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PETITION OF LODESTAR ENERGY FOR A DECLARATORY RULING THAT NO CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED IS REQUIRED FOR THE CONSTRUCTION, OPERATION, AND MAINTENANCE OF A 2.0 MW AC SOLAR PHOTOVOLTAIC FACILITY IN SUFFIELD, CONNECTICUT

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STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

PETITION OF LODESTAR ENERGY FOR A DECLARATORY RULING THAT NO CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED IS REQUIRED FOR THE CONSTRUCTION, OPERATION, AND MAINTENANCE OF A 2.0 MW AC SOLAR PHOTOVOLTAIC FACILITY IN SUFFIELD, CONNECTICUT	:	**PETITION NO. _____** **MAY 21, 2015**

I. INTRODUCTION

Pursuant to Conn. Gen. Stat. §§ 4-176 and 16-50k(a) and Conn. Agencies Regs. § 16-50j-38 *et seq.*, Lodestar Energy ("Lodestar" or "Company") requests that the Connecticut Siting Council ("Council") approve by declaratory ruling the location, construction, operation, and maintenance of a solar photovoltaic facility capable of up to 2.0 MW AC, and associated equipment ("Canis Major Solar" or "Project") consisting of approximately 10 acres of solar panels to be constructed within a 26.47 acre lease area located at 1005 North Street in Suffield, Connecticut (the "Site"). Approximately half of the Site is currently maintained in agriculture; the remaining half consists of a former gravel pit which has become overgrown and wooded. Conn. Gen. Stat. § 16-50k(a) provides:

> Notwithstanding the provisions of this chapter or title 16a, the council shall, in the exercise of its jurisdiction over the siting of generating facilities, approve by declaratory ruling...the construction or location of any customer-side distributed resources project or facility or grid-side distributed resources project or facility with a capacity of not more than sixty-five megawatts, as long as such project meets air and water quality standards of the Department of Energy and Environmental Protection.

As discussed in this petition, the Petitioner's goal is to design an environmentally compatible project that produces the maximum amount of energy while avoiding and minimizing

adverse environmental impacts. Based on the evaluation presented in this report, the Project is not expected to cause any significant adverse environmental impacts to the immediate and surrounding area. Accordingly, the construction, operation, and maintenance of the Project satisfies the criteria of Conn. Gen. Stat. § 16-50k(a).

II. PETITIONER

Lodestar is a Connecticut-based developer of renewable energy projects having its principal place of business at 3 Ellsworth Place, Suite 122, Avon, Connecticut 06001. Lodestar will lead the Project construction and development. Lodestar's team has worked with utilities, school districts, cities, counties, commercial businesses, industrial clients and many others to develop more than 500 MW of solar projects with a value of more than $1 billion across North America.[1]

Please address all correspondence and/or communications regarding this Petition to:

Jeffrey J. Macel, Esq.
Principal and Co-Founder
Lodestar Energy LLC
3 Ellsworth Place, Suite 122
Avon, CT 06001
jmacel@lodestarenergy.com

Please also provide a copy of all such correspondence and/or communications to the Company's counsel:

[1] Note that the 500 MW of solar projects includes projects that have been developed by the Lodestar principals prior to joining the Company.

Mark R. Sussman
Patricia L. Boye-Williams
Murtha Cullina LLP
City Place I
185 Asylum Street
Hartford, CT 06103
860-240-6034
msussman@murthalaw.com

III. PROPOSED PROJECT

A. PROJECT BACKGROUND

In developing this Project, the Company has taken into account the State's energy policy to "develop and utilize renewable energy resources, such as solar and wind energy, to the maximum practicable extent." Conn. Gen. Stat. § 16a-35k. As a solar development, the proposed Project is considered a Class I renewable energy source under General Statutes § 16-1(a)(26).

The Project creates a significant benefit for the Town of Suffield and its residents. First, the Project will return currently unused land (the former gravel pit) to productive use. Over the course of a 20- year lease between the Company and the landowner, the Project will produce income in the form of rent for the landowner and a generous, stable tax base for the Town. When the solar array is removed from the Property upon expiration of the lease, the prior agricultural use of the Property can resume, if so desired. During its lifespan, the Project will help to reduce greenhouse gas emissions and pollutants.

B. SITE SELECTION

The Company based the site selection process for the Project on a detailed evaluation of the following key criteria.

- Site suitability (size, topography, and apparent lack of biological and hydrological conflicts in initial fatal flaw screening);
- Site availability and mutual benefits (ability to come to suitable lease terms with land owner; utilizing otherwise unusable former gravel pit); and
- Proposed cost of interconnecting to and proximity to critical infrastructure (suitable electrical grid access).

After performing an initial site evaluation, the Company began a preliminary design of a site layout that would best minimize negative environmental impacts. The Company conducted further diligence on the Site, negotiated fair and reasonable taxation terms with the Town, and entered into a contract option to lease the land. The Company performed significant public outreach within Town government, met with, and anticipates receiving appropriate letters of support from the Conservation Commission, Zoning and Planning Commission and the Suffield Board of Selectmen. The Company retained the following consultants to assist in the evaluation and design of the Project:

- Raber Associates – Archaeologist
- Rema Ecological Services – Wildlife Biologist
- J.R. Russo & Associates – Civil Engineering / Land Surveying / Planning
- Highland Soils – Wetland Report and Functional Assessment
- Megawatt Energy Solutions – Civil Engineering
- Power Engineers, LLC – Electrical Design and Utility Interconnection
- GZA GeoEnvironmental – Geotechnical
- GeoQuest – Phase I Environmental Site Assessment
- Kleinfelder – Visual Simulations

C. PROPERTY DESCRIPTION

The Project Site is located on the western 26.47 acres of a 51.3 acre parcel owned by Kevin and Krist Sullivan at 1005 North Street in Suffield (the Sullivan Farm). A Vicinity Map is provided as Exhibit I. The Site is bounded to the west by undeveloped woodland, to the north by an agricultural field, to the east by remaining agricultural land owned by the Sullivans, to the south by a horse farm, and to the southwest by single family residential homes. Exhibit II is a Land Use Map which depicts the surrounding land uses within one-half mile of the site. Greater detail of the immediate vicinity surrounding the Site is shown on the Site Plans. (Exhibit III.)

The Site itself is located approximately 1,350 feet west of North Street at the rear of the Sullivan Farm. The Site is accessible from the west side of North Street via an existing paved portion of driveway followed by approximately 1,200 feet of dirt farm road. The farm road is approximately 10 feet wide. As it approaches the Site, the road crosses a culverted stream and bisects wetlands on both sides. The access road leads to an open agricultural field on the southern portion of the Site.

The Site contains two upland areas divided by an intermittent stream. The stream originates from a pond and associated wetland in the northwest corner of the Site. From the pond, the stream flows easterly to a wetland on the east side of the Site. The area to the north of the intermittent stream was formerly mined for gravel back in the 1950's and 1960's. The gravel operation has since ceased, and this area has become overgrown and wooded. The northern portion of the Site is accessed from the southern portion of the Site via a farm road over an existing culvert that conveys the intermittent stream.

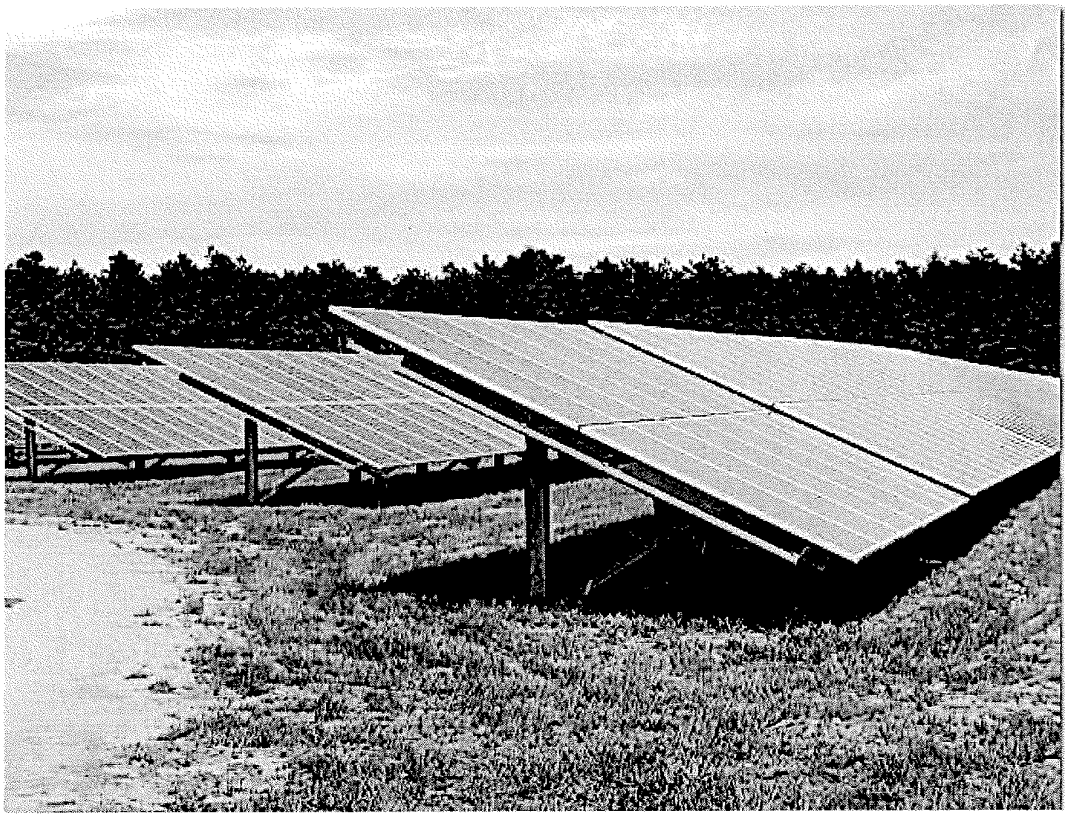
The majority of the southern portion of the Site is maintained in agriculture. This area is currently a hay field, but was formerly used to grow corn. Portions of the agricultural lot are

characterized as wetland, but are still actively farmed. Wooded areas are present to the east, south and west of the hay field. A small isolated pond is located within the southeast corner of the agricultural field where the access road enters the field.

D. PROJECT DESCRIPTION

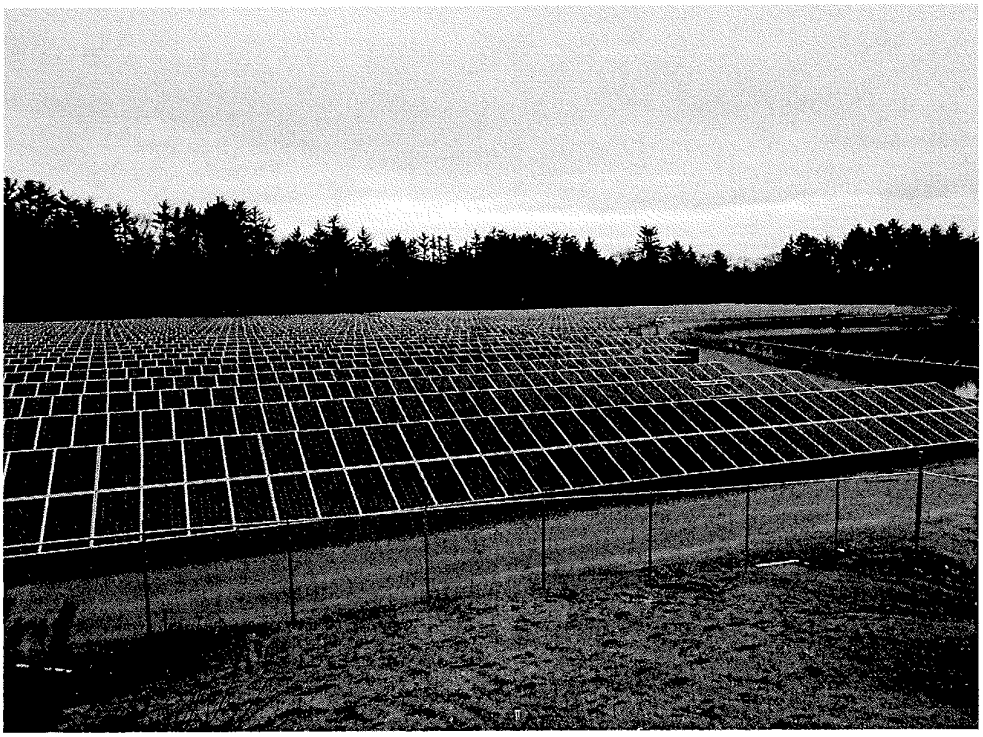
If this Project is approved by the Siting Council, Lodestar will enter into a lease agreement with the Sullivans that will give it the right to construct, operate, and maintain the solar farm at the Site. The Project will involve the construction of approximately 10 acres of ground-mounted solar photovoltaic panels and improvements to an existing farm road to provide access to the site from North Street. The work will include clearing and grubbing; grading; construction of access roads; layout and placement of foundation systems, racking, approximately 9,288 solar PV panels and 86 string intervers; installation of utility pads and associated electrical equipment; installation of electrical conduit, conduit supports, electrical poles, and overhead wire; installation of a transmissin line and associated tranmission line tap; and installation of security fencing. The access road will be improved and widened in accordance with local requirements to accommodate emergency vehicles and fire trucks. The security fence will completely enclose the PV facilities and will consist of an 8-foot chain-link ballasted fence with gated access.

The PV panels and inverters will be mounted on a driven post racking system at a 25-degree tilt facing due south. Inverters will be mounted to the racking system, underneath the PV panels. The maximum height of the panels will be approximately 8 feet. The image below is an example of the type of panels and racking system that will be utilized.



Grading is required and removal of trees will be necessary to prepare the array location for equipment installation, as well as to maximize the electrical production of the system. At the end of the operational life of the Project, the Company will remove all equipment (e.g. racking system, panels, inverters, electrical collection system, etc.) from the Site.

The Company will install the facilities in the area shown on the Site Plans in Exhibit III. The image below is an example of a similar solar array field installed by the Company.



Project construction period is estimated at 4-6 months from Notice to Proceed.

Project Schedule:

Task	Duration
Mobilization and Site Preparation	4 weeks
Civil Work: Road construction, tree clearing, grading	4 weeks
Racking and Panel Installation	4 weeks
Electrical Installation	3 weeks
Interconnection and Medium Voltage	2 weeks
System Testing	1 week
Approvals & Commissioning	2 weeks

E. INTERCONNECTION

The Company proposes interconnecting the Project to an existing 13.8kV overhead circuit that runs along North Street which is part of Eversource's distribution system. The interconnection will require the installation of new poles extending from the existing utility pole #4125, located on the west side of North Street at the entrance to the access road, to the array location on the west side of the property. Eversource will own and install a pole mount recloser on the first new pole and an overhead primary metering cluster on the second new pole. The point of common coupling will be on the load side of the primary metering cluster. The Company will install an overhead 3-phase 15kV line running approximately 1,400 feet from the point of common coupling to the array location. The extension will follow the path of the access road with poles installed adjacent to the access road on its north side. The extension will cross an existing Tennessee Gas Pipeline easement. The overhead portion of the extension will end at a riser pole at the array location where a pole mounted group operated disconnect will be installed by the Company. The extension will continue underground from the last riser pole to the pad mounted switchgear installed at the array location.

F. LOCAL INPUT & NOTICE

The Company has actively sought input and approval from the Town of Suffield, First Selectman Edward G. McAnaney, and other officials throughout the planning and development of this Project, and remains committed to providing the Town of Suffield with as much information regarding the Project as possible. In support of this goal, the Company:

- Attended meetings with First Selectman Edward G. McAnaney; Town Planner, Bill Hawkins; Town Engineer, Gerald J. Turbet; and Town Attorney, Carl Landolina to present project and solicit feedback on proposed design;

- Attended Suffield Zoning and Planning Commission meeting on March 16, 2015, to present project site plan and solicit feedback;
- Attended Suffield Conservation Commission meeting on March 24, 2015, to present project site plan and solicit feedback;
- Provided additional information to Bill Hawkins, Town Planner, by letter dated April 2, 2015, to follow up on questions raised by the Zoning and Planning Commission in its March 16 meeting; and
- Will be providing copies of the Final Site Plans and Wetlands Report to Zoning and Planning and the Conservation Commission concurrently with the submittal of this Petition to the Siting Council.

Additionally, as required by the Regulations of Connecticut State Agencies § 16-50j-40(a), the Company provided notice of this petition to all required persons and appropriate municipal officials and governmental agencies. Attached, as Exhibit IV, is a copy of the notice of service and a service list.

Additionally, the Company provided notice to the following Town officials:

- First Selectman Edward G. McAnaney
- Gerald J. Turbet, Town Engineer
- Arthur Christian, Chair Conservation Commission
- Frank Bauchiero, Jr., Chairperson, Zoning and Planning Commission
- Carl Landolina Town Attorney

IV. POTENTIAL ENVIRONMENTAL IMPACTS

On behalf of the Company, GeoQuest, Inc. conducted a comprehensive Phase I Environmental Site Assessment ("ESA"). (Exhibit V.) Additionally, a Wetland Delineation Report and Functional Assessment (Exhibit VI) for the Project was completed by Highland Soils. The Company consulted the Suffield Conservation Commission and other relevant agencies, evaluated potential environmental impacts, and procured before-and-after visual

renderings of the proposed Project (see Exhibits VII.) For these reasons and those addressed further below, this Project avoids, reduces, and mitigates potential environmental impacts.

A. ENVIRONMENTAL SITE ASSESSMENT

GeoQuest, Inc. performed a Phase I Environmental Site Assessment ("ESA") of the Project Site, in conformance with ASTM E 1527-13. The ESA concluded that the Project Site contained no recognized environmental conditions. Accordingly, GeoQuest concluded that no additional investigation or action was required at the Project Site. See Exhibit V.

B. AIR QUALITY

The Project will have no air emissions during operation and only very minor air emissions of regulated air pollutants and greenhouse gases during construction. The Company will control any temporary emissions at the Site by enacting appropriate mitigation measures (e.g., water for dust control; avoid mass early morning vehicle startups, etc.). Accordingly, any potential air effects produced by the Project's construction activities will be de minimus. During operation, the Project will produce extremely low levels of regulated air pollutants or greenhouse gases (e.g., PM, VOCs, GHG or Ozone). No air permit will be required for either construction or operation of the Project.

C. BIOLOGICAL RESOURCES

A request for review of the Natural Diversity Database (NDDB) was submitted to the Connecticut Department of Energy and Environmental Protection (DEEP) on February 23, 2015. (Exhibit VIII.) DEEP responded with a letter on March 3, 2015. (Exhibit IX.) The NDDB review identified three possible listed species that may occur within or very close to the Project Site. The three species are the Dwarf Wedge Mussel (Alasmidonta heterodon), a federally- and

State- listed endangered species; the wood turtle (Glyptemys insculpta), a State species of Special Concern; and the bobolink (Dolichonyz oryzivorus), also a State species of Special Concern. In order to further evaluate whether these species are present at the Site, the Company retained REMA Ecological Services ("REMA").

REMA conducted a site investigation on April 7, 2015, to screen the site for its potential to provide suitable habitat for the listed species identified by the DEEP. Based on its evaluation, REMA concluded that "it is unlikely that any of the three recorded 'listed' species from the vicinity of the Site actually utilize the subject site. Therefore, the proposed [Canis Major Solar Project] would not adversely affect habitat for these species." (See Exhibit X.)

D. WETLANDS

The state and federal wetlands in the vicinity of the Project were delineated by Highland Soils, Inc. in December of 2014. Additional investigations by Highland Soils, Inc. in April and May of 2015 also identified the presence of vernal pool habitats within the wetlands at five locations at and adjacent to the site. The wetland flags have been surveyed and mapped, and the wetland resources are shown on the attached detailed Site plans. (Exhibit III.) Detailed descriptions of the wetland resources, including a functions and values assessment, are provided in the attached Wetland Report. (Exhibit VI.)

The proposed project was designed to avoid where possible, and then minimize impacts to, the existing wetland resources at the Site. As discussed above, the Site is currently accessed via an existing farm road. The initial section of farm road includes one wetland crossing and appears to bisect an existing wetland. An additional wetland crossing is present where the road crosses the intermittent stream to provide access to the northern portion of the Site.

In order to avoid potential impacts from the construction of a new access road, the existing farm road will continue to be used for access to the Site. However, the road will be reconstructed to accommodate emergency vehicles and widened to a minimum clear width of 18 feet, consistent with the Town's requirements for residential driveways in excess of 250 feet in length. The widening will ultimately result in some wetland filling at the locations of the two existing wetland crossing. However, utilization of these existing wetland crossing locations significantly decreases the amount of direct wetland impact. In addition, approximately 793 feet of retaining wall will be installed on both sides of the widened road in the vicinity of the southern crossing in order to reduce the amount of wetland fill. The overall amount of wetland fill associated with the project will be 2,445 square feet.

As discussed in the Wetland Report, the proposed fill will not adversely impact the functions of these wetlands, and some positive impact will result from the addition of riprap as outlet protection at these culverts. Similarly, indirect impacts to the existing vernal pool habitats have been minimized by maintaining separation distances between site activities and these resources and by use of appropriate erosion controls and other best management practices.

The total square footage of the impacts to the wetlands will be less than 5,000 square feet. For this reason, the project will be considered a Category 1 activity under the Army Corps of Engineers' Programmatic General Permit for Connecticut and the Company will file a certification form prior to the commencement of the work. Copies of the Wetland Report and Site Plans have been provided to the Town's Conservation Commission for its review and approval and/or comment.

E. STORMWATER MANAGEMENT

The proposed development is not anticipated to have an adverse impact to the surrounding water and wetland resources. The proposed fixed panel solar arrays are installed on elevated racks that provide adequate height above the ground to promote vegetative growth and allow for infiltration. As a result, the areas containing the solar arrays can be considered pervious groundcover.

A detailed Drainage Report was prepared by J.R. Russo & Associates, LLC. (Exhibit XI.) As the report indicates, the existing and proposed hydrologic conditions were evaluated to determine if the development would result in significant changes to the stormwater discharge from the Site. The report concludes that the post development peak stormwater discharges from the Site will be equal to or less than the pre-development levels. This Drainage Report has also been provided to the Town of Suffield Engineer.

Construction of the facilities will result in a grading disturbance of approximately 15.75 acres of land including reconstruction of the existing access road and grading for placement of the solar arrays, and clearing of adjacent trees to eliminate the potential for shading. The majority of this disturbance will be in areas previously disturbed by historic farming and gravel mining operations at the Site. The natural drainage patterns, which consist of sheet flow to the surrounding wetlands, will be preserved reducing the potential for erosion and sedimentation. All graded areas will be seeded with a low growth, low maintenance meadow/native grass mix and stabilized as soon as possible.

The Petitioner will register under the DEEP's General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities prior to commencing construction. As required by this General Permit, the Petitioner will prepare a

Stormwater Pollution Control Plan and submit it to the DEEP for review in accordance with the requirements and timelines established by the General Permit.

F. FLOODPLAINS

The attached Federal Emergency Management Agency (FEMA) Flood Map (Exhibit XII) indicates that no portion of the Site is located within the 100-year flood zone or special flood hazard areas. The very eastern end of the Site is located within Zone X. However, Zone X only includes areas of 0.2% annual chance flood (i.e. 500-year flood), areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood. The Company designed the Project to avoid FEMA's 500-year flood elevation level. The solar facilities do not require design modifications to meet the 500-year mark.

G. DRINKING WATER RESOURCES

The subject property and surrounding properties on North Street and Wendover Road have access to public water supplied by the Connecticut Water Company. A review of the Connecticut Aquifer Protection Area Map prepared by the CT DEEP Bureau of Water Protection and Land Reuse (Exhibit XIII) does not show any mapped aquifer protection areas at or in the vicinity of the Site. No surface drinking water supplies are located in the Town of Suffield. Due to their absence in the project area, the proposed project will not impact any drinking water sources or aquifer protection areas.

H. HISTORIC RESOURCES

On February 25, 2015, a request was submitted to the Connecticut State Historic Preservation Office (SHPO) for review of the proposed site and facilities in relation to historic

and archeological resources. (Exhibit XIV) On March 27, 2015, Petitioner received a response from SHPO (dated March 16, 2015). (Exhibit XV.) In its response, SHPO requested that the Company complete a "professional cultural resources assessment and reconnaissance survey" prior to construction. The Company has retained Raber Associates ("Raber") (an archaeologist identified by SHPO) to perform this work and will supplement this Petition when it has received the final report from Raber.

I. SCENIC VALUES AND VISUAL RENDERINGS

The Project is located approximately 1,400 feet west of North Street and separated from the street by a row of residential houses, active agricultural fields used for nursery stock, and existing woods. As a result, the visibility of the Project from North Street will be extremely limited, and the potential for visual impacts to North Street are minor.

The nearest sensitive visual receptors to the Project were determined to be the existing residential houses to the southwest of the site at the end of Wendover Road (a dead end street) and the residential home across the field north of the project site. The Project will include the planting of double rows of evergreens along the northern and southwestern limits as indicated on the Site Plan to minimize the visual impact to these properties. In addition, the use of low profile Project components (e.g., racking system, panels, inverters, etc.) and the existing topography of the Site significantly reduce potential visible impact.

To evaluate the potential visual impact to these properties, existing photographs were taken from three observation points at the edge of these properties in February of 2014. Subsequently, visual renderings of the proposed project were prepared by Kleinfelder. (Exhibit VII.) As demonstrated in those renderings, the Project will cause an insignificant impact on the scenic values of the Site from these nearby residences.

J. PUBLIC HEALTH AND SAFETY

The Company is immensely concerned with safety. Overall, the Project will meet or exceed all health and safety requirements applicable for electric power generation. Each employee working on Site will:

- Receive required general and site-specific health and safety training;
- Comply with all health and safety controls as directed by local, state, and federal requirements;
- Understand and employ the Site health and safety plan;
- Know the location of local emergency care facilities, travel times, ingress and egress routes; and
- Immediately report all unsafe conditions to the construction manager.

During construction, heavy equipment will be required to access the Project Site and higher levels of noise are anticipated; however, the Company will conduct all activities during normal working hours.

K. FEDERAL AVIATION ADMINISTRATION DETERMINATIONS

Pursuant to 14 CFR § 77.9 regarding the Federal Aviation Administration (FAA) Notice of Proposed Construction or Alteration, the FAA must be notified of "any construction or alteration that exceeds an imaginary surface extending outward and upward at a slope of 100 to 1 for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of the airport." 14 CFR § 77.9(b)(1) The southern property line of the Site is approximately 19,000 feet from the northern property line of the Bradley International Airport. The actual end of the runway is an additional 1,800 feet from the airport property line, and the Project's nearest panel is approximately another 150 feet +/- from the Site's property line. Thus, the closest structure (a

PV panel) will be approximately 20,950 feet from the end of the runway and beyond the distance required for notifying the FAA.

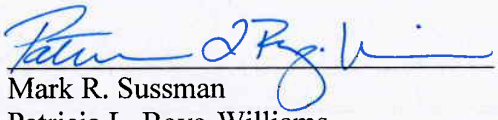
Furthermore, the elevation at the end of the runway is about 146 feet. The elevation of the ground surface at the highest point where the Company is installing PV panels is approximately 171 feet. Even if the panels were to extend fifteen feet high (to elevation 186), the difference in elevation is only 40 feet over the 20,950 feet. Thus, the array's highest structure does not rise above the limiting 100:1 slope, which at a distance of 20,000 feet would be elevation 346 feet (146 feet + 20,000 feet/100). Accordingly, when considering either the Project's distance to the end of the runway or the elevation of the Project's site in relation to the end of the runway, the Company is not required to file a notice with the FAA.

V. CONCLUSION

The Project, a grid-side distributed resources project with a capacity of less than 65 MW, is among the types of projects that the Council can approve by declaratory ruling. Accordingly, and for the reasons stated herein, because the proposed Project will meet state air and water quality standards and will not have a substantial adverse effect on the environment, Petitioner respectfully requests that the Council approve the location and construction of the proposed Project by declaratory ruling.

Respectfully submitted,

Lodestar Energy

By: 
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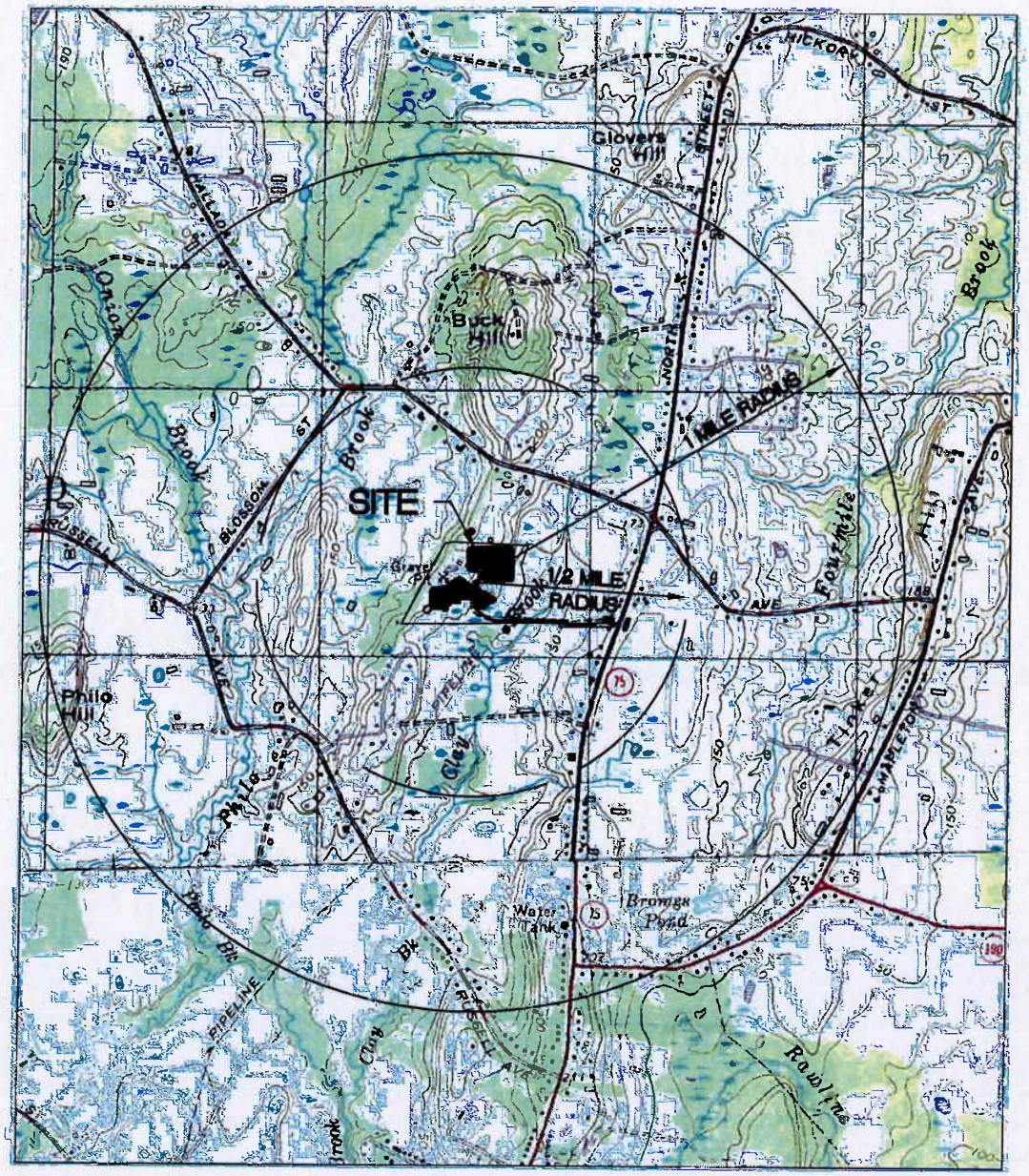
Its Attorneys



SOURCE:
WEST SPRINGFIELD, MA & WINDSOR LOCKS, CT USGS QUADRANGLES

VICINITY MAP

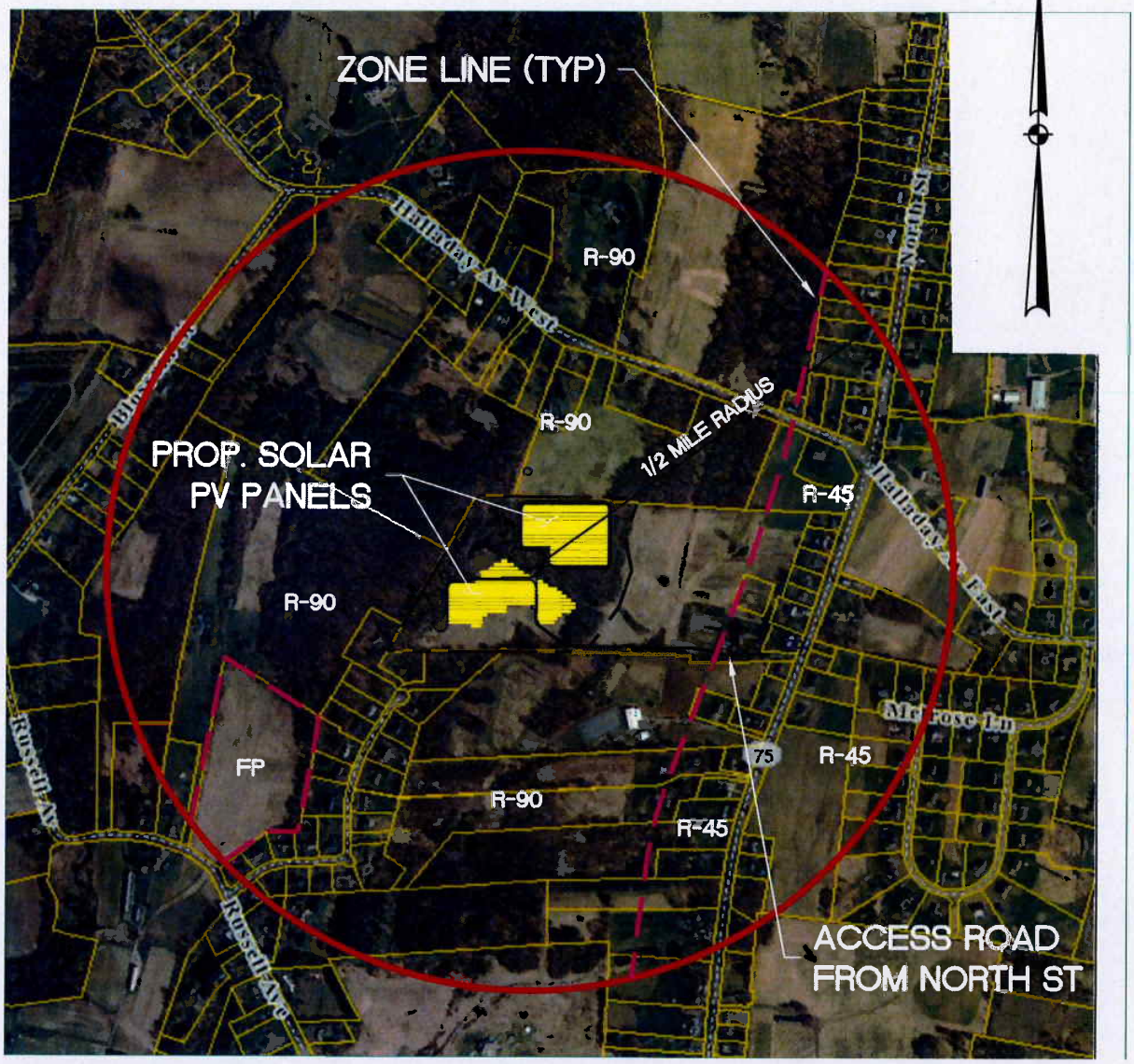
Canis Major Solar
Sullivan Farm

1005 North Road
Suffield, Connecticut

RUSSO
SURVEYORS · ENGINEERS
SERVING CT & MA

J.R. Russo & Associates, LLC
1 Shoham Rd East Windsor, CT 06088 · CT 860.623.0569 · MA 413.785.1158
www.jrrusso.com · info@jrrusso.com

DATE	4-30-15
SCALE	1"=2,000'
JOB NUMBER	2014-115
SHEET	EXHIBIT I



ZONING LEGEND:
FP = FARMLAND PRESERVATION ZONE
R-90 = RESIDENTIAL ZONE
R-45 = RESIDENTIAL ZONE

SOURCE:
SUFFIELD GIS W/2012 AERIAL PHOTOGRAPH & ZONING BOUNDARY OVERLAYS

LAND USE MAP

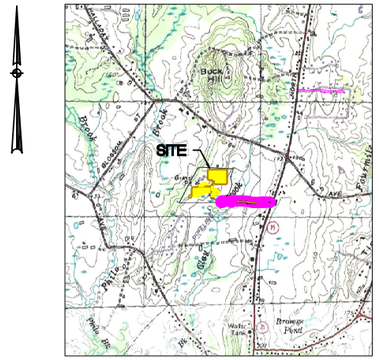
Canis Major Solar
Sullivan Farm
1005 North Road
Suffield, Connecticut

RUSSO
SURVEYORS · ENGINEERS
SERVING CT & MA
J.R. Russo & Associates, LLC
1 Shoham Rd East Windsor, CT 06088 · CT 860.623.0569 · MA 413.785.1158
www.jrrusso.com · info@jrrusso.com

DATE	4-30-15
SCALE	1"=1,000'
JOB NUMBER	2014-115
SHEET	EXHIBIT II

Canis Major Solar

Rear Land of 1005 North Street
Suffield, Connecticut



LOCATION MAP
1"=2000'

LODESTAR ENERGY

Applicant

Lodestar Energy, LLC
3 Ellsworth Place, Suite 122
Avon, CT 06001

Owner

Krist A. & Kevin S. Sullivan, Jr.
1005 North Street
Suffield, CT 06078

Prepared By

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DRAWING INDEX

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SITE PLAN (40 SCALE)	5 of 8	5-14-15
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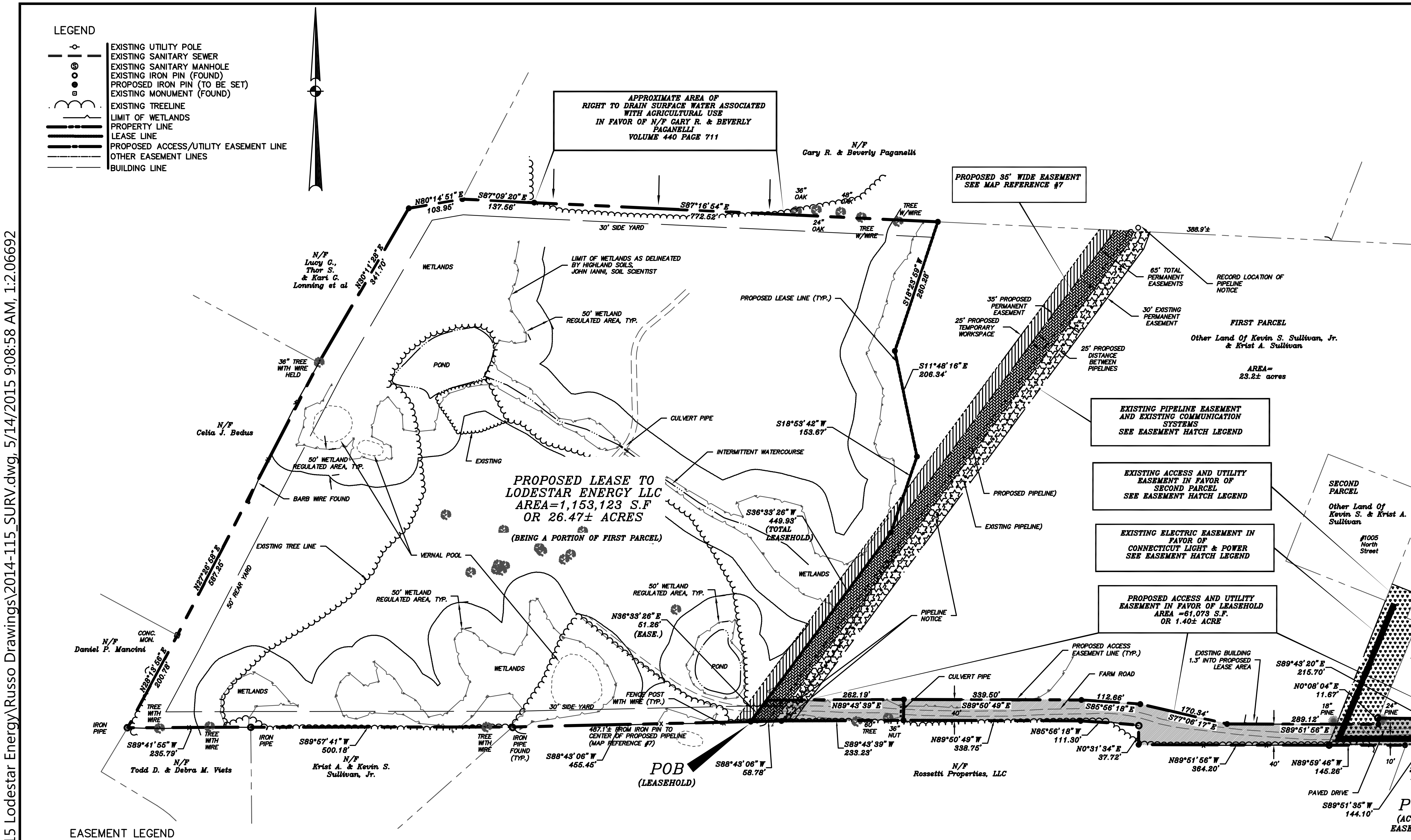

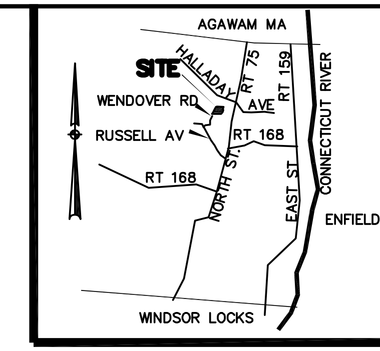

EASEMENT LEGEND

- PROPOSED ACCESS EASEMENT IN FAVOR OF LEASEHOLD
- PROPOSED TEMPORARY WORK SPACE – SEE MAP REFERENCE #7
- PROPOSED PERMANENT EASEMENT – SEE MAP REFERENCE #7
- EXISTING PIPELINE EASEMENT IN FAVOR OF TENNESSEE GAS PIPELINE CO. VOLUME 79 PAGE 137 –ALSO, EXISTING COMMUNICATION SYSTEMS EASEMENT IN FAVOR OF TENNESSEE GAS PIPELINE CO. VOLUME 298 PAGE 527 (AFFECTS LEASEHOLD PARCEL)
- EXISTING ACCESS AND UTILITY EASEMENT IN FAVOR OF SECOND PARCEL VOLUME 168 PAGE 925 (AFFECTS LEASEHOLD PARCEL)
- EXISTING ELECTRIC EASEMENT IN FAVOR OF CONNECTICUT LIGHT & POWER VOLUME 144 PAGE 47 (AFFECTS LEASEHOLD PARCEL)

GRAPHIC SCALE

(IN FEET)
1 inch = 100 ft.

Deed References:

1. Warranty Deed Ligia J. Vakalis to Kevin S.Sullivan, Jr. and Krist A Sullivan June 29, 1995 Volume 261 Page 366;

2. Warranty Deed Gary R. Paganelli and Beverly Paganelli to Kevin S. Sullivan, Jr. and Krist A Sullivan Volume 302 Page 889;

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1. "Property Of Eva Guertin To Be Conveyed To George Valalis 4–1–74 Town Clerk #156";
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3. "Map Prepared For Joseph Guertin Suffield Conn. May 12, 1959" By Stanley J. Marnicki;
4. "Re–subdivision Plan Property Of Elizabeth & Lewis 235 Halladay Avenue Suffield, Connecticut" By Henry Charles Cotton;
5. "Re–subdivision Property Of Charles Dyer & John Rodzen Wendover Road Suffield Connecticut" By Close, Jensen & Miller;
6. "Prepared for Gary R. Paganelli Halladay Avenue & North Street Suffield Connecticut No. 94110 Date 12–10–2007" By J.R. Russo & Associates;
7. "Connecticut Expansion Proposed 24" Line Crossing Property Of Kevin S. Sullivan Jr. et al Suffield Connecticut Hartford County Plotted 1–30–2015" By Tennessee Gas Pipeline Company, LLC

DATA BLOCK:

Leasehold Parcel lies in Residential Zone (R–90)
Leasehold Area = 1,153,123 SF (26.5± ACRES)
Bulk Requirements:

Maximum Building Height	30'
Minimum Frontage	200'
Minimum Lot Size	90,000 SF
Minimum Developable Area	60,000 SF
Max. Coverage	10%
Front Yard	50'
Side Yard	30'
Rear Yard	50'

NOTES:

1. THE PURPOSED OF THIS PLAN IS TO PROVIDE A BOUNDARY SURVEY OF THE AREA TO BE LEASED BY LODESTAR ENERGY INC. FOR A PHOTOVOLTAIC SOLAR FARM.
2. PARCEL IS NOT LOCATED IN A 100–YEAR FLOOD HAZARD ZONE, PANEL NO. 09003C 0094F.
3. PORTION OF PARCEL LIES WITHIN INLAND WETLANDS AS DELINEATED BY HIGHLAND SOILS, INC. IN DECEMBER 2014.
4. HORIZONTAL DATUM BASED ON N.A.D. 1983.
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LODESTAR ENERGY

5–14–15	PETITION SUBMITTAL, ACCESS & UTILITY EASEMENT
4–02–15	GAS LINE EASEMENT

REVISIONS
BY: RS CHK: JEU

Canis Major Solar
Prepared For
Lodestar Energy LLC
Rear Land of 1005 North Street
Suffield, Connecticut
Map 39H Block 29 Lot 21 Zone: R–90

LIMITED BOUNDARY SURVEY

DATE: 3–10–15
SCALE: 1"=100'
JOB NUMBER: 2014–115
SHEET: 2 of 8

S:\Acad\2014 Civil 3D\2014-115 Lodestar Energy\Russo Drawings\2014-115_SURV.dwg, 5/14/2015 9:08:58 AM, 1:2.06692

S:\Acad\2014 Civil 3D\2014-115 Lodestar Energy\Russo Drawings\2014-115_SURV.dwg, 5/14/2015 9:07:30 AM, 1:2.06722

N/F Lucy G., Thor S. & Kari G. Lonning et al

N/F Gary R. & Beverly Paganelli

(33) – COLORADO BLUE SPRUCE (PICEA PUNGENS) 5–6' B&B

PROP. 12' WIDE GRAVEL ACCESS ROAD

PHOTOVOLTAIC (PV) MODULE/INVERTERS, TYP.

