 **DIST/DIR:** 0.33 SW **ELEVATION:** 30 **MAP ID:** 23

NAME: LIGHT SOURCES INC
ADDRESS: 70 CASCADE BLVD
MILFORD CT 06460
CONTACT:
SOURCE: EPA

REV: 1/1/11
ID1: CTD983873100
ID2:
STATUS: SGN
PHONE:

CT MANIFEST INFORMATION

MANIFEST ID	SHIPPED	TSD ID	TRANS ID	QTY	MATERIAL
CTC0284499	04/28/1990	CTD072138969	CTD980321290	0330 G	FLAMMABLE LIQUID, NOS
CTC0297237	06/06/1990	CTD072138969	CTD983872748	0275 G	WASTE FLAMMABLE LIQUID, NOS MATERIAL
CTC0303786	06/27/1990	CTD072138969	CTD983872748	0275 G	FALAMMABLE LIQUID, NOS
CTF0078185	08/17/1990	CTD072138969	CTD983872748	0330 G	WASTE FLAMMABLE LIQUID, NOS
CTF0061263	01/15/1991	CTD072138969	CTD983872748	0275 G	WASTE LIQ NOS BUTYL ACETATE
CTF0012910	04/24/1991	CTD072138969	CTD983872748	0550 G	WASTE BUTYL ACETATE, LIQUID, NOS
CTF0012910	04/24/1991	CTD072138969	CTD983872748	0550 G	WASTE LIQ NOS BUTYL ACETATE
CTF0012970	06/13/1991	CTD072138969	CTD983872748	0265 G	WASTE BUTYL ACET
CTF0012982	07/03/1991	CTD072138969	CTD983872748	0720 G	WASTE BUTYL ACETATE, LIQUID, NOS
CTF0012982	07/03/1991	CTD072138969	CTD983872748	0220 G	WASTE LIQUID NOS, BUTYL ACETATE
CTF0074992	04/29/1991	CTD072138969	CTD983872748	0220 G	WASTE LIQUID NOS, BUTYL ACETATE
CTF0074980	10/08/1991	CTD072138969	CTD983872748	0220 G	WASTE LIQUID NOS, BUTYL ACETATE
CTF0074936	11/13/1991	CTD072138969	CTD983872748	0165 G	WASTE LIQUID NOS, BUTYL ACETATE
CTF0148111	01/22/1992	CTD072138969	CTD983872748	0275 G	WASTE LIQUID NOS, BUTYL ACETATE
CTF0148136	02/21/1992	CTD021116819	CTD983872748	0550 G	WASTE FLAMMABLE LIQUID, NOS
CTF0148188	03/11/1992	CTD072138969	CTD983872748	0275 G	WASTE LIQUID NOS, BUTYL ACETATE
CTF0129348	05/13/1992	CTD072138969	CTD983872748	0275 G	WASTE FLAMMABLE LIQUID
CTF0129284	06/18/1992	CTD072138969	CTD983872748	0330 G	WASTE FLAMMABLE LIQUID, NOS
CTF0124310	07/21/1992	CTD072138969	CTD983872748	0330 G	WASTE FLAMMABLE LIQUID, NOS
CTF0124310	07/21/1992	CTD072138969	CTD983872748	0330 G	WASTE FLAMMABLE LIQUID
CTF0124534	08/19/1992	CTD072138969	CTD983872748	0330 G	WASTE LIQ NOS BUTYL ACETATE
CTF0124579	09/21/1992	CTD072138969	CTD983872748	0385 G	WASTE FLAMMABLE LIQUID, NOS
CTF0124579	09/21/1992	CTD072138969	CTD983872748	0385 G	WASTE FLAMMABLE LIQUID

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Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRAGN

SEARCH ID: 5 **DIST/DIR:** 0.33 SW **ELEVATION:** 50 **MAP ID:** 23

NAME: LIGHT SOURCES INC
ADDRESS: 70 CASCADE BLVD
MILFORD CT 06460

REV: 1/11/11
ID1: CTD983873100
ID2:
STATUS: SGN
PHONE:

CONTACT:
SOURCE: EPA

CTF0142443	11/11/1992	CTD980667927	ILD051060408	0086 P	WASTE COMBUSTIBLE LIQUID, NOS
CTF0139291	11/17/1992	CTD072138969	CTD983872748	0333 G	W FLAMMABLE LIQUID NOS, BUTYL ACETATE
CTF0131251	12/18/1992	CTD072138969	CTD983872748	0495 G	WASTE FLAMMABLE LIQUID, NOS
CTF0139704	01/05/1993	CTD980667927	ILD051060408	0019 G	WASTE COMBUSTIBLE LIQUID, NOS
CTF0223412	01/29/1993	CTD072138969	CTD983872748	0495 G	WASTE FLAMMABLE LIQUID, NOS
CTF0219033	02/26/1993	CTD980667927	ILD051060408	0016 G	WASTE COMBUSTIBLE LIQUID
CTF0226105	03/03/1993	CTD072138969	CTD983872748	0550 G	WASTE FLAMMABLE LIQUID
CTF0226146	04/02/1993	CTD072138969	CTD983872748	0440 G	WASTE BUTYL ACETATE LIQUID, NOS
CTF0012910	04/24/1993	CTD072138969	CTD983872748	0550 G	WASTE BUTYL ACETATE, LIQUID, NOS
CTF0012910	04/24/1993	CTD072138969	CTD983872748	0550 G	WASTE LIQ NOS BUTYL ACETATE
CTF0222965	04/27/1993	CTD980667927	ILD051060408	0016 G	WASTE PETROLEUM NAPHTHA LIQUID, NOS
CTF0281164	04/30/1993	CTD072138969	CTD983872748	0330 G	WASTE FLAMMABLE LIQUID, NOS
CTF0281094	06/01/1993	CTD072138969	CTD983872748	0440 G	WASTE BUTYL ACETATE, FLAMMABLE LIQUID
CTF0211995	06/23/1993	CTD980667927	ILD981908102	0016 G	WASTE COMBUSTIBLE LIQUID, NOS
CTF0012982	07/03/1993	CTD072138969	CTD983872748	0220 G	WASTE BUTYL ACETATE, LIQUID, NOS
CTF0012982	07/03/1993	CTD072138969	CTD983872748	0220 G	WASTE LIQUID NOS, BUTYL ACETATE
CTF0272242	07/08/1993	CTD072138969	CTD983872748	0440 G	WASTE FLAMMABLE LIQUID
CTF0278719	07/19/1993	CTD072138969	CTD983872748	0535 G	WASTE FLAMMABLE LIQUID
CTF0124579	07/21/1993	CTD072138969	CTD983872748	0385 G	WASTE FLAMMABLE LIQUID
CTF0124579	07/21/1993	CTD072138969	CTD983872748	0385 G	WASTE FLAMMABLE LIQUID, NOS
CTF0124510	07/21/1993	CTD072138969	CTD983872748	0330 G	WASTE FLAMMABLE LIQUID, NOS
CTF0124510	07/21/1993	CTD072138969	CTD983872748	0330 G	WASTE FLAMMABLE LIQUID
CTF0229232	08/18/1993	CTD980667927	ILD981908102	0015 G	WASTE PETROLEUM NAPHTHA LIQUID, NOS
CTF0216686	08/27/1993	CTD072138969	CTD983872748	0440 G	WASTE BUTYL ACETATE, FLAMMABLE LIQUID
MAF532224	09/20/1993	CTD072138969	CTD983872748	0165 G	WASTE FLAMMABLE LIQUID
CTF0312242	09/27/1993	CTD072138969	CTD983872748	0165 G	W BUTYL ACETATE, FLAMMABLE LIQUID, NOS

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRAGN

SEARCH ID: 5 **DIST/DIR:** 0.33 SW **ELEVATION:** 50 **MAP ID:** 23

NAME: LIGHT SOURCES INC
ADDRESS: 70 CASCADE BLVD
MILFORD CT 06460

REV: 1/11/11
ID1: CTD983873100
ID2:
STATUS: SGN
PHONE:

CONTACT:
SOURCE: EPA

CTF0312806	10/06/1993	CTD072138969	CTD983872748	0165 G	WASTE FLAMMABLE LIQUID, NOS
CTF0301438	10/13/1993	CTD980667927	ILD981908202	0015 G	WASTE COMBUSTIBLE LIQUID
CTF0312827	10/26/1993	CTD072138969	CTD983872748	0110 G	WASTE FLAMMABLE LIQUID, NOS
CTF0312838	11/01/1993	CTD072138969	CTD983872748	0165 G	WASTE FLAMMABLE LIQUIDS
CTF0253638	11/24/1993	CTD072138969	CTD983872748	0110 G	WASTE FLAMMABLE LIQUID
CTF0001229	11/26/1993	CTD072138969	CTD983872748	0495 G	FLAMMABLE LIQUID
CTF0251235	12/01/1993	CTD072138969	CTD983872748	0165 G	WASTE FLAMMABLE LIQUID
CTF0300462	12/09/1993	CTD980667927	ILD981908202	0016 G	WASTE COMBUSTIBLE LIQUID
CTF0233010	12/16/1993	CTD072138969	CTD983872748	0110 G	WASTE FLAMMABLE LIQUIDS
CTF0244121	01/06/1994	CTD072138969	CTD983872748	0220 G	WASTE FLAMMABLE LIQUID
CTF0244103	01/21/1994	CTD072138969	CTD983872748	0220 G	WASTE FLAMMABLE LIQUID
CTF0296593	02/01/1994	CTD980667927	ILD981908202	0015 G	WASTE COMBUSTIBLE LIQUID, NOS
CTF0244179	02/03/1994	CTD072138969	CTD983872748	0165 G	WASTE BUTYL ACETATE LIQUID, NOS
CTF0244189	02/17/1994	CTD072138969	CTD983872748	0220 G	WASTE BUTYL ACETATE LIQUID, NOS
CTF0208017	03/01/1994	CTD072138969	CTD983872748	0165 G	WASTE BUTYL ACETATE, LIQUID, NOS
CTF0208071	03/23/1994	CTD072138969	CTD983872748	0110 G	WASTE BUTYL ACETATE, LIQUID NOS
CTF0291128	04/04/1994	CTD980667927	ILD981908202	0015 G	WASTE COMBUSTIBLE LIQUID, NOS
CTF0005369	04/06/1994	CTD072138969	CTD983872748	0165 G	WASTE FLAMMABLE LIQUID
MAG128282	04/13/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
MAG129209	04/21/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0175180	05/02/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0263256	05/11/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
CTF0263250	05/17/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
MAH064710	05/23/1994	CTD980667927	ILD981908202	0015 G	WASTE COMBUSTIBLE LIQUID, NOS
MAH398775	05/25/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
MAH387768	06/07/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0356731	06/21/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES

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Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRAGN

SEARCH ID: 5 **DIST/DIR:** 0.33 SW **ELEVATION:** 50 **MAP ID:** 23

NAME: LIGHT SOURCES INC
ADDRESS: 70 CASCADE BLVD
MILFORD CT 06460

REV: 1/11/11
ID1: CTD983873100
ID2:
STATUS: SGN
PHONE:

CONTACT:
SOURCE: EPA

CTF0356411	06/29/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0356850	07/07/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0356478	07/14/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0326202	07/20/1994	CTD980667927	ILD981908202	0016 G	WASTE COMBUSTIBLE LIQUID, NOS
CTF0356908	07/22/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
CTF0357005	08/10/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
CTF0357085	08/23/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
CTF0337104	09/01/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0357158	09/09/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0355406	09/14/1994	CTD980667927	ILD981908202	0015 G	WASTE COMBUSTIBLE LIQUID, NOS
CTF0370416	09/14/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0370642	09/19/1994	CTD072138969	CTD072138969	0110 G	WASTE FLAMMABLE LIQUID, NOS
CTF0370702	09/26/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0370780	10/04/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
CTF0370851	10/12/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0370891	10/19/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0370994	10/25/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
MAH099919	11/07/1994	CTD980667927	ILD981908202	0016 G	WASTE COMBUSTIBLE LIQUID
CTF0372256	11/08/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
CTF0372085	11/15/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0372322	11/22/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0372368	12/05/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0372515	12/12/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0372584	12/20/1994	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0372632	12/30/1994	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
MAH111112	01/05/1995	CTD980667927	ILD981908202	0016 G	WASTE COMBUSTIBLE LIQUID, NOS

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Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRAGN

SEARCH ID: 5 **DIST/DIR:** 0.33 SW **ELEVATION:** 50 **MAP ID:** 23

NAME: LIGHT SOURCES INC
ADDRESS: 70 CASCADE BLVD
MILFORD CT 06460

REV: 1/11/11
ID1: CTD983873100
ID2:
STATUS: SGN
PHONE:

CONTACT:
SOURCE: EPA

CTF0372753	01/13/1995	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0398215	01/27/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0398237	02/03/1995	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0398336	02/10/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0398388	02/17/1995	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0411673	02/24/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0415439	03/03/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0415431	03/10/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0415354	03/17/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0415376	03/24/1995	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
CTF0409411	03/31/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0409439	04/07/1995	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0409548	04/21/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATE
CTF0409548	04/21/1995	CTD072138969	CTD072138969	0055 G	WASTE FLAMMABLE LIQUID NOS
CTF0409817	04/28/1995	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATE
CTF0467203	05/05/1995	CTD980667927	ILD981908202	0016 G	WASTE COMBUSTIBLE LIQUID NOS
CTF0409746	05/05/1995	CTD072138969	CTD072138969	0055 G	WASTE FLAMMABLE LIQUID NOS
CTF0409778	05/12/1995	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
CTF0409809	05/19/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0409491	05/26/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0409901	06/02/1995	CTD072138969	CTD072138969	0110 G	WASTE BUTYL ACETATES
CTF0409923	06/09/1995	CTD072138969	CTD072138969	0055 G	WASTE XYLENE
CTF0390640	06/16/1995	CTD072138969	CTD072138969	0055 G	WASTE FLAMMABLE LIQUID NOS
CTF0420078	06/23/1995	CTD072138969	CTD072138969	0055 G	WASTE BUTYL ACETATES
CTF0470792	06/27/1995	CTD980667927	ILD981908202	0016 G	WASTE COMBUSTIBLE LIQUID NOS
CTF0410836	06/30/1995	CTD072138969	CTD072138969	0300 P	WASTE BUCYL ACETATES
CTF0410874	07/07/1995	CTD072138969	CTD072138969	0400 P	WASTE BUTYL ACETATES

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Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRAGN

SEARCH ID: 3 **DIST/DIR:** 0.33 SW **ELEVATION:** 50 **MAP ID:** 23

NAME: LIGHT SOURCES INC
ADDRESS: 70 CASCADE BLVD
MILFORD CT 06460

CONTACT:
SOURCE: EPA

REV: 1/1/91
ID1: CTD983179100
ID2:
STATUS: SGN
PHONE:

CTF0410853	07/14/1993	CTD072138969	CTD072138969	0300	P	WASTE BUTYL ACETATES
CTF0410908	07/21/1993	CTD072138969	CTD072138969	0500	P	WASTE BUTYL ACETATE
CTF0420161	08/04/1993	CTD072138969	CTD072138969	0165	G	WASTE BUTYL ACETATES
CTF0420198	08/11/1993	CTD072138969	CTD072138969	0055	G	WASTE BUTYL ACETATE
CTF0423381	08/18/1993	CTD072138969	CTD072138969	0055	G	WASTE BUTYL ACETATES
CTF0423450	08/25/1993	CTD072138969	CTD072138969	0110	G	WASTE BUTYL ACETATE
CTF0423528	09/01/1993	CTD072138969	CTD072138969	0055	G	WASTE BUTYL ACETATES
CTF0425349	09/08/1993	CTD072138969	CTD072138969	0110	G	WASTE BUTYL ACETATES
CTF0429215	09/15/1993	CTD072138969	CTD072138969	0055	G	WASTE BUTYL ACETATES
CTF0429231	09/22/1993	CTD072138969	CTD072138969	0055	G	WASTE BUTYL ACETATES
CTF0429323	10/01/1993	CTD072138969	CTD072138969	0110	G	WASTE BUTYL ACETATES
CTF0431133	10/12/1993	CTD980667927	ILD981998202	0008	G	WASTE COMBUSTIBLE LIQUID NOS
CTF0429413	10/13/1993	CTD072138969	CTD072138969	0055	G	WASTE BUTYL ACETATES
CTF0429461	10/20/1993	CTD072138969	CTD072138969	0165	G	WASTE BUTYL ACETATES
CTF0429499	10/27/1993	CTD072138969	CTD072138969	0110	G	WASTE BUTYL ACETATE
CTF0429542	11/03/1993	CTD072138969	CTD072138969	0055	G	WASTE BUTYL ACETATE
CTF0429579	11/10/1993	CTD072138969	CTD072138969	0055	G	WASTE BUTYL ACETATES
CTF0429729	12/01/1993	CTD072138969	CTD072138969	0110	G	WASTE BUTYL ACETATES
CTF0392991	01/12/1994	CTD072138969	CTD072138969	0055	G	WASTE BUTYL ACETATEE
CTF0392908	01/19/1994	CTD072138969	CTD072138969	0055	G	WASTE BUTYL ACETATE
CTF0472331	01/24/1994	CTD980667927	ILD981998202	0014	G	FLAMMABLE LIQUID N.O.S.
CTF0510114	02/02/1994	CTD072138969	CTD072138969	0055	G	WASTE BUTYL ACETATE
CTF0510946	02/16/1994	CTD072138969	CTD072138969	0055	G	BUTYL ACETATES
CTF0510989	02/23/1994	CTD072138969	CTD072138969	0110	G	WASTE BUTYL ACETATE
CTF0511072	03/15/1994	CTD072138969	CTD072138969	0165	G	BUTYL ACETATE
CTF0511199	03/29/1994	CTD072138969	CTD072138969	0055	G	WASTE BUTYL ACETATE

- More Details Exist For This Site; Max Page Limit Reached -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRAGN

SEARCH ID: 7 **DIST/DIR:** 0.36 SW **ELEVATION:** 42 **MAP ID:** 24

NAME: ORANGE RESEARCH INC
ADDRESS: 134 CASCADE BLVD
MILFORD CT 06460

CONTACT:
SOURCE: EPA

REV: 1/1/91
ID1: CTD913981469
ID2:
STATUS: SGN
PHONE:

SITE INFORMATION

UNIVERSE INFORMATION:

GOVERNMENT PERFORMANCE AND RESULTS ACT (GPRA)

GPRA PERMIT:	*N - NO*
GPRA POST CLOSURE:	*N - NO*
GPRA CA:	*N - NO*
GOVERNMENT PERFORMANCE AND RESULTS ACT (GPRA)	
GPRA PERMIT:	*N - NO*
GPRA POST CLOSURE:	*N - NO*
GPRA CA:	*N - NO*
GPRA COMPLIANCE MONITORING and ENFORCEMENT:	*N - NO*

SUBJECT TO CORRECTIVE ACTION (SUBJCA)

SUBJCA:	N - NO
SUBJCA TSD 3004:	N - NO
SUBJCA NON TSD:	N - NO
SIGNIFICANT NON-COMPLIANCE(SNC):	N - NO
BEGINNING OF THE YEAR SNC:	N - NO
PERMIT WORKLOAD:	—
CLOSURE WORKLOAD:	—
POST CLOSURE WORKLOAD:	—
PERMITTING /CLOSURE/POST-CLOSURE PROGRESS:	—
CORRECTIVE ACTION WORKLOAD:	N - NO
GENERATOR STATUS:	SQG - SMALL QUANTITY GENERATOR: GENERATES 100 - 1000
KG/MONTH OF HAZARDOUS WASTE	

NAIC INFORMATION

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

HAZARDOUS WASTE INFORMATION:

Ignitable waste
Tetrachloroethylene
Benzene
D000

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRAGN

SEARCH ID: 6 **DIST/DIR:** 0.38 SW **ELEVATION:** 43 **MAP ID:** 25

NAME: ORANGE RESEARCH INC
ADDRESS: 140 CASCADE BLVD
MILFORD CT 06460

CONTACT:
SOURCE: EPA

REV: 1/1/91
ID1: CTD042283155
ID2:
STATUS: VGN
PHONE:

SITE INFORMATION

UNIVERSE INFORMATION:

GOVERNMENT PERFORMANCE AND RESULTS ACT (GPRA)

GPRA PERMIT:	*N - NO*
GPRA POST CLOSURE:	*N - NO*
GPRA CA:	*N - NO*
GOVERNMENT PERFORMANCE AND RESULTS ACT (GPRA)	
GPRA PERMIT:	*N - NO*
GPRA POST CLOSURE:	*N - NO*
GPRA CA:	*N - NO*
GPRA COMPLIANCE MONITORING and ENFORCEMENT:	*N - NO*

SUBJECT TO CORRECTIVE ACTION (SUBJCA)

SUBJCA:	N - NO
SUBJCA TSD 3004:	N - NO
SUBJCA NON TSD:	N - NO
SIGNIFICANT NON-COMPLIANCE(SNC):	N - NO
BEGINNING OF THE YEAR SNC:	N - NO
PERMIT WORKLOAD:	—
CLOSURE WORKLOAD:	—
POST CLOSURE WORKLOAD:	—
PERMITTING /CLOSURE/POST-CLOSURE PROGRESS:	—
CORRECTIVE ACTION WORKLOAD:	N - NO
GENERATOR STATUS:	CEG - CONDITIONALLY EXEMPT SMALL QUANTITY GENERATORS: GENERATES LESS THAN
100 KG/MONTH OF HAZA	

NAIC INFORMATION

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

HAZARDOUS WASTE INFORMATION:

2-Propanone (I) (OR) Acetone (I)
Benzene, dimethyl- (LT) (OR) Xylene (I)
Ethane, 1, 1, 1-trichloro- (OR) Methyl chloroform
2-Butanone (LT) (OR) Methyl ethyl ketone (MEK) (LT)
2-Propenoic acid, 2-methyl-, methyl ester (LT) (OR) Methyl methacrylate (LT)
4-Methyl-2-pentanone (I) (OR) Methyl isobutyl ketone (I) (OR) Pentanol, 4-methyl-
Cyclohexanone (I)

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRAGN

SEARCH ID: 6 **DIST/DIR:** 0.38 SW **ELEVATION:** 43 **MAP ID:** 25

NAME: ORANGE RESEARCH INC
ADDRESS: 140 CASCADE BLVD
MILFORD CT 06460

CONTACT:
SOURCE: EPA

REV: 1/1/91
ID1: CTD042283155
ID2:
STATUS: VGN
PHONE:

Methane, dichloro- (OR) Methylene chloride
Ethene, trichloro- (OR) Trichloroethylene
Furan, tetrahydro-(I) (OR) Tetrahydrofuran (I)
Benzene, methyl- (OR) Toluene
1-Butanol (I) (OR) n-Butyl alcohol (I)

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRANLR

SEARCH ID: 17 **DIST/DIR:** 0.15 SE **ELEVATION:** 68 **MAP ID:** 5

NAME: NORTHEAST PACKAGING INC
ADDRESS: 23 CONNAIR RD
ORANGE CT 06477
NEW
CONTACT:
SOURCE: EPA

REV: 1/11/11
ID1: CTD980515199
ID2:
STATUS: NLR
PHONE:

SITE INFORMATION

CONTACT INFORMATION: HOWARD WYLLIE
23 CONNAIR RD
ORANGE CT 06477

PHONE: 2037959706

UNIVERSE INFORMATION:

NAIC INFORMATION

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

VIOLATION NUMBER: 0001 RESPONSIBLE: S - STATE
DETERMINED: 6/3/1985 DETERMINED BY: S - STATE
CITATION:
RESOLVED: 12/29/1986
TYPE: GENERATOR-ALL REQUIREMENTS (OVERSIGHT)

HAZARDOUS WASTE INFORMATION:

The following spent non-halogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by
Ethane, 1,1,1-trichloro- (OR) Methyl chloroform
2-Propanone (I) (OR) Acetone (I)
1-Propanol, 2-methyl- (I,T) (OR) Isobutyl alcohol (I,T)
The following spent halogenated solvents: Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene,
1,1,2-trichloro-1,2,2- trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1,1,2, trichloroethane; a
Benzene, methyl- (OR) Toluene

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRANLR

SEARCH ID: 12 **DIST/DIR:** 0.16 SW **ELEVATION:** 106 **MAP ID:** 9

NAME: DATA SWITCH CORP
ADDRESS: 12 CASCADE BLVD
ORANGE CT 06477
NEW
CONTACT:
SOURCE: EPA

REV: 1/11/11
ID1: CT5000000612
ID2:
STATUS: NLR
PHONE:

SITE INFORMATION

CONTACT INFORMATION: BRYAN NEUMANN
12 CASCADE BLVD
ORANGE CT 064773431

PHONE: 2037950739

UNIVERSE INFORMATION:

NAIC INFORMATION

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

HAZARDOUS WASTE INFORMATION:

Ignitable waste

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRANLR

SEARCH ID: 13 **DIST/DIR:** 0.17 SE **ELEVATION:** 69 **MAP ID:** 11

NAME: ESSEX FRANCE CO
ADDRESS: CONNAIR RD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 1/11/11
ID1: CTD067984384
ID2:
STATUS: NLR
PHONE:

SITE INFORMATION

UNIVERSE INFORMATION:

NAIC INFORMATION

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRANLR

SEARCH ID: 15 **DIST/DIR:** 0.17 SW **ELEVATION:** 91 **MAP ID:** 10

NAME: L S NEON INC
ADDRESS: 11 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 1/11/11
ID1: CT5000000448
ID2:
STATUS: NLR
PHONE:

SITE INFORMATION

CONTACT INFORMATION: EUGENE CZAKO
11 CASCADE BLVD
MILFORD CT 06460

PHONE: 2038777777

UNIVERSE INFORMATION:

NAIC INFORMATION

ENFORCEMENT INFORMATION:

AGENCY: S - STATE DATE: 3/4/1994
TYPE: 120 - WRITTEN INFORMAL

AGENCY: S - STATE DATE: 3/4/1994
TYPE: 120 - WRITTEN INFORMAL

AGENCY: S - STATE DATE: 9/17/1997
TYPE: 310 - FINAL 3008(A) COMPLIANCE ORDER

AGENCY: S - STATE DATE: 9/17/1997
TYPE: 310 - FINAL 3008(A) COMPLIANCE ORDER

VIOLATION INFORMATION:

VIOLATION NUMBER: 0001 RESPONSIBLE: S - STATE
DETERMINED: 8/20/1993 DETERMINED BY: S - STATE
CITATION: 262.11
RESOLVED: 4/25/1994
TYPE: HAZARDOUS WASTE DETERMINATIONS

VIOLATION NUMBER: 0002 RESPONSIBLE: S - STATE
DETERMINED: 8/20/1993 DETERMINED BY: S - STATE
CITATION: 262.12(c)
RESOLVED: 3/29/1994
TYPE: GENERATOR-GENERAL REQUIREMENTS

VIOLATION NUMBER: 0003 RESPONSIBLE: S - STATE
DETERMINED: 8/20/1993 DETERMINED BY: S - STATE
CITATION: 262.12(c)
RESOLVED: 3/29/1994
TYPE: GENERATOR-GENERAL REQUIREMENTS

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRANLR

SEARCH ID: 15 **DIST/DIR:** 0.17 SW **ELEVATION:** 91 **MAP ID:** 10

NAME: L S NEON INC
ADDRESS: 11 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 1/31/11
ID1: CT3000005418
ID2:
STATUS: NLR
PHONE:

VIOLATION NUMBER: 0004 RESPONSIBLE: S - STATE
DETERMINED: 8/20/1993 DETERMINED BY: S - STATE
CITATION: 262.20(a)
RESOLVED: 3/29/1994
TYPE: GENERATOR-MANIFEST REQUIREMENTS

VIOLATION NUMBER: 0005 RESPONSIBLE: S - STATE
DETERMINED: 8/20/1993 DETERMINED BY: S - STATE
CITATION: 22a-449(c)-102(b)(1)
RESOLVED: 3/29/1994
TYPE: GENERATOR-GENERAL REQUIREMENTS

VIOLATION NUMBER: 0006 RESPONSIBLE: S - STATE
DETERMINED: 8/20/1993 DETERMINED BY: S - STATE
CITATION: 262.34(d)(5)(iii)
RESOLVED: 4/11/1994
TYPE: GENERATOR-SQG REQUIREMENTS

VIOLATION NUMBER: 0007 RESPONSIBLE: S - STATE
DETERMINED: 8/20/1993 DETERMINED BY: S - STATE
CITATION: 265.32(c)
RESOLVED: 3/29/1994
TYPE: GENERATOR-SQG REQUIREMENTS

VIOLATION NUMBER: 0008 RESPONSIBLE: S - STATE
DETERMINED: 8/20/1993 DETERMINED BY: S - STATE
CITATION: 22a-449(c)-102(b)(7)
RESOLVED: 3/29/1994
TYPE: GENERATOR INSPECTION SCHEDULE and LOG

VIOLATION NUMBER: 0009 RESPONSIBLE: S - STATE
DETERMINED: 8/20/1993 DETERMINED BY: S - STATE
CITATION: 22a-449(c)-102(b)(7)
RESOLVED: 3/29/1994
TYPE: GENERATOR INSPECTION SCHEDULE and LOG

VIOLATION NUMBER: 0010 RESPONSIBLE: S - STATE
DETERMINED: 8/20/1993 DETERMINED BY: S - STATE
CITATION: 262.34(d)(5)(i)
RESOLVED: 3/29/1994
TYPE: GENERATOR-SQG REQUIREMENTS

VIOLATION NUMBER: 0011 RESPONSIBLE: S - STATE
DETERMINED: 8/20/1993 DETERMINED BY: S - STATE
CITATION: 262.34(d)(5)(ii)
RESOLVED: 4/11/1994
TYPE: GENERATOR-SQG REQUIREMENTS

VIOLATION NUMBER: 0012 RESPONSIBLE: S - STATE
DETERMINED: 8/20/1993 DETERMINED BY: S - STATE
CITATION: 262.34(c)(2)
RESOLVED: 3/29/1994

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRANLR

SEARCH ID: 15 **DIST/DIR:** 0.17 SW **ELEVATION:** 91 **MAP ID:** 10

NAME: L S NEON INC
ADDRESS: 11 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 1/31/11
ID1: CT3000005418
ID2:
STATUS: NLR
PHONE:

TYPE: CONTAINER MGT-SAT LITE ACCUMS/CONTAINER

VIOLATION NUMBER: 0013 RESPONSIBLE: S - STATE
DETERMINED: 8/20/1993 DETERMINED BY: S - STATE
CITATION: 262.41(c)
RESOLVED: 3/29/1994
TYPE: GENERATOR-RECORDKEEPING REQUIREMENTS

HAZARDOUS WASTE INFORMATION:

Ignitable waste
The following spent non-halogenated solvents: Xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/ blends containing, before use, only the above spent
The following spent non-halogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRANLR

SEARCH ID: 14 **DIST/DIR:** 0.17 SW **ELEVATION:** 91 **MAP ID:** 10

NAME: L C D LIGHTING INC
ADDRESS: 11 CASCADE BLVD
MILFORD CT 06460
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 1/31/11
ID1: CTR000002733
ID2:
STATUS: NLR
PHONE:

SITE INFORMATION

UNIVERSE INFORMATION:

NAIC INFORMATION

ENFORCEMENT INFORMATION:

AGENCY: S - STATE DATE: 3/4/1994
TYPE: 130 - WRITTEN INFORMAL

AGENCY: S - STATE DATE: 3/4/1994
TYPE: 130 - WRITTEN INFORMAL

VIOLATION INFORMATION:

VIOLATION NUMBER: 0001 RESPONSIBLE: S - STATE
DETERMINED: 12/18/1992 DETERMINED BY: S - STATE
CITATION: 262.11
RESOLVED: 3/27/1998
TYPE: HAZARDOUS WASTE DETERMINATIONS

VIOLATION NUMBER: 0002 RESPONSIBLE: S - STATE
DETERMINED: 12/18/1992 DETERMINED BY: S - STATE
CITATION: 261.5(g)(3)
RESOLVED: 3/27/1998
TYPE: GENERATOR-GENERAL REQUIREMENTS

VIOLATION NUMBER: 0003 RESPONSIBLE: S - STATE
DETERMINED: 12/18/1992 DETERMINED BY: S - STATE
CITATION: 22a-449(c)-11(e)
RESOLVED: 3/27/1998
TYPE: TRANSPORTER-GENERAL REQUIREMENTS

VIOLATION NUMBER: 0004 RESPONSIBLE: S - STATE
DETERMINED: 12/18/1992 DETERMINED BY: S - STATE
CITATION: 40 CFR 263.11
RESOLVED: 3/27/1998
TYPE: GENERATOR-GENERAL REQUIREMENTS

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRANLR

SEARCH ID: 18 **DIST/DIR:** 0.19 NW **ELEVATION:** 102 **MAP ID:** 12

NAME: SIGMA INSTRUMENT INTERNATIONAL INSTR DIV
ADDRESS: 55 MARSH HILL RD
ORANGE CT 06477
CONTACT:
SOURCE: EPA

REV: 1/31/11
ID1: CTD990931917
ID2:
STATUS: NLR
PHONE:

SITE INFORMATION

CONTACT INFORMATION: ALFRED POSEY
55 MARSH HILL RD
ORANGE CT 06477

PHONE: 2039954711

UNIVERSE INFORMATION:

NAIC INFORMATION

332323 - SHEET METAL WORK MANUFACTURING

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRANLR

SEARCH ID: 8 **DIST/DIR:** 0.19 NW **ELEVATION:** 102 **MAP ID:** 12

NAME: ASEA BROWN BOVERI
ADDRESS: 88 MARSH HILL RD
ORANGE CT 06477
CONTACT:
SOURCE: EPA

REV: 1/1/1
ID1: CTD036183356
ID2:
STATUS: NLR
PHONE:

SITE INFORMATION

CONTACT INFORMATION: JERRY ULATOWSKI
16250 W GLENDALE DR
NEW BERLIN WI 53151

PHONE: 4147853415

UNIVERSE INFORMATION:

NAIC INFORMATION

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

HAZARDOUS WASTE INFORMATION:

Ignitable waste
The following spent halogenated solvents used in degreasing: Tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing contain

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRANLR

SEARCH ID: 11 **DIST/DIR:** 0.28 SW **ELEVATION:** 56 **MAP ID:** 20

NAME: CYRO IND
ADDRESS: 25 EXECUTIVE BLVD
ORANGE CT 06477
NEW HAVEN
CONTACT:
SOURCE: EPA

REV: 1/1/1
ID1: CTD981203511
ID2:
STATUS: NLR
PHONE:

SITE INFORMATION

CONTACT INFORMATION: ROBERT SIEGLER
25 EXECUTIVE BLVD
ORANGE CT 06477

PHONE: 2037956011

UNIVERSE INFORMATION:

NAIC INFORMATION

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRANLR

SEARCH ID: 16 **DIST/DIR:** 0.33 SW **ELEVATION:** 50 **MAP ID:** 23

NAME: LIGHT SOURCES INC
ADDRESS: 70 CASCADE BLVD
MILFORD CT 06460
CONTACT:
SOURCE: EPA

REV: 7/1/99
ID1: CTD981873100
ID2:
STATUS: NLR
PHONE:

SITE INFORMATION

CONTACT INFORMATION: EUGENE CEASO
70 CASCADE BLVD
MILFORD CT 06460

PHONE: 2038777177

UNIVERSE INFORMATION:

NAIC INFORMATION

33311 - ELECTRIC LAMP BULB AND PART MANUFACTURING

ENFORCEMENT INFORMATION:

AGENCY:	S - STATE	DATE:	3/4/1994
TYPE:	120 - WRITTEN INFORMAL		
AGENCY:	S - STATE	DATE:	3/4/1994
TYPE:	120 - WRITTEN INFORMAL		
AGENCY:	S - STATE	DATE:	6/30/1997
TYPE:	310 - FINAL 3008(A) COMPLIANCE ORDER		
AGENCY:	S - STATE	DATE:	6/30/1997
TYPE:	310 - FINAL 3008(A) COMPLIANCE ORDER		
AGENCY:	S - STATE	DATE:	12/22/1997
TYPE:	120 - WRITTEN INFORMAL		
AGENCY:	S - STATE	DATE:	12/22/1997
TYPE:	120 - WRITTEN INFORMAL		

VIOLATION INFORMATION:

VIOLATION NUMBER:	0001	RESPONSIBLE:	S - STATE
DETERMINED:	8/20/1993	DETERMINED BY:	S - STATE
CITATION:	270		
RESOLVED:	5/10/1994		
TYPE:	TSD-PART B APPLICATION		
VIOLATION NUMBER:	0002	RESPONSIBLE:	E - EPA
DETERMINED:	8/20/1993	DETERMINED BY:	S - STATE
CITATION:	268		
RESOLVED:	8/20/1998		

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRANLR

SEARCH ID: 16 **DIST/DIR:** 0.33 SW **ELEVATION:** 50 **MAP ID:** 23

NAME: LIGHT SOURCES INC
ADDRESS: 70 CASCADE BLVD
MILFORD CT 06460
CONTACT:
SOURCE: EPA

REV: 7/1/99
ID1: CTD981873100
ID2:
STATUS: NLR
PHONE:

TYPE:	GENERATOR-LAND BAN REQUIREMENTS		
VIOLATION NUMBER:	0003	RESPONSIBLE:	S - STATE
DETERMINED:	8/20/1993	DETERMINED BY:	S - STATE
CITATION:	22a-449(c) - 102(b)(2)		
RESOLVED:			
TYPE:	GENERATOR INSPECTION SCHEDULE and LOG		
VIOLATION NUMBER:	0004	RESPONSIBLE:	S - STATE
DETERMINED:	8/20/1993	DETERMINED BY:	S - STATE
CITATION:	262.34(a)(4)		
RESOLVED:			
TYPE:	PERSONNEL TRAINING RECORDS		
VIOLATION NUMBER:	0005	RESPONSIBLE:	S - STATE
DETERMINED:	8/20/1993	DETERMINED BY:	S - STATE
CITATION:	262.34(a)(4)		
RESOLVED:	9/13/1994		
TYPE:	YCONTINGENCY PLAN		
VIOLATION NUMBER:	0006	RESPONSIBLE:	S - STATE
DETERMINED:	8/20/1993	DETERMINED BY:	S - STATE
CITATION:	262.34(a)(4)		
RESOLVED:	5/10/1994		
TYPE:	PREPAREDNESS AND PREVENTION		
VIOLATION NUMBER:	0007	RESPONSIBLE:	S - STATE
DETERMINED:	8/20/1993	DETERMINED BY:	S - STATE
CITATION:	262.34(a)(1)		
RESOLVED:	5/10/1994		
TYPE:	CONTAINER MGT-SAT LITE ACCUMS/CONTAINER		
VIOLATION NUMBER:	0008	RESPONSIBLE:	S - STATE
DETERMINED:	8/20/1993	DETERMINED BY:	S - STATE
CITATION:	262.34(a)(1)		
RESOLVED:	5/10/1994		
TYPE:	CONTAINER MGT-SAT LITE ACCUMS/CONTAINER		
VIOLATION NUMBER:	0009	RESPONSIBLE:	S - STATE
DETERMINED:	8/20/1993	DETERMINED BY:	S - STATE
CITATION:	262.34(a)(1)		
RESOLVED:	5/10/1994		
TYPE:	CONTAINER MGT-SAT LITE ACCUMS/CONTAINER		
VIOLATION NUMBER:	0011	RESPONSIBLE:	S - STATE
DETERMINED:	8/20/1993	DETERMINED BY:	S - STATE
CITATION:	262.11		
RESOLVED:			
TYPE:	HAZARDOUS WASTE DETERMINATIONS		
VIOLATION NUMBER:	0012	RESPONSIBLE:	S - STATE
DETERMINED:	8/20/1993	DETERMINED BY:	S - STATE
CITATION:	262.11		

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRANLR

SEARCH ID: 16 **DIST/DIR:** 0.33 SW **ELEVATION:** 50 **MAP ID:** 23

NAME: LIGHT SOURCES INC
ADDRESS: 70 CASCADE BLVD
MILFORD CT 06460

REV: 7/14/09
ID1: CTD953373100
ID2:
STATUS: NLR
PHONE:

CONTACT:
SOURCE: EPA

RESOLVED: 3/27/1998
TYPE: HAZARDOUS WASTE DETERMINATIONS

VIOLATION NUMBER: 0013 RESPONSIBLE: S - STATE
DETERMINED: 5/21/1997 DETERMINED BY: S - STATE
CITATION: 262.34(a)(2)
RESOLVED: 3/27/1998
TYPE: GENERATOR-PRE-TRANSPORT REQUIREMENTS

VIOLATION NUMBER: 0014 RESPONSIBLE: S - STATE
DETERMINED: 5/21/1997 DETERMINED BY: S - STATE
CITATION: 264.175
RESOLVED: 3/27/1998
TYPE: CONTAINER MGT=SAT LITE ACCUMS/CONTAINER

VIOLATION NUMBER: 0015 RESPONSIBLE: S - STATE
DETERMINED: 5/21/1997 DETERMINED BY: S - STATE
CITATION: 262.34(a)(3)
RESOLVED: 3/27/1998
TYPE: GENERATOR-PRE-TRANSPORT REQUIREMENTS

VIOLATION NUMBER: 0016 RESPONSIBLE: S - STATE
DETERMINED: 5/21/1997 DETERMINED BY: S - STATE
CITATION: 265.35
RESOLVED: 3/27/1998
TYPE: PREPAREDNESS AND PREVENTION

HAZARDOUS WASTE INFORMATION:

Ignitable waste
The following spent non-halogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by
The following spent non-halogenated solvents: Xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/ blends containing, before use, only the above spent

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRANLR

SEARCH ID: 9 **DIST/DIR:** 0.43 NE **ELEVATION:** 60 **MAP ID:** 26

NAME: AVIATION COMPONENTS SUPPORT CO
ADDRESS: 11 FRONTAGE RD
ORANGE CT 06477

REV: 1/11/11
ID1: CTD093607711
ID2:
STATUS: NLR
PHONE:

CONTACT:
SOURCE: EPA

SITE INFORMATION:

CONTACT INFORMATION: ALAN BURTON
PO BOX 947
ORANGE CT 06477

PHONE: 2037950727

UNIVERSE INFORMATION:

NAIC INFORMATION

334413 - OTHER AIRCRAFT PARTS AND AUXILIARY EQUIPMENT MANUFACTURING

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

HAZARDOUS WASTE INFORMATION:

D009
Chromium

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

RCRANLR

SEARCH ID: 10 **DIST/DIR:** 0.48 SW **ELEVATION:** 39 **MAP ID:** 28

NAME: CARRIER CORP
ADDRESS: 200 CASCADE BLVD
MILFORD CT 06460
NEW

REV: 1/11/11
ID1: CTD982777715
ID2:
STATUS: NLR
PHONE:

CONTACT:
SOURCE: EPA

SITE INFORMATION:

CONTACT INFORMATION: JOE FICANO
200 CASCADE BLVD
MILFORD CT 06460

PHONE: 2033770363

UNIVERSE INFORMATION:

NAIC INFORMATION

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

HAZARDOUS WASTE INFORMATION:

Dichlorodifluoromethane (OR) Methane, dichlorodifluoro-
Methane, trichlorofluoro- (OR) Trichloromonofluoromethane
Ignitable waste
Corrosive waste

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 69 **DIST/DIR:** 0.07 SE **ELEVATION:** 74 **MAP ID:** 1

NAME:
ADDRESS: 55 ROBINSON
ORANGE CT 06477

REV: 3/13/01
ID1: 921621
ID2:
STATUS: CLOSED
PHONE:

CONTACT:
SOURCE: CT DEP

SITE INFORMATION:

INSPECTOR S BADGE NUMBER:	NR		
REPORT DATE:	04/04/92	REPORT TIME:	6
ACTUAL TIME:	10		
REPORTER:	LT PATRICK FIRE DEPT		
WORK PHONE:	203 799 2239		
HOME PHONE:			
POLE NUMBER:			
INCIDENT TYPE:	OTHER	DISCHARGED:	55 GAL DRUM
GALLONS:		YARDS:	
POUNDS:		CON:	
DRUMS:		FEDRAL:	
CERCLA:		ACROSS PROPERTY LINES:	
EMERGENCY CLEANUP:		REP QUAN:	
TOTAL POUNDS:			
DESCRIPTION:			
DATE:	04/04/92	DATE UNKNOWN:	
CONTINUOUS SPILL:		SPILL TIME:	610
RELEASE TERMINATED:		ONGOING RELEASE:	
UNKNOWN:		CONTAINED:	
ADDITIONAL INFORMATION:	DRUM NOT LEAKING NO RESPONSE		
WATERBODY:	SWAMP	RIVER:	
LIS:		TRIBUTARY:	
CATCH BASIN:		POND:	
AIR:		SURFACE WATER:	Y
GROUND WATER:		GROUND SURFACE:	
INSIDE BUILDING:		OTHER AREA:	
TOTAL IN WATER:		TOTAL RECOVERED FROM WATER:	
TOTAL RECOVERED:			
RESPONSIBLE PARTY:			
PHONE:		ACCEPT RESPONSIBILITY:	
POLLUTER UNKNOWN:			
CLEANUP ACTION TAKEN:	REMOVED		
BUY BRAD:		NOTIFIED FEDERAL GOVERNMENT:	
NOTIFIED COAST GAURD:		NOTIFIED FIRE MARSHALL:	
NOTIFIED LOCAL FIRE DEPT:		NOTIFIED POLICE:	
NOTIFIED ATTORNEY GENERAL:	LOCAL BLDG	NOTIFIED AQUACULTURE:	
NOTIFIED STATE DORS:		NOTIFIED STATE WATER BUREAU:	
NOTIFIED STATE AIR BUREAU:		NOTIFIED STATE WASTE BUREAU:	
NOTIFIED WEED HAZ WASTE:		NOTIFIED WEED SOLID WASTE:	

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 69 **DIST/DIR:** 0.07 SE **ELEVATION:** 74 **MAP ID:** 1

NAME:
ADDRESS: 53 ROBINSON
ORANGE CT 06477
CONTACT:
SOURCE: CT DEP

REV: 3/13/01
ID1: 921624
ID2:
STATUS: CLOSED
PHONE:

PERMITTING NOTIFIED:
NOTIFIED SOLID WASTE RECOVERY:
NOTIFIED P-F:
NOTIFIED OPS:
NOTIFIED STATE AGENCIES:
NOTIFICATION TIME:
DISCHARGE CLASS: UNKNOWN

CAUSE: UNKNOWN

CORRECTIVE ACTION TAKEN: REMOVED

NOTIFIED UST UNIT:
NOTIFIED ENVIRONMENTAL CONSERVATION:
NOTIFIED F-W:
NOTIFIED OTHER:
NOTIFICATION DATE:

CONTRACTOR:
DID DEP HIRE CONT:
WHEN CONT REQUESTED:
ARRIVED:
RECEIVED BY: KELLEY
ASSIGNED DATE: 04/04/97
NOT 911 EMERGENCY:
CT EMERGENCY SPILLFUND USED:
CASE NUMBER 2:
PIN:
ISC CODE:
OTHER OWNER:
PROP NAME:

CONT NAME:
HIRE DATE:
SECOND REQUEST:
ARRIVED SECOND TIME:
BADGE NUMBER:
ASSIGNED TIME: 6:12
NOTIFICATION STATUS:
CASE NUMBER:
FED GOV PAID:
COST RECOVERY EXPENDITURE:
PROPERTY OWNER:

WAS POLLUTER A TRUCK:
OWNER OF TRUCK/TRAILER:
OPERATORS NAME:
VEHICLE MODEL:
TRAILER REGISTRATION:
DATE UPDATED:
QUAN PET:

WAS POLLUTER A TRAILER:
OWNERS NAME:
MAKE OF VEHICLE:
TRUCK REGISTRATION:
UPDATED WITH INSPECTORS REPORT:
COPY: W

MISCELLANEOUS INFORMATION: FIRE DEPT REMOVED DRUM

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 72 **DIST/DIR:** 0.11 NW **ELEVATION:** 102 **MAP ID:** 2

NAME:
ADDRESS: 60 MARSH HILL RD
ORANGE CT
CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/22/11
ID1: 200109891
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 11/21/2001
TIME OF RELEASE:
ACTION: REFERRED

DISHCHARGER:

CT

DISHCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

REPORT TIME: 11/21/2001 7:30:32 PM
REPORTED BY: BOB WAGNER
REPORTER S PHONE: 7957667

MATERIAL RELEASED: WHITE POWDER
CAUSE OF INCIDENT: OTHER

EMERGENCY MEASURES: POSSIBILITY THAT THE SUBSTANCE WAS POWDER FROM CANDY, HOSPITAL INSTRUCTING CALLER TO ADVISE DEP OC WP IN ALTOID TIN CONTAINER NO CREADITABILIT NO SAMPLE

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 65 **DIST/DIR:** 0.11 NW **ELEVATION:** 102 **MAP ID:** 2

NAME: SAA
ADDRESS: 60 MARSH HILL RD
ORANGE CT
CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/22/11
ID1: 200408319
ID2:
STATUS: CLOSED
PHONE:

REPORT TIME: 12/3/2004 11:09:29 AM
REPORTED BY: PAUL ALFONSI
REPORTER S PHONE: 7957712

MATERIAL RELEASED: HYDRAULIC OIL
CAUSE OF INCIDENT: TRANSFER LINE FAILURE

EMERGENCY MEASURES: GARAGE LIFTS, SUSPECTED LEAK IN PIPE FROM TANK TO LIFTS, EXCAVATING NEXT WEEK. 12/7 HRS. 1 (MARS) - 3 LIFT TO BE REPAIRED WELL.

SPILLS

SEARCH ID: 64 **DIST/DIR:** 0.11 NW **ELEVATION:** 102 **MAP ID:** 2

NAME: SAA
ADDRESS: 60 MARSH HILL RD
ORANGE CT
CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/22/11
ID1: 200607432
ID2:
STATUS: CLOSED
PHONE:

REPORT TIME: 11/22/2006 11:43:31 AM
REPORTED BY: PAUL ALFONSI
REPORTER S PHONE: 7957712

MATERIAL RELEASED: HYDRAULIC OIL
QUANTITY SPILLED: 10 GAL

CAUSE OF INCIDENT: OTHER

EMERGENCY MEASURES: INVESTIGATING AT THIS TIME WHAT TO DO, CONTRACTING OUT TO HALEY ALDRICH.

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 67 **DIST/DIR:** 0.12 SE **ELEVATION:** 67 **MAP ID:** 4

NAME: UNKNOWN
ADDRESS: END OF ROBINSON BLVD
ORANGE CT
CONTACT: WOFFORD, RON
SOURCE: CT DEP

REV: 3/22/11
ID1: 9905012
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 3/29/1999
TIME OF RELEASE:
ACTION: CONTAINED

DISHCHARGER: UNKNOWN

CT

DISHCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: NO

SITE INFORMATION

DATE OF RELEASE: 7/29/1999
TIME OF RELEASE:
ACTION: REMOVED

DISHCHARGER: UNKNOWN

CT

DISHCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: NO

REPORT TIME: 7/29/1999 1:18:16 PM
REPORTED BY: STEVE CAURA
REPORTER S PHONE: 6243794

MATERIAL RELEASED: WASTE OIL
QUANTITY SPILLED: 10 GAL

CAUSE OF INCIDENT: DUMPING

EMERGENCY MEASURES: 25 GALLON CARBOY DISCOVERED ON ROAD SIDE LEAKING

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 71 **DIST/DIR:** 0.12 SW **ELEVATION:** 104 **MAP ID:** 3

NAME:
ADDRESS: 55 MARSH HILL RD
ORANGE CT
NEW HAVEN
CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/22/11
ID1: 200905524
ID2:
STATUS: CLOSED
PHONE:

REPORT TIME: 9/29/2009 7:06:43 AM
REPORTED BY: BOBBY
REPORTER S PHONE: 4131200

MATERIAL RELEASED: DIESEL FUEL
QUANTITY SPILLED: 5 GAL

EMERGENCY MEASURES:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 61 **DIST/DIR:** 0.12 SW **ELEVATION:** 104 **MAP ID:** 3

NAME: DICHELLO DISTRIBUTORS
ADDRESS: 55 MARSH HILL RD
ORANGE CT
CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/22/11
ID1: 9701331
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 4/16/1997
TIME OF RELEASE:
ACTION: PUMPED OUT

DISHCHARGER: DICHELLO DISTRIBUTORS
55 marsh hill rd
CT

DISCHARGER S PHONE: 8912100
ACCEPTS RESPONSIBILITY: YES

SITE INFORMATION

DATE OF RELEASE: 4/16/1997
TIME OF RELEASE:
ACTION: SOIL REMOVED

DISHCHARGER: DICHELLO DISTRIBUTORS
55 marsh hill rd
CT

DISCHARGER S PHONE: 8912100
ACCEPTS RESPONSIBILITY: YES

REPORT TIME: 9:30:00 AM
REPORTED BY: SCOTT GRAVES
REPORTER S PHONE: 4265900

MATERIAL RELEASED: DIESEL FUEL
CAUSE OF INCIDENT: INGROUND TANK FAILURE

EMERGENCY MEASURES: PULLED 2-10K DIESEL UST S, SOIL ANALYSIS TPH:790 PPM, H2O: 6PPM TPH, NO SHEEN OR FREE PRODUCT, WILL VAC HOLE AND INSTALL WELL

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 60 **DIST/DIR:** 0.12 SW **ELEVATION:** 104 **MAP ID:** 3

NAME: DICHELLO BEER DISTRIBUTORS
ADDRESS: 55 MARSH HILL RD
ORANGE CT
CONTACT: EMANUELSON, BRIAN
SOURCE: CT DEP

REV: 3/22/11
ID1: 9702998
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 5/20/1997
TIME OF RELEASE: 9:00:00 AM
ACTION: 21

DISHCHARGER: DICHELLO BEER DISTRIBUTORS
55 MARSH HILL ROAD
ORANGE CT 06477

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: NO

SITE INFORMATION

DATE OF RELEASE: 5/20/1997
TIME OF RELEASE: 9:00:00 AM
ACTION: OTHER

DISHCHARGER: DICHELLO BEER DISTRIBUTORS
55 MARSH HILL ROAD
ORANGE CT 06477

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: NO

REPORT TIME: 6/9/1997 2:42:59 PM
REPORTED BY: UNKNOWN
REPORTER S PHONE: 5555555

MATERIAL RELEASED: GASOLINE
CAUSE OF INCIDENT: INGROUND TANK FAILURE

CAUSE OF INCIDENT: DUMPING

EMERGENCY MEASURES: BASED AN ANONYMOUS REPORT-- TANKS REPORTED TO BE REMOVED AND DUMPED IN MARSH BEHIND BUILDING

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 70 **DIST/DIR:** 0.15 SW **ELEVATION:** 98 **MAP ID:** 7

NAME:
ADDRESS: MARSH HILL and CASSCADE BLVD
ORANGE CT
CONTACT: LECLERC, KEN
SOURCE: CT DEP

REV: 3/22/11
ID1: 200107244
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 9/21/2001
TIME OF RELEASE:
ACTION: SANDED

DISHCHARGER:

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

SITE INFORMATION

DATE OF RELEASE: 9/21/2001
TIME OF RELEASE:
ACTION: CONTRACTED

DISHCHARGER:

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

SITE INFORMATION

DATE OF RELEASE: 9/21/2001
TIME OF RELEASE:
ACTION: PUMPED OUT

DISHCHARGER:

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

REPORT TIME: 7:26:00 AM
REPORTED BY: ORANGE POLICE
REPORTER S PHONE: 8912130

MATERIAL RELEASED: DIESEL FUEL
QUANTITY SPILLED: 75 GAL

CAUSE OF INCIDENT: MV ACCIDENT

EMERGENCY MEASURES: TRACTOR TRAILER ACCIDENT

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 66 **DIST/DIR:** 0.15 SW **ELEVATION:** 96 **MAP ID:** 6

NAME: SAA
ADDRESS: 15 EXECUTIVE BLVD
ORANGE CT

CONTACT: LIANO, MARK
SOURCE: CT DEP

REV: 3/22/11
ID1: 200606479
ID2:
STATUS: CLOSED
PHONE:

REPORT TIME: 10/11/2006 11:30:34 AM
REPORTED BY: DISPATCH
REPORTER S PHONE: 9912130

MATERIAL RELEASED: WHITE POWDER
CAUSE OF INCIDENT: OTHER

EMERGENCY MEASURES: DELIVERY TRUCK WITH DELIVERY, POUCHES WITH WHITE POWDER 3 X 3

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 59 **DIST/DIR:** 0.19 NW **ELEVATION:** 81 **MAP ID:** 13

NAME: DHL DELIVERY
ADDRESS: 89 MARSH HILL RD
ORANGE CT

CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/22/11
ID1: 200306059
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 8/30/2002
TIME OF RELEASE:
ACTION: REFERRED

DISHCHARGER: DHL DELIVERY
CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

SITE INFORMATION

DATE OF RELEASE: 8/30/2002
TIME OF RELEASE:
ACTION: CONTRACTED

DISHCHARGER: DHL DELIVERY
CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

SITE INFORMATION

DATE OF RELEASE: 8/30/2002
TIME OF RELEASE:
ACTION: SANDED

DISHCHARGER: DHL DELIVERY
CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

REPORT TIME: 8/30/2002 5:13:10 PM
REPORTED BY: JON BOURRET
REPORTER S PHONE: 7995648

MATERIAL RELEASED: DIESEL FUEL
QUANTITY SPILLED: 2 GAL

CAUSE OF INCIDENT: HOSE FAILURE

EMERGENCY MEASURES: CALLED CONTRACTOR TO PUMP OUT STANDINGWATER IN STORM DRAIN

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 58 **DIST/DIR:** 0.19 NW **ELEVATION:** 81 **MAP ID:** 13

NAME: CT. REFINING CO.
ADDRESS: 89 MARSH HILL RD
ORANGE CT

CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/22/11
ID1: 200400712
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 2/4/2004
TIME OF RELEASE: 10:20:00 AM
ACTION: CONTAINED

DISHCHARGER: CT. REFINING CO.
105 wetter st.
WEST HAVEN CT 06516

DISCHARGER S PHONE: 2905020
ACCEPTS RESPONSIBILITY: YES

SITE INFORMATION

DATE OF RELEASE: 2/4/2004
TIME OF RELEASE: 10:30:00 AM
ACTION: CONTRACTED

DISHCHARGER: CT. REFINING CO.
105 wetter st.
WEST HAVEN CT 06516

DISCHARGER S PHONE: 2905020
ACCEPTS RESPONSIBILITY: YES

REPORT TIME: 2/4/2004 11:29:31 AM
REPORTED BY: C.L
REPORTER S PHONE: 2905020

MATERIAL RELEASED: 2 FUEL OIL
QUANTITY SPILLED: 3 GAL

CAUSE OF INCIDENT: OVERFILL

EMERGENCY MEASURES: CONTAINED , CONTRACTED

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 62 **DIST/DIR:** 0.21 NW **ELEVATION:** 82 **MAP ID:** 15

NAME: NONE
ADDRESS: 125 FRONTAGE BEHIND D ALARM GUARD RD
ORANGE CT

CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/22/11
ID1: 9902372
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 4/14/1999
TIME OF RELEASE:
ACTION: OTHER

DISHCHARGER: NONE
CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

SITE INFORMATION

DATE OF RELEASE: 4/14/1999
TIME OF RELEASE:
ACTION: 21

DISHCHARGER: NONE
CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

REPORT TIME: 4/15/1999 9:25:26 AM
REPORTED BY: PAT WATSON
REPORTER S PHONE: 3471871

MATERIAL RELEASED: NO RELASE
QUANTITY SPILLED: 3 DRUMS

CAUSE OF INCIDENT: OTHER

EMERGENCY MEASURES: INVESTIGATED BY 921 3 DRUMS NON-HAZ / NO SPILL/DRUMS PROPERLY COVERED

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 63 **DIST/DIR:** 0.21 SE **ELEVATION:** 21 **MAP ID:** 14

NAME: NORTHEAST BEVERAGE CO
ADDRESS: 32 ROBINSON BLVD
ORANGE CT
NEW HAVEN
CONTACT: LIANO, MARK
SOURCE: CT DEP

REV: 3/22/11
ID1: 201000468
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 1/26/2010
TIME OF RELEASE:
ACTION: OTHER

DISCHARGER: NORTHEAST BEVERAGE CO
32 ROBINSON BLVD
ORANGE CT 06477

DISCHARGER S PHONE: 7954943
ACCEPTS RESPONSIBILITY: YES

REPORT TIME: 1/26/2010 1:32:53 AM
REPORTED BY: ORANGE POLICE
REPORTER S PHONE: 8912130

MATERIAL RELEASED: DIESEL FUEL
QUANTITY SPILLED: 35 GAL

CAUSE OF INCIDENT: OTHER

EMERGENCY MEASURES: FORK LIFT PUNCTURED SADDLE TANK ON TRUCK

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 68 **DIST/DIR:** 0.23 NW **ELEVATION:** 97 **MAP ID:** 16

NAME: YALE UNIVERSITY
ADDRESS: 37 FRONTAGE RD
ORANGE CT
NEW HAVEN
CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/22/11
ID1: 200500494
ID2:
STATUS: CLOSED
PHONE:

REPORT TIME: 1/31/2009 10:38:54 PM
REPORTED BY: JOANNE FARRELL
REPORTER S PHONE: 6279213

MATERIAL RELEASED: HYDRAULIC OIL
QUANTITY SPILLED: 1 GAL

CAUSE OF INCIDENT: HOSE FAILURE

EMERGENCY MEASURES: TRASH COMPACTOR AT LOADING DOCK, UNITED INDUSTRIAL SERVICES CONTRACTED TO CLEAN, AND SPILL PADS ON PAVEMENT.

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 73 **DIST/DIR:** 0.24 NW **ELEVATION:** 105 **MAP ID:** 18

NAME:
ADDRESS: I - 95 NB EXIT
ORANGE CT
CONTACT: GOTHBERG, ERIC
SOURCE: CT DEP

REV: 3/22/11
ID1: 200100079
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 1/2/2001
TIME OF RELEASE:
ACTION: SANDED

DISHCHARGER:

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

REPORT TIME: 1/3/2001 1:50:28 AM
REPORTED BY: TROOP G
REPORTER S PHONE: 6962500

MATERIAL RELEASED: DIESEL FUEL
QUANTITY SPILLED: 50 GAL

CAUSE OF INCIDENT: MV ACCIDENT

EMERGENCY MEASURES: D.O.T. TO SAND

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 440 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: SAA
ADDRESS: I-95 N AFTER REST AREA
MILFORD CT
CONTACT: ACETO, JOHN
SOURCE: CT DEP

REV: 3/22/11
ID1: 200504910
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 7/25/2005
TIME OF RELEASE:
ACTION: CONTRACTED

DISHCHARGER: SAA

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

SITE INFORMATION

DATE OF RELEASE: 7/25/2005
TIME OF RELEASE:
ACTION: CONTAINED

DISHCHARGER: SAA

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

REPORT TIME: 7/25/2005 9:23:48 AM
REPORTED BY: TIM HAYNES
REPORTER S PHONE: 9947911

MATERIAL RELEASED: DIESEL FUEL
QUANTITY SPILLED: 30 GAL

CAUSE OF INCIDENT: SADDLE TANK FAILURE

EMERGENCY MEASURES: SADDLE TANK DUE TO ROAD DEBRIS, NO DRAINS REPORTED TO BE AFFECTED

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 434 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: SAA
ADDRESS: MILFORD I-95 CONNECTOR NEAR MOSES WHEELER BRIDGE
MILFORD CT
CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/22/31
ID1: 200302907
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 5/13/2005
TIME OF RELEASE: 9:40:00 AM
ACTION: REMOVED

DISHCHARGER: SAA

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

SITE INFORMATION

DATE OF RELEASE: 5/13/2005
TIME OF RELEASE: 9:40:00 AM
ACTION: SANIFED

DISHCHARGER: SAA

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

REPORT TIME: 5/13/2005 11:21:23 AM
REPORTED BY: GIL CLARK
REPORTER S PHONE: 3716773

MATERIAL RELEASED: DIESEL FUEL
QUANTITY SPILLED: 10 GAL

CAUSE OF INCIDENT: TRANSFER LINE FAILURE

EMERGENCY MEASURES: SAND FROM BROKEN LINE ON H20 TRUCK

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 333 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: DUMPING
ADDRESS: UNKNOWN
ORANGE CT
CONTACT: LIANO, MARK
SOURCE: CT DEP

REV: 3/22/31
ID1: 200601916
ID2:
STATUS: CLOSED
PHONE:

REPORT TIME: 4/5/2006 11:31:39 AM
REPORTED BY: STEPHEN DUPREE
REPORTER S PHONE: 7953098

MATERIAL RELEASED: CHEMICALS
CAUSE OF INCIDENT: DUMPING

EMERGENCY MEASURES: 20 X 50 POND, RIGHT SIDE OF LARGE POND, IS A SMALL POND BEHIND A RETAINING WALL, THINKS CHEMICALS WERE DUMPED, MAY BE NATURAL

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 327 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: CBL TRUCKING
ADDRESS: I-95 N EXIT 34 and EXIT 41
ORANGE CT 06477
CONTACT: CBL TRUCKING
SOURCE: CT DEP

REV: 3/13/91
ID1: 933389
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

INSPECTOR S BADGE NUMBER: 924
REPORT DATE: 06/23/93 REPORT TIME: 5
ACTUAL TIME: 5
REPORTER: TROOP I

WORK PHONE: 203 789 7720
HOME PHONE:
POLE NUMBER:
INCIDENT TYPE: CHEMICAL DISCHARGED: CLEAREDGE 6125
GALLONS: 310 YARDS:
POUNDS: 255 CON:
DRUMS: FEDERAL:
CERCLA: ACROSS PROPERTY LINES:
EMERGENCY CLEANUP: REP QUAN:
TOTAL POUNDS:

DESCRIPTION:

DATE: 06/23/93 DATE UNKNOWN:
CONTINUOUS SPILL: SPILL TIME:
RELEASE TERMINATED: Y ONGOING RELEASE:
UNKNOWN: CONTAINED: Y

ADDITIONAL INFORMATION: I-95 N/B STARTING AT EX 33 TO EX 41 OFF MARSH HILL RD TO 11 FRONTAGE RD CBL TRUCKING TERMINAL

WATERBODY: RIVER:
LIS: TRIBUTARY:
CATCH BASIN: POND:
AIR: SURFACE WATER:
GROUND WATER: GROUND SURFACE: Y
INSIDE BUILDING: OTHER AREA:
TOTAL IN WATER: TOTAL RECOVERED FROM WATER:
TOTAL RECOVERED: 300
RESPONSIBLE PARTY: CBL TRUCKING

DELANCO NJ 8075

PHONE: ACCEPT RESPONSIBILITY: Y
POLLUTER UNKNOWN:
CLEANUP ACTION TAKEN:
DUN BRAD:
NOTIFIED COAST GAURD: NOTIFIED FEDERAL GOVERNMENT:
NOTIFIED LOCAL FIRE DEPT: NOTIFIED FIRE MARSHALL:
NOTIFIED ATTORNEY GENERAL: NOTIFIED POLICE:
NOTIFIED STATE DOH: NOTIFIED AQUACULTURE:
NOTIFIED STATE AIR BUREAU: NOTIFIED STATE WATER BUREAU:
NOTIFIED STATE WASTE BUREAU:

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 327 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: CBL TRUCKING
ADDRESS: I-95 N EXIT 34 and EXIT 41
ORANGE CT 06477
CONTACT: CBL TRUCKING
SOURCE: CT DEP

REV: 3/13/91
ID1: 933389
ID2:
STATUS: CLOSED
PHONE:

NOTIFIED WEED HAZ WASTE:
PERMITTING NOTIFIED:
NOTIFIED SOLID WASTE RECOVERY:
NOTIFIED P-F:
NOTIFIED OPS:
NOTIFIED STATE AGENCIES:
NOTIFICATION TIME:
DISCHARGE CLASS: TRANSPORTATION

CAUSE: CONTAINER FAILURE

CORRECTIVE ACTION TAKEN: CONTRACTED

CONTRACTOR: Y
DID DEP HIRE CONT: N
WHEN CONT REQUESTED:
ARRIVED:
RECEIVED BY:
ASSIGNED DATE: 06/23/93
NOT 911 EMERGENCY:
CT EMERGENCY SPILLFUND USED:
CASE NUMBER 1:
PIN:
INC CODE:
OTHER OWNER:
PROP NAME: ST OF CT/TOWNS OF MLFRD/ORANGE

NOTIFIED WEED SOLID WASTE:
NOTIFIED UST UNIT:
NOTIFIED ENVIRONMENTAL CONSERVATION:
NOTIFIED F-W:
NOTIFIED OTHER:
NOTIFICATION DATE:

CONT NAME: ENVIRONMENTAL PROD/SVC
HIRE DATE:
SECOND REQUEST:
ARRIVED SECOND TIME:
BADGE NUMBER: 924
ASSIGNED TIME: 5 9
NOTIFICATION STATUS:
CASE NUMBER:
FED GOV PAID:
COST RECOVERY EXPENDITURE:
PROPERTY OWNER: I

WAS POLLUTER A TRUCK: Y
OWNER OF TRUCK/TRAILER: Y
OPERATORS NAME: ELWOOD R ELDER
VEHICLE MODEL: AEROMAY
TRAILER REGISTRATION: 13506
DATE UPDATED: 06/23/93

WAS POLLUTER A TRAILER: Y
OWNERS NAME: C D L TRUCKING
MAKE OF VEHICLE: FORD
TRUCK REGISTRATION: NJ XW258G
UPDATED WITH INSPECTORS REPORT: Y
COPY: 2

MISCELLANEOUS INFORMATION: DISP 921 921 922 902 CALLED TO SCENE T/T LEAKING OIL FROM CONTAINER INSIDE TRAILER THAT HAD BREACHED LENGTHY REPORTS ATTACHED

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 338 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: FREIGHT MASTER TRANSPORTATION
ADDRESS: MARSH HILL ROAD, AT I-95 OFF RAMP
ORANGE CT
CONTACT: ACETO, JOHN
SOURCE: CT DEP

REV: 3/22/11
ID1: 200806443
ID2:
STATUS: CLOSED
PHONE:

REPORT TIME: 10/10/2006 11:10:24 AM
REPORTED BY: FD
REPORTER S PHONE: 8912150

MATERIAL RELEASED: 2 FUEL OIL
QUANTITY SPILLED: 5 GAL

CAUSE OF INCIDENT: MV ACCIDENT

EMERGENCY MEASURES: TANKER ON IT S SIDE.

SPILLS

SEARCH ID: 634 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: UNKNOWN TRUCKING COMPANY
ADDRESS: I-95 BETWEEN EXIT 39 and EXIT 40
MILFORD CT
CONTACT: ACETO, JOHN
SOURCE: CT DEP

REV: 3/22/11
ID1: 2005006712
ID2:
STATUS: CLOSED
PHONE:

REPORT TIME: 1:03:00 PM
REPORTED BY: CONNOR
REPORTER S PHONE: 8783991

MATERIAL RELEASED: DIESEL FUEL
CAUSE OF INCIDENT: FIRE

CAUSE OF INCIDENT: OTHER

EMERGENCY MEASURES: 1 OF 2 SADDLE TANKS LEAKING AFTER FIRE EXTINGUISHED

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 593 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: SAA
ADDRESS: MILFORD I-95 CONNECTOR NEAR MOSES WHEELER BRIDGE
MILFORD CT
CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/22/11
ID1: 200502907
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 5/13/2005
TIME OF RELEASE: 9:30:00 AM
ACTION: REMOVED

DISHCHARGER: SAA

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

SITE INFORMATION

DATE OF RELEASE: 5/13/2005
TIME OF RELEASE: 9:30:00 AM
ACTION: SANDED

DISHCHARGER: SAA

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

REPORT TIME: 5/13/2005 11:21:23 AM
REPORTED BY: GIL CLARK
REPORTER S PHONE: 3750773

MATERIAL RELEASED: DIESEL FUEL
QUANTITY SPILLED: 10 GAL

CAUSE OF INCIDENT: TRANSFER LINE FAILURE

EMERGENCY MEASURES: SAND FROM BROKEN LINE ON H20 TRUCK

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 593 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: ROADLINK USA JOHN DEHOLL
ADDRESS: I-95 N BETWEEN EXIT 37 and EXIT 39
MILFORD CT
CONTACT: ACETO, JOHN
SOURCE: CT DEP

REV: 3/22/11
ID1: 200603757
ID2:
STATUS: CLOSED
PHONE:

REPORT TIME: 9/11/2006 2:26:18 PM
REPORTED BY: DISPATCHER DONNA
REPORTER S PHONE: 8783991

MATERIAL RELEASED: DIESEL FUEL
QUANTITY SPILLED: 75 GAL

CAUSE OF INCIDENT: SADDLE TANK FAILURE

CAUSE OF INCIDENT: OTHER

EMERGENCY MEASURES: CSP ON SCENE, MFD CAR 4 ON SCENE, STILL DRIPPING.

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 603 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: SAA
ADDRESS: I-95 N AFTER REST AREA
MILFORD CT
CONTACT: ACETO, JOHN
SOURCE: CT DEP

REV: 3/22/11
ID1: 200504910
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 7/25/2005
TIME OF RELEASE:
ACTION: CONTRACTED

DISHCHARGER: SAA

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

SITE INFORMATION

DATE OF RELEASE: 7/25/2005
TIME OF RELEASE:
ACTION: CONTAINED

DISHCHARGER: SAA

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

REPORT TIME: 7/25/2005 9:25:48 AM
REPORTED BY: TIM HAYNES
REPORTER S PHONE: 9947011

MATERIAL RELEASED: DIESEL FUEL
QUANTITY SPILLED: 30 GAL

CAUSE OF INCIDENT: SADDLE TANK FAILURE

EMERGENCY MEASURES: SADDLE TANK DUE TO ROAD DEBRIS, NO DRAINS REPORTED TO BE AFFECTED

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 623 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: UNKNOWN
ADDRESS: I-95 BETWEEN EXIT 34 and EXIT 39
MILFORD CT
REV: 3/22/11
ID1: 20070399
ID2:
STATUS: CLOSED
PHONE:

CONTACT: THIGPEN, DONNELL
SOURCE: CT DEP

SITE INFORMATION

DATE OF RELEASE: 4/11/2007
TIME OF RELEASE:
ACTION: OTHER

DISCHARGER: UNKNOWN

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

REPORT TIME: 4/11/2007 8:02:51 AM
REPORTED BY: DONNA
REPORTER S PHONE: 8715991

MATERIAL RELEASED: UNKNOWN PETROLEUM
CAUSE OF INCIDENT: OTHER

EMERGENCY MEASURES: WEPAWAUG RIVER HAS SHEEN ON WATER. FD STATES THEY BELIEVE IT IS RUN OFF FROM HIGHWAY.

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 567 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: DIRECT TRANSIT INC
ADDRESS: I-95 E EXIT 34 and EXIT 40
MILFORD CT 06460
REV: 3/13/91
ID1: 946811
ID2:
STATUS: CLOSED
PHONE: 800 443 3139

CONTACT: DIRECT TRANSIT INC
SOURCE: CT DEP

SITE INFORMATION

INSPECTOR S BADGE NUMBER: 924
REPORT DATE: 11/19/91 REPORT TIME: 17
ACTUAL TIME: 38
REPORTER: DAVE LOMBARD
FIRE DEPT
NEW HAVEN AVE
MILFORD CT 6460

WORK PHONE: 203 878 5991
HOME PHONE:
POLE NUMBER:
INCIDENT TYPE: PETROLEUM DISCHARGED: DIESEL FUEL
GALLONS: 150 YARDS:
POUNDS: CON:
DRUMS: FEDRAL:
CERCLA: ACROSS PROPERTY LINES:
EMERGENCY CLEANUP: REP QUAN:
TOTAL POUNDS:

DESCRIPTION:

DATE: 11/19/91 DATE UNKNOWN:
CONTINUOUS SPILL: SPILL TIME:
RELEASE TERMINATED: Y ONGOING RELEASE:
UNKNOWN: CONTAINED: Y

ADDITIONAL INFORMATION:

WATERBODY: RIVER:
LIS: TRIBUTARY:
CATCH BASIN: Y POND:
AIR: SURFACE WATER: Y
GROUND WATER: GROUND SURFACE: Y
INSIDE BUILDING: OTHER AREA:
TOTAL IN WATER: 50 TOTAL RECOVERED FROM WATER: 50
TOTAL RECOVERED: 150
RESPONSIBLE PARTY: DIRECT TRANSIT INC

NORTH SIOUX CITY SD

PHONE: 800 443 3139 ACCEPT RESPONSIBILITY: Y
POLLUTER UNKNOWN:
CLEANUP ACTION TAKEN: SANDED/BOOMED
DUN BRAD: NOTIFIED FEDERAL GOVERNMENT:
NOTIFIED COAST GAURD: NOTIFIED FIRE MARSHALL:
NOTIFIED LOCAL FIRE DEPT: NOTIFIED POLICE:
NOTIFIED ATTORNEY GENERAL: NOTIFIED AQUACULTURE:
NOTIFIED STATE DOBS: NOTIFIED STATE WATER BUREAU:
NOTIFIED STATE AIR BUREAU: NOTIFIED STATE WASTE BUREAU:
NOTIFIED WEED HAZ WASTE: NOTIFIED WEED SOLID WASTE:

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 567 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: DIRECT TRANSIT INC
ADDRESS: I-95 E EXIT 34 and EXIT 40
MILFORD CT 06460
REV: 3/13/91
ID1: 946811
ID2:
STATUS: CLOSED
PHONE: 800 443 3139

CONTACT: DIRECT TRANSIT INC
SOURCE: CT DEP

PERMITTING NOTIFIED: NOTIFIED UST UNIT:
NOTIFIED SOLID WASTE RECOVERY: NOTIFIED ENVIRONMENTAL CONSERVATION:
NOTIFIED P-F: NOTIFIED P-W:
NOTIFIED OPS: NOTIFIED OTHER:
NOTIFIED STATE AGENCIES: NOTIFICATION DATE:
NOTIFICATION TIME:
DISCHARGE CLASS: TRANSPORTATION

CAUSE: SADDLE TANK FAILURE

CORRECTIVE ACTION TAKEN: CONTAINED/REMOVED CONTRACTED

CONTRACTOR: Y CONT NAME: ENV PRODS SVC
DID DEP HIRE CONT: N HIRE DATE:
WHEN CONT REQUESTED: SECOND REQUEST:
ARRIVED: ARRIVED SECOND TIME:
RECEIVED BY: BADGE NUMBER: 924
ASSIGNED DATE: 11/19/91 ASSIGNED TIME: 17:41
NOT 911 EMERGENCY: NOTIFICATION STATUS:
CT EMERGENCY SPILLFUND USED: CASE NUMBER:
CASE NUMBER 2: FED GOV PAID:
PIN: COST RECOVERY EXPENDITURE:
INC CODE: PROPERTY OWNER: ?
OTHER OWNER: COMMERCIAL
PROP NAME: MAYFLOWER TRUCK STOP/ST OF CT

NEW HAVEN CT

WAS POLLUTER A TRUCK: Y WAS POLLUTER A TRAILER: Y
OWNER OF TRUCK/TRAILER: Y OWNERS NAME: DIRECT TRANSIT INC
OPERATORS NAME: WESLEY K BECHAM MAKE OF VEHICLE: FREIGHTLINER
VEHICLE MODEL: BON TRUCK REGISTRATION: SD PR20641
TRAILER REGISTRATION: SD 57137 UPDATED WITH INSPECTORS REPORT: Y
DATE UPDATED: 11/19/91 COPY: 2
QUAN FET:

MISCELLANEOUS INFORMATION: T/T RAN OVER TRUCK BED LINER DAMAGING SADDLE TANK and DISCHARGING FUEL OVER ROAD and COMING TO REST AT TRUCK STOP LOST REMAINDER OF FUEL IN PRO AREA and UNDER CONNEX BOXES ENV PRODS WAS HIRED TO CLEAN

UP AREA CATCH BASINS WERE BOOMED and A TOW TRUCK WAS CALLED TO MOVE CONNEX BOXES STREET SWEEPER BROUGHT IN TO SWEEP RAMP

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 555 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: I-95 S/B
MILFORD CT 06460
REV: 3/13/91
ID1: 911335
ID2:
STATUS: CLOSED
PHONE:

CONTACT:
SOURCE: CT DEP

SITE INFORMATION

INSPECTOR S BADGE NUMBER: 924
REPORT DATE: 04/11/91 REPORT TIME: 8
ACTUAL TIME: 13
REPORTER: DON WORROLLIS
MILFORD FIRE DEPT

WORK PHONE: 203 878 5991
HOME PHONE:
POLE NUMBER:
INCIDENT TYPE: PETROLEUM DISCHARGED: DIESEL
GALLONS: YARDS:
POUNDS: CON:
DRUMS: FEDRAL:
CERCLA: ACROSS PROPERTY LINES:
EMERGENCY CLEANUP: REP QUAN:
TOTAL POUNDS:

DESCRIPTION:

DATE: 04/11/91 DATE UNKNOWN:
CONTINUOUS SPILL: SPILL TIME:
RELEASE TERMINATED: ONGOING RELEASE:
UNKNOWN: CONTAINED:

ADDITIONAL INFORMATION: 25 GALS OUT CAN T STOP LEAK

WATERBODY: RIVER:
LIS: TRIBUTARY:
CATCH BASIN: POND:
AIR: SURFACE WATER:
GROUND WATER: GROUND SURFACE:
INSIDE BUILDING: OTHER AREA:
TOTAL IN WATER: TOTAL RECOVERED FROM WATER:
TOTAL RECOVERED:
RESPONSIBLE PARTY:

PHONE: ACCEPT RESPONSIBILITY:
POLLUTER UNKNOWN:
CLEANUP ACTION TAKEN:
DUN BRAD: NOTIFIED FEDERAL GOVERNMENT:
NOTIFIED COAST GAURD: NOTIFIED FIRE MARSHALL:
NOTIFIED LOCAL FIRE DEPT: NOTIFIED POLICE:
NOTIFIED ATTORNEY GENERAL: NOTIFIED AQUACULTURE:
NOTIFIED STATE DOBS: NOTIFIED STATE WATER BUREAU:
NOTIFIED STATE AIR BUREAU: NOTIFIED STATE WASTE BUREAU:
NOTIFIED WEED HAZ WASTE: NOTIFIED WEED SOLID WASTE:

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 555 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: I-95 S/B
MILFORD CT 06460
CONTACT:
SOURCE: CT DEP

REV: 3/13/01
ID1: 931335
ID2:
STATUS: CLOSED
PHONE:

PERMITTING NOTIFIED:
NOTIFIED SOLID WASTE RECOVERY:
NOTIFIED P-F:
NOTIFIED OPS:
NOTIFIED STATE AGENCIES:
NOTIFICATION TIME:
DISCHARGE CLASS: COMMERCIAL

CAUSE: MOTOR VEHICLE ACCIENT

CORRECTIVE ACTION TAKEN: UNKOWN

CONTRACTOR:
DID DEP HIRE CONT:
WHEN CONT REQUESTED:
ARRIVED:
RECEIVED BY: PORTER
ASSIGNED DATE:
NOT 911 EMERGENCY:
CT EMERGENCY SPILLFUND USED:
CASE NUMBER 2:
PIN:
INC CODE:
OTHER OWNER:
PROP NAME:

NOTIFIED UST UNIT:
NOTIFIED ENVIRONMENTAL CONSERVATION:
NOTIFIED F-W:
NOTIFIED OTHER:
NOTIFICATION DATE:

CONT NAME:
HIRE DATE:
SECOND REQUEST:
ARRIVED SECOND TIME:
BADGE NUMBER:
ASSIGNED TIME:
NOTIFICATION STATUS:
CASE NUMBER:
FED GOV PAID:
COST RECOVERY EXPENDITURE:
PROPERTY OWNER:

WAS POLLUTER A TRUCK:
OWNER OF TRUCK/TRAILER:
OPERATORS NAME:
VEHICLE MODEL:
TRAILER REGISTRATION:
DATE UPDATED:
QUAN FET:

WAS POLLUTER A TRAILER:
OWNERS NAME:
MAKE OF VEHICLE:
TRUCK REGISTRATION:
UPDATED WITH INSPECTORS REPORT:
COPY: P

MISCELLANEOUS INFORMATION:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 553 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: I-95 N EXIT 32 and EXIT 34
MILFORD CT 06460
CONTACT:
SOURCE: CT DEP

REV: 3/13/01
ID1: 944417
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

INSPECTOR S BADGE NUMBER: NR
REPORT DATE: 08/01/94
ACTUAL TIME: 9
REPORTER: FIRE DEPT
REPORT TIME: 4

WORK PHONE: 203 878 5991
HOME PHONE:
POLE NUMBER:
INCIDENT TYPE: PETROLEUM
GALLONS: 40
POUNDS:
DRUMS:
CERCLA:
EMERGENCY CLEANUP:
TOTAL POUNDS:
DISCHARGED: DIESEL FUEL
YARDS:
CON:
FEDERAL:
ACROSS PROPERTY LINES:
REP QUAN:

DESCRIPTION:

DATE: 08/01/94
CONTINUOUS SPILL:
RELEASE TERMINATED: Y
UNKNOWN:
DATE UNKNOWN:
SPILL TIME:
ONGOING RELEASE:
CONTAINED: Y

ADDITIONAL INFORMATION: SM AMT INTO DRAIN EAST COAST ENV TO CLEAN UP

WATERBODY:
LIS:
CATCH BASIN: Y
AIR:
GROUND WATER:
INSIDE BUILDING:
TOTAL IN WATER:
TOTAL RECOVERED:
RESPONSIBLE PARTY:
RIVER:
TRIBUTARY:
POND:
SURFACE WATER: Y
GROUND SURFACE: Y
OTHER AREA:
TOTAL RECOVERED FROM WATER:

PHONE:
POLLUTER UNKNOWN:
CLEANUP ACTION TAKEN:
DUN BRAD:
NOTIFIED COAST GAURD:
NOTIFIED LOCAL FIRE DEPT:
NOTIFIED ATTORNEY GENERAL:
NOTIFIED STATE DOHS:
NOTIFIED STATE AIR BUREAU:
NOTIFIED WEED HAZ WASTE:
ACCEPT RESPONSIBILITY:
NOTIFIED FEDERAL GOVERNMENT:
NOTIFIED FIRE MARSHALL:
NOTIFIED POLICE:
NOTIFIED AQUACULTURE:
NOTIFIED STATE WATER BUREAU:
NOTIFIED STATE WASTE BUREAU:
NOTIFIED WEED SOLID WASTE:

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 553 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: I-95 N EXIT 32 and EXIT 34
MILFORD CT 06460
CONTACT:
SOURCE: CT DEP

REV: 3/13/01
ID1: 944417
ID2:
STATUS: CLOSED
PHONE:

PERMITTING NOTIFIED:
NOTIFIED SOLID WASTE RECOVERY:
NOTIFIED P-F:
NOTIFIED OPS:
NOTIFIED STATE AGENCIES:
NOTIFICATION TIME:
DISCHARGE CLASS: TRANSPORTATION

CAUSE: MOTOR VEHICLE ACCIDENT

CORRECTIVE ACTION TAKEN: CONTRACTED

CONTRACTOR: Y
DID DEP HIRE CONT: N
WHEN CONT REQUESTED:
ARRIVED:
RECEIVED BY:
ASSIGNED DATE:
NOT 911 EMERGENCY:
CT EMERGENCY SPILLFUND USED:
CASE NUMBER 2:
PIN:
INC CODE:
OTHER OWNER:
PROP NAME:

NOTIFIED UST UNIT:
NOTIFIED ENVIRONMENTAL CONSERVATION:
NOTIFIED F-W:
NOTIFIED OTHER:
NOTIFICATION DATE:

CONT NAME: EAST COAST ENV
HIRE DATE:
SECOND REQUEST:
ARRIVED SECOND TIME:
BADGE NUMBER:
ASSIGNED TIME:
NOTIFICATION STATUS:
CASE NUMBER:
FED GOV PAID:
COST RECOVERY EXPENDITURE:
PROPERTY OWNER:

WAS POLLUTER A TRUCK:
OWNER OF TRUCK/TRAILER:
OPERATORS NAME:
VEHICLE MODEL:
TRAILER REGISTRATION:
DATE UPDATED:
QUAN FET:

WAS POLLUTER A TRAILER:
OWNERS NAME:
MAKE OF VEHICLE:
TRUCK REGISTRATION:
UPDATED WITH INSPECTORS REPORT:
COPY: W

MISCELLANEOUS INFORMATION:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 561 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: B and J TRANSPORTATION
ADDRESS: I-95 S SOUTH OF EXIT 38
MILFORD CT
CONTACT: CIANO, MARK
SOURCE: CT DEP

REV: 3/22/11
ID1: 20040129
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 1/8/2004
TIME OF RELEASE:
ACTION: CONTRACTED

DISHCHARGER: B and J TRANSPORTATION

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

SITE INFORMATION

DATE OF RELEASE: 1/8/2004
TIME OF RELEASE:
ACTION: PUMPED OUT

DISHCHARGER: B and J TRANSPORTATION

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

REPORT TIME: 9:40:00 PM
REPORTED BY: TROOP G
REPORTER S PHONE: 6962500

MATERIAL RELEASED: DIESEL FUEL
QUANTITY SPILLED: 5 GAL

CAUSE OF INCIDENT: SADDLE TANK FAILURE

EMERGENCY MEASURES: TRACTOR TRAILER ACCIDENT

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 585 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: NORTHEAST UTILITIES
ADDRESS: NRO
MILFORD CT

CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/22/11
ID1: 200004217
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 6/12/2000
TIME OF RELEASE: 12:19:00 PM
ACTION: REMOVED

DISHCHARGER: NORTHEAST UTILITIES

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

SITE INFORMATION

DATE OF RELEASE: 6/12/2000
TIME OF RELEASE: 12:19:00 PM
ACTION: CONTAINED

DISHCHARGER: NORTHEAST UTILITIES

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

SITE INFORMATION

DATE OF RELEASE: 6/12/2000
TIME OF RELEASE: 12:19:00 PM
ACTION: CONTRACTED

DISHCHARGER: NORTHEAST UTILITIES

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

REPORT TIME: 6/12/2000 12:19:37 PM
REPORTED BY: RANDY STONG
REPORTER S PHONE: 7836743

MATERIAL RELEASED: HYDRAULIC OIL
QUANTITY SPILLED: 9 GAL

CAUSE OF INCIDENT: HOSE FAILURE

EMERGENCY MEASURES: VAC TRUCK VALVE DIDN T CLOSE ALL THE WAY. AET CONTRACTED, OIL DISCHARGED TO PAVEMENT

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 585 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: NORTHEAST UTILITIES
ADDRESS: NRO
MILFORD CT

CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/22/11
ID1: 200004217
ID2:
STATUS: CLOSED
PHONE:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 584 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: MVA
ADDRESS: I-95, NEAR EXIT 38,
MILFORD CT

CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/22/11
ID1: 200304344
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 6/18/2003
TIME OF RELEASE:
ACTION: SANDED

DISHCHARGER: MVA

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

SITE INFORMATION

DATE OF RELEASE: 6/18/2003
TIME OF RELEASE:
ACTION: CLEANED

DISHCHARGER: MVA

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

REPORT TIME: 6/18/2003 9:32:42 AM
REPORTED BY: CPT GARY BAKER
REPORTER S PHONE: 8735991

MATERIAL RELEASED: GASOLINE
QUANTITY SPILLED: 5 GAL

CAUSE OF INCIDENT: MV ACCIDENT

EMERGENCY MEASURES: CTDOT TO SAND HIGHWAY. OF THE MOTOR VEHICLE SPILL

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 583 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: MOBIL GAS
ADDRESS: I-95 N
MILFORD CT

CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/22/11
ID1: 200705465
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 8/24/2007
TIME OF RELEASE: 2:00:00 PM
ACTION: CLEANED

DISHCHARGER: MOBIL GAS

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

REPORT TIME: 8/24/2007 4:11:30 PM
REPORTED BY: JOE FEZASKI
REPORTER S PHONE: 2206119

MATERIAL RELEASED: MOTOR OIL
QUANTITY SPILLED: 1 GAL

CAUSE OF INCIDENT: MV ACCIDENT

EMERGENCY MEASURES: SPEED DRY AND ESI RESPONDING TO COLLECT CONTAMINATED PRODUCT

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 681 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: RD
MILFORD CT
REV: 3/22/11
ID1: 20020903
ID2:
STATUS: CLOSED
PHONE:

CONTACT: LIANO, MARK
SOURCE: CT DEP

SITE INFORMATION

DATE OF RELEASE: 6/14/2002
TIME OF RELEASE:
ACTION: SANDED

DISHCHARGER:
ACROSS FROM 70 TERRACE ROAD
CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

SITE INFORMATION

DATE OF RELEASE: 6/14/2002
TIME OF RELEASE:
ACTION: OTHER

DISHCHARGER:
ACROSS FROM 70 TERRACE ROAD
CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

SITE INFORMATION

DATE OF RELEASE: 6/14/2002
TIME OF RELEASE:
ACTION: 21

DISHCHARGER:
ACROSS FROM 70 TERRACE ROAD
CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

REPORT TIME: 6/14/2002 11:03:24 AM
REPORTED BY: BEVERLY JOHNSON
REPORTER S PHONE: 2135780

MATERIAL RELEASED: UNKNOWN OIL
CAUSE OF INCIDENT: OTHER

EMERGENCY MEASURES: HOMEOWNER DOING YARD RECONSTRUCTION OF YARD HAD MACHINES LEAK FLUIDS ONTO ROAD

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 718 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: I-95 S/B
MILFORD CT 06460
REV: 3/13/01
ID1: 911333
ID2:
STATUS: CLOSED
PHONE:

CONTACT:
SOURCE: CT DEP

SITE INFORMATION

INSPECTOR S BADGE NUMBER: 924
REPORT DATE: 04/11/91 REPORT TIME: 8
ACTUAL TIME: 13
REPORTER: DON WORROLLIS
MILFORD FIRE DEPT

WORK PHONE: 203 878 5991
HOME PHONE:
POLE NUMBER:
INCIDENT TYPE: PETROLEUM DISCHARGED: DIESEL
GALLONS: YARDS:
POUNDS: CON:
DRUMS: FEDRAL:
CERCLA: ACROSS PROPERTY LINES:
EMERGENCY CLEANUP: REP QUAN:
TOTAL POUNDS:

DESCRIPTION:

DATE: 04/11/91 DATE UNKNOWN:
CONTINUOUS SPILL: SPILL TIME:
RELEASE TERMINATED: ONGOING RELEASE:
UNKNOWN: CONTAINED:

ADDITIONAL INFORMATION: 75 GALS OUT CAN T STOP LEAK

WATERBODY: RIVER:
LIS: TRIBUTARY:
CATCH BASIN: POND:
AIR: SURFACE WATER:
GROUND WATER: GROUND SURFACE:
INSIDE BUILDING: OTHER AREA:
TOTAL IN WATER: TOTAL RECOVERED FROM WATER:
TOTAL RECOVERED:
RESPONSIBLE PARTY:

PHONE: ACCEPT RESPONSIBILITY:
POLLUTER UNKNOWN:
CLEANUP ACTION TAKEN:
DUN BRAD: NOTIFIED FEDERAL GOVERNMENT:
NOTIFIED COAST GAURD: NOTIFIED FIRE MARSHALL:
NOTIFIED LOCAL FIRE DEPT: NOTIFIED POLICE:
NOTIFIED ATTORNEY GENERAL: NOTIFIED AQUACULTURE:
NOTIFIED STATE DOBS: NOTIFIED STATE WATER BUREAU:
NOTIFIED STATE AIR BUREAU: NOTIFIED STATE WASTE BUREAU:
NOTIFIED WEED HAZ WASTE: NOTIFIED WEED SOLID WASTE:

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 718 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: I-95 S/B
MILFORD CT 06460
REV: 3/13/01
ID1: 911333
ID2:
STATUS: CLOSED
PHONE:

CONTACT:
SOURCE: CT DEP

PERMITTING NOTIFIED: NOTIFIED UST UNIT:
NOTIFIED SOLID WASTE RECOVERY: NOTIFIED ENVIRONMENTAL CONSERVATION:
NOTIFIED P-F: NOTIFIED F-W:
NOTIFIED OPS: NOTIFIED OTHER:
NOTIFIED STATE AGENCIES: NOTIFICATION DATE:
NOTIFICATION TIME:
DISCHARGE CLASS: COMMERCIAL

CAUSE: MOTOR VEHICLE ACCIDENT

CORRECTIVE ACTION TAKEN: UNKNOWN

CONTRACTOR: CONT NAME:
DID DEP HIRE CONT: HIRE DATE:
WHEN CONT REQUESTED: SECOND REQUEST:
ARRIVED: ARRIVED SECOND TIME:
RECEIVED BY: PORTER BADGE NUMBER:
ASSIGNED DATE: ASSIGNED TIME:
NOT 911 EMERGENCY: NOTIFICATION STATUS:
CT EMERGENCY SPILLFUND USED: CASE NUMBER:
CASE NUMBER 2: FED GOV PAID:
PIN: COST RECOVERY EXPENDITURE:
INC CODE: PROPERTY OWNER:
OTHER OWNER:
PROP NAME:

WAS POLLUTER A TRUCK: WAS POLLUTER A TRAILER:
OWNER OF TRUCK/TRAILER: OWNERS NAME:
OPERATORS NAME: MAKE OF VEHICLE:
VEHICLE MODEL: TRUCK REGISTRATION:
TRAILER REGISTRATION: UPDATED WITH INSPECTORS REPORT:
DATE UPDATED: COPY: P
QUAN FET:

MISCELLANEOUS INFORMATION:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 716 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: I-95 N EXIT 32 and EXIT 34
MILFORD CT 06460
REV: 3/13/01
ID1: 944417
ID2:
STATUS: CLOSED
PHONE:

CONTACT:
SOURCE: CT DEP

SITE INFORMATION

INSPECTOR S BADGE NUMBER: NR
REPORT DATE: 08/01/94 REPORT TIME: 4
ACTUAL TIME: 9
REPORTER: FIRE DEPT

WORK PHONE: 203 878 5991
HOME PHONE:
POLE NUMBER:
INCIDENT TYPE: PETROLEUM DISCHARGED: DIESEL FUEL
GALLONS: 80 YARDS:
POUNDS: CON:
DRUMS: FEDRAL:
CERCLA: ACROSS PROPERTY LINES:
EMERGENCY CLEANUP: REP QUAN:
TOTAL POUNDS:

DESCRIPTION:

DATE: 08/01/94 DATE UNKNOWN:
CONTINUOUS SPILL: SPILL TIME:
RELEASE TERMINATED: Y ONGOING RELEASE:
UNKNOWN: CONTAINED: Y

ADDITIONAL INFORMATION: SM AMT INTO DRAIN EAST COAST ENV TO CLEAN UP

WATERBODY: RIVER:
LIS: TRIBUTARY:
CATCH BASIN: Y POND:
AIR: SURFACE WATER: Y
GROUND WATER: GROUND SURFACE: Y
INSIDE BUILDING: OTHER AREA:
TOTAL IN WATER: TOTAL RECOVERED FROM WATER:
TOTAL RECOVERED:
RESPONSIBLE PARTY:

PHONE: ACCEPT RESPONSIBILITY:
POLLUTER UNKNOWN:
CLEANUP ACTION TAKEN:
DUN BRAD: NOTIFIED FEDERAL GOVERNMENT:
NOTIFIED COAST GAURD: NOTIFIED FIRE MARSHALL:
NOTIFIED LOCAL FIRE DEPT: NOTIFIED POLICE:
NOTIFIED ATTORNEY GENERAL: NOTIFIED AQUACULTURE:
NOTIFIED STATE DOBS: NOTIFIED STATE WATER BUREAU:
NOTIFIED STATE AIR BUREAU: NOTIFIED STATE WASTE BUREAU:
NOTIFIED WEED HAZ WASTE: NOTIFIED WEED SOLID WASTE:

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 716 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: I-95 N EXIT 31 and EXIT 34
MILFORD CT 06460
CONTACT:
SOURCE: CT DEP

REV: 3/13/01
ID1: 94417
ID2:
STATUS: CLOSED
PHONE:

PERMITTING NOTIFIED:
NOTIFIED SOLID WASTE RECOVERY:
NOTIFIED F-F:
NOTIFIED OPS:
NOTIFIED STATE AGENCIES:
NOTIFICATION TIME:
DISCHARGE CLASS: TRANSPORTATION

NOTIFIED UST UNIT:
NOTIFIED ENVIRONMENTAL CONSERVATION:
NOTIFIED F-W:
NOTIFIED OTHER:
NOTIFICATION DATE:

CAUSE: MOTOR VEHICLE ACCIDENT

CORRECTIVE ACTION TAKEN: CONTRACTED

CONTRACTOR: Y
DID DEP HIRE CONT: N
WHEN CONT REQUESTED:
ARRIVED:
RECEIVED BY:
ASSIGNED DATE:
NOT 911 EMERGENCY:
CT EMERGENCY SPILLFUND USED:
CASE NUMBER 2:
PIN:
INC CODE:
OTHER OWNER:
PROP NAME:

CONT NAME: EAST COAST ENV
HIRE DATE:
SECOND REQUEST:
ARRIVED SECOND TIME:
BADGE NUMBER:
ASSIGNED TIME:
NOTIFICATION STATUS:
CASE NUMBER:
FED GOV PAID:
CUST RECOVERY EXPENDITURE:
PROPERTY OWNER:

WAS POLLUTER A TRUCK:
OWNER OF TRUCK/TRAILER:
OPERATORS NAME:
VEHICLE MODEL:
TRAILER REGISTRATION:
DATE UPDATED:
QUAN FET:

WAS POLLUTER A TRAILER:
OWNERS NAME:
MAKE OF VEHICLE:
TRUCK REGISTRATION:
UPDATED WITH INSPECTORS REPORT:
COPY: W

MISCELLANEOUS INFORMATION:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 699 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: I-95 S
MILFORD CT
CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/22/11
ID1: 200005406
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 11/5/2000
TIME OF RELEASE: 11:54:00 AM
ACTION: SANDED

DISHCHARGER:

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

SITE INFORMATION

DATE OF RELEASE: 11/5/2000
TIME OF RELEASE: 11:54:00 AM
ACTION: CLEANED

DISHCHARGER:

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

REPORT TIME: 11/5/2000 11:54:37 AM
REPORTED BY: CONNERS
REPORTER S PHONE: 8715991

MATERIAL RELEASED: GASOLINE
QUANTITY SPILLED: 6 GAL

CAUSE OF INCIDENT: OTHER

EMERGENCY MEASURES:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 700 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: S I-95 BOUND OF EXIT
MILFORD CT
CONTACT: EMANUELSON, BRIAN
SOURCE: CT DEP

REV: 3/22/11
ID1: 9701495
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 6/5/1997
TIME OF RELEASE: 10:11:00 PM
ACTION: CONTAINED

DISHCHARGER:

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

SITE INFORMATION

DATE OF RELEASE: 6/5/1997
TIME OF RELEASE: 10:11:00 PM
ACTION: OTHER

DISHCHARGER:

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

REPORT TIME: 10:39:00 PM
REPORTED BY: STATE POLICE DISPATCHER RUSSO
REPORTER S PHONE: 7997728

MATERIAL RELEASED: GASOLINE
QUANTITY SPILLED: 150 GAL

CAUSE OF INCIDENT: SADDLE TANK FAILURE

EMERGENCY MEASURES: VACCUUM56 TRUCK DISPATCHED BOOMED ECT.

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 637 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: I-95 N REST AREA
MILFORD CT
CONTACT: LECLERC, KEN
SOURCE: CT DEP

REV: 3/22/11
ID1: 200700350
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 1/13/2007
TIME OF RELEASE: 5:15:00 PM
ACTION: CONTAINED

DISHCHARGER:

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

REPORT TIME: 1/17/2007 9:29:35 PM
REPORTED BY: DONNA
REPORTER S PHONE: 8715991

MATERIAL RELEASED: ANTIFREEZE
CAUSE OF INCIDENT: OTHER

EMERGENCY MEASURES: TRUCK HAS 55 GALLONS DRUMS CONTAINING ANTIFREEZE ONE OF THE DRUMS HAS A LEAK IN IT AND IS NEAR THE FRONT OF THE TRUCK. NEIL FROM PIEDMONT EXPRESS CALLED TO CHECK TO SEE IF THIS WAS REPORTED. US EXPRESS IS CLEANUP COMPANY. NEIL S NUMBER IS 704-640-7200.

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 565 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: COMM. VEHICLE
ADDRESS: I-95 NB
MILFORD CT
CONTACT: LECLERC, KEN
SOURCE: CT DEP

REV: 3/22/11
ID1: 200904141
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 6/11/2001
TIME OF RELEASE: 1:00:00 PM
ACTION: SANDED

DISCHARGER: COMM. VEHICLE

CT

DISCHARGER'S PHONE: 0000000
ACCEPTS RESPONSIBILITY:

REPORT TIME: 1:01:00 PM
REPORTED BY: TRP. GUERRA
REPORTER'S PHONE: 6962500

MATERIAL RELEASED: HYDRAULIC OIL
QUANTITY SPILLED: 40 GAL

CAUSE OF INCIDENT: HOSE FAILURE

CAUSE OF INCIDENT: MV ACCIDENT

EMERGENCY MEASURES: D.O.T. SANDED.

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 673 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: DEVON STATE BOAT LAUNCH UNDER I-95
MILFORD CT
CONTACT: LECLERC, KEN
SOURCE: CT DEP

REV: 3/22/11
ID1: 200900699
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 2/4/2004
TIME OF RELEASE:
ACTION: OTHER

DISCHARGER:

CT

DISCHARGER'S PHONE:
ACCEPTS RESPONSIBILITY:

REPORT TIME: 2/4/2004 8:02:32 AM
REPORTED BY: KEN STADALNIK
REPORTER'S PHONE: 7354311

MATERIAL RELEASED: UNKNOWN SUBSTANCE
CAUSE OF INCIDENT: DUMPING

EMERGENCY MEASURES: DRUM WAS LEFT AT BOAT LAUNCH. UNKNOWN SUBSTANCE WITHIN A RUSTED, UNMARKED 55 GALLON DRUM

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 670 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: UNKNOWN
MILFORD CT
CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/22/11
ID1: 200404334
ID2:
STATUS: CLOSED
PHONE:

REPORT TIME: 6/29/2004 9:52:17 AM
REPORTED BY: ANONYMOUS
REPORTER'S PHONE: 0000000

MATERIAL RELEASED:
EMERGENCY MEASURES:

SPILLS

SEARCH ID: 664 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: I-95 S BETWEEN EXIT 39A and EXIT 39B
MILFORD CT
CONTACT: ACETO, JOHN
SOURCE: CT DEP

REV: 3/23/11
ID1: 200507321
ID2:
STATUS: CLOSED
PHONE:

REPORT TIME: 10/26/2005 10:53:54 AM
REPORTED BY: DONNA
REPORTER'S PHONE: 5785991

MATERIAL RELEASED: DIESEL FUEL
QUANTITY SPILLED: 270 GAL

CAUSE OF INCIDENT: MV ACCIDENT

EMERGENCY MEASURES:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 658 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: I-95 N EXIT 4
MILFORD CT
CONTACT: LIANO, MARK
SOURCE: CT DEP

REV: 3/22/11
ID1: 200301024
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 1/19/2007
TIME OF RELEASE:
ACTION: OTHER

DISCHARGER:

CT

DISCHARGER'S PHONE:
ACCEPTS RESPONSIBILITY:

REPORT TIME: 2/19/2007 2:33:22 PM
REPORTED BY: DONNA
REPORTER'S PHONE: 7783991

MATERIAL RELEASED: DIESEL FUEL
QUANTITY SPILLED: 20 GAL

CAUSE OF INCIDENT: PUMPING

EMERGENCY MEASURES: RESPONSE REQUESTED

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 430 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: ROADLINK USA JOHN DEHOLL
ADDRESS: I-95 N BETWEEN EXIT 37 and EXIT 39
MILFORD CT
CONTACT: ACETO, JOHN
SOURCE: CT DEP

REV: 3/22/11
ID1: 200605757
ID2:
STATUS: CLOSED
PHONE:

REPORT TIME: 9/11/2006 2:26:18 PM
REPORTED BY: DISPATCHER DONNA
REPORTER S PHONE: 8735991

MATERIAL RELEASED: DIESEL FUEL
QUANTITY SPILLED: 15 GAL

CAUSE OF INCIDENT: SADDLE TANK FAILURE

CAUSE OF INCIDENT: OTHER

EMERGENCY MEASURES: CSP ON SCENE, MFD CAR 4 ON SCENE, STILL DRIPPING.

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 422 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: NORTHEAST UTILITIES
ADDRESS: NEU
MILFORD CT
CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/22/11
ID1: 200004217
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 6/12/2000
TIME OF RELEASE: 12:19:00 PM
ACTION: REMOVED

DISHCHARGER: NORTHEAST UTILITIES
CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

SITE INFORMATION

DATE OF RELEASE: 6/12/2000
TIME OF RELEASE: 12:19:00 PM
ACTION: CONTAINED

DISHCHARGER: NORTHEAST UTILITIES
CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

SITE INFORMATION

DATE OF RELEASE: 6/12/2000
TIME OF RELEASE: 12:19:00 PM
ACTION: CONTRACTED

DISHCHARGER: NORTHEAST UTILITIES
CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

REPORT TIME: 6/12/2000 12:19:37 PM
REPORTED BY: RANDY STONO
REPORTER S PHONE: 7134143

MATERIAL RELEASED: HYDRAULIC OIL
QUANTITY SPILLED: 5 GAL

CAUSE OF INCIDENT: HOSE FAILURE

EMERGENCY MEASURES: VAC TRUCK VALVE DIDN T CLOSE ALL THE WAY, AEY CONTRACTED, OIL DISCHARGED TO PAVEMENT

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 422 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: NORTHEAST UTILITIES
ADDRESS: NEU
MILFORD CT
CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/22/11
ID1: 200004217
ID2:
STATUS: CLOSED
PHONE:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 421 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: MVA
ADDRESS: I-95, NEAR EXIT 38,
MILFORD CT
CONTACT: NO RESPONSE
SOURCE: CT DEP

REV: 3/22/11
ID1: 200004344
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 6/13/2003
TIME OF RELEASE:
ACTION: SANDED

DISHCHARGER: MVA
CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

SITE INFORMATION

DATE OF RELEASE: 6/13/2003
TIME OF RELEASE:
ACTION: CLEANED

DISHCHARGER: MVA
CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

REPORT TIME: 6/18/2003 9:52:42 AM
REPORTED BY: CPT GARY BAKER
REPORTER S PHONE: 8735991

MATERIAL RELEASED: GASOLINE
QUANTITY SPILLED: 5 GAL

CAUSE OF INCIDENT: MV ACCIDENT

EMERGENCY MEASURES: CTDOT TO SAND HIGHWAY, OF THE MOTOR VEHICLE SPILL.

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 420 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: MOBIL GAS
ADDRESS: I-95 N
MILFORD CT

REV: 3/22/11
ID1: 200703465
ID2:
STATUS: CLOSED
PHONE:

CONTACT: NO RESPONSE
SOURCE: CT DEP

SITE INFORMATION

DATE OF RELEASE: 8/24/2007
TIME OF RELEASE: 2:00:00 PM
ACTION: CLEANED

DISHCHARGER: MOBIL GAS

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

REPORT TIME: 8/24/2007 4:18:50 PM
REPORTED BY: JOE TREASKI
REPORTER S PHONE: 2406119

MATERIAL RELEASED: MOTOR OIL
QUANTITY SPILLED: 1 GAL

CAUSE OF INCIDENT: MV ACCIDENT

EMERGENCY MEASURES: SPEED DRY AND ESI RESPONDING TO COLLECT CONTAMINATED PRODUCT

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 417 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: LOGISTICS EXPRESS INC
ADDRESS: UNKNOWN
MILFORD CT

REV: 3/22/11
ID1: 200709925
ID2:
STATUS: CLOSED
PHONE:

CONTACT: NO RESPONSE
SOURCE: CT DEP

SITE INFORMATION

DATE OF RELEASE: 8/11/2003
TIME OF RELEASE:
ACTION: SANDED

DISHCHARGER: LOGISTICS EXPRESS INC
randy tumbaeville

DISCHARGER S PHONE: 7962004
ACCEPTS RESPONSIBILITY:

REPORT TIME: 8/11/2003 6:18:39 PM
REPORTED BY: TOM HAVZOPOLOS
REPORTER S PHONE: 3124312

MATERIAL RELEASED: MOTOR OIL
QUANTITY SPILLED: 1 GAL

CAUSE OF INCIDENT: HOSE FAILURE

EMERGENCY MEASURES:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 460 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: UNKNOWN
ADDRESS: I-95 BETWEEN EXIT 38 and EXIT 39
MILFORD CT

REV: 3/22/11
ID1: 200702899
ID2:
STATUS: CLOSED
PHONE:

CONTACT: THIGPEN, DONNELL
SOURCE: CT DEP

SITE INFORMATION

DATE OF RELEASE: 4/11/2007
TIME OF RELEASE:
ACTION: OTHER

DISHCHARGER: UNKNOWN

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

REPORT TIME: 4/11/2007 8:07:31 AM
REPORTED BY: DONNA
REPORTER S PHONE: 8781991

MATERIAL RELEASED: UNKNOWN PETROLEUM
CAUSE OF INCIDENT: OTHER

EMERGENCY MEASURES: WEPAWAUG RIVER HAS SHEEN ON WATER. FD STATES THEY BELIEVE IT IS RUN OFF FROM HIGHWAY.

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 388 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: I-95 EXIT 42
ORANGE CT

REV: 3/22/11
ID1: 200705156
ID2:
STATUS: CLOSED
PHONE:

CONTACT: NO RESPONSE
SOURCE: CT DEP

REPORT TIME: 8/11/2007 10:26:37 AM
REPORTED BY: MIKE CAMERA
REPORTER S PHONE: 5351033

MATERIAL RELEASED: WATER
CAUSE OF INCIDENT: OTHER

EMERGENCY MEASURES: CAR WASH AT GAS STATION ON TANK PADS. NO RELEASE.

SPILLS

SEARCH ID: 385 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: UNKNOWN
ORANGE CT

REV: 3/22/11
ID1: 200501342
ID2:
STATUS: CLOSED
PHONE:

CONTACT: NO RESPONSE
SOURCE: CT DEP

REPORT TIME: 3/19/2009 3:21:15 PM
REPORTED BY: ANONYMOUS
REPORTER S PHONE: 0000000

MATERIAL RELEASED:
EMERGENCY MEASURES:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 404 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: DIRECT TRANSIT INC
ADDRESS: I-95 E EXIT 38 and EXIT 40
MILFORD CT 06460
CONTACT: DIRECT TRANSIT INC
SOURCE: CT DEP

REV: 3/13/01
ID1: 946811
ID2:
STATUS: CLOSED
PHONE: 800 441 3159

SITE INFORMATION

INSPECTOR S BADGE NUMBER: 974
REPORT DATE: 11/19/94 REPORT TIME: 17
ACTUAL TIME: 38
REPORTER: DAVE LOMBARD
FIRE DEPT
NEW HAVEN AVE
MILFORD CT 6460

WORK PHONE: 203 878 3691
HOME PHONE:
POLE NUMBER:
INCIDENT TYPE: PETROLEUM DISCHARGED: DIESEL FUEL
GALLONS: 150 YARDS:
POUNDS: CON:
DRUMS: FEDRAL:
CERCLA: ACROSS PROPERTY LINES:
EMERGENCY CLEANUP: REP QUAN:
TOTAL POUNDS:

DESCRIPTION:

DATE: 11/19/94 DATE UNKNOWN:
CONTINUOUS SPILL: SPILL TIME:
RELEASE TERMINATED: Y ONGOING RELEASE:
UNKNOWN: CONTAINED: Y

ADDITIONAL INFORMATION:

WATERBODY: RIVER:
LIS: TRIBUTARY:
CATCH BASIN: Y POND:
AIR: SURFACE WATER: Y
GROUND WATER: GROUND SURFACE: Y
INSIDE BUILDING: OTHER AREA:
TOTAL IN WATER: 50 TOTAL RECOVERED FROM WATER: 50
TOTAL RECOVERED: 150
RESPONSIBLE PARTY: DIRECT TRANSIT INC

NORTH SIOUX CITY SD

PHONE: 800 441 3159 ACCEPT RESPONSIBILITY: Y
POLLUTER UNKNOWN:
CLEANUP ACTION TAKEN: SANDED/BOOMED
DUN BRAD: NOTIFIED FEDERAL GOVERNMENT:
NOTIFIED COAST GAURD: NOTIFIED FIRE MARSHALL:
NOTIFIED LOCAL FIRE DEPT: NOTIFIED POLICE:
NOTIFIED ATTORNEY GENERAL: NOTIFIED AQUACULTURE:
NOTIFIED STATE DORS: NOTIFIED STATE WATER BUREAU:
NOTIFIED STATE AIR BUREAU: NOTIFIED STATE WASTE BUREAU:
NOTIFIED WEED HAZ WASTE: NOTIFIED WEED SOLID WASTE:

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 404 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: DIRECT TRANSIT INC
ADDRESS: I-95 E EXIT 38 and EXIT 40
MILFORD CT 06460
CONTACT: DIRECT TRANSIT INC
SOURCE: CT DEP

REV: 3/13/01
ID1: 946811
ID2:
STATUS: CLOSED
PHONE: 800 441 3159

PERMITTING NOTIFIED: NOTIFIED UST UNIT:
NOTIFIED SOLID WASTE RECOVERY: NOTIFIED ENVIRONMENTAL CONSERVATION:
NOTIFIED P-F: NOTIFIED F-W:
NOTIFIED OPS: NOTIFIED OTHER:
NOTIFIED STATE AGENCIES: NOTIFICATION DATE:
NOTIFICATION TIME:
DISCHARGE CLASS: TRANSPORTATION

CAUSE: SADDLE TANK FAILURE

CORRECTIVE ACTION TAKEN: CONTAINED/REMOVED CONTRACTED

CONTRACTOR: Y CONT NAME: ENV PRODS/SVC
DID DEP HIRE CONT: N HIRE DATE:
WHEN CONT REQUESTED: SECOND REQUEST:
ARRIVED: ARRIVED SECOND TIME:
RECEIVED BY: BADGE NUMBER: 974
ASSIGNED DATE: 11/19/94 ASSIGNED TIME: 17 41
NOT 911 EMERGENCY: NOTIFICATION STATUS:
CT EMERGENCY SPILLFUND USED: CASE NUMBER:
CASE NUMBER 2: FED GOV PAID:
PIN: COST RECOVERY EXPENDITURE:
INC CODE: PROPERTY OWNER: 7
OTHER OWNER: COMMERCIAL
PROP NAME: MAYFLOWER TRUCK STOP/ST OF CT

NEW HAVEN CT

WAS POLLUTER A TRUCK: Y WAS POLLUTER A TRAILER: Y
OWNER OF TRUCK/TRAILER: Y OWNERS NAME: DIRECT TRANSIT INC
OPERATORS NAME: WESLEY K BECKHAM MAKE OF VEHICLE: FREIGHTLINER
VEHICLE MODEL: BOX TRUCK REGISTRATION: SD FR20641
TRAILER REGISTRATION: SD 57137 UPDATED WITH INSPECTORS REPORT: Y
DATE UPDATED: 11/19/94 COPY: 2
QUAN FET:

MISCELLANEOUS INFORMATION: T/T RAN OVER TRUCK BED LINER DAMAGING SADDLE TANK and DISCHARGING FUEL OVER ROAD and COMING TO REST AT TRUCK STOP LOST REMAINDER OF FUEL IN PRO AREA and UNDER CONNEX BOXES ENV PRODS WAS HIRED TO CLEAN

UP AREA CATCH BASINS WERE BOOMED and A TOW TRUCK WAS CALLED TO MOVE CONNEX BOXES STREET SWEEPER BROUGHT IN TO SWEEP RAMP

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 390 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: MARSH HILL RD
ORANGE CT 06477
CONTACT:
SOURCE: CT DEP

REV: 3/13/01
ID1: 944560
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

INSPECTOR S BADGE NUMBER: NR
REPORT DATE: 06/04/94 REPORT TIME: 19
ACTUAL TIME: 47
REPORTER: CHIEF SHERWOOD
FIRE DEPT

WORK PHONE: 203 799 2131
HOME PHONE:
POLE NUMBER:
INCIDENT TYPE: CHEMICAL DISCHARGED: ANTIFREEZE
GALLONS: 3 YARDS:
POUNDS: CON:
DRUMS: FEDRAL:
CERCLA: ACROSS PROPERTY LINES:
EMERGENCY CLEANUP: REP QUAN:
TOTAL POUNDS:

DESCRIPTION:

DATE: 06/04/94 DATE UNKNOWN:
CONTINUOUS SPILL: SPILL TIME:
RELEASE TERMINATED: Y ONGOING RELEASE:
UNKNOWN: CONTAINED: Y

ADDITIONAL INFORMATION:

WATERBODY: RIVER:
LIS: TRIBUTARY:
CATCH BASIN: Y POND:
AIR: SURFACE WATER: Y
GROUND WATER: GROUND SURFACE: Y
INSIDE BUILDING: OTHER AREA:
TOTAL IN WATER: 1 TOTAL RECOVERED FROM WATER:
TOTAL RECOVERED: 2
RESPONSIBLE PARTY:

PHONE: ACCEPT RESPONSIBILITY:
POLLUTER UNKNOWN:
CLEANUP ACTION TAKEN: SANDED
DUN BRAD: NOTIFIED FEDERAL GOVERNMENT:
NOTIFIED COAST GAURD: NOTIFIED FIRE MARSHALL:
NOTIFIED LOCAL FIRE DEPT: NOTIFIED POLICE:
NOTIFIED ATTORNEY GENERAL: NOTIFIED AQUACULTURE:
NOTIFIED STATE DORS: NOTIFIED STATE WATER BUREAU:
NOTIFIED STATE AIR BUREAU: NOTIFIED STATE WASTE BUREAU:
NOTIFIED WEED HAZ WASTE: NOTIFIED WEED SOLID WASTE:

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 390 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: MARSH HILL RD
ORANGE CT 06477
CONTACT:
SOURCE: CT DEP

REV: 3/13/01
ID1: 944560
ID2:
STATUS: CLOSED
PHONE:

PERMITTING NOTIFIED: NOTIFIED UST UNIT:
NOTIFIED SOLID WASTE RECOVERY: NOTIFIED ENVIRONMENTAL CONSERVATION:
NOTIFIED P-F: NOTIFIED F-W:
NOTIFIED OPS: NOTIFIED OTHER:
NOTIFIED STATE AGENCIES: NOTIFICATION DATE:
NOTIFICATION TIME:
DISCHARGE CLASS: TRANSPORTATION

CAUSE: MOTOR VEHICLE ACCIDENT

CORRECTIVE ACTION TAKEN: SANDED

CONTRACTOR: CONT NAME:
DID DEP HIRE CONT: HIRE DATE:
WHEN CONT REQUESTED: SECOND REQUEST:
ARRIVED: ARRIVED SECOND TIME:
RECEIVED BY: BADGE NUMBER:
ASSIGNED DATE: ASSIGNED TIME:
NOT 911 EMERGENCY: NOTIFICATION STATUS:
CT EMERGENCY SPILLFUND USED: CASE NUMBER:
CASE NUMBER 2: FED GOV PAID:
PIN: COST RECOVERY EXPENDITURE:
INC CODE: PROPERTY OWNER:
OTHER OWNER:
PROP NAME:

WAS POLLUTER A TRUCK: WAS POLLUTER A TRAILER:
OWNER OF TRUCK/TRAILER: OWNERS NAME:
OPERATORS NAME: MAKE OF VEHICLE:
VEHICLE MODEL: TRUCK REGISTRATION:
TRAILER REGISTRATION: UPDATED WITH INSPECTORS REPORT:
DATE UPDATED: COPY: W
QUAN FET:

MISCELLANEOUS INFORMATION:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 398 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: B and J TRANSPORTATION
ADDRESS: I-95 S SOUTH OF EXIT 36
MILFORD CT
CONTACT: LIANO, MARK
SOURCE: CT DEP

REV: 3/22/11
ID1: 20040129
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 1/3/2004
TIME OF RELEASE:
ACTION: CONTRACTED

DISHCHARGER: B and J TRANSPORTATION
CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

SITE INFORMATION

DATE OF RELEASE: 1/8/2004
TIME OF RELEASE:
ACTION: PUMPED OUT

DISHCHARGER: B and J TRANSPORTATION
CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

REPORT TIME: 9:00:00 PM
REPORTED BY: TROOP G
REPORTER S PHONE: 6961500

MATERIAL RELEASED: DIESEL FUEL
QUANTITY SPILLED: 5 GAL

CAUSE OF INCIDENT: SADDLE TANK FAILURE

EMERGENCY MEASURES: TRACTOR TRAILER ACCIDENT

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 402 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: COMBI VEHICLE
ADDRESS: I-95 NB
MILFORD CT
CONTACT: LECLERC, KEN
SOURCE: CT DEP

REV: 3/22/11
ID1: 20010141
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 6/11/2001
TIME OF RELEASE: 1:00:00 PM
ACTION: SANDED

DISHCHARGER: COMBI VEHICLE
CT

DISCHARGER S PHONE: 0000000
ACCEPTS RESPONSIBILITY:

REPORT TIME: 1:05:00 PM
REPORTED BY: TRP. GUERRA
REPORTER S PHONE: 6962500

MATERIAL RELEASED: HYDRAULIC OIL
QUANTITY SPILLED: 40 GAL

CAUSE OF INCIDENT: HOSE FAILURE

CAUSE OF INCIDENT: MV ACCIDENT

EMERGENCY MEASURES: D.O.T. SANDED.