SECURITY FENCE, TYP.

PROP. TREELINE, TYP.

PROP. LEASE LINE (TYP)

EXIST. POND/VERNAL POOL WATER EL.=136.5±

TRANSFORMERS

N/F Celia J. Bedus

APPROX. VERNAL POOL

APPROX. VERNAL POOL

REMOVE & REPLACE EXISTING PIPE W/ 56'–24" ACCMP S=5.89%

PHOTOVOLTAIC (PV) MODULE/INVERTERS, TYP.

INTERMITTENT WATERCOURSE

N/F Krist A. & Kevin S. Sullivan, Jr.

N/F Krist A. & Kevin S. Sullivan, Jr.

N/F Daniel P. Mancini

45'R GRAVEL TURN–AROUND

LIMIT OF WETLANDS (TYP)

TRANSFORMERS

SWITCH GEAR

PROP. GATE

APPROX. VERNAL POOL

EXIST. POND WATER EL.=142.8±

LIMITS OF EXISTING & PROPOSED PIPELINE EASEMENT

IMPROVE EXISTING FARM ROAD TO 12' WIDE GRAVEL ACCESS ROAD

PROPOSED ACCESS & UTILITY EASEMENT IN FAVOR OF LODESTAR ENERGY, LLC

RETAINING WALL, TYP.

North Street

N/F Richard & Marion P. Stevens

(20) – COLORADO BLUE SPRUCE (PICEA PUNGENS) 5–6' B&B

SHRUB PLANTINGS

APPROX. VERNAL POOL

REMOVE & REPLACE EXISTING PIPE W/ 32'–24" ACCMP S=0.5%

PROP. UTILITY POLE, TYP.

N/F Steven T. & Kimberly D. Goodwin

CONNECT TO EXIST. POWER DISTRIBUTION LINES COORD. W/ UTILITY COMPANY

N/F Todd D. & Debra M. Viets

N/F Krist A. & Kevin S. Sullivan, Jr.

N/F Rossetti Properties, LLC

Wendover Road

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)

1 inch = 100 ft.

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LODESTAR ENERGY

REVISIONS		
BY: TAC	CHK: JEU	
4–02–15	CLEARING LIMIT LINE, ADD PROPOSED GAS EASEMENT	
5–14–15	PETITION SUBMITTAL	

Canis Major Solar

Prepared For

Lodestar Energy, LLC

Rear Land of 1005 North Street

Suffield, Connecticut

Map 39H Block 29 Lot 21 Zone: R–90

OVERALL SITE PLAN

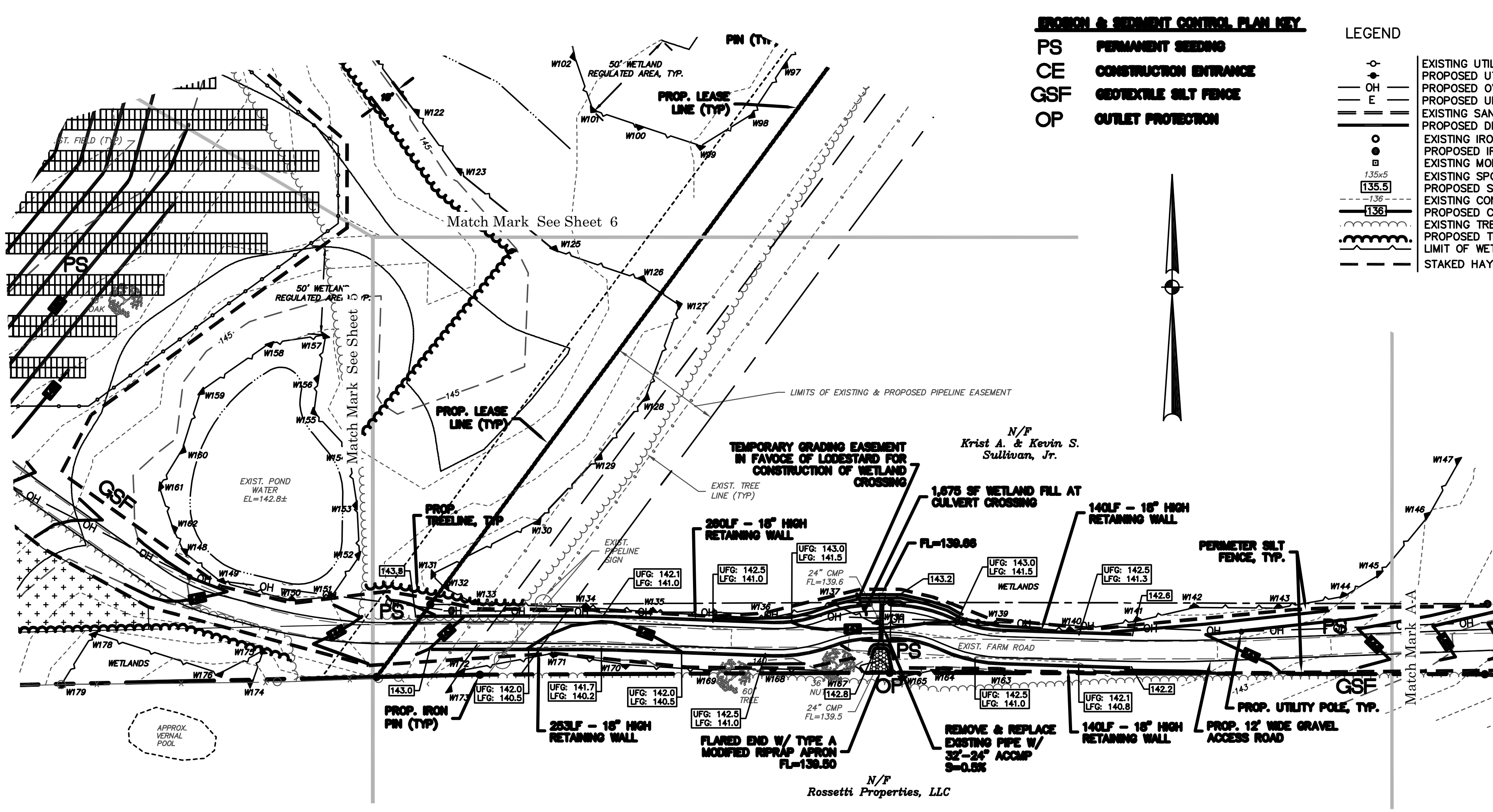
DATE 3–10–15

SCALE 1"=100'

JOB NUMBER 2014–115

SHEET 3 of 8

S:\Acad\2014 Civil 3D\2014-115 Lodestar Energy\Russo Drawings\2014-115_SURV.dwg, 5/14/2015 9:06:32 AM, 1:2.06722



EROSION & SEDIMENT CONTROL PLAN KEY

PS	PERMANENT SEEDING
CE	CONSTRUCTION ENTRANCE
GSF	GEOTEXTILE SILT FENCE
OP	OUTLET PROTECTION

LEGEND

- EXISTING UTILITY POLE
- PROPOSED UTILITY POLE
- PROPOSED OVERHEAD ELECTRIC
- PROPOSED UNDERGROUND ELECTRIC
- EXISTING SANITARY SEWER
- PROPOSED DRAIN LINE
- EXISTING IRON PIN (FOUND)
- PROPOSED IRON PIN (TO BE SET)
- EXISTING MONUMENT (FOUND)
- EXISTING SPOT GRADE
- PROPOSED SPOT GRADE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING TREELINE
- PROPOSED TREELINE
- LIMIT OF WETLANDS
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4. "RE-SUBDIVISION PLAN PROPERTY OF ELIZABETH & LEWIS 235 HALLADAY AVENUE SUFFIELD, CONNECTICUT" BY HENRY CHARLES COTTON;

5. "RE-SUBDIVISION PROPERTY OF CHARLES DYER & JOHN RODZEN WENDOVER ROAD SUFFIELD CONNECTICUT" BY CLOSE, JENSEN & MILLER;

6. "PREPARED FOR GARY R. PAGANELLI HALLADAY AVENUE & NORTH STREET SUFFIELD CONNECTICUT NO. 94110 DATE 12-10-2007" BY J.R. RUSSO & ASSOCIATES;

NOTES:

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6. SHRUBS PLANTINGS SHALL CONSIST OF ONE OR MORE OF THE FOLLOWING SPEICES BASED ON AVAILABILITY: HIGHBUSH BLUEBERRY, SHADBLOW, AMERICAN CRANBERRY, SPICEBUSH, WINTERBERRY, SILKY DOGWOOD, RED-OSIER DOGWOOD, WITCH HAZEL, OR SWAMP AZALEA. PLANTING STOCK TO BE MIN. 18"-24". PLANTINGS TO BE APPROXIMATELY 10' O.C.
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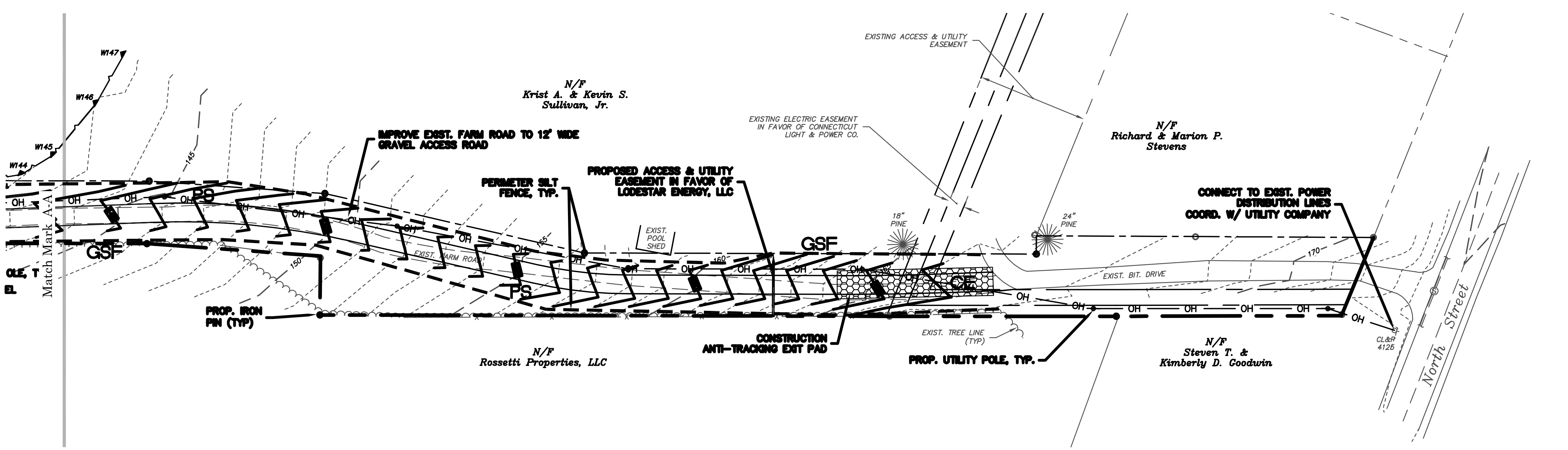

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

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LODESTAR ENERGY

5-14-15	PETITION SUBMITTAL	
4-02-15	CLEARING LIMIT LINE	

REVISIONS

BY: LF/TAC CHK: JEU

Canis Major Solar
Prepared For
Lodestar Energy, LLC
Rear Land of 1005 North Street
Suffield, Connecticut
Map 39H Block 29 Lot 21 Zone: R-90

SITE PLAN

DATE 3-10-15
SCALE 1"=40'
JOB NUMBER 2014-115
SHEET 4 of 8

S:\Acad\2014 Civil 3D\2014-115 Lodestar Energy\Russo Drawings\2014-115_SURV.dwg, 5/14/2015 9:06:11 AM, 1:2.06722

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- PROPOSED UTILITY POLE
- PROPOSED OVERHEAD ELECTRIC
- PROPOSED UNDERGROUND ELECTRIC
- EXISTING SANITARY SEWER
- PROPOSED DRAIN LINE
- EXISTING IRON PIN (FOUND)
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- EXISTING MONUMENT (FOUND)
- EXISTING SPOT GRADE
- PROPOSED SPOT GRADE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING TREELINE
- PROPOSED TREELINE
- LIMIT OF WETLANDS
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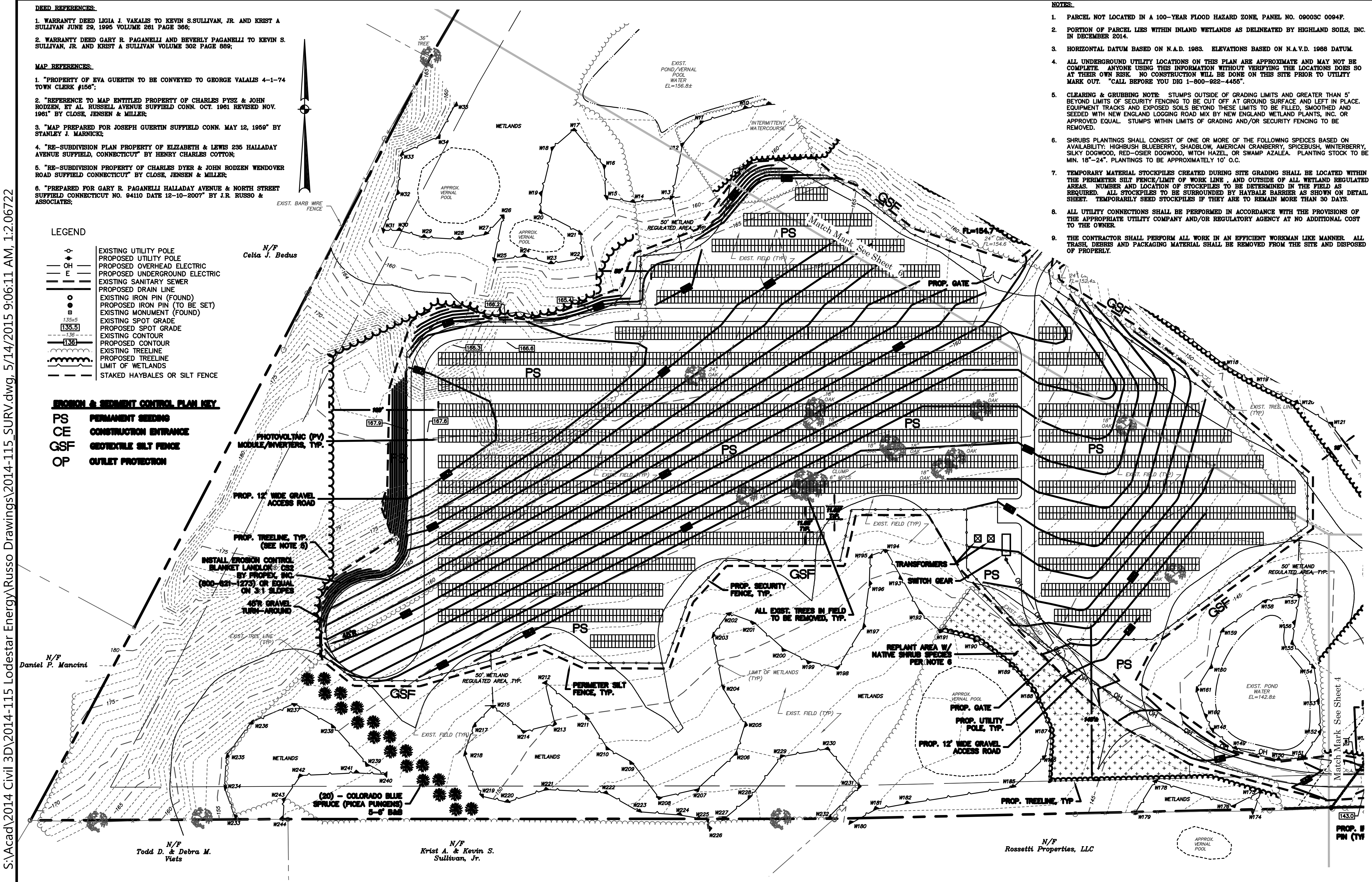
EROSION & SEDIMENT CONTROL PLAN KEY

PS	PERMANENT SEEDING
CE	CONSTRUCTION ENTRANCE
GSF	GEOTEXTILE SILT FENCE
OP	OUTLET PROTECTION



GRAPHIC SCALE

(IN FEET)
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LODESTAR ENERGY

5-14-15	PETITION SUBMITTAL	
4-02-15	CLEARING LIMIT LINE	

REVISIONS

BY: LF/TAC | CHK: JEU

Canis Major Solar

Prepared For

Lodestar Energy, LLC

Rear Land of 1005 North Street
Suffield, Connecticut
Map 39H Block 29 Lot 21 Zone: R-90

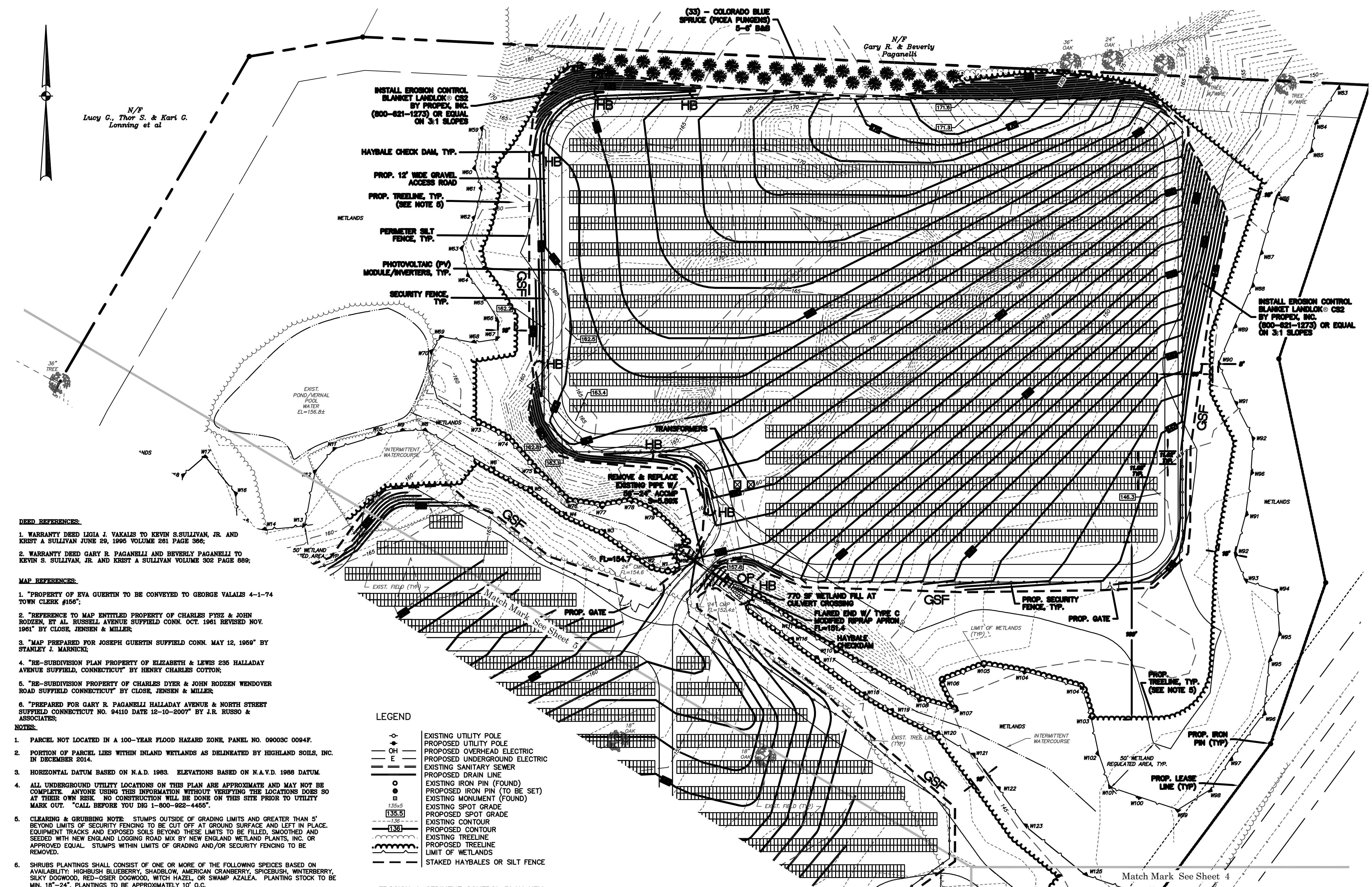
SITE PLAN

DATE: 3-10-15

SCALE: 1"=40'

JOB NUMBER: 2014-115

SHEET: 5 of 8



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GSF	GEOTEXTILE SILT FENCE
OP	OUTLET PROTECTION
HB	HAYBALE CHECKDAM

GRAPHIC SCALE

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(IN FEET)
1 inch = 40 ft.

This survey and map has been prepared in accordance with Sections 20-300b-1 thru 20-300b-20 of the Regulations of Connecticut State Agencies – "Minimum Standards for Surveys and Maps in the State of Connecticut" as endorsed by the Connecticut Association of Land Surveyors, Inc. It is a Property Survey the eastern portion is based on a Resurvey and the western portion is based on a First Survey conforming to Horizontal Class A-2 & a Topographic Survey conforming to Class T-2.

This document and copies thereof are valid only if they bear the live signature and embossed seal of the designated professional. Unauthorized alterations render any declaration hereon null and void.

TO THE BEST OF MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

RUSSO SURVEYORS·ENGINEERS SERVING CT & MA

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LODESTAR ENERGY

REVISIONS

5-14-15	PETITION SUBMITTAL
4-02-15	CLEARING LIMIT LINE

BY: LF/TAC CHK: JEU

Canis Major Solar

Prepared For

Lodestar Energy, LLC

Rear Land of 1005 North Street
Suffield, Connecticut
Map 39H Block 29 Lot 21 Zone: R-90

SITE PLAN

DATE	3-10-15
SCALE	1"=40'
JOB NUMBER	2014-115
SHEET	6 of 8

GEOTEXTILE SILT FENCE (GSF)

SPECIFICATIONS

Materials

Geotextile fabric: shall be a pervious sheet of polypropylene, nylon, polyester, ethylene or similar filaments and shall be certified by the manufacturer or supplier as conforming to the requirements shown in Figure GSF-1 in the Connecticut Guidelines For Soil Erosion and Sediment Control latest edition. The geotextile shall be non-rotting, acid and alkali resistant and have sufficient strength and permeability operations. Filamanets in the geotextile shall be resistant to absorption. The filament network must be dimensionally stable and free of any chemical treatment or coating that will reduce its permeability. The geotextile shall also be free of any flaws or defects which will alter its physical properties. Torn or punctured geotextiles shall not be used.

Supporting posts: shall be at least 42 inches long made of either 1.5 inch square hardwood stakes or steel posts with projections for fastening the geotextile possessing a minimum strength of 0.5 pound per linear foot.

Placement

For toe of slope: Locate 5-10 feet down gradient from the toe of slope, generally on the contour with maintenance and sediment removal requirements in mind. When the contour can not be followed install the fence such that perpendicular wings are created to break the velocity of water flowing along the fence. See Figure GSF-2 in the Connecticut Guidelines For Soil Erosion and Sediment Control for spacing requirements.

Swales: Locate "U" shape across swale such that the bottom of both ends of the fence are higher that the top of the lowest section of the fence.

Catch Basin in Swale on Slopes: Locate 2 "U" shapes across swale as above: one immediately up slope from the catch basin and the other immediately down slope from the catch basin.

Catch Basins in Depressions: Encircle catch basin.

Culvert Inlets: Locate in a "U" shape approximately 6 feet from the culvert in the direction of the incoming flow.

Culvert Outlets: Locate across the swale at least 6 feet from the culvert outlet.

Installation

Trench excavation: Excavate a trench a minimum of 6 inches deep and 6 inches wide on the up slope side of the fence location. For slope and swale installations, extend the ends of the trench sufficiently up slope such that bottom end of the fence will be higher than the top of the lowest portion of the fence.

When the fence is not to be installed on the contour, excavate wing trenches spaces at the intervals given on Figure GSF-2 in the Connecticut Guidelines For Soil Erosion and Sediment Control latest edition.

When excavation is obstructed by an occasional stone or tree roots, provide a smooth transition between the trench bottom and the obstruction.

Support Posts: Drive support posts on the down slope side of the trench to a depth of at least 12 inches into original ground.

Never install support posts more than 10 feet apart. Install support posts closer than 10 feet apart when concentrated flows are anticipated or when steep contributing slopes and soil conditions are expected to generate larger volumes of sediment. For catch basins in hollows, drive posts at each corner of the catch basin. Whenever the geotextile filter fabric that is used exceeds the minimum material specifications contained in this measure, the spacing of the stakes shall be per manufacturer's recommendations.

Geotextile Filter Fabric: Staple or secure the geotextile to the support posts per manufacture's instruction such that at least 6 inches of geotextile lies within the trench, the height of the fence does not exceed 30 inches and the geotextile is taut between the posts. When the trench is obstructed by stones, tree roots, etc. allow the geotextile to lay over the obstruction such that the bottom of the geotextile points up slope.

In the absence of manufacture's instructions, space wire staples on wooden stakes at a maximum of 4 inches apart and alternate their position from parallel to the axis of the stake to perpendicular.

Do not staple the geotextile to living trees.

Provide reinforcement for the fence when it can be exposed to high winds.

When joints in the geotextile fabric are necessary, splice together only at at support posts, and securely seal.

Backfill & Compaction: Backfill the trench with tamped soil or aggregate over the geotextile. When the trench is obstructed by a stone, tree root, etc. make sure the bottom of the geotextile lies horizontal on the ground with the resulting flap on the up slope side of the geotextile and bury the flap with 6 inches of tamped soil, or aggregate.

MAINTENANCE

Inspect the silt fence at least once a week and within 24 hours of the end of a storm with rainfall amount of 0.5 inch or greater to determine maintenance needs. When used for dewatering operations, inspect frequently before, during and after pumping operations.

Remove the sediment deposits or, if room allows, install a secondary silt fence up slope of the existing fence when sediment deposits reach approximately one half the height of the existing fence.

Replace or repair the fence within 24 hours of observed failure. Failure of the fence has occurred when sediment fails to be retained by the fence because:
(a) the fence has been overtopped, undercut or bypassed by runoff water,
(b) the fence has been moved out of position (knocked over), or
(c) the geotextile has decomposed or been damaged.

Maintain the fence until the contributing area is stabilized.

After the contributing area is stabilized determine if sediment contained by the fence requires removal or regrading and stabilization. If the depth is greater than or equal to 6 inches, regrading or removal of the accumulated sediment is required. No removal or regrading is required if sediment depth is less than 6 inches.

Remove the fence by pulling up the support posts and cutting the geotextile at ground level. Regrade or remove sediment as needed, and stabilize disturbed soils.

HALE BALE BARRIER (HB)

SPECIFICATIONS

Materials

Hay Bales: shall be made of hay or straw with 40 pounds minimum weight and 120 pounds maximum weight held together by twine or wire.

Stakes for Anchoring Hay Bales: shall be a minimum of 36 inches long and made of either hardwood with dimensions of at least 1.5 inches square or steel posts with a minimum weight of 0.5 pound per linear foot.

Placement

Toe of Slope: Locate 5-10 feet down gradient from the toe of slope, generally on the contour. When the contour can not be followed, stagger the bale installation and install perpendicular wings (spaces as shown in Figure HB-1 in the Connecticut Guidelines For Soil Erosion and Sediment Control latest edition) to break the velocity of water flowing behind the bales. The barrier should be located with sufficient distance from the toe of the slope to allow access by equipment for removal of accumulated sediments.

Catch Basins in Depression or Low Spots: Encircle catch basin or yard drain.

Installation

Trench excavation: Excavate a trench as wide as the bales and at least 4 inches deep. Each end of the trench should be winged upslope so that the bottom of the last bale is higher than the top of the lowest hay bale in the barrier.

Hay Bale Placement: Place bales in a single row in the trench, lengthwise, with ends of adjacent bales tightly abutting one another and the bindings oriented around the sides rather than along the tops and bottoms of the bales (to avoid premature rotting of the bindings).

Staking Hay Bales: Anchor each bale with at least 2 stakes, driving the first stake in each bale toward the previously laid bale to force the bales together. Stakes must be driven a minimum of 18 inches into the ground. Fill any gaps between the bales with hay or straw to prevent water from escaping between the bales.

Backfill & Tamped: Backfill the bales with the excavated trench material to a minimum depth of 4 inches on the uphill side of the bales. Tamp by hand or machine and compact the soil. Loose hay or straw scattered over the disturbed area immediately uphill from the hay bale barrier tends to increase barrier efficiency.

MAINTENANCE

Inspect the hay bale barrier at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inches or greater to determine maintenance needs. For dewater operations, inspect frequently before, during and after pumping operations.

Remove the sediment deposits or install a secondary barrier upslope from the existing barrier when sediment deposits reach approximately one half the height of the barrier.

Replace or repair the barrier within 24 hours of observed failure. Failure of the barrier has occurred when sediment fails to be retained by the barrier because:
(a) the barrier has been overtopped, undercut or bypassed by runoff water,
(b) the barrier has been moved out of position, or
(c) the hay bales have deteriorated or been damaged.

Maintain the hay bale barrier until the contributing area is stabilized.

After the upslope areas have been permanently stabilized, pull the stakes out of the hay bales. Unless otherwise required, no removal or regrading of accumulated sediment is necessary. The hay bales may then be left in place or broken up for ground cover.

TEMPORARY SEEDING (TS)

SPECIFICATIONS

Site Preparation

Install needed erosion control measures such as diversions, grade stabilization structures, sedimentation basins and grassed waterways in accordance with the approved plan.

Grade according to plans and allow for the use of appropriate equipment for seedbed preparation, seeding, mulch application and mulch anchoring.

Seedbed Preparation

Loosen the soil to a depth of 3-4 inches with a slightly roughened surface. If the area has been recently loosened or disturbed, no further roughening is required. Soil preparation can be accomplished by tracking with a bulldozer, discing harrowing, raking or dragging with a section of chain link fence.

Apply ground limestone and fertilizer according to soil test recommendations (such as those offered by the University of Connecticut Soil Testing Laboratory or other reliable source).

If soil testing is not feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 300 pounds per acre or 7.5 pounds per 1,000 square feet of 10-10-10 or equivalent.

Seeding

Apply seed uniformly by hand, cyclone seeder, drill, cultipacker type seeder or hydroseeder. The temporary seed shall be Rye (grain) applied at a rate of 120 pounds per acre. Increase seeding rates by 10% when hydroseeding.

Mulching

See guidelines in the Mulch For Seed measures.

MAINTENANCE

Inspect temporary seeding area at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater for seed and mulch movement and rill erosion.

Where seed has been moved or where soil erosion has occurred, determine the cause of the failure and repair as needed.

PERMANENT SEEDING (PS)

SPECIFICATIONS

Time Of Year

Seeding dates in Connecticut are normally April 1 through June 15 and August 15 through October 1. Spring seedings give the best results and spring seedings of all mixes with legumes is recommended. There are two exceptions to the above dates. The first exception is when seedings will be made in the areas of Connecticut known as the Coastal Slope and the Connecticut River Valley. The Coastal Slope includes the coastal towns of New London, Middlesex, New Haven, and Fairfield counties. In these areas, with the exception of crown vetch (when crown vetch is seeded in late summer, at least 35% of the seed should be hard seed (unscarified), the final fall seeding dates can be extended and additional 15 days. The second exception is frost crack or dormant seeding, the seed is applied during the time of year when no germination can be expected, normally November through February. Germination will take place when weather conditions improve, mulching is extremely important to protect the seed from wind and surface erosion and to provide erosion protection until the seeding becomes established.

Site Preparation

Grade in accordance with the Land Grading measure which is in the Connecticut Guidelines For Soil Erosion and Sediment Control latest edition.

Install all necessary surface water controls.

For areas to be mowed remove all surface stones 2 inches or larger. Remove all other debris such as wire, cable tree roots, pieces of concrete, clods, lumps, or other unsuitable material.

Seed Selection

Lawn Areas: Premium Seed Mix for Sun and Shade.
Bottom of Stormwater Basin: ERNMX-126 Retention Basin Floor Mix - Low Maintenance or approved equal.

Seedbed Preparation

Apply topsoil, if necessary, in accordance with the Topsoiling measure which is in the Connecticut Guidelines For Soil Erosion and Sediment Control latest edition.

Apply ground limestone and fertilizer according to soil test recommendations (such as those offered by the University of Connecticut Soil Testing Laboratory or other reliable source).

Where soil testing is not feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 300 pounds per acre or 7.5 pounds per 1,000 square feet of 10-10-10 or equivalent and limestone at 4 tons per acre or 200 pounds per 1,000 square feet.

Work lime and fertilizer into the soil to a depth of 3 to 4 inches with a disc or other suitable equipment.

Inspect seedbed just before seeding. If the soil is compacted, crusted or hardened, scarify the area prior to seeding.

Seed Application

Apply selected seed at rates per manufacturer's recommendations uniformly by hand, cyclone seeder, drill, cultipacker type seeder or hydroseeder (slurry including seed, fertilizer). Normal seeding depth is from 0.25 to 0.5 inch. Increase seeding rates by 10% when hydroseeding or frost crack seeding. Seed warm season grasses during the spring period only.

Mulching

See guidelines in the Mulch For Seed measures.

MAINTENANCE

Inspect temporary soil protection area at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater during the first growing season.

Where seed has been moved or where soil erosion has occurred, determine the cause of the failure and repair as needed.

DUST CONTROL (DC)

SPECIFICATIONS

Mechanical Sweeping

Use mechanical sweeping on paved areas where dust and fine materials accumulate as a result of truck traffic, pavement saw cutting spillage, and wind or water deposition from adjacent disturbed areas. Sweep daily in heavily traveled areas.

Water

Periodically moisten exposed soil surfaces on unpaved travelways to keep the travelway damp.

Non-Asphaltic Soil Tackifier

Non-asphaltic soil tackifier consists of an emulsified liquid soil stabilizer of organic, inorganic or mineral origin, including, but not limited to the following: modified resins, calcium chloride, complex surfactant copolymers or high grade latex acrylics. The solutions shall be non-asphaltic, non toxic to human, animal and plant life, non corrosive and nonflammable. Materials used shall meet local, state and federal guidelines for intended use. All materials are to be applied according to the manufacturer's recommendations and all safety guidelines shall be followed in storing, handling and applying materials.

MAINTENANCE

Repeat application of dust control measures when fugitive dust becomes evident.

MULCH FOR SEED (MS)

SPECIFICATIONS

Materials

Types of Mulches within this specification include, but are not limited to:

1. Hay: The dried stems and leafy parts of plants cut and harvested, such as alfalfa, clovers, other forage legumes and the finer stemmed, leafy grasses. The average stem length should not be less than 4 inches. Hay that can be windblown should be anchored to hold it in place.

2. Straw: Cut and dried stems of herbaceous plants, such as wheat, barley, cereal rye, or brome. The average stem length should not be less than 4 inches. Straw that can be windblown should be anchored to hold it in place.

3. Cellulose Fiber: Fiber origin is either virgin wood, post-industrial/pre-consumer wood or post consumer wood complying with materials specification (collectively referred to as "wood fiber"), newspaper, kraft paper, cardboard (collectively referred to as "paper fiber") or a combination of wood and paper fiber. Paper fiber, in particular, shall not contain boron, which inhibits seed germination. The cellulose fiber must be manufactured in such a manner that after the addition to and agitation in slurry tanks with water, the fibers in the slurry become uniformly suspended to form a homogeneous product. Subsequent to hydraulic spraying on the ground, the mulch shall allow for the absorption and percolation of moisture and shall not form a tough crust such that it interferes with seed germination or growth. Generally applied with tackifier and fertilizer. Refer to manufacturer's specifications for application rates needed to attain 80%-95% coverage without interfering with seed germination or plant growth. Not recommended as a mulch for use when seeding occurs outside of the recommended seeding dates.

Tackifiers within this specification include, but are not limited to: Water soluble materials that cause mulch particles to adhere to one another, generally consisting of either a natural vegetable gum blended with gelling and hardening agents or a blend of hydrophilic polymers, resins, viscosifiers, sticking aids and gums. Good for areas intended to be mowed. Cellulose fiber mulch may be applied as a tackifier to other mulches, provided the application is sufficient to cause the other mulches to adhere to one another. Emulsified asphalts are specifically prohibited for use as tackifiers due to their potential for causing water pollution following its application.

Nettings within this specification include, but are not limited to: Prefabricated openwork fabrics made of cellulose cords, ropes, threads, or biodegradable synthetic material that is woven, knotted or molded in such a manner that it holds mulch in place until vegetation growth is sufficient to stabilize the soil. Generally used in areas where no mowing is planned.

Site Preparation

Grade according to plans and allow for the use of appropriate equipment for seedbed preparation, seeding, mulch application and mulch anchoring.

Application

Timing: Applied immediately following seeding. Some cellulose fiber may be applied with seed to assist in marking where seed has been sprayed, but expect to apply a second application of cellulose fiber to meet the requirements of Mulch For Seed in the Connecticut Guidelines For Soil Erosion and Sediment Control latest edition.

Spreading: Mulch material shall be spread uniformly by hand or machine resulting in 80%-95% coverage of the disturbed soil when seeding within the recommended seeding dates. Applications that are uneven can result in excessive mulch smothering the germinating seeds. For hay or straw anticipate an application rate of 2 tons per acre. For cellulose fiber follow manufacture's recommended application rates to provided 80%-95% coverage.

When seeding outside the recommended seeding dates, increase mulch application rate to provide between 95%-100% coverage of the disturbed soil. For hay or straw anticipate an application rate to 2.5 to 3 tons per acre.

When spreading hay mulch by hand, divide the area to be mulched into approximately 1,000 square feet and place 1.5-2 bales of hay in each section to facilitate uniform distribution.

For cellulose fiber mulch, expect several spray passes to attain adequate coverage, to eliminate shadowing, and to avoid slippage.

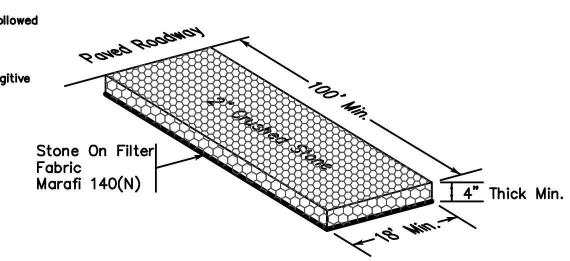
Anchoring: Expect the need for mulch anchoring along the shoulders of actively traveled roads, hill tops and long open slopes not protected by wind breaks.

When using netting, the most critical aspect is to ensure that the netting maintains substantial contact with the underlying mulch and the mulch, in turn, maintains continuos contact with the soil surface. Without such contact, the material is useless and erosion can be expected to occur.

MAINTENANCE

Inspect mulch for seed area at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater until the grass has germinated to determine maintenance needs.

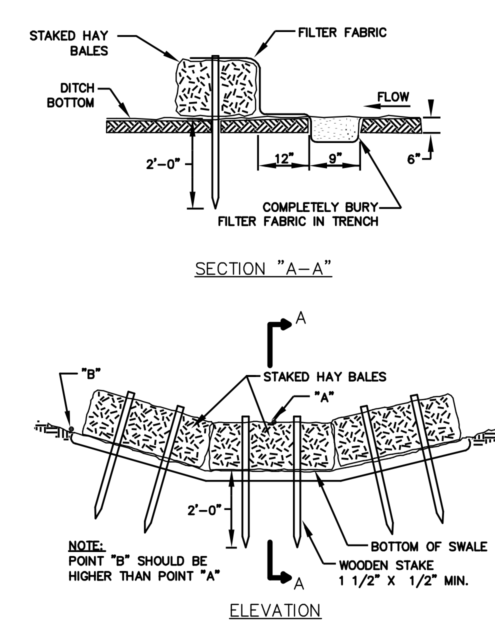
Where mulch has been moved or where soil erosion has occurred, determine the cause of the failure and repair as needed.



ANTI-TRACKING PAD DETAIL (CE)
NOT TO SCALE

SOIL ERSOION & SEDIMENT CONTROL NOTES

1. All soil erosion and sediment control work shall be done in strict accordance with the Connecticut Guidelines For Soil Erosion and Sediment Control latest edition.
2. Any additional erosion/sediment control deemed necessary by the engineer during construction, shall be installed by the developer. In addition, the developer shall be responsible for the repair/replacement and/or maintenance of all erosion control measures until all disturbed areas are stabilized to the satisfaction of the town staff.
3. All soil erosion and sediment control operations shall be in place prior to any grading operations and installation of proposed structures or utilities and shall be left in place until construction is completed and/or area is stabilized.
4. In all areas, removal of trees, bushes and other vegetation as well as disturbance of the soil is to be kept to an absolute minimum while allowing proper development of the site. During construction, expose as small an area of soil as possible for as short a time as possible.
5. All fill areas shall be compacted sufficiently for their intended purpose and as required to reduce slipping, erosion or excess saturation. Fill intended to support buildings, structures, conduits, etc., shall be compacted in accordance with local requirements or codes.
6. Topsoil is to be stripped and stockpiled in amounts necessary to complete finished grading of all exposed areas requiring topsoil. The stockpiled topsoil is to be located as designated on the plans. Topsoil shall not be placed while in a frozen or muddy condition, when the subgrade is excessively wet, or in a condition that may otherwise be detrimental to proper grading or proposed sodding or seeding.
7. Any and all fill material is to be free of brush, rubbish, timber, logs vegetative matter and stumps in amounts that will be detrimental to constructing stable fills. Maximum side slopes of exposed surfaces of earth to be 3:1 or as otherwise specified by local authorities.
8. Where construction activities have permanently ceased or have temporarily been suspended for more than seven days, or when final grades are reached in any portion of the site, stabilization practices shall be implemented within five days. Areas which remain disturbed but inactive for at least thirty days shall receive temporary seeding.
9. Waste Materials - All waste will be collected and stored in a securely covered metal dumpster as provided by a licensed solid waste managment company. The dumpster shall meet all local and state regulations. The dumpster will be emptied a minimum of twice per week, or more often if necessary. No construction waste materials shall be permitted to be buried or burned on-site.



HAYBALE CHECK DAM
NOT TO SCALE

CHECKLIST FOR EROSION CONTROL PLAN

PROJECT: Canis Major Solar

LOCATION: 1005 North Street, Suffield, Connecticut

PROJECT DESCRIPTION: Construction of a 2.0 MW AC Photovoltaic (PV) Facility

PARCEL AREA: 26.7 acres

RESPONSIBLE PERSONNEL: Lodestar Energy, LLC Adam Beal (970) 379-3937

EROSION AND SEDIMENT CONTROL PLAN PREPARER: J.R. Russo & Associates, LLC

CHECKLIST:

Work Description Erosion & Sediment Control Measures	Location	Date Installed	Initials	Date Removed	Initials
Install construction anti-tracking pad	As shown on plan.				
Install perimeter sediment barriers	As shown on plan.				
Install haybale check dams in swales	As installed.				
Install haybale perimeter around stockpiles	As installed.				

MAINTENANCE OF MEASURES:

Location	Description or Number	Date	Initials

Project Dates: ______

Date of groundbreaking for project: ______

Date of final stabilization: ______

PROJECT NARRATIVE AND CONSTRUCTION SEQUENCE

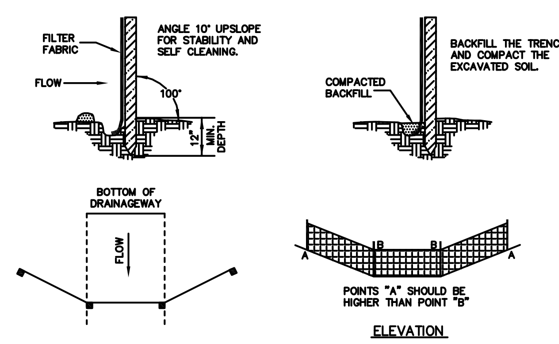
This project is located on the western end of the Sullivan Farm at 1005 North Street in Suffield, Connecticut. The proposed activity is the construction of a 2.0 MW AC photovoltaic solar facility. The suggested schedule of construction is as follows:

1. Install construction anti-tracking pad (CE).
2. Construct improvements to access road.
3. Clear trees.
4. Install perimeter silt fence (GSF) at project perimeters where downgradient from site disturbance.
5. Grub stumps. All stumps within grading limits and 5' of proposed securing fencing to be removed. Stumps outside of grading limits and beyond 5' from security fencing to be cut off-flush with ground surface.
6. Strip topsoil and stockpile in within limits of work, but outside of wetland regulated areas. Number and location of stockpiles to be determined in field. Temporarily seed (TS) stockpiles if they are to remain more than 30 days.
7. Grade site. Re-spread topsoil.
8. Install foundations and solar panels.
9. Install electical equipment and distribution lines..
10. Stabilize landscape areas with topsoil and permanent seeding as soon as possible.
11. Remove silt fence (GSF) after site is fully stabilized.

Construction of this site is anticipated to begin in the Summer of 2015, pending approvals. Site work is anticipated to be completed within one construction season. Temporary erosion control measures shall be installed prior to any soil disturbance and maintained throughout construction until soils have been stabilized with permanent vegetation.

The Contractor shall keep the area of disturbance to a minimum and establish vegetative cover on exposed soils as soon as practical. All soil and erosion control measures shall be installed and maintained in accordance with these plans and the "Connecticut DEEP Guidelines for Soil Erosion and Sediment Control", as amended. The Contractor shall verify all conditions noted on the plans and shall immediately notify the Engineer of any discrepancies.

The developer shall be responsible for the repair/replacement/maintenance of all erosion control measures until all disturbed areas are stabilized. Sediment deposits shall be periodically removed from the upstream sides of silt fence (GSF). This material is to be spread and stabilized in areas not subject to erosion, or to be used in areas which are not to be paved or built on. Silt fences (GSF) are to be replaced as necessary to maintain proper filtering action. Silt fence (GSF) shall remain in place and shall be maintained to insure efficient sediment capture until all areas above the erosion checks are stabilized and vegetation has been established.



SOURCE: U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, STORRS, CONNECTICUT

GEOTEXTILE SILT FENCE (GSF)
NOT TO SCALE

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LODESTAR ENERGY

5-14-15	PETITION SUBMITTAL	
4-02-15	NO CHANGES THIS SHEET	

REVISIONS

BY: LF/TAC CHK: JEU

Canis Major Solar
Prepared For
Lodestar Energy, LLC
Rear Land of 1005 North Street
Suffield, Connecticut
Map 39H Block 29 Lot 21 Zone: R-90

Erosion & Sediment Control Notes & Details

DATE: 3-10-15
SCALE: As Noted
JOB NUMBER: 2014-115
SHEET: 7 of 8

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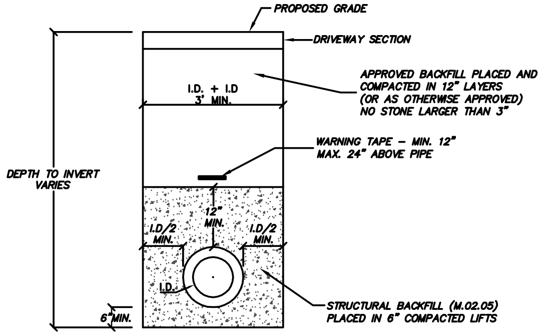
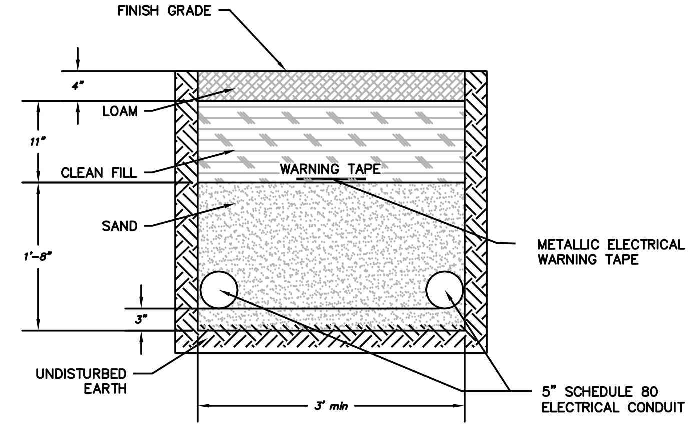


STANDARD STORM DRAIN DETAIL
NOT TO SCALE



MEDIUM VOLTAGE CABLE TRENCH DETAIL (MV)
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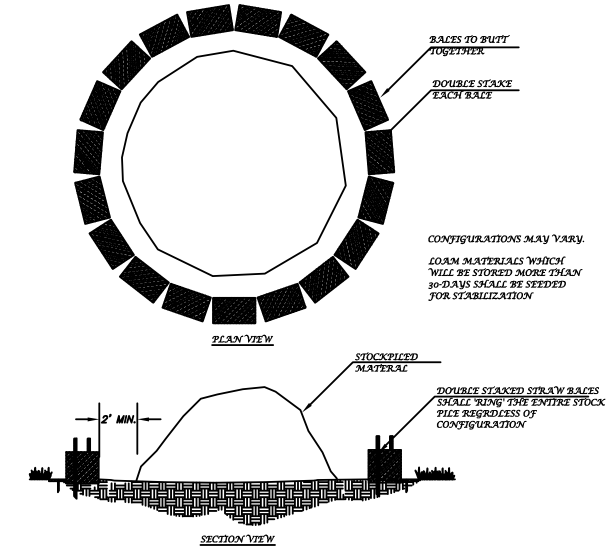
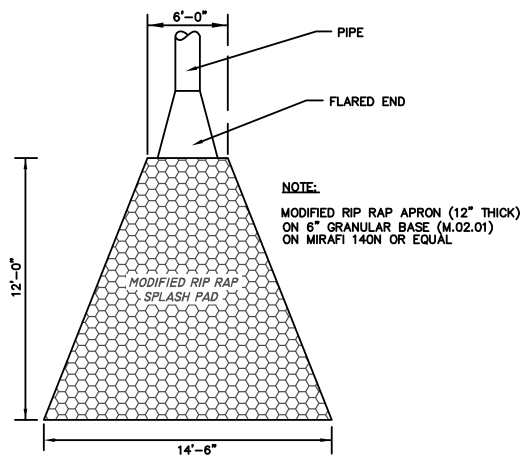
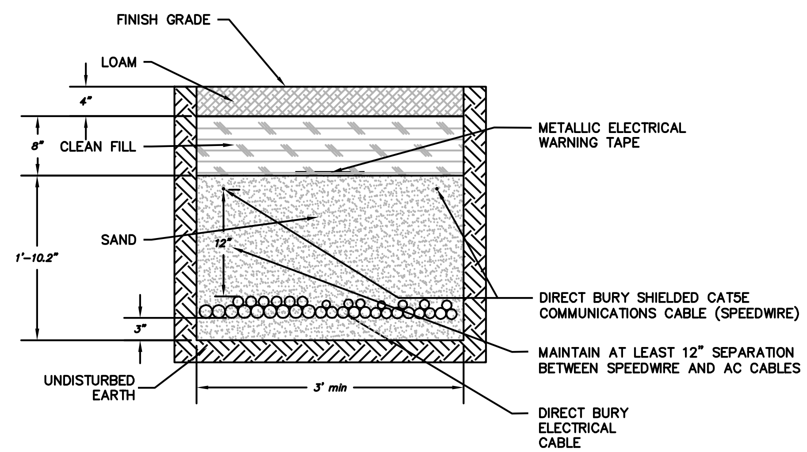


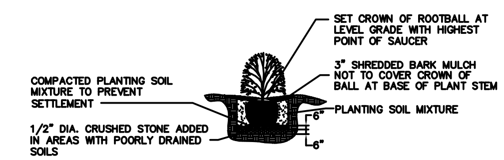
MATERIAL STOCKPILE PROTECTION
NOT TO SCALE



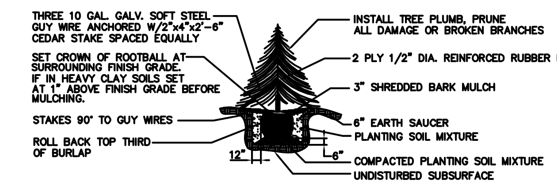
RIPRAP APRON (OP)
NOT TO SCALE



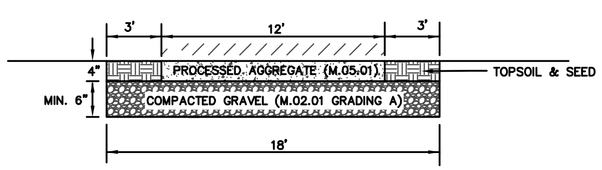
INVERTER POWER & COMMS CABLE TRENCH DETAIL (INV/C)
NOT TO SCALE



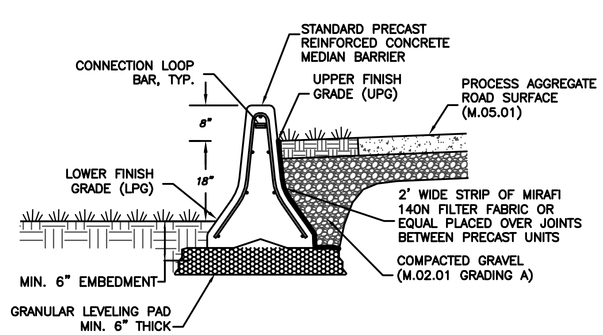
SHRUB PLANTING
NOT TO SCALE



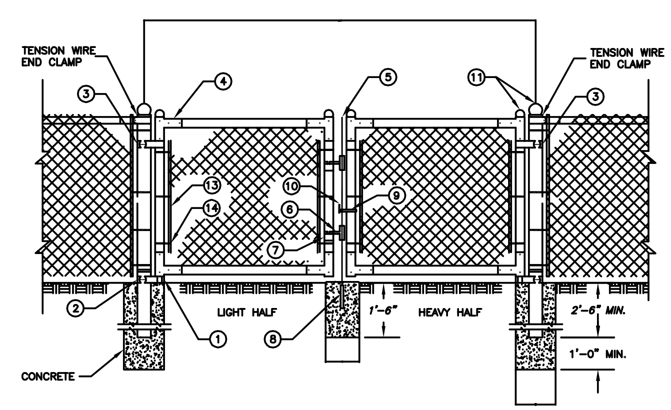
EVERGREEN TREE PLANTING
NOT TO SCALE



DRIVEWAY DETAIL
NOT TO SCALE



RETAINING WALL SECTION
NOT TO SCALE

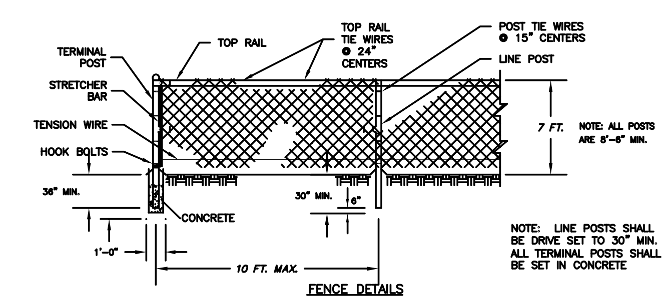


GATE DETAIL

LEGEND

PART NO.	DESCRIPTION	QUANTITY
1	STRAIGHT PLUG	2
2	BOTTOM HINGE	2
3	TOP HINGE	2
4	CORNER ELBOW	8
5	PLUNGER ROD	1
6	LATCH FORK	2
7	FORK CATCH	2
8	PLUNGER ROD CATCH	1
9	LOCK KEEPER GUIDE	1
10	LOCK KEEPER	1
11	ORNAMENTAL TOPS	6
12	TRUSS RODS	4
13	STRETCHER BAR	4
14	HOOK BOLTS	12

NOTE:
THE FENCING SHALL BE #9 GAGE FENCE FABRIC, STANDARD 2-INCH CHAIN LINK DIAMOND MESH.



NOTE: LINE POSTS SHALL BE DRIVE SET TO 30" MIN. ALL TERMINAL POSTS SHALL BE SET IN CONCRETE

FENCE DETAILS

SHAPE, SIZE AND WEIGHT REQUIREMENTS FOR FENCE POSTS AND RAILS

ITEM	SHAPE	OUTSIDE DIMENSIONS INCHES	WEIGHT LBS./LIN. FT.
** TERMINAL POSTS	ROUND *ROUND	2.375 2.375	3.65 3.12
LINE POSTS	ROUND *ROUND	1.90 1.90	2.72 2.28
TOP & BRACE RAILS	ROUND *ROUND	1.66 1.66	2.27 1.84

* GRADE B HIGH STRENGTH STEEL
** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

GATE FRAME MEMBERS SIZE AND WEIGHT

GATE FRAME	OUTSIDE DIMENSIONS INCHES	WEIGHT LBS./LIN. FT.
ROUND	1.66	2.27
*ROUND	1.66	1.84

* GRADE B HIGH STRENGTH STEEL

GATE POST SIZE AND WEIGHT

GATE LEAF WIDTH OF 6 FT. OR LESS	OUTSIDE DIMENSIONS INCHES	WEIGHT LBS./LIN. FT.
ROUND	2.875	5.79
*ROUND	2.875	4.64

* GRADE B HIGH STRENGTH STEEL

CONSTRUCTION NOTES

1. MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE MANUFACTURER'S SPECIFICATIONS.
2. ALL POSTS SHALL BE INSTALLED VERTICALLY. WHERE POSTS ARE INSTALLED ON AN INCLINED SURFACE, THE ANGLE OF THE POST SHALL BE ADJUSTED SO THAT THE POST WILL BE VERTICAL.
3. THE FENCING SHALL BE #9 GAGE FENCE FABRIC, STANDARD 2-INCH CHAIN LINK DIAMOND MESH.

CHAIN LINK FENCE DETAIL
NOT TO SCALE

RUSSO SURVEYORS • ENGINEERS SERVING CT & MA
J.R. Russo & Associates, LLC
1 Shoham Rd East Windsor CT 06088 • CT 860.623.0569 • MA 413.785.1158
www.jrrusso.com • info@jrrusso.com

LODESTAR ENERGY

5-14-15	PETITION SUBMITTAL
4-02-15	NO CHANGES THIS SHEET

REVISIONS

BY: LF/TAC CHK: JEU

Canis Major Solar
Prepared For
Lodestar Energy, LLC
Rear Land of 1005 North Street
Suffield, Connecticut
Map 39H Block 29 Lot 21 Zone: R-90

Detail Sheet

DATE
3-10-15
SCALE
As Noted
JOB NUMBER
2014-115
SHEET
8 of 8

PATRICIA BOYE-WILLIAMS
860.240.6168 DIRECT TELEPHONE
860.240.5883 DIRECT FACSIMILE
PBOYEWILLIAMS@MURTHALAW.COM

May 20, 2015

Via Certified Mail

Addressees on attached page

Re: Petition of Lodestar Energy to the Connecticut Siting Council for a Declaratory Ruling for the Location and Construction of a 2.0 Megawatt Solar Electric Generating Facility at 1005 North Street, Suffield, Connecticut

To the Persons on the Attached List:

Pursuant to Section 16-50j-40 of the Connecticut Siting Council's (the "Council") regulations, we are notifying you that Lodestar Energy intends to file on or shortly after May 21, 2015, a petition for declaratory ruling with the Council. The petition will request the Council's approval of the location and construction of an approximately 2.0 megawatt ("MW") solar electric generating facility (the "Facility") at 1005 North Street, Suffield, Connecticut (the "Site").

The Facility will be a "grid-side distributed resources" facility (as defined in Conn. Gen. Stat. § 16-1(a)(38)) under 65 MW that complies with the air and water quality standards of the Connecticut Department of Energy and Environmental Protection ("DEEP"), and that will not have a substantial adverse environmental effect. Electricity generated by the Facility will be exported to the electric grid.

If you have any questions regarding the proposed Facility, please contact any of the following:

Jeffrey J. Macel, Esq.
Principal and Co-Founder
Lodestar Energy LLC
3 Ellsworth Place, Suite 122
Avon, CT 06001

Tel: (203) 872-7122
Fax: (215) 207-9793

jmacel@lodestarenergy.com

Patricia L. Boye-Williams, Esq.
Murtha Cullina LLP
185 Asylum Street
Hartford, CT 06103

Tel: (860) 240-6168
Fax: (860) 240-6150

pboyewilliams@murthalaw.com

Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Tel: (860) 827-2935
Fax: (860) 827-2950

siting.council@ct.gov

Best regards,

Patricia Boye-Williams

Enclosure

Attachment

Service List
2.0 MW Solar Electric Generating Facility
1005 North Street, Suffield, CT

Municipal Official/Agency	*Name/Address*
Chief Executive Officer	First Selectman Edward G. McAnaney 83 Mountain Road Suffield, CT 06078
Inland Wetlands Commission	Arthur Christian, Chair Conservation Commission 230 C Mountain Road Suffield, CT 06078
Conservation Commission	Arthur Christian, Chair Conservation Commission 230 C Mountain Road Suffield, CT 06078
Planning & Zoning Commission	Frank E. Bauchiero, Jr., Chair Zoning & Planning Commission 83 Mountain Road Suffield, CT 06078
Regional Planning Agency	Chip Beckett, Chair Capitol Region Council of Governments 241 Main St., 4th Flr. Hartford 06106-5310
Town Engineer	Gerald J. Turbet, P.E. Town Engineer 230 C Mountain Road Suffield, CT 06078
State Senator	John Kissell, State Senator Legislative Office Building Room 3400 300 Capital Ave Hartford, CT 06106
State Representative	Tami Zawistowski, State Representative Legislative Office Building Room 4200 300 Capital Ave Hartford, CT 06106

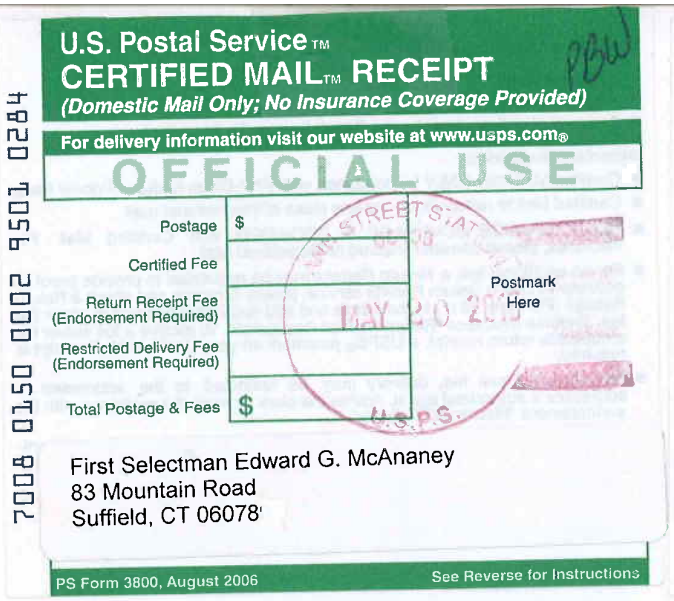
Municipal Official/Agency	*Name/Address*
Connecticut Attorney General	George Jepsen, Attorney General Office of the Attorney General 55 Elm Street Hartford, CT 06106
State Department of Energy and Environmental Protection	Rob Klee, Commissioner Department of Energy and Environmental Protection 79 Elm Street Hartford, CT 06106
State Public Utilities Regulatory Authority	Arthur House, Chairman Public Utilities Regulatory Authority 10 Franklin Square New Britain, CT 06051
State Department of Public Health	Dr. Jewel Mullen, Commissioner Department of Public Health 410 Capitol Avenue P.O. Box 340308 Hartford, CT 06134
State Council on Environmental Quality	Susan D. Merrow, Chair Council on Environmental Quality 79 Elm Street Hartford, CT 06106
State Department of Agriculture	Steven K. Reviczky, Commissioner Department of Agriculture 165 Capitol Avenue Hartford, CT 06106
Office of Policy & Management	Benjamin Barnes, Secretary Office of Policy and Management 450 Capitol Avenue Hartford, CT 06106
State Department of Economic & Community Development	Catherine Smith, Commissioner Department of Economic and Community Development 505 Hudson Street Hartford, CT 06106

Municipal Official/Agency	*Name/Address*
State Department of Transportation	James P. Redeker, Commissioner Department of Transportation 2800 Berlin Turnpike Newington, CT 06111
Any Federal Agencies with Jurisdiction Over the Site	None

Abutter Property	*Abutter Name/Mailing Address*
141 Wendover Road Suffield, CT 06078 (Map Block Lot 31H-29-98)	Daniel P. Mancini 141 Wendover Road Suffield, CT 06078
500 Russell Avenue Suffield, CT 06078 (Map Block Lot 31H-29-111)	Celia J. Bedus 500 Russell Avenue Suffield, CT 06078
Halladay Avenue Suffield, CT 06078 (Map Block Lot 39H-29-7)	Lucy G. Lonning, Thor S. Lonning, and Kari G. Lonning 225 Halladay Avenue Suffield, CT 06078
Halladay Avenue Suffield, CT 06078 (Map Block Lot 39H-29-12-1)	Gary R. and Beverly Paganelli P.O. Box 652 Suffield, CT 06078-0652
North Street Suffield, CT 06078 (Map Block Lot 39H-29-13)	B & G Realty Investments LLC P.O. Box 652 Suffield, CT 06078-0652
1109 North Street Suffield, CT 06078 (Map Block Lot 39H-29-14)	Peter Anthony Corjulo 1109 North Street Suffield, CT 06078
1105 North Street Suffield, CT 06078 (Map Block Lot 39H-29-15)	Walter S. Jr. and Elizabeth Skowron 1105 North Street Suffield, CT 06078

Abutter Property	*Abutter Name/Mailing Address*
1089 North Street Suffield, CT 06078 (Map Block Lot 39H-29-16)	Laura J. Coates 1089 North Street Suffield, CT 06078
1071 North Street Suffield, CT 06078 (Map Block Lot 39H-29-17)	Sebastian J. and Linda H. Buccheri 1071 North Street Suffield, CT 06078
1061 North Street Suffield, CT 06078 (Map Block Lot 39H-29-18)	Louis R. and Francesca D. Frank c/o Maria and Louis Frank, Jr. 7431 Saint Charles Avenue New Orleans, LA 70118
1051 North Street Suffield, CT 06078 (Map Block Lot 39H-29-19)	Walter Willard 334 School Street Agawam, MA 01001
1009 North Street Suffield, CT 06078 (Map Block Lot 39H-29-20)	Richard and Marion P. Stevens 1009 North Street Suffield, CT 06078
North Street Suffield, CT 06078 (Map Block Lot 39H-21-A)	Kevin S. Jr. and Krist A. Sullivan 1005 North Street Suffield, CT 06078
1005 North Street Suffield, CT 06078 (Map Block Lot 39H-29-21)	Kevin S. Jr. and Krist A. Sullivan 1005 North Street Suffield, CT 06078
1007 North Street Suffield, CT 06078-1629 (Map Block Lot 40H-29-22)	Steven T. and Kimberly D. Goodwin 1007 North Street Suffield, CT 06078-1629
949 North Street Suffield, CT 06078 (Map Block Lot 40H-29-25)	Rossetti Properties LLC 949 North Street Suffield, CT 06078
1008 North Street Suffield, CT 06078 (Map Block Lot 40H-42-23-2)	Ajay, Shalu and Surv Malhotra 1008 North Street Suffield, CT 06078

Abutter Property	*Abutter Name/Mailing Address*
Wendover Road Suffield, CT 06078 (Map Block Lot 31H-29-96)	Kevin S. Jr. and Krist A. Sullivan 1005 North Street Suffield, CT 06078
151 Wendover Road Suffield, CT 06078 (Map Block Lot 31H-29-97)	Todd D. and Debra M. Viets 151 Wendover Road Suffield, CT 06078
989 North Street Suffield, CT 06078 (Map Block Lot 40-29-23)	Andrew Sheridan 989 North Street Suffield, CT 06078
1014 North Street Suffield, CT 06078 (Map Block Lot 40-42-57)	Carolyn A. and Arthur K.Strole, Jr. 1014 North Street Suffield, CT 06078
1024 North Street Suffield, CT 06078 (Map Block Lot 40-42-58)	Justin Mokerzecki 86 Highland Park Enfield, CT 06082
1060 North Street Suffield, CT 06078 (Map Block Lot 51-42-59)	David L. and Curtis L. Belden 1060 North Street Suffield, CT 06078
29 Halladay Avenue Suffield, CT 06078 (Map Block Lot 39-29-13)	Bogdan and Julie Bodnar & Survivor 29 Halladay Avenue Suffield, CT 06078
959 North Street Suffield, CT 06078 (Map Block Lot 40-29-25)	Jody S. Rosetti, Trustee 959 North Street Suffield, CT 06078
998 North Street Suffield, CT 06078 (Map Block Lot 40-42-23)	Amy Digennaro 998 North Street Suffield, CT 06078
Wendover Road Suffield, CT 06078 (Map Block Lot 31-29-99	Athanasia Leventis 121 Wendover Road Suffield, CT 06078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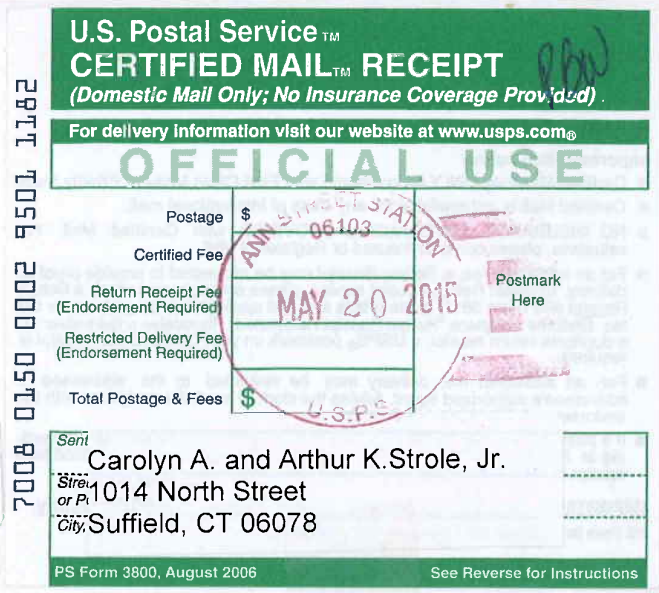
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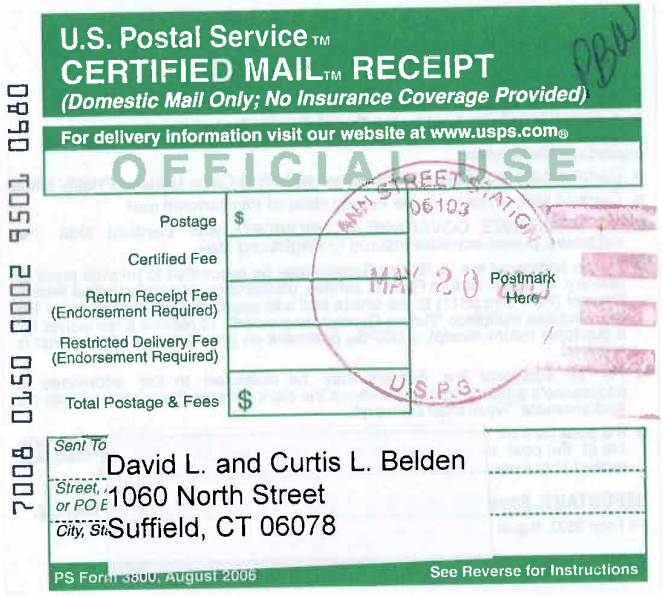
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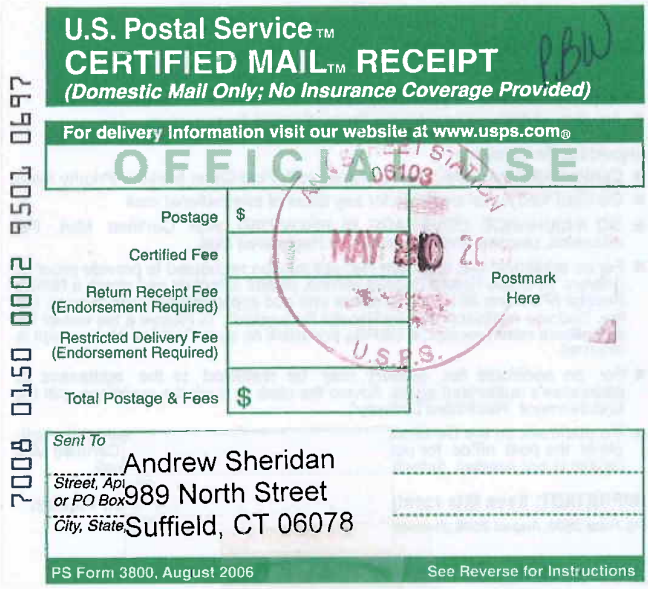
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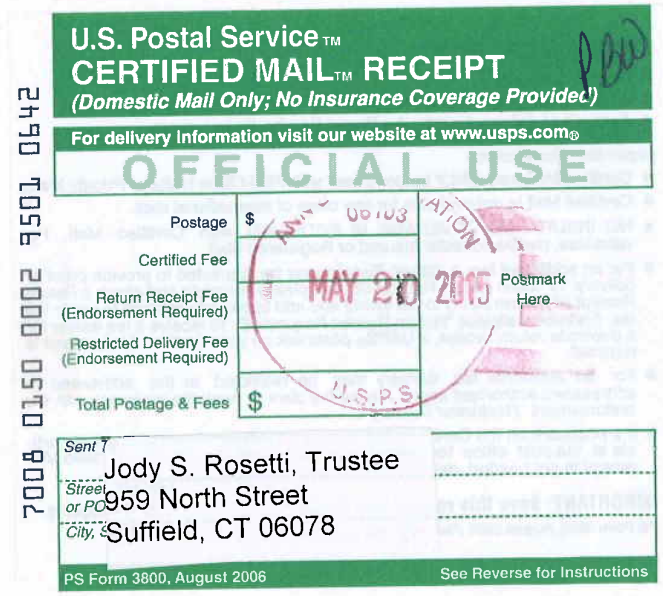
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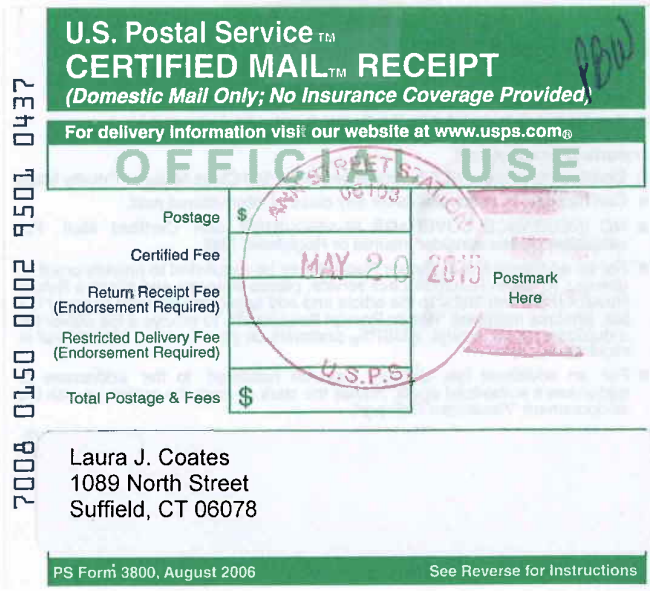
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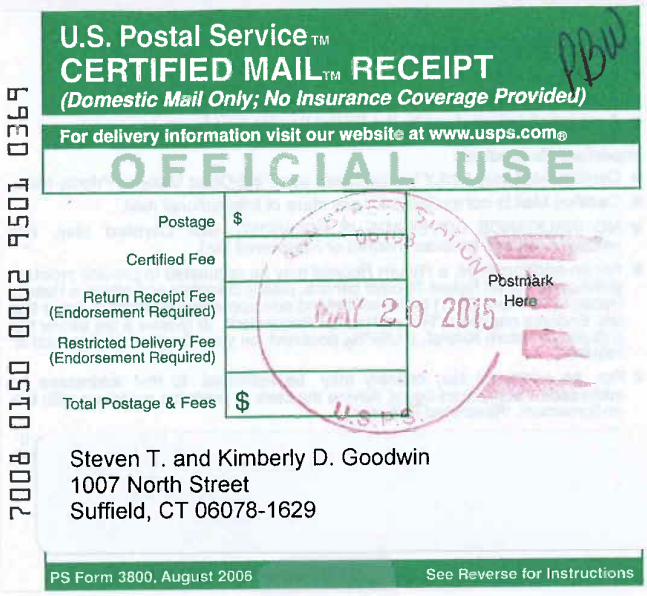
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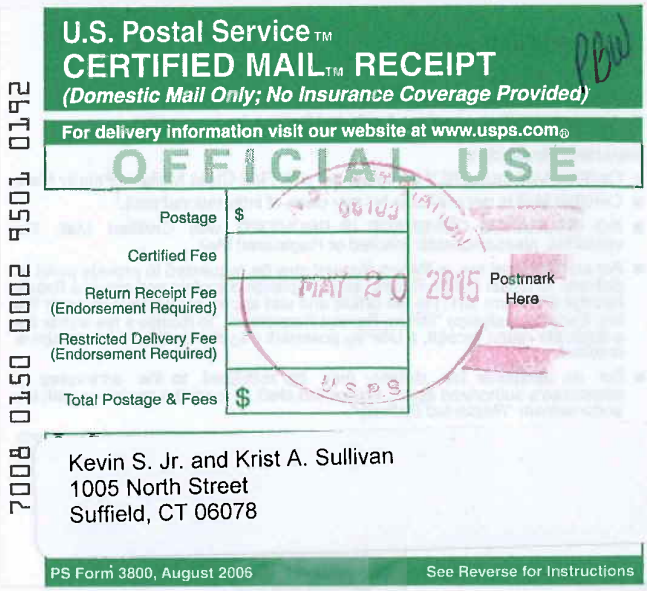
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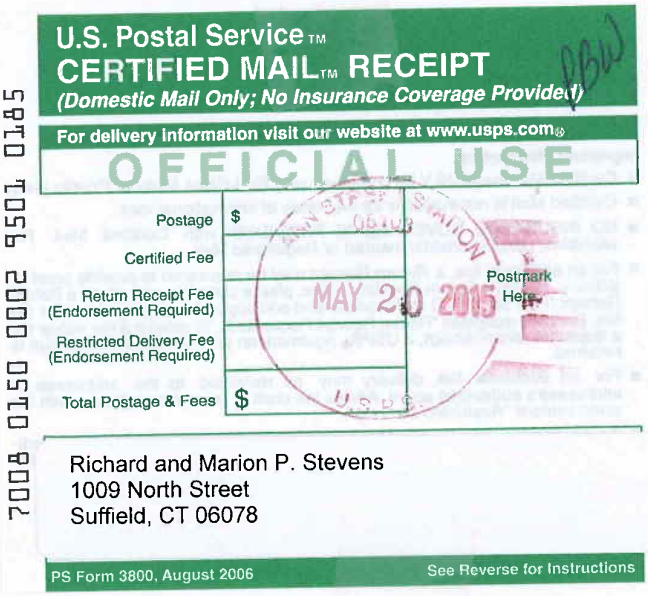
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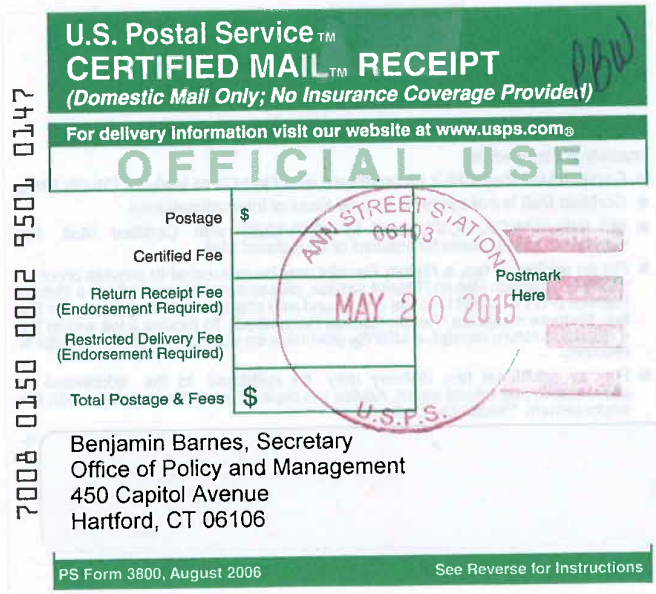
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Benjamin Barnes, Secretary
Office of Policy and Management
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Department of Agriculture
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Dr. Jewel Mullen, Commissioner
Department of Public Health
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Hartford, CT 06134

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Athanasia Leventis
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Justin Mokerzecki
86 Highland Park
Enfield, CT 06082

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Rossetti Properties LLC
949 North Street
Suffield, CT 06078

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Amy Digennaro
998 North Street
Suffield, CT 06078

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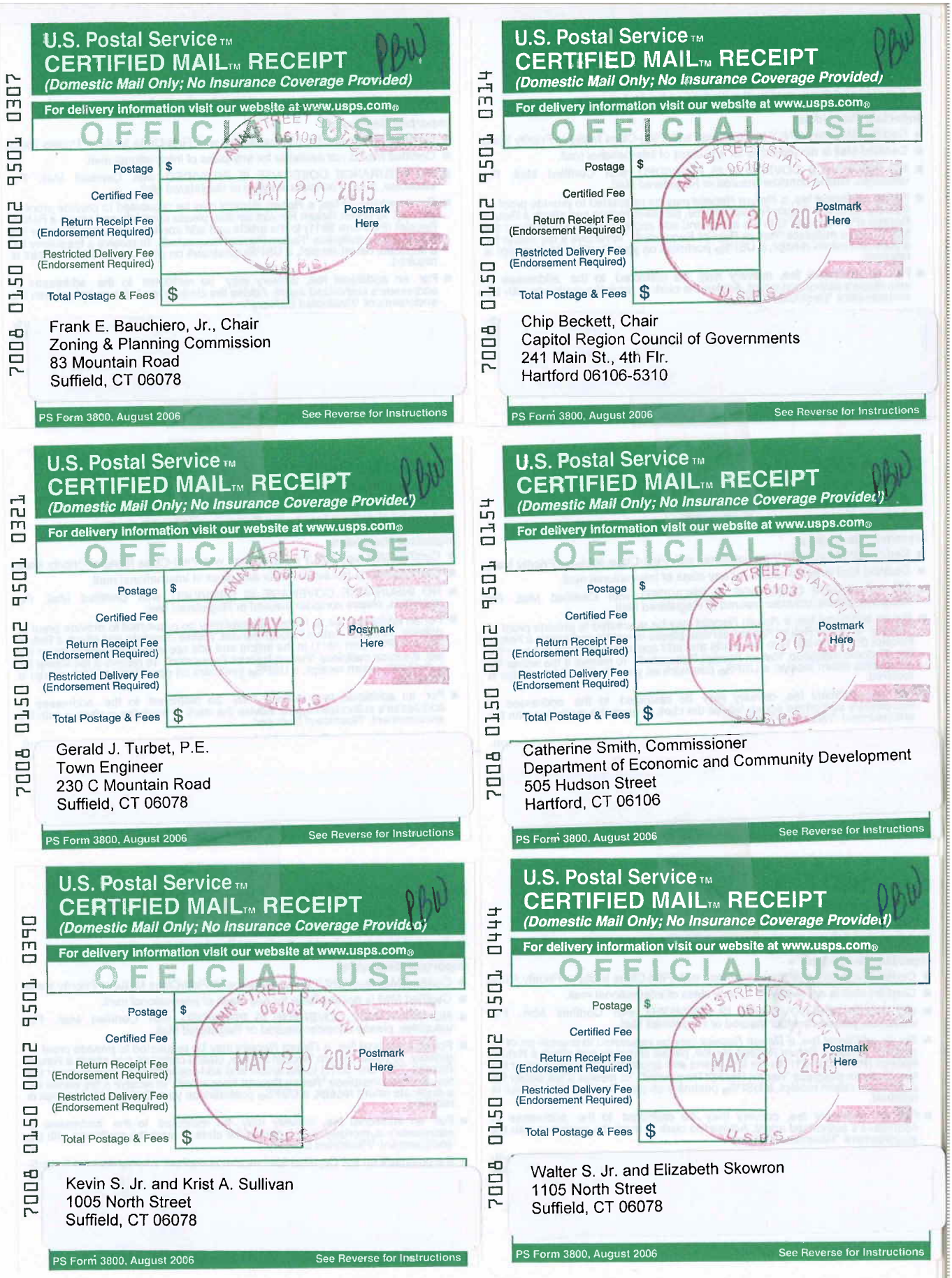

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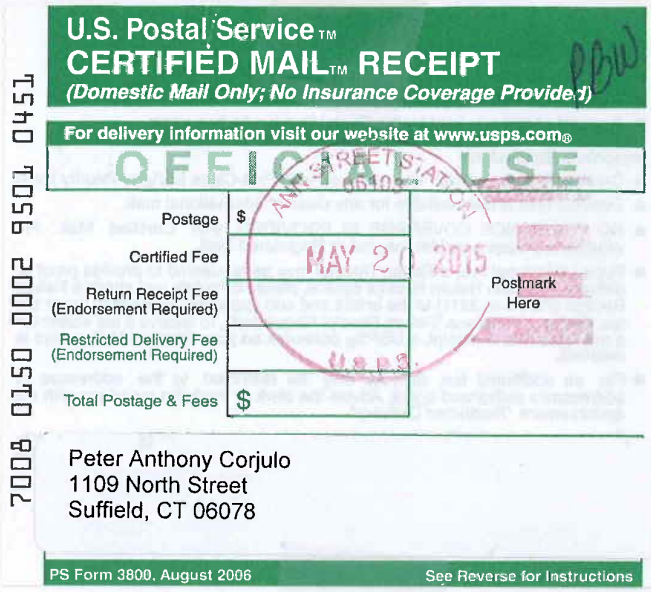

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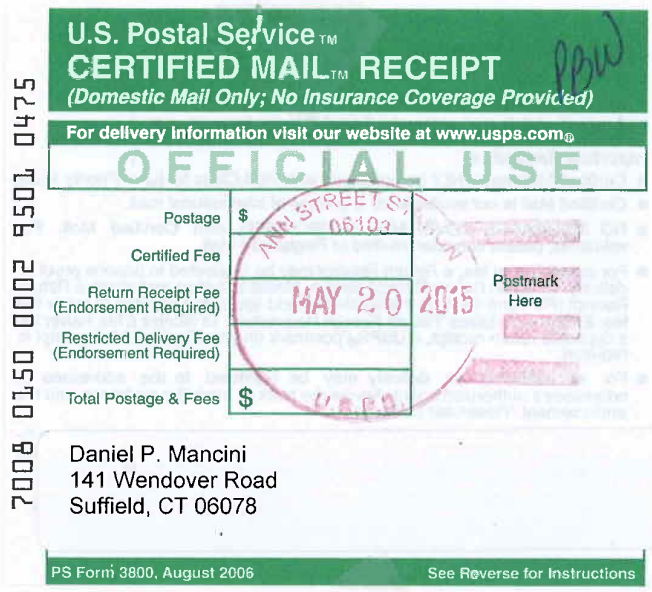

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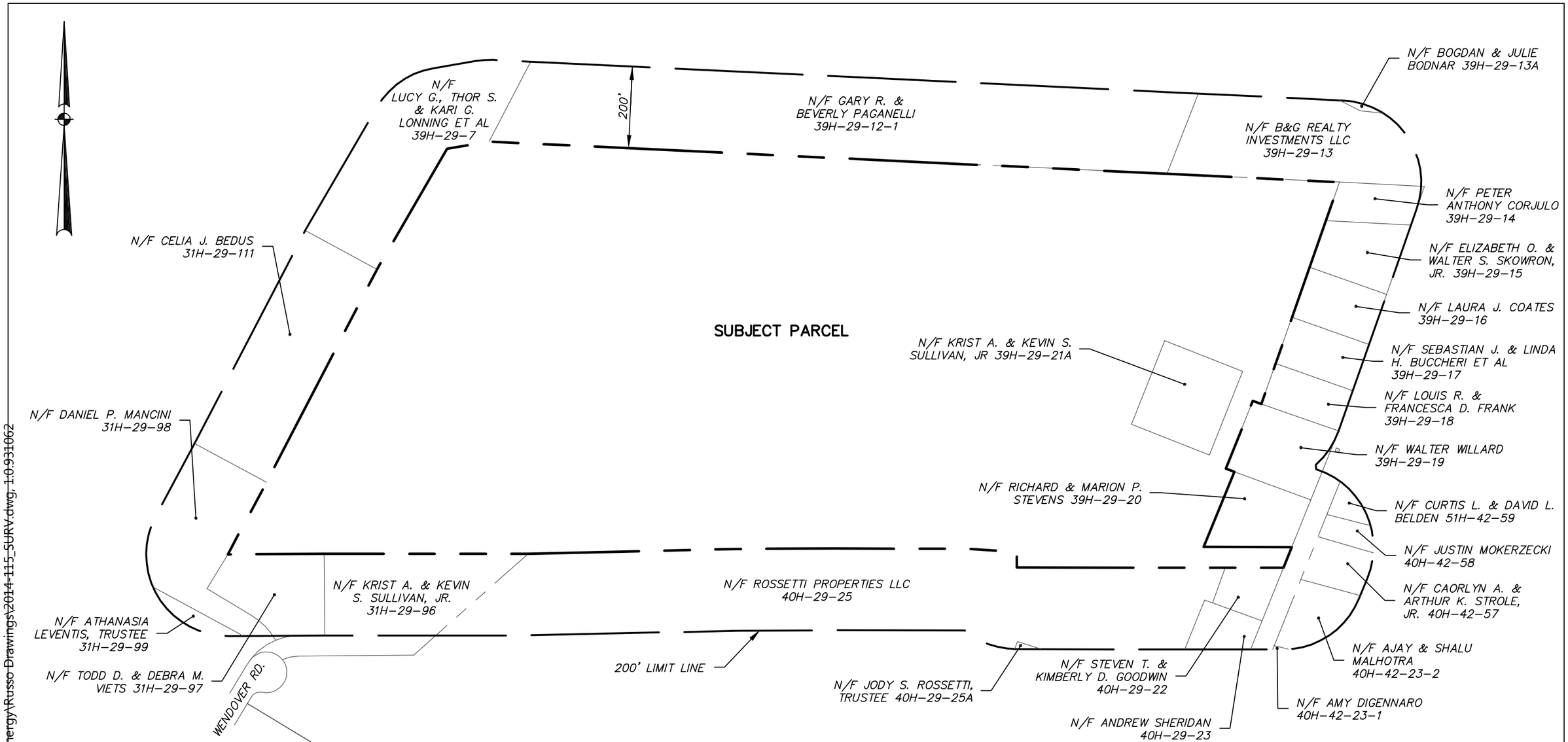

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ABUTTERS MAP

Solar PV Development
Canis Major Solar

1005 North Road
Suffield, Connecticut

RUSSO
SURVEYORS • ENGINEERS

DATE	5–20–15
SCALE	1"=250'
JOB NUMBER	2014–115
SHEET	EXHIBIT

GeoQuest, inc.