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 518 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: RD
MILFORD CT
CONTACT: LIANO, MARK
SOURCE: CT DEP

REV: 3/22/11
ID1: 20020393
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 6/14/2002
TIME OF RELEASE:
ACTION: SANDED

DISHCHARGER:
ACROSS FROM 70 TERRACE ROAD
CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

SITE INFORMATION

DATE OF RELEASE: 6/14/2002
TIME OF RELEASE:
ACTION: OTHER

DISHCHARGER:
ACROSS FROM 70 TERRACE ROAD
CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

SITE INFORMATION

DATE OF RELEASE: 6/14/2002
TIME OF RELEASE:
ACTION: 21

DISHCHARGER:
ACROSS FROM 70 TERRACE ROAD
CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

REPORT TIME: 6/14/2002 11:03:34 AM
REPORTED BY: BEVERLY JOHNSON
REPORTER S PHONE: 2155780

MATERIAL RELEASED: UNKNOWN OIL
CAUSE OF INCIDENT: OTHER

EMERGENCY MEASURES: HOMEOWNER DOING YARD RECONSTRUCTION OF YARD HAD MACHINES LEAK FLUIDS ONTO ROAD

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 510 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: DEVON STATE BOAT LAUNCH UNDER I-95
MILFORD CT
CONTACT: LECLERC, KEN
SOURCE: CT DEP

REV: 3/22/11
ID1: 20040699
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 2/4/2004
TIME OF RELEASE:
ACTION: OTHER

DISHCHARGER:
CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

REPORT TIME: 2/4/2004 8:03:12 AM
REPORTED BY: KEN STADALNIK
REPORTER S PHONE: 7354311

MATERIAL RELEASED: UNKNOWN SUBSTANCE
CAUSE OF INCIDENT: DUMPING

EMERGENCY MEASURES: DRUM WAS LEFT AT BOAT LAUNCH. UNKNOWN SUBSTANCE WITHIN A RUSTED, UNMARKED 55 GALLON DRUM.

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 507 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: UNKNOWN
MILFORD CT

REV: 3/22/11
ID1: 2004043154
ID2:
STATUS: CLOSED
PHONE:

CONTACT: NO RESPONSE
SOURCE: CT DEP

REPORT TIME: 6/29/2004 9:52:17 AM
REPORTED BY: ANONYMOUS
REPORTER S PHONE: 0000000

MATERIAL RELEASED:
EMERGENCY MEASURES:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 536 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: I-95 S
MILFORD CT

REV: 3/22/11
ID1: 200001806
ID2:
STATUS: CLOSED
PHONE:

CONTACT: NO RESPONSE
SOURCE: CT DEP

SITE INFORMATION

DATE OF RELEASE: 11/5/2000
TIME OF RELEASE: 11:58:00 AM
ACTION: SANDED

DISHCHARGER:

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

SITE INFORMATION

DATE OF RELEASE: 11-5-2000
TIME OF RELEASE: 11:58:00 AM
ACTION: CLEANED

DISHCHARGER:

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

REPORT TIME: 11/5/2000 11:58:27 AM
REPORTED BY: CONNERS
REPORTER S PHONE: 5715991

MATERIAL RELEASED: GASOLINE
QUANTITY SPILLED: 4 GAL

CAUSE OF INCIDENT: OTHER

EMERGENCY MEASURES:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 537 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: S I-95 BOUND OF EXIT
MILFORD CT

REV: 3/22/11
ID1: 9701695
ID2:
STATUS: CLOSED
PHONE:

CONTACT: EMANUELSON, BRIAN
SOURCE: CT DEP

SITE INFORMATION

DATE OF RELEASE: 4/3/1997
TIME OF RELEASE: 10:31:00 PM
ACTION: CONTAINED

DISHCHARGER:

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

SITE INFORMATION

DATE OF RELEASE: 4/3/1997
TIME OF RELEASE: 10:31:00 PM
ACTION: OTHER

DISHCHARGER:

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY: YES

REPORT TIME: 10:39:00 PM
REPORTED BY: STATE POLICE DISPATCHER RUSSO
REPORTER S PHONE: 7697720

MATERIAL RELEASED: GASOLINE
QUANTITY SPILLED: 150 GAL

CAUSE OF INCIDENT: SADDLE TANK FAILURE

EMERGENCY MEASURES: VACCUUM TRUCK DISPATCHED BOOMED ECT.

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 501 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: I-95 S BETWEEN EXIT 39A and EXIT 39B
MILFORD CT

REV: 3/22/11
ID1: 200507321
ID2:
STATUS: CLOSED
PHONE:

CONTACT: ACETO, JOHN
SOURCE: CT DEP

REPORT TIME: 10/26/2005 10:55:54 AM
REPORTED BY: DONNA
REPORTER S PHONE: 5715991

MATERIAL RELEASED: DIESEL FUEL
QUANTITY SPILLED: 270 GAL

CAUSE OF INCIDENT: MV ACCIDENT

EMERGENCY MEASURES:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 474 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: I-95 N REST AREA
MILFORD CT

CONTACT: LECLERC, KEN
SOURCE: CT DEP

REV: 3/22/11
ID1: 200700350
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 1/17/2007
TIME OF RELEASE: 5:15:00 PM
ACTION: CONTAINED

DISHCHARGER:

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

REPORT TIME: 1/17/2007 5:29:35 PM
REPORTED BY: DONNA
REPORTER S PHONE: 8781991

MATERIAL RELEASED: ANTIFREEZE
CAUSE OF INCIDENT: OTHER

EMERGENCY MEASURES: TRUCK HAS 55 GALLONS DRUMS CONTAINING ANTIFREEZE ONE OF THE DRUMS HAS A LEAK IN IT AND IS NEAR THE FRONT OF THE TRUCK. NEIL FROM PIEDMONT EXPRESS CALLED TO CHECK TO SEE IF THIS WAS REPORTED. US EXPRESS IS CLEANUP COMPANY. NEIL S NUMBER IS 704-698-7200.

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 471 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: UNKNOWN TRUCKING COMPANY
ADDRESS: I-95 BETWEEN EXIT 39 and EXIT 40
MILFORD CT

CONTACT: ACETO, JOHN
SOURCE: CT DEP

REV: 3/22/11
ID1: 200500712
ID2:
STATUS: CLOSED
PHONE:

REPORT TIME: 1:03:00 PM
REPORTED BY: CONNOR
REPORTER S PHONE: 8711991

MATERIAL RELEASED: DIESEL FUEL
CAUSE OF INCIDENT: FIRE

CAUSE OF INCIDENT: OTHER

EMERGENCY MEASURES: 1 OF 2 SADDLE TANKS LEAKING AFTER FIRE EXTINGUISHED

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SPILLS

SEARCH ID: 495 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: I-95 N EXIT 4
MILFORD CT

CONTACT: LIAND, MARK
SOURCE: CT DEP

REV: 3/22/11
ID1: 200701024
ID2:
STATUS: CLOSED
PHONE:

SITE INFORMATION

DATE OF RELEASE: 2/19/2007
TIME OF RELEASE:
ACTION: OTHER

DISHCHARGER:

CT

DISCHARGER S PHONE:
ACCEPTS RESPONSIBILITY:

REPORT TIME: 2/19/2007 2:32:22 PM
REPORTED BY: DONNA
REPORTER S PHONE: 8781991

MATERIAL RELEASED: DIESEL FUEL
QUANTITY SPILLED: 20 GAL

CAUSE OF INCIDENT: PUMPING

EMERGENCY MEASURES: RESPONSE REQUESTED

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 55 **DIST/DIR:** 0.16 SE **ELEVATION:** 44 **MAP ID:** 8

NAME: REXAM INDUSTRIES CORP.
ADDRESS: 11 ROBINSON BLVD
ORANGE CT

CONTACT:
SOURCE: CT DEP

REV: 4/23/10
ID1: 4150
ID2:
STATUS: SUSPECTED
PHONE:

SITE INFORMATION

WASTE TYPE1:
WASTE TYPE2:
WASTE TYPE3:

DISPOSAL METHOD:

SAMPLE AVAILABLE: NO
LOCATION METHOD:
OTHER DEP:
UPDATED BY:
UPDATED PROGRAM:
UPDATED:
SW CLASSIFICATION:
GW CLASSIFICATION:

COMMENTS:

SITE NAMES
REXHAM CORPORATION

COMMENTS:

INFORMATION
ESTABLISHMENT: REXHAM CORPORATION
SELLER: REXHAM CORP.
BUYER: BOWATER INDUSTRIES, PLC

TDRA: FORM I RECEIVED: 12/7/1997
ACKNOWLEDGED: 2/3/1998 RETURNED:
CERTIFIED: REVISED:
ECAF RECEIVED: ECAF REVIEWED:

STATUS:

STAFF:

CERTIFIER:

FIRST PAYMENT: $ SECOND PAYMENT: $

COMMENTS:

INFORMATION

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 55 **DIST/DIR:** 0.16 SE **ELEVATION:** 44 **MAP ID:** 8

NAME: REXAM INDUSTRIES CORP.
ADDRESS: 37 ROBINSON BLVD
ORANGE CT
CONTACT:
SOURCE: CT DEP

REV: 4/23/10
ID1: 4850
ID2:
STATUS: SUSPECTED
PHONE:

ESTABLISHMENT: REXAM INDUSTRIES CORP.
SELLER: REXAM INDUSTRIES, CORP.
BUYER: 37 ROBINSON BLVD., L.L.C.

FORM: FORM I
ACKNOWLEDGED: 4/27/1995
CERTIFIED:
ECAF RECEIVED:

RECEIVED: 9/19/1995
RETURNED:
REVISED:
ECAF REVIEWED:

STATUS:

STAFF:

CERTIFIER:

FIRST PAYMENT: $200 SECOND PAYMENT: $

COMMENTS:

REFERRAL INFORMATION
SOURCE: PTP - PROPERTY TRANSFER PROGRAM
RECEIVED: 12/7/1987
STAFF:
PROGRAM: PTP - PROPERTY TRANSFER PROGRAM
ASSIGNED:
COMPLETED: 12/7/1987
OUTCOME: PTP

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 46 **DIST/DIR:** 0.19 NW **ELEVATION:** 102 **MAP ID:** 12

NAME: ABB INDUSTRIAL SYSTEMS, INC.
ADDRESS: 55 MARSH HILL RD
ORANGE CT
CONTACT:
SOURCE: CT DEP

REV: 4/23/10
ID1: 952
ID2: CTD981876293
STATUS: INVENTORY
PHONE:

SITE INFORMATION

WASTE TYPE1: CHLR VOC - CHLORINATED VOLATILE ORGANIC COMPOUNDS
WASTE TYPE2: CHLR SOLVENTS
WASTE TYPE3:

DISPOSAL METHOD: SPILL/DUMP TO GROUND

SAMPLE AVAILABLE: NO
LOCATION METHOD: UNK
OTHER DEP: WASTE
UPDATED BY: ROBINSON, R.
UPDATED PROGRAM: PTP - PROPERTY TRANSFER PROGRAM
UPDATED: 1/20/1998
SW CLASSIFICATION:
GW CLASSIFICATION:

COMMENTS: ECAF FILED 11/12/97

SITE NAMES

COMMENTS:

FEDERAL INFORMATION
ON CERCLIS: YES
ARCHIVE: NO
EPA REMOVAL: NO
ON NPL: NO
RCRA STAT: NOTI
FED FAC: NO

EPI SITE: NO
ARCHIVE DATE:
DELISTED: NO
PART NPL: NO
RCRA PERMIT:

INVENTORY INFORMATION
REQUEST STAFF: TARTARIS, S.
DATE ADDED: 11/13/1991
ASSESSED: YES
87 ORIGIN:

PROGRAM: DumpA
ON INVENTORY: YES
87 GROUP:
ON 87: NO

INFORMATION
ESTABLISHMENT: ABB INDUSTRIAL SYSTEMS, INC.
SELLER: ABB INDUSTRIAL SYSTEMS, INC.
BUYER: HALEPAS REALTY, INC.

FORM: FORM III
ACKNOWLEDGED: 11/26/1997
CERTIFIED:
ECAF RECEIVED:

RECEIVED: 11/12/1997
RETURNED:
REVISED:
ECAF REVIEWED: 12/8/1997

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 46 **DIST/DIR:** 0.19 NW **ELEVATION:** 102 **MAP ID:** 12

NAME: ABB INDUSTRIAL SYSTEMS, INC.
ADDRESS: 55 MARSH HILL RD
ORANGE CT
CONTACT:
SOURCE: CT DEP

REV: 4/23/10
ID1: 952
ID2: CTD981876293
STATUS: INVENTORY
PHONE:

STATUS: I

STAFF: ROBINSON, R.

CERTIFIER: ABB ENVIRONMENTAL SERVICES, INC., TRANSFEROR/SISTER COMPANY

FIRST PAYMENT: $2000 SECOND PAYMENT: $

COMMENTS: ECAF RECEIVED 11/11/97

REFERRAL INFORMATION
SOURCE: RCRA - DEP WASTE BUREAU - WASTE ENGINEERING and ENFORCEMENT DIVISION
RECEIVED: 9/11/1990
STAFF: TARTARIS, S
PROGRAM: PTP - PROPERTY TRANSFER PROGRAM
ASSIGNED: 4/29/1991
COMPLETED: 11/13/1991
OUTCOME: INVENTORY

ASSESS INFORMATION
TYPE: PA
PROGRAM: FFRE
DRAFT: 8/12/1991
REVIEWED:
NFA: YES

STAFF: TATARTIS, S.
ASSIGNED:
REVIEWER: EPA
FINAL: 12/11/1991

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 50 **DIST/DIR:** 0.33 SW **ELEVATION:** 50 **MAP ID:** 23

NAME: LIGHT SOURCES, INC.
ADDRESS: 70 CASCADE BLVD
MILFORD CT
CONTACT:
SOURCE: CT DEP

REV: 4/23/10
ID1: 3130
ID2: CTD981873100
STATUS: SUSPECTED
PHONE:

SITE INFORMATION

WASTE TYPE1: METALS
WASTE TYPE2:
WASTE TYPE3:

DISPOSAL METHOD: SPILL/DUMP

SAMPLE AVAILABLE: NO
LOCATION METHOD:
OTHER DEP: SPILLS
UPDATED BY: ZIMMERMAN, D.
UPDATED PROGRAM: DumpA
UPDATED: 5/24/1998
SW CLASSIFICATION:
GW CLASSIFICATION:

COMMENTS:

SITE NAMES

COMMENTS:

REFERRAL INFORMATION
SOURCE: SPILLS
RECEIVED: 5/18/1998
STAFF: ZIMMERMAN, D.
PROGRAM: DumpA
ASSIGNED: 5/18/1998
COMPLETED:
OUTCOME:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 52 **DIST/DIR:** 0.43 NE **ELEVATION:** 60 **MAP ID:** 26

NAME: NORTHEAST ENTERPRISES
ADDRESS: 11 FRONTAGE RD
ORANGE CT

REV: 4/23/10
ID1: 1637
ID2: CTD093697711
STATUS: SUSPECTED
PHONE:

CONTACT:
SOURCE: CT DEP

SITE INFORMATION

WASTE TYPE1: CHLR VOC - CHLORINATED VOLATILE ORGANIC COMPOUNDS
WASTE TYPE2:
WASTE TYPE3:

DISPOSAL METHOD: SPILL/DUMP ,

SAMPLE AVAILABLE: NO
LOCATION METHOD:
OTHER DEP:
UPDATED BY: NEZIANYA, C.
UPDATED PROGRAM: DumpA
UPDATED: 9/29/1993
SW CLASSIFICATION:
GW CLASSIFICATION:

COMMENTS: AKA: AVIATION COMPONENTS SUPPORT CO. EMERGENCY AUTHORIZATION TO DISCHARGE GROUNDWATER CONTAMINATED WITH VOC S TO SANITARY SEWER.

SITE NAMES
CBL TRUCKING, INC.
AVIATION COMPONENTS
AVIATION COMPONENTS
CBL TRUCKING, INC.

COMMENTS:

REFERRAL INFORMATION
SOURCE: WATER - DEP WATER MANAGEMENT BUREAU OR WATER ENFORCEMENT
RECEIVED: 2/16/1994
STAFF: NEZIANYA, C.
PROGRAM: DumpA
ASSIGNED:
COMPLETED:
OUTCOME:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 51 **DIST/DIR:** 0.60 SW **ELEVATION:** 61 **MAP ID:** 29

NAME: MOBIL 04-927
ADDRESS: I-95 NORTHBOUND
MILFORD CT
NEW HAVEN

REV: 4/23/10
ID1: 2212
ID2:
STATUS: SUSPECTED
PHONE:

CONTACT:
SOURCE: CT DEP

SITE INFORMATION

WASTE TYPE1:
WASTE TYPE2:
WASTE TYPE3:

DISPOSAL METHOD:

SAMPLE AVAILABLE: NO
LOCATION METHOD:
OTHER DEP:
UPDATED BY: POST, M.
UPDATED PROGRAM: CORE
UPDATED: 2/23/1995
SW CLASSIFICATION:
GW CLASSIFICATION:

COMMENTS:

SITE NAMES

COMMENTS:

REFERRAL INFORMATION
SOURCE: REMEDIAL - DEP WATER BUREAU - REMEDIATION SECTION
RECEIVED: 2/23/1995
STAFF:
PROGRAM:
ASSIGNED:
COMPLETED:
OUTCOME:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 47 **DIST/DIR:** 0.73 SW **ELEVATION:** 29 **MAP ID:** 30

NAME: ALIES LABORATORIES
ADDRESS: 200 ROCK LN
MILFORD CT

REV: 4/23/10
ID1: 178
ID2:
STATUS: SUSPECTED
PHONE:

CONTACT:
SOURCE: CT DEP

SITE INFORMATION

WASTE TYPE1: SOLVENTS
WASTE TYPE2: SLUDGES
WASTE TYPE3:

DISPOSAL METHOD: LAGOON

SAMPLE AVAILABLE: NO
LOCATION METHOD:
OTHER DEP:
UPDATED BY:
UPDATED PROGRAM:
UPDATED:
SW CLASSIFICATION:
GW CLASSIFICATION:

COMMENTS: WASTE WATER SLUDGES TO LAGOONS CHEMICAL LIQUID DISPOSAL TO ??

SITE NAMES

COMMENTS:

REFERRAL INFORMATION
SOURCE: ISWS - INDUSTRIAL SOLID WASTE SURVEY
RECEIVED: 5/18/1990
STAFF:
PROGRAM:
ASSIGNED:
COMPLETED:
OUTCOME:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 53 **DIST/DIR:** 0.81 NW **ELEVATION:** 61 **MAP ID:** 31

NAME: TOWN OF ORANGE
ADDRESS: LAMBERT SOUTH LN
ORANGE CT
NEW HAVEN

REV: 4/23/10
ID1: 1156
ID2:
STATUS: SUSPECTED
PHONE:

CONTACT:
SOURCE: CT DEP

SITE INFORMATION

WASTE TYPE1: CHLR VOC - CHLORINATED VOLATILE ORGANIC COMPOUNDS
WASTE TYPE2: SALT - SODIUM/SALT
WASTE TYPE3: NITRATES - NITRATES-FERTILIZERS

DISPOSAL METHOD: SPILL/DUMP

SAMPLE AVAILABLE: NO
LOCATION METHOD:
OTHER DEP:
UPDATED BY: MADSEN, D.
UPDATED PROGRAM: PWP - DEP WATER BUREAU - POTABLE WATER PROGRAM
UPDATED: 5/30/1995
SW CLASSIFICATION:
GW CLASSIFICATION:

COMMENTS: WC-3631

SITE NAMES

COMMENTS:

REFERRAL INFORMATION
SOURCE: PWP - DEP WATER BUREAU - POTABLE WATER PROGRAM
RECEIVED: 5/30/1995
STAFF:
PROGRAM:
ASSIGNED:
COMPLETED:
OUTCOME:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 48 **DIST/DIR:** 0.83 NW **ELEVATION:** 68 **MAP ID:** 32

NAME: BLASE MANUFACTURING CO.
ADDRESS: 269 LAMBERT RD
ORANGE CT
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 4/23/10
ID1: 4845
ID2:
STATUS: SUSPECTED
PHONE:

SITE INFORMATION

WASTE TYPE1:
WASTE TYPE2:
WASTE TYPE3:

DISPOSAL METHOD:

SAMPLE AVAILABLE: NO
LOCATION METHOD:
OTHER DEP:
UPDATED BY:
UPDATED PROGRAM:
UPDATED:
SW CLASSIFICATION:
GW CLASSIFICATION:

COMMENTS:

SITE NAMES

COMMENTS:

INFORMATION
ESTABLISHMENT: BLASE MANUFACTURING CO.
SELLER: BLASE MANUFACTURING CO.
BUYER: BLASE MANUFACTURING CO.

FORM: FORM I
ACKNOWLEDGED: 9/1/1992
CERTIFIED:
ECAF RECEIVED:

RECEIVED: 7/7/1992
RETURNED:
REVISED:
ECAF REVIEWED:

STATUS:

STAFF:

CERTIFIER:

FIRST PAYMENT: $200
SECOND PAYMENT: $

COMMENTS:

REFERRAL INFORMATION

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 48 **DIST/DIR:** 0.83 NW **ELEVATION:** 68 **MAP ID:** 32

NAME: BLASE MANUFACTURING CO.
ADDRESS: 269 LAMBERT RD
ORANGE CT
NEW HAVEN
CONTACT:
SOURCE: CT DEP

REV: 4/23/10
ID1: 4845
ID2:
STATUS: SUSPECTED
PHONE:

SOURCE: PTP - PROPERTY TRANSFER PROGRAM
RECEIVED: 7/7/1992
STAFF:
PROGRAM: PTP - PROPERTY TRANSFER PROGRAM
ASSIGNED:
COMPLETED: 7/7/1992
OUTCOME: PTP

Environmental FirstSearch
Site Detail Report

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 49 **DIST/DIR:** 0.92 NE **ELEVATION:** 112 **MAP ID:** 33

NAME: BURNDY CORPORATION
ADDRESS: 305 EDISON RD
ORANGE CT
CONTACT:
SOURCE: CT DEP

REV: 4/23/10
ID1: 893
ID2:
STATUS: SUSPECTED
PHONE:

SITE INFORMATION

WASTE TYPE1: OIL
WASTE TYPE2: HYDROCARBONS
WASTE TYPE3:

DISPOSAL METHOD: TO GROUND SPILL/DUMP

SAMPLE AVAILABLE: NO
LOCATION METHOD:
OTHER DEP:
UPDATED BY:
UPDATED PROGRAM:
UPDATED:
SW CLASSIFICATION:
GW CLASSIFICATION:

COMMENTS:

SITE NAMES

COMMENTS:

REFERRAL INFORMATION
SOURCE: ISWS - INDUSTRIAL SOLID WASTE SURVEY
RECEIVED: 5/15/1990
STAFF:
PROGRAM:
ASSIGNED:
COMPLETED:
OUTCOME:

Environmental FirstSearch
Site Detail Report

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 56 **DIST/DIR:** 0.92 NE **ELEVATION:** 112 **MAP ID:** 33

NAME: SCANIA U.S.A. INC.
ADDRESS: 289 EDISON RD
ORANGE CT
CONTACT:
SOURCE: CT DEP

REV: 4/23/10
ID1: 4151
ID2:
STATUS: SUSPECTED
PHONE:

SITE INFORMATION

WASTE TYPE1:
WASTE TYPE2:
WASTE TYPE3:

DISPOSAL METHOD:

SAMPLE AVAILABLE: NO
LOCATION METHOD:
OTHER DEP:
UPDATED BY:
UPDATED PROGRAM:
UPDATED:
SW CLASSIFICATION:
GW CLASSIFICATION:

COMMENTS:

SITE NAMES

COMMENTS:

INFORMATION
ESTABLISHMENT: SCANIA U.S.A. INC.
SELLER: SCANIA U.S.A. INC.
BUYER: FINLAY FINE JEWELRY CORP.

FORM: FORM I
ACKNOWLEDGED: 11/4/1996
CERTIFIED:
ECAF RECEIVED:

RECEIVED: 10/22/1996
RETURNED:
REVISED:
ECAF REVIEWED:

STATUS:

STAFF:

CERTIFIER: SCANIA U.S.A. INC., TRANSFEROR

FIRST PAYMENT: $200
SECOND PAYMENT: $

COMMENTS:

REFERRAL INFORMATION

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 56 **DIST/DIR:** 0.92 NE **ELEVATION:** 112 **MAP ID:** 33

NAME: SCANIA U.S.A. INC.
ADDRESS: 209 EDISON RD
ORANGE CT

REV: 4/23/10
ID1: 4451
ID2:
STATUS: SUSPECTED
PHONE:

CONTACT:
SOURCE: CT DEP

SOURCE: PTP - PROPERTY TRANSFER PROGRAM
RECEIVED: 10/22/1996
STAFF:
PROGRAM: PTP - PROPERTY TRANSFER PROGRAM
ASSIGNED:
COMPLETED: 10/22/1996
OUTCOME: PTP

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 53 **DIST/DIR:** 0.97 NE **ELEVATION:** 80 **MAP ID:** 34

NAME: NOVACAR CHEMICALS INC
ADDRESS: 343 MORGAN LN
WEST HAVEN CT

REV: 4/23/10
ID1: 1361
ID2: CTD075405807
STATUS: SUSPECTED
PHONE:

CONTACT:
SOURCE: CT DEP

SITE INFORMATION

WASTE TYPE1: HYDRO/OIL - HYDROCARBONS AND/OR FUEL OIL
WASTE TYPE2: CHLR VOC - CHLORINATED VOLATILE ORGANIC COMPOUNDS
WASTE TYPE3: METALS

DISPOSAL METHOD: LANDFILL

SAMPLE AVAILABLE: NO
LOCATION METHOD:
OTHER DEP:
UPDATED BY: POST, M.
UPDATED PROGRAM: CORE
UPDATED: 8/18/1994
SW CLASSIFICATION:
GW CLASSIFICATION:

COMMENTS: SITE INVESTIGATION RECEIVED GW 10/22/91

SITE NAMES
NOVACAR CHEMICALS INC PLASTICS DIV
RICHARDSON POLYMER CORP.
RICHARDSON POLYMER CORP.
NOVACAR CHEMICALS INC PLASTICS DIV

COMMENTS:

INFORMATION
ESTABLISHMENT: NOVACOR
SELLER: N/A
BUYER: N/A

FORM: FORM VOL RECEIVED: 6/3/1996
ACKNOWLEDGED: RETURNED:
CERTIFIED: REVISED:
ECAF RECEIVED: ECAF REVIEWED: 6/16/1996

STATUS: V

STAFF: CZECZOTKA, J.

CERTIFIER: NOVACOR CHEMICAL, OWNER

FIRST PAYMENT: $2000 SECOND PAYMENT: $

COMMENTS: VERIFIED TWICE

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 53 **DIST/DIR:** 0.97 NE **ELEVATION:** 80 **MAP ID:** 34

NAME: NOVACAR CHEMICALS INC
ADDRESS: 343 MORGAN LN
WEST HAVEN CT

REV: 4/23/10
ID1: 1361
ID2: CTD075405807
STATUS: SUSPECTED
PHONE:

CONTACT:
SOURCE: CT DEP

INFORMATION
ESTABLISHMENT: RICHARDSON POLYMER CORP.
SELLER: RICHARDSON POLYMER CORP.
BUYER: POLYSAR INC.

FORM: FORM I RECEIVED: 4/3/1989
ACKNOWLEDGED: 3/22/1989 RETURNED:
CERTIFIED: REVISED:
ECAF RECEIVED: ECAF REVIEWED:

STATUS:

STAFF:

CERTIFIER: ,

.

FIRST PAYMENT: $ SECOND PAYMENT: $

COMMENTS: FILED ECAF VOL REM-96/4/8

INFORMATION
ESTABLISHMENT: RICHARDSON POLYMER CORP.
SELLER: POLYSAR INCORPORATED
BUYER: 316633 ALBERTA, INC.

FORM: FORM I RECEIVED: 10/4/1999
ACKNOWLEDGED: 9/21/1999 RETURNED: 11/24/1998
CERTIFIED: REVISED:
ECAF RECEIVED: ECAF REVIEWED:

STATUS:

STAFF:

CERTIFIER: .

.

FIRST PAYMENT: $ SECOND PAYMENT: $

COMMENTS: FILED ECAF VOL REM-96/04/8

INFORMATION
ESTABLISHMENT: RICHARDSON POLYMER CORP.

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 53 **DIST/DIR:** 0.97 NE **ELEVATION:** 80 **MAP ID:** 34

NAME: NOVACAR CHEMICALS INC
ADDRESS: 343 MORGAN LN
WEST HAVEN CT

REV: 4/23/10
ID1: 1361
ID2: CTD075405807
STATUS: SUSPECTED
PHONE:

CONTACT:
SOURCE: CT DEP

SELLER: RICHARD POLYMER CORP.
BUYER: POLYSAR INCORPORATED

FORM: FORM I RECEIVED: 7/23/1987
ACKNOWLEDGED: 8/21/1987 RETURNED:
CERTIFIED: REVISED:
ECAF RECEIVED: ECAF REVIEWED:

STATUS:

STAFF: GELTING, J.

CERTIFIER: .

.

FIRST PAYMENT: $ SECOND PAYMENT: $

COMMENTS: FILE ECAF FOR REM. 4/96

REFERRAL INFORMATION

REFERRAL INFORMATION
SOURCE: RCRA - DEP WASTE BUREAU - WASTE ENGINEERING and ENFORCEMENT DIVISION
RECEIVED: 7/2/1992
STAFF:
PROGRAM:
ASSIGNED:
COMPLETED:
OUTCOME:

SOURCE: REMEDIAL - DEP WATER BUREAU - REMEDIATION SECTION
RECEIVED: 8/18/1994
STAFF:
PROGRAM: PWP - DEP WATER BUREAU - POTABLE WATER PROGRAM
ASSIGNED:
COMPLETED:
OUTCOME:

AUDIT INFORMATION
TYPE: 133a STAFF: WILCOX, J.
LEP: Drake, R LICENSE: 133
VERIFICATION: 9/12/1998 RSR ISSUE:
ELUR: SCENARIO:
RECOMMENDATIONS: 10/8/1998 NOTICE: 2/3/1999
REVIEW: 10/6/1998 MEETING: 3/2/1999
FINDING: Rejected FINDINGS LTR: 9/3/1999
LEP LETTER: LEP REVIEW:
REFILE: CLOSURE:

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 53 **DIST/DIR:** 0.97 NE **ELEVATION:** 80 **MAP ID:** 34

NAME: NOVACAR CHEMICALS INC
ADDRESS: 343 MORGAN LN
WEST HAVEN CT

REV: 4/23/10
ID1: 1361
ID2: CTD073608087
STATUS: SUSPECTED
PHONE:

CONTACT:
SOURCE: CT DEP

COMMENTS:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 54 **DIST/DIR:** 0.97 NW **ELEVATION:** 74 **MAP ID:** 35

NAME: PETROL PLUS AMOCO
ADDRESS: 464 BOSTON POST RD
ORANGE CT

REV: 4/23/10
ID1: 1031
ID2:
STATUS: SUSPECTED
PHONE:

CONTACT:
SOURCE: CT DEP

SITE INFORMATION

WASTE TYPE1: NCHLR VOC - NON CHLORINATED VOLATILE ORGANIC COMPOUNDS
WASTE TYPE2: CHLR VOC - CHLORINATED VOLATILE ORGANIC COMPOUNDS
WASTE TYPE3:

DISPOSAL METHOD: UST

SAMPLE AVAILABLE: NO
LOCATION METHOD:
OTHER DEP:
UPDATED BY: POST, M.
UPDATED PROGRAM: CORE
UPDATED: 9/11/1994
SW CLASSIFICATION:
GW CLASSIFICATION:

COMMENTS:

SITE NAMES

COMMENTS:

REFERRAL INFORMATION
SOURCE: REMEDIAL - DEP WATER BUREAU - REMEDIATION SECTION
RECEIVED: 9/11/1994
STAFF:
PROGRAM:
ASSIGNED:
COMPLETED:
OUTCOME:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 311 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: HOUSATONIC WWTP
ADDRESS: CRONIQUE RD
MILFORD CT 06460

REV: 4/23/10
ID1: 5611
ID2:
STATUS:
PHONE:

CONTACT:
SOURCE: CT DEP

SITE INFORMATION

WASTE TYPE1: ChlorVoc
WASTE TYPE2: fly Ash
WASTE TYPE3:

DISPOSAL METHOD:

SAMPLE AVAILABLE: NO
LOCATION METHOD:
OTHER DEP:
UPDATED BY: G.Stevens
UPDATED PROGRAM: SwRem
UPDATED: 11/25/2003
SW CLASSIFICATION: B
GW CLASSIFICATION: GB - HIGH YIELD - N.P.P.

COMMENTS: Property under investigation for the presence of Chlorinated VOC in Groundwater.

SITE NAMES

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 310 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: WESTFIELD INC.
ADDRESS: MARSH HILL RD
ORANGE CT

REV: 4/23/10
ID1: 4154
ID2:
STATUS: SUSPECTED
PHONE:

CONTACT:
SOURCE: CT DEP

SITE INFORMATION

WASTE TYPE1:
WASTE TYPE2:
WASTE TYPE3:

DISPOSAL METHOD:

SAMPLE AVAILABLE: NO
LOCATION METHOD:
OTHER DEP:
UPDATED BY:
UPDATED PROGRAM:
UPDATED:
SW CLASSIFICATION:
GW CLASSIFICATION:

COMMENTS:

SITE NAMES
SOUTHERN NEW ENGLAND TELEPHONE CO.

COMMENTS:

INFORMATION
ESTABLISHMENT: WESTFIELD INC.
SELLER: WESTFIELD, INC.
BUYER: BINDLEY-WESTERN IND.

FORM: FORM II
ACKNOWLEDGED:
CERTIFIED:
ECAF RECEIVED:

RECEIVED: 7/1/1992
RETURNED: 9/24/1992
REVISED: 10/26/1992
ECAF REVIEWED:

STATUS:

STAFF:

CERTIFIER:

FIRST PAYMENT: $4500
SECOND PAYMENT: $

COMMENTS: SHOULD BE III

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 310 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: WESTFIELD INC.
ADDRESS: MARSH HILL RD
ORANGE CT

REV: 4/23/10
ID1: 4934
ID2:
STATUS: SUSPECTED
PHONE:

CONTACT:
SOURCE: CT DEP

REFERRAL INFORMATION

SOURCE:	PTP - PROPERTY TRANSFER PROGRAM
RECEIVED:	7/1/1992
STAFF:	
PROGRAM:	PTP - PROPERTY TRANSFER PROGRAM
ASSIGNED:	
COMPLETED:	7/1/1992
OUTCOME:	PTP

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 312 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: JORDAN REALTY
ADDRESS: SHELLAND ST
MILFORD CT 06460

REV: 4/23/10
ID1: 5609
ID2:
STATUS:
PHONE:

CONTACT:
SOURCE: CT DEP

SITE INFORMATION

WASTE TYPE1:	ChrVoc
WASTE TYPE2:	
WASTE TYPE3:	
DISPOSAL METHOD:	spill/dump
SAMPLE AVAILABLE:	NO
LOCATION METHOD:	
OTHER DEP:	
UPDATED BY:	G.Stevens
UPDATED PROGRAM:	PWP - DEP WATER BUREAU - POTABLE WATER PROGRAM
UPDATED:	11/25/2003
SW CLASSIFICATION:	B
GW CLASSIFICATION:	GB - HIGH YIELD - N.P.P.
COMMENTS:	PA order SRD 152 issued 08/27/2003

SITE NAMES

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 313 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: RIVER HIGHLANDS DRIVE SUBDIVISION
ADDRESS: RIVER HIGHLANDS DR
MILFORD CT 06460

REV: 4/23/10
ID1: 5607
ID2:
STATUS:
PHONE:

CONTACT:
SOURCE: CT DEP

SITE INFORMATION

WASTE TYPE1:	solid waste
WASTE TYPE2:	
WASTE TYPE3:	
DISPOSAL METHOD:	
SAMPLE AVAILABLE:	NO
LOCATION METHOD:	
OTHER DEP:	
UPDATED BY:	
UPDATED PROGRAM:	
UPDATED:	
SW CLASSIFICATION:	
GW CLASSIFICATION:	GB - HIGH YIELD - N.P.P.
COMMENTS:	landfill material found on site along with street sweeping

SITE NAMES

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 314 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: PAINT MART
ADDRESS: ROUTE 34
WEST HAVEN CT

REV: 4/23/10
ID1: 2496
ID2:
STATUS: SUSPECTED
PHONE:

CONTACT:
SOURCE: CT DEP

SITE INFORMATION

WASTE TYPE1:	
WASTE TYPE2:	
WASTE TYPE3:	
DISPOSAL METHOD:	
SAMPLE AVAILABLE:	NO
LOCATION METHOD:	
OTHER DEP:	
UPDATED BY:	GOLDMAN, J.
UPDATED PROGRAM:	PWP - DEP WATER BUREAU - POTABLE WATER PROGRAM
UPDATED:	5/30/1995
SW CLASSIFICATION:	
GW CLASSIFICATION:	
COMMENTS:	

SITE NAMES

COMMENTS:

REFERRAL INFORMATION

SOURCE:	PWP - DEP WATER BUREAU - POTABLE WATER PROGRAM
RECEIVED:	5/31/1995
STAFF:	
PROGRAM:	
ASSIGNED:	
COMPLETED:	5/31/1995
OUTCOME:	PWP

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 315 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: STEINBERG REALTY
ADDRESS: FRONTAGE RD
WEST HAVEN CT

REV: 4/23/10
ID1: 3366
ID2:
STATUS: SUSPECTED
PHONE:

CONTACT:
SOURCE: CT DEP

SITE INFORMATION

WASTE TYPE1:
WASTE TYPE2:
WASTE TYPE3:

DISPOSAL METHOD:

SAMPLE AVAILABLE: NO
LOCATION METHOD:
OTHER DEP:
UPDATED BY:
UPDATED PROGRAM:
UPDATED:
SW CLASSIFICATION:
GW CLASSIFICATION:

COMMENTS:

SITE NAMES
MIDAS MUFFLER

COMMENTS:

INFORMATION
ESTABLISHMENT: STEINBERG REALTY
SELLER: STEINBERG REALTY
BUYER: WIDE RIVER REALTY

FORM: FORM 1 RECEIVED: 4/28/1986
ACKNOWLEDGED: RETURNED:
CERTIFIED: REVISED:
ECAF RECEIVED: ECAF REVIEWED:

STATUS:

STAFF: PEASE, R.

CERTIFIER:

FIRST PAYMENT: $ SECOND PAYMENT: $

COMMENTS:

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 315 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: STEINBERG REALTY
ADDRESS: FRONTAGE RD
WEST HAVEN CT

REV: 4/23/10
ID1: 3366
ID2:
STATUS: SUSPECTED
PHONE:

CONTACT:
SOURCE: CT DEP

REFERRAL INFORMATION
SOURCE: PTP - PROPERTY TRANSFER PROGRAM
RECEIVED: 4/28/1986
STAFF: PEASE, R.
PROGRAM: PTP - PROPERTY TRANSFER PROGRAM
ASSIGNED:
COMPLETED: 4/28/1986
OUTCOME: PTP

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 318 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: RIVER HIGHLANDS DRIVE SUBDIVISION
ADDRESS: RIVER HIGHLANDS DR
MILFORD CT 06460

REV: 4/23/10
ID1: 3607
ID2:
STATUS:
PHONE:

CONTACT:
SOURCE: CT DEP

SITE INFORMATION

WASTE TYPE1: solid waste
WASTE TYPE2:
WASTE TYPE3:

DISPOSAL METHOD:

SAMPLE AVAILABLE: NO
LOCATION METHOD:
OTHER DEP:
UPDATED BY:
UPDATED PROGRAM:
UPDATED:
SW CLASSIFICATION:
GW CLASSIFICATION: GB - HIGH YIELD - N.P.P.

COMMENTS: landfill material found on site along with street sweepings

SITE NAMES

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 317 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: JORDAN REALTY
ADDRESS: SHELLAND ST
MILFORD CT 06460

REV: 4/23/10
ID1: 3609
ID2:
STATUS:
PHONE:

CONTACT:
SOURCE: CT DEP

SITE INFORMATION

WASTE TYPE1: Cln/Veg
WASTE TYPE2:
WASTE TYPE3:

DISPOSAL METHOD: spill/dump

SAMPLE AVAILABLE: NO
LOCATION METHOD:
OTHER DEP:
UPDATED BY: G.Stevens
UPDATED PROGRAM: PWP - DEP WATER BUREAU - POTABLE WATER PROGRAM
UPDATED: 11/25/2003
SW CLASSIFICATION: B
GW CLASSIFICATION: GB - HIGH YIELD - N.P.P.

COMMENTS: PA order SRD 152 lowed 06/27/2003

SITE NAMES

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 316 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: HOUSATONIC WWTP
ADDRESS: ORONOQUE RD
MILFORD CT 06460

REV: 4/23/10
ID1: 3611
ID2:
STATUS:
PHONE:

CONTACT:
SOURCE: CT DEP

SITE INFORMATION

WASTE TYPE1: Chlorinated VOC
WASTE TYPE2: Fly Ash
WASTE TYPE3:

DISPOSAL METHOD:

SAMPLE AVAILABLE: NO
LOCATION METHOD:
OTHER DEP:
UPDATED BY: CLSievens
UPDATED PROGRAM: SiteRem
UPDATED: 11/25/2003
SW CLASSIFICATION: B
GW CLASSIFICATION: GB - HIGH YIELD - N.P.P.

COMMENTS: Property under investigation for the presence of Chlorinated VOC in Groundwater.

SITE NAMES

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

STATE

SEARCH ID: 309 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: UNNAMED STREAM
ADDRESS: INDIAN RIVER RD
ORANGE CT

REV: 4/22/10
ID1: 2346
ID2:
STATUS: SUSPECTED
PHONE:

CONTACT:
SOURCE: CT DEP

SITE INFORMATION

WASTE TYPE1:
WASTE TYPE2:
WASTE TYPE3:

DISPOSAL METHOD:

SAMPLE AVAILABLE: NO
LOCATION METHOD:
OTHER DEP:
UPDATED BY: BUTTI, T.
UPDATED PROGRAM: DamAA
UPDATED: 3/31/1995
SW CLASSIFICATION: A
GW CLASSIFICATION: OA - MEDIUM YIELD - P.P.

COMMENTS: STREAM IS TRIBUTARY TO INDIAN LAKE.

SITE NAMES

COMMENTS:

REFERRAL INFORMATION
SOURCE: LOCAL GOV - LOCAL GOVERNMENT
RECEIVED: 3/30/1995
STAFF:
PROGRAM:
ASSIGNED:
COMPLETED:
OUTCOME:

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

SWL

SEARCH ID: 721 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME:
ADDRESS: RTE 1, NEAR TOWN
ORANGE CT

REV: 1/1/85
ID1: CTSW-CL-01-122
ID2:
STATUS: CLOSED
PHONE:

CONTACT: HOME DEPOT PLAZA
SOURCE: CT DEP

SITE INFORMATION

CLOSED LANDFILL

CLOSING DATE: 1991
PERMIT NUMBER: NONE PERMIT DATE: 9/1/91
WASTE TYPE: MUNICIPAL SOLID WASTE
APP ACRE: 3
COMMENTS: (NOW A PARKING LOT APPROVED)

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

TRIBALLAND

SEARCH ID: 790 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: BUREAU OF INDIAN AFFAIRS CONTACT INFORMATION
ADDRESS: UNKNOWN
CT 06460
NEW HAVEN

REV: 01/15/08
ID1: BIA-06460
ID2:
STATUS:
PHONE:

CONTACT:
SOURCE: BIA

BUREAU OF INDIAN AFFAIRS CONTACT INFORMATION

OFFICE: Eastern Regional Office
CONTACT: FRANKLIN KEEL,REGIONAL DIRECTOR

ADDRESS: 545 MARRIOTT DR, SUITE 700
Nashville TN 37214

PHONE: Phone: 615-564-6700
FAX: Fax: 615-564-6701

The Native American Consultation Database (NACD) is a tool for identifying consultation contacts for Indian tribes, Alaska Native villages and corporations, and Native Hawaiian organizations. The database is not a comprehensive source of information, but it does provide a starting point for the consultation process by identifying tribal leaders and NAGPRA contacts. This database can be accessed online at the following web address http://home.nps.gov/nacd/

TRIBALLAND

SEARCH ID: 787 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: BUREAU OF INDIAN AFFAIRS CONTACT INFORMATION
ADDRESS: UNKNOWN
CT 06477
NEW HAVEN

REV: 01/15/08
ID1: BIA-06477
ID2:
STATUS:
PHONE:

CONTACT:
SOURCE: BIA

BUREAU OF INDIAN AFFAIRS CONTACT INFORMATION

OFFICE: Eastern Regional Office
CONTACT: FRANKLIN KEEL,REGIONAL DIRECTOR

ADDRESS: 545 MARRIOTT DR, SUITE 700
Nashville TN 37214

PHONE: Phone: 615-564-6700
FAX: Fax: 615-564-6701

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Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

TRIBALLAND

SEARCH ID: 788 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: BUREAU OF INDIAN AFFAIRS CONTACT INFORMATION
ADDRESS: UNKNOWN
CT 06460
NEW HAVEN
CONTACT:
SOURCE: BIA

REV: 01/1998
ID1: BIA-06460
ID2:
STATUS:
PHONE:

BUREAU OF INDIAN AFFAIRS CONTACT INFORMATION

OFFICE: Eastern Regional Office
CONTACT: FRANKLIN KEEL REGIONAL DIRECTOR

ADDRESS: 545 MARRIOTT DR, SUITE 700
Nashville TN 37214
PHONE: Phone: 615-564-6700
FAX: Fax: 615-564-6701

The Native American Consultation Database (NACD) is a tool for identifying consultation contacts for Indian tribes, Alaska Native villages and corporations, and Native Hawaiian organizations. The database is not a comprehensive source of information, but it does provide a starting point for the consultation process by identifying tribal leaders and NAGPRA contacts. This database can be accessed online at the following web address
http://home.nps.gov/nacd/

TRIBALLAND

SEARCH ID: 789 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: BUREAU OF INDIAN AFFAIRS CONTACT INFORMATION
ADDRESS: UNKNOWN
CT 06516
NEW HAVEN
CONTACT:
SOURCE: BIA

REV: 07/1998
ID1: BIA-06516
ID2:
STATUS:
PHONE:

BUREAU OF INDIAN AFFAIRS CONTACT INFORMATION

OFFICE: Eastern Regional Office
CONTACT: FRANKLIN KEEL REGIONAL DIRECTOR

ADDRESS: 545 MARRIOTT DR. SUITE 700
Nashville TN 37214
PHONE: Phone: 615-564-6700
FAX: Fax: 615-564-6701

The Native American Consultation Database (NACD) is a tool for identifying consultation contacts for Indian tribes, Alaska Native villages and corporations, and Native Hawaiian organizations. The database is not a comprehensive source of information, but it does provide a starting point for the consultation process by identifying tribal leaders and NAGPRA contacts. This database can be accessed online at the following web address
http://home.nps.gov/nacd/

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

UST

SEARCH ID: 89 **DIST/DIR:** 0.11 NW **ELEVATION:** 102 **MAP ID:** 2

NAME: SOUTHERN CONNECTICUT GAS COMPANY
ADDRESS: 40 MARSH HILL RD
ORANGE CT 06477
CONTACT:
SOURCE: CT DEP

REV: 1/5/11
ID1: 11037
ID2: 103-11037
STATUS: TEMP CLOSED
PHONE:

TOTAL NUMBER OF TANKS: 2

SITE INFORMATION

FACILITY ID: 11037

TANK ID: 11037-1
TANK STATUS: TEMPORARILY CLOSED-

DATE INSTALLED:	9/1/1993	DATE LAST USED:	12/6/2006
SUBSTANCE STORED:	DIESEL	CAPACITY (GALS):	10000
TANK MATERIAL:	FIBERGLASS REINFORCED PLASTIC	TANK PROTECTION:	DOUBLE-WALLED
PIPE MATERIAL:	RIGID FIBERGLASS REINFORCED PLASTIC	PIPE PROTECTION:	
DOUBLE-WALLED			

SITE INFORMATION

FACILITY ID: 11037

TANK ID: 11037-2
TANK STATUS: TEMPORARILY CLOSED-

DATE INSTALLED:	9/1/1993	DATE LAST USED:	12/6/2006
SUBSTANCE STORED:	GASOLINE	CAPACITY (GALS):	10000
TANK MATERIAL:	FIBERGLASS REINFORCED PLASTIC	TANK PROTECTION:	DOUBLE-WALLED
PIPE MATERIAL:	RIGID FIBERGLASS REINFORCED PLASTIC	PIPE PROTECTION:	
DOUBLE-WALLED			

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

UST

SEARCH ID: 84 **DIST/DIR:** 0.12 SW **ELEVATION:** 104 **MAP ID:** 3

NAME: DICHELLO DISTRIBUTORS, INC.
ADDRESS: 55 MARSH HILL RD
ORANGE CT 06477
CONTACT:
SOURCE: CT DEP

REV: 1/5/11
ID1: 05112
ID2: 107-5112
STATUS: PERMANENTLY CLOSED
PHONE:

TOTAL NUMBER OF TANKS: 6

SITE INFORMATION

FACILITY ID: 05112

TANK ID: 5112-1
TANK STATUS: PERMANENTLY CLOSED-TANK WAS REMOVED FROM GROUND

DATE INSTALLED:	3/1/1990	DATE LAST USED:	6/1/1997
SUBSTANCE STORED:	HEATING OIL	CAPACITY (GALS):	10000
TANK MATERIAL:	ASPHALT COATED OR BARE STEEL	TANK PROTECTION:	
PIPE MATERIAL:	BARE OR GALVONIZED STEEL	PIPE PROTECTION:	

SITE INFORMATION

FACILITY ID: 05112

TANK ID: 5112-2
TANK STATUS: PERMANENTLY CLOSED-TANK WAS REMOVED FROM GROUND

DATE INSTALLED:	3/1/1990	DATE LAST USED:	6/1/1997
SUBSTANCE STORED:	HEATING OIL	CAPACITY (GALS):	10000
TANK MATERIAL:	ASPHALT COATED OR BARE STEEL	TANK PROTECTION:	
PIPE MATERIAL:	BARE OR GALVONIZED STEEL	PIPE PROTECTION:	

SITE INFORMATION

FACILITY ID: 05112

TANK ID: 5112-3
TANK STATUS: PERMANENTLY CLOSED-TANK WAS REMOVED FROM GROUND

DATE INSTALLED:	3/1/1990	DATE LAST USED:	5/1/1998
SUBSTANCE STORED:	GASOLINE	CAPACITY (GALS):	2500
TANK MATERIAL:	ASPHALT COATED OR BARE STEEL	TANK PROTECTION:	
PIPE MATERIAL:	BARE OR GALVONIZED STEEL	PIPE PROTECTION:	

SITE INFORMATION

FACILITY ID: 05112

TANK ID: 5112-4
TANK STATUS: PERMANENTLY CLOSED-TANK WAS REMOVED FROM GROUND

DATE INSTALLED:	8/1/1990	DATE LAST USED:	6/1/1997
SUBSTANCE STORED:	GASOLINE	CAPACITY (GALS):	1000
TANK MATERIAL:	OTHER (SPECIFY)	TANK PROTECTION:	
PIPE MATERIAL:	OTHER (SPECIFY)	PIPE PROTECTION:	

- Continued on next page -

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

UST

SEARCH ID: 84 **DIST/DIR:** 0.12 SW **ELEVATION:** 104 **MAP ID:** 3

NAME: DICHELLO DISTRIBUTORS, INC.
ADDRESS: 55 MARSH HILL RD
ORANGE CT 06477
CONTACT:
SOURCE: CT DEP

REV: 1/5/11
ID1: 05112
ID2: 107-5112
STATUS: PERMANENTLY CLOSED
PHONE:

SITE INFORMATION

FACILITY ID: 05112

TANK ID: 5112-5
TANK STATUS: PERMANENTLY CLOSED-TANK WAS REMOVED FROM GROUND

DATE INSTALLED:	8/1/1990	DATE LAST USED:	6/1/1997
SUBSTANCE STORED:	GASOLINE	CAPACITY (GALS):	5000
TANK MATERIAL:	OTHER (SPECIFY)	TANK PROTECTION:	
PIPE MATERIAL:	OTHER (SPECIFY)	PIPE PROTECTION:	

SITE INFORMATION

FACILITY ID: 05112

TANK ID: 5112-6
TANK STATUS: PERMANENTLY CLOSED-TANK WAS REMOVED FROM GROUND

DATE INSTALLED:	3/1/1990	DATE LAST USED:	6/1/1997
SUBSTANCE STORED:	GASOLINE	CAPACITY (GALS):	3000
TANK MATERIAL:	OTHER (SPECIFY)	TANK PROTECTION:	
PIPE MATERIAL:	OTHER (SPECIFY)	PIPE PROTECTION:	

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

UST

SEARCH ID: 87 **DIST/DIR:** 0.15 SE **ELEVATION:** 68 **MAP ID:** 5

NAME: ROEBIC LABORATORIES, INC.
ADDRESS: 25 CONNAIR RD
ORANGE CT 06477
CONTACT:
SOURCE: CT DEP

REV: 1/5/11
ID1: 11393
ID2: 107-11393
STATUS: PERMANENTLY CLOSED
PHONE:

TOTAL NUMBER OF TANKS: 1

SITE INFORMATION

FACILITY ID: 11393

TANK ID: 11393-1
TANK STATUS: PERMANENTLY CLOSED-TANK WAS REMOVED FROM GROUND

DATE INSTALLED:		DATE LAST USED:	6/1/1979
SUBSTANCE STORED:	GASOLINE	CAPACITY (GALS):	2000
TANK MATERIAL:	ASPHALT COATED OR BARE STEEL	TANK PROTECTION:	
PIPE MATERIAL:	BARE OR GALVONIZED STEEL	PIPE PROTECTION:	

UST

SEARCH ID: 86 **DIST/DIR:** 0.19 NW **ELEVATION:** 102 **MAP ID:** 12

NAME: PARAMETRICS
ADDRESS: 11 MARSH HILL RD
MADISON CT 06443
CONTACT:
SOURCE: CT DEP

REV: 1/5/11
ID1: 05807
ID2: 107-5807
STATUS: CURRENTLY IN USE
PHONE:

TOTAL NUMBER OF TANKS: 1

SITE INFORMATION

FACILITY ID: 05807

TANK ID: 5807-1
TANK STATUS: CURRENTLY IN USE-

DATE INSTALLED:	1/1/1950	DATE LAST USED:	
SUBSTANCE STORED:	HEATING OIL	CAPACITY (GALS):	2
TANK MATERIAL:	ASPHALT COATED OR BARE STEEL	TANK PROTECTION:	
PIPE MATERIAL:	BARE OR GALVONIZED STEEL	PIPE PROTECTION:	

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

UST

SEARCH ID: 85 **DIST/DIR:** 0.26 NW **ELEVATION:** 108 **MAP ID:** 19

NAME: GENERAL ACCIDENT
ADDRESS: 137 FRONTAGE RD
ORANGE CT 06477
CONTACT:
SOURCE: CT DEP

REV: 1/5/11
ID1: 05830
ID2: 107-5830
STATUS: PERMANENTLY CLOSED
PHONE:

TOTAL NUMBER OF TANKS: 1

SITE INFORMATION

FACILITY ID: 05830

TANK ID: 5830-1
TANK STATUS: PERMANENTLY CLOSED-TANK WAS REMOVED FROM GROUND

DATE INSTALLED:	4/1/1984	DATE LAST USED:	12/22/1998
SUBSTANCE STORED:	HEATING OIL	CAPACITY (GALS):	10000
TANK MATERIAL:	ASPHALT COATED OR BARE STEEL	TANK PROTECTION:	
PIPE MATERIAL:	BARE OR GALVONIZED STEEL	PIPE PROTECTION:	

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

UST

SEARCH ID: 88 **DIST/DIR:** 0.32 SW **ELEVATION:** 55 **MAP ID:** 22

NAME: SHARFIT STONE CONTAINER CORPORATION
ADDRESS: 75 CASCADE BLVD.
MILFORD CT 06460
CONTACT:
SOURCE: CT DEP

REV: 1/5/11
ID1: 06214
ID2: 114-6214
STATUS: PERMANENTLY CLOSED
PHONE:

TOTAL NUMBER OF TANKS: 3

SITE INFORMATION

FACILITY ID: 06214

TANK ID: 6214-1
TANK STATUS: PERMANENTLY CLOSED-TANK WAS REMOVED FROM GROUND

DATE INSTALLED:	7/1/1978	DATE LAST USED:	10/1/1987
SUBSTANCE STORED:	HEATING OIL	CAPACITY (GALS):	30000
TANK MATERIAL:	ASPHALT COATED OR BARE STEEL	TANK PROTECTION:	
PIPE MATERIAL:	BARE OR GALVONIZED STEEL	PIPE PROTECTION:	

SITE INFORMATION

FACILITY ID: 06214

TANK ID: 6214-2
TANK STATUS: PERMANENTLY CLOSED-TANK WAS REMOVED FROM GROUND

DATE INSTALLED:	7/1/1978	DATE LAST USED:	10/1/1987
SUBSTANCE STORED:	HEATING OIL	CAPACITY (GALS):	30000
TANK MATERIAL:	ASPHALT COATED OR BARE STEEL	TANK PROTECTION:	
PIPE MATERIAL:	BARE OR GALVONIZED STEEL	PIPE PROTECTION:	

SITE INFORMATION

FACILITY ID: 06214

TANK ID: 6214-3
TANK STATUS: PERMANENTLY CLOSED-TANK WAS REMOVED FROM GROUND

DATE INSTALLED:	7/1/1978	DATE LAST USED:	10/1/1981
SUBSTANCE STORED:	DIESEL	CAPACITY (GALS):	10000
TANK MATERIAL:	ASPHALT COATED OR BARE STEEL	TANK PROTECTION:	
PIPE MATERIAL:	BARE OR GALVONIZED STEEL	PIPE PROTECTION:	

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

UST

SEARCH ID: 90 **DIST/DIR:** 0.43 NE **ELEVATION:** 60 **MAP ID:** 26

NAME: YALE UNIVERSITY WEST CAMPUS
ADDRESS: 11 FRONTAGE RD
ORANGE CT 06477
CONTACT:
SOURCE: CT DEP

REV: 1/5/11
ID1: 05311
ID2: 107-5311
STATUS: PERMANENTLY CLOSED
PHONE:

TOTAL NUMBER OF TANKS: 2

SITE INFORMATION

FACILITY ID: 05311

TANK ID: 5311-1
TANK STATUS: PERMANENTLY CLOSED-TANK WAS REMOVED FROM GROUND

DATE INSTALLED:	1/1/1950	DATE LAST USED:	12/22/1998
SUBSTANCE STORED:	DIESEL	CAPACITY (GALS):	12000
TANK MATERIAL:	ASPHALT COATED OR BARE STEEL	TANK PROTECTION:	
PIPE MATERIAL:	BARE OR GALVONIZED STEEL	PIPE PROTECTION:	

SITE INFORMATION

FACILITY ID: 05311

TANK ID: 5311-2
TANK STATUS: PERMANENTLY CLOSED-TANK WAS REMOVED FROM GROUND

DATE INSTALLED:	7/1/1979	DATE LAST USED:	12/22/1998
SUBSTANCE STORED:	DIESEL	CAPACITY (GALS):	6000
TANK MATERIAL:	ASPHALT COATED OR BARE STEEL	TANK PROTECTION:	
PIPE MATERIAL:	BARE OR GALVONIZED STEEL	PIPE PROTECTION:	

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

VCP

SEARCH ID: 95 **DIST/DIR:** 0.19 NW **ELEVATION:** 102 **MAP ID:** 12

NAME: ABB INDUSTRIAL SYSTEMS, INC.
ADDRESS: 55 MARSH HILL RD
ORANGE CT

REV: 4/23/10
ID1: 952
ID2: 952
STATUS: VRP-133XSITES
PHONE:

CONTACT:
SOURCE: CT DEP

SITE INFORMATION

WASTE TYPE1: CHLR VOC - CHLORINATED VOLATILE ORGANIC COMPOUNDS
WASTE TYPE2: CHLR SOLVENTS
WASTE TYPE3:

DISPOSAL METHOD: SPILL/DUMP TO GROUND

SAMPLE AVAILABLE: NO
LOCATION METHOD: UNK
OTHER DEP: WASTE
UPDATED BY: ROBINSON, R.
UPDATED PROGRAM: PTP - PROPERTY TRANSFER PROGRAM
UPDATED: 1/26/1998
SW CLASSIFICATION:
GW CLASSIFICATION:

COMMENTS: ECAF FILED 11/12/97

SITE NAMES

COMMENTS:

FEDERAL INFORMATION

ON CERCLIS:	YES	EPI SITE:	NO
ARCHIVE:	NO	ARCHIVE DATE:	
EPA REMOVAL:	NO	DEFERRED:	NO
ON NPL:	NO	PART NPL:	NO
RCRA STAT:	NOTI	RCRA PERMIT:	
FED FAC:	NO		

INVENTORY INFORMATION

REQUEST STAFF:	TARTARIS, S.	PROGRAM:	DandA
DATE ADDED:	11/15/1991	ON INVENTORY:	YES
ASSESSED:	YES	87 GROUP:	
87 ORIGIN:		ON 87:	NO

INFORMATION

ESTABLISHMENT: ABB INDUSTRIAL SYSTEMS, INC.
SELLER: ABB INDUSTRIAL SYSTEMS, INC.
BUYER: HALEPAS REALTY, INC.

FORM:	FORM III	RECEIVED:	11/12/1997
ACKNOWLEDGED:	11/26/1997	RETURNED:	
CERTIFIED:		REVISED:	
ECAF RECEIVED:		ECAF REVIEWED:	12/3/1997

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: 55 MARSH HILL ROAD
ORANGE CT 06477

JOB: 11-153

VCP

SEARCH ID: 95 **DIST/DIR:** 0.19 NW **ELEVATION:** 102 **MAP ID:** 12

NAME: ABB INDUSTRIAL SYSTEMS, INC.
ADDRESS: 55 MARSH HILL RD
ORANGE CT

REV: 4/23/10
ID1: 952
ID2: 952
STATUS: VRP-133XSITES
PHONE:

CONTACT:
SOURCE: CT DEP

STATUS: I.

STAFF: ROBINSON, R.

CERTIFIER: ABB ENVIRONMENTAL SERVICES, INC., TRANSFEROR/SISTER COMPANY

FIRST PAYMENT: $2000 SECOND PAYMENT: $

COMMENTS: ECAF RECEIVED 11/11/97

REFERRAL INFORMATION

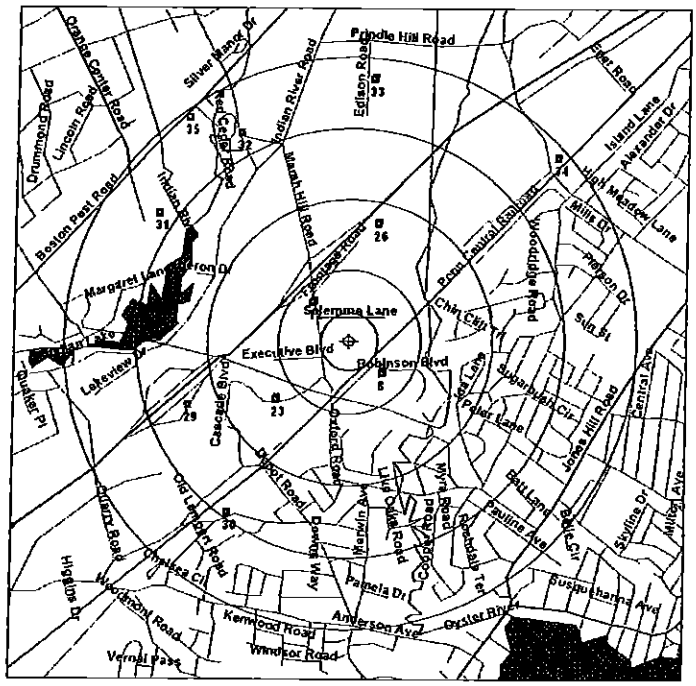
SOURCE: RCRA - DEP WASTE BUREAU - WASTE ENGINEERING and ENFORCEMENT DIVISION
RECEIVED: 9/11/1990
STAFF: TARTARIS, S
PROGRAM: PTP - PROPERTY TRANSFER PROGRAM
ASSIGNED: 6/13/1991
COMPLETED: 11/13/1991
OUTCOME: INVENTORY

ASSESS INFORMATION

TYPE:	PA	STAFF:	TATARTIS, S.
PROGRAM:	FFRE	ASSIGNED:	
DRAFT:	8/12/1991	REVIEWER:	EPA
REVIEWED:		FINAL:	12/11/1991
NFA:	YES		

Environmental FirstSearch
Map Width: 2.000 Mile(s)
ASTM Map: NPL, RCRACOR, STATE Sites

55 MARSH HILL ROAD, ORANGE CT 06477



Source: 2003 U.S. Census TIGER Files

Target Site (Latitude: 41.249289 Longitude: -72.997483) .....
Identified Site, Multiple Sites, Receptor .....
NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste .....
Triballand .....
Railroads .....
Black Rings Represent 1/4 Mile Radius. Red Ring Represents 0.625 Mile Radius.

Environmental FirstSearch
Map Width: 1.000 Mile(s)
ASTM Map: CERCLIS, RCRATSD, LUST, SWL

55 MARSH HILL ROAD, ORANGE CT 06477

Source: 2003 U.S. Census TIGER Files

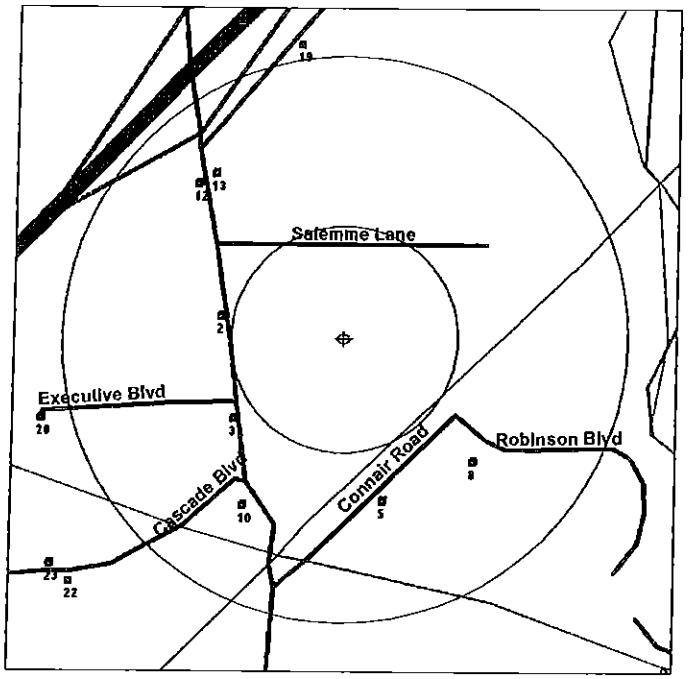
Target Site (Latitude: 41.249289 Longitude: -72.997483) .....
Identified Site, Multiple Sites, Receptor .....
NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste .....
Triballand .....
Railroads .....
Black Rings Represent 1/4 Mile Radius. Red Ring Represents 0.625 Mile Radius.

Environmental FirstSearch

Map Width: 0.500 Mile(s)

ASTM Map: RCRAGEN, ERNS, UST, FED IC/EC, METH LABS

65 MARSH HILL ROAD, ORANGE CT 06477



Source: 2005 U.S. Census TIGER Files

Target Site (Latitude: 41.249089 Longitude: -72.997483) _____

Identified Site, Multiple Sites, Receptor _____

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste _____

Triballand _____

Railroads _____

Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

Map Width: 1.000 Mile(s)

Non-ASTM Map: Multiple Databases

65 MARSH HILL ROAD, ORANGE CT 06477

Source: 2003 U.S. Census TIGER Files

Target Site (Latitude: 41.249089 Longitude: -72.997483) _____

Identified Site, Multiple Sites, Receptor _____

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste _____

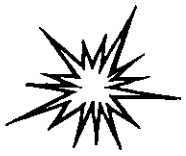
Triballand _____

National Historic Sites and Landmark Sites _____

Railroads _____

Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

ATTACHMENT 4



THE GENERAL STATUTES OF CONNECTICUT

REVISION OF 1958

Revised to January 1, 2009

TITLE 22a*

ENVIRONMENTAL PROTECTION

Sec. 22a-134. Transfer of hazardous waste establishments: Definitions. For the purposes of this section and sections 22a-134a to 22a-134d, inclusive:

(1) "Transfer of establishment" means any transaction or proceeding through which an establishment undergoes a change in ownership, but does not mean:

(A) Conveyance or extinguishment of an easement;

(B) Conveyance of an establishment through a foreclosure, as defined in subsection (b) of section 22a-452f or foreclosure of a municipal tax lien or through a tax warrant sale pursuant to section 12-157 or, provided the establishment is within the pilot program

established in subsection (c) of section 32-9cc, a subsequent transfer by such municipality that has foreclosed municipal tax liens or that has acquired title to the property through section 12-157;

(C) Conveyance of a deed in lieu of foreclosure to a lender, as defined in and that qualifies for the secured lender exemption pursuant to subsection (b) of section 22a-452f;

(D) Conveyance of a security interest, as defined in subdivision (7) of subsection (b) of section 22a-452f;

(E) Termination of a lease and conveyance, assignment or execution of a lease for a period less than ninety-nine years including conveyance, assignment or execution of a lease with options or similar terms that will extend the period of the leasehold to ninety-nine years, or from the commencement of the leasehold, ninety-nine years, including conveyance, assignment or execution of a lease with options or similar terms that will extend the period of the leasehold to ninety-nine years, or from the commencement of the leasehold;

(F) Any change in ownership approved by the Probate Court;

(G) Devolution of title to a surviving joint tenant, or to a trustee, executor or administrator under the terms of a testamentary trust or will, or by intestate succession;

(H) Corporate reorganization not substantially affecting the ownership of the establishment;

(I) The issuance of stock or other securities of an entity which owns or operates an establishment;

(J) The transfer of stock, securities or other ownership interests representing less than forty per cent of the ownership of the entity that owns or operates the establishment;

(K) Any conveyance of an interest in an establishment where the transferor is the sibling, spouse, child, parent, grandparent, child of a sibling or sibling of a parent of the transferee;

(L) Conveyance of an interest in an establishment to a trustee of an inter vivos trust created by the transferor solely for the benefit of one or more siblings, spouses, children, parents, grandchildren, children of a sibling or siblings of a parent of the transferor;

(M) Any conveyance of a portion of a parcel upon which portion no establishment is or has been located and upon which there has not occurred a discharge, spillage, uncontrolled loss, seepage or filtration of hazardous waste, provided either the area of such portion is not greater than fifty per cent of the area of such parcel or written notice of such proposed conveyance and an environmental condition assessment form for such parcel is provided to the commissioner sixty days prior to such conveyance;

(N) Conveyance of a service station, as defined in subdivision (5) of this section;

(O) Any conveyance of an establishment which, prior to July 1, 1997, had been developed solely for residential use and such use has not changed;

(P) Any conveyance of an establishment to any entity created or operating under chapter 130 or 132, or to an urban rehabilitation agency, as defined in section 8-292, or to a municipality under section 32-224, or to the Connecticut Development Authority or any subsidiary of the authority;

(Q) Any conveyance of a parcel in connection with the acquisition of properties to effectuate the development of the overall project, as defined in section 32-651;

(R) The conversion of a general or limited partnership to a limited liability company under section 34-199;

(S) The transfer of general partnership property held in the names of all of its general partners to a general partnership which includes as general partners immediately after the transfer all of the same persons as were general partners immediately prior to the transfer;

(T) The transfer of general partnership property held in the names of all of its general partners to a limited liability company which includes as members immediately after the transfer all of the same persons as were general partners immediately prior to the transfer;

(U) Acquisition of an establishment by any governmental or quasi-governmental condemning authority;

(V) Conveyance of any real property or business operation that would qualify as an establishment solely as a result of (i) the generation of more than one hundred kilograms of universal waste in a calendar month, (ii) the storage, handling or transportation of universal waste generated at a different location, or (iii) activities undertaken at a universal waste transfer facility, provided any such real property or business operation does not otherwise qualify as an establishment; there has been no discharge, spillage, uncontrolled loss, seepage or filtration of a universal waste or a constituent of universal waste that is a hazardous substance at or from such real property or business operation; and universal waste is not also recycled, treated, except for treatment of a universal waste pursuant to 40 CFR 273.13(a)(2) or (c)(2) or 40 CFR 273.33 (a)(2) or (c)(2), or disposed of at such real property or business operation; or

(W) Conveyance of a unit in a residential common interest community in accordance with section 22a-134i;

(2) "Commissioner" means the Commissioner of Environmental Protection or the designated agent of the commissioner;

(3) "Establishment" means any real property at which or any business operation from which (A) on or after November 19, 1980, there was generated, except as the result of remediation of polluted soil, groundwater or sediment, more than one hundred kilograms of hazardous waste in any one month, (B) hazardous waste generated at a different location was recycled, reclaimed, reused, stored, handled, treated, transported or disposed of, (C) the process of dry cleaning was conducted on or after May 1, 1967, (D) furniture stripping was conducted on or after May 1, 1967, or (E) a vehicle body repair facility was located on or after May 1, 1967;

(4) "Hazardous waste" means any waste which is (A) hazardous waste identified in accordance with Section 3001 of the federal Resource Conservation and Recovery Act of 1976, 42 USC 6901 et seq., (B) hazardous waste identified by regulations adopted

by the Commissioner of Environmental Protection, or (C) polychlorinated biphenyls in concentrations greater than fifty parts per million except that sewage, sewage sludge and lead paint abatement wastes shall not be considered to be hazardous waste for the purposes of this section and sections 22a-134a to 22a-134d, inclusive;

(5) "Service station" means a retail operation involving the resale of motor vehicle fuel including, but not limited to, gasoline, diesel fuel and kerosene and which operation does not otherwise meet the definition of an establishment;

(6) "Certifying party" means, in the case of a Form III or Form IV, a person associated with the transfer of an establishment who signs a Form III or Form IV and who agrees to investigate the parcel in accordance with prevailing standards and guidelines and to remediate pollution caused by any release at the establishment in accordance with the remediation standards and, in the case of a Form I or Form II, a transferor of an establishment who signs the certification on a Form I or II;

(7) "Party associated with the transfer of an establishment" means (A) the present or past owner or operator of the establishment, (B) the owner of the real property on which the establishment is located, (C) the transferor, transferee, lender, guarantor or indemnitor, (D) the business entity which operates or operated the establishment, or (E) the state;

(8) "Remediation standards" means regulations adopted by the commissioner pursuant to section 22a-133k;

(9) "Parcel" means piece, parcel or tract of land which constitutes an establishment, as defined in subdivision (3) of this section, or on which is or was located any business operation which constitutes an establishment;

(10) "Form I" means a written certification by the transferor of an establishment on a form prescribed and provided by the commissioner that: (A) No discharge, spillage, uncontrolled loss, seepage or filtration of hazardous waste or a hazardous substance has occurred at the establishment which certification is based on an investigation of the parcel in accordance with prevailing standards and guidelines, or (B) no discharge spillage, uncontrolled loss, seepage or filtration of hazardous waste has occurred at the establishment based upon an investigation of the parcel in accordance with the prevailing standards and guidelines and the commissioner has determined, in writing, or a licensed environmental professional has verified, in writing, that any discharge, spillage, uncontrolled loss, seepage or filtration of a hazardous substance has been remediated in accordance with the remediation standards and that since any such written approval or verification, including any approval or verification for a portion of an establishment, no discharge, spillage, uncontrolled loss, seepage or filtration of hazardous waste or hazardous substances has occurred at any portion of the establishment;

(11) "Form II" means a written certification by the transferor of an establishment on a form prescribed and provided by the commissioner that the parcel has been investigated in accordance with prevailing standards and guidelines and that (A) any pollution caused by a discharge, spillage, uncontrolled loss, seepage or filtration of hazardous waste or a hazardous substance which has occurred from the establishment has been remediated in accordance with the remediation standards and that the remediation has been approved in writing by the commissioner or has been verified pursuant to section 22a-133x or section 22a-134a in writing attached to such form by a licensed environmental professional to have been performed in accordance with the remediation standards

and that since any such written approval or verification, including any approval or verification for a portion of an establishment, no discharge, spillage, uncontrolled loss, seepage or filtration of hazardous waste or hazardous substances has occurred at any portion of the establishment, (B) the commissioner has determined in writing or a licensed environmental professional has verified pursuant to section 22a-133x or section 22a-134a in writing, attached to the form that no remediation is necessary to achieve compliance with the remediation standards, or (C) a Form IV verification was previously submitted to the commissioner and, since the date of the submission of the Form IV, no discharge, spillage, uncontrolled loss, seepage or filtration of hazardous waste or a hazardous substance has occurred at the establishment, which certification is based on an investigation of the parcel in accordance with prevailing standards and guidelines;

(12) "Form III" means a written certification signed by a certifying party on a form prescribed and provided by the commissioner, which certification states that (A) a discharge, spillage, uncontrolled loss, seepage or filtration of hazardous waste or a hazardous substance has occurred at the establishment or the environmental conditions at the establishment are unknown, and (B) that the person signing the certification agrees to investigate the parcel in accordance with prevailing standards and guidelines and to remediate pollution caused by any release of a hazardous waste or hazardous substance from the establishment in accordance with the remediation standards;

(13) "Form IV" means a written certification signed by one or more certifying parties on a form prescribed and provided by the commissioner and which is accompanied by a written determination by the commissioner or by a verification by a licensed environmental professional pursuant to section 22a-134a or 22a-133x, which certification states and is accompanied by documentation demonstrating that the parcel has been investigated in accordance with prevailing standards and guidelines and that (A) there has been a discharge, spillage, uncontrolled loss, seepage or filtration of hazardous waste or a hazardous substance on the establishment, and (B) all actions to remediate any pollution caused by any release at the establishment have been taken in accordance with the remediation standards except postremediation monitoring, natural attenuation monitoring or the recording of an environmental land use restriction, and (C) the person or persons signing the certification agree, in accordance with the representations made in the form, to conduct postremediation monitoring or natural attenuation monitoring in accordance with the remediation standards and if further investigation and remediation are necessary to take further action to investigate the establishment in accordance with prevailing standards and guidelines and to remediate the establishment in accordance with the remediation standards;

(14) "Person" means person, as defined in section 22a-2;

(15) "Remediate" means to contain, remove or abate pollution, potential sources of pollution and substances in soil or sediment which pose an unacceptable risk to human health or the environment and includes, but is not limited to, the reduction of pollution by natural attenuation;

(16) "Licensed environmental professional" means an environmental professional licensed pursuant to section 22a-133v;

(17) "Environmental condition assessment form" means a form prescribed and provided by the commissioner, prepared under the supervision of a licensed environmental professional, and executed by (A) the certifying party under sections 22a-134 to 22a-134e, inclusive, or (B) the owner of the property under section 22a-133x which form describes the environmental conditions at the parcel;

(18) "Pollution" means pollution, as defined in section 22a-423;

(19) "Verification" means the rendering of a written opinion by a licensed environmental professional on a form prescribed by the commissioner that an investigation of the parcel has been performed in accordance with prevailing standards and guidelines and that the establishment has been remediated in accordance with the remediation standards;

(20) "Vehicle" means any motorized device for conveying persons or objects except for an aircraft, boat, railroad car or engine, or farm tractor;

(21) "Business operation" means any business that has, or any series of substantially similar businesses that have, operated continuously or with only brief interruption on the same parcel, either with a single owner or successive owners;

(22) "Corporate reorganization not substantially affecting the ownership of an establishment" means implementation of a business plan to restructure a corporation through a merger, spin-off or other plan or reorganization under which the direct owner of the establishment does not change;

(23) "Form IV verification" means the rendering of a written opinion by a licensed environmental professional, after a Form IV has been filed, that postremediation monitoring, natural attenuation or the recording of an environmental land use restriction has been completed in accordance with the Form IV;

(24) "Hazardous substance" means hazardous substance, as defined in Section 101 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 USC 9601, or a petroleum product or by-product for which there are remediation standards adopted pursuant to section 22a-133k or for which such remediation standards have a process for calculating the numeric criteria of such substance;

(25) "Sediment" means unconsolidated material occurring in a stream, pond, wetland estuary or other water body;

(26) "Universal waste" means batteries, pesticides, thermostats, lamps and used electronics regulated as a universal waste under regulations adopted pursuant to subsection (c) of section 22a-449. "Universal waste" does not mean (A) batteries, pesticides, thermostats and lamps that are not covered under 40 CFR Part 273, or (B) used electronics that are not regulated as a universal waste under regulations adopted pursuant to subsection (c) of section 22a-449;

(27) "Universal waste transfer facility" means any facility related to transportation, including loading docks, parking areas, storage areas and other similar areas where shipments of universal waste are held during the normal course of transportation for ten days or less.

(P.A. 85-568, S. 2; P.A. 87-475, S. 1; P.A. 95-183, S. 1; P.A. 96-113, S. 1, 17; P.A. 97-218, S. 1; P.A. 98-253, S. 2; Dec. Sp. Sess. P.A. 98-1, S. 35, 43; P.A. 99-225, S. 6; 99-241, S. 56, 66; P.A. 00-140, S. 24, 40; P.A. 01-204, S. 15; June Sp. Sess. P.A. 01-9, S. 73, 131; P.A. 03-19, S. 58–61; 03-218, S. 5, 6; P.A. 06-76, S. 11, 13, 14; 06-184, S. 3; P.A. 07-81, S. 3; P.A. 08-124, S. 15, 16.)

History: P.A. 87-475 redefined "establishment" to apply to those operating on or after May 1, 1967, and to include dry cleaning, furniture stripping, painting and auto body operations and added definitions of "service stations" and "transfer of a service station"; P.A. 95-183 added Subdiv. (1) (A) to (M), inclusive, re exclusions from the definition of "transfer of establishment"; amended Subdiv. (3) to redefine "establishment" to mean any real property or business operation from which on and after November 1, 1980, there was generated, except as the result of remediation activities, more than 100 kilograms of hazardous waste in any one month and to make other grammatical adjustments for consistency; amended Subdiv. (4) to redefine "hazardous waste" to include waste identified in accordance with the federal Resource Conservation and Recovery Act or by the commissioner in regulations and polychlorinated biphenyls in concentrations greater than 50 parts per million and to exclude lead paint abatement wastes; deleted former Subdiv. (5) defining "negative declaration" and renumbered the remaining Subdivs. accordingly; amended the renumbered Subdiv. (5) to specify that "service station" means a retail operation which does not otherwise meet the definition of "establishment"; amended the renumbered Subdiv. (6) to add Subparas. (A) to (M), inclusive, re exclusions from the definition of "transfer of a service station"; and added new Subdivs. (7) to (20), inclusive, providing definitions for "certifying party", "party associated with the transfer of an establishment", "remediation standards", "parcel", "Form I", "Form II", "Form III", "Form IV", "person", "remediate", "licensed environmental professional", "environmental condition assessment form", "pollution", and "verification"; P.A. 96-113 redefined "transfer of establishment" to add provision re providing environmental condition assessment form to commissioner for conveyance of certain portions of parcels and to exclude conveyances of service stations, redefined "establishment" to make technical clarifications, deleted a definition of "transfer of a service station", redefined "party" to explicitly include former operators of establishments and the state, redefined "Form II" to add provision re determination that no remediation is necessary, redefined "Form IV" to add provision re accompanying documentation and added the definition of "vehicle", renumbering Subdivs. as necessary, effective May 24, 1996; P.A. 97-218 redefined "transfer of establishment" in Subdiv. (1) to exclude conveyances of parcels developed solely for residential use prior to July 1, 1997, where such use has not changed; amended Subdiv. (3)(B) to provide that in that category of "establishment", the waste is generated at a different location; redefined "certifying party" in Subdiv. (6) to specify that investigation of parcel be in accordance with prevailing standards and guidelines and that remediation be in accordance with the remediation standards; redefined "form I" in Subdiv. (10) to clarify that declaration is based on an investigation of the property in accordance with the prevailing standards and guidelines; redefined "form II" in Subdiv. (11) to provide that remediation of the parcel is in accordance with the remediation standards; redefined "form III" in Subdiv. (12) to provide that the investigation is in accordance with prevailing standards and guidelines; and redefined "form IV" in Subdiv. (13) to provide that the certification be accompanied by a determination by the commissioner or a licensed environmental professional under Secs. 22a-134a or 22a-133x and that the investigation is in accordance with prevailing standards and guidelines; P.A. 98-253 added Subdiv. (1)(P) excluding from the definition of "transfer of establishment" conveyances to certain state or municipal agencies; Dec. Sp. Sess. P.A. 98-1 added Subdiv. (1)(Q) re conveyance to a limited liability company established to assemble properties to effectuate the purposes of the Patriots Stadium Enabling Act, effective January 12, 1999; P.A. 99-225 deleted said Subdiv. (1)(Q) and added new Subparas. (Q), (R) and (S) regarding exemptions for certain transactions involving certain partnership properties, amended Subdiv. (3) to clarify a provision excepting remediation activities from the definition of "establishment", and amended Subdivs. (6), (10), (11), (12), and (13) to require adoption of regulations on or before January 1, 2002, providing standards for investigation of contaminated parcels; P.A. 99-241 deleted Subdiv. (1)(Q) re conveyance of parcel to limited liability company established to assemble properties to effectuate purposes of the Patriots Stadium Enabling Act, and added a limited liability company established to assemble properties for development of the convention center facilities, sportsplex and related parking facilities site, effective July 1, 1999 (Revisor's note: In codifying the provisions of P.A. 99-225 and 99-241, as they affect Subdiv. (1), the Revisors retained the words "or (Q) any conveyance of a parcel", which were deleted by P.A. 99-225, so as to add the amendment to Subpara. (Q) contained in P.A. 99-241, and relettered new Subparas. (Q), (R) and (S), contained in P.A. 99-225, to (R), (S) and (T), respectively); P.A. 00-140 amended Subdiv. (1)(Q) to make a technical change, substitute "acquisition" for "assembly", delete references to former convention center facilities, sportsplex and related parking facilities and add reference to the overall project as defined in Sec. 32-651, effective May 2, 2000; P.A. 01-204 redefined "transfer of establishment", "establishment", "certifying party", "party associated with the transfer of an establishment", "Form I", "Form II", "Form III", "Form IV", "environmental condition assessment form", "verification" and "vehicle", defined "business operation", "corporate reorganization not substantially affecting the ownership of an establishment", "Form IV verification", "hazardous substance" and "sediment", and made technical changes; June Sp. Sess. 01-9 revised effective date of P.A. 01-204 but without affecting this section; P.A. 03-218 amended Subdiv. (1)(B) by adding "or foreclosure of a municipal tax lien" and made a technical change (1)(E), amended Subdiv. (10)(B) by adding "based on an investigation of the parcel in accordance with the prevailing standards and guidelines", and amended Subdiv. (11) by making technical changes and, in Subpara. (C), by adding "verification", effective July 1, 2003; P.A. 03-19 made technical changes in Subdivs. (1), (11), (21) and (24), effective May 12, 2003; P.A. 06-76 amended Subdiv. (1) to make technical changes, to add Subpara. (V) re universal waste, and to add Subpara. (W) re residential common interest community, amended Subdiv. (10) to require verification from licensed environmental professional to be in writing, amended Subdivs. (10) and (11)(A) to require additional verification that no discharge, spillage, uncontrolled loss, seepage or filtration of hazardous waste or substances has occurred at any portion of the establishment, and added Subdivs. (26) and (27) defining "universal waste" and "universal waste transfer facility", respectively; P.A. 06-184 amended Subdiv. (1)(B) by redefining "transfer of establishment" to include tax warrant sales pursuant to Sec. 12-157, effective June 9, 2006; P.A. 07-81 amended Subdiv. (19) to redefine "verification" to require that written opinion be on a form prescribed by commissioner; P.A. 08-124 made technical changes in Subdiv. (1)(L) and (V), effective June 2, 2008.

Cited. 223 C. 910. Cited. 226 C. 737. Cited. 239 C. 284.

Sec. 22a-134a. Transfer of hazardous waste establishments: Forms, verification, schedules, audits, approval, notification requirements, orders, exceptions. (a) No person shall transfer an establishment except in accordance with the provisions of sections 22a-134 to 22a-134e, inclusive. Notwithstanding any provision of sections 22a-134 to 22a-134e, inclusive, a person appointed by the Superior Court or any other court to sell, convey or partition real property or a person appointed as a trustee in bankruptcy shall not be deemed a party associated with the transfer of an establishment and shall not be required to comply with the provisions of sections 22a-134 to 22a-134e, inclusive.

(b) The commissioner may adopt regulations, in accordance with the provisions of chapter 54, to implement the provisions of this section.

(c) Prior to transferring an establishment, the transferor shall submit to the transferee a complete Form I or a Form II and, no later than ten days after the transfer, shall submit a copy of such Form I or Form II to the commissioner. The commissioner shall notify the transferor no later than ninety days after the submission of such Form I or Form II if the commissioner deems the Form I or Form II incomplete. If the transferor is unable to submit a Form I or a Form II to the transferee, the transferor shall, prior to the transfer, submit a complete Form III or Form IV prepared and signed by a party associated with the transfer to the transferee and, no later than ten days after the transfer, shall submit a copy of such Form III or Form IV to the commissioner. If no other party associated with the transfer of an establishment prepares and signs the proper form as a certifying party, the transferor shall have the obligation for such preparation and signing.

(d) The certifying party to a Form I, Form II, Form III or Form IV shall (1) upon receipt of a written request from the commissioner, provide to the commissioner copies of all technical plans, reports and other supporting documentation relating to the investigation of the parcel or remediation of the establishment as specified in the commissioner's written request, and (2) simultaneously submit with the submission of a Form I, Form III or Form IV to the commissioner a complete environmental condition assessment form and shall certify to the commissioner, in writing, that the information contained in such form is correct and accurate to the best of the certifying party's knowledge and belief.

(e) Not later than thirty days after receipt of a Form III or Form IV, the commissioner shall notify the certifying party whether the form is complete or incomplete. The certifying party shall use a licensed environmental professional to verify the investigation and remediation, unless not later than seventy-five days after receipt of a complete Form III or IV the commissioner notifies the certifying party, in writing, that review and approval of the remediation by the commissioner shall be required. Any person who submitted a Form III to the commissioner prior to October 1, 1995, may submit an environmental condition assessment form to the commissioner. The commissioner shall, not later than forty-five days after receipt of such form, notify the certifying party whether approval of the remediation by the commissioner will be required or whether a licensed environmental professional may verify that the investigation was performed in accordance with prevailing standards and guidelines and the remediation has been performed in accordance with the remediation standards.

(f) In determining whether review and approval of the remediation by the commissioner will be required, or whether a licensed environmental professional may verify that the remediation has been performed in accordance with the remediation standards,

the commissioner shall consider: (1) The potential risk to human health and the environment posed by any discharge, spillage, uncontrolled loss, seepage or filtration of hazardous waste or a hazardous substance at the establishment; (2) the degree of environmental investigation at the parcel; (3) the proximity of the establishment to significant natural resources; (4) the character of the land uses surrounding the establishment; (5) the complexity of the environmental condition of the establishment; and (6) any other factor the commissioner deems relevant.

(g) (1) Except as provided in subsection (h) of this section, the certifying party to a Form III or Form IV shall, not later than seventy-five days after the receipt of the notice that such form is complete or such later date as may be approved in writing by the commissioner, submit a schedule for the investigation of the parcel and remediation of the establishment. Such schedule shall, unless a later date is specified in writing by the commissioner, provide that the investigation shall be completed within two years of the date of receipt of such notice and that remediation shall be initiated not later than three years after the date of receipt of such notice. The schedule shall also include a schedule for providing public notice of the remediation prior to the initiation of such remediation in accordance with subsection (i) of this section. Not later than two years after the date of the receipt of the notice that the Form III or Form IV is complete, unless the commissioner has specified a later day, in writing, the certifying party shall submit to the commissioner documentation, approved in writing by a licensed environmental professional and in a form prescribed by the commissioner, that the investigation has been completed in accordance with prevailing standards and guidelines. Not later than three years after the date of the receipt of the notice that the Form III or Form IV is complete, unless the commissioner has specified a later day in writing, the certifying party shall notify the commissioner in a form prescribed by the commissioner that the remediation has been initiated, and shall submit to the commissioner a remedial action plan approved in writing by a licensed environmental professional in a form prescribed by the commissioner. Notwithstanding any other provision of this section, the commissioner may determine at any time that the commissioner's review and written approval is necessary and in such case shall notify the certifying party that the commissioner's review and written approval is necessary. Such certifying party shall investigate the parcel and remediate the establishment in accordance with the proposed schedule or the schedule specified by the commissioner. When remediation of the entire establishment is complete, the certifying party shall submit to the commissioner a final verification by a licensed environmental professional. Any such final verification may include and rely upon a verification for a portion of the establishment submitted pursuant to subdivision (2) of this subsection. Verifications shall be submitted on a form prescribed by the commissioner.

(2) If a certifying party completes the remediation for a portion of an establishment such party may submit a verification by a licensed environmental professional for any such portion of an establishment. The certifying party shall be deemed to have satisfied the requirements of this subsection for that portion of the establishment covered by any such verification. If any portion of an establishment for which a verification is submitted pursuant to this subdivision is transferred or conveyed or undergoes a change in ownership before remediation of the entire establishment is complete that would not otherwise be subject to the provisions of sections 22a-134 to 22a-134e, inclusive, the certifying party shall provide notice to the commissioner of such transfer, conveyance or change in ownership not later than thirty days after any such transfer, conveyance or change in ownership.

(3) (A) The commissioner may conduct an audit of any verification submitted pursuant to this section, but shall not conduct an audit of a final verification of an entire establishment submitted pursuant to subdivision (1) of this subsection after three years have passed since the date of the commissioner's receipt of such final verification unless an exception listed in subparagraph (C) of this subdivision applies. Upon completion of an audit, the commissioner shall send written audit findings to the certifying party and the licensed environmental professional who verified. The three-year time frame for an audit of a final verification of an entire establishment shall apply to such final verifications received by the commissioner after October 1, 2007.

(B) The commissioner may request additional information during an audit. If such information has not been provided to the commissioner within ninety days of the commissioner's request for such information or any longer time as the commissioner may determine in writing, the commissioner may either (i) suspend the audit, which for a final verification shall suspend the running of the three-year audit time frame until such time as the commissioner receives all the information requested, or (ii) complete the audit based upon the information provided in the verification before the request for additional information.

(C) The commissioner shall not conduct an audit of a final verification of an entire establishment after three years from receipt of such verification pursuant to this subdivision unless (i) the commissioner has reason to believe that a verification was obtained through the submittal of materially inaccurate or erroneous information, or otherwise misleading information material to the verification or that misrepresentations were made in connection with the submittal of the verification, (ii) a verification is submitted pursuant to an order of the commissioner pursuant to subsection (j) of this section, (iii) any post-verification monitoring, or operations and maintenance, is required as part of a verification and which has not been done, (iv) a verification that relies upon an environmental land use restriction was not recorded on the land records of the municipality in which such land is located in accordance with section 22a-133o and applicable regulations, (v) the commissioner determines that there has been a violation of sections 22a-134 to 22a-134e, or (vi) the commissioner determines that information exists indicating that the remediation may have failed to prevent a substantial threat to public health or the environment.

(h) (1) If the commissioner notifies the certifying party to a Form III or Form IV that the commissioner's review and written approval of the investigation of the parcel and remediation of the establishment is required, such certifying party shall, not later than thirty days after the receipt of such notice or such later date as may be approved in writing by the commissioner, submit for the commissioner's review and written approval a proposed schedule for: (A) Investigating the parcel and remediating the establishment; (B) submitting to the commissioner scopes of work, technical plans, technical reports and progress reports related to such investigation and remediation; and (C) providing public notice of the remediation prior to the initiation of such remediation in accordance with subsection (i) of this section. Upon the commissioner's approval of such schedule, such certifying party shall, in accordance with the approved schedule, submit scopes of work, technical plans, technical reports and progress reports to the commissioner for the commissioner's review and written approval. Such certifying party shall perform all actions identified in the approved scopes of work, technical plans, technical reports and progress reports in accordance with the approved schedule. The commissioner may approve in writing any modification proposed in writing by such certifying party to such schedule or investigation and remediation. The commissioner

may, at any time, notify such certifying party in writing that the commissioner's review and written approval is not required and that a licensed environmental professional may verify that the remediation has been performed in accordance with the remediation standards.

(2) A certifying party may complete the remediation of a portion of an establishment and request that the commissioner determine that the requirements of this subsection have been satisfied for any such portion of the establishment. If the commissioner determines that any such remediation is complete, the certifying party shall be deemed to have satisfied the requirements of this subsection for any such portion of an establishment. Any determination by the commissioner that remediation at the entire establishment has been completed may include and rely upon any determination made pursuant to this subdivision that remediation is complete at a portion of an establishment. If any portion of an establishment for which the commissioner determines that remediation is complete pursuant to this subdivision is transferred or conveyed or undergoes a change in ownership before remediation of the entire establishment is complete that would not otherwise be subject to the provisions of sections 22a-134 to 22a-134e, inclusive, the certifying party shall provide notice to the commissioner of such transfer, conveyance or change in ownership not later than thirty days after any such transfer, conveyance or change in ownership.

(i) The certifying party to a Form III or Form IV shall (1) publish notice of the remediation, in accordance with the schedule submitted pursuant to this section, in a newspaper having a substantial circulation in the area affected by the establishment, (2) notify the director of health of the municipality where the establishment is located of the remediation, and (3) either (A) erect and maintain for at least thirty days in a legible condition a sign not less than six feet by four feet on the establishment, which sign shall be clearly visible from the public highway, and shall include the words "ENVIRONMENTAL CLEAN-UP IN PROGRESS AT THIS SITE. FOR FURTHER INFORMATION CONTACT:" and include a telephone number for an office from which any interested person may obtain additional information about the remediation, or (B) mail notice of the remediation to each owner of record of property which abuts the parcel, at the address for such property on the last-completed grand list of the municipality where the establishment is located.

(j) The commissioner may issue an order to any person who fails to comply with any provision of sections 22a-134 to 22a-134e, inclusive, including, but not limited to, any person who fails to file a form, or files an incomplete or incorrect form or to any person who fails to carry out any activities to which that person agreed in a Form III or Form IV. If no form is filed or if an incomplete or incorrect form is filed for a transfer of an establishment, the commissioner may issue an order to the transferor, the transferee, or both, requiring a filing. The commissioner may also request that the Attorney General bring an action in the superior court for the judicial district of Hartford to enjoin any person who fails to comply with any provision of sections 22a-134 to 22a-134e, inclusive, including, but not limited to, any person who fails to file a form, improperly files a Form I, Form II, Form III or Form IV or the certifying party to a Form III or Form IV to take any actions necessary to prevent or abate any pollution at, or emanating from, the subject establishment. Any person to whom such an order is issued may appeal such order in accordance with the procedures set forth in sections 22a-436 and 22a-437.

(k) Notwithstanding the exemptions provided in section 22a-134a, nothing contained in sections 22a-134 to 22a-134e, inclusive, shall be construed as creating an innocent landowner defense for purposes of section 22a-452d.

(l) Notwithstanding any other provisions of this section, no person shall be required to comply with the provisions of sections 22a-134 to 22a-134e, inclusive, when transferring real property (1) (A) for which a Form I or Form II has been filed for the transfer of the parcel on or after October 1, 1995, or (B) for which parcel a Form III or Form IV has been filed and which has been remediated and such remediation has been approved in writing by the commissioner or has been verified in writing in accordance with this section by a licensed environmental professional that an investigation has been performed in accordance with prevailing standards and guidelines and that the remediation has been performed in accordance with the remediation standards, and (2) at which no activities described in subdivision (3) of section 22a-134 have been conducted since the date of such approval or verification or the date on which the Form I or Form II was filed.

(m) Failure of the commissioner to notify any party in accordance with the provisions of this section in no way limits the ability of the commissioner to enforce the provisions of sections 22a-134 to 22a-134e, inclusive.

(P.A. 85-568, S. 3; P.A. 87-475, S. 2; 87-589, S. 49, 87; P.A. 88-230, S. 1, 12; P.A. 90-98, S. 1, 2; P.A. 93-142, S. 4, 7, 8; P.A. 95-183, S. 2; 95-220, S. 4–6; P.A. 96-113, S. 2, 6, 17; P.A. 99-225, S. 7, 8; P.A. 01-204, S. 16; June Sp. Sess. P.A. 01-9, S. 73, 131; P.A. 03-19, S. 62; 03-82, S. 1; 03-218, S. 7–9; P.A. 06-76, S. 15; P.A. 07-81, S. 4; 07-233, S. 10; P.A. 08-124, S. 17.)

History: P.A. 87-475 added Subsec. (d) regarding liens against real estate on which a service station was transferred and in operation on or after May 1, 1967, and added Subsec. (e) authorizing the commissioner to adopt regulations; P.A. 87-589 made technical changes in Subsec. (d); P.A. 95-183 amended Subsec. (a) to add a reference to Sec. 22a-134e, deleted former Subsecs. (b) and (c) and relettered the remaining Subsecs. accordingly, amended the relettered Subsec. (b) to change "cleaned up" to "remediated", added new Subsec. (d) re submittal of Form I or II, new Subsec. (e) re submittal of Form II or IV, new Subsec. (f) re review of Form III or IV, new Subsec. (g) re verification of forms by environmental professional, new Subsecs. (h) and (i) re a schedule for remediation, new Subsec. (j) re notice of remediation, new Subsec. (k) re orders to file or remediate, new Subsec. (l) re construction of the Transfer Act with regard to innocent landowners and new Subsec. (m) re transfers covered by previous filings (Revisor's note: P.A. 88-230, 90-98, 93-142 and 95-220 authorized substitution of "judicial district of Hartford" for "judicial district of Hartford-New Britain" in public and special acts of the 1995 session of the General Assembly, effective September 1, 1998); P.A. 96-113 amended Subsec. (d) to provide that a transferor shall submit a copy of any Form III or IV to the transferee and amended Subsec. (k) to expand range of orders authorized under that subsection, effective May 24, 1996; P.A. 99-225 amended Subsec. (f) to require verification of investigations and to require adoption of regulations on or before January 1, 2002, providing standards for investigation of contaminated parcels and amended Subsec. (m) to provide that eligibility for the exemption under that subsection on the basis of a filing of a Form I or II is limited to filings of such forms after October 1, 1995, to require verification of investigations by licensed environmental professionals and to require adoption of regulations before January 1, 2002, providing standards for investigation of contaminated parcels; P.A. 01-204 deleted former Subsec. (b) re liens pursuant to Sec. 22a-452 and redesignated existing Subsecs. (c) to (m) as Subsecs. (b) to (l), amended Subsec. (c) to clarify that a Form I or II submission must be complete, require the commissioner to notify the transferor no later than 90 days after the submission of a Form I or Form II if the commissioner deems the Form I or Form II incomplete, require the transferor, rather than the certifying party, to submit a complete Form III or Form IV if the transferor is unable to submit Form I or Form II, require such Form III or Form IV to be prepared and signed by a party associated with the transfer, and require the transferor to prepare and sign the proper form if no other party associated with the transfer does so, amended Subsec. (d) to require the certifying party to a Form I, Form III or Form IV, if requested in writing by the commissioner, to submit copies of technical plans, reports and other supporting documentation of the investigation of the parcel or remediation of the establishment and make a technical change for purposes of gender neutrality, amended Subdiv. (e) to change the commissioner's notification deadline from within 15 days of receipt to no later than 30 days after receipt, make technical change for purposes of gender neutrality, eliminate the requirement for adoption of regulations on or before January 1, 2002, and delete provision re parcels subject to an order, consent order, or stipulated judgment, amended Subsec. (f) to include a hazardous substance at the establishment in Subdiv. (1) and to substitute "establishment" for "parcel" in Subdivs. (3) to (5), amended Subsec. (g) to make the subsection applicable to a certifying party to a Form III or Form IV, require the certifying party to submit a schedule for investigating and remediating the establishment, rather than the parcel, require the commissioner to notify the certifying party if the commissioner determines that the commissioner's review and written approval is necessary, delete provisions re submission of copies of technical plans and reports, provide that the certifying party shall investigate the parcel and remediate the establishment, require the certifying party to submit a verification that the establishment has been remediated, require that the certifying party submit, as applicable, a Form IV verification and make technical changes, amended Subsec. (h) to apply to certifying parties to a Form III or Form IV, provide that commissioner's notification state approval of the investigation of the parcel and remediation of the establishment is required, provide that schedule is to apply to the investigation of the parcel and remediation of the establishment, provide that the certifying party is to submit a schedule for the submission for scopes of work and submit the scopes of work, and make technical changes, amended Subsec. (i) to apply to certifying parties to a Form III or Form IV and, in Subdivs. (2) and (3), to substitute "establishment" for "parcel", amended Subsec. (j) to allow the commissioner to issue an order to any person who fails to file a form or files an incomplete or incorrect form, allow the commissioner to issue an order to the transferor or transferee, or both, requiring a filing, substitute "establishment" for "parcel" and make conforming changes, amended Subsec. (l) to make technical changes and delete requirement for adoption of regulations on or before January

1, 2002, and added Subsec. (m) re failure of commissioner to comply with notice provisions of section does not limit commissioner's ability to enforce provisions of the Transfer Act; June Sp. Sess. P.A. 01-9 revised effective date of P.A. 01-204 but without affecting this section; P.A. 03-19 made a technical change in Subsec. (l), effective May 12, 2003; P.A. 03-82 amended Subsec. (a) by adding provision re person appointed by court to sell, convey or partition real property or as a trustee in bankruptcy shall not be deemed a party associated with the transfer of an establishment and shall not be required to comply with Secs. 22a-134 to 22a-134e; P.A. 03-218 added "Form II" to the introductory language in Subsec. (d), amended Subsec. (d)(2) by replacing "Form II" with "Form III", replaced "establishment" with "parcel" in Subsec. (i)(3)(B), and replaced "22a-134f" with "22a-134e" in Subsec. (m), effective July 1, 2003; P.A. 06-76 amended Subsec. (g) to designate existing language as Subdiv. (1), make a technical change, add provision re schedule specified by commissioner, replace provision re submission of independent verification with language re submission of a final verification and reliance on verification for a portion of the establishment and add Subdiv. (2) re remediation of a portion of an establishment, and amended Subsec. (h) to designate existing language as Subdiv. (1), make technical changes and add Subdiv. (2) re remediation of a portion of an establishment; P.A. 07-81 amended Subsec. (e) to provide that certifying party shall use a licensed environmental professional for verification unless notified that commissioner's review is required, to require that investigation be performed in accordance with prevailing standards and guidelines and to make technical changes, amended Subsec. (g)(1) to add reference to Subsec. (h) as an exception, to change deadline for submission of schedule from 30 to 75 days after receipt of the notice, to add provisions re deadlines of 2 years and 3 years, respectively, for notification of completion of the investigation or initiation of the remediation, to specify that commissioner's review may be required at any time and to make technical changes, and amended Subsec. (k) to replace reference to Sec. 22a-134(a) with reference to Sec. 22a-134a; P.A. 07-233 amended Subsec. (e) to require certifying party to use a licensed environmental professional to verify investigation and remediation, to add exception for review required by the commissioner, to require commissioner to respond not later than 45 days after receipt of an environmental condition assessment form from anyone who submitted a Form III before October 1, 1995, re whether a licensed environmental professional can be used, and to add to the licensed environmental professional's charge in such cases verification that investigation was done according to prevailing standards and guidelines, amended Subsec. (g) to add exception as provided in Subsec. (h), to give certifying party 75, rather than 30, days to submit investigation and remediation schedule, to provide that the 75 days starts upon notice that form is complete, to require certifying party to provide commissioner with documentation that investigation and a remedial action plan are done, and to allow commissioner to prescribe the form for all verifications, and added Subsec. (e)(3) re audits, effective July 1, 2007; P.A. 08-124 made technical changes in Subsecs. (g) and (h), effective June 2, 2008.

Cited. 223 C. 910. Cited. 226 C. 737.
Cited. 27 CA 353. Cited. 30 CA 204. Cited. 43 CA 113.
Cited. 43 CS 83.

Sec. 22a-134b. Damages. Failure of the transferor to comply with any of the provisions of sections 22a-134 to 22a-134e, inclusive, entitles the transferee to recover damages from the transferor, and renders the transferor of the establishment strictly liable, without regard to fault, for all remediation costs and for all direct and indirect damages.

(P.A. 85-568, S. 4; P.A. 95-183, S. 5.)

History: P.A. 95-183 added a reference to Sec. 22a-134e and changed "cleanup and removal costs" to "remediation costs".

Trial court properly considered in its valuation of property the possibility of recovering remediation costs pursuant to Transfer Act. 272 C. 14.
Cited. 27 CA 353. Cited. 30 CA 204. Cited. 43 CA 113.

Sec. 22a-134c. Authority of commissioner. The provisions of sections 22a-134 to 22a-134e, inclusive, shall not affect the authority of the commissioner under any other statute or regulation, including, but not limited to, the authority to issue any order to the transferor or transferee of an establishment.

(P.A. 85-568, S. 5; P.A. 95-183, S. 6.)

History: P.A. 95-183 added a reference to Sec. 22a-134e.

Cited. 27 CA 353. Cited. 43 CA 113.

Sec. 22a-134d. Penalty. Any person who violates any provision of sections 22a-134a to 22a-134e, inclusive, or regulations issued in accordance with the provisions of said sections shall be assessed a civil penalty or shall be fined in accordance with section 22a-438.

(P.A. 85-568, S. 6; P.A. 95-183, S. 7; 95-190, S. 15, 17; P.A. 01-204, S. 17; June Sp. Sess. P.A. 01-9, S. 73, 131.)

History: P.A. 95-183 added a reference to Sec. 22a-134e; P.A. 95-190 also added reference to Sec. 22a-134e and provided for a penalty under this section for anyone who gives false information pursuant to a voluntary site remediation, effective June 20, 1995; P.A. 01-204 deleted existing provisions and added provisions re assessment of civil penalty or

ne in accordance with Sec. 22a-438; June Sp. Sess. P.A. 01-9 revised effective date of P.A. 01-204 but without affecting iis section.

Cited. 27 CA 353. Cited. 43 CA 113.

Sec. 22a-134e. Transfer fees. Regulations. (a) As used in this section, "cost of emediation" shall include total costs related to the complete investigation of pollution n-site and off-site, evaluation of remediation alternatives, design and implementation f approved remediation, operation and maintenance costs for the remediation and post-emediation monitoring.

(b) The fee for filing a Form I, as defined in section 22a-134, shall be three hundred ollars. The fee for filing a Form II shall be one thousand fifty dollars except as provided or in subsections (e) and (p) of this section.

(c) The fee for filing a Form III, after July 1, 1990, and before July 1, 1993, shall e as follows: (1) Four thousand five hundred dollars if the cost of remediation is less ian one hundred thousand dollars; (2) seven thousand dollars if the cost of remediation : equal to or greater than one hundred thousand dollars but less than five hundred iousand dollars; (3) ten thousand dollars if the cost of remediation is equal to or greater ian five hundred thousand dollars but less than one million dollars; and (4) thirteen iousand dollars if the cost of remediation is equal to or greater than one million dollars.

(d) The fee for filing a Form III with the Commissioner of Environmental Protection rior to July 1, 1990, and which concern a site for which the commissioner had not iven written approval of a final remediation plan before July 1, 1990, shall be as follows: or a Form III filed between October 1, 1985, and September 30, 1986, the fee shall be venty per cent of the amount specified in subsection (c) of this section; for a Form III led between October 1, 1986, and September 30, 1987, the fee shall be forty per cent the amount specified in subsection (c) of this section; for a Form III filed between ctober 1, 1987, and September 30, 1988, the fee shall be sixty per cent of the amount ecified in subsection (c) of this section; for a Form III filed between October 1, 1988, id September 30, 1989, the fee shall be eighty per cent of the amount specified in ibsection (c) of this section and for a Form III filed between October 1, 1989, and July 1990, the fee shall be ninety per cent of the amount specified in said subsection (c).

(e) If a Form II is filed after July 1, 1990, and before October 1, 1995, and within ree years following completion of remedial measures as approved by the Commis-oner of Environmental Protection, the fee for such transfer shall be the fee specified subsection (c) of this section.

(f) The fees specified in subsections (b) and (e) of this section shall be due upon e filing of the notification required under section 22a-134a.

(g) The fee specified in subsection (c) of this section shall be due in accordance ith the following schedule: (1) Four thousand five hundred dollars shall be paid upon ing of the Form III; (2) the balance, if any, shall be paid within thirty days of receipt om the commissioner of written approval of a remedial action plan or within thirty ys of the issuance of an order, consent agreement or stipulated judgment, whichever earlier; (3) any remaining balance shall be paid within thirty days after receipt of itten notice from the commissioner that it is due; (4) any refund, if applicable, will paid after receipt of a letter from the commissioner stating that no further action is quired or after receipt of a letter of compliance.

(h) The fee specified in subsection (d) of this section shall be due in accordance with the following schedule: (1) Nine hundred dollars shall be paid within thirty days of receipt of a written notice of a fee due from the Commissioner of Environmental Protection; (2) the balance, if any, shall be paid within thirty days of receipt from the commissioner of written approval of a remedial action plan or within thirty days of the issuance of an order, consent agreement or stipulated judgment, whichever is earlier; (3) any remaining balance shall be paid within thirty days after receipt of written notice from the commissioner that it is due; (4) any refund, if applicable, will be paid after receipt of a letter from the commissioner stating that no further action is required or after receipt of a letter of compliance.

(i) The commissioner may adopt regulations, in accordance with the provisions of chapter 54, to prescribe the amount of the fees required pursuant to this section. Upon the adoption of such regulations, the fees required by this section shall be as prescribed in such regulations.

(j) The fees specified in this section shall be paid by the certifying party.