PHASE I ENVIRONMENTAL SITE ASSESSMENT
1005 NORTH STREET
SUFFIELD, CONNECTICUT

Prepared for:

Lodestar Energy, LLC
3 Ellsworth Place, Suite 122
Avon, Connecticut 06001

GeoQuest Project No. 2493

April, 2015

3 Barnard Lane • P.O. Box 85 • Bloomfield, Connecticut 06002 • (860) 243-1757 • FAX: (860) 243-9414

TABLE OF CONTENTS

APPENDICES

1.0 SUMMARY

GeoQuest, Inc. (GeoQuest) has performed a Phase I Environmental Site Assessment (ESA) of an approximately 15 acre portion of a larger 50.46 acre parcel of land in Suffield, Connecticut identified in the Suffield land records as Map 39H, Block 29, Lot 21. For the purposes of this report the smaller parcel shall be known as the "Site" or the "subject property". This ESA was performed in conformance with the scope and limitations of ASTM Practice E 1527-13 for Phase I ESAs.

The Site is located on the west side of North Street (a.k.a. Route 75) with access along an easement running from North Street westward into the Site itself.

The Site is located in a rural, largely residential/agricultural area of Suffield. Surrounding properties consist of a field to the north, a horse farm to the south, and woods to the west. To the east is agricultural land belonging to the 2005 North Street residence.

Groundwater in the area of the Site has been classified by the Connecticut Department of Energy and Environmental Protection (CTDEEP) as "GA" which indicates that the water in this area is suitable for use as a potable water supply without treatment.

The Site itself consists of open fields, woodlands, and some wetlands. The topography of the Site slopes gently down from west to east with ridges and gullies punctuating the area. Several ponds/wetland areas were observed in the eastern portion of the Site as well as a wet area near the northern edge. There were no indications of spills or releases of any kind on the Site. While there was a small farm dump observed near the southeastern edge of the Site, according to Mr. Sullivan this is not on the subject property.

GeoQuest reviewed the files of the Suffield Building Department for information regarding the Site. Any information in these files pertained to the residence on the eastern half of the larger 1005 North Street property.

A review of available state and federal environmental databases, obtained through Environmental Data Resources, Inc. (EDR), indicated that the Site is not listed on any of the databases searched. There was also no information for the Site in the files of the CTDEEP.

Based on a review of documents and information collected during the Site walk-through and from the EDR database search there was no evidence that any listed activities (dry cleaning, furniture stripping, and auto body repair) identified in the Connecticut Property Transfer Act (Transfer Act) have occurred on-site. In addition, there is no evidence that any on-site activities have generated hazardous waste. Therefore, the Site would not be considered an "establishment" pursuant to the Transfer Act.

Based on the scope of services conducted and the information reviewed, GeoQuest did not identify any recognized environmental conditions (RECs) on the Site. Therefore, GeoQuest believes that no further assessment is warranted on this site at this time.

2.0 INTRODUCTION

GeoQuest, Inc. conducted a Phase I Environmental Site Assessment (ESA) of a portion of a 50 acre parcel of land in Suffield, Connecticut identified in the Suffield Assessor's files as Block 29, Lot 21 on Map 39H with the address of 1005 North Street. For the purposes of this report this approximately 15 acre piece of the larger parcel shall be known as the "Site" or the "subject property".

2.1 Purpose

The purpose of this assessment was to collect information that could assist the Client in assessing the environmental condition of the property and in making decisions regarding the property. To achieve these ends GeoQuest attempted to identify recognized environmental conditions (RECs) and liability issues in connection with the property to the extent feasible pursuant to the processes prescribed in the American Society for Testing Materials (ASTM) E 1527-13 guidelines. The term "REC" as defined by ASTM is "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment." The term is not intended to include *de minimis* conditions that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

The Phase I ESA includes information gathered from Federal, State, and local agencies; personal interviews with people familiar with the Site; and a Site visit conducted by GeoQuest personnel. The report is intended to meet the requirements of ASTM E-1527-13.

2.2 Detailed Scope of Services

The Phase I ESA included, but was not limited to, the following:

- a walk-through inspection of the subject property and reconnaissance of the site area;
- review of documents available from the offices of the Suffield Assessor, Fire Marshal, and Building Departments;
- review of documents and files available from Federal, State, and local regulatory offices;
- interviews with people familiar with the Site, as available; and
- preparation of a report presenting our findings including a summary of conclusions and recommendations.

2.3 Significant Assumptions

The purpose of this Phase I ESA is to provide appropriate inquiry into the current and prior use of the Site consistent with good commercial and customary practice in an effort to minimize liability. GeoQuest assumes that the information provided by the Client, regulatory database provider, interviewees, and local and State government agencies is true and reliable.

2.4 Limitations and Exceptions

This report has been prepared for Lodestar Energy, LLC and their counsel in accordance with the terms and conditions agreed upon[1]. Only the party for whom this report was originally prepared, and other specifically named parties, may make use of and rely upon the information in this report, in its entirety, in accordance with the ASTM's "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" ASTM Designation E 1527-00 dated May 10, 2000, ASTM's "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" ASTM Designation E 1527-05 dated November 1, 2005, the Code of Federal Regulations (CFR) 40CFR Part 312 "Standards and Practices for All Appropriate Inquiries: Final Rule" dated November 1, 2005, and/or "Standards and Practices for All Appropriate Inquiries E 1527-13. After 180 days and prior to using the information contained herein, the report should be updated in accordance with ASTM Standards and Federal regulations.

GeoQuest does not assume responsibility for the discovery and elimination of environmental problems which could result in regulatory actions or for hazards which could cause accidents, injuries or damage. Compliance with submitted recommendations, suggestions, remedial actions or any proposed scope of services in no way assures elimination of hazards, environmental impairment or fulfillment of the owner's or potential purchaser's obligations as may be required by any local, state or federal laws or modifications or changes thereto. In addition, GeoQuest, does not provide any guarantees, certifications, or warranties (express or implied) that a property is free from environmental contamination. Furthermore, nothing contained in this document shall relieve any other party of its responsibility to abide by contract documents and all applicable laws, codes, regulations, or standards. In many cases local, state or federal regulations and/or statutes require the prompt reporting to "appropriate" authorities should a "release" occur or be identified. It is the responsibility of the current owner or operator to notify authorities of any conditions which exist which are in violation of current laws or codes.

The findings and conclusions contained in this report are based solely on professional interpretation of observations of conditions as they presently exist and on information obtained while conducting the scope-of-services detailed in this report. If the recommendations or findings within this report are not implemented or acted upon within a reasonable period of time, there can be no assurances that intervening factors will not arise which will effect the conclusions contained herein. In addition, data available from further inspections, assessments, subsurface explorations, sampling and testing of the subject property may modify or indicate the need to modify the conclusions and recommendations of this report. Should additional information or observations collected at a later date indicate the presence of an environmental situation not addressed in this report, GeoQuest will determine the need to modify the conclusions and recommendations contained in this report, if contacted by the client. GeoQuest assumes no responsibility for damages (consequential or otherwise) arising from information or situations that are identified, but not brought to its attention immediately.

[1] The terms and conditions were attached to the original proposal. If for any reason these terms and conditions are not accepted, this report should be returned immediately to the sender.

2.5 Special Terms and Conditions

The scope of work for this Phase I ESA did not include an assessment of the presence or potential presence of asbestos containing material, lead based paint, radon, microbial material, radionuclides, or assessment of non-chemical potential hazards such as damage from earthquakes or floods.

2.6 User Reliance

This report is prepared for the exclusive use of Lodestar Energy, LLC and its counsel. No use of the information contained in this report by others is permissible without receiving prior written authorization to do so from GeoQuest. GeoQuest is not responsible for independent conclusions, opinions, or recommendations made by others or otherwise based on the findings presented in this report.

3.0 SITE DESCRIPTION

3.1 Location and Legal Description

The subject property consists of an approximately 15 acre portion of a 50.46 acre parcel of land (eight of which are listed as woodlands) identified in the Suffield land records as Map 39H, Block 29, Lot 21. For the purposes of this report this parcel shall be known as the "Site" or the "subject property". The Site is located on the west side of North Street (a.k.a. Route 75). A Site Location Map can be found in Appendix A.

3.2 Site and Vicinity General Characteristics

The Site is an irregularly shaped parcel accessed by a narrow right of way running from its southeast corner eastward to North Street.

The Site is located in a largely residential/agricultural area of Suffield.

3.3 Current Use of the Property

The land currently consists of open fields with some surrounding woodlands and some wetland areas. There are no structures on the Site.

3.4 Descriptions of Structures, Roads, and Other Improvements on the Site

This section provides details of the site improvements. A Site Layout Map can be found in Appendix A.

3.4.1 General Description of Structures

There are currently no structures on the Site.

3.4.2 Roads

There are currently no roads on the Site. There is right of way leading from North Street to the Site. This becomes into an old farm road/track which cuts diagonally through the center of the Site.

3.4.3 Potable Water Supply

Currently there are no utilities on-site. There are no public water supply wells within 1.0 mile of the subject property.

3.4.4 Sewage Disposal System

There are no public utilities on the Site.

3.5 Current Uses of Adjoining Properties

Residential properties abut the Site on the southwest. There is a horse farm to the south, and agricultural field to the north with residences beyond along Halliday Avenue West. An agricultural field, belonging to the 2005 North Street residence, borders the Site to the east; the remainder of the abutting land is wooded.

4.0 SITE RECONNAISSANCE

4.1 Methodology and Limiting Conditions

On April 15, 2015 GeoQuest personnel conducted a walk-through of the subject property to determine the presence or absence of recognized environmental conditions which could have the potential to impact the Site. The weather was clear and in the 60°s.

Information about the Site was provided by Mr. Kevin Sullivan, current owner, and by State and local offices. Mr. Sullivan accompanied GeoQuest for a portion of the walk-through. Photographs of the Site can be found in Appendix B.

4.2 General Site Setting

4.2.1 Current Use(s) of the Property

The Site consists of open fields, woods, and some wetland areas; it is currently vacant.

4.2.2 Past Use(s) of the Property

Based on information provided by Mr. Sullivan and on the aerial photographs there was historically a gravel pit on the Site with the remainder of the Site being either wooded or open fields.

4.2.3 Current Uses of Adjoining Properties

Residential properties abut the Site to the southwest; a horse farm abuts the Site to the south. There is an agricultural field to the north with residences beyond, along Halliday Avenue West. An agricultural field, belonging to the 2005 North Street residence, borders the Site to the east; the remainder of the abutting land is wooded.

4.2.4 Past Uses of Adjoining Properties

Based on the aerial photographs, adjoining properties were agricultural fields with residences along North Street.

4.2.5 Current or Past Uses in the Surrounding Area

Based on the aerial photographs, the surrounding area has consisted of a few residences and agricultural properties.

4.2.6 Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions

Based on the Bedrock Geological Map of Connecticut (1985), bedrock at the Site consists of Portland Arkose, a reddish brown, medium to coarse grained sandstone.

According to the CTDEEP Map of Surficial Materials (1992) soils in the area are reported to largely be made up of fines - well sorted, thin layers of alternating silt and clay or thicker layers of sand and silt. The topography of the Site slopes gently down from west to southeast. Based on the overall topography of the area and the proximity of local water courses, overall groundwater flow is assumed to be flowing to the south southwest.

4.3 Exterior Observations

The Site is irregularly shaped with current access only from a right of way leading from North Street westward into the Site. This becomes an old farm road/track which cuts diagonally northwest through the center of the Site.

The Site consists largely of open fields surrounded by patches of woods with some small areas of wetlands near the eastern edge as well as some small ponds in the north central area of the Site.

There were no indications of spills or releases, tanks or dump areas in any of the areas investigated. A small farm dump was observed near the southeastern corner of the Site; however, according to Mr. Sullivan this is not on the subject property.

Observations regarding the following items were made during GeoQuest's Site walk-through in accordance with the ASTM standard.

4.3.1 Hazardous Substances and Petroleum Products in Connection with Identified Uses

No hazardous substances or petroleum products were identified on the exterior portion of the site.

4.3.2 Storage Tanks

There were no indications of underground storage tanks (eg. vent and fill pipes) evident on the Site.

4.3.3 Odors

GeoQuest did not note any noxious odors during the walk-through of the Site.

4.3.4 Pools of Liquid

There were no pools of liquid observed on the Site other than the wetlands.

4.3.5 Drums

There were no drums observed on the Site.

4.3.6 Hazardous Substance and Petroleum Products Containers (Not Necessarily in Connection with Identified Uses)

There were no hazardous substance or petroleum containers observed on the Site.

4.3.7 Unidentified Substance Containers

There were no unidentified substance containers identified on the Site.

4.3.8 Polychlorinated Biphenyls (PCBs)

There were no potential PCB containing materials present on-site.

4.3.9 Pits, Ponds, or Lagoons

There were no pits, ponds or lagoons noted on Site other than the wetlands.

4.3.10 Stained Soil or Pavement

There were no indications of stained soil or pavement on-site.

4.3.11 Stressed Vegetation

No stressed vegetation was noted on the Site.

4.3.12 Solid Waste

There was no solid waste identified on the Site.

4.3.13 Wastewater

There were no stormwater or waste water discharges noted on the Site during the Site walk-through.

4.3.14 Wells

There are no potable wells or monitoring wells on-site.

4.3.15 Septic Systems

Currently there are no utilities serving the Site.

5.0 USER-PROVIDED INFORMATION

GeoQuest provided a "User Questionnaire" to the client. The answers as provided by the client are noted below. A copy of the completed questionnaire can be found in Appendix C.

5.1 Environmental Liens or Activity and Use Limitations

The client is not aware of any environmental liens against the property that are filed or recorded under federal, tribal, state, or local law. Nor are they aware of any activity or land use restrictions or limitations.

5.2 Specialized Knowledge

The client has no specialized knowledge about the Site.

5.3 Commonly Known or Reasonably Ascertainable Information

The Client is aware that much of the Site was used for agriculture and that there was, at one time, a gravel pit on the Site. They are not aware of any chemicals used on-site or of any spills or environmental clean-ups on the Site.

5.4 Knowledge of Litigation or Administrative Proceedings

The client has no information to indicate that there are any pending administrative proceedings relevant to hazardous substances on the property.

5.5 Valuation Reduction for Environmental Issues

The client believes that they are paying the fair market value for the land.

6.0 RECORDS REVIEW

6.1 Previous Environmental Reports

GeoQuest was not provided with any prior environmental reports.

6.2 Standard Environmental Record Sources

GeoQuest requested a search of available environmental records by Environmental Data Resources, Inc. (EDR) of Shelton, Connecticut, which maps and lists properties in Federal and State environmental databases with existing conditions or status that may have the potential to affect the subject property. This search met the specific requirements of the ASTM Standard Practice for Environmental Assessments, E 1527-13, including those associated with government databases, search distances, and data currency**.** A copy of the EDR report can be found in Appendix D.

The Site is not listed on any of the databases searched.

6.2.1 Federal Environmental Record Sources

In accordance with ASTM E 1527-13 guidelines GeoQuest reviewed the Federal databases listed below:

6.2.1.1 National Priorities List (NPL; 1.0 mile)

The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund program. In order for a CERCLIS site to be classified as an NPL site, it must meet or surpass one of several criteria set by the U.S. Department of Health and Human Services and the U.S. EPA.

There are no listed NPL properties within 1.0 mile of the Site.

6.2.1.2 Delisted NPL Site List (1.0 mile)

This list includes properties that have been delisted from the NPL when no further response is appropriate.

There are no delisted NPL properties within 1.0 mile of the Site.

6.2.1.3 Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS/ 0.5 mile)

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies, and private persons, pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This list contains sites that are either proposed for the NPL or in the screening and assessment phase for possible inclusion on the NPL.

There are no CERCLIS sites within 0.5 miles of the Site.

6.2.1.4 CERCLIS-No Further Remedial Action Planned (CERCLIS-NFRAP; 0.5 miles)

This list contains data on sites on which, after an initial investigation, no contamination was found, contamination was removed quickly without the need for listing on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration.

There are no CERCLIS-NFRAP site within 0.5 miles of the Site.

6.2.1.5 Corrective Action Report (CORRACTS; 1.0 mile)

This list identifies hazardous waste handlers with RCRA corrective action activity.

There are no CORRACTS properties within 1.0 mile of the Site.

6.2.1.6 RCRA Treatment, Storage and Disposal (TSD) Facilities (0.5 mile)

This list includes selected information on facilities that store, treat and/or dispose of hazardous waste, as defined by the Resource Conservation and Recovery Act (RCRA).

There are no listed RCRA-TSDF properties within 0.5 miles of the Site.

6.2.1.7 RCRA Generators List (Site and/or Adjoining Properties)

RCRA large quantity generators (LQG) generate over 1,000 kilograms (kg) of hazardous waste per month, or over 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

There are no RCRA generators listed at the Site or any adjoining properties.

6.2.1.8 Federal Institutional Control/Engineering Control Registries (Site only)

These lists include facilities with engineering or institutional controls in place.

The Site is not listed on either registry.

6.2.1.9 Emergency Response Notification System (ERNS; site only)

ERNS is a national database that records and stores information on reported releases

of oil and hazardous substances.

The Site is not listed on the ERNS database.

6.2.2 State Environmental Record Sources

ASTM E 1527-13 requires a review of the State databases listed below.

6.2.2.1 State Hazardous Waste Sites (SHWS; 0.5 mile)

These records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. The data come from the DEP's inventory of Hazardous Disposal Sites.

There are no listed SHWS properties within 0.5 miles of the Site.

6.2.2.2 Solid Waste Facilities/Landfills (SWF/LF; 0.5 mile)

This list contains an inventory of solid waste disposal facilities or landfills in the state. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

There are no listed SWF/LF sites within 0.5 miles of the Site.

6.2.2.3 State Leaking Underground Storage Tank Database (LUST; 0.5 mile)

This is an inventory of reported leaking underground storage tank incidents.

There are three LUST sites identified within 0.5 miles of the Site. Two of these (at 91 Wendover Drive, 0.28 miles southwest; and 763 North Street, 0.44 miles south) are located down gradient to the site relative to assumed groundwater flow direction and, therefore, would not be expected to impact the Site. The third site is at 1174 Blossom Street, approximately 0.43 miles west of the Site, is cross gradient to the Site relative to assumed groundwater flow direction. Based on its location, as well as on its listed status of "LUST completed", the potential for this incident to impact the Site is considered very low.

6.2.2.4 State Registered Underground Storage Tank (UST; Site and Adjoining Properties)

This database contains listings of current registered UST sites.

There are no USTs listed for the Site. There is one UST listed for 200 Halliday Avenue West. There is no listing of 200 Halliday Avenue West in the Suffield Assessor's files, although the EDR report indicates it is approximately 0.177 miles north northwest. Based on its location relative to assumed groundwater flow direction the potential for an incident impacting the subject property is low. In addition, the presence of a UST is not by itself an environmental issue.

6.2.2.5 State Voluntary Cleanup Program Sites (VCP; 0.5 miles)

This database lists sites involved in the Voluntary Remediation Program.

There are no VCP facilities listed within 0.5 miles of the Site.

6.2.2.6 State and Tribal Brownfield Sites (0.5 miles)

This database contains listings for current Brownfield sites.

There are no Brownfield sites listed within 0.5 miles of the Site.

6.3 Additional Environmental Record Sources

The files of the Connecticut Department of Energy and Environmental Protection (CTDEEP) were checked for any information regarding the subject property or abutting properties including leaking underground storage tanks, oil or chemical spills, and manifests.

There was no information relating to the subject property found in the CTDEEP files.

6.4 Municipal File Information

6.4.1 Town Assessor's Office

GeoQuest reviewed the Suffield Tax Assessor's office street cards for the subject property. The subject property has not been divided out of the larger 50 acre parcel which is listed on the property card as Block 29, Lot 21 on Map 39H. The property cards show 8 acres of woodland as well as an approximately 4,000 square foot, two-story house. However, the house is on the eastern portion of the property and is not part of the subject property.

The current owner of the larger parcel is listed as Krista and Kevin S. Sullivan Jr. who purchased it on June 30, 1995.

A copy of this card can be found in Appendix E.

6.4.2 Building Department

GeoQuest reviewed records maintained by the Suffield Building Department. All permits found pertain to the residence on the eastern portion of the larger parcel.

6.4.3 Fire Marshal's Office

The Suffield Fire Marshal's office files were reviewed for any information regarding underground tanks, spills etc. for the subject property. According to Captain Mike Thibedeau there is nothing in their files relating to the subject property.

6.5 Physical Setting Source(s)

6.5.1 Regional Physiographic Conditions

According to the EDR report the Site is located at 156 feet above mean sea level. It is located in the Central Lowlands Portion of the New England Physiographic Province. The topography of the Site slopes gently downward from west to southeast.

6.5.2 Soil Conditions

According to the CTDEEP Map of Surficial Materials (1992) soils in the area are reported to largely be made up of fines - well sorted, thin layers of alternating silt and clay or thicker layers of sand and silt.

6.5.3 Geologic Conditions

According to the Bedrock Geological Map of Connecticut (1985), bedrock at the Site consists of Portland Arkose, a reddish brown medium to coarse grained sandstone.

6.5.4 Surface Water and Groundwater Characteristics

While there is no detailed information on the hydrogeology of this area, it is assumed that the primary subsurface aquifer would be in the unconsolidated sediments overlying the bedrock. The movement and direction of groundwater flow is influenced by many factors, including the aquifer's hydraulic characteristics, surface and bedrock topography, the presence of surface water bodies, building foundations and the influence of pumping wells. While the topography of the Site area slopes downward from north to southeast, based on the overall topography of the Site area and the proximity of local water courses, overall groundwater flow is assumed to be flowing to the south southwest.

The CTDEEP has classified groundwater in the Site area as "GA". A GA classification indicates that the water in this area is suitable for use as a potable water supply without treatment.

6.6 Historical Use Information on the Property

6.6.1 Land Title Records

Based on the property record cards available at the Suffield Assessor's office the following owners were identified:

Land Owner	Date of Acquisition
Krista & Kevin S. Sullivan Jr.	June 30, 1995
Mary Diana Vakalis	August 17, 1977

No references to land uses were observed in the records reviewed.

6.6.2 Sanborn Fire Insurance Maps

Sanborn Fire Insurance Maps (Sanborns) were requested from Environmental Data Resources, Inc. (EDR) of Shelton, Connecticut. There were no Sanborn Maps for the Site area.

6.6.3 Aerial Photographs

Aerial photographs for the Site and surrounding area were requested from EDR. Aerial photographs for the years 1934, 1941, 1957, 1970, 1977, 1986, 1992, 1995, 2005, 2006, 2008, 2010,and 2012 were available and reviewed for this assessment to determine the presence of prior building structures, if any, and other land use features on-site. (It should be noted that the 1977 photo is too dark to read.) Copies of these photographs can be found in Appendix F.

1934-1941	Most of the Site area appears quite open with fields for agriculture and a large area in the middle which is perhaps wetlands. There is a small cluster of trees in the southern portion of the Site area (there are no boundary lines to determine exactly where the Site is). There are a few houses along North Street as well as along Halliday Avenue to the north.
1957	There is a small road running from North Street along what appears to be the south edge of the Site. It curves north in the western portion of the Site and ends in what appears to be an excavation of some sort (perhaps the gravel pit). Most of the remainder of the Site appears open.
1970	The road and excavation area are not as clearly defined as in 1957 and there are more trees in the northwestern portion of the Site area. Additional residences can be seen along both North Street and Halladay Avenue.
1986-1995	The western portion of the Site becomes increasingly wooded and there is a line cutting diagonally across the center of the Site from southwest to northeast which may mark a watercourse or a pipeline. The excavated area becomes less and less visible. There is a large U shaped formation near the center of the Site, purpose unknown.
2005-2012	The eastern half and the southwest corner of the Site appear as open fields while the remainder is wooded.

6.6.4 Historical Topographic Maps

Historical topographic maps for the Site and surrounding area were requested from EDR. Maps for the years 1895, 1901, 1919, 1945, 1958, 1970, and 1979 were available and reviewed for this assessment to determine the presence of prior building structures, if any,

and other land use features on-site. The general Site area is circled on each map. Copies of these maps can be found in Appendix G.

1895-1901 No specific features appear in the Site area.

1919 What appear to be clusters of trees can be seen in the general area of the Site.

1945 Clay Brook is now identified running through the Site area and there are some houses along North Street. There is also a road running westward from North Street with some small structures along it, although it does not appear to be on the Site itself.

1958 Some wetlands are now marked in the central portion of what is believed to be the Site. In addition, another road appears to cut across the Site area leading to a "gravel pit". Additional houses can be seen along North Street as well as along Halladay Avenue to the north.

1970-1979 The Site area remains basically unchanged. There is what appears to be a housing development to the southwest of the Site area, off of Russell Avenue.

7.0 INTERVIEWS

7.1 Interviews with Owner/Site Contacts

GeoQuest spoke with Mr. Kevin Sullivan, the current owner of the property. Mr Sullivan, who has owned the property since 1996, confirmed that the Site historically had a gravel pit on it. In addition, much of the Site had been open fields which were used for tree farming and growing nursery stock.

8.0 ADDITIONAL SERVICES

No additional services were performed for this site assessment.

9.0 APPLICABILITY OF THE CONNECTICUT PROPERTY TRANSFER ACT

Based on a review of documents and information collected during the site walk-through and on file at the CTDEEP there was no evidence that any listed activities (dry cleaning, furniture stripping, and auto body repair) identified in the Connecticut Property Transfer Act (Transfer Act) have occurred on-site. In addition, there is no indication that any activities at the Site generated hazardous waste. Therefore, the Site would not be considered an “establishment” pursuant to the Transfer Act.

10.0 FINDINGS

10.1 Recognized Environmental Conditions (RECs) and/or Areas of Concern (AOCs)

GeoQuest did not identify any RECs on the subject property.

10..2 De Minimis Conditions

No de minimis conditions were identified.

11.0 OPINION

This section includes the environmental professional's opinion(s) of the impact on the property of conditions identified in the findings section of the report. Based on the information reviewed and observations made during the Site walk-through, GeoQuest found no evidence of any recognized environmental concerns at the Site. . Therefore, GeoQuest believes that no further assessment is warranted on this site at this time.

12.0 CONCLUSIONS

GeoQuest, Inc. has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-13 of the Site identified as a portion of 1005 North Street, Suffield, Connecticut. Any exceptions to, or deletions from, this practice are described in Section 13.0 of this report. This assessment has revealed no evidence of any recognized environmental conditions in connection with the Site.

13.0 DEVIATION/DATA GAPS

Based on the walk through, the only data gap was the difficulty determining the exact boundaries of the Site; however, since most of the surrounding land was also undeveloped GeoQuest does not consider this data gap significant.

14.0 REFERENCES

The information contained in this report was collected during the walk-through of the property and from review and/or inspection of the following documents and files:

Interviews	Mr. Kevin Sullivan, current owner
Suffield	Assessor's Office Building Department Fire Marshal's Office

United States Geological Survey Topographic Map, Broad Brook Quadrangle (7.5 minute series), 1997

Connecticut Department of Environmental Protection, Bureau of Waste Management Records

Connecticut Department of Environmental Protection, Bureau of Water Management Records

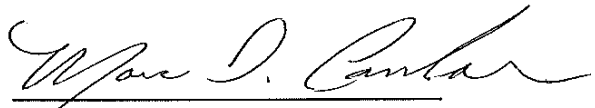
Connecticut Department of Environmental Protection, Water Compliance Unit, Adopted Water Quality Classifications for the Connecticut River and South Central Coastal Basins, 2001.

Bedrock Geological Map of Connecticut, Connecticut Geological and Natural History Survey, 1985

Surficial Materials Map of Connecticut, United States Geological Survey, 1992

15.0 STATEMENT OF ENVIRONMENTAL PROFESSIONAL

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 40 C.F.R. 312. I have the specific qualifications based on education, training, and experience to assess as 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 C.F.R. part 312.

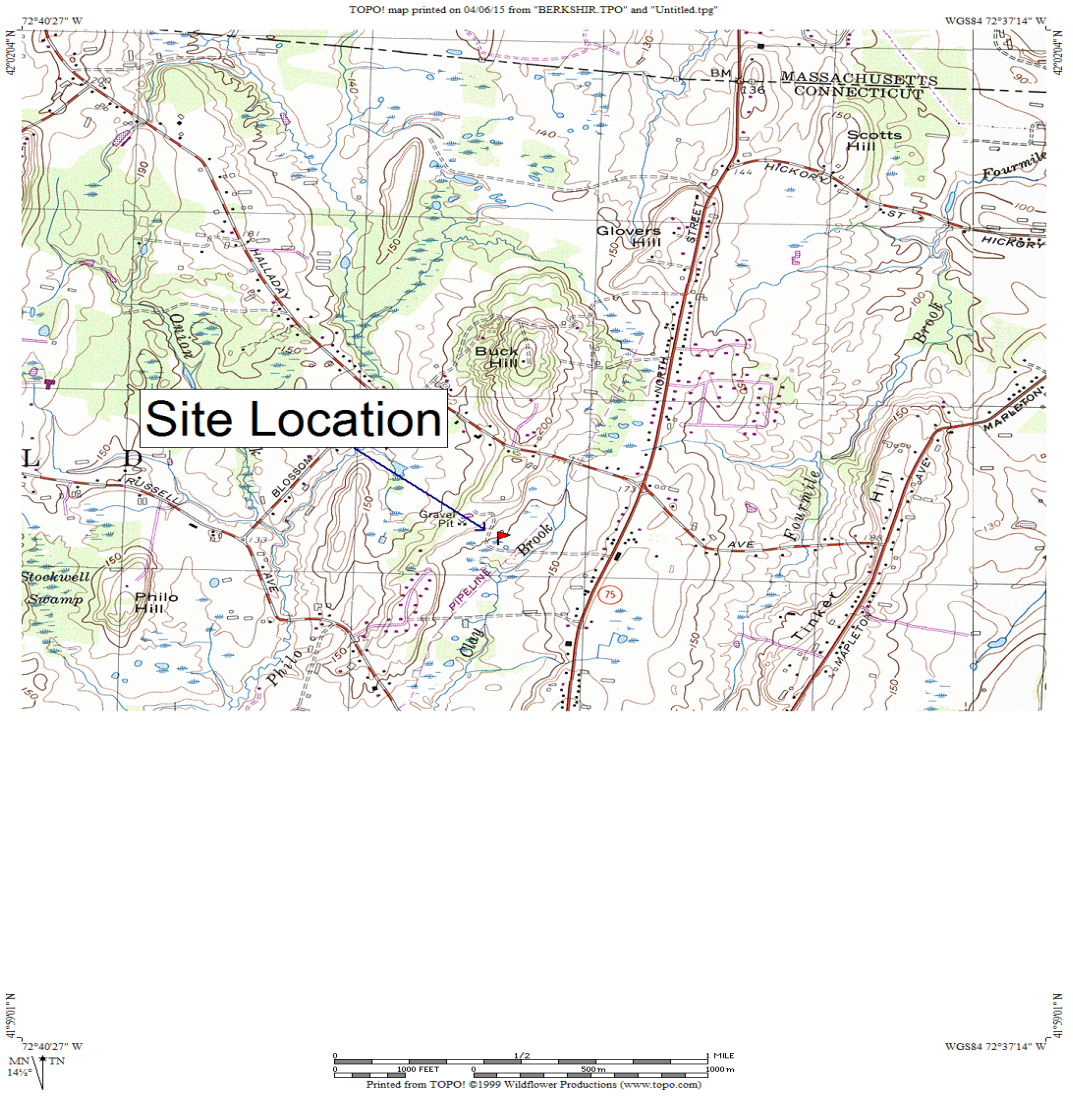


Marc I. Casslar
President

APPENDIX A

SITE LOCATION MAP
SITE LAYOUT MAP

SITE LOCATION MAP

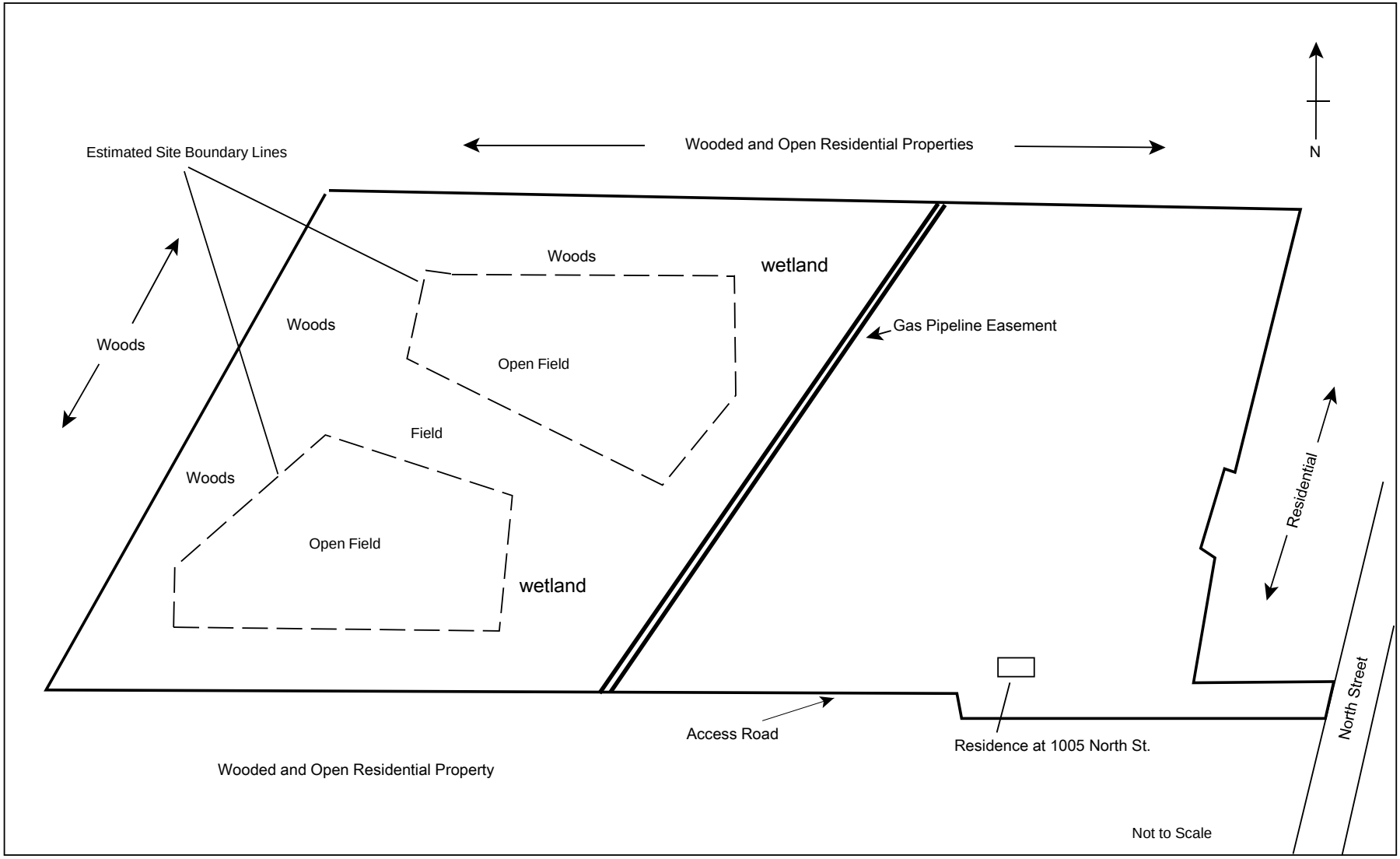


Source: U.S. Geological Survey, 7.5 Minute Quadrangle, Scale 1:24000

GeoQuest, inc.
P.O. Box 85
Bloomfield, CT
Tel: (860) 243-1757
Fax: (860) 243-9414

SITE LOCATION	PROJECT NUMBER
1005 North Street Suffield, Connecticut	2493

SITE LAYOUT MAP



GeoQuest, inc.
P.O. Box 85
Bloomfield, CT
Tel: (860) 243-1757
Fax: (860) 243-9414

SITE LOCATION	DATE	PROJECT NUMBER
1005 North Street Suffield, CT	April, 2015	2493

APPENDIX B

SITE PHOTOGRAPHS

1005 NORTH STREET, SUFFIELD

Open Field – Central Part of Site

Woods on Edge of Field

Track Leading into Site

Wetlands Area

Woods Along Track

Interior Woods

APPENDIX C

USER QUESTIONNAIRE

ASTM 1527-13 Phase I Environmental Site Assessment

User Provided Information Questionnaire

The ASTM standard for Phase I ESAs requires that the user (usually the client) be responsible for certain information that is included in the Phase I report. The following questions are being provided to you as the "user". You may or may not know specifics about what is being asked.

Name: Adam Beal

Organization: Lodestar Energy

Subject Site (& Address): 1005 North St.
Suffield, CT

Name(s) & Address(es) of party(ies) for whom report is being prepared:
Lodestar Energy
3 Ellsworth Rd., Suite 122, Avon, CT 06001

Reason why Phase I is required: Financing

Signed: Adam M. Beal

Date: 3.31.15

Please provide the following information, if available:

- Any prior environmental site assessment reports,
- Environmental audit reports,
- Environmental permits (for example, solid waste disposal permits, hazardous waste disposal permits, wastewater permits, NPDES permits, underground injection permits),
- Registrations for underground and above-ground storage tanks,
- Material safety data sheets,
- Community right-to-know plan,
- Safety plans; preparedness and prevention plans; spill prevention, countermeasure, and control plans; etc.,
- Reports regarding hydrogeologic conditions on the property or surrounding area,

- Notices or other correspondence from any government agency relating to past or current violations of environmental laws with respect to the property or relating to environmental liens encumbering the property,
- Hazardous waste generator notices or reports.
- Geotechnical studies,
- Risk assessments,
- Recorded Activity Use Limitations

2. Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?

No.

3. Are you aware of any activity or land use limitations, such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

No.

4. Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

No.

5. Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as user,

a) Do you know the past uses of the property? If so, what are they?

Agriculture, gravel pit.

b) Do you know of specific chemicals that are present or once were present at the property?

No.

c) Do you know of spills or other chemical releases that have taken place at the property?

No.

d) Do you know of any environmental cleanups that have taken place at the property?

No.

7. Do you know of any pending, threatened, or past litigation or administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property?

No.

8. Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property?

No.

9. Do you believe that the value of the Site that was or is being paid for this property reasonably reflects the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?

Yes.

APPENDIX D

EDR REPORT

1005 North Street
1005 North Street
Suffield, CT 06078

Inquiry Number: 4235246.2s
March 16, 2015

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

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

1005 NORTH STREET
HARTFORD County, CT 06078

COORDINATES

Latitude (North):	42.0095000 - 42° 0' 34.20''
Longitude (West):	72.6471000 - 72° 38' 49.56''
Universal Tranverse Mercator:	Zone 18
UTM X (Meters):	694843.8
UTM Y (Meters):	4653295.5
Elevation:	156 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	42072-A6 WEST SPRINGFIELD, MA CT
Most Recent Revision:	1979
South Map:	41072-H6 WINDSOR LOCKS, CT
Most Recent Revision:	1984

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20120706, 20120712
Source:	USDA

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

EXECUTIVE SUMMARY

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

CERCLIS ..... Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY ..... Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP ..... CERCLIS No Further Remedial Action Planned

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-LQG ..... RCRA - Large Quantity Generators
RCRA-SQG ..... RCRA - Small Quantity Generators
RCRA-CESQG ..... RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROL ..... Sites with Institutional Controls
LUCIS ..... Land Use Control Information System

Federal ERNS list

ERNS ..... Emergency Response Notification System

State- and tribal - equivalent CERCLIS

SHWS ..... Inventory of Hazardous Disposal Sites
SDADB ..... Site Discovery and Assessment Database

State and tribal landfill and/or solid waste disposal site lists

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

AST ..... Marine Terminals and Tank Information

EXECUTIVE SUMMARY

INDIAN UST ..... Underground Storage Tanks on Indian Land
FEMA UST ..... Underground Storage Tank Listing

State and tribal institutional control / engineering control registries

ENG CONTROLS ..... Engineering Controls Listing
AUL ..... ELUR Sites

State and tribal voluntary cleanup sites

VCP ..... Voluntary Remediation Sites
INDIAN VCP ..... Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS ..... Brownfields Inventory

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

ODI ..... Open Dump Inventory
DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations
SWRCY ..... Recycling Facilities
INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL ..... Clandestine Drug Labs
CDL ..... Clandestine Drug Lab Listing
US HIST CDL ..... National Clandestine Laboratory Register

Local Land Records

LIENS 2 ..... CERCLA Lien Information
LIENS ..... Environmental Liens Listing
CT PROPERTY ..... Property Transfer Filings

Records of Emergency Release Reports

HMIRS ..... Hazardous Materials Information Reporting System
SPILLS ..... Oil & Chemical Spill Database
SPILLS 90 ..... SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR ..... RCRA - Non Generators / No Longer Regulated
DOT OPS ..... Incident and Accident Data
DOD ..... Department of Defense Sites
FUDS ..... Formerly Used Defense Sites

EXECUTIVE SUMMARY

CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
US MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System
RMP	Risk Management Plans
LWDS	Connecticut Leachate and Wastewater Discharge Sites
MANIFEST	Hazardous Waste Manifest Data
DRYCLEANERS	Drycleaner Facilities
ENF	Enforcement Case Listing
NPDES	Wastewater Permit Listing
AIRS	Permitted Air Sources Listing
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
PCB TRANSFORMER	PCB Transformer Registration Database
Financial Assurance	Financial Assurance Information Listing
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
COAL ASH DOE	Steam-Electric Plant Operation Data
LEAD SMELTERS	Lead Smelter Sites
PRP	Potentially Responsible Parties
2020 COR ACTION	2020 Corrective Action Program List
SEH	List of Significant Environmental Hazards Report to DEEP

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants
EDR US Hist Auto Stat	EDR Exclusive Historic Gas Stations
EDR US Hist Cleaners	EDR Exclusive Historic Dry Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS	Recovered Government Archive State Hazardous Waste Facilities List
RGA LUST	Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

EXECUTIVE SUMMARY

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.

STANDARD ENVIRONMENTAL RECORDS

State and tribal leaking storage tank lists

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 LUST list, as provided by EDR, and dated 01/30/2015 has revealed that there are 3 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MR SWANSON	***91 WENDOVER DR.***	***SW 1/4 - 1/2 (0.281 mi.)***	***2***	***8***
GUS CONDARAS	***763 NORTH ST***	***S 1/4 - 1/2 (0.444 mi.)***	***4***	***14***
Lower Elevation	**Address**	**Direction / Distance**	**Map ID**	**Page**
STEVEN LEACH	***1174 BLOSSOM ST.***	***W 1/4 - 1/2 (0.434 mi.)***	***3***	***11***

State and tribal registered storage tank lists

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 UST list, as provided by EDR, and dated 02/27/2015 has revealed that there is 1 UST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
EDWARD W BRODER JR	200 HALLADAY AVE W	NNW 1/8 - 1/4 (0.177 mi.)	1	7

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

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

EXECUTIVE SUMMARY

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 CPCS list, as provided by EDR, and dated 02/27/2015 has revealed that there are 3 CPCS sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MR SWANSON	*91 WENDOVER DR.*	*SW 1/4 - 1/2 (0.281 mi.)*	*2*	*8*
GUS CONDARAS	*763 NORTH ST*	*S 1/4 - 1/2 (0.444 mi.)*	*4*	*14*

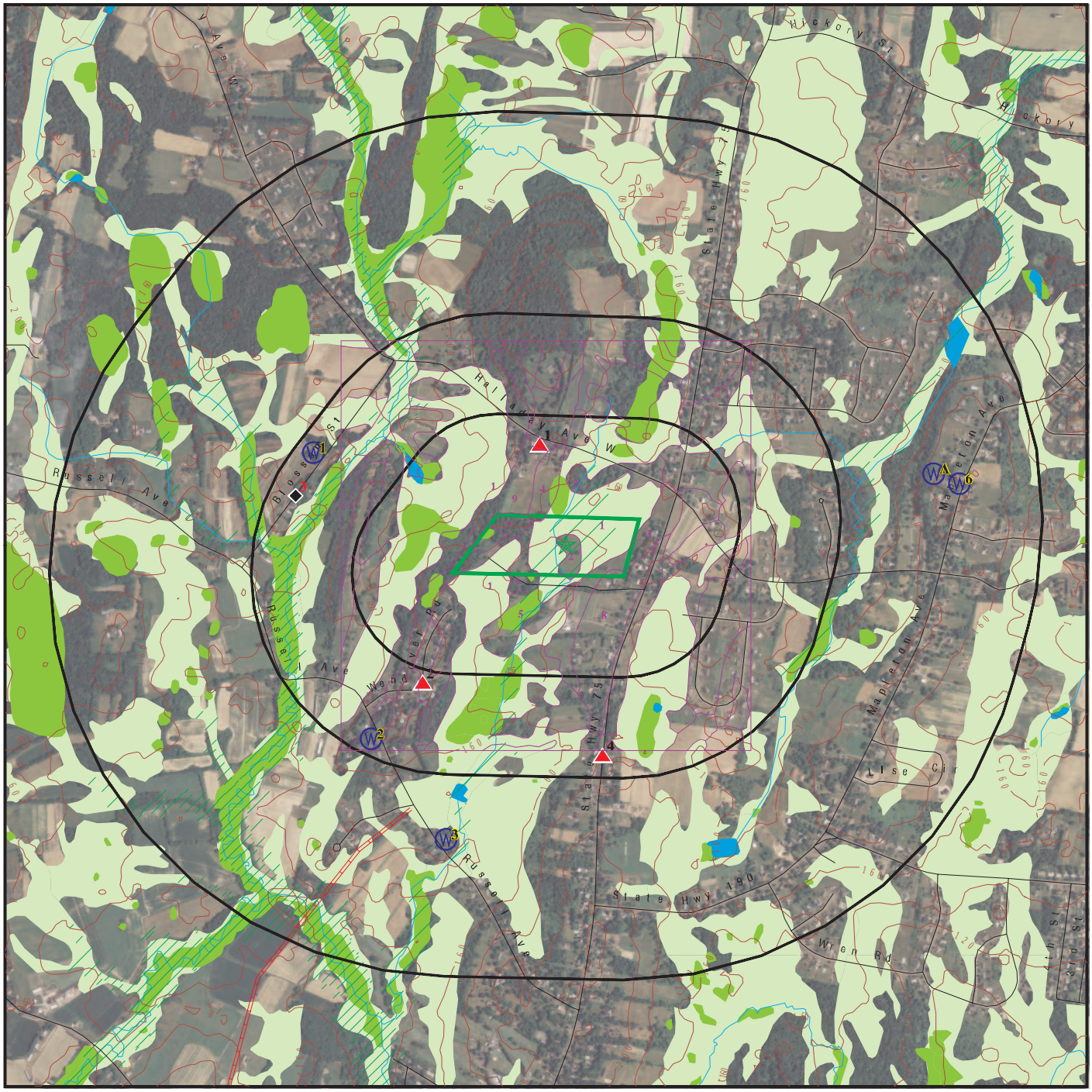
Lower Elevation	Address	Direction / Distance	Map ID	Page
STEVEN LEACH	*1174 BLOSSOM ST.*	*W 1/4 - 1/2 (0.434 mi.)*	*3*	*11*

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 1 records.

Site Name	Database(s)
N. CENTRAL CONN. CORRECTIONAL FACI	LUST

OVERVIEW MAP - 4235246.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Oil & Gas pipelines from USGS

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: 1005 North Street	CLIENT: GeoQuest, Inc.
ADDRESS: 1005 North Street Suffield CT 06078	CONTACT: Beth
LAT/LONG: 42.0095 / 72.6471	INQUIRY #: 4235246.2s DATE: March 16, 2015 1:54 pm

DETAIL MAP - 4235246.2S

0 1/8 1/4 1/2 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
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines from USGS
- 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: 1005 North Street	CLIENT: GeoQuest, Inc.
ADDRESS: 1005 North Street Suffield CT 06078	CONTACT: Beth
LAT/LONG: 42.0095 / 72.6471	INQUIRY #: 4235246.2s DATE: March 16, 2015 1:56 pm

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								
CERCLIS	0.500		0	0	0	NR	NR	0
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP	0.500		0	0	0	NR	NR	0
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	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
SHWS	1.000		0	0	0	0	NR	0
SDADB	0.500		0	0	0	NR	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	0	3	NR	NR	3
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST	0.250		0	1	NR	NR	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
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
ENG CONTROLS	0.500		0	0	0	NR	NR	0
AUL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
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								
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	TP		NR	NR	NR	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
US HIST CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
LIENS	TP		NR	NR	NR	NR	NR	0
CT PROPERTY	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
SPILLS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	0	0	NR	0
CONSENT	1.000		0	0	0	0	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
ROD	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
LWDS	0.250		0	0	NR	NR	NR	0
MANIFEST	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
AIRS	TP		NR	NR	NR	NR	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
CPCS	0.500		0	0	3	NR	NR	3
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
SEH	0.500		0	0	0	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR US Hist Auto Stat	0.250		0	0	NR	NR	NR	0
EDR US Hist Cleaners	0.250		0	0	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA HWS	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

MAP FINDINGS

Map ID / Direction / Distance / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
1 NNW 1/8-1/4 0.177 mi. 937 ft.	**EDWARD W BRODER JR 200 HALLADAY AVE W SUFFIELD, CT 06078**	**UST**	**U002175606 N/A**

Relative: Higher

Actual: 192 ft.

UST:

Facility State:	CT
Facility Id:	139-7709
Latitude:	42.013613
Longitude:	-72.648582

Contact:

Owner Name:	EDWARD W. BRODER
Owner Address:	200 HALLADAY AVE W
Owner City/State/Zip:	SUFFIELD, CT 060781106
Owner Phone:	(203) 668-2828
Owner Phone Ext:	Not reported
Affiliation Type:	Owner
Contact Name:	Not reported
Contact Title:	Not reported
Contact EMail:	Not reported

Owner Name:	EDWARD W. BRODER
Owner Address:	200 HALLADAY AVE W
Owner City/State/Zip:	SUFFIELD, CT 060781106
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:	1
Compartment ID:	a
Tank Status:	**Permanently Closed**
Tank Material:	Asphalt Coated or Bare Steel
Secondary Material:	Not reported
Capacity:	1000
Substance:	Gasoline
Date Installed:	05/01/1980
Date Last Used:	Not reported
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

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
2 **SW** **1/4-1/2** **0.281 mi.** **1486 ft.**	**MR SWANSON** **91 WENDOVER DR.** **SUFFIELD, CT 06078**	**LUST** **CPCS**	**S105456985** **N/A**

Relative:
Higher

Actual:
188 ft.

LUST:

LUST Id:	1975
UST Facility Id:	Not reported
LUST Case Id:	30084
Lust Status:	Lust Completed
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:	06/01/1995
Entry Date:	Not reported
Site Case Id:	Not reported
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:	1974
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:	139
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

Map ID Direction Distance Elevation	Site	MAP FINDINGS Database(s)	EDR ID Number EPA ID Number

MR SWANSON (Continued) **S105456985**

Date Referred:	Not reported
Emergency:	False
Private Heating Fuel:	True
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:	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:	27
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

Map ID
Direction
Distance
Elevation | Site | MAP FINDINGS | Database(s) | EDR ID Number EPA ID Number

MR SWANSON (Continued) **S105456985**

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:	Not reported
Work Performed:	Not reported

CPCS:

Site Type:	LUST
Lust Status:	LUST Completed (DEP’s significant hazard definition)
PTP Form:	Not reported
Program:	Not reported
Comments:	Not reported
Site Type Definition:	Leaking Underground Storage Tanks Completed

MAP FINDINGS

Map ID / Direction / Distance / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
3 West 1/4-1/2 0.434 mi. 2293 ft.	**STEVEN LEACH 1174 BLOSSOM ST. SUFFIELD, CT 06078**	**LUST SPILLS CPCS**	**S105443951 N/A**

Relative: Lower

Actual: 145 ft.

LUST:

LUST Id:	8034
UST Facility Id:	Not reported
LUST Case Id:	36085
Lust Status:	Lust Completed
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:	04/29/1999
Entry Date:	Not reported
Site Case Id:	9902729
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:	8215
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:	139
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

Map ID Direction Distance Elevation	Site	MAP FINDINGS Database(s)	EDR ID Number EPA ID Number

STEVEN LEACH (Continued) **S105443951**

Date Referred:	Not reported
Emergency:	False
Private Heating Fuel:	True
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
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

MAP FINDINGS

Map ID / Direction / Distance / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number

STEVEN LEACH (Continued) **S105443951**

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, PRIVATE, removed 550 UST , soil removed.
Work Performed:	Not reported

SPILLS:

Year of Database:	1999
Case Number:	9902729
Who Took Spill:	915
Assigned To:	0
Report Date:	04/29/1999
Report Time:	09:52:20
Date Release:	04/29/1999
Time Responded:	Not reported
Reported By:	lt. Leach
Phone:	860 6683888
Representing:	fire dept.
Terminated:	YES
Recovd (Total):	0
Total (Water):	0
Facility Status:	Closed

MAP FINDINGS

Map ID / Direction / Distance / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number

STEVEN LEACH (Continued) **S105443951**

Continuous Spill: False
Released Substance: #2 FUEL OIL
Qty: 0 (Gallons)
Emergency Measure: removed 550 ust , soil removed.
Water Body: na
Discharger: steven leach
Telephone: 860 6685104
Responsible Party: YES
RP Address 1: 1174 blossom st.
RP City,St,Zip: SUFFIELD, CT 06078
Historic: False
Waterbody: False
Time Stamp: 1999-04-29 12:55:57
Sr Inspector: Capuano, Mike
At Inspctor: **NO RESPONSE
User Stamp: Not reported
Comments: 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
Cause ID: Inground Tank Failure
Other Cause: Not reported
Media ID: Other
Other Media: subsurface soil contamination
Class ID: Private
Other Class: Not reported
Release Type: petroleum
Other Release: Not reported
Waterbody: Other
Other Wtrbody: na

CPCS:
Site Type: LUST
Lust Status: LUST Completed (DEP's significant hazard definition)
PTP Form: Not reported
Program: Not reported
Comments: 550, Heating Oil, Private, Removed 550 Ust , Soil Removed.
Site Type Definition: Leaking Underground Storage Tanks Completed

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4
South
1/4-1/2
0.444 mi.
2343 ft.

GUS CONDARAS **LUST** **S103159639**
763 NORTH ST **SPILLS** **N/A**
SUFFIELD, CT 06078 **CPCS**

Relative:
Higher

Actual:
178 ft.

LUST:
LUST Id: 4852
UST Facility Id: Not reported
LUST Case Id: 32977
Lust Status: Lust Completed

MAP FINDINGS

Map ID / Direction / Distance / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number

GUS CONDARAS (Continued) **S103159639**

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:	05/13/1997
Entry Date:	Not reported
Site Case Id:	9702373
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:	4963
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:	139
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:	True
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

MAP FINDINGS

Map ID / Direction / Distance / Elevation | Site | Database(s) | EDR ID Number / EPA ID Number

GUS CONDARAS (Continued) **S103159639**

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
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

Map ID
Direction
Distance
Elevation | Site | MAP FINDINGS | Database(s) | EDR ID Number EPA ID Number

GUS CONDARAS (Continued) **S103159639**

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:	HEATING OIL, , SOIL REMOVAL
Work Performed:	Not reported

SPILLS:

Year of Database:	1997
Case Number:	9702373
Who Took Spill:	934
Assigned To:	0
Report Date:	05/13/1997
Report Time:	10:52:30
Date Release:	05/13/1997
Time Responded:	Not reported
Reported By:	TOM BELLMRE
Phone:	860 6681078
Representing:	F.D.
Terminated:	YES
Recovd (Total):	0
Total (Water):	0
Facility Status:	closed
Continuous Spill:	False
Released Substance:	#2 FUEL OIL
Qty:	0 (Gallons)
Emergency Measure:	SOIL REMOVAL
Water Body:	NONE
Discharger:	GUS CONDARAS
Telephone:	860 6681078
Responsible Party:	YES
RP Address 1:	Not reported

MAP FINDINGS

Map ID / Direction / Distance / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number

GUS CONDARAS (Continued) **S103159639**

RP City,St,Zip: SUFFIELD, CT 06078
Historic: False
Waterbody: False
Time Stamp: 1997-05-22 12:17:24
Sr Inspector: Williamson, Matt
At Inspctor: **NO RESPONSE
User Stamp: Not reported
Comments: Not reported
Action: Soil Removed
Other Action: Not reported
Agency ID: DEP Dispatch
Other Agency: Not reported
DEP Bureau: Not reported
DEP Agency: Not reported
Cause ID: Inground Tank Failure
Other Cause: Not reported
Media ID: Ground Surface
Other Media: Not reported
Release Type: petroleum
Other Release: Not reported
Waterbody: Other
Other Wtrbody: NONE

CPCS:
Site Type: LUST
Lust Status: LUST Completed (DEP's significant hazard definition)
PTP Form: Not reported
Program: Not reported
Comments: Heating Oil, , Soil Removal
Site Type Definition: Leaking Underground Storage Tanks Completed

Count: 1 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
SUFFIELD	S109822423	N. CENTRAL CONN. CORRECTIONAL FACI	1149 - 1153 SOUTH EAST STREET		LUST

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: 12/16/2014
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 32

Source: EPA
Telephone: N/A
Last EDR Contact: 01/08/2015
Next Scheduled EDR Contact: 04/20/2015
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 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

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: 12/16/2014
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 32

Source: EPA
Telephone: N/A
Last EDR Contact: 01/08/2015
Next Scheduled EDR Contact: 04/20/2015
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: 12/16/2014
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 32
Source: EPA
Telephone: N/A
Last EDR Contact: 01/08/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System
CERCLIS 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). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 02/13/2014
Number of Days to Update: 94
Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 02/27/2015
Next Scheduled EDR Contact: 06/08/2015
Data Release Frequency: Quarterly

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: 07/21/2014
Date Data Arrived at EDR: 10/07/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 13
Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 01/09/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned
Archived sites are sites that have been removed and archived from the inventory of CERCLIS 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 this 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. This 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 a potential NPL site.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 02/13/2014
Number of Days to Update: 94
Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 02/27/2015
Next Scheduled EDR Contact: 06/08/2015
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
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: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
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: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
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: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
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: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal institutional controls / engineering controls registries

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: 09/18/2014
Date Data Arrived at EDR: 09/19/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/26/2015
Next Scheduled EDR Contact: 06/15/2015
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: 09/18/2014
Date Data Arrived at EDR: 09/19/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/26/2015
Next Scheduled EDR Contact: 06/15/2015
Data Release Frequency: Varies

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: 12/03/2014
Date Data Arrived at EDR: 12/12/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 48

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 02/16/2015
Next Scheduled EDR Contact: 06/01/2015
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: 09/29/2014
Date Data Arrived at EDR: 09/30/2014
Date Made Active in Reports: 11/06/2014
Number of Days to Update: 37

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
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: 01/05/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 01/05/2015
Next Scheduled EDR Contact: 04/20/2015
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: 08/14/2013
Date Data Arrived at EDR: 10/30/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 37

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3366
Last EDR Contact: 01/30/2015
Next Scheduled EDR Contact: 05/11/2015
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: 01/30/2015
Date Data Arrived at EDR: 02/12/2015
Date Made Active in Reports: 03/02/2015
Number of Days to Update: 18

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3376
Last EDR Contact: 01/05/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Semi-Annually

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: 01/08/2015
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 01/08/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Quarterly

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: 01/30/2015
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 32

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
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: 09/30/2014
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/13/2015
Number of Days to Update: 10

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 02/01/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 184
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/30/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

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: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
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: 01/23/2015
Date Data Arrived at EDR: 02/10/2015
Date Made Active in Reports: 03/13/2015
Number of Days to Update: 31
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

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: 01/28/2015
Date Data Arrived at EDR: 01/30/2015
Date Made Active in Reports: 03/13/2015
Number of Days to Update: 42
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 02/03/2015
Date Data Arrived at EDR: 02/12/2015
Date Made Active in Reports: 03/13/2015
Number of Days to Update: 29
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Quarterly

State and tribal registered storage tank lists

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: 02/27/2015
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/10/2015
Number of Days to Update: 7
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3376
Last EDR Contact: 02/26/2015
Next Scheduled EDR Contact: 06/15/2015
Data Release Frequency: Semi-Annually

AST: Marine Terminals and Tank Information
A listing of bulk petroleum facilities that receive petroleum by a vessel.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 07/07/2014
Date Made Active in Reports: 07/08/2014
Number of Days to Update: 1
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3233
Last EDR Contact: 01/05/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Varies

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: 02/03/2015
Date Data Arrived at EDR: 02/12/2015
Date Made Active in Reports: 03/13/2015
Number of Days to Update: 29
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
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: 02/01/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 01/27/2014
Number of Days to Update: 271
Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/30/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

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: 09/30/2014
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/13/2015
Number of Days to Update: 10
Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
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: 01/30/2015
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/13/2015
Number of Days to Update: 36
Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
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: 01/23/2015
Date Data Arrived at EDR: 02/13/2015
Date Made Active in Reports: 03/13/2015
Number of Days to Update: 28
Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Semi-Annually

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).

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
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: 01/29/2015
Date Data Arrived at EDR: 01/30/2015
Date Made Active in Reports: 03/13/2015
Number of Days to Update: 42
Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
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: 12/14/2014
Date Data Arrived at EDR: 02/13/2015
Date Made Active in Reports: 03/13/2015
Number of Days to Update: 28
Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Quarterly

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: 01/12/2015
Next Scheduled EDR Contact: 04/27/2015
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: 02/06/2015
Next Scheduled EDR Contact: 05/18/2015
Data Release Frequency: Varies

AUL: ELUR Sites

Environmental Land Use Restriction sites.

Date of Government Version: 01/15/2015
Date Data Arrived at EDR: 02/04/2015
Date Made Active in Reports: 03/02/2015
Number of Days to Update: 26
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3912
Last EDR Contact: 02/04/2015
Next Scheduled EDR Contact: 05/25/2015
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

VCP: Voluntary Remediation Sites
Sites involved in the Voluntary Remediation Program.

Date of Government Version: 01/15/2015
Date Data Arrived at EDR: 02/04/2015
Date Made Active in Reports: 03/02/2015
Number of Days to Update: 26
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3705
Last EDR Contact: 11/06/2014
Next Scheduled EDR Contact: 05/25/2015
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: 09/29/2014
Date Data Arrived at EDR: 10/01/2014
Date Made Active in Reports: 11/06/2014
Number of Days to Update: 36
Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 12/31/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Varies

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

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: 12/29/2014
Date Data Arrived at EDR: 01/09/2015
Date Made Active in Reports: 02/03/2015
Number of Days to Update: 25
Source: Connecticut Brownfields Redevelopment Authority
Telephone: 860-258-7833
Last EDR Contact: 12/18/2014
Next Scheduled EDR Contact: 04/06/2015
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: 11/30/2004
Date Data Arrived at EDR: 06/26/2009
Date Made Active in Reports: 07/09/2009
Number of Days to Update: 13
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3705
Last EDR Contact: 12/24/2014
Next Scheduled EDR Contact: 04/06/2015
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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/22/2014
Date Data Arrived at EDR: 12/22/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 38
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 12/22/2014
Next Scheduled EDR Contact: 04/06/2015
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

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: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: No Update Planned

SWRCY: Recycling Facilities
A listing of recycling facilities.

Date of Government Version: 02/14/2014
Date Data Arrived at EDR: 02/25/2014
Date Made Active in Reports: 03/26/2014
Number of Days to Update: 29
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3223
Last EDR Contact: 03/13/2015
Next Scheduled EDR Contact: 06/29/2015
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: 02/02/2015
Next Scheduled EDR Contact: 05/18/2015
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

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: 11/10/2014
Date Data Arrived at EDR: 12/01/2014
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 70
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/03/2015
Next Scheduled EDR Contact: 06/15/2015
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CDL: Clandestine Drug Lab Listing
A listing of clandestine drug lab locations included in the Spills database.

Date of Government Version: 02/02/2015
Date Data Arrived at EDR: 02/06/2015
Date Made Active in Reports: 03/02/2015
Number of Days to Update: 24
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3361
Last EDR Contact: 01/05/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Quarterly

US HIST CDL: National Clandestine Laboratory Register
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: 11/10/2014
Date Data Arrived at EDR: 12/01/2014
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 70
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/03/2015
Next Scheduled EDR Contact: 06/15/2015
Data Release Frequency: No Update Planned

Local Land Records

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: 01/30/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

LIENS: Environmental Liens Listing
A listing of environmental liens placed by the Cost Recovery Program.

Date of Government Version: 05/20/2014
Date Data Arrived at EDR: 05/23/2014
Date Made Active in Reports: 06/03/2014
Number of Days to Update: 11
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3120
Last EDR Contact: 02/16/2015
Next Scheduled EDR Contact: 06/01/2015
Data Release Frequency: Varies

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: 01/15/2015
Date Data Arrived at EDR: 02/04/2015
Date Made Active in Reports: 03/02/2015
Number of Days to Update: 26
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3705
Last EDR Contact: 02/04/2015
Next Scheduled EDR Contact: 05/25/2015
Data Release Frequency: Semi-Annually

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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/29/2014
Date Data Arrived at EDR: 12/30/2014
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 69
Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 12/30/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Annually

SPILLS: Oil & Chemical Spill Database
Oil and Chemical Spill Data.

Date of Government Version: 02/02/2015
Date Data Arrived at EDR: 02/06/2015
Date Made Active in Reports: 03/02/2015
Number of Days to Update: 24
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3024
Last EDR Contact: 01/05/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Semi-Annually

SPILLS 90: SPILLS90 data from FirstSearch
Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 10/15/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/11/2013
Number of Days to Update: 39
Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non 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). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31
Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Varies

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: 02/03/2015
Next Scheduled EDR Contact: 05/18/2015
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: 01/15/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 06/06/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 09/18/2014
Number of Days to Update: 8

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 03/13/2015
Next Scheduled EDR Contact: 06/22/2015
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: 01/23/2015
Date Data Arrived at EDR: 02/13/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 24

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 12/24/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Varies

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: 03/10/2015
Next Scheduled EDR Contact: 06/22/2015
Data Release Frequency: Annually

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: 02/27/2015
Next Scheduled EDR Contact: 06/08/2015
Data Release Frequency: Varies

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: 12/30/2014
Date Data Arrived at EDR: 12/31/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 29

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 03/06/2015
Next Scheduled EDR Contact: 06/15/2015
Data Release Frequency: Semi-Annually

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: 12/31/2011
Date Data Arrived at EDR: 07/31/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 44

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 01/29/2015
Next Scheduled EDR Contact: 06/08/2015
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 12/22/2014
Next Scheduled EDR Contact: 04/06/2015
Data Release Frequency: Every 4 Years

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: 02/23/2015
Next Scheduled EDR Contact: 06/08/2015
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: 02/23/2015
Next Scheduled EDR Contact: 06/08/2015
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

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
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: 01/09/2015
Next Scheduled EDR Contact: 04/27/2015
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: 07/01/2014
Date Data Arrived at EDR: 10/15/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 33
Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 01/16/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Annually

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: 12/29/2014
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 21
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 03/09/2015
Next Scheduled EDR Contact: 06/22/2015
Data Release Frequency: Quarterly

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: 10/07/2014
Date Data Arrived at EDR: 10/08/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 12
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 02/27/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Quarterly

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).

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/16/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: EPA
Telephone: (617) 918-1111
Last EDR Contact: 03/09/2015
Next Scheduled EDR Contact: 06/22/2015
Data Release Frequency: Quarterly

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

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: 08/01/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 11/06/2014
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
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: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/19/2013
Number of Days to Update: 52

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 02/24/2015
Next Scheduled EDR Contact: 06/08/2015
Data Release Frequency: Biennially

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

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 11/17/2014
Next Scheduled EDR Contact: 03/02/2015
Data Release Frequency: No Update Planned

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: 03/13/2015
Next Scheduled EDR Contact: 06/29/2015
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: 01/28/2015
Date Data Arrived at EDR: 01/28/2015
Date Made Active in Reports: 02/03/2015
Number of Days to Update: 6
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3265
Last EDR Contact: 01/19/2015
Next Scheduled EDR Contact: 05/04/2015
Data Release Frequency: Varies

NPDES: Wastewater Permit Listing
A listing of permits issued by the DEP.

Date of Government Version: 01/20/2015
Date Data Arrived at EDR: 01/21/2015
Date Made Active in Reports: 02/13/2015
Number of Days to Update: 23
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3832
Last EDR Contact: 01/12/2015
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Varies

AIRS: Permitted Air Sources Listing
A listing of permitted air sources in Connecticut.

Date of Government Version: 01/30/2015
Date Data Arrived at EDR: 01/30/2015
Date Made Active in Reports: 02/03/2015
Number of Days to Update: 4
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3026
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

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: 01/15/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Semi-Annually

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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 02/18/2015
Next Scheduled EDR Contact: 06/01/2015
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: 07/23/2014
Date Data Arrived at EDR: 06/26/2014
Date Made Active in Reports: 07/21/2014
Number of Days to Update: 25

Source: Department of Energy & Environmental Protection
Telephone: 860-418-5930
Last EDR Contact: 12/18/2014
Next Scheduled EDR Contact: 04/06/2015
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

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 11/25/2014
Date Data Arrived at EDR: 11/26/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 01/05/2015
Next Scheduled EDR Contact: 04/20/2015
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: 09/30/2014
Date Data Arrived at EDR: 10/21/2014
Date Made Active in Reports: 12/17/2014
Number of Days to Update: 57

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3766
Last EDR Contact: 01/23/2015
Next Scheduled EDR Contact: 05/04/2015
Data Release Frequency: Varies

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: 02/13/2015
Next Scheduled EDR Contact: 05/25/2015
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 02/13/2015
Next Scheduled EDR Contact: 05/25/2015
Data Release Frequency: Quarterly

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: 01/15/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: N/A

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: 10/16/2014
Date Data Arrived at EDR: 10/31/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 17
Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 02/06/2015
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data
A listing of minor source facilities.

Date of Government Version: 10/16/2014
Date Data Arrived at EDR: 10/31/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 17
Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 02/06/2015
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Annually

COAL ASH DOE: Sleam-Electric Plan 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: 01/15/2015
Next Scheduled EDR Contact: 04/27/2015
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: 07/23/2014
Date Data Arrived at EDR: 07/01/2014
Date Made Active in Reports: 07/09/2014
Number of Days to Update: 8
Source: Department of Energy & Environmental Protection
Telephone: 860-418-5930
Last EDR Contact: 12/18/2014
Next Scheduled EDR Contact: 04/06/2015
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 03/13/2015
Next Scheduled EDR Contact: 06/22/2015
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: 11/19/2014
Date Data Arrived at EDR: 11/21/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 69
Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 02/16/2015
Next Scheduled EDR Contact: 06/01/2015
Data Release Frequency: Quarterly

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: 01/30/2015
Next Scheduled EDR Contact: 05/11/2015
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: 02/27/2015
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/10/2015
Number of Days to Update: 7
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3766
Last EDR Contact: 02/09/2015
Next Scheduled EDR Contact: 05/25/2015
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: 02/09/2015
Next Scheduled EDR Contact: 05/25/2015
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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 US Hist Auto Stat: 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 US Hist Cleaners: 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 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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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 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

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: 12/31/2011
Date Data Arrived at EDR: 07/19/2012
Date Made Active in Reports: 08/28/2012
Number of Days to Update: 40

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 01/12/2015
Next Scheduled EDR Contact: 04/27/2015
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: 01/01/2015
Date Data Arrived at EDR: 02/04/2015
Date Made Active in Reports: 02/27/2015
Number of Days to Update: 23

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 02/04/2015
Next Scheduled EDR Contact: 05/18/2015
Data Release Frequency: Annually

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 07/21/2014
Date Made Active in Reports: 08/25/2014
Number of Days to Update: 35

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 01/19/2015
Next Scheduled EDR Contact: 05/04/2015
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 07/15/2014
Date Made Active in Reports: 08/13/2014
Number of Days to Update: 29

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/23/2015
Next Scheduled EDR Contact: 06/08/2015
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

VT MANIFEST: Hazardous Waste Manifest Data
Hazardous waste manifest information.

Date of Government Version: 12/22/2014
Date Data Arrived at EDR: 02/06/2015
Date Made Active in Reports: 02/27/2015
Number of Days to Update: 21

Source: Department of Environmental Conservation
Telephone: 802-241-3443
Last EDR Contact: 01/19/2015
Next Scheduled EDR Contact: 05/04/2015
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 06/20/2014
Date Made Active in Reports: 08/07/2014
Number of Days to Update: 48

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/13/2015
Next Scheduled EDR Contact: 06/29/2015
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

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, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

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: Wetland Soils
Source: Department of Environmental Protection
Telephone: 860-871-4047

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

1005 NORTH STREET
1005 NORTH STREET
SUFFIELD, CT 06078

TARGET PROPERTY COORDINATES

Latitude (North):	42.0095 - 42° 0' 34.20''
Longitude (West):	72.6471 - 72° 38' 49.56''
Universal Tranverse Mercator:	Zone 18
UTM X (Meters):	694843.8
UTM Y (Meters):	4653295.5
Elevation:	156 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	42072-A6 WEST SPRINGFIELD, MA CT
Most Recent Revision:	1979
South Map:	41072-H6 WINDSOR LOCKS, CT
Most Recent Revision:	1984

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

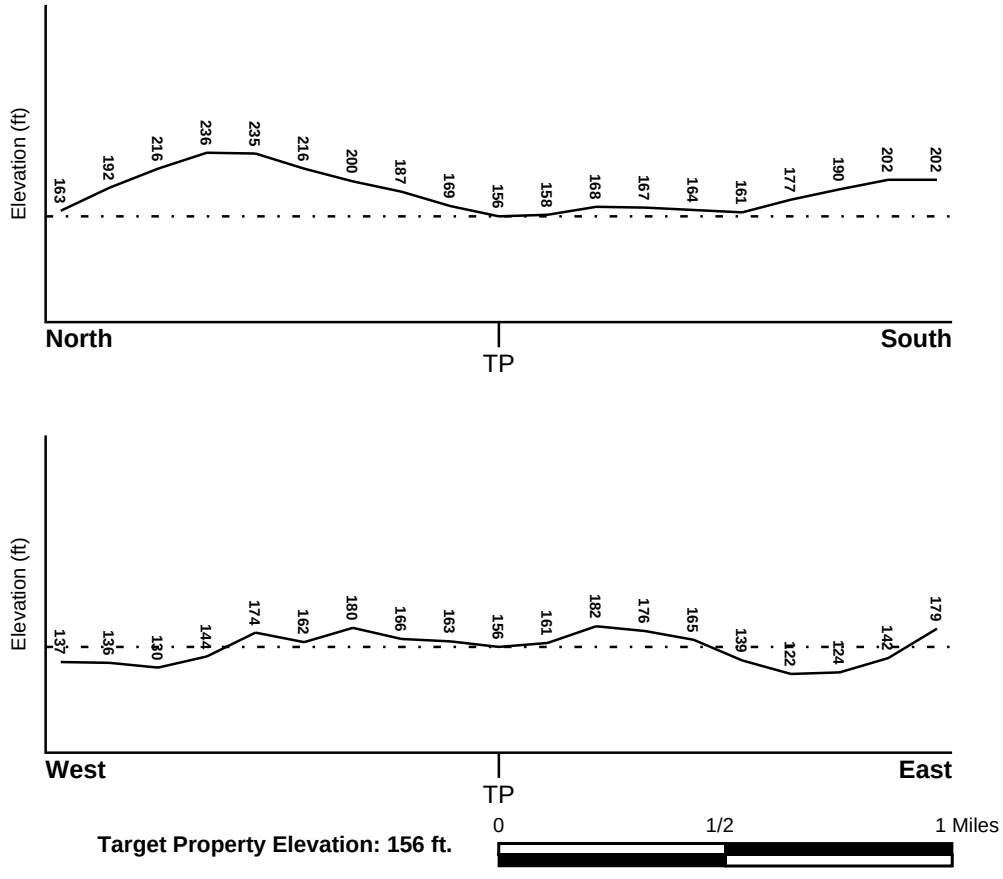
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SSW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' 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.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
HARTFORD, CT	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 09003C - FEMA DFIRM Flood data

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
WEST SPRINGFIELD	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

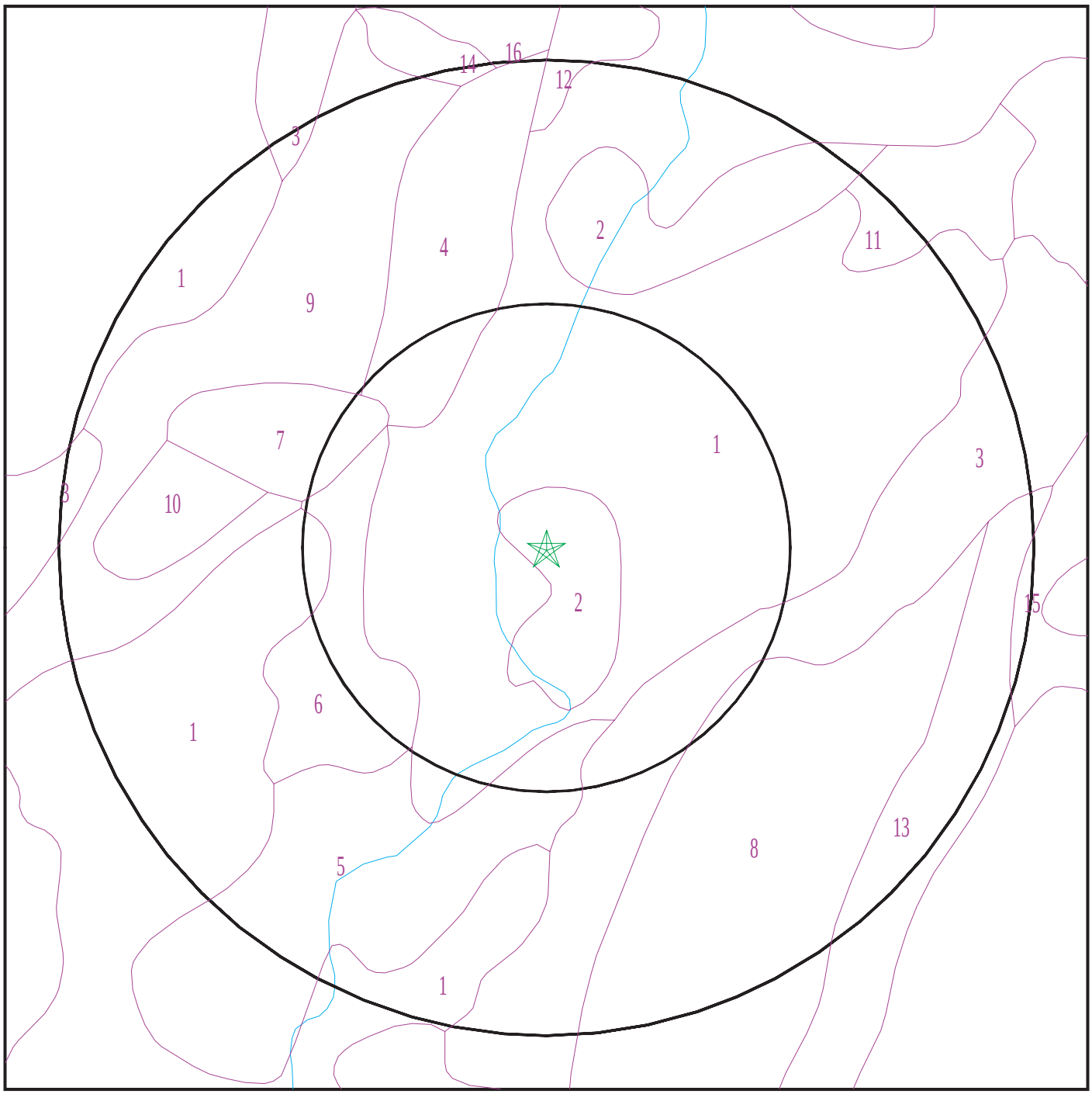
Era:	Mesozoic
System:	Triassic
Series:	Triassic
Code:	Tr *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 4235246.2s



SITE NAME: 1005 North Street ADDRESS: 1005 North Street Suffield CT 06078 LAT/LONG: 42.0095 / 72.6471	CLIENT: GeoQuest, Inc. CONTACT: Beth INQUIRY #: 4235246.2s DATE: March 16, 2015 1:56 pm

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Scitico

Soil Surface Texture: silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 8 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 7.3 Min: 4.5
2	7 inches	11 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 0.42	Max: 7.3 Min: 5.1
3	11 inches	18 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 0.42	Max: 7.3 Min: 5.1
4	18 inches	29 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 1.4 Min: 0.01	Max: 7.8 Min: 5.6

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
5	29 inches	38 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.42 Min: 0.01	Max: 7.8 Min: 5.6
6	38 inches	51 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.42 Min: 0.01	Max: 7.8 Min: 5.6
7	51 inches	64 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.42 Min: 0.01	Max: 7.8 Min: 5.6

Soil Map ID: 2

Soil Component Name: Brancroft

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 53 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 1.4	Max: 6.5 Min: 4.5
2	5 inches	16 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4 Min: 0.42	Max: 7.3 Min: 5.1
3	16 inches	22 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 0.42	Max: 7.3 Min: 5.1
4	22 inches	31 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 1.4 Min: 0.01	Max: 7.3 Min: 5.1
5	31 inches	42 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.42 Min: 0.01	Max: 7.3 Min: 5.6
6	42 inches	66 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.42 Min: 0.01	Max: 7.3 Min: 5.6

Soil Map ID: 3

Soil Component Name: Elmridge

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 4.5
2	5 inches	9 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 7.3 Min: 5.1
3	9 inches	18 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 7.3 Min: 5.1
4	18 inches	25 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 7.3 Min: 5.1
5	25 inches	64 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.42 Min: 0.01	Max: 7.8 Min: 5.6

Soil Map ID: 4

Soil Component Name: Windsor

Soil Surface Texture: moderately decomposed plant material

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Excessively drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	1 inches	moderately decomposed plant material	A-8	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Organic Clay or Organic Silt.	Max: 141 Min: 42	Max: 6 Min: 4.5
2	1 inches	3 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 6 Min: 4.5
3	3 inches	9 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 6 Min: 4.5
4	9 inches	20 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 6 Min: 4.5
5	20 inches	25 inches	sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Well-graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 703 Min: 42	Max: 6.5 Min: 4.5
6	25 inches	64 inches	sand	Granular materials (35 pct. or less passing No. 200), Fine Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Well-graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 703 Min: 42	Max: 6.5 Min: 4.5

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 5

Soil Component Name: Brancroft

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 53 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 1.4	Max: 6.5 Min: 4.5
2	5 inches	16 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4 Min: 0.42	Max: 7.3 Min: 5.1
3	16 inches	22 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 0.42	Max: 7.3 Min: 5.1
4	22 inches	31 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 1.4 Min: 0.01	Max: 7.3 Min: 5.1

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
5	31 inches	42 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.42 Min: 0.01	Max: 7.3 Min: 5.6
6	42 inches	66 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.42 Min: 0.01	Max: 7.3 Min: 5.6

Soil Map ID: 6

Soil Component Name: Ludlow

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6 Min: 4.5

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	7 inches	20 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6 Min: 4.5
3	20 inches	25 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6 Min: 4.5
4	25 inches	64 inches	gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 1.4 Min: 0.01	Max: 6 Min: 4.5

Soil Map ID: 7

Soil Component Name: Udorthents

Soil Surface Texture: loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 7.8 Min: 4.5
2	5 inches	21 inches	gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 703 Min: 0.01	Max: 7.8 Min: 4.5
3	21 inches	79 inches	very gravelly sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 703 Min: 0.01	Max: 7.8 Min: 4.5

Soil Map ID: 8

Soil Component Name: Broadbrook

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6 Min: 4.5
2	7 inches	14 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6 Min: 4.5
3	14 inches	25 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6 Min: 4.5
4	25 inches	64 inches	gravelly fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 1.4 Min: 0.01	Max: 6 Min: 4.5

Soil Map ID: 9

Soil Component Name: Manchester

Soil Surface Texture: gravelly sandy loam

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Excessively drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	gravelly sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 6 Min: 4.5
2	9 inches	18 inches	gravelly loamy sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 703 Min: 42	Max: 6 Min: 4.5
3	18 inches	64 inches	stratified extremely gravelly coarse sand to very gravelly loamy sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Well-graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 703 Min: 42	Max: 6 Min: 4.5

Soil Map ID: 10

Soil Component Name: Haven

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6 Min: 4.5
2	7 inches	14 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6 Min: 4.5
3	14 inches	20 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6 Min: 4.5
4	20 inches	24 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5
5	24 inches	59 inches	stratified very gravelly sand to gravelly fine sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Well-graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 703 Min: 141	Max: 6 Min: 4.5

Soil Map ID: 11

Soil Component Name: Sudbury

Soil Surface Texture: moderately decomposed plant material

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Moderately well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 69 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	1 inches	moderately decomposed plant material	A-8	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Organic Clay or Organic Silt.	Max: 42 Min: 14	Max: 6 Min: 4.5
2	1 inches	5 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 6.5 Min: 4.5
3	5 inches	16 inches	gravelly sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 6.5 Min: 4.5
4	16 inches	25 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 6.5 Min: 4.5
5	25 inches	59 inches	stratified gravel to sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel	Max: 703 Min: 42	Max: 6.5 Min: 4.5

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 12

Soil Component Name: Ninigret

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 4	Max: 6 Min: 4.5
2	7 inches	16 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 4	Max: 6 Min: 4.5
3	16 inches	25 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 4	Max: 6 Min: 4.5
4	25 inches	64 inches	stratified very gravelly coarse sand to loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 703 Min: 42	Max: 6.5 Min: 4.5

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 13

Soil Component Name: Elmridge

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 4.5
2	5 inches	9 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 7.3 Min: 5.1
3	9 inches	18 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 7.3 Min: 5.1
4	18 inches	25 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 7.3 Min: 5.1
5	25 inches	64 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.42 Min: 0.01	Max: 7.8 Min: 5.6

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 14

Soil Component Name: Udorthents

Soil Surface Texture: loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 7.8 Min: 4.5
2	5 inches	21 inches	gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 703 Min: 0.01	Max: 7.8 Min: 4.5
3	21 inches	79 inches	very gravelly sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 703 Min: 0.01	Max: 7.8 Min: 4.5

Soil Map ID: 15

Soil Component Name: Rainbow

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6 Min: 4.5
2	5 inches	18 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6 Min: 4.5
3	18 inches	25 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6 Min: 4.5
4	25 inches	64 inches	gravelly fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 1.4 Min: 0.01	Max: 6 Min: 4.5

Soil Map ID: 16

Soil Component Name: Agawam

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 6.5 Min: 4.5
2	7 inches	14 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 6.5 Min: 4.5
3	14 inches	24 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 6.5 Min: 4.5
4	24 inches	59 inches	stratified very gravelly coarse sand to fine sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 703 Min: 141	Max: 6.5 Min: 4.5

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS40000230628	1/2 - 1 Mile WNW
2	USGS40000230536	1/2 - 1 Mile SW
3	USGS40000230499	1/2 - 1 Mile SSW
6	USGS40000230619	1/2 - 1 Mile East

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

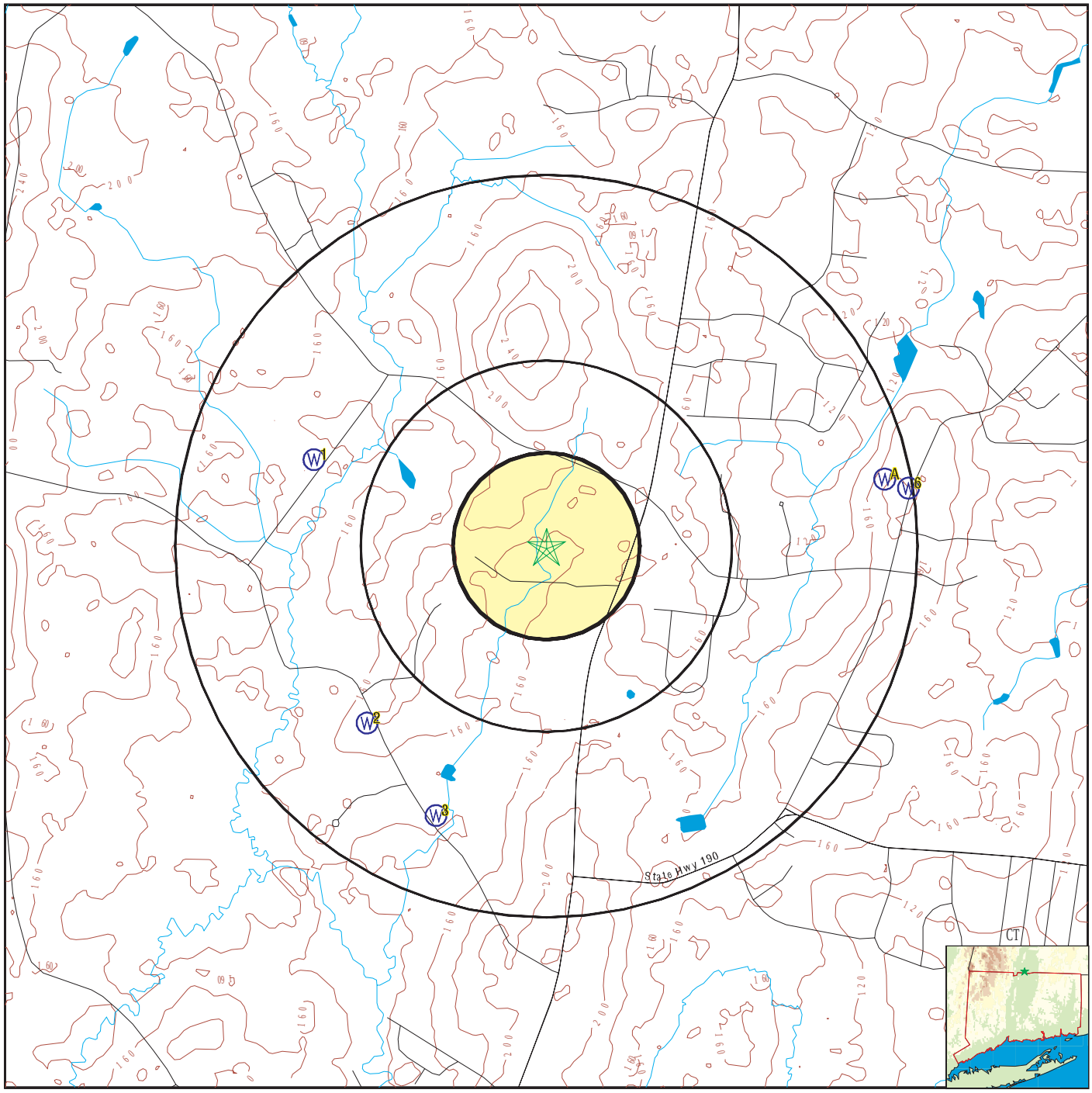
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A4	CTC000000000004	1/2 - 1 Mile ENE
A5	CTC000000000005	1/2 - 1 Mile East

PHYSICAL SETTING SOURCE MAP - 4235246.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- EPA Designated Sole Src. Aq.