(k) The fee for filing a Form III, on and after July 1, 1993, and before October 1, 1995, shall be as follows: (1) Twenty-three thousand dollars if the cost of remediation is equal to or greater than one million dollars; (2) twenty thousand dollars if the cost of remediation is equal to or greater than five hundred thousand dollars but less than one million dollars; (3) fourteen thousand dollars if the cost of remediation is equal to or greater than one hundred thousand dollars but less than five hundred thousand dollars; (4) four thousand five hundred dollars if the cost of remediation is equal to or greater than fifty thousand dollars but less than one hundred thousand dollars; (5) three thousand dollars if the cost of remediation is equal to or greater than twenty-five thousand dollars but less than fifty thousand dollars; and (6) two thousand dollars if the cost of remediation is less than twenty-five thousand dollars.

(l) The fee specified in subsection (k) of this section shall be due in accordance with the following schedule: (1) Two thousand dollars shall be paid upon the filing of the notification required under section 22a-134a if the cost of remediation is less than one hundred thousand dollars; (2) six thousand dollars shall be paid upon filing of the notification required under section 22a-134a if the cost of remediation is equal to or greater than one hundred thousand dollars; (3) the balance, if any, shall be paid within thirty days of receipt from the commissioner of written approval of a remedial action plan or within thirty days of the issuance of an order, consent agreement or stipulated judgment, whichever is earlier; (4) any remaining balance shall be paid within thirty days after receipt of written notice from the commissioner that it is due; (5) any refund, if applicable, will be paid after receipt of a letter from the commissioner stating that no further action is required or after receipt of a letter of compliance. After the deposit of any appropriated funds, funds from the sale of bonds of the state or any contribution pursuant to section 22a-16a, 22a-133t or 22a-133u or section 3 of public act 96-250* to the Special Contaminated Property Remediation and Insurance Fund established under section 22a-133t, any amount received by the commissioner pursuant to this section shall be deposited into said fund.

(m) On and after October 1, 1995, the fee for filing a Form III or Form IV shall be due in accordance with the following schedule: An initial fee of three thousand dollars shall be submitted to the commissioner with the filing of a Form III or Form IV. If a licensed environmental professional verifies the remediation of the establishment and the commissioner has not notified the certifying party that the commissioner's written

approval of the remediation is required, no additional fee shall be due. If the commissioner notifies the certifying party that the commissioner's written approval of the remediation is required, the balance of the total fee shall be due prior to the commissioner's issuance of the commissioner's final approval of the remediation.

(n) On and after October 1, 1995, the total fee for filing a Form III shall be as follows: (1) Thirty-four thousand five hundred dollars if the total cost of remediation is equal to or greater than one million dollars; (2) thirty thousand dollars if the total cost of remediation is equal to or greater than five hundred thousand dollars but less than one million dollars; (3) twenty-one thousand dollars if the total cost of remediation is equal to or greater than one hundred thousand dollars but less than five hundred thousand dollars; (4) six thousand seven hundred fifty dollars if the total cost of remediation is equal to or greater than fifty thousand dollars but less than one hundred thousand dollars; (5) four thousand five hundred dollars if the total cost of remediation is equal to or greater than twenty-five thousand dollars but less than fifty thousand dollars; and (6) three thousand dollars if the total cost of remediation is less than twenty-five thousand dollars.

(o) On and after October 1, 1995, except as provided in subsection (p) of this section, the total fee for filing a Form IV shall be as follows: (1) Seventeen thousand two hundred fifty dollars if the total cost of remediation is equal to or greater than one million dollars; (2) fifteen thousand dollars if the total cost of remediation is equal to or greater than five hundred thousand dollars but less than one million dollars; (3) ten thousand five hundred dollars if the total cost of remediation is greater than or equal to one hundred thousand dollars but less than five hundred thousand dollars; (4) three thousand three hundred seventy-five dollars if the total cost of remediation is equal to or greater than fifty thousand dollars but less than one hundred thousand dollars; and (5) three thousand dollars if the total cost of remediation is less than fifty thousand dollars.

(p) Notwithstanding any other provision of this section, the fee for filing a Form II or Form IV for an establishment for which the commissioner has issued a written approval of a remediation under subsection (c) of section 22a-133x within three years of the date of the filing of the form shall be the total fee for a Form III specified in subsection (n) of this section and shall be due upon the filing of the Form II or Form IV.

(q) The requirements of this section shall not apply to a transfer of property to a municipality under the provisions of section 12-157.

(P.A. 90-231, S. 5, 28; P.A. 91-369, S. 12, 36; P.A. 93-277, S. 1, 2; 93-435, S. 55, 95; P.A. 94-28, S. 1, 3; P.A. 95-183, S. 8; 95-190, S. 11, 17; P.A. 96-113, S. 3–5, 14, 17; P.A. 99-216, S. 3, 4; 99-225, S. 9, 10, 21, 33; P.A. 01-204, S. 18–20; June Sp. Sess. P.A. 01-9, S. 73, 131; June 30 Sp. Sess. P.A. 03-6, S. 119, 120; P.A. 05-285, S. 2.)

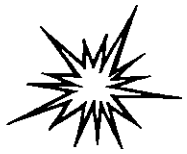
*Note: Section 3 of public act 96-250 is special in nature and therefore has not been codified but remains in full force and effect according to its terms.

History: P.A. 91-369 inserted a new Subsec. (a) defining "cost of clean up", amended Subsecs. (b), (c) and (d) to specify that the fee is for filing of notice under those subsections, amended Subsec. (d) to include in the requirements of that subsection certain sites which had not been approved by the commissioner before July 1, 1990, amended Subsec. (e) to specify that said subsection shall apply to transfer after July 1, 1990, amended Subsec. (g) to specify when certain portions of fees due under this section shall be due, deleted former Subsec. (h) re setting of fees on and after July 1, 1995, and added new Subsecs. concerning the setting of fees under this section by regulation and concerning payment of fees by the transferee, relettering previously existing Subsecs. as necessary; P.A. 93-277 amended Subsecs. (g) and (h) to specify procedures for payment of outstanding fee balances due and for refunds and added new Subsecs. (k) and (l) re a new graduated fee schedule to be in effect after July 1, 1993, effective June 23, 1993; P.A. 93-435 made a technical correction, effective June 28, 1993; P.A. 94-28 amended Subsec. (a) to add the definition of "notice" and amended Subsec. (j) to provide for payment of fee for filing notice under Subsec. (c) by the party making such certification, effective July 1, 1994; P.A. 95-183 amended Subsec. (a) to change "cost of clean-up" to "cost of remediation", included postremediation monitoring in such costs and deleted a definition of "notice", amended Subsecs. (b) to (e), (j) and (k) to replace references to former notices with references to new specific forms and added new Subsecs. (m) and (n) re filing fees after October 1, 1995; P.A. 95-190 amended Subsec. (l) to provide that fees received under this section be deposited into the Special Contaminated Property Remediation and Insurance Fund, effective July 1, 1996; P.A. 96-113 amended Subsec. (a) to

provide a more comprehensive definition of "cost of remediation", amended Subsec. (e) to include certain Form II filings for measures not taken pursuant to an administrative order, amended Subsec. (l) to condition the timing of the initial deposit of fees into the Special Contaminated Property Remediation and Insurance Fund, designated provisions formerly part of Subsec. (m) as Subsec. (n), inserted new Subsec. (o) and relettered former Subsec. (n) as Subsec. (p), and made technical revisions in the text and a minor revision in the fee schedule and procedures, effective May 24, 1996; P.A. 99-216 and P.A. 99-225 amended Subsecs. (b), (o) and (p) to make technical changes, and P.A. 99-225 further amended section to add new Subsec. (q) regarding transfers to municipalities under Sec. 12-157, effective June 29, 1999; P.A. 01-204 amended Subsec. (j) to require fees specified in section to be paid by the certifying party, amended Subsec. (m) to substitute "establishment" for "parcel" and to make a technical change for purposes of gender neutrality and amended Subsec. (p) to substitute "establishment" for "parcel"; June Sp. Sess. P.A. 01-9 revised effective date of P.A. 01-204 but without affecting this section; June 30 Sp. Sess. P.A. 03-6 amended Subsec. (b) to increase fee for filing a Form I from $200 to $300 and fee for filing a Form II from $700 to $1,050, amended Subsec. (m) to increase initial fee for filing a Form III or IV from $2,000 to $3,000, amended Subsec. (n) to increase total fee for filing a Form III by 50%, and amended Subsec. (o) to increase total fee for filing a Form IV by 50%, effective August 20, 2003; P.A. 05-285 amended Subsec. (l) to delete reference to repealed Sec. 12-63f, effective July 13, 2005.

See Sec. 22a-27i re exemption of municipality for one year.

ATTACHMENT 5



PERMIT # 7244

TOWN OF ORANGE, CONN.

Application for Building Permit Under Building Ordinance

Date July 18 19 79

Application is hereby made to the Building Official to construct a warehouse and distribution center

Location of Property March Hill Road 55

Name of Owner Firestone Properties Present Address 768 South Street, Suffield, C

Zone LI-2 Width of Lot *1 Depth of Lot Area of Lot 676,486 sq. ft.

Size of Building *2 Area of Building 168,418 sq. ft Stories 1

Front Yard *3 Rear Yard Side Yard

Use of Buildings beer distribution center

Remarks

Use space below for plot plan of property.

*1 see attached plot plan

*2 see S-1 plan

*3 see SD-1 site plan

Approved and Permit issued 8/16 1977 Building Official

Applicant Wayne Donovan

APPLICATION FOR PERMIT FOR CONSTRUCTION OF SEWAGE DISPOSAL SYSTEM

TO THE HEALTH OFFICER
TOWN OF ORANGE, CONNECTICUT

Permit No. 5153
Date 9-19-79

I hereby apply for permit to build a sewage disposal system for a WHARE HOUSE
(Residence, Boarding House, Hotel, etc.)

GARBAGE DISPOSAL UNIT Yes ☐ No ☐

Owned by DICHELLO DISTRIBUTORS of ORANGE
And located at 55 MARSH HILL RD
To be built by J & H SLATER CONST. CO., INC. of 421 ABBY RD So. WINDSOR, CONN.
in accordance with detailed information stated below.

GENERAL INFORMATION

Soil test SEE FILE House Style

1. Estimated population of premises (present) Number of bedrooms
2. Description of premises
   No. Fixtures (above basement): Water closets Urinals Lavatories
   Bath tubs Showers Kitchen Sinks Laundry Tubs
   List fixtures in basement
3. Water supply (public or well) Location of well
4. Character of soil at proposed location of leaching system, including depths of various strata SEE FILE
   (sand, loam, clay, hardpan, etc. - use test pits)
5. Elevation of ground water SEE FILE
   (with reference to both present and future grades)
6. Description of proposed system (furnish drawings of same, with plot plan showing system)
   Septic Tank(s) 1 Capacity (gal.) 2500 Name of Manufacturer DUTILLO
   Distance from Building 15'
   Automatic Dosing Apparatus, if any (describe) 1,000 GAL. HOLDING TANK WITH DURAFLEX PUMP SYSTEM

   Soil Absorption System
   Distance from Building Distance from property lines
   Leaching Bed(s) size
   Leaching Pit(s), (depth below inlet)
   Leaching Galleries, size
   6 Leaching Fields, total length is 800 ft.
   Width of trenches 2 ft., depth of broken stone or screened gravel, total inches 18"
   Stone or gravel will be covered by BUILDING PAPER
   (salt hay, building paper, etc.)
   Distance between trenches 6 ft.
   Distance from water supply on same property 10'+ ft. on adjoining property ft.

   Secondary Treatment, if other than soil absorption.
   Describe in detail, and locate on map

System was designed by MECHANICAL ASSOCIATES
Above information furnished by J. W. SLATER

Approved and Permit Issued Sept 19 19 79 Health Officer

Applicant Signature James W. Slater 001098 RJ Cubberley

Home Address 285 MAIN ST, S. WINDSOR Phone No. 528-1797

BLUEPRINT OF SYSTEM REQUESTED UPON INSPECTION.

SUBMITTED PLOT PLAN IS ON REVERSE SIDE OF THIS APPLICATION.

STATE OF CONNECTICUT

DEPARTMENT OF HEALTH SERVICES
OFFICE OF PUBLIC HEALTH

August 20, 1979

Mr. Arthur Castellazzo, R.S.
Orange Health Department
Town Hall
Orange, Connecticut 06477

Dear Art:

We have reviewed revised plans for installation of a subsurface sewage disposal system to serve the proposed warehouse and shipping facilities known as Dichello Distributors, located off Marsh Hill Road in Orange. Plans were prepared by Robert J. McKay, consulting engineer, and submitted to our office for review pursuant to Section 19-13-B20m of the Public Health Code.

Plans appear generally satisfactory and meet requirements of the Public Health Code. There are, however, several modifications, omissions, and corrections which must be made in order to assure long-term effective operation of the proposed sewage disposal system. The modifications which should be included on plans are as follows:

1. The sewer line from the proposed building to the septic tank should be specified as cast iron laid a minimum pitch of 1/4-inch per foot.

2. A proposed 2,500-gallon septic tank must be a 2-compartment tank, two-thirds of the tank volume in the first chamber, with at least two access manholes extended to grade.

3. Additional information on the pump lift chamber must be provided. Plans did not specify the type of sewage lift pumps to be used, the type of electrical controls to be used, nor that a high level alarm will be installed as typically required with all sewage pump lift stations. In addition, a dosage rate of approximately 200 to 350 gallons per cycle should be used in order to provide effective dosing of the leaching system.

4. Additional information should be provided as to the type and manufacturer of the proposed 2-inch forced sewage line which runs from the pump lift station to the main distribution box. A 2-inch PVC water pressure pipe, 100 psi would be acceptable for use in this situation.

5. Rather than construct the leaching system with 8 rows of leaching trenches 100 feet long located on one side, we would recommend that the lowest four trenches be relocated parallel with the upper four trenches and thus spread the leaching system across 200 lineal foot parallel with existing contours.

Phone: 566-2195
79 Elm Street — Hartford, Connecticut 06115

6. The typical leaching trench detail as shown on plan should be clarified to indicate compliance with Code requirements for trench construction. With leaching trenches notched no more than 18 inches into original soil, the typical trench detail would indicate that a minimum of 12 inches of 1-inch broken stone or screened gravel will be located below the 4-inch distribution pipe and a minimum of 2 inches of stone placed above the 4-inch distribution pipe for a total depth of 18 inches. This leaching trench as described would be covered with pervious building paper or salt hay as required by Code, and backfilled with on-site material. It is extremely important that the entire leaching area be graded uniformly to promote rapid runoff of surface water and not be mounded as shown in the typical trench detail on plan.

The proposed sewage disposal system with above-listed modifications incorporated present a satisfactory proposal for on-site sewage disposal which may be approved. It is recommended that prior to issuance of permit, the design engineer make the necessary changes and submit plans to your office for review.

If you have any questions, or would like to discuss this matter further, please call our office.

Very truly yours,

Frank A. Schaub

Frank A. Schaub
Senior Sanitary Engineer
Environmental Health Services Div.

FAS/pdp

cc: Robert M. White, M.D.
Director of Health, Orange

Robert McKay, P.E.

South Central Regional Office

(Dictated, but not read.)

TOWN OF ORANGE, CONNECTICUT

OFFICE OF BUILDING OFFICIAL

"TEMPORARY"

CERTIFICATE OF OCCUPANCY

Zone LI-2 Date April 7 19 80

This is to certify that building at 55 Marsh Hill Rd

as Built under Permit No. 7244 conforms substantially to the requirements of the Building Code and Zoning and Sanitary Regulations of the Town of Orange and is hereby approved for occupancy as indicated below.

Approved for occupancy as a warehouse and office building according to Section 120.5 of State Building Code.

Zoning Enforcement Officer

Building Official

NOTICE: Any change or extension of the use herein approved requires a new certificate of occupancy.

Sanitarian

PERMIT # 7318

TOWN OF ORANGE, CONN.

Application for Building Permit Under Building Ordinance

Date May 6, 19 80

Application is hereby made to the Building Official to Erect Commercial Building

Location of Property East Side of 55 Marsh Hill Road

Name of Owner Firestone Properties Present Address 768 South St., Suffield, CT

Zone ..... Width of Lot ..... Depth of Lot ..... Area of Lot .....

Size of Building 80' x 80' Area of Building 6400 sq. ft. Stories One

Front Yard ..... Rear Yard ..... Side Yard .....

Use of Buildings Truck Maintenance and Truck-Wash

Remarks .....

Use space below for plot plan of property.

See Plan on file.

Approved and Permit issued May 9, 19 80 Building Official

Applicant

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

STATE OFFICE BUILDING HARTFORD, CONNECTICUT 06115

May 29, 1980

865-7700

Sub: DeChello
55 Marsh Hill Road

Mr. Nelson A. Prentice
The Griffith Company, Inc.
239 Asylum Street
Bridgeport, Connecticut 06610

Re: Truck Washing

Dear Mr. Prentice:

I have reviewed the letter and information you have submitted to Mr. Randy May of this Department dated May 6, 1980. This Department has no objections to the described wash system, per se, however a problem arises concerning the disposal of the actual wash and rinse water. Any truck washing operation is classified by this Department as an industrial discharge, must be treated accordingly, and a discharge permit obtained. Due to the fact that any vehicle wash water will contain varying amounts of grease and oil, it must be disposed of properly. As far as this Department is able to determine there are only four possible ways to deal with this oil contaminated water.

The first way is to install a gravity type oil separator and then discharge the water to the sanitary sewerage system.

mr Sempsky * prefers this method

The second method is to install a holding tank to retain all oil and water and have the holding tank pumped out as needed.

The third alternative is to install a complete treatment system to remove all emulsified and free oil and then initrate a surface water discharge.

A final way to treat the discharge is to install an oil separation and then discharge the water to an appropriately sized leaching field.

If I may be of any further assistance concerning this matter, please do not hesitate to contact me.

Respectfully,

Walter Sinnott
Senior Sanitary Engineer
WATER COMPLIANCE UNIT
#566-2719

IN only Tues or Thurs.

WW:cb

cc: Mr. Art Castelazzo ✓
Orange, Ct.

APPLICATION FOR PERMIT FOR CONSTRUCTION OF SEWAGE DISPOSAL SYSTEM

TO THE HEALTH OFFICER
TOWN OF ORANGE, CONNECTICUT

Permit No. 5206
Date 7/24/80

I hereby apply for permit to build a sewage disposal system for a Industrial Building
(Residence, Boarding House, Hotel, etc.)

GARBAGE DISPOSAL UNIT Yes ☐ No ☐

Owned by Dechello Dist. of 55 Marsh Hill Road
And located at 55 Marsh Hill Road (Maintenance Building)
To be built by Jim Slater of 285 Main Street, South Windsor Ct.
in accordance with detailed information stated below.

GENERAL INFORMATION

Soil test See file for main building House Style —

1. Estimated population of premises (present) ..... Number of bedrooms —
2. Description of premises .....
   No. Fixtures
   (above basement): Water closets ..... Urinals ..... Lavatories .....
   Bath tubs ..... Showers ..... Kitchen Sinks ..... Laundry Tubs .....
   List fixtures in basement .....
3. Water supply public (public or well) Location of well .....
4. Character of soil at proposed location of leaching system, including depths of various strata .....
   See file on main building
   (sand, loam, clay, hardpan, etc. - use test pits)
5. Elevation of ground water See file
   (with reference to both present and future grades)
6. Description of proposed system (furnish drawings of same, with plot plan showing system)
   Septic Tank(s) 1 Capacity (gal.) 1000 Name of Manufacturer .....
   Distance from Building 15'
   Automatic Dosing Apparatus, if any (describe) .....
   1 - 1000 gal. Pump chamber

   Soil Absorption System
   Distance from Building > 25' Distance from property lines > 25'
   .....Leaching Bed(s) .....size.....
   .....Leaching Pit(s), (depth below inlet) .....
   .....Leaching Galleries, size.....
   1 Leaching Fields, total length is 50 ft.
   Width of trenches 2 ft., depth of broken stone or screened gravel, total inches 18"
   Stone or gravel will be covered by building paper
   (salt hay, building paper, etc.)
   Distance between trenches 6' ft.
   Distance from water supply on same property City water ft. on adjoining property.....ft.

Secondary Treatment, if other than soil absorption.
Describe in detail, and locate on map .....

System was designed by Mechanical Associates
Above information furnished by all Eng. Drawing dated 7-19-80

Approved and Permit issued July 24 19 80 Health Officer

Applicant Signature [signature] [signature]

Home Address 285 Main St. S. Windsor Phone No. 528-1791

BLUEPRINT OF SYSTEM REQUESTED UPON INSPECTION.

SUBMITTED PLOT PLAN IS ON REVERSE SIDE OF THIS APPLICATION.

PERMIT # 8520

TOWN OF ORANGE, CONN.

Application for Building Permit Under Building Ordinance

Date November 19 19 86

Application is hereby made to the Building Official to erect a structure

Warehouse & Storage Bldg.

Location of Property 55 Marsh Hill Road, Orange, CT 06477

Name of Owner Dichello Distributors Inc Present Address Same as Above

Zone LI2 Width of Lot * Depth of Lot * Area of Lot *

Size of Building 160 x 240 Area of Building 384,000 Stories (1) one

Front Yard * Rear Yard * Side Yard *

Use of Buildings recycling of beverage containers

Remarks Will connect to Public Sewer Mark & Well

Comply with all Town specs. Prohibitions on connection.

Use space below for plot plan of property.

*See plot plan on file

#697

Approved and Permit issued Dec 16 19 86 Building Official

Applicant Atlantic Design & Construction, Inc.
61 Industrial Park Road Ext.
Plymouth, MA 02360 617-746-8700

Urban J. Cloran, President

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

24 WOLCOTT HILL ROAD, P.O. DRAWER A
WETHERSFIELD, CONNECTICUT 06109-0801

Phone : 566-3010

January 9, 1987

Mr. Burton L. Zempsky
Executive Vice President
and General Manager
DiChello Distributors, Inc.
P. O. Box 562
55 Marsh Hill Road
Orange, Connecticut 06477

Dear Mr. Zempsky:

Subject: Proposed Building on
DiChello Property
Orange, Ct.

I had received your letter of November 18, 1986, and directed it to the attention of Mr. William J. Lynch, Director of Rail Operations, for investigation and reply. I regret that you have not had a formal reply from Mr. Lynch, however, this has not affected the review of your site plan indicating the proposed detention pond and spillway. The plan has been under review by our Hydraulics & Drainage engineer and I am advised that additional information will be necessary from Mr. Lawrence Edwards, your engineer.

In our conversation on January 8, 1987, you advised me that DiChello Distributors is prepared to go forward with a 40,000 square foot building which will require a detention pond and spillway to enter the channel. Your engineer's calculations, however, did not include the impact that would result from the original detention pond for your previous building of 180,000 square feet.

I am granting approval for the installation of the detention pond and spillway, however, DiChello Distributors, Inc., must accept the responsibility to perform whatever construction is necessary, as determined by our Hydraulics engineer, in the event that the previous detention pond affects

the proposed installation and would require alterations to your present plans. It is, therefore, requested that you indicate your acceptance of the terms and conditions contained herein by signing in the space indicated below and return a copy of this letter.

Very truly yours,

Donald G. Leavitt
Deputy Commissioner
Bureau of Highways

Conditions Accepted By:

Burton L. Zempsky
Executive Vice President
and General Manager
DiChello Distributors, Inc.

Date Jan 12, 1987

DICHELLO DISTRIBUTORS, INC.
P.O. BOX 562 55 MARSH HILL ROAD ORANGE, CONNECTICUT 06477
PHONE: (203) 865-7700

January 12, 1987

Ms. Diane Mull, Chairperson
Town Plan & Zoning Commission
Town Hall
Orange, CT 06477

Dear Ms. Mull:

Enclosed is photocopy of January 9, 1987 letter from the State of Connecticut Department of Transportation permitting us to drain onto the railroad right-of-way as requested in your October 27, 1986 letter.

In the pursuit of that goal we have been side-tracked from Conrail to the Metropolitan Transportation Authority to Metro-North to the Department of Transportation. The foregoing information may save a future applicant the bureaucratic shuffle we endured.

Our thanks to you and all the members of your commission for the courtesy and consideration extended to us.

Very truly yours,

Burton L. Zempsky
Executive Vice President
and General Manager

CC: Bill Converse, Assessor
Tony Marchitto, Building Inspector
Bob Hiza, Town Engineer
Fred Schumacher, Sanitarian
enclosure
BLZ:jap

...ING BOARD
-82

STATE OF CONNECTICUT
DEPARTMENT OF CONSUMER PROTECTION
WELL DRILLING PERMIT
165 CAPITOL AVE., HARTFORD, CONNECTICUT 06106

PERMIT NUMBER
123523

ORANGE | 55 MARSH HILL ROAD | DATE 7/7/87
LOCATION OF WELL (Town) (Street) (Lot Number)

OWNER OF WELL
ATLANTIC DESIGN & CONSTRUCTION INC. FOR DICHELLO BEER DISTRIBUTOR
☐ INDIVIDUAL ☒ BUILDER ☐ OTHER (Specify)

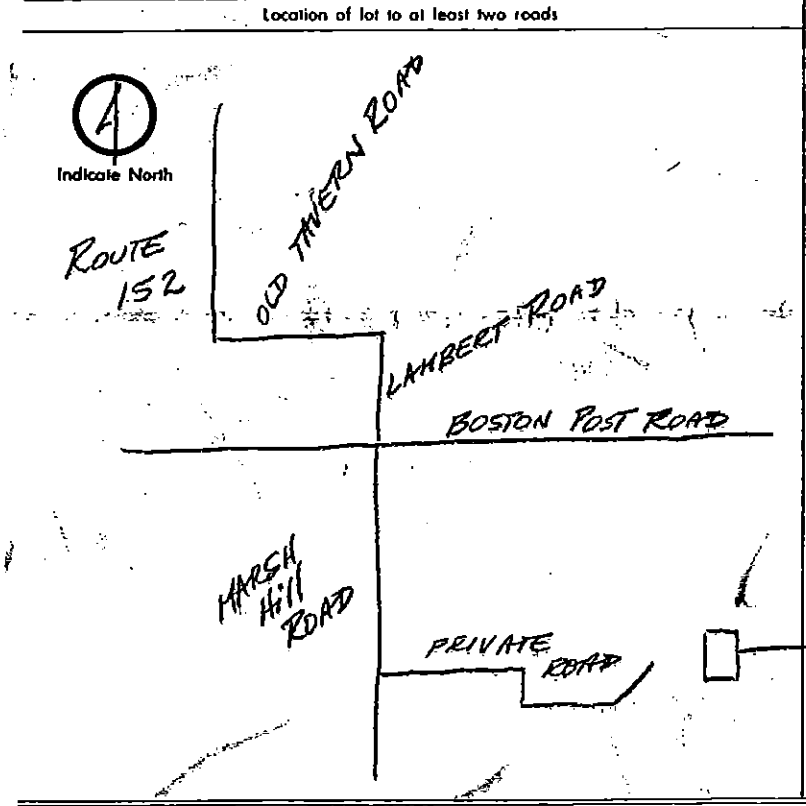
OWNER'S ADDRESS
61 INDUSTRIAL PARK ROAD EXTENSION, PLYMOUTH, MASS. 02360

PROPOSED USE OF WELL					Est. No. of People being served.
	☐ DOMESTIC	☐ BUSINESS ESTABLISHMENT	☐ FARM	☐ TEST WELL	10±
	☐ PUBLIC SUPPLY	☒ INDUSTRIAL	☐ AIR CONDITIONING	☐ OTHER (Specify)	

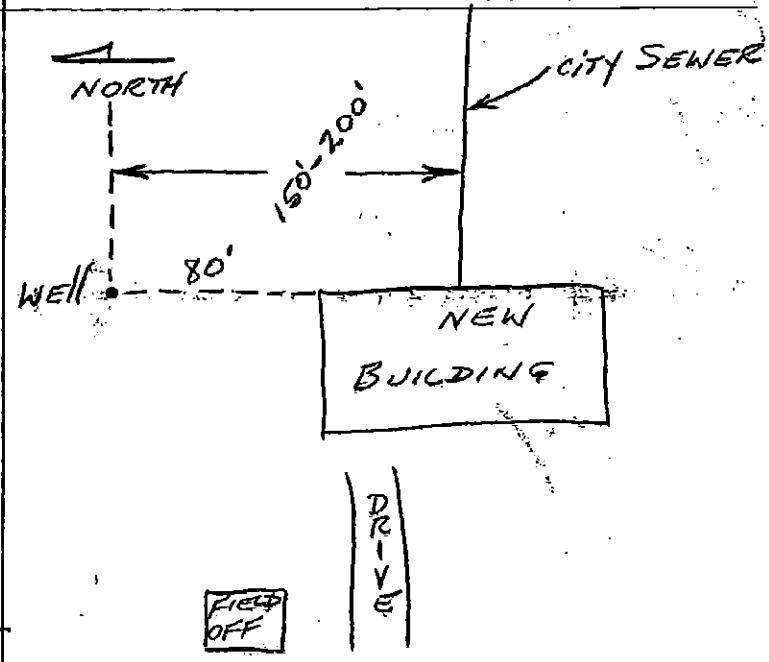
SKETCH OF WELL LOCATION

Locate well with respect to at least two roads, showing distance from intersection and front of lot

Location of lot to at least two roads



Well location on lot and to house (if present)



Approximate number of feet from well to nearest source of possible contamination: 150'+

The undersigned is aware that upon completion of the well, a "Well Completion Report" containing construction details and information required under Section 25-131 of the 1969 Supplement to the General Statutes must be sent to the owner, the Board and the Water Resources Commission on the form provided by the Board. This permit is not valid until all information is filled in and it has been counter-signed by the Director of Health or his agent.

APPLICANT (Signature)	APPLICANT'S ADDRESS	REGISTRATION NO.
J Ellis EASTERN WATER DEVEL CO	5 BENSON ROAD, OXFORD, CONN. 06483	33
☒ APPROVED ☐ REJECTED	BY (Town Health Officer or Agent) Frederick C. Schumacher, R-S.	DATE 7/24/87

REMARKS

DIRECTOR OF HEALTH

MPLETION REPORT

.1-82

STATE OF CONNECTICUT
DEPARTMENT OF CONSUMER PROTECTION
WELL DRILLING BOARD
165 CAPITOL AVE.
HARTFORD, CONNECTICUT 06106

Do NOT fill in
STATE WELL NO.
OTHER NO.

OWNER — NAME: Atlantic Design & Const. — ADDRESS: 61 Industrial Park Ext. Plymouth Mass. 02360

LOCATION OF WELL — (No. & Street): 55 Marsh Hill Road — (Town): Orange — (Lot Number):

PROPOSED USE OF WELL
- [ ] DOMESTIC
- [ ] BUSINESS ESTABLISHMENT
- [ ] FARM
- [ ] TEST WELL
- [ ] PUBLIC SUPPLY
- [x] INDUSTRIAL
- [ ] AIR CONDITIONING
- [ ] OTHER (Specify)

DRILLING EQUIPMENT
- [ ] ROTARY
- [x] COMPRESSED AIR PERCUSSION
- [ ] CABLE PERCUSSION
- [ ] OTHER (Specify)

CASING DETAILS

LENGTH (feet)	DIAMETER (inches)	WEIGHT PER FOOT			DRIVE SHOE	WAS CASING GROUTED?
42	6	17	[x] THREADED	[ ] WELDED	[x] YES [ ] NO	[x] YES [ ] NO

YIELD TEST — [ ] BAILED [ ] PUMPED [x] COMPRESSED AIR — HOURS: 4 — YIELD (G.P.M.): 3½

WATER LEVEL

MEASURE FROM LAND SURFACE—STATIC (Specify feet)	DURING YIELD TEST (feet)	Depth of Completed Well in feet below land surface:
17	500	505

SCREEN DETAILS

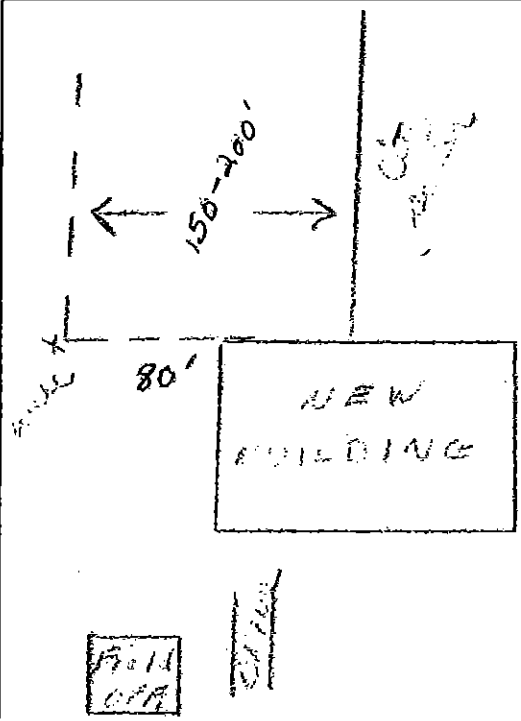
MAKE					LENGTH OPEN TO AQUIFER (feet)	
SLOT SIZE	DIAMETER (inches)	IF GRAVEL PACKED:	Diameter of well including gravel pack (inches):	GRAVEL SIZE (inches)	FROM (feet)	TO (feet)

DEPTH FROM LAND SURFACE FEET TO FEET		FORMATION DESCRIPTION
0	30	clay sand gravel
31	505	granite

If yield was tested at different depths during drilling, list below

FEET	GALLONS PER MINUTE
505	3.5

Sketch exact location of well with distances, to at least two permanent landmarks.



ORANGE HEALTH DEPT.
DIV. OF ENVIRONMENTAL HEALTH
Rec'd 9/14/87

DATE WELL COMPLETED	PERMIT NO.	REGISTRATION NO.	DATE OF REPORT	WELL DRILLER (Signature)
7/29/87	123523	33	7/30/87	

LOCAL DIRECTOR OF HEALTH

ATER CONTROL LABORATORIES
HOPKINTON INDUSTRIAL PARK
106 SOUTH ST.
HOPKINTON, MA 01748
617-435-6824

WORK ID #		
72517404	000035	T02 1

SAMPLE IDENTIFICATION INFORMATION

ATLANTIC DESIGN
55 MARSH HILL RD.

ORANGE CT

REFERRED BY:

EASTERN WATER DEVELOPMENT CO.,
ATTN: BOB GRANT
ADD'S BENSON RD.
OXFORD, CT. 06483

COLLECTED	RECEIVED	REPORTED
09/08/87 11:00	09/09/87 10:11	09/09/87 22:45

EPORT: FINAL REPORT

COMMENT:

TESTS	RESULTS	UNITS	REFERENCE RANGE	LOW	ACCEPTABLE RANGE GRAPHIC RESULTS	HIGH
*** GENERAL INFORMATION						
COLLECTOR: EASTERN WATER DEV.						
*** ROUTINE QUALITY TESTING						
COLIFORM BACTERIA	0.	/100 ML				
ODOR	NONE					
TURBIDITY	0.39	NTU				
COLOR	0.		0. - 15.			
PH	7.5		5.0 - 9.0			
ALKALINITY	86.	MG/L				
HARDNESS-CALCULATED	114.	MG/L				
HARDNESS MAY BE EVALUATED USING THE FOLLOWING INFORMATION: SOFT:0-75 MOD HARD:76-150 HARD:151-300 VERY HARD:300+						
SODIUM	7.	MG/L	0. - 20.			
AMMONIA	<0.1	MG/L				
NITRATE	0.0	MG/L	0.0 - 10.0			
CHLORIDE	8.	MG/L	0. - 250.			
IRON	0.01	MG/L	0.00 - 0.30			
MANGANESE	0.02	MG/L	0.00 - 0.05			
*** MINERALS						
CALCIUM	33.4	MG/L				
MAGNESIUM	7.6	MG/L				
*** MISCELLANEOUS TESTING						
SULFATE	28.	MG/L	0. - 250.			
SOLIDS, T. DISSOLVED	250.	MG/L				
*** FINAL COMMENTS:	RESULTS FOR THE TEST(S) PERFORMED ON THIS SAMPLE MEET THE EPA CRITERIA FOR SAFE DRINKING WATER. *** THIS IS A FINAL REPORT. ***					

ORANGE HEALTH DEPT.
DIV. OF ENVIRONMENTAL HEALT
Rcv'd 9/14/87

WELL APPROVAL CERTIFICATE

SOURCE OF SAMPLE 55 Marsh Hill road DATE TAKEN 9/8/87

OWNER OF PROPERTY DiChello Distributors, Inc.

ADDRESS OF PROPERTY OWNER 55 Marsh Hill Road, Orange, CT.

BACTERIOLOGICAL TEST RESULTS: COLIFORM COLONIES/100 ML 0

X The results of the analysis for this well meet the requirements for a potable water supply.

__ The results of the analysis for this well are satisfactory for a potable water supply but certain of the chemical or physical constituents are above recommended levels.

__ The analysis indicates water is not suitable as a potable water supply.

COMMENTS: .....

Signed Frederick C Schumacher, R.S.
Frederick C. Schumacher, R.S.

Date September 14, 1987

TOWN OF ORANGE, CONNECTICUT

OFFICE OF BUILDING OFFICIAL

CERTIFICATE OF OCCUPANCY

Zone LI-2 . Date September 3 19 87

This is to certify that building at 55 Marsh Hill Road

as Built under Permit No. 8526 conforms substantially to the requirements of the Building Code and Zoning and Sanitary Regulations of the Town of Orange and is hereby approved for occupancy as indicated below.

Approved for occupancy For LI-2 Use

Paul G. Dimes

Zoning Enforcement Officer

Frederick C. Schumacher, R.S. *

Sanitarian

Building Official

NOTICE: Any change or extension of the use herein approved requires a new certificate of occupancy.

* See "Well Approval Certificate"

WELL APPROVAL CERTIFICATE

SOURCE OF SAMPLE 55 Marsh Hill road DATE TAKEN 9/8/87

OWNER OF PROPERTY DiChello Distributors, Inc.

ADDRESS OF PROPERTY OWNER 55 Marsh Hill Road, Orange, CT.

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__ The results of the analysis for this well are satisfactory for a potable water supply but certain of the chemical or physical constituents are above recommended levels.

__ The analysis indicates water is not suitable as a potable water supply.

COMMENTS: .....

Signed Frederick C. Schumacher, R.S.
Frederick C. Schumacher, R.S.

Date September 14, 1987

LIBERTY AUTO & ELECTRIC COMPANY, INC.

SERVICING THE PETROLEUM INDUSTRY
SINCE 1920

MEMBER PEI PETROLEUM EQUIPMENT INSTITUTE

38 GURDON STREET
P.O. BOX 6217
BRIDGEPORT, CT 06606
(203) 333-4112

E-1 Lic No. 102016
P 9 Lic No. 206586
F-3 Lic No. F80026

July 11, 1990

Town of Orange
Fire Marshall's Office
Orange Center Road
Orange, Connecticut 06477

107-5812

ATTN: Tim Smith

RE: Dichello Distributors
55 Marsh Hill Road
Orange, CT

This is to certify that Liberty Auto & Electric Co., removed and legally disposed of one (1) 2500 gallon tank, in accordance with Section 29-62-88 of Fire Marshall's Code of the State of Connecticut 1-75 and N.F.P.A. 30, Appendix B 1984.

Yours very truly,
Liberty Auto & Electric Co., Inc.

Brian H. Hulse
Vice President & Treasurer

BHH/ed
c:c: State of Connecticut D.E.P.
c:c: Dichello's Distributors, Orange, CT

DICHELLO DISTRIBUTORS, INC.
P.O. BOX 562 55 MARSH HILL ROAD ORANGE, CONNECTICUT 06477
PHONE: (203) 891-2100

TO: Mr. Paul Dinice,
Town of Orange Planning & Zoning
FROM: Pat Oates, Director of Operations
DATE: March 13th, 1997
SUBJECT: Proposed Removal of existing Underground Storage Fuel Tanks and Replacement with an Above Ground Tank

Dichello Distributors, Inc. through it's contractor R.C. Graves, Inc. of Sandy Hook, Connecticut, proposes to remove two (2) 10,000 gallon Underground Storage Tanks and replace them with one (1) 10,000 gallon Above Ground Storage tank.

The removal and replacement will help to assure that Dichello Distributors can utilize the improved industrial technologies available while continuing our efforts to be environmentally proactive and protective of our grounds and neighborhood.

The choice of Above Ground Tank included in the replacement project was made with input from several employees and officials of the Town of Orange. The Convault brand fuel tank is the same manufacture (on a smaller scale) as was recently purchased by the Town of Orange and installed at the City Yard.

An introduction by Convault personnel allowed Dichello officers the chance to see the Orange layout and meet key Town personnel.

An invitation from Maintenance Foreman Leo Moran to inspect the City Yard setup was accepted and Mr. Moran's expertise and pertinent information on this subject was greatly appreciated.

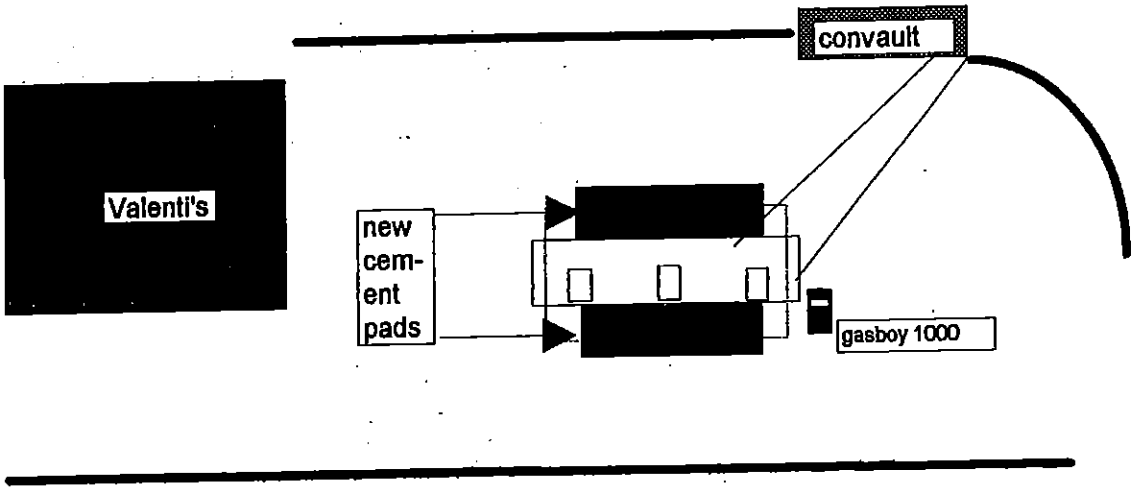
Several conversations with Town Fire Marshall Tim Smith and Dichello personnel revealed that our project scope and placement area met with his approval.

We hope, with your permission, to be able to upgrade our fueling facility as shown in the attached layout.

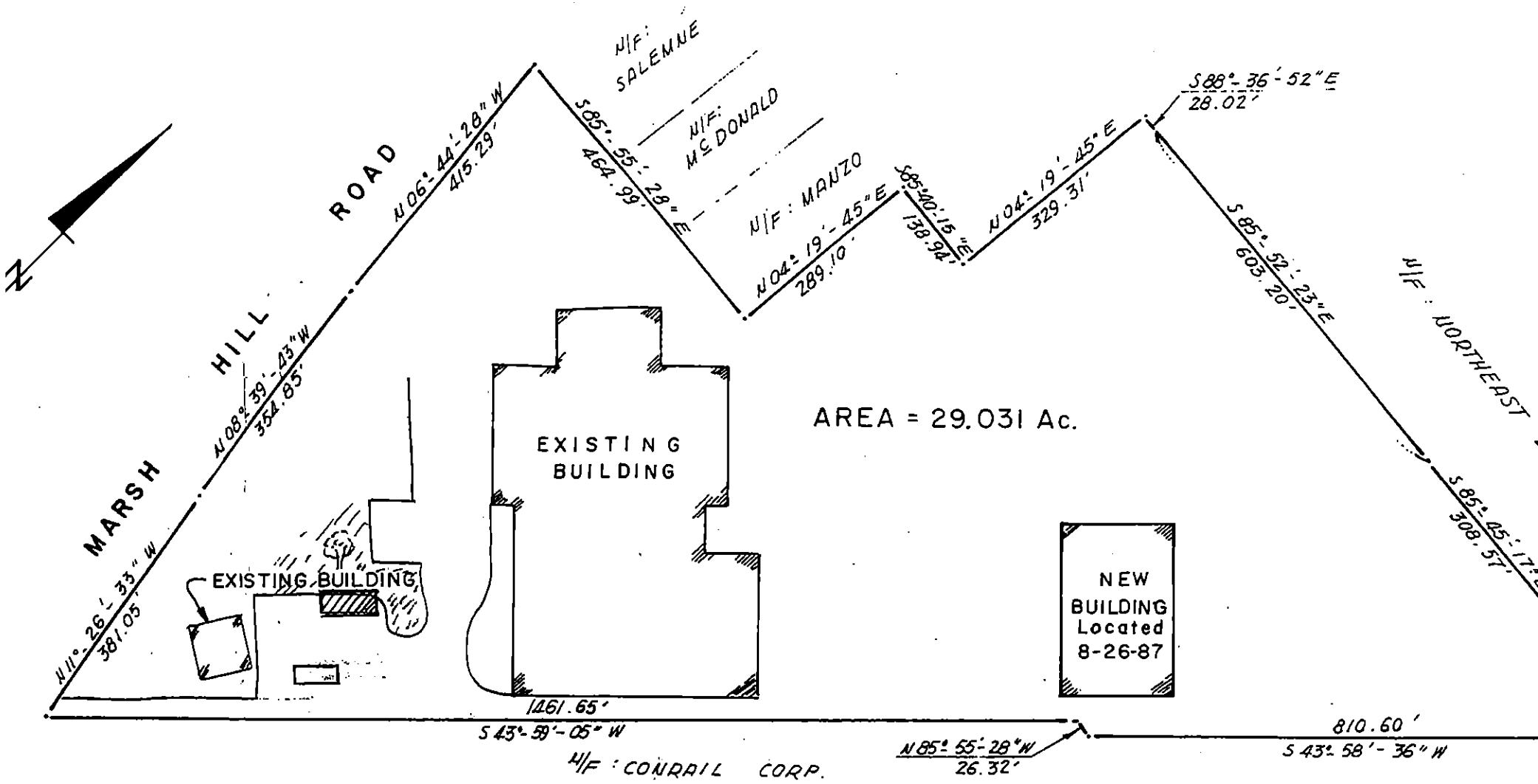
Thank you for your time and consideration,

Pat Oates, Sr.
Director of Operations
Dichello Distributors, Inc.

CC: Mr. Edward Crowley, COO, Dichello Distributors
Mr. Peter Deane, General Manager, Dichello Distributors



The new Convault Fuel Tank will be offset into the lawn area along the curb line running behind Valenti's. Two fuel intake ports will be attached so that the delivery of fuel can be made from ground level. An anti-syphon check valve on top of the tank(or under the pump dispensers) will ensure that fuel will not leak from the tank should a hose tear or bleed. Double-walled flex piping will run underground from the tank to the pulsar-retrofitted dispensers at our existing island. The Gasboy 1000 Fuel Management System will then monitor and record all requested categories of mileage and usage data.

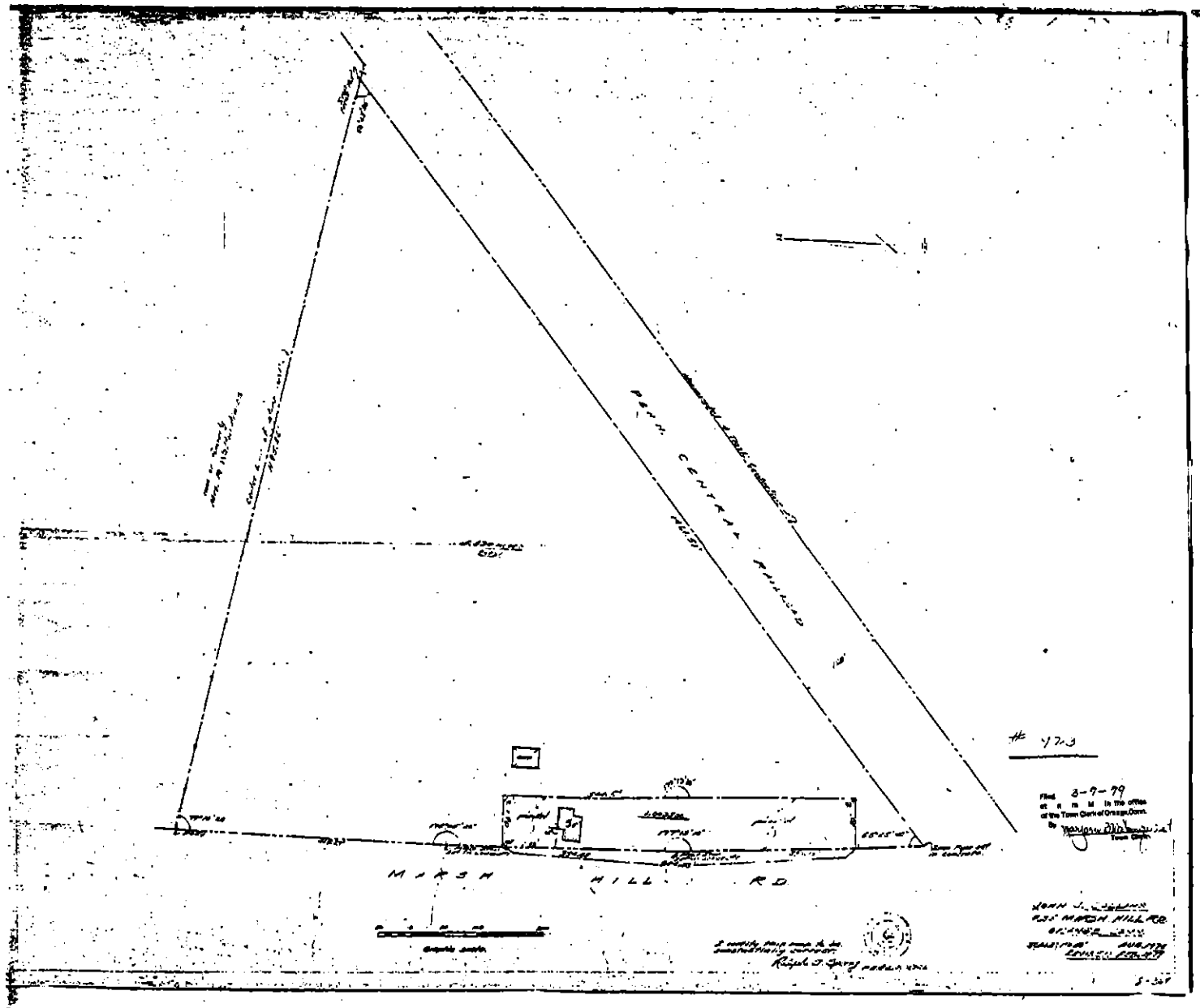


OVERALL PLAN Scale 1" = 200'

EXISTING & REMAINING FUEL PUMP ISLAND (NOT TO SCALE)

CONVAULT ABOVE GROUND FUEL TANK (NOT TO SCALE)

SECTION BREAK


PENN CENTRAL RAILROAD
MASON HILL RD
#423
Filed 3-9-79
at 8 m M in the office
of the Town Clerk of Orange, Conn.
Town Clerk

923

#423

SECTION BREAK

SECTION A

1a. [X] FIRST NOTIFICATION
OR
b. [ ] SUBSEQUENT NOTIFICATION (If checked, enter No.)

SITE I.D.

UNDERGROUND STORAGE FACILITIES PROGRAM
HAZARDOUS MATERIALS MANAGEMENT UNIT
165 Capitol Avenue, Hartford, CT 06106
TEL. 556-4630

EPHM-6 NEW

PLEASE TYPE. ALL THREE COPIES MUST BE LEGIBLE!
Refer to **INSTRUCTIONS FOR FILING NOTIFICATION** before completing form.

D. GRID COO
X

SECTION B

	NAME	NO. AND STREET	NEAREST INTERSECTING STREET	CITY OR TOWN
4. LOCATION OF FACILITY	Dichello Distributors, Inc.	55 Marsh Hill Road	Cascade Blvd	Orange
6. BUSINESS NAME AND MAILING ADDRESS	Dichello Distributors, Inc.	55 Marsh Hill Road		Orange
7. FACILITY OWNER	Dichello Distributors, Inc.	55 Marsh Hill Road		Orange

8. TYPE OF OWNER: [X] PRIVATE [ ] STATE [ ] MUNICIPAL [ ] FEDERAL (G.S.A. No. _____)

	NAME	NO. AND STREET	CITY OR TOWN
9. OPERATOR/CONTACT PERSON	Burton L. Zempsky	55 Marsh Hill Road	Orange

SECTION C

10. TANK ID.	11a. DATE OF INSTALLATION (Mo./Yr.)	11b. LIFE EXPECTANCY (# of years)	12a. TOTAL CAPACITY (Gals.)	12 b. STATUS: IN USE	ABANDONED IN PLACE	EST. QUANTITY LEFT STORED (if any). (Gals.)	REMOVED	DATE TANK LAST USED (Mo./Yr.)	13. TYPE OF CONTENTS: OIL/PETROLEM PRODUCT	CHEMICAL LIQUID	14. CONTENTS- CHEMICAL NAME OF PRINCIPAL SUBSTANCE (not trade name.) (Enter C.A.S. No., if known)	15. CONSTRUCTION MATERIALS: STEEL	FIBERGLASS REINFORCED PLASTIC	OTHER (Specify from list A)	16.PROTECTION a.INTERNAL: LINED	UNLINED	CATHODIC PROTECTION	b. EXTERNAL: COATED/ WRAPPED	CATHODIC PROTECTION	OTHER (Specify from list B)
Example	5/75	30	5000	X					X		Heating fuel #2		X			X				H
Example	7/60	-	8000				X	8/78		X	1,1,1- Trichloroethane CAS #79016	X				X				E
A1	3/80	30	10,000	X					X		Fuel #2	X				X				E
A2	3/80	30	10,000	X					X		Fuel #2	X				X				E
A3	3/80	30	2,500	X					X		Gas	X				X				E
B4	8/80	15	1,000	X							Waste			2		X				H
C5	8/80	15	5,000	X					X		Waste			2		X				H
D6	3/80	15	3,000	X							Waste			2		X				H

SECTION D

20. HAVE YOU ATTACHED SKETCH OF TANKS AND LOCATION? [X] YES

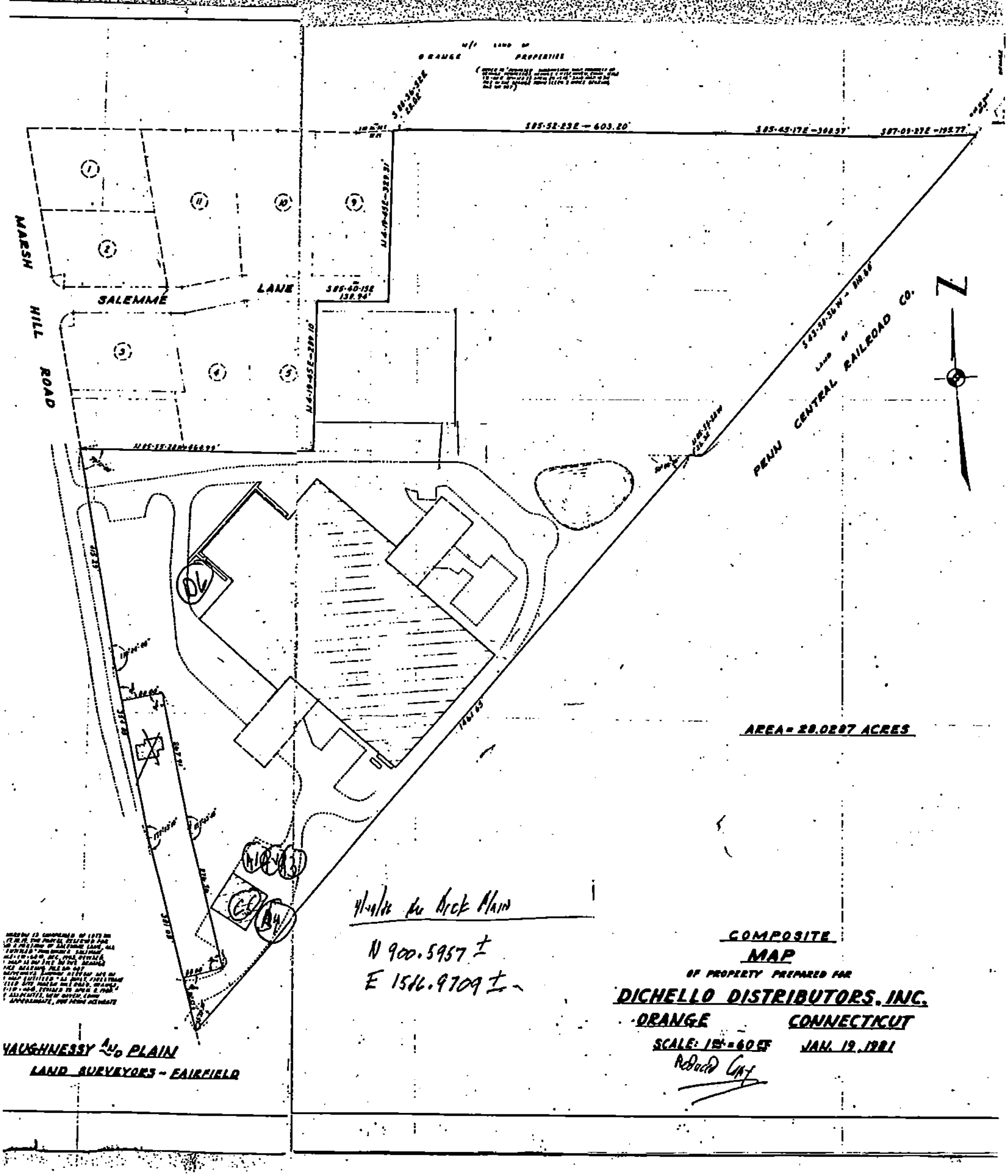
21. COMMENTS:

22. CERTIFICATION: I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. **Penalties:** any owner who knowingly fails to notify shall be subject to a civil penalty not to exceed $10,000 for each tank for which notification is not given or for which false information is submitted.

22a. SIGNATURE
X

22c. NAME (Type or Print)
Burton L. Zempsky

COPY 2: SEND TO LOCAL FIRE MARSHAL



MARSH HILL ROAD
SALEMME LANE
PENN CENTRAL RAILROAD CO.
S85-52-23E - 603.20'
S85-45-17E - 308.37'
S87-09-27E - 195.77'
S85-40-15E
AREA = 28.0287 ACRES
N
COMPOSITE
MAP
OF PROPERTY PREPARED FOR
DICHELLO DISTRIBUTORS, INC.
ORANGE CONNECTICUT
SCALE: 1" = 60'
JAN. 19, 1981
SHAUGHNESSY AND PLAIN
LAND SURVEYORS - FAIRFIELD
N 900.5957 ±
E 1516.9709 ±

FACILITY NOTIFICATION

1a. ☐ FIRST NOTIFICATION
OR
b. ☐ SUBSEQUENT NOTIFICATION (If checked, enter No.)

2. [ ]

SITE I.D.

STATE OF CONNECTICUT
Department of Environmental Protection
UNDERGROUND STORAGE FACILITIES PROGRAM
HAZARDOUS MATERIALS MANAGEMENT UNIT
165 Capitol Avenue, Hartford, CT 06106
TEL. 566-4630

EPHM- 6 NEW 1

PLEASE TYPE. ALL THREE COPIES MUST BE LEGIBLE!
Refer to **INSTRUCTIONS FOR FILING NOTIFICATION** before completing form.

D. GRID COORD X

SECTION A

	SITE NAME	NO. AND STREET	NEAREST INTERSECTING STREET	CITY OR TOWN
4. LOCATION OF FACILITY	Dichello Distributors, Inc.	55 Marsh Hill Road	Cascade Blvd	Orange

SECTION B

	NAME	NO. AND STREET	CITY OR TOWN
6. BUSINESS NAME AND MAILING ADDRESS	Dichello Distributors, Inc.	55 Marsh HIll Road	Orange
7. FACILITY OWNER	Dichello Distributors, Inc.	55 Marsh HIll Road	Orange

8. TYPE OF OWNER: ☒ PRIVATE ☐ STATE ☐ MUNICIPAL ☐ FEDERAL (G.S.A. No. _____)

	NAME	NO. AND STREET	CITY OR TOWN
9. OPERATOR/CONTACT PERSON	Burton L. Zempsky	55 Marsh Hill Road	Orange

SECTION C

10. TANK ID.	11a. DATE OF INSTALLATION (Mo./Yr.)	11b. LIFE EXPECTANCY (# of years)	12a. TOTAL CAPACITY (Gals.)	12 b. STATUS: IN USE	ABANDONED IN PLACE	EST. QUANTITY LEFT STORED (if any). (Gals.)	REMOVED	DATE TANK LAST USED (Mo./Yr.)	13. TYPE OF CONTENTS: OIL/PETROLEUM PRODUCT	CHEMICAL LIQUID	14. CONTENTS- CHEMICAL NAME OF PRINCIPAL SUBSTANCE (not trade name.) (Enter C.A.S. No., If known)	15. CONSTRUCTION MATERIALS: STEEL	FIBERGLASS REINFORCED PLASTIC	OTHER (Specify from list A)	16.PROTECTION a.INTERNAL: LINED	UNLINED	b. EXTERNAL: CATHODIC PROTECTION	COATED/ WRAPPED	CATHODIC PROTECTION	OTHER (Specify from list B)	17. P CONSTRUCTION
Example	5/75	30	5000	X					X		Heating fuel #2		X			X				H	
Example	7/60	-	8000				X	8/78		X	I, I, I, - Trichloroethane CAS #79016	X				X				E	
A3	3/80	30	2,500				X	5/90	X		Gas	X				X				E	

SECTION D

20. HAVE YOU ATTACHED SKETCH OF TANKS AND LOCATION? ☐ YES

21. COMMENTS:

22. CERTIFICATION: I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. **Penalties:** any owner who knowingly fails to notify shall be subject to a civil penalty not to exceed $10,000 for each tank for which notification is not given or for which false information is submitted.

22a. SIGNATURE X

22b. NAME (Type or Print) Burton L. Zempsky

STATE OF CONNECTICUT

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Bureau of Waste Management, Oil and Chemical Spill Response Division

Emergency Incident Report

Case No.: 97-01831
Staff Receiving Call: 935 TORRES, NEIL **Assigned To:** 000 **NO RESPONSE
Date Reported: 04/16/1997 **Time Reported:** 9:30
Date of Release: 04/16/1997 **Time of Release:** UNKNOWN
Town of Release: ORANGE **State of Release:** CT
Location of Reported Release: 55 MARSH HILL RD
Reported By: SCOTT GRAVES **Phone:** (203) 426-8900
Representing: RC GRAVES, INC
Responsible Party: DICHELLO DISTRIBUTORS **Phone:** (203) 891-2100
Street Address: 55 MARSH HILL RD
Town: **State:** **Zip Code:**
Does the Responsible Party Accept Financial Responsibility? YES
Release Type: PETROLEUM
Release Substance: diesel
Media: SOIL GROUND WATER
Total Quantity: 0 Gallons 0 Cubic Yards 0 Cubic Feet 0 Drums 0 Pounds
Emergency Measures: pulled 2-10k diesel ust's, soil analysis tph:780 ppm, h2o: 6ppm tph, no sheen or free product, will vac hole and install well
Has the Release Been Terminated?: YES
Type of Waterbody Affected: GROUNDWATER
Name of Waterbody Affected:
Total Quantity Recovered: 0 **Total Quantity In Water:** 0
Corrective Actions Taken: SOIL REMOVED PUMPED OUT
Discharge Class: INDUSTRIAL
Cause of Incident: INGROUND TANK FAILURE
Agencies Notified: LOCAL FIRE MARSHAL
Status: CLOSED

RECEIVED
APR 24
OFFICE OF FIRE MARSHAL
TOWN OF ORANGE

DICHELLO DISTRIBUTORS, INC.
P.O. BOX 562 55 MARSH HILL ROAD ORANGE, CONNECTICUT 06477
PHONE: (203) 891-2100

Fire Marshall Tim Smith
dba/ Town of Orange City Hall
617 Orange Center Rd
Orange, CT 06477

May 27th, 1997

Dear Fire Marshall Smith,

Attached please find the results of the final soil sample taken from the excavated tank grave here on our property.

If I can be of any assistance on this or any other matter please do not hesitate to call.

Sincerely,

Pat Oates
Director of Operations

CC: E. Crowley; P. Deane

COMPLETE ENVIRONMENTAL TESTING, INC.

911 Bridgeport Avenue
900 Shelton Plaza
Shelton, CT 06484

Tel: (203) 925-1133
Fax: (203) 925-1140
e-mail: comenvtst@aol.com

May 1, 1997

Mr. Ed Kost
Enviroshield, Inc.
P.O. Box 1296
Stratford, CT 06497

RE: Analysis of 1 soil sample collected 4/29/97.
PROJECT: Dichellos Dist., Marsh Hill Road, Orange
P.O. #: 05256
CET #: 97-1888

	TPH (418.1)
Tank Grave Comp.	72

Results are in ppm.

Final sample after excavation to proper soil

Please call us if you have any questions.

David Ditta
Laboratory Director

VALENTI AUTO SALES, INC.

399 No. Colony St. • Wallingford, Conn. 06492

Sales (203) 265-0991 Service (203) 284-1000 Parts (203) 265-3894

June 18, 2009

Mr. Timothy P. Smith
Fire Marshall
Town of Orange
355 Boston Post Road
Orange Ct. 06477

Re: Dichello Distributors Repair Facility

Dear Mr. Smith;

Attached find diagram showing products used and their location in the building.

After looking into dry chemical systems for the spray booth we have contracted with Connecticut Fire Protection & Sprinkler Services Company, Inc of Milford to re-pipe and update the present system as per the attached specifications.

Please call if you have any questions or suggestions.

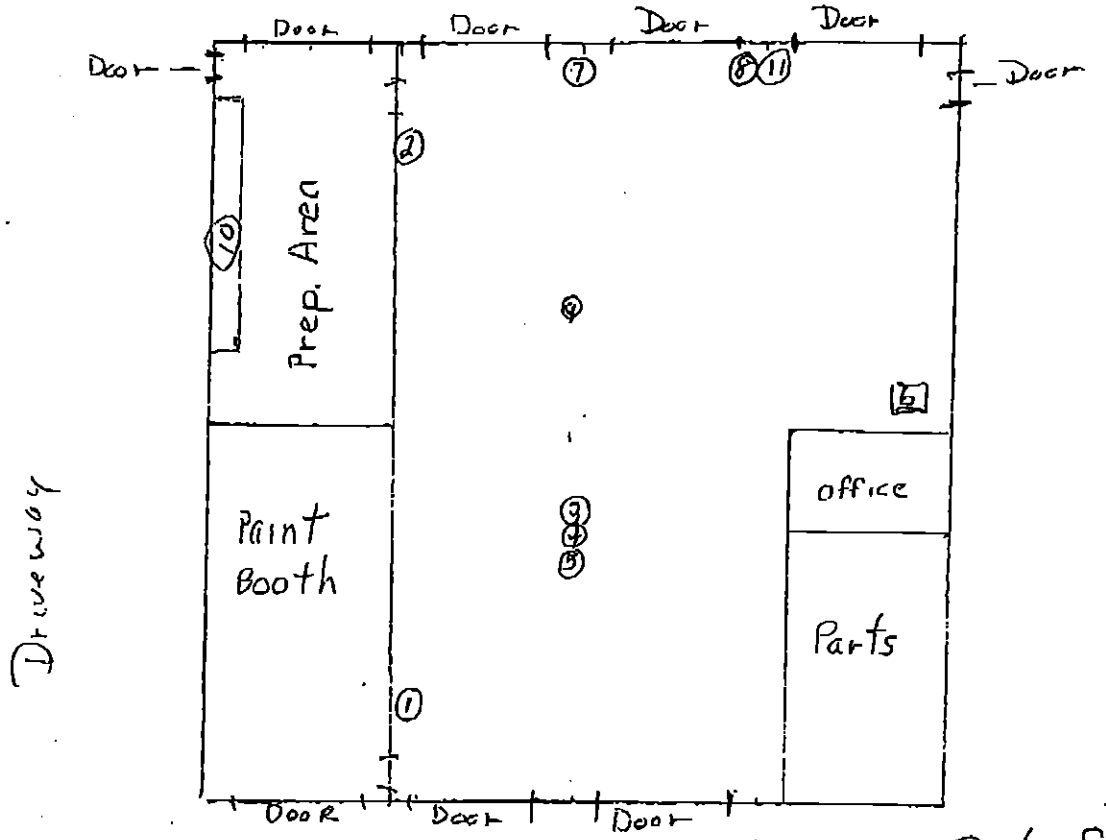
Sincerely,

Fred Valenti Auto Sales, Inc.

CHEVROLET

SUZUKI

55 Marsh Hill Rd



		Amounts
① Oxygen	1 Tank 1 Tank on cart ③	2 Tanks
② Engine oil		275 gals.
③ Acetylene	1 Tank 1 Tank on cart	2 Tanks
④ Argon - CO_2		1 Tank
⑤ Argon Compressor		1 Tank
⑥ Waste oil		500 gals. (max)
⑦ Anti-Freeze		55 gals
⑧ Mobile Line H. D. Plus		120 lbs
⑨ Zep 940E Cleaner		55 gals
⑪ Mobil ATF		55 gals

Body Shop ⑩

2 gals - 3661S	Lacquer Thinner
1 gal - Centari	Lacquer Thinner
2 gal - 2505S	Primer-Sealer
1 gal - 2510S	Primer-sealer
2 gal - 99A	Acrylic Enamel
2 gal - 615S	Variprimer
5 gals - 481-16	Thinner
55-gals -	Waste Thinner/Paint
1 gal - 6371	Fibre Strand Filler

SECTION BREAK

ORANGE Property Record Card Current

Parcel ID: 3-1-10
Location: 55 MARSH HILL RD
Owner: DICHELLO DISTRIBUTORS INC
Address: 55 MARSH HILL RD
ORANGE, CT 06477

Class: Warehouse-Storage
Type: Commercial
Lot Size: 15.53 acres
Census: 1571
Zoning: LI-2
Survey #:
Account #: 298000

2010 Market Value		70% Assessment
Land:	$3,106,000	$2,174,200
Building:	$6,177,900	$4,324,500
Other:	$0	$0
Total:	$9,283,900	$6,498,700

Assessment History

Year	Value 70 %
2010	$6,498,700
2009	$6,498,700
2008	$6,498,700
2007	$6,498,700
2006	$6,498,700
2005	$5,798,500
2004	$5,798,500
2003	$5,798,500
2002	$5,798,500
2001	$5,798,500
2000	$5,798,500
1999	$6,500,550
1998	$6,500,550
1997	$6,500,550

Sales Information:

Date	Price	Vol	Page	Seller	Valid Code	DeedType
05/07/1980	$0	274	227			

Land Description:

Topography: Level
Utilities: All Public
Street: Paved
Road: Public
Landlocked: No
Sidewalk: No
Gas: No
View: Average

Market

Type	Description	Zone	Nhbd	Area	Infl	Traffic	Value	70 Value
3-1	Industrial	LI-2	Town	15.53	1.00	Light	$3,106,000	$2,174,200
							$3,106,000	$2,174,200

490

Inspection Information:

Date	Inspector	Entry	Contact	Notes
07/29/2005	MBB	Est. For Misc. Reasons (See N		
10/03/2000	JL	Entrance Gained	Tenant	

Permit Information:

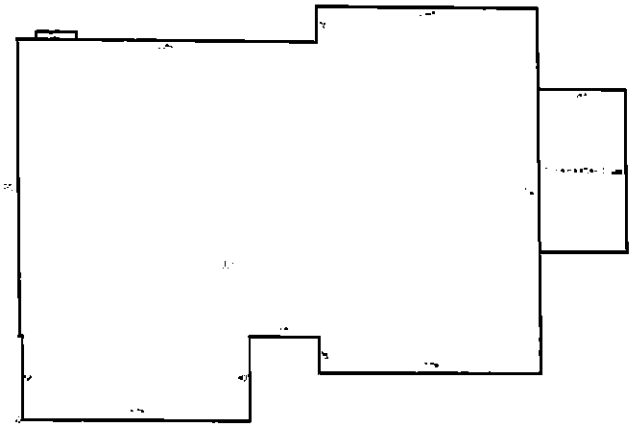
ID #	Date	% Comp	Value	Notes
595	01/31/2003	100	$ 54,000	renovate office area
461	08/29/2002	100	$ 38,000	renovations

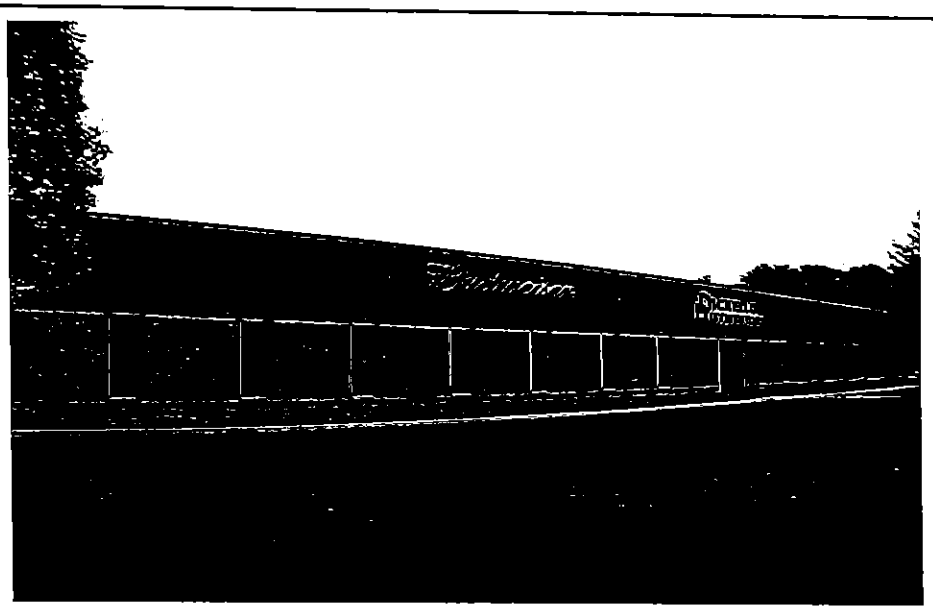
Date Initials

Signature

Owner Other

3-1-10 55 MARSH HILL RD





Building Area:	186,826	**FAR**	0.28	**Park Spaces:**	100
Footprint Area:	186,826	**Lot Coverage:**	0.28	**Park Ratio:**	0.00

Building Notes:

Section Information:

Main Warehouse — Stories 1.0 — Foot Print 13,280 — Sect Area 13,280 — Rating — IndAve — Lease/Area 0 — Phy/Func/Eco 0.68 0.20 0.20

Frame	Foundation	Basement	External Wall	Roof Structure	Roof Type	Roof Cover	RCN	Year Blt	Effective
Fire Res	Concrete	Slab	Precast Concrete	Steel Truss	Flat	BU Comp.	1,502,053	1980	

Floors	Description	Wall Ht	Baths	H Baths	Fixt	Units	Lease Area	Elevator	Sprinklers	Partitions	Flr Cover	HVAC	Finish Wall	Ceiling	Rating	Condition
1	Office, 1-Story	14	0	0	25	1	0		0.00	0.00	Typical	Carpet	Warmed/C	Drywall	Tile	IndAve	Average

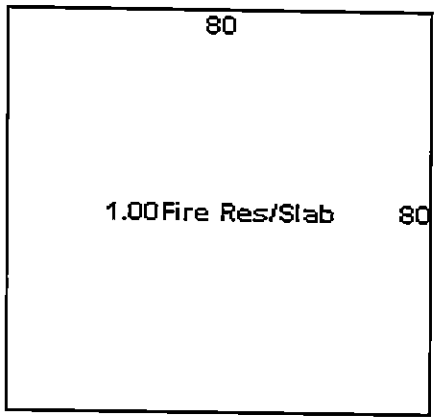
A1 Warehouse — Stories 1.0 — Foot Print 173,546 — Sect Area 173,546 — Rating — IndAve — Lease/Area 0 — Phy/Func/Eco 0.68 0.20 0.20

Frame	Foundation	Basement	External Wall	Roof Structure	Roof Type	Roof Cover	RCN	Year Blt	Effective
Fire Res	Concrete	Slab	Precast Concrete	Steel Truss	Flat	BU Comp.	12,624,424	1980	

Floors	Description	Wall Ht	Baths	H Baths	Fixt	Units	Lease Area	Elevator	Sprinklers	Partitions	Flr Cover	HVAC	Finish Wall	Ceiling	Rating	Condition
1	Warehouse	30	0	0	0	1	0		0.00	0.00	Typical	Concrete	Package U	Paint	Unfinishe	IndAve	Average

ORANGE Property Record Card Current

3-1-10 55 MARSH HILL RD



Building Area:	6,400	**FAR**	0.01	**Park Spaces:**	0		
Footprint Area:	6,400	**Lot Coverage:**	0.01	**Park Ratio:**	0.00		

Building Notes:

Section Information:

Main | Garage Service | Stories 1.0 | Foot Print 6,400 | Sect Area 6,400 | Rating | IndAve | Lease Area 0 | Phy/Func/Eco 0.68 0.10 0.10

Frame	Foundation	Basement	External Wall	Roof Structure	Roof Type	Roof Cover	RCN	Year Blt	Effective
Fire Res	Concrete	Slab	8" Cinder Block	Steel Truss	Flat	BU Comp.	475,799	1980	

Floors	Description	Wall Ht	Baths	H Baths	Fixt	Units	Lease Area	Elevator	Sprinklers	Partitions	Flr Cover	HVAC	Finish Wall	Ceiling	Rating	Condition
1	Garage Service	18	0	0	2	1	0	0.00	0.00	Typical	Concrete	Forced Air U	Paint	Paint	IndAve	Average

Other Improvements and Additional Features:

Code	Type	Qty	Year	Length	Width	Grade	Condition	Adj

Property Notes:

BAA for 2000 change; 2-22-07; for the 38,400 sq ft building see 3-1-1,

ORANGE Property Record Card Current

Parcel ID: 3-1-1
Location: 0 MARSH HILL RD
Owner: DICHELLO DISTRIBUTORS INC
Address: 55 MARSH HILL RD
ORANGE, CT 06477

Class: Warehouse-Storage
Type: Commercial
Lot Size: 13.35 acres
Census: 1571
Zoning: LI-2
Survey #:
Account #: 296900

2010 Market Value		70% Assessment
Land:	$987,900	$691,500
Building:	$672,500	$470,800
Other:	$0	$0
Total:	$1,660,400	$1,162,300

Assessment History

Year	Value 70 %
2010	$1,162,300
2009	$1,162,300
2008	$1,162,300
2007	$1,162,300
2006	$1,162,300
2005	$560,700
2004	$560,700
2003	$560,700
2002	$560,700
2001	$560,700
2000	$560,700
1999	$336,420
1998	$336,420
1997	$336,420

Sales Information:

Date	Price	Vol	Page	Seller	Valid Code	DeedType
06/10/1981	$0	277	688			

Land Description:

Topography: Level
Utilities: All Public
Street: Paved
Road: Public
Landlocked: No
Sidewalk: No
Gas: No
View: Average

Market

Type	Description	Zone	Nhbd	Area	Infl	Traffic	Value	70 Value
5-3	Vacant Industrial	LI-2	Town	13.35	0.40	Light	$987,900	$691,500
							$987,900	$691,500

490

Inspection Information:

Date	Inspector	Entry	Contact	Notes
02/16/2001				

Permit Information:

ID #	Date	% Comp	Value	Notes

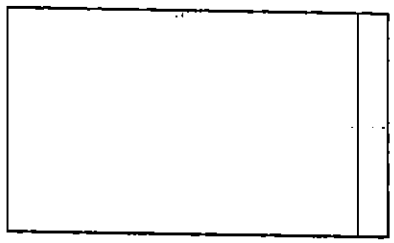
Date Initials

Signature

Owner Other

ORANGE Property Record Card Current

3-1-1 0 MARSH HILL RD



Building Area:	38,400	**FAR**	0.07	**Park Spaces:**	0
Footprint Area:	38,400	**Lot Coverage:**	0.07	**Park Ratio:**	0.00

Building Notes:
THIS BUIDLING WAS FORMERLY ON 3-1-10

Section Information:

Main Warehouse Stories 1.0 Foot Print 38,400 Sect Area 38,400 Rating IndAve Lease Area 0 Phy/Func/Eco 0.75 0.60 0.25

Frame	Foundation	Basement	External Wall	Roof Structure	Roof Type	Roof Cover	RCN	Year Blt	Effective
Fire Res	Concrete	Slab	Metal	Steel Truss	D.P	Metal	3,090,069	1987	

Floors	Description	Wall Ht	Baths	H Baths	Fixt	Units	Lease Area	Elevator	Sprinklers	Partitions	Flr Cover	HVAC	Finish Wall	Ceiling	Rating	Condition
1	Warehouse	24	0	0	6	1	0	0.00	0.00	Typical	Concrete	Forced Air U	Paint	Unfinishe	IndAve	Average

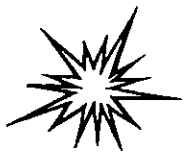
Other Improvements and Additional Features:

Code	Type	Qty	Year	Length	Width	Grade	Condition	Adj

Property Notes:

TCM 1007; off the rear of salemme lane, rear land with frontage on railroad, abuts Dichello warehouse, BAA for 2000 change, 2-2-07 38,400 SQ FT building formerly on 3-1-10, is on this lot

ATTACHMENT 6



Introduction to Connecticut's Water Quality Classifications for Surface and Ground Waters

The water quality Classifications map and Standards constitute a two part system used by the Department of Environmental Protection to manage water quality in Connecticut. This system classifies all surface and ground waters of the state; establishes guidelines and procedures for issuing permits for discharges to surface or ground waters; sets priorities of enforcement and cleanup activities; and provides for the separation of clearly incompatible uses of the same waters, such as for water supply and waste disposal.

Classification symbols used on the map are explained below. All surface and ground waters not otherwise classified are considered as Class A, Class SA, or Class GA. All surface waters within existing or potential water supply watersheds (areas classified GAA) are Class AA unless otherwise classified. Classification symbols separated by a diagonal line (B/AA) indicate the present condition (B) and the future goal (AA). Classification symbols with a three part designation (GB/GA/GAA) indicate present condition (GB), an intermediate goal (GA), and a long term goal (GAA). The symbol GC represents a special classification relating to the potential for disposal of certain wastes.

Regulation of waste disposal is an important part of the State's Water Quality Management System. All disposal or discharge of any liquid or solid waste to the surface or ground waters requires a specific permit from the Water Compliance Unit of the Department of Environmental Protection. In addition, successful management of water quality requires coordinated management of the volume or quantity aspects of the state's surface and ground waters. This is accomplished through the Water Diversion Policy Act requiring a permit for all withdrawals of more than 50,000 gallons per day from surface or ground waters, or for modifications of instantaneous flows in watercourses with a watershed area of 100 acres or more.

GAA: Ground waters within public water supply watersheds or within the area of influence of public human consumption. State's goal is to maintain that condition by banning almost all discharges to ground water.

GA: Ground waters within the area of influence of private and potential public water supply wells. Presumed suitable for direct human consumption. State's goal is to maintain that condition by banning almost all discharges to ground water.

GB/GA: Ground waters which may not be suitable for direct human consumption and the state has established a goal of restoring the ground water to drinking water quality.

S: Coastal and marine surface waters (Long Island Sound and related saline waters of harbors and estuaries).

GB: Ground waters within highly urbanized areas of intense industrial activity and where public water supply is available. May not be suitable for direct human consumption. State's long term goal is to prevent further degradation by preventing any additional discharges which could cause irreversible contamination.

AA: Uncontaminated surface waters designated for use as public water supply. State's goal is to maintain existing natural quality characteristics by banning discharges to reservoir or any tributary surface waters.

GB/GAA: Ground waters which are contaminated and the state's goal is a Class GAA condition because waters are being used for public water supply purposes or are proposed for that use.

A: Uncontaminated surface waters designated for use as a potential public water supply. State's goal is to maintain existing natural quality characteristics by banning discharges to these watercourses.

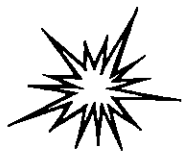
GC: An area where all federal, state and local permits have been secured for its use as a solid waste disposal site. Ground waters not suitable for development of drinking water supplies.

GA/GA/GC: Ground waters which are not now contaminated and where certain hydrogeologic conditions exist which could be utilized as part of a waste treatment process and where development of a public water supply is unlikely due to low yield conditions.

GB/GB/GC: Ground waters which are now contaminated and where certain hydrogeologic conditions exist which could be utilized as part of a waste treatment process and where development of a public water supply is unlikely due to low yield conditions.

B: Surface waters where the water quality goal is a fishable/swimmable condition. Waste water discharges may be allowed under permit.

ATTACHMENT 7



Office use only

DEP Staff - ☐
Records Center Staff - ☑
Initials - [signature]

Connecticut Department of Environmental Protection

File Request Form

Requestor Name: Peter Prey
Company Name: Catalyst Environmental
Address: 78 Herman Drive Simsbury, CT
Phone Number: 860-651-6910

Date: 9/6/11

Facility/Co Name: Dichello Distributors Inc	☒ REM	☒ IND	☒ P5	☒ ORD	☐ SW	
Address: 55 Marsh Hill Rd	☒ OCS	☒ COR	☒ HAZ	☒ SOL	☒ UST	05812
Town: Orange	☐ PER	☐ PRG	☐ SII	☐ PIQ	☐ TCR	
☆ Valenti Leasing Co.						
Facility/Co Name: Southern CT Gas Co.	☒ REM	☒ IND	☐ P5	☒ ORD	☐ SW	
Address: 60 Marsh Hill Rd	☐ OCS	☐ COR	☒ HAZ	☒ SOL	☒ UST	11037
Town: Orange	☐ PER	☐ PRG	☐ SII	☐ PIQ	☐ TCR	
Facility/Co Name: Tamaro Oil Inc.	☒ REM	☒ IND	☐ P5	☒ ORD	☐ SW	
Address: 38 Marsh Hill Rd	☐ OCS	☐ COR	☒ HAZ	☒ SOL	☒ UST	
Town: Orange	☐ PER	☐ PRG	☐ SII	☐ PIQ	☐ TCR	
Facility/Co Name: Northeast Enterprises	☒ REM	☒ IND	☐ P5	☒ ORD	☐ SW	
Address: 11 Frontage Rd	☐ OCS	☐ COR	☒ HAZ	☒ SOL	☒ UST	
Town: Orange	☐ PER	☐ PRG	☐ SII	☐ PIQ	☐ TCR	
Facility/Co Name: Anything	☒ REM	☒ IND	☐ P5	☒ ORD	☐ SW	
Address: Frontage Rd	☐ OCS	☐ COR	☒ HAZ	☒ SOL	☒ UST	
Town: Orange	☐ PER	☐ PRG	☐ SII	☐ PIQ	☐ TCR	
Facility/Co Name: Anything	☒ REM	☒ IND	☐ P5	☒ ORD	☐ SW	
Address: 5-55 Commerce Rd	☐ OCS	☐ COR	☒ HAZ	☒ SOL	☒ UST	
Town: Orange	☐ PER	☐ PRG	☐ SII	☐ PIQ	☐ TCR	
Facility/Co Name: Anything	☐ REM	☒ IND	☐ P5	☒ ORD	☐ SW	
Address: Salemme Lane	☐ OCS	☐ COR	☒ HAZ	☒ SOL	☒ UST	
Town: Orange	☐ PER	☐ PRG	☐ SII	☐ PIQ	☐ TCR	

Comments: OCS 1970 - 1997, 2001, 2006, 2009, 1999
OCS Correspondence 'All'
RCRA Town Misc.
Remediation Town Misc.

REM - Remediation
ORD – Water Orders
OCS – Oil & Chemical Spills Reports
COR - Oil & Chemical Spills Correspondence
PER – Air Permits
PRG – Air Enforcement
STK – Air Stack Tests
SII – Gas Station Vapor Recovery

IND – Industrial Water Corr'dence Files
SW – Stormwater Correspondence Files
SOL – Solid Waste
PIQ – Air Pre-Inspection Questionnaire
IS – Air Indirect Source
OB – Air Open Burning
TAX– Air Tax Abatement
CRA – CT Resource Recovery Authority

P5 – Water Industrial Survey
HAZ – Hazardous Waste
UST – Underground Storage Tanks
TCR – Tank Closure Report
SS – Sub-Surface
WPA –Water Perm Application
DMR – Discharge Monitoring Reports

List of Contaminated or Potentially Contaminated Sites

"Hazardous Waste Facilities" as defined by Section 22a-134f of the Connecticut General Statutes

TOWN OF: ORANGE

Name	*Address*	*Site Definition*	*Investigation Started*	*Remediation Started*	*Post Remedial Monitoring Started*	*Remediation Completed*	*ELUR*	*ELUR Type*
Aamco Station	Boston Post Rd.	Leaking Underground Storage Tanks – Investigation						
Abb Industrial Systems, Inc.	88 Marsh Hill Road	Inventory of Hazardous Waste Disposal Sites						
Abb Industrial Systems, Inc.	88 Marsh Hill Road	Property Transfer – Form III Investigation started	1/14/1998					
Amity Junior High School	Ohman Rd.	Leaking Underground Storage Tanks – Investigation						
Aviation Component Support Company, Llc	95 Marsh Hill Road	Property Transfer – Form III						
Aviation Components Support Company, Llc	295 Indian River Road	Property Transfer – Form III Investigation started	2/25/1999					
Aviation Components/cbl Trucking, Inc.	95 Marsh Hill Rd/11 Frontage R	Property Transfer – Form III Investigation started	6/15/1998					
Barbara Pratt	428 Barton Drive	Leaking Underground Storage Tanks – Completed						
Bayer Pharmaceuticals Corporation	11 Frontage Rd/95 Marsh Hill Rd Aka Parcel 8	Property Transfer – Form III						
Ben's Texaco	115 Boston Post Road	Leaking Underground Storage Tanks – Pending						
Berkley Residence	380 Wildwood Dr.	Leaking Underground Storage Tanks – Completed						
Bindley Western	181 Marsh Hill Road	Property Transfer – Form III Remediation Complete	4/16/2003			5/10/2004	NO	
Bindley Western Industries Inc. Facility	181 Marsh Hill Road	Voluntary Remediation: CGS 22a.-133x Investigation started	4/16/2003					
Blasé Manufacturing Company	269 Lambert Road	Property Transfer – Form III Investigation started	7/9/2008					
Builder's Square	260 Bull Hill Road	Property Transfer – Form III						

List of Contaminated or Potentially Contaminated Sites

"Hazardous Waste Facilities" as defined by Section 22a-134f of the Connecticut General Statutes

TOWN OF: ORANGE

Name	*Address*	*Site Definition*	*Investigation Started*	*Remediation Started*	*Post Remedial Monitoring Started*	*Remediation Completed*	*ELUR*	*ELUR Type*
Cappor	540 Howellton Rd.	Leaking Underground Storage Tanks – Completed						
Coppola	405 Timberlane	Leaking Underground Storage Tanks – Completed						
Cw Multilayer Corp Fka Peak Electronics	51 Carlson Aka 54 Boston Post	Voluntary Remediation: CGS 22a.-133x Investigation started	12/17/1998					
Cw Multilayer Products Group	51 Carlson Road	Property Transfer – Form III						
Cyro Industries	25 Executive Boulevard	Property Transfer – Form III Investigation started	7/24/2008					
Dacier Residence	830 Holly Hock Lane	Leaking Underground Storage Tanks – Pending						
Daniel Presnick	179 Martin Lane	Leaking Underground Storage Tanks – Completed						
Data Switch Corp. (former)	12 Cascade Boulevard	Property Transfer -- Form III Investigation started	7/18/2008					
Delaney	23 New Haven Ave	Leaking Underground Storage Tanks – Completed						
Dichello Beer Distibutors	55 Marsh Hill Road	Leaking Underground Storage Tanks – Completed						
Dichello Distributors	55 Marsh Hill Rd	Leaking Underground Storage Tanks – Completed						
Eagle Leasing- Maxwell Stock	Eagle Leasing, 1 Irving Eagle Place	Leaking Underground Storage Tanks – Completed						
Ehthone	Marsh Hill Rd.	Leaking Underground Storage Tanks – Completed						
Enterman's Bakery	Bull Hill Ln.	Leaking Underground Storage Tanks – Completed						
Estate Of Carl Rogher	569 Boston Post Rd United Insurance Agency	Leaking Underground Storage Tanks – Completed						

List of Contaminated or Potentially Contaminated Sites

"Hazardous Waste Facilities" as defined by Section 22a-134f of the Connecticut General Statutes

TOWN OF: ORANGE

Name	*Address*	*Site Definition*	*Investigation Started*	*Remediation Started*	*Post Remedial Monitoring Started*	*Remediation Completed*	*ELUR*	*ELUR Type*
Orange Dot (hart # 09)garage	Route 34	Voluntary Remediation: CGS 22a.-133x Investigation started	5/1/2002					
Orange White Acres Shopping Center	80 Boston Post Road	Leaking Underground Storage Tanks – Rem. Started						
Palmer	300 Sarah Circle	Leaking Underground Storage Tanks – Completed						
R.g. Vadney	316 Boston Post Road	Leaking Underground Storage Tanks – Rem. Started						
Raymond Sieakowski	76 Rolling Ridge Rd.	Leaking Underground Storage Tanks – Completed						
Raymond Vancore	60 Wellington Drive	Leaking Underground Storage Tanks – Completed						
Richard Barry Francis, Inc. (former)	15 Executive Boulevard	Property Transfer – Form III Investigation started	7/9/2008					
Richetelli Real Estate	109 Bridgeport	Leaking Underground Storage Tanks – Investigation						
Roebic Laboratories Inc.	25 Connair Road	Property Transfer – Form III Investigation started	7/24/2008					
Sears, Roebuck And Co.	80 Boston Post Road	Property Transfer – Form III Investigation started	8/15/2000					
Sears-white Acres Shop Center	80 Boston Post Road	Property Transfer – Form III						
Shell Facility No. 136363	249 Bull Hill Road	Voluntary Remediation: CGS 22a.-133y Remediation Started		8/14/2006				
Shell Facilty No. 136364	340 Boston Post Road	Property Transfer – Form III Remediation Started	3/16/2007	7/27/2007				
Shell Oil	249 Bull Hill Lane	Leaking Underground Storage Tanks – Completed						
Shell Service Station	340 Boston Post Rd.	Leaking Underground Storage Tanks – Rem. Started						

List of Contaminated or Potentially Contaminated Sites

"Hazardous Waste Facilities" as defined by Section 22a-134f of the Connecticut General Statutes

TOWN OF: ORANGE

Name	*Address*	*Site Definition*	*Investigation Started*	*Remediation Started*	*Post Remedial Monitoring Started*	*Remediation Completed*	*ELUR*	*ELUR Type*
Sid Guillotis	356 Augusta Dr	Leaking Underground Storage Tanks – Completed						
Sivion Residence	741 Deer Run Lane	Leaking Underground Storage Tanks – Completed						
Snet	48 Boston Post Rd.	Leaking Underground Storage Tanks – Completed						
Snet Distribution Center	48-50 Boston Post Road	Property Transfer – Form III Investigation started	10/22/1997					
Snet Distribution Center	48-50 Boston Post Road	Property Transfer – Form III Investigation started	4/8/1998					
Snet Distribution Center	48-50 Boston Post Road	Property Transfer – Form III Investigation started	11/25/1998					
Stochmal, Casimir	245 Harvester Road	Leaking Underground Storage Tanks – Completed						
The Southern Ct Gas Company	60 Marsh Hill Road	Property Transfer – Form III Investigation started	7/24/2008					
Thornton Oil Corporation	151 Boston Post Rd.	Leaking Underground Storage Tanks – Completed						
Town Of Orange	605 Orange Center Rd	Leaking Underground Storage Tanks – Completed						
Turkey Hill School	441 Turkey Hill Road	Leaking Underground Storage Tanks – Rem. Started						
Unison Industries Inc.	34 Prindle Hill Road	Property Transfer – Form III Investigation started	6/30/2002					
Unison Industries, Inc.	34 Prindle Hill Road	Property Transfer – Form III Investigation started	3/28/2001					
Unison Industries, Llc	34 Prindle Hill Road	Property Transfer – Form IV Remediation Started	7/21/2005	7/21/2005				

GENERATOR SUMMARY REPORT

1/1/1984 thru 12/31/2007

Generator EPA ID: **CTP000008901**

Generator Name, Address, and Zipcode: VALENTI LEASING AUTO BODY
55 MARSH HILL ROAD
ORANGE , CT , 06477 USA

MANIFEST	DTSHIPPED	US DOT DESC	HAZ CL	UNNA	# OF CONT	CONT TYPE	QTY	WT/VO	EPA CODE	BATCH#
CTC0220931	2/7/1989	WASTE PAINT RELATED MATERIAL, LIQUID	FLAMM	1263	003	DM	324	P	F003	999999
CTC0237076	6/16/1989	WASTE PAINT-RELATED LIQUID MATERIAL	FLAMM	1263	002	DM	123	P	F003	999999
CTC0271881	7/7/1989	WASTE PAINT RELATED MATERIAL, LIQUID	FLAMM	1263	001	DM	27	P	F003	999999
CTC0273009	7/28/1989	WASTE PAINT-RELATED LIQUID MATERIAL	FLAMM	1263	001	DM	27	P	F003	999999
CTC0272487	9/15/1989	WASTE PAINT RELATED MATERIAL	FLAMM	1263	001	DM	27	P	F003	999999
CTC0272330	10/18/1989	WASTE PAINT RELATED MATERIAL, LIQUID	FLAMM	1263	001	DM	27	P	F003	999999
CTC0287370	11/21/1989	WASTE PAINT RELATED MATERIAL	FLAMM	1263	001	DM	27	P	F003	999999
CTC0285436	12/20/1989	WASTE PAINT RELATED MATERIAL, LIQUID	FLAMM	1263	002	DM	123	P	F003	999999
CTC0249237	3/8/1990	WASE PAINT RELATED MATERIAL, LIQUID	FLAMM	1263	001	DM	27	P	F003	999999

GENERATOR SUMMARY REPORT

1/1/1984 thru 12/31/2007

Generator EPA ID: **CTP000008901**

Generator Name, Address, and Zipcode: VALENTI LEASING AUTO BODY
55 MARSH HILL ROAD
ORANGE , CT , 06477 USA

MANIFEST	DTSHIPPED	US DOT DESC	HAZ CL	UNNA	# OF CONT	CONT TYPE	QTY	WT/VO	EPA CODE	BATCH#

GENERATOR SUMMARY REPORT

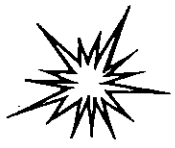
1/1/1984 thru 12/31/2007

Generator EPA ID: **CTP000011043**

Generator Name, Address, and Zipcode: DICHELLO DISTRIBUTORS
55 MARSH HILL ROAD
ORANGE , CT , 00000 USA

MANIFEST	DTSHIPPED	US DOT DESC	HAZ CL	UNNA	# OF CONT	CONT TYPE	QTY	WT/VO	EPA CODE	BATCH#
CTC0269072										
	5/15/1990	WASTE FLAMMABLE LIQUID, NOS	FLAMM	1993	001	TT	2600	G	D001	999999

SECTION BREAK



STATE OF CONNECTICUT

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Bureau of Waste Management, Oil and Chemical Spill Response Division

Emergency Incident Report

Case No.: 97-01831
Staff Receiving Call: 935 TORRES, NEIL Assigned To: 000 **NO RESPONSE
Date Reported: 04/16/1997 Time Reported: 9:30
Date of Release: 04/16/1997 Time of Release: UNKNOWN
Town of Release: ORANGE State of Release: CT
Location of Reported Release: 55 MARSH HILL RD
Reported By: SCOTT GRAVES Phone: (203) 426-8900
Representing: RC GRAVES, INC
Responsible Party: DICHELLO DISTRIBUTORS Phone: (203) 891-2100
Street Address: 55 MARSH HILL RD
Town: State: Zip Code:
Does the Responsible Party Accept Financial Responsibility? YES
Release Type: PETROLEUM
Release Substance: diesel
Media: SOIL GROUND WATER
Total Quantity: 0 Gallons 0 Cubic Yards 0 Cubic Feet 0 Drums 0 Pounds
Emergency Measures: pulled 2-10k diesel ust's, soil analysis tph:780 ppm, h2o: 6ppm tph, no sheen or free product, will vac hole and install well
Has the Release Been Terminated?: YES
Type of Waterbody Affected: GROUNDWATER
Name of Waterbody Affected:
Total Quantity Recovered: 0 Total Quantity In Water: 0
Corrective Actions Taken: SOIL REMOVED PUMPED OUT
Discharge Class: INDUSTRIAL
Cause of Incident: INGROUND TANK FAILURE
Agencies Notified: LOCAL FIRE MARSHAL
Status: CLOSED

97-1831

DICHELLO DISTRIBUTORS, INC.
P.O. BOX 562 55 MARSH HILL ROAD ORANGE, CONNECTICUT 06477
PHONE: (203) 891-2100

State of Connecticut
Department of Environmental Protection
Oil and Chemical Spill Division
79 Elm Street
Hartford, Connecticut 06106-5127

June 10, 1997

Dear Sir or Madam,

My name is Patrick Oates and I am the Director of Operations at Dichello Distributors, Inc., 55 Marsh Hill Road, Orange, Connecticut.

I was visited yesterday by your Brian Emanuelson after his inspection of our site to determine the accuracy of a complaint the Oil and Chemical Spills Division received on 6/9/97 pertaining to 55 Marsh Hill Road, Orange, CT 06477.

Please forward a copy of all literature, communications and findings pertinent to the original Complaint and the contents of the subsequent investigation based on that Complaint to my attention at the address stated on the letterhead. Include the names and addresses of all authors with your submittals. I understand that such request is my right under the Freedom of Information Act.

My thanks for your attention to this matter,

Sincerely,

Pat Oates
Director of Operations
Dichello Distributors, Inc.

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

April 21, 1997

Dichello Distributors
55 Marsh Hill Road
Orange, CT 06477
Attention: Scott Graves (R.C. Graves, Inc.)

Dear Mr. Graves,

I have reviewed the information you submitted regarding the accumulated water in the excavation at the Dichello Distributors facility. Stormwater has entered the excavation from an underground storage tank removal project and must be dewatered to refill the hole. Analysis indicates that trace levels of hydrocarbons may be present in the accumulated water.

This water should be considered to be stormwater and discharged accordingly. As referenced in your correspondence, their remains a risk of hydrocarbon contamination in this water, and an air stripping unit will be installed to deal with the potential contamination as a precaution. This is a prudent safeguard that should protect the receiving stream from pollutant impacts should contamination appear.

During discharge, I would recommend strongly that monitoring of the discharge be conducted every second day to ensure pollutants are not present. In addition to the modified EPA 8015, each sample should be monitored for EPA Methods 602 plus xylenes and Methyl-tertiary-butyl-ether. I must be notified immediately if results indicate levels of EPA 8015 exceeding 10 mg/l or if any concentrations of other contaminants are detected. In addition, the discharge point must be free of siltation and erosion resulting from this discharge.

Please call me at (860) 424-3827 if you have questions.

Sincerely,

Donald J. Gonyea
Environmental Analyst

cc. Pat Oates

inter-office correspondence

to Don Gonyea Fax # 860-424-4057 date 4/21/97

from Scott Graves - R.C. Graves Inc.

subject Dichello Dist.

Don, we removed 2 - 10,000 gallon diesel fuel tanks from this site at 55 Mark Hill Rd. Orange Ct. We test the soil (results attached) and then over the weekend the rain filled the excavation. We test the water (results attached). We are not putting new tanks in the excavation we are filling it in after contaminated soil is removed. We will install a monitoring well in the excavation for future Monitoring. Enviroshield Inc. will be supplying a Low Profile stripping tray to clean water and will perform the 1991 and 1992 test as soon as possible.

If you have any Questions please page me at 203-730-3882. You can Fax the letter we talked about to 203-426-6738 my office and also 203-795-6875 that is Dichello dist. Fax # ATTN: Pat Oates.

Thank You very much

Scott Graves

STATE OF CONNECTICUT

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Bureau of Waste Management, Oil and Chemical Spill Response Division

Emergency Incident Report

Case No.: 97-02998
Staff Receiving Call: 922 ACETO, JOHN
Assigned To: 917 EMANUELSON, BRIAN
Date Reported: 06/09/1997
Time Reported: 14:42
Date of Release: 05/30/1997
Time of Release: 9:00
Town of Release: ORANGE
State of Release: CT
Location of Reported Release: 55 MARSH HILL ROAD
Reported By: UNKNOWN
Phone: (203) 555-5555
Representing: SELF
Responsible Party: DICHELLO BEER DISTIBUTORS
Phone:
Street Address: 55 MARSH HILL ROAD
Town: ORANGE
State: CT
Zip Code: 06477-
Does the Responsible Party Accept Financial Responsibility? NO
Release Type: PETROLEUM
Release Substance: GASOLINE
Media: GROUND SURFACE
Total Quantity: 0 Gallons 0 Cubic Yards 0 Cubic Feet 0 Drums 0 Pounds
Emergency Measures: BASED AN ANONYMOUS REPORT– TANKS REPORTED TO BE REMOVED AND DUMPED IN MARSH BEHIND BUILDING
Has the Release Been Terminated?: YES
Type of Waterbody Affected: MARSH
Name of Waterbody Affected: MARSH
Total Quantity Recovered: 0
Total Quantity In Water: 0
Corrective Actions Taken: INVESTIGATED
Discharge Class: COMMERCIAL
Cause of Incident: DUMPING
INGROUND TANK FAILURE
Agencies Notified: BUREAU OF WASTE MANAGEMENT - OIL AND CHEMICAL SPILL RESPONSE
Status: CLOSED

CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106

BUREAU OF WASTE MANAGEMENT
OIL AND CHEMICAL SPILL RESPONSE DIVISION

EMERGENCY INCIDENT FIELD REPORT

Case Number :	97-2998	Assigned By :	922	Assigned To (Lead ERC) :	917
Additional ERC's On Scene :					
Date Reported :	5/30/97	Time Reported :	1442 hrs	Release Town :	ORANGE
Location of Reported Release :	55 Marsh Hill Rd.				
Reported By :	ANONYMOUS	Phone:	860 567 8644	Phone :	
Representing :	na				
Responsible Party :	Dichello Dist.	Phone :	203 426 8900		
Street :	saa	Town :	saa	State :	Zip Code
Financial Responsibility Accepted :	X	Yes :		No :	Date :	Time :
Accepted/Denied by Whom :	saa	OCSRD ERC :	917		

Release Type :	X	Petroleum		Chemical		Dielect		HazWaste		Sewage Related	
	Gaseous Emission		Biomedical		Other (Explain)						
Release Substance :	Diesel contaminated soil										
	Unknown at this time	Date of Release :		Time of Release :							
Status of Release :		Historic	X	Terminated		Ongoing		Other			
Total Quantity Involved :			Gallons		CuYd		CuFeet		Drums		Lbs.
Media :		Air		Ground Soil	X	Ground Surface		Groundwater		Surface Water	
	Inside of a Structure		Other (Explain)								
Emergency Measures :											
Type of Waterbody Impacted :		L.I.S		River		Stream/Brook		Groundwater		Pond	
	Catch Basin		Sanitary Sewer		Floor Drain		Drywell	X	No Waterbody affected		
Total Quantity Recovered (Gallons) :	na	Total Quantity in Waterbody (Gallons) :	na								
Total Quantity Recovered From Waterbody (Gallons) :	na										
Name of Waterbody Impacted :	na										
Threatens Navigable Waterway :		Yes	X	No	Potential OPA-90 Case		Yes	X	No		
Pathway Identified :		Yes	X	No	Details :						
U.S. EPA Contacted :		Yes	X	No	Time/Date :		FOSC				
USCG Contacted :		Yes	X	No	Time/Date :		FOSC				

Property Owner # 1	saa			Phone :	
Street :		Town :		State:	Zip Code:
Property Owner # 2				Phone :	
Street :		Town :		State:	Zip Code:

Transportation Incident :		Yes	X	No	Type :		Tractor Trailer		Truck
	Passenger		Vessel		Other	Make/Model :			
Vehicle Registration/Number :					Trailer Registration/Number :				
Owner of Vehicle/Vessel :						Phone :			
Street :		Town :			State :		Zip Code :		
Operator of Vehicle :					Drivers License Number :				
Street :		Town :			State :		Zip Code :		
Connecticut State Police Press Release Attached :		Yes		No	Trooper #				
If No, Explain :	na								
State Licensed Contractor Retained :		Yes	X	No	Hired by Whom :				
Name of Contractor (s) Retained :									
Time/Date Requested :					Time/Date Arrived :				
Name of Contractor (s) Retained :									
Spill Fund Authorized :		Yes	X	No	Authorized By :				
Time of Fund's Authorization :					Date of Fund's Authorization :				

MITIGATION EQUIPMENT

	Sea / Sorbent Boom		Sorbent Pads		# of Vacuum Trucks	X	Speedy Dry / Absorbents
	Hand Tools		Boat		Excavation Equip.		Overpacks / Drums

EVIDENCE AVAILABLE ON THIS INCIDENT

Photographs of Scene		Yes	X	No	Video Tape of Scene		Yes	X	No	
If No, Explain :	na									
Photographs Taken By :					Video Tape Taken By :					
Photographs Developed :		Yes		No	Photographs/Videos Submitted :		Yes		No	
Samples Taken :		Yes	X	No	Analytical Results Attached :		Yes		No	
If No, Explain :	na									
Samples Taken By :	na				Date Samples Taken :					
Laboratory Performing Analysis :					DOHS Laboratory		Yes		No	
Split Samples :		Yes		No	Split With Whom:					
Chain of Custody :		Yes		No	Analysis Required :					
If No, Explain :										

CASE STATUS OF INCIDENT

Open :		Closed :	X	Report Author :	EMANUELSON #917
Signature of Case Emergency Response Coordinator :					

INSPECTOR'S REPORT :Investigated complaint on 6/9/97 at this time a large amount of stock piled soil was noted in rear of property. This inspector met with Pat Oates of Dichello Distributers. I was informed at this time that this soil was generated from tank pull that occurred several weeks earlier. this soil was moved offsite to Pheonix soil Tech a week later.

Tank were removed by Doug Graves of R C Graves. Tanks were disposed properly at scrap metal yard in West Haven. This inspector concluded his investigation at 1645 hrs.

STATE OF CONNECTICUT

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Bureau of Waste Management, Oil and Chemical Spill Response Division

Emergency Incident Report

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Time of Release: 9:00
Town of Release: ORANGE
State of Release: CT
Location of Reported Release: 55 MARSH HILL ROAD
Reported By: UNKNOWN
Phone: (203) 555-5555
Representing: SELF
Responsible Party: DICHELLO BEER DISTIBUTORS
Phone:
Street Address: 55 MARSH HILL ROAD
Town: ORANGE
State: CT
Zip Code: 06477-
Does the Responsible Party Accept Financial Responsibility? NO
Release Type: PETROLEUM
Release Substance: GASOLINE
Media: GROUND SURFACE
Total Quantity: 0 Gallons 0 Cubic Yards 0 Cubic Feet 0 Drums 0 Pounds
Emergency Measures: BASED AN ANONYMOUS REPORT-- TANKS REPORTED TO BE REMOVED AND DUMPED IN MARSH BEHIND BUILDING
Has the Release Been Terminated?: YES
Type of Waterbody Affected: MARSH
Name of Waterbody Affected: MARSH
Total Quantity Recovered: 0
Total Quantity in Water: 0
Corrective Actions Taken: INVESTIGATED
Discharge Class: COMMERCIAL
Cause of Incident: DUMPING
INGROUND TANK FAILURE
Agencies Notified: BUREAU OF WASTE MANAGEMENT - OIL AND CHEMICAL SPILL RESPONSE
Status: CLOSED

CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106

BUREAU OF WASTE MANAGEMENT
OIL AND CHEMICAL SPILL RESPONSE DIVISION

EMERGENCY INCIDENT FIELD REPORT

Case No: 97-2998 Assigned to: 917
Date: 6-9-97 Time: 1442 Town of Discharge: ORANGE
Assigned By: 922 Reported By: UNKNOWN Phone:
Representing:
Address of Reporter:
Location of reported discharge: 55 MARSH HILL RD.

Discharge Type: Petroleum X Chemical ___ Gas Emission ___ Air ___ Other ___
Date of Discharge ___ Historic X Ongoing ___ TOTAL QUANTITY 500 YARDS
Discharge Substance: DIESEL Unknown at this time
Estimated time of Discharge: Unknown at this time
Emergency Measures NA
Boom ___ Containment ___ Sorbent ___ Pads ___
Waterbody impacted: Yes ___ No X
Type of Waterbody: Long Island Sound ___ River ___ Stream/Brook ___ Groundwater ___
Sanitary Sewer ___ Catch Basin ___ Pond ___ Floor drain ___ Other ___
Total Recovered 500 YDS Total in water NA Total Recovered from Water NA
Name of Waterbody if Applicable: NA
Waterbody threatens navigable waterway Yes ___ No X OPA-90 Yes ___ No X
Notification to U.S EPA Yes ___ No X Contact: Time/Date
Notification to USCG Yes ___ No X Contact: Time/Date
1136 Spill Funds authorized: Yes ___ No X
(If Yes, By whom:) Time/Date

Discharger: DICHELLO DIST. Accept Responsibility: Yes X No ___
Address: 55 MARSH HILL RD. Accepted By Whom:
Time/Date accepted:
Phone number PAT OATES OCSRD Representative: 917 EMANUELSON

Property Owner: SAA
Address:
Phone number:

Transportation Incident: Yes___ No X Type: Tractor Trailer___ Passenger___ Other___

Make/Model _____ Registration # _____

Tractor Number: _____ Trailer Registration/Number: _____

Operator of Vehicle: _____ Drivers License # _____

Owner of Vehicle: _____ Phone Number: _____

Contractor retained: Yes X No___ Not required___ If Yes-Name: _____

Equipment: Boom___ Pads___ Vac Truck___ Manpower(Number of personnel)_____

Speedy Dry _____ Hand Tools___ Boat___ Special (specify)_____

Time/Date Requested: _____ Time/Date Arrived: _____

Special Contacts: **PAT OATES DICHELLO DIST.**

INSPECTOR'S REPORT: Subject complaint investigated by this inspector on 6-9-97 at 1600 hrs. There was no indication that any tanks were dumped in marsh at subject site. Diesel tanks recently removed were transported offsite to Westhaven srap metal yard. A estimated 500 yards of contaminated soil was noted on plastic in rear of property. This soil will be transported offsite to Pheonix soil tech in Waterbury.