SITE NAME: 1005 North Street	CLIENT: GeoQuest, Inc.
ADDRESS: 1005 North Street Suffield CT 06078	CONTACT: Beth
LAT/LONG: 42.0095 / 72.6471	INQUIRY #: 4235246.2s DATE: March 16, 2015 1:56 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
WNW
1/2 - 1 Mile
Lower

FED USGS **USGS40000230628**

Org. Identifier:	USGS-CT		
Formal name:	USGS Connecticut Water Science Center		
Monloc Identifier:	USGS-420046072393501		
Monloc name:	CT-SU 216		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01080205	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	42.0128736
Longitude:	-72.6592575	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	140.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Early Mesozoic basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1960	Welldepth:	238
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1960-08-01	10.00	

2
SW
1/2 - 1 Mile
Higher

FED USGS **USGS40000230536**

Org. Identifier:	USGS-CT		
Formal name:	USGS Connecticut Water Science Center		
Monloc Identifier:	USGS-420009072392501		
Monloc name:	CT-SU 36		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01080205	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	42.0025961
Longitude:	-72.6564797	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	160.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Early Mesozoic basin aquifers		
Formation type:	Sedimentary Bedrock		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	208
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

3
SSW **FED USGS** **USGS40000230499**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-CT		
Formal name:	USGS Connecticut Water Science Center		
Monloc Identifier:	USGS-415956072391201		
Monloc name:	CT-SU 66		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01080205	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.998985
Longitude:	-72.6528684	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	130.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Early Mesozoic basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1956	Welldepth:	101
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 2

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1956-02-24					
Note: The site was flowing, but the head could not be measured without additional equipment.					
1956-02-24					
Note: The site was flowing, but the head could not be measured without additional equipment.					

A4
ENE **CT WELLS** **CTC000000000004**
1/2 - 1 Mile
Higher

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

CT Community Well

Well ID:	4	Well Name:	Mapleton Ave Well 2
Supply System ID:	47301	Supply System Name:	CTWC, NORTHERN REG, WESTERN SYS
Source Status:	Active	Type:	Drilled
Groundwater Aquifer Type:	Bedrock	GIS Date/Method:	1984 Tablet Digitize
Depth:	238 Feet	Depth to Bedrock:	0 Feet
Well Diameter:	8	Casing Diameter:	0
Pump Capacity:	235	Safe Yield:	.07

A5
East
1/2 - 1 Mile
Higher

CT WELLS **CTC000000000005**

CT Community Well

Well ID:	5	Well Name:	Mapleton Ave Well 1
Supply System ID:	47301	Supply System Name:	CTWC, NORTHERN REG, WESTERN SYS
Source Status:	Active	Type:	Drilled
Groundwater Aquifer Type:	Bedrock	GIS Date/Method:	1984 Tablet Digitize
Depth:	228 Feet	Depth to Bedrock:	0 Feet
Well Diameter:	8	Casing Diameter:	0
Pump Capacity:	167	Safe Yield:	.07

6
East
1/2 - 1 Mile
Higher

FED USGS **USGS40000230619**

Org. Identifier:	USGS-CT		
Formal name:	USGS Connecticut Water Science Center		
Monloc Identifier:	USGS-420042072374301		
Monloc name:	CT-SU 49		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01080205	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	42.0117626
Longitude:	-72.6281454	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	185.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Early Mesozoic basin aquifers		
Formation type:	Sedimentary Bedrock		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	236
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1969-05-16	30.00	

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CT Radon

Radon Test Results

City	# Sites	< 4 Pci/L	4 < 10 Pci/L	10 < 20 Pci/L	20 < 50 Pci/L	50 < 100 Pci/L	> 100 Pci/L
Southington	27	12 (44.4)	11 (40.7)	4 (14.8)	0 (0)	0 (0)	0 (0)
Suffield	12	10 (83.3)	2 (16.7)	0 (0)	0 (0)	0 (0)	0 (0)
Unionville	5	5 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Weatogue	6	6 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
West Hartford	55	46 (83.6)	7 (12.7)	1 (1.8)	1 (1.8)	0 (0)	0 (0)
West Simsbury	13	12 (92.3)	1 (7.7)	0 (0)	0 (0)	0 (0)	0 (0)
West Suffield	5	5 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Wethersfield	33	27 (81.8)	5 (15.2)	1 (3)	0 (0)	0 (0)	0 (0)
Windsor	19	15 (78.9)	4 (21.1)	0 (0)	0 (0)	0 (0)	0 (0)
Windsor Locks	8	8 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Tariffville	2	1 (50)	0 (0)	0 (0)	1 (50)	0 (0)	0 (0)
East Hampton	110	83 (100)	19 (0)	8 (0)	0 (0)	0 (0)	0 (0)
Manchester	34	24 (70.6)	10 (29.4)	0 (0)	0 (0)	0 (0)	0 (0)
Avon	15	8 (53.3)	6 (50)	1 (6.7)	0 (0)	0 (0)	0 (0)
Berlin	11	7 (63.6)	1 (9.1)	4 (36.4)	0 (0)	0 (0)	0 (0)
Bloomfield	7	7 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Bristol	17	10 (58.8)	4 (23.5)	3 (17.6)	0 (0)	0 (0)	0 (0)
Broad Brook	3	1 (33.3)	2 (66.7)	0 (0)	0 (0)	0 (0)	0 (0)
Burlington	125	125 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Canton	8	6 (75)	2 (25)	0 (0)	0 (0)	0 (0)	0 (0)
Collinsville	1	0 (0)	1 (100)	0 (0)	0 (0)	0 (0)	0 (0)
East Berlin	6	4 (66.7)	2 (33.3)	0 (0)	0 (0)	0 (0)	0 (0)
East Granby	13	8 (61.5)	0 (0)	1 (7.7)	0 (0)	4 (30.8)	0 (0)
East Hartford	20	20 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
East Hartland	1	1 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
East Windsor	4	3 (75)	1 (25)	0 (0)	0 (0)	0 (0)	0 (0)
Enfield	2	2 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Farmington	34	31 (91.2)	1 (2.9)	0 (5.9)	2 (0)	0 (0)	0 (0)
Forestville	3	3 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Glastonbury	152	120 (78.9)	22 (14.5)	5 (3.3)	4 (2.6)	0 (0)	1 (.7)
Granby	10	8 (80)	2 (20)	0 (0)	0 (0)	0 (0)	0 (0)
Hartford	99	95 (96)	5 (4)	0 (0)	0 (0)	0 (0)	0 (0)
Kensington	7	6 (85.7)	1 (14.3)	0 (0)	0 (0)	0 (0)	0 (0)
Marion	1	1 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Marlborough	16	12 (75)	4 (25)	0 (0)	0 (0)	0 (0)	0 (0)
New Britain	20	13 (65)	5 (25)	2 (10)	0 (0)	0 (0)	0 (0)
Newington	45	26 (57.8)	12 (26.7)	6 (13.3)	1 (2.2)	0 (0)	0 (0)
North Canton	2	2 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Plainville	2	2 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Plantsville	3	3 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Rocky Hill	24	19 (79.2)	3 (12.5)	2 (8.3)	0 (0)	0 (0)	0 (0)
Simsbury	13	12 (92.3)	1 (7.7)	0 (0)	0 (0)	0 (0)	0 (0)
South Glastonbury	13	10 (76.9)	0 (0)	1 (7.7)	1 (7.7)	0 (0)	1 (7.7)
South Windsor	23	23 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for HARTFORD County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 06078

Number of sites tested: 5

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	Not Reported	Not Reported	Not Reported	Not Reported
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	1.020 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

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: Wetland Soils
Source: Department of Environmental Protection
Telephone: 860-871-4047

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

RADON

State Database: CT Radon
Source: Department of Public Health
Telephone: 860-509-7367
Radon Statistical Summary

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

APPENDIX E

PROPERTY CARD

Property Location: 1005 NORTH ST | MAP ID: 39/H 29/ 21/ / | Bldg Name: | State Use: 1012

Vision ID: 2959 | Account #39531 | Bldg #: 1 of 1 | Sec #: 1 of 1 | Card 1 of 2 | Print Date: 03/16/2015 14:15

CURRENT OWNER	TOPO.	UTILITIES	STRT./ROAD	LOCATION
SULLIVAN KEVIN S JR & KRIST A	1 Level	5 Well	1 Paved	3 Rural
1005 NORTH ST		6 Septic		
SUFFIELD, CT 06078				
Additional Owners:				

SUPPLEMENTAL DATA	
Other ID:	Condo Floor
Sub-div	Section B
Dev Map	490 FLAG *
I+E	Asking
Prec.	D Mailer
Census Tract 4771.01	
GIS ID: 2959	ASSOC PID#

CURRENT ASSESSMENT

Description	Code	Appraised Value	Assessed Value
RES LAND	1-1	81,700	57,190
RES EXCES	1-2	8,600	6,020
DWELLING	1-3	406,500	284,550
RES OUTBL	1-4	28,500	19,950
FARM LAND	6-1	355,100	13,950
	Total	880,400	381,660

6139
SUFFIELD, CT

VISION

RECORD OF OWNERSHIP	BK-VOL/PAGE	SALE DATE	q/u	v/i	SALE PRICE	V.C.
SULLIVAN KEVIN S JR & KRIST A	261/ 364	06/30/1995			255,000	
VAKALIS MARY DIANA	148/1008	08/17/1977			0	

PREVIOUS ASSESSMENTS (HISTORY)

Yr.	Code	Assessed Value	Yr.	Code	Assessed Value	Yr.	Code	Assessed Value
2013	1-1	57,190	2013	1-1	57,190	2012	1-1	67,830
2013	1-2	6,020	2013	1-2	6,020	2012	1-2	7,490
2013	1-3	284,550	2013	1-3	284,550	2012	1-3	281,330
2013	1-4	19,950	2013	1-4	19,950	2012	1-4	19,950
2013	6-1	13,950	2013	6-1	13,950	2012	6-1	11,440
	Total:	381,660		Total:	381,660		Total:	388,040

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

TAN
NH 11-2-2005 ASSUMED COMP
FGR HAS UBM
NO WH FUNC NEEDED
GRANITE COUNTERTOPS
OIL/UT
25X26 FUS=IN-LAW APT (3/1
SULLIVANS CONSTRUCTION SERVICE

APPRAISED VALUE SUMMARY

Appraised Bldg. Value (Card)	398,800
Appraised XF (B) Value (Bldg)	7,700
Appraised OB (L) Value (Bldg)	28,500
Appraised Land Value (Bldg)	90,300
Special Land Value	355,100
Total Appraised Parcel Value	880,400
Valuation Method:	C
Adjustment:	0
Net Total Appraised Parcel Value	880,400

BUILDING PERMIT RECORD

Permit ID	Issue Date	Type	Description	Amount	Insp. Date	% Comp.	Date Comp.	Comments
34539	02/04/2004	NC	New Construct	15,000		100		POOL HOUSE
31058	09/07/2001	NC	New Construct	13,000	11/02/2005	100		INGRN POOL
25062	10/01/1997	RS	Residential	0		100		FOP

VISIT/ CHANGE HISTORY

Date	Type	IS	ID	Cd.	Purpose/Result
06/13/2013			SB	15	Review
09/02/2008			SR	10	Measu/LtrSnt Letter Se
04/28/2008			SR	15	Review
04/02/2008			JG	01	Measured
04/02/2008			JG	03	Callback 2

LAND LINE VALUATION SECTION

B #	Use Code	Use Description	Zone	D	Front	Depth	Units		Unit Price	I. Factor	S.A.	Acre Disc	C. Factor	ST. Idx	Adj.	Notes- Adj	Special Pricing Spec Use		Spec Calc		S Adj Fact	Adj. Unit Price	Land Value
1	1012	SFR w/Apt	R90		54		1.00	AC	86,000.00	1.0000	1	1.0000	0.95	5	1.00	ACCESS					1.00		81,700
1	1012	SFR w/Apt	R90				1.07	AC	8,000.00	1.0000	0	1.0000	1.00		0.00						1.00		8,600
1	7130	Tillable D	R90				30.39	AC	8,000.00	1.0000	0	1.0000	1.00		0.00	490	490	600			1.00		243,100
1	7180	Pasture	R90				5.00	AC	8,000.00	1.0000	0	1.0000	1.00		0.00	490	490	90			1.00		40,000
1	7220	NonProWetl	R90				5.00	AC	8,000.00	1.0000	0	1.0000	0.20		0.00	490	490	40			1.00		8,000

Total Card Land Units: 42.46 AC | Parcel Total Land Area: 50.46 AC | Total Land Value: 381,400

Property Location: 1005 NORTH ST *MAP ID:* 39/H 29/ 21/ / *Bldg Name:* *State Use:* 1012

Vision ID: 2959 *Account* #39531 *Bldg #:* 1 of 1 *Sec #:* 1 *of* 1 *Card* 1 *of* 2 *Print Date:* 03/16/2015 14:15

CONSTRUCTION DETAIL

Element	Cd.	Ch.	Description
Style	03		Colonial
Model	01		Residential
Grade	06		Good
Stories	2		2 Stories
Occupancy	2		
Exterior Wall 1	11		Clapboard
Exterior Wall 2			
Roof Structure	07		Gambrel
Roof Cover	10		Wood Shingle
Interior Wall 1	05		Drywall
Interior Wall 2			
Interior Flr 1	12		Hardwood
Interior Flr 2			
Heat Fuel	02		Oil
Heat Type	05		Hot Water
AC Type	01		None
Total Bedrooms	05		5 Bedrooms
Total Bthrms	4		
Total Half Baths	1		
Total Xtra Fixtrs			
Total Rooms	12		12 Rooms
Bath Style	02		Average
Kitchen Style	03		Above Average

CONSTRUCTION DETAIL (CONTINUED)

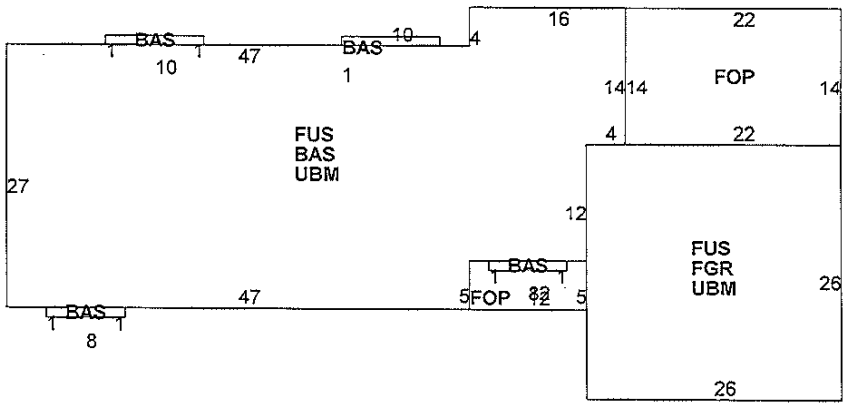
Element	Cd.	Ch.	Description

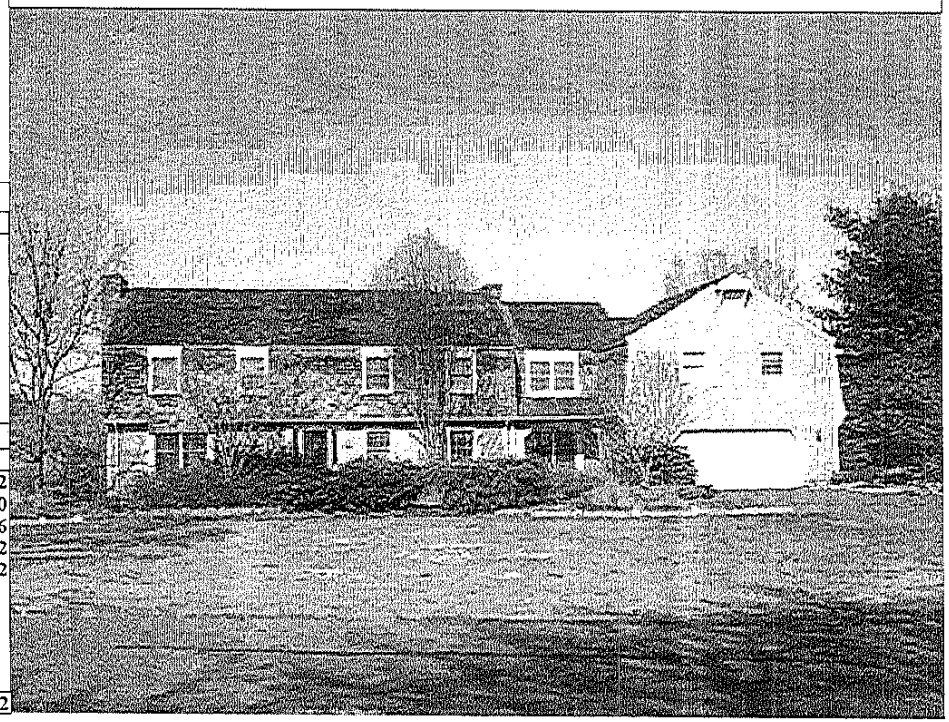
MIXED USE

Code	Description	Percentage
1012	SFR w/Apt	100

COST/MARKET VALUATION

Adj. Base Rate:	104.00
Replace Cost	498,472
AYB	1975
Dep Code	G
Remodel Rating	
Year Remodeled	
Dep %	20
Functional Obsinc	0
External Obsinc	0
Cost Trend Factor	1
Condition	
% Complete	
Overall % Cond	80
Apprais Val	398,800
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
SPL2	IG Pool - Vinyl			L	648	28.00	2001	C		G	75	13,600
BTH1	Bath House/Ca			L	990	20.00	2004	C		G	75	14,900
FPL3	Fireplace 2 Sto			B	2	3,300.00	1993		1		100	5,300
FPO	Fireplace Extra			B	3	1,000.00	1993		1		100	2,400
KIT1	Kitchen			B		3,500.00	1993		1		Null	0

BUILDING SUB-AREA SUMMARY SECTION

Code	Description	Living Area	Gross Area	Eff. Area	Unit Cost	Undeprec. Value
BAS	First Floor	1,673	1,673	1,673		173,992
FGR	Garage	0	676	270		28,080
FOP	Porch, Open	0	368	74		7,696
FUS	Upper Story, Finished	2,313	2,313	2,313		240,552
UBM	Basement, Unfinished	0	2,313	463		48,152
	Ttl. Gross Liv/Lease Area:	3,986	7,343	4,793		498,472

Property Location: 1005 NORTH ST | MAP ID: 39/H 29/ 21/ / | Bldg Name: | State Use: 1012

Vision ID: 2959 | Bldg #: 1 of 1 | Sec #: 1 of 1 | Card 2 of 2 | Print Date: 03/16/2015 14:15

CURRENT OWNER	TOPO.	UTILITIES	STRT./ROAD	LOCATION
SULLIVAN KEVIN S JR & KRIST A				
1005 NORTH ST				
SUFFIELD, CT 06078				
Additional Owners:				

SUPPLEMENTAL DATA

Other ID:

GIS ID: 2959 | ASSOC PID#

CURRENT ASSESSMENT

Description	Code	Appraised Value	Assessed Value
		Total	880,400	381,660

6139
SUFFIELD, CT

VISION

RECORD OF OWNERSHIP	BK-VOL/PAGE	SALE DATE	q/u	v/i	SALE PRICE	V.C.

PREVIOUS ASSESSMENTS (HISTORY)

Yr.	Code	Assessed Value	Yr.	Code	Assessed Value	Yr.	Code	Assessed Value
Total:			Total:			Total:		

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)	398,800
Appraised XF (B) Value (Bldg)	7,700
Appraised OB (L) Value (Bldg)	28,500
Appraised Land Value (Bldg)	90,300
Special Land Value	355,100
Total Appraised Parcel Value	880,400
Valuation Method:	C
Adjustment:	0
Net Total Appraised Parcel Value	880,400

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

LAND LINE VALUATION SECTION

B #	Use Code	Use Description	Zone	D	Front	Depth	Units		Unit Price	I. Factor	S.A.	Acre Disc	C. Factor	ST. Idx	Adj.	Notes- Adj	Special Pricing Spec Use	Special Pricing Spec Calc	S Adj Fact	Adj. Unit Price	Land Value
1	7170	Woodlands	R90				8.00	AC	8,000.00	1.0000	0	1.0000	1.00		0.00	490	490 130		1.00		64,000

Total Card Land Units: 8.00 AC | Parcel Total Land Area: 50.46 AC | Total Land Value: 64,000

APPENDIX F

AERIAL PHOTOGRAPHS

1005 North Street
1005 North Street
Suffield, CT 06078

Inquiry Number: 4235246.9
March 17, 2015

The EDR Aerial Photo Decade Package

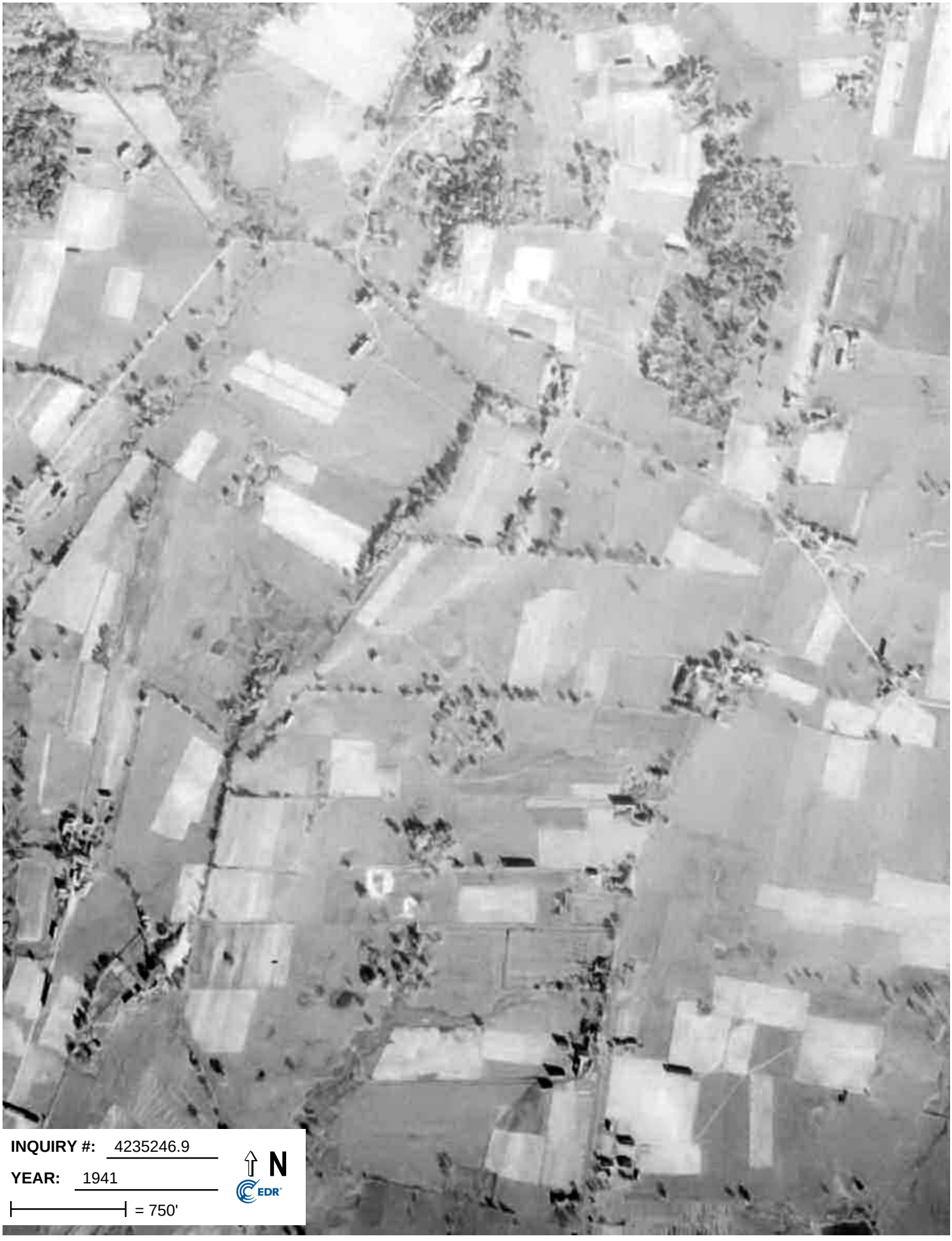
6 Armstrong Road, 4th Floor
Shelton, Connecticut 06484
Toll Free: 800.352.0050
www.edrnet.com

Date EDR Searched Historical Sources:
Aerial Photography March 17, 2015

Target Property:
1005 North Street
Suffield, CT 06078

Year	***Scale***	***Details***	***Source***
1934	Aerial Photograph. Scale: 1"=500'	Flight Date: May 08, 1934	USGS
1941	Aerial Photograph. Scale: 1"=750'	Flight Date: October 20, 1941	EDR
1957	Aerial Photograph. Scale: 1"=500'	Flight Date: April 15, 1957	EDR
1970	Aerial Photograph. Scale: 1"=500'	Flight Date: May 30, 1970	EDR
1977	Aerial Photograph. Scale: 1"=500'	Flight Date: May 01, 1977	USDA
1986	Aerial Photograph. Scale: 1"=500'	Flight Date: March 08, 1986	USGS
1992	Aerial Photograph. Scale: 1"=500'	DOQQ - acquisition dates: April 13, 1992	USGS/DOQQ
1995	Aerial Photograph. Scale: 1"=500'	Flight Date: April 20, 1995	EDR
2005	Aerial Photograph. Scale: 1"=500'	Flight Year: 2005	USDA/NAIP
2006	Aerial Photograph. Scale: 1"=500'	Flight Year: 2006	USDA/NAIP
2008	Aerial Photograph. Scale: 1"=500'	Flight Year: 2008	USDA/NAIP
2010	Aerial Photograph. Scale: 1"=500'	Flight Year: 2010	USDA/NAIP
2012	Aerial Photograph. Scale: 1"=500'	Flight Year: 2012	USDA/NAIP


INQUIRY #: 4235246.9
YEAR: 1934
= 500'
N
EDR


INQUIRY #: 4235246.9
YEAR: 1941
= 750'
N
EDR


INQUIRY #: 4235246.9
YEAR: 1957
= 500'
N
EDR


INQUIRY #: 4235246.9
YEAR: 1970
= 500'
N
EDR


INQUIRY #: 4235246.9
YEAR: 1977
= 500'
N
EDR


INQUIRY #: 4235246.9
YEAR: 1986
= 500'
N
EDR


INQUIRY #: 4235246.9
YEAR: 1992
= 500'
N
EDR

INQUIRY #: 4235246.9

YEAR: 1995

= 500'

N

EDR


INQUIRY #: 4235246.9
YEAR: 2005
= 500'
N
EDR


INQUIRY #: 4235246.9
YEAR: 2006
= 500'
N
EDR


INQUIRY #: 4235246.9
YEAR: 2008
= 500'
N
EDR


INQUIRY #: 4235246.9
YEAR: 2010
= 500'
N
EDR


INQUIRY #: 4235246.9
YEAR: 2012
= 500'
N
EDR

APPENDIX G

HISTORICAL TOPOGRAPHIC MAPS

1005 North Street
1005 North Street
Suffield, CT 06078

Inquiry Number: 4235246.4
March 16, 2015

EDR Historical Topographic Map Report

6 Armstrong Road, 4th Floor
Shelton, Connecticut 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topographic Map Report

Environmental Data Resources, Inc.s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Historical Topographic Map

N	TARGET QUAD NAME: SPRINGFIELD MAP YEAR: 1895 SERIES: 15 SCALE: 1:62500	SITE NAME: 1005 North Street ADDRESS: 1005 North Street Suffield, CT 06078 LAT/LONG: 42.0095 / -72.6471	CLIENT: GeoQuest, Inc. CONTACT: Beth INQUIRY#: 4235246.4 RESEARCH DATE: 03/16/2015

Historical Topographic Map

N	TARGET QUAD NAME: HOLYOKE MAP YEAR: 1901 SERIES: 30 SCALE: 1:125000	SITE NAME: 1005 North Street ADDRESS: 1005 North Street Suffield, CT 06078 LAT/LONG: 42.0095 / -72.6471	CLIENT: GeoQuest, Inc. CONTACT: Beth INQUIRY#: 4235246.4 RESEARCH DATE: 03/16/2015

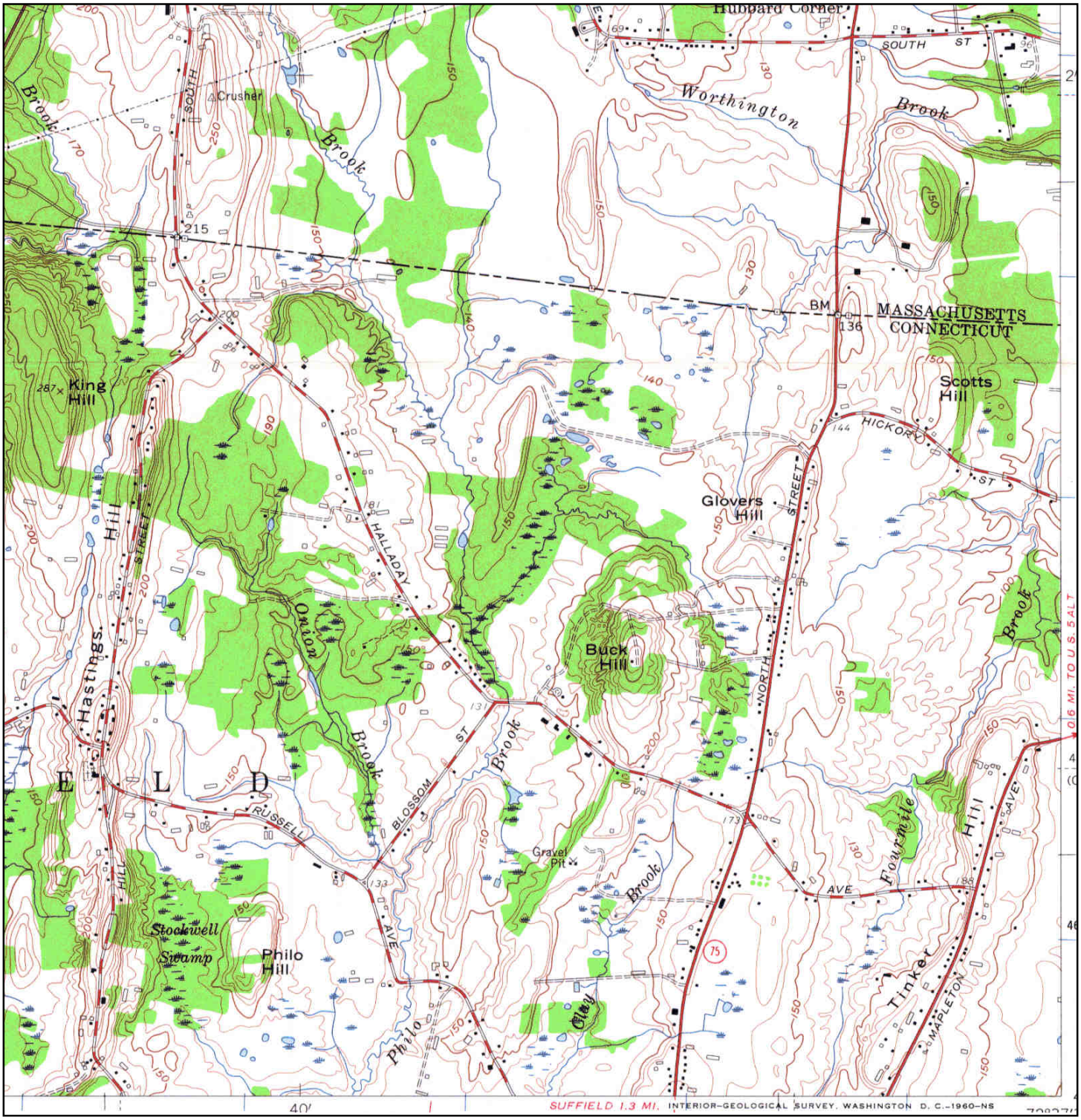
Historical Topographic Map

N	TARGET QUAD NAME: SPRINGFIELD MAP YEAR: 1919 SERIES: 15 SCALE: 1:62500	SITE NAME: 1005 North Street ADDRESS: 1005 North Street Suffield, CT 06078 LAT/LONG: 42.0095 / -72.6471	CLIENT: GeoQuest, Inc. CONTACT: Beth INQUIRY#: 4235246.4 RESEARCH DATE: 03/16/2015

Historical Topographic Map

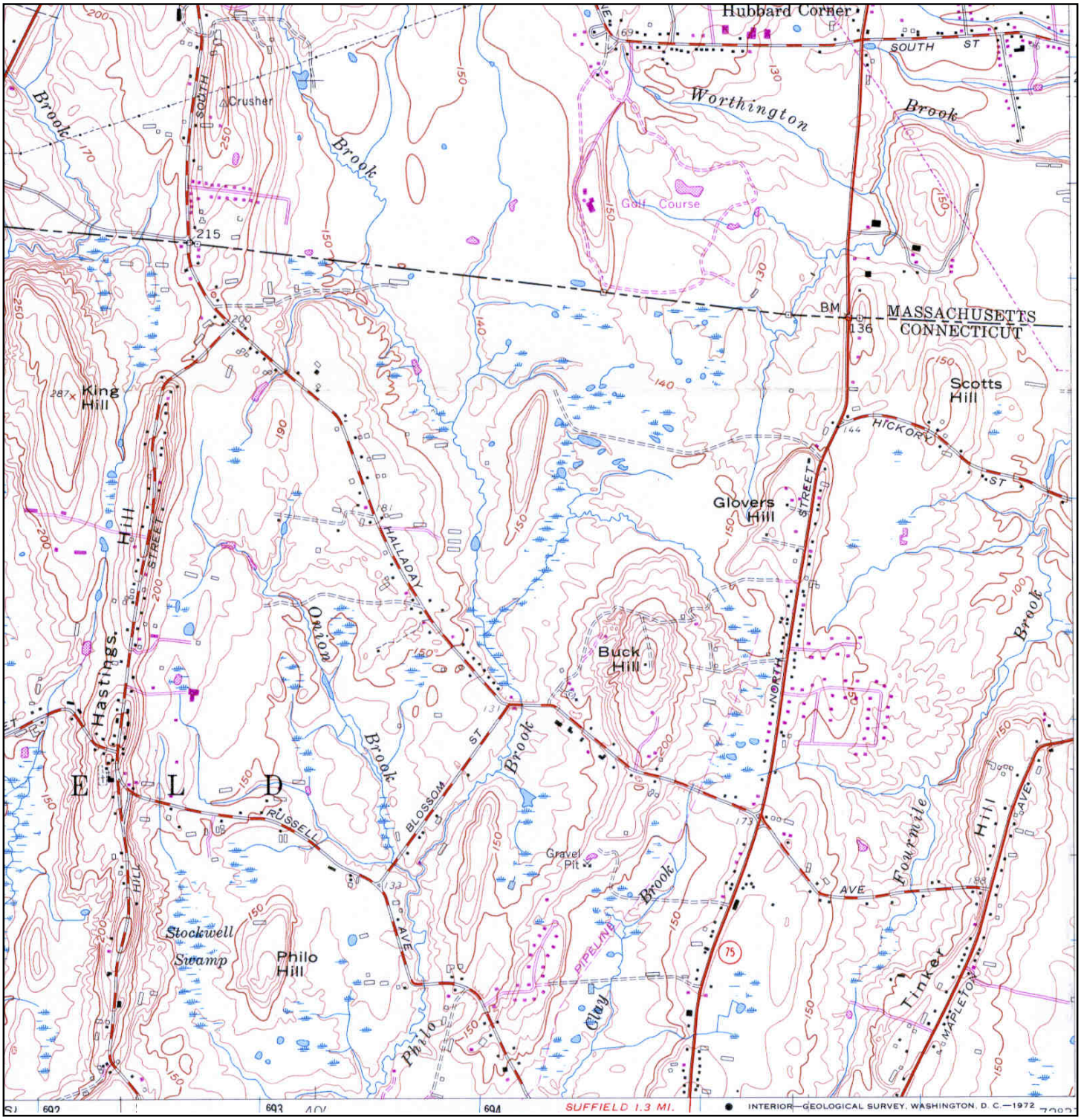
N	TARGET QUAD NAME: WEST SPRINGFIELD MAP YEAR: 1945 SERIES: 7.5 SCALE: 1:31680	SITE NAME: 1005 North Street ADDRESS: 1005 North Street Suffield, CT 06078 LAT/LONG: 42.0095 / -72.6471	CLIENT: GeoQuest, Inc. CONTACT: Beth INQUIRY#: 4235246.4 RESEARCH DATE: 03/16/2015

Historical Topographic Map



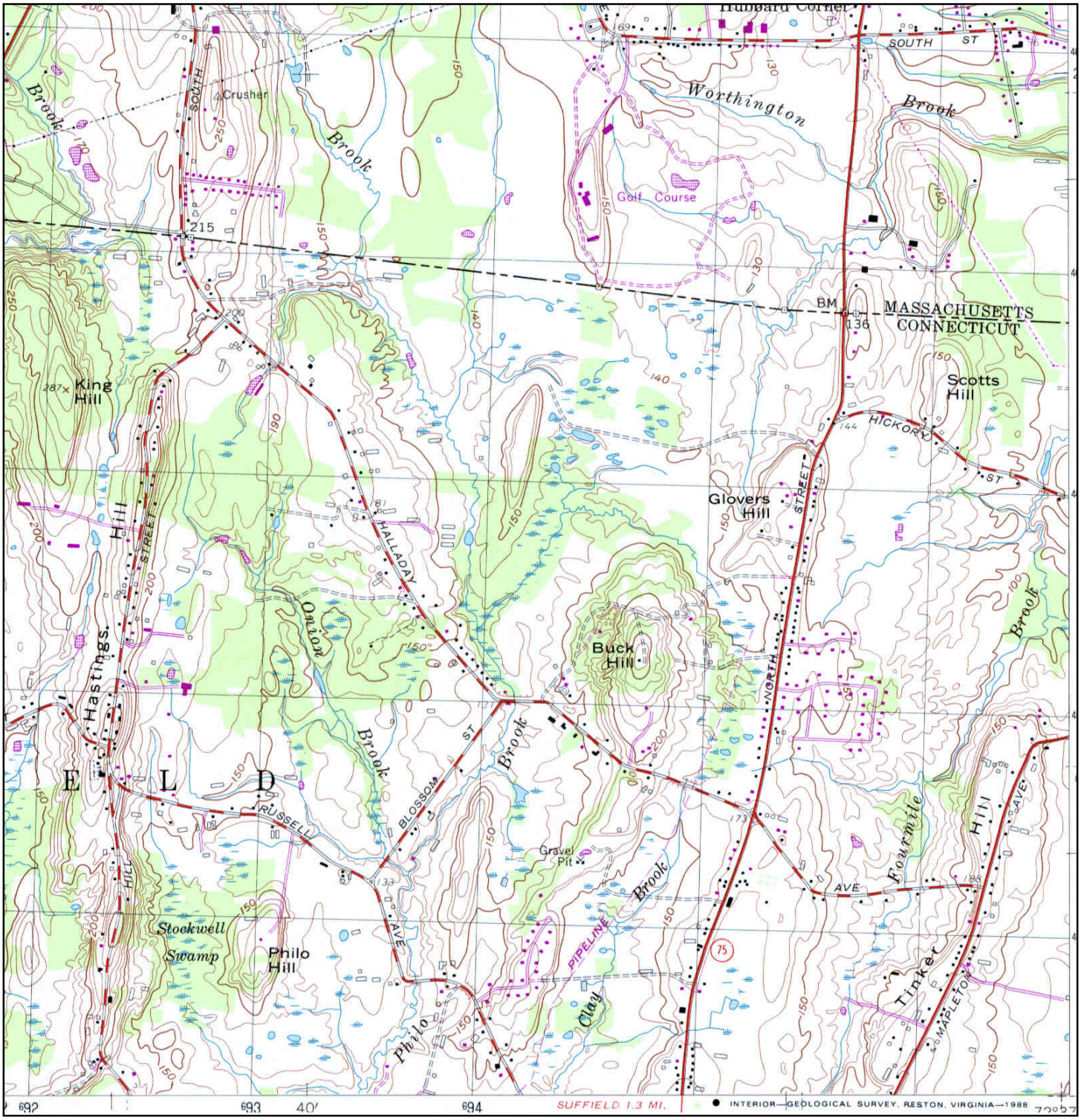
N	TARGET QUAD NAME: WEST SPRINGFIELD MAP YEAR: 1958 SERIES: 7.5 SCALE: 1:24000	SITE NAME: 1005 North Street ADDRESS: 1005 North Street Suffield, CT 06078 LAT/LONG: 42.0095 / -72.6471	CLIENT: GeoQuest, Inc. CONTACT: Beth INQUIRY#: 4235246.4 RESEARCH DATE: 03/16/2015

Historical Topographic Map



N	**TARGET QUAD** NAME: WEST SPRINGFIELD MAP YEAR: 1970 PHOTOREVISED FROM :1958 SERIES: 7.5 SCALE: 1:24000	SITE NAME: 1005 North Street ADDRESS: 1005 North Street Suffield, CT 06078 LAT/LONG: 42.0095 / -72.6471	CLIENT: GeoQuest, Inc. CONTACT: Beth INQUIRY#: 4235246.4 RESEARCH DATE: 03/16/2015

Historical Topographic Map



N	TARGET QUAD NAME: WEST SPRINGFIELD MAP YEAR: 1979 PHOTOREVISED FROM :1958 SERIES: 7.5 SCALE: 1:24000	SITE NAME: 1005 North Street ADDRESS: 1005 North Street Suffield, CT 06078 LAT/LONG: 42.0095 / -72.6471	CLIENT: GeoQuest, Inc. CONTACT: Beth INQUIRY#: 4235246.4 RESEARCH DATE: 03/16/2015

HIGHLAND SOILS LLC

WETLAND REPORT

CANIS MAJOR SOLAR

1005 NORTH STREET

SUFFIELD, CONNECTICUT

PREPARED FOR

LODESTAR ENERGY, LLC

BY

JOHN P. IANNI
PROFESSIONAL SOIL SCIENTIST

MAY 13, 2015

P.O. Box 337, Storrs, Connecticut 06268 • (860) 742-5868

INTRODUCTION

A solar farm is proposed on the rear portion of land located at 1005 North Street, Suffield, CT. The land is west of North Street and south of Halladay Avenue West. The property is within a large area dominated by agricultural uses, forest and single-family detached homes. Both grass land and actively tilled agricultural lands are prevalent in the surrounding area.