Emergency Response and Spill Prevention Division
Emergency Incident Report

Case No.: 2009-05524
Staff Receiving Call: 206 KINNEY, CLARENCE Assigned To: 000 NO RESPONSE
Date Reported: 09/29/2009 Time Reported: 7:06
Date of Release: 09/29/2009 Time of Release: UNKNOWN
Town of Release: ORANGE State of Release: CT
Location of Reported Release: 55 MARSH HILL RD
Reported By: BOBBY Phone: (203) 453-1200
Representing: EASTERN ENERGY
Responsible Party: Phone:
Street Address:
Town: State: Zip Code:
Does the Responsible Party Accept Financial Responsibility?
Release Type: PETROLEUM
Release Substance: DIESEL FUEL
Media: GROUND SURFACE
Total Quantity: 5 Gallons 0 Cubic Yards 0 Cubic Feet 0 Drums 0 Pounds
Emergency Measures:
Has the Release Been Terminated?: YES
Type of Waterbody Affected: NA
Name of Waterbody Affected: NA
Total Quantity Recovered: 0 Total Quantity In Water: 0
Corrective Actions Taken:
Discharge Class:
Cause of Incident:
Agencies Notified: DEP DISPATCH
Status: CLOSED

CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION
Hazardous Materials Management Unit
Oil and Chemical Spill Section

CASE # 2321 7/3/90 ASSIGNED TO: JA

EMERGENCY INCIDENT REPORT

DATE: 6/30/90 TIME: 10:50 TOWN of INCIDENT: Orange
FROM: BY: Off. Curley PHONE: 795-0567
REPRESENTING: Orange P.D.
ADDRESS:

INCIDENT LOCATION: Orange Aviation Components - 11 Frontage Rd. exit 41 off of 95 - Marsh Hill Rd.
TYPE: (X) PETRO. ( ) CHEMICAL ( ) DIELECT. ( ) GASEOUS ( ) HAZ. WST. ( ) OTHER
DISCHARGE SUBSTANCE: Diesel QUANTITY: Ap. 50 gals.
SARA: ( ) EXTREMELY HAZ. SUB. ( ) CERCLA HAZ. SUB. FED. RQ
( ) RELEASE CROSSED PROPERTY LINE ( ) PROTECTIVE ACTIONS (cont. other side)
DATE OF SPILL: 6/30/90 TIME OF SPILL: 10:21 SPILL STOPPED :
MISC. INFO: ~~tank mon Source~~ overfill of truck

WATER BODY: TOTAL IN WATER:
TOTAL RECOVERED: RECOVERED FROM WATER:
DISCHARGER:
DISCHARGER ACCEPTS FINANCIAL RESPONSIBILITY: ( )YES ( )NO

DISCHARGE CLASS: 1.(X) UNKNOWN 2.( ) MARINE TERMINAL 3.( ) INDUSTRIAL
4.(X) TRANSPORTATION 5.( ) PRIVATE 6.( ) GOVERNMENTAL 7.( ) VESSEL
8.( ) COMMERCIAL 9.( ) INLAND TERMINAL 10.( ) UTILITY 11.( ) NATURAL
99.( ) OTHER

CAUSE: 1( ) UNKNOWN 2( ) HOSE FAILURE 3( ) TRANSF. LINE FAILURE
4( ) INGROUND TANK FAIL. 5( ) ABOVE GROUND TANK FAIL. 6( ) SADDLE TANK FAIL.
7( ) CARGO TANK FAIL. 8( ) FUEL TANK FAIL. 9( ) HULL FRACTURE 10(X) OVERFILL
11( ) CONTAINER FAIL. 12( ) VALVE FAIL. 13( ) FIRE 14( ) POWER FAILURE
15( ) PUMP FAIL. 16( ) PUMPING 17( ) DUMPING 18( ) ILLEGAL DISCHARGE
19( ) SINKING 20( ) SEEPAGE 21( ) PUMPING BILGE 22( ) OPEN HATCH
23( ) VANDALISM 24( ) BLOW BACK 25( ) ROAD OILING/REPAIR 26( ) M/V ACCIDENT
27( ) TRANS./CAPACITOR 28( ) NATURAL
99( ) OTHER

CORRECTIVE ACTIONS: 1( ) NONE 2( ) NONE REQUIRED 3( )UNKNOWN 4( ) REMOVED
5(X) CONTAINED & REMOVED 6( ) CONTRACTED 7( ) TEST WELL(S) 8( ) DISSIPATED
9( ) EVAPORATED 10( ) SANDED 11( ) FOAMED 12( ) REFERRED 13( ) CLEANED
14( ) WASHED DOWN 15( ) PUMPED OUT 16( ) NEUTRALIZED 17( ) RECOVERY SYSTEM
18( ) REPAIRED LINE 19( )REPAIRED TANK 20( )DISPERSED 21( ) REMOVED TANK
99( ) OTHER

CLEAN-UP ACTIONS BEING TAKEN: # 5

AGENCIES NOTIFIED: D.E.P.
CLEAN-UP CONTRACTOR(S): Tn house REQUESTED: ARRIVED:
STATUS: ( ) OPEN (X) CLOSED ( ) MONITORED CODE:
RECEIVED BY: RRowley 202 INSPECTOR: 903 / John Scala
DATE/TIME ASSIGNED: 6/30/90. 10:56 ESTIMATED ETA:

CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION
Oil & Chemical Spill Section
Hazardous Materials Management Unit

CASE # _____

ASSIGNED TO: J.A

INSPECTOR'S REPORT

DATE: 6/30/90 TIME: ~~2~~ 11:30 TOWN OF DISCHARGE: Orange
FROM: _____ BY: Officer Curly PHONE: 795-0567
REPRESENTING: Orange P.D
STREET ADDRESS: Lambert St.
CITY: Orange
LOCATION OF DISCHARGE: Aviation Components
11 Frontage Rd
Orange

DISCHARGE TYPE: (X) PETRO ( ) CHEMICAL ( ) GAS. EMMISSION. ( ) OTHER
DISCHARGE SUBSTANCE: diesel TOTAL QUANTITY: 50 gallons
DATE OF DISCHARGE: 6/30/90 TIME OF DISCHARGE: 11:00
CONTAINMENT MEASURES: Speedy dry applied by workers

WATER BODY: surface TOTAL IN WATER: -0-
TOTAL RECOVERED: 90% RECOVERED FROM WATER: -0-
DISCHARGER: Aviation Components DISCHARGE STOPPED: yes
DISCHARGER ACCEPTED LEGAL RESPONSIBLITY: yes

PROPERTY OWNER: Aviation Components
11 Frontage Rd
Orange
Phone Number: _____

POLLUTOR: Same as above

Phone Number: _____

VEHICLE IDENT:

TRACTOR
Type: N.A. Reg. #: N.A
Operator: _____ License #: _____
Owner: _____
Phone No#: _____

TRAILER
Type: N.A. Reg. #: N.A
Operator: _____ Trailer #: _____
Owner: _____
Phone No#: _____

CONTRACTOR INFO.: NAME: In house

Equipment:
Boom ✓ Vac Truck _____ Hose _____
Boat _____ F/F Mats _____ Vactor _____
Special _____ Hand Tools ✓ Skimmer _____
Manpower ✓

REQUESTED: _____ ARRIVED: _____

INSPECTOR: John Aceto

over

SAMPLES:

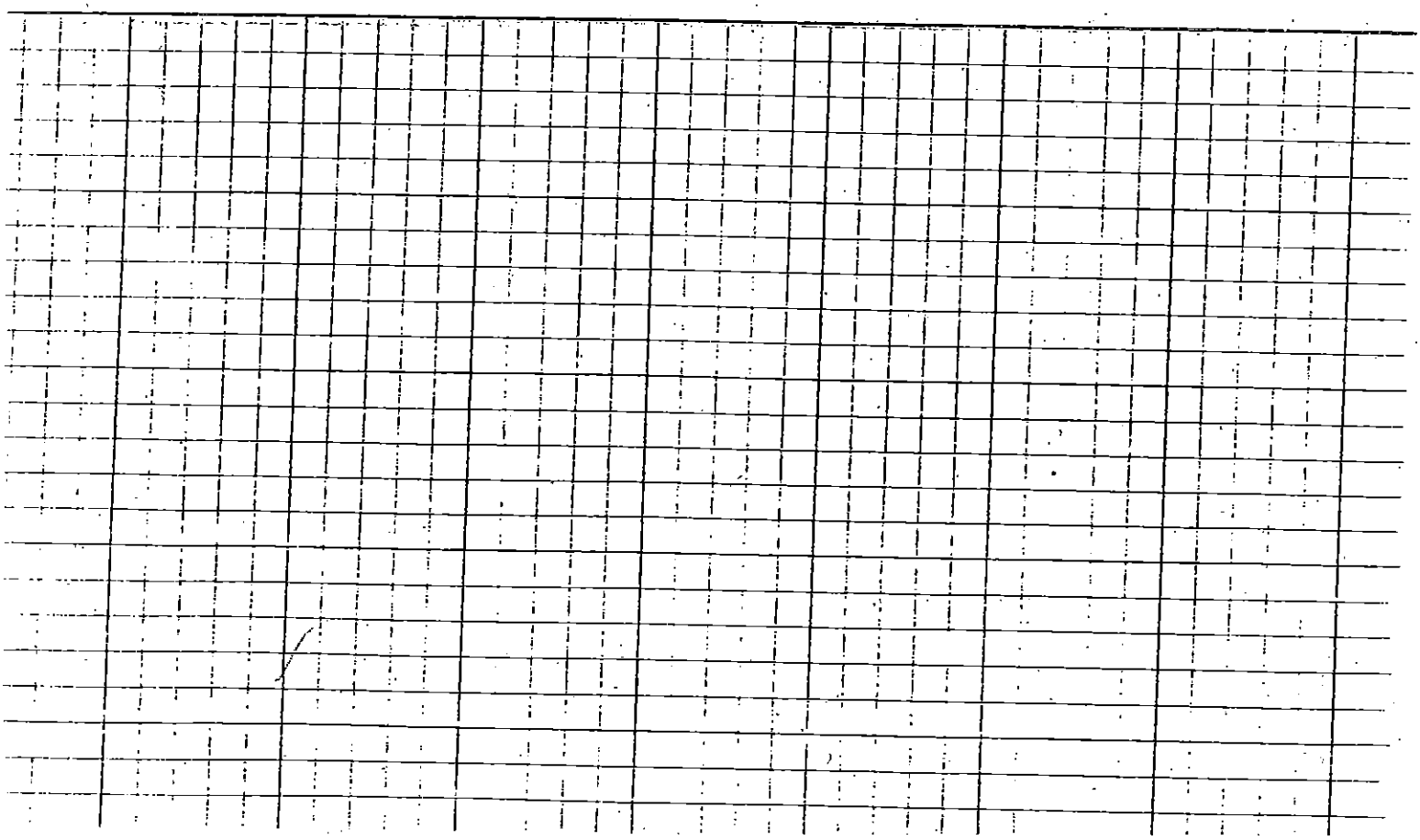
Qty.: _____ Qty.: _____

Loc.: _____ Loc.: _____

CONTACTS: Name: _____ Phone Number: _____

Name: _____ Phone Number: _____

ADDITIONAL INFORMATION: Attendent left pump unattended approx. 50 gallons of diesel spilt onto pavement. Aviation Components employees allowed to clean up spill with speedy dry and pads.



STATE OF CONNECTICUT

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Bureau of Waste Management, Oil and Chemical Spill Response Division

Emergency Incident Report

Case No.: 97-00782
Staff Receiving Call: 934 WILLIAMSON, MATT Assigned To: 000 **NO RESPONSE
Date Reported: 02/14/1997 Time Reported: 14:00
Date of Release: 02/14/1997 Time of Release: UNKNOWN
Town of Release: ORANGE State of Release: CT
Location of Reported Release: 11 FRONTAGE RD.
Reported By: MIKE HOPKINS Phone: (203) 245-3322
Representing: HOPKINS ENV.
Responsible Party: NATIONAL LOAN INVESTORS Phone: (800) 729-3278
Street Address:
Town: State: Zip Code:
Does the Responsible Party Accept Financial Responsibility?
Release Type: PETROLEUM
Release Substance: DIESEL
Media: SOIL
Total Quantity: 0 Gallons 50 Cubic Yards 0 Cubic Feet 0 Drums 0 Pounds
Emergency Measures: SOIL REMOVAL
Has the Release Been Terminated?: YES
Type of Waterbody Affected: N/A
Name of Waterbody Affected: N/A
Total Quantity Recovered: 0 Total Quantity In Water: 0
Corrective Actions Taken: SOIL REMOVED REMOVED TANK
Discharge Class: COMMERCIAL
Cause of Incident: OVERFILL
Agencies Notified: DEP DISPATCH
Status: CLOSED

Emergency Response and Spill Prevention Division
Emergency Incident Report

Case No.: 99-04642
Staff Receiving Call: 931 COSS, BRIAN Assigned To: 000 NO RESPONSE
Date Reported: 07/15/1999 Time Reported: 12:06
Date of Release: 07/14/1999 Time of Release: 15:00
Town of Release: ORANGE State of Release: CT
Location of Reported Release: 11 FRONTAGE RD.
Reported By: DICK LEWIS Phone: (203) 380-5644
Representing: ENVIROSHIELD
Responsible Party: CBL TRUCKING COMPANY Phone:
Street Address: 124 GAITHER DR.
Town: MT. LAUREL State: NJ Zip Code:
Does the Responsible Party Accept Financial Responsibility? YES
Release Type: PETROLEUM
Release Substance: DIESEL FUEL
Media: SOIL AND LEAVES/DEBRIS
Total Quantity: 0 Gallons 2 Cubic Yards 0 Cubic Feet 0 Drums 0 Pounds
Emergency Measures: 10,000 AST 3 YEARS OLD BUT LEAK IS FROM PUMP
Has the Release Been Terminated?: YES
Type of Waterbody Affected:
Name of Waterbody Affected: NA
Total Quantity Recovered: 0 Total Quantity in Water: 0
Corrective Actions Taken: REMOVED TANK
Discharge Class: COMMERCIAL
Cause of Incident: PUMP FAILURE
Agencies Notified: WILL CALL ASAP
LOCAL FIRE MARSHAL

Status: CLOSED

Emergency Response and Spill Prevention Division
Emergency Incident Report

Case No.: 2001-09891
Staff Receiving Call: 210 MCCARTHY, KEVIN Assigned To: 000 NO RESPONSE
Date Reported: 11/21/2001 Time Reported: 19:30
Date of Release: 11/21/2001 Time of Release: UNKNOWN
Town of Release: ORANGE State of Release: CT
Location of Reported Release: 60 MARSH HILL ROAD
Reported By: BOB WAGNER Phone: (203) 795-7667
Representing: SOUTHERN CT GAS COMPANY
Responsible Party: Phone:
Street Address:
Town: State: Zip Code:
Does the Responsible Party Accept Financial Responsibility?
Release Type: BIOMEDICAL
Release Substance: WHITE POWDER
Media: AIR
Total Quantity: 0 Gallons 0 Cubic Yards 0 Cubic Feet 0 Drums 0 Pounds
Emergency Measures: POSSIBILITY THAT THE SUBSTANCE WAS POWDER FROM CANDY, HOSPITAL INSTRUCTING CALLER TO ADVISE DEP O/C WP IN ALTOID TIN CONTAINER NO CREADITABILIY NO SAMPLE
Has the Release Been Terminated?: YES
Type of Waterbody Affected: NONE
Name of Waterbody Affected: NONE
Total Quantity Recovered: 0 Total Quantity In Water: 0
Corrective Actions Taken: REFERRED
Discharge Class: UTILITY
Cause of Incident: UNKNOWN
Agencies Notified: LOCAL HEALTHCARE FACILITY
DEP DISPATCH
LOCAL POLICE

Status: CLOSED

Emergency Response and Spill Prevention Division
Emergency Incident Report

Case No.: 2004-08315
Staff Receiving Call: 916 STAVOLA, ROSANNE Assigned To: 000 NO RESPONSE
Date Reported: 12/03/2004 Time Reported: 11:09
Date of Release: 12/03/2004 Time of Release: UNKNOWN
Town of Release: ORANGE State of Release: CT
Location of Reported Release: SOUTHERN CT GAS CO, 60 MARSH HILL RD
Reported By: PAUL ALFONSI Phone: (203) 795-7782
Representing: SAA
Responsible Party: SAA Phone:
Street Address:
Town: State: Zip Code:
Does the Responsible Party Accept Financial Responsibility? YES
Release Type: PETROLEUM
Release Substance: HYDRAULIC OIL
Media: GROUND SURFACE
Total Quantity: 0 Gallons 0 Cubic Yards 0 Cubic Feet 0 Drums 0 Pounds
Emergency Measures: GARAGE LIFTS, SUSPECTED LEAK IN PIPE FROM TANK TO LIFTS, EXCAVATING NEXT WEEK. 1247 HRS, 14MAR05 - 3 LEFT TO BE REPAIRED WELL.
Has the Release Been Terminated?: NO
Type of Waterbody Affected:
Name of Waterbody Affected:
Total Quantity Recovered: 0 Total Quantity In Water: 0
Corrective Actions Taken:
Discharge Class: UTILITY
Cause of Incident: TRANSFER LINE FAILURE
Agencies Notified:
Status: CLOSED

Emergency Response and Spill Prevention Division
Emergency Incident Report

Case No.: 2006-07432
Staff Receiving Call: 205 COX, MICHAEL Assigned To: 000 NO RESPONSE
Date Reported: 11/22/2006 Time Reported: 11:43
Date of Release: 11/22/2006 Time of Release: 10:00
Town of Release: ORANGE State of Release: CT
Location of Reported Release: 60 MARSH HILL RD.
Reported By: PAUL ALFONSI Phone: (203) 795-7782
Representing: SOUTHERN CT. GAS COMPANY
Responsible Party: SAA Phone:
Street Address:
Town: ORANGE State: CT Zip Code: 06477-
Does the Responsible Party Accept Financial Responsibility? YES
Release Type: PETROLEUM
Release Substance: HYDRAULIC OIL
Media: AND UNDER CONCRETE PAD INSIDE BUILDING
Total Quantity: 14 Gallons 0 Cubic Yards 0 Cubic Feet 0 Drums 0 Pounds
Emergency Measures: investigating at this time what to do, contracting out to Haley Aldrich.
Has the Release Been Terminated?: YES
Type of Waterbody Affected: NONE
Name of Waterbody Affected:
Total Quantity Recovered: 0 Total Quantity In Water: 0
Corrective Actions Taken:
Discharge Class: COMMERCIAL
Cause of Incident: EQUIPMENT FAILURE
Agencies Notified: DEP DISPATCH
Status: CLOSED

STATE OF CONNECTICUT

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Bureau of Waste Management, Oil and Chemical Spill Response Division

Emergency Incident Report

Case No.: 2001-07244
Staff Receiving Call: 206 KINNEY, CLARENCE Assigned To: 918 LECLERC, KEN
Date Reported: 09/21/2001 Time Reported: 2:26
Date of Release: 09/21/2001 Time of Release: UNKNOWN
Town of Release: ORANGE State of Release: CT
Location of Reported Release: MARSH HILL ROAD & CASSCADE BLVD
Reported By: ORANGE POLICE Phone: (203) 891-2130
Representing:
Responsible Party: Phone:
Street Address:
Town: State: Zip Code:
Does the Responsible Party Accept Financial Responsibility?
Release Type: PETROLEUM
Release Substance: DIESEL FUEL
Media: GROUND SURFACE
Total Quantity: 75 Gallons 0 Cubic Yards 0 Cubic Feet 0 Drums 0 Pounds
Emergency Measures: TRACTOR TRAILER ACCIDENT
Has the Release Been Terminated?: YES
Type of Waterbody Affected:
Name of Waterbody Affected:
Total Quantity Recovered: 0 Total Quantity in Water: 0
Corrective Actions Taken: PUMPED OUT SANDED
CONTRACTED
Discharge Class: UNKNOWN
Cause of Incident: MV ACCIDENT
Agencies Notified: DEP DISPATCH
921
Status: CLOSED

CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106

BUREAU OF WASTE MANAGEMENT
OIL AND CHEMICAL SPILL RESPONSE DIVISION

EMERGENCY INCIDENT FIELD REPORT

Case Number :	2001-07244	Assigned By :	921			Assigned To (Lead ERC) :	918								
Additional ERC's On Scene :															
Date Reported :	09/21/2001	Time Reported :	02:26			Release Town :	ORANGE								
Location of Reported Release :	MARSH HILL ROAD & CASCADE BLVD.														
Reported By :	ORANGE POLICE			Phone:	203-891-2130	Phone :									
Representing :	ORANGE POLICE														
Responsible Party :	SYSTEM FREIGHT					Phone :	203-949-0717								
Street :	1 CENTRE DRIVE		Town :	JAMESBURG		State :	NJ	Zip Code	08831						
Financial Responsibility Accepted :		Yes :	X	No :	Date :	09/21/01	Time :	03:45							
Accepted/Denied by Whom :	SYSTEM FREIGHT					OCSRD ERC :	NA								
Release Type :	X	Petroleum		Chemical		Dielect		HazWaste		Sewage Related					
	Gaseous Emission		Biomedical		Other (Explain)										
Release Substance :	DIESEL FUEL														
	Unknown at this time	Date of Release :	09/21/01			Time of Release :	02:15								
Status of Release :		Historic	X	Terminated		Ongoing		Other							
Total Quantity Involved :	100	X	Gallons		CuYd		CuFeet		Drums		Lbs.				
Media :		Air		Ground Soil	X	Ground Surface		Groundwater	X	Surface Water					
	Inside of a Structure		Other (Explain)												
Emergency Measures :	CONTRACTED														
Type of Waterbody Impacted :		L.I.S		River	X	Stream/Brook		Groundwater		Pond					
X	Catch Basin		Sanitary Sewer		Floor Drain			No Waterbody affected							
Total Quantity Recovered (Gallons) :	100	Total Quantity in Waterbody (Gallons) :	100												
Total Quantity Recovered From Waterbody (Gallons) :	100														
Name of Waterbody Impacted :	UNKNOWN DRAINAGE DITCH														
Threatens Navigable Waterway :		Yes	X	No	Potential OPA-90 Case	X	Yes		No						
Pathway Identified :		Yes	X	No	Details :	NA									
U.S. EPA Contacted :	X	Yes		No	Time/Date :	05:30 09/21/01	FOSC	LORECK							
USCG Contacted :		Yes	X	No	Time/Date :	NA	FOSC	NA							
Property Owner # 1	STATE OF CONNECTICUT					Phone :									
Street :		Town :				State:		Zip Code:							
Property Owner # 2						Phone :									
Street :		Town :				State:		Zip Code:							

Transportation Incident :	X	Yes		No	Type :	X	Tractor Trailer		Truck		
	Passenger		Vessel		Other	Make/Model :	2001 MACK				
Vehicle Registration/Number :	NJ AF885E				Trailer Registration/Number :		ME 1124522				
Owner of Vehicle/Vessel :	SYSTEM FREIGHT					Phone :	SAA				
Street :	SAA		Town :	SAA		State :		Zip Code :			
Operator of Vehicle :	HORACE MILTON				Drivers License Number :		NY 672529811				
Street :			Town :			State :		Zip Code :			
Connecticut State Police Press Release Attached :		Yes	X	No	Trooper #	NA					
If No, Explain :	NA										
State Licensed Contractor Retained :	X	Yes		No	Hired by Whom :	CT DEP					
Name of Contractor (s) Retained :	EARTH TECHNOLOGY LLC										
Time/Date Requested :	03:50 09/21/01				Time/Date Arrived :	04:30 09/21/01					
Name of Contractor (s) Retained :	EARTH TECHNOLOGY LLC										
Spill Fund Authorized :	X	Yes		No	Authorized By :	SERC B. YORKE					
Time of Fund's Authorization :	03:50				Date of Fund's Authorization :	09/21/01					

MITIGATION EQUIPMENT

	Sea / Sorbent Boom		Sorbent Pads	1	# of Vacuum Trucks	X	Speedy Dry / Absorbents
X	Hand Tools		Boat		Excavation Equip.	X	Overpacks / Drums

EVIDENCE AVAILABLE ON THIS INCIDENT

Photographs of Scene	X	Yes		No	Video Tape of Scene		Yes	X	No		
If No, Explain :	NA										
Photographs Taken By :	918 – K.M. LECLERC				Video Tape Taken By :	NA					
Photographs Developed :		Yes	X	No	Photographs/Videos Submitted :		Yes	X	No		
Samples Taken :		Yes	X	No	Analytical Results Attached :		Yes	X	No		
If No, Explain :	NA										
Samples Taken By :	NA				Date Samples Taken :	NA					
Laboratory Performing Analysis :	NA				DOHS Laboratory		Yes	X	No		
Split Samples :		Yes	X	No	Split With Whom:	NA					
Chain of Custody :		Yes	X	No	Analysis Required :	NA					
If No, Explain :	NA										

CASE STATUS OF INCIDENT

Open :		Closed :	X	Report Author :	918 – K.M. LECLERC
Signature of Case Emergency Response Coordinator :					

INSPECTOR'S REPORT : On 09/21/2001, this ERC1 (K.M. LeClerc #918) was dispatched to the above address to investigate the report of a diesel fuel spill as a result of a tractor trailer accident.

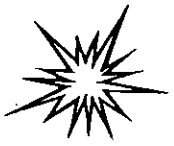
On arrival, this ERC met with Lt. Anderson of the Orange Fire Department. Both vehicles involved in the collision had been removed and approximately 100 gallons of red fuel oil had been spilled to the roadway and to 2 catch basins leading to a drainage ditch along the side of

Metro North tracks. Metro North officer Jimmy Anderson was on scene to coordinate operations along the railroad tracks.

Due to the fact that the driver was injured and in the hospital, SERC Ben Yorke approved the hiring of Earth Technology LLC utilizing the spill fund. Town of Orange personnel responded and sanded the road due to the rainy conditions. ETI personnel responded and utilized a road sweeper and vac truck to remediate the spilled fuel in both the road and drainage ditch and catch basins.

Based on the above information, this case is considered closed.

SECTION BREAK



UNDERGROUND STORAGE FACILITY NOTIFICATION

2. PG 1 of

STATE OF CONNECTICUT
Department of Environmental Protection
UNDERGROUND STORAGE FACILITIES PROGRAM
Bureau of Waste Management
79 ELM STREET, Hartford, CT 06106-5127
TEL. (860) 424-3374

EPHM-6 Rev. 5/94

PLEASE TYPE OR PRINT. ALL THREE COPIES MUST BE LEGIBLE
Refer to INSTRUCTIONS FOR FILING NOTIFICATION before completing form.

3. FOR STATE AGENCY USE ONLY | A. DATE ENTERED: 5-9-07 | B. FEE BILLED | C. FEE RECEIVED | D. GRID COORDINATES X ___ Y ___ | E. DOES FACILITY MEET NEW REQUIREMENTS? ☐ YES ☐ NO

SECTION A

1a. ☐ FIRST NOTIFICATION
OR
b. ☐ SUBSEQUENT NOTIFICATION (If checked, enter no.) SITE I.D. 107 + 05812

SECTION B

4. LOCATION OF FACILITY	SITE NAME: DICAELLO DISTILLERS INC	NO. AND STREET: 55 MARSH HILL RD.	NEAREST INTERSECTING STREET: CASCADE BLVD	CITY OR TOWN: ORANGE	STATE: CT	5. LATITUDE: N 41° 15' 57" LONGITUDE: W 73° 01' 27"
6. BUSINESS NAME AND MAILING ADDRESS	NAME: DICHELLO DISTILLERS INC	NO. AND STREET: 55 MARSH HILL Rd.		CITY OR TOWN: ORANGE	STATE: CT	ZIP CODE: 06477	TELEPHONE: (203) 891-2100
7. FACILITY OWNER	NAME: DICHELLO DISTILLERS INC	NO. AND STREET: 55 MARSH HILL Rd.		CITY OR TOWN: ORANGE	STATE: CT	ZIP CODE: 06477	TELEPHONE: (203) 891-2100
8. TYPE OF OWNER	☒ PRIVATE ☐ STATE ☐ MUNICIPAL ☐ FEDERAL (G.S.A. NO. _____)					41° 15' 04" 72° 59' 58"
OPERATOR/CONTACT 9. PERSON	NAME: PATRICK OATES	NO. AND STREET: 55 MARSH HILL Rd.		CITY OR TOWN: ORANGE	STATE: CT	ZIP CODE: 06477	TELEPHONE: (203) 891-2100

SECTION C

10. TANK I.D.	11a. DATE OF INSTALLATION (Mo./Yr.)	11b. LIFE EXPECTANCY (# of years)	12a. TOTAL CAPACITY (Gals.)	IN USE	12b. STATUS: ABANDONED IN PLACE	EST. QUANTITY LEFT STORED (If any) (Gals.)	REMOVED	DATE TANK LAST USED (Mo./Yr.)	13 TYPE OF CONTENTS: PETROLEUM PRODUCT	CHEMICAL LIQUID	14. CONTENTS: CHEMICAL NAME OF PRINCIPAL SUBSTANCE (not trade name) (Enter C.A.S. No., if known)	15. CONSTRUCTION MATERIALS: STEEL	FIBERGLASS REINFORCED PLASTIC	OTHER (Specify from List A)	16. PROTECTION a. INTERNAL: LINED	UNLINED	CATHODIC PROTECTION	b. EXTERNAL: COATED/WRAPPED	CATHODIC PROTECTION	OTHER (Specify from List B)	17. INTEGRAL PIPING SYSTEM a. CONSTRUCTION MATERIAL (See List A)	b. PROTECTION (See List B)	DATE OF INSTALLATION OR REPLACEMENT (Mo./Yr.)	18. MONITORING SYSTEM (Specify type from list B)	19. FAILURE DETERMINATION CONDUCTED? (If "YES", enter "DATE" and attach results). (If "NO", enter "NO")
Example	5/75	30	5000	X					X		Heating fuel #2		X			X				H	3	H	5/75	U	NO
Example	7/60	–	8000				X	8/78		X	1,1,1, - Tricloroethane CAS #79016	X				X				E	7	W	7/60	U	–
A1	3/80	30	10000				X	6/97			Fuel #2	X				X				E	7		3/80	O	NO
A2	3/80	30	10000				X	6/97			Fuel #2	X				X				E	7		3/80	O	NO
A3	3/80	30	2500				X	6/97			Gas	X				X				E	7		3/80	O	NO
B4	8/80	15	1000				X	6/97			Waste			2		X				H	2		8/80	K	NO
C5	8/80	15	5000				X	6/97			Waste			2		X				H	2		8/80	K	NO
D6	3/80	15	3000				X	6/97			Waste			2		X				H	2		3/80	L	NO

RECEIVED
MAY 08 2007
Bureau of Materials Management & Compliance Assurance
Storage Tank Enforcement Unit

SECTION D

20. HAVE YOU ATTACHED SKETCH OF TANKS AND LOCATION? ☐ YES

21. COMMENTS:
FROM LAST FILING 5/3/07 VISIT BY AGENT CZERNOTA. (20.)

22. CERTIFICATION: I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. Penalties: any owner who knowingly fails to notify shall be subject to a civil penalty not to exceed $10,000 for each tank for which notification is not given or for which false information is submitted.

22a. SIGNATURE: X [signature]
22b. DATE SIGNED: 5/4/07
22c. NAME (Type or Print): PATRICK OATES
22d. OFFICIAL TITLE (of owner or authorized representative): SENIOR DIRECTOR

COPY 1: SEND TO DEP: 79 ELM ST. HARTFORD, CT 06106

LIBERTY AUTO & ELECTRIC COMPANY, INC.

SERVICING THE PETROLEUM INDUSTRY
SINCE 1920

MEMBER PEI PETROLEUM EQUIPMENT INSTITUTE

38 GURDON STREET
P.O. BOX 6217
BRIDGEPORT, CT 06606
(203) 333-4112

E-1 Lic No. 102015
P 9 Lic No. 206886
F-3 Lic No. P80025

July 11, 1990

Town of Orange
Fire Marshall's Office
Orange Center Road
Orange, Connecticut 06477

107-5812

ATTN: Tim Smith

RE: Dichello Distributors
55 Marsh Hill Road
Orange, CT

This is to certify that Liberty Auto & Electric Co., removed and legally disposed of one (1) 2500 gallon tank, in accordance with Section 29-62-88 of Fire Marshall's Code of the State of Connecticut 1-75 and N.F.P.A. 30, Appendix B 1984.

Yours very truly,
Liberty Auto & Electric Co., Inc.

Brian H. Hulse
Vice President & Treasurer

BHH/ed
c:c: State of Connecticut D.E.P.
c:c: Dichello's Distributors, Orange, CT

FICATION

Department of Environmental Protection
UNDERGROUND STORAGE FACILITIES PROGRAM
HAZARDOUS MATERIALS MANAGEMENT UNIT
165 Capitol Avenue, Hartford, CT 06106
TEL. 566-4630

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Refer to INSTRUCTIONS FOR FILING NOTIFICATION before completing form.

Effective 6 NEW 10/85

2. [ ][ ]

CATION

hecked, er No.)

SITE I.D. 5812

3. FOR STATE AGENCY USE ONLY — A. SITE I.D. — B. DATE RCVD BY D.E.P 6-29-90 — C. DATE ENTERED

D. GRID COORDINATES X ____ Y ____ — E. DOES FACILITY MEET NEW REQUIREMENTS? ☐ YES ☐ NO

SECTION B

	NAME	NO. AND STREET	NEAREST INTERSECTING STREET	CITY OR TOWN	STATE	5. LATITUDE	LONGITUDE	ZIP CODE	TELEPHONE
6. BUSINESS NAME AND MAILING ADDRESS	Dichello Distributors, Inc.	55 Marsh Hill Road	Cascade Blvd	Orange	CT	N 900 597	E 1586 970 9		
7. FACILITY OWNER	Dichello Distributors, Inc.	55 Marsh HIll Road		Orange	CT	06477		(203) 865 7700	
OPERATOR/CONTACT 9. PERSON	Burton L. Zempsky	55 Marsh Hill Road		Orange	CT	06477		(203) 865 7700	

8. TYPE OF OWNER: ☒ PRIVATE ☐ STATE ☐ MUNICIPAL ☐ FEDERAL (G.S.A. No. _____)

SECTION C

10. TANK ID.	11a. DATE OF INSTALLATION (Mo./Yr.)	11b. LIFE EXPECTANCY (# of years)	12a. TOTAL CAPACITY (Gals.)	12 b. STATUS: IN USE	ABANDONED IN PLACE	EST. QUANTITY LEFT STORED (if any). (Gals.)	REMOVED	DATE TANK LAST USED (Mo./Yr.)	13. TYPE OF CONTENTS: OIL/PETROLEUM PRODUCT	CHEMICAL LIQUID	14. CONTENTS- CHEMICAL NAME OF PRINCIPAL SUBSTANCE (not trade name.) (Enter C.A.S. No., if known)	15. CONSTRUCTION MATERIALS: STEEL	FIBERGLASS REINFORCED PLASTIC	OTHER (Specify from list A)	16. PROTECTION a. INTERNAL: LINED	UNLINED	CATHODIC PROTECTION	b. EXTERNAL: COATED/WRAPPED	CATHODIC PROTECTION	OTHER (Specify from list B)	17. INTEGRAL PIPING SYSTEM a. CONSTRUCTION AND PROTECTION (from list A&B)	b. DATE OF INSTALLATION OR REPLACEMENT (Mo./Yr.)	18. MONITORING SYSTEM (Specify type from list D)	19. FAILURE DETERMINATION CONDUCTED? (If "YES", enter DATE and attach results). (If "NO", enter "NO")
Example	5/75	30	5000	X					X		Heating fuel #2		X			X				H	5	5/75	U	NO
Example	7/60	-	8000				X	8/78		X	1, 1, 1, - Trichloroethane CAS #79016	X				X				E	7	7/60	U	-
A3	3/80	~~30~~ 15	2,500				X	5/90	X		Gas	X				X				E	7	5/90	0	No

RECEIVED
JUN 29 1990
DEP HMMU
UST SECTION

SECTION D

20. HAVE YOU ATTACHED SKETCH OF TANKS AND LOCATION? ☐ YES

21. COMMENTS:

22. CERTIFICATION: "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. Penalties: any owner who knowingly fails to notify shall be subject to a civil penalty not to exceed $10,000 for each tank for which notification is not given or for which false information is submitted."

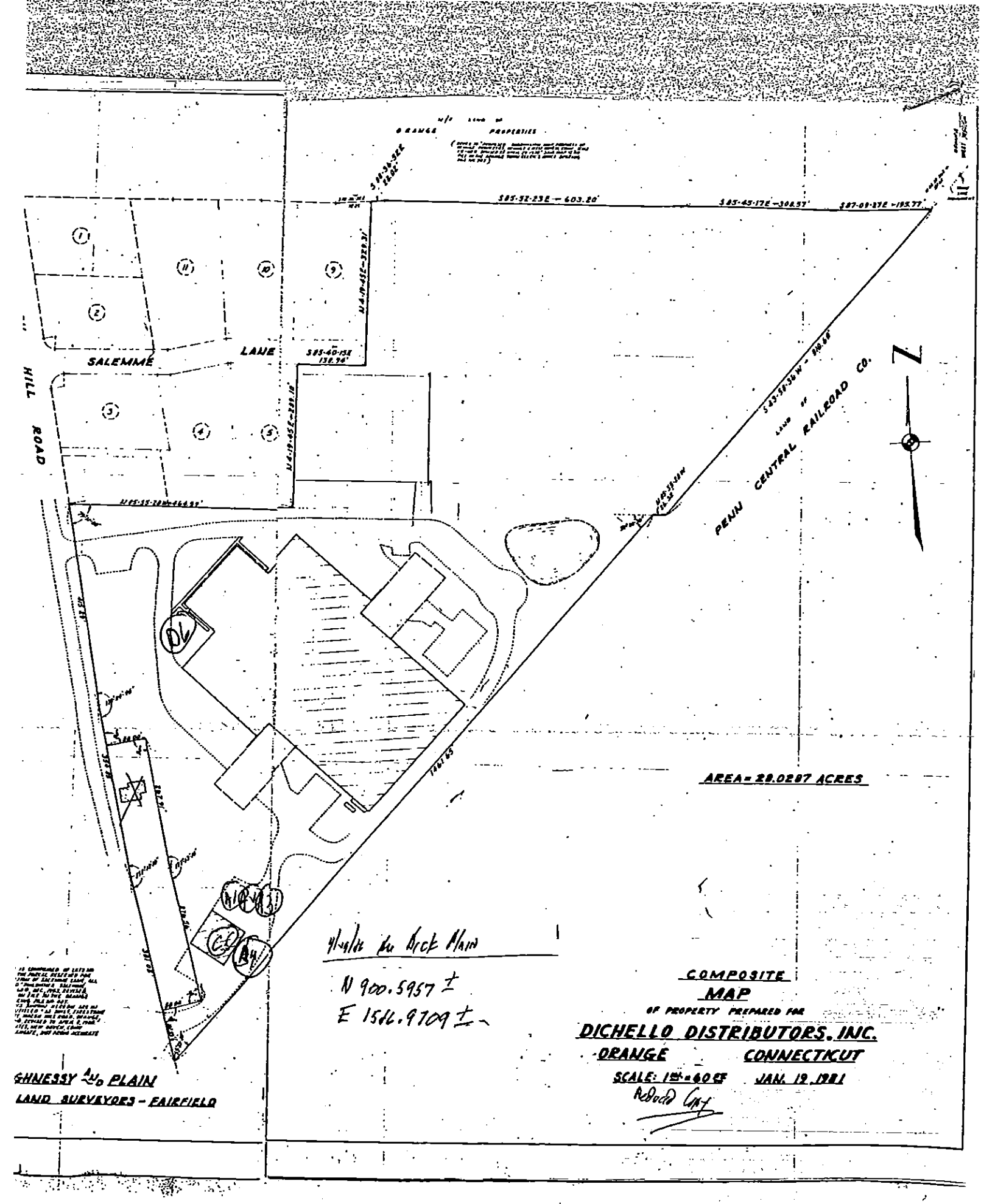
22a. SIGNATURE

22b. DATE SIGNED: June 27, 1990

22c. NAME (Type or Print): Burton L. Zempsky

22d. OFFICIAL TITLE (of owner or authorized representative): Executive Vice President

COPY 1: SEND TO DEP: 165 CAPITOL AVE. HARTFORD, CT 06103


SALEMME
LANE
HILL ROAD
PENN CENTRAL RAILROAD CO.
AREA = 28.0287 ACRES
4/4/81 Lu Brick Main
N 900.5957 ±
E 1516.9709 ±
COMPOSITE
MAP
OF PROPERTY PREPARED FOR
DICHELLO DISTRIBUTORS, INC.
ORANGE CONNECTICUT
SCALE: 1" = 60' JAN. 19, 1981
Reduced Copy
GHNESSY AND PLAIN
LAND SURVEYORS - FAIRFIELD

UNDERGROUND STORAGE FACILITY NOTIFICATION

2. PG 1 of 1

STATE OF CONNECTICUT
Department of Environmental Protection
UNDERGROUND STORAGE FACILITIES PROGRAM
Bureau of Waste Management
79 ELM STREET, Hartford, CT 06106-5127
TEL. (860) 424-3374

EPHM-6 Rev. 5/94

PLEASE TYPE OR PRINT. ALL THREE COPIES MUST BE LEGIBLE
Refer to INSTRUCTIONS FOR FILING NOTIFICATION before completing form.

3. FOR STATE AGENCY USE ONLY | A. DATE ENTERED: 1-9-07 | B. FEE BILLED | C. FEE RECEIVED

D. GRID COORDINATES X ____ Y ____ | E. DOES FACILITY MEET NEW REQUIREMENTS? ☐ YES ☐ NO

SECTION A

1a. ☐ FIRST NOTIFICATION
OR
b. ☒ SUBSEQUENT NOTIFICATION (If checked, enter no.) SITE I.D. 102-1087

SECTION B

4. LOCATION OF FACILITY	SITE NAME: Southern Connecticut Gas Co.	NO. AND STREET: 60 Marsh Hill Rd.	NEAREST INTERSECTING STREET: Frontage Rd	CITY OR TOWN: Orange	STATE: CT	5. LATITUDE: 41° 15' 00" LONGITUDE: 73° 00' 00"
6. BUSINESS NAME AND MAILING ADDRESS	NAME: Southern Connecticut Gas Co.	NO. AND STREET: SAME		CITY OR TOWN: Orange	STATE: CT	ZIP CODE: 06477 TELEPHONE: (203) 795-7782
7. FACILITY OWNER	NAME: Southern Connecticut Gas Co.	NO. AND STREET: SAME		CITY OR TOWN: Orange	STATE: CT	ZIP CODE: 06477 TELEPHONE: (203) 795-7782
8. TYPE OF OWNER	☒ PRIVATE ☐ STATE ☐ MUNICIPAL ☐ FEDERAL (G.S.A. NO. ____)					
9. OPERATOR/CONTACT PERSON	NAME: Paul Alfonsi	NO. AND STREET: 60 Marsh Hill Road		CITY OR TOWN: Orange	STATE: CT	ZIP CODE: 06477 TELEPHONE: (203) 795-7782

SECTION C

10. TANK I.D.	11a. DATE OF INSTALLATION (Mo./Yr.)	11b. LIFE EXPECTANCY (# of years)	12a. TOTAL CAPACITY (Gals.)	12b. STATUS: IN USE	ABANDONED IN PLACE	EST. QUANTITY LEFT STORED (If any) (Gals.)	REMOVED	DATE TANK LAST USED (Mo./Yr.)	13 TYPE OF CONTENTS: PETROLEUM PRODUCT	CHEMICAL LIQUID	14. CONTENTS: CHEMICAL NAME OF PRINCIPAL SUBSTANCE (not trade name) (Enter C.A.S. No., if known)	15. CONSTRUCTION MATERIALS: STEEL	FIBERGLASS REINFORCED PLASTIC	OTHER (Specify from List A)	16. PROTECTION a. INTERNAL: LINED	UNLINED	CATHODIC PROTECTION	b. EXTERNAL: COATED/WRAPPED	CATHODIC PROTECTION	OTHER (Specify from List B)	17. INTEGRAL PIPING SYSTEM a. CONSTRUCTION MATERIAL (See List C)	b. PROTECTION (See List B)	DATE OF INSTALLATION OR REPLACEMENT (Mo./Yr.)	18. MONITORING SYSTEM (Specify type from list B)	19. FAILURE DETERMINATION CONDUCTED? (If "YES", enter "DATE" and attach results). (If "NO", enter "NO")
Example	5/75	30	5000	X					X		Heating fuel #2		X			X				H	3	H	5/75	U	NO
Example	7/60	–	8000				X	8/78		X	1,1,1 - Trichloroethane CAS #79016	X				X				E	7	W	7/60	U	–
G-1	9/93	30	10000	T					X		Gasoline		X			X				B,D	3	B	9/93	T- TLS-350 Veeder Root	YES- TLS-350 Veeder Root
D-1	9/93	30	10000	T					X		Diesel		X			X				B,D	3	B	9/93	T TLS-350 Veeder Root	YES TLS-350 Veeder Root

RECEIVED
JAN 09 2007
Bureau of Materials Management
& Compliance Assurance
Storage Tank Enforcement Unit

SECTION D

20. HAVE YOU ATTACHED SKETCH OF TANKS AND LOCATION? ☐ YES

21. COMMENTS:
TANKS G-1 and D-1 are "Temporarily out of Service" as of December 6th, 2006.

22. CERTIFICATION: I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. Penalties: any owner who knowingly fails to notify shall be subject to a civil penalty not to exceed $10,000 for each tank for which notification is not given or for which false information is submitted.

22a. SIGNATURE: X By Juliet L. Janczewski

22b. DATE SIGNED: 1/3/07

22c. NAME (Type or Print): JULIET L. JANCZEWSKI

22d. OFFICIAL TITLE (of owner or authorized representative): SR. CORPORATE COUNSEL & SECRETARY

COPY 1: SEND TO DEP: 79 ELM ST. HARTFORD, CT 06106

UST Data Report

Owner ID: 6385

Owner

6385

OwnerType: Private
Name: SOUTHERN CONNECTICUT GAS CO.
Address: 855 MAIN ST.
City, ST Zip: Bridgeport CT 06604
Contact: Phone: (203) 382-8111
OwnerDesc: Private Fax:
Comment:

Facility

Owner ID: 6385 Alt Fac ID: 107-11037

Facility ID: FacilityType: OperFirstNam OperLastName Phone
Facility Name: Street Address: City: State ZIP:
Comments:

11037 Not Listed		PAUL	ALFONSI
SOUTHERN CONNECTICUT GAS CO			
60 MARSH HILL RD	Orange	CT	06477

Site Owner GSA #:
Site Basin Name: NO LAT/LONG
Site Proprietary Code: N
Site Grid X: 1
Site Grid Y: 1
Intersecting Street: FRONTAGE RD
Check ZIP code...may not be correct!

Date of Receipt: 1/9/2007

LatDeg: +04
LatMin: 11
LatSec: 51.00
LongDeg: 007
LongMin: 34
LongSec: 51.00

Facility Contacts:

Last Name:	Phone:
MIKE WASILNAK/ P. ALFONSI	(203) 795-7782
SOUTHERN CONN. GAS CO.	(203) 795-7782

Tank

Fac ID: 11037

Tank Status: (•) All Tanks ( ) In Use ( ) Perm Out of Use ( ) Temp Out of Use

TankID Tank Stat Desc: Closure Status Desc: Capacity:
Overfill inst Spill Inst CP Met FedRegd? Tank Mat Desc:
Subs.Desc: Dt Lst Usd: TankModsDesc: PipeMatDes PipeModDesc:

1	Temporarily Out of Us						10000
☑	☐	☑	☑	Fiberglass Reinforced Plastic			
Gasoline	12/06/06	Double-Walled				Fiberglass Reinfor	Double-Wall
2	Temporarily Out of Us						10000
☑	☐	☑	☑	Fiberglass Reinforced Plastic			
Gasoline	12/06/06	Double-Walled				Fiberglass Reinfor	Double-Wall

UST Data Report

Owner ID: 7976

Owner

7976

OwnerType: Not Listed
Name: B & R Realty
Address: 25 Connair Road
City, ST Zip: Orange CT 06477
Contact: Phone: (203) 795-1283
OwnerDesc: Not Listed Fax:
Comment:

Facility

Owner ID: 7976 Alt Fac ID: 107-11393

Facility ID: FacilityType: OperFirstNam OperLastName Phone
Facility Name: - Street Address: City: State ZIP:
Comments:

11393 Not Listed		(203) 795-128
Roebic Laboratories, Inc.		
25 Connair Road	Orange	CT 06477

Date of Receipt: 9/1/1994

LatDeg:
LatMin:
LatSec:
LongDeg:
LongMin:
LongSec:

Facility Contacts:

Last Name:	Phone:
Bush	(203) 795-1283

Tank

Fac ID: 11393

Tank Status: (•) All Tanks ( ) In Use ( ) Perm Out of Use ( ) Temp Out of Use

TankID	Tank Stat Desc:	Closure Status Desc:	Capacity:
Overfill inst	Spill Inst	CP Met	FedRegd?	Tank Mat Desc:
Subs.Desc:	Dt Lst Usd:	TankModsDesc:	PipeMatDes	PipeModDesc:
1	Permanently Out of U	Tank removed from ground		2000
☐	☐	☐	☑	Asphalt Coated or Bare Steel		
Gasoline	06/01/79	None	Bare Steel	None

SECTION BREAK

ECAF RECOMMENDATION

To: Robert Bell, Assist. Director
Bureau of Water Protection and Land Reuse
Remediation Division

Thomas RisCassi, Supervisor
Remediation Division/ South Central District District

From: Martin Beskind, Sanitary Engineer
South Central District

Date: March 13, 2008

RE: Determination of a Form III ECAF
Recommendation for LEP Verification

Bayer Pharmaceuticals Corp. aka Aviation Components — Rem ID # 8718
11 Frontage Rd./95 Marsh Hill Rd., Orange, CT — Drainage Basin # 5000-53

On September 28, 2007, DEP received a Form III and ECAF for the Purchase and Sale of Real Estate of the referenced property. Peter A. Reinhardt, Director of Environmental Health and Safety, Yale University, certified the Form III and ECAF as the transferee.

SITE DESCRIPTION

Two buildings (33,000 sq. ft. total) are located on the western portion of this seventeen-acre site. The site is located in a mixed commercial, industrial and residential area; the eastern portion of the site is undeveloped. A day care facility and a farm adjoin the site. Oyster River and wetlands cross the eastern portion of the property. Helicopter and vehicle maintenance facilities and a truck terminal occupied the site in the past. Operations included machining, degreasing, painting, plating, and truck maintenance. The site is currently used for warehouse storage. Ground water classification is GA. Public water and sewer serve are connected to this site.

PROPERTY TRANSFER HISTORY A Form III and ECAF were filed on Jan. 5,1998; the site was retained by DEP. Form III and ECAF were filed on November 2, 2000; verification was assigned to an LEP.

ENVIRONMENTAL CONDITIONS

Groundwater beneath the site has been impacted with VOCs, primarily 1,1,1TCA and its breakdown products. Intermittent pump and treat remediation in the 1990s appears to have reduced concentrations considerably. Excavation of petroleum-impacted soil and fill was carried out in 2000. ETPH, barium, lead and cadmium have been detected at concentrations above GWPC in the past.

I recommend that the investigation and remediation of this site be delegated to a licensed environmental professional for verification.

→ Public water and sewer service the area.

→ Recent investigation indicates that VOC concentrations are below RSR criteria.

Property Transfer Fee Payment Form

Fees are payable pursuant to Section 22a-134e of the Connecticut General Statutes (CGS) for the Transfer of Establishment CGS Section 22a-134a, Forms I-IV.

Only bank checks or money orders made payable to the Department of Environmental Protection will be accepted.

DEP USE ONLY

Date Payment Received: _____

Received by: _____

Date Notice for Transfer of Establishment received: _____

1. **Transferor: Bayer Pharmaceuticals Corporation**
   Mailing Address: **400 Morgan Lane**
   City/Town: **West Haven** State: **CT** Zip Code: **06516-4175**

2. **Transferee: Yale University**
   Mailing Address: **135 College Street, 1st Floor**
   City/Town: **New Haven** State: **CT** Zip Code: **06510-2411**

3. **Establishment: Bayer Pharmaceuticals Corporation**
   Mailing Address: **11 Frontage Road / 95 Marsh Hill Road (also known as "Parcel 8")**
   City/Town: **Orange** State: **CT** Zip Code: **06477**

4. **Date of Transfer:** 9/25/2007

5. **Certifying Party** (as referenced in Forms III & IV): **Yale University**

6. **Payor: Yale University**
   Mailing Address: **135 College Street, 1st Floor**
   City/Town: **New Haven** State: **CT** Zip Code: **06510-2411**
   Phone: **203-785-3550**

7. **Filing Fee** (Please check the appropriate fee paid).
   - ☐ Form I $300.00
   - ☐ Form II $1,050.00 (Higher fees may be applicable; refer to CGS Section 22a-134e for fee.)
   - ☒ Form III Initial Fee $3,000.00
   - ☐ Form IV Initial Fee $3,000.00

HOLD DOCUMENT UP TO THE LIGHT TO VIEW TRUE WATERMARK

OFFICIAL CHECK

HOLD DOCUMENT UP TO THE LIGHT TO VIEW TRUE WATERMARK

Citizens Bank

23-97
1020

802338949-0

September 14, 2007

PAY **$3,000.00** DOLLARS

TO THE ORDER OF ****CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION****

MEMO: Yale/Bayer - Lot # 8

Drawer: RBS Citizens, N.A.
Citizens Bank is a division of RBS Citizens, N.A.

Security Features Details on Back.

Issued by Integrated Payment Systems Inc., Englewood, Colorado
JPMorgan Chase Bank, N.A., Denver, Colorado

AUTHORIZED SIGNATURE

MP

Bayer Pharmaceuticals Corp, Orange

⑈222465⑈ ⑆102000991⑆ 6800802338948⑈

Transfer of Establishment - Form III
(REAL ESTATE)

WATER PROTECTION AND LAND REUSE

SEP 2 8 2007

REMEDIATION DIVISION

Complete all sections. Use this form when transferring any real property that meets the definition of an establishment, as defined in Section 22a-134(3) of the CGS. This form can also be used when transferring both real property and business operations simultaneously from "A" to "B." This form is appropriate when a discharge, spillage, uncontrolled loss, seepage or filtration of hazardous waste or a hazardous substance has occurred at the parcel or the environmental conditions at the parcel are unknown prior to the transfer. The person signing the certification agrees to investigate the parcel in accordance with prevailing standards and guidelines and to remediate the parcel in accordance with the remediation standards, Section 22a-133k and Section 22a-133q of the Regulations of Connecticut State Agencies (RCSA). **AN ENVIRONMENTAL CONDITION ASSESSMENT FORM (ECAF) MUST BE SUBMITTED SIMULTANEOUSLY WITH FORM III.**

Section A: General Establishment Information

1. **EPA (RCRA) ID No.: CTD093607711**

2. **Type of Transfer** (be specific): **Conveyance of Real Property**

3. **Identification of Establishment** (give name of business which exists/existed on-site)

   Establishment Name: **Bayer Pharmaceuticals Corporation**

   Location: **11 Frontage Road / 95 Marsh Hill Road (also known as "Parcel 8")**

   City/Town: **Orange** State: **CT** Zip Code: **06477-**

   Phone: **914-366-1740** ext. Fax: **914-366-1784**

   Contact Person: **Jeffrey M. Greenman, Esq.** Title: **General Counsel & Secretary, Bayer Pharmaceuticals Corporation**

   Date of Transfer: **9/25/2007**

   From Transferor: **Bayer Pharmaceuticals Corporation**

   To Transferee: **Yale University**

4. **Transferor**

   Name: **Bayer Pharmaceuticals Corporation**

   Legal Mailing Address: **400 Morgan Lane**

   City/Town: **West Haven** State: **CT** Zip Code: **06516-4175**

   Phone: **914-366-1740** ext. Fax: **914-366-1784**

   Contact Person: **Jeffrey M. Greenman, Esq.** Title: **General Counsel & Secretary, Bayer Pharmaceuticals Corporation**

5. **Property Owner** (as it appears in land records):

   Name: **Bayer Pharmaceuticals Corporation**

   Legal Mailing Address: **400 Morgan Lane**

   City/Town: **West Haven** State: **CT** Zip Code: **06516-4175**

   Phone: **914-366-1740** ext. Fax: **914-366-1784**

   Contact Person: **Jeffrey M. Greenman, Esq.** Title: **General Counsel & Secretary, Bayer Pharmaceuticals Corporation**

6. ***A map of the property location must be submitted with this form.***

RD

Section B: Certification (This is the certifying party as defined in CGS Section 22a-134(6))

Description in Property Deed: **SEE ATTACHMENT A**

Recorded on page **81** of volume **500** , of the Town of **Orange**

land records, as lot **4** , block **3** on map **8** in the Tax Assessor's Office.

"As the certifying party, I certify that, to the extent necessary to minimize or mitigate a threat to human health and the environment, I agree to investigate the parcel in accordance with prevailing standards and guidelines and to remediate the parcel in accordance with the remediation standards. I agree to contain, remove, or abate pollution, potential sources of pollution and substances in soil or sediment which pose an unacceptable risk to human health or the environment."

"I have personally examined and am familiar with the information submitted in this document, and all attachments thereto, including inquiry of those individuals immediately responsible for obtaining such information, and certify that the submitted information is true, accurate and complete, to the best of my knowledge and belief. I am aware that if I knowingly submit false information or fail to comply with the provisions of CGS Sections 22a-134 to 22a-134e, I may be subject to damages and penalties pursuant to CGS Sections 22a-134(b and d) and an enforcement action pursuant to CGS Section 22a-134a(j). I further certify that I submitted this Form III to the transferee prior to the transfer of establishment."

"This Form III is complete and accurate as prescribed by the commissioner without alteration of the text."

This must be signed by an individual(s), if in such capacity; a responsible corporate officer; partner in a partnership; member of a LLC, as applicable.

P. A. Reinhardt

Authorized Signature(s) for Certifying Party

Peter A. Reinhardt
Name of Signatory for Certifying Party (print or type)

Director of Environmental Health and Safety, Yale University
Title (if applicable)

Representing: **Yale University**
(Company name, LLC, as applicable)

Legal Mailing Address: **135 College Street, 1st Floor**

City/Town: **New Haven** State: **CT** Zip Code: **06510-2411**

Phone: **203-785-3550** ext. Fax: **203-785-7588**

STATE OF **Connecticut** }
} SS. **New Haven**
COUNTY OF **New Haven** } *(Town)*

The foregoing was subscribed to and sworn to before me this 25th day of **September, 2007,**

by **Peter A. Reinhardt, Director of Environmental Health and Safety, Yale University**
(Name of Signatory, Title and Company, if applicable)

who personally appeared, and that person, as such, satisfactorily proven to be authorized to do so, as certifying party, executed the foregoing instrument for the purposes therein contained.

Barbara A. Ceriello

Signature of Notary/Commissioner of Superior Court

Name of Notary/Commissioner of Superior Court (print or type)

My commission expires 7/31/2012

Section C: Reason for Filing Form III

Indicate the reason why a Form III is being submitted: **A Form I, II, or IV cannot be filed.**

Section D: Transferee Information (This pertains to transferee, must be completed, signed and notarized)

This document was received by me on 9/25/2007 as the Transferee.

This must be signed by an individual(s), if in such capacity; a responsible corporate officer; partner in a partnership; member of a LLC, as applicable.

Authorized Signature(s) for Transferee

Peter A. Reinhardt
Name of Person Signing (print or type)

Director of Environmental Health and Safety, Yale University
Title (if applicable)

Transferee: **Yale University**

Mailing Address: **135 College Street, 1st Floor**

City/Town: **New Haven** State: **CT** Zip Code: **06510-2411**

Phone: **203-785-3550** ext. Fax: **203-785-7588**

STATE OF **Connecticut** }
} SS. **New Haven**
COUNTY OF **New Haven** } *(Town)*

The foregoing was subscribed to and sworn to before me this 25th day of **September, 2007,**

by **Peter A. Reinhardt, Director of Environmental Health and Safety, Yale University**
(Name of Authorized Signatory for Transferee, Title and Company, if applicable)

who personally appeared, and that person, as such, satisfactorily proven to be authorized to do so, as Transferee, executed the foregoing instrument for the purposes therein contained.

Signature of Notary/Commissioner of Superior Court

Name of Notary/Commissioner of Superior Court (print or type)

My commission expires 7/31/2012

Section E: Transferor Information (This pertains to transferor, must be completed, signed and notarized)

This must be signed by an individual(s), if in such capacity; a responsible corporate officer; partner in a partnership; member of a LLC, as applicable, and must be completed regardless of whether the Transferor is also the certifying party.

Authorized Signature(s) for Transferor

Jeffrey M. Greenman, Esq.
Name of Person Signing (print or type)

General Counsel & Secretary, Bayer Pharmaceuticals Corporation
Title (if applicable)

Transferor: **Bayer Pharmaceuticals Corporation**

Mailing Address: **400 Morgan Lane**

City/Town: **West Haven** State: **CT** Zip Code: **06516-4175**

Phone: **914-366-1740** ext. Fax: **914-366-1784**

STATE OF **Connecticut** }
} SS. **West Haven**
COUNTY OF **New Haven** } *(Town)*

The foregoing was subscribed to and sworn to before me this **20th** day of **September, 2007,**

by **Jeffrey M. Greenman, Esq., General Counsel & Secretary, Bayer Pharmaceuticals Corporation**
(Name of Authorized Signatory for Transferor, Title and Company, if applicable)

who personally appeared, and that person, as such, satisfactorily proven to be authorized to do so, as Transferor, executed the foregoing instrument for the purposes therein contained.

Signature of Notary/Commissioner of Superior Court

Name of Notary/Commissioner of Superior Court (print or type)

ELAINE PORTER
NOTARY PUBLIC
MY COMMISSION EXPIRES JUNE 30, 2011

My commission expires /

This form is prescribed and provided by the DEP.
The DEP does not certify that the information submitted in this form is correct.

All Forms I (with ECAF), II, III (with ECAF), or IV (with ECAF), any supporting documents as applicable, and fee payment should be mailed or hand delivered to: (*this is for fee processing*)

CENTRAL PERMIT PROCESSING UNIT, 1st FLOOR
DEPARTMENT OF ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127

All *subsequent* correspondence or *subsequent* reports should be mailed to:

REMEDIATION DIVISION, 2nd FLOOR
BUREAU OF WATER PROTECTION AND LAND REUSE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127

ATTACHMENT A

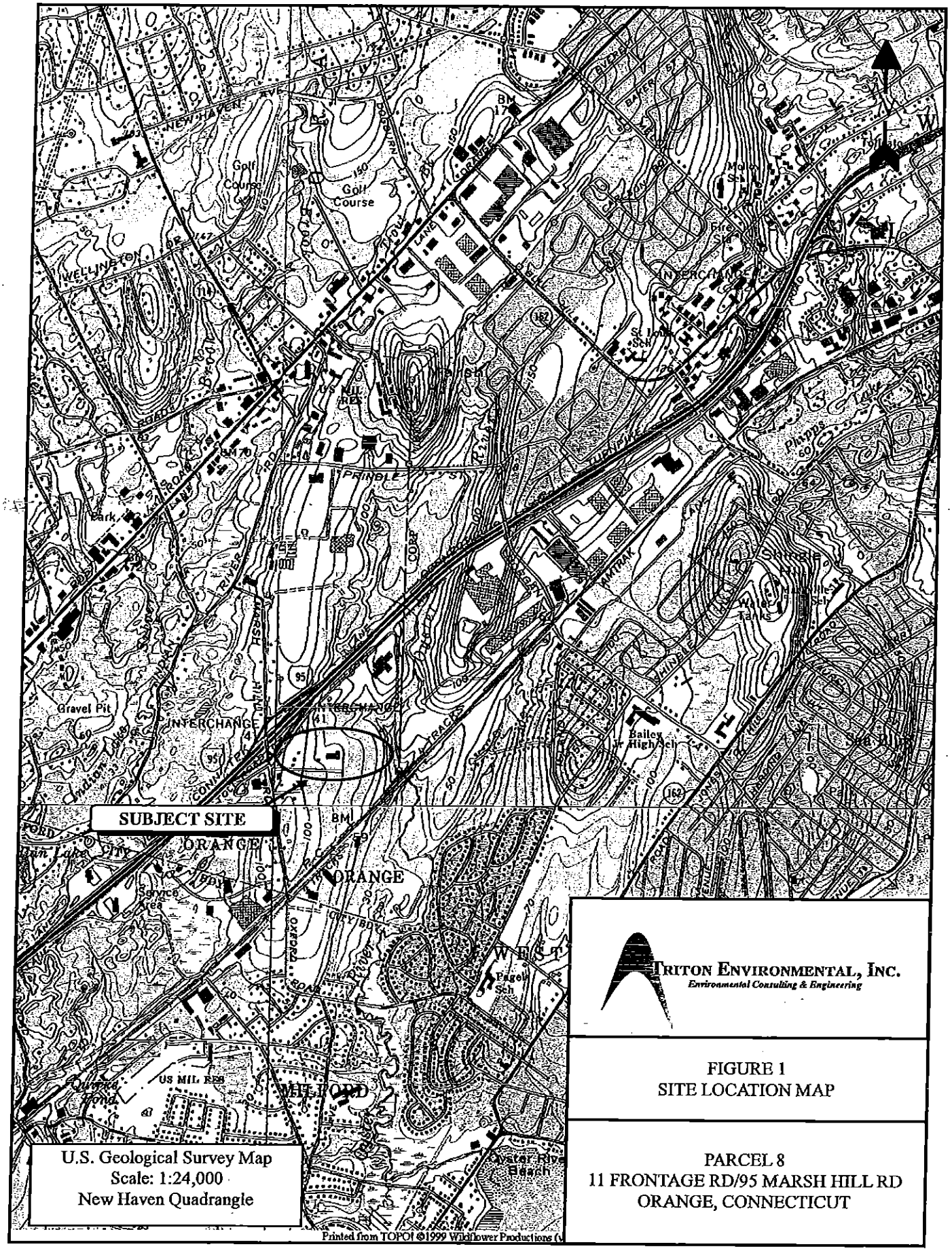
Description of 11 Frontage Road / 95 Marsh Hill, West Haven
(also known as "Parcel 8")

All that certain piece or parcel of land, with any improvements thereon, situated mainly in the Town of Orange, County of New Haven and State of Connecticut, a very small portion thereof being situated in the Town of West Haven, County of New Haven and State of Connecticut, being Parcel #2 on a map entitled "Proposed Subdivision Map property of Orange Properties Orange & West Haven, Conn." by Igor Vechesloff, Professional Engineer and Land Surveyor, on file in the Orange Town Clerk's office and bounded:

Commencing at a point in the Easterly line of Marsh Hill Road, which point is 50.94 feet Northwesterly from the Northwesterly corner of land now or formerly of Renzo J. Hilda M. Pierpaoli;
thence running South 86° 35' 19" East 315.30 feet to a point;
thence running South 86° 03' 22" East 181.03 feet to a point;
thence running South 84° 34' 26" East 154.34 feet to an iron pipe;
thence running North 0° 59' 58" East 293.00 feet to a point;
thence running South 85° 06' 00" East 60.15 feet to a point;
thence running North 0° 59' 58" East 197.24 feet to a point;
thence running South 75° 02' 55" East 48.24 feet to a point;
thence running South 81° 25' 15" East 104.18 feet to a point;
thence running North 88° 21' 28" East 109.00 feet to a point;
thence running South 86° 36' 27" East 446.26 feet to a point;
thence running North 83° 33' 22" East 180.87 feet to a point;
thence running South 86° 51' 03" East 102.28 feet to a point;
thence running South 77°34' 18" East 40.06 feet to a point;
thence running South 89° 01' 38" East 100.52 feet to a point;
thence running South 88° 36' 48" East 116.75 feet to a point;
thence running in a generally southerly direction by a broken line the following courses and distances:
South 26° 33' 47" East 57.39 feet;
South 6° 38' 37" East 75.58 feet;
South 18° 40' 21" West 48.19 feet;
South 14° 51' 12" East 51.14 feet;
South 17° 52' 00" West 25 feet;
South 1° 03' 12" West 59.75 feet;
South 52° 51' 10" East 42.32 feet;
South 31° 39' 07" East 55.38 feet;
South 43° 58' 36" West 260.16 feet;
thence running North 87° 09' 27" West 195.77 feet;
thence running North 85° 45' 17" West 308.57 feet;
thence running North 85° 52' 23" West 603.20 feet;
thence running North 88° 36' 52" West 100.27 feet;
thence running North 84° 34' 26" West 169.57 feet;
thence running North 86° 03' 22" West 180.15 feet;
thence running North 86° 35' 19" West 305.31 feet;
thence running North 7° 37' 30" West 50.94 feet to the point of beginning.

Excepting therefrom that certain piece or parcel of property as described in a Certificate of Condemnation dated November 20, 1997 and recorded December 5, 1997 in Volume 413 at Page 782 of the Orange Land Records.

40243681 v2



U.S. Geological Survey Map
Scale: 1:24,000
New Haven Quadrangle

TRITON ENVIRONMENTAL, INC.
Environmental Consulting & Engineering

FIGURE 1
SITE LOCATION MAP

PARCEL 8
11 FRONTAGE RD/95 MARSH HILL RD
ORANGE, CONNECTICUT

R:*PROJECTS\103000\103056\Topo\103056TOPO.doc

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER PROTECTION AND LAND REUSE
REMEDIATION DIVISION
79 ELM STREET, HARTFORD, CT 06106-5127

Environmental Condition Assessment Form (ECAF)

Please complete this form in accordance with the instructions (DEP-PTP-INS-200). Print or type unless otherwise noted. Use an addendum page if necessary.

☒ Please check the box if this form is being submitted with a property transfer filing under Connecticut General Statutes (CGS) Section 22a-134a.

☐ Please check the box if this form is being submitted pursuant to CGS Section 22a-133x.

☒ Please check the box if addendum sheets are attached.

DEP USE ONLY
WATER PROTECTION AND LAND REUSE
SEP 2 8 2007
REMEDIATION DIVISION

Part I: Site Information

1. Name of Site: **Bayer Pharmaceuticals Corporation**
   Street Address: **11 Frontage Road / 95 Marsh Hill Road (a.k.a. Parcel 8)**
   City/Town: **Orange** State: **CT** Zip Code: **06477-**
2. EPA ID#: CTD **093607711** DEP-WPC #:
3. Fill in the name of the business/person submitting this form:
   Name: **Yale University**
   Mailing Address: **135 Church Street, 1st Floor**
   City/Town: **New Haven** State: **CT** Zip Code: **06510-2411**
   Business Phone: **203-785-3550** ext. Fax: **203-785-7588**
   Authorized Representative: **Peter A. Reinhardt** Title: **Dir. Env. H&S, Yale**
4. Fill in the name of the person who will serve as primary contact for the CT DEP:
   Firm Name: **Triton Environmental, Inc.**
   Mailing Address: **385 Church Street, Suite 201**
   City/Town: **Guilford** State: **CT** Zip Code: **06437-**
   Business Phone: **203-458-7200** ext. Fax: **203-458-7201**
   Primary Contact: **Mr. J. Carver Glezen** Title: **Senior Vice President**
5. Fill in the name of the owner of the parcel, if different from the name and address in item 3 above:
   Name: **Bayer Pharmaceuticals Corporation**
   Mailing Address: **400 Morgan Lane**
   City/Town: **West Haven** State: **CT** Zip Code: **06516-4175**
   Business Phone: **914-366-1740** ext. Fax: **914-366-1784**
   Contact Person: **Jeffrey Greenman, Esq.** Title: **Gen. Counsel & Secretary**

Part I: Site Information (cont.)

6. Pursuant to CGS Section 22a-134a and Section 22a-133x, the Licensed Environmental Professional (LEP) must sign below as supervising the completion of this ECAF. If there is more than one, please attach an addendum with the requested information for each LEP.

Print or type LEP Name: **J. Carver Glezen**

Firm Name: **Triton Environmental, Inc.**

Address: **385 Church Street, Suite 201**

City/Town: **Guilford** State: **CT** Zip Code: **06437-**

Business Phone: **203-458-7200** ext. Fax: **203-458-7201**

9-21-07

Signature of LEP **338** LEP #

Part II: Site History, Waste Management History

1. Summary of industrial/commercial history of site (present and former use, including dates and SIC codes):

See Attachment A (Site History)

2. Hazardous substances or petroleum products presently or formerly handled at the site (list materials & management method):

See Attachment B (Waste Management History)

3. RCRA Notifier Status: **Former LQG** RCRA Permit Status:

4. Has any enforcement action been taken by CT DEP or EPA regarding waste handling practices at the site, or requiring remediation at the site? ☐ Yes ☒ No

If yes, list action type, date, number, name of party, purpose & status:

5. Releases reported to CT DEP Oil & Chemical Spills? ☒ Yes ☐ No

If yes, list date, material released and quantity:

6/30/90, 50 gallons of diesel fuel released due to truck overfill
2/14/97, petroleum impacted soil encountered during tank removal

6. Previous Form filings with CT DEP Property Transfer Program? ☒ Yes ☐ No

If yes, list form & date:

Form III, 1998; Form III, 2000

7. CT DEP staff involved with assessment or remediation of the site:

Corinne Fitting and Thomas RisCassi

Part II: Site History, Waste Management History (cont.)

8. a. List any release areas or potential release areas on the site, and for each describe the nature of the release, the date and estimated duration of the release, and an estimated volume of the release. For each release area or potential release area indicate whether the area has been investigated or remediated.

See Attachment C (Identified AOCs and Release Areas)

b. Specify which release areas are not included under the certification to remediate releases at the establishment being transferred, if applicable.

NA

Part III: Environmental Setting

1. Ground Water

Ground-water classification: **GA**

a. Is the ground water on the site used for:
☐ drinking water ☐ agricultural uses ☐ industrial purposes

b. What is the distance from the site to the nearest off-site well, other than a monitoring well?
adjoining property to the southwest

c. Is the site within the zone of contribution of a public water supply well? ☐ Yes ☒ No

2. Surface Water

Surface-water classification: **B/A**

a. Identify the nearest down-gradient surface-water body: **Oyster River**

b. What is the distance from site to the nearest surface water: **along eastern boundary**

3. Public Utilities

a. Is public water provided to the site? ☒ Yes ☐ No
Is public water unavailable to any developed area surrounding the site? ☐ Yes ☒ No

b. Is the site connected to municipal sewers? ☒ Yes ☐ No

c. Are or have on-site septic system(s) been used at the site? ☒ Yes ☐ No
If yes, dates in use: **1967 - 1990**

4. Describe the land use on the site and in the area surrounding the site. Identify any sensitive land uses within 1/2 mile of the site?

Site is currently used for warehouse storage. A daycare is located on the adjoining property to the northwest, a residential and farm property adjoin the site on the southwest. The site vicinity is mixed commercial, industrial and residential.

Part III: Environmental Setting (cont.)

5. Provide a brief geologic and hydrogeologic summary of the site and surrounding area:

   See Attachment D (Environmental Setting)

Part IV: Environmental Assessment

1. Field investigation/ Environmental Assessment:
   a. Date(s) performed: Phase 1: **5/ /2007** Phase 2: **9/ /2002** Phase 3: **9/ /2004**
   b. Potential release areas (#): Identified: **17** Tested: **17** Release detected: **8**
2. Soil Investigation:
   a. How many of soil samples were screened/analyzed?
      Waste **NA/NA** Shallow soil **250/250** Soil >2' deep **400/210**
   b. What techniques were used to investigate soil?
      ☒ Soil gas survey Other surveys (specify):
      Subsurface sampling techniques (specify): **split spoon sampling, Geoprobe**
3. Ground Water Investigation:
   a. How many samples of ground water and how many rounds of sampling were used in the investigation? **250 samples, 10 rounds of sampling**
   b. How many monitoring wells were used to investigate the ground water? **51on 21off site**
      For each well list the well number, type of well, and geologic unit that the well is screened in or open to. Use an addendum sheet, if necessary. (Refer to instructions)
      See Attachment E (Well Construction Summary)
   c. How many other types of wells were used? Provide the type and address for each well.
      99 Frontage Road, private water supply well. Sampled in 1997. VOCs were not detected. Former on site potable well, now out of service.
   d. Is the extent of each ground-water plume resulting from releases at the site fully characterized? ☒ Yes ☐ No
   e. What techniques were used to investigate the ground water?
      ☒ Ground water quality testing ☒ Pump testing ☐ Geophysical logging
      Other techniques (specify):
4. Indicate phases of environmental assessment completed to date:
   ☒ Investigation ☒ Remedial design ☒ Remediation ☐ Post-remedial Monitoring

Part V: Contaminants in the Environment

1. Contaminated Soil or Wastes on the Site - List the contaminant codes for substances detected in waste or soil on the site and for each contaminant the highest concentration detected: (Note where not applicable "NA" or not tested "NT")

   a. Waste or waste residue: **NA**

   b. Soil: **See Attachment F**

2. Contaminated Ground Water Resulting from Releases on the Site - List the contaminant codes for substances detected in ground water and for each contaminant the highest concentration detected: (Note where not applicable "NA" or not tested "NT")

   a. Ground water in overburden on-site: **See Attachment G**

   b. Ground water in overburden off-site: **See Attachment G**

   c. Ground water in bedrock on site: **See Attachment G**

   d. Ground water in bedrock off-site: **See Attachment G**

3. Contaminated Surface Water Resulting from Releases on the Site - List the number of surface water samples taken; contaminant codes for substances detected resulting from releases on the site; and for each contaminant the highest concentration detected.

   One surface water sample was collected from Oyster River on the southeastern corner of Parcel 8 in December 1992 and analyzed for VOCs and metals; analytical results were below the instrument detection limits.

4. Non-Aqueous Phase Liquids (NAPL) - Describe whether NAPLs resulting from a release at the site are present or potentially present in the following settings:

   a. Are NAPLs present in the unsaturated zone? ☐ Yes ☒ No ☐ Potentially
   Product(s):

   b. Are NAPLs present in unconsolidated material below the water table?
   ☐ Yes ☒ No ☐ Potentially
   Product(s):

   c. Are NAPLs present in the bedrock below the water table?
   ☐ Yes ☒ No ☐ Potentially
   Product(s):

5. Briefly describe the extent and distribution of contaminated soil/waste, ground water, surface water and/or NAPLs resulting from releases on the site. If applicable, specify which contaminants are not subject to the certification to remediate releases at the establishment being transferred.

   Groundwater beneath the site has been impacted with VOCs, primarily 111TCA and its breakdown products. Active pump & treat remediation in the 1990s and natural attenuation have reduced concentrations significantly. Several soil samples on the NW portion of the site are >RSRs for ETPH, PAHs, and SPLP lead. Also see Attachments C, F and G.

Part V: Contaminants in the Environment (cont.)

6. List for each release area the codes for contaminants of concern, and for each contaminant the following: the number of samples in which the contaminant was detected; the maximum and typical concentrations of the contaminant; and depth at which the maximum concentration was detected: Enter a check if an addendum table is used. ☒

Provide site name, address and town from Part I, Item 1:

Name of site: **Bayer Pharmaceuticals Corporation**

Street Address or Description of Location: **11 Frontage Road / 95 Marsh Hill Road (a.k.a. Parcel 8)**

City/Town: **Orange** State: **CT** Zip Code: **06477-**

Release Area	Contaminants of concern tested	Contaminants in soil/waste	Contaminants in ground water	Contaminants in surface water
***See Attachments C, F and G**				

Part VI: Supporting Documents (see instructions for details)

1. ☒ Site Map attached Latitude & Longitude (d/m/s): N: **41/15/08** W: **72/59/47**

2. Enter a check mark for features included on Site Plans: Number of sheets attached:

☒ structures/boundaries	☒ potential release areas	☒ areas remediated
☒ material management areas	☒ sampling locations	☐ water table elevations
☒ waste management areas	☒ monitoring wells ☐	limits of ground-water plume
☒ UST and AST locations	☒ release areas	☒ topography/drainage

3. Site Size: Acres: **17** Acres undeveloped: **12**
   % impervious: **35** Building sq. footage: **22,500**

4. This assessment is based on the following reports (title; date; consultant): *Make note of whether the report is on file with DEP - "*". Note by using "+" if report is attached.*

   Summary of Environmental Activities Report; May 3, 2007; AEI +
   Report on Remedial Investigation and Remediation Cost Estimate; October 1997; AEI *
   Limited Groundwater and Soil Vapor Sampling; September 2007; Triton +

Part VII: Certification

"I have personally examined and am familiar with the information submitted in this document and all attachments, and certify that based on reasonable investigation the submitted information is true and accurate to the best of my knowledge and belief. I certify that this form is complete and accurate as prescribed by the Commissioner without alteration of the text."

Peter A Reinhardt — 9/25/2007

Authorized Signature (as specified in instructions) — Date

Peter A. Reinhardt — Name of Authorized Representative (print or type)

Dir. of Env. H&S, Yale Univ. — Title (if applicable)

Representing: **Yale University**

Mailing Address: **135 College St, 1st Floor**

City/Town: **New Haven** State: **CT** Zip Code: **06510-2411**

Phone: **203-785-3550**

STATE OF **Connecticut** }
} SS. **New Haven**
COUNTY OF **New Haven** } *(Town)*

The foregoing was subscribed to and sworn to before me this 25th day of **September**, 20 **07**,

by **Peter A. Reinhardt, Dir. of Env. Health & Safety, Yale Univ.**
(Name of Signatory, Title and Company, if applicable)

who personally appeared, and that person, as such, satisfactorily proven to be authorized to do so, executed the foregoing instrument for the purposes therein contained.

Barbara A. Caplan — Name of Notary/Commissioner of Superior Court (print or type)

Signature of Notary/Commissioner of Superior Court

My commission expires 7/31/2012.

Initial PAR

ATTACHMENT A

Site History

Parcel 8, 11 Frontage Rd/95 Marsh Hill Rd – Orange, CT

Bayer Pharmaceuticals Corporation (Bayer) has owned the 17-acre property located at 11 Frontage Road and 95 Marsh Hill Road, also known as Parcel 8, since 2000. There are two buildings on Parcel 8, located on the western portion of Parcel 8, and identified as building D37 and the garage building. Since 2000, Bayer has used the site buildings for warehouse space only. The northwestern portion of Parcel 8 is a paved parking area for building E29 (Bayer daycare facility), located on Parcel 6. The eastern portion of Parcel 8, totaling approximately 12 acres, is undeveloped vacant land. Oyster River and associated wetlands currently cross the eastern-most portion of the property.

A review of historical records indicates that the eastern portion of Parcel 8 has been vacant, undeveloped land since 1968. This portion of the property may have been active farmland prior to 1968 (SIC Code 200, agricultural products & animal specialties).

The western part of the site contains two buildings constructed in 1968, which were formerly occupied by a helicopter and vehicle maintenance facility (SIC Code 3720, aircraft & parts and SIC Code 4231, terminal maintenance facilities for motor freight transport) and various trucking companies (SIC Code 4210, trucking & courier services (no air)).

Building D37 has been used as a trucking terminal between at least 1971 and the late 1990s. The building is an open warehouse with built-in office space and a partial basement. Prior to 1994, a machine shop was located in the basement. Building D37 originally had 31 loading docks, each equipped with load levelers and dock door seals. The warehouse portion was historically used for unloading, loading and the temporary storage of freight (predominantly dry goods).

The garage building is a single-story building with high ceilings and slab-on-grade foundation. The garage building formerly had trench drains and a maintenance pit that were filled and paved with concrete prior to 1996. The garage building was formerly used for helicopter repairs from at least 1982 until at least 1994 by Aviation Components Support Company, L.L.C. (ACS). ASC operations included disassembly, machining (turning, grinding and drilling), cleaning (kerosene and mineral spirits), anodizing (small tank), paint stripping (dip tank), rinsing, cadmium plating (limited brush on operation), painting (spray booth), vapor degreasing (1,1,1-trichloroethane), and assembly. A former paint room adjoined to the northwest corner of the garage building; the building foundation remains. Prior and subsequent to ACS, the garage building was used for truck maintenance (i.e. oil changes) prior to 1982 and from the mid- to late-1990s.

According to historical environmental reports, previous site tenants and their approximate dates of occupancy are:

- J. C. Greasing and General Repairs (a.k.a G&G Truck Repair) between at least 1972 and 1973
- Aviation Components Support Co. from 1982 to 1994
- Helicopter Support, at least 1992
- Eastern Express Trucking from 1971 to 1979
- Preston Trucking from 1982 to 1983
- Sanborn Motor Express from 1982 to 1986
- Raiders Express 1988 to 1989
- Con-Way Eastern Express in 1989
- CBL Trucking from 1990 to at least 1997
- United Stationers at least 1994

Initial PAR

ATTACHMENT B
Waste Management History
Parcel 8, 11 Frontage Rd/95 Marsh Hill Rd – Orange, CT

ACS was registered as a RCRA large quantity generator, EPA ID No. CTD093607711, from 1982 to 1994. Types of wastes generated at the garage building included waste paint, paint solvents and cadmium plating wastes. Waste oil, oil filters and antifreeze were reportedly generated on site by various trucking companies. Product and waste materials were reportedly stored on-site in underground storage tanks (USTs) and drums, as described below.

Building D37 had a waste oil drum storage area in a room located in the northwest corner of the building. A former outdoor hazardous waste container storage area was situated along the northern extent of the west wall of building D37. A 10,000-gallon diesel above ground storage tank (AST) and associated dispenser, installed in 1994, was situated off the north side of building D37. This AST was removed sometime between 1997 and 2000. Waste crankcase oil, spent oil filters, and waste antifreeze were stored in 55-gallon drums and other containers in the garage building. Drums of virgin motor oil and antifreeze were also stored there.

Three petroleum USTs and a pump island were formerly situated off the east side of the garage building. In February 1997, one 6,000-gallon UST (installed in 1979) and one 12,000-gallon diesel UST (installed in 1950) and one 6,000-gallon gasoline UST (installation date unknown), associated piping and dispensing systems and 925 tons of petroleum impacted soil were removed along with a truck scale.

A former UST was reported beneath the footprint of the former paint room off the northwest portion of the garage building. This 550-gallon UST is thought to have contained virgin motor oil that was reportedly removed when the paint room was constructed in 1988.

A 2,000-gallon hazardous waste UST located off the south side of the garage building was removed in June 1997. This UST was reportedly installed in 1987 and stored paint waste, solvent waste, and cadmium-containing rinsewater from former plating operations. This tank reportedly replaced a 1,500-gallon UST used to accumulate rinse waters containing residue of brush cadmium, a chrome plating process, and spent solvent. A 275-gallon waste oil AST was observed inside the garage building in 1996, in addition to a petroleum naptha parts washer and oil filter draining station.

Prior to connection to the sanitary sewer in 1990, wastewater was disposed of in an on-site 2,000-gallon septic tank with leaching fields. The septic tank is depicted as being located near the northwest corner of building D37. The leach field is depicted as being located on the northwest corner of Parcel 8. A sample was collected from the on-site septic tank to assess whether hazardous materials had been discharged; analytical results indicated low concentrations of various VOCs and cadmium.

Initial PAK

No hazardous substances or petroleum products are currently stored on Parcel 8 by Bayer.

Initial PAR

ATTACHMENT C
Identified AOCs and Release Areas
Parcel 8, 11 Frontage Rd/95 Marsh Hill Rd – Orange, CT

Numerous environmental reports have been prepared for Parcel 8 since the early 1990s. The reports indicate that groundwater has been impacted by releases primarily of halogenated volatile organic compounds (VOCs), although petroleum hydrocarbon and metals have also been detected in certain groundwater samples. The primary groundwater contaminants reported on-site are the degreasing solvent 1,1,1-trichloroethane (111-TCA) and its degradation product, 1,1-dichlorothylene (11-DCE). 111-TCA was reportedly used in the former vapor degreaser in the former helicopter repair facility (garage building). Soil, soil gas and groundwater investigations throughout the years did not indicate the presence of a substantial source area in soils. Other release sources include former motor fuel USTs and dispensing systems, a former plating and solvent rinse water UST, a former paint booth, former outdoor and indoor storage of hazardous wastes and substances, and former loading dock area motor fuel leaks.

In the early 1990s, ACS initiated a voluntary corrective action program, installing numerous groundwater monitoring wells on site. A groundwater recovery well was installed in 1993 and periodically operated until 1999 or 2000 to address groundwater contamination in the vicinity of the garage building. The original discharge was performed under an emergency authorization dated September 29, 1993, authorization number EA0000003. The recovery system pumped approximately 5,000 gallons per day of untreated effluent to the sanitary sewer via a floor drain in the garage building under a state discharge permit. A soil vapor extraction system was installed and made operational in 1993 to address soil contamination in the vicinity of the garage building. According to previous reports, the system was thought to be ineffective and was shut down.

A December 4, 2000 letter from the Bureau of Water Management to Bayer authorized the use of a Licensed Environmental Professional to oversee the remainder of the site investigation and remediation activities. Additional environmental investigations completed on the behalf of Bayer included a passive soil vapor survey to assess for residual sources of VOCs and extensive soil and groundwater sampling across the site. Remedial activities completed on the behalf of Bayer included excavation and removal of approximately 70 tons of petroleum-impacted soil from the loading dock area and removal of 1,660 tons of impacted fill material on the northwestern portion of Parcel 8, deposited during construction of the adjoining Parcel 6 parking area.

Areas of concern (AOCs) and associated investigations performed are summarized in the following table. Areas of concern are depicted on Figure 2. A discussion of each release area is provided below. Release areas are depicted on Figure 3.

AOC	Description	Investigated?	Release?
1	One 12,000- and one 6,000-gallon diesel UST and one 6,000-gallon gasoline UST and fuel dispensing systems off the east side of the maintenance garage.	USTs removed in February 1997 along with 925 tons of impacted soil. Excavated to either bedrock or 15 feet bgs, both of which were below the water table. Soil analytical results detected total petroleum hydrocarbons. VOCs were not detected. Subsequent soil sampling below RSRs.	Yes, impacted soil excavated.
2	A truck scale area adjacent to the former diesel fuel pump island.	Removed in February 1997; soil sampling results below RSRs.	No
3	One 2,000-gallon RCRA hazardous waste UST located off the south side of the maintenance garage, 1987 - 1997. Former waste paint UST removed in 1987.	Removed June 1997. Six confirmation samples collected; results were ND for VOCs, TPH, total cyanide, and leachable metals. Total metals were below RSRs. Subsequent soil sampling below RSRs.	No
4	A former 550-gallon oil UST located beneath the former paint room floor (AOC 5).	Reportedly removed in 1988 when the paint room was constructed. Subsequent soil sampling below RSRs.	No
5	The former paint room and associated outdoor solvent drum storage area off the north side of the maintenance garage.	Paint chips from the former paint room floor were below TCLP. Subsequent soil sampling below RSRs except for one sample above the RSRs for SPLP lead.	Yes, RA-6
6	The maintenance garage bay area with former floor trench drains, maintenance pit and vapor degreaser.	Concrete floor sampling results were below TCLP. Subsequent soil sampling indicated metals and VOCs below RSRs. Floor drains may have discharged to the hazardous waste UST (AOC 3).	No
7	The former outdoor hazardous waste container storage area, near northwest corner of building D37.	Concrete floor sampling results were below TCLP. Subsequent soil samples below RSRs. Limited excavation in 2003.	No
8	An indoor waste oil drum storage area inside north-west portion building D37	Concrete floor sampling results were below TCLP. Located on first floor with basement beneath.	No
9	The former machine room in the northwest portion of the basement in the truck terminal building.	Oily building surface wipe samples collected; all ND for PCBs. Four soil samples collected; below RSRs. One soil vapor sample collected; below RSRs.	No
10	The out-of-service septic tank and leaching field off the northwest side of the truck terminal building.	Septic liquid and sludge samples contained VOCs in the ppb range. Sludge had TCLP cadmium in low mg/L range. Subsequent soil samples below RSRs except two for ETPH at 4-6 feet below grade.	Yes, RA-3

11	Potential releases from leaks in sanitary sewer piping or septic system piping from the garage building to the septic tank off the northwest side of building D37.	Several soil samples in vicinity; all below RSRs.	No
12	A former diesel fuel AST and dispensing system north of building D37.	Soil samples below RSRs except three above for SPLP lead (attributed to fill material, AOC 20).	No
13	Mounds of earth fill, some containing demolition debris, on the rear undeveloped portion of the site	December 1992 test pit sampling. Soil: TPH low, VOCs ND, TCLP metals below TCLP criteria, pesticides ND. VOCs detected in ground water. VOCs and metals not detected in Oyster River surface water sample. Subsequent AEI soil samples below RSRs.	No
14	Debris dumped on the rear undeveloped portion of the site.	December 1992 Test pit sampling. Soils: TPH low, VOCs ND, TCLP metals below TCLP criteria, pesticides ND. VOCs detected in ground water. VOCs and metals not detected in Oyster River surface water sample. Subsequent AEI soil samples below RSRs.	No
15	Misc. scattered areas of petroleum-affected pavement and shallow subsoils from truck/vehicle parking and loading dock.	Loading dock sampling around building perimeter. One soil sample above RSRs. Limited excavation in 2003. Confirmation soil samples below RSRs.	Yes, RA-7.
16	Groundwater impacted by chlorinated VOCs.	111TCA and 11DCE and other VOCs in groundwater	Yes
17	Fill material, northwestern portion of Parcel 8	Impacted fill placed during construction of abutting Parcel 6 parking lot. Excavation to property boundary in 2005. SPLP lead and PAHs detected on northwestern corner of Parcel 8 and in vicinity of AOC 12.	Yes, RA-1, 2, 4.

Source: Advanced Environmental Interface, Inc. (AEI), 1997. Report on Remedial Investigation and Remediation Cost Estimate. December. AEI. 2007. Report on Phase I/Phase II Environmental Site Assessment. May 3.

During construction activities on the adjoining Parcel 6, fill material was placed to level out the parking area which is located primarily on Parcel 8. It was later determined that the fill material was impacted with SPLP lead, ETPH, and/or PAHs. Extensive soil sampling was performed and the impacted area was excavated up to property boundaries in 2005. Sixty soil samples were collected during and after excavation was completed. Final confirmation soil samples were below the RSRs for PAHs, SPLP lead and ETPH.

Across Parcel 8, a total of 310 soil samples have been collected and analyzed for ETPH. Of those 310 samples, 48 had detectable concentrations of ETPH with an average

concentration of 346 mg/kg. Ten soil samples had ETPH concentrations above the GA PMC of 500 mg/kg, as follows:

- Seven intermediate confirmation soil samples collected during the 2005 excavation of impacted fill material on the northwest corner of the site (AOC 17, RA-1) had ETPH concentrations above the RSRs. Final confirmation soil samples were all below 500 mg/kg.
- One sample collected from northeastern end of building D37 (AOC 15, RA-7) had an ETPH concentration above the RSRs. This area was excavated in 2003. Confirmation soil samples were below the RSRs.
- ETPH was detected at 935 and 1,614 mg/kg from 4-6 feet below grade (AOC 10, RA-3) in two soil samples collected in the vicinity of the former leach field area, located on the northwestern portion of Parcel 8.

Across Parcel 8, 276 soil samples have been analyzed for SPLP lead. Of those 276 soil samples, a total of 51 have had SPLP lead concentrations above the instrument detection limit with an average concentration of 0.009 mg/L. A total of nine soil samples had SPLP lead concentrations above the GA PMC of 0.015 mg/L, as follows:

- Three soil samples had SPLP lead concentrations above the RSRs in the northwest corner of Parcel 8 parking area (AOC 17, RA-1). These soils were excavated in 2005 and confirmation analytical results were below criteria.
- Two soil samples collected from 0-2 feet from the northwest corner of Parcel 8 contained SPLP lead at 0.017 mg/L (AOC 17, RA-2).
- Three soil samples collected north of building D37 contained SPLP lead from 0-4 feet at concentrations of 0.016, 0.021, and 0.027 mg/kg (AOC 17, RA-4).
- One soil sample collected north of the garage building contained SPLP lead from 0-2 feet at 0.018 mg/L (AOC 5, RA-6).

Across Parcel 8, a total of 222 soil samples have been analyzed for PAHs. Of those 222 soil samples, a total of 69 have had detectable PAH concentrations. A total of three soil samples had PAH concentrations above the RSRs, as follows:

- Two intermediate confirmation soil samples collected during the 2005 excavation of impacted fill material on the northwest corner of the site (AOC 20, RA-1) had PAH concentrations above the RSRs. Final confirmation soil samples were below all applicable RSRs.
- One soil sample collected west of building D37 and northeast of the garage building had several PAHs above the RSRs in the 0-2 feet sample (AOC 17 RA-5).

Initial PAR

ATTACHMENT D
Environmental Setting
Parcel 8, 11 Frontage Rd/95 Marsh Hill Rd – Orange, CT

According to the Surficial Geology Map of Connecticut, (Stone, et. al., 1992), the subject site's surficial geology is identified as thick till areas where till is greater than 10 to 15 feet thick and including drumlins in which till thickness commonly exceeds 100 feet. Upper till is surface deposits. Lower till is moderately to very compact and is commonly finer-grained and less stony than upper till.

Test borings completed during 1996 and 1997 investigations indicated fill materials beneath pavement on the western developed portion of the site and in mounds of earth across a large potion of the undeveloped eastern portion of the site.

Triton reviewed a copy of the Bedrock Geology Map of Connecticut (Rodgers, 1985). The bedrock is identified as Oronoque schist. This schist is a gray to silver, medium to fine grained schist and granofel. Test borings indicated that the overburden thickness on the subject site ranged from approximately four feet to more than 15 feet.

Groundwater at the site has been classified by DEP as "GA" based on the 1997 Water Quality Classifications Map of the Connecticut River and Southcentral Coastal Major Basins. Depth to groundwater beneath the site varies and is approximately 7 to 16 feet below grade. Groundwater flow direction on Parcel 8 is to the east-northeast.

The nearest surface water body is Oyster River, which traverses the eastern portion of Parcel 8. Oyster River is classified as B/A. The City of West Haven Wetlands and Watercourses Map depicts Oyster River and its associated wetlands on the eastern portion of Parcel 8.

Initial PAR

ATTACHMENT E

Well Construction Summary

Parcel 8, 11 Frontage Rd/95 Marsh Hill Rd – Orange, CT

Well ID	Casing diameter (inches)	Screened interval (fbg)	Approx. Depth to water (fbg)	Geologic unit of screened interval
HE-1	2	4-14	10.48	N/A
HE-2	2	10-20	14.08	N/A
HE-4	2	6-16	10.32	N/A
HE-5	2	9-19	9.30	N/A
HE-6	2	5-15	9.80	N/A
HE-7	N/A	N/A	N/A	N/A
HE-7S	2	N/A	10.60	N/A
HE-7D	2	10-20	Dry	N/A
HE-8	2	10-20	10.63	N/A
HE-9S	2	N/A	10.76	N/A
HE-9D	2	35-55	10.52	N/A
HE-10S	2	N/A	10.22	N/A
HE-10D	2	41-71	10.50	N/A
MW-1	2	10-20	13.19	N/A
MW-2	2	5-15	12.84	N/A
MW-3	2	4-14	12.66	N/A
MW-4	2	16-26	22.72	N/A
MW-5	N/A	N/A	N/A	N/A
MW-6	2	7-17	10.36	N/A
MW-7	2	4-12	4.2	N/A
MW-11	2	8-18	10.4	N/A
MW-12	2	7-17	10.19	N/A
MW-13	2	3-13	9.05	N/A
MW-13D	N/A	N/A	N/A	N/A
MW-14	2	5-15	10.32	N/A
MW-15	2	7-17	8.80	N/A
MW-16	2	2-12	12.04	N/A
PW-1	N/A	N/A	N/A	N/A
RW-1	N/A	N/A	N/A	N/A
MW-17	2	8-18	N/A	BR. MED-FINE SAND. WEATHERED ROCK
MW-18	2	8-18	N/A	BR. MED-FINE SAND. WEATHERED ROCK
MW-19	2	7-17	7.5	BR. FINE-MED SAND AND SILT, LITTLE FINE-MED GRAVEL
MW-20	2	6-16	7.5	BR. FINE-MED SAND, SILT LITTLE FINE-MED. GRAVEL

Well ID	Casing diameter (inches)	Screened interval (fbg)	Approx. Depth to water (fbg)	Geologic unit of screened interval
MW-21	2	8-18	7.0	BR. FINE-MED SAND AND SILT LITTLE FINE-MED. GRAVEL
MW-21D	N/A	N/A	N/A	N/A
MW-22	2	8-18	N/A	DARK BR. FINE-MED SAND, SOME SILT AND FINE-MED. GRAVEL
MW-23	2	8-18	10.0	BR. FINE SAND AND SILT, SOME WEATHERED ROCK
MW-24	2	8-18	10.5	BR. FINE SAND, SOME SILT, & WEATHERED ROCK FRAGMENTS
MW-25	2	8-18	16.0	BR. FINE SAND AND SILT, LITTLE FINE-MED GRAVEL
MW-26	2	8-18	16.0	BR. FINE SAND AND SILT, LITTLE FINE-MED GRAVEL
MW-27	N/A	5-15	N/A	N/A
MW-28	N/A	N/A	N/A	N/A
MW-28I	N/A	N/A	N/A	N/A
MW-28D	N/A	N/A	N/A	N/A
MW-29D	N/A	N/A	N/A	N/A
MW-30	N/A	N/A	N/A	N/A
MW-31	N/A	N/A	N/A	N/A
MW-32	N/A	N/A	N/A	N/A
SVE-1	N/A	N/A	N/A	N/A
SVE-2	N/A	N/A	N/A	N/A

source: Advanced Environmental Interface, Inc., 2007, Summary of Environmental Activities Report. May 3. Appendix C, Tab 5.

Note: Well construction details for all off-site wells could not be located at the time of submittal.

N/A – not available

fbg – feet below grade

Attachment F

Summary of Constituents Detected in Soil Samples and Maximum Detected Concentrations

Parcel 8, 11 Frontage Rd/95 Marsh Hill Rd - Orange, CT

Initial TAR

	Res DEC	I/C DEC	GA PMC	Maximum Concentration
ETPH (mg/kg)	500	2,500	500	1,614
Polyaromatic Hydrocarbons/Semi-Volatile Organic Compounds (mg/kg)				
Acenaphthene	1,000	2,500	8.4	0.04
Acenaphthylene	1,000	2,500	8.4	0.51
Anthracene	1,000	2,500	40	10.04
Benzo[a]anthracene	1	7.8	1	17.13
Benzo[a]pyrene	1	1	1	8.35
Benzo[b]fluoranthene	1	7.8	1	3.74
Benzo[g,h,i]perylene	1,000	2,500	4.2	0.37
Benzo[k]fluoranthene	8.4	78	1	2.72
bis(2-Ethylhexyl)phthalate	44	410	1	0.00
Chrysene	84	780	1	2.74
Dibenzo[a,h]anthracene	1	1	1	2.21
7-H-Dibenzo(c,g)carbazole	NE	NE	NE	0.14
Di-n-octylphthalate	1,000	2,500	2	0.00
Fluoranthene	1,000	2,500	5.6	12.77
Fluorene	1,000	2,500	5.6	3.60
Indeno[1,2,3-cd]pyrene	1	7.8	1	0.82
Naphthalene	1,000	2,500	5.6	0.04
Phenanthrene	1,000	2,500	4	1.23
Pyrene	1,000	2,500	4	9.19
Volatile Organic Compounds (mg/kg)				0
Polychlorinated Biphenyls (mg/kg)				0
Pesticides (mg/kg)				0
Total Metals (mg/kg)				
As	10	10	NE	10
Ba	4,700	140,000	NE	57
Cd	34	1,000	NE	6
Cr	NE	NE	NE	54
Pb	400	1,000	NE	361
Hg	20	610	NE	1
SPLP Metals (mg/L)				
Cd	NA	NA	0.005	0.005
Cu	NA	NA	1.3	13.0
Pb	NA	NA	0.015	0.018

Notes

Only parameters detected are shown

mg/kg - milligram per kilogram

mg/L - milligram per liter

NA - Not applicable

NE - None established

Res DEC - Residential Direct Exposure Criteria

I/C DEC - Industrial/Commercial Direct Exposure Criteria

GA PMC - GA Pollutant Mobility Criteria

Attachment G

Summary of Constituents Detected in Groundwater and Maximum Detected Concentration

Parcel 8, 11 Frontage Road/95 Marsh Hill Road - Orange, CT

Initial

	GA Ground-water Protection Criteria	Surface Water Protection Criteria	Residential Volatilization Criteria	Industrial and Commercial Volatilization Criteria	Maximum Concentration Detected in Overburden On-site	Maximum Concentration Detected in Overburden Off-site	Maximum Concentration Detected in Bedrock On-site	Maximum Concentration Detected in Bedrock Off-site
Volatile Organic Compounds (ug/L)								
ACT	700	NE	50,000	50,000	19	ND	ND	ND
BZ	1	710	130	310	5.2	ND	ND	ND
sec-Butylbenzene	61	NE	1,500	20,000	.6	ND	ND	ND
CFM	6	14,100	26	62	0	1.6	ND	ND
2DCB	600	170,000	5,100	50,000	4	ND	ND	ND
4DCB	75	26,000	1,400	3,400	2.2	ND	ND	ND
11DCA	70	NE	3,000	41,000	663	23	33	ND
12DCA	1	2,970	6.5	68	9	ND	ND	17
12DCE	70	NE	830	11,000	11.6	ND	ND	ND
11DCE	7	96	190	920	560	15	1015	11
MTBE	70	NE	21,000	50,000	5.3	ND	ND	ND
PCE	5	88	340	810	7	ND	1	ND
TL	1,000	4,000,000	7,100	41,000	31	ND	ND	ND
TCA	200	62,000	6,500	16,000	13,706	299	109,125	30
TCE	5	2,340	27	67	1.8	13	ND	ND
1,2,4-Trimethylbenzene	350	NE	360	4,800	2.6	ND	3.6	ND
1,3,5-Trimethylbenzene	350	NE	280	3,900	ND	ND	10	ND
VC	2	15,750	1.6	52	.7	ND	ND	ND
Metals (ug/L)								
Ba	1,000	NE	NE	NE	1490	NA	121	NA
Cd	5	6	NE	NE	24	NA	ND	NA
Extractable Total Petroleum Hydrocarbons (ug/L)	100	NE	NE	NE	400	NA	NA	NA
Polyaromatic Hydrocarbons (ug/L)					ND	NA	NA	NA

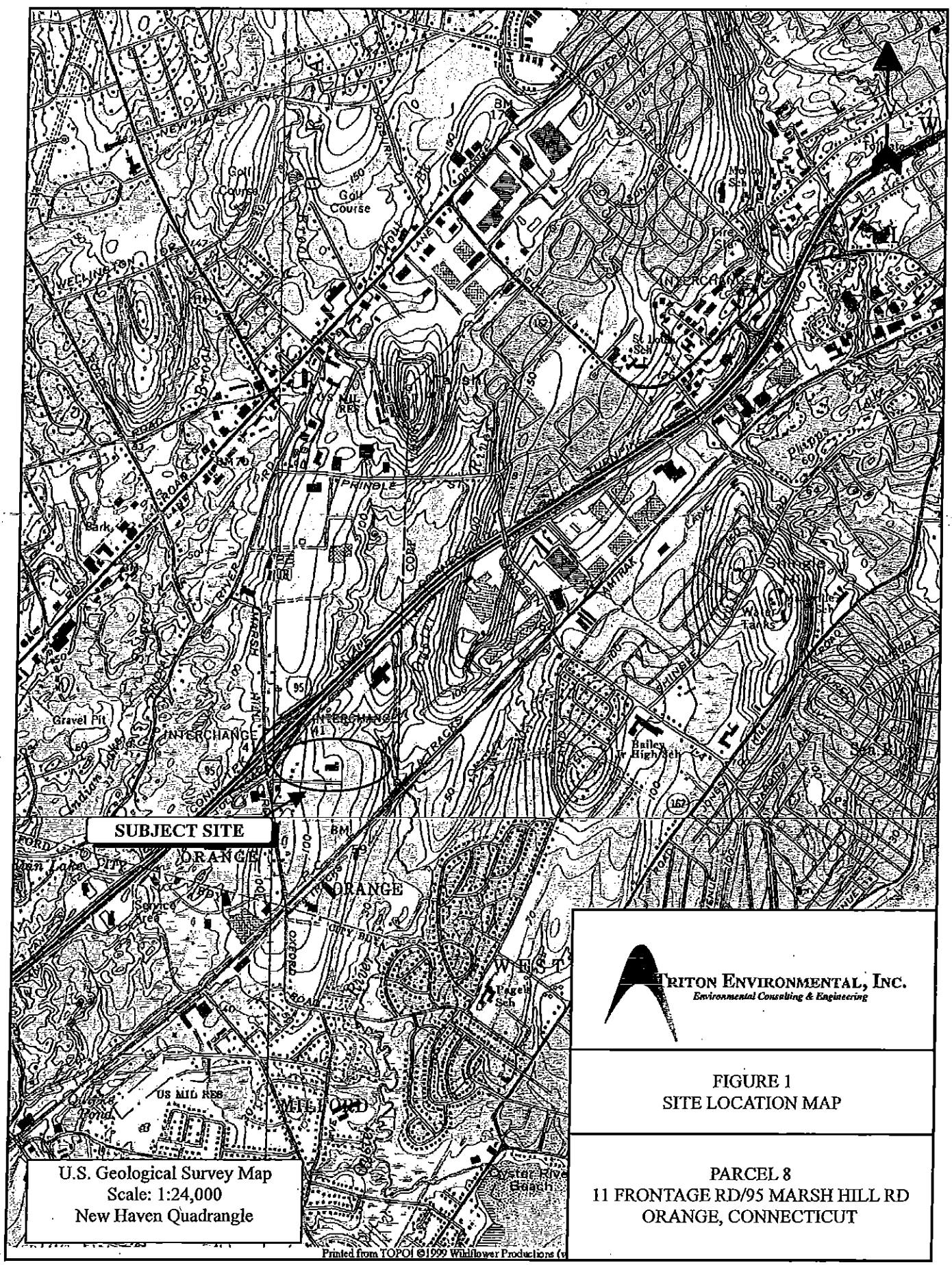
Notes

NA - Not analyzed

ND - Not detected above the instrument detection limits

NE - Not established

ug/L - micrograms per liter



U.S. Geological Survey Map
Scale: 1:24,000
New Haven Quadrangle

TRITON ENVIRONMENTAL, INC.
Environmental Consulting & Engineering

FIGURE 1
SITE LOCATION MAP

PARCEL 8
11 FRONTAGE RD/95 MARSH HILL RD
ORANGE, CONNECTICUT

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Summary of Environmental Activities Report

Bayer Pharmaceuticals Corporation, Parcel 8
11 Frontage Road/95 Marsh Hill Road,
Orange, CT (Map 8/Block 3/Lot 4)

Prepared for:
Bayer Pharmaceuticals Corporation

Prepared by:
Advanced Environmental Interface, Inc.
8 Old Indian Trail
Middlefield, Connecticut 06455
(860) 349-3559

May 3, 2007

AEI-07J-005

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1.0 EXECUTIVE SUMMARY

Bayer Pharmaceuticals Corporation (Bayer) retained Advanced Environmental Interface, Inc. (AEI) to summarize environmental site assessment work conducted on the 17.014-acre portion of the Bayer campus identified as Parcel 8 of the 137-acre Bayer campus, which is in two municipalities, the City of West Haven and the Town of Orange. Parcel 8 is situated primarily in Orange with less than one acre at the northeast corner of the parcel in West Haven. The Town of Orange Tax Assessor's records identify it as Lot No. 4 of Block No. 3 of Map No. 8. Parcel 8 has an address of 11 Frontage Road and 95 Marsh Hill Road in Orange and contains Building D-37 and a nearby garage. Building D-37 is a warehouse building that was constructed in 1968; it is 16,440 square feet in area. The garage was also constructed in 1968 and is 3,436 square feet in area. The Oyster River is on the east-most portion of the parcel.

Bayer purchased Parcel 8 circa 2000. Prior to 2000, Building D-37 was a trucking terminal with a basement machine shop and the garage was a helicopter maintenance facility. Numerous environmental reports have been prepared for Parcel 8 since the early 1990s. The environmental reports indicate that soil and ground water on Parcel 8 had been impacted by releases primarily of halogenated volatile organic compounds (VOCs), petroleum hydrocarbons, lead and cadmium prior to Bayer's purchase of the parcel. The releases resulted primarily from former motor fuel underground storage tanks (USTs) and dispensing systems, a former plating and solvent rinsewater UST, a former vapor degreaser, a former paint booth, former outdoor and indoor storage of hazardous wastes and substances, and former loading dock area motor fuel leaks. The Connecticut Department of Environmental Protection (DEP) has classified ground water beneath all but the extreme northeast portion of Parcel 8 as GA, indicating that it is presumed suitable for drinking without treatment. The small remainder of the parcel has a GB ground water classification, generally indicating that it is considered degraded due to historic spills and land uses.

In 2004, as part of a follow-up remedial investigation of the parcel, AEI detected the presence of polluted fill on the extreme northwest portion of Parcel 8 that was placed during the construction of Building E-29 on abutting Bayer Parcel 6. The E-29 parking lot and rear grounds are situated on Parcel 8. The fill was placed when

the elevation of that portion of the parcel was raised to allow for construction of the E-29 parking lot and rear grounds.

AEI's 1997 report on Remedial Investigation and Remediation Cost Estimates for 11 Frontage Road/95 Marsh Hill Road, which was prepared on behalf of Bayer, and which summarizes information from certain other prior environmental reports and from AEI's 1996 and 1997 subsurface investigation of the parcel, indicates that due to a prior operator on Parcel 8 being a RCRA Large Quantity Generator of hazardous waste, the parcel is an establishment as defined by the Connecticut Transfer Act. Therefore, in 2000, Bayer submitted to the Connecticut Department of Environmental Protection (DEP) a Property Transfer Form III and an Environmental Condition Assessment Form (ECAF). As the certifying party to the Form III, Bayer agreed to investigate Parcel 8 in accordance with prevailing standards and guidelines and to remediate the site in accordance with the Remediation Standard Regulations (RSRs). In response to Bayer's Form III filing, DEP notified Bayer that a licensed environmental professional (LEP) may verify that the investigation of the parcel has been performed in accordance with prevailing standards and guidelines and that the parcel has been remediated in accordance with the RSRs. (In 1998, a prior owner of the parcel submitted a Form III and ECAF to DEP as the certifying party at that time.)

Subsequent to Bayer's Form III and ECAF filing in 2000, Bayer and/or AEI on behalf of Bayer completed the following additional environmental work on and related to Parcel 8 to further characterize the site and to satisfy certain requirements of the RSRs and Transfer Act:

- August 2002: conducted a passive soil vapor survey using Gore-Sorber modules to help assess for any residual source of VOCs historically detected in ground water on and adjacent to Parcel 8.
- September 2002: conducted test borings and soil sampling below the floor of the former helicopter maintenance building.
- October 2002 – February 2003: conducted test borings and sub-surface soil sampling in certain outdoor portions of the parcel.
- October 2002 – February 2003: installed ground water monitoring wells to replace certain wells destroyed during construction activities on the portion of

Parcel 8 used for the Building E-29 parking lot and rear grounds and to expand coverage for any compliance and post-remediation monitoring required to satisfy the RSRs.

- November 2002 – December 2002: conducted surficial soil sampling in areas of mounded fill on the rear portion of the parcel.
- February 2003: conducted test borings and sub-surface soil sampling in loading dock areas and below the floor of the former machine shop of the former trucking terminal building.
- December 2003: provided public notice of upcoming remediation in the New Haven Register and notified health department officials in West Haven and Orange by mail.
- December 2003: posted a sign stating that remediation was in progress and containing site contact information.
- December 2003: excavated and removed approximately 70 tons of petroleum-impacted soil from the loading dock area of the former trucking terminal. Post-excavation soil sample results indicated that remaining soils in this area satisfied RSR clean-up criteria.
- July, August, and November 2005: excavated and removed approximately 1,660 tons of impacted soil (i.e., polluted soil fill) from the Parcel 8 rear grounds of Building E-29. Post-excavation soil sample results indicated that certain remaining soils in this area of Parcel 8 exceeded RSR clean-up criteria. Impacted soil was excavated up to the property line and existing structures.
- March 2007: submitted to DEP a request to reclassify ground water from GA to GB on the portion of the Bayer campus west of the Oyster River, in which Parcel 8 is situated. The purpose of the request was two-fold: (1) to connect an existing area of GB ground water on the portion of the Bayer campus east of the Oyster River to a GB area west of the Bayer campus, which would reflect the industrial use of the current GA area, and (2) to facilitate remediation of Bayer Parcel 8, which is a DEP Property Transfer Program site. GB ground water is defined as ground water within a historically highly urbanized area or an area of intense industrial activity and where public

water supply service is available. Such ground water may not be suitable for human consumption without treatment due to waste discharges, spills or leaks of chemicals, or land use impacts. DEP considers GB ground waters to be degraded due to a variety of pollution sources

Because Parcel 8 is an establishment, there is a regulatory requirement to conduct additional remediation and environmental assessment of the parcel. The degree of additional remediation and environmental assessment required to attain compliance with the RSRs depends in large part upon the outcome of Bayer's ground water reclassification request, which will likely be determined within the next several months.

2.0 INTRODUCTION

2.1 Background

Bayer Pharmaceuticals Corporation (Bayer) retained Advanced Environmental Interface, Inc. (AEI) to summarize environmental site assessment work conducted on the 17.014-acre portion of the Bayer campus identified as Parcel 8 of the 137-acre Bayer campus, which is in two municipalities, the City of West Haven and the Town of Orange. Parcel 8 is situated primarily in Orange with less than one acre at the northeast corner of the parcel in West Haven. The Town of Orange Tax Assessor's records identify it as Lot No. 4 of Block No. 3 of Map No. 8. Parcel 8 has an address of 11 Frontage Road and 95 Marsh Hill Road in Orange and contains Building D-37 and a nearby garage. Building D-37 is a warehouse building that was constructed in 1968; it is 16,440 square feet in area. The garage was also constructed in 1968 and is 3,436 square feet in area. The Oyster River is on the east-most portion of the parcel.

2.2 Purpose

The purpose of this report is to summarize environmental activities pertaining to Parcel 8 of the Bayer West Haven/Orange campus.

2.3 Scope of Work

AEI's scope of work was to summarize environmental activities on Parcel 8 of the Bayer West Haven/Orange campus.

2.4 Previous Environmental Reports

Previous environmental reports for Parcel 8 are listed in Appendix A. In addition, the following documents AEI prepared on behalf of Bayer for Parcel 8 are attached as appendices to this report:

- *Summary of Ground Water Monitoring Results, 1991 - 2005, Property at 11 Frontage Road, Orange, Connecticut*, undated. A copy of this summary is in Appendix B.

- *Soil, Soil Vapor and Ground Water Data Summary Documents, 95 Marsh Hill Road, (aka 11 Frontage Road), Orange, Connecticut*, dated May 2003. A copy of this summary is in Appendix C. The summary provides soil data from 2002 and 2003, soil vapor data from 2002, and ground water data from 1991 to 2001.
- *Post-Excavation Soil Sampling and Analysis Results Summary Documents for Former Trucking Terminal Loading Dock Area*, undated. A copy of this summary is in Appendix D. The summary provides soil data from 2003.
- *Polluted Soil Fill Investigation and Post-Excavation Sampling and Analysis Results Summary Documents for Building E29 Rear Grounds Area*, undated. A copy of this summary is in Appendix E. The summary provides soil data from 2004 to 2005.

AEI's previous reports revealed the following about Parcel 8:

- Bayer purchased Parcel 8 circa 2000. Prior to 2000, Building D-37 was a trucking terminal with a basement machine shop and the garage was a helicopter maintenance facility. Numerous environmental reports have been prepared for Parcel 8 since the early 1990s. The environmental reports indicate that soil and ground water on Parcel 8 had been impacted by releases primarily of halogenated volatile organic compounds (VOCs), petroleum hydrocarbons, lead and cadmium prior to Bayer's purchase of the parcel. The releases resulted from primarily former motor fuel underground storage tanks (USTs) and dispensing systems, a former plating and solvent rinsewater UST, a former vapor degreaser, a former paint booth, former outdoor and indoor storage of hazardous wastes and substances, and former loading dock area motor fuel leaks.
- The Connecticut Department of Environmental Protection (DEP) has classified ground water beneath all but the extreme northeast portion of Parcel 8 as GA, indicating that it is presumed suitable for drinking without treatment. The small remainder of the parcel has a GB ground water classification, generally indicating that it is considered degraded due to historic spills and land uses.
- As part of a follow-up remedial investigation of the parcel, AEI detected the

presence of polluted fill on the extreme northwest portion of Parcel 8 that was placed during the construction of Building E-29 on abutting Bayer Parcel 6. The E-29 parking lot and rear grounds are situated on Parcel 8. The fill was placed when the elevation of that portion of the parcel was raised to allow for construction of the E-29 parking lot and rear grounds.

- AEI's 1997 report on Remedial Investigation and Remediation Cost Estimates for 11 Frontage Road/95 Marsh Hill Road, which was prepared on behalf of Bayer, and which summarizes information from certain other prior environmental reports and from AEI's 1996 and 1997 subsurface investigation of the parcel, indicates that due to a prior operator on Parcel 8 being a RCRA Large Quantity Generator of hazardous waste, the parcel is an establishment as defined by the Connecticut Transfer Act. In 2000, Bayer submitted to the Connecticut Department of Environmental Protection (DEP) a Property Transfer Form III and an Environmental Condition Assessment Form (ECAF). As the certifying party to the Form III, Bayer agreed to investigate Parcel 8 in accordance with prevailing standards and guidelines and to remediate the site in accordance with the Remediation Standard Regulations (RSRs). In response to Bayer's Form III filing, DEP notified Bayer that a licensed environmental professional (LEP) may verify that the investigation of the parcel has been performed in accordance with prevailing standards and guidelines and that the parcel has been remediated in accordance with the RSRs. (In 1998, a prior owner of the parcel submitted a Form III and ECAF to DEP as the certifying party at that time.)
- In December 2003, Bayer excavated and removed approximately 70 tons of petroleum-impacted soil from the loading dock area of the former trucking terminal. Post-excavation soil sample results indicated that remaining soils in this area satisfied RSR clean-up criteria.
- In July, August, and November 2005, Bayer excavated and removed approximately 1,660 tons of impacted soil (i.e., polluted soil fill) from the Parcel 8 rear grounds of Building E-29. Post-excavation soil sample results indicated that certain remaining soils in this area of Parcel 8 exceeded RSR clean-up criteria. Impacted soil was excavated up to the property line and existing structures.

- In March 2007, Bayer submitted to DEP a request to reclassify ground water from GA to GB on the portion of the Bayer campus west of the Oyster River, in which Parcel 8 is situated. The purpose of the request was two-fold: (1) to connect an existing area of GB ground water on the portion of the Bayer campus east of the Oyster River to a GB area west of the Bayer campus, which would reflect the industrial use of the current GA area, and (2) to facilitate remediation of Bayer Parcel 8, which is a DEP Property Transfer Program site. GB ground water is defined as ground water within a historically highly urbanized area or an area of intense industrial activity and where public water supply service is available. Such ground water may not be suitable for human consumption without treatment due to waste discharges, spills or leaks of chemicals, or land use impacts. DEP considers GB ground waters to be degraded due to a variety of pollution sources

Because Parcel 8 is an establishment, there is a regulatory requirement to conduct additional remediation and environmental assessment of the parcel. The degree of additional remediation and environmental assessment required to attain compliance with the RSRs depends in large part upon the outcome of Bayer's ground water reclassification request, which will likely be determined within the next several months.

3.0 SITE OVERVIEW

3.1 Site Location

Parcel 8 is situated primarily in Orange with less than one acre at the northeast corner of the parcel in West Haven. The Town of Orange Tax Assessor's records identify it as Lot No. 4 of Block No. 3 of Map No. 8. Parcel 8 has an address of 11 Frontage Road and 95 Marsh Hill Road in Orange. The site location is shown on Figure 1.

3.2 Site Description

Parcel 8 contains Building D-37 and a nearby garage. The eastern two-thirds or so

of the parcel is vacant, undeveloped land. The Oyster River is on the east-most portion of the parcel. The configuration of Parcel 8 is shown on the Bayer site plan in Appendix F. Figure 2 shows the layout of the entire Bayer West Haven/Orange campus, the subject parcel configuration, and the parcel numbers assigned for the purpose of this report. Figure 3 is a schematic of Parcel 8.

3.3 Building Descriptions

Building D-37 is a warehouse building that was constructed in 1968; it is 16,440 square feet in area. It has brick and cinder block walls and a concrete slab foundation. A basement is situated at the west side. Offices are above the basement. The garage was also constructed in 1968 and is 3,436 square feet in area. It is a brick structure with a concrete slab foundation. Bayer's Engineering Department provided AEI with detailed floor plans for D-37, which are included in Appendix G.

3.4 Nearby Land Uses

Parcel 8 is bordered to the north by Bayer Parcels 4, 5, 6 and 7, to the west by Parcel 6 and a residential/agricultural parcel, and to the south and east by land with mixed residential, commercial and industrial uses. Figure 2 shows Parcel 8 and nearby Bayer parcels comprising the West Haven/Orange campus.

4.0 SITE FEATURES

4.1 Water Supply

Water is supplied to Parcel 8 by the South Central Connecticut Regional Water Authority (SCCRWA).

4.2 Waste Water Disposal

Parcel 8 is connected to the Town of Orange municipal sanitary sewer system.

4.3 On-Site Utilities

The Parcel 8 buildings are provided electric service by the United Illuminating Company (UI). Gas service is provided by the Southern Connecticut Gas Company. Bayer-owned utilities on the parcel include, but may not be limited to, fire suppression water, fiberoptics, electric, telephone, storm sewer, and sanitary sewer. Bayer Engineering has detailed drawings on all on-site utilities.

4.4 Storage Areas

There currently are no hazardous waste or materials storage areas on Parcel 8. Prior hazardous waste and materials storage areas are detailed in prior environmental reports for the parcel.

4.5 Above Ground Tanks

There currently are no hazardous waste or materials above ground storage tanks on Parcel 8. Prior hazardous waste and materials above ground storage tanks are detailed in prior environmental reports for the parcel.

4.6 Underground Storage Tanks

There currently are no underground petroleum or chemical storage tanks on Parcel 8. Prior hazardous waste and materials underground storage tanks are detailed in prior environmental reports for the parcel.

4.7 Dry Wells/Septic Systems

There currently are no dry wells or septic systems on Parcel 8. Prior septic systems are detailed in prior environmental reports for the parcel.

5.0 SITE USAGE

5.1 Current Uses of Subject Site

Bayer is in the process of closing the West Haven/Orange facility. Currently, the on-site buildings are being vacated. Certain administrative, Health, Environmental, and Safety (HES), engineering, and facility maintenance operations remain. Clean Harbors Environmental Services, Inc. is removing chemicals, equipment, and instrumentation from all laboratories, storage areas, and research and development buildings.

5.1.1 Current Owner/Operator

According to Town of Orange Town Clerk's records, the current owner of Parcel 8 is Bayer Pharmaceuticals Corporation.

5.1.2 Current Processes and Hazardous Materials Used and Stored On-Site

Currently, no manufacturing or research and development processes are being conducted on the Bayer campus. Prior processes conducted on Parcel 8 are detailed in prior environmental reports for the parcel. Chemicals, equipment, and instrumentation are being removed from the campus.

5.1.3 Current Waste Generation, Storage, and Disposal Methods

Bayer has retained Clean Harbors Environmental Services, Inc. to remove all hazardous and non-hazardous chemicals from the Bayer campus as part of the facility's closing. Wastes are being removed in lab packs, in 55-gallon drums, and in fiber board boxes. Bayer informed AEI that fluorescent light bulbs and light ballasts will be removed and disposed of as universal waste by "WE Recycle", and that all refrigerants will be removed by Bayer Engineering.

5.2 Former Uses of Subject Site

Bayer purchased Parcel 8 circa 2000. Building D-37 was a trucking terminal with a basement machine shop and the garage was a helicopter maintenance facility.

Both buildings were constructed in 1968. A copy of a Chronological History of the West Haven Site spanning 1965 to 2005, prepared by Bayer, is in Appendix H. Further details about former uses of Parcel 8 are in the prior reports listed in Appendix A.

6.0 APPLICABILITY AND OVERVIEW OF RSRs

As stated in Regulations of Connecticut State Agencies (RCSA) Section 22a-133k-1(b), the Remediation Standard Regulations (RSRs) apply to any action taken to remediate polluted soil, surface water, or a ground water plume at or emanating from a release area, which action is:

- Required pursuant to Chapters 445 (hazardous waste) or 446K (water pollution control) of the Connecticut General Statutes (CGS); or
- Taken pursuant to CGS Section 22a-133 (voluntary cleanup) including but not limited to any such action required to be taken or verified by a Licensed Environmental Professional (LEP) pursuant to such Public Acts.

Because the above conditions pertain to Parcel 8, and because the parcel is an establishment, the RSRs are applicable to Parcel 8.

7.0 CONCLUSIONS

AEI's previous reports revealed the following about Parcel 8:

- Bayer purchased Parcel 8 circa 2000. Prior to 2000, Building D-37 was a trucking terminal with a basement machine shop and the garage was a helicopter maintenance facility. Numerous environmental reports have been prepared for Parcel 8 since the early 1990s. The environmental reports indicate that soil and ground water on Parcel 8 had been impacted by releases primarily of halogenated volatile organic compounds (VOCs), petroleum hydrocarbons, lead and cadmium prior to Bayer's purchase of the parcel. The releases resulted from primarily former motor fuel underground storage tanks (USTs) and dispensing systems, a former plating and solvent rinsewater UST, a former vapor degreaser, a former paint booth, former

outdoor and indoor storage of hazardous wastes and substances, and former loading dock area motor fuel leaks.

- The Connecticut Department of Environmental Protection (DEP) has classified ground water beneath all but the extreme northeast portion of Parcel 8 as GA, indicating that it is presumed suitable for drinking without treatment. The small remainder of the parcel has a GB ground water classification, generally indicating that it is considered degraded due to historic spills and land uses.

- As part of a follow-up remedial investigation of the parcel, AEI detected the presence of polluted fill on the extreme northwest portion of Parcel 8 that was placed during the construction of Building E-29 on abutting Bayer Parcel 6. The E-29 parking lot and rear grounds are situated on Parcel 8. The fill was placed when the elevation of that portion of the parcel was raised to allow for construction of the E-29 parking lot and rear grounds.

- Due to a prior operator on Parcel 8 being a RCRA Large Quantity Generator of hazardous waste, the parcel is an establishment as defined by the Connecticut Transfer Act. In 2000, Bayer submitted to the Connecticut Department of Environmental Protection (DEP) a Property Transfer Form III and an Environmental Condition Assessment Form (ECAF). As the certifying party to the Form III, Bayer agreed to investigate Parcel 8 in accordance with prevailing standards and guidelines and to remediate the site in accordance with the Remediation Standard Regulations (RSRs). In response to Bayer's Form III filing, DEP notified Bayer that a licensed environmental professional (LEP) may verify that the investigation of the parcel has been performed in accordance with prevailing standards and guidelines and that the parcel has been remediated in accordance with the RSRs. (In 1998, a prior owner of the parcel submitted a Form III and ECAF to DEP as the certifying party at that time.)

- In December 2003, Bayer excavated and removed approximately 70 tons of petroleum-impacted soil from the loading dock area of the former trucking terminal. Post-excavation soil sample results indicated that remaining soils in this area satisfied RSR clean-up criteria.

- During July, August, and November 2005, Bayer excavated and removed approximately 1,660 tons of impacted soil (i.e., polluted soil fill) from the Parcel 8 rear grounds of Building E-29. Post-excavation soil sample results indicated that certain remaining soils in this area of Parcel 8 exceeded RSR clean-up criteria. Impacted soil was excavated up to the property line and existing structures.
- In March 2007, Bayer submitted to DEP a request to reclassify ground water from GA to GB on the portion of the Bayer campus west of the Oyster River, in which Parcel 8 is situated. The purpose of the request was two-fold: (1) to connect an existing area of GB ground water on the portion of the Bayer campus east of the Oyster River to a GB area west of the Bayer campus, which would reflect the industrial use of the current GA area, and (2) to facilitate remediation of Bayer Parcel 8, which is a DEP Property Transfer Program site. GB ground water is defined as ground water within a historically highly urbanized area or an area of intense industrial activity and where public water supply service is available. Such ground water may not be suitable for human consumption without treatment due to waste discharges, spills or leaks of chemicals, or land use impacts. DEP considers GB ground waters to be degraded due to a variety of pollution sources

Because Parcel 8 is an establishment, there is a regulatory requirement to conduct additional remediation and environmental assessment of the parcel. The degree of additional remediation and environmental assessment required to attain compliance with the RSRs depends in large part upon the outcome of Bayer's ground water reclassification request, which will likely be determined within the next several months.

8.0 LIMITATIONS

The purpose of this assessment was to summarize environmental activities pertaining to Parcel 8 of the Bayer West Haven/Orange campus. This assessment was performed solely for use by Bayer or third parties to whom Bayer releases this report, provided that AEI authorizes their use via a third-party reliance document executed by the parties. This report relies primarily on prior reports and data

summaries prepared by AEI through 2005.

No attempt was made to confirm the accuracy of information contained in the various files or documents reviewed or provided by persons contacted. All such information is considered accurate as provided.

The purpose of the remediation or assessment requirements discussed in this report is to comply with the State of Connecticut Department of Environmental Protection (DEP) Remediation Standard Regulations (RSRs). The remediation requirements presented in this report are based in part upon AEI's experience at similar sites in Connecticut, interaction with DEP on other sites since the promulgation of the RSRs in January 1996, and working knowledge of the RSRs. A DEP opinion or ruling on specific remediation requirements for the subject site may be obtained if requested of DEP via the Voluntary Remediation Program and the filing on an Environmental Condition Assessment Form (ECAF). DEP may dictate further investigation, monitoring, and/or remediation measures that may differ from those presented in this report. AEI cannot anticipate fully what those additional measures, if any, would be.

AEI's conclusions regarding the RSRs and Transfer Act are not intended to replace the advice of legal counsel.

9.0 REFERENCES

Bayer Pharmaceuticals Corporation, 2007: Personal communications with HES staff.

DeLorme Street Atlas, USA, 2001.

10.0 SIGNATURE PAGE

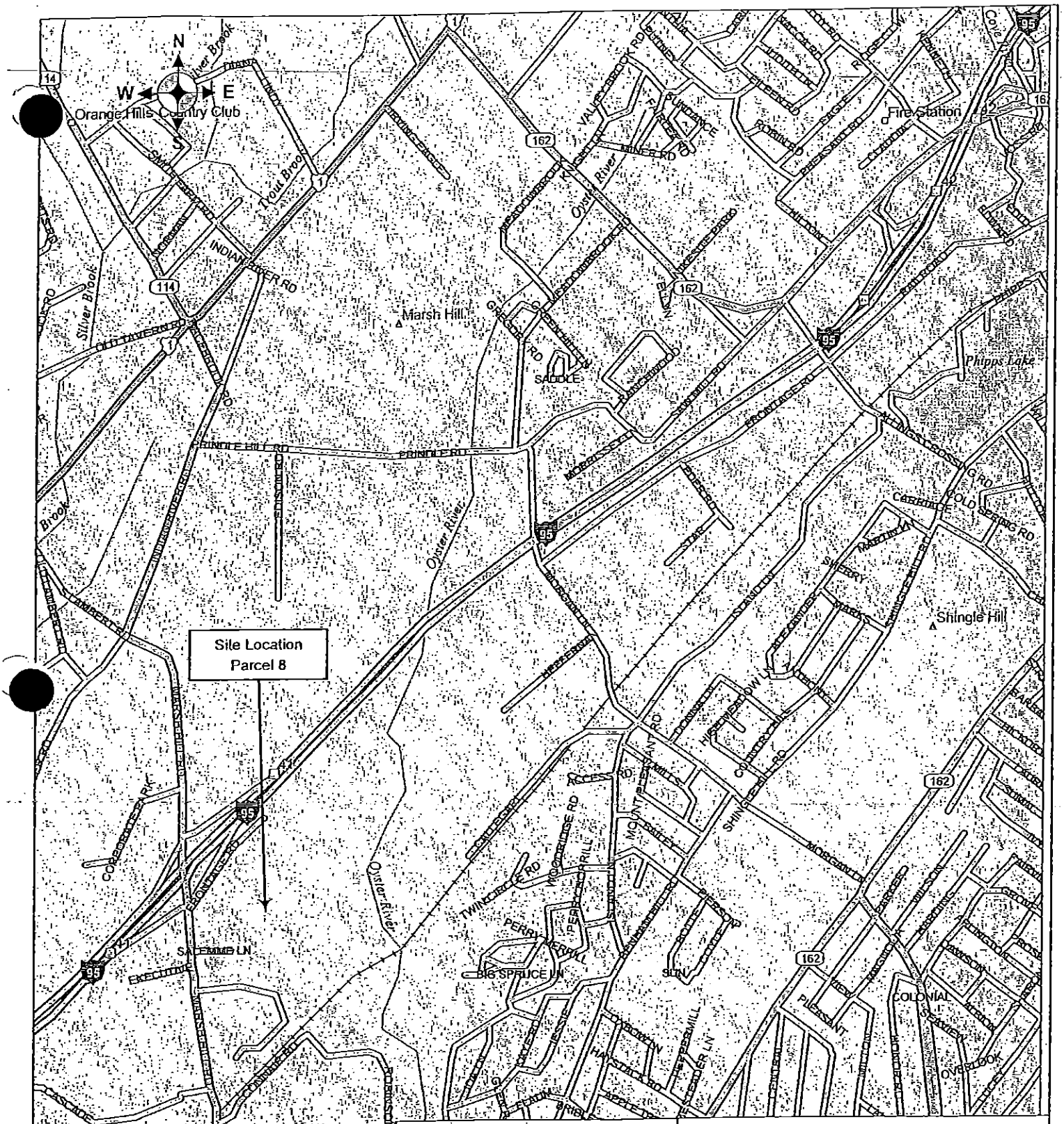
Project Name:	Environmental Activities Summary Report
Project Site Location:	Bayer Pharmaceuticals Corporation, Parcel 8, 11 Frontage Road/95 Marsh Hill Road, Orange, Connecticut
AEI Project Number:	AEI-07J-005
Client:	Bayer Pharmaceuticals Corporation
Client Contact:	Dave Smith
AEI Project Manager:	Joseph A. Santovasi, CPG, LEP
Report Date:	May 3, 2007

REPORT PREPARED BY:

ADVANCED ENVIRONMENTAL INTERFACE, INC.

Prepared by:

Joseph A. Santovasi, CPG, LEP
Principal



Advanced Environmental Interface, Inc.

Figure 1: Site Location Map

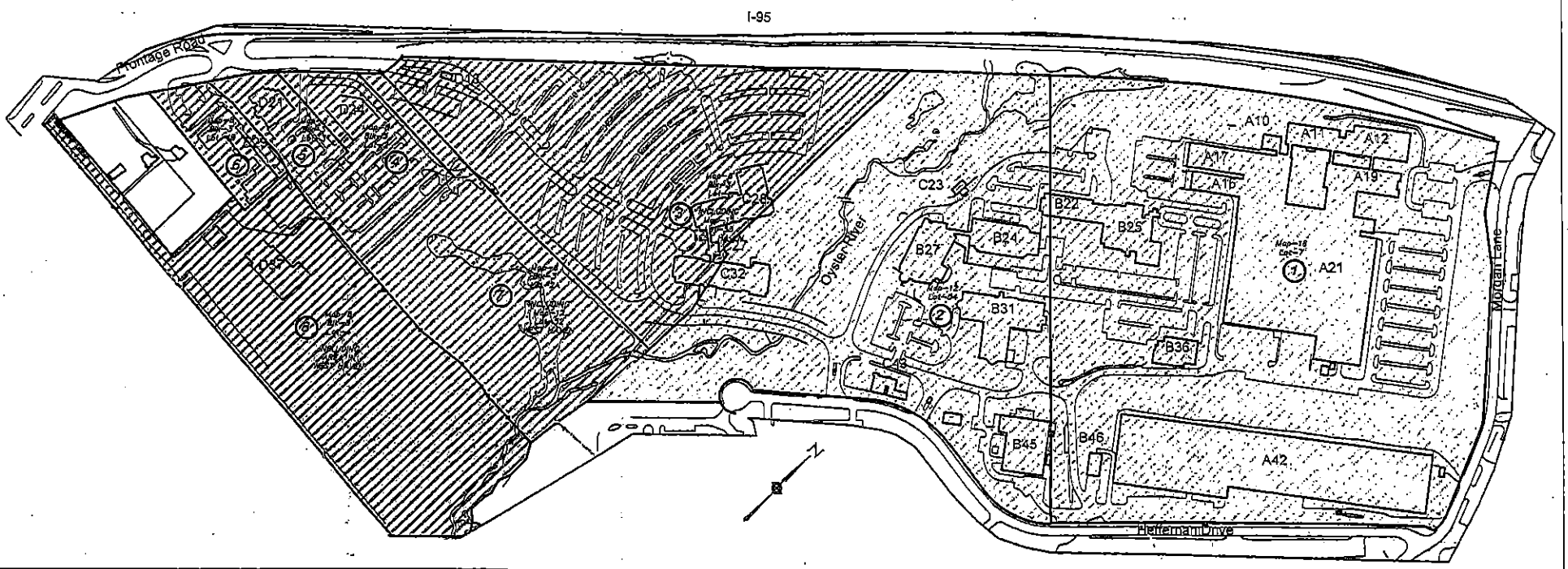
Location:
Bayer Pharmaceuticals Corp., Parcel 8
11 Frontage Road/95 Marsh Hill Road
Orange, Connecticut

Project No.: AEI-07J-005

Date: April 2007

Approximate Scale in Miles: 0 — 0.25

Map Source: DeLorme Street Atlas, USA 2001



Parcels Comprising Bayer Campus

① = Parcel 1; 400 Morgan Lane, West Haven

② = Parcel 2; 300 Heffernan Drive/400 Morgan Lane, West Haven

③ = Parcel 3; 400 Morgan Lane, West Haven/141 Frontage Road, Orange

④ = Parcel 4; 137 Frontage Road, Orange

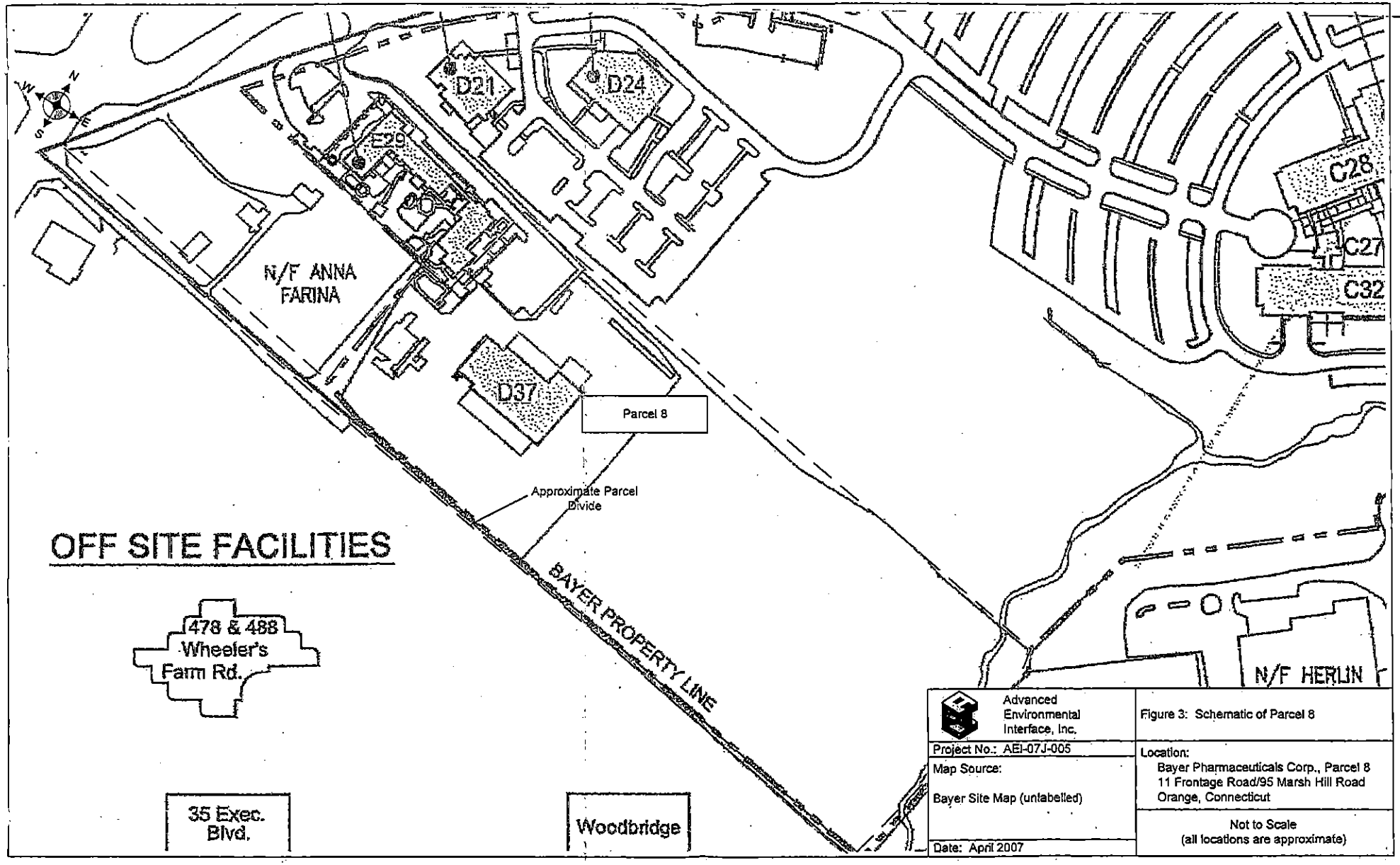
⑤ = Parcel 5; 125 Frontage Road, Orange

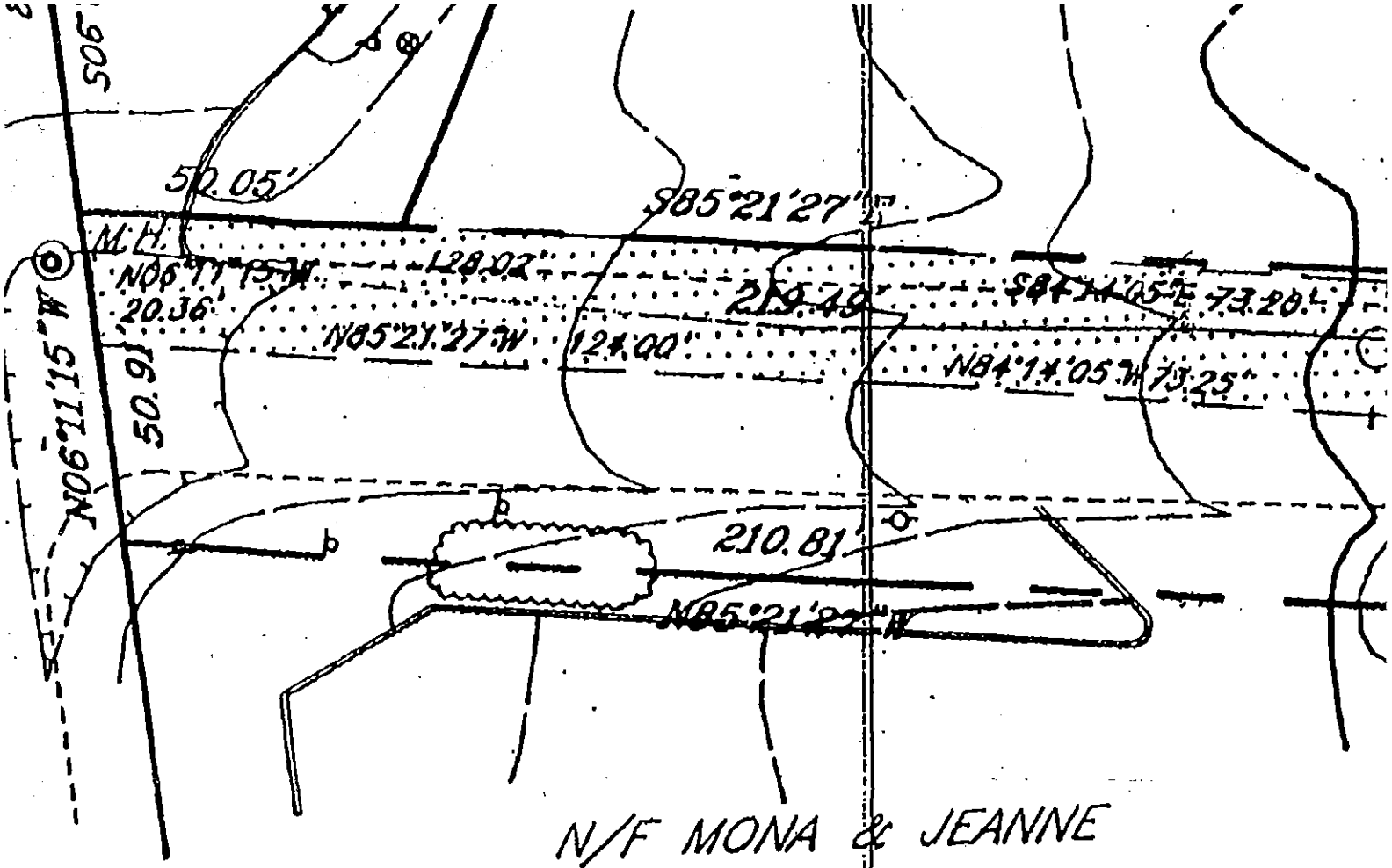
⑥ = Parcel 6; 117 Frontage Road, Orange

⑦ = Parcel 7; 139 Frontage Road, Orange

⑧ = Parcel 8; 11 Frontage Road/95 Marsh Hill Road, Orange

Advanced Environmental Interface, Inc.	Figure 2: Schematic of Parcels and Buildings Comprising Bayer Campus
Project No.: AEI-07J-005	Location: Bayer Pharmaceuticals Corp. Orange and West Haven, Connecticut
Map Source: Bayer Engineering File Map (undated, unlabeled)	Not To Scale
Date: April 2007	

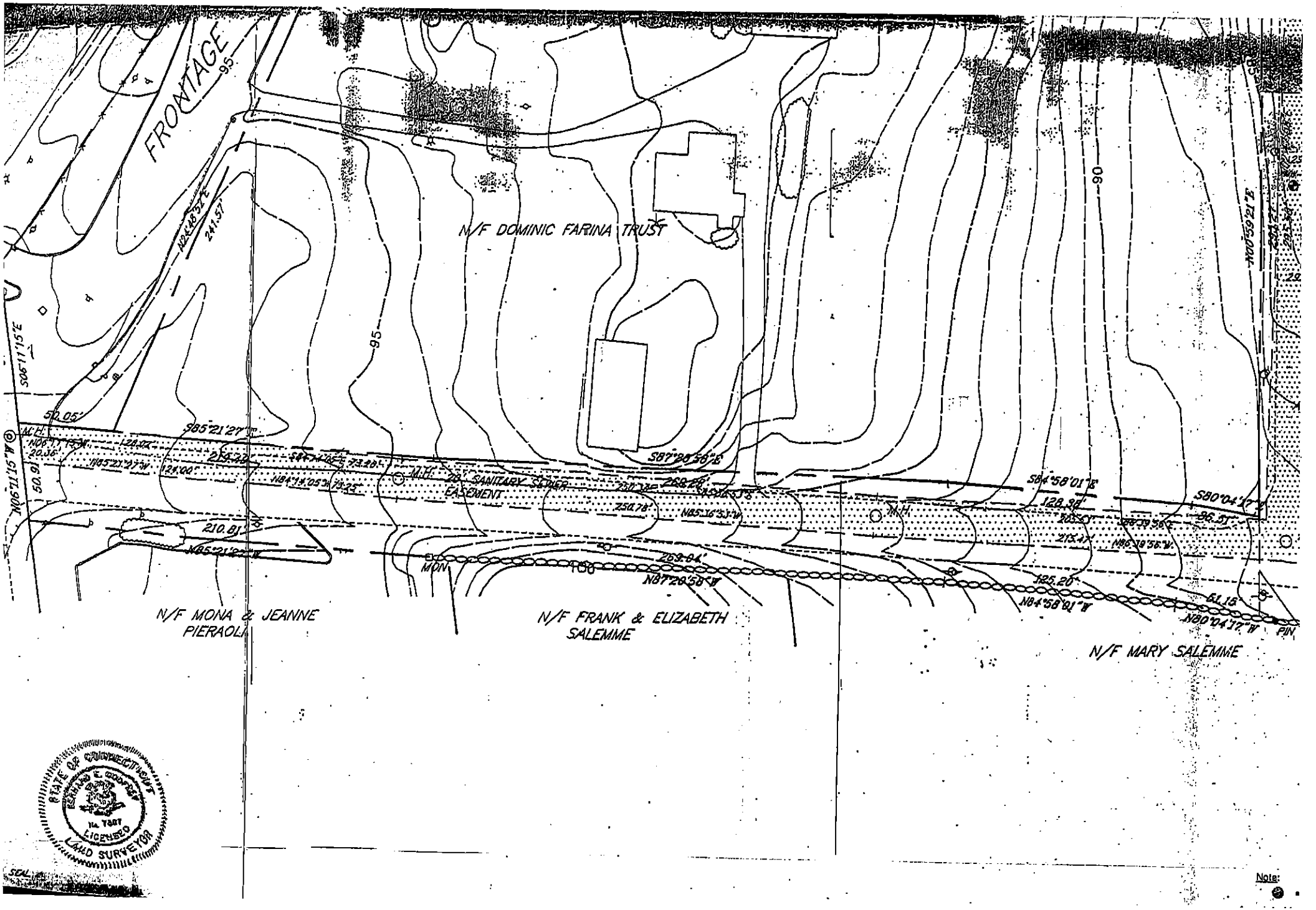

D21
D24
E29
C28
C27
C32
N/F ANNA FARINA
D37
Parcel 8
Approximate Parcel Divide
BAYER PROPERTY LINE
N/F HERLIN
OFF SITE FACILITIES
478 & 488 Wheeler's Farm Rd.
35 Exec. Blvd.
Woodbridge
Advanced Environmental Interface, Inc.
Figure 3: Schematic of Parcel 8
Project No.: AEI-07J-005
Location:
Bayer Pharmaceuticals Corp., Parcel 8
11 Frontage Road/95 Marsh Hill Road
Orange, Connecticut
Map Source:
Bayer Site Map (unlabelled)
Not to Scale
(all locations are approximate)
Date: April 2007



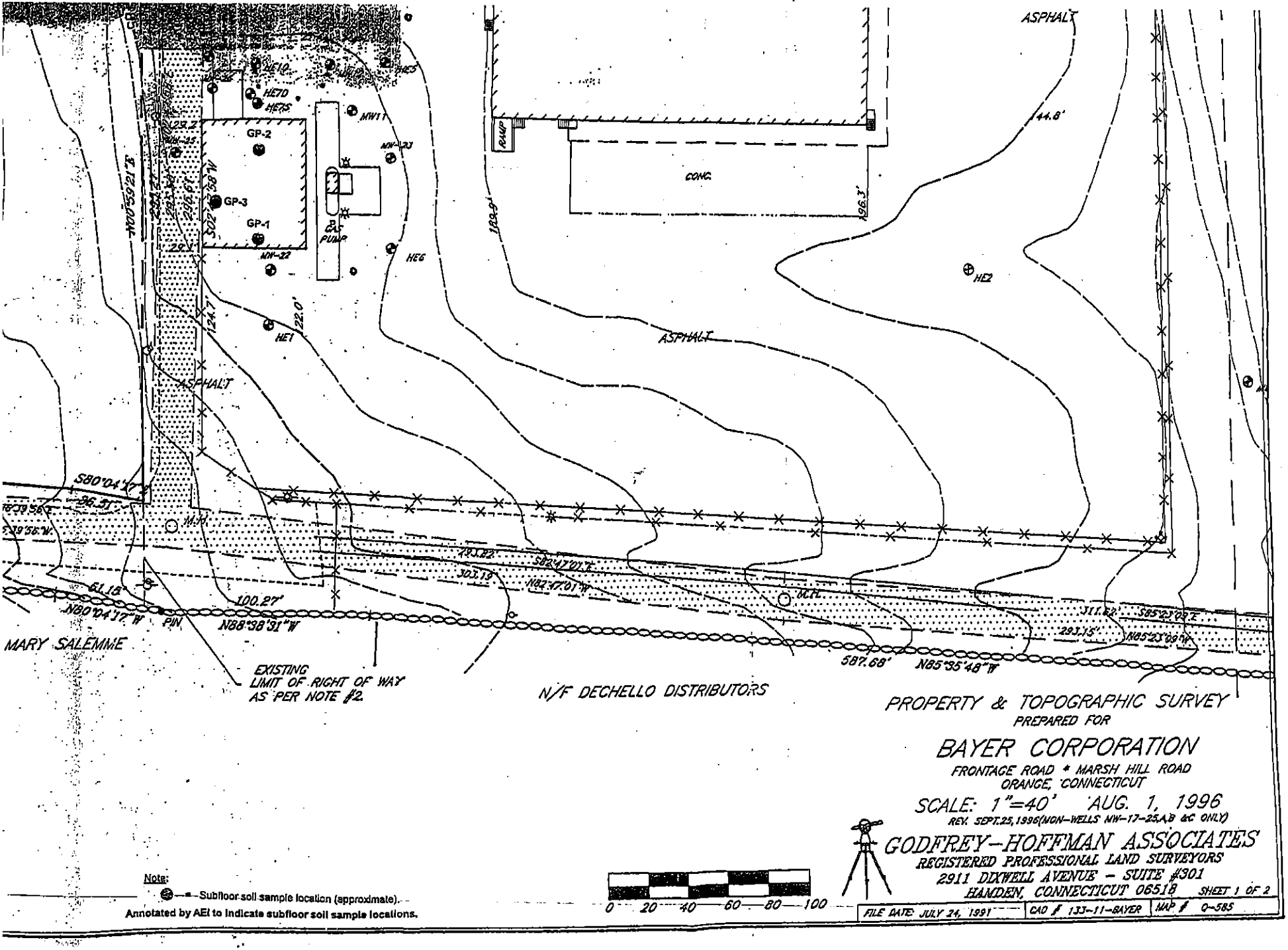
MAP

STATE OF CONNECTICUT
GERARD E. GOUDREAU
No. 7807
LICENSED
LAND SURVEYOR

AND SEAL


FRONTAGE
95
N/F DOMINIC FARINA TRUST
N06°48'52"E
241.57'
S05°11'15"E
50.05'
S85°21'27"W
N06°11'15"W
20.36'
N85°21'27"W
128.00'
215.42'
S87°26'56"E
73.20'
M.H.
20' SANITARY SEWER EASEMENT
N84°18'05"W
79.35'
268.26'
S84°58'01"E
128.30'
S80°04'17"E
96.87'
N85°16'33"W
250.78'
N85°39'56"W
213.41'
N85°39'56"W
210.81'
N85°21'27"W
MON
N87°28'58"W
262.04'
N84°58'01"W
185.20'
N80°04'17"W
61.18'
PIN
N/F MONA & JEANNE PIERAOLA
N/F FRANK & ELIZABETH SALEMME
N/F MARY SALEMME
STATE OF CONNECTICUT
RICHARD F. GODFREY
No. 7587
LICENSED
LAND SURVEYOR
SEAL

Note:



PROPERTY & TOPOGRAPHIC SURVEY
PREPARED FOR

BAYER CORPORATION

FRONTAGE ROAD * MARSH HILL ROAD
ORANGE, CONNECTICUT

SCALE: 1"=40' AUG. 1, 1996
REV. SEPT.25, 1996(MON-WELLS NW-17-25A,B &C ONLY)

GODFREY-HOFFMAN ASSOCIATES
REGISTERED PROFESSIONAL LAND SURVEYORS
2911 DIXWELL AVENUE - SUITE #301
HAMDEN, CONNECTICUT 06518

SHEET 1 OF 2

Note:
⊕ = Subfloor soil sample location (approximate).
Annotated by AEI to indicate subfloor soil sample locations.

0 20 40 60 80 100

FILE DATE: JULY 24, 1991 | CAD # 133-11-BAYER | MAP # 0-585

APPENDIX A

List of Prior Environmental Reports for Parcel 8

List of Environmental Reports for Bayer Parcel 8
11 Frontage Road/95 Marsh Hill Road, Orange, Connecticut

Address	Building	Author	Title	Site	Report Date
11 Frontage Road	D-37	Advanced Environmental Interface, Inc.	Septic System Documentation	aka 95 Marsh Hill Road Bayer Parcel 8	Undated
11 Frontage Road	D-37	Advanced Environmental Interface, Inc.	Groundwater Monitoring Well Specifications	aka 95 Marsh Hill Road Bayer Parcel 8	Undated
11 Frontage Road	D-37	Advanced Environmental Interface, Inc.	Summary of Groundwater Laboratory Testing Results Concentrations of Volatile Organic Compounds	aka 95 Marsh Hill Road Bayer Parcel 8	Undated
11 Frontage Road	D-37	Advanced Environmental Interface, Inc.	Well Completion Report	aka 95 Marsh Hill Road Bayer Parcel 8	1/27/68
11 Frontage Road	D-37	Advanced Environmental Interface, Inc.	Report on Phase I and Phase II Environmental Site Assessment	aka 95 Marsh Hill Road Northeast Enterprises Property Rear Bayer Parcel B	12/28/92
11 Frontage Road	D-37	Advanced Environmental Interface, Inc.	Report on Remedial Investigation and Remediation Cost Estimates	aka 95 Marsh Hill Road Bayer Parcel 8	10/29/96
11 Frontage Road	D-37	Advanced Environmental Interface, Inc.	Report on Remedial Investigation and Remediation Cost Estimate	aka 95 Marsh Hill Road Bayer Parcel 8	12/97
11 Frontage Road	D-37	Advanced Environmental Interface, Inc.	FAX Memo to Rudy Zimmerman, Ground Water Monitoring Results	aka 95 Marsh Hill Road Bayer Parcel 8	12/13/99
11 Frontage Road	D-37	Advanced Environmental Interface, Inc.	Environmental Condition Assessment Form (ECAF) and Attachments	aka 95 Marsh Hill Road Bayer Parcel 8	10/00
11 Frontage Road	D-37	Advanced Environmental Interface, Inc.	Letter to DEP, Schedule for Investigating and Remediating Bayer Corporation Site	aka 95 Marsh Hill Road Bayer Parcel 8	1/10/01
11 Frontage Road	D-37	Advanced Environmental Interface, Inc.	Letter to DEP (Doug Zimmerman), Status Report Investigation and Remediation of Bayer Corporation Site	aka 95 Marsh Hill Road Bayer Parcel 8	12/14/01

List of Environmental Reports for Bayer Parcel 8
11 Frontage Road/95 Marsh Hill Road, Orange, Connecticut

Address	Building	Author	Title	Site	Report Date
11 Frontage Road	D-37	Advanced Environmental Interface, Inc.	Health and Safety Plan, Subsurface Investigation	aka 95 Marsh Hill Road Bayer Parcel 8	7/23/02
11 Frontage Road	D-37	Advanced Environmental Interface, Inc.	Memo, Update re: Remedial Investigation of Bayer Site	aka 95 Marsh Hill Road Bayer Parcel 8	10/31/02
11 Frontage Road	D-37	Advanced Environmental Interface, Inc.	Draft Soil, Soil Vapor and Ground Water Data Summary Documents	aka 95 Frontage Road Bayer Parcel 8	5/03
11 Frontage Road	D-37	Advanced Environmental Interface, Inc.	Letter to DEP (Doug Zimmerman), Status Report re: Investigation and Remediation	aka 95 Marsh Hill Road Bayer Parcel 8	5/1/03
11 Frontage Road	D-37	Advanced Environmental Interface, Inc.	Health and Safety, Site Remediation and Confirmatory Sampling	aka 95 Marsh Hill Road Bayer Parcel 8	12/22/03
11 Frontage Road	D-37	Advanced Environmental Interface, Inc.	FAX Memo to Dave Smith, Range of Concentrations for Pollutants Detected in Soil Samples	aka 95 Marsh Hill Road Bayer Parcel 8	1/14/04
11 Frontage Road	D-37	Advanced Environmental Interface, Inc.	Draft Request for Proposal to Conduct Remedial Actions	aka 95 Marsh Hill Road Bayer Parcel 8	2/9/04
11 Frontage Road	D-37	Advanced Environmental Interface, Inc.	FAX to Dave Smith, Draft Lab Results Summary Day Care Site and Adjoining	aka 95 Marsh Hill Road Bayer Parcel 8	11/8/04
11 Frontage Road	D-37	Advanced Environmental Interface, Inc.	Letter to DEP, Status Report re: Investigation and Remediation	aka 95 Marsh Hill Road Bayer Parcel 8	9/25/06
11 Frontage Road	D-37	Advanced Environmental Interface, Inc.	Ground Water Reclassification Request to DEP	aka 95 Marsh Hill Road Bayer Parcel 8	3/29/07
11 Frontage Road	D-37	Consulting Environmental Services, Inc.	Application for Emergency Authorization for Discharge of Contaminated Ground Water into the Sanitary Sewer	aka 95 Marsh Hill Road Bayer Parcel 8	8/31/93
11 Frontage Road	D-37	Consulting Environmental Services, Inc.	Analysis of Water Samples Collected from Recovery/Interceptor Well RW-1	aka 95 Marsh Hill Road Bayer Parcel 8	5/25/96

List of Environmental Reports for Bayer Parcel 8
11 Frontage Road/95 Marsh Hill Road, Orange, Connecticut

Address	Building	Author	Title	Site	Report Date
11 Frontage Road	D-37	Consulting Environmental Services, Inc.	Analysis of Water Samples Collected from Recovery/Interceptor Well RW-1, June 1996	aka 95 Marsh Hill Road Bayer Parcel 8	7/30/96
11 Frontage Road	D-37	Consulting Environmental Services, Inc.	DEP General Permit Registration for the Discharge of Ground Water Waste Water to a Sanitary Sewer	aka 95 Marsh Hill Road Bayer Parcel 8	9/99
11 Frontage Road	D-37	Department of Environmental Protection	Letter to I. Levi, Acknowledgement of Receipt of Complete Form 3 & ECAF	aka 95 Marsh Hill Road Bayer Parcel 8	4/2/98
11 Frontage Road	D-37	Department of Environmental Protection	Letter to I. Levi, Environmental Condition Assessment Form	aka 95 Marsh Hill Road Bayer Parcel 8	6/15/98
11 Frontage Road	D-37	Department of Environmental Protection	Letter to I. Levi, Review of Historic Reports	aka 95 Marsh Hill Road Bayer Parcel 8	5/24/99
11 Frontage Road	D-37	Department of Environmental Protection	Letter to I. Levi, Environmental Investigation Update Report	aka 95 Marsh Hill Road Bayer Parcel 8	4/18/00
11 Frontage Road	D-37	Department of Environmental Protection	Letter to Rudy Zimmerman, Investigation and Remediation (LEP Delegation)	aka 95 Marsh Hill Road Bayer Parcel 8	10/14/00
11 Frontage Road	D-37	Environmental Resources Management	Summary of Additional Findings	aka 95 Marsh Hill Road Bayer Parcel 8	1/14/98
11 Frontage Road	D-37	Environmental Resources Management	Letter, Schedule for Investigation, Remediation, Public Notice and Submission of Status Reports	aka 95 Marsh Hill Road Bayer Parcel 8	7/21/99
11 Frontage Road	D-37	Environmental Resources Management	Summary of Plating Waste UST Investigation and Remediation	aka 95 Marsh Hill Road Bayer Parcel 8	8/3/99
11 Frontage Road	D-37	Environmental Resources Management	Submittal to DEP, Updated Summary of Active Soil Gas Survey Results	aka 95 Marsh Hill Road Bayer Parcel 8	9/16/99
11 Frontage Road	D-37	Environmental Resources Management	Environmental Investigation Update	aka 95 Marsh Hill Road Bayer Parcel 8	1/18/00

List of Environmental Reports for Bayer Parcel 8
11 Frontage Road/95 Marsh Hill Road, Orange, Connecticut

Address	Building	Author	Title	Site	Report Date
11 Frontage Road	D-37	GEI Consultants, Inc.	Draft Environmental Review Report	aka 95 Marsh Hill Road Bayer Parcel 8	4/23/97
11 Frontage Road	D-37	Heynen-Teale	Phase I Site Assessments	aka 95 Marsh Hill Road Bayer Parcel 8	10/3/91
11 Frontage Road	D-37	Heynen-Teale	Phase II Environmental Assessments	aka 95 Marsh Hill Road Bayer Parcel 8	10/3/91
11 Frontage Road	D-37	Heynen-Teale	Phase III Contamination Assessments/ Remedial Investigations	aka 95 Marsh Hill Road Bayer Parcel 8	2/3/92
11 Frontage Road	D-37	Hopkins Environmental Management, Inc	Phase I Environmental Site Assessment	aka 95 Marsh Hill Road Bayer Parcel 8	12/13/94
11 Frontage Road	D-37	Hopkins Environmental Management, Inc	Soil Sampling Report	aka 95 Marsh Hill Road Bayer Parcel 8	5/5/95
11 Frontage Road	D-37	Hopkins Environmental Management, Inc	Environmental Site Assessment Update	aka 95 Marsh Hill Road Bayer Parcel 8	8/8/96
11 Frontage Road	D-37	Hopkins Environmental Management, Inc	Tank Closure Report	aka 95 Marsh Hill Road Bayer Parcel 8	3/25/97
11 Frontage Road	D-37	Hopkins Environmental Management, Inc	Form 3 for Levi Purchase	aka 95 Marsh Hill Road Bayer Parcel 8	3/98
11 Frontage Road	D-37	Hopkins Environmental Management, Inc	Form 3 to DEP	aka 95 Marsh Hill Road Bayer Parcel 8	10/00
11 Frontage Road	D-37	HRP Associates, Inc.	Phase I Environmental Site Assessment Report	aka 95 Marsh Hill Road Bayer Parcel 8	9/23/92
11 Frontage Road	D-37	HRP Associates, Inc.	Hydrogeologic Evaluation of Ground Water Contamination in the Vicinity of the Paint Room and Preliminary Investigation of Site Septic Leaching Fields	aka 95 Marsh Hill Road Bayer Parcel 8	11/92

Rev. Date: April 30, 2007

List of Environmental Reports for Bayer Parcel 8
11 Frontage Road/95 Marsh Hill Road, Orange, Connecticut

Address	Building	Author	Title	Site	Report Date
11 Frontage Road	D-37	HRP Associates, Inc.	Paint Room Contamination Source Investigation and Soil Vapor Extraction Pilot Test Report, ACSC	aka 95 Marsh Hill Road Bayer Parcel 8	11/2/92
11 Frontage Road	D-37	Subsurface Informational Surveys, Inc.	GPR Results	aka 95 Marsh Hill Road Bayer Parcel 8	7/24/02
11 Frontage Road	D-37	Subsurface Informational Surveys, Inc.	GPR Results	aka 95 Marsh Hill Road Bayer Parcel 8	12/21/02
11 & 117 Frontage Road	D-37 E-29	Advanced Environmental Interface, Inc.	Memo to Paul Planz, Bayer Corporation, Abandonment of Ground Water Monitoring Wells	aka 95 Marsh Hill Road Bayer Parcel 8 Bayer Parcel 6	9/13/01
11, 117, 125, 137 & 139 Frontage Road	D-21 D-24 D-37 E-29	Rudy Zimmerman	Letter, Ground Water Monitoring Results	Multiple	6/8/01
11, 117, 125, 137 & 139 Frontage Road	D-21 D-24 D-37 E-29	Rudy Zimmerman	Updated Letter, Ground Water Monitoring Results	Multiple	7/18/01

Table 1
Summary of Ground Water Monitoring Results (parts per billion)
11 Frontage Road, Orange, Connecticut
September 1991 - April 2005

Well I.D. 11 Frontage Rd.	Sampling Date	Benzene	1,1,1-TCA	sec-Butylbenzene	1,1-DCE	1,1-DCA	1,2-DCB	TCE	1,4-DCB	Toluene	Chloroform	1,2-DCA	1,2,4-TMB	c-1,2-DCE	1,3,5-TMB	PCE	MTBE	Vinyl Chloride	Metals	CT ETPH	PAHs
HE-1	9/91	NA	ND	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	NA	NA	ND	NT	NT	NT
	12/27/91	NA	2.0	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	9/11/92	NA	17.0	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	7/22/93	NA	ND	NA	ND	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	6/9/94	NA	ND	NA	ND	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	10/31/94	NA	ND	NA	ND	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	8/6/96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/20/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
HE-2	9/91	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT	NT
	12/27/91	NA	7.0	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	9/11/92	NA	6.0	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	6/94	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	ND	NA	ND	NT	NT	NT
	8/6/96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NT	NT	NT
	4/20/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
HE-3	9/91	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT	NT
	12/27/91	NA	2.0	NA	ND	2.0	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	9/11/92	NA	ND	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	7/93	destroyed																			
HE-4	9/91	NA	58.0	NA	1.0	25.0	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	12/27/91	NA	560.0*	NA	45.0*	18.0	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	9/11/92	NA	345.0*	NA	12.0*	15.0	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	7/22/93	NA	301.0*	NA	19.0*	16.0	NA	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	6/9/94	NA	87.0	NA	5.0*	7.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT	NT
	10/31/94	NA	69.0	NA	10.0*	10.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT	NT
	8/6/96	ND	38.0	ND	6.0*	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NT	NT	NT
	4/20/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/13/05	ND	1.6	ND	ND	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
HE-5	9/91	NA	305.0*	NA	11.0*	80.0*	NA	ND	NA	NA	ND	1.0	NA	ND	NA	ND	NA	ND	NT	NT	NT
	12/27/91	NA	673.0*	NA	27.0*	27.0	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	9/11/92	NA	480.0*	NA	85.0*	21.0	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	7/22/93	NA	1,047.0*	NA	51.0*	9.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT	NT
	10/29/93	NA	1,247.0*	NA	57.0*	17.0	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	1/24/94	NA	505.0*	NA	42.0*	7.0	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	6/9/94	NA	285.0*	NA	15.0*	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	10/31/94	NA	175.0	NA	3.0*	1.0	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	8/6/96	ND	6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/20/01	ND	4.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/14/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	BDL
HE-6	9/91	NA	41.0	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	12/27/91	NA	58.0	NA	1.0	1.0	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	9/11/92	NA	212.0*	NA	4.0*	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	7/22/93	NA	19.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT	NT

Table 1
Summary of Ground Water Monitoring Results (parts per billion)
11 Frontage Road, Orange, Connecticut
September 1991 - April 2005

Well I.D. 11 Frontage Rd.	Sampling Date	Benzene	1,1,1-TCA	sec-Butylbenzene	1,1-DCE	1,1-DCA	1,2-DCB	TCE	1,4-DCB	Toluene	Chloroform	1,2-DCA	1,2,4-TMB	c-1,2-DCE	1,3,5-TMB	PCE	MTBE	Vinyl Chloride	Metals	CT ETPH	PAHs
HE-6 (cont'd)	8/6/96	ND	6.0	ND	ND	1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/23/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	400*	BDL
	4/14/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	BDL
HE-7S	12/27/91	NA	9,112.0*	NA	163.0*	663.0*	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	9/11/92	NA	13,706.0*	NA	428.0*	133.0*	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	7/22/93	NA	11,160.0*	NA	ND	37.0	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	1/24/94	NA	343.0*	NA	1.0	1.0	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	6/94	NA	798.0*	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	8/6/96	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT	NT
	4/20/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/14/05	ND	10.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.3	ND	ND	NT	NT	NT
HE-7D	10/29/93	NA	178.0	NA	30.0*	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	1/24/94	NA	4,437.0*	NA	170.0*	4.0	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	6/9/94	NA	9,798.0*	NA	560.0*	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	10/31/94	NA	1,718.0*	NA	47.0*	175.0*	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	8/6/96	ND	1,203.0*	ND	30.0*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/20/01	ND	11.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.9	ND	ND	NT	NT	NT
	4/14/05	ND	7.9	ND	ND	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.6	ND	ND	NT	NT	NT
HE-8	12/27/91	NA	773.0*	NA	26.0*	46.0	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	9/11/92	NA	640.0*	NA	49.0*	42.0	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	7/22/93	NA	1,010.0*	NA	58.0*	26.0	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	1/24/94	NA	332.0*	NA	21.0*	20.0	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	6/9/94	NA	70.0	NA	ND	8.0	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	10/31/94	NA	24.0	NA	4.0*	12.0	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	8/6/96	ND	26.0	ND	4.0*	4.0	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	NT	NT	NT
	4/20/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/14/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
HE-9S	9/11/92	NA	160.0	NA	5.0*	10.0	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	10/29/93	NA	1.0	NA	ND	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	1/24/94	NA	1.0	NA	ND	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	6/9/94	NA	ND	NA	ND	1.0	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	10/31/94	NA	ND	NA	ND	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	8/6/96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/20/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/13/05	ND	ND	ND	ND	ND	ND	ND	ND	0.7	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
HE-9D	12/27/91	NA	185.0	NA	8.0*	33.0	NA	ND	NA	NA	ND	ND	NA	ND	NA	1.0	NA	ND	NT	NT	NT
	9/11/92	NA	35.0	NA	10.0*	2.0	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	10/29/93	NA	1.0	NA	ND	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	1/24/94	NA	ND	NA	ND	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	6/9/94	NA	ND	NA	ND	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	10/31/94	NA	ND	NA	ND	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	8/6/96	ND	35.0	ND	4.0*	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/20/01	ND	7.3	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/14/05	ND	2.6	ND	1.0	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT

Table 1
Summary of Ground Water Monitoring Results (parts per billion)
11 Frontage Road, Orange, Connecticut
September 1991 - April 2005

Well I.D. 11 Frontage Rd.	Sampling Date	Benzene	1,1,1-TCA	sec-Butylbenzene	1,1-DCE	1,1-DCA	1,2-DCB	TCE	1,4-DCB	Toluene	Chloroform	1,2-DCA	1,2,4-TMB	c-1,2-DCE	1,3,5-TMB	PCE	MTBE	Vinyl Chloride	Metals	CT ETPH	PAHs
HE-10S	9/11/92	NA	197.0	NA	4.0*	18.0	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	7/22/93	NA	212.0*	NA	13.0*	59.0	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	10/29/93	NA	226.0*	NA	22.0*	79.0*	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	1/24/94	NA	302.0*	NA	18.0*	84.0*	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	6/9/94	NA	1,271.0*	NA	100.0*	289.0*	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	10/31/94	NA	1,213.0*	NA	ND	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	8/6/96	ND	430.0*	ND	48.0*	261.0*	ND	ND	ND	ND	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	4/20/01	ND	256.0*	ND	49.3*	97.0*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/14/05	ND	82.0	ND	29.6*	45.6	ND	ND	ND	ND	ND	1.3*	ND	ND	ND	ND	ND	ND	NT	NT	NT
HE-10D	9/11/92	NA	71.0	NA	2.0*	ND	NA	NA	NA	NA	ND	0.6	ND	ND	ND	ND	ND	0.7	NT	NT	NT
	10/29/93	NA	109,125.0*	NA	1,015.0*	21.0	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	1/24/94	NA	79.0	NA	3.0*	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	6/9/94	NA	96.0	NA	ND	3.0	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	10/31/94	NA	28.0	NA	ND	1.0	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	8/6/96	ND	25.0	ND	ND	2.0	ND	ND	ND	ND	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	12/12/97[1]	ND	14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/20/01	ND	55.0	ND	7.3	3.9	ND	ND	ND	ND	ND	ND	3.6	ND	10	ND	ND	ND	Ba=121	NT	NT
	4/14/05	ND	12.5	ND	3.1	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
HE-10	12/27/91	NA	98.0	NA	4.0*	40.0	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	9/11/92	NA	198.0	NA	4.0*	18.0	NA	ND	NA	NA	ND	ND	NA	ND	NA	NA	NA	ND	NT	NT	NT
MW-1	12/10/92	NA	56.0	NA	3.0*	2.0	NA	ND	NA	NA	ND	NA	NA	ND	NA	ND	NA	ND	NT	NT	NT
	8/6/96	ND	9.0	ND	1.0	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/19/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/15/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
MW-2	12/10/92	NA	2.0	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	8/6/96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/19/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/15/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
MW-3	12/10/92	NA	1.0	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	8/6/96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/19/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/15/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
MW-4	12/10/92	NA	ND	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	8/6/96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/19/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/14/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
MW-5	12/10/92	NA	ND	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	8/6/96	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/19/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/14/05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-6	12/10/92	NA	ND	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT

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Well I.D. 11 Frontage Rd.	Sampling Date	Benzene	1,1,1-TCA	sec-Butylbenzene	1,1-DCE	1,1-DCA	1,2-DCB	TCE	1,4-DCB	Toluene	Chloroform	1,2-DCA	1,2,4-TMB	c-1,2-DCE	1,3,5-TMB	PCE	MTBE	Vinyl Chloride	Metals	CT ETPH	PAHs
MW-6 (cont'd)	8/6/96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/19/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/14/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
MW-7	12/10/92	NA	ND	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	8/6/96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/19/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/14/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
MW-11	9/11/92	NA	185.0	NA	6.0*	2.0	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	10/29/93	NA	1,202.0*	NA	ND	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	1/24/94	NA	560.0*	NA	33.0*	5.0	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	6/9/94	NA	34.0	NA	ND	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	8/6/96	ND	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/23/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/15/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	BDL
MW-12	9/11/92	NA	4,758.0*	NA	320.0*	77.0*	NA	1.0	NA	ND	9.0*	NA	ND	NA	ND	NA	ND	ND	BDL	BDL	BDL
	7/22/93	NA	9,318.0*	NA	264.0*	42.0	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA	ND	NT	NT	NT
	6/9/94	NA	8,656.0*	NA	368.0*	ND	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA	ND	NT	NT	NT
	8/6/96	ND	51.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	12/12/97[1]	ND	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/23/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Ba=1,490*	NT	NT
	4/15/05	ND	1.8	ND	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	400*	BDL
MW-13	9/11/92	NA	299.0*	NA	9.0*	16.0	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	BDL	200*	BDL
	7/22/93	NA	650.0*	NA	25.0*	6.0	NA	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	10/29/93	NA	470.0*	NA	ND	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	1/24/94	NA	143.0	NA	7.0*	9.0	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	6/9/94	NA	37.0	NA	ND	1.0	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	10/31/94	NA	23.0	NA	2.0*	1.0	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	8/6/96	ND	8.0	ND	ND	1.0	ND	ND	ND	ND	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	4/20/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/14/05	ND	0.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	100	BDL
MW-13D	12/12/97[1]	ND	5.5	ND	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	5.3	ND	BDL	BDL	BDL
	4/20/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Ba=18/ Cd=24	NT	NT
	4/14/05	ND	4.9	ND	0.8	0.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.6	ND	ND	NT	NT	NT
MW-14	9/11/92	NA	ND	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	6/9/94	NA	ND	NA	ND	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	10/31/94	NA	ND	NA	ND	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	8/6/96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/20/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
MW-15	9/11/92	NA	151.0	NA	3.0*	3.0	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	6/9/94	NA	ND	NA	ND	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT

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MW-15 (cont'd)	10/31/94	NA	ND	NA	ND	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	8/6/96	ND	9.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/20/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
MW-16	9/11/92	NA	3.0	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	10/29/93	NA	ND	NA	ND	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	1/24/94	NA	ND	NA	ND	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	10/31/94	NA	ND	NA	ND	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NT	NT	NT
	8/6/96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/20/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
PW-1	9/91	NA	24.0	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	12/27/91	NA	38.0	NA	1.0	ND	NA	1.0	NA	NA	ND	ND	NA	ND	NA	NA	NA	ND	NT	NT	NT
	9/11/92	NA	24.0	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	6/94	NA	2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT	NT
	8/6/96	ND	6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	6/26/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/15/05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
RW-1	8/93	NA	782.0*	NA	143.0*	280.0*	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	10/16/93	NA	2,576.0*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT	NT
	10/28/93	NA	1,061.0*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT	NT
	11/93	NA	1,145.0*	NA	28.0*	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	12/20/93	NA	886.0*	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	1/21/94	NA	691.0*	NA	34.0*	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	2/27/94	NA	682.0*	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	4/28/94	NA	1,005.0*	NA	29.0*	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	5/31/94	NA	573.0*	NA	33.0*	6.0	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	6/28/94	NA	285.0*	NA	36.0*	4.0	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	7/23/94	NA	436.0*	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	4/28/96	NA	301.0*	NA	ND	ND	NA	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	NT	NT	NT
	8/6/96	ND	760.0*	ND	24.0*	4.0	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	NT	NT	NT
	6/26/01	ND	8.7	ND	1.9	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/14/05	ND	2.4	ND	ND	0.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
MW-17	9/23/96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/20/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/15/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
MW-18	9/23/96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	BDL
	4/20/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
MW-19	9/23/96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/20/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT

Table 1
Summary of Ground Water Monitoring Results (parts per billion)
11 Frontage Road, Orange, Connecticut
September 1991 - April 2005

Well I.D. 11 Frontage Rd.	Sampling Date	Benzene	1,1,1-TCA	sec-Butylbenzene	1,1-DCE	1,1-DCA	1,2-DCB	TCE	1,4-DCB	Toluene	Chloroform	1,2-DCA	1,2,4-TMB	c-1,2-DCE	1,3,5-TMB	PCE	MTBE	Vinyl Chloride	Metals	CT ETPH	PAHs
MW-20	9/23/96	ND	19.0	ND	ND	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/20/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/14/05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-21	9/23/96	ND	3.0	ND	ND	1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/20/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	ND	BDL	BDL	BDL
	4/14/05	ND	1.0	ND	ND	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	BDL
MW-21D	12/12/97[1]	ND	3.8	NO	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3	ND	Ba=12	NT	NT
	4/20/01	ND	9.9	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/14/05	ND	3.3	ND	0.8	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
MW-22	9/23/96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/20/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/14/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	BDL
MW-23	9/23/96	ND	12.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	BDL
	4/20/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/15/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Cd=11*	BDL	BDL
MW-24	9/23/96	ND	483.0*	ND	15.0*	6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	BDL
	4/23/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/15/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	BDL
MW-25	9/23/96	ND	384.0*	ND	15.0*	15.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	BDL
	4/20/01	ND	14.7	NO	ND	5.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/14/05	ND	1.4	ND	ND	3.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
MW-26	9/23/96	ND	893.0*	ND	41.0*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
	4/23/01	ND	ND	NO	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	BDL
	4/15/05	ND	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	BDL
MW-27	4/13/05	5.2*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
MW-28	4/14/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
MW-28I	4/14/05	ND	ND	ND	ND	ND	ND	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
MW-28D	4/15/05	ND	ND	ND	ND	ND	ND	0.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
MW-29D	4/14/05	ND	ND	ND	ND	ND	ND	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT
MW-30	4/15/05	ND	3.2	0.6	ND	6.2	4.0	ND	2.2	ND	ND	ND	2.6	ND	ND	ND	ND	ND	BDL	BDL	BDL
MW-31	4/15/05	ND	0.9	ND	ND	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	BDL
MW-32	4/15/05	ND	7.7	NO	1.6	1.7	ND	1.8	ND	ND	ND	ND	ND	11.6	ND	7.0*	ND	ND	BDL	BDL	BDL
SVE-1	4/15/05	ND	5.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	BDL

Table 1
Summary of Ground Water Monitoring Results (parts per billion)
11 Frontage Road, Orange, Connecticut
September 1991 - April 2005

Well I.D. 11 Frontage Rd.	Sampling Date	Benzene	1,1,1-TCA	sec-Butylbenzene	1,1-DCE	1,1-DCA	1,2-DCB	TCE	1,4-DCB	Toluene	Chloroform	1,2-DCA	1,2,4-TMB	c-1,2-DCE	1,3,5-TMB	PCE	MTBE	Vinyl Chloride	Metals	CT ETPH	PAHs
SVE-2	4/15/05	ND	4.2	ND	1.2	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	BDL
DEP Cleanup Standards		**Benzene**	**1,1,1-TCA**	**sec-Butylbenzene**	**1,1-DCE**	**1,1-DCA**	**1,2-DCB**	**TCE**	**1,4-DCB**	**Toluene**	**Chloroform**	**1,2-DCA**	**1,2,4-TMB**	**c-1,2-DCE**	**1,3,5-TMB**	**PCE**	**MTBE**	**Vinyl Chloride**	**Metals**	**CT ETPH**	**PAHs**
GWPC (GA)		1	200	61	7	70	600	5	75	1,000	6	1	350	70	350	5	100	2	Ba/Cd 1,000/5	100	--
Volatilization Criteria																					
Residential		130	6,500	1,500	190	3,000	5,100	27	1,400	7,100	26	6.5	360	830	280	340	21,000	1.6	NC/NC	NC	NC
Industrial/Commercial		310	16,000	20,000	920	41,000	50,000	67	3,400	41,000	62	68	4,800	11,000	3,900	810	50,000	52	NC/NC	NC	NC
SWPC		710	62,000	NC	96	NC	170,000	2,340	26,000	4,000,000	14,100	2,970	NC	NC	NC	88	NC	15,750	NC/6	NC	NC

Notes:

All concentrations shown are in parts per billion (ppb), which are comparable to micrograms per liter (ug/L).

Ba = Barium.
Cd = Cadmium.
CT ETPH = State of Connecticut Extractable Total Petroleum Hydrocarbons.
1,1,1-TCA = 1,1,1-Trichloroethane.
1,1-DCE = 1,1-Dichloroethylene.
1,1,1-DCA = 1,1-Dichloroethane.
TCE = Trichloroethylene.
1,2-DCA = 1,2-Dichloroethane.
1,2,4-TMB = 1,2,4-Trimethylbenzene.
1,3,5-TMB = 1,3,5-Trimethylbenzene.
PAHs = Polynuclear Aromatic Hydrocarbons.
PCE = Perchloroethylene or tetrachloroethylene.
MTBE = Methyl-tert-butyl-ether.
NA = Not available.
NC = No criterion.
ND = Not detected.
NS = Not sampled.
NT = Not tested.
RSR = CT Remediation Standard Regulations.
GWPC = RSR Ground Water Protection Criteria for GA/GAA areas.
SWPC = RSR Surface Water Protection Criteria for Ground Water.
* = Concentration exceeds one or more DEP cleanup standard.
(1) = Samples collected by ERM on December 12, 1997.

APPENDIX C

AEI Summary of Soil, Soil Vapor, and Ground Water Data

Draft Soil, Soil Vapor and Ground Water Data Summary Documents

Bayer Corporation Site
95 Marsh Hill Road
(a.k.a. 11 Frontage Road)
Orange/West Haven, Connecticut

Prepared By:

Advanced Environmental Interface, Inc.
8 Old Indian Trail
Middlefield, Connecticut 06455
(860) 349-3559

May 2003

AEI-01J-039

TABLE OF CONTENTS

This document includes the following data summary documents compiled by or prepared for Advanced Environmental Interface, Inc. (AEI) for the Bayer Corporation site at 95 Marsh Hill Road (a.k.a. 11 Frontage Road) in Orange/West Haven, CT:

TAB 1

Draft Site Schematic and Data Summary Table showing the locations of and laboratory analytical results for soil samples collected from indoor sub-floor Geoprobe locations GP-1 through GP-3.

Table 1

Comparison of Subfloor Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria

DRAFT

Bayer Site

11 Frontage Road, Orange, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)		Soil Sample Concentrations (ppm)						
	Residential	Industrial/ Commercial	GA/GAA	GB	GP-1	GP-1	GP-1	GP-1	GP-1	GP-1	GP-1
Depth Below Grade					(0.5-2.5')	(4.5-6.5')	(6.5-8.5')	(8.5-10.5')	(10.5-12.5')	(12.5-14.5')	(14.5-16.5')
Sampling Date					9/24/02	9/24/02	9/24/02	9/24/02	9/24/02	9/24/02	9/24/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)	NA	NA	NA	NA	BDL	BDL	NT	NT	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Mass/Total Metals											
Arsenic	10	10	NA	NA	2.8	NT	2.9	NT	NT	NT	NT
Barium	4,700	140,000	NA	NA	8.0	NT	8.0	NT	NT	NT	NT
Beryllium	2	2	NA	NA	BDL	NT	NT	NT	NT	NT	NT
Cadmium	34	1,000	NA	NA	BDL	NT	BDL	NT	NT	NT	NT
Chromium (total)	NC	NC	NA	NA	13.4	NT	15.9	NT	NT	NT	NT
Copper	2,500	76,000	NA	NA	25.7	NT	NT	NT	NT	NT	NT
Lead	500	1,000	NA	NA	5.6	NT	6.2	NT	NT	NT	NT
Mercury	20	610	NA	NA	BDL	NT	BDL	NT	NT	NT	NT
Nickel	1,400	7,500	NA	NA	14.0	NT	NT	NT	NT	NT	NT
Vanadium	470	14,000	NA	NA	19.5	NT	NT	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NA	18.2	NT	NT	NT	NT	NT	NT
SPLP Metals											
Copper	NA	NA	1.3	13	BDL	NT	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (ETPH)	500	2,500	500	2,500	BDL	BDL	NT	NT	NT	NT	NT

Notes:

mg/kg = milligrams per kilogram.
ppm = Parts per million (comparable to mg/kg).
BDL = Below laboratory minimum detection limit.
NA = Not applicable.
NC = No criteria established.
NT = Not tested.
SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).

Table 1

Comparison of Subfloor Soil Sample Analyte Concentrations to DEP Remediation Standard Regulations Numerical Criteria

Bayer Site

11 Frontage Road, Orange, Connecticut

DRAFT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)		Soil Sample Concentrations (ppm)							
	Residential	Industrial/ Commercial	GA/GAA	GB	GP-2	GP-2	GP-3	GP-3	GP-3	GP-3	GP-3	GP-3
Depth Below Grade					(0.5-2.5')	(2.5-4.5')	(0.5-2.5')	(2.5-4.5')	(4.5-6.5')	(6.5-8.5')	(8.5-10.5')	(10.5-12.5')
Sampling Date					9/24/02	9/24/02	9/24/02	9/24/02	9/24/02	9/24/02	9/24/02	9/24/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	NT	BDL
USEPA Method 8260 Volatile Organic Compounds (VOCs)	NA	NA	NA	NA	BDL	BDL	BDL	BDL	NT	BDL	BDL	BDL
Mass/Total Metals												
Arsenic	10	10	NA	NA	5.0	2.1	2.7	2.6	3.6	NT	NT	NT
Barium	4,700	140,000	NA	NA	46	23	29	25	18.0	NT	NT	NT
Beryllium	2	2	NA	NA	0.7	BDL	BDL	BDL	BDL	NT	NT	NT
Cadmium	34	1,000	NA	NA	BDL	BDL	BDL	BDL	BDL	NT	NT	NT
Chromium (total)	NC	NC	NA	NA	20.4	8.7	16.8	14.1	15.9	NT	NT	NT
Copper	2,500	76,000	NA	NA	27.0	17.6	13.7	18.2	36.7	NT	NT	NT
Lead	500	1,000	NA	NA	16.4	7.2	10.3	8.8	7.1	NT	NT	NT
Mercury	20	610	NA	NA	0.10	BDL	0.03	0.03	BDL	NT	NT	NT
Nickel	1,400	7,500	NA	NA	18.9	11.0	15.3	12.0	21.2	NT	NT	NT
Vanadium	470	14,000	NA	NA	36.4	19.6	29.1	27.8	24.1	NT	NT	NT
Zinc	20,000	610,000	NA	NA	23.9	15.1	16.5	15.5	24.1	NT	NT	NT
SPLP Metals												
Copper	NA	NA	1.3	13	0.02	BDL	BDL	BDL	BDL	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (ETPH)	500	2,500	500	2,500	BDL	BDL	BDL	BDL	NT	NT	NT	NT

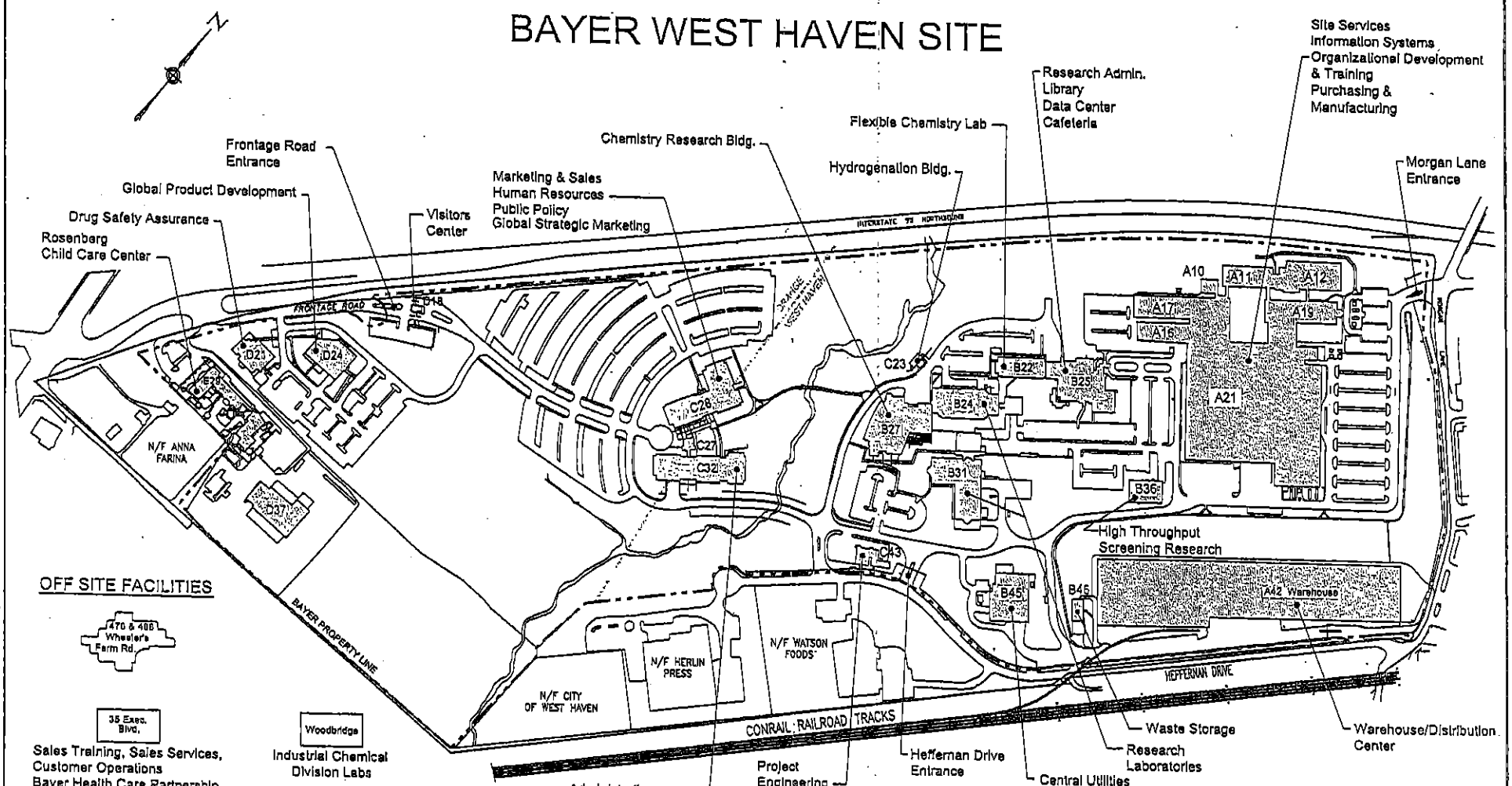
Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- BDL = Below laboratory minimum detection limit.
- NA = Not applicable.
- NC = No criteria established.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).

TAB 2

Draft Site Schematic and Data Summary Table showing the locations of and laboratory analytical results for soil samples collected from indoor and outdoor test boring locations TT-1 through TT-28.

BAYER WEST HAVEN SITE



OFF SITE FACILITIES

470 & 486 Wheeler's Farm Rd.

35 Exec. Blvd.
Sales Training, Sales Services, Customer Operations
Bayer Health Care Partnership

Woodbridge
Industrial Chemical Division Labs

198 Railroad Ave.
Building 4
(QA/DEV)

Bayer

SITE-SLDGS.DWG

CHRONOLOGICAL HISTORY OF THE WEST HAVEN SITE

1959	Miles Laboratories, Elkhart, IN, acquired Dome Chemical Company, New York City.
1965	West Haven, CT land purchase, 51 acres (206,400 m^2).
1966	Ground breaking for 270,000 sq. ft. (24,600 m^2) facility in May, (A-21).
1968	Occupancy by Dome Division.
1969	Addition of 3,200 sq. ft. (300 m^2) separate building (B-36) for RIHSA (Radioactive Iodinated Human Serum Albumen).
1971	Warehouse (A-42) 234,500 sq. ft. (21,800 m^2) occupied in January.
1972	Tridesilon® (desonide) cream introduced.
1974	Tridesilon® (desonide) ointment introduced.
1975	DTIC-Dome® (dacarbazine) introduced.
1976	Otic Domeboro® solution introduced.
1979	Miles-Bayer merger is finalized. Mycelex® (clotrimazole) cream and solution introduced. Mycelex-G® (clotrimazole) vaginal cream and tablets introduced.
1980	Dome name changed to Miles Pharmaceuticals. Office building (A-11) occupied in October by Medical Research, 27,500 sq. ft. (2,550 m2)
1981	Product Development addition 14,000 sq. ft. (1,300 m^2) occupied in February.
1982	Penicillin addition (conversion of B-36, RIHSA) 9,800 sq. ft. (910 m^2).
1983	Miles Inc./Cutter Inc. merger is completed. Hollister Stier became part of Miles Pharmaceuticals. Purchase of adjoining land for Research Center, 30 acres (121,400 m^2). Biltricide® (praziquantel) tablets introduced.
1985	Research Center Phase I (B-31) ground breaking. Alka Seltzer manufacturing and packaging relocated to Elkhart. Adalat® (nifedipine) capsules introduced.
1986	Administration building (A-12) 39,000 sq. ft. (3,620 m^2) occupied in January. Cutter Biological merges with Pharmaceutical Division. Gamimune® N introduced.
1987	Miles Laboratories name changed to Miles Inc. Solid Dosage facility completed, 14,000 sq. ft. (1,300 m^2). Miles Research Center, Phase I, (B-31) 125,000 sq. ft. (11, 610 m^2) occupied in December. Cipro® (ciprofloxacin HCl) tablets introduced. Prolastin® introduced.
1988	Conversion of former Alka Seltzer packaging area to temporary office space, 12,000 sq. ft. (1,115 m^2).
1989	Nimotop® (nimodipine) capsules introduced.
1991	Central Utility Plant completed, (B-45) 21,000 sq. ft. (1,950 m^2).
1992	Miles Research Center, Phase IIa, (B-24) 130,000 sq. ft. (12,100 m^2) occupied. Central Services Building, Phase IIb, (B-25) 63,000 sq. ft. (5,850 m^2) occupied. Cipro® I.V. (ciprofloxacin) introduced. Thrombate III® introduced.

CHRONOLOGICAL HISTORY OF THE WEST HAVEN SITE

1993	Hydrogenation Plant completed, 2,300 sq. ft. (215 m^2). Lease 66,000 sq. ft. office space at 35 Executive Boulevard, Orange, CT. Adalat CC® (nifedipine) tablets introduced. Kogenate® introduced.
1994	20 acre "Cinema" site purchased (80,940 m^2). Trasylol® (aprotinin) introduced
1995	Miles to Bayer Name Change - (April 3, 1995). Office buildings C-28 & C-32 completed.
1996	10 Acre (Fusco Property) Purchase. C28/32 buildings occupied. "D" wing Pharma Tech building completed. Expansion of CUP completed. Precose® (acarbose) tablets introduced.
1997	2 acre property purchase for Day Care Center & build facility.
1998	Day Care Center opened. Lease 65,000 sq. ft. of office space at 488 Wheelers Farm Road, Milford, CT. Flexible Chemistry Lab (B-22) Occupied - 17,000 sq. ft. Metrifonate/Solid Dosage expansion building completed. Label Center and office space at Lower Warehouse completed.
1999	Purchased 137 Frontage Road, Orange, CT Property (D-24) - (General Accident).
2000	Purchased 125 Frontage Road, Orange, CT Property (D-21) - (Alarmguard). Purchased 95 Marsh Hill Road, Orange, CT property (17 acres). Lease Research Center space in Woodbridge. High Throughput Screening (Research) Lab located in renovated B-36 building. Wash and Weigh facility completed. Avelox® tablets introduced.
2001	B-27 Chemistry building completed. Packaging Modernization completed. Viadur® introduced. Bayer and CuraGen announce research alliance in pharmacogenomics and toxicogenomics. Baycol® voluntarily withdrawn from the market.
2002	Rosenberg Child Care Center expansion completed. B46 Waste Storage facility completed. Bayer shares are listed on the New York Stock Exchange
2003	Cipro® XR launched in January. Levitra® (vardenafil HCl) introduced in August Name and logo changed from Bayer Corporation to Bayer Pharmaceuticals Corporation.
2004	Site consolidation restructuring began due to alliance with Schering Plough for commercialization of primary care products. Bayer Pharmaceuticals Corporation restructured as a specialty pharmaceuticals company.
2005	35 EB lease termination between Baker Properties and Bayer effective 5/14/05 Vacated A42 Lower Warehouse and D21 Building Sale of Building 4, 195 Frontage Road, West Haven, CT - (August 15, 2005) B31 Vivarium Expansion completed (Certificate of Occupancy)

STATE OF CONNECTICUT

DEPARTMENT OF ENVIRONMENTAL PROTECTION

79 ELM STREET HARTFORD, CT 06106-5127

PHONE: 860-424-3001

Gina McCarthy
Commissioner

February 13, 2009

Mr. Mark A. Gottlieb
Catalyst Environmental Consulting, Inc.
7B Herman Drive
Simsbury, CT 06070

Dear Mr. Gottlieb,

Thank you for your letter outlining your concerns regarding the availability of timely information on hazardous waste shipments from Connecticut businesses. The Department understands that the data from hazardous waste manifests are a valued source of information used in Phase One site investigations and other work by environmental consultants.

The Department is taking steps to improve our data management of this resource by moving the electronic data to a more robust platform than the current one. This is expected to alleviate a significant impediment to keeping the database running properly.

We also expect your concerns will be addressed in part when the national E-Manifest system is enacted. As you may know, the federal EPA and the regulated community have both been actively supporting the E-Manifest system. Congress took the first step to authorize this system, when on September 27, 2008 the Senate passed S-3109 and forwarded the bill to the House of Representatives for consideration. This bill authorizes the EPA to start the E-Manifest program, which will provide for a national manifest clearinghouse to receive and process all hazardous waste manifests. All data, along with the E-manifest document would be available to the states within 30 days of receipt, which should help alleviate the timeliness issues you have described.

If you have any questions, please contact David Westcott of the Bureau of Materials Management & Compliance Assurance at (860) 424-3666, 79 Elm St., Hartford, CT 06106-5127, or via email at david.westcott@ct.gov

Yours truly,

Gina McCarthy,
Commissioner

GM/rci/dw

Catalyst Environmental Consulting, Inc.
(860) 651-6900 Fax (860) 651-6902
M.A. Gottlieb & Associates, Inc.
(860) 988-0010 Fax (860) 988-0011

7B Hennan Drive
Simsbury, Connecticut 06070

January 19, 2009

The Honorable Gina McCarthy, Commissioner
CT Department of Environmental Protection
79 Elm Street
Hartford CT 06106-5127

Re: Hazardous Waste Manifest Accessibility

Dear Commissioner McCarthy,

As you know, the Department maintains hazardous waste manifests on file for various purposes including due diligence assessments relative to the Connecticut Transfer Act (Conn. Gen. Stat. § 22a-134 (3)). At present, manifests after December 31, 2006, are not available for review either through the File Room or by FOIA requests, due to a processing backlog.

The lack of available Hazardous Waste Manifest information creates significant issues for three types of stakeholders:

The regulated community: Buyers of property or businesses cannot obtain up-to-date manifest information from CTDEP and are limited to that information supplied by the seller. In my eighteen years of practice here in Connecticut, I have seen several cases where the seller did not release all documents with respect to hazardous waste generation. Similarly, non-occupant sellers of a property who do not have first hand knowledge of on-site operations may not have sufficient information to determine if the site is an Establishment as defined in §22a-134(3). Clearly the Department has an obligation to provide the regulated community with sufficient information to determine the regulatory status of a property or business.

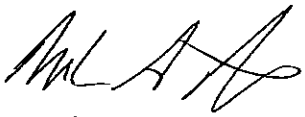
Licensed Environmental Professionals and other consultants: It has become common practice in Connecticut for the potential applicability of the Transfer Act to be addressed in a Phase I ESA. Without access to up-to-date manifest records, we are unable to definitively state that a site is or is not an Establishment If we erroneously conclude that a site is not an Establishment, we are subject to a significant error & omissions claim; a analogous situation arises if we erroneously conclude that a site is an Establishment when it is not.

In addition, without information regarding the types and amounts of wastes generated, an LEP is not able to comply with the "prevailing standard of practice" as defined in the Departments 2007 Site Characterization Guidance Document with respect to determining the contaminants of concern at a given site.

Connecticut Department of Environmental Protection: Without up-to-date manifest information, the Department has no way of determining who is and who is not complying with the Transfer Act. Allowing transactions that are subject to the Transfer Act to occur without enforcement action is unfair to those buyers and sellers who have complied with the Transfer Act, often at great expense.

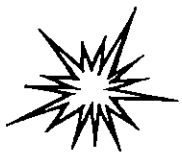
I am requesting that the department take steps to correct this situation in as timely a manner as possible. I understand that there are budgetary concerns, however the Department has an obligation to the regulated community in this matter.

Sincerely,

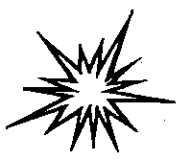


Mark A. Gottlieb, LEP
President

CERTIFIED MAIL ARTICLE # 7005 3110 0004 5129 3120



ATTACHMENT 9



Resume Of

PETER J. PREY

Environmental Scientist

Education

B.S. Environmental Science, 1998, Dickinson College, Carlisle, PA

Continuing Education

Remediation Standard Regulations, Fundamental Review (Environmental Professionals' Organization of Connecticut, 2000)

Employment

3/99 to present – Environmental Scientist, Catalyst Environmental Consulting, Inc., Simsbury, CT.

8/97 to 5/98 – Alliance for Aquatic Resource Management, Dickinson College, Carlisle, PA. Database Manager and GIS Assistant.

6/97 to 8/97 – Dexter Electronics, Olean, NY. Summer Intern for Health Safety and Environment Manager. Completed research and Federal Permits for Toxic Release Inventory, and for the NYS Air Pollution Regulations.

Professional Experience

Conducted Phase I and II Environmental Site Assessments, and Transaction Screens in accordance with ASTM guidelines, groundwater sampling and monitoring, UST removals, and remediation.

Training and Certification

OSHA 40 hour Hazardous Waste Site Operator and Emergency Training Course

Resume Of

MARK A. GOTTLIEB, L.E.P.

President

EDUCATION

University of Hartford, B.A., Mathematics with chemistry minor, 1981

University of Connecticut, coursework in environmental engineering and geology, 1989

Western Kentucky University, graduate coursework in Geology, Hydrology and Hydrogeology with specialization in environmental issues in karst terrains, 1989-1992

EMPLOYMENT

1994 - present: President, Catalyst Environmental Consulting, Inc., and M. A. Gottlieb & Associates Inc., Simsbury, CT. Catalyst is a small specialty service consulting firm providing environmental site assessments, remediation, consulting and related services for the financial, insurance and real estate communities. M. A. Gottlieb specializes in regulatory consultation, third party review of environmental projects and documents, and expert witness services.

1993-1994: Vice President, IES of Connecticut, Inc., Hartford, CT. Responsible for all phases of the operation for this medium sized environmental consulting firm, including technical direction, personnel, health and safety, and customer services.

1993-1995: Adjunct faculty, Chemistry Department, University of Hartford, Hartford, CT. Taught introductory chemistry and graduate level environmental organic chemistry.

PROFESSIONAL EXPERIENCE

Conducts Environmental Site Assessments in Connecticut, Massachusetts, Rhode Island, and New York, including subsurface investigations involving petroleum hydrocarbons, volatile and semi-volatile organic compounds, light and dense non-aqueous phase liquids, metals, pesticides, and polychlorinated biphyenyls (PCB). Actively involved in the completion of over sixteen hundred Environmental Site Assessments.

Project manager for over one hundred remediation projects in Connecticut from 1994 to the present, including 19th and 20th century mill properties, gas stations, former agricultural lands,

large-scale leaking USTs, and PCB contaminated soils. Several of these projects have involved the use of Environmental Land Use Restrictions (ELURs) resulting in significant cost savings for the client.

Connecticut Licensed Environmental Professional of record on over fifteen sites subject to the Transfer Act under Conn. Gen. Stat. §22a-134, or Voluntary Remediation under Conn. Gen. Stat. §22a-133x and 22a-133y.

Conducts technical and financial reviews of ongoing remediation projects due to railroad accidents for various reinsurers. Projects have included UPRR derailment in Eunice, Louisiana, of 34 chemical cars and subsequent fires and releases in May 2000; BNSF release of 85,000 gallons of benzene and dicyclopentadiene due to a derailment in Scotts Bluff, Nebraska, in November 2000; CSX December 2001 derailment in Rochester, New York, and 14,000 gallon release of diesel, acetone and methylene chloride into the surrounding area and Genesee River; and CPR derailment in Minot, North Dakota, in January 2002, resulting in release of over 300,000 gallons of anhydrous ammonia. In all cases, remediation costs were in excess of $10 million.

PROFESSIONAL MEMBERSHIPS

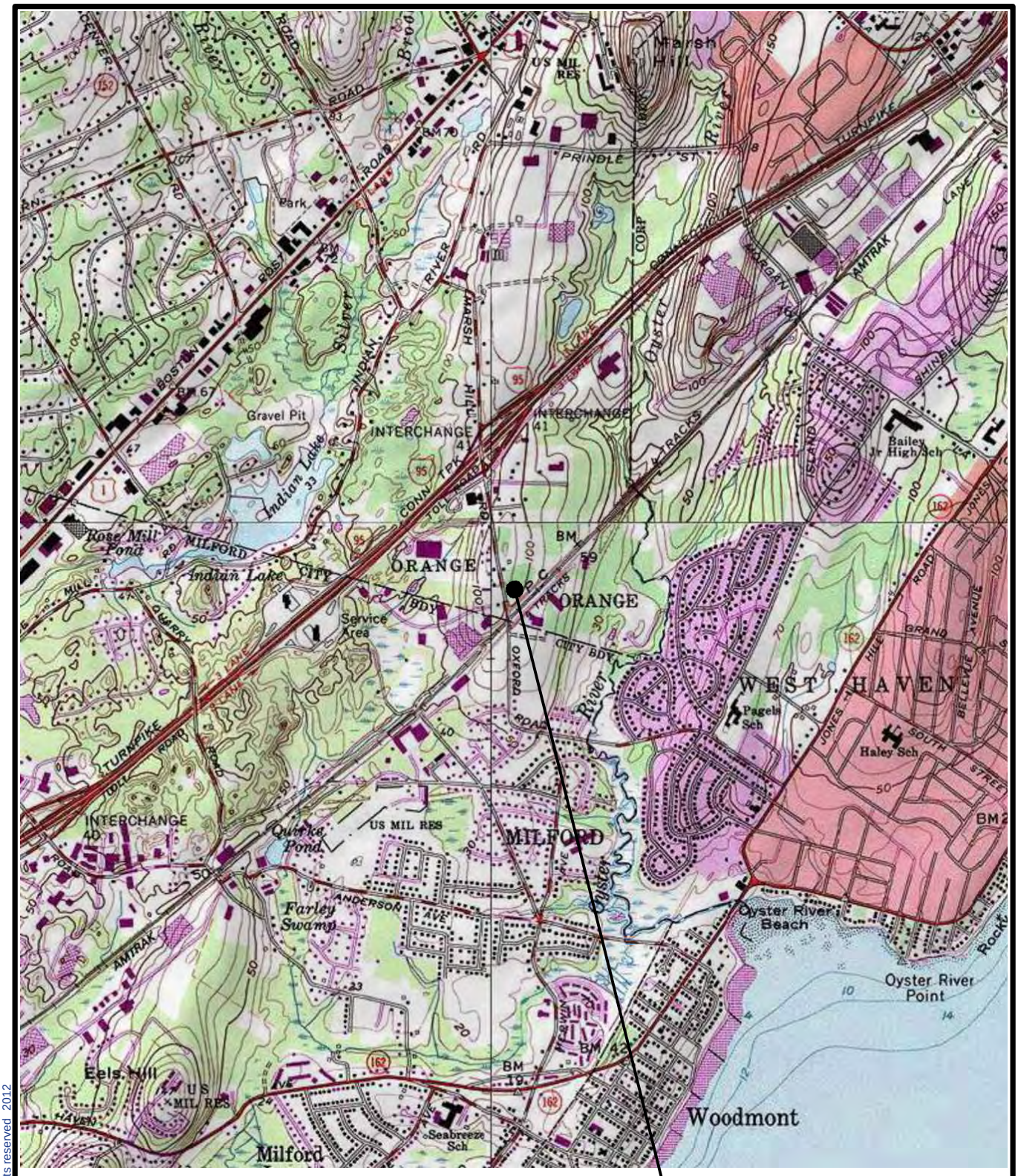
National Groundwater Association
Environmental Professionals Organization of Connecticut
Geological Society of America
Connecticut Business and Industry Association

TRAINING, CERTIFICATIONS & CONTINUING EDUCATION

CT Licensed Environmental Professional (license # 386), and continuing education coursework
- Aquifer Behavior & Testing (January 2003)
- Site Characterization & Remediation Techniques for DNAPLs (February 2003)
- Statistics for Environmental Professions (March 2004)
- Vapor Intrusion Seminar (December 2004)
- Evaluation Groundwater Flow & Chemical Transport Modeling (May 2005)
- Estimating Cleanup Times Associated with Combining Source Area Remediation with Natural Attenuation (November 2006)
- Aquifer Test Analysis in Fractured Rock (April 2007)
- Remediation Standard Regulations (April 2007)

OSHA 40 Hour Hazardous Waste Site Operator and Emergency Response Training Course, and ongoing refresher courses
CT State Approved Lead Based Paint Abatement Worker Training Course
CT State Approved Asbestos Inspector Training Course
MA DEP Introduction to 21E Training Course

FIGURES



1000 0 1000 2000 3000

APPROXIMATE SCALE IN FEET

MAP REFERENCE:

SECTION OF THE USGS 7.5 MINUTE SERIES TOPOGRAPHIC MAP FOR MILFORD, CT, MAP VERSION DATE 1984. MAP CREATED WITH TOPO! © 2006 NATIONAL GEOGRAPHIC.

PHASE I ENVIRONMENTAL SITE ASSESSMENT
0 MARSH HILL ROAD, ORANGE, CT

SITE LOCATION MAP

Comm.No.	FIGURE 1	Loureiro
23DP201.002		Engineering • Construction • EH&S • Energy • Waste

G:\AUTOCAD\PROJECTS\23DP201\TASK002 0 MARSH HILL RD PHASE I ESA\23DP201.002 USGS-F1.DWG Tab:F1 Saved: 10/1/2012 3:11 PM Plotted: 10/1/2012 3:12 PM

BRIGHT HORIZONS YALE WEST CAMPUS
(FORMER BAYER CORPORATION)

AOC-1
HISTORIC AGRICULTURAL USE

AOC-2
CLEARED AREA 1990/1991 AERIALS, MISCELLANEOUS DEBRIS

N/F
CYNTHIA SALEMME-RICCO

N/F
CYNTHIA SALEMME-RICCO

WOODED

WOODED

SALEMME LANE

WATER SUPPLY WELL
(APPROX. LOCATION)

PAVED ASPHALT

LOADING DOCK

PROPOSED DIVISION LINE

LOADING DOCK

BOTTLE FACILIT
0 MARSH HILL ROAD

PROPOSED DIVISION LINE

N/F
SIXTY FIVE
MARSH HILL ROAD, LLC

PAVED ASPHALT
PARKING AREA

LOADING DOCK

GRASS

ALUMINUM
CAN CRUSHER

PROPOSED TEMPORARY
CONSTRUCTION EASEMENT

LOADING DOCK

COVERED LOADING DOCKS

AOC-3
DETENTION BASIN

MONUMENTED RAILROAD CENTERLINE

METRO NORTH RAIL LINE

MH

MH

TOWN OF ORANGE

TOWN OF WEST HAVEN

SITE PLAN
SCALE 1"=50'-0"

SITE PLAN WITH 1991 AERIAL
SCALE 1"=100'-0"

LEGEND

- PROPERTY BOUNDARY
- PROPERTY BOUNDARY - ABUTTERS
- BUILDING/STRUCTURE
- ROAD/DRIVE
- CHAIN LINK FENCE
- STONE WALL
- ST — STORM WATER LINE
- DRAINAGE SWALE
- MH — MANHOLE
- CATCH BASIN
- CULVERT DRAIN
- WV — WATER VALVE
- LIGHT POLE
- MONITORING WELL LOCATION

AREAS OF CONCERN

AOC	DESCRIPTION
AOC-1	Historic Agricultural Use
AOC-2	Cleared Area, Miscellaneous Debris
AOC-3	Detention Pond

MAP NOTE:

HORIZONTAL DATUM IS NAD 83.

MAP REFERENCE:

"PROPERTY SURVEY DEPICTING BOUNDARY LINE ADJUSTMENT PREPARED FOR: DICHELLO DISTRIBUTORS, INC. MARSH HILL ROAD, ORANGE, CONNECTICUT". MILONE & MACBROOM, 99 REALTY DRIVE, CHESHIRE, CONNECTICUT 06410 (203) 271-1773. DATED SEPTEMBER 26, 2012, REVISED 9/27/12.

DRAFT

N

25 0 25 50 75
SCALE IN FEET

REV.	DESCRIPTION OF REVISION	DATE	APPR.

Loureiro Engineering Associates, Inc.
100 Northwest Drive • Plainville, Connecticut 06062
Phone: 860-747-6181 • Fax: 860-747-8822
An Employee Owned Company • www.Loureiro.com

Loureiro
Engineering • Construction • Infill • Energy • Water

SCALE	COMM.NO.	DRAWN BY	DATE	APPROVED BY	DATE
1" = 50'	23DP201.002	PJA	10/15/12	D.F.	10/15/12

PHASE I ENVIRONMENTAL SITE ASSESSMENT
0 MARSH HILL ROAD, ORANGE, CT

SITE PLAN

Loureiro
Engineering • Construction • Infill • Energy • Water

DRAWING
1

SHEET NO. | NO. OF SHEETS 1

PHASE I ENVIRONMENTAL SITE ASSESSMENT UPDATE

0 Marsh Hill Rd
Orange, Connecticut

July 2015

Prepared for

Orange Land Development LLC
5 Indian Neck Avenue
Branford, Connecticut 06405

Loureiro Engineering Associates, Inc.

100 Northwest Drive • Plainville, CT 06062 • 860.747.6181 • Fax 860.747.8822 • www.Loureiro.com

An Employee-Owned Company

Comm. No. 64OL501.001

PHASE I ENVIRONMENTAL SITE ASSESSMENT UPDATE

0 Marsh Hill Rd
Orange, Connecticut

July 2015

Prepared for

Orange Land Development LLC
5 Indian Neck Avenue
Branford, Connecticut 06405

Prepared by

LOUREIRO ENGINEERING ASSOCIATES, INC.
100 Northwest Drive
Plainville, Connecticut 06062

An Employee Owned Company

Comm. No. 64OL501.001

Table of Contents

FIGURES

DRAWINGS

APPENDICES

ACRONYMS

AAI	All Appropriate Inquiry
AOC	Area of Concern
AMSL	Above Mean Sea Level
AST	Aboveground Storage Tank
ASTM	ASTM International
CEC	Catalyst Environmental Consultants, Inc.
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERCLIS	CERCLA Information System
CFR	Code of Federal Regulations
CGS	Connecticut General Statutes
CORRACTS	Corrective Action Sites
CSM	Conceptual Site Model
CTDOT	Connecticut Department of Transportation
DEEP	Connecticut Department of Energy & Environmental Protection
ECS	Environmental Compliance Solutions, Inc.
EPA	United States Environmental Protection Agency
ERNS	Emergency Response Notification System
EDR	Environmental Data Resources, Inc.
ESA	Environmental Site Assessment
ETPH	Extractable Total Petroleum Hydrocarbons
FINDS	Facility Index System
FIRM	Flood Insurance Rate Mapping
FOIA	Freedom of Information Act
FRS	Facility Registry System
MAGIC	University of Connecticut Mapping and Geographic Information Center
PCB	Polychlorinated Biphenyl
REC	Recognized Environmental Condition
RCRA	Resource Conservation and Recovery Act
SVOC	Semivolatile Organic Compounds
TPH	Total Petroleum Hydrocarbon
USC	United States Code
USGS	United States Geological Survey
UST	Underground Storage Tank
VOC	Volatile Organic Compound

1. INTRODUCTION

1.1 Purpose and Scope

Loureiro Engineering Associates (Loureiro) has been retained by Orange Land Development LLC to conduct a Phase I Environmental Site Assessment (ESA) Update of the property located at 0 Marsh Hill Road in Orange, Connecticut (hereinafter referred to as "the Site"). The Site is an approximate 13.36 acre parcel of land currently owned by Dichello Distributors Inc. (Dichello) and is occupied by one single building with a physical address 0 Marsh Hill Road. The 34,800 square-foot building is primarily used as a beverage can and bottle recycling warehouse.

Although the Site and 55 Marsh Hill Road were recently resubdivided to create a new approximately 8.091 acre vacant lot (the "Option Parcel") and to add the portion of former 0 Marsh Hill Road containing the parking lot, beverage can and bottle recycling facility and detention basin (approximately 5.268 acres, the "Dichello Parcel") to 55 Marsh Hill Road, the entire Site was examined for the purposes of the Phase I ESA completed by Loureiro in October 2012 and this Phase I ESA Update.

This Phase I ESA Update has been prepared at the request of Day Pitney LLP to document the environmental condition of the Site and to evaluate the potential for activities conducted at the Site and in the surrounding area to have affected the environmental condition of the Site since the completion of the Phase I ESA completed by Loureiro in October 2012. The Phase I ESA Update was performed in general accordance with the guidance provided in the ASTM International Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, ASTM E 1527-13 (ASTM, 2013), as well as the relevant portions of the Site Characterization Guidance Document published by the Connecticut Department of Energy and Environmental Protection (DEEP) dated September 2007 and revised December 2010. The ASTM standard is recognized by the United States Environmental Protection Agency (EPA) as being consistent with the All Appropriate Inquiry (AAI) Rule of the 2005 amendments to the Small Business Liability Relief and Brownfields Revitalization Act of 2002 (40 Code of Federal Regulations (CFR) 312).

To evaluate the information gathered during the Phase I ESA Update, a preliminary conceptual site model (CSM) was developed for the Site. The CSM identifies Areas of Concern (AOCs) where present operations at the Site have the potential, or past operations had the potential or were known, to result in releases to the environment that could adversely affect the environmental quality of surface or subsurface conditions at the Site. AOCs generally

correspond to Recognized Environmental Conditions (RECs), as referred to in the ASTM Standard. The term AOC is used throughout this Phase I ESA Update to be consistent with the terminology used in the DEEP Site Characterization Guidance Document.

1.2 Report Reliance

This report may be distributed and relied upon by Orange Land Development LLC, its respective successors and assigns, and its lenders, if any. This report may also be distributed to and relied upon by the Connecticut Department of Transportation. Reliance on the information and conclusions in this report by any other person or entity is not authorized without the written consent of Loureiro.

1.3 Exceptions, Deviations, and Data Gaps

Section 12.10 of ASTM E 1527-13 requires that all limiting conditions, deletions, and deviations from the standard (if any) be listed individually and in detail, and that data gaps be identified. In performing this Phase I ESA, the following deviations from the ASTM standard, limiting conditions, and identified data gaps are noted below:

- Due to the dense overgrowth of trees and brush in the eastern and northern portions of the Site, inspection of some of these areas was not possible during the Site reconnaissance.
- The owner/user questionnaire was not completed by Orange Land Development LLC as part of this Phase I ESA Update since they do not have authorization to sign any documents on behalf of Dichello.
- The format of this report does not specifically follow the recommended format indicated in Appendix X4 of ASTM E 1527-13.

Based upon the information documented and reviewed for the Site, it is unlikely that these deviations or data gaps would significantly affect the outcome and recommendations of this Phase I ESA.

1.4 Non-Scope Considerations

Section 13 of ASTM E 1527-13 identifies “additional issues” that are beyond the scope of the ASTM Phase I Standard practice, including the following non-scope considerations: Asbestos-Containing Building Materials; Radon; Lead-based Paint; Lead in Drinking Water; Cultural and Historic Resources; Industrial Hygiene; Health and Safety; Ecological Resources; Endangered

Species; Indoor Air Quality; Mold, Fluorescent Light Ballasts; and High Voltage Power Lines. These issues were not evaluated as part of the Phase I ESA.

1.5 Report Format

This report has been prepared as a series of "Fact Sheets" that provide pertinent aspects of the assessment in a concise, user-friendly format that utilizes multiple tables to summarize and convey pertinent information relevant to the specific aspect of the report for which each Fact Sheet was prepared. Relevant tables are included with each Fact Sheet, as appropriate, but figures have been provided separately, since multiple Fact Sheets may refer to the same figures. Similarly, appendices are provided following the figures, as they also may be referred to in more than one Fact Sheet and are considered to be a component of the report as a whole.

The Fact Sheets prepared for this report cover the following topics, which also include a brief summary of the type of information included in that particular Fact Sheet, if not readily apparent from the description.

- Site Description and History – includes information on the physical layout of the Site; surrounding properties; current use of the Site; and results of the Site reconnaissance survey and interviews with the Site owner, occupants, and/or other personnel knowledgeable about the Site. Information pertaining to the history of Site ownership and former uses of the Site, including activities that were conducted on the Site and adjacent properties, as relevant, are also included in this Fact Sheet.

- Environmental Setting – includes information on the physical setting of the Site with respect to such environmental factors as topography, drainage, nearby water bodies, geology and hydrogeology and potential human and environmental receptors.

- File Reviews and Computerized Database Search – summarizes the information gathered during file reviews at federal, state and local agencies, as well as the information provided by the computerized database search that was conducted for the Site and surrounding area.

- Preliminary Conceptual Site Model – presents the preliminary CSM for the Site and identifies those AOCs where releases to the environment are known to have occurred or where information gathered during the Phase I ESA Update indicate the potential for such a release to occur or to have occurred. The preliminary CSM also identifies the constituents of concern for each known or potential release area, the mechanisms by which such releases could or have occurred, the transport pathways and mechanisms for known or potential releases and potential receptors for a release. Any potential data gaps that were identified

during the course of the Phase I ESA Update and the significance of those data gaps with respect to the ability to draw conclusions regarding the potential for a release to occur or to have occurred are discussed in this Fact Sheet.

- Summary of Phase I ESA Update Findings – A summary of the results of the Phase I ESA Update is provided following the Fact Sheets, and provides conclusions regarding the areas at the Site where releases to the environment have occurred or where there exists the potential for releases or threats of releases to the environment from current or past uses and activities at the Site or surrounding area to occur.

The signed statement of the environmental professional responsible for the preparation of this ESA Update, as required to meet the requirements for AAI described in 40 CFR 312, is provided within the Summary and Conclusions Fact Sheet. References used in the preparation of this Phase I ESA Update are included as Appendix A.

2. SITE DESCRIPTION AND HISTORY FACT SHEET

The information provided in this Site Description and History Fact Sheet provides an overview of the Site history, background information and Site ownership, as derived from a review of the Site and surrounding area as well as an interpretation of information acquired from a review of historical record sources, including but not limited to, historical deeds, City Directories, aerial photographs, historical topographic maps and Sanborn® Fire Insurance Maps. The historical resources for the Phase I Update were reviewed from the previously completed Phase I ESA. City directories were reviewed for 2012 through present day. Table SD-1 provides a brief description of the Site and surrounding land uses. Changes to the physical layout of the Site over time, as interpreted from available aerial photographs and historical mapping, are summarized in Table SD-2. Pertinent information gathered during the Site reconnaissance is provided in Tables SD-3 and SD-4.

2.1 General Site Information

The Site consists of an approximate 13.36 acre parcel of land located in the southeastern portion of Orange, on the east side of Marsh Hill Road. The current 38,400 square foot building on the Site has the physical address of 0 Marsh Hill Rd and the property is listed on the Town of Orange Tax Assessor Card as Map ID 3, Block 1, Lot 1. The Site location, local topography, nearby water bodies, surrounding structures and major access routes are depicted on Figure 1, which was developed using the United States Geological Survey (USGS) 7.5-minute series topographic quadrangle map for the Milford, Connecticut Quadrangle dated 1984.

The Site is located in an area primarily developed for commercial and light industrial use, with some residential properties located to the north of the Site. According to the City of Orange Tax Assessor, the Site is zoned “LI-2” (Light Industrial District 2). The Site is bounded to the south by 55 Marsh Hill Road (Dichello Distributors warehouse and Valenti Leasing Inc. Repair Garage). To the west of Marsh Hill Rd is a commercial and light industrial use area and Executive Campus Business Park along Executive Boulevard, including Dooney & Bourke, Bead Industries, Southern Connecticut Gas Company, among other businesses. Residences are located to the west of the Site along Salemme Lane. Salemme Lane would be the means of access to the northern portion of 0 Marsh Hill Road. Bright Horizons at the Yale West Campus (previously owned by Bayer Corporation and Aviation Components Support Company, among others) abuts the Site to the north, with Interstate 95 beyond. The eastern portion of the Bright Horizons property abutting the Site is undeveloped, wooded land. Metro North railroad tracks about the Site to the east and southeast, with a commercial and light industrial area beyond along Robinson Boulevard. The Site is accessible from the 55 Marsh Hill Road property to the south

via two entrances located along Marsh Hill Road. Asphalt paved areas encircle the can recycling center building, with the exception of the southeast side. Relevant site features and property boundaries are depicted on Drawing 1 (Site Plan) and described below.

The aluminum can recycling building was constructed in 1987 on a concrete slab with precast concrete walls and steel truss roof structure. It is a single-story, steel truss warehouse.

The building is heated with natural gas fired furnaces (ceiling-suspended). The natural gas meter is located on the northwest corner of the building. The Site is provided with sanitary sewer from the Town of Orange. Water is provided to the building from a water supply well (installed 405 feet into granite bedrock), located approximately 75 feet northwest of the building. Electricity is provided by United Illuminating to the building via overhead lines to a pole located southeast of the repair garage and then underground electrical lines leading from the 55 Marsh Hill Road property.

2.2 Previous Environmental Investigations

Loureiro reviewed two historical reports available for the Site, a Phase I ESA performed by Catalyst Environmental Consulting, Inc (CEC) dated April 14, 2011 and a Phase I ESA performed by Loureiro dated October 2012. Copies of the historic environmental reports for the Site are included in Appendix B. The CEC Phase I ESA identified the following Areas of Concern associated with the 0 Marsh Hill Road property:

- AOC-8 – Disposal Areas: CEC identified piles of miscellaneous debris located in the wooded area in the northern portion of the 0 Marsh Hill Road property, including soil piles, asphalt, brick, concrete, asphalt shingles, discarded televisions, motor oil cans, furniture, tires, and rusted metal.

- AOC-9 – Former Agricultural Use: The Site was used for agricultural purposes prior to the construction of the can recycling center building in 1987.

- AOC-11 – Detention Basin: Catch basins on the 0 Marsh Hill Road property discharge to the detention basin located east of the building.

- AOC-15 – Drinking Water Well: The building is served by a drinking water well.

The October 2012 Loureiro Phase I ESA identified the following Areas of Concern associated with the 0 Marsh Hill Road property:

- AOC-1 – Former Agricultural Use: The property was used for agricultural purposes since at least the early 20th century, until sometime between 1970 and 1980.

- AOC-2 – Detention Basin: A storm water detention basin is located east of the existing building.

- AOC-3 – Cleared Area, Areas of Debris: 1990 and 1991 aerial photos indicate an area of clearing performed north of the building. Storage of materials is also evident in the 1991 aerial photo. Small debris piles, brick, asphalt, concrete, etc. were identified by CEC in 2010, and Loureiro during the Site visit in 2012 and 2015.

Loureiro did not consider the drinking water well identified in the CEC Phase I ESA due to there not being a release mechanism for contaminants to enter the environment, with the exception of well sanitation chemicals typical for water supply wells.

2.3 Site Reconnaissance Survey

A Site reconnaissance survey was completed by Mr. Curtis Romanchok of Loureiro on July 7, 2015. Loureiro met with Robert Simon of Dichello Distributors who allowed access to the building, and was interviewed about the past and present operations at the Site. The 38,400 square foot can recycling center building receives deliveries of aluminum and glass beverage cans and bottles by truck through the drive-through loading docks. The cans are crushed in a crushing machine located on the southeast portion of the building. The cans are bundled together in square blocks and loaded onto trucks for recycling at the covered loading dock area at the southeast end of the building. Floor drains were observed in the building, which reportedly discharge to the sanitary sewer (this was verified during the 2012 Phase I ESA in a phone conversation with Mr. Chris Gurkie of the DEEP, who performed an inspection of the Site in 2010). Beginning in 2013, the Site began crushing glass to be recycled. The glass crushing machine is located in southeast corner of the building, running along the eastern wall. The glass is crushed and transported by a conveyor belt through a window and into a truck parked outside.

A detention basin was observed to the east of the building. Significant vegetative growth was observed in the basin, and no evidence of stressed vegetation or staining was observed. Small piles of debris were noted in the undeveloped wooded land to the north of the building. The water supply well servicing the building was observed just off the paved area to the northwest of the building. A natural gas meter was observed in the western corner of the building. A paved parking lot is located at the southwest corner of the Site, used for both 0 Marsh Hill Road and 55 Marsh Hill Road. Additional observations made during the Site reconnaissance survey are

presented in Tables SD-3 and SD-4. Pertinent Site features are depicted on Drawing 1. Site photographs are included as Appendix C.

2.4 Site Ownership/Occupant History

The Site is currently owned by Dichello Distributors Inc. The following table summarizes the ownership history of the Site as established through review of municipal land records. A copy of the most recent deed is included in Appendix D. A 1922 Town of Orange Assessor's map indicated that Elm City Nursery and F. Pucillo, Antonia Farino, and A.F. Salerno occupied the Site and 55 Marsh Hill Road at this time. No change in ownership has occurred from 2012 through present day. Day Pitney provided a signed "Alta Commitment for Title Insurance" prepared by Chicago Title Insurance Company, which indicates that there are no environmental liens on record for the Site. A copy of this document is provided in Appendix E.

Grantor	Grantee	Date of Transaction	Volume/Page in Town Land Records
Estate of Alesandro Salemme	Philomena Salemme	11/7/1949	156 / 507
Philomena Salemme	Joseph Salemme, et al.	6//9/1981	277 / 690
Joseph Salemme, et al.	Dichello Distributors Inc.	6/10/1981	277 / 691

A review of City Directories from the prior Phase I ESA was completed from selected years ranging from 1963 through 2008 in the Local History room of the State of Connecticut Public Library as well as being provided by Environmental Data Resources (EDR). City directories were reviewed at the State of Connecticut Public Library for 2012 through present day for this Phase I ESA Update. The 0 Marsh Hill Road was not listed in any of the City Directories (although Dichello Distributors and Valenti Leasing were indicated in the City Directories between 1981 and present day).

TABLE SD-1 - Site Information Summary

Municipality	Orange
County	New Haven
State	Connecticut
Physical Address	0 Marsh Hill Road
Assessors Card Information	Parcel ID: 3-1-1
Zoning	LI-2 (Light Industrial District 2)
Site Size	13.35 acre
Latitude	41°14'54.11" north
Longitude	72°59'43.57" west
Structure(s)/Current Use	One single floor structure, built in 1987, used as an aluminum can

		and glass bottle recycling warehouse.
Site Utilities	Sanitary	Connected to the municipal sanitary sewer.
	Water Supply	Well Water
	Natural Gas	Connected to natural gas supply.
	Electrical	Available to the Site from United Illuminating.
	Heat	The building is heated by natural gas
Adjacent Land-Use	North	Bright Horizons Yale University West campus (former Bayer Corporation, Former Aviation Components Support Company), comprised primarily of wooded/undeveloped land over approximately 50% of the northern property boundary.
	South	Metro North railroad tracks and several commercial or light industrial facilities beyond the rail line. 55 Marsh Hill Road abuts the property immediately to the south.
	East	Metro North railroad tracks and undeveloped land, with a residential neighborhood beyond.
	West	Parking lots and a beer distribution facility (55 Marsh Hill Rd). Further west is an industrial business park.

TABLE SD-2 - Summary of Aerial Photograph, Topographical Map and Sanborn® Fire Insurance Map Observations					
			Observations		
Media	**Date**	**Source**	**Building(s)**	**Other Relevant Site Features**	**Surrounding Areas**
Aerial Photographs	1934	EDR Aerials	There appears to be a small dwelling on the western edge on the Site.	The Site is primarily farmland.	The Site is bordered by railroad tracks to the southeast and east. Marsh Hill Rd abuts the property to the west. To the north is more farmland with a few small residences and farmhouses. More residencies are apparent west of Marsh Hill Rd.
	1940	EDR Aerials	The Site appears to remain unchanged since the previous photograph	The Site appears to remain unchanged since the previous photograph	No changes since previous aerial photograph.
	1963	EDR Aerials	The Site appears to remain unchanged since the previous photograph	The Site has filled in with trees along the western, southern, and eastern boundaries	No changes since previous aerial photograph.
	1966	EDR Aerials	The Site appears to remain unchanged since the previous photograph	The Site appears to remain unchanged since the previous photograph	Little changes have occurred since the last photograph. More houses have been developed to the northwest.
	1970	EDR Aerials, CT ECO Map Catalog	The Site appears to remain unchanged since the previous photograph	The Site appears to remain unchanged since the previous photograph	Two industrial buildings have been developed across the train tracks to the southeast.
	1972	EDR Aerials	The Site appears to remain unchanged since the previous photograph	The Site appears to remain unchanged since the previous photograph	Residential buildings and additions to the industrial facility have been made to the southeast. A large industrial building has been constructed to the west across Marsh Hill Road.
	1980	EDR Aerials	The main distribution facility has been developed in the central portion of the property as well as a smaller building in the southern	Paved parking areas have been established around the new building at 55 Marsh Hill Road. The repair garage and dispenser island was	New industrial facilities have been built to the southwest across Marsh Hill Road. Residential properties have also increased to the south.

TABLE SD-2 - Summary of Aerial Photograph, Topographical Map and Sanborn® Fire Insurance Map Observations					
			Observations		
Media	**Date**	**Source**	**Building(s)**	**Other Relevant Site Features**	**Surrounding Areas**
			portion.	also built in the southern portion of the 55 Marsh Hill Road property.	
	1985	EDR Aerials, CT ECO Map Catalog	The Site appears to remain unchanged since the previous photograph	A parking lot has been developed on the western portion of the Site.	A new industrial facility has been constructed west of Marsh Hill Rd. A new street of residential homes has been developed to the south of the Site. A new industrial building has been developed across the train tracks to the southeast
	1990	EDR Aerials, CT ECO Map Catalog	The present-day recycling warehouse has been built in the southeast portion of the Site.	The detention basin located east of the can recycling center building is also present. An area north of the building has been cleared (area of debris and soil piles)	An addition has been made to the industrial facility to the west of Marsh Hill Rd.
	1991	EDR Aerials	The Site appears to remain unchanged since the previous photograph	The Site appears to remain unchanged since the previous photograph. An area north of the building has been cleared (area of debris and soil piles), and materials are stored in this area.	No changes since previous aerial photograph
	1995	EDR Aerials, CT ECO Map Catalog	The Site appears to remain unchanged since the previous photograph	The Site appears to remain unchanged since the previous photograph	Parking areas have expanded on the industrial property to the west of Marsh Hill Rd.
	2005	EDR Aerials	The Site appears to remain unchanged since the previous photograph	The Site appears to remain unchanged since the previous photograph.	No changes since previous aerial photograph

TABLE SD-2 - Summary of Aerial Photograph, Topographical Map and Sanborn® Fire Insurance Map Observations					
			Observations		
Media	**Date**	**Source**	**Building(s)**	**Other Relevant Site Features**	**Surrounding Areas**
	2006	EDR Aerials	The Site appears to remain unchanged since the previous photograph	The Site appears to remain unchanged since the previous photograph	No changes since previous aerial photograph
	2008	EDR Aerials	The Site appears to remain unchanged since the previous photograph	The Site appears to remain unchanged since the previous photograph	No changes since previous aerial photograph
	2012	Google Earth	The Site appears to remain unchanged since the previous photograph	The Site appears to remain unchanged since the previous photograph	No changes since previous aerial photograph
Historical Topographic Maps	1892	USGS 15-minute series New Haven, Connecticut, Quadrangle: Environmental Data Resources, Inc. (EDR)	No building are shown within the property limits	Site elevation is approximately 90 feet above mean sea level.	A few small dwellings are depicted to the north of the Site
	1947	USGS 7.5-minute series New Haven, Connecticut, Quadrangle: EDR	No building are shown within the property limits	No changes since previous topographic map.	No changes since previous topographic map.
	1954	USGS 7.5-minute series New Haven, Connecticut, Quadrangle: EDR	No building are shown within the property limits	No changes since previous topographic map.	No changes since previous topographic map.
	1967	USGS 7.5-minute series New Haven, Connecticut, Quadrangle: EDR	The image shows only the southeastern edge of the Site. No properties can be seen in this image.	The image shows only the southeastern edge of the Site. No properties can be seen in this image.	No changes since previous topographic map.
	1972	USGS 7.5-minute series New Haven, Connecticut,	The image shows only the southeastern edge of the Site. No properties can be	No changes since previous topographic map.	No changes since previous topographic map.