The property is located in the Stoney Brook Watershed. Clay Brook, a perennial watercourse, flows through the site in a north to south direction. Clay Brook is a tributary to Stoney Brook, which discharges to the Connecticut River south and east of the site.

The wetlands within the project area and along the proposed access drive were field delineated in December 2014. The wetlands were field delineated in accordance with the standards of the National Cooperative Soil Survey and the definition of wetlands as found in the Connecticut General Statutes, Chapter 440, Section 22A-38. The prepared plans have been reviewed and the representation of the field delineated wetlands is substantially correct.

EXISTING CONDITIONS

The site, as described, is the rear portion of land at 1005 North Street. An existing access drive is located along the southern property line and extends to the rear or western part of the site. The site contains open fields (formerly used for the production of nursery stock), woodlands and an abandoned gravel pit. Regulated wetlands were identified in parts of the gravel pit, woodlands and open fields.

ACCESS DRIVE

The existing access driveway is well established and parallels the southern property line. The access drive contains a hard sub-base and an existing culvert was located where the driveway crosses Clay Brook. The driveway traverses a large open field to the north that is dominated by perennial grasses such as Rye grass and annual weed species including Goldenrod. The fields are occasionally mowed and regrowth of woody species are suppressed by the mowing. Portions of the field have been and are currently used for the cultivation of ornamental shrubs and trees. Mature hardwoods including, but not limited to, Pin oak, White oak and Red maple occupy the area between the driveway and the southerly property line. In addition, the shrub layer includes saplings of the aforementioned species as well as the invasive Multiflora rose, and the ever-present Honeysuckle.

The existing access drive crosses Clay Brook and a partially collapsed cross culvert was noted at the crossing. Clay Brook crosses a large open field northerly of the access drive and the water course flows within a low-bank channel. No signs of erosion were noted along this section of Clay Brook. South of the driveway and off property, Clay Brook flows within a well-defined channel that appears to have been partially altered by human activity. The offsite portion of Clay Brook flows through a wooded area just south of the site.

A small island of wooded vegetation was noted along the driveway. This wooded area mainly contains Red maple trees and the understory is dominated by Honeysuckle. The access drive crosses an existing gas line as it enters the area of the proposed solar farm.

GRAVEL PIT

A former gravel pit was noted in the northwestern quadrant of the site. The pit has not been active for many years and some of the vegetation in the disturbance area is estimated to be over 50 years old. The pit consists of an excavation into a ridge of sand and gravel. The excavation has left an open face of gravel along the western property line that can range up to 30 feet from top to bottom. The excavation exposed the seasonal water table and a portion of the gravel pit is now classified as regulated wetlands. A distinct topographic break occurs in the gravel pit and the limits of wetlands generally follow this sharp break. The surface topography is undulating and numerous mounds and piles of over-burden are scattered in the area.

The gravel pit does not extend along the entire western property line. A shallow man-made pond has formed in the southern third of the gravel pit. Numerous areas of ponded surface water were noted in the gravel pit in the spring of 2015. The outlet for surface water from the gravel pit and shallow pond is via a well-defined man-made swale that flows to the southeast. The embankments along the swale are five or more feet tall and contain spoils from the construction of the surface outlet. An existing crossing of the outlet swale is present.

The gravel pit has not been active for some time and the vegetation within the disturbed areas contains some large trees that are dominated by Eastern cottonwood and Aspen. The understory contains a mix of Multiflora rose, Honeysuckle and brambles of Raspberry and Blackberry. Asiatic bittersweet is prevalent in the area.

The man-made pond within the gravel pit as well as areas south of the pit was found to be active breeding areas for Wood Frogs and provide Vernal Pool habitat.

WOODED AREA

Easterly and adjacent to the gravel pit is a wooded area containing mainly moderately well drained soils. This area is separated from the gravel pit by an old woods road. Large mounds and piles of over-burden were stockpiled along the road while the gravel pit was active. Some minor grading and soil disturbances were noted in the woods but most of the disturbances were concentrated near the woods road. This wooded area contains an even-aged stand of mixed hardwoods that include Sugar maple and Red maple with Cottonwood, Pin oak and Aspen also present. The understory contains saplings of the aforementioned tree species as well as Multiflora rose and Honeysuckle.

This area of the property contains moderately well drained soils overlying a compact till. A seasonally high water table was noted in the area and wetlands were identified at the transition between the wooded and the open field along the gas line.

OPEN FIELD/SOUTHWESTERN WOODS

Of the area proposed for the solar panels, approximately half of the site consists of an open field formerly used for the production of nursery stock. The field is occasionally mowed and contains a mix of grasses and annual weed species. The growth is that of an abandoned agricultural field. A few individual Shagbark hickory trees are scattered in the field, as is a lone Pin oak. As part of the agricultural use, the top two feet of the soils were mixed during land clearing and production of the nursery stock.

A small man-made pond was created in the eastern limits of the field. The spoils from the pond are still visible to the north of its present location. The pond was used for irrigation and currently has Cat-tails growing in it; woody species such as Alder are beginning to colonize the embankments.

The pond is shallow along its edges but is deep enough to support a fish population. The pond is not habitat for the obligate amphibian species and does not support vernal pool habitat.

A small wooded area is present between the pond and the gas line to the east. This upland area contains mainly hardwoods dominated by Red maple with a scattering of White pine. A distinct edge of shrubs forms a transition from the woods to the open grassland to the east.

To the south of the pond and across the existing access road, lies a wooded wetland that is mainly off the property. The northerly limits of the wetland soils of this wetland fall onto the property. This wooded wetland is isolated from other wetland areas and ponds

water in the spring. This wetland area contains a Vernal Pool and Wood frog breeding was observed in the spring of 2015.

To the west of the previously described area is a wetland that encompasses both a wooded area and a wet meadow. The wetland soils extend northward from the woods into the open areas along the south edges of the open field. The vegetation in the field areas does not differ much from the upland areas. Soft rush and Eastern Bur-reed were noted in the wetland areas and are generally absent in the uplands. This wooded area contains shallow ponded water and is characterized by Red maple trees growing on hummocks and Buttonwood in areas of open water. Eastern Bur-weed is the dominant ground cover plant. Cat-tails are prevalent and the boundary of the wetland is distinct with upland tree species dominated by Oaks growing along the edges. There is no surface outlet to the ponded area.

This wetland area provides Vernal Pool Habitat and Wood Frogs were actively breeding in the spring of 2015.

WETLAND FUNCTIONS

The functions and values of the wetlands will be described in a qualitative manner modeled after the method used by the US Army Corps of Engineers. The information is from *The Highway Methodology Workbook Supplement*. This publication uses a descriptive approach to assessing functional values, versus the CT D.E.E.P. approach, which uses a quantitative or numerical approach to ranking wetland functions and values.

Ground Water Recharge/Discharge - This function considers the potential for a wetland to serve as a ground water recharge and/or discharge area. It refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

> The site contains soils underlain by sands and gravel as well as glacial till and glacial lake clays. Both recharge and discharge functions were noted on site. In general, the recharge areas are associated with remaining deposits of sand and gravel in the upland areas along western property line. The floor of the gravel pit was excavated into glacial till and the water table and little recharge occur. The wetlands on the site are generally discharge systems that are underlain by relatively slow permeable materials. Active seepage zones along her wetland boundaries are evidence of the exfiltration of shallow ground water.

Floodflow Alteration - This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of flood waters. It adds to the stability of the wetland

ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas.

The wetland areas associated with Clay Brook have potential for this function. However, Clay Brook and its wetlands are not part of the site (with the exception of the proposed upgrade to the existing crossing of the Brook). The next largest area of wetlands is associated with the former gravel pit. This area has some potential for this function, however, the watershed of the gravel pit is very small and there is an active outlet to the system that generally controls water levels in the wetland. The remaining wetlands in the southern open field drain into a wooded wetland with no surface outlet. The watershed is very limited for this wetland and the overall functionality for flood storage is limited. This does not appear to be a primary function of the on-site wetlands.

Fish and Shellfish Habitat - This function considers the effectiveness of seasonal or permanent watercourses associated with wetland in question for fish and shellfish habitat.

The wooded wetlands and wetland areas in the open field do not support fin-fish or shellfish. The small man-made pond does support a small fish population. This is not a primary function of the wetlands.

Sediment/Toxicant/Pathogen Retention - This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants or pathogens in runoff water from surrounding uplands, or upstream eroding wetland areas.

The on-site wetlands have potential for this function. Although the gravel pit has potential for retention; it has a very limited watershed and has an active water course outlet. The limited watershed and outlet reduce the effectiveness for this function. The other wetlands have potential due to the lack of defined outlets. The man-made pond and wetlands associated with the open fields are effective traps for sediments. This appears to be a primary function of some of the on-site wetlands.

Nutrient Removal/Retention/Transformation - This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands, and the ability of the wetlands to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or surface waters such as ponds, lakes, streams, rivers or estuaries.

As with the previous function, the ability of the wetlands to retain nutrients is present, however, the ability of the wetlands to transform nutrients is limited by the density and diversity of vegetation. The wetlands in the southern portion of the site have retention capabilities and the vegetation appears sufficient to remove or transform nutrients. The gravel pit and its associated wetlands lack the density and diversity of vegetation to effectively remove or transform the nutrients. This is a primary function for parts of the wetlands.

Production Export - This function relates to the effectiveness of the wetland to produce food or usable products for human, or other living organisms.

Productivity of the wetlands for food or nutrient export is limited. There appears to be little export of organic matter from the gravel pit wetland system and this system does not have a high degree of berry-producing shrubs or nectar-producing plants. The wetlands associated with the open field are limited in size, while they have a higher potential for food sources, the wetlands are within closed systems that do not outlet to other wetlands.

Sediment/Shoreline Stabilization - This function evaluates the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Other than the defined outlet from the gravel pit, the wetlands are not associated with water courses or water bodies. This is not a primary function.

Wildlife Habitat - This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and wetland edge. Both resident and/or migrating species are considered.

The wetlands on the site, viewed as individual components, do not indicate many of the qualifiers for this function. However, when viewed in the context of the surrounding area, the wetlands do add to the overall habitat value of the area. The wetlands provide small areas of open water, although shallow, to an environment that generally is lacking in expanses of open water. The area lacks deeper water habitat such as a deep water marsh. The wetlands do support Vernal Pool habitat and Wood frog breeding was noted in three of the wetland areas. The site does provide edge habitat but the presence of invasive species along the edges limits the potential. The on-site wetlands have some potential for this function and add to the overall diversity of wildlife habitat in the area. This is not a primary function of the wetlands.

Recreation – (Consumptive and Non-Consumptive) This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting and other active or passive recreational activities.

> The on-site wetlands are not suited for water based recreation and this does not appear to be a primary value.

Educational/Scientific Value - This function considers the suitability of the wetland as an "outdoor classroom" or for scientific research.

> The wetlands and surrounding uplands have been impacted by human activity over many years. They lack original character and are examples of wetlands that have been indirectly impacted by human activities, which result in alterations to the hydrology and species composition. The wetlands are not suitable for this value due to historic disturbances.

Uniqueness/Heritage - This value considers the effectiveness of the wetland for special values such as archeological sites, rare and endangered species habitat or uniqueness for its location.

> Similar to the previous function, the historic agricultural disturbances to the land have lessened the potential for this function. The wetlands are fairly typical for the area.

Visual Qualities/Aesthetics - This value relates to the visual qualities of the wetlands.

> The site has limited view sheds and the wetlands are embedded within upland areas and are not very distinguishable from the uplands. This is not a primary value.

Endangered Species Habitat – This value considers the suitability of the wetland to support threatened or endangered species.

> A review of the Natural Diversity Data Base indicates potential for this site for a couple of species. A Biologist has been retained and will report under separate cover.

WETLAND IMPACTS

The project has been designed to minimize direct impacts to wetlands. Direct wetland impacts are proposed in two areas and are associated with the replacement of existing cross culverts. The existing access drive crosses Clay Brook approximately 1,100 feet from North Street. The existing corrugated plastic pipe has been partially collapsed and is proposed to be replaced with 32 feet of new pipe. The replacement of the cross culvert will require 1,675 square feet of wetland disturbance.

In addition to the replacement of the cross culvert, the existing access drive will be widened to 12 feet. In an effort to reduce wetland impacts along the length of the driveway, low retaining walls are proposed. These 18-inch high retaining walls would greatly reduce wetland impacts from the side slopes of the driveway. Four hundred feet of retaining wall is proposed on the north side of the drive and 393 feet is proposed for the south side of the driveway.

The second direct wetland impact also involves the replacement of an existing cross culvert. The solar farm is split into two areas of panels. An existing man-made drainage way separates the two areas. As proposed, the existing historic crossing will be widened and a new culvert will be installed. The direct wetland impact in this area will be 770 square feet.

While 2,445 square feet of wetlands will be lost due to the replacement of the two culverts, there will be no decrease in wetland functions. Both existing cross culverts function to convey surface water under existing crossings. These functions will not change and some positive improvements will result from the addition of rip rap as inlet and outlet protection at the culverts.

As designed, the project minimizes both direct and indirect wetland impacts. The indirect wetland impacts are being minimized by maintaining a 50-foot separating distance to most of the site grading and clearing activities.

VERNAL POOL IMPACTS

VERNAL POOL #1

Wood Frogs were noted breeding in five wetland areas. One of the wetland areas (Wetland Flags #174 to #179) is along the southern border of the site and the actual breeding pool is located offsite (VP #1). Wood Frogs were actively calling from this pool in the early spring and it is assumed to be a viable breeding area. A visual survey from the property line indicates less than 25 egg masses in the pool. The pool, although in a

small wooded area, is surrounded by open field habitat. It is estimated that 65% of the Vernal Pool Envelope (area within 100 feet of the pool's edge) is currently maintained as open field. Over 50% of the critical terrestrial habitat (100 to 750 feet from the pool) is developed.

According to the methodology contained in: *Calhoun, A. J. K. and M. W. Klemens. 2002. Best development practices: Conserving pool-breeding amphibians in residential and commercial developments in the northeastern United States. MCA Technical Paper No. 5, Metropolitan Conservation Alliance, Wildlife Conservation Society, Bronx, New York.*

As noted in the document:

> **"CAUTION** *This rating system is designed strictly as a planning tool, not as an official assessment tool.* It will enable you to determine the relative ecological value of pools within your community. A Tier I rating –which will most likely apply only to a minority of sites –denotes exemplary pools: Management Recommendations should be applied at these sites. For pools rated as Tier II, proceed with care; you need more information! Tier II pools will probably constitute the majority of your vernal pool resources; Management Recommendations should be applied at these sites to the maximum extent practicable. Tier II pools might also be likely candidates for restoration efforts (eg., reforestation of the critical terrestrial habitat)."

This pool has a Tier III rating due to the low numbers of egg masses (<25), the presence of a single species (Wood Frog) and the existing agricultural development within the vernal pool envelope and critical terrestrial habitat. The pool currently lacks both cover within the vernal pool envelope and critical terrestrial habitat.

Activities that are proposed in proximity to the offsite pool include upgrades to the existing access roads and minor clearing of existing vegetation on the northern fringe of the wetland. No activity is proposed within the pool. The small wooded area to the north of the offsite pool will have selective clearing of tree species and replanting of the shrub layer. Although the access road will be developed just north of the resource, the amount of anticipated vehicle trips is well below the threshold for impacts to migrating amphibians. The proposed activities should not result in significant loss of habitat value for this existing compromised pool.

VERNAL POOL #2

The second breeding pool is located in a small wooded area also along the southern property line (Wetland Flags #181 to #190). This pool is also in a small wooded area with open field to the north, south and west and contiguous woodland offsite to the southwest. This pool also has a Tier III rating due to the presence of a single amphibian species with less than 25 egg masses and agricultural disturbances that occupy 50% of the vernal pool envelope. Additionally, the majority of the critical terrestrial habitat is currently developed as agricultural fields.

The few individual tree species north of the pool between the wetland and the access road are proposed to be removed. A note has been added to the plans detailing the removal of the trees and the replanting of a naturalized shrub layer. Although clearing will occur within 100 feet of the north side of the breeding pool, the preservation of the shrub layer will limit the indirect impacts. The remaining activity within proximity to the pool is occurring in open field areas that do not support upland habitat for the Wood Frogs. No significant impacts are anticipated from the proposed activity.

VERNAL POOLS #3, #4 and #5

The third breeding area is a complex of three breeding pools within one mapped wetland. Pool #3 is located in the vicinity of Wetland Flags #20 to #25 and Pool #4 is in the vicinity of flags #26 to #34. Pool #5 is the man-made pond located northwest of wetland flags #8-10.

All three of the pools are located in the same wetland that was part of the former gravel pit. All three pools developed in man-made depressions that are on the edges of cleared agricultural fields. The area to the south of pools #3 and #4 contains mainly shrub species of Honeysuckle and Multiflora rose. A few Cottonwood trees, over-grown with Asiatic bittersweet, are scattered along the transitions from wooded areas to open field.

All three pools are rated as Tier III pools with a single amphibian species (Wood Frog) and low egg mass counts (<25). Additionally, the vernal pool envelopes are not currently wooded but contain mainly invasive shrub growth. The critical terrestrial habitat for these pools is generally located to the west of the property. The eastern half of the critical terrestrial habitat is approximately 40% agricultural field.

Minor clearing is proposed within 100 feet of the two southern pools (#3 and #4). The clearing is limited to a few Cottonwood trees choked with Asiatic Bittersweet and the shrub layer of Honeysuckle and Multiflora rose. The removal of the few trees and the

understory of invasive species is not anticipated to be a significant impact on the vernal pool habitats.

Vernal Pool #5 is the man-made shallow pond within the former gravel pit. This Tier III rated pool has had approximately 40% of its envelope, and 40% of the critical terrestrial habitat previously converted to agricultural fields.

Additional clearing of wooded areas is proposed to the north and east of Pool #5. The clearing and grading of the upland woods in the northeasterly portion of the site diminishes, but does not eliminate, upland habitat for the Wood Frog. Wooded areas will still exist to the south, north and west of the pool and connections to upland habitat will remain.

CONCLUSION

The wetlands on the site are limited to a former gravel pit that was excavated into the water table. The second wetland is associated with small wet meadow areas in agriculturally disturbed fields. Three Vernal Pool habitat areas were noted in the wetlands.

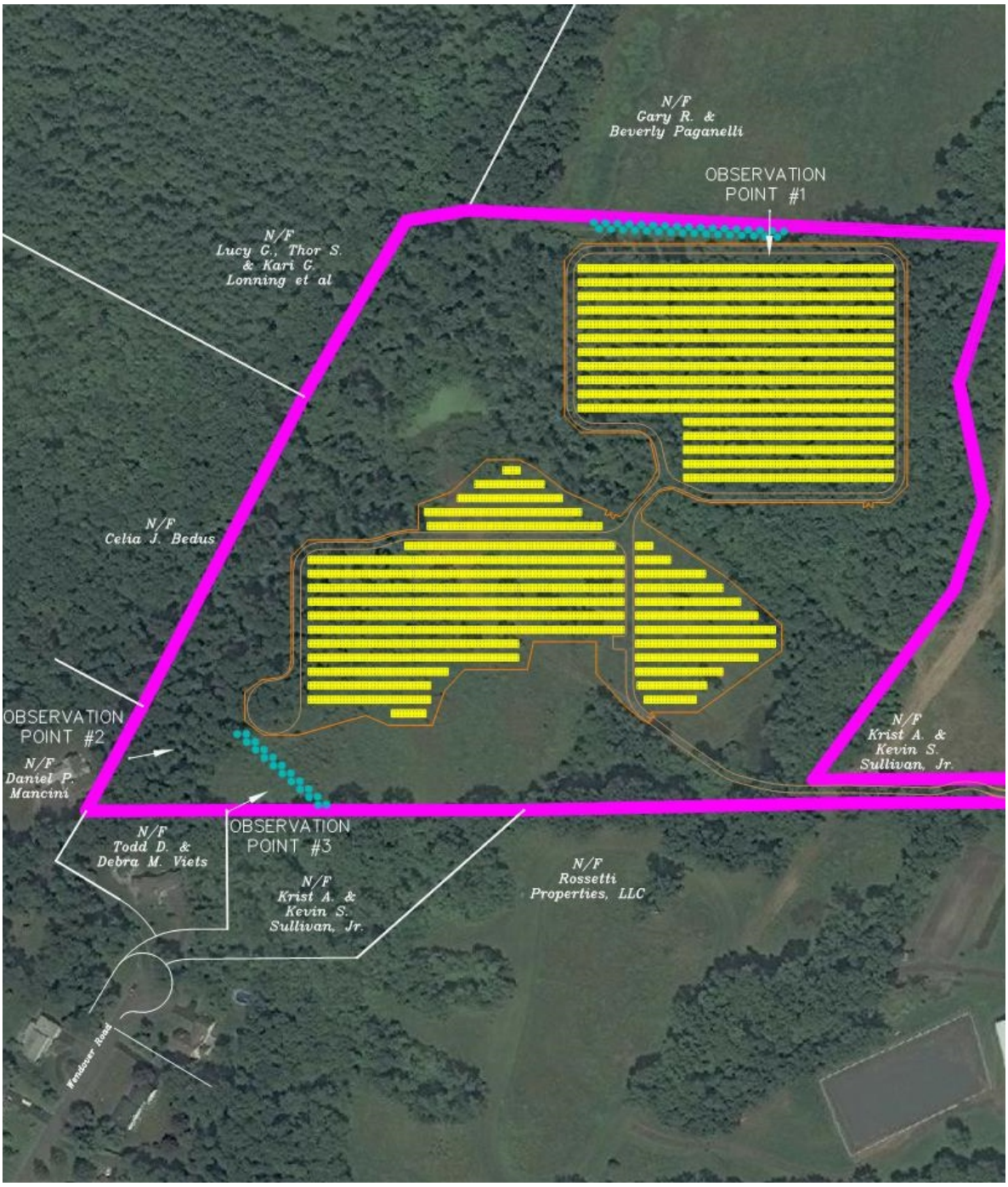
The majority of the site is underlain by glacial till and glacial lake clays; a veneer of gravel is found in association with a glacial ridge along the western property line.

The vegetation in the wetlands and on the site has been influenced by human activity. The soils on the site are generally silt loam in texture and have a seasonally high water table.

The wetlands are generally ground water discharge wetlands that have seepage zones along the edges. The wetlands have limited potential for the known functions and values. The wetland functions and values have been influenced by the agricultural uses of the property and the gravel pit. The influence that agriculture has had on the composition of species is quite apparent and is expressed by the spread of invasive species such as Autumn olive, Multiflora rose and Honeysuckle.

Direct wetland impacts have been minimized by careful consideration of the site topography and natural resources and the use of Best Management Practices. The direct impacts are limited to the replacement of existing cross culverts. Indirect impacts have been minimized by maintaining a separating distance between site activities and the wetlands and by use of appropriate erosion controls and other management practices.

EXHIBIT VII - VISUAL SIMULATIONS
CANIS MAJOR SOLAR



Key Map of Observation Points

OBSERVATION POINT #1 – Looking South from Paganelli Property

Existing 3/23/15

Proposed Photo Simulation

OBSERVATION POINT #2 – Looking East-Northeast from Mancini Property

Existing 3/23/15

Proposed Photo Simulation

OBSERVATION POINT #3 – Looking Northeast from Viets Property

Existing 3/23/15

Proposed Photo Simulation

Connecticut Department of
Energy & Environmental Protection
Bureau of Natural Resources
Wildlife Division

CPPU USE ONLY
App #:_____
Doc #:_____
Check #: No fee required
Program: Natural Diversity Database Endangered Species
Hardcopy _____ Electronic _____

Request for Natural Diversity Data Base (NDDB) State Listed Species Review

Please complete this form in accordance with the instructions (DEEP-INST-007) to ensure proper handling of your request.
There are no fees associated with NDDB Reviews.

Part I: Preliminary Screening & Request Type

Before submitting this request, you must review the most current Natural Diversity Data Base "State and Federal Listed Species and Significant Natural Communities Maps" found on the DEEP website. These maps are updated twice a year, usually in June and December.

Does your site, including all affected areas, fall in an NDDB Area according to the map instructions:

☒ Yes ☐ No **Enter the date** of the map reviewed for pre-screening: **December 2014**

This form is being submitted for a :

☒ *New* NDDB request ☐ *Renewal/Extension* of a NDDB Request, ***without*** *modifications and within* ***one year*** *of issued NDDB determination* (no attachments required) [*CPPU Use Only - NDDB-Listed Species Determination # 1736*]	☐ *New* **Safe Harbor Determination** (optional) must be associated with an application for a GP for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities ☐ *Renewal/Extension* of an existing Safe Harbor Determination ☐ With modifications ☐ Without modifications (no attachments required) [*CPPU Use Only - NDDB-Safe Harbor Determination # 1736*]
Enter NDDB Determination Number for Renewal/Extension:	Enter Safe Harbor Determination Number for Renewal/Extension:

Part II: Requester Information

If the requester is a corporation, limited liability company, limited partnership, limited liability partnership, or a statutory trust, it must be registered with the Secretary of State. If applicable, the name shall be stated **exactly as it is registered with the Secretary of State. Please note, for those entities registered with the Secretary of State, the registered name will be the name used by DEEP. This information can be accessed at the Secretary of the State's database CONCORD.* (www.concord-sots.ct.gov/CONCORD/index.jsp)

If the requester is an individual, provide the legal name (include suffix) in the following format: First Name; Middle Initial; Last Name; Suffix (Jr, Sr., II, III, etc.).

If there are any changes or corrections to your company/facility or individual mailing or billing address or contact information, please complete and submit the Request to Change company/Individual Information to the address indicated on the form.

1. Requester*

Company Name: **J.R. Russo & Associates,LLC**

Contact Name: **Timothy Coon**

Address: **1 Shoham Road**

City/Town: **East Windsor** State: **CT** Zip Code: **06088**

Business Phone: **860-623-0569** ext.

E-mail: **tcoon@jrrusso.com

**By providing this email address you are agreeing to receive official correspondence from the department, at this electronic address, concerning this request. Please remember to check your security settings to be sure you can receive emails from "ct.gov" addresses. Also, please notify the department if your e-mail address changes

a) Requester can best be described as:

☐ Individual ☐ Federal Agency ☐ State agency ☐ Municipality ☐ Tribal

☒ *business entity (* if a business entity complete i through iii):

i) Check type ☐ corporation ☒ limited liability company ☐ limited partnership
☐ limited liability partnership ☐ statutory trust ☐ Other:

ii) Provide Secretary of the State Business ID #: 0948628 This information can be accessed at the Secretary of the State's database (CONCORD). (www.concord-sots.ct.gov/CONCORD/index.jsp)

iii) ☐ Check here if your business is **NOT** registered with the Secretary of State's office.

b) Acting as (Affiliation), pick one:

☐ Property owner ☒ Consultant ☐ Engineer ☐ Facility owner ☐ Applicant

☐ Biologist ☐ Pesticide Applicator ☐ Other representative:

2. List Primary Contact to receive Natural Diversity Data Base correspondence and inquiries, if different from requester.

Company Name:

Contact Person: Title:

Mailing Address:

City/Town: State: Zip Code:

Business Phone: ext.

**E-mail:

Part III: Site Information

This request can only be completed for one site. A separate request must be filed for each additional site.

1. SITE NAME AND LOCATION

Site Name or Project Name: **Sullivan Farm**

Town(s): **Suffield**

Street Address or Location Description:
1005 North Street

Size in acres, or site dimensions: **26.7 acres**

Latitude and longitude of the center of the site in decimal degrees (e.g., 41.23456 -71.68574):

Latitude: **42.00912** Longitude: **-72.650759**

Method of coordinate determination (check one):

☐ GPS ☒ Photo interpolation using CTECO map viewer ☐ Other (specify):

2a. Describe the current land use and land cover of the site.

Portion of the site is in agriculture (hay crop). Remainder is wooded.

b. Check all that apply and enter the size in acres or % of area in the space after each checked category.

☐ Industrial/Commercial _____	☐ Residential _____	☒ Forest 51%
☒ Wetland 23%	☐ Field/grassland _____	☒ Agricultural 26%
☐ Water _____	☐ Utility Right-of-way _____	
☐ Transportation Right-of-way _____	☐ Other (specify): _____	

Part IV: Project Information

1. PROJECT TYPE:

Choose Project Type: Other , If other describe: **Solar PV Development**

2. Is the subject activity limited to the maintenance, repair, or improvement of an existing structure within the existing footprint? ☐ Yes ☒ No If yes, explain.

Part IV: Project Information (continued)

3. Give a detailed description of the activity which is the subject of this request and describe the methods and equipment that will be used. Include a description of steps that will be taken to minimize impacts to any known listed species.

   The Solar PV development will require clearing and grubbing of portions of the existing wooded area and grading to create a suitable gradual grade for the placement of PV modules. The work will include construction of access roads, layout and placement of foundation systems, racking, and solar PV panels, installation of utility pads and associated electrical equipment, installation of electrical conduit, conduit supports, electrical poles, and overhead wire, and security fencing. This work will be performed using skidders, excavators, dump trucks, crane operations, dozers, and pick-up trucks. The bottom of the security fence will be elevated approximately 6" above finish grade to allow for small animals enter and exit the site boundaries.

4. If this is a renewal or extension of an existing Safe Harbor request *with* modifications, explain what about the project has changed.

5. Provide a contact for questions about the project details if different from Part II primary contact.

   Name:

   Phone:

   E-mail:

Part V: Request Requirements and Associated Application Types

Check *one* box from either Group 1, Group 2 *or* Group 3, indicating the appropriate category for this request.

Group 1. If you check one of these boxes, complete Parts I – VII of this form and submit the required attachments A and B.

- ☐ Preliminary screening was negative but an NDDB review is still requested
- ☐ Request regards a municipally regulated or unregulated activity (no state permit/certificate needed)
- ☒ Request regards a preliminary site assessment or project feasibility study
- ☐ Request relates to land acquisition or protection
- ☐ Request is associated with a *renewal* of an existing permit, with no modifications

Group 2. If you check one of these boxes, complete Parts I – VII of this form and submit required attachments A, B, *and* C.

- ☐ Request is associated with a *new* state or federal permit application
- ☐ Request is associated with modification of an existing permit
- ☐ Request is associated with a permit enforcement action
- ☐ Request regards site management or planning, requiring detailed species recommendations
- ☐ Request regards a state funded project, state agency activity, or CEPA request

☐ **Group 3.** If you are requesting a **Safe Harbor Determination**, complete Parts I-VII and submit required attachments A, B, and D. Safe Harbor determinations can only be requested if you are applying for a GP for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities

If you are filing this request as part of a state or federal permit application(s) enter the application information below.

Permitting Agency and Application Name(s): _____

State DEEP Application Number(s), if known: _____

State DEEP Enforcement Action Number, if known: _____

State DEEP Permit Analyst(s)/Engineer(s), if known: _____

Is this request related to a previously submitted NDDB request? ☐ Yes ☒ No

If yes, provide the previous NDDB Determination Number(s), if known: _____

Part VI: Supporting Documents

Check each attachment submitted as verification that *all* applicable attachments have been supplied with this request form. Label each attachment as indicated in this part (e.g., Attachment A, etc.) and be sure to include the requester's name, site name and the date. **Please note that Attachments A and B are required for all new requests and Safe Harbor renewals/extensions with modifications.** Renewals/Extensions with no modifications do not need to submit any attachments. Attachments C and D are supplied at the end of this form.

☒ Attachment A:	**Overview Map:** an 8 1/2" X 11" print/copy of the relevant portion of a USGS Topographic Quadrangle Map clearly indicating the exact location of the site.
☒ Attachment B:	**Detailed Site Map:** fine scaled map showing site boundary and area of work details on aerial imagery with relevant landmarks labeled. (Site and work boundaries in GIS [ESRI ArcView shapefile, in NAD83, State Plane, feet] format can be substituted for detailed maps, see instruction document)
☐ Attachment C:	**Supplemental Information, Group 2 requirement (attached, DEEP-APP-007C)** ☐ Section i: Supplemental Site Information and supporting documents ☐ Section ii: Supplemental Project Information and supporting documents
☐ Attachment D:	**Safe Harbor Report Requirements, Group 3 (attached, DEEP-APP-007D)**

Part VII: Requester Certification

The requester *and* the individual(s) responsible for actually preparing the request must sign this part. A request will be considered incomplete unless all required signatures are provided.

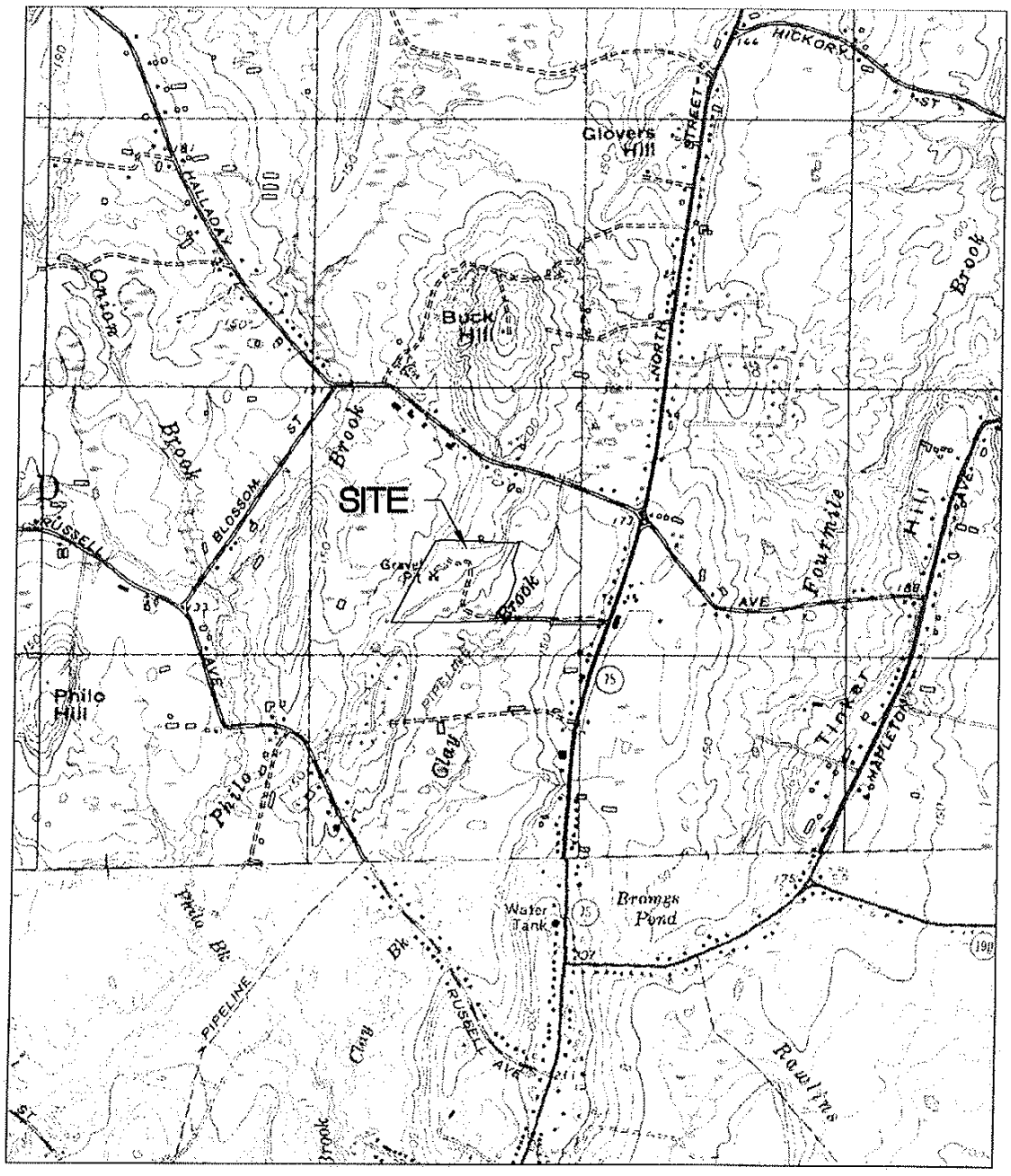
"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of the individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief."

Signature of Requester (a typed name will substitute for a handwritten signature)	**2-22-15** Date
Timothy A. Coon Name of Requester (print or type)	**Project Engineer** Title (if applicable)
Signature of Preparer (if different than above)	Date
Name of Preparer (print or type)	Title (if applicable)

Note: Please submit the completed Request Form and all Supporting Documents to:

CENTRAL PERMIT PROCESSING UNIT
DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127

Or email request to: **deep.nddbrequest@ct.gov**



VICINITY MAP
West Springfield USGS Quadrangle

Solar PV Development
Sullivan Farm
1005 North Road
Suffield, Connecticut

RUSSO
SURVEYORS · ENGINEERS
SERVING CT & MA

J.R. Russo & Associates, LLC

DATE	2-22-15
SCALE	1"=2,000'
JOB NUMBER	2014-115
SHEET	VC-1

REQUESTOR: *TIMOTHY COON*
J.R. RUSSO & ASSOCIATES LLC

CRCOG

February 20, 2015

Property Information

Property ID	09003139-2959
Location	1005 NORTH ST
Owner	SULLIVAN KEVIN S JR & KRI

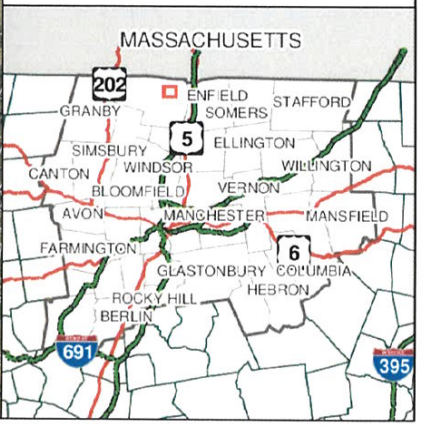
REQUESTOR: *TIMOTHY COON*
J.R. RUSSO & ASSOCIATES, LLC
SITE: *SOLAR PV DEVELOPMENT*
SULLIVAN FARM
1005 NORTH ST., SUFFIELD, CT
DATE: *2-22-15*

CRCOG

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

CRCOG and AppGeo make no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Parcels updated October 1, 2013



Connecticut Department of
ENERGY & ENVIRONMENTAL PROTECTION

March 3, 2015

Mr. Timothy Coon
J.R. Russo & Associates
1 Shoham Road
East Windsor, CT 06088
tcoon@jrrusso.com

Project: Preliminary Assessment for a Solar PV Development at Sullivan Farm Located at 1005 North Street in Suffield, Connecticut
NDDB Determination No.: 201501368

Dear Timothy,

I have reviewed Natural Diversity Data Base maps and files regarding the area delineated on the map provided for the preliminary assessment for a Solar PV Development at Sullivan Farm located at 1005 North Street in Suffield, Connecticut. According to our records there are known extant populations of Federal and State Endangered *Alasmidonta heterodon* (dwarf wedge mussel), State Special Concern *Glyptemys insculpta* (wood turtle) and *Dolichonyx oryzivorus* (bobolink) that occur within or very close to the boundaries of this property. Please be advised that this is a preliminary review and not a final determination. A more detailed review will be necessary to move forward with any subsequent environmental permit applications submitted to DEEP for the proposed project. This letter cannot be used or submitted with your permit applications at DEEP. If you submit another NDDB review to be used for DEEP permits please let us know how you will protect this state-listed species from being impacted by this project. This preliminary assessment is good for one year.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available. The result of this review does not preclude the possibility that listed species may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits.

Please contact me if you have further questions at (860) 424-3592, or dawn.mckay@ct.gov . Thank you for consulting the Natural Diversity Data Base.

Sincerely,

Dawn M. McKay

Dawn M. McKay
Environmental Analyst 3

● Ecology
● Soil & Wetland Studies
● Water Quality Monitoring ● GPS
● Environmental Planning & Management
● Ecological Restoration & Habitat Mitigation
● Aquatic, Wildlife and Listed Species Surveys
● Application Reviews ● Permitting & Compliance

April 8, 2015

Lodestar Energy
3 Ellsworth Place, Suite 122
Avon, CT 06001

ATTN: Mr. Adam Beal, Director of Development

RE: **LISTED-SPECIES INVESTIGATION**
Sullivan Solar Farm
1005R North Street, Suffield, CT
REMA Job No.: 15-1792-SUF39

Dear Mr. Beal:

At your request, on April 7th, 2015, REMA Ecological Services, LLC (REMA) conducted a site investigation at the above-referenced property (i.e. "the site"). The primary purpose of the investigation was to screen the site for its potential to provide suitable habitat for several "listed" species (i.e. endangered, threatened, special concern). These species were identified in a March 3rd, 2015 letter from Dawn McKay, of the Connecticut Department of Energy & Environmental Protection (CT DEEP), in response to a query by your engineering consultant, Mr. Timothy Coon, P.E., of J.R. Russo & Associates, who also forwarded a complete set of site plans to our office (8 sheets, dated 3/10/15).

Specifically CT DEEP records identified three listed species from the vicinity of the site: (1) the federal and state endangered dwarf wedge mussel (*Alasmidonta heterodon*), (2) the state special concern wood turtle (*Glyptemys insculpta*), and (3) the state special concern bobolink (*Dolichonyx oryzivorus*).

Riparian aquatic habitat for the ***dwarf wedge mussel*** does not exist at the site. The closest documented habitat for this species is associated with Philo Brook, approximately 0.25 miles northwesterly of the subject site. In fact, the site is not within the Philo Brook watershed, but rather in that of Clay Brook. This was confirmed in the field during my site visit. The presence of this species within the Philo Brook riparian corridor was verified by your engineering consultant in a conversation with Ms. Susi Van Oettingen at the New England Field Office of the US Fish & Wildlife Service.

The ***wood turtle*** requires riparian habitats of rivers or perennial streams, typically sandy-bottom streams with overhanging vegetation, banks and open areas for basking, wooded floodplains, and sandy open fields for nesting (Klemens 1993, DeGraaf and Yamasaki 2001, Hammerson 2004). Moreover, in my experience with wood turtles in Connecticut during the past 26 years, wood turtles were only associated with larger perennial watercourses. Philo Brook, at least 0.25 miles to the west of the site, appears to be appropriate habitat for this species. In contrast, Clay Brook just east of the site is too small in this reach to be optimal or even suboptimal habitat for wood turtles. In conclusion, it is unlikely that wood turtles utilize the site during any portion of their life cycle.

The ***bobolink*** is a transequatorial, neotropical migrant that requires open grassy meadows for breeding, and prefers wet to moist meadows as opposed to drier spectrum meadows (Bevier 1994). Bobolinks are considered area-sensitive, and highly sensitive to habitat fragmentation (Herkert et al. 1993, Martin and Gavin, 1995). In fact, bobolinks are most often found in fields that are at least 15 to 20 acres in size. In my experience of 26 years observing bobolinks in Connecticut, the smallest field habitat encountered with breeding bobolinks was roughly 10 to 12 acres, and was moist and luxuriant.

The subject site's fields include wet and moist areas (i.e. southern field), a habitat preferred by bobolinks, but this field is too small (+/- 3.5 acres), and it has not been maintained through annual mowing, allowing woody vegetation (i.e. saplings and shrubs) to emerge, making it unsuitable habitat for this species. Similarly, the northern drier spectrum field is too small (+/- 3.7 acres), not moist enough for bobolink, and is also dotted with saplings and shrubs (see attached annotated photographs).

During the site visit, I conducted a survey documenting avian species utilizing the subject site (see attached inventory and Figure A). Admittedly, early April is too early to establish breeding avian utilization at any site. In Connecticut bobolinks do not arrive until late April and breeding does not commence until May. A survey in late May would have been

much more instructive, but the likelihood of encountering bobolink at the site is quite remote.

In conclusion, in my professional opinion, it is unlikely that any of the three recorded "listed" species from the vicinity of site actually utilize the subject site. Therefore, the proposed Sullivan Solar Farm would not adversely affect habitat for these species.

Please feel free to contact us with any questions on the above.

Respectfully submitted,

REMA ECOLOGICAL SERVICES, LLC

George T. Logan, MS, PWS, CSE
Certified Senior Ecologist
Wildlife Biologist

VIA E-MAIL

Attachments: Figure A; Annotated Photographs (1-10); Avian Inventory; Professional Resume

Literature Cited:

Bevier, Louis, ed. 1994. The Atlas of Breeding Birds of Connecticut. State Geological and Natural History Survey of Connecticut. Bulletin 113. Hartford, CT.