TABLE SD-2 - Summary of Aerial Photograph, Topographical Map and Sanborn® Fire Insurance Map Observations					
			Observations		
Media	**Date**	**Source**	**Building(s)**	**Other Relevant Site Features**	**Surrounding Areas**
		Quadrangle: EDR	seen in this image.		
	1984	USGS 7.5-minute series New Haven, Connecticut, Quadrangle: EDR	The image shows only the southeastern edge of the Site. No properties can be seen in this image.	No changes since previous topographic map.	Three large building have been developed across the railroad tracks to the southeast of the Site.
Sanborn Fire Insurance Maps		No Sanborn coverage in this area	No Sanborn coverage in this area	No Sanborn coverage in this area	No Sanborn coverage in this area

TABLE SD-3 - Summary of Site Reconnaissance Exterior Observations	
Parking Area(s)	A paved parking and travel area exists along the northern, western, eastern and southern boundaries of the property.
Vegetated Area(s)	Overgrown forest and undergrowth lies directly to the north of the building.
Staining/Stressed Vegetation	The vegetated areas did not appear to be stressed.
Building Construction	The only building on this property was built in 1987 on a concrete slab. The building is a steel-framed truss.
Loading/Unloading Areas	Trucks enter the building for unloading of beverage cans and kegs, and cubes of crushed cans and kegs are loaded from the covered loading dock on the east side of the building.
Site Topography	The topography of the Site gradually slopes toward the east.
Surface Water	No surface water bodies were observed on the Site. The detention pond discharges to a drainage channel running along the west side of the Metro North rail line. The drainage ditch discharges to Oyster River located approximately 100 feet northeast of the Site. The detention pond and drainage ditch were dry during the Site visit.
Manholes/Catch Basins/Drywells	Catch basins on the Site discharge to the detention basin located east of the building.
Underground Storage Tanks (USTs)	No evidence of existing USTs was observed during the Site visit.
Above-ground Storage Tanks (ASTs)	No ASTs were observed during the Site visit.
Transformers	No transformers were observed on the 0 Marsh Hill Road property (a pad-mounted transformer was observed on the 55 Marsh Hill Road property).
Drums/Storage Containers and/or Equipment	No drums were observed during the Site visit. An aluminum can crusher was observed in the southeast portion of the building. A bottle crusher and conveyor belt was observed in the southeast corner of the building.
Miscellaneous Storage	None
Septic System	No visible evidence of a former septic system was observed during the Site reconnaissance.
Wells	One water supply well was observed on the Site, approximately 75 feet northwest of the building.

TABLE SD-4 - Summary of Site Reconnaissance Interior Observations	
Number of Floors	The building is a single-floor facility.
Basement or Crawlspace	The building is constructed with concrete slab floors with no basements or crawlspaces.
Construction	The interior construction of the building is steel-framed with concrete floors.
Current Use	The building is used as an aluminum can, keg, cardboard, and glass recycling warehouse.
Residential Space	None
Heating and/or Cooling System	The building is heated with natural gas by ceiling-suspended furnaces.
Staining and/or Corrosion	Slight staining was observed, but from spilled beverages from the bottle and cans processed within the building.
Drums/Storage Containers and/or Equipment	Storage of materials within the buildings included kegs, cardboard, aluminum cans, bottles, and wooden pallets for packaging.
Drains and/or Sumps	Floor drains were observed in the can recycling center building, which discharge into the municipal sanitary sewer system.
ASTs	No ASTs were observed during the Site visit.
Other	None

3. ENVIRONMENTAL SETTING FACT SHEET

The information provided in this Environmental Setting Fact Sheet is based on available information from municipal, state and federal sources, including published mapping for the Site and vicinity. Pertinent information with regard to the environmental setting is provided in Table ES-1. There were no changes to the environmental setting since the completion of the 2012 Phase I ESA.

The Site is located in the southeastern portion of the city of Orange in southern Connecticut. The Site is located in a light industrial zone. Local topography in the Site vicinity slopes downward to the east.

The environmental setting information was used to evaluate the potential for releases or environmental conditions within the surrounding area to affect the quality of soil or groundwater at the Site. Environmental setting information was also used in developing the preliminary CSM, particularly with respect to migration pathways and potential receptors for known or potential releases from identified AOCs.

TABLE ES-1 - Environmental Setting

Topography	The Site slopes from Marsh Hill Road to the east-southeast, and is relatively flat to the north of the can recycling center building. There is a significant grade change from Marsh Hill Road to the warehouse building at the 55 Marsh Hill Road property. The surface elevation of the Site ranges from approximately 100 feet above mean sea level (AMSL) on the western portion of the Site to 40 feet AMSL at the northeast corner of the Site. The regional surface topography has a gentle natural gradient to the south-southeast.
Surface Water and Drainage	No surface water bodies are present on the Site. One detention pond is located east of the building, which discharges to a drainage ditch along the west side of the Metro North rail line. The drainage ditch flows north and discharges to Oyster Brook approximately 100 feet northeast of the Site. The Long Island Sound is located approximately 5,200 feet southeast of the Site.
Wetlands	According to the US Fish and Wildlife Service Wetlands Mapper, no watercourses, water bodies, or inland wetland areas exist on the Site. Wetlands are identified along the banks of the Oyster River just to the north east of the Site on the map entitled *Connecticut Inland Wetland Soils, Orange, Connecticut* (DEEP, October 2009).
Floodplain	According to the *Federal Emergency Management Agency Flood Insurance Rate Map (FIRM)*, and the *Q3 Flood Zone Data, Orange, CT* (DEEP, 2010) the Site is located within Zone X, which is defined as areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood. There is an area of 100-foot flood plain located just to the northeast of the Site near Oyster Brook. A Site Selection Study for a New Train Station indicated that wetlands and 50-year flood plains may be located in the eastern portion of the Site. A copy of the pertinent portion of the applicable FIRM is included in Appendix F.

TABLE ES-1 - Environmental Setting	
Closest Surface Water Body	Oyster Brook is located approximately 100 feet northeast of the Site and is the closest downgradient waterbody based the direction of flow of the drainage ditch along the Metro North rail line.
Surface Water Quality	The DEEP has designated Oyster Brook as a Class "A" surface water, indicating that the designated uses of the surface water are habitat for fish and other aquatic life and wildlife; potential drinking water supplies; recreation; navigation; and water supply for industry and agriculture (Water Quality Classifications, Orange, CT, August 2012).
Groundwater Classification	The DEEP has classified groundwater beneath the Site and surrounding areas as "GA". The GA classification indicates that designated uses are existing private and potential public or private supplies of water suitable for drinking without treatment and baseflow for hydraulically-connected surface water bodies (DEEP, 2014). Areas east of Oyster River, and west of Marsh Hill Road are designated "GB". According to the *Connecticut Aquifer Protection Areas*, (DEEP, June 1, 2015), there are no Aquifer Protection Areas located in the Town of Orange or in the vicinity of the Site.
Depth to Groundwater and Groundwater Flow	Based on local topography, the groundwater flow direction is inferred to be to east-southeast.
Surficial Geology	Unconsolidated surficial deposits below the Site are comprised of thick till (greater than 10-15 feet) on the western portion of the 0 Marsh Hill Road property, and thin till (less than 10-15 feet) along the east side of the Site (DEEP, August 2009). The well completion record from the water supply well indicated the surficial deposits consisted of "clay, sand, gravel", glacial meltwater deposits consisting of deposits of related series of major ice-dammed ponds.
Bedrock Geology	The bedrock beneath the Site is mapped as the Oronoque member of the Derby Hill Schist, which is described as a gray to silvery medium- to fine-grained schist and granofels (Rodgers, 1985). Bedrock is descibed in the well completion record for the water supply well on the Site as "granite".
Depth to Bedrock	Based on the well completion record for the water supply well on the Site, the depth to bedrock at that location is approximately 31 feet below ground.
Leachate and/or Wastewater Discharges	There are no leachate and/or wastewater discharges associated with the Site. The floor drains at the warehouse on the 55 Marsh Hill Road property discharged to the detention pond just south of 0 Marsh Hill Road from 1980 to 2011. Truck washing operations at the Valenti repair garage at 55 Marsh Hill Road also formerly discharged to a septic leaching field. No leachate or wastewater discharges were identified in the EDR Report.
Radon	According to the EPA Map of Radon Zones, the Site is located within Zone 1. New Haven County is considered Zone 1, which has a highest potential for average short-term indoor radon measurements of greater than 4 pico curies per liter of air.
Potential Ecological Receptors	The Site is not located within a designated Natural Diversity Database Boundary (Natural Diversity Data Base Areas, DEEP, December 2014).
Potential Human Receptors	Potential human receptors would include residential areas and sensitive lands, including schools and playgrounds situated hydraulically downgradient of the Site. Residential neighborhoods abut the Site to the west along Salemme Lane. Bright Horizons (child care) is located north of the Site, and Hope Academy (child care) is located along Marsh Hill Road beyond Salemme Lane northwest of the Site.

4. FILE REVIEWS AND COMPUTERIZED DATABASE FACT SHEET

The information presented in this File Review and Computerized Database Fact Sheet was obtained during a review of records at various federal, state and local agencies and supplemented using a computerized database search. The database search was conducted by Environmental Data Resources, Inc. (EDR) for the Site and surrounding area and transmitted in an EDR Radius Map™ Report with GeoCheck® provided on July 6, 2015. The pertinent information from the computerized database report and federal, state and local record review is summarized in fact sheet FR-1.

The EDR Radius Map™ Report with GeoCheck® provides a summary of pertinent electronic environmental records maintained by federal and state agencies. The available information provided in the database report includes, but is not limited to, the following: summaries of records maintained by the EPA and DEEP on the Resource Conservation and Recovery Act (RCRA) database (such as Corrective Action Sites [CORRACTS]), Hazardous Waste, RCRA Facility Assessments, Solid Waste Management Units, Toxic Substances Control Act inspections, as well as DEEP Permitting, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) listings (CERCLIS), Superfund listings, Air Quality Pollution Control, Superfund Amendments and Reauthorization Act Right-to-Know (Title 3) information, Emergency Response Notification System (ERNS), the Facility Index System (FINDS), Oil and Chemical Spills, Connecticut Leachate and Wastewater Discharge Sites, Property Transfer Filings and other relevant information regarding the Site or properties within the approximate minimum search distances prescribed in ASTM E 1527-13.

Only those properties located in close proximity to the Site or in an inferred upgradient direction of the Site were assessed to have the potential, given the site setting, to affect soil and/or groundwater quality at the Site. The complete copy of the EDR Radius Map™ Report with GeoCheck® is included as Appendix G. The evaluation as to which properties or release locations had the potential to affect soil and groundwater at the Site included such factors as the reported nature and volume of the release, the distance between the reported release location and the Site, and the direction of the reported release location from the Site. Although windblown dust could be a consideration, the primary transport mechanism to the Site was considered to be groundwater flow. Since the actual groundwater flow direction between noted properties in the vicinity of the Site and the Site itself has not been established through field measurements, it is not possible to definitively state that groundwater contamination at identified properties could not reach the Site. However, a presumed groundwater flow direction based on topographic

relationships and proximity of surface water bodies was used in the above-described evaluation process. No records were identified in the EDR Report for the 0 Marsh Hill Road property.

4.1 Federal Agency Reviews

On July 16, 2015, a Loureiro representative queried all environmental records from the EPA through the online EPA database. A search of the Envirofacts database and the website "My Property" was performed; no information was on record for the Site. This search is equivalent to a Freedom of Information Act (FOIA) request. This search of the databases did not locate any environmental records for the Site. The EDR Report searches the Facility Registry System (FRS), which includes all databases maintained by the EPA.

Loureiro investigated the well located near northeast portion of the Site, near the railroad tracks, and determined it to be a USGS monitoring well. According to the USGS National Water Information System, the well is identified as USGS Site Number: 411451072595301 and USGS Site Name: CT-O 410. The well was drilled into New York and New England crystalline-rock aquifer at a depth of 180 feet below land surface. On August 1, 1958, the water level was recorded at 30.00 feet below the land surface. Federal file information obtained during the Phase I ESA Update is provided in Appendix F.

4.2 State Agency Reviews

To supplement information provided in the EDR report regarding the Site, a Loureiro representative conducted a review of the files and maps maintained by the DEEP on July 9, 2015. The file search included a review of records maintained in the DEEP pubic records room under the following categories: Remediation, Water Orders, Oil and Chemical Spills Reports and Correspondence, Air Permits and Enforcement, Industrial Water Correspondence Files, Stormwater Correspondence Files, Solid Waste, Water Industry Survey (P5), Hazardous Waste, Underground Storage Tanks, Tank Closure Reports, Sub-Surface, and Water Permit Applications. A Loureiro representative also searched for the Site in the DEEP Hazardous Waste Manifest Database, which includes manifest data generated between January 1, 1984 and December 31, 2007. No records were on file associated with the 0 Marsh Hill Road property. However, an inspection was performed by Mr. Christopher Gurkie of the DEEP Bureau of Materials Management and Compliance Assurance Water Permitting and Enforcement Division on June 9 and June 15, 2010 including an inspection of the floor drains at the 0 Marsh Hill Road property. A field notice of violation was issued on June 9, 2010 (FNOV 10 101) indicating that floor cleaning wastewater was being discharged to the storm drain system without a permit. An August 11, 2010 letter from Environmental Compliance Services, Inc. (ECS) indicated that connection to the sanitary sewer was verified with the Town of Orange for the 0 Marsh Hill

Road building and that the floor drains did not discharge to the detention basin. Information obtained from the DEEP is provided in Appendix H.

4.3 Town File Reviews

Available records maintained by the Town of Orange including the Tax Assessor's Office, Town Clerk, Building Department, Planning and Zoning Department, Public Works Department, Health Department, and Fire Marshal's Office were reviewed by an Loureiro representative on July 7, 2015. The purpose of the file review was to identify past or present uses of the Site, Site development history, former Site characteristics that may not have been evident at the Site at the time the Site reconnaissance was conducted, potential contaminant migration pathways, potential receptors and other information pertinent to the identification of potential AOCs at the Site (for the time period between 2012 and 2015). Copies of the documents obtained during the city record file review are included in Appendix D.

The current property cards for the Site were copied from the Town of Orange tax assessor's office. A Site Selection Study for a New Train Station was on file with the Planning and Zoning Department. The plan indicated a train station with associated parking, platforms and building were proposed for the northern portion of the Site, as well as the southeast portion of the abutting Yale property to the north. The Study reported the presence of a 50-year flood plain in a portion of the proposed building, and filling of wetlands that would be necessary for the project. Also on file with the Planning and Zoning Department is an approval of an application for the resubdivision of 55 Marsh Hill Road and 0 Marsh Hill Road submitted by Orange Land Development LLC dated April 8, 2015. The resubdivision creates a new approximately 8.091 acre vacant lot (the "Vacant Land Parcel") and adds the portion of former 0 Marsh Hill Road containing the parking lot, beverage can and bottle recycling facility and detention basin (approximately 5.268 acres, the "Dichello Parcel") to 55 Marsh Hill Road.

A proposed sewer connection drawing was on file with the Building Department indicating that the can recycling center was to connect to an existing sanitary sewer line located to the north of the building near the property boundary. The sewer line is in the vicinity of the cleared area and debris noted in the 1990 and 1991 aerial photographs, indicating that the clearing activities may have been performed for the installation of the sanitary sewer line. An investigation for Sewage Disposal System was on file with the Health Department indicating that percolation tests for a proposed leaching field were performed in an area located east of the existing can recycling building (dated September 26, 1984). A drawing depicting a proposed septic system and leaching field located north of the can recycling center building was also on file with the Health Department (although the building connected to the sanitary sewer system and the septic system

was not constructed). A building permit dated November 19, 1986 also stipulated that the can recycling center building would connect to the sanitary sewer.

TABLE FR-1 - Summary of Environmental Data Resources Report						
	Site Identification	Location Relative to Site	Source of Record/ Record Type	Map ID	Report Page Number	Comments
Locations with the Most Likely Potential to Affect The Site	Valenti Leasing Automotive 55 Marsh Hill Road	0.095 mi SW (upgradient)	CT Manifest	A1	8-9	• EPA ID: CTC000008901 • Waste paint related material is listed on the manifest.
	Dichello Distributor 55 Marsh Hill Road	0.095 mi SW (upgradient)	CT CPCS, CT LUST, CT UST, CT Manifest	A2; A3	9-20	• On 4/16/97, two 10,000 gal diesel fuel USTs were removed from the property. LUST Case ID: 32887. TPH detected in soil at 780 ppm, in groundwater at 6 ppm. • Six USTs are recorded being on the property, currently all are permanently closed. Two 10,000 gal heating oil USTs, one 2,500 gal gasoline UST, one 1,000 gal gasoline UST, one 5,000 gal gasoline UST, and one 3,000 gal gasoline UST. • EPA ID: CTP000008901, CTP000011043 • Waste paint related material and flammable waste are listed on the manifest.
	Southern Connecticut Gas Company 60 Marsh Hill Road	0.139 mi West (down-gradient)	CT Manifest, NY Manifest, CT LUST, CT UST, CT SPILLS, CT ENF, CT NPDES, ENFORCEMENT, CT Property	B4-B8	20-49	• EPA ID: CTP000020776, CTP000022438, CTP000019506 • Ammonia, corrosive liquid waste, corrosive solid waste, corrosive gas, and waste lithium batteries are listed on the manifest. • Notice of violation: NVAR1662810143, Air Management • Vehicle Maintenance Wastewater General Permit # GVM000037 • A Form III has been filed for this property on 4/07/2008. • Two USTs are recorded for the property, both permanently closed. One 10,000 gal diesel UST, one 10,000 gal gasoline UST. • LUST Case ID: 60495,

						Date: 9/05/2013.
	Former ABB Industrial Facility 88 Marsh Hill Road	0.171 mi WNW (down-gradient)	CT LWDS, CT Manifest, CT NPDES, CT Property, RCRA NonGen / NLR, FINDS, CERC-NFRAP, CT SHWS, CT SDADB, CT CPCS, NJ Manifest	D14-D19	141-164	• Leachate and Wastewater NO: 5000071 • EPA ID: CTD990851917, CTD036183556, CTD983876293 • Groundwater Remediation Wastewater to Sanitary Sewer General Permit # GGR001160. • A Form III has been filed for this property on 11/12/1997. • CREC-NFRAP ID: 0102267 • SHWS Waste Category: Chlorinated Solvents.
	Aviation Component Support Company 95 Marsh Hill Road	0.180 mi WNW (upgradient)	RCRA NonGen / NLR, CT Manifest, CT Property	D20, F23, F29	164-168, 174-175, 188	• A Form III has been filed for this property on 11/02/2000 and 1/05/1998. • EPA ID: CTD093607711 • Liquid hazardous waste and waste petroleum liquid are identified on the manifest.
	CBL Trucking 11 Frontage Road	0.197 mi WNW (upgradient)	CT Manifest, CT SPILLS	F24-F26	175-185	• EPA ID: CT$000021790, CTP000002754 • Flammable solid waste, flammable liquid, ammonium nitrate, calcium hypochlorite, and waste paint related material are identified on the manifest.
	Yale University 11 Frontage Road	0.197 mi WNW (upgradient)	CT UST	F27	185-186	• Two USTs are recorded for this property, both permanently closed. One 12,000 gal diesel UST and one 6,000 gal diesel UST.
	Northeast Enterprises 11 Frontage Road	0.197 mi WNW (upgradient)	CT SDADB	F28	186-187	• Facility ID: 1637 • Waste Type: Chlorinated Solvents

TABLE FR-2 - Summary of State and City Record Findings						
Research Method	Record Location	Record Number	Record Type	Location of Site Associated with Record	Date of Record	Record Summary
Loureiro Research	DEEP	1	Field NOV	55 Marsh Hill Road	6/9/2010	Field FNOV 10 101 indicated that 55 Marsh Hill Road discharged floor washing waste water to storm sewer, discharging to detention basin. Floor drains sealed and treatment system installed.
	Orange P&Z Department	2	Application	On Site	4/8/2015	Applications for Site Plan Review and Subdivision or Resubdivision Approval (received April 8, 2015)
	Orange Building Department	3	Building Permit	On Site	11/19/1986	A building permit was granted for construction of can recycling center building, provided connection made to sanitary sewer.
	Orange Building Department	4	Letter from Connecticut Department of Transportation (CTDOT)	On Site	1/9/1987	Letter indicates CTDOT approval of installation of detention pond and spillway, provided any changes required by CTDOT hydraulics engineer are performed.
	Orange Health Department	5	Well Permit and Approval	On Site	7/7/87, 7/30/87, 9/8/87	Well permit, analytical data, approval certificate for existing water supply well.
	Orange Building Department	6	Certificate of Occupancy	On Site	9/3/1987	CO for new can recycling center building.
	Orange Planning & Zoning Department	7	Site Selection Study for a New Train Station	On Site	May 2009	Study for proposed train station at the northern portion of 0 Marsh Hill Road, and southeast corner of abutting property to the north.
	Orange Building Department	8	Proposed Septic System	On Site	1984	Proposed septic system and leaching field on north side of proposed building, percolation testing report (Site connected to sanitary sewer instead).

5. PRELIMINARY CONCEPTUAL SITE MODEL FACT SHEET

This Preliminary CSM Fact Sheet identifies those AOCs at the Site where releases to the environment are known to have occurred or where information gathered during the Phase I ESA Update indicate the potential for such a release to occur or to have occurred. The identified AOCs at the Site are presented in Table CSM-1, which also provides information on the constituents of concern for each known or potential release area, the mechanisms by which such releases could or have occurred, potential contaminant transport mechanisms and pathways and potentially affected media. The information used to develop Table CSM-1 was gathered throughout the course of the Phase I assessment update and serves as a summary of information provided in other fact sheets.

The preliminary CSM for each AOC is provided in Table CSM-1. Locations of the AOCs are shown on the Site Plan presented as Drawing 1. Documentation and supporting information used to develop Table CSM-1 are provided or referenced in the specific primary Fact Sheets in this Phase I Update.

It should be noted that although CEC identified the existing water supply well as an AOC for the 0 Marsh Hill Road property, Loureiro does not believe that this would constitute an AOC as there is no release mechanism for contaminants to enter the environment, with the exception of well sanitation chemicals typical for water supply wells. There were no new AOCs identified during the Phase I ESA Update.

The AOCs are presented below as either associated with the retained Dichello portion of the Site ("Dichello Parcel") where the bottle and can recycling building, parking lot, and associated developed areas are located, or the "Vacant Land Parcel" located on the eastern and northern portions of the Site, or both.

TABLE CSM-1 - Areas of Concern and Preliminary Conceptual Site Model								
AOC	Area Name	Description	Potential Release Mechanisms, Migration Pathways and Affected Media	Constituents of Concern				
				VOCs	SVOCs	ETPH	PCBs, Pest, Herb	Metals
AOC-1	Detention Basin (Dichello Parcel)	A storm water detention basin is located east of the existing building on the Dichello Parcel.	Oils and or chemicals, primarily from vehicular traffic, could be released to the paved area around the building, enter the storm sewers, and discharge to the detention basin and impact shallow soil in the basin. Impacts to soil could then migrate downward to groundwater. Affected media would include the potentially impacted soil and the groundwater if the contamination reached the water table.	X	X	X	X	X
AOC-2	Former Agricultural Use (Dichello Parcel and Option Parcel)	A significant portion of the Site on both the Dichello Parcel and the Option Parcel was used for agricultural purposes since at least the early 20th century, until sometime between 1970 and 1980.	Pesticides and/or herbicides could have been used during farming operations on the Site, impacting shallow soils. Impacts to soil could then migrate downward to groundwater. Affected media would include the potentially impacted soil and the groundwater if the contamination reached the water table.				X (pesticides, herbicides)	X (lead, arsenic)

TABLE CSM-1 - Areas of Concern and Preliminary Conceptual Site Model								
AOC	Area Name	Description	Potential Release Mechanisms, Migration Pathways and Affected Media	Constituents of Concern				
				VOCs	SVOCs	ETPH	PCBs, Pest, Herb	Metals
AOC-3	Cleared Area, Areas of Debris (Option Parcel)	1990 and 1991 aerial photos indicate an area of clearing performed north of the building on the Option Parcel. Storage of materials is also evident in the 1991 aerial photo. Small debris piles, brick, asphalt, concrete, etc. were identified by CEC in 2010, and Loureiro during the Site visit in 2012 and 2015.	The debris and solid waste could potentially impact the underlying soil, and then migrate downward to the groundwater table.	X	X	X	X	X

Notes:

VOCs – volatile organic compounds; SVOCs – semi-volatile organic compounds; ETPH – extractable total petroleum hydrocarbons; PCBs – polychlorinated biphenyls; Pest, Herb. – Pesticides / Herbicides

6. SUMMARY OF PHASE I ESA UPDATE FINDINGS FACT SHEET

Loureiro conducted a Phase I ESA Update to document the environmental condition of the Site, to assess the potential for activities conducted at the Site and in the surrounding area to have affected the environmental condition of the Site, and to perform an "all appropriate inquiry" (AAI) into the previous ownership and use of the property, consistent with good commercial and customary practices as defined in Title 42 of the United States Code (USC), Section 9601(35)(B) since the October 2012 Phase I ESA was completed by Loureiro. The assessment was conducted in accordance with the guidance provided in the ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, ASTM E 1527-13 (ASTM, 2013), which incorporates the AAI Final Rule (40 CFR Part 312). The purpose of the ASTM Standard E 1527-13 document is to provide guidance on the activities to be conducted and the inquiries to be made that constitute good commercial and customary practice for conducting environmental Site assessments.

6.1 Findings

Based on Loureiro's investigations into the documented history of the Site, as obtained from the records on file with the Town of Orange, Connecticut, the DEEP and the Connecticut State Library, along with an electronic environmental database search, a review of surficial and bedrock geology information obtained from available state and federal sources and observations performed during the Site reconnaissance survey on July 7, 2015, the following is a summary of findings pertaining to the Site.

- The Site is an approximate 13.36 acre parcel currently owned by Dichello Distributors Inc. and is occupied by one single building with a physical address 0 Marsh Hill Road. The 34,800 square-foot building is primarily used as a can and bottle recycling center warehouse. The Site is bound to the south by 55 Marsh Hill Road (Dichello Distributors warehouse and Valenti Leasing Inc. Repair Garage). Residences are located to the west of the Site along Salemme Lane. Salemme Lane would likely be a means of access to the northern portion of 0 Marsh Hill Road. Bright Horizons (child care) at the Yale West Campus (previously owned by Bayer Corporation and Aviation Components Support Company) abuts the Site to the north, with Interstate 95 beyond. The eastern portion of the Bright Horizons property abutting the Site is undeveloped, wooded land. Metro North railroad tracks abut the Site to the east and southeast, with a commercial and light industrial area beyond along Robinson Boulevard.

- The aluminum can, and beginning in 2013 glass, recycling building was constructed in 1987 on a concrete slab with precast concrete walls and steel truss roof structure. It is a single-story, steel truss warehouse. The building is heated with natural gas fired furnaces (ceiling-suspended).

- The Site is provided with sanitary sewer from the Town of Orange. Water is provided to the building from a water supply well (installed 405 feet into granite bedrock), located approximately 75 feet northwest of the building. The natural gas meter is located on the northwest corner of the building. Electricity is provided by United Illuminating to the building via overhead lines to a pole located southeast of the repair garage and then underground electrical lines leading from the 55 Marsh Hill Road property.

- A detention pond was observed to the east of the building on the Dichello Parcel. Significant vegetative growth was observed in the basin, and no evidence of stressed vegetation or staining was observed. The detention pond discharges to a drainage channel running along the west side of the Metro North rail line. The drainage ditch discharges to Oyster River located approximately 100 feet northeast of the Site. Floor drains were observed in the building, which reportedly discharge to the sanitary sewer (this was verified during the 2012 Phase I ESA in a phone conversation with Mr. Chris Gurkie of the DEEP, who performed an inspection of the Site in 2010).

- A field notice of violation was issued for the 55 Marsh Hill Road property on June 9, 2010 (FNOV 10 101) indicating that floor cleaning wastewater was being discharged to the storm drain system without a permit. An August 11, 2010 letter from ECS indicated that connection to the sanitary sewer was verified with the Town of Orange for the 0 Marsh Hill Road building and that the floor drains did not discharge to the detention basin.

- Small piles of debris were noted in the undeveloped wooded land to the north of the building on the Option Parcel.

- Site is located within Zone X, which is defined as areas of 500-year flood plain. There is an area of 100-foot flood plain located just to the northeast of the Site near Oyster Brook. A Site Selection Study for a New Train Station indicated that wetlands and 50-year flood plains may be located in the eastern portion of the Site.

- The Site (including both the Dichello Parcel and the Option Parcel) was previously used for agricultural purposes from at least the early 20th century to sometime between 1970 and 1980.

- Applications for Subdivision or Resubdivision and Site Plan Review for the Site dated April 8, 2015 were on-file with the Planning and Zoning Department.

6.2 Areas of Concern

The Phase I ESA Update identified certain activities or conditions having the potential to affect soil and/or groundwater quality at the Site. Three AOCs were identified at the Site and included the following:

- AOC-1 – Detention Basin (Dichello Parcel)
- AOC-2 – Former Agricultural Use (Dichello Parcel and Option Parcel)
- AOC-3 – Cleared Area, Areas of Debris (Option Parcel)

No new AOCs were identified during this Phase I ESA Update. As previously stated, the deviations and data gaps identified above in Section 1.3 did not affect Loureiro's ability to identify the AOCs at the Site.

6.3 Connecticut Property Transfer Program

This ESA update has been prepared to document current and historical operations conducted at the Site and to assess the potential for these operations to affect the environmental condition of the Site and surrounding properties. Sections 22a-134 to 22a-134e of the Connecticut General Statutes (CGS), also known as the Property Transfer Act, as amended by Public Act 95-183 and Public Act 01-204, require an assessment of any discharge, spillage, uncontrolled loss, seepage, or filtration of hazardous waste at an "Establishment" prior to the transfer of the facility. Section 22a-134(3) defines an establishment as follows:

Any real property at which or any business operation from which (A) on or after November 19, 1980, there was generated, except as the result of remediation of polluted soil, groundwater or sediment, more than one hundred kilograms of hazardous waste in any one month, (B) hazardous waste generated at a different location was recycled, reclaimed, reused, stored, handled, treated, transported or disposed of, (C) the process of dry cleaning was conducted on or after May 1, 1967, (D) furniture stripping was conducted on or after May 1, 1967, or (E) a vehicle body repair facility was located on or after May 1, 1967.

No information was found during the completion of this Phase I ESA Update specifically indicating that hazardous waste was generated at the Site, or that other activity which would result in the classification of the property as an Establishment has ever occurred at the Site. Legal

counsel should be consulted to verify whether or not the property or business operations at the Site are an "Establishment" pursuant to the Property Transfer Act.

6.4 Statement of the Environmental Professional

As required by 40 CFR 312.21(d), the Phase I ESA report shall include the following statements of the environmental professional(s) responsible for conducting the Phase I Environmental Site Assessment and preparation of the report.

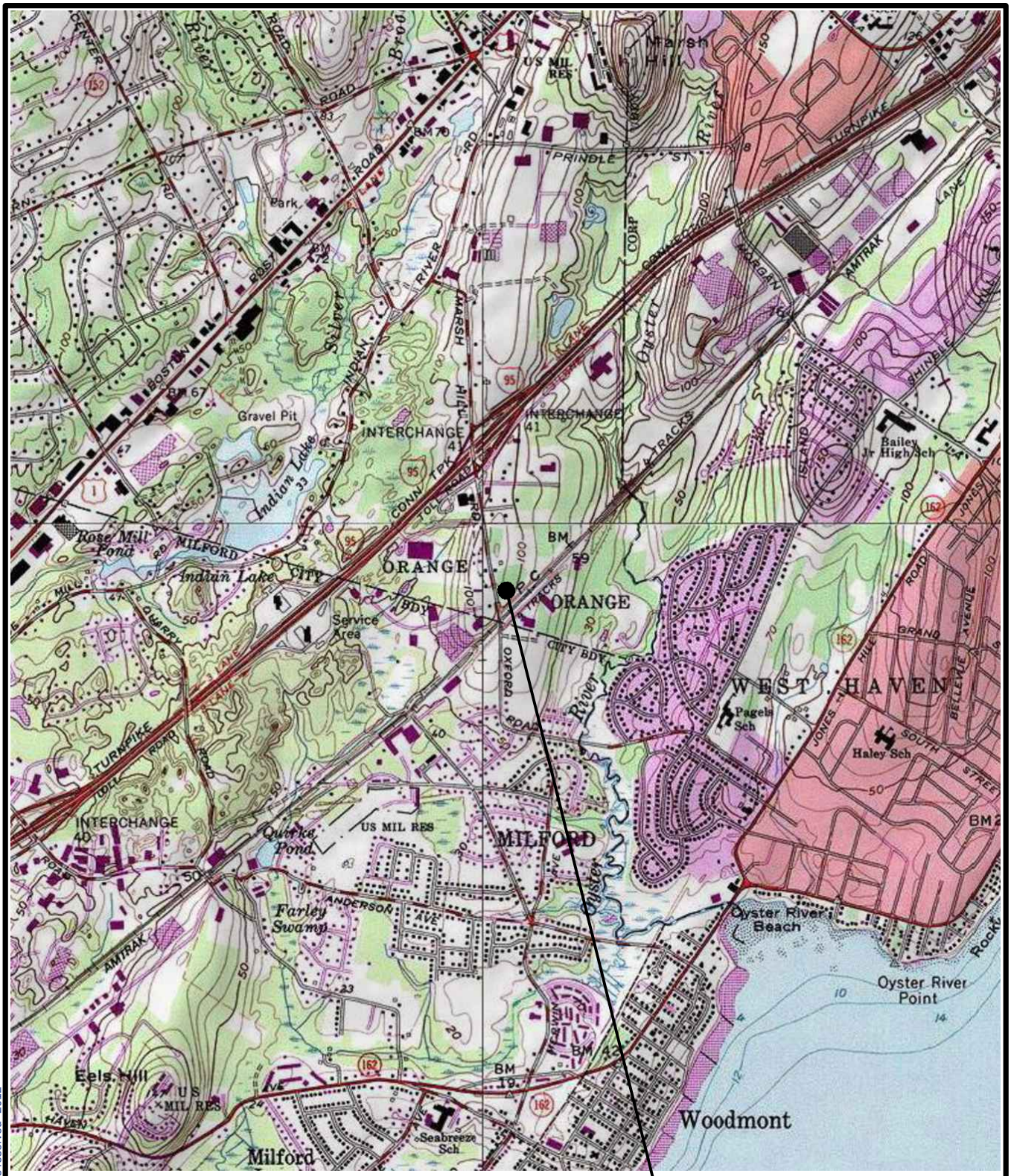
I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of this part (40 CFR 312).

I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

July 23, 2015

Joseph T. Trzaski, LEP Date

FIGURES



1000 0 1000 2000 3000

APPROXIMATE SCALE IN FEET

MAP REFERENCE:

SECTION OF THE USGS 7.5 MINUTE SERIES TOPOGRAPHIC MAP FOR MILFORD, CT, MAP VERSION DATE 1984. MAP CREATED WITH TOPO! © 2006 NATIONAL GEOGRAPHIC.

PHASE I ENVIRONMENTAL SITE ASSESSMENT
0 MARSH HILL ROAD, ORANGE, CT

SITE LOCATION MAP

Comm.No.	FIGURE 1	Loureiro
64OL501.001		

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SITE PLAN
SCALE 1"=50'-0"

SITE PLAN WITH 1991 AERIAL
SCALE 1"=100'-0"

LEGEND

- PROPERTY BOUNDARY
- PROPERTY BOUNDARY - ABUTTERS
- BUILDING/STRUCTURE
- ROAD/DRIVE
- CHAIN LINK FENCE
- STONE WALL
- STORM WATER LINE
- DRAINAGE SWALE
- MANHOLE
- CATCH BASIN
- CULVERT DRAIN
- WATER VALVE
- LIGHT POLE
- MONITORING WELL LOCATION

AREAS OF CONCERN

AOC	DESCRIPTION
AOC-1	Detention Basin
AOC-2	Former Agricultural Use
AOC-3	Cleared Area, Areas of Debris

MAP NOTE:

HORIZONTAL DATUM IS NAD 83.

MAP REFERENCE:

"PROPERTY SURVEY DEPICTING BOUNDARY LINE ADJUSTMENT PREPARED FOR: DICHELLO DISTRIBUTORS, INC. MARSH HILL ROAD, ORANGE, CONNECTICUT". MILONE & MACBROOM, 99 REALTY DRIVE, CHESHIRE, CONNECTICUT 06410 (203) 271-1773. DATED SEPTEMBER 26, 2012, REVISED 9/27/12.

DRAFT

25 0 25 50 75
SCALE IN FEET

REV.	DESCRIPTION OF REVISION	DATE	APPR.

Loureiro Engineering Associates, Inc.
100 Northwest Drive • Plainville, Connecticut 06062
Phone: 860-747-6181 • Fax: 860-747-8822
An Employee Owned Company • www.Loureiro.com

SCALE	COMM. NO.	DRAWN BY	DATE	APPROVED BY	DATE
1" = 50'	64OL501.001	PJA	07/23/15	J.T.T.	07/23/15

PHASE I ENVIRONMENTAL SITE ASSESSMENT
0 MARSH HILL ROAD, ORANGE, CT

SITE PLAN

DRAWING 1
SHEET NO. 1 NO. OF SHEETS 1

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APPENDIX A

References

References

ArcExplorer. Using town, road, hydrology, bedrock, natural diversity, water quality, and leachate and wastewater discharge layers from the CTDEP.

ASTM International. 2006. *Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process*. Document Designation E 1528-06.West Conshohocken, Pennsylvania.

Catalyst Environmental Consulting, Inc., Environmental Site Assessment, April 11, 2011.

DEEP, *Connecticut Aquifer Protection Areas*, January 19, 2012.

DEEP, *Connecticut Inland Wetland Soils, Orange, Connecticut*, October 2009.

DEEP, *Natural Diversity Database* Areas, Orange, Connecticut, June 2012.

DEEP, Public Records File Room. Hartford, CT. October 4, 2012.

DEEP, *Q3 Flood Zone Data,* Orange, Connecticut, September 2010.

DEEP, *Quaternary Geology, Orange, Connecticut*, December 2010.

DEEP, 2007a *Site Characterization Guidance Document*, September 2007 updated December 2010.

DEEP, in cooperation with the U.S. Geological Survey, Connecticut Geological and Natural History Survey, *Bedrock Geology of Connecticut*, data format: shapefile, file name: bedrock, downloaded from: http://magic.lib.uconn.edu/cgi-bin/MAGIC_DBsearch2.pl?Geography=37800&Loc=0000 on 9/18/2003, scale 1:50,000, 2000.

DEEP, *Water Quality Classification, Orange, Connecticut*, August, 2012.

EDR, Aerial Photo Decade Package, Inquiry number 3415482.11: 0 Marsh Hill Road, September 21, 2012.

EDR, Certified Sanborn Map Report, Inquiry number 3415482.9: 0 Marsh Hill Road, September 21, 2012.

EDR, Historical Topographic Map Report, Inquiry number 3415482.10: 0 Marsh Hill Road, September 21, 2012.

EDR, EDR Radius Report with Geocheck, Inquiry number 4345155.2s: 0 Marsh Hill Road, July 6, 2015.

EPA, EPA Map of Radon Zones, Connecticut, http://www.epa.gov/radon/zone map.html, 2008.

Googlemaps.com. Searched September 21, 2012.

Town of Orange Assessor's Office. Property Card, and Tax Assessor's Map.

Wetlands Mapper. National Wetlands Inventory. U.S. Fish and Wildlife Service. http://www.fws.gov/wetlands/Data/Mapper.html.

APPENDIX B

Previous Environmental Reports

PHASE I ENVIRONMENTAL SITE ASSESSMENT

0 Marsh Hill Rd
Orange, Connecticut

October 2012

Prepared for

Day Pitney, LLP
7 Times Square
New York, NY 10036-7311

Prepared by

LOUREIRO ENGINEERING ASSOCIATES, INC.
100 Northwest Drive
Plainville, Connecticut 06062

An Employee Owned Company

Comm. No. 23DP201.002

Table of Contents

ACRONYMS

AAI	All Appropriate Inquiry
AOC	Area of Concern
AMSL	Above Mean Sea Level
AST	Aboveground Storage Tank
ASTM	American Society of Testing Materials
CEC	Catalyst Environmental Consultants, Inc.
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERCLIS	CERCLA Information System
CFR	Code of Federal Regulations
CGS	Connecticut General Statutes
CORRACTS	Corrective Action Sites
CSM	Conceptual Site Model
CTDOT	Connecticut Department of Transportation
DEEP	Connecticut Department of Energy & Environmental Protection
ECS	Environmental Compliance Solutions, Inc.
EPA	United States Environmental Protection Agency
ERNS	Emergency Response Notification System
EDR	Environmental Data Resources, Inc.
ESA	Environmental Site Assessment
ETPH	Extractable Total Petroleum Hydrocarbons
FINDS	Facility Index System
FIRM	Flood Insurance Rate Mapping
FOIA	Freedom of Information Act
FRS	Facility Registry System
LEA	Loureiro Engineering Associates, Inc.
MAGIC	University of Connecticut Mapping and Geographic Information Center
PCBs	Polychlorinated Biphenyls
REC	Recognized Environmental Condition
RCRA	Resource Conservation and Recovery Act
SVOCs	Semivolatile Organic Compounds
TPH	Total Petroleum Hydrocarbons
USC	United States Code
USGS	United States Geological Survey
UST	Underground Storage Tank
VOCs	Volatile Organic Compounds

1. INTRODUCTION

1.1 Purpose and Scope

Loureiro Engineering Associates (LEA) has been retained by Day Pitney LLP on behalf of Orange Land Development LLC to conduct a Phase I Environmental Site Assessment (ESA) of the property located at 0 Marsh Hill Road in Orange, Connecticut (hereinafter referred to as "the Site"). The Site is a 13.3587 acre parcel owned by Dichello Distributors Inc. (Dichello) and is occupied by one single building with a physical address 0 Marsh Hill Road. The 34,800 square-foot building is primarily used as a beverage can recycling warehouse. Although the Site and 55 Marsh Hill Road were recently resubdivided to create a new approximately 8.091 acre vacant lot, and to add the portion of former 0 Marsh Hill Road containing the parking lot, beverage can and bottle recycling facility and detention basin (approximately 5.268 acres) to 55 Marsh Hill Road, the entire Site was examined for the purposes of the Phase I ESA completed by Loureiro in October 2012 and this Phase I ESA Update.

This Phase I ESA report has been prepared at the request of Day Pitney to document the environmental condition of the Site and to evaluate the potential for activities conducted at the Site and in the surrounding area to have affected the environmental condition of the Site. The Phase I ESA was performed in general accordance with the guidance provided in the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, ASTM E 1527-05 (ASTM, 2005), as well as the relevant portions of the Site Characterization Guidance Document published by the Connecticut Department of Energy and Environmental Protection (DEEP) dated September 2007 and revised December 2010. The ASTM standard is recognized by the United States Environmental Protection Agency (EPA) as being consistent with the All Appropriate Inquiry (AAI) Rule of the 2005 amendments to the Small Business Liability Relief and Brownfields Revitalization Act of 2002 (40 Code of Federal Regulations (CFR) 312).

To evaluate the information gathered during the Phase I ESA, a preliminary conceptual site model (CSM) was developed for the Site. The CSM identifies Areas of Concern (AOCs) where present operations at the Site have the potential, or past operations had the potential or were known, to result in releases to the environment that could adversely affect the environmental quality of surface or subsurface conditions at the Site. AOCs generally correspond to Recognized Environmental Conditions (RECs), as referred to in the ASTM Standard. The term AOC is used throughout this Phase I ESA report to be consistent with the terminology used in the DEEP Site Characterization Guidance Document.

1.2 Report Reliance

This report may be distributed and relied upon by Day Pitney LLP, Finn Dixon & Herling LLP, Orange Land Development LLC, its respective successors and assigns, and its lenders, if any. This report may also be distributed to and relied upon by the Connecticut Department of Transportation. Reliance on the information and conclusions in this report by any other person or entity is not authorized without the written consent of Loureiro.

1.3 Report Format

This report has been prepared as a series of "Fact Sheets" that provide pertinent aspects of the assessment in a concise, user-friendly format that utilizes multiple tables to summarize and convey pertinent information relevant to the specific aspect of the report for which each Fact Sheet was prepared. Relevant tables are included with each Fact Sheet, as appropriate, but figures have been provided separately, since multiple Fact Sheets may refer to the same figures. Similarly, appendices are provided following the figures, as they also may be referred to in more than one Fact Sheet and are considered to be a component of the report as a whole.

The Fact Sheets prepared for this report cover the following topics, which also include a brief summary of the type of information included in that particular Fact Sheet, if not readily apparent from the description.

- Site Description and History – includes information on the physical layout of the Site; surrounding properties; current use of the Site; and results of the site reconnaissance survey and interviews with the site owner, occupants, and/or other personnel knowledgeable about the Site. Information pertaining to the history of site ownership and former uses of the Site, including activities that were conducted on the Site and adjacent properties, as relevant, are also included in this Fact Sheet.

- Environmental Setting – includes information on the physical setting of the Site with respect to such environmental factors as topography, drainage, nearby water bodies, geology and hydrogeology and potential human and environmental receptors.

- File Reviews and Computerized Database Search – summarizes the information gathered during file reviews at federal, state and local agencies, as well as the information provided by the computerized database search that was conducted for the Site and surrounding area.

- Preliminary Conceptual Site Model – presents the preliminary CSM for the Site and identifies those AOCs where releases to the environment are known to have occurred or

where information gathered during the Phase I ESA indicate the potential for such a release to occur or to have occurred. The preliminary CSM also identifies the constituents of concern for each known or potential release area, the mechanisms by which such releases could or have occurred, the transport pathways and mechanisms for known or potential releases and potential receptors for a release. Any potential data gaps that were identified during the course of the Phase I ESA and the significance of those data gaps with respect to the ability to draw conclusions regarding the potential for a release to occur or to have occurred are discussed in this Fact Sheet.

- Summary of Phase I ESA Findings – A summary of the results of the Phase I ESA is provided following the Fact Sheets, and provides conclusions regarding the areas at the Site where releases to the environment have occurred or where there exists the potential for releases or threats of releases to the environment from current or past uses and activities at the Site or surrounding area to occur.

- The signed statement of the environmental professional responsible for the preparation of this ESA report, as required to meet the requirements for AAI described in 40 CFR 312, is provided within the Summary and Conclusions Fact Sheet. References used in the preparation of this Phase I ESA are included as Appendix A.

2. SITE DESCRIPTION AND HISTORY FACT SHEET

The information provided in this Site Description and History Fact Sheet provides an overview of the site history, background information and site ownership, as derived from a review of the Site and surrounding area as well as an interpretation of information acquired from a review of historical record sources, including but not limited to, historical deeds, City Directories, aerial photographs, historical topographic maps and Sanborn® Fire Insurance Maps. Table SD-1 provides a brief description of the Site and surrounding land uses. Changes to the physical layout of the Site over time, as interpreted from available aerial photographs and historical mapping are summarized in Table SD-2. Pertinent information gathered during the site reconnaissance is provided in Tables SD-3 and SD-4.

2.1 General Site Information

The Site consists of a 13.3587 acre parcel of land located in the southeastern portion of Orange, on the east side of Marsh Hill Road. The current 38,400 square foot building on the Site has the physical address of 0 Marsh Hill Rd and the property is listed on the Town of Orange Tax Assessor Card as Map ID 3, Block 1, Lot 1. The Site location, local topography, nearby water bodies, surrounding structures and major access routes are depicted on Figure 1, which was developed using the United States Geological Survey (USGS) 7.5-minute series topographic quadrangle map for the Milford, Connecticut Quadrangle dated 1984.

The Site is located in an area primarily developed for commercial and light industrial use, with some residential properties located to the north of the Site. According to the City of Orange Tax Assessor, the Site is zoned “LI-2” (Light Industrial District 2). The Site is bound to the south by 55 Marsh Hill Road (Dichello Distributors warehouse and Valenti Leasing Inc. Repair Garage). To the west of Marsh Hill Rd is a commercial and light industrial use area and Executive Campus Business Park along Executive Boulevard, including KBC Electronics, Bead Industries, Southern Connecticut Gas Company, among other businesses. Residences are located to the west of the Site along Salemme Lane. Salemme Lane would likely be a means of access to the northern portion of 0 Marsh Hill Road. Bright Horizons at the Yale West Campus (previously owned by Bayer Corporation and Aviation Components Support Company, among others) abuts the Site to the north, with Interstate 95 beyond. The eastern portion of the Bright Horizons property abutting the Site is undeveloped, wooded land. Metro North railroad tracks abut the Site to the east and southeast, with a commercial and light industrial area beyond along Connair Road.

The Site is accessible from the 55 Marsh Hill Road property to the south via two entrances located along Marsh Hill Road. Asphalt paved areas encircle the can recycling center building, with the exception of the southeast side. Relevant site features and property boundaries are depicted on Figure 2 (Site Plan) and described below.

The aluminum can recycling building was constructed in 1987 on a concrete slab with precast concrete walls and steel truss roof structure. It is a single-story, steel truss warehouse.

The building is heated with natural gas fired furnaces (ceiling-suspended). The natural gas meter is located on the northwest corner of the building. The site is provided with sanitary sewer from the Town of Orange. Water is provided to the building from a water supply well (installed 405 feet into granite bedrock), located approximately 75 feet northwest of the building. Electricity is provided by United Illuminating to the building via overhead lines to a pole located southeast of the repair garage and then underground electrical lines leading from the 55 Marsh Hill Road property.

2.2 Previous Environmental Investigations

LEA reviewed one historical report available for the Site, a Phase I ESA performed by Catalyst Environmental Consulting, Inc (CEC) dated April 14, 2011. A copy of the historic environmental report for the Site is included in Appendix B. The CEC Phase I ESA identified the following Areas of Concern associated with the 0 Marsh Hill Road property:

- AOC-8 – Disposal Areas: CEC identified piles of miscellaneous debris located in the wooded area in the northern portion of the 0 Marsh Hill Road property, including soil piles, asphalt, brick, concrete, asphalt shingles, discarded televisions, motor oil cans, furniture, tires, and rusted metal.

- AOC-9 – Former Agricultural Use: The Site was used for agricultural purposes prior to the construction of the can recycling center building in 1987.

- AOC-11 – Detention Basin: Catch basins on the 0 Marsh Hill Road property discharge to the detention basin located east of the building.

- AOC-15 – Drinking Water Well: The building is served by a drinking water well.

2.3 Site Reconnaissance Survey

A site reconnaissance survey was completed by Jeremy Marcantonio and Joseph Trzaski of LEA on October 2, 2012. The two representatives of LEA were accompanied by the Director of

Facilities and Grounds, Mr. Frank Pascale of Dichello Distributors. The 38,400 square foot can recycling center building receives deliveries of aluminum beverage cans by truck through the drive-through loading docks. The cans are crushed in a crushing machine located on the southeast portion of the building. The cans are bundles together in square blocks and loaded onto trucks for recycling at the covered loading dock area at the southeast end of the building. Floor drains were observed in the building, which reportedly discharge to the sanitary sewer (this was verified in a phone conversation with Mr. Chris Gurkie of the DEEP, who performed an inspection of the Site in 2010). A detention basin was observed to the east of the building. Significant vegetative growth was observed in the basin, and no evidence of stressed vegetation or staining was observed. Small piles of debris were noted in the undeveloped wooded land to the north of the building. The water supply well servicing the building was observed just off the paved area to the northwest of the building. A natural gas meter was observed in the western corner of the building. A paved parking lot is located at the southwest corner of the Site, used for both 0 Marsh Hill Road and 55 Marsh Hill Road.

Additional observations made during the site reconnaissance survey are presented in Tables SD-3 and SD-4. Pertinent site features are depicted on Figure 2. Site photographs are included as Appendix C.

2.4 Site Ownership/Occupant History

The Site is currently owned by Dichello Distributors Inc. The following table summarizes the ownership history of the Site as established through review of municipal land records. A copy of the most recent deed is included in Appendix D. A 1922 Town of Orange Assessor's map indicated that Elm City Nursery and F. Pucillo, Antonia Farino, and A.F. Salerno occupied the Site and 55 Marsh Hill Road at this time.

Grantor	Grantee	Date of Transaction	Volume/Page in Town Land Records
Estate of Alesandro Salemme	Philomena Salemme	11/7/1949	156 / 507
Philomena Salemme	Joseph Salemme, et al.	6//9/1981	277 / 690
Joseph Salemme, et al.	Dichello Distributors Inc.	6/10/1981	277 / 691

A review of City Directories from selected years ranging from 1963 through 2008 was conducted in the Local History room of the State of Connecticut Public Library as well as being provided by Environmental Data Resources (EDR). The 0 Marsh Hill Road was not listed in any of the City Directories (although Dichello Distributors and Valenti Leasing were indicated in the City Directories between 1981 and present day).

TABLE SD-1 - Site Information Summary

Municipality		Orange
County		New Haven
State		Connecticut
Physical Address		0 Marsh Hill Road
Assessors Card Information		Parcel ID: 3-1-1
Zoning		LI-2 (Light Industrial District 2)
Site Size		13.35 acre
Latitude		41°14'54.11" north
Longitude		72°59'43.57" west
Structure(s)/Current Use		One single floor structure, built in 1987, used as a aluminum can recycling warehouse.
Site Utilities	Sanitary	Connected to the municipal sanitary sewer.
	Water Supply	Well Water
	Natural Gas	Connected to natural gas supply.
	Electrical	Available to the Site from United Illuminating.
	Heat	The building is heated by natural gas
Adjacent Land-Use	North	Bright Horizons Yale University West campus (former Bayer Corporation, Former Aviation Components Support Company), comprised primarily of wooded/undeveloped land over approximately 50% of the northern property boundary.
	South	Metro North railroad tracks and several commercial or light industrial facilities beyond the rail line. 55 Marsh Hill Road abuts the property immediately to the south.
	East	Metro North railroad tracks and undeveloped land, with a residential neighborhood beyond.
	West	Parking lots and a beer distribution facility (55 Marsh Hill Rd). Further west is an industrial business park.

TABLE SD-2 - Summary of Aerial Photograph, Topographical Map and Sanborn® Fire Insurance Map Observations					
			Observations		
Media	**Date**	**Source**	**Building(s)**	**Other Relevant Site Features**	**Surrounding Areas**
Aerial Photographs	1934	EDR Aerials	There appears to be a small dwelling on the western edge on the Site.	The Site is primarily farmland.	The Site is bordered by railroad tracks to the southeast and east. Marsh Hill Rd abuts the property to the west. To the north is more farmland with a few small residences and farmhouses. More residencies are apparent west of Marsh Hill Rd.
	1940	EDR Aerials	The Site appears to remain unchanged since the previous photograph	The Site appears to remain unchanged since the previous photograph	No changes since previous aerial photograph.
	1963	EDR Aerials	The Site appears to remain unchanged since the previous photograph	The Site has filled in with tress along the western, southern, and eastern boundaries	No changes since previous aerial photograph.
	1966	EDR Aerials	The Site appears to remain unchanged since the previous photograph	The Site appears to remain unchanged since the previous photograph	Little changes have occurred since the last photograph. More houses have been developed to the northwest.
	1970	EDR Aerials, CT ECO Map Catalog	The Site appears to remain unchanged since the previous photograph	The Site appears to remain unchanged since the previous photograph	Two industrial buildings have been developed across the train tracks to the southeast.
	1972	EDR Aerials	The Site appears to remain unchanged since the previous photograph	The Site appears to remain unchanged since the previous photograph	Residential buildings and additions to the industrial facility have been made to the southeast. A large industrial building has been constructed to the west across Marsh Hill Road.
	1980	EDR Aerials	The main distribution facility has been developed in the central portion of the property as well as a smaller	Paved parking areas have been established around the new building at 55 Marsh Hill Road. The repair garage	New industrial facilities have been built to the southwest across Marsh Hill Road. Residential properties have

TABLE SD-2 - Summary of Aerial Photograph, Topographical Map and Sanborn® Fire Insurance Map Observations					
			Observations		
Media	**Date**	**Source**	**Building(s)**	**Other Relevant Site Features**	**Surrounding Areas**
			building in the southern portion.	and dispenser island was also built in the southern portion of the 55 Marsh Hill Road property.	also increased to the south.
	1985	EDR Aerials, CT ECO Map Catalog	The Site appears to remain unchanged since the previous photograph	A parking lot has been developed on the western portion of the Site.	A new industrial facility has been constructed west of Marsh Hill Rd. A new street of residential homes has been developed to the south of the Site. A new industrial building has been developed across the train tracks to the southeast
	1990	EDR Aerials, CT ECO Map Catalog	The present-day recycling warehouse has been built in the southeast portion of the Site.	The detention basin located east of the can recycling center building is also present. An area north of the building has been cleared (area of debris and soil piles)	An addition has been made to the industrial facility to the west of Marsh Hill Rd.
	1991	EDR Aerials	The Site appears to remain unchanged since the previous photograph	The Site appears to remain unchanged since the previous photograph. An area north of the building has been cleared (area of debris and soil piles), and materials are stored in this area.	No changes since previous aerial photograph
	1995	EDR Aerials, CT ECO Map Catalog	The Site appears to remain unchanged since the previous photograph	The Site appears to remain unchanged since the previous photograph	Parking areas have expanded on the industrial property to the west of Marsh Hill Rd.
	2005	EDR Aerials	The Site appears to remain unchanged since the previous photograph	The Site appears to remain unchanged since the previous photograph.	No changes since previous aerial photograph

TABLE SD-2 - Summary of Aerial Photograph, Topographical Map and Sanborn® Fire Insurance Map Observations					
			Observations		
Media	**Date**	**Source**	**Building(s)**	**Other Relevant Site Features**	**Surrounding Areas**
	2006	EDR Aerials	The Site appears to remain unchanged since the previous photograph	The Site appears to remain unchanged since the previous photograph	No changes since previous aerial photograph
	2008	EDR Aerials	The Site appears to remain unchanged since the previous photograph	The Site appears to remain unchanged since the previous photograph	No changes since previous aerial photograph
Historical Topographic Maps	1892	USGS 15-minute series New Haven, Connecticut, Quadrangle: Environmental Data Resources, Inc. (EDR)	No building are shown within the property limits	Site elevation is approximately 90 feet above mean sea level.	A few small dwellings are depicted to the north of the Site
	1947	USGS 7.5-minute series New Haven, Connecticut, Quadrangle: EDR	No building are shown within the property limits	No changes since previous topographic map.	No changes since previous topographic map.
	1954	USGS 7.5-minute series New Haven, Connecticut, Quadrangle: EDR	No building are shown within the property limits	No changes since previous topographic map.	No changes since previous topographic map.
	1967	USGS 7.5-minute series New Haven, Connecticut, Quadrangle: EDR	The image shows only the southeastern edge of the Site. No properties can be seen in this image.	The image shows only the southeastern edge of the Site. No properties can be seen in this image.	No changes since previous topographic map.
	1972	USGS 7.5-minute series New Haven, Connecticut, Quadrangle: EDR	The image shows only the southeastern edge of the Site. No properties can be seen in this image.	No changes since previous topographic map.	No changes since previous topographic map.
	1984	USGS 7.5-minute series New Haven,	The image shows only the southeastern edge of the	No changes since previous	Three large building have been developed across the railroad tracks to

TABLE SD-2 - Summary of Aerial Photograph, Topographical Map and Sanborn® Fire Insurance Map Observations					
			Observations		
Media	**Date**	**Source**	**Building(s)**	**Other Relevant Site Features**	**Surrounding Areas**
		Connecticut, Quadrangle: EDR	Site. No properties can be seen in this image.	topographic map.	the southeast of the Site.
Sanborn Fire Insurance Maps		No Sanborn coverage in this area	No Sanborn coverage in this area	No Sanborn coverage in this area	No Sanborn coverage in this area

Note: CT Eco Map Catalog provided by the University of Connecticut Mapping and Geographic Information Center (MAGIC)

TABLE SD-3 - Summary of Site Reconnaissance Exterior Observations	
Parking Area(s)	A paved parking and travel area exists along the northern, western, eastern and southern boundaries of the property.
Vegetated Area(s)	Overgrown forest and undergrowth lies directly to the north of the building.
Staining/Stressed Vegetation	The vegetated areas did not appear to be stressed .
Building Construction	The only building on this property was built in 1987 on a concrete slab. The building is a steel-framed truss.
Loading/Unloading Areas	Trucks enter the building for unloading of beverage cans and kegs, and cubes of crushed cans and kegs are loaded from the covered loading dock on the east side of the building.
Site Topography	The topography of the site gradually slopes toward the east.
Surface Water	No surface water bodies were observed on the Site. The detention pond discharges to a drainage channel running along the west side of the Metro North rail line. The drainage ditch discharges to Oyster River located approximately 100 feet northeast of the Site. The detention pond and drainage ditch were dry during the site visit.
Manholes/Catch Basins/Drywells	Catch basins on the Site discharge to the detention basin located east of the building.
Underground Storage Tanks (USTs)	No evidence of existing USTs was observed during the site visit.
Above-ground Storage Tanks (ASTs)	No ASTs were observed during the site visit.
Transformers	No transformers were observed on the 0 Marsh Hill Road property (a pad-mounted transformer was observed on the 55 Marsh Hill Road property).
Drums/Storage Containers and/or Equipment	No drums were observed during the site visit. An aluminum can crusher was observed in the southeast portion of the building.
Miscellaneous Storage	None
Septic System	No visible evidence of a former septic system was observed during the site reconnaissance.
Wells	One water supply well was observed on the site, approximately 75 feet northwest of the building.

TABLE SD-4 - Summary of Site Reconnaissance Interior Observations	
Number of Floors	The building is a single-floor facility.
Basement or Crawlspace	The building is constructed with concrete slab floors with no basements or crawlspaces.
Construction	The interior construction of the building is steel-framed with concrete floors.
Current Use	The building is used as an aluminum can, keg and cardboard recycling warehouse.
Residential Space	None
Heating and/or Cooling System	The building is heated with natural gas by ceiling-suspended furnaces.
Staining and/or Corrosion	Slight staining was observed, but from spilled beverages from the bottle and cans processed within the building.
Drums/Storage Containers and/or Equipment	Storage of materials within the buildings included kegs, cardboard, aluminum cans and wooden pallets for packaging.
Drains and/or Sumps	Floor drains were observed in the can recycling center building, which discharge into the municipal sanitary sewer system.
ASTs	No ASTs were observed during the site visit.
Other	None

3. ENVIRONMENTAL SETTING FACT SHEET

The information provided in this Environmental Setting Fact Sheet is based on available information from municipal, state and federal sources, including published mapping for the Site and vicinity. Pertinent information with regard to the environmental setting is provided in Table ES-1.

The Site is located in the southeastern portion of the city of Orange in southern Connecticut. The Site is located in a light industrial zone. Local topography in the site vicinity slopes downward to the east.

The environmental setting information was used to evaluate the potential for releases or environmental conditions within the surrounding area to affect the quality of soil or groundwater at the Site. Environmental setting information was also used in developing the preliminary CSM, particularly with respect to migration pathways and potential receptors for known or potential releases from identified AOCs.

TABLE ES-1 - Environmental Setting

Topography	The Site slopes from Marsh Hill Road to the east-southeast, and is relatively flat to the north of the can recycling center building. There is a significant grade change from Marsh Hill Road to the warehouse building at the 55 Marsh Hill Road property. The surface elevation of the Site ranges from approximately 100 feet above mean sea level (AMSL) on the western portion of the Site to 40 feet AMSL at the northeast corner of the Site. The regional surface topography has a gentle natural gradient to the south-southeast.
Surface Water and Drainage	No surface water bodies are present on the Site. One detention pond is located east of the building, which discharges to an drainage ditch along the west side of the Metro North rail line. The drainage ditch flows north and discharges to Oyster Brook approximately 100 feet northeast of the Site. The Long Island Sound is located approximately 5,200 feet southeast of the Site.
Wetlands	According to the US Fish and Wildlife Service Wetlands Mapper, no watercourses, water bodies, or inland wetland areas exist on the Site. Wetlands are identified along the banks of the Oyster River just to the north east of the Site on the map entitled *Connecticut Inland Wetland Soils, Orange, Connecticut* (DEEP, October 2009).
Floodplain	According to the *Federal Emergency Management Agency Flood Insurance Rate Map (FIRM),* and the *Q3 Flood Zone Data, Orange, CT* (DEEP, 2010) the Site is located within Zone X, which is defined as areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood. There is an area of 100-foot flood plain located just to the northeast of the Site near Oyster Brook. A Site Selection Study for a New Train Station indicated that wetlands and 50-year flood plains may be located in the eastern portion of the Site. A copy of the pertinent portion of the applicable FIRM is included in Appendix E.
Closest Surface Water Body	Oyster Brook is located approximately 100 feet northeast of the Site and is the closest downgradient waterbody based the direction of flow of the drainage ditch

TABLE ES-1 - Environmental Setting	
	along the Metro North rail line.
Surface Water Quality	The DEEP has designated Oyster Brook as a Class "A" surface water, indicating that the designated uses of the surface water are habitat for fish and other aquatic life and wildlife; potential drinking water supplies; recreation; navigation; and water supply for industry and agriculture (Water Quality Classifications, Orange, CT, August 2012).
Groundwater Classification	The DEEP has classified groundwater beneath the Site and surrounding areas as "GA". The GA classification indicates that designated uses are existing private and potential public or private supplies of water suitable for drinking without treatment and baseflow for hydraulically-connected surface water bodies (DEEP, 2012). Areas east of Oyster River, and west of Marsh Hill Road are designated "GB". According to the *Connecticut Aquifer Protection Areas,* (DEEP, January 19, 2012), there are no Aquifer Protection Areas located in the Town of Orange or in the vicinity of the Site.
Depth to Groundwater and Groundwater Flow	Based on local topography, the groundwater flow direction is inferred to be to east-southeast.
Surficial Geology	Unconsolidated surficial deposits below the Site are comprised of thick till (greater than 10-15 feet) on the western portion of the 0 Marsh Hill Road property, and thin till (less than 10-15 feet) along the east side of the Site. The well completion record from the water supply well indicated the surficial deposits consisted of "clay, sand, gravel", glacial meltwater deposits consisting of deposits of related series of major ice-dammed ponds. (DEEP, 2011).
Bedrock Geology	The bedrock beneath the Site is mapped as the Oronoque member of the Derby Hill Schist, which is described as a gray to silvery medium- to fine-grained schist and granofels (Rodgers, 1985). Bedrock is descibed in the well completion record for the water supply well on the Site as "granite".
Depth to Bedrock	Based on the well completion record for the water supply well on the Site, the depth to bedrock at that location is approximately 31 feet below ground.
Leachate and/or Wastewater Discharges	There are no leachate and/or wastewater discharges associated with the Site. The floor drains at the warehouse on the 55 Marsh Hill Road property discharged to the detention pond just south of 0 Marsh Hill Road from 1980 to 2011. Truck washing operations at the Valenti repair garage at 55 Marsh Hill Road also formerly discharged to a septic leaching field. No leachate or wastewater discharges were identified in the EDR Report.
Radon	According to the EPA Map of Radon Zones, the Site is located within Zone 1. New Haven County is considered Zone 1, which has a highest potential for average short-term indoor radon measurements of greater than 4 pico curies per liter of air.
Potential Ecological Receptors	The Site is not located within a designated Natural Diversity Database Boundary (Natural Diversity Data Base Areas, DEEP, June 2012).
Potential Human Receptors	Potential human receptors would include residential areas and sensitive lands, including schools and playgrounds situated hydraulically downgradient of the Site. Residential neighborhoods abut the Site to the west along Salemme Lane.

4. FILE REVIEWS AND COMPUTERIZED DATABASE FACT SHEET

The information presented in this File Review and Computerized Database Fact Sheet was obtained during a review of records at various federal, state and local agencies and supplemented using a computerized database search. The database search was conducted by Environmental Data Resources, Inc. (EDR) for the Site and surrounding area and transmitted in an EDR Radius Map™ Report with GeoCheck® provided on September 21, 2012. The pertinent information from the computerized database report and federal, state and local record review is summarized in fact sheet FR-1.

The EDR Radius Map™ Report with GeoCheck® provides a summary of pertinent electronic environmental records maintained by federal and state agencies. The available information provided in the database report includes, but is not limited to, the following: summaries of records maintained by the EPA and DEEP on the Resource Conservation and Recovery Act (RCRA) database (such as Corrective Action Sites [CORRACTS]), Hazardous Waste, RCRA Facility Assessments, Solid Waste Management Units, Toxic Substances Control Act inspections, as well as DEEP Permitting, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) listings (CERCLIS), Superfund listings, Air Quality Pollution Control, Superfund Amendments and Reauthorization Act Right-to-Know (Title 3) information, Emergency Response Notification System (ERNS), the Facility Index System (FINDS), Oil and Chemical Spills, Connecticut Leachate and Wastewater Discharge Sites, Property Transfer Filings and other relevant information regarding the Site or properties within the approximate minimum search distances prescribed in ASTM E 1527-05.

Only those properties located in close proximity to the Site or in an inferred upgradient direction of the Site were assessed to have the potential, given the site setting, to affect soil and/or groundwater quality at the Site. The complete copy of the EDR Radius Map™ Report with GeoCheck® is included as Appendix E. The evaluation as to which properties or release locations had the potential to affect soil and groundwater at the Site included such factors as the reported nature and volume of the release, the distance between the reported release location and the Site, and the direction of the reported release location from the Site. Although windblown dust could be a consideration, the primary transport mechanism to the Site was considered to be groundwater flow. Since the actual groundwater flow direction between noted properties in the vicinity of the Site and the Site itself has not been established through field measurements, it is not possible to definitively state that groundwater contamination at identified properties could not reach the Site. However, a presumed groundwater flow direction based on topographic

relationships and proximity of surface water bodies was used in the above-described evaluation process. No records were identified in the EDR Report for the 0 Marsh Hill Road property.

4.1 Federal Agency Reviews

On May 4, 2012, a representative of LEA queried all environmental records from the EPA through the online EPA database. A search of the Envirofacts database and the website "My Property" was performed; no information was on record for the site. This search is equivalent to a Freedom of Information Act (FOIA) request. This search of the databases did not locate any environmental records for the Site. The EDR Report searches the Facility Registry System (FRS), which includes all databases maintained by the EPA.

4.2 State Agency Reviews

To supplement information provided in the EDR report regarding the Site, an LEA representative conducted a review of the files and maps maintained by the DEEP on October 4, 2012. The file search included a review of records maintained in the DEEP pubic records room under the following categories: Remediation, Water Orders, Oil and Chemical Spills Reports and Correspondence, Air Permits and Enforcement, Industrial Water Correspondence Files, Stormwater Correspondence Files, Solid Waste, Water Industry Survey (P5), Hazardous Waste, Underground Storage Tanks, Tank Closure Reports, Sub-Surface, and Water Permit Applications. An LEA representative also searched for the Site in the DEEP Hazardous Waste Manifest Database, which includes manifest data generated between January 1, 1984 and December 31, 2007. No records were on file associated with the 0 Marsh Hill Road property. However, an inspection was performed by Mr. Christopher Gurkie of the DEEP Bureau of Materials Management and Compliance Assurance Water Permitting and Enforcement Division on June 9 and June 15, 2010 including an inspection of the floor drains at the 0 Marsh Hill Road property. A field notice of violation was issued on June 9, 2010 (FNOV 10 101) indicating that floor cleaning wastewater was being discharged to the storm drain system without a permit. An August 11, 2010 letter from Environmental Compliance Services, Inc. (ECS) indicated that connection to the sanitary sewer was verified with the Town of Orange for the 0 Marsh Hill Road building and that the floor drains did not discharge to the detention basin.

4.3 Town File Reviews

Available records maintained by the Town of Orange including the Tax Assessor's Office, Town Clerk, Building Department, Planning and Zoning Department, Public Works Department, Health Department, and Fire Marshal's Office were reviewed by an LEA representative on October 2, 2012. The purpose of the file review was to identify past or present uses of the Site,

site development history, former site characteristics that may not have been evident at the Site at the time the site reconnaissance was conducted, potential contaminant migration pathways, potential receptors and other information pertinent to the identification of potential AOCs at the Site. Copies of the documents obtained during the city record file review are included in Appendix D.

The current property cards for the Site were copied from the Town of Orange tax assessor's office. A Site Selection Study for a New Train Station was on file with the Planning and Zoning Department. The plan indicated a train station with associated parking, platforms and building were proposed for the northern portion of the Site, as well as the southeast portion of the abutting Yale property to the north. The Study reported the presence of a 50-year flood plain in a portion of the proposed building, and filling of wetlands that would be necessary for the project

A proposed sewer connection drawing was on file with the Building Department indicating that the can recycling center was to connect to an existing sanitary sewer line located to the north of the building near the property boundary. The sewer line is in the vicinity of the cleared area and debris noted in the 1990 and 1991 aerial photographs, indicating that the clearing activities may have been performed for the installation of the sanitary sewer line. An investigation for Sewage Disposal System was on file with the Health Department indicating that percolation tests for a proposed leaching field were performed in an area located east of the existing can recycling building (dated September 26, 1984). A drawing depicting a proposed septic system and leaching field located north of the can recycling center building was also on file with the Health Department (although the building connected to the sanitary sewer system and the septic system was not constructed). A building permit dated November 19, 1986 also stipulated that the can recycling center building would connect to the sanitary sewer.

TABLE FR-1 - Summary of Environmental Data Resources Report

Locations with the Most Likely Potential to Affect The Site	Site Identification	Location Relative to Site	Source of Record/ Record Type	Map ID	Report Page Number	Comments
	55 Marsh Hill Road	Abutting to South	Manifest (multiple)	A	7-11	Multiple manifests for disposal of waste paint related flammable liquids, one manifest for disposal of 2,600-gallons waste flammable liquid, NOS associated with the removal of gasoline and diesel USTs
	55 Marsh Hill Road	Abutting to South	LUST	A3, A4	11	One 2.5K-gallon gasoline and two 10K-gallon diesel USTs removed in 1997,

						unknown quantity of impacted soil removed.
	55 Marsh Hill Road	Abutting to South	UST	A3	16-18	Above referenced USTs included, plus 1K-gallon, 3K-gallon, and 5K-gallon gasoline USTs referenced (indicated as "waste" tanks in DEEP file registrations, the site contact indicated that the tanks correspond to two septic tanks, and an abandoned oil-water separator at the repair garage).
	55 Marsh Hill Road	Abutting to South	SPILLS	A	11, 18	Two spills reported associated with the removal of the two diesel USTs and gasoline UST referenced above, one associated with false report of tanks being disposed in woods.
	11 Frontage Road/95 Marsh Hill Road	Abutting to North	CT Transfer Property, Manifest, SPILLS, Former LQG, UST	D, E	Varies	Property formerly Aviation Components Support Company (helicopter repair), Northeast Enterprises, Bayer Corporation, Yale University West. Property transfer (Form III filed), primarily chlorinated VOCs, 1,730 tons of impacted soil removed, pump and treat remediation in 1990s. Remediation/assessment on-going. VOCs reportedly below CT Remediation Standard Regulations (RSR) criteria.

TABLE FR-2 - Summary of State and City Record Findings

Research Method	Record Location	Record Number	Record Type	Location of Site Associated with Record	Date of Record	Record Summary
	DEEP	1	Field NOV	55 Marsh Hill Road	6/9/2010	Field FNOV 10 101 indicated that 55 Marsh Hill Road disharged floor washing waste water to storm sewer, discharging to detention basin. Floor drains sealed and treatment system installed.

TABLE FR-2 - Summary of State and City Record Findings						
Research Method	Record Location	Record Number	Record Type	Location of Site Associated with Record	Date of Record	Record Summary
	Orange Building Department	2	Building Permit	On Site	11/19/1986	A building permit was granted for construction of can recycling center building, provided connection made to sanitary sewer.
LEA Research	Orange Building Department	3	Letter from Connecticut Department of Transportation (CTDOT)	On Site	1/9/1987	Letter indicates CTDOT approval of installation of detention pond and spillway, provided any changes required by CTDOT hydraulics engineer are performed.
	Orange Health Department	4	Well Permit and Approval	On Site	7/7/87, 7/30/87, 9/8/87	Well permit, analytical data, approval certificate for existing water supply well.
	Orange Building Department	5	Certfiicate of Occupancy	On Site	9/3/1987	CO for new can recycling center building.
	Orange Planning & Zoning Department	6	Site Selection Study for a New Train Station	On Site	May 2009	Study for proposed train station at the northern portion of 0 Marsh Hill Road, and southeast corner of abutting property to the north.
	Orange Building Department	7	Proposed Septic System	On Site	1984	Proposed septic system and leaching field on north side of proposed building, percolation testing report (site connected to sanitary sewer instead).

5. PRELIMINARY CONCEPTUAL SITE MODEL FACT SHEET

This Preliminary CSM Fact Sheet identifies those AOCs at the Site where releases to the environment are known to have occurred or where information gathered during the Phase I ESA indicate the potential for such a release to occur or to have occurred. The identified AOCs at the Site are presented in Table CSM-1, which also provides information on the constituents of concern for each known or potential release area, the mechanisms by which such releases could or have occurred, potential contaminant transport mechanisms and pathways and potentially affected media. The information used to develop Table CSM-1 was gathered throughout the course of the Phase I assessment and serves as a summary of information provided in other fact sheets.

The preliminary CSM for each AOC is provided in Table CSM-1. Locations of the AOCs are shown on the Site Plan presented as Figure 2. Documentation and supporting information used to develop Table CSM-1 are provided or referenced in the specific primary Fact Sheets in this Phase I report.

It should be noted that although CEC identified the existing water supply well as an AOC for the 0 Marsh Hill Road property, LEA does not believe that this would constitute an AOC as there is no release mechanism for contaminants to enter the environment, with the exception of well sanitation chemicals typical for water supply wells.

TABLE CSM-1 - Areas of Concern and Preliminary Conceptual Site Model								
AOC	Area Name	Description	Potential Release Mechanisms, Migration Pathways and Affected Media	Constituents of Concern				
				VOCs	SVOCs	ETPH	PCBs, Pest, Herb	Metals
AOC-1	Former Agricultural Use	The property was used for agricultural purposes since at least the early 20th century, until sometime between 1970 and 1980.	Pesticides and/or herbicides could have been used during farming operations on the Site, impacting shallow soils. Impacts to soil could then migrate downward to groundwater. Affected media would include the potentially impacted soil and the groundwater if the contamination reached the water table.				X (pesticides, herbicides)	X (lead, arsenic)
AOC-2	Detention Basin	A storm water detention basin is located east of the existing building.	Oils and or chemicals, primarily from vehicular traffic, could be released to the paved area around the building, enter the storm sewers, and discharge to the detention basin and impact shallow soil in the basin. Impacts to soil could then migrate downward to groundwater. Affected media would include the potentially impacted soil and the groundwater if the contamination reached the water table.	X	X	X	X	X

TABLE CSM-1 - Areas of Concern and Preliminary Conceptual Site Model								
AOC	Area Name	Description	Potential Release Mechanisms, Migration Pathways and Affected Media	Constituents of Concern				
				VOCs	SVOCs	ETPH	PCBs, Pest, Herb	Metals
AOC-3	Cleared Area, Areas of Debris	1990 and 1991 aerial photos indicate an area of clearing performed north of the building. Storage of materials is also evident in the 1991 aerial photo. Small debris piles, brick, asphalt, concrete, etc were identified by CEC in 2010, and LEA during the site visit in 2012.	The debris and solid waste could potentially impact the underlying soil, and then migrate downward to the groundwater table.	X	X	X	X	X

Notes:

VOCs – volatile organic compounds; SVOCs – semi-volatile organic compounds; ETPH – extractable total petroleum hydrocarbons; PCBs – polychlorinated biphenyls; Pest, Herb. – Pesticides / Herbicides

6. SUMMARY OF PHASE I ESA FINDINGS FACT SHEET

LEA conducted a Phase I ESA to document the environmental condition of the Site, to assess the potential for activities conducted at the Site and in the surrounding area to have affected the environmental condition of the Site, and to perform an "all appropriate inquiry" (AAI) into the previous ownership and use of the property, consistent with good commercial and customary practices as defined in Title 42 of the United States Code (USC), Section 9601(35)(B). The assessment was conducted in accordance with the guidance provided in the ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, ASTM E 1527-05 (ASTM, 2005), which incorporates the AAI Final Rule (40 CFR Part 312). The purpose of the ASTM Standard E 1527-05 document is to provide guidance on the activities to be conducted and the inquiries to be made that constitute good commercial and customary practice for conducting environmental site assessments.

6.1 Findings

Based on LEA's investigations into the documented history of the Site, as obtained from the records on file with the Town of Orange, Connecticut, the DEEP and the Connecticut State Library, along with an electronic environmental database search, a review of surficial and bedrock geology information obtained from available state and federal sources and observations performed during the site reconnaissance survey on October 2, 2012, the following is a summary of findings pertaining to the Site.

- The Site is a 13.3587 acre parcel owned by Dichello Distributors Inc. and is occupied by one single building with a physical address 0 Marsh Hill Road. The 34,800 square-foot building is primarily used as a can recycling center warehouse. The Site is bound to the south by 55 Marsh Hill Road (Dichello Distributors warehouse and Valenti Leasing Inc. Repair Garage). Residences are located to the west of the Site along Salemme Lane. Salemme Lane would likely be a means of access to the northern portion of 0 Marsh Hill Road. Bright Horizons at the Yale West Campus (previously owned by Bayer Corporation and Aviation Components Support Company) abuts the Site to the north, with Interstate 95 beyond. The eastern portion of the Bright Horizons property abutting the Site is undeveloped, wooded land. Metro North railroad tracks abut the Site to the east and southeast, with a commercial and light industrial area beyond along Connair Road.

- The aluminum can recycling building was constructed in 1987 on a concrete slab with precast concrete walls and steel truss roof structure. It is a single-story, steel truss warehouse. The building is heated with natural gas fired furnaces (ceiling-suspended).

- The site is provided with sanitary sewer from the Town of Orange. Water is provided to the building from a water supply well (installed 405 feet into granite bedrock), located approximately 75 feet northwest of the building. The natural gas meter is located on the northwest corner of the building. Electricity is provided by United Illuminating to the building via overhead lines to a pole located southeast of the repair garage and then underground electrical lines leading from the 55 Marsh Hill Road property.

- A detention pond was observed to the east of the building. Significant vegetative growth was observed in the basin, and no evidence of stressed vegetation or staining was observed. The detention pond discharges to a drainage channel running along the west side of the Metro North rail line. The drainage ditch discharges to Oyster River located approximately 100 feet northeast of the Site. Floor drains were observed in the building, which reportedly discharge to the sanitary sewer (this was verified in a phone conversation with Mr. Chris Gurkie of the DEEP, who performed an inspection of the Site in 2010).

- A field notice of violation was issued for the 55 Marsh Hill Road property on June 9, 2010 (FNOV 10 101) indicating that floor cleaning wastewater was being discharged to the storm drain system without a permit. An August 11, 2010 letter from Environmental Compliance Services, Inc. (ECS) indicated that connection to the sanitary sewer was verified with the Town of Orange for the 0 Marsh Hill Road building and that the floor drains did not discharge to the detention basin.

- Small piles of debris were noted in the undeveloped wooded land to the north of the building, including soil piles, scrap metal, bricks, asphalt, and concrete.

- Site is located within Zone X, which is defined as areas of 500-year flood plain. There is an area of 100-foot flood plain located just to the northeast of the Site near Oyster Brook. A Site Selection Study for a New Train Station indicated that wetlands and 50-year flood plains may be located in the eastern portion of the Site.

- The Site was previously used for agricultural purposes from at least the early 20th century to sometime between 1970 and 1980.

6.2 Areas of Concern

The Phase I ESA identified certain activities or conditions having the potential to affect soil and/or groundwater quality at the Site. Contaminants of concern for the Site generally include VOCs, SVOCs, petroleum hydrocarbons, pesticides/herbicides, PCBs and metals. Three AOCs were identified at the Site and included the following:

- AOC-1 – Former Agricultural Use
- AOC-2 – Detention Basin
- AOC-3 – Cleared Area, Areas of Debris

6.3 Connecticut Property Transfer Program

This ESA report has been prepared to document current and historical operations conducted at the Site and to assess the potential for these operations to affect the environmental condition of the Site and surrounding properties. Sections 22a-134 to 22a-134e of the Connecticut General Statutes (CGS), also known as the Property Transfer Act, as amended by Public Act 95-183 and Public Act 01-204, require an assessment of any discharge, spillage, uncontrolled loss, seepage, or filtration of hazardous waste at an "Establishment" prior to the transfer of the facility. Section 22a-134(3) defines an establishment as follows:

Any real property at which or any business operation from which (A) on or after November 19, 1980, there was generated, except as the result of remediation of polluted soil, groundwater or sediment, more than one hundred kilograms of hazardous waste in any one month, (B) hazardous waste generated at a different location was recycled, reclaimed, reused, stored, handled, treated, transported or disposed of, (C) the process of dry cleaning was conducted on or after May 1, 1967, (D) furniture stripping was conducted on or after May 1, 1967, or (E) a vehicle body repair facility was located on or after May 1, 1967.

No information was found during the completion of this Phase I ESA specifically indicating that hazardous waste was generated at the Site, or that other activity which would result in the classification of the property as an Establishment ever occurred at the Site.

6.4 Statement of the Environmental Professional

As required by 40 CFR 312.21(d), the Phase I ESA report shall include the following statements of the environmental professional(s) responsible for conducting the Phase I Environmental Site Assessment and preparation of the report.

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of this part (40 CFR 312).

I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and

performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

10/22/12

Signature of Environmental Professional Date

0 Marsh Hill Rd
0 Marsh Hill Rd
Orange, CT 06477

Inquiry Number: 4748865.2s
October 10, 2016

The EDR Radius Map™ Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

0 MARSH HILL RD
ORANGE, CT 06477

COORDINATES

Latitude (North):	41.2509750 - 41° 15' 3.51''
Longitude (West):	72.9957410 - 72° 59' 44.66''
Universal Tranverse Mercator:	Zone 18
UTM X (Meters):	667929.3
UTM Y (Meters):	4568343.0
Elevation:	77 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5642445 NEW HAVEN, CT
Version Date:	2012
Southeast Map:	5642467 WOODMONT, CT
Version Date:	2012
Southwest Map:	5642099 MILFORD, CT
Version Date:	2012
Northwest Map:	5642091 ANSONIA, CT
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140718, 20140717
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
0 MARSH HILL RD
ORANGE, CT 06477

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	AVIATION COMPONENT S	95 MARSH HILL ROAD	CT PROPERTY, CT CPCS	Lower	278, 0.053, NNE
A2	AVIATION COMPONENTS/	95 MARSH HILL RD/11	CT CPCS	Lower	278, 0.053, NNE
B3	DICHELLO DISTRIBUTOR	55 MARSH HILL RD	CT LUST, CT UST, CT CPCS, CT MANIFEST	Higher	438, 0.083, SW
B4	DICHELLO DISTRIBUTOR	55 MARSH HILL RD	CT SPILLS, CT ENF	Higher	438, 0.083, SW
B5		55 MARSH HILL ROAD	CT SPILLS	Higher	438, 0.083, SW
B6	DICHELLO BEER DISTIB	55 MARSH HILL ROAD	CT CPCS	Higher	438, 0.083, SW
B7	VALENTI LEASING AUTO	55 MARSH HILL RD	CT MANIFEST	Higher	438, 0.083, SW
B8		58 ROBINSON BLVD CUL	CT SPILLS	Higher	455, 0.086, SSW
C9	DICHELLO BEER DISTIB	55 MARSH HILL ROAD	CT RGA LUST	Higher	466, 0.088, SW
C10	DICHELLO DISTRIBUTOR	55 MARSH HILL RD	CT RGA LUST	Higher	466, 0.088, SW
D11	SOUTHERN CT GAS CO	60 MARSHHILL RD	CT MANIFEST	Higher	545, 0.103, WSW
D12		60 MARSH HILL ROAD	CT SPILLS	Higher	545, 0.103, WSW
D13	SOUTHERN CONNECTICUT	60 MARSH HILL RD	CT UST	Higher	545, 0.103, WSW
D14	SOUTHERN CT GAS CO	60 MARSH HILL RD	CT MANIFEST	Higher	545, 0.103, WSW
D15		60 MARSH HILL RD.	CT SPILLS	Higher	545, 0.103, WSW
D16	SOUTHERN CT GAS	60 MARSH HILL RD	NY MANIFEST	Higher	545, 0.103, WSW
D17	SOUTHERN CONNECTICUT	60 MARSH HILL ROAD	CT LUST, CT PROPERTY, CT SPILLS, CT ENF, CT...	Higher	545, 0.103, WSW
D18		60 MARSH HILL RD	CT SPILLS	Higher	545, 0.103, WSW
E19		125 FRONTAGE RD BEHI	CT SPILLS	Higher	643, 0.122, NNW
F20	ASEA BROWN BOVERI	88 MARSH HILL RD	CT MANIFEST	Higher	652, 0.123, West
F21	FORMER ABB INDUSTRIA	88 MARSH HILL RD	CT PROPERTY, CT LWDS, CT MANIFEST, CT NPDES	Higher	652, 0.123, West
F22	A B B DRIVE	88 MARCH HILL RD	CT MANIFEST	Higher	652, 0.123, West
F23	ASEA BROWN BOVERI	88 MARSH HILL RD	RCRA NonGen / NLR, NJ MANIFEST	Higher	652, 0.123, West
F24	SIGMA INSTRUMENT INT	88 MARSH HILL RD	RCRA NonGen / NLR, FINDS, ECHO	Higher	652, 0.123, West
F25	ABB INDUSTRIAL SYSTE	88 MARSH HILL ROAD	CT RGA HWS	Higher	652, 0.123, West
F26	ABB INDUSTRIAL SYSTE	88 MARSH HILL ROAD	SEMS-ARCHIVE, CT SHWS, CT SDADB, CT CPCS	Higher	652, 0.123, West
G27	NORTHEAST ENTERPRISE	11 FRONTAGE ROAD	CT SDADB	Higher	759, 0.144, WNW
G28	YALE UNIVERSTY WEST	11 FRONTAGE RD	CT UST	Higher	759, 0.144, WNW
E29	GENERAL ACCIDENT	137 FRONTAGE RD	CT UST	Higher	865, 0.164, NNW
30	ROEBIC LABORATORIES,	25 CONNAIR RD	CT UST, CT PROPERTY	Lower	991, 0.188, South
H31	REXAM INDUSTRIES COR	37 ROBINSON BOULEVAR	CT SDADB	Lower	994, 0.188, SSE
H32	LIGHT SOURCES LCD LI	37 ROBINSON BLVD	RCRA-LQG, ICIS, FINDS, NJ MANIFEST, NY MANIFEST,...	Lower	994, 0.188, SSE
33	GHP MEDIA INC	475 HEFFERNAN DR	RCRA-SQG	Lower	1034, 0.196, NE
34	UNITED ILLUMINATING	100 MARSH HILL RD	RCRA-LQG, FINDS, ECHO	Higher	1114, 0.211, NW
35		5 CONNAIR RD	EDR Hist Auto	Higher	1174, 0.222, SSW
I36	CITY OF WEST HAVEN -	171 BEATRICE LANE	CT LUST, CT SPILLS	Lower	1231, 0.233, SE
I37	CITY OF WEST HAVEN -	171 BEATRICE LANE	CT RGA LUST	Lower	1231, 0.233, SE
I38	CITY OF WEST HAVEN -	171 BEATRICE LANE	CT SPILLS, CT CPCS	Lower	1231, 0.233, SE
J39	AZURE WATER SERVICES	280 CALLEGARI DR	RCRA-SQG	Lower	1235, 0.234, ENE

MAPPED SITES SUMMARY

Target Property Address:
0 MARSH HILL RD
ORANGE, CT 06477

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
J40	AZURE WATER SERVICES	280 CALLEGARI DR	CT VCP, CT NPDES	Lower	1235, 0.234, ENE
41	LIGHT SOURCES, INC.	70 CASCADE BOULEVARD	CT SDADB	Lower	1628, 0.308, SW

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State and tribal landfill and/or solid waste disposal site lists

CT SWF/LF ---------- List of Landfills/Transfer Stations

State and tribal leaking storage tank lists

INDIAN LUST ---- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST ---- Underground Storage Tank Listing
CT AST ---- Marine Terminals and Tank Information
INDIAN UST ---- Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

CT ENG CONTROLS ---- Engineering Controls Listing
CT AUL ---- ELUR Sites

State and tribal voluntary cleanup sites

INDIAN VCP ---- Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

CT BROWNFIELDS ---- Brownfields Inventory

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

CT SWRCY ---- Recycling Facilities
INDIAN ODI ---- Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ---- Torres Martinez Reservation Illegal Dump Site Locations
ODI ---- Open Dump Inventory

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---- Delisted National Clandestine Laboratory Register
CT CDL ---- Clandestine Drug Lab Listing
US CDL ---- National Clandestine Laboratory Register

Local Land Records

CT LIENS ---- Environmental Liens Listing
LIENS 2 ---- CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ---- Hazardous Materials Information Reporting System

Other Ascertainable Records

FUDS ---- Formerly Used Defense Sites

DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
UXO	Unexploded Ordnance Sites
DOCKET HWC	Hazardous Waste Compliance Docket Listing
CT AIRS	Permitted Air Sources Listing
CT DRYCLEANERS	Drycleaner Facilities
CT Financial Assurance	Financial Assurance Information Listing
CT LEAD	Lead Inspection Database
CT SEH	List of Significant Environmental Hazards Report to DEEP
FUELS PROGRAM	EPA Fuels Program Registered Listing

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants
EDR Hist Cleaner	EDR Exclusive Historic Dry Cleaners

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

A review of the SEMS-ARCHIVE list, as provided by EDR, and dated 03/07/2016 has revealed that there is 1 SEMS-ARCHIVE site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ABB INDUSTRIAL SYSTE	*88 MARSH HILL ROAD*	*W 0 - 1/8 (0.123 mi.)*	*F26*	*85*

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 06/21/2016 has revealed that there are 2 RCRA-LQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
UNITED ILLUMINATING	*100 MARSH HILL RD*	*NW 1/8 - 1/4 (0.211 mi.)*	*34*	*152*
Lower Elevation	**Address**	**Direction / Distance**	**Map ID**	**Page**
LIGHT SOURCES LCD LI	*37 ROBINSON BLVD*	*SSE 1/8 - 1/4 (0.188 mi.)*	*H32*	*97*

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 06/21/2016 has revealed that there are 2 RCRA-SQG sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
GHP MEDIA INC	475 HEFFERNAN DR	NE 1/8 - 1/4 (0.196 mi.)	33	142
AZURE WATER SERVICES	280 CALLEGARI DR	ENE 1/8 - 1/4 (0.234 mi.)	J39	162

State- and tribal - equivalent CERCLIS

CT SHWS: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Environmental Protection's Inventory of Hazardous Disposal Sites.

A review of the CT SHWS list, as provided by EDR, and dated 04/23/2010 has revealed that there is 1 CT SHWS site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ABB INDUSTRIAL SYSTE	***88 MARSH HILL ROAD***	***W 0 - 1/8 (0.123 mi.)***	***F26***	***85***
State ID: 952				
EPA ID: CTD983876293				

CT SDADB: Site Discovery and Assessment Database.

A review of the CT SDADB list, as provided by EDR, and dated 04/23/2010 has revealed that there are 4 CT SDADB sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ABB INDUSTRIAL SYSTE	***88 MARSH HILL ROAD***	***W 0 - 1/8 (0.123 mi.)***	***F26***	***85***
Facility Id: 952				
NORTHEAST ENTERPRISE	11 FRONTAGE ROAD	WNW 1/8 - 1/4 (0.144 mi.)	G27	89
Facility Id: 1637				

Lower Elevation	Address	Direction / Distance	Map ID	Page
REXAM INDUSTRIES COR	37 ROBINSON BOULEVAR	SSE 1/8 - 1/4 (0.188 mi.)	H31	96
Facility Id: 4850				
LIGHT SOURCES, INC.	70 CASCADE BOULEVARD	SW 1/4 - 1/2 (0.308 mi.)	41	167
Facility Id: 3130				

State and tribal leaking storage tank lists

CT LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Environmental Protection's Leaking Underground Storage Tank List.

A review of the CT LUST list, as provided by EDR, and dated 08/04/2016 has revealed that there are 3

CT LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
DICHELLO DISTRIBUTOR	***55 MARSH HILL RD***	***SW 0 - 1/8 (0.083 mi.)***	***B3***	***12***
Lust Status: 4 LUST Id: 33096 LUST Id: 32887				
SOUTHERN CONNECTICUT	***60 MARSH HILL ROAD***	***WSW 0 - 1/8 (0.103 mi.)***	***D17***	***49***
Lust Status: 3 LUST Id: 60495				

Lower Elevation	Address	Direction / Distance	Map ID	Page
CITY OF WEST HAVEN -	***171 BEATRICE LANE***	***SE 1/8 - 1/4 (0.233 mi.)***	***I36***	***157***
Lust Status: 3 LUST Id: 36666				

State and tribal registered storage tank lists

CT UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Protection's "Town Inventory" UST Listing.

A review of the CT UST list, as provided by EDR, and dated 08/23/2016 has revealed that there are 5 CT UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
DICHELLO DISTRIBUTOR	***55 MARSH HILL RD***	***SW 0 - 1/8 (0.083 mi.)***	***B3***	***12***
Facility Id: 107-5812 Tank Status: Permanently Closed				
SOUTHERN CONNECTICUT	60 MARSH HILL RD	WSW 0 - 1/8 (0.103 mi.)	D13	39
Facility Id: 107-11037 Tank Status: Permanently Closed				
YALE UNIVERSTY WEST	11 FRONTAGE RD	WNW 1/8 - 1/4 (0.144 mi.)	G28	90
Facility Id: 107-5811 Tank Status: Permanently Closed				
GENERAL ACCIDENT	137 FRONTAGE RD	NNW 1/8 - 1/4 (0.164 mi.)	E29	92
Facility Id: 107-5830 Tank Status: Permanently Closed				

Lower Elevation	Address	Direction / Distance	Map ID	Page
ROEBIC LABORATORIES,	***25 CONNAIR RD***	***S 1/8 - 1/4 (0.188 mi.)***	***30***	***93***
Facility Id: 107-11393 Tank Status: Permanently Closed				

State and tribal voluntary cleanup sites

CT VCP: Sites involved in the Voluntary Remediation Program.

A review of the CT VCP list, as provided by EDR, and dated 08/04/2016 has revealed that there is 1 CT VCP site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
AZURE WATER SERVICES	***280 CALLEGARI DR***	***ENE 1/8 - 1/4 (0.234 mi.)***	***J40***	***164***
Status: Pending. Post 10/1/95 filing				

ADDITIONAL ENVIRONMENTAL RECORDS

Records of Emergency Release Reports

The Oil & Chemical Spill Database from the Department of Environmental Protection

A review of the CT SPILLS list, as provided by EDR, and dated 08/16/2016 has revealed that there are 8 CT SPILLS sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
DICHELLO DISTRIBUTOR	***55 MARSH HILL RD***	***SW 0 - 1/8 (0.083 mi.)***	***B4***	***23***
Facility Status: CLOSED Facility Status: closed Case Number: 200905524 Case Number: 9701831				
Not reported	55 MARSH HILL ROAD	SW 0 - 1/8 (0.083 mi.)	B5	26
Facility Status: Closed Case Number: 9702998				
Not reported	58 ROBINSON BLVD CUL	SSW 0 - 1/8 (0.086 mi.)	B8	28
Case Number: 3528				
Not reported	60 MARSH HILL ROAD	WSW 0 - 1/8 (0.103 mi.)	D12	38
Facility Status: CLOSED Case Number: 201500380				
Not reported	60 MARSH HILL RD.	WSW 0 - 1/8 (0.103 mi.)	D15	47
Facility Status: CLOSED Case Number: 200607432				
SOUTHERN CONNECTICUT	***60 MARSH HILL ROAD***	***WSW 0 - 1/8 (0.103 mi.)***	***D17***	***49***
Facility Status: closed Facility Status: CLOSED Case Number: 200109891 Case Number: 201202911 Case Number: 201304737 Case Number: 201306783 Case Number: 201502144				
Not reported	60 MARSH HILL RD	WSW 0 - 1/8 (0.103 mi.)	D18	63
Facility Status: CLOSED Case Number: 201500431				
Not reported	125 FRONTAGE RD BEHI	NNW 0 - 1/8 (0.122 mi.)	E19	64

Facility Status: Closed
Case Number: 9902372

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 06/21/2016 has revealed that there are 2 RCRA NonGen / NLR sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ASEA BROWN BOVERI	***88 MARSH HILL RD***	***W 0 - 1/8 (0.123 mi.)***	***F23***	***75***
SIGMA INSTRUMENT INT	***88 MARSH HILL RD***	***W 0 - 1/8 (0.123 mi.)***	***F24***	***84***

CT CPCS: A list of Contaminated or Potentially Contaminated Sites within Connecticut. This list represents the "Hazardous Waste Facilities," as defined in Section 22a-134f of the Connecticut General Statutes (CGS). The list contains the following types of sites: Sites listed on the Inventory of Hazardous Waste Disposal Sites; Sites subject to the Property Transfer Act; Sites at which underground storage tanks are known to have leaked; Sites at which hazardous waste subject to the RCRA; Sites that are included in EPA's (CERCLIS); Sites that are the subject of an order issued by the Commissioner of DEP that requires investigation and remediation of a potential or known source of pollution; and Sites that have entered into one of the Department's Voluntary Remediation Programs.

A review of the CT CPCS list, as provided by EDR, and dated 07/27/2016 has revealed that there are 6 CT CPCS sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
DICHELLO DISTRIBUTOR	***55 MARSH HILL RD***	***SW 0 - 1/8 (0.083 mi.)***	***B3***	***12***
Lust Status: LUST Completed (DEP's significant hazard definition)				
DICHELLO BEER DISTIB	55 MARSH HILL ROAD	SW 0 - 1/8 (0.083 mi.)	B6	27
Lust Status: LUST Completed (DEP's significant hazard definition)				
ABB INDUSTRIAL SYSTE	***88 MARSH HILL ROAD***	***W 0 - 1/8 (0.123 mi.)***	***F26***	***85***

Lower Elevation	Address	Direction / Distance	Map ID	Page
AVIATION COMPONENT S	***95 MARSH HILL ROAD***	***NNE 0 - 1/8 (0.053 mi.)***	***A1***	***8***
AVIATION COMPONENTS/	95 MARSH HILL RD/11	NNE 0 - 1/8 (0.053 mi.)	A2	12
CITY OF WEST HAVEN -	***171 BEATRICE LANE***	***SE 1/8 - 1/4 (0.233 mi.)***	***I38***	***161***
Lust Status: Cleanup Initiated				

EXECUTIVE SUMMARY

CT LWDS: The Leachate and Waste Water Discharge Inventory Data Layer (LWDS) includes point locations digitized from Leachate and Wastewater Discharge Source maps compiled by the Connecticut DEP.

A review of the CT LWDS list, as provided by EDR, and dated 07/17/2009 has revealed that there is 1 CT LWDS site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FORMER ABB INDUSTRIA	***88 MARSH HILL RD***	***W 0 - 1/8 (0.123 mi.)***	***F21***	***70***
Leachate and Wastewater Number: 5000071				

CT MANIFEST: Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

A review of the CT MANIFEST list, as provided by EDR, and dated 07/30/2013 has revealed that there are 8 CT MANIFEST sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
DICHELLO DISTRIBUTOR	***55 MARSH HILL RD***	***SW 0 - 1/8 (0.083 mi.)***	***B3***	***12***
EPA Id: CTP000008901				
EPA Id: CTP000011043				
VALENTI LEASING AUTO	55 MARSH HILL RD	SW 0 - 1/8 (0.083 mi.)	B7	27
EPA Id: CTC000008901				
SOUTHERN CT GAS CO	60 MARSHHILL RD	WSW 0 - 1/8 (0.103 mi.)	D11	31
EPA Id: CTP000020776				
SOUTHERN CT GAS CO	60 MARSH HILL RD	WSW 0 - 1/8 (0.103 mi.)	D14	41
EPA Id: CTP000019506				
EPA Id: CTP000020776				
EPA Id: CTP000022438				
SOUTHERN CONNECTICUT	***60 MARSH HILL ROAD***	***WSW 0 - 1/8 (0.103 mi.)***	***D17***	***49***
EPA Id: CTP000022438				
ASEA BROWN BOVERI	88 MARSH HILL RD	W 0 - 1/8 (0.123 mi.)	F20	65
EPA Id: CTD036183556				
FORMER ABB INDUSTRIA	***88 MARSH HILL RD***	***W 0 - 1/8 (0.123 mi.)***	***F21***	***70***
EPA Id: CTD990851917				
A B B DRIVE	88 MARCH HILL RD	W 0 - 1/8 (0.123 mi.)	F22	74
EPA Id: CTP000013686				

NJ MANIFEST: Hazardous waste manifest information.

A review of the NJ MANIFEST list, as provided by EDR, and dated 12/31/2013 has revealed that there is 1 NJ MANIFEST site within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ASEA BROWN BOVERI	***88 MARSH HILL RD***	***W 0 - 1/8 (0.123 mi.)***	***F23***	***75***
EPA Id: CTD036183556				

NY MANIFEST: Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

A review of the NY MANIFEST list, as provided by EDR, and dated 08/01/2016 has revealed that there is 1 NY MANIFEST site within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SOUTHERN CT GAS EPA ID: CTP000019506	60 MARSH HILL RD	WSW 0 - 1/8 (0.103 mi.)	D16	48

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there is 1 EDR Hist Auto site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported	5 CONNAIR RD	SSW 1/8 - 1/4 (0.222 mi.)	35	156

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

CT RGA HWS: The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Energy & Environmental Protection formerly know as the DEP which changes in July 2011 in Connecticut.

A review of the CT RGA HWS list, as provided by EDR, has revealed that there is 1 CT RGA HWS site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ABB INDUSTRIAL SYSTE	88 MARSH HILL ROAD	W 0 - 1/8 (0.123 mi.)	F25	85

EXECUTIVE SUMMARY

CT RGA LUST: The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Energy & Environmental Protection formerly know as the DEP which changes in July 2011 in Connecticut.

A review of the CT RGA LUST list, as provided by EDR, has revealed that there are 3 CT RGA LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
DICHELLO BEER DISTIB	55 MARSH HILL ROAD	SW 0 - 1/8 (0.088 mi.)	C9	30
DICHELLO DISTRIBUTOR	55 MARSH HILL RD	SW 0 - 1/8 (0.088 mi.)	C10	31

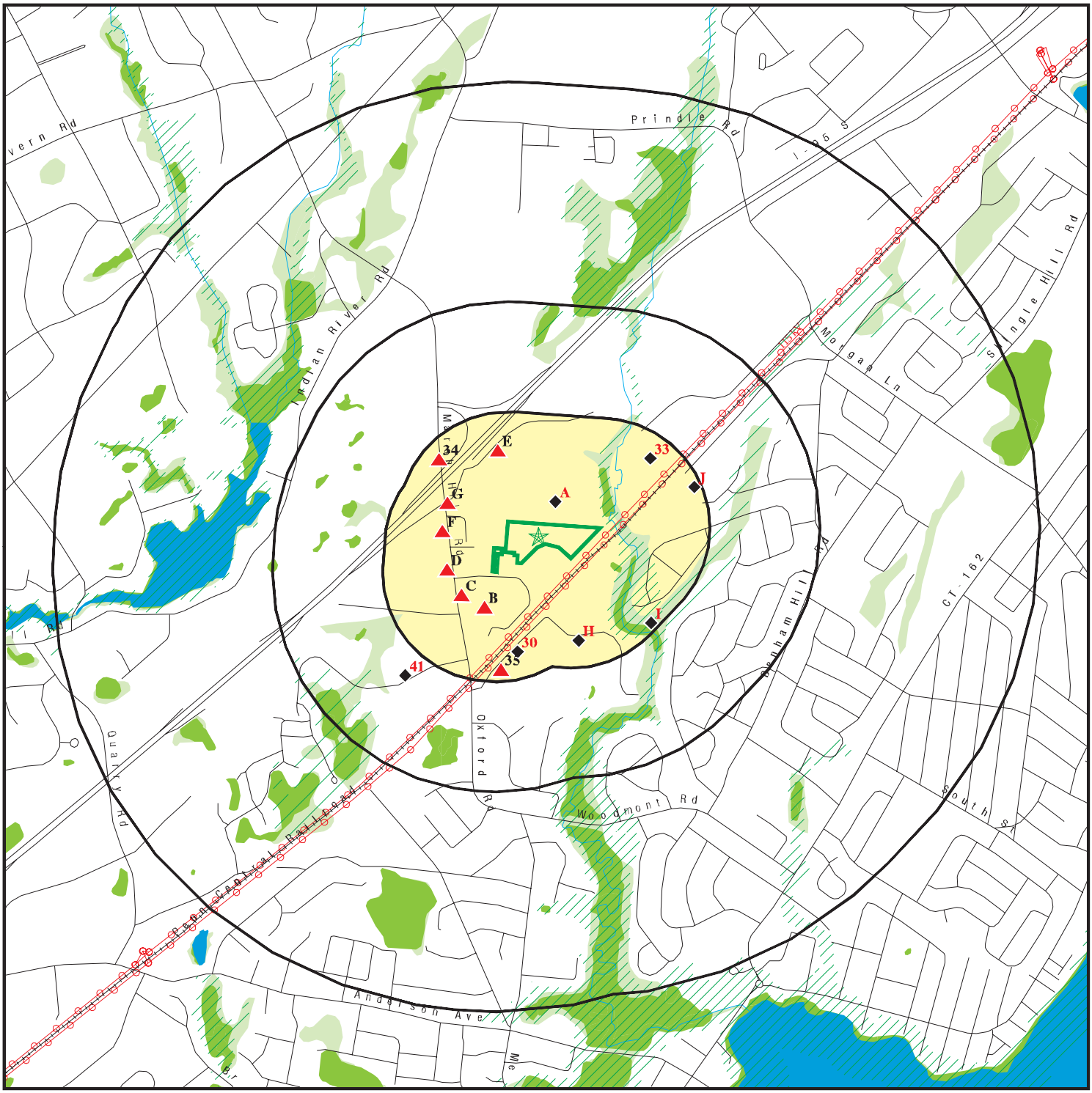
Lower Elevation	Address	Direction / Distance	Map ID	Page
CITY OF WEST HAVEN -	171 BEATRICE LANE	SE 1/8 - 1/4 (0.233 mi.)	I37	160

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 5 records.

Site Name	Database(s)
EXXONMOBIL (01-927, 13987)	CT LUST
MOBIL SERVICE STATION 01-M8E (#139	CT LUST
WESTFIELD INC.	CT SDADB, CT PROPERTY
STEINBERG REALTY	CT SDADB, CT PROPERTY
UNNAMED STREAM	CT SDADB

OVERVIEW MAP - 4748865.2S



0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 0 Marsh Hill Rd	CLIENT: Fuss & ONeill Consulting Eng.
ADDRESS: 0 Marsh Hill Rd Orange CT 06477	CONTACT: Stefanie Wierszchalek
LAT/LONG: 41.250975 / 72.995741	INQUIRY #: 4748865.2s DATE: October 10, 2016 10:03 am

DETAIL MAP - 4748865.2S

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	0 Marsh Hill Rd	CLIENT:	Fuss & ONeill Consulting Eng.
ADDRESS:	0 Marsh Hill Rd Orange CT 06477	CONTACT:	Stefanie Wierszchalek
		INQUIRY #:	4748865.2s
LAT/LONG:	41.250975 / 72.995741	DATE:	October 10, 2016 10:04 am

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		1	0	0	NR	NR	1
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	2	NR	NR	NR	2
RCRA-SQG	0.250		0	2	NR	NR	NR	2
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
CT SHWS	1.000		1	0	0	0	NR	1
CT SDADB	0.500		1	2	1	NR	NR	4
State and tribal landfill and/or solid waste disposal site lists								
CT SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
CT LUST	0.500		2	1	0	NR	NR	3
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CT UST	0.250		2	3	NR	NR	NR	5
CT AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
CT ENG CONTROLS	0.500		0	0	0	NR	NR	0
CT AUL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
CT VCP	0.500		0	1	0	NR	NR	1
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
CT BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
CT SWRCY	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
CT CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
CT PROPERTY	TP		NR	NR	NR	NR	NR	0
CT LIENS	TP		NR	NR	NR	NR	NR	0
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
CT SPILLS	0.125		8	NR	NR	NR	NR	8
Other Ascertainable Records								
RCRA NonGen / NLR	0.125		2	NR	NR	NR	NR	2
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
CT AIRS	TP		NR	NR	NR	NR	NR	0
CT CPCS	0.500		5	1	0	NR	NR	6
CT DRYCLEANERS	0.250		0	0	NR	NR	NR	0
CT ENF	TP		NR	NR	NR	NR	NR	0
CT Financial Assurance	TP		NR	NR	NR	NR	NR	0
CT LEAD	TP		NR	NR	NR	NR	NR	0
CT LWDS	0.250		1	0	NR	NR	NR	1
CT MANIFEST	0.125		8	NR	NR	NR	NR	8
NJ MANIFEST	0.125		1	NR	NR	NR	NR	1
NY MANIFEST	0.125		1	NR	NR	NR	NR	1
CT NPDES	TP		NR	NR	NR	NR	NR	0
CT SEH	0.500		0	0	0	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.250		0	1	NR	NR	NR	1
EDR Hist Cleaner	0.250		0	0	NR	NR	NR	0

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

CT RGA HWS	1.000		1	0	0	0	NR	1

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CT RGA LUST	0.500		2	1	0	NR	NR	3
- Totals --		0	36	14	1	0	0	51

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 **AVIATION COMPONENT SUPPORT COMPANY, LLC** **CT PROPERTY** **S104876812**
NNE **95 MARSH HILL ROAD** **CT CPCS** **N/A**
< 1/8 **ORANGE, CT 06477**
0.053 mi.
278 ft. **Site 1 of 2 in cluster A**

Relative:
Lower

Actual:
69 ft.

CT Property:

Seller Name:	95 Marsh Hill Road Associates, LLC
Buyer Name:	Bayer Corporation
Certifying Party:	Bayer Corporation
Certifying Attention Person:	Rudy A. Zimmermann
Title Of Certifying Person:	Director of Engineering
Certifying Person Address:	Bayer Corporation, 400 Morgan Lane
Certifying Person City,St,Zip:	West Haven, CT 06516
Property Transfer Forms:	Form III (DEP-PERD-PTP-203) when a discharge, spillage, uncontrolled loss, seepage or filtration of hazardous waste has occurred at the parcel that has not been fully remediated or the environmental conditions at the parcel are unknown. The person signing the Form III certification agrees to investigate and remediate the site in accordance with the remediation standards. The statute does not require completion of remediation before the parcel is transferred. Any person submitting a Form III shall simultaneously submit a completed Environmental Condition Assessment Form (ECAF)(DEP-PERD-PTP-200).
Date Recieved:	11/02/2000
Ackn Date:	11/15/2000
Determination Date:	12/14/2000
LEP Verified/DEP Approval Date:	Not reported
Rem Id:	1089
Remediation Location Id:	1380
Date Entered:	Not reported
Program:	Property Transfer Program
GAO Site:	False
Staff Full Name:	Ryan Santos
Super/Date:	Not reported
Stage Of Project:	Not reported
RP Level Of Activity:	Not reported
RP Needed Level Of Activity:	Not reported
Staff Level Of Activity:	Not reported
Staff Needed Level Of Activity:	Not reported
Public Intrest:	Not reported
PRP Cooperation:	Not reported
Enforcement Status:	Not reported
Level Of Complexity:	Not reported
Complex Eng Or Sci:	False
Complex Due To Public Involvement:	False
Politically Complex:	False
Complex Enforcement:	False
Coordination With Other Bureaus:	False
EPA Involvement:	False
Staff Prefrence:	Not reported
Readiness For Transfer:	Not reported
Project Transfer Time:	Not reported
Transfer Comments:	Not reported
Staff As Of July 2000:	Not reported
Initial Staff:	Not reported
Type Of Transfer:	Not reported
Salutation:	Mr. Zimmerman
Relationship To Transfer:	transferee

AVIATION COMPONENT SUPPORT COMPANY, LLC (Continued) **S104876812**

Audit Date:	Not reported
Verif Type:	Not reported
Audit Outcome:	Not reported
GW:	GA
Basin:	Not reported
1st Payment:	2000
Pay Tag1:	Not reported
2nd Payment:	Not reported
Pay Tag2:	Not reported
RTN:	Not reported
Revised:	Not reported
ECAF Received:	Not reported
Old Determination Date:	Not reported
Redeterminationdate:	Not reported
Previous Determination:	Not reported
Monitoringoption:	Not reported
Postremedialmonitoring:	Not reported
Schedule Of I/R:	01/10/2001
Schedule Overdue:	Not reported
Aprvl Sched:	Not reported
Yr 1 Report:	2001-12-19 00:00:00
Yr 2 Report:	2003-05-08 00:00:00
Report Overdue:	Not reported
Ext Aprvl Sched:	Not reported
License #:	Not reported
Project Phase:	Not reported
PT Comments:	Not reported
EPA Id Number:	Not reported
GW Class:	Not reported
SW Class:	Not reported
AO/C0:	Not reported
Water Lead(Y Or N):	Not reported
Priority:	Not reported
Project Status(A, I Or D):	Not reported
Last Updated:	Not reported
SR Comments:	Not reported
Priority Or Work-Load:	Not reported
Status:	Not reported
Notes:	Not reported
Special Project Name:	Not reported
Special Project Comments:	Not reported
DOT Project:	Not reported
Pt Counter:	0
Project Complete:	False
Project Inactive:	False
Int Deposit #:	Not reported
Deposit #:	Not reported
Spill Case #:	Not reported
Diversion Id:	Not reported
Public Notice:	Not reported
RAP Received:	Not reported
RAP Approved:	Not reported
Compliance Category:	B
Delete Record:	False
ECAF Reviewed By:	Not reported
Not Locatable:	False
Primary Address:	False

AVIATION COMPONENT SUPPORT COMPANY, LLC (Continued) **S104876812**

AKA Site Name:	True
Primary Site Name:	False
AKA Site Address:	True
Lead:	LEP
Seller Name:	National Loan Investors, L.P.
Buyer Name:	95 Marsh Hill Road Assoc., LLC
Certifying Party:	Itzhak Levi/member
Certifying Attention Person:	Not reported
Title Of Certifying Person:	Not reported
Certifying Person Address:	Not reported
Certifying Person City,St,Zip:	Not reported
Property Transfer Forms:	Form III (DEP-PERD-PTP-203) when a discharge, spillage, uncontrolled loss, seepage or filtration of hazardous waste has occurred at the parcel that has not been fully remediated or the environmental conditions at the parcel are unknown. The person signing the Form III certification agrees to investigate and remediate the site in accordance with the remediation standards. The statute does not require completion of remediation before the parcel is transferred. Any person submitting a Form III shall simultaneously submit a completed Environmental Condition Assessment Form (ECAF)(DEP-PERD-PTP-200).
Date Recieved:	01/05/1998
Ackn Date:	04/02/1998
Determination Date:	06/15/1998
LEP Verified/DEP Approval Date:	Not reported
Rem Id:	3681
Remediation Location Id:	1380
Date Entered:	Not reported
Program:	Property Transfer Program
GAO Site:	False
Staff Full Name:	Ryan Santos
Super/Date:	Not reported
Stage Of Project:	REMDIATION
RP Level Of Activity:	MEDIUM
RP Needed Level Of Activity:	MEDIUM
Staff Level Of Activity:	MEDIUM
Staff Needed Level Of Activity:	MEDIUM
Public Intrest:	LOW
PRP Cooperation:	MEDIUM
Enforcement Status:	NONE TAKEN
Level Of Complexity:	MEDIUM
Complex Eng Or Sci:	False
Complex Due To Public Involvement:	False
Politically Complex:	False
Complex Enforcement:	False
Coordination With Other Bureaus:	False
EPA Involvement:	False
Staff Prefrence:	WOULD KEEP IF REQUIRED
Readiness For Transfer:	READY TO TRANSFER NOW
Project Transfer Time:	Not reported
Transfer Comments:	Not reported
Staff As Of July 2000:	Hamel Maurice
Initial Staff:	MRH
Type Of Transfer:	Not reported
Salutation:	Not reported
Relationship To Transfer:	95 Marsh Hill Road Assoc.

AVIATION COMPONENT SUPPORT COMPANY, LLC (Continued) **S104876812**

Audit Date:	Not reported
Verif Type:	Not reported
Audit Outcome:	Not reported
GW:	GA
Basin:	Not reported
1st Payment:	2000
Pay Tag1:	Not reported
2nd Payment:	Not reported
Pay Tag2:	Not reported
RTN:	01/21/1998
Revised:	03/31/1998
ECAF Received:	03/06/98
Old Determination Date:	DEP-98/06/15
Redeterminationdate:	Not reported
Previous Determination:	Not reported
Monitoringoption:	Not reported
Postremedialmonitoring:	Not reported
Schedule Of I/R:	10/01/1998
Schedule Overdue:	Not reported
Aprvl Sched:	Not reported
Yr 1 Report:	Not reported
Yr 2 Report:	Not reported
Report Overdue:	Not reported
Ext Aprvl Sched:	Not reported
License #:	Not reported
Project Phase:	4
PT Comments:	Not reported
EPA Id Number:	Not reported
GW Class:	Not reported
SW Class:	Not reported
AO/C0:	Not reported
Water Lead(Y Or N):	Not reported
Priority:	Not reported
Project Status(A, I Or D):	Not reported
Last Updated:	Not reported
SR Comments:	Not reported
Priority Or Work-Load:	Not reported
Status:	Not reported
Notes:	Not reported
Special Project Name:	Not reported
Special Project Comments:	Not reported
DOT Project:	Not reported
Pt Counter:	Not reported
Project Complete:	False
Project Inactive:	False
Int Deposit #:	Not reported
Deposit #:	Not reported
Spill Case #:	Not reported
Diversion Id:	Not reported
Public Notice:	Not reported
RAP Received:	Not reported
RAP Approved:	Not reported
Compliance Category:	Not reported
Delete Record:	False
ECAF Reviewed By:	Not reported
Not Locatable:	False
Primary Address:	False

AVIATION COMPONENT SUPPORT COMPANY, LLC (Continued) **S104876812**

AKA Site Name: True
Primary Site Name: False
AKA Site Address: True
Lead: DEP

CPCS:
Site Type: Projects
Lust Status code: Not reported
Lust Status: Not reported
PTP Form: III
Program: Property Transfer Program
Comments: Projects
Site Type Definition: Property Transfer Form III

A2 **AVIATION COMPONENTS/CBL TRUCKING, INC.** **CT CPCS** **S110775038**
NNE **95 MARSH HILL RD/11 FRONTAGE R** **N/A**
< 1/8 **ORANGE, CT 06477**
0.053 mi.
278 ft. **Site 2 of 2 in cluster A**

Relative:
Lower

Actual:
69 ft.

CPCS:
Site Type: Projects
Lust Status code: Not reported
Lust Status: Not reported
PTP Form: III
Program: Property Transfer Program
Comments: Projects
Site Type Definition: Property Transfer Form III

B3 **DICHELLO DISTRIBUTORS, INC.** **CT LUST** **U002174589**
SW **55 MARSH HILL RD** **CT UST** **N/A**
< 1/8 **ORANGE, CT 06477** **CT CPCS**
0.083 mi. **CT MANIFEST**
438 ft. **Site 1 of 6 in cluster B**

Relative:
Higher

Actual:
91 ft.

LUST:
LUST Id: 4762
UST Facility Id: 5812
LUST Case Id: 32887
Lust Status: Lust Completed
Processing Status: Not reported
EPA Reportable: False
Motor Fuel: True
Diesel: True
Gasoline: False
Other: False
Other Release: Not reported
No Release: False
Leak: False
Tank: False
Piping: False
Overfill: False
Removal: False
Incident Date: 04/16/1997
Entry Date: Not reported
Site Case Id: 9701831

DICHELLO DISTRIBUTORS, INC. (Continued) **U002174589**

UST Site Id:	Not reported
Cost Recovery Spill Case #:	Not reported
Old SITS Number:	Not reported
Case Log Id:	Not reported
Monthly Report Id:	0
UST Owner Id:	1735
LUST Owner Id:	Not reported
UST Event Id:	4871
Contact Info:	Not reported
Contact EMail:	Not reported
Site Contact City,St,Zip:	UNKNOWN
2nd Contact:	Not reported
2nd Contact EMail:	Not reported
2nd Contact Address:	Not reported
2nd Contact City,St,Zip:	UNKNOWN
2nd Contact Address 2:	Not reported
2nd Contact City 2:	Not reported
2nd Contact Phone Number:	Not reported
2nd Contact Fax Number:	Not reported
2nd Contact Type:	Not reported
Facility City Num:	107
Site Contact:	Not reported
Site Contact Address:	Not reported
Site Contact Add 2:	Not reported
Site Contact City 2:	Not reported
Site Contact Phone:	Not reported
Site Contact Fax:	Not reported
Site Contact Type:	Not reported
Department Contact 1:	Not reported
Department Contact 2:	Not reported
Referral Source:	Not reported
Offsite Source:	False
Date Referred:	Not reported
Emergency:	False
Private Heating Fuel:	False
Commercial Heating Fuel:	False
Commercial HF < 2100 Gal.:	False
Commercial HF > 2100 Gal.:	False
Commercial HF - Size Unk:	False
No LUST Site:	False
Cost Recvry Prgm Candidate:	False
OCSRD Complete:	True
Follow Up Flag:	False
Alternate Water Supply:	False
Relocation:	False
Responsible Party:	False
Responsible EMail:	Not reported
Resp Party Name:	Not reported
Resp Party Address:	Not reported
Resp Party City,St,Zip:	Not reported
Resp Party Town Number:	UNKNOWN
Resp Party Phone:	Not reported
Resp Party Fax:	Not reported
Resp Party Name 2:	Not reported
Resp Party Address 2:	Not reported
Resp Party Phone 2:	Not reported
Investigator Id:	35

DICHELLO DISTRIBUTORS, INC. (Continued) **U002174589**

Follow Update:	Not reported
Area Lextent:	Not reported
Annual Precipitation:	Not reported
Affected Population:	Not reported
Population Setting:	Not reported
Ground Water Direction:	Not reported
Ground Water Gradient:	Not reported
Hydro Basin:	Not reported
Drastic:	Not reported
Geo Setting:	Not reported
Ground Water Classification:	Not reported
Receptor:	Not reported
Ground Water Flow Direction:	Not reported
Ground Water Depth:	Not reported
Areas Of Concern:	Not reported
Free Product Inches:	Not reported
Fund Date:	Not reported
Fund Planned:	No
Fund Obligated:	No
Fund Outlayed:	No
Fund Judgment:	No
Fund Recovered:	No
Cellar Borings:	False
Install Micro Wells:	False
Ground Water Sample:	False
Soil Sample:	False
Soil Gas:	False
Site Inspect:	False
Soil Excavate:	False
Geo Probe:	False
Survey:	False
Potable Well Sample:	False
Sample MWS:	False
Ground Water Gauging:	False
Soil Venting:	False
Active:	False
NOV Action:	None
NOV Issued:	Not reported
NOV Due:	Not reported
NOV Received:	Not reported
NOV Closed:	Not reported
NOV Disc Date:	Not reported
NOV Issued Date:	Not reported
NOV Compliance Sched:	Not reported
NOV Admin Order:	Not reported
NOV Referred To Ag:	Not reported
Stop All NOV Actions:	False
Release Invest Rpt:	False
DEP App Letter 1:	False
Correct Action Plan:	False
DEP App Letter 2:	False
Rem Sys Install:	False
Rem Sys Install Date:	Not reported
Closure Date:	Not reported
Rem Sys Monitoring Rpt:	False
Qrtly Gwater Mon Rpts:	False
Closure Req Rpt:	False

DICHELLO DISTRIBUTORS, INC. (Continued) **U002174589**

DEP Closure Letter:	False
Referred To:	Not reported
No Wells:	Not reported
Lph Wells:	Not reported
User Stamp:	Not reported
Date Stamp:	Not reported
Correspondence:	Not reported
Environmental Impact:	Not reported
FollowUp:	Not reported
GW Comments:	Not reported
Location Desc:	Not reported
NOV Comments:	Not reported
Release Desc:	Not reported
Running Comments:	diesel FUEL, , pulled 2-10k diesel UST's, soil analysis tph:780 ppm, h2o: 6ppm tph, no sheen or free product, will vac hole and install well
Work Performed:	Not reported
LUST Id:	4971
UST Facility Id:	5812
LUST Case Id:	33096
Lust Status:	Lust Completed
Processing Status:	Not reported
EPA Reportable:	False
Motor Fuel:	True
Diesel:	False
Gasoline:	False
Other:	False
Other Release:	Not reported
No Release:	False
Leak:	False
Tank:	False
Piping:	False
Overfill:	False
Removal:	False
Incident Date:	06/09/1997
Entry Date:	Not reported
Site Case Id:	9702998
UST Site Id:	Not reported
Cost Recovery Spill Case #:	Not reported
Old SITS Number:	Not reported
Case Log Id:	Not reported
Monthly Report Id:	0
UST Owner Id:	1735
LUST Owner Id:	Not reported
UST Event Id:	5082
Contact Info:	Not reported
Contact EMail:	Not reported
Site Contact City,St,Zip:	UNKNOWN
2nd Contact:	Not reported
2nd Contact EMail:	Not reported
2nd Contact Address:	Not reported
2nd Contact City,St,Zip:	UNKNOWN
2nd Contact Address 2:	Not reported
2nd Contact City 2:	Not reported
2nd Contact Phone Number:	Not reported
2nd Contact Fax Number:	Not reported

DICHELLO DISTRIBUTORS, INC. (Continued) **U002174589**

2nd Contact Type:	Not reported
Facility City Num:	107
Site Contact:	Not reported
Site Contact Address:	Not reported
Site Contact Add 2:	Not reported
Site Contact City 2:	Not reported
Site Contact Phone:	Not reported
Site Contact Fax:	Not reported
Site Contact Type:	Not reported
Department Contact 1:	Not reported
Department Contact 2:	Not reported
Referral Source:	Not reported
Offsite Source:	False
Date Referred:	Not reported
Emergency:	False
Private Heating Fuel:	False
Commercial Heating Fuel:	False
Commercial HF < 2100 Gal.:	False
Commercial HF > 2100 Gal.:	False
Commercial HF - Size Unk:	False
No LUST Site:	False
Cost Recvry Prgm Candidate:	False
OCSRD Complete:	True
Follow Up Flag:	False
Alternate Water Supply:	False
Relocation:	False
Responsible Party:	False
Responsible EMail:	Not reported
Resp Party Name:	Not reported
Resp Party Address:	Not reported
Resp Party City,St,Zip:	Not reported
Resp Party Town Number:	UNKNOWN
Resp Party Phone:	Not reported
Resp Party Fax:	Not reported
Resp Party Name 2:	Not reported
Resp Party Address 2:	Not reported
Resp Party Phone 2:	Not reported
Investigator Id:	24
Follow Update:	Not reported
Area Lextent:	Not reported
Annual Precipitation:	Not reported
Affected Population:	Not reported
Population Setting:	Not reported
Ground Water Direction:	Not reported
Ground Water Gradient:	Not reported
Hydro Basin:	Not reported
Drastic:	Not reported
Geo Setting:	Not reported
Ground Water Classification:	Not reported
Receptor:	Not reported
Ground Water Flow Direction:	Not reported
Ground Water Depth:	Not reported
Areas Of Concern:	Not reported
Free Product Inches:	Not reported
Fund Date:	Not reported
Fund Planned:	No
Fund Obligated:	No

DICHELLO DISTRIBUTORS, INC. (Continued) **U002174589**

Fund Outlayed:	No
Fund Judgment:	No
Fund Recovered:	No
Cellar Borings:	False
Install Micro Wells:	False
Ground Water Sample:	False
Soil Sample:	False
Soil Gas:	False
Site Inspect:	False
Soil Excavate:	False
Geo Probe:	False
Survey:	False
Potable Well Sample:	False
Sample MWS:	False
Ground Water Gauging:	False
Soil Venting:	False
Active:	False
NOV Action:	None
NOV Issued:	Not reported
NOV Due:	Not reported
NOV Received:	Not reported
NOV Closed:	Not reported
NOV Disc Date:	Not reported
NOV Issued Date:	Not reported
NOV Compliance Sched:	Not reported
NOV Admin Order:	Not reported
NOV Referred To Ag:	Not reported
Stop All NOV Actions:	False
Release Invest Rpt:	False
DEP App Letter 1:	False
Correct Action Plan:	False
DEP App Letter 2:	False
Rem Sys Install:	False
Rem Sys Install Date:	Not reported
Closure Date:	Not reported
Rem Sys Monitoring Rpt:	False
Qrtly Gwater Mon Rpts:	False
Closure Req Rpt:	False
DEP Closure Letter:	False
Referred To:	Not reported
No Wells:	Not reported
Lph Wells:	Not reported
User Stamp:	Not reported
Date Stamp:	Not reported
Correspondence:	Not reported
Environmental Impact:	Not reported
FollowUp:	Not reported
GW Comments:	Not reported
Location Desc:	Not reported
NOV Comments:	Not reported
Release Desc:	Not reported
Running Comments:	GASOLINE, Commercial, BASED AN ANONYMOUS REPORT-- TANKS REPORTED TO BE REMOVED AND DUMPED IN MARSH BEHIND BUILDING
Work Performed:	Not reported

UST:

Facility State:	CT

DICHELLO DISTRIBUTORS, INC. (Continued) **U002174589**

Facility Id:	107-5812
Latitude:	41.249490
Longitude:	-72.999286

Contact:

Owner Name:	PATRICIA OATES
Owner Address:	Not reported
Owner City/State/Zip:	Not reported
Owner Phone:	Not reported
Owner Phone Ext:	Not reported
Affiliation Type:	Operator
Contact Name:	Not reported
Contact Title:	Not reported
Contact EMail:	Not reported

Owner Name:	DICHELLO DISTRIBUTORS, INC.
Owner Address:	55 MARSH HILL RD
Owner City/State/Zip:	ORANGE, CT 064773612
Owner Phone:	(203) 865-7700
Owner Phone Ext:	Not reported
Affiliation Type:	Owner
Contact Name:	Not reported
Contact Title:	Not reported
Contact EMail:	Not reported

Owner Name:	DICHELLO DISTRIBUTORS, INC.
Owner Address:	55 MARSH HILL RD
Owner City/State/Zip:	ORANGE, CT 064773612
Owner Phone:	Not reported
Owner Phone Ext:	Not reported
Affiliation Type:	Registrant
Contact Name:	Not reported
Contact Title:	Not reported
Contact EMail:	Not reported

Tank ID:	A1
Compartment ID:	a
Tank Status:	**Permanently Closed**
Tank Material:	Asphalt Coated or Bare Steel
Secondary Material:	Not reported
Capacity:	10000
Substance:	Heating Oil(on-site consumption)
Date Installed:	03/01/1980
Date Last Used:	06/01/1997
Closure Status:	**Tank was Removed From Ground**
Pipe Material:	Bare Steel
Pipe Mode Description:	Not reported
Spill Installed:	Not reported
Overfill Installed:	Not reported
Tank Latitude:	41.249590
Tank Longitude:	-72.998660

Tank ID:	A2
Compartment ID:	a
Tank Status:	**Permanently Closed**
Tank Material:	Asphalt Coated or Bare Steel

DICHELLO DISTRIBUTORS, INC. (Continued) **U002174589**

Secondary Material:	Not reported
Capacity:	10000
Substance:	Heating Oil(on-site consumption)
Date Installed:	03/01/1980
Date Last Used:	06/01/1997
Closure Status:	**Tank was Removed From Ground**
Pipe Material:	Bare Steel
Pipe Mode Description:	Not reported
Spill Installed:	Not reported
Overfill Installed:	Not reported
Tank Latitude:	41.249590
Tank Longitude:	-72.998660

Tank ID:	A3
Compartment ID:	a
Tank Status:	**Permanently Closed**
Tank Material:	Asphalt Coated or Bare Steel
Secondary Material:	Not reported
Capacity:	2500
Substance:	Gasoline
Date Installed:	03/01/1980
Date Last Used:	05/01/1990
Closure Status:	**Tank was Removed From Ground**
Pipe Material:	Bare Steel
Pipe Mode Description:	Not reported
Spill Installed:	Not reported
Overfill Installed:	Not reported
Tank Latitude:	Not reported
Tank Longitude:	Not reported

Tank ID:	B4
Compartment ID:	a
Tank Status:	**Permanently Closed**
Tank Material:	Other (Specify)
Secondary Material:	Not reported
Capacity:	1000
Substance:	Gasoline
Date Installed:	08/01/1980
Date Last Used:	06/01/1997
Closure Status:	**Tank was Removed From Ground**
Pipe Material:	Other (Specify)
Pipe Mode Description:	Not reported
Spill Installed:	Not reported
Overfill Installed:	Not reported
Tank Latitude:	41.249590
Tank Longitude:	-72.998660

Tank ID:	C5
Compartment ID:	a
Tank Status:	**Permanently Closed**
Tank Material:	Other (Specify)
Secondary Material:	Not reported
Capacity:	5000
Substance:	Gasoline

DICHELLO DISTRIBUTORS, INC. (Continued) **U002174589**

Date Installed:	08/01/1980
Date Last Used:	06/01/1997
Closure Status:	**Tank was Removed From Ground**
Pipe Material:	Other (Specify)
Pipe Mode Description:	Not reported
Spill Installed:	Not reported
Overfill Installed:	Not reported
Tank Latitude:	Not reported
Tank Longitude:	Not reported

Tank ID:	D6
Compartment ID:	a
Tank Status:	**Permanently Closed**
Tank Material:	Other (Specify)
Secondary Material:	Not reported
Capacity:	3000
Substance:	Gasoline
Date Installed:	03/01/1980
Date Last Used:	06/01/1997
Closure Status:	**Tank was Removed From Ground**
Pipe Material:	Other (Specify)
Pipe Mode Description:	Not reported
Spill Installed:	Not reported
Overfill Installed:	Not reported
Tank Latitude:	41.249590
Tank Longitude:	-72.998660

CPCS:

Site Type:	LUST
Lust Status code:	4
Lust Status:	Lust Completed (DEP's significant hazard definition)
PTP Form:	Not reported
Program:	Not reported
Comments:	Diesel Fuel, , Pulled 2-10k Diesel Ust's, Soil Analysis Tph:780 Ppm, H2o: 6ppm Tph, No Sheen Or Free Product, Will Vac Hole And Install Well
Site Type Definition:	Leaking Underground Storage Tanks Completed

CT MANIFEST:

Detail:

Year:	1990
Manifest Id:	CTC0249237
EPA ID:	CTP000008901
TSDF EPA ID:	CTD980667927
TSDF Name:	SAFETY KLEEN CORP 2-112-01
TSDF Address:	11 TIPPING DR LOT #4
TSDF City,St,Zip:	BRANFORD, CT 06405
TSDF Country:	USA
TSDF Telephone:	Not reported
Transport Date:	03/08/1990
Transporter EPA ID:	ILD051060408
Transporter Name:	SAFETY-KLEEN CORP (TRANSPORTER ONLY)
Transporter Address:	Not reported
Transporter City,St,Zip:	CT
Transporter Country:	USA

DICHELLO DISTRIBUTORS, INC. (Continued) **U002174589**

Transporter Phone:	Not reported
Trans 2 Date:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
Trans 2 Address:	Not reported
Trans 2 City,St,Zip:	CT
Trans 2 Country:	USA
Trans 2 Phone:	Not reported
Generator Phone:	2037950044
Generator Mailing Addr:	55 MARSH HILL RD
Generator Mailing City/State/Zip:	06477
Generator Mailing Country:	USA
Special Handling:	Yes
Discrepancies:	No
Date Shipped:	03/08/1990
Date Received:	03/08/1990
Last modified date:	04/27/2004
Last modified by:	IG
Comments:	Not reported

Waste:

Year:	1990
Manifest Id:	CTC0249237
Waste Occurence:	1
UNNA:	1263
Hazard Class:	FLAMMABLE
US Dot Description:	WASE PAINT RELATED MATERIAL, LIQUID
No of Containers:	001
Container Type:	DM
Quantity:	27
Weight/Volume:	P
Additional Description:	Y
Handling Code:	S01
Date Record Was Last Modified:	2004-04-27 00:00:00
DEO Who Last Modified Record:	IG
EPA Waste Code:	F003
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-27 00:00:00

Detail:

Year:	1990
Manifest Id:	CTC0269072
EPA ID:	CTP000011043
TSDF EPA ID:	CTD021816889
TSDF Name:	UNITED OIL RECOVERY INC
TSDF Address:	136 GRACEY AVE
TSDF City,St,Zip:	MERIDEN, CT 06450
TSDF Country:	USA
TSDF Telephone:	Not reported
Transport Date:	05/25/1990
Transporter EPA ID:	CTD021816889
Transporter Name:	UNITED OIL RECOVERY INC
Transporter Address:	Not reported
Transporter City,St,Zip:	CT
Transporter Country:	USA

DICHELLO DISTRIBUTORS, INC. (Continued) **U002174589**

Transporter Phone:	Not reported
Trans 2 Date:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
Trans 2 Address:	Not reported
Trans 2 City,St,Zip:	CT
Trans 2 Country:	USA
Trans 2 Phone:	Not reported
Generator Phone:	2038657700
Generator Mailing Addr:	55 MARSH HILL RD
Generator Mailing City/State/Zip:	06477
Generator Mailing Country:	USA
Special Handling:	No
Discrepancies:	No
Date Shipped:	05/15/1990
Date Received:	05/16/1990
Last modified date:	04/27/2004
Last modified by:	IG
Comments:	Not reported

Waste:

Year:	1990
Manifest Id:	CTC0269072
Waste Occurence:	1
UNNA:	1993
Hazard Class:	FLAMMABLE
US Dot Description:	WASTE FLAMMABLE LIQUID, NOS
No of Containers:	001
Container Type:	TT
Quantity:	2600
Weight/Volume:	G
Additional Description:	Y
Handling Code:	S02
Date Record Was Last Modified:	2004-04-27 00:00:00
DEO Who Last Modified Record:	IG
EPA Waste Code:	D001
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-27 00:00:00

Detail:

Year:	1989
Manifest Id:	CTC0271881
EPA ID:	CTP000008901
TSDF EPA ID:	CTD980667927
TSDF Name:	SAFETY KLEEN CORP 2-112-01
TSDF Address:	11 TIPPING DR LOT #4
TSDF City,St,Zip:	BRANFORD, CT 06405
TSDF Country:	USA
TSDF Telephone:	Not reported
Transport Date:	07/07/1989
Transporter EPA ID:	ILD051060408
Transporter Name:	SAFETY-KLEEN CORP (TRANSPORTER ONLY)
Transporter Address:	Not reported
Transporter City,St,Zip:	CT
Transporter Country:	USA

DICHELLO DISTRIBUTORS, INC. (Continued) **U002174589**

Transporter Phone:	Not reported
Trans 2 Date:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
Trans 2 Address:	Not reported
Trans 2 City,St,Zip:	CT
Trans 2 Country:	USA
Trans 2 Phone:	Not reported
Generator Phone:	2037950044
Generator Mailing Addr:	55 MARSH HILL RD
Generator Mailing City/State/Zip:	06477
Generator Mailing Country:	USA
Special Handling:	Yes
Discrepancies:	No
Date Shipped:	07/07/1989
Date Received:	07/07/1989
Last modified date:	04/27/2004
Last modified by:	IG
Comments:	Not reported

Waste:

Year:	1989
Manifest Id:	CTC0271881
Waste Occurence:	1
UNNA:	1263
Hazard Class:	FLAMMABLE
US Dot Description:	WASTE PAINT RELATED MATERIAL, LIQUID
No of Containers:	001
Container Type:	DM
Quantity:	27
Weight/Volume:	P
Additional Description:	Y
Handling Code:	S01
Date Record Was Last Modified:	2004-04-27 00:00:00
DEO Who Last Modified Record:	IG
EPA Waste Code:	F003
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-27 00:00:00

B4 **DICHELLO DISTRIBUTORS, INC.** **CT SPILLS** **S104236769**
SW **55 MARSH HILL RD** **CT ENF** **N/A**
< 1/8 **ORANGE, CT**
0.083 mi.
438 ft. **Site 2 of 6 in cluster B**

Relative:
Higher

Actual:
91 ft.

SPILLS:

Year of Database:	2009
Case Number:	200905524
Who Took Spill:	206
Assigned To:	0
Report Date:	09/29/2009
Report Time:	07:06:43
Date Release:	09/29/2009
Time Responded:	Not reported
Reported By:	BOBBY
Phone:	203 4531200

DICHELLO DISTRIBUTORS, INC. (Continued) **S104236769**

Representing: EASTERN ENERGY
Terminated: YES
Recovd (Total): 0
Total (Water): 0
Facility Status: CLOSED
Continuous Spill: False
Released Substance: DIESEL FUEL
Qty: 5 (Gallons)
Emergency Measure: Not reported
Water Body: NA
Discharger: Not reported
Telephone: Not reported
Responsible Party: Not reported
RP Address 1: Not reported
RP City,St,Zip: CT
Historic: False
Waterbody: False
Time Stamp: 2009-09-29 07:33:45
Sr Inspector: Kinney, Clarence
At Inspctor: **NO RESPONSE
User Stamp: ckinney
Comments: Not reported
Agency ID: DEP Dispatch
Other Agency: Not reported
DEP Bureau: Not reported
DEP Agency: Not reported
Media ID: Ground Surface
Other Media: Not reported
Release Type: petroleum
Other Release: Not reported
Waterbody: Other
Other Wtrbody: NA

Year of Database: 1997
Case Number: 9701831
Who Took Spill: 935
Assigned To: 0
Report Date: 04/16/1997
Report Time: 09:30:00
Date Release: 04/16/1997
Time Responded: Not reported
Reported By: scott graves
Phone: 203 4268900
Representing: rc graves, inc
Terminated: YES
Recovd (Total): 0
Total (Water): 0
Facility Status: closed
Continuous Spill: False
Released Substance: DIESEL FUEL
Qty: 0 (Gallons)
Emergency Measure: pulled 2-10k diesel ust's, soil analysis tph:780 ppm, h2o: 6ppm tph, no sheen or free product, will vac hole and install well
Water Body: Not reported
Discharger: dichello distributors
Telephone: 203 8912100
Responsible Party: YES

DICHELLO DISTRIBUTORS, INC. (Continued) **S104236769**

RP Address 1: 55 marsh hill rd
RP City,St,Zip: CT
Historic: False
Waterbody: False
Time Stamp: 1997-04-16 10:08:12
Sr Inspector: Torres, Neil
At Inspctor: **NO RESPONSE
User Stamp: Not reported
Comments: Not reported
Action: Pumped Out
Other Action: Not reported
Action: Soil Removed
Other Action: Not reported
Agency ID: Local Fire Marshal
Other Agency: Not reported
DEP Bureau: Not reported
DEP Agency: Not reported
Cause ID: Inground Tank Failure
Other Cause: Not reported
Media ID: Ground Water
Other Media: Not reported
Media ID: Other
Other Media: soil
Release Type: petroleum
Other Release: Not reported
Waterbody: Groundwater
Other Wtrbody: Not reported

ENFORCEMENT:
Enforcement Action ID: FNOVWRIN10101
Enforcement Type Code: Field Notice of Violation
Program Id: Not reported
Enforcement Action Date: 06/09/2010
Penalty Amount: $0.00
Sep Amt: Not reported
Bureau Name: Materials Management & Compliance Assurance
Program: Industrial General Permit Enforcement
Status: Active
Date of Discovery: Not reported
Resolution Date: Not reported
Resolution Type: None
Staff: Gerke Christopher H
ENF Action Comment: Not reported
Number Violations: Not reported
Civil Penalty: Not reported
SEP Description: Not reported
Associated EIs: Not reported
Client Affiliation Type: Respondent
Affiliation Name: DICHELLO DISTRIBUTORS, INC.
Affiliation Address Line1: 55 MARSH HILL RD
Affiliation Address Line2: Not reported
Affiliation City/State/Zip: ORANGE, CT 06477 3612
Contact Title: MAINTENANCE MANAGER
Contact Name: FRANK PASCALE
Contact EMail: Not reported

B5
SW
< 1/8
0.083 mi.
438 ft.

55 MARSH HILL ROAD
ORANGE, CT

Site 3 of 6 in cluster B

CT SPILLS **S109738360**
N/A

Relative:
Higher

Actual:
91 ft.

SPILLS:

Year of Database:	1997
Case Number:	9702998
Who Took Spill:	922
Assigned To:	917
Report Date:	06/09/1997
Report Time:	14:42:59
Date Release:	05/30/1997
Time Responded:	09:00:00
Reported By:	UNKNOWN
Phone:	203 5555555
Representing:	Self
Terminated:	YES
Recovd (Total):	0
Total (Water):	0
Facility Status:	Closed
Continuous Spill:	False
Released Substance:	GASOLINE
Qty:	0 (Gallons)
Emergency Measure:	BASED AN ANONYMOUS REPORT-- TANKS REPORTED TO BE REMOVED AND DUMPED IN MARSH BEHIND BUILDING
Water Body:	MARSH
Discharger:	DICHELLO BEER DISTIBUTORS
Telephone:	Not reported
Responsible Party:	NO
RP Address 1:	55 MARSH HILL ROAD
RP City,St,Zip:	ORANGE, CT 06477
Historic:	False
Waterbody:	False
Time Stamp:	1997-06-24 08:38:48
Sr Inspector:	Aceto, John
At Inspctor:	Emanuelson, Brian
User Stamp:	Not reported
Comments:	Not reported
Action:	Other
Other Action:	INVESTIGATED
Action:	Investigated
Other Action:	Not reported
Agency ID:	DEP
Other Agency:	Not reported
DEP Bureau:	BUREAU OF WASTE MANAGEMENT
DEP Agency:	OIL AND CHEMICAL SPILL RESPONSE
Cause ID:	Inground Tank Failure
Other Cause:	Not reported
Cause ID:	Dumping
Other Cause:	Not reported
Media ID:	Ground Surface
Other Media:	Not reported
Class ID:	Commercial
Other Class:	Not reported
Release Type:	petroleum
Other Release:	Not reported
Waterbody:	Other

(Continued) **S109738360**

Other Wtrbody: MARSH

B6 **DICHELLO BEER DISTIBUTORS** **CT CPCS** **S103160221**
SW **55 MARSH HILL ROAD** **N/A**
< 1/8 **ORANGE, CT 06477**
0.083 mi.
438 ft. **Site 4 of 6 in cluster B**

Relative:
Higher

Actual:
91 ft.

CPCS:

Site Type:	LUST
Lust Status code:	4
Lust Status:	Lust Completed (DEP's significant hazard definition)
PTP Form:	Not reported
Program:	Not reported
Comments:	Gasoline, Commercial, Based An Anonymous Report-- Tanks Reported To Be Removed And Dumped In Marsh Behind Building
Site Type Definition:	Leaking Underground Storage Tanks Completed

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B7 **VALENTI LEASING AUTO BODY** **CT MANIFEST** **S109722155**
SW **55 MARSH HILL RD** **N/A**
< 1/8 **ORANGE, CT 06477**
0.083 mi.
438 ft. **Site 5 of 6 in cluster B**

Relative:
Higher

Actual:
91 ft.

CT MANIFEST:

Detail:

Year:	1990
Manifest Id:	CTC0287948
EPA ID:	CTC000008901
TSDF EPA ID:	CTD980667927
TSDF Name:	SAFETY KLEEN CORP 2-112-01
TSDF Address:	11 TIPPING DR LOT #4
TSDF City,St,Zip:	BRANFORD, CT 06405
TSDF Country:	USA
TSDF Telephone:	Not reported
Transport Date:	01/12/1990
Transporter EPA ID:	ILD051060408
Transporter Name:	SAFETY-KLEEN CORP (TRANSPORTER ONLY)
Transporter Address:	Not reported
Transporter City,St,Zip:	CT
Transporter Country:	USA
Transporter Phone:	Not reported
Trans 2 Date:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
Trans 2 Address:	Not reported
Trans 2 City,St,Zip:	CT
Trans 2 Country:	USA
Trans 2 Phone:	Not reported
Generator Phone:	2037950044
Generator Mailing Addr:	55 MARSH HILL RD
Generator Mailing City/State/Zip:	06477
Generator Mailing Country:	USA
Special Handling:	Yes
Discrepancies:	No
Date Shipped:	01/12/1990

VALENTI LEASING AUTO BODY (Continued) **S109722155**

Date Received: 01/12/1990
Last modified date: 04/27/2004
Last modified by: IG
Comments: Not reported

Waste:
Year: 1990
Manifest Id: CTC0287948
Waste Occurence: 1
UNNA: 1263
Hazard Class: FLAMMABLE
US Dot Description: WASTE PAINT RELATED MATERIAL
No of Containers: 001
Container Type: DM
Quantity: 27
Weight/Volume: P
Additional Description: Y
Handling Code: S01
Date Record Was Last Modified: 2004-04-27 00:00:00
DEO Who Last Modified Record: IG
EPA Waste Code: F003
Recycled Waste?: True
Date Record Was Last Modified: 2004-04-27 00:00:00

B8 **CT SPILLS** **S101804837**
SSW **58 ROBINSON BLVD CUL DE SAC** **N/A**
< 1/8 **ORANGE, CT**
0.086 mi.
455 ft. **Site 6 of 6 in cluster B**

Relative:
Higher

Actual:
85 ft.

SPILLS:
Year of Database: 1991
Case Number: 3528
Who Took Spill: BURTON
Assigned To: Not reported
Report Date: 09/03/1991
Report Time: 12
Date Release: Not reported
Time Responded: Not reported
Reported By: JAMIE KRANICK
Phone: Not reported
Representing: Not reported
Terminated: Not reported
Recovd (Total): .
Total (Water): .
Facility Status: Not reported
Continuous Spill: Not reported
Released Substance: Not reported
Qty: 25 (Gallons)
Emergency Measure: Not reported
Water Body: Not reported
Discharger: Not reported
Telephone: Not reported
Responsible Party: Not reported
RP Address 1: Not reported
RP City,St,Zip: Not reported

(Continued) **S101804837**

Historic: Not reported
Waterbody: Not reported
Time Stamp: Not reported
Sr Inspector: Not reported
At Inspctor: Not reported
User Stamp: Not reported
Comments: Not reported

Year of Database: 1991
Town of Spill: ORANGE
Case Number: 3528
OCSRD Inspector: NR
Spill Date: 09/03/91
Spill Time: Not reported
Report Date: 09/03/91
Report Time: 12: 0
Reported By: JAMIE KRANICK
Representing: ORANGE P.D.
Work Telephone: 203- 795- 6567
Home Telephone: Not reported
Telephone Pole#: .
Incident Type: OTHER
Substance: MIXED WASTE
Quantity: 25 Gallon(s)
Concentration: .
Action Desc: Not reported
On Going: Not reported
Continuous Spill: Not reported
Release Status: Not reported
Misc Info: (2) 55 GAL (2) 5 GAL (1) 30 GAL DRUMS CARPET SHAMPOO PETROLEUM PRODUCTS - AMALIE - KENDALL - FUEL OIL COND
Water Body: Not reported
Other Media: Not reported
Release Area: Ground Surface
Total (Water): .
Recovd (Water): .
Recovd (Total): .
Polluter Name: Not reported
Polluted Address: Not reported
Polluted City,St,Zip: .
Polluter Phone: .- .- .
Polluter Responisbility: Not reported
Unknown Responsibility: Not reported
Unknown Polluter: Not reported
Cleanup Action: REFERRED TO WEED
Dun and Bradst#: Not reported
UST Unit: Not reported
Agency Notified: Not reported
State Agency: Not reported
Notify Date: .
Notify Time: Not reported
Other Agency: UST
Notify Other: Not reported
Notify Status: Not reported
Class1: Commercial
Other Class: Not reported
Cause1: Dumping

(Continued) **S101804837**

Other Cause:	Not reported
Actions1:	Referred
Other Actions:	Not reported
Cleanup Contractor:	Not reported
Contractor Name:	Not reported
Did DEP Hire Contractor:	Not reported
Date Contractor Hired:	.
When Contractor Requested:	Not reported
When Contractor Arrived:	Not reported
Who Took Spill:	BURTON
Badge # of Who Recieved Spill:	902
Who Assigned Spill:	NR/WEED
Badge # of Who Assigned Spill:	.
Date Assigned:	.
Assigned Time:	Not reported
Spill Status:	Closed
Case 1136:	Not reported
Federal 311K:	.
Case #1:	Not reported
Case #2:	.
Cost Recovery:	.
Property Owner:	Not reported
Property Other:	.
Property Name:	Not reported
Property Addr:	Not reported
Property CSZ:	.
Polluter:	Not reported
Owner:	Not reported
Operator:	Not reported
Vehicle Make:	Not reported
Vehicle Model:	Not reported
Truck Reg:	Not reported
Trail Reg:	Not reported
Additional Info:	Not reported
Updated:	Not reported
Update Date:	.

C9 **DICHELLO BEER DISTIBUTORS** **CT RGA LUST** **S116027152**
SW **55 MARSH HILL ROAD** **N/A**
< 1/8 **ORANGE, CT**
0.088 mi.
466 ft. **Site 1 of 2 in cluster C**

Relative:
Higher

Actual:
101 ft.

RGA LUST:

2012	DICHELLO BEER DISTIBUTORS	55 MARSH HILL ROAD
2011	DICHELLO BEER DISTIBUTORS	55 MARSH HILL ROAD
2010	DICHELLO BEER DISTIBUTORS	55 MARSH HILL ROAD
2009	DICHELLO BEER DISTIBUTORS	55 MARSH HILL ROAD
2008	DICHELLO BEER DISTIBUTORS	55 MARSH HILL ROAD
2006	DICHELLO BEER DISTIBUTORS	55 MARSH HILL ROAD
2004	DICHELLO BEER DISTIBUTORS	55 MARSH HILL ROAD
2003	DICHELLO BEER DISTIBUTORS	55 MARSH HILL ROAD
2002	DICHELLO BEER DISTIBUTORS	55 MARSH HILL ROAD

C10
SW
< 1/8
0.088 mi.
466 ft.

DICHELLO DISTRIBUTORS
55 MARSH HILL RD
ORANGE, CT

Site 2 of 2 in cluster C

CT RGA LUST **S116027153**
N/A

Relative:
Higher

Actual:
101 ft.

RGA LUST:

2012	DICHELLO DISTRIBUTORS	55 MARSH HILL RD
2011	DICHELLO DISTRIBUTORS	55 MARSH HILL RD
2010	DICHELLO DISTRIBUTORS	55 MARSH HILL RD
2009	DICHELLO DISTRIBUTORS	55 MARSH HILL RD
2008	DICHELLO DISTRIBUTORS	55 MARSH HILL RD
2006	DICHELLO DISTRIBUTORS	55 MARSH HILL RD
2004	DICHELLO DISTRIBUTORS	55 MARSH HILL RD
2003	DICHELLO DISTRIBUTORS	55 MARSH HILL RD
2002	DICHELLO DISTRIBUTORS	55 MARSH HILL RD

D11
WSW
< 1/8
0.103 mi.
545 ft.

SOUTHERN CT GAS CO
60 MARSHHILL RD
ORANGE, CT 06477

Site 1 of 8 in cluster D

CT MANIFEST **S109748509**
N/A

Relative:
Higher

Actual:
103 ft.

CT MANIFEST:

Detail:

Year:	2007
Manifest Id:	000575411FLE
EPA ID:	CTP000020776
TSDF EPA ID:	OHD000816629
TSDF Name:	SPRING GROVE RESOURCE RECOVERY
TSDF Address:	4879 SPRING GROVE AVE
TSDF City,St,Zip:	CINCINNATI, OH 45232-
TSDF Country:	USA
TSDF Telephone:	(513)681-5738
Transport Date:	03/20/2007
Transporter EPA ID:	MAD039322250
Transporter Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Transporter Address:	PO BOX 9149
Transporter City,St,Zip:	NORWELL, MA 02061-9149
Transporter Country:	USA
Transporter Phone:	(781)792-5000
Trans 2 Date:	Not reported
Trans 2 EPA ID:	ALD067138891
Trans 2 Name:	ROBBIE D. WOOD, INC.
Trans 2 Address:	P.O. BOX 125
Trans 2 City,St,Zip:	DOLOMITE, AL 35061
Trans 2 Country:	USA
Trans 2 Phone:	(205)744-8440
Generator Phone:	Not reported
Generator Mailing Addr:	60 MARSHHILL RD
Generator Mailing City/State/Zip:	Not reported
Generator Mailing Country:	USA
Special Handling:	Not reported
Discrepancies:	Not reported
Date Shipped:	03/20/2007
Date Received:	03/28/2007
Last modified date:	07/11/2008
Last modified by:	JEB
Comments:	Not reported

SOUTHERN CT GAS CO (Continued) **S109748509**

Waste:

Year:	2007
Manifest Id:	000575411FLE
Waste Occurence:	1
UNNA:	2809
Hazard Class:	8
US Dot Description:	MERCURY
No of Containers:	001
Container Type:	DF
Quantity:	10
Weight/Volume:	P
Additional Description:	Not reported
Handling Code:	Not reported
Date Record Was Last Modified:	2008-06-03 00:00:00
DEO Who Last Modified Record:	DMG
EPA Waste Code:	D009
Recycled Waste?:	False
Date Record Was Last Modified:	2008-06-03 00:00:00

Detail:

Year:	2006
Manifest Id:	ctf1201818
EPA ID:	CTP000020776
TSDF EPA ID:	OHD000816629
TSDF Name:	SPRING GROVE RESOURCE RECOVERY
TSDF Address:	4879 SPRING GROVE AVE
TSDF City,St,Zip:	CINCINNATI, OH 45232-
TSDF Country:	USA
TSDF Telephone:	(513)681-5738
Transport Date:	02/14/2006
Transporter EPA ID:	MAD039322250
Transporter Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Transporter Address:	PO BOX 9149
Transporter City,St,Zip:	NORWELL, MA 02061-9149
Transporter Country:	USA
Transporter Phone:	(781)792-5000
Trans 2 Date:	02/14/2006
Trans 2 EPA ID:	OHD009865825
Trans 2 Name:	DART TRUCKING COMPANY, INC.
Trans 2 Address:	PO BOX 60
Trans 2 City,St,Zip:	COLUMBIANA, OH 44408-
Trans 2 Country:	USA
Trans 2 Phone:	(800)541-8206
Generator Phone:	Not reported
Generator Mailing Addr:	60 MARSHHILL RD
Generator Mailing City/State/Zip:	Not reported
Generator Mailing Country:	USA
Special Handling:	Not reported
Discrepancies:	Not reported
Date Shipped:	02/14/2006
Date Received:	02/15/2006
Last modified date:	07/02/2007
Last modified by:	DMG
Comments:	Not reported

SOUTHERN CT GAS CO (Continued) **S109748509**

Waste:

Year:	2006
Manifest Id:	ctf1201818
Waste Occurence:	1
UNNA:	2809
Hazard Class:	8
US Dot Description:	MERCURY
No of Containers:	001
Container Type:	CF
Quantity:	20
Weight/Volume:	P
Additional Description:	Not reported
Handling Code:	Not reported
Date Record Was Last Modified:	2007-07-02 00:00:00
DEO Who Last Modified Record:	DMG
EPA Waste Code:	D009
Recycled Waste?:	False
Date Record Was Last Modified:	2007-07-02 00:00:00

Detail:

Year:	2004
Manifest Id:	ctf1187387
EPA ID:	CTP000020776
TSDF EPA ID:	OHD000816629
TSDF Name:	SPRING GROVE RESOURCE REC
TSDF Address:	4879 SPRING GROVE AVE
TSDF City,St,Zip:	CINCINNATI, OH 45232
TSDF Country:	USA
TSDF Telephone:	(513)681-5738
Transport Date:	10/06/2004
Transporter EPA ID:	MAD039322250
Transporter Name:	CLEAN HARBORS ENVIRONMENTAL SVS
Transporter Address:	1501 WASHINGTON ST
Transporter City,St,Zip:	BRAINTREE, MA 02184-
Transporter Country:	USA
Transporter Phone:	(781)849-1800
Trans 2 Date:	10/08/2004
Trans 2 EPA ID:	NJD986607380
Trans 2 Name:	MAUMEE EXPRESS, INC.
Trans 2 Address:	P.O. BOX 278
Trans 2 City,St,Zip:	SOMERVILLE, NJ 08854
Trans 2 Country:	USA
Trans 2 Phone:	(732)424-8441
Generator Phone:	Not reported
Generator Mailing Addr:	60 MARSHHILL RD
Generator Mailing City/State/Zip:	Not reported
Generator Mailing Country:	USA
Special Handling:	Not reported
Discrepancies:	Not reported
Date Shipped:	10/06/2004
Date Received:	10/26/2004
Last modified date:	12/21/2005
Last modified by:	JEB
Comments:	Not reported

SOUTHERN CT GAS CO (Continued) **S109748509**

Waste:

Year:	2004
Manifest Id:	ctf1187387
Waste Occurence:	1
UNNA:	2809
Hazard Class:	8
US Dot Description:	MERCURY
No of Containers:	1
Container Type:	DF
Quantity:	1
Weight/Volume:	P
Additional Description:	Not reported
Handling Code:	Not reported
Date Record Was Last Modified:	2005-06-17 00:00:00
DEO Who Last Modified Record:	CJS
EPA Waste Code:	D009
Recycled Waste?:	False
Date Record Was Last Modified:	2005-06-17 00:00:00

Detail:

Year:	2002
Manifest Id:	MAQ028557
EPA ID:	CTP000020776
TSDF EPA ID:	MAD053452637
TSDF Name:	CLEAN HARBORS OF BRAINTREE INC
TSDF Address:	1 HILL AVE
TSDF City,St,Zip:	BRAINTREE, MA 02184
TSDF Country:	USA
TSDF Telephone:	Not reported
Transport Date:	02/25/2002
Transporter EPA ID:	MAD039322250
Transporter Name:	CLEAN HARBORS ENVIRONMENTAL SVS INC
Transporter Address:	Not reported
Transporter City,St,Zip:	CT
Transporter Country:	USA
Transporter Phone:	Not reported
Trans 2 Date:	02/27/2002
Trans 2 EPA ID:	OHD009865825
Trans 2 Name:	DART TRUCKING CO INC
Trans 2 Address:	Not reported
Trans 2 City,St,Zip:	CT
Trans 2 Country:	USA
Trans 2 Phone:	Not reported
Generator Phone:	Not reported
Generator Mailing Addr:	60 MARSHHILL RD
Generator Mailing City/State/Zip:	06477
Generator Mailing Country:	USA
Special Handling:	Not reported
Discrepancies:	No
Date Shipped:	02/25/2002
Date Received:	02/27/2002
Last modified date:	04/27/2004
Last modified by:	IG
Comments:	Not reported

SOUTHERN CT GAS CO (Continued) **S109748509**

Waste:

Year:	2002
Manifest Id:	MAQ028557
Waste Occurence:	1
UNNA:	2809
Hazard Class:	8
US Dot Description:	mercury
No of Containers:	001
Container Type:	DF
Quantity:	30
Weight/Volume:	P
Additional Description:	Not reported
Handling Code:	Not reported
Date Record Was Last Modified:	2004-04-27 00:00:00
DEO Who Last Modified Record:	IG
EPA Waste Code:	D009
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-27 00:00:00

Detail:

Year:	2001
Manifest Id:	MAM894768
EPA ID:	CTP000020776
TSDF EPA ID:	MAD053452637
TSDF Name:	CLEAN HARBORS OF BRAINTREE INC
TSDF Address:	1 HILL AVE
TSDF City,St,Zip:	BRAINTREE, MA 02184
TSDF Country:	USA
TSDF Telephone:	Not reported
Transport Date:	04/10/2001
Transporter EPA ID:	MAD039322250
Transporter Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Transporter Address:	Not reported
Transporter City,St,Zip:	CT
Transporter Country:	USA
Transporter Phone:	Not reported
Trans 2 Date:	04/11/2001
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS ENV SERVICES INC
Trans 2 Address:	Not reported
Trans 2 City,St,Zip:	CT
Trans 2 Country:	USA
Trans 2 Phone:	Not reported
Generator Phone:	Not reported
Generator Mailing Addr:	60 MARSHHILL RD
Generator Mailing City/State/Zip:	06477
Generator Mailing Country:	USA
Special Handling:	Not reported
Discrepancies:	Yes
Date Shipped:	04/10/2001
Date Received:	04/11/2001
Last modified date:	04/27/2004
Last modified by:	IG
Comments:	Not reported

SOUTHERN CT GAS CO (Continued) **S109748509**

Waste:

Year:	2001
Manifest Id:	MAM894768
Waste Occurence:	1
UNNA:	1950
Hazard Class:	2.1
US Dot Description:	aerosols
No of Containers:	001
Container Type:	DF
Quantity:	11
Weight/Volume:	P
Additional Description:	Not reported
Handling Code:	Not reported
Date Record Was Last Modified:	2004-04-27 00:00:00
DEO Who Last Modified Record:	IG
EPA Waste Code:	D001
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-27 00:00:00
EPA Waste Code:	D003
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-27 00:00:00
EPA Waste Code:	D002
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-27 00:00:00
Year:	2001
Manifest Id:	MAM894768
Waste Occurence:	2
UNNA:	3090
Hazard Class:	9
US Dot Description:	WASTE LITHIUM BATTERY
No of Containers:	001
Container Type:	DF
Quantity:	25
Weight/Volume:	P
Additional Description:	Not reported
Handling Code:	Not reported
Date Record Was Last Modified:	2004-04-27 00:00:00
DEO Who Last Modified Record:	IG
EPA Waste Code:	D001
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-27 00:00:00
EPA Waste Code:	D003
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-27 00:00:00
EPA Waste Code:	D002
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-27 00:00:00
Year:	2001
Manifest Id:	MAM894768
Waste Occurence:	3
UNNA:	1830

SOUTHERN CT GAS CO (Continued) **S109748509**

Hazard Class:	8
US Dot Description:	sulfuric acid
No of Containers:	001
Container Type:	DF
Quantity:	3
Weight/Volume:	G
Additional Description:	Not reported
Handling Code:	Not reported
Date Record Was Last Modified:	2004-04-27 00:00:00
DEO Who Last Modified Record:	IG
EPA Waste Code:	D001
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-27 00:00:00
EPA Waste Code:	D003
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-27 00:00:00
EPA Waste Code:	D002
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-27 00:00:00

Detail:

Year:	2000
Manifest Id:	MAM501723
EPA ID:	CTP000020776
TSDF EPA ID:	MAD053452637
TSDF Name:	CLEAN HARBORS OF BRAINTREE INC
TSDF Address:	385 QUINCY AVE
TSDF City,St,Zip:	BRAINTREE, MA 02184
TSDF Country:	USA
TSDF Telephone:	Not reported
Transport Date:	01/11/2000
Transporter EPA ID:	MAD039322250
Transporter Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Transporter Address:	Not reported
Transporter City,St,Zip:	CT
Transporter Country:	USA
Transporter Phone:	Not reported
Trans 2 Date:	01/12/2000
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS ENVIRONMENTAL SVS INC
Trans 2 Address:	Not reported
Trans 2 City,St,Zip:	CT
Trans 2 Country:	USA
Trans 2 Phone:	Not reported
Generator Phone:	Not reported
Generator Mailing Addr:	60 MARSHHILL RD
Generator Mailing City/State/Zip:	06477
Generator Mailing Country:	USA
Special Handling:	Not reported
Discrepancies:	No
Date Shipped:	01/11/2000
Date Received:	01/14/2000
Last modified date:	04/27/2004
Last modified by:	IG

SOUTHERN CT GAS CO (Continued) **S109748509**

Comments: Not reported

Waste:
Year: 2000
Manifest Id: MAM501723
Waste Occurence: 1
UNNA: 1993
Hazard Class: 3
US Dot Description: FLAMMABLE LIQUID N.O.S.
No of Containers: 002
Container Type: DM
Quantity: 170
Weight/Volume: G
Additional Description: Not reported
Handling Code: Not reported
Date Record Was Last Modified: 2004-04-27 00:00:00
DEO Who Last Modified Record: IG
EPA Waste Code: D001
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

D12 **CT SPILLS** **S117540537**
WSW **60 MARSH HILL ROAD** **N/A**
< 1/8 **ORANGE, CT**
0.103 mi.
545 ft. **Site 2 of 8 in cluster D**

Relative:
Higher

Actual:
103 ft.

SPILLS:
Year of Database: 2015
Case Number: 201500380
Who Took Spill: 202
Assigned To: 0
Report Date: 01/23/2015
Report Time: 14:24:48
Date Release: 01/23/2015
Time Responded: Not reported
Reported By: paul slawski
Phone: 860 4282446
Representing: southern ct gas
Terminated: YES
Recovd (Total): 0
Total (Water): 0
Facility Status: CLOSED
Continuous Spill: False
Released Substance: MOTOR OIL
Qty: 2 (Gallons)
Emergency Measure: Not reported
Water Body: Not reported
Discharger: same
Telephone: Not reported
Responsible Party: Not reported
RP Address 1: Not reported
RP City,St,Zip: CT
Historic: False
Waterbody: False
Time Stamp: 2015-01-28 13:10:11

(Continued) **S117540537**

Sr Inspector:	Landry, Robin
At Inspctor:	**NO RESPONSE
User Stamp:	Guzmanca
Comments:	Not reported
Action:	Contained
Other Action:	Not reported
Action:	Contracted
Other Action:	Not reported
Action:	Cleaned
Other Action:	Not reported
Agency ID:	DEP Dispatch
Other Agency:	Not reported
DEP Bureau:	Not reported
DEP Agency:	Not reported
Cause ID:	Overfill
Other Cause:	Not reported
Media ID:	Ground Surface
Other Media:	Not reported
Class ID:	Commercial
Other Class:	Not reported
Release Type:	petroleum
Other Release:	Not reported
Waterbody:	Other
Other Wtrbody:	none

D13 **SOUTHERN CONNECTICUT GAS COMPANY** **CT UST** **U002172039**
WSW **60 MARSH HILL RD** **N/A**
< 1/8 **ORANGE, CT 06477**
0.103 mi.
545 ft. **Site 3 of 8 in cluster D**

Relative:
Higher

Actual:
103 ft.

UST:

Facility State:	CT
Facility Id:	107-11037
Latitude:	41.249023
Longitude:	-73.001987

Contact:

Owner Name:	THE SOUTHERN CONNECTICUT GAS COMPANY
Owner Address:	60 MARSH HILL RD
Owner City/State/Zip:	ORANGE, CT 064773624
Owner Phone:	(203) 382-8111
Owner Phone Ext:	Not reported
Affiliation Type:	Billing Contact
Contact Name:	PAUL ALFONSI
Contact Title:	Not reported
Contact EMail:	Not reported

Owner Name:	THE SOUTHERN CONNECTICUT GAS COMPANY
Owner Address:	60 MARSH HILL RD
Owner City/State/Zip:	ORANGE, CT 064773624
Owner Phone:	(203) 382-8111
Owner Phone Ext:	Not reported
Affiliation Type:	Operator
Contact Name:	PAUL ALFONSI
Contact Title:	Not reported
Contact EMail:	Not reported

SOUTHERN CONNECTICUT GAS COMPANY (Continued) **U002172039**

Owner Name: HALEY & ALDRICH, INC.
Owner Address: 100 Corporate Pl - Suite 105A
Owner City/State/Zip: Rocky Hill, CT 060671803
Owner Phone: (860) 282-9400
Owner Phone Ext: Not reported
Affiliation Type: Other
Contact Name: Not reported
Contact Title: Not reported
Contact EMail: Not reported

Owner Name: THE SOUTHERN CONNECTICUT GAS COMPANY
Owner Address: 60 MARSH HILL RD
Owner City/State/Zip: ORANGE, CT 064773624
Owner Phone: (203) 382-8111
Owner Phone Ext: Not reported
Affiliation Type: Owner
Contact Name: Not reported
Contact Title: Not reported
Contact EMail: Not reported

Owner Name: THE SOUTHERN CONNECTICUT GAS COMPANY
Owner Address: 60 MARSH HILL RD
Owner City/State/Zip: ORANGE, CT 064773624
Owner Phone: (203) 382-8111
Owner Phone Ext: Not reported
Affiliation Type: Primary Contact
Contact Name: PAUL ALFONSI
Contact Title: Not reported
Contact EMail: Not reported

Owner Name: THE SOUTHERN CONNECTICUT GAS COMPANY
Owner Address: 60 MARSH HILL RD
Owner City/State/Zip: ORANGE, CT 064773624
Owner Phone: (203) 382-8111
Owner Phone Ext: Not reported
Affiliation Type: Property Owner
Contact Name: PAUL ALFONSI
Contact Title: Not reported
Contact EMail: Not reported

Owner Name: THE SOUTHERN CONNECTICUT GAS COMPANY
Owner Address: 60 MARSH HILL RD
Owner City/State/Zip: ORANGE, CT 064773624
Owner Phone: (203) 382-8111
Owner Phone Ext: Not reported
Affiliation Type: Registrant
Contact Name: PAUL ALFONSI
Contact Title: Not reported
Contact EMail: Not reported

Tank ID: D-1
Compartment ID: Not reported
Tank Status: **Permanently Closed**
Tank Material: Fiberglass Reinforced Plastic
Secondary Material: Double Walled
Capacity: 10000

SOUTHERN CONNECTICUT GAS COMPANY (Continued) **U002172039**

Substance:	Diesel
Date Installed:	09/01/1993
Date Last Used:	12/06/2006
Closure Status:	**Tank was Removed From Ground**
Pipe Material:	Rigid Fiberglass Reinforced Plastic
Pipe Mode Description:	Double Walled
Spill Installed:	Spill Bucket
Overfill Installed:	Flapper Device
Tank Latitude:	41.249023
Tank Longitude:	-73.001987

Tank ID:	G-1
Compartment ID:	Not reported
Tank Status:	**Permanently Closed**
Tank Material:	Fiberglass Reinforced Plastic
Secondary Material:	Double Walled
Capacity:	10000
Substance:	Gasoline
Date Installed:	09/01/1993
Date Last Used:	12/06/2006
Closure Status:	**Tank was Removed From Ground**
Pipe Material:	Rigid Fiberglass Reinforced Plastic
Pipe Mode Description:	Double Walled
Spill Installed:	Spill Bucket
Overfill Installed:	Flapper Device
Tank Latitude:	41.249023
Tank Longitude:	-73.001987

D14 **SOUTHERN CT GAS CO** **CT MANIFEST** **S109747648**
WSW **60 MARSH HILL RD** **N/A**
< 1/8 **ORANGE, CT 06477**
0.103 mi.
545 ft. **Site 4 of 8 in cluster D**

Relative:
Higher

Actual:
103 ft.

CT MANIFEST:

Detail:

Year:	2008
Manifest Id:	002054613FLE
EPA ID:	CTP000020776
TSDF EPA ID:	OHD000816629
TSDF Name:	SPRING GROVE RESOURCE RECOVERY
TSDF Address:	4879 SPRING GROVE AVE
TSDF City,St,Zip:	CINCINNATI, OH 45232-
TSDF Country:	USA
TSDF Telephone:	(513)681-5738
Transport Date:	06/03/2008
Transporter EPA ID:	MAD039322250
Transporter Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Transporter Address:	PO BOX 9149
Transporter City,St,Zip:	NORWELL, MA 02061-9149
Transporter Country:	USA
Transporter Phone:	(781)792-5000
Trans 2 Date:	06/04/2008
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 Address:	PO BOX 9149

SOUTHERN CT GAS CO (Continued) **S109747648**

Trans 2 City,St,Zip:	NORWELL, MA 02061-9149
Trans 2 Country:	USA
Trans 2 Phone:	(781)792-5000
Generator Phone:	Not reported
Generator Mailing Addr:	60 MARSHHILL RD
Generator Mailing City/State/Zip:	Not reported
Generator Mailing Country:	USA
Special Handling:	Not reported
Discrepancies:	Not reported
Date Shipped:	06/03/2008
Date Received:	06/16/2008
Last modified date:	08/26/2009
Last modified by:	CYF
Comments:	Not reported

Waste:

Year:	2008
Manifest Id:	002054613FLE
Waste Occurence:	1
UNNA:	3262
Hazard Class:	8
US Dot Description:	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.
No of Containers:	1
Container Type:	DF
Quantity:	15
Weight/Volume:	P
Additional Description:	Not reported
Handling Code:	Not reported
Date Record Was Last Modified:	2009-08-26 00:00:00
DEO Who Last Modified Record:	CYF
EPA Waste Code:	D007
Recycled Waste?:	False
Date Record Was Last Modified:	2009-08-26 00:00:00

Detail:

Year:	2003
Manifest Id:	MDC1028243
EPA ID:	CTP000020776
TSDF EPA ID:	MDD980555189
TSDF Name:	CLEAN HARBOR OF BALTIMORE INC
TSDF Address:	1910 RUSSELL ST
TSDF City,St,Zip:	BALTIMORE, MD 21230
TSDF Country:	USA
TSDF Telephone:	Not reported
Transport Date:	05/13/2003
Transporter EPA ID:	MAD039322250
Transporter Name:	CLEAN HARBORS ENV SVS INC
Transporter Address:	PO BOX 859048
Transporter City,St,Zip:	BRAINTREE, MA 02185-9048
Transporter Country:	USA
Transporter Phone:	Not reported
Trans 2 Date:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
Trans 2 Address:	Not reported

SOUTHERN CT GAS CO (Continued) **S109747648**

Trans 2 City,St,Zip:	CT
Trans 2 Country:	USA
Trans 2 Phone:	Not reported
Generator Phone:	Not reported
Generator Mailing Addr:	60 MARSH HILL RD
Generator Mailing City/State/Zip:	06477
Generator Mailing Country:	USA
Special Handling:	Not reported
Discrepancies:	Not reported
Date Shipped:	05/13/2003
Date Received:	Not reported
Last modified date:	05/26/2004
Last modified by:	IG
Comments:	Not reported

Detail:

Year:	1999
Manifest Id:	NYG1476666
EPA ID:	CTP000022438
TSDF EPA ID:	NYD000632372
TSDF Name:	SAFETY-KLEEN (BDT) INC
TSDF Address:	4255 RESEARCH PKWY
TSDF City,St,Zip:	CLARENCE, NY 14031
TSDF Country:	USA
TSDF Telephone:	Not reported
Transport Date:	05/14/1999
Transporter EPA ID:	NYD982792814
Transporter Name:	FRANKS VACUUM TRUCK SVC INC
Transporter Address:	Not reported
Transporter City,St,Zip:	CT
Transporter Country:	USA
Transporter Phone:	Not reported
Trans 2 Date:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
Trans 2 Address:	Not reported
Trans 2 City,St,Zip:	CT
Trans 2 Country:	USA
Trans 2 Phone:	Not reported
Generator Phone:	Not reported
Generator Mailing Addr:	60 MARSH HILL RD
Generator Mailing City/State/Zip:	06477
Generator Mailing Country:	USA
Special Handling:	Not reported
Discrepancies:	Not reported
Date Shipped:	05/14/1999
Date Received:	05/18/1999
Last modified date:	04/26/2004
Last modified by:	IG
Comments:	Not reported

Waste:

Year:	1999
Manifest Id:	NYG1476666
Waste Occurence:	1

SOUTHERN CT GAS CO (Continued) **S109747648**

UNNA:	3304
Hazard Class:	2.1
US Dot Description:	COMPRESSED GAS, TOXIC CORROSIVE
No of Containers:	004
Container Type:	DM
Quantity:	200
Weight/Volume:	G
Additional Description:	Not reported
Handling Code:	Not reported
Date Record Was Last Modified:	2004-04-26 00:00:00
DEO Who Last Modified Record:	IG
EPA Waste Code:	D002
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-26 00:00:00

Detail:

Year:	1999
Manifest Id:	CTF0767999
EPA ID:	CTP000020776
TSDF EPA ID:	CTD000604488
TSDF Name:	CLEAN HARBORS OF CONNECTICUT INC
TSDF Address:	51 BRODERICK RD
TSDF City,St,Zip:	BRISTOL, CT 06010
TSDF Country:	USA
TSDF Telephone:	Not reported
Transport Date:	06/23/1999
Transporter EPA ID:	MAD039322250
Transporter Name:	CLEAN HARBORS ENVIR SERVICES INC
Transporter Address:	Not reported
Transporter City,St,Zip:	CT
Transporter Country:	USA
Transporter Phone:	Not reported
Trans 2 Date:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
Trans 2 Address:	Not reported
Trans 2 City,St,Zip:	CT
Trans 2 Country:	USA
Trans 2 Phone:	Not reported
Generator Phone:	Not reported
Generator Mailing Addr:	60 MARSH HILL RD
Generator Mailing City/State/Zip:	06477
Generator Mailing Country:	USA
Special Handling:	Not reported
Discrepancies:	No
Date Shipped:	06/23/1999
Date Received:	06/28/1999
Last modified date:	04/26/2004
Last modified by:	IG
Comments:	Not reported

Waste:

Year:	1999
Manifest Id:	CTF0767999
Waste Occurence:	1

SOUTHERN CT GAS CO (Continued) **S109747648**

UNNA:	2672
Hazard Class:	8
US Dot Description:	ammonia solution
No of Containers:	001
Container Type:	DF
Quantity:	1
Weight/Volume:	G
Additional Description:	Not reported
Handling Code:	Not reported
Date Record Was Last Modified:	2004-04-26 00:00:00
DEO Who Last Modified Record:	IG
EPA Waste Code:	D002
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-26 00:00:00

EPA Waste Code:	D002
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-26 00:00:00

EPA Waste Code:	D006
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-26 00:00:00

Year:	1999
Manifest Id:	CTF0767999
Waste Occurence:	2
UNNA:	3266
Hazard Class:	8
US Dot Description:	corrosive liquid basic, inorganic nos
No of Containers:	001
Container Type:	DF
Quantity:	1
Weight/Volume:	G
Additional Description:	Not reported
Handling Code:	Not reported
Date Record Was Last Modified:	2004-04-26 00:00:00
DEO Who Last Modified Record:	IG
EPA Waste Code:	D002
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-26 00:00:00

EPA Waste Code:	D002
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-26 00:00:00

EPA Waste Code:	D006
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-26 00:00:00

Year:	1999
Manifest Id:	CTF0767999
Waste Occurence:	3
UNNA:	3077
Hazard Class:	9
US Dot Description:	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
No of Containers:	001
Container Type:	DF

SOUTHERN CT GAS CO (Continued) **S109747648**

Quantity:	50
Weight/Volume:	P
Additional Description:	Not reported
Handling Code:	Not reported
Date Record Was Last Modified:	2004-04-26 00:00:00
DEO Who Last Modified Record:	IG
EPA Waste Code:	D002
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-26 00:00:00

EPA Waste Code:	D002
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-26 00:00:00

EPA Waste Code:	D006
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-26 00:00:00

Detail:

Year:	1997
Manifest Id:	NYG0232155
EPA ID:	CTP000019506
TSDF EPA ID:	NYD082785429
TSDF Name:	CHEMICAL POLLUTION CONTROL
TSDF Address:	120 S 4TH ST
TSDF City,St,Zip:	BAY SHORE, NY 11706
TSDF Country:	USA
TSDF Telephone:	Not reported
Transport Date:	02/11/1997
Transporter EPA ID:	NYD082785429
Transporter Name:	CHEMICAL POLLUTION CONTROL
Transporter Address:	Not reported
Transporter City,St,Zip:	CT
Transporter Country:	USA
Transporter Phone:	Not reported
Trans 2 Date:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
Trans 2 Address:	Not reported
Trans 2 City,St,Zip:	CT
Trans 2 Country:	USA
Trans 2 Phone:	Not reported
Generator Phone:	Not reported
Generator Mailing Addr:	60 MARSH HILL RD
Generator Mailing City/State/Zip:	06477
Generator Mailing Country:	USA
Special Handling:	Not reported
Discrepancies:	Not reported
Date Shipped:	02/11/1997
Date Received:	Not reported
Last modified date:	04/26/2004
Last modified by:	IG
Comments:	Not reported

Waste:

SOUTHERN CT GAS CO (Continued) **S109747648**

Year:	1997
Manifest Id:	NYG0232155
Waste Occurence:	1
UNNA:	3090
Hazard Class:	9
US Dot Description:	WASTE LITHIUM BATT.
No of Containers:	001
Container Type:	DM
Quantity:	60
Weight/Volume:	P
Additional Description:	Not reported
Handling Code:	Not reported
Date Record Was Last Modified:	2004-04-26 00:00:00
DEO Who Last Modified Record:	IG
EPA Waste Code:	D003
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-26 00:00:00

D15 **CT SPILLS** **S108319097**
WSW **60 MARSH HILL RD.** **N/A**
< 1/8 **ORANGE, CT**
0.103 mi.
545 ft. **Site 5 of 8 in cluster D**

Relative:
Higher

Actual:
103 ft.

SPILLS:

Year of Database:	2006
Case Number:	200607432
Who Took Spill:	205
Assigned To:	0
Report Date:	11/22/2006
Report Time:	11:43:31
Date Release:	11/22/2006
Time Responded:	10:00:00
Reported By:	Paul Alfonsi
Phone:	203 7957782
Representing:	Southern CT. Gas Company
Terminated:	YES
Recovd (Total):	0
Total (Water):	0
Facility Status:	CLOSED
Continuous Spill:	False
Released Substance:	HYDRAULIC OIL
Qty:	14 (Gallons)
Emergency Measure:	investigating at this time what to do, contracting out to Haley Aldrich.
Water Body:	Not reported
Discharger:	SAA
Telephone:	Not reported
Responsible Party:	YES
RP Address 1:	Not reported
RP City,St,Zip:	ORANGE, CT 06477
Historic:	False
Waterbody:	False
Time Stamp:	2006-11-30 15:05:44
Sr Inspector:	Cox, Michael
At Inspctor:	**NO RESPONSE
User Stamp:	mgranill

(Continued) **S108319097**

Comments:	Not reported
Agency ID:	DEP Dispatch
Other Agency:	Not reported
DEP Bureau:	Not reported
DEP Agency:	Not reported
Cause ID:	Other
Other Cause:	equipment failure
Media ID:	Inside Building
Other Media:	Not reported
Media ID:	Other
Other Media:	and under concrete pad
Class ID:	Commercial
Other Class:	Not reported
Release Type:	petroleum
Other Release:	Not reported
Waterbody:	Other
Other Wtrbody:	none

D16 **SOUTHERN CT GAS** **NY MANIFEST** **1009220349**
WSW **60 MARSH HILL RD** **N/A**
< 1/8 **ORANGE, CT 06477**
0.103 mi.
545 ft. **Site 6 of 8 in cluster D**

Relative:
Higher

Actual:
103 ft.

NY MANIFEST:

Country:	USA
EPA ID:	CTP000019506
Facility Status:	Not reported
Location Address 1:	60 MARSH HILL RD
Code:	BP
Location Address 2:	Not reported
Total Tanks:	Not reported
Location City:	ORANGE
Location State:	CT
Location Zip:	06477
Location Zip 4:	Not reported

NY MANIFEST:

EPAID:	CTP000019506
Mailing Name:	SOUTHERN CT GAS
Mailing Contact:	PAUL ALFONSI
Mailing Address 1:	60 MARSH HILL RD
Mailing Address 2:	Not reported
Mailing City:	ORANGE
Mailing State:	CT
Mailing Zip:	06477
Mailing Zip 4:	Not reported
Mailing Country:	USA
Mailing Phone:	2037957782

NY MANIFEST:

Document ID:	NYG0232155
Manifest Status:	C
seq:	Not reported
Year:	1997
Trans1 State ID:	PD9938
Trans2 State ID:	Not reported
Generator Ship Date:	02/11/1997

SOUTHERN CT GAS (Continued) **1009220349**

Trans1 Recv Date:	02/11/1997
Trans2 Recv Date:	/ /
TSD Site Recv Date:	02/11/1997
Part A Recv Date:	02/24/1997
Part B Recv Date:	02/24/1997
Generator EPA ID:	CTP000019506
Trans1 EPA ID:	NYD082785429
Trans2 EPA ID:	Not reported
TSDF ID 1:	NYD082785429
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D003 - NON-LISTED REACTIVE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00060
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100

D17 **SOUTHERN CONNECTICUT GAS COMPANY** **CT LUST** **S108304907**
WSW **60 MARSH HILL ROAD** **CT PROPERTY** **N/A**
< 1/8 **ORANGE, CT 06477** **CT SPILLS**
0.103 mi. **CT ENF**
545 ft. **Site 7 of 8 in cluster D** **CT MANIFEST**
CT NPDES

Relative:
Higher

LUST:

Actual:
103 ft.

LUST Id:	0
UST Facility Id:	11037
LUST Case Id:	60495
Lust Status:	Cleanup Initiated
Processing Status:	Not reported
EPA Reportable:	True
Motor Fuel:	True
Diesel:	True
Gasoline:	True
Other:	False
Other Release:	Not reported
No Release:	False
Leak:	False
Tank:	True

SOUTHERN CONNECTICUT GAS COMPANY (Continued) **S108304907**

Piping:	False
Overfill:	False
Removal:	True
Incident Date:	09/05/2013
Entry Date:	09/06/2013
Site Case Id:	201304737
UST Site Id:	0
Cost Recovery Spill Case #:	0
Old SITS Number:	0
Case Log Id:	0
Monthly Report Id:	0
UST Owner Id:	6385
LUST Owner Id:	Not reported
UST Event Id:	0
Contact Info:	Not reported
Contact EMail:	email@cttank.com
Site Contact City,St,Zip:	15, CT 06605
2nd Contact:	Sean Carroll (Haley & Aldrich, Inc.)
2nd Contact EMail:	Not reported
2nd Contact Address:	100 Corporate Place
2nd Contact City,St,Zip:	119, CT 06067
2nd Contact Address 2:	Suite 105
2nd Contact City 2:	Rocky Hill
2nd Contact Phone Number:	8602829400
2nd Contact Fax Number:	8607210612
2nd Contact Type:	Senior Engineer
Facility City Num:	107
Site Contact:	Connecticut Tank Removal
Site Contact Address:	118 Burr Court
Site Contact Add 2:	Not reported
Site Contact City 2:	Bridgeport
Site Contact Phone:	2033846020
Site Contact Fax:	Not reported
Site Contact Type:	Not reported
Department Contact 1:	Not reported
Department Contact 2:	Not reported
Referral Source:	Not reported
Offsite Source:	False
Date Referred:	Not reported
Emergency:	False
Private Heating Fuel:	False
Commercial Heating Fuel:	False
Commercial HF < 2100 Gal.:	False
Commercial HF > 2100 Gal.:	False
Commercial HF - Size Unk:	False
No LUST Site:	False
Cost Recvry Prgm Candidate:	False
OCSRD Complete:	False
Follow Up Flag:	False
Alternate Water Supply:	False
Relocation:	False
Responsible Party:	False
Responsible EMail:	Not reported
Resp Party Name:	The Southern Connecticut Gas Company
Resp Party Address:	60 Marsh Hill Road
Resp Party City,St,Zip:	Orange, CT 064773663
Resp Party Town Number:	107

SOUTHERN CONNECTICUT GAS COMPANY (Continued) **S108304907**

Resp Party Phone:	2033821111
Resp Party Fax:	Not reported
Resp Party Name 2:	Ken Quirke
Resp Party Address 2:	Not reported
Resp Party Phone 2:	Not reported
Investigator Id:	0
Follow Update:	Not reported
Area Lextent:	Not reported
Annual Precipitation:	Not reported
Affected Population:	Not reported
Population Setting:	Not reported
Ground Water Direction:	Not reported
Ground Water Gradient:	Not reported
Hydro Basin:	Not reported
Drastic:	Not reported
Geo Setting:	Not reported
Ground Water Classification:	GA
Receptor:	Not reported
Ground Water Flow Direction:	south-southwest
Ground Water Depth:	5 to 7 ftgb
Areas Of Concern:	Not reported
Free Product Inches:	0
Fund Date:	Not reported
Fund Planned:	No
Fund Obligated:	No
Fund Outlayed:	No
Fund Judgment:	No
Fund Recovered:	No
Cellar Borings:	False
Install Micro Wells:	False
Ground Water Sample:	False
Soil Sample:	True
Soil Gas:	False
Site Inspect:	False
Soil Excavate:	False
Geo Probe:	False
Survey:	False
Potable Well Sample:	False
Sample MWS:	False
Ground Water Gauging:	False
Soil Venting:	False
Active:	True
NOV Action:	None
NOV Issued:	Not reported
NOV Due:	Not reported
NOV Received:	Not reported
NOV Closed:	Not reported
NOV Disc Date:	Not reported
NOV Issued Date:	Not reported
NOV Compliance Sched:	Not reported
NOV Admin Order:	Not reported
NOV Referred To Ag:	Not reported
Stop All NOV Actions:	False
Release Invest Rpt:	False
DEP App Letter 1:	False
Correct Action Plan:	False
DEP App Letter 2:	False

SOUTHERN CONNECTICUT GAS COMPANY (Continued) **S108304907**

Rem Sys Install:	False
Rem Sys Install Date:	Not reported
Closure Date:	Not reported
Rem Sys Monitoring Rpt:	False
Qrtly Gwater Mon Rpts:	False
Closure Req Rpt:	False
DEP Closure Letter:	False
Referred To:	Not reported
No Wells:	0
Lph Wells:	0
User Stamp:	forresta/forresta
Date Stamp:	01/13/2015
Correspondence:	Not reported
Environmental Impact:	Not reported
FollowUp:	Not reported
GW Comments:	Not reported
Location Desc:	Surficial Geology: silty sand to sandy silt with traces of fine gravelBedrock Geology: har to very hard, medium to fine-grained schist Not reported
NOV Comments:	Not reported
Release Desc:	Not reported
Running Comments:	Spills Files, UST Enforcement Files, Remediation Files, and LUST FilesOpen LUST Cases:2013-04737
Work Performed:	Not reported

CT Property:

Seller Name:	Baker-Properties Limited Partnership
Buyer Name:	The Southern Connecticut Gas Company
Certifying Party:	The Southern Connecticut Gas Company
Certifying Attention Person:	Janet Janczewski
Title Of Certifying Person:	Senior Corp. Counsel
Certifying Person Address:	60 Marsh Hill Road
Certifying Person City,St,Zip:	Orange, CT 06477-3663
Property Transfer Forms:	Form III (DEP-PERD-PTP-203) when a discharge, spillage, uncontrolled loss, seepage or filtration of hazardous waste has occurred at the parcel that has not been fully remediated or the environmental conditions at the parcel are unknown. The person signing the Form III certification agrees to investigate and remediate the site in accordance with the remediation standards. The statute does not require completion of remediation before the parcel is transferred. Any person submitting a Form III shall simultaneously submit a completed Environmental Condition Assessment Form (ECAF)(DEP-PERD-PTP-200).
Date Recieved:	04/07/2008
Ackn Date:	04/21/2008
Determination Date:	07/24/2008
LEP Verified/DEP Approval Date:	Not reported
Rem Id:	8937
Remediation Location Id:	7977
Date Entered:	04/15/2008
Program:	Property Transfer Program
GAO Site:	False
Staff Full Name:	Ryan Santos
Super/Date:	04/21/2008
Stage Of Project:	Not reported
RP Level Of Activity:	Not reported
RP Needed Level Of Activity:	Not reported

SOUTHERN CONNECTICUT GAS COMPANY (Continued) **S108304907**

Staff Level Of Activity:	Not reported
Staff Needed Level Of Activity:	Not reported
Public Intrest:	Not reported
PRP Cooperation:	Not reported
Enforcement Status:	Not reported
Level Of Complexity:	Not reported
Complex Eng Or Sci:	False
Complex Due To Public Involvement:	False
Politically Complex:	False
Complex Enforcement:	False
Coordination With Other Bureaus:	False
EPA Involvement:	False
Staff Prefrence:	Not reported
Readiness For Transfer:	Not reported
Project Transfer Time:	Not reported
Transfer Comments:	Not reported
Staff As Of July 2000:	Not reported
Initial Staff:	Not reported
Type Of Transfer:	property
Salutation:	Ms. Janczewski
Relationship To Transfer:	transferee
Audit Date:	Not reported
Verif Type:	Not reported
Audit Outcome:	Not reported
GW:	GA/GB
Basin:	Not reported
1st Payment:	3000
Pay Tag1:	8027665069
2nd Payment:	Not reported
Pay Tag2:	Not reported
RTN:	Not reported
Revised:	Not reported
ECAF Received:	Not reported
Old Determination Date:	Not reported
Redeterminationdate:	Not reported
Previous Determination:	Not reported
Monitoringoption:	Not reported
Postremedialmonitoring:	Not reported
Schedule Of I/R:	Not reported
Schedule Overdue:	Not reported
Aprvl Sched:	2008-07-07 00:00:00
Yr 1 Report:	Not reported
Yr 2 Report:	Not reported
Report Overdue:	Not reported
Ext Aprvl Sched:	Not reported
License #:	Not reported
Project Phase:	Not reported
PT Comments:	Not reported
EPA Id Number:	Not reported
GW Class:	Not reported
SW Class:	Not reported
AO/C0:	Not reported
Water Lead(Y Or N):	Not reported
Priority:	Not reported
Project Status(A, I Or D):	Not reported
Last Updated:	Not reported
SR Comments:	Not reported

SOUTHERN CONNECTICUT GAS COMPANY (Continued) **S108304907**

Priority Or Work-Load:	Not reported
Status:	Not reported
Notes:	Not reported
Special Project Name:	Not reported
Special Project Comments:	Not reported
DOT Project:	Not reported
Pt Counter:	0
Project Complete:	False
Project Inactive:	False
Int Deposit #:	08-3537
Deposit #:	Not reported
Spill Case #:	Not reported
Diversion Id:	0
Public Notice:	Not reported
RAP Received:	Not reported
RAP Approved:	Not reported
Compliance Category:	Not reported
Delete Record:	False
ECAF Reviewed By:	Not reported
Not Locatable:	False
Primary Address:	True
AKA Site Name:	False
Primary Site Name:	True
AKA Site Address:	False
Lead:	LEP

SPILLS:

Year of Database:	2001
Case Number:	200109891
Who Took Spill:	210
Assigned To:	0
Report Date:	11/21/2001
Report Time:	19:30:32
Date Release:	11/21/2001
Time Responded:	Not reported
Reported By:	bob wagner
Phone:	203 7957667
Representing:	SOUTHERN CT GAS COMPANY
Terminated:	YES
Recovd (Total):	0
Total (Water):	0
Facility Status:	closed
Continuous Spill:	False
Released Substance:	WHITE POWDER
Qty:	0 (Gallons)
Emergency Measure:	POSSIBILITY THAT THE SUBSTANCE WAS POWDER FROM CANDY, HOSPITAL INSTRUCTING CALLER TO ADVISE DEP O/C WP IN ALTOID TIN CONTAINER NO CREADITABILIY NO SAMPLE
Water Body:	NONE
Discharger:	Not reported
Telephone:	Not reported
Responsible Party:	Not reported
RP Address 1:	Not reported
RP City,St,Zip:	CT
Historic:	False
Waterbody:	False
Time Stamp:	2002-03-04 14:42:21

SOUTHERN CONNECTICUT GAS COMPANY (Continued) **S108304907**

Sr Inspector: holyfield, steve
At Inspctor: **NO RESPONSE
User Stamp: Not reported
Comments: Not reported
Action: Referred
Other Action: Not reported
Agency ID: Local Police
Other Agency: Not reported
DEP Bureau: Not reported
DEP Agency: Not reported
Agency ID: DEP Dispatch
Other Agency: Not reported
DEP Bureau: Not reported
DEP Agency: Not reported
Agency ID: Other
Other Agency: LOCAL HEALTHCARE FACILITY
DEP Bureau: Not reported
DEP Agency: Not reported
Cause ID: Other
Other Cause: UNKNOWN
Media ID: Air
Other Media: Not reported
Class ID: Utility
Other Class: Not reported
Release Type: biomedical
Other Release: Not reported
Waterbody: Other
Other Wtrbody: NONE

Year of Database: 2012
Case Number: 201202911
Who Took Spill: 205
Assigned To: 0
Report Date: 06/08/2012
Report Time: 12:42:09
Date Release: 06/08/2012
Time Responded: 12:00:00
Reported By: Arnold Koehler
Phone: 203 5256623
Representing: SLM
Terminated: YES
Recovd (Total): 0
Total (Water): 0
Facility Status: CLOSED
Continuous Spill: False
Released Substance: HYDRAULIC OIL
Qty: 5 (Gallons)
Emergency Measure: Speedi dry
Water Body: n/a
Discharger: saa
Telephone: Not reported
Responsible Party: YES
RP Address 1: Not reported
RP City,St,Zip: CT
Historic: False
Waterbody: False
Time Stamp: 2012-06-13 12:54:38

SOUTHERN CONNECTICUT GAS COMPANY (Continued) **S108304907**

Sr Inspector: Cox, Michael
At Inspctor: **NO RESPONSE
User Stamp: GranilloM
Comments: Not reported
Action: Contained
Other Action: Not reported
Action: Contracted
Other Action: Not reported
Action: Other
Other Action: MCVAC
Agency ID: DEP Dispatch
Other Agency: Not reported
DEP Bureau: Not reported
DEP Agency: Not reported
Cause ID: Hose Failure
Other Cause: Not reported
Media ID: Ground Surface
Other Media: Not reported
Class ID: Industrial
Other Class: Not reported
Release Type: petroleum
Other Release: Not reported
Waterbody: Other
Other Wtrbody: none

Year of Database: 2013
Case Number: 201304737
Who Took Spill: 208
Assigned To: 0
Report Date: 09/05/2013
Report Time: 11:46:14
Date Release: 09/05/2013
Time Responded: Not reported
Reported By: ken quirke
Phone: 203 6239214
Representing: southern ct gas
Terminated: Not reported
Recovd (Total): 0
Total (Water): 0
Facility Status: CLOSED
Continuous Spill: False
Released Substance: DIESEL FUEL
Qty: 0 (Gallons)
Emergency Measure: 10000 g lust. CT Tank removing tank
Water Body: Not reported
Discharger: Not reported
Telephone: Not reported
Responsible Party: Not reported
RP Address 1: Not reported
RP City,St,Zip: CT
Historic: False
Waterbody: False
Time Stamp: 2013-09-06 14:03:52
Sr Inspector: Monarca, Vincent
At Inspctor: **NO RESPONSE
User Stamp: GuzmanCa
Comments: Not reported

SOUTHERN CONNECTICUT GAS COMPANY (Continued) **S108304907**

Action: Contracted
Other Action: Not reported
Agency ID: DEP Dispatch
Other Agency: Not reported
DEP Bureau: Not reported
DEP Agency: Not reported
Cause ID: Transfer Line Failure
Other Cause: Not reported
Media ID: Ground Surface
Other Media: Not reported
Class ID: Commercial
Other Class: Not reported
Release Type: petroleum
Other Release: Not reported

Year of Database: 2013
Case Number: 201306783
Who Took Spill: 205
Assigned To: 0
Report Date: 12/24/2013
Report Time: 08:58:44
Date Release: 12/24/2013
Time Responded: 08:24:00
Reported By: ken quirke
Phone: 203 6239214
Representing: southern ct gas
Terminated: Not reported
Recovd (Total): 0
Total (Water): 0
Facility Status: CLOSED
Continuous Spill: False
Released Substance: MOTOR OIL
Qty: 7 (Gallons)
Emergency Measure: Not reported
Water Body: n/a
Discharger: saa
Telephone: Not reported
Responsible Party: YES
RP Address 1: Not reported
RP City,St,Zip: CT
Historic: False
Waterbody: False
Time Stamp: 2013-12-26 11:13:46
Sr Inspector: Cox, Michael
At Inspctor: **NO RESPONSE
User Stamp: GuzmanCa
Comments: Not reported
Action: Contracted
Other Action: Not reported
Action: Other
Other Action: ct tank
Agency ID: DEP Dispatch
Other Agency: Not reported
DEP Bureau: Not reported
DEP Agency: Not reported
Cause ID: Container Failure
Other Cause: Not reported

SOUTHERN CONNECTICUT GAS COMPANY (Continued) **S108304907**

Media ID: Ground Surface
Other Media: Not reported
Class ID: Commercial
Other Class: Not reported
Release Type: petroleum
Other Release: Not reported
Waterbody: Other
Other Wtrbody: none

Year of Database: 2015
Case Number: 201502144
Who Took Spill: 204
Assigned To: 0
Report Date: 05/08/2015
Report Time: 15:38:49
Date Release: 05/08/2015
Time Responded: Not reported
Reported By: paul slawski
Phone: 860 4282446
Representing: Self
Terminated: YES
Recovd (Total): 0
Total (Water): 0
Facility Status: CLOSED
Continuous Spill: False
Released Substance: MOTOR OIL
Qty: 3 (Gallons)
Emergency Measure: Not reported
Water Body: Not reported
Discharger: Not reported
Telephone: Not reported
Responsible Party: Not reported
RP Address 1: Not reported
RP City,St,Zip: CT
Historic: False
Waterbody: False
Time Stamp: 2015-05-11 17:35:35
Sr Inspector: therrien, adam
At Inspctor: **NO RESPONSE
User Stamp: Guzmanca
Comments: Not reported
Action: Contracted
Other Action: Not reported
Action: Other
Other Action: ctr
Agency ID: DEP Dispatch
Other Agency: Not reported
DEP Bureau: Not reported
DEP Agency: Not reported
Cause ID: Container Failure
Other Cause: Not reported
Media ID: Ground Surface
Other Media: Not reported
Class ID: Commercial
Other Class: Not reported
Release Type: petroleum
Other Release: Not reported

SOUTHERN CONNECTICUT GAS COMPANY (Continued) **S108304907**

ENFORCEMENT:

Enforcement Action ID:	NVAR1662810143
Enforcement Type Code:	Notice Of Violation
Program Id:	Not reported
Enforcement Action Date:	10/22/2010
Penalty Amount:	$0.00
Sep Amt:	Not reported
Bureau Name:	Air Management
Program:	Air Enforcement
Status:	Not reported
Date of Discovery:	Not reported
Resolution Date:	Not reported
Resolution Type:	Not reported
Staff:	Algier Mark A
ENF Action Comment:	22a-174-22(k)(1)
Number Violations:	Not reported
Civil Penalty:	Not reported
SEP Description:	Not reported
Associated EIs:	Not reported
Client Affiliation Type:	Not reported
Affiliation Name:	Not reported
Affiliation Address Line1:	Not reported
Affiliation Address Line2:	Not reported
Affiliation City/State/Zip:	Not reported
Contact Title:	MGR. ENVIRON.
Contact Name:	PAUL ALFONSI
Contact EMail:	Not reported

CT MANIFEST:

Detail:

Year:	2001
Manifest Id:	CTF0961898
EPA ID:	CTP000022438
TSDF EPA ID:	CTD002593887
TSDF Name:	BRIDGEPORT UNITED RECYCLE (HITCHCOCK)
TSDF Address:	50 CROSS ST
TSDF City,St,Zip:	BRIDGEPORT, CT 06608
TSDF Country:	USA
TSDF Telephone:	Not reported
Transport Date:	01/11/2001
Transporter EPA ID:	CTD021816889
Transporter Name:	UNITED OIL RECOVERY INC
Transporter Address:	Not reported
Transporter City,St,Zip:	CT
Transporter Country:	USA
Transporter Phone:	Not reported
Trans 2 Date:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
Trans 2 Address:	Not reported
Trans 2 City,St,Zip:	CT
Trans 2 Country:	USA
Trans 2 Phone:	Not reported
Generator Phone:	Not reported
Generator Mailing Addr:	60 MARSH HILL RD
Generator Mailing City/State/Zip:	06477

SOUTHERN CONNECTICUT GAS COMPANY (Continued) **S108304907**

Generator Mailing Country: USA
Special Handling: Not reported
Discrepancies: No
Date Shipped: 01/11/2001
Date Received: 01/12/2001
Last modified date: 04/27/2004
Last modified by: IG
Comments: Not reported

Waste:
Year: 2001
Manifest Id: CTF0961898
Waste Occurence: 1
UNNA: 1230
Hazard Class: 3
US Dot Description: METHYL,METHANOL
No of Containers: 008
Container Type: DM
Quantity: 440
Weight/Volume: G
Additional Description: Not reported
Handling Code: Not reported
Date Record Was Last Modified: 2004-04-27 00:00:00
DEO Who Last Modified Record: IG
EPA Waste Code: D001
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

EPA Waste Code: D001
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

EPA Waste Code: D002
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

EPA Waste Code: D006
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

Year: 2001
Manifest Id: CTF0961898
Waste Occurence: 2
UNNA: 1993
Hazard Class: 3
US Dot Description: FLAMMABLE LIQUID N.O.S.
No of Containers: 001
Container Type: DM
Quantity: 55
Weight/Volume: G
Additional Description: Not reported
Handling Code: Not reported
Date Record Was Last Modified: 2004-04-27 00:00:00
DEO Who Last Modified Record: IG
EPA Waste Code: D001
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

SOUTHERN CONNECTICUT GAS COMPANY (Continued) **S108304907**

EPA Waste Code: D001
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

EPA Waste Code: D002
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

EPA Waste Code: D006
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

Year: 2001
Manifest Id: CTF0961898
Waste Occurence: 3
UNNA: 2794
Hazard Class: 8
US Dot Description: WASTE BATTERY WET FILLED WITH ACID
No of Containers: 001
Container Type: DF
Quantity: 35
Weight/Volume: P
Additional Description: Not reported
Handling Code: Not reported
Date Record Was Last Modified: 2004-04-27 00:00:00
DEO Who Last Modified Record: IG
EPA Waste Code: D001
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

EPA Waste Code: D001
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

EPA Waste Code: D002
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

EPA Waste Code: D006
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

Year: 2001
Manifest Id: CTF0961898
Waste Occurence: 4
UNNA: 3077
Hazard Class: 9
US Dot Description: ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
No of Containers: 001
Container Type: DF
Quantity: 3
Weight/Volume: G
Additional Description: Not reported
Handling Code: Not reported
Date Record Was Last Modified: 2004-04-27 00:00:00
DEO Who Last Modified Record: IG
EPA Waste Code: D001

SOUTHERN CONNECTICUT GAS COMPANY (Continued) **S108304907**

Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

EPA Waste Code: D001
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

EPA Waste Code: D002
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

EPA Waste Code: D006
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

NPDES:

Town Id: Not reported
Company Name: Not reported
Permit Number: GVM000037
Permit Issued Date: 01/26/2011
Permit Expiration Date: 01/23/2021
Application Received Date: Not reported
Affiliation Type: Permittee
Permit EI Type: Vehicle Maintenance Wastewater-GP
App Id: 201100318
Site Address Description: Not reported
Site Address Line 2: Not reported
Permit Description: Not reported
Status: Active
Affiliate Address Line 1: 60 MARSH HILL RD
Affiliate Address Line 2: Not reported
Affiliate City/State/Zip: ORANGE, CT 06477-3624
Contact Name: PAUL ALFONSI
Contact Title: MGR. ENVIRON.
Contact EMail: Not reported

Town Id: Not reported
Company Name: Not reported
Permit Number: CTMIU0024
Permit Issued Date: 05/02/2014
Permit Expiration Date: 10/30/2018
Application Received Date: Not reported
Affiliation Type: Registrant
Permit EI Type: Miscellaneous Sewer Discharges-GP
App Id: 201401410
Site Address Description: Not reported
Site Address Line 2: Not reported
Permit Description: PERMIT RENEWAL #GMI000129
Status: Active
Affiliate Address Line 1: 60 MARSH HILL RD
Affiliate Address Line 2: Not reported
Affiliate City/State/Zip: ORANGE, CT 06477-3624
Contact Name: Kenneth Quirke
Contact Title: Not reported
Contact EMail: kenneth.quirke@uinet.com

D18
WSW
< 1/8
0.103 mi.
545 ft.

60 MARSH HILL RD
ORANGE, CT

Site 8 of 8 in cluster D

CT SPILLS **S117540588**
N/A

Relative:
Higher

Actual:
103 ft.

SPILLS:

Year of Database:	2015
Case Number:	201500431
Who Took Spill:	208
Assigned To:	0
Report Date:	01/28/2015
Report Time:	14:49:12
Date Release:	01/28/2015
Time Responded:	Not reported
Reported By:	ken quirke
Phone:	203 6239214
Representing:	United Illuminating
Terminated:	YES
Recovd (Total):	0
Total (Water):	0
Facility Status:	CLOSED
Continuous Spill:	False
Released Substance:	HYDRAULIC OIL
Qty:	1 (Gallons)
Emergency Measure:	sanded
Water Body:	Not reported
Discharger:	Not reported
Telephone:	Not reported
Responsible Party:	Not reported
RP Address 1:	Not reported
RP City,St,Zip:	CT
Historic:	False
Waterbody:	False
Time Stamp:	2015-01-28 14:49:45
Sr Inspector:	Monarca, Vincent
At Inspctor:	**NO RESPONSE
User Stamp:	monarcav
Comments:	Not reported
Action:	Sanded
Other Action:	Not reported
Agency ID:	DEP Dispatch
Other Agency:	Not reported
DEP Bureau:	Not reported
DEP Agency:	Not reported
Cause ID:	MV Accident
Other Cause:	Not reported
Media ID:	Ground Surface
Other Media:	Not reported
Class ID:	Utility
Other Class:	Not reported
Release Type:	petroleum
Other Release:	Not reported

E19
NNW
< 1/8
0.122 mi.
643 ft.

Relative:
Higher

Actual:
89 ft.

CT SPILLS **S107455582**
N/A

125 FRONTAGE RD BEHIND ALARM GUARD
ORANGE, CT

Site 1 of 2 in cluster E

SPILLS:

Year of Database:	1999
Case Number:	9902372
Who Took Spill:	936
Assigned To:	0
Report Date:	04/14/1999
Report Time:	09:25:26
Date Release:	04/14/1999
Time Responded:	Not reported
Reported By:	pat watson
Phone:	203 3871878
Representing:	Self
Terminated:	YES
Recovd (Total):	0
Total (Water):	0
Facility Status:	Closed
Continuous Spill:	False
Released Substance:	NO RELASE
Qty:	0 (Gallons)
Emergency Measure:	investigated by 921 3 drums non-haz / no-spill/drums properly covered
Water Body:	none
Discharger:	none
Telephone:	Not reported
Responsible Party:	Not reported
RP Address 1:	Not reported
RP City,St,Zip:	CT
Historic:	False
Waterbody:	False
Time Stamp:	1999-04-15 09:32:17
Sr Inspector:	Wofford, Ron
At Inspctor:	**NO RESPONSE
User Stamp:	Not reported
Comments:	Not reported
Action:	Other
Other Action:	investigated
Action:	Investigated
Other Action:	Not reported
Agency ID:	DEP Dispatch
Other Agency:	Not reported
DEP Bureau:	Not reported
DEP Agency:	Not reported
Cause ID:	Other
Other Cause:	no incident
Media ID:	Ground Surface
Other Media:	Not reported
Class ID:	Commercial
Other Class:	Not reported
Release Type:	other
Other Release:	non-haz no release
Waterbody:	Other
Other Wtrbody:	none

F20
West
< 1/8
0.123 mi.
652 ft.

Relative:
Higher

Actual:
93 ft.

ASEA BROWN BOVERI
88 MARSH HILL RD
ORANGE, CT 06477

Site 1 of 7 in cluster F

CT MANIFEST **S109726562**
N/A

CT MANIFEST:

Detail:

Year:	2008
Manifest Id:	004259617JJK
EPA ID:	CTD036183556
TSDF EPA ID:	NJD991291105
TSDF Name:	CLEAN EARTH OF NORTH JERSEY INC
TSDF Address:	105 JACOBUS AVE
TSDF City,St,Zip:	KEARNY, NJ 07032
TSDF Country:	USA
TSDF Telephone:	9733444004
Transport Date:	11/21/2008
Transporter EPA ID:	NJD054126164
Transporter Name:	FREEHOLD CARTAGE INC
Transporter Address:	PO BOX 5010
Transporter City,St,Zip:	FREEHOLD, NJ 07728
Transporter Country:	USA
Transporter Phone:	(732)462-1001
Trans 2 Date:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
Trans 2 Address:	Not reported
Trans 2 City,St,Zip:	CT
Trans 2 Country:	USA
Trans 2 Phone:	Not reported
Generator Phone:	4147853415
Generator Mailing Addr:	16250 W GLENDALE DR
Generator Mailing City/State/Zip:	53151
Generator Mailing Country:	USA
Special Handling:	Not reported
Discrepancies:	Not reported
Date Shipped:	11/21/2008
Date Received:	11/21/2008
Last modified date:	06/20/2012
Last modified by:	SB
Comments:	Not reported

Waste:

Year:	2008
Manifest Id:	004259617JJK
Waste Occurence:	1
UNNA:	Not reported
Hazard Class:	9
US Dot Description:	HAZARDOUS WASTE, SOLID, N.O.S.
No of Containers:	1
Container Type:	CM
Quantity:	20
Weight/Volume:	Y
Additional Description:	Not reported
Handling Code:	Not reported
Date Record Was Last Modified:	2011-07-07 00:00:00
DEO Who Last Modified Record:	IR

ASEA BROWN BOVERI (Continued) **S109726562**

EPA Waste Code: F001
Recycled Waste?: False
Date Record Was Last Modified: 2011-07-07 00:00:00

Detail:
Year: 1990
Manifest Id: CTC0311266
EPA ID: CTD036183556
TSDF EPA ID: CTD072138969
TSDF Name: ENVIRONMENTAL WASTE RESOURCES INC
TSDF Address: 130 FREIGHT ST
TSDF City,St,Zip: WATERBURY, CT 06702
TSDF Country: USA
TSDF Telephone: Not reported
Transport Date: 05/15/1990
Transporter EPA ID: CTD072138969
Transporter Name: ENVIRONMENTAL WASTE RESOURCES INC
Transporter Address: Not reported
Transporter City,St,Zip: CT
Transporter Country: USA
Transporter Phone: Not reported
Trans 2 Date: Not reported
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
Trans 2 Address: Not reported
Trans 2 City,St,Zip: CT
Trans 2 Country: USA
Trans 2 Phone: Not reported
Generator Phone: 2037950811
Generator Mailing Addr: 88 MARSH HILL RD
Generator Mailing City/State/Zip: 06477
Generator Mailing Country: USA
Special Handling: Yes
Discrepancies: No
Date Shipped: 05/15/1990
Date Received: Not reported
Last modified date: 04/27/2004
Last modified by: IG
Comments: Not reported

Waste:
Year: 1990
Manifest Id: CTC0311266
Waste Occurence: 1
UNNA: 1993
Hazard Class: COMBUSTIBL
US Dot Description: WASTE COMBUSTIBLE LIQUID, NOS
No of Containers: 001
Container Type: DM
Quantity: 55
Weight/Volume: G
Additional Description: Y
Handling Code: Not reported
Date Record Was Last Modified: 2004-04-27 00:00:00
DEO Who Last Modified Record: IG

ASEA BROWN BOVERI (Continued) **S109726562**

EPA Waste Code: F003
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

EPA Waste Code: F001
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

EPA Waste Code: D008
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

Year: 1990
Manifest Id: CTC0311266
Waste Occurence: 2
UNNA: 1993
Hazard Class: COMBUSTIBL
US Dot Description: WASTE COMBUSTIBLE LIQUID, NOS
No of Containers: 001
Container Type: DM
Quantity: 55
Weight/Volume: G
Additional Description: Y
Handling Code: Not reported
Date Record Was Last Modified: 2004-04-27 00:00:00
DEO Who Last Modified Record: IG
EPA Waste Code: F003
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

EPA Waste Code: F001
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

EPA Waste Code: D008
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

Year: 1990
Manifest Id: CTC0311266
Waste Occurence: 3
UNNA: 9189
Hazard Class: ORM-E
US Dot Description: HAZARDOUS WASTE, NOS
No of Containers: 001
Container Type: DM
Quantity: 75
Weight/Volume: P
Additional Description: Y
Handling Code: Not reported
Date Record Was Last Modified: 2004-04-27 00:00:00
DEO Who Last Modified Record: IG
EPA Waste Code: F003
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

EPA Waste Code: F001

ASEA BROWN BOVERI (Continued) **S109726562**

Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

EPA Waste Code: D008
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

Detail:
Year: 1988
Manifest Id: CTC0198935
EPA ID: CTD036183556
TSDF EPA ID: CTD072138969
TSDF Name: ENVIRONMENTAL WASTE RESOURCES INC
TSDF Address: 130 FREIGHT ST
TSDF City,St,Zip: WATERBURY, CT 06702
TSDF Country: USA
TSDF Telephone: Not reported
Transport Date: 11/11/1988
Transporter EPA ID: CTD072138969
Transporter Name: ENVIRONMENTAL WASTE RESOURCES INC
Transporter Address: Not reported
Transporter City,St,Zip: CT
Transporter Country: USA
Transporter Phone: Not reported
Trans 2 Date: Not reported
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
Trans 2 Address: Not reported
Trans 2 City,St,Zip: CT
Trans 2 Country: USA
Trans 2 Phone: Not reported
Generator Phone: 2037950811
Generator Mailing Addr: 88 MARSH HILL RD
Generator Mailing City/State/Zip: 06477
Generator Mailing Country: USA
Special Handling: Yes
Discrepancies: No
Date Shipped: 10/24/1988
Date Received: 11/11/1988
Last modified date: 04/27/2004
Last modified by: IG
Comments: Not reported

Waste:
Year: 1988
Manifest Id: CTC0198935
Waste Occurence: 1
UNNA: 1993
Hazard Class: COMBUSTIBL
US Dot Description: WASTE COMBUSTIBLE LIQUID
No of Containers: 001
Container Type: DM
Quantity: 55
Weight/Volume: G
Additional Description: Y

ASEA BROWN BOVERI (Continued) **S109726562**

Handling Code:	T01
Date Record Was Last Modified:	2004-04-27 00:00:00
DEO Who Last Modified Record:	IG
EPA Waste Code:	F001
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-27 00:00:00

EPA Waste Code:	F001
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-27 00:00:00

Year:	1988
Manifest Id:	CTC0198935
Waste Occurence:	2
UNNA:	1993
Hazard Class:	FLAMMABLE
US Dot Description:	WASTE FLAMMABLE LIQUID NOS
No of Containers:	002
Container Type:	DM
Quantity:	110
Weight/Volume:	G
Additional Description:	Y
Handling Code:	S02
Date Record Was Last Modified:	2004-04-27 00:00:00
DEO Who Last Modified Record:	IG
EPA Waste Code:	F001
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-27 00:00:00

EPA Waste Code:	F001
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-27 00:00:00

Detail:

Year:	1987
Manifest Id:	MAC230094
EPA ID:	CTD036183556
TSDF EPA ID:	MAD019371079
TSDF Name:	GENERAL CHEMICAL CORP
TSDF Address:	133 LELAND ST
TSDF City,St,Zip:	FRAMINGHAM, MA 01701
TSDF Country:	USA
TSDF Telephone:	Not reported
Transport Date:	08/31/1987
Transporter EPA ID:	CTD055310759
Transporter Name:	HUBBARD HALL INC
Transporter Address:	Not reported
Transporter City,St,Zip:	CT
Transporter Country:	USA
Transporter Phone:	Not reported
Trans 2 Date:	09/02/1987
Trans 2 EPA ID:	MAD019371079
Trans 2 Name:	GENERAL CHEMICAL CORPORATION,
Trans 2 Address:	Not reported
Trans 2 City,St,Zip:	CT
Trans 2 Country:	USA

ASEA BROWN BOVERI (Continued) **S109726562**

Trans 2 Phone:	Not reported
Generator Phone:	2037950811
Generator Mailing Addr:	88 MARSH HILL RD
Generator Mailing City/State/Zip:	06477
Generator Mailing Country:	USA
Special Handling:	No
Discrepancies:	No
Date Shipped:	08/31/1987
Date Received:	09/08/1987
Last modified date:	04/27/2004
Last modified by:	IG
Comments:	Not reported

Waste:

Year:	1987
Manifest Id:	MAC230094
Waste Occurence:	1
UNNA:	9189
Hazard Class:	ORM-E
US Dot Description:	HAZARDOUS WASTE LIQUID NOS
No of Containers:	002
Container Type:	DM
Quantity:	110
Weight/Volume:	G
Additional Description:	Y
Handling Code:	S01
Date Record Was Last Modified:	2004-04-27 00:00:00
DEO Who Last Modified Record:	IG
EPA Waste Code:	F001
Recycled Waste?:	False
Date Record Was Last Modified:	2004-04-27 00:00:00

F21 **FORMER ABB INDUSTRIALSYSTEMS FAC** **CT PROPERTY** **S108301217**
West **88 MARSH HILL RD** **CT LWDS** **N/A**
< 1/8 **ORANGE, CT 06477** **CT MANIFEST**
0.123 mi. **CT NPDES**
652 ft. **Site 2 of 7 in cluster F**

Relative: Higher

Actual: 93 ft.

CT Property:

Seller Name:	ABB Industrial Systems, Inc.
Buyer Name:	Halepas Realty, Inc.
Certifying Party:	ABB Environmental Services, Inc.
Certifying Attention Person:	Kenneth W. Campbell
Title Of Certifying Person:	Principal Project Manager
Certifying Person Address:	511 Congress Street
Certifying Person City,St,Zip:	Portland, ME 04101
Property Transfer Forms:	Form III (DEP-PERD-PTP-203) when a discharge, spillage, uncontrolled loss, seepage or filtration of hazardous waste has occurred at the parcel that has not been fully remediated or the environmental conditions at the parcel are unknown. The person signing the Form III certification agrees to investigate and remediate the site in accordance with the remediation standards. The statute does not require completion of remediation before the parcel is transferred. Any person submitting a Form III shall simultaneously submit a completed Environmental Condition Assessment Form (ECAF)(DEP-PERD-PTP-200).

FORMER ABB INDUSTRIALSYSTEMS FAC (Continued) **S108301217**

Date Recieved:	11/12/1997
Ackn Date:	11/26/1997
Determination Date:	01/14/1998
LEP Verified/DEP Approval Date:	Not reported
Rem Id:	3643
Remediation Location Id:	238
Date Entered:	Not reported
Program:	Property Transfer Program
GAO Site:	False
Staff Full Name:	Tom Riscassi
Super/Date:	Not reported
Stage Of Project:	Not reported
RP Level Of Activity:	Not reported
RP Needed Level Of Activity:	Not reported
Staff Level Of Activity:	Not reported
Staff Needed Level Of Activity:	Not reported
Public Intrest:	Not reported
PRP Cooperation:	Not reported
Enforcement Status:	Not reported
Level Of Complexity:	Not reported
Complex Eng Or Sci:	False
Complex Due To Public Involvement:	False
Politically Complex:	False
Complex Enforcement:	False
Coordination With Other Bureaus:	False
EPA Involvement:	False
Staff Prefrence:	Not reported
Readiness For Transfer:	Not reported
Project Transfer Time:	Not reported
Transfer Comments:	Not reported
Staff As Of July 2000:	Robinson Rob
Initial Staff:	RHR
Type Of Transfer:	Not reported
Salutation:	Not reported
Relationship To Transfer:	transferor/sister company
Audit Date:	Not reported
Verif Type:	Not reported
Audit Outcome:	Not reported
GW:	GB
Basin:	Not reported
1st Payment:	2000
Pay Tag1:	Not reported
2nd Payment:	Not reported
Pay Tag2:	Not reported
RTN:	Not reported
Revised:	Not reported
ECAF Received:	Not reported
Old Determination Date:	LEP-98/01/14
Redeterminationdate:	Not reported
Previous Determination:	Not reported
Monitoringoption:	Not reported
Postremedialmonitoring:	Not reported
Schedule Of I/R:	02/27/1998
Schedule Overdue:	1998-07-13 00:00:00
Aprvl Sched:	Not reported
Yr 1 Report:	2004-01-28 00:00:00
Yr 2 Report:	Not reported

FORMER ABB INDUSTRIALSYSTEMS FAC (Continued) **S108301217**

Report Overdue:	Not reported
Ext Aprvl Sched:	Not reported
License #:	Not reported
Project Phase:	Not reported
PT Comments:	Portion verification
EPA Id Number:	Not reported
GW Class:	Not reported
SW Class:	Not reported
AO/C0:	Not reported
Water Lead(Y Or N):	Not reported
Priority:	Not reported
Project Status(A, I Or D):	Not reported
Last Updated:	Not reported
SR Comments:	Not reported
Priority Or Work-Load:	Not reported
Status:	Not reported
Notes:	Not reported
Special Project Name:	Not reported
Special Project Comments:	Not reported
DOT Project:	Not reported
Pt Counter:	Not reported
Project Complete:	False
Project Inactive:	False
Int Deposit #:	Not reported
Deposit #:	Not reported
Spill Case #:	Not reported
Diversion Id:	Not reported
Public Notice:	Not reported
RAP Received:	2008-09-10 00:00:00
RAP Approved:	Not reported
Compliance Category:	Not reported
Delete Record:	False
ECAF Reviewed By:	Not reported
Not Locatable:	False
Primary Address:	True
AKA Site Name:	False
Primary Site Name:	True
AKA Site Address:	False
Lead:	LEP

LWDS:

Leachate and Wastewater Number:	5000071
Status of the Discharge Activity:	Inactive
Leachate and Waste Flow:	Ground
Alias:	Aba Und Systems
Alias2:	Not reported

CT MANIFEST:

Detail:

Year:	1996
Manifest Id:	CTF0530779A
EPA ID:	CTD990851917
TSDF EPA ID:	Not reported
TSDF Name:	Not reported
TSDF Address:	Not reported
TSDF City,St,Zip:	Not reported

FORMER ABB INDUSTRIALSYSTEMS FAC (Continued) **S108301217**

TSDF Country:	USA
TSDF Telephone:	Not reported
Transport Date:	Not reported
Transporter EPA ID:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City,St,Zip:	CT
Transporter Country:	USA
Transporter Phone:	Not reported
Trans 2 Date:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
Trans 2 Address:	Not reported
Trans 2 City,St,Zip:	CT
Trans 2 Country:	USA
Trans 2 Phone:	Not reported
Generator Phone:	Not reported
Generator Mailing Addr:	88 MARSH HILL RD
Generator Mailing City/State/Zip:	Not reported
Generator Mailing Country:	USA
Special Handling:	Not reported
Discrepancies:	Not reported
Date Shipped:	10/04/1996
Date Received:	Not reported
Last modified date:	04/26/2004
Last modified by:	IG
Comments:	Not reported

NPDES:

Town Id:	Not reported
Company Name:	Not reported
Permit Number:	GGR001160
Permit Issued Date:	06/19/2008
Permit Expiration Date:	02/15/2018
Application Received Date:	Not reported
Affiliation Type:	Permittee
Permit EI Type:	Groundwater Remediation Wastewater To A Sanitary Sewer-GP
App Id:	200801422
Site Address Description:	Not reported
Site Address Line 2:	Not reported
Permit Description:	DISCHARGE OF GROUNDWATERREMEDIATION WASTEWATER TO A SANITARY SEWER
Status:	Active
Affiliate Address Line 1:	5 Waterside Xing
Affiliate Address Line 2:	Not reported
Affiliate City/State/Zip:	WINDSOR, CT 06095-1580
Contact Name:	KEITH KNAUERHASE
Contact Title:	Not reported
Contact EMail:	KEITH.R.KNAUERHASE@US.ABB.COM

F22
West
< 1/8
0.123 mi.
652 ft.

A B B DRIVE
88 MARCH HILL RD
ORANGE, CT 06477

Site 3 of 7 in cluster F

CT MANIFEST **S109742744**
N/A

Relative:
Higher

Actual:
93 ft.

CT MANIFEST:

Detail:

Year:	1992
Manifest Id:	MAG234761
EPA ID:	CTP000013686
TSDF EPA ID:	MAD053452637
TSDF Name:	CLEAN HARBORS INC OF BRAINTREE
TSDF Address:	385 QUINCY AVE
TSDF City,St,Zip:	BRAINTREE, MA 02184
TSDF Country:	USA
TSDF Telephone:	Not reported
Transport Date:	06/26/1992
Transporter EPA ID:	MAD039322250
Transporter Name:	CLEAN HARBORS INC
Transporter Address:	Not reported
Transporter City,St,Zip:	CT
Transporter Country:	USA
Transporter Phone:	Not reported
Trans 2 Date:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
Trans 2 Address:	Not reported
Trans 2 City,St,Zip:	CT
Trans 2 Country:	USA
Trans 2 Phone:	Not reported
Generator Phone:	4147853200
Generator Mailing Addr:	88 MARCH HILL RD
Generator Mailing City/State/Zip:	06477
Generator Mailing Country:	USA
Special Handling:	Yes
Discrepancies:	No
Date Shipped:	06/26/1992
Date Received:	06/26/1992
Last modified date:	04/27/2004
Last modified by:	IG
Comments:	Not reported

Waste:

Year:	1992
Manifest Id:	MAG234761
Waste Occurence:	1
UNNA:	9189
Hazard Class:	ORM-E
US Dot Description:	HAZARDOUS WASTE SOLID, NOS
No of Containers:	001
Container Type:	DM
Quantity:	200
Weight/Volume:	P
Additional Description:	Y
Handling Code:	S01
Date Record Was Last Modified:	2004-04-27 00:00:00
DEO Who Last Modified Record:	IG

A B B DRIVE (Continued) **S109742744**

EPA Waste Code: F001
Recycled Waste?: False
Date Record Was Last Modified: 2004-04-27 00:00:00

F23 **ASEA BROWN BOVERI** **RCRA NonGen / NLR** **1000141763**
West **88 MARSH HILL RD** **NJ MANIFEST** **CTD036183556**
< 1/8 **ORANGE, CT 06477**
0.123 mi.
652 ft. **Site 4 of 7 in cluster F**

Relative:
Higher

Actual:
93 ft.

RCRA NonGen / NLR:
Date form received by agency: 02/10/1983
Facility name: ASEA BROWN BOVERI
Facility address: 88 MARSH HILL RD
ORANGE, CT 06477
EPA ID: CTD036183556
Mailing address: W GLENDALE DR
NEW BERLIN, WI 53151
Contact: JERRY ULATOWSKI
Contact address: 16250 W GLENDALE DR
NEW BERLIN, WI 53151
Contact country: US
Contact telephone: (414) 785-3415
Contact email: Not reported
EPA Region: 01
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: ZERO MAX INDUSTRIES INC
Owner/operator address: OWNERSTREET
OWNERCITY, CT 99999
Owner/operator country: Not reported
Owner/operator telephone: (203) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

ASEA BROWN BOVERI (Continued) **1000141763**

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

NJ MANIFEST:

EPA Id:	CTD036183556
Mail Address:	W GLENDALE DR
Mail City/State/Zip:	NEW BERLIN, WI 53151
Facility Phone:	Not reported
Emergency Phone:	Not reported
Contact:	JERRY ULATOWSKI
Comments:	Not reported
SIC Code:	Not reported
County:	CT009
Municipal:	Not reported
Previous EPA Id:	Not reported
Gen Flag:	Not reported
Trans Flag:	Not reported
TSDF Flag:	Not reported
Name Change:	Not reported
Date Change:	Not reported

Manifest:

Manifest Number:	004259617JJK
EPA ID:	CTD036183556
Date Shipped:	11/21/2008
TSDF EPA ID:	NJD991291105
Transporter EPA ID:	NJD054126164
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	11/21/2008
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported

ASEA BROWN BOVERI (Continued) **1000141763**

Date TSDF Received Waste:	11/21/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW BERLIN, WI 53151
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	F001
Hand Code:	H141
Quantity:	42940 P

Manifest Number:	004259620JJK
EPA ID:	CTD036183556
Date Shipped:	11/21/2008
TSDF EPA ID:	NJD991291105
Transporter EPA ID:	NJD054126164
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	11/21/2008
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	11/21/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported

ASEA BROWN BOVERI (Continued) **1000141763**

Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW BERLIN, WI 53151
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	F001
Hand Code:	H141
Quantity:	33480 P

Manifest Number:	004259625JJK
EPA ID:	CTD036183556
Date Shipped:	11/21/2008
TSDF EPA ID:	NJD991291105
Transporter EPA ID:	NJD054126164
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	11/21/2008
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	11/21/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW BERLIN, WI 53151
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	F001

ASEA BROWN BOVERI (Continued) **1000141763**

Hand Code:	H141
Quantity:	34500 P
Manifest Number:	004259619JJK
EPA ID:	CTD036183556
Date Shipped:	11/20/2008
TSDF EPA ID:	NJD991291105
Transporter EPA ID:	NJD054126164
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	11/20/2008
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	11/20/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW BERLIN, WI 53151
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	F001
Hand Code:	H141
Quantity:	35580 P
Manifest Number:	004259622JJK
EPA ID:	CTD036183556
Date Shipped:	11/19/2008
TSDF EPA ID:	NJD991291105
Transporter EPA ID:	NJD054126164
Transporter 2 EPA ID:	Not reported

ASEA BROWN BOVERI (Continued) **1000141763**

Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	11/19/2008
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	11/19/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW BERLIN, WI 53151
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	F001
Hand Code:	H141
Quantity:	35040 P

Manifest Number:	004259618JJK
EPA ID:	CTD036183556
Date Shipped:	11/20/2008
TSDF EPA ID:	NJD991291105
Transporter EPA ID:	NJD054126164
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	11/20/2008
Date Trans2 Transported Waste:	Not reported

ASEA BROWN BOVERI (Continued) **1000141763**

Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	11/20/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW BERLIN, WI 53151
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	F001
Hand Code:	H141
Quantity:	40740 P

Manifest Number:	004259623JJK
EPA ID:	CTD036183556
Date Shipped:	11/20/2008
TSDF EPA ID:	NJD991291105
Transporter EPA ID:	NJD054126164
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	11/20/2008
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	11/20/2008
TSDF EPA Facility Name:	Not reported

ASEA BROWN BOVERI (Continued) **1000141763**

QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW BERLIN, WI 53151
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	F001
Hand Code:	H141
Quantity:	40880 P

Manifest Number:	004259624JJK
EPA ID:	CTD036183556
Date Shipped:	11/21/2008
TSDF EPA ID:	NJD991291105
Transporter EPA ID:	NJD054126164
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	11/21/2008
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	11/21/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported

ASEA BROWN BOVERI (Continued) **1000141763**

Manifest Discrepancy Type: Not reported
Data Entry Number: Not reported
Was Load Rejected: NEW BERLIN, WI 53151
Reason Load Was Rejected: Not reported

Waste:
Manifest Year: Not reported
Waste Code: F001
Hand Code: H141
Quantity: 36820 P

Manifest Number: 004259626JJK
EPA ID: CTD036183556
Date Shipped: 11/24/2008
TSDF EPA ID: NJD991291105
Transporter EPA ID: NJD054126164
Transporter 2 EPA ID: Not reported
Transporter 3 EPA ID: Not reported
Transporter 4 EPA ID: Not reported
Transporter 5 EPA ID: Not reported
Transporter 6 EPA ID: Not reported
Transporter 7 EPA ID: Not reported
Transporter 8 EPA ID: Not reported
Transporter 9 EPA ID: Not reported
Transporter 10 EPA ID: Not reported
Date Trans1 Transported Waste: 11/24/2008
Date Trans2 Transported Waste: Not reported
Date Trans3 Transported Waste: Not reported
Date Trans4 Transported Waste: Not reported
Date Trans5 Transported Waste: Not reported
Date Trans6 Transported Waste: Not reported
Date Trans7 Transported Waste: Not reported
Date Trans8 Transported Waste: Not reported
Date Trans9 Transported Waste: Not reported
Date Trans10 Transported Waste: Not reported
Date TSDF Received Waste: 11/24/2008
TSDF EPA Facility Name: Not reported
QTY Units: Not reported
Transporter SEQ ID: Not reported
Transporter-1 Date: Not reported
Waste SEQ ID: Not reported
Waste Type Code 2: Not reported
Waste Type Code 3: Not reported
Waste Type Code 4: Not reported
Waste Type Code 5: Not reported
Waste Type Code 6: Not reported
Date Accepted: Not reported
Manifest Discrepancy Type: Not reported
Data Entry Number: Not reported
Was Load Rejected: NEW BERLIN, WI 53151
Reason Load Was Rejected: Not reported

Waste:
Manifest Year: Not reported
Waste Code: F001
Hand Code: H141
Quantity: 36580 P

F24
West
< 1/8
0.123 mi.
652 ft.

SIGMA INSTRUMENT INTERNATIONAL INSTR DIV
88 MARSH HILL RD
ORANGE, CT 06477

Site 5 of 7 in cluster F

RCRA NonGen / NLR
FINDS
ECHO

1000294743
CTD990851917

Relative:
Higher

Actual:
93 ft.

RCRA NonGen / NLR:

Date form received by agency:	08/18/1980
Facility name:	SIGMA INSTRUMENT INTERNATIONAL INSTR DIV
Facility address:	88 MARSH HILL RD ORANGE, CT 06477
EPA ID:	CTD990851917
Mailing address:	MARSH HILL RD ORANGE, CT 06477
Contact:	ALFRED POSEY
Contact address:	88 MARSH HILL RD ORANGE, CT 06477
Contact country:	US
Contact telephone:	(203) 795-4711
Contact email:	Not reported
EPA Region:	01
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	SIGMA INSTRUMENTS
Owner/operator address:	OWNERSTREET OWNERCITY, CT 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(203) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110002494131

Environmental Interest/Information System

SIGMA INSTRUMENT INTERNATIONAL INSTR DIV (Continued) **1000294743**

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Registry ID: 110005967953

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ECHO:

Envid:	1000294743
Registry ID:	110005967953
DFR URL:	http://echo.epa.gov/detailed_facility_report?fid=110005967953

Envid:	1000294743
Registry ID:	110002494131
DFR URL:	http://echo.epa.gov/detailed_facility_report?fid=110002494131

F25 **ABB INDUSTRIAL SYSTEMS, INC.** **CT RGA HWS** **S116040118**
West **88 MARSH HILL ROAD** **N/A**
< 1/8 **ORANGE, CT**
0.123 mi.
652 ft. **Site 6 of 7 in cluster F**

Relative:
Higher

Actual:
93 ft.

RGA HWS:

2010	ABB INDUSTRIAL SYSTEMS, INC.	88 MARSH HILL ROAD
2008	ABB INDUSTRIAL SYSTEMS, INC.	88 MARSH HILL ROAD
2007	ABB INDUSTRIAL SYSTEMS, INC.	88 MARSH HILL ROAD
2006	ABB INDUSTRIAL SYSTEMS, INC.	88 MARSH HILL ROAD
2005	ABB INDUSTRIAL SYSTEMS, INC.	88 MARSH HILL ROAD
2004	ABB INDUSTRIAL SYSTEMS, INC.	88 MARSH HILL ROAD

F26 **ABB INDUSTRIAL SYSTEMS, INC.** **SEMS-ARCHIVE** **1003862846**
West **88 MARSH HILL ROAD** **CT SHWS** **CTD983876293**
< 1/8 **ORANGE, CT 06477** **CT SDADB**
0.123 mi. **CT CPCS**
652 ft. **Site 7 of 7 in cluster F**

Relative:
Higher

Actual:
93 ft.

SEMS-ARCHIVE:

Site ID:	102267
EPA ID:	CTD983876293
Federal Facility:	N
NPL:	Not on the NPL
Non NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information

Following information was gathered from the prior CERCLIS update completed in 10/2013:
Site ID: 0102267

ABB INDUSTRIAL SYSTEMS, INC. (Continued) **1003862846**

Federal Facility: Not a Federal Facility
NPL Status: Not on the NPL
Non NPL Status: NFRAP-Site does not qualify for the NPL based on existing information

CERCLIS-NFRAP Site Contact Details:
Contact Sequence ID: 13325882.00000
Person ID: 13004278.00000

CERCLIS-NFRAP Assessment History:
Action: DISCOVERY
Date Started: / /
Date Completed: 09/05/90
Priority Level: Not reported

Action: ARCHIVE SITE
Date Started: / /
Date Completed: 12/11/91
Priority Level: Not reported

Action: PRELIMINARY ASSESSMENT
Date Started: / /
Date Completed: 12/11/91
Priority Level: NFRAP-Site does not qualify for the NPL based on existing information

SHWS:
State ID: 952
PTP Id Number: Not reported
WPC Number: Not reported
EPA ID: CTD983876293
PO Office: Not reported
Lat/Long: 41.2508/-73.0008
Location Method: UNK
Groundwater Class: Not reported
Surface Water Qualification: Not reported
Waste Category: CHLR VOC, CHLR SOLVENTS
Disposal Method: SPILL/DUMP, TO GROUND
Sample: False
Other Dept of Env. Protection: WASTE
Updated By: ROBINSON, R.
Update Program: PTP
Date Updated: 1/20/1998
Duplicate: False
Program: D&A
Inventory Date: 11/15/1991
On Inventory: True
Assessed: True
87 Group: Not reported
87 Origin: Not reported
On 87: False
Comments: ECAF FILED 11/12/97

Site Discovery and Assessment:
Facility ID: 952
Rem Master ID: 1001
PTP Id: Not reported

ABB INDUSTRIAL SYSTEMS, INC. (Continued) **1003862846**

WPC Number:	Not reported
Postal District:	Not reported
Latitude:	41.2508
Longitude:	-73.0008
Lat/Long Determined By:	UNK
Ground Water Quality Classification:	Not reported
Surface Water Quality Classification:	Not reported
Waste Type:	CHLR VOC, CHLR SOLVENTS
Disposal:	SPILL/DUMP, TO GROUND
Sample Data Available:	False
Updated By:	ROBINSON, R.
Update Program:	PTP
Updated:	1/20/1998
Date Created:	Not reported
Duplicate:	False

SDA Federal:

EPA CERCLIS Id:	Not reported
Number EPA RCRIS Id:	Not reported
Site on EPA's CERCLIS:	True
Site Archived from CERCLIS:	False
Archive Date:	Not reported
EPA's Removal at Site:	False
Deferred to another EPA Program:	False
EPA Env Priority Initiative Site:	False
Federal Facility:	False
Site on EPA's National Priority List:	False
Part of an NPL site:	False
RCRA Generator Status:	NOTI
RCRA Permit Status:	Not reported

SDA Referral:

Referral Id:	900
Source of referral:	RCRA
Date Received:	9/18/1990
Staff Assigned:	TARTARIS, S
Remediation Program:	PTP
Date dt_assigned:	4/19/1991
Remediation Complete Approved DEP/Verified by LEP:	11/15/1991
Outcome:	INVENTORY

SDA Remedial:

Remedial Id:	Not reported
PTP Id:	Not reported
Remediation Program:	Not reported
Remediation Program Entered:	Not reported
Staff Assigned:	Not reported
Remediation Program:	Not reported
Date dt_assign:	Not reported
Project Phase:	Not reported
Order issued:	Not reported
Order Number:	Not reported
Date order issued:	Not reported
Remedial Investigation Start:	Not reported
Remedial Investigation Completed:	Not reported
Remedial Design Start:	Not reported
Remedial Design complet:	Not reported
Remedial Action Start:	Not reported
Remedial Action Completed:	Not reported

ABB INDUSTRIAL SYSTEMS, INC. (Continued) **1003862846**

Date Oper/ maintenance Started:	Not reported
GW monitoring:	Not reported
Remediation complete Approved DEP/Verified by LEP:	Not reported

SDA Orders:

Order Id:	Not reported
Order Number:	Not reported
Date order issued:	Not reported
Staff Assigned:	Not reported
Type of Order:	Not reported
Order Respondent:	Not reported
Admin Appeal Date:	Not reported
Date of Admin Appeal Ruling:	Not reported
Date of Admin Appeal Ruling:	Not reported
Date of Final Order:	Not reported
Date of Court Appeal:	Not reported
Date of Court Ruling:	Not reported
Date of Court Ruling:	Not reported
Date Order Modified:	Not reported
Date Referred to AG:	Not reported
Judgement:	Not reported
Date of AGR judgement:	Not reported
Penalty assessed:	Not reported
Order Complete:	Not reported
In compliance:	Not reported
Comments:	Not reported

SDADB:

SDA Waste:

Waste Id:	5
Waste Type:	CHLR VOC
Description:	Chlorinated Volatile Organic Compounds

CPCS:

Site Type:	Sites
Lust Status code:	Not reported
Lust Status:	Not reported
PTP Form:	Not reported
Program:	-1
Comments:	Ecaf Filed 11/12/97
Site Type Definition:	Inventory of Hazardous Waste Disposal Sites

Site Type:	Projects
Lust Status code:	Not reported
Lust Status:	Not reported
PTP Form:	III
Program:	Property Transfer Program
Comments:	Projects
Site Type Definition:	Property Transfer Form III

G27
WNW
1/8-1/4
0.144 mi.
759 ft.

NORTHEAST ENTERPRISES
11 FRONTAGE ROAD
ORANGE, CT

Site 1 of 2 in cluster G

CT SDADB **S104254721**
N/A

Relative:
Higher

Actual:
101 ft.

Site Discovery and Assessment:

Facility ID:	1637
Rem Master ID:	1653
PTP Id:	Not reported
WPC Number:	Not reported
Postal District:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Lat/Long Determined By:	Not reported
Ground Water Quality Classification:	Not reported
Surface Water Quality Classification:	Not reported
Waste Type:	CHLR VOC
Disposal:	SPILL/DUMP
Sample Data Available:	False
Updated By:	NEZIANYA, C.
Update Program:	D&A
Updated:	9/29/1993
Date Created:	Not reported
Duplicate:	False

SDA Federal:

EPA CERCLIS Id:	Not reported
Number EPA RCRIS Id:	Not reported
Site on EPA's CERCLIS:	Not reported
Site Archived from CERCLIS:	Not reported
Archive Date:	Not reported
EPA's Removal at Site:	Not reported
Deferred to another EPA Program:	Not reported
EPA Env Priority Initiative Site:	Not reported
Federal Facility:	Not reported
Site on EPA's National Priority List:	Not reported
Part of an NPL site:	Not reported
RCRA Generator Status:	Not reported
RCRA Permit Status:	Not reported

SDA Referral:

Referral Id:	1509
Source of referral:	WATER
Date Received:	2/16/1994
Staff Assigned:	NEZIANYA, C.
Remediation Program:	D&A
Date dt_assigned:	Not reported
Remediation Complete Approved DEP/Verified by LEP:	Not reported
Outcome:	Not reported

SDA Remedial:

Remedial Id:	Not reported
PTP Id:	Not reported
Remediation Program:	Not reported
Remediation Program Entered:	Not reported
Staff Assigned:	Not reported
Remediation Program:	Not reported
Date dt_assign:	Not reported
Project Phase:	Not reported
Order issued:	Not reported

NORTHEAST ENTERPRISES (Continued) **S104254721**

Order Number:	Not reported
Date order issued:	Not reported
Remedial Investigation Start:	Not reported
Remedial Investigation Completed:	Not reported
Remedial Design Start:	Not reported
Remedial Design complet:	Not reported
Remedial Action Start:	Not reported
Remedial Action Completed:	Not reported
Date Oper/ maintenance Started:	Not reported
GW monitoring:	Not reported
Remediation complete Approved DEP/Verified by LEP:	Not reported

SDA Orders:

Order Id:	Not reported
Order Number:	Not reported
Date order issued:	Not reported
Staff Assigned:	Not reported
Type of Order:	Not reported
Order Respondent:	Not reported
Admin Appeal Date:	Not reported
Date of Admin Appeal Ruling:	Not reported
Date of Admin Appeal Ruling:	Not reported
Date of Final Order:	Not reported
Date of Court Appeal:	Not reported
Date of Court Ruling:	Not reported
Date of Court Ruling:	Not reported
Date Order Modified:	Not reported
Date Referred to AG:	Not reported
Judgement:	Not reported
Date of AGR judgement:	Not reported
Penalty assessed:	Not reported
Order Complete:	Not reported
In compliance:	Not reported
Comments:	Not reported

SDADB:

SDA Waste:

Waste Id:	5
Waste Type:	CHLR VOC
Description:	Chlorinated Volatile Organic Compounds

G28 **YALE UNIVERSTY WEST CAMPUS** **CT UST** **U002026312**
WNW **11 FRONTAGE RD** **N/A**
1/8-1/4 **ORANGE, CT 06477**
0.144 mi.
759 ft. **Site 2 of 2 in cluster G**

Relative:
Higher

Actual:
101 ft.

UST:

Facility State:	CT
Facility Id:	107-5811
Latitude:	41.252176
Longitude:	-72.999315

Contact:

Owner Name:	NORTHEAST ENTERPRISES
Owner Address:	288 ORANGE ST
Owner City/State/Zip:	NEW HAVEN, CT 065101716
Owner Phone:	(203) 787-7431

YALE UNIVERSTY WEST CAMPUS (Continued) **U002026312**

Owner Phone Ext: Not reported
Affiliation Type: Owner
Contact Name: Not reported
Contact Title: Not reported
Contact EMail: Not reported

Owner Name: NORTHEAST ENTERPRISES
Owner Address: 288 ORANGE ST
Owner City/State/Zip: NEW HAVEN, CT 065101716
Owner Phone: Not reported
Owner Phone Ext: Not reported
Affiliation Type: Registrant
Contact Name: Not reported
Contact Title: Not reported
Contact EMail: Not reported

Tank ID: A-1
Compartment ID: a
Tank Status: **Permanently Closed**
Tank Material: Asphalt Coated or Bare Steel
Secondary Material: Not reported
Capacity: 12000
Substance: Diesel
Date Installed: 01/01/1950
Date Last Used: 12/22/1998
Closure Status: **Tank was Removed From Ground**
Pipe Material: Bare Steel
Pipe Mode Description: Not reported
Spill Installed: Not reported
Overfill Installed: Not reported
Tank Latitude: 41.252530
Tank Longitude: -72.995950

Tank ID: B-4
Compartment ID: a
Tank Status: **Permanently Closed**
Tank Material: Asphalt Coated or Bare Steel
Secondary Material: Not reported
Capacity: 6000
Substance: Diesel
Date Installed: 07/01/1979
Date Last Used: 12/22/1998
Closure Status: **Tank was Removed From Ground**
Pipe Material: Bare Steel
Pipe Mode Description: Not reported
Spill Installed: Not reported
Overfill Installed: Not reported
Tank Latitude: 41.252530
Tank Longitude: -72.995950

E29
NNW
1/8-1/4
0.164 mi.
865 ft.

GENERAL ACCIDENT
137 FRONTAGE RD
ORANGE, CT 06477

Site 2 of 2 in cluster E

CT UST **U004009464**
N/A

Relative:
Higher

Actual:
80 ft.

UST:

Facility State:	CT
Facility Id:	107-5830
Latitude:	41.254211
Longitude:	-72.996986

Contact:

Owner Name:	GENERAL ACCIDENT INS. CO. OF AMERICA
Owner Address:	436 WALNUT ST
Owner City/State/Zip:	PHILADELPHIA, PA 191063703
Owner Phone:	(215) 625-1845
Owner Phone Ext:	Not reported
Affiliation Type:	Owner
Contact Name:	Not reported
Contact Title:	Not reported
Contact EMail:	Not reported

Owner Name:	GENERAL ACCIDENT INS. CO. OF AMERICA
Owner Address:	436 WALNUT ST
Owner City/State/Zip:	PHILADELPHIA, PA 191063703
Owner Phone:	Not reported
Owner Phone Ext:	Not reported
Affiliation Type:	Registrant
Contact Name:	Not reported
Contact Title:	Not reported
Contact EMail:	Not reported

Tank ID:	A
Compartment ID:	a
Tank Status:	**Permanently Closed**
Tank Material:	Asphalt Coated or Bare Steel
Secondary Material:	Not reported
Capacity:	10000
Substance:	Heating Oil(on-site consumption)
Date Installed:	04/01/1984
Date Last Used:	12/22/1998
Closure Status:	**Tank was Removed From Ground**
Pipe Material:	Bare Steel
Pipe Mode Description:	Not reported
Spill Installed:	Not reported
Overfill Installed:	Not reported
Tank Latitude:	41.253450
Tank Longitude:	-72.996660

30
South
1/8-1/4
0.188 mi.
991 ft.

ROEBIC LABORATORIES, INC.
25 CONNAIR RD
ORANGE, CT 06477

CT UST **1000494483**
CT PROPERTY **N/A**

Relative:
Lower

Actual:
68 ft.

UST:

Facility State:	CT
Facility Id:	107-11393
Latitude:	41.246371
Longitude:	-72.997799

Contact:

Owner Name:	B & R Realty
Owner Address:	25 CONNAIR RD
Owner City/State/Zip:	ORANGE, CT 064773601
Owner Phone:	(203) 795-1283
Owner Phone Ext:	Not reported
Affiliation Type:	Owner
Contact Name:	Not reported
Contact Title:	Not reported
Contact EMail:	Not reported

Owner Name:	B & R Realty
Owner Address:	25 CONNAIR RD
Owner City/State/Zip:	ORANGE, CT 064773601
Owner Phone:	Not reported
Owner Phone Ext:	Not reported
Affiliation Type:	Registrant
Contact Name:	Not reported
Contact Title:	Not reported
Contact EMail:	Not reported

Tank ID:	A1
Compartment ID:	a
Tank Status:	**Permanently Closed**
Tank Material:	Asphalt Coated or Bare Steel
Secondary Material:	Not reported
Capacity:	2000
Substance:	Gasoline
Date Installed:	Not reported
Date Last Used:	06/01/1979
Closure Status:	**Tank was Removed From Ground**
Pipe Material:	Bare Steel
Pipe Mode Description:	Not reported
Spill Installed:	Not reported
Overfill Installed:	Not reported
Tank Latitude:	Not reported
Tank Longitude:	Not reported

CT Property:

Seller Name:	Gibert Rebhun, etal
Buyer Name:	Stuart Bush
Certifying Party:	B & R Realty, LLC
Certifying Attention Person:	Stuart Bush
Title Of Certifying Person:	Manager
Certifying Person Address:	25 Connair Road
Certifying Person City,St,Zip:	Orange, CT 06477

ROEBIC LABORATORIES, INC. (Continued) **1000494483**

Property Transfer Forms:	Form III (DEP-PERD-PTP-203) when a discharge, spillage, uncontrolled loss, seepage or filtration of hazardous waste has occurred at the parcel that has not been fully remediated or the environmental conditions at the parcel are unknown. The person signing the Form III certification agrees to investigate and remediate the site in accordance with the remediation standards. The statute does not require completion of remediation before the parcel is transferred. Any person submitting a Form III shall simultaneously submit a completed Environmental Condition Assessment Form (ECAF)(DEP-PERD-PTP-200).
Date Recieved:	02/02/2008
Ackn Date:	04/17/2008
Determination Date:	07/24/2008
LEP Verified/DEP Approval Date:	Not reported
Rem Id:	8946
Remediation Location Id:	7982
Date Entered:	04/17/2008
Program:	Property Transfer Program
GAO Site:	False
Staff Full Name:	Ryan Santos
Super/Date:	04/18/2008
Stage Of Project:	Not reported
RP Level Of Activity:	Not reported
RP Needed Level Of Activity:	Not reported
Staff Level Of Activity:	Not reported
Staff Needed Level Of Activity:	Not reported
Public Intrest:	Not reported
PRP Cooperation:	Not reported
Enforcement Status:	Not reported
Level Of Complexity:	Not reported
Complex Eng Or Sci:	False
Complex Due To Public Involvement:	False
Politically Complex:	False
Complex Enforcement:	False
Coordination With Other Bureaus:	False
EPA Involvement:	False
Staff Prefrence:	Not reported
Readiness For Transfer:	Not reported
Project Transfer Time:	Not reported
Transfer Comments:	Not reported
Staff As Of July 2000:	Not reported
Initial Staff:	Not reported
Type Of Transfer:	real estate
Salutation:	Mr. Bush
Relationship To Transfer:	property owner
Audit Date:	Not reported
Verif Type:	Not reported
Audit Outcome:	Not reported
GW:	GA
Basin:	Not reported
1st Payment:	3000
Pay Tag1:	6034984
2nd Payment:	Not reported
Pay Tag2:	Not reported
RTN:	Not reported
Revised:	Not reported
ECAF Received:	Not reported

ROEBIC LABORATORIES, INC. (Continued) **1000494483**

Old Determination Date:	Not reported
Redeterminationdate:	Not reported
Previous Determination:	Not reported
Monitoringoption:	Not reported
Postremedialmonitoring:	Not reported
Schedule Of I/R:	Not reported
Schedule Overdue:	Not reported
Aprvl Sched:	2008-07-03 00:00:00
Yr 1 Report:	Not reported
Yr 2 Report:	Not reported
Report Overdue:	Not reported
Ext Aprvl Sched:	Not reported
License #:	Not reported
Project Phase:	Not reported
PT Comments:	Not reported
EPA Id Number:	Not reported
GW Class:	Not reported
SW Class:	Not reported
AO/C0:	Not reported
Water Lead(Y Or N):	Not reported
Priority:	Not reported
Project Status(A, I Or D):	Not reported
Last Updated:	Not reported
SR Comments:	Not reported
Priority Or Work-Load:	Not reported
Status:	Not reported
Notes:	Not reported
Special Project Name:	Not reported
Special Project Comments:	Not reported
DOT Project:	Not reported
Pt Counter:	0
Project Complete:	False
Project Inactive:	False
Int Deposit #:	Not reported
Deposit #:	Not reported
Spill Case #:	Not reported
Diversion Id:	0
Public Notice:	Not reported
RAP Received:	Not reported
RAP Approved:	Not reported
Compliance Category:	Not reported
Delete Record:	False
ECAF Reviewed By:	Not reported
Not Locatable:	False
Primary Address:	True
AKA Site Name:	False
Primary Site Name:	True
AKA Site Address:	False
Lead:	LEP

H31 **REXAM INDUSTRIES CORP.** **CT SDADB** **S104563354**
SSE **37 ROBINSON BOULEVARD** **N/A**
1/8-1/4 **ORANGE, CT**
0.188 mi.
994 ft. **Site 1 of 2 in cluster H**

Relative:
Lower

Actual:
30 ft.

Site Discovery and Assessment:

Facility ID:	4850
Rem Master ID:	4830
PTP Id:	1464
WPC Number:	Not reported
Postal District:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Lat/Long Determined By:	Not reported
Ground Water Quality Classification:	Not reported
Surface Water Quality Classification:	Not reported
Waste Type:	Not reported
Disposal:	Not reported
Sample Data Available:	False
Updated By:	Not reported
Update Program:	Not reported
Updated:	Not reported
Date Created:	Not reported
Duplicate:	False

SDA Federal:

EPA CERCLIS Id:	Not reported
Number EPA RCRIS Id:	Not reported
Site on EPA's CERCLIS:	Not reported
Site Archived from CERCLIS:	Not reported
Archive Date:	Not reported
EPA's Removal at Site:	Not reported
Deferred to another EPA Program:	Not reported
EPA Env Priority Initiative Site:	Not reported
Federal Facility:	Not reported
Site on EPA's National Priority List:	Not reported
Part of an NPL site:	Not reported
RCRA Generator Status:	Not reported
RCRA Permit Status:	Not reported

SDA Referral:

Referral Id:	5019
Source of referral:	PTP
Date Received:	12/7/1987
Staff Assigned:	Not reported
Remediation Program:	PTP
Date dt_assigned:	Not reported
Remediation Complete Approved DEP/Verified by LEP:	12/7/1987
Outcome:	PTP

SDA Remedial:

Remedial Id:	Not reported
PTP Id:	Not reported
Remediation Program:	Not reported
Remediation Program Entered:	Not reported
Staff Assigned:	Not reported
Remediation Program:	Not reported
Date dt_assign:	Not reported
Project Phase:	Not reported
Order issued:	Not reported

REXAM INDUSTRIES CORP. (Continued) **S104563354**

Order Number:	Not reported
Date order issued:	Not reported
Remedial Investigation Start:	Not reported
Remedial Investigation Completed:	Not reported
Remedial Design Start:	Not reported
Remedial Design complet:	Not reported
Remedial Action Start:	Not reported
Remedial Action Completed:	Not reported
Date Oper/ maintenance Started:	Not reported
GW monitoring:	Not reported
Remediation complete Approved DEP/Verified by LEP:	Not reported

SDA Orders:

Order Id:	Not reported
Order Number:	Not reported
Date order issued:	Not reported
Staff Assigned:	Not reported
Type of Order:	Not reported
Order Respondent:	Not reported
Admin Appeal Date:	Not reported
Date of Admin Appeal Ruling:	Not reported
Date of Admin Appeal Ruling:	Not reported
Date of Final Order:	Not reported
Date of Court Appeal:	Not reported
Date of Court Ruling:	Not reported
Date of Court Ruling:	Not reported
Date Order Modified:	Not reported
Date Referred to AG:	Not reported
Judgement:	Not reported
Date of AGR judgement:	Not reported
Penalty assessed:	Not reported
Order Complete:	Not reported
In compliance:	Not reported
Comments:	Not reported

H32 **LIGHT SOURCES LCD LIGHTING** **RCRA-LQG** **1000239215**
SSE **37 ROBINSON BLVD** **ICIS** **CTD983866187**
1/8-1/4 **ORANGE, CT 06477** **FINDS**
0.188 mi. **NJ MANIFEST**
994 ft. **Site 2 of 2 in cluster H** **NY MANIFEST**
ECHO

Relative:
Lower

Actual:
30 ft.

RCRA-LQG:

Date form received by agency:	02/18/2014
Facility name:	L C D LIGHTING INC
Facility address:	37 ROBINSON BLVD ORANGE, CT 06477
EPA ID:	CTD983866187
Mailing address:	ROBINSON BLVD ORANGE, CT 06477
Contact:	ROBERT MISKE
Contact address:	ROBINSON BLVD ORANGE, CT 06477
Contact country:	US
Contact telephone:	(203) 799-7877
Telephone ext.:	3066
Contact email:	BMISKE@LIGHT-SOURCES.COM
EPA Region:	01

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Land type: Private
Classification: Large Quantity Generator
Description: Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:
Owner/operator name: L C D LIGHTING INC
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/01/1997
Owner/Op end date: Not reported

Owner/operator name: CHRISTIAN SAUSKA
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/01/1997
Owner/Op end date: Not reported

Owner/operator name: CHRISTIAN L SAUSKA
Owner/operator address: ROBINSON BLVD
ORANGE, CT 06477
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/1997
Owner/Op end date: Not reported

Owner/operator name: CHRISTIAN SAUSKA
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/01/1977
Owner/Op end date: Not reported

Owner/operator name: CHRISTIAN SAUSKA

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Owner/operator address: ROBINSON BLVD
ORANGE, CT 06477
Owner/operator country: US
Owner/operator telephone: (203) 799-7877
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/1997
Owner/Op end date: Not reported

Owner/operator name: CHRISTIAN SAUSKA
Owner/operator address: 37 ROBINSON BLVD
ORANGE, CT 06477
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/1997
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D005
. Waste name: BARIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

. Waste code: U213
. Waste name: FURAN, TETRAHYDRO-(I) (OR) TETRAHYDROFURAN (I)

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Historical Generators:
Date form received by agency: 02/11/2012
Site name: L C D LIGHTING
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D005
. Waste name: BARIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: U112
. Waste name: ACETIC ACID, ETHYL ESTER (I) (OR) ETHYL ACETATE (I)

. Waste code: U159
. Waste name: 2-BUTANONE (I,T) (OR) METHYL ETHYL KETONE (MEK) (I,T)

. Waste code: U162
. Waste name: 2-PROPENOIC ACID, 2-METHYL-, METHYL ESTER (I,T) (OR) METHYL METHACRYLATE (I,T)

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

. Waste code: U220
. Waste name: BENZENE, METHYL- (OR) TOLUENE

. Waste code: U239
. Waste name: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

. Waste code: U359
. Waste name: ETHANOL, 2-ETHOXY- (OR) ETHYLENE GLYCOL MONOETHYL ETHER

Date form received by agency: 05/21/2010
Site name: L C D LIGHTING
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D005
. Waste name: BARIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D018
. Waste name: BENZENE

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

. Waste code: D040
. Waste name: TRICHLORETHYLENE

Date form received by agency: 09/04/2008
Site name: L C D LIGHTING
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D005
. Waste name: BARIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D018

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

. Waste name: BENZENE

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

. Waste code: D040
. Waste name: TRICHLORETHYLENE

Date form received by agency: 02/12/2008
Site name: LIGHT SOURCES INC
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D005
. Waste name: BARIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D018
. Waste name: BENZENE

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

. Waste code: D040
. Waste name: TRICHLORETHYLENE

Date form received by agency: 02/21/2006
Site name: LIGHT SOURCES INC
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D005
. Waste name: BARIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D018
. Waste name: BENZENE

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

. Waste code: D040
. Waste name: TRICHLORETHYLENE

Date form received by agency: 03/03/2004
Site name: LIGHT SOURCES INC
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D005
. Waste name: BARIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency: 02/10/2004
Site name: LIGHT SOURCES INC
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D005
. Waste name: BARIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

Date form received by agency: 02/21/2002

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Site name: LIGHT SOURCES INC
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D005
. Waste name: BARIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency: 02/21/2000
Site name: LIGHT SOURCES INC
Classification: Large Quantity Generator

Date form received by agency: 03/05/1998
Site name: LIGHT SOURCES INC
Classification: Large Quantity Generator

. Waste code: D000
. Waste name: Not Defined

. Waste code: D001
. Waste name: IGNITABLE WASTE

Biennial Reports:

Last Biennial Reporting Year: 2013

Annual Waste Handled:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Amount (Lbs): 25692

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Waste code:	D002
Waste name:	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Amount (Lbs):	6014
Waste code:	D005
Waste name:	BARIUM
Amount (Lbs):	5380
Waste code:	D008
Waste name:	LEAD
Amount (Lbs):	54500
Waste code:	D009
Waste name:	MERCURY
Amount (Lbs):	47800
Waste code:	D035
Waste name:	METHYL ETHYL KETONE
Amount (Lbs):	800
Waste code:	D039
Waste name:	TETRACHLOROETHYLENE
Amount (Lbs):	600
Waste code:	F003
Waste name:	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs):	800
Waste code:	F005
Waste name:	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs):	808
Waste code:	U112
Waste name:	ACETIC ACID ETHYL ESTER (I)
Amount (Lbs):	800

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Waste code: U159
Waste name: 2-BUTANONE (I,T)
Amount (Lbs): 800

Waste code: U162
Waste name: METHYL METHACRYLATE (I,T)
Amount (Lbs): 4

Waste code: U220
Waste name: BENZENE, METHYL-
Amount (Lbs): 800

Waste code: U239
Waste name: BENZENE, DIMETHYL- (I,T)
Amount (Lbs): 800

Waste code: U359
Waste name: ETHANOL, 2-ETHOXY-
Amount (Lbs): 8

Facility Has Received Notices of Violations:
Regulation violated: FR - 262.11
Area of violation: Generators - General
Date violation determined: 09/17/2002
Date achieved compliance: 11/14/2002
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 22a-449(c)-102(a)(2)(B)
Area of violation: Generators - Pre-transport
Date violation determined: 03/02/2001
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 262.34(a)(2)
Area of violation: Generators - Pre-transport
Date violation determined: 03/02/2001
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 265.52(e)
Area of violation: Generators - Pre-transport
Date violation determined: 03/23/1998
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: FIELD NOTICE OF VIOLATION
Enforcement action date: 03/23/1998
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 265.52(e)
Area of violation: Generators - Pre-transport
Date violation determined: 03/23/1998
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General Facility Standards
Date violation determined: 03/23/1998
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 22a-449(c)-102(a)(2)(B)
Area of violation: Generators - Pre-transport
Date violation determined: 03/23/1998
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 265.173(a)
Area of violation: Generators - Pre-transport
Date violation determined: 03/23/1998
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: FIELD NOTICE OF VIOLATION
Enforcement action date: 03/23/1998
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 265.53(b)
Area of violation: Generators - Pre-transport
Date violation determined: 03/23/1998
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 265.53(b)
Area of violation: Generators - Pre-transport
Date violation determined: 03/23/1998
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: FIELD NOTICE OF VIOLATION
Enforcement action date: 03/23/1998
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270.1(c)
Area of violation: TSD - General Facility Standards
Date violation determined: 03/23/1998
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 265.52(f)
Area of violation: Generators - Pre-transport
Date violation determined: 03/23/1998
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: FIELD NOTICE OF VIOLATION
Enforcement action date: 03/23/1998
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 262.11
Area of violation: Generators - General
Date violation determined: 03/23/1998
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 262.11
Area of violation: Generators - General
Date violation determined: 03/23/1998
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: FIELD NOTICE OF VIOLATION
Enforcement action date: 03/23/1998
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 262.34(a)(3)
Area of violation: Generators - Pre-transport
Date violation determined: 03/23/1998
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: FIELD NOTICE OF VIOLATION
Enforcement action date: 03/23/1998
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 262.34(a)(2)
Area of violation: Generators - Pre-transport
Date violation determined: 03/23/1998
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 22a-449(c)-102(a)(2)(B)
Area of violation: Generators - Pre-transport
Date violation determined: 03/23/1998
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: FIELD NOTICE OF VIOLATION
Enforcement action date: 03/23/1998
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General Facility Standards
Date violation determined: 03/23/1998
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: FIELD NOTICE OF VIOLATION
Enforcement action date: 03/23/1998
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 262.34(a)(2)
Area of violation: Generators - Pre-transport
Date violation determined: 03/23/1998
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: FIELD NOTICE OF VIOLATION
Enforcement action date: 03/23/1998
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 262.34(a)(3)
Area of violation: Generators - Pre-transport
Date violation determined: 03/23/1998
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 265.15(d)
Area of violation: Generators - Pre-transport
Date violation determined: 03/23/1998
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270.1(c)
Area of violation: TSD - General Facility Standards
Date violation determined: 03/23/1998
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: FIELD NOTICE OF VIOLATION
Enforcement action date: 03/23/1998
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 265.52(f)
Area of violation: Generators - Pre-transport
Date violation determined: 03/23/1998
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Paid penalty amount: Not reported

Regulation violated: FR - 265.173(a)
Area of violation: Generators - Pre-transport
Date violation determined: 03/23/1998
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 265.15(d)
Area of violation: Generators - Pre-transport
Date violation determined: 03/23/1998
Date achieved compliance: 03/02/2001
Violation lead agency: State
Enforcement action: FIELD NOTICE OF VIOLATION
Enforcement action date: 03/23/1998
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 04/10/2013
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 12/20/2007
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 09/17/2002
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Generators - General
Date achieved compliance: 11/14/2002
Evaluation lead agency: State

Evaluation date: 03/02/2001
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: 03/02/2001
Evaluation lead agency: State

Evaluation date: 03/02/2001
Evaluation: NOT A SIGNIFICANT NON-COMPLIER

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 03/23/1998
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General Facility Standards
Date achieved compliance: 03/02/2001
Evaluation lead agency: State

Evaluation date: 03/23/1998
Evaluation: SIGNIFICANT NON-COMPLIER
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 03/23/1998
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: 03/02/2001
Evaluation lead agency: State

Evaluation date: 03/23/1998
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 03/02/2001
Evaluation lead agency: State

ICIS:
Enforcement Action ID: 01-2009-9033
FRS ID: 110030399593
Program ID: BR CTD983866187
Action Name: LIGHT SOURCES INC
Full Address: 37 ROBINSON BLVD ORANGE CT 06477-3623
State: Connecticut
Facility Name: LIGHT SOURCES LCD LIGHTING
Facility Address: 37 ROBINSON BLVD
ORANGE, CT 06477-3623
Enforcement Action Type: EPCRA 325 Action For Penalty
Facility County: NEW HAVEN
EPA Region #: 1

Enforcement Action ID: 01-2009-9033
FRS ID: 110030399593
Program ID: EIS 9788311
Action Name: LIGHT SOURCES INC
Full Address: 37 ROBINSON BLVD ORANGE CT 06477-3623
State: Connecticut
Facility Name: LIGHT SOURCES LCD LIGHTING
Facility Address: 37 ROBINSON BLVD
ORANGE, CT 06477-3623
Enforcement Action Type: EPCRA 325 Action For Penalty
Facility County: NEW HAVEN
EPA Region #: 1

Enforcement Action ID: 01-2009-9033
FRS ID: 110030399593
Program ID: FRS 110030399593

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Action Name:	LIGHT SOURCES INC
Full Address:	37 ROBINSON BLVD ORANGE CT 06477-3623
State:	Connecticut
Facility Name:	LIGHT SOURCES LCD LIGHTING
Facility Address:	37 ROBINSON BLVD ORANGE, CT 06477-3623
Enforcement Action Type:	EPCRA 325 Action For Penalty
Facility County:	NEW HAVEN
EPA Region #:	1
Enforcement Action ID:	01-2009-9033
FRS ID:	110030399593
Program ID:	NEI NEICT00906477LGHTS37
Action Name:	LIGHT SOURCES INC
Full Address:	37 ROBINSON BLVD ORANGE CT 06477-3623
State:	Connecticut
Facility Name:	LIGHT SOURCES LCD LIGHTING
Facility Address:	37 ROBINSON BLVD ORANGE, CT 06477-3623
Enforcement Action Type:	EPCRA 325 Action For Penalty
Facility County:	NEW HAVEN
EPA Region #:	1
Enforcement Action ID:	01-2009-9033
FRS ID:	110030399593
Program ID:	TRIS 06477LGHTS37ROB
Action Name:	LIGHT SOURCES INC
Full Address:	37 ROBINSON BLVD ORANGE CT 06477-3623
State:	Connecticut
Facility Name:	LIGHT SOURCES LCD LIGHTING
Facility Address:	37 ROBINSON BLVD ORANGE, CT 06477-3623
Enforcement Action Type:	EPCRA 325 Action For Penalty
Facility County:	NEW HAVEN
EPA Region #:	1
Enforcement Action ID:	01-2009-9033
FRS ID:	110030399593
Program ID:	OSHA-OIS 980080168
Action Name:	LIGHT SOURCES INC
Full Address:	37 ROBINSON BLVD ORANGE CT 06477-3623
State:	Connecticut
Facility Name:	LIGHT SOURCES LCD LIGHTING
Facility Address:	37 ROBINSON BLVD ORANGE, CT 06477-3623
Enforcement Action Type:	EPCRA 325 Action For Penalty
Facility County:	NEW HAVEN
EPA Region #:	1
Enforcement Action ID:	01-2009-9033
FRS ID:	110030399593
Program ID:	RCRAINFO CTD983866187
Action Name:	LIGHT SOURCES INC
Full Address:	37 ROBINSON BLVD ORANGE CT 06477-3623
State:	Connecticut
Facility Name:	LIGHT SOURCES LCD LIGHTING
Facility Address:	37 ROBINSON BLVD

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

ORANGE, CT 06477-3623
Enforcement Action Type: EPCRA 325 Action For Penalty
Facility County: NEW HAVEN
EPA Region #: 1

Enforcement Action ID: 01-2009-9033
FRS ID: 110030399593
Program ID: SIMS 1530909
Action Name: LIGHT SOURCES INC
Full Address: 37 ROBINSON BLVD ORANGE CT 06477-3623
State: Connecticut
Facility Name: LIGHT SOURCES LCD LIGHTING
Facility Address: 37 ROBINSON BLVD
ORANGE, CT 06477-3623
Enforcement Action Type: EPCRA 325 Action For Penalty
Facility County: NEW HAVEN
EPA Region #: 1

Enforcement Action ID: 01-2009-9033
FRS ID: 110030399593
Program ID: OSHA-OIS 980020608
Action Name: LIGHT SOURCES INC
Full Address: 37 ROBINSON BLVD ORANGE CT 06477-3623
State: Connecticut
Facility Name: LIGHT SOURCES LCD LIGHTING
Facility Address: 37 ROBINSON BLVD
ORANGE, CT 06477-3623
Enforcement Action Type: EPCRA 325 Action For Penalty
Facility County: NEW HAVEN
EPA Region #: 1

Program ID: BR CTD983866187
Facility Name: LIGHT SOURCES LCD LIGHTING
Address: 37 ROBINSON BLVD
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: Not reported

Program ID: EIS 9788311
Facility Name: LIGHT SOURCES LCD LIGHTING
Address: 37 ROBINSON BLVD
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: Not reported

Program ID: FRS 110030399593
Facility Name: LIGHT SOURCES LCD LIGHTING
Address: 37 ROBINSON BLVD
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: Not reported

Program ID: NEI NEICT00906477LGHTS37

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Facility Name: LIGHT SOURCES LCD LIGHTING
Address: 37 ROBINSON BLVD
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: Not reported

Program ID: OSHA-OIS 980020608
Facility Name: LIGHT SOURCES LCD LIGHTING
Address: 37 ROBINSON BLVD
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: Not reported

Program ID: OSHA-OIS 980080168
Facility Name: LIGHT SOURCES LCD LIGHTING
Address: 37 ROBINSON BLVD
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: Not reported

Program ID: RCRAINFO CTD983866187
Facility Name: LIGHT SOURCES LCD LIGHTING
Address: 37 ROBINSON BLVD
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: Not reported

Program ID: SIMS 1530909
Facility Name: LIGHT SOURCES LCD LIGHTING
Address: 37 ROBINSON BLVD
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: Not reported

Program ID: TRIS 06477LGHTS37ROB
Facility Name: LIGHT SOURCES LCD LIGHTING
Address: 37 ROBINSON BLVD
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: Not reported

FINDS:

Registry ID: 110030399593

Environmental Interest/Information System
AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

AIR EMISSIONS CLASSIFICATION UNKNOWN

US EPA TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZARDOUS WASTE BIENNIAL REPORTER

Connecticut Site Information Management System (SIMS) is part of a suite of web-based applications designed to allow the Connecticut Department of Environmental Protection (DEP) staff to harmonize environmental interest information from disparate systems in a single agency-wide data repository (known as CFI). SIMS provides tools for identifying and resolving duplicate data, querying data (using both tabular and geospatial methods), and viewing/maintaining documents associated to the data.

AIR MINOR

NJ MANIFEST:

EPA Id:	CTD983866187
Mail Address:	37 ROBINSON BLV
Mail City/State/Zip:	NEW HAVEN, CT 06477
Facility Phone:	Not reported
Emergency Phone:	Not reported
Contact:	EARL F DIGIOIA
Comments:	Not reported
SIC Code:	Not reported
County:	CT009
Municipal:	Not reported
Previous EPA Id:	Not reported
Gen Flag:	Not reported
Trans Flag:	Not reported
TSDF Flag:	Not reported
Name Change:	Not reported
Date Change:	Not reported

Manifest:

Manifest Number:	000709641VES
EPA ID:	CTD983866187
Date Shipped:	10/29/2013

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

TSDF EPA ID:	NJD980536593
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	Not reported
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	Not reported
Generator EPA Facility Name:	LIGHT SOURCES INC
Transporter-1 EPA Facility Name:	VEOLIA ES TECHNICAL SOLUTIONS CORP
TSDF EPA Facility Name:	VEOLIA ES TECHNICAL SOLUTIONS LLC
QTY Units:	Pounds
Transporter SEQ ID:	Not reported
Transporter-1 Date:	10/29/2013
Waste SEQ ID:	1.00
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	10/30/2013
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW HAVEN, CT 06477
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	2013 New Jersey Manifest Data
Waste Code:	U213 D001
Hand Code:	Not reported
Quantity:	70.00 Pounds
Manifest Year:	2013 New Jersey Manifest Data
Waste Code:	D002
Hand Code:	Not reported
Quantity:	1.00 Pounds
Manifest Year:	2013 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	Not reported
Quantity:	20.00 Pounds
Manifest Number:	000368354VES

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

EPA ID:	CTD983866187
Date Shipped:	09/11/2009
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	09/11/2009
Date Trans2 Transported Waste:	09/16/2009
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	09/18/2009
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW HAVEN, CT 06477
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H141
Quantity:	100 P

Manifest Number:	000395551VES
EPA ID:	CTD983866187
Date Shipped:	1/14/2011
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	Not reported
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	Not reported
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW HAVEN, CT 06477
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H061
Quantity:	200.00 Pounds

Manifest Number:	000397475VES
EPA ID:	CTD983866187
Date Shipped:	4/11/2012
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	Not reported
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	Not reported
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW HAVEN, CT 06477
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001 D005
Hand Code:	Not reported
Quantity:	400.00 Pounds

Manifest Number:	000395805VES
EPA ID:	CTD983866187
Date Shipped:	1/31/2011
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	Not reported
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	Not reported
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW HAVEN, CT 06477
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H061
Quantity:	400.00 Pounds

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H061
Quantity:	400.00 Pounds

Manifest Number:	000402585VES
EPA ID:	CTD983866187
Date Shipped:	8/25/2011
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	Not reported
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	Not reported
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Manifest Discrepancy Type: Not reported
Data Entry Number: Not reported
Was Load Rejected: NEW HAVEN, CT 06477
Reason Load Was Rejected: Not reported

Waste:
Manifest Year: Not reported
Waste Code: D001
Hand Code: H141
Quantity: 20.00 Pounds

Manifest Number: 000368421VES
EPA ID: CTD983866187
Date Shipped: 08/17/2009
TSDF EPA ID: NJD980536593
Transporter EPA ID: NJD080631369
Transporter 2 EPA ID: NJD054126164
Transporter 3 EPA ID: Not reported
Transporter 4 EPA ID: Not reported
Transporter 5 EPA ID: Not reported
Transporter 6 EPA ID: Not reported
Transporter 7 EPA ID: Not reported
Transporter 8 EPA ID: Not reported
Transporter 9 EPA ID: Not reported
Transporter 10 EPA ID: Not reported
Date Trans1 Transported Waste: 08/17/2009
Date Trans2 Transported Waste: 08/24/2009
Date Trans3 Transported Waste: Not reported
Date Trans4 Transported Waste: Not reported
Date Trans5 Transported Waste: Not reported
Date Trans6 Transported Waste: Not reported
Date Trans7 Transported Waste: Not reported
Date Trans8 Transported Waste: Not reported
Date Trans9 Transported Waste: Not reported
Date Trans10 Transported Waste: Not reported
Date TSDF Received Waste: 08/28/2009
TSDF EPA Facility Name: Not reported
QTY Units: Not reported
Transporter SEQ ID: Not reported
Transporter-1 Date: Not reported
Waste SEQ ID: Not reported
Waste Type Code 2: Not reported
Waste Type Code 3: Not reported
Waste Type Code 4: Not reported
Waste Type Code 5: Not reported
Waste Type Code 6: Not reported
Date Accepted: Not reported
Manifest Discrepancy Type: Not reported
Data Entry Number: Not reported
Was Load Rejected: NEW HAVEN, CT 06477
Reason Load Was Rejected: Not reported

Waste:
Manifest Year: Not reported
Waste Code: D001
Hand Code: H141
Quantity: 400 P

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Manifest Number:	000395760VES
EPA ID:	CTD983866187
Date Shipped:	2/25/2011
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	Not reported
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	Not reported
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW HAVEN, CT 06477
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H061
Quantity:	400.00 Pounds

Manifest Number:	000264027VES
EPA ID:	CTD983866187
Date Shipped:	03/20/2009
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	03/20/2009
Date Trans2 Transported Waste:	03/26/2009
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	03/31/2009
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW HAVEN, CT 06477
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H141
Quantity:	60 P

Manifest Number:	000259624VES
EPA ID:	CTD983866187
Date Shipped:	05/02/2008
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	05/02/2008
Date Trans2 Transported Waste:	05/05/2008
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	05/06/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW HAVEN, CT 06477
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H061
Quantity:	400 P

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H141
Quantity:	200 P

Manifest Number:	000395806VES
EPA ID:	CTD983866187
Date Shipped:	1/31/2011
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	Not reported
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	Not reported

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW HAVEN, CT 06477
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H061
Quantity:	630.00 Pounds

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H061
Quantity:	400.00 Pounds

Manifest Number:	000260112VES
EPA ID:	CTD983866187
Date Shipped:	05/28/2008
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	05/28/2008
Date Trans2 Transported Waste:	05/29/2008
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	05/30/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW HAVEN, CT 06477
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H141
Quantity:	300 P

Manifest Number:	000037458VES
EPA ID:	CTD983866187
Date Shipped:	04/06/2010
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	04/06/2010
Date Trans2 Transported Waste:	04/09/2010
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	04/14/2010
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW HAVEN, CT 06477
Reason Load Was Rejected:	Not reported

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Waste:
Manifest Year: Not reported
Waste Code: D001
Hand Code: H141
Quantity: 180 P

Manifest Number: 000260398VES
EPA ID: CTD983866187
Date Shipped: 08/25/2008
TSDF EPA ID: NJD002454544
Transporter EPA ID: NJD080631369
Transporter 2 EPA ID: NJD054126164
Transporter 3 EPA ID: Not reported
Transporter 4 EPA ID: Not reported
Transporter 5 EPA ID: Not reported
Transporter 6 EPA ID: Not reported
Transporter 7 EPA ID: Not reported
Transporter 8 EPA ID: Not reported
Transporter 9 EPA ID: Not reported
Transporter 10 EPA ID: Not reported
Date Trans1 Transported Waste: 08/25/2008
Date Trans2 Transported Waste: 08/28/2008
Date Trans3 Transported Waste: Not reported
Date Trans4 Transported Waste: Not reported
Date Trans5 Transported Waste: Not reported
Date Trans6 Transported Waste: Not reported
Date Trans7 Transported Waste: Not reported
Date Trans8 Transported Waste: Not reported
Date Trans9 Transported Waste: Not reported
Date Trans10 Transported Waste: Not reported
Date TSDF Received Waste: 08/29/2008
TSDF EPA Facility Name: Not reported
QTY Units: Not reported
Transporter SEQ ID: Not reported
Transporter-1 Date: Not reported
Waste SEQ ID: Not reported
Waste Type Code 2: Not reported
Waste Type Code 3: Not reported
Waste Type Code 4: Not reported
Waste Type Code 5: Not reported
Waste Type Code 6: Not reported
Date Accepted: Not reported
Manifest Discrepancy Type: Not reported
Data Entry Number: Not reported
Was Load Rejected: NEW HAVEN, CT 06477
Reason Load Was Rejected: Not reported

Waste:
Manifest Year: Not reported
Waste Code: D001
Hand Code: H061
Quantity: 400 P

Manifest Year: Not reported
Waste Code: D001
Hand Code: H141

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Quantity:	90 P
Manifest Year:	Not reported
Waste Code:	D009
Hand Code:	H061
Quantity:	400 P
Manifest Number:	000709705VES
EPA ID:	CTD983866187
Date Shipped:	9/4/2013
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	NJD071629976
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	Not reported
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	Not reported
Generator EPA Facility Name:	LIGHT SOURCES INC
Transporter-1 EPA Facility Name:	SJ TRANSPORTATION COMPANY
TSDF EPA Facility Name:	VEOLIA ES TECHNICAL SOLUTIONS LLC
QTY Units:	Pounds
Transporter SEQ ID:	Not reported
Transporter-1 Date:	9/4/2013
Waste SEQ ID:	2.00
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	9/9/2013
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW HAVEN, CT 06477
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	2013 New Jersey Manifest Data
Waste Code:	D009
Hand Code:	Not reported
Quantity:	400.00 Pounds
Manifest Year:	2013 New Jersey Manifest Data

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Waste Code:	D001 D005
Hand Code:	Not reported
Quantity:	400.00 Pounds

Manifest Number:	000264284VES
EPA ID:	CTD983866187
Date Shipped:	11/11/2008
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	11/11/2008
Date Trans2 Transported Waste:	11/18/2008
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	11/19/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW HAVEN, CT 06477
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H141
Quantity:	180 P

Manifest Number:	000395761VES
EPA ID:	CTD983866187
Date Shipped:	2/25/2011
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	NJD080631369

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	Not reported
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	Not reported
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW HAVEN, CT 06477
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H141
Quantity:	2,800.00 Pounds

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H141
Quantity:	400.00 Pounds

Manifest Number:	000259506VES
EPA ID:	CTD983866187
Date Shipped:	01/24/2008
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	01/24/2008
Date Trans2 Transported Waste:	01/28/2008
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	01/29/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW HAVEN, CT 06477
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H141
Quantity:	50 P

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H061
Quantity:	400 P

Manifest Number:	000403337VES
EPA ID:	CTD983866187
Date Shipped:	07/07/2010
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	07/07/2010

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Date Trans2 Transported Waste:	07/12/2010
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	07/13/2010
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW HAVEN, CT 06477
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D009
Hand Code:	H061
Quantity:	400 P

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H061
Quantity:	400 P

Manifest Number:	000260004VES
EPA ID:	CTD983866187
Date Shipped:	06/23/2008
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	06/23/2008
Date Trans2 Transported Waste:	06/24/2008
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	06/25/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	NEW HAVEN, CT 06477
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H141
Quantity:	100 P

NY MANIFEST:

Country:	USA
EPA ID:	CTD983866187
Facility Status:	Not reported
Location Address 1:	37 ROBINSON BLVD
Code:	BP
Location Address 2:	Not reported
Total Tanks:	Not reported
Location City:	ORANGE
Location State:	CT
Location Zip:	06477
Location Zip 4:	3623

NY MANIFEST:

EPAID:	CTD983866187
Mailing Name:	LIGHT SOURCES INC
Mailing Contact:	JORGE ANDERSEN
Mailing Address 1:	PO BOX 948
Mailing Address 2:	Not reported
Mailing City:	ORANGE
Mailing State:	CT
Mailing Zip:	06477
Mailing Zip 4:	Not reported
Mailing Country:	USA
Mailing Phone:	2037997877

NY MANIFEST:

Document ID:	NYB8090154

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Manifest Status:	Not reported
seq:	01
Year:	2001
Trans1 State ID:	0440396ME
Trans2 State ID:	0463664ME
Generator Ship Date:	05/11/2001
Trans1 Recv Date:	05/11/2001
Trans2 Recv Date:	05/14/2001
TSD Site Recv Date:	05/14/2001
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	CTD983866187
Trans1 EPA ID:	NJD054126164
Trans2 EPA ID:	NJD054126164
TSDF ID 1:	NYD049836679
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	01750
Units:	P - Pounds
Number of Containers:	007
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	01.00

Document ID:	NYB8547651
Manifest Status:	C
seq:	Not reported
Year:	1997
Trans1 State ID:	18844A
Trans2 State ID:	Not reported
Generator Ship Date:	05/29/1997
Trans1 Recv Date:	05/29/1997
Trans2 Recv Date:	/ /
TSD Site Recv Date:	05/29/1997
Part A Recv Date:	06/10/1997
Part B Recv Date:	06/18/1997
Generator EPA ID:	CTD983866187
Trans1 EPA ID:	CTD983883745
Trans2 EPA ID:	Not reported
TSDF ID 1:	NY0000343889

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D009 - MERCURY 0.2 MG/L TCLP
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00600
Units:	P - Pounds
Number of Containers:	001
Container Type:	CW - Wooden boxes
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100

Document ID:	NYB8547723
Manifest Status:	C
seq:	Not reported
Year:	1997
Trans1 State ID:	18844A
Trans2 State ID:	Not reported
Generator Ship Date:	05/15/1997
Trans1 Recv Date:	05/15/1997
Trans2 Recv Date:	/ /
TSD Site Recv Date:	05/16/1997
Part A Recv Date:	05/23/1997
Part B Recv Date:	06/06/1997
Generator EPA ID:	CTD983866187
Trans1 EPA ID:	CTD983883745
Trans2 EPA ID:	Not reported
TSDF ID 1:	NY0000343889
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D009 - MERCURY 0.2 MG/L TCLP
Waste Code:	Not reported

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	01200
Units:	P - Pounds
Number of Containers:	002
Container Type:	CW - Wooden boxes
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Document ID:	NYB8547741
Manifest Status:	C
seq:	Not reported
Year:	1997
Trans1 State ID:	CT18844A
Trans2 State ID:	Not reported
Generator Ship Date:	05/01/1997
Trans1 Recv Date:	05/01/1997
Trans2 Recv Date:	/ /
TSD Site Recv Date:	05/01/1997
Part A Recv Date:	05/09/1997
Part B Recv Date:	05/23/1997
Generator EPA ID:	CTD983866187
Trans1 EPA ID:	CTD983883745
Trans2 EPA ID:	Not reported
TSDF ID 1:	NY0000343889
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D009 - MERCURY 0.2 MG/L TCLP
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	01200
Units:	P - Pounds
Number of Containers:	002
Container Type:	CW - Wooden boxes
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Document ID:	NYB8548452
Manifest Status:	K
seq:	Not reported
Year:	1997

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Trans1 State ID:	CT18844A
Trans2 State ID:	Not reported
Generator Ship Date:	06/05/1997
Trans1 Recv Date:	06/05/1997
Trans2 Recv Date:	/ /
TSD Site Recv Date:	06/05/1997
Part A Recv Date:	06/12/1997
Part B Recv Date:	07/25/1997
Generator EPA ID:	CTD983866187
Trans1 EPA ID:	CTD983883745
Trans2 EPA ID:	Not reported
TSDF ID 1:	NY0000343889
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D009 - MERCURY 0.2 MG/L TCLP
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	01950
Units:	P - Pounds
Number of Containers:	003
Container Type:	CW - Wooden boxes
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Document ID:	NYB8547732
Manifest Status:	C
seq:	Not reported
Year:	1997
Trans1 State ID:	18844-A
Trans2 State ID:	Not reported
Generator Ship Date:	05/08/1997
Trans1 Recv Date:	05/08/1997
Trans2 Recv Date:	/ /
TSD Site Recv Date:	05/08/1997
Part A Recv Date:	05/28/1997
Part B Recv Date:	05/28/1997
Generator EPA ID:	CTD983866187
Trans1 EPA ID:	CTD983883745
Trans2 EPA ID:	Not reported
TSDF ID 1:	NY0000343889
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D009 - MERCURY 0.2 MG/L TCLP
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	01000
Units:	P - Pounds
Number of Containers:	002
Container Type:	CW - Wooden boxes
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100

Document ID:	NYB8548479
Manifest Status:	K
seq:	Not reported
Year:	1997
Trans1 State ID:	CT18844A
Trans2 State ID:	Not reported
Generator Ship Date:	06/12/1997
Trans1 Recv Date:	06/12/1997
Trans2 Recv Date:	/ /
TSD Site Recv Date:	06/12/1997
Part A Recv Date:	06/27/1997
Part B Recv Date:	07/25/1997
Generator EPA ID:	CTD983866187
Trans1 EPA ID:	CTD983883745
Trans2 EPA ID:	Not reported
TSDF ID 1:	NY0000343889
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D009 - MERCURY 0.2 MG/L TCLP
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Waste Code:	Not reported
Quantity:	01500
Units:	P - Pounds
Number of Containers:	002
Container Type:	CW - Wooden boxes
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100

Document ID:	NYB8547687
Manifest Status:	K
seq:	Not reported
Year:	1997
Trans1 State ID:	18844A
Trans2 State ID:	Not reported
Generator Ship Date:	05/22/1997
Trans1 Recv Date:	05/22/1997
Trans2 Recv Date:	/ /
TSD Site Recv Date:	05/22/1997
Part A Recv Date:	06/05/1997
Part B Recv Date:	06/26/1997
Generator EPA ID:	CTD983866187
Trans1 EPA ID:	CTD983883745
Trans2 EPA ID:	Not reported
TSDF ID 1:	NY0000343889
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D009 - MERCURY 0.2 MG/L TCLP
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	01200
Units:	P - Pounds
Number of Containers:	002
Container Type:	CW - Wooden boxes
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100

Document ID:	NYB8547813
Manifest Status:	C
seq:	Not reported
Year:	1997
Trans1 State ID:	18844A
Trans2 State ID:	Not reported
Generator Ship Date:	04/24/1997

LIGHT SOURCES LCD LIGHTING (Continued) **1000239215**

Trans1 Recv Date:	04/24/1997
Trans2 Recv Date:	/ /
TSD Site Recv Date:	04/24/1997
Part A Recv Date:	05/05/1997
Part B Recv Date:	05/15/1997
Generator EPA ID:	CTD983866187
Trans1 EPA ID:	CTD983883745
Trans2 EPA ID:	Not reported
TSDF ID 1:	NY0000343889
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D009 - MERCURY 0.2 MG/L TCLP
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	01200
Units:	P - Pounds
Number of Containers:	002
Container Type:	CW - Wooden boxes
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100

ECHO:

Envid:	1000239215
Registry ID:	110030399593
DFR URL:	http://echo.epa.gov/detailed_facility_report?fid=110030399593

33
NE
1/8-1/4
0.196 mi.
1034 ft.

Relative:
Lower

Actual:
58 ft.

GHP MEDIA INC **RCRA-SQG** **1007117645**
475 HEFFERNAN DR **CTR000504050**
WEST HAVEN, CT 06516

RCRA-SQG:

Date form received by agency:	06/23/2011
Facility name:	GHP MEDIA INC
Facility address:	475 HEFFERNAN DR WEST HAVEN, CT 06516
EPA ID:	CTR000504050
Contact:	KAREN MCANDREW
Contact address:	475 HEFFERNAN DR WEST HAVEN, CT 06516
Contact country:	US

GHP MEDIA INC (Continued) **1007117645**

Contact telephone: (203) 479-7559
Contact email: KAREN.MCANDREW@GHPMECHA.COM
EPA Region: 01
Land type: Private
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: GHP MEDIA INC
Owner/operator address: 475 HEFFERNAN DRIVE
WEST HAVEN, CT 06516
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 06/26/2006
Owner/Op end date: Not reported

Owner/operator name: GIST HERLIN PRESS LLC
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 12/16/2003
Owner/Op end date: Not reported

Owner/operator name: JOHN ROBINSON
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 12/16/2003
Owner/Op end date: Not reported

Owner/operator name: GHP MEDIA INC
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 06/26/2001
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No

GHP MEDIA INC (Continued) **1007117645**

Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE WASTE

Historical Generators:
Date form received by agency: 06/08/2011
Site name: GHP MEDIA INC
Classification: Small Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

Date form received by agency: 02/19/2010
Site name: GHP MEDIA INC
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

Date form received by agency: 02/12/2008
Site name: GHP MEDIA INC
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

Date form received by agency: 08/03/2007
Site name: G H P
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

Date form received by agency: 02/24/2006
Site name: GIRT & HERLIN PRESS INC
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT

GHP MEDIA INC (Continued) **1007117645**

NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency: 12/12/2005
Site name: GIRT & HERLIN PRESS INC
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: F002
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency: 02/10/2004
Site name: GIST & HERLIN PRESS INC

GHP MEDIA INC (Continued) **1007117645**

Classification: Large Quantity Generator

. Waste code: MA01
. Waste name: WASTE OIL

. Waste code: MA99
. Waste name: NON-HAZARDOUS WASTE TO BE USED ONLY FOR NON-HW SHIPPED USING A HW MANIFEST

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: F002
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency: 01/06/2004
Site name: GIST & HERLIN PRESS INC
Classification: Large Quantity Generator

. Waste code: MA01
. Waste name: WASTE OIL

. Waste code: MA99
. Waste name: NON-HAZARDOUS WASTE TO BE USED ONLY FOR NON-HW SHIPPED USING A HW MANIFEST

. Waste code: D001
. Waste name: IGNITABLE WASTE

GHP MEDIA INC (Continued) **1007117645**

. Waste code: F002
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency: 12/23/2003
Site name: GIST HERLIN PRESS LLC
Classification: Large Quantity Generator

. Waste code: MA01
. Waste name: WASTE OIL

. Waste code: MA99
. Waste name: NON-HAZARDOUS WASTE TO BE USED ONLY FOR NON-HW SHIPPED USING A HW MANIFEST

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: F002
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

GHP MEDIA INC (Continued) **1007117645**

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - Pre-transport
Date violation determined: 12/15/2008
Date achieved compliance: 01/06/2009
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 265.16
Area of violation: Generators - Pre-transport
Date violation determined: 08/11/2005
Date achieved compliance: 09/07/2007
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 07/31/2006
Enf. disposition status: Action Satisfied (Case Closed)
Enf. disp. status date: 09/07/2007
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 13500
Paid penalty amount: 13500

Regulation violated: SR - 449(c)-102
Area of violation: Generators - Pre-transport
Date violation determined: 08/11/2005
Date achieved compliance: 09/07/2007
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 07/31/2006

GHP MEDIA INC (Continued) **1007117645**

Enf. disposition status: Action Satisfied (Case Closed)
Enf. disp. status date: 09/07/2007
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 13500
Paid penalty amount: 13500

Regulation violated: FR - 265.50-56
Area of violation: Generators - Pre-transport
Date violation determined: 08/11/2005
Date achieved compliance: 09/07/2007
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 11/08/2005
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 265.50-56
Area of violation: Generators - Pre-transport
Date violation determined: 08/11/2005
Date achieved compliance: 09/07/2007
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 07/31/2006
Enf. disposition status: Action Satisfied (Case Closed)
Enf. disp. status date: 09/07/2007
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 13500
Paid penalty amount: 13500

Regulation violated: SR - 449(c)-102
Area of violation: Generators - Pre-transport
Date violation determined: 08/11/2005
Date achieved compliance: 09/07/2007
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 11/08/2005
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 262.30-34
Area of violation: Generators - Pre-transport
Date violation determined: 08/11/2005
Date achieved compliance: 09/07/2007
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 07/31/2006
Enf. disposition status: Action Satisfied (Case Closed)

GHP MEDIA INC (Continued) **1007117645**

Enf. disp. status date: 09/07/2007
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 13500
Paid penalty amount: 13500

Regulation violated: FR - 262.30-34
Area of violation: Generators - Pre-transport
Date violation determined: 08/11/2005
Date achieved compliance: 09/07/2007
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 11/08/2005
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 449(c)-119
Area of violation: State Statute or Regulation
Date violation determined: 08/11/2005
Date achieved compliance: 09/07/2007
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 11/08/2005
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 449(c)-119
Area of violation: State Statute or Regulation
Date violation determined: 08/11/2005
Date achieved compliance: 09/07/2007
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 07/31/2006
Enf. disposition status: Action Satisfied (Case Closed)
Enf. disp. status date: 09/07/2007
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 13500
Paid penalty amount: 13500

Regulation violated: FR - 262.34(c)
Area of violation: Generators - Pre-transport
Date violation determined: 08/11/2005
Date achieved compliance: 09/07/2007
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 11/08/2005
Enf. disposition status: Not reported
Enf. disp. status date: Not reported

GHP MEDIA INC (Continued) **1007117645**

Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 265.15
Area of violation: Generators - Pre-transport
Date violation determined: 08/11/2005
Date achieved compliance: 09/07/2007
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 07/31/2006
Enf. disposition status: Action Satisfied (Case Closed)
Enf. disp. status date: 09/07/2007
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 13500
Paid penalty amount: 13500

Regulation violated: FR - 262.34(c)
Area of violation: Generators - Pre-transport
Date violation determined: 08/11/2005
Date achieved compliance: 09/07/2007
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 07/31/2006
Enf. disposition status: Action Satisfied (Case Closed)
Enf. disp. status date: 09/07/2007
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 13500
Paid penalty amount: 13500

Regulation violated: FR - 265.15
Area of violation: Generators - Pre-transport
Date violation determined: 08/11/2005
Date achieved compliance: 09/07/2007
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 11/08/2005
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 265.16
Area of violation: Generators - Pre-transport
Date violation determined: 08/11/2005
Date achieved compliance: 09/07/2007
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 11/08/2005
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State

GHP MEDIA INC (Continued) **1007117645**

Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 12/15/2008
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: 01/06/2009
Evaluation lead agency: State

Evaluation date: 07/31/2006
Evaluation: NOT A SIGNIFICANT NON-COMPLIER
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 11/08/2005
Evaluation: SIGNIFICANT NON-COMPLIER
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 08/11/2005
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: 09/07/2007
Evaluation lead agency: State

Evaluation date: 08/11/2005
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: State Statute or Regulation
Date achieved compliance: 09/07/2007
Evaluation lead agency: State

34
NW
1/8-1/4
0.211 mi.
1114 ft.

UNITED ILLUMINATING CO THE OPERATIONS CTR **RCRA-LQG** **1014950906**
100 MARSH HILL RD **FINDS** **CTR000511345**
ORANGE, CT 06477 **ECHO**

Relative:
Higher

Actual:
106 ft.

RCRA-LQG:
Date form received by agency: 01/29/2014
Facility name: UNITED ILLUMINATING CO
Facility address: 100 MARSH HILL RD
ORANGE, CT 06477
EPA ID: CTR000511345
Mailing address: MARSH HILL RD
ORANGE, CT 06477
Contact: SHAWN C CROSBIE
Contact address: MARSH HILL RD
ORANGE, CT 06477
Contact country: US
Contact telephone: (203) 926-4595
Contact email: SHAWN.CROSBIE@UINET.COM
EPA Region: 01
Land type: Private
Classification: Large Quantity Generator

UNITED ILLUMINATING CO THE OPERATIONS CTR (Continued) **1014950906**

Description: Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name: UNITED ILLUMINATING CO THE
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 08/01/2012
Owner/Op end date: Not reported

Owner/operator name: UNITED ILLUMINATING CO THE
Owner/operator address: MARSH HILL RD
ORANGE, CT 06477
Owner/operator country: US
Owner/operator telephone: (203) 499-3900
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 08/01/2012
Owner/Op end date: Not reported

Owner/operator name: UNITED ILLUMINATING CO THE
Owner/operator address: MARSH HILL RD
ORANGE, CT 06477
Owner/operator country: US
Owner/operator telephone: (203) 926-4595
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 06/01/2012
Owner/Op end date: Not reported

Owner/operator name: UNITED ILLUMINATING CO THE
Owner/operator address: MARSH HILL RD
ORANGE, CT 06477
Owner/operator country: US
Owner/operator telephone: (203) 926-4595
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 06/01/2012
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No

UNITED ILLUMINATING CO THE OPERATIONS CTR (Continued) **1014950906**

Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D008
. Waste name: LEAD

. Waste code: D018
. Waste name: BENZENE

Historical Generators:
Date form received by agency: 05/01/2012
Site name: UNITED ILLUMINATING CO
Classification: Large Quantity Generator

. Waste code: CR01
. Waste name: WASTE PCBs

. Waste code: CR02
. Waste name: WASTE OIL

. Waste code: CR03
. Waste name: WASTE WATER SOLUBLE OIL

. Waste code: CR04
. Waste name: WASTE CHEMICAL LIQUIDS

. Waste code: CR05
. Waste name: WASTE CHEMICAL SOLID

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D004
. Waste name: ARSENIC

. Waste code: D005
. Waste name: BARIUM

. Waste code: D006

UNITED ILLUMINATING CO THE OPERATIONS CTR (Continued) **1014950906**

. Waste name: CADMIUM

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D018
. Waste name: BENZENE

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 12/03/2014
Date achieved compliance: 12/03/2014
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - Pre-transport
Date violation determined: 12/03/2014
Date achieved compliance: 03/10/2015
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 01/29/2015
Enf. disposition status: Action Satisfied (Case Closed)
Enf. disp. status date: 03/10/2015
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 12/03/2014
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: 03/10/2015
Evaluation lead agency: State

Evaluation date: 12/03/2014
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General

UNITED ILLUMINATING CO THE OPERATIONS CTR (Continued) **1014950906**

Date achieved compliance: 12/03/2014
Evaluation lead agency: State

FINDS:

Registry ID: 110045535104

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZARDOUS WASTE BIENNIAL REPORTER

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

ECHO:
Envid: 1014950906
Registry ID: 110045535104
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110045535104

35
SSW
1/8-1/4
0.222 mi.
1174 ft.

5 CONNAIR RD
ORANGE, CT 06477

EDR Hist Auto **1015520603**
N/A

Relative:
Higher

Actual:
80 ft.

EDR Historical Auto Stations:
Name: AZTEC REPAIR LLC
Year: 2002
Address: 5 CONNAIR RD

I36
SE
1/8-1/4
0.233 mi.
1231 ft.

CITY OF WEST HAVEN - S.T.P
171 BEATRICE LANE
WEST HAVEN, CT 06516

Site 1 of 3 in cluster I

CT LUST **S106889877**
CT SPILLS **N/A**

Relative:
Lower

Actual:
16 ft.

LUST:

LUST Id:	8640
UST Facility Id:	Not reported
LUST Case Id:	36666
Lust Status:	Cleanup Initiated
Processing Status:	Not reported
EPA Reportable:	False
Motor Fuel:	False
Diesel:	False
Gasoline:	False
Other:	False
Other Release:	Not reported
No Release:	False
Leak:	False
Tank:	False
Piping:	False
Overfill:	False
Removal:	False
Incident Date:	07/29/1999
Entry Date:	Not reported
Site Case Id:	9905010
UST Site Id:	Not reported
Cost Recovery Spill Case #:	Not reported
Old SITS Number:	Not reported
Case Log Id:	Not reported
Monthly Report Id:	0
UST Owner Id:	Not reported
LUST Owner Id:	Not reported
UST Event Id:	8821
Contact Info:	Not reported
Contact EMail:	Not reported
Site Contact City,St,Zip:	UNKNOWN
2nd Contact:	Not reported
2nd Contact EMail:	Not reported
2nd Contact Address:	Not reported
2nd Contact City,St,Zip:	UNKNOWN
2nd Contact Address 2:	Not reported
2nd Contact City 2:	Not reported
2nd Contact Phone Number:	Not reported
2nd Contact Fax Number:	Not reported
2nd Contact Type:	Not reported
Facility City Num:	156
Site Contact:	Not reported
Site Contact Address:	Not reported
Site Contact Add 2:	Not reported
Site Contact City 2:	Not reported
Site Contact Phone:	Not reported
Site Contact Fax:	Not reported
Site Contact Type:	Not reported
Department Contact 1:	Not reported
Department Contact 2:	Not reported
Referral Source:	Not reported
Offsite Source:	False

CITY OF WEST HAVEN - S.T.P (Continued) **S106889877**

Date Referred:	Not reported
Emergency:	False
Private Heating Fuel:	False
Commercial Heating Fuel:	True
Commercial HF < 2100 Gal.:	True
Commercial HF > 2100 Gal.:	False
Commercial HF - Size Unk:	False
No LUST Site:	False
Cost Recvry Prgm Candidate:	False
OCSRD Complete:	True
Follow Up Flag:	False
Alternate Water Supply:	False
Relocation:	False
Responsible Party:	False
Responsible EMail:	Not reported
Resp Party Name:	Not reported
Resp Party Address:	Not reported
Resp Party City,St,Zip:	Not reported
Resp Party Town Number:	UNKNOWN
Resp Party Phone:	Not reported
Resp Party Fax:	Not reported
Resp Party Name 2:	Not reported
Resp Party Address 2:	Not reported
Resp Party Phone 2:	Not reported
Investigator Id:	25
Follow Update:	Not reported
Area Lextent:	Not reported
Annual Precipitation:	Not reported
Affected Population:	Not reported
Population Setting:	Not reported
Ground Water Direction:	Not reported
Ground Water Gradient:	Not reported
Hydro Basin:	Not reported
Drastic:	Not reported
Geo Setting:	Not reported
Ground Water Classification:	Not reported
Receptor:	Not reported
Ground Water Flow Direction:	Not reported
Ground Water Depth:	Not reported
Areas Of Concern:	Not reported
Free Product Inches:	Not reported
Fund Date:	Not reported
Fund Planned:	No
Fund Obligated:	No
Fund Outlayed:	No
Fund Judgment:	No
Fund Recovered:	No
Cellar Borings:	False
Install Micro Wells:	False
Ground Water Sample:	False
Soil Sample:	False
Soil Gas:	False
Site Inspect:	False
Soil Excavate:	False
Geo Probe:	False
Survey:	False
Potable Well Sample:	False

CITY OF WEST HAVEN - S.T.P (Continued) **S106889877**

Sample MWS:	False
Ground Water Gauging:	False
Soil Venting:	False
Active:	False
NOV Action:	None
NOV Issued:	Not reported
NOV Due:	Not reported
NOV Received:	Not reported
NOV Closed:	Not reported
NOV Disc Date:	Not reported
NOV Issued Date:	Not reported
NOV Compliance Sched:	Not reported
NOV Admin Order:	Not reported
NOV Referred To Ag:	Not reported
Stop All NOV Actions:	False
Release Invest Rpt:	False
DEP App Letter 1:	False
Correct Action Plan:	False
DEP App Letter 2:	False
Rem Sys Install:	False
Rem Sys Install Date:	Not reported
Closure Date:	Not reported
Rem Sys Monitoring Rpt:	False
Qrtly Gwater Mon Rpts:	False
Closure Req Rpt:	False
DEP Closure Letter:	False
Referred To:	Not reported
No Wells:	Not reported
Lph Wells:	Not reported
User Stamp:	Not reported
Date Stamp:	Not reported
Correspondence:	Not reported
Environmental Impact:	Not reported
FollowUp:	Not reported
GW Comments:	Not reported
Location Desc:	Not reported
NOV Comments:	Not reported
Release Desc:	Not reported
Running Comments:	550, Heating Oil, GOVERNMENTAL, REMOVAL OF A 550 - GALLON L.U.S.T / FREE PRODUCT IN HOLE / FIRE MARSHAL ON SITE
Work Performed:	Not reported

SPILLS:

Year of Database:	2005
Case Number:	200501772
Who Took Spill:	206
Assigned To:	0
Report Date:	03/29/2005
Report Time:	02:58:11
Date Release:	03/29/2005
Time Responded:	Not reported
Reported By:	JUNE SUCCO
Phone:	203 9373637
Representing:	OMI WEST HAVEN TREATMENT PLANT
Terminated:	NO
Recovd (Total):	0
Total (Water):	0

CITY OF WEST HAVEN - S.T.P (Continued) **S106889877**

Facility Status:	closed
Continuous Spill:	False
Released Substance:	RAW SEWAGE
Qty:	0 (Gallons)
Emergency Measure:	BYPASS
Water Body:	Not reported
Discharger:	Not reported
Telephone:	Not reported
Responsible Party:	Not reported
RP Address 1:	Not reported
RP City,St,Zip:	CT
Historic:	False
Waterbody:	False
Time Stamp:	2005-05-31 13:40:48
Sr Inspector:	Kinney, Clarence
At Inspctor:	**NO RESPONSE
User Stamp:	Not reported
Comments:	Not reported
Agency ID:	DEP Dispatch
Other Agency:	Not reported
DEP Bureau:	Not reported
DEP Agency:	Not reported
Cause ID:	Other
Other Cause:	RAIN
Media ID:	Ground Surface
Other Media:	Not reported
Class ID:	Private
Other Class:	Not reported
Release Type:	sewage related
Other Release:	Not reported

I37 **CITY OF WEST HAVEN - S.T.P** **CT RGA LUST** **S116025947**
SE **171 BEATRICE LANE** **N/A**
1/8-1/4 **WEST HAVEN, CT**
0.233 mi.
1231 ft. **Site 2 of 3 in cluster I**

Relative:
Lower

Actual:
16 ft.

RGA LUST:

2012	CITY OF WEST HAVEN - S.T.P	171 BEATRICE LANE
2011	CITY OF WEST HAVEN - S.T.P	171 BEATRICE LANE
2010	CITY OF WEST HAVEN - S.T.P	171 BEATRICE LANE
2009	CITY OF WEST HAVEN - S.T.P	171 BEATRICE LANE
2008	CITY OF WEST HAVEN - S.T.P	171 BEATRICE LANE
2006	CITY OF WEST HAVEN - S.T.P	171 BEATRICE LANE
2004	CITY OF WEST HAVEN - S.T.P	171 BEATRICE LANE
2003	CITY OF WEST HAVEN - S.T.P	171 BEATRICE LANE
2002	CITY OF WEST HAVEN - S.T.P	171 BEATRICE LANE

I38 **CITY OF WEST HAVEN - S.T.P** **CT SPILLS** **S104311147**
SE **171 BEATRICE LANE** **CT CPCS** **N/A**
1/8-1/4 **WEST HAVEN, CT 06516**
0.233 mi.
1231 ft. **Site 3 of 3 in cluster I**

Relative:
Lower

Actual:
16 ft.

SPILLS:

Year of Database:	1999
Case Number:	9905010
Who Took Spill:	922
Assigned To:	936
Report Date:	07/29/1999
Report Time:	11:46:13
Date Release:	07/29/1999
Time Responded:	Not reported
Reported By:	SHAUN MAGEE
Phone:	860 6463348 - 860 7299594
Representing:	TANKWORKS, INC.
Terminated:	YES
Recovd (Total):	0
Total (Water):	0
Facility Status:	Closed
Continuous Spill:	False
Released Substance:	#2 FUEL OIL
Qty:	10 (Gallons)
Emergency Measure:	REMOVAL OF A 550 - GALLON L.U.S.T / FREE PRODUCT IN HOLE / FIRE MARSHAL ON SITE
Water Body:	NA
Discharger:	CITY OF WEST HAVEN - S.T.P
Telephone:	Not reported
Responsible Party:	YES
RP Address 1:	171 BEATRICE LANE
RP City,St,Zip:	WEST HAVEN, CT 06516
Historic:	False
Waterbody:	False
Time Stamp:	2000-01-11 11:47:14
Sr Inspector:	Aceto, John
At Inspctor:	Wofford, Ron
User Stamp:	Not reported
Comments:	Not reported
Action:	Contracted
Other Action:	Not reported
Action:	Pumped Out
Other Action:	Not reported
Action:	Removed Tank
Other Action:	Not reported
Action:	Soil Removed
Other Action:	Not reported
Agency ID:	Local Fire Marshal
Other Agency:	Not reported
DEP Bureau:	Not reported
DEP Agency:	Not reported
Agency ID:	DEP
Other Agency:	Not reported
DEP Bureau:	BUREAU OF WASTE MANAGEMENT
DEP Agency:	OIL AND CHEMICAL SPILL RESPONSE
Cause ID:	Inground Tank Failure
Other Cause:	Not reported
Media ID:	Ground Water

CITY OF WEST HAVEN - S.T.P (Continued) **S104311147**

Other Media: Not reported
Media ID: Ground Surface
Other Media: Not reported
Class ID: Governmental
Other Class: Not reported
Release Type: petroleum
Other Release: Not reported
Waterbody: Groundwater
Other Wtrbody: Not reported

CPCS:
Site Type: LUST
Lust Status code: 3
Lust Status: Cleanup Initiated
PTP Form: Not reported
Program: Not reported
Comments: 550, Heating Oil, Governmental, Removal Of A 550 - Gallon L.u.s.t / Free Product In Hole / Fire Marshal On Site
Site Type Definition: Leaking Underground Storage Tanks Rem. Started

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J39 **AZURE WATER SERVICES LLC** **RCRA-SQG** **1012210538**
ENE **280 CALLEGARI DR** **CTR000508960**
1/8-1/4 **WEST HAVEN, CT 06516**
0.234 mi.
1235 ft. **Site 1 of 2 in cluster J**

Relative:
Lower

Actual:
40 ft.

RCRA-SQG:
Date form received by agency: 12/21/2009
Facility name: AZURE WATER SERVICES LLC
Facility address: 280 CALLEGARI DR
WEST HAVEN, CT 06516
EPA ID: CTR000508960
Mailing address: CALLEGARI DR
WEST HAVEN, CT 06516
Contact: KENNETH SOEDER
Contact address: CALLEGARI DR
WEST HAVEN, CT 06516
Contact country: US
Contact telephone: (203) 932-3655
Contact email: KSOEDER@JAMESTOWNTECH.COM
EPA Region: 01
Land type: Private
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: AZURE WATER SERVICES LLC
Owner/operator address: CALLERGARI DR
WEST HAVEN, CT 06516
Owner/operator country: US
Owner/operator telephone: (203) 932-3655
Legal status: Private
Owner/Operator Type: Owner

AZURE WATER SERVICES LLC (Continued) **1012210538**

Owner/Op start date: 01/01/2009
Owner/Op end date: Not reported

Owner/operator name: AZURE WATER SERVICES LLC
Owner/operator address: CALLERGARI DR
WEST HAVEN, CT 06516
Owner/operator country: US
Owner/operator telephone: (203) 932-3655
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/01/2009
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: CR02
. Waste name: WASTE OIL

. Waste code: CR04
. Waste name: WASTE CHEMICAL LIQUIDS

. Waste code: CR05
. Waste name: WASTE CHEMICAL SOLID

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D003
. Waste name: REACTIVE WASTE

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Not reported
Date violation determined: Not reported
Date achieved compliance: Not reported
Violation lead agency: Not reported
Enforcement action: Not reported
Enforcement action date: Not reported

AZURE WATER SERVICES LLC (Continued) **1012210538**

Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 05/23/2011
Evaluation: COMPLIANCE ASSISTANCE VISIT
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

J40 **AZURE WATER SERVICES, LLC** **CT VCP** **S108302938**
ENE **280 CALLEGARI DR** **CT NPDES** **N/A**
1/8-1/4 **WEST HAVEN, CT 06516**
0.234 mi.
1235 ft. **Site 2 of 2 in cluster J**

Relative:
Lower

Actual:
40 ft.

VCP:
Transferor (seller): 3/22
Transfee (buyer): n/a
Certifying Party: Metchel Helfeld
Certifying Party Attn: Mitchel Helfeld
Certifying Party Title: Property Owner
Certifying Party Address: 26 B Westgate
Certifying Party City,St,Zip: Boynton Beach, FL 33436
Voluntary Remediation Site: Yes
Date Received: 03/16/2010
Acknowledge Date: 03/19/2010
Determination Date: Not reported
LEP Verified/DEP: Not reported
Rem Id: 9695
Remediation Location Id: 8481
Date Entered: 03/17/2010
Program: Vol_Rem_X
GAO Site: False
Staff Full Name: Tom Riscassi
Super/Date: Not reported
Stage Of Project: Not reported
RP Level Of Activity: Not reported
RP Needed Level Of Activity: Not reported
Staff Level Of Activity: Not reported
Staff Needed Level Of Activity: Not reported
Public Intrest: Not reported
PRP Cooperation: Not reported
Enforcement Status: Not reported
Level Of Complexity: Not reported
Complex Eng Or Sci: False
Complex Due To Public Involvement: False
Politically Complex: False
Complex Enforcement: False
Coordination With Other Bureaus: False
EPA Involvement: False
Staff Prefrence: Not reported
Readiness For Transfer: Not reported
Project Transfer Time: Not reported

AZURE WATER SERVICES, LLC (Continued) **S108302938**

Transfer Comments:	Not reported
Staff As Of July 2000:	Not reported
Initial Staff:	Not reported
Type Of Transfer:	voluntary
Salutation:	Mr. Helfeld
Relationship To Transfer:	Not reported
Audit Date:	Not reported
Verif Type:	Not reported
Audit Outcome:	Not reported
GW:	GB
Basin:	Not reported
1st Payment:	3250
Pay Tag1:	1601780618
2nd Payment:	Not reported
Pay Tag2:	Not reported
Rtn:	Not reported
Revised:	Not reported
ECAF Received:	Not reported
Old Determination Date:	Not reported
Redeterminationdate:	Not reported
Previous Determination:	Not reported
Monitoringoption:	Not reported
Postremedialmonitoring:	Not reported
Schedule Of I/R:	Not reported
Schedule Overdue:	Not reported
Aprvl Sched:	Not reported
Yr 1 Report:	Not reported
Yr 2 Report:	Not reported
Report Overdue:	Not reported
Ext Aprvl Sched:	Not reported
License #:	Not reported
Project Phase:	Not reported
PT Comments:	Not reported
EPA Id Number:	Not reported
GW Class:	Not reported
SW Class:	Not reported
AO/C0:	Not reported
Water Lead(Y Or N):	Not reported
Priority:	Not reported
Project Status(A, I Or D):	Not reported
Last Updated:	Not reported
SR Comments:	Not reported
Priority Or Work-Load:	Not reported
Status:	Pending. Post 10/1/95 filing
Notes:	Not reported
Special Project Name:	Not reported
Special Project Comments:	Not reported
DOT Project:	Not reported
Pt Counter:	0
Project Complete:	False
Project Inactive:	False
Intl Deposit #:	Not reported
Deposit #:	Not reported
Spill Case #:	Not reported
Diversion Id:	0
Public Notice:	Not reported
Rap Received:	Not reported

AZURE WATER SERVICES, LLC (Continued) **S108302938**

Rap Approved:	Not reported
Compliance Category:	Not reported
Delete Record:	False
ECAF Reviewed By:	Jon Goldman
Notlocatable:	False
Primaryaddress:	True
Aka_sitename:	False
Primarysitename:	True
Aka_siteaddress:	False
Lead:	LEP
Contain Value For Decode:	P
ACKTAG:	Not reported
RCVTAG:	Not reported
Rtn Ctfd:	Not reported
Review:	03/23/2010
I:	N
C:	N
D:	N
Issued:	Not reported
Cont Type:	Not reported
Issues:	Not reported
PW Program:	False
PT Program:	False
US Program:	False
DA Program:	False
SR Program:	False
SF Program:	False

NPDES:

Town Id:	Not reported
Company Name:	Not reported
Permit Number:	GSI002056
Permit Issued Date:	10/01/2011
Permit Expiration Date:	09/30/2016
Application Received Date:	Not reported
Affiliation Type:	Permittee
Permit EI Type:	Stormwater Industrial Activities - GP
App Id:	201105202
Site Address Description:	Not reported
Site Address Line 2:	Not reported
Permit Description:	Not reported
Status:	Active
Affiliate Address Line 1:	280 CALLEGARI DR
Affiliate Address Line 2:	Not reported
Affiliate City/State/Zip:	WEST HAVEN, CT 06516-6234
Contact Name:	KENNETH SOEDER
Contact Title:	PRESIDENT
Contact EMail:	KSOEDER@JAMESTOWNTECH.COM

41
SW
1/4-1/2
0.308 mi.
1628 ft.

LIGHT SOURCES, INC.
70 CASCADE BOULEVARD
MILFORD, CT

CT SDADB **S104254325**
N/A

Relative:
Lower

Actual:
53 ft.

Site Discovery and Assessment:

Facility ID:	3130
Rem Master ID:	3172
PTP Id:	Not reported
WPC Number:	Not reported
Postal District:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Lat/Long Determined By:	Not reported
Ground Water Quality Classification:	Not reported
Surface Water Quality Classification:	Not reported
Waste Type:	METALS
Disposal:	SPILL/DUMP
Sample Data Available:	False
Updated By:	ZIMMERMAN, D.
Update Program:	D&A
Updated:	3/24/1998
Date Created:	Not reported
Duplicate:	False

SDA Federal:

EPA CERCLIS Id:	Not reported
Number EPA RCRIS Id:	Not reported
Site on EPA's CERCLIS:	Not reported
Site Archived from CERCLIS:	Not reported
Archive Date:	Not reported
EPA's Removal at Site:	Not reported
Deferred to another EPA Program:	Not reported
EPA Env Priority Initiative Site:	Not reported
Federal Facility:	Not reported
Site on EPA's National Priority List:	Not reported
Part of an NPL site:	Not reported
RCRA Generator Status:	Not reported
RCRA Permit Status:	Not reported

SDA Referral:

Referral Id:	2934
Source of referral:	SPILLS
Date Received:	3/18/1998
Staff Assigned:	ZIMMERMAN, D.
Remediation Program:	D&A
Date dt_assigned:	3/18/1998
Remediation Complete Approved DEP/Verified by LEP:	Not reported
Outcome:	Not reported

SDA Remedial:

Remedial Id:	Not reported
PTP Id:	Not reported
Remediation Program:	Not reported
Remediation Program Entered:	Not reported
Staff Assigned:	Not reported
Remediation Program:	Not reported
Date dt_assign:	Not reported
Project Phase:	Not reported
Order issued:	Not reported

LIGHT SOURCES, INC. (Continued) **S104254325**

Order Number:	Not reported
Date order issued:	Not reported
Remedial Investigation Start:	Not reported
Remedial Investigation Completed:	Not reported
Remedial Design Start:	Not reported
Remedial Design complet:	Not reported
Remedial Action Start:	Not reported
Remedial Action Completed:	Not reported
Date Oper/ maintenance Started:	Not reported
GW monitoring:	Not reported
Remediation complete Approved DEP/Verified by LEP:	Not reported

SDA Orders:

Order Id:	Not reported
Order Number:	Not reported
Date order issued:	Not reported
Staff Assigned:	Not reported
Type of Order:	Not reported
Order Respondent:	Not reported
Admin Appeal Date:	Not reported
Date of Admin Appeal Ruling:	Not reported
Date of Admin Appeal Ruling:	Not reported
Date of Final Order:	Not reported
Date of Court Appeal:	Not reported
Date of Court Ruling:	Not reported
Date of Court Ruling:	Not reported
Date Order Modified:	Not reported
Date Referred to AG:	Not reported
Judgement:	Not reported
Date of AGR judgement:	Not reported
Penalty assessed:	Not reported
Order Complete:	Not reported
In compliance:	Not reported
Comments:	Not reported

SDADB:

SDA Waste:

Waste Id:	14
Waste Type:	METALS
Description:	Not reported

Count: 5 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
MILFORD	S109377263	EXXONMOBIL (01-927, 13987)	I-95 NORTHBOUND-EASTBOUND	06460	CT LUST
MILFORD	S109822295	MOBIL SERVICE STATION 01-M8E (#139	I-95 SOUTHBOUND	06460	CT LUST
ORANGE	S104254728	UNNAMED STREAM	INDIAN RIVER ROAD		CT SDADB
ORANGE	S104563356	WESTFIELD INC.	MARSH HILL ROAD		CT SDADB, CT PROPERTY
WEST HAVEN	S104563621	STEINBERG REALTY	FRONTAGE ROAD		CT SDADB, CT PROPERTY

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 04/05/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 10

Source: EPA
Telephone: N/A
Last EDR Contact: 10/05/2016
Next Scheduled EDR Contact: 01/16/2017
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 04/05/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 10

Source: EPA
Telephone: N/A
Last EDR Contact: 10/05/2016
Next Scheduled EDR Contact: 01/16/2017
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 04/05/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 10

Source: EPA
Telephone: N/A
Last EDR Contact: 10/05/2016
Next Scheduled EDR Contact: 01/16/2017
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/13/2015
Date Data Arrived at EDR: 01/06/2016
Date Made Active in Reports: 05/20/2016
Number of Days to Update: 135

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 10/04/2016
Next Scheduled EDR Contact: 01/16/2017
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 04/05/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 10

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 07/22/2016
Next Scheduled EDR Contact: 10/31/2016
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 04/05/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 10

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 07/22/2016
Next Scheduled EDR Contact: 10/31/2016
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 06/27/2016
Date Data Arrived at EDR: 06/30/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 64

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/28/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/21/2016
Date Data Arrived at EDR: 06/30/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 09/28/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/21/2016
Date Data Arrived at EDR: 06/30/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 09/28/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/21/2016
Date Data Arrived at EDR: 06/30/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 09/28/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/21/2016
Date Data Arrived at EDR: 06/30/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 09/28/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/28/2015
Date Data Arrived at EDR: 05/29/2015
Date Made Active in Reports: 06/11/2015
Number of Days to Update: 13

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/12/2016
Next Scheduled EDR Contact: 11/28/2016
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 05/09/2016
Date Data Arrived at EDR: 06/01/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 93

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/31/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 05/09/2016
Date Data Arrived at EDR: 06/01/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 93

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/31/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 03/28/2016
Date Data Arrived at EDR: 03/30/2016
Date Made Active in Reports: 05/20/2016
Number of Days to Update: 51

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 09/29/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SHWS: Inventory of Hazardous Disposal Sites

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 04/23/2010
Date Data Arrived at EDR: 04/23/2010
Date Made Active in Reports: 05/25/2010
Number of Days to Update: 32

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3705
Last EDR Contact: 09/29/2016
Next Scheduled EDR Contact: 01/16/2017
Data Release Frequency: No Update Planned

SDADB: Site Discovery and Assessment Database

All sites reported to Permitting, Enforcement, and Remediation Division where it is suspected that hazardous waste may have been disposed or sites that are eligible for listing on the State Inventory of Hazardous Waste Disposal Sites.

Date of Government Version: 04/23/2010
Date Data Arrived at EDR: 04/23/2010
Date Made Active in Reports: 05/25/2010
Number of Days to Update: 32

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3705
Last EDR Contact: 10/03/2016
Next Scheduled EDR Contact: 01/16/2017
Data Release Frequency: No Update Planned

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: List of Landfills/Transfer Stations

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 07/02/2015
Date Data Arrived at EDR: 07/28/2015
Date Made Active in Reports: 08/05/2015
Number of Days to Update: 8

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3366
Last EDR Contact: 07/29/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Annually

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank List

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 08/04/2016
Date Data Arrived at EDR: 08/12/2016
Date Made Active in Reports: 09/22/2016
Number of Days to Update: 41

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3376
Last EDR Contact: 10/03/2016
Next Scheduled EDR Contact: 01/16/2017
Data Release Frequency: Semi-Annually

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 01/07/2016
Date Data Arrived at EDR: 01/08/2016
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 41
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/13/2015
Date Data Arrived at EDR: 10/23/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 118
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/09/2015
Date Data Arrived at EDR: 02/12/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 112
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 12/11/2015
Date Data Arrived at EDR: 02/19/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 105
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 02/05/2016
Date Data Arrived at EDR: 04/29/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 35
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/26/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Semi-Annually

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/27/2015
Date Data Arrived at EDR: 10/29/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 67
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/29/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 02/17/2016
Date Data Arrived at EDR: 04/27/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 37
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 02/25/2016
Date Data Arrived at EDR: 04/27/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Quarterly

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 07/07/2016
Next Scheduled EDR Contact: 10/24/2016
Data Release Frequency: Varies

UST: Underground Storage Tank Data
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 08/23/2016
Date Data Arrived at EDR: 08/29/2016
Date Made Active in Reports: 09/22/2016
Number of Days to Update: 24

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3376
Last EDR Contact: 08/29/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Semi-Annually

AST: Marine Terminals and Tank Information
A listing of bulk petroleum facilities that receive petroleum by a vessel.

Date of Government Version: 07/01/2016
Date Data Arrived at EDR: 07/29/2016
Date Made Active in Reports: 08/16/2016
Number of Days to Update: 18

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3233
Last EDR Contact: 09/29/2016
Next Scheduled EDR Contact: 01/16/2017
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 01/26/2016
Date Data Arrived at EDR: 02/05/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 119

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Quarterly

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 02/05/2016
Date Data Arrived at EDR: 04/29/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 35

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/26/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Semi-Annually

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 01/07/2016
Date Data Arrived at EDR: 01/08/2016
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 41

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 02/25/2016
Date Data Arrived at EDR: 04/27/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 37

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Quarterly

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/20/2015
Date Data Arrived at EDR: 10/29/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 67

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/29/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 09/23/2014
Date Data Arrived at EDR: 11/25/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 65

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 12/03/2015
Date Data Arrived at EDR: 02/04/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 120

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 11/05/2015
Date Data Arrived at EDR: 11/13/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 52

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

ENG CONTROLS: Engineering Controls Listing

An Engineered Control is a permanent physical structure designed to safely isolate pollutants which would otherwise not comply with the self-implementing remedial options allowed in the Connecticut Remediation Standard Regulations (RSRs). The ECGD includes a description of what is eligible to be considered as an Engineered Control under section 22a-133k-2(f)(2) of the RSRs, a description of the information necessary for the preparation of complete and approvable applications, a step-by-step outline of the review and approval process, and supplemental resources provided in the appendices.

Date of Government Version: 03/05/2013
Date Data Arrived at EDR: 05/07/2013
Date Made Active in Reports: 06/19/2013
Number of Days to Update: 43

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3000
Last EDR Contact: 08/05/2016
Next Scheduled EDR Contact: 11/14/2016
Data Release Frequency: Varies

AUL: ELUR Sites

Environmental Land Use Restriction sites.

Date of Government Version: 08/04/2016
Date Data Arrived at EDR: 08/08/2016
Date Made Active in Reports: 09/21/2016
Number of Days to Update: 44

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3912
Last EDR Contact: 08/03/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 09/26/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Varies

VCP: Voluntary Remediation Sites

Sites involved in the Voluntary Remediation Program.

Date of Government Version: 08/04/2016
Date Data Arrived at EDR: 08/08/2016
Date Made Active in Reports: 09/22/2016
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3705
Last EDR Contact: 08/03/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Inventory

CBRA has identified over 200 brownfield sites eligible for redevelopment. In most cases these are prime properties for commercial or industrial use. CBRA's grants, assistance and financing lower the financial risks and eliminate the legal, regulatory and environmental risks of redevelopment.

Date of Government Version: 03/25/2016
Date Data Arrived at EDR: 03/29/2016
Date Made Active in Reports: 05/18/2016
Number of Days to Update: 50

Source: Connecticut Brownfields Redevelopment Authority
Telephone: 860-258-7833
Last EDR Contact: 09/19/2016
Next Scheduled EDR Contact: 01/02/2017
Data Release Frequency: Varies

BROWNFIELDS 2: Brownfields Inventory

A brownfield site is generally defined as "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant or contaminanta?|"

Date of Government Version: 03/11/2016
Date Data Arrived at EDR: 06/22/2016
Date Made Active in Reports: 09/01/2016
Number of Days to Update: 71

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3705
Last EDR Contact: 09/23/2016
Next Scheduled EDR Contact: 01/02/2017
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/21/2016
Date Data Arrived at EDR: 06/22/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 72

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/21/2016
Next Scheduled EDR Contact: 01/02/2017
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY: Recycling Facilities

A listing of recycling facilities.

Date of Government Version: 06/16/2016
Date Data Arrived at EDR: 06/21/2016
Date Made Active in Reports: 08/16/2016
Number of Days to Update: 56

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3223
Last EDR Contact: 09/12/2016
Next Scheduled EDR Contact: 12/26/2016
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 08/05/2016
Next Scheduled EDR Contact: 11/14/2016
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/20/2016
Next Scheduled EDR Contact: 10/07/2016
Data Release Frequency: No Update Planned

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 08/31/2016
Date Data Arrived at EDR: 09/06/2016
Date Made Active in Reports: 09/23/2016
Number of Days to Update: 17

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/31/2016
Next Scheduled EDR Contact: 10/10/2016
Data Release Frequency: No Update Planned

CDL: Clandestine Drug Lab Listing

A listing of clandestine drug lab locations included in the Spills database.

Date of Government Version: 08/16/2016
Date Data Arrived at EDR: 08/23/2016
Date Made Active in Reports: 09/21/2016
Number of Days to Update: 29

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3361
Last EDR Contact: 10/03/2016
Next Scheduled EDR Contact: 01/16/2017
Data Release Frequency: Quarterly

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 08/30/2016
Date Data Arrived at EDR: 09/06/2016
Date Made Active in Reports: 09/23/2016
Number of Days to Update: 17

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/31/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Quarterly

Local Land Records

CT PROPERTY: Property Transfer Filings

A listing of sites that meet the definition of a hazardous waste establishment. They can be generators, dry cleaners, furniture strippers, etc. These sites have been sold to another owner.

Date of Government Version: 08/04/2016
Date Data Arrived at EDR: 08/08/2016
Date Made Active in Reports: 09/22/2016
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3705
Last EDR Contact: 08/03/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: Semi-Annually

LIENS: Environmental Liens Listing
A listing of environmental liens placed by the Cost Recovery Program.

Date of Government Version: 08/11/2016
Date Data Arrived at EDR: 08/15/2016
Date Made Active in Reports: 09/22/2016
Number of Days to Update: 38
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3120
Last EDR Contact: 05/13/2016
Next Scheduled EDR Contact: 08/29/2016
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/18/2014
Date Data Arrived at EDR: 03/18/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 37
Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 07/29/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/27/2016
Date Data Arrived at EDR: 06/28/2016
Date Made Active in Reports: 09/23/2016
Number of Days to Update: 87
Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 09/27/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Annually

SPILLS: Oil & Chemical Spill Database
Oil and Chemical Spill Data.

Date of Government Version: 08/16/2016
Date Data Arrived at EDR: 08/23/2016
Date Made Active in Reports: 09/21/2016
Number of Days to Update: 29
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3024
Last EDR Contact: 10/03/2016
Next Scheduled EDR Contact: 01/16/2017
Data Release Frequency: Semi-Annually

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/21/2016
Date Data Arrived at EDR: 06/30/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 64
Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 09/28/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Varies

FUDS: Formerly Used Defense Sites
The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 09/09/2016
Next Scheduled EDR Contact: 12/19/2016
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/15/2016
Next Scheduled EDR Contact: 10/24/2016
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/15/2016
Next Scheduled EDR Contact: 10/24/2016
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/15/2016
Next Scheduled EDR Contact: 11/28/2016
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 05/08/2016
Date Data Arrived at EDR: 05/18/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 107

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 08/17/2016
Next Scheduled EDR Contact: 11/28/2016
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 08/08/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 09/06/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/15/2015
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 14

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/23/2016
Next Scheduled EDR Contact: 01/02/2017
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 11/24/2015
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 133

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/26/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/25/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 11/25/2013
Date Data Arrived at EDR: 12/12/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 74

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/09/2016
Next Scheduled EDR Contact: 12/19/2016
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 05/01/2016
Date Data Arrived at EDR: 05/26/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 99

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/25/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 08/12/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 01/20/2016
Date Data Arrived at EDR: 04/28/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 127

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/15/2016
Next Scheduled EDR Contact: 10/24/2016
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 01/23/2015
Date Data Arrived at EDR: 02/06/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 07/07/2016
Next Scheduled EDR Contact: 10/24/2016
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/17/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/17/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 03/18/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 28
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 09/05/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 09/09/2016
Next Scheduled EDR Contact: 12/19/2016
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 09/06/2016
Next Scheduled EDR Contact: 12/19/2016
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 07/29/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/07/2015
Date Data Arrived at EDR: 07/09/2015
Date Made Active in Reports: 09/16/2015
Number of Days to Update: 69

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/05/2016
Next Scheduled EDR Contact: 01/16/2017
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 08/02/2016
Next Scheduled EDR Contact: 11/14/2016
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 03/31/2016
Date Data Arrived at EDR: 08/01/2016
Date Made Active in Reports: 09/23/2016
Number of Days to Update: 53

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 09/26/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 02/24/2015
Date Made Active in Reports: 09/30/2015
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 08/26/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/15/2016
Next Scheduled EDR Contact: 10/24/2016
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 07/21/2016
Date Data Arrived at EDR: 07/26/2016
Date Made Active in Reports: 09/23/2016
Number of Days to Update: 59

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 07/26/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 09/09/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 04/07/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 148

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 09/29/2016
Next Scheduled EDR Contact: 01/16/2017
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/20/2015
Date Data Arrived at EDR: 10/27/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 69

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data
A listing of minor source facilities.

Date of Government Version: 10/20/2015
Date Data Arrived at EDR: 10/27/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 69

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Annually

US MINES: Mines Master Index File
Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/05/2016
Date Data Arrived at EDR: 09/01/2016
Date Made Active in Reports: 09/23/2016
Number of Days to Update: 22

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 09/01/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing
This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 09/02/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing
Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 09/02/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Varies

FINDS: Facility Index System/Facility Registry System
Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 07/20/2015
Date Data Arrived at EDR: 09/09/2015
Date Made Active in Reports: 11/03/2015
Number of Days to Update: 55

Source: EPA
Telephone: (617) 918-1111
Last EDR Contact: 09/07/2016
Next Scheduled EDR Contact: 12/19/2016
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites
A listing of unexploded ordnance site locations

Date of Government Version: 10/25/2015
Date Data Arrived at EDR: 01/29/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 67

Source: Department of Defense
Telephone: 571-373-0407
Last EDR Contact: 09/19/2016
Next Scheduled EDR Contact: 01/02/2017
Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing
A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 06/02/2016
Date Data Arrived at EDR: 06/03/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 91

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 08/24/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Varies

AIRS: Permitted Air Sources Listing
A listing of permitted air sources in Connecticut.

Date of Government Version: 07/11/2016
Date Data Arrived at EDR: 07/29/2016
Date Made Active in Reports: 08/18/2016
Number of Days to Update: 20

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3026
Last EDR Contact: 07/25/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Varies

CPCS: Contaminated or Potentially Contaminated Sites
A list of Contaminated or Potentially Contaminated Sites within Connecticut. This list represents the "Hazardous Waste Facilities," as defined in Section 22a-134f of the Connecticut General Statutes (CGS). The list contains the following types of sites: Sites listed on the Inventory of Hazardous Waste Disposal Sites; Sites subject to the Property Transfer Act; Sites at which underground storage tanks are known to have leaked; Sites at which hazardous waste subject to the RCRA; Sites that are included in EPA's (CERCLIS); Sites that are the subject of an order issued by the Commissioner of DEP that requires investigation and remediation of a potential or known source of pollution; and Sites that have entered into one of the Department's Voluntary Remediation Programs.

Date of Government Version: 07/27/2016
Date Data Arrived at EDR: 08/08/2016
Date Made Active in Reports: 09/22/2016
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3766
Last EDR Contact: 08/03/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: Quarterly

DRYCLEANERS: Drycleaner Facilities
A listing of drycleaner facility locations.

Date of Government Version: 07/18/2008
Date Data Arrived at EDR: 08/08/2008
Date Made Active in Reports: 08/27/2008
Number of Days to Update: 19

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3026
Last EDR Contact: 09/12/2016
Next Scheduled EDR Contact: 12/26/2016
Data Release Frequency: Varies

ENFORCEMENT: Enforcement Case Listing
The types of enforcement actions included are administrative consent orders, final unilateral orders and final dispositions of civil cases through the Attorney General's Office.

Date of Government Version: 07/15/2016
Date Data Arrived at EDR: 07/19/2016
Date Made Active in Reports: 08/16/2016
Number of Days to Update: 28

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3265
Last EDR Contact: 07/13/2016
Next Scheduled EDR Contact: 10/31/2016
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

A listing containing RCRA financial assurance information submitted on behalf of the CT DEP's Program Analysis Group of the Waste Engineering and Enforcement Division.

Date of Government Version: 06/30/2016
Date Data Arrived at EDR: 07/13/2016
Date Made Active in Reports: 08/16/2016
Number of Days to Update: 34

Source: Department of Energy & Environmental Protection
Telephone: 860-418-5930
Last EDR Contact: 09/19/2016
Next Scheduled EDR Contact: 01/02/2017
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 06/30/2016
Date Data Arrived at EDR: 07/13/2016
Date Made Active in Reports: 08/16/2016
Number of Days to Update: 34

Source: Department of Energy & Environmental Protection
Telephone: 860-418-5930
Last EDR Contact: 09/19/2016
Next Scheduled EDR Contact: 01/02/2017
Data Release Frequency: Varies

LEAD: Lead Inspection Database

The Lead Poisoning Prevention and Control Program lead inspection database.

Date of Government Version: 03/26/2014
Date Data Arrived at EDR: 03/27/2014
Date Made Active in Reports: 05/08/2014
Number of Days to Update: 42

Source: Department of Public Health
Telephone: 860-509-7299
Last EDR Contact: 09/02/2016
Next Scheduled EDR Contact: 12/19/2016
Data Release Frequency: Varies

LWDS: Connecticut Leachate and Wastewater Discharge Sites

The Leachate and Waste Water Discharge Inventory Data Layer (LWDS) includes point locations digitized from Leachate and Wastewater Discharge Source maps compiled by the Connecticut DEP. These maps locate surface and groundwater discharges that (1) have received a waste water discharge permit from the state or (2) are historic and now defunct waste sites or (3) are locations of accidental spills, leaks, or discharges of a variety of liquid or solid wastes.

Date of Government Version: 07/17/2009
Date Data Arrived at EDR: 10/21/2009
Date Made Active in Reports: 10/30/2009
Number of Days to Update: 9

Source: Department of Energy & Environmental Protection
Telephone: N/A
Last EDR Contact: 10/15/2014
Next Scheduled EDR Contact: 01/26/2015
Data Release Frequency: Varies

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/30/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/10/2016
Next Scheduled EDR Contact: 11/28/2016
Data Release Frequency: No Update Planned

NPDES: Wastewater Permit Listing

A listing of permits issued by the DEP.

Date of Government Version: 07/08/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 08/16/2016
Number of Days to Update: 35

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3832
Last EDR Contact: 10/07/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Varies

SEH: List of Significant Environmental Hazards Report to DEEP

The Significant Environmental Hazard Statute is intended to identify and abate short-term risks associated with specific environmental conditions identified in the statute. After abatement of short-term risks (meaning abatement of the significant environmental hazard condition), there may still be potential long-term risks associated with the release. However, a significant environmental hazard can be considered abated under the statute even though potential long-term risks may not have been addressed.

Date of Government Version: 07/15/2016
Date Data Arrived at EDR: 07/26/2016
Date Made Active in Reports: 08/16/2016
Number of Days to Update: 21

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3766
Last EDR Contact: 07/22/2016
Next Scheduled EDR Contact: 10/31/2016
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 05/24/2016
Date Data Arrived at EDR: 05/25/2016
Date Made Active in Reports: 07/13/2016
Number of Days to Update: 49

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 08/23/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/20/2015
Date Data Arrived at EDR: 09/23/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 103

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 09/20/2016
Next Scheduled EDR Contact: 01/02/2017
Data Release Frequency: Quarterly

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Energy & Environmental Protection formerly know as the DEP which changes in July 2011 in Connecticut.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/02/2014
Number of Days to Update: 185

Source: Department of Energy & Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Energy & Environmental Protection formerly know as the DEP which changes in July 2011 in Connecticut.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/02/2014
Number of Days to Update: 185

Source: Department of Energy & Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 07/17/2015
Date Made Active in Reports: 08/12/2015
Number of Days to Update: 26

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 07/11/2016
Next Scheduled EDR Contact: 10/24/2016
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 08/01/2016
Date Data Arrived at EDR: 08/03/2016
Date Made Active in Reports: 09/09/2016
Number of Days to Update: 37

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 08/03/2016
Next Scheduled EDR Contact: 11/14/2016
Data Release Frequency: Annually

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/24/2015
Date Made Active in Reports: 08/18/2015
Number of Days to Update: 25

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/18/2016
Next Scheduled EDR Contact: 10/31/2016
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 06/19/2015
Date Made Active in Reports: 07/15/2015
Number of Days to Update: 26

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 09/20/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Annually

VT MANIFEST: Hazardous Waste Manifest Data

Hazardous waste manifest information.

Date of Government Version: 05/02/2016
Date Data Arrived at EDR: 05/24/2016
Date Made Active in Reports: 07/13/2016
Number of Days to Update: 50

Source: Department of Environmental Conservation
Telephone: 802-241-3443
Last EDR Contact: 07/18/2016
Next Scheduled EDR Contact: 10/31/2016
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 04/14/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 50

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/12/2016
Next Scheduled EDR Contact: 12/26/2016
Data Release Frequency: Annually

Oil/Gas Pipelines

Source: PennWell Corporation

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data

Source: PennWell Corporation

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GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Child Care Facilities
Source: Department of Public Health
Telephone: 860-509-8045

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Tidal Wetlands
Source: Department of Energy & Environmental Protection
Telephone: 860-424-4054

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STREET AND ADDRESS INFORMATION