DeGraaf, R.M., and M. Yamasaki. 2001. New England Wildlife: Habitat, Natural History, and Distribution. University Press of New England, Hanover, NH.

Hammerson, G.A. 2004. Connecticut Wildlife: Biodiversity, Natural History, and Conservation. University Press of New England, Lebanon, NH.

Herkert, J.R., R.E. Szafoni, V.M. Kleen, and J.E. Schwegman. 1993. Habitat Establishment, Enhancement and Management for Forest and Grassland Birds in Illinois. Natural Heritage Technical Publication No. 1. Springfield: Illinois Department of Conservation.

Klemens, M.W. 1993. Amphibians and Reptiles of Connecticut and Adjacent Regions. State Geological and Natural History Survey of Connecticut. Bulletin No. 112.

Martin, S.G., and T.A. Gavin. 1995. Bobolink (*Dolichonyx oryzivorus*). *In* The Birds of North America, No. 176 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and the American Ornithologists' Union, Washington, D.C.


N
FIGURE A: Rear Land of 1005 North St., Suffield, CT, showing study area on a 3-29-12 Aerial Photograph (Google Earth)
Produced by: Rema Ecological Services, LLC
Date: 4-8-15
Scale: NTS
Avian Survey
Finish: 5:02 pm
Avian Survey
Start: 3:20 pm

REMA ECOLOGICAL SERVICES, LLC
164 East Center Street, Suite 8
Manchester, CT 06040
Phone: 860.649.REMA

SITE: Rear Land of 1005 North Street, Suffield, CT

SURVEY DATE: 4/7/15 (3:20pm to 5:02pm)

COVER TYPES: post-agricultural fields, wet meadows, marsh, forest edge, scrub shrub

STUDY AREA ACREAGE: +/- 12

AVIAN INVENTORY

Common Name	Scientific Name
Avians	
Wood duck	*Aix sponsa*
Mallard	*Anas platyrhynchos*
Turkey vulture	*Cathartes aura*
Red-tailed hawk	*Buteo jamaicensis*
Wild turkey	*Meleagris gallopavo*
Mourning dove	*Zenaida macroura*
Red-bellied woodpercker	*Melanerpes carolinus*
Downy woodpercker	*Picoides pubescens*
Blue jay	*Cyanocitta cristata*
American crow	*Corvus brachyrhynchos*
Black-capped chickadee	*Parus atricapillus*
Tufted titmouse	*Parus bicolor*
Carolina wren	*Thryothorus ludovicianus*
American robin	*Turdus migratorius*
Northern cardinal	*Cardinalis cardinalis*
Song sparrow	*Melospiza melodia*
Swamp sparrow	*Melospiza georgiana*
White-throated sparrow	*Zonotrichia albicollis*
Common grackle	*Quiscalus quiscula*
Brown-headed Cowbird	*Molothrus ater*
House finch	*Carpodacus mexicanus*
American goldfinch	*Carduelis tristis*

Rear Land of 1005 North Street, Suffield, CT
Photos taken on 4/7/2015 by REMA Ecological Services, LLC

Photo 1: Farm road to rear property and fields; facing westerly

Photo 2: Farm road (access way) to rear property and fields; facing easterly

Rear Land of 1005 North Street, Suffield, CT
Photos taken on 4/7/2015 by REMA Ecological Services, LLC

Photo 3: Southeastern section of site, with small pond with cattails; facing northerly

Photo 4: Lower (southern) post-agricultural field (early) with wet and moist meadow, being colonized by woody species (saplings and shrubs); facing westerly

Rear Land of 1005 North Street, Suffield, CT
Photos taken on 4/7/2015 by REMA Ecological Services, LLC

Photo 5: Lower (southern) field; note colonization by woody plants; facing southeasterly

Photo 6: Upper (northern) post-agricultural field, being colonized by woody species (i.e., saplings and shrubs); facing easterly

Rear Land of 1005 North Street, Suffield, CT
Photos taken on 4/7/2015 by REMA Ecological Services, LLC

Photo 7: Lower (southern) field, northern section; note colonization by woody plants; facing southeasterly

Photo 8: Upper (northern) post-agricultural field, eastern section; facing southeasterly

Rear Land of 1005 North Street, Suffield, CT
Photos taken on 4/7/2015 by REMA Ecological Services, LLC

Photo 9: Swamp sparrow (*Melospiza georgiana*); one of the avian species encountered at the site; edge of wet meadow

Photo 10: A red-bellied woodpecker (*Melanerpes carolinus*), seen on a large diameter oak at the edge of the northern field.

PROFESSIONAL RESUME

George T. Logan, MS, PWS, CSE

Principal Environmental Scientist/Senior Ecologist

EDUCATION:

M.S. Natural Resources, *Wildlife Management & Conservation Biology,* University of Rhode Island, Kingston, R.I., 1989.

B.S. Natural Resources, *Wildlife Management & Wetlands Ecology,* University of Rhode Island, Kingston, R.I., 1986.

Continuing Education

The Transportation Project Development Process: Training in the PennDOT Environmental Impact Statement Handbook, Harrisburg, PA, January 1994

Rapid Bioassessment Protocols of Aquatic Systems (EPA Protocols), Wetland Training Institute, Williamsport, PA, August 3-6, 1993

CERTIFICICATIONS: ***(current)***

Certified Senior Ecologist *(2014)* - The Ecological Society of America

Certified Professional Wetland Scientist (No. 581) *(1994)* - Society of Wetland Scientists

Registered Soil Scientist *(1989)* - Society of Soil Scientists of Southern New England

Certified Associate Wildlife Biologist *(1989)* – The Wildlife Society

EXPERIENCE:

Mr. Logan is the Co-Owner and *Principal Environmental Scientist* and *Senior Ecologist* for Rema Ecological Services, LLC. He specializes in tidal and inland wetland delineation and evaluation, permitting, wetland mitigation design, implementation and monitoring, and the preparation of environmental compliance documents in accordance with national (NEPA), state (e.g., CEPA, MEPA), and local criteria and guidelines. He also provides design, construction supervision and implementation for a wide variety of habitat restoration and enhancement projects. Mr. Logan performs watershed-wide and surface water quality evaluations and provides guidance in the design of stormwater Best Management Practices (BMPs), including stormwater wetlands and bioretention basins, as well as for LID (low impact development) practices.

Mr. Logan has over 26 years of experience as a wildlife biologist/ecologist conducting wildlife habitat evaluations and focused avian, mammalian, invertebrate, and herpetofaunal surveys using both active and passive methods. He frequently conducts targeted surveys for sensitive, rare, and “listed” species (i.e. endangered, threatened, special concern), and aquatic biosurveys to assess the biodiversity and biotic health of ponds, lakes, vernal pools, rivers, and streams. Mr. Logan has extensive experience in performing herpetological surveys, including vernal pool investigations and evaluations.

Mr. Logan has participated in over 2,200 individual projects in New England and the Mid-Atlantic States and in 156 of 169 municipalities in Connecticut.

Professional Resume: *(continued)*

George T. Logan, MS, PWS, CSE

PROFESSIONAL AFFILIATIONS:

Society of Soil Scientists of Southern New England
Society of Wetland Scientists
Association of Massachusetts Wetland Scientists
Ecological Society of America
The American Birding Association
The Wildlife Society
Soil & Water Conservation Society
Connecticut Association of Wetland Scientists (CAWS) *(Past-President, Charter member)*

PUBLICATIONS: *(selected)*

Logan, G.T. & S.N. Gadwa. 1999. Quinnipiac River Watershed Association Stream Study. Water Quality in the Quinnipiac River. Proceedings of a Symposium on the Impact of Nonpoint Source Pollution in the Quinnipiac River Watershed, pp. 66-70.

Logan, G.T. & S.N. Gadwa. 1998. Stream Biosurveys: *A Primer*. Quinnipiac River Watershed Association Educational Series for the Adopt-the-River Programs.

Pawlak, E.M. & G.T. Logan. 1996. Town of Cromwell Wetland Evaluation Project. Connecticut Association of Conservation and Inland Wetlands Commissions. The Habitat, Vol. 10:1

Logan, G.T., F.B. Titlow & D.G. Schall. 1995. The Scientific Basis for Protecting Buffer Zones. Proceedings of the 16th Annual Meeting of the Society of Wetland Scientists.

Pawlak, E.M. & G.T. Logan. 1995. Town of Cromwell Wetland Buffer Zone Designation Methodology. Proceedings of the 16th Annual Meeting of the Society of Wetland Scientists.

Logan, G.T., J.H. Brown, Jr., T.P. Husband & M.C. Nicholson. 1994. Conservation Biology of the Cretan Agrimi (*Capra aegagrus cretensis*). Biologia Gallo-Hellenica, Vol. 21, pp. 51-57.

Nicholson, M.C., T.P. Husband, J.H. Brown, Jr. and G.T. Logan. 1994. Implications of behavior on the management of the Cretan Agrimi (*Capra aegagrus cretensis*). Biologia Gallo-Hellenica, Vol. 21, pp. 45-50.

WORKSHOPS & CONFERENCES: *(selected)*

Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region. Corps Training Workshop. May 2011. *(sponsor, participant)*

Vernal Pools: *The Jewels of the Forest.* Technical Workshop for the Town of Southwick Conservation Commission. January 2005. *(Guest Lecturer)*

Professional Resume: *(continued)*

George T. Logan, MS, PWS, CSE

WORKSHOPS & CONFERENCES: *(selected)*

The Importance of Habitat Edges. Riverside Landscaping Conference. The Rivers Alliance of Connecticut. June 1998. (*Guest Lecturer*)

Riparian Buffer Function, Performance & Limitations. Urban Riparian Buffers Conference & Technical Training Session. April 1999. *(Guest Lecturer)*

Sedimentation and Erosion Control Review Session. USDA. Natural Resource Conservation Service and CPESC (Certified Professionals in Erosion Control), Concord, NH. September 2001.

Buffer Strips as Storm Water Quality Controls. EnviroExpo, Boston. May 1999. *(Guest Speaker)*

Identifying Wetland Soils, Fauna and Flora. Municipal Inland Wetland Staff Technical Workshops. June 1999. *(Guest Speaker)*

Water Quality in the Quinnipiac River: A Symposium on the Impact of Non Point Source Pollution in the Quinnipiac River Watershed. November 1998. *(Presenter)*

Our Hidden Wetlands: Vernal Pools in Connecticut. Co-sponsored by CT DEP and the Center for Coastal and Watershed Systems. November 1997 and January 1998 *(Workshop Leader)*

Aquatic Invertebrate & Stream Ecology Workshop. Quinnipiac River Watershed Association Workshop Series. September 1997, May 1998, June 1999, January 2000 (*Workshop Leader*)

The Massachusetts Association of Conservation Commissions Third Annual Conference: Wetland Buffer Zones, March 1996 (*Guest Lecturer*)

16th Annual Conference of the Society of Wetland Scientists: Wetland Understanding, Wetland Education, May 1995 (*Presenter*)

Quinnipiac River Watershed Association Forum on Non-Point Pollution: Significance of Wetlands and Wetland Buffers, October 1992 (*Guest Lecturer*)

The Massachusetts Association of Conservation Commissions Second Annual Conference, April 1995 (*Guest Lecturer*)

The Society of Soil Scientists of Southern New England Riparian Buffer Zone Conference, November 1994 (*Presenter*)

Professional Resume: *(continued)*

George T. Logan, MS, PWS, CSE

SUPPLEMENTARY INFORMATION:

1996 to present

Rema Ecological Services, LLC
Principal Environmental Scientist/Ecologist, Co-Owner

- Founded the company to provide natural resources management, environmental planning, compliance and permitting services, and client advocacy throughout the Northeast.
- Has participated in over 1,800 individual projects since the company's inception, including four gas-fired, combined-cycle power plant projects, numerous municipal projects, including over 20 new schools, several higher education projects, numerous wetland replacement projects, and many large residential, industrial and commercial endeavors.
- Was the Interim Environmental Planner for the Town of Waterford, Connecticut, during a ten-month tenure. Responsibilities included providing procedural and technical support to the town's Conservation Commission (a.k.a. Inland Wetlands and Watercourses Agency), and working closely with Planning Department staff.

1994 to 1996

Fugro East, Inc. *(Currently AECOM)*
Senior Project Manager/Environmental Scientist

- Office Manager for the firm's Connecticut office, responsible for day-to-day operations, marketing, and business development.
- Wetland delineations in accordance with state and federal criteria.
- Natural resource inventories of upland, wetland and aquatic ecosystems, specializing in wildlife habitat assessments.
- Preparation of environmental compliance documentation for over 100 projects including large-scale commercial development.

1993 to 1994

A.D. Marble & Company, Inc.
Senior Environmental Planner/Wildlife Biologist

- Participated in the management of major transportation improvement projects and in the preparation of environmental documents in accordance with the National Environmental Policy Act (NEPA) while continuing involvement in the collection of baseline field data.
- Application of the Pennsylvania Department of Environmental Resources (PADER) hierarchical methodology for the selection of suitable wetland replacement sites.
- Field verification of Threatened, Endangered or Special Concern species listed by the Pennsylvania Game Commission.
- Wetland boundary identification in accordance with the unified PADER and U.S. Army Corps of Engineers (USACOE) methodology.
- Participated in nearly 30 projects, mostly for major transportation corridors, such as the rehabilitation of the I-95 corridor in PA.

Professional Resume: *(continued)*

George T. Logan, MS, PWS, CSE

SUPPLEMENTARY INFORMATION *(continued):*

1989 to 1993

Soil Science & Environmental Services, Inc.
Wildlife Biologist-Ecologist & Soil Scientist

- Project Manager responsible for field operations and report preparation for nearly 300 individual projects in over 75 towns in New England, including one town-wide wetland mapping, inventory and evaluation project (Town of Cromwell).
- Wetland boundary delineation according to state and federal criteria (e.g., Connecticut and Massachusetts Statutes, U.S. Army Corps of Engineers methodologies).
- Ecosystem analyses and biological inventories of upland areas, tidal and inland wetlands, estuaries, streams, rivers, ponds and lakes.
- Environmental impact evaluations, including site plan review, analyses of proposed impacts and design of mitigation strategies.
- Local, state and federal permitting for impacts to natural resources, including wetlands.
- Implementation of water quality monitoring programs for streams and rivers.
- Design, construction supervision, and monitoring of wetland enhancement, restoration and creation.
- Aquatic biosurveys of streams and rivers utilizing standardized methods (e.g. EPA Rapid Bioassessment Protocols).
- Detailed faunal surveys and censuses using both active and passive methods (e.g. direct and indirect observation, live-trapping, point count avian censuses, pellet counts, etc.).
- Expert witness testimony for court and administrative proceedings.

1988 to 1989

Independent Contracts
Soil & Wetland Scientist

- *Summer of 1988*: Was hired by the Town of Canton, CT to identify, inventory, and evaluate wetlands and watercourses within the entire municipality. Was responsible for amending the municipality's *Official Wetland and Watercourses Map*.
- *Spring of 1988*: Was hired by the Connecticut Chapter of the Nature Conservancy to determine and report on the historic expansion of invasive plants (*Phragmites australis*, *Lythrum salicaria*) on eight TWC preserves. Scope included site visits, remote sensing using archived aerial photographs, and report.

TECHNICAL REPORTS:

Mr. Logan has completed several hundred comprehensive studies (e.g. Wetlands Assessments, Ecological Evaluations, Environmental Impact Analyses/Statements, Vernal Pool Investigations, Listed-Species Surveys & Management Plans, aquatic vegetation surveys, and a variety of other specialized studies. A representative list of these technical reports can be provided upon request.

DRAINAGE REPORT

Sullivan Solar Farm
Rear of 1005 North Street
Suffield, CT

March 13, 2015

Prepared for:

Lodestar Energy, LLC
3 Ellsworth Place, Suite 122
Avon, CT 06001

Project No. 2014-115

Prepared by:

J.R. Russo & Associate, LLC
Land Surveyors & Professional Engineers
1 Shoham Road
East Windsor, CT 06088
(860) 623-0569

I. INTRODUCTION

A. Project Summary

Lodestar Energy LLC is proposing the construction of a 2.0 MW AC solar photovoltaic facility at the rear of the Sullivan Farm at 1005 North Street in Suffield, Connecticut. The project will include clearing and grubbing, grading, construction of access roads, layout and placement of foundation systems, racking, and solar PV panels, installation of utility pads and associated electrical equipment, installation of electrical conduit, conduit supports, electrical poles, and overhead wire, and security fencing. The access road will be constructed to accommodate emergency vehicles and fire trucks.

B. Existing Conditions

The project site includes the western 28.1 acres of a 51.3 acre parcel owned by Kevin and Krist Sullivan at 1005 North Street in Suffield (the Sullivan Farm). The site is located approximately 1,350 feet west of North Street. It is accessible from the west side of North Street via an existing paved portion of driveway followed by approximately 1,200 feet of dirt farm road. The farm road is approximately 10 feet wide. As it approaches the site, the road crosses a culverted stream and bisects wetlands on both sides. The access road leads to an open agricultural field on the southern portion of the site.

The site contains two upland areas divided by an intermittent stream. The stream originates from a pond and associated wetland in the northwest corner of the site. From the pond, the stream flows easterly to a wetland on the east side of the site. The area to the north of the intermittent stream was formerly mined for gravel back in the 1950's and 1960's. The gravel operation has since ceased, and this area has become overgrown and wooded. The northern portion of the site is accessed from the southern portion of the site via a farm road over an existing culvert that conveys the intermittent stream.

The majority of the area to the southern portion of the project site of is currently maintained in agriculture. This area is currently a hay field, but was formerly corn. Portions of the agricultural lot are characterized as wetland, but are still actively farmed. Wooded areas are present to the east, south and west of the field. A small isolated pond is located within the southeast corner of the agricultural field where the access road enters the field.

Runoff from the northern and eastern portions of the site currently sheet flows to the intermittent stream and surrounding wetlands that continue to flow into the larger wetland system east of the site on the remaining portion of the Sullivan Farm. This wetland ultimately discharges to the south via the culvert under the access road. Runoff from the southwestern corner of the property sheet flows into the wetland system across the southerly property line.

C. Soils

Based on a review of the USDA Soil Survey of Hartford County, several soil types are located at the site. Soil types are identified on the Soils Map in Appendix 1. Table 1 also summarizes the soil types below. The USDA Soil Survey defines groups of soils into Hydrologic Soil Groups (HSG) according to their runoff-producing characteristics. Soils are assigned to four groups (A, B, C, and D Groups). In group A, are soils having a high infiltration rate when thoroughly wet and having a low runoff potential. They typically are deep, well drained, and sandy or gravelly. In group D, at the other extreme, are soils having a very slow infiltration rate and thus a high runoff potential. They have a hardpan or clay layer at or near the surface, have a permanent high water table, or are shallow over nearly impervious bedrock or other nearly impervious material. The HSG classifications of site soils are summarized in Table 1. The HSG soil classifications within the proposed development area are also identified on the Drainage Area Maps in Appendix 2.

Table 1 – Site Soil Classifications

Map Unit #	Soil Type	HSG Classification
9	Scitico, Shaker & Maybid	D
25	Brancroft silt loam	C
28	Elmridge fine sandy loam	C
32	Haven & Enfield soils	B
36	Windsor loamy sand	A
37	Manchester gravelly sandy loam	A
40	Ludlow silt loam	C
82	Broadbrook silt loam	C
305	Udorthents-Pits complex, gravel	C

II. STORMWATER RUNOFF ANALYSIS

A. Methodology

Peak runoff flow rates on-site were determined for pre- and post-development conditions using Applied Microcomputer System's HydroCAD™ Stormwater Modeling System. This computer software employs the SCS Technical Release 55 and 20 (TR-55 & TR-20) methodology. The potential stormwater impacts were evaluated for the 2-yr, 10-yr, 25-yr, and 100-yr; Type III 24-hour storm events.

Based on the present and proposed drainage patterns at the site, two design points were selected for the analysis. Design point 1 is the wetland system to the east of the site where the northern and eastern portions of the site drain. Design point 2 is the wetland

system south of the site where the southwest portion of the site drains. The design points are shown on the Drainage Area Maps in Appendix 2.

B. Pre-Development Hydrology

The pre-development site was divided into two subcatchments associated with the two design points. The subcatchment (1) that discharges to design point 1 consists of 21.25 acres of woodland, agricultural field (modeled as row crop), gravel road and lawn areas. The subcatchment (2) that discharges to design point 2 consists of 6.61 acres of similar cover types. These subcatchments are shown on the attached Pre-Development Drainage Area Map in Appendix 2. Pre-development runoff characteristics for each of the subcatchments are provided in Appendix 3. A summary of the calculated peak flows is provided in Table 2.

C. Post Development Hydrology

The proposed development will result in the construction of approximately 12 acres of solar panels with surrounding gravel access roads. The natural drainage patterns, which consist of sheet flow to the surrounding wetlands, will be preserved. The proposed fixed panel solar arrays are installed on elevated racks that provide adequate height above the ground to promote vegetative growth and allow for infiltration. As a result, the areas containing the solar arrays can be considered pervious groundcover.

The design points selected for calculations of the pre-development condition are also used for the calculations of the post-development condition. The post development site was divided into two subcatchments associated with the two design points. Subcatchment 1 includes 19.82 acres that will discharge to design point 1. Subcatchment 2 includes 8.03 acres that will discharge to design point 2. The subcatchments are shown on the Post Development Drainage Area Map in Appendix 2. The post development subcatchment characteristics are summarized in the attached HydroCAD data sheets in Appendix 4.

Using the characteristics described above, the Post Development peak flow rates for the entire site were calculated for the design storms. Table 2 compares the pre-development peak flows with the post-development peak flows at the design points.

Table 1 – Summary of Peak Discharges

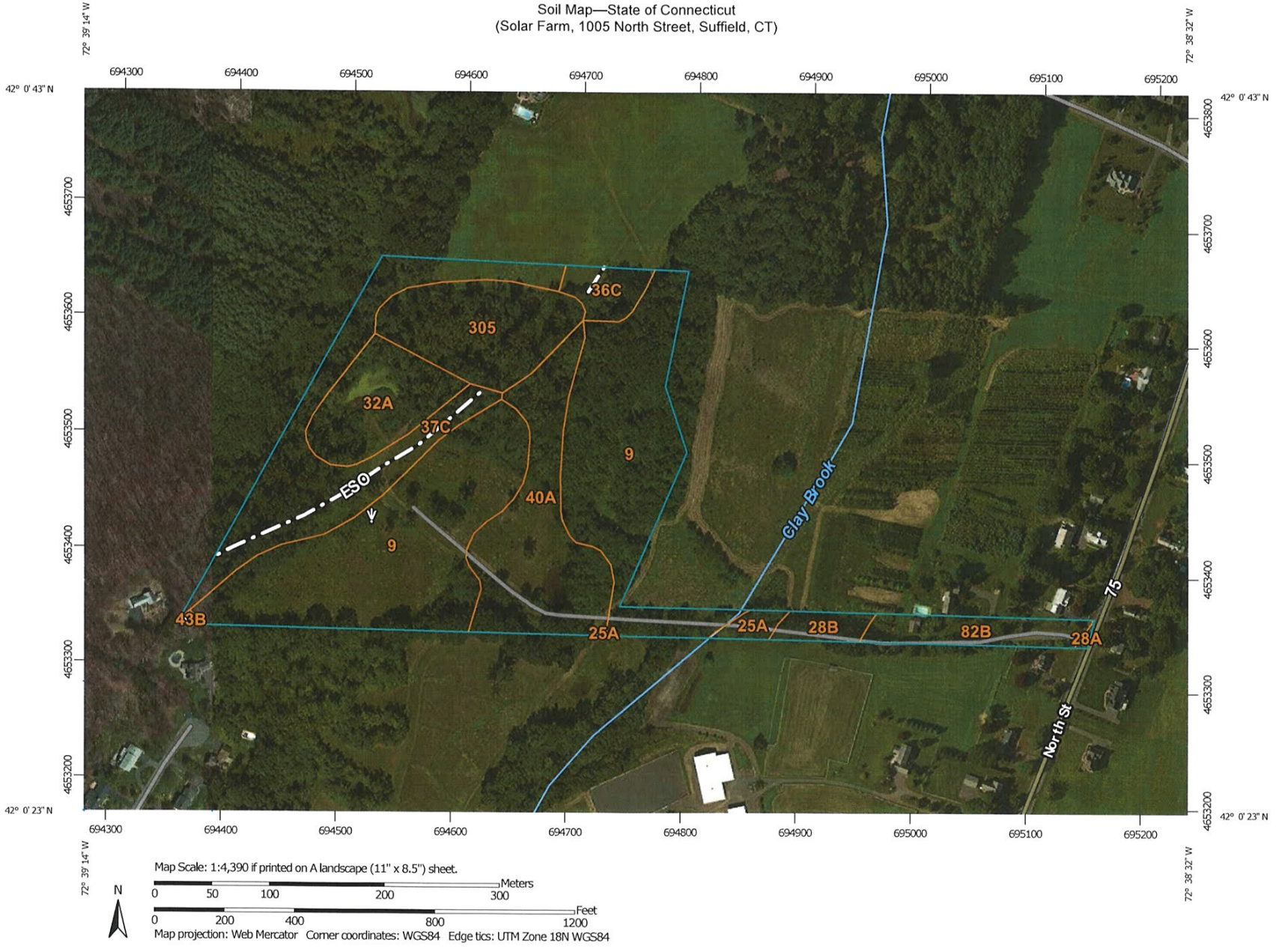
	2-Year	10-Year	25-Year	100-Year
Design Point #1				
Pre	14.1	29.5	38.5	54.7
Post	14.0	29.5	38.5	54.7
Design Point #2				
Pre	10.5	19.3	24.15	32.7o
Post	7.0	14.5	18.8	26.5

D. Conclusion

The proposed design and analysis indicates that the post development peak discharge from the site will be equal to or less than the pre-development peak discharge for all design storms. As a result, one can conclude that the proposed development will not have a negative impact on downstream properties.

Appendix 1:
SOILS INFORMATION

Soil Map—State of Connecticut
(Solar Farm, 1005 North Street, Suffield, CT)



USDA **Natural Resources Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

2/24/2015
Page 1 of 3

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
Survey Area Data: Version 13, Oct 28, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 28, 2011—Sep 9, 2013

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

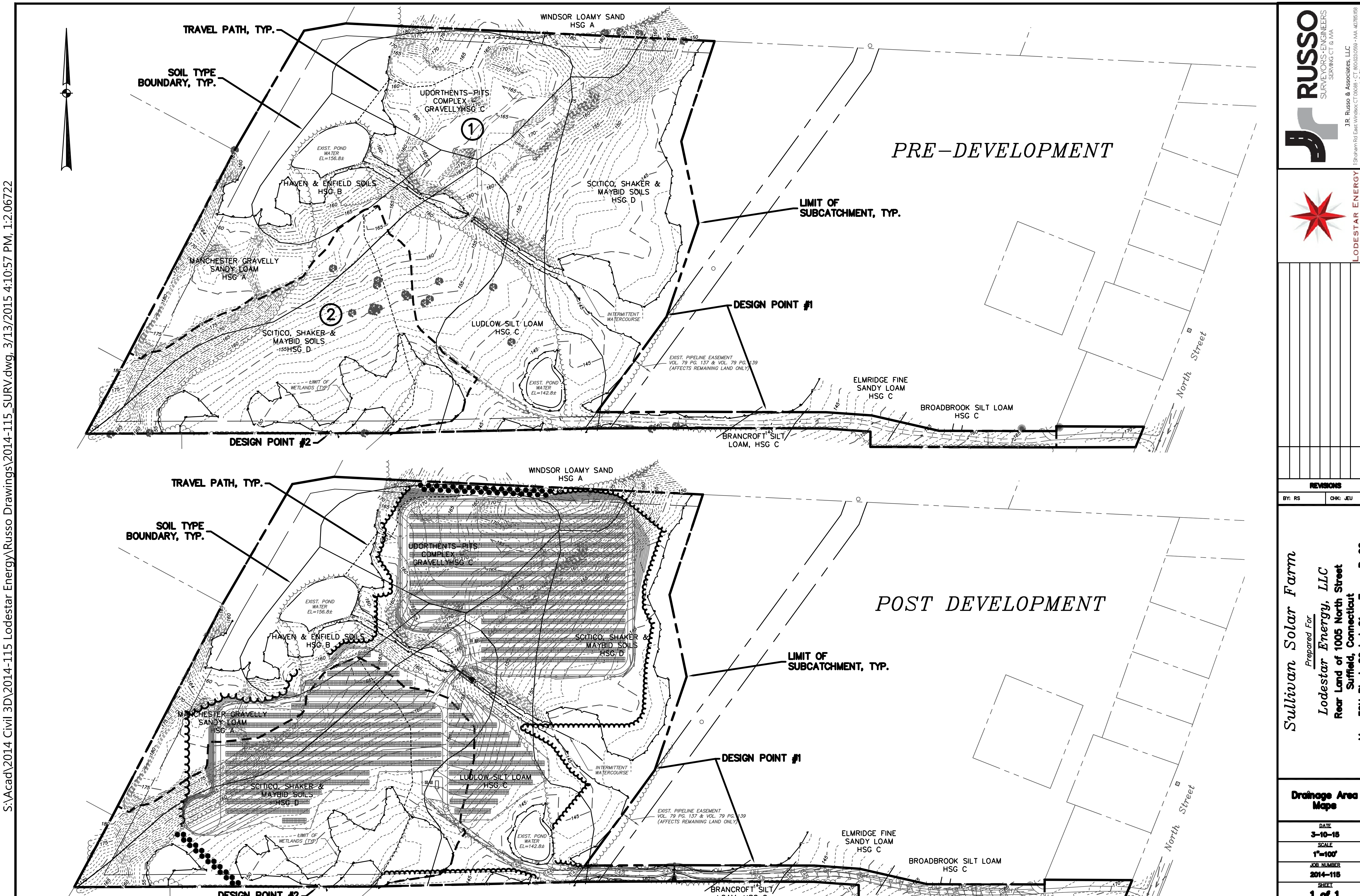
Map Unit Legend

State of Connecticut (CT600)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
9	Scitico, Shaker, and Maybid soils	12.5	42.9%
25A	Brancroft silt loam, 0 to 3 percent slopes	0.3	1.0%
28A	Elmridge fine sandy loam, 0 to 3 percent slopes	0.0	0.1%
28B	Elmridge fine sandy loam, 3 to 8 percent slopes	0.5	1.7%
32A	Haven and Enfield soils, 0 to 3 percent slopes	2.2	7.4%
36C	Windsor loamy sand, 8 to 15 percent slopes	0.7	2.4%
37C	Manchester gravelly sandy loam, 3 to 15 percent slopes	4.6	15.9%
40A	Ludlow silt loam, 0 to 3 percent slopes	4.2	14.3%
43B	Rainbow silt loam, 3 to 8 percent slopes	0.0	0.1%
82B	Broadbrook silt loam, 3 to 8 percent slopes	1.2	4.0%
305	Udorthents-Pits complex, gravelly	3.0	10.2%
Totals for Area of Interest		**29.1**	**100.0%**

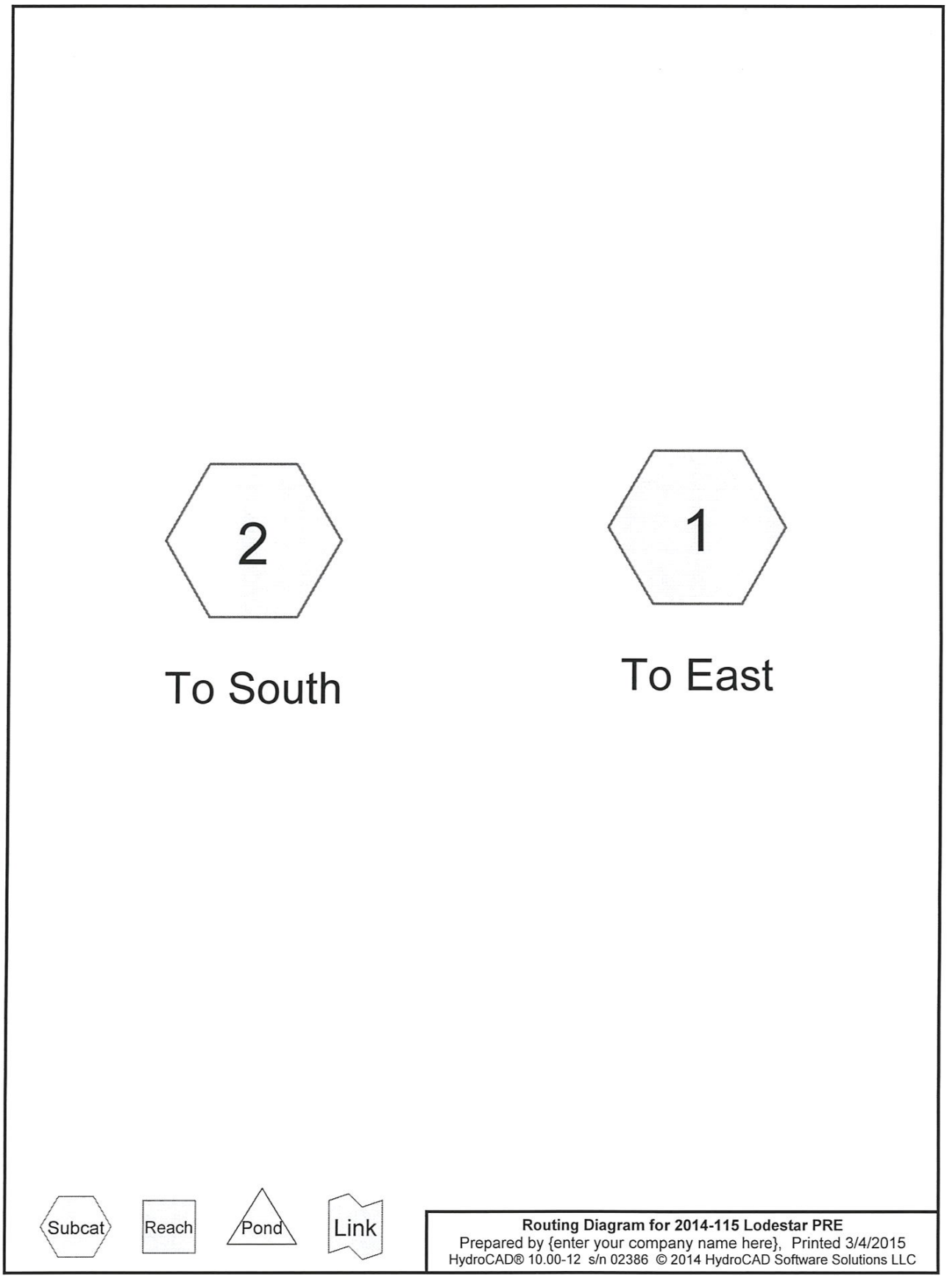
HSG
D
C
C
C
B
A
A
C
C
C
C

Appendix 2:
FIGURES

S:\Acad\2014 Civil 3D\2014-115 Lodestar Energy\Russo Drawings\2014-115_SURV.dwg, 3/13/2015 4:10:57 PM, 1:2.06722


PRE-DEVELOPMENT
TRAVEL PATH, TYP.
SOIL TYPE BOUNDARY, TYP.
WINDSOR LOAMY SAND HSG A
UDORTHENTS-PITS COMPLEX GRAVELLY HSG C
EXIST. POND WATER EL=156.8±
HAVEN & ENFIELD SOILS HSG B
SCITICO, SHAKER & MAYBID SOILS HSG D
LIMIT OF SUBCATCHMENT, TYP.
MANCHESTER GRAVELLY SANDY LOAM HSG A
DESIGN POINT #1
INTERMITTENT WATERCOURSE
LUDLOW SILT LOAM HSG C
SCITICO, SHAKER & MAYBID SOILS HSG D
EXIST. PIPELINE EASEMENT VOL. 79 PG. 137 & VOL. 79 PG. 139 (AFFECTS REMAINING LAND ONLY)
LIMIT OF WETLANDS (TYP)
EXIST. POND WATER EL=142.8±
ELMRIDGE FINE SANDY LOAM HSG C
BROADBROOK SILT LOAM HSG C
North Street
DESIGN POINT #2
BRANCROFT SILT LOAM, HSG C
POST DEVELOPMENT
TRAVEL PATH, TYP.
SOIL TYPE BOUNDARY, TYP.
WINDSOR LOAMY SAND HSG A
UDORTHENTS-PITS COMPLEX GRAVELLY HSG C
EXIST. POND WATER EL=156.8±
HAVEN & ENFIELD SOILS HSG B
SCITICO, SHAKER & MAYBID SOILS HSG D
LIMIT OF SUBCATCHMENT, TYP.
MANCHESTER GRAVELLY SANDY LOAM HSG A
DESIGN POINT #1
INTERMITTENT WATERCOURSE
LUDLOW SILT LOAM HSG C
SCITICO, SHAKER & MAYBID SOILS HSG D
EXIST. PIPELINE EASEMENT VOL. 79 PG. 137 & VOL. 79 PG. 139 (AFFECTS REMAINING LAND ONLY)
LIMIT OF WETLANDS (TYP)
EXIST. POND WATER EL=142.8±
ELMRIDGE FINE SANDY LOAM HSG C
BROADBROOK SILT LOAM HSG C
North Street
DESIGN POINT #2
BRANCROFT SILT LOAM, HSG C
RUSSO
SURVEYORS • ENGINEERS
SERVING CT & MA
J.R. Russo & Associates, LLC
LODESTAR ENERGY
REVISIONS
BY: RS
CHK: JEU
Sullivan Solar Farm
Prepared For
Lodestar Energy, LLC
Rear Land of 1005 North Street
Suffield, Connecticut
Map 39H Block 29 Lot 21 Zone: R-90
Drainage Area Maps
DATE
3-10-15
SCALE
1"=100'
JOB NUMBER
2014-115
SHEET
1 of 1

Appendix 3:
PRE-DEVELOPMENT ANALYSES


2
To South
1
To East
Subcat
Reach
Pond
Link
Routing Diagram for 2014-115 Lodestar PRE
Prepared by {enter your company name here}, Printed 3/4/2015
HydroCAD® 10.00-12 s/n 02386 © 2014 HydroCAD Software Solutions LLC

Summary for Subcatchment 1: To East

Runoff = 14.05 cfs @ 12.49 hrs, Volume= 1.937 af, Depth= 1.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-yr Rainfall=3.20"

	Area (ac)	CN	Description
*	4.744	98	Wetland
*	0.432	96	Gravel Road
	0.737	74	>75% Grass cover, Good, HSG C
	0.148	80	>75% Grass cover, Good, HSG D
	0.086	67	Row crops, straight row, Good, HSG A
	0.402	78	Row crops, straight row, Good, HSG B
	1.390	85	Row crops, straight row, Good, HSG C
	1.058	89	Row crops, straight row, Good, HSG D
	2.720	30	Woods, Good, HSG A
	0.572	55	Woods, Good, HSG B
	4.408	70	Woods, Good, HSG C
	4.549	77	Woods, Good, HSG D
	21.246	75	Weighted Average
	16.502		77.67% Pervious Area
	4.744		22.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.1	35	0.1100	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.20"
14.5	115	0.0700	0.13		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
11.2	450	0.0180	0.67		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.3	850	0.0200	3.26	8.16	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=0.50' Z= 2.0 '/' Top.W=6.00' n= 0.035
33.1	1,450	Total			

Summary for Subcatchment 2: To South

Runoff = 10.52 cfs @ 12.14 hrs, Volume= 0.848 af, Depth= 1.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-yr Rainfall=3.20"

	Area (ac)	CN	Description
*	1.509	98	Wetland
	0.543	67	Row crops, straight row, Good, HSG A
	3.202	89	Row crops, straight row, Good, HSG D
	0.669	30	Woods, Good, HSG A
	0.081	70	Woods, Good, HSG C
	0.609	77	Woods, Good, HSG D
	6.613	82	Weighted Average
	5.104		77.18% Pervious Area
	1.509		22.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.6	150	0.0330	0.54		**Sheet Flow,** Fallow n= 0.050 P2= 3.20"
4.9	470	0.0320	1.61		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
9.5	620	Total			

Summary for Subcatchment 1: To East

Runoff = 29.52 cfs @ 12.47 hrs, Volume= 3.910 af, Depth= 2.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-yr Rainfall=4.70"

	Area (ac)	CN	Description
*	4.744	98	Wetland
*	0.432	96	Gravel Road
	0.737	74	>75% Grass cover, Good, HSG C
	0.148	80	>75% Grass cover, Good, HSG D
	0.086	67	Row crops, straight row, Good, HSG A
	0.402	78	Row crops, straight row, Good, HSG B
	1.390	85	Row crops, straight row, Good, HSG C
	1.058	89	Row crops, straight row, Good, HSG D
	2.720	30	Woods, Good, HSG A
	0.572	55	Woods, Good, HSG B
	4.408	70	Woods, Good, HSG C
	4.549	77	Woods, Good, HSG D
	21.246	75	Weighted Average
	16.502		77.67% Pervious Area
	4.744		22.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.1	35	0.1100	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.20"
14.5	115	0.0700	0.13		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
11.2	450	0.0180	0.67		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.3	850	0.0200	3.26	8.16	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=0.50' Z= 2.0 '/' Top.W=6.00' n= 0.035
33.1	1,450	Total			

Summary for Subcatchment 2: To South

Runoff = 19.31 cfs @ 12.13 hrs, Volume= 1.550 af, Depth= 2.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-yr Rainfall=4.70"

	Area (ac)	CN	Description
*	1.509	98	Wetland
	0.543	67	Row crops, straight row, Good, HSG A
	3.202	89	Row crops, straight row, Good, HSG D
	0.669	30	Woods, Good, HSG A
	0.081	70	Woods, Good, HSG C
	0.609	77	Woods, Good, HSG D
	6.613	82	Weighted Average
	5.104		77.18% Pervious Area
	1.509		22.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.6	150	0.0330	0.54		**Sheet Flow,** Fallow n= 0.050 P2= 3.20"
4.9	470	0.0320	1.61		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
9.5	620	Total			

Summary for Subcatchment 1: To East

Runoff = 38.47 cfs @ 12.47 hrs, Volume= 5.065 af, Depth= 2.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-yr Rainfall=5.50"

	Area (ac)	CN	Description
*	4.744	98	Wetland
*	0.432	96	Gravel Road
	0.737	74	>75% Grass cover, Good, HSG C
	0.148	80	>75% Grass cover, Good, HSG D
	0.086	67	Row crops, straight row, Good, HSG A
	0.402	78	Row crops, straight row, Good, HSG B
	1.390	85	Row crops, straight row, Good, HSG C
	1.058	89	Row crops, straight row, Good, HSG D
	2.720	30	Woods, Good, HSG A
	0.572	55	Woods, Good, HSG B
	4.408	70	Woods, Good, HSG C
	4.549	77	Woods, Good, HSG D
	21.246	75	Weighted Average
	16.502		77.67% Pervious Area
	4.744		22.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.1	35	0.1100	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.20"
14.5	115	0.0700	0.13		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
11.2	450	0.0180	0.67		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.3	850	0.0200	3.26	8.16	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=0.50' Z= 2.0 '/' Top.W=6.00' n= 0.035
33.1	1,450	Total			

Summary for Subcatchment 2: To South

Runoff = 24.15 cfs @ 12.13 hrs, Volume= 1.945 af, Depth= 3.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-yr Rainfall=5.50"

	Area (ac)	CN	Description
*	1.509	98	Wetland
	0.543	67	Row crops, straight row, Good, HSG A
	3.202	89	Row crops, straight row, Good, HSG D
	0.669	30	Woods, Good, HSG A
	0.081	70	Woods, Good, HSG C
	0.609	77	Woods, Good, HSG D
	6.613	82	Weighted Average
	5.104		77.18% Pervious Area
	1.509		22.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.6	150	0.0330	0.54		**Sheet Flow,** Fallow n= 0.050 P2= 3.20"
4.9	470	0.0320	1.61		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
9.5	620	Total			

Summary for Subcatchment 1: To East

Runoff = 54.70 cfs @ 12.46 hrs, Volume= 7.191 af, Depth= 4.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-yr Rainfall=6.90"

	Area (ac)	CN	Description
*	4.744	98	Wetland
*	0.432	96	Gravel Road
	0.737	74	>75% Grass cover, Good, HSG C
	0.148	80	>75% Grass cover, Good, HSG D
	0.086	67	Row crops, straight row, Good, HSG A
	0.402	78	Row crops, straight row, Good, HSG B
	1.390	85	Row crops, straight row, Good, HSG C
	1.058	89	Row crops, straight row, Good, HSG D
	2.720	30	Woods, Good, HSG A
	0.572	55	Woods, Good, HSG B
	4.408	70	Woods, Good, HSG C
	4.549	77	Woods, Good, HSG D
	21.246	75	Weighted Average
	16.502		77.67% Pervious Area
	4.744		22.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.1	35	0.1100	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.20"
14.5	115	0.0700	0.13		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
11.2	450	0.0180	0.67		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.3	850	0.0200	3.26	8.16	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=0.50' Z= 2.0 '/' Top.W=6.00' n= 0.035
33.1	1,450	Total			

Summary for Subcatchment 2: To South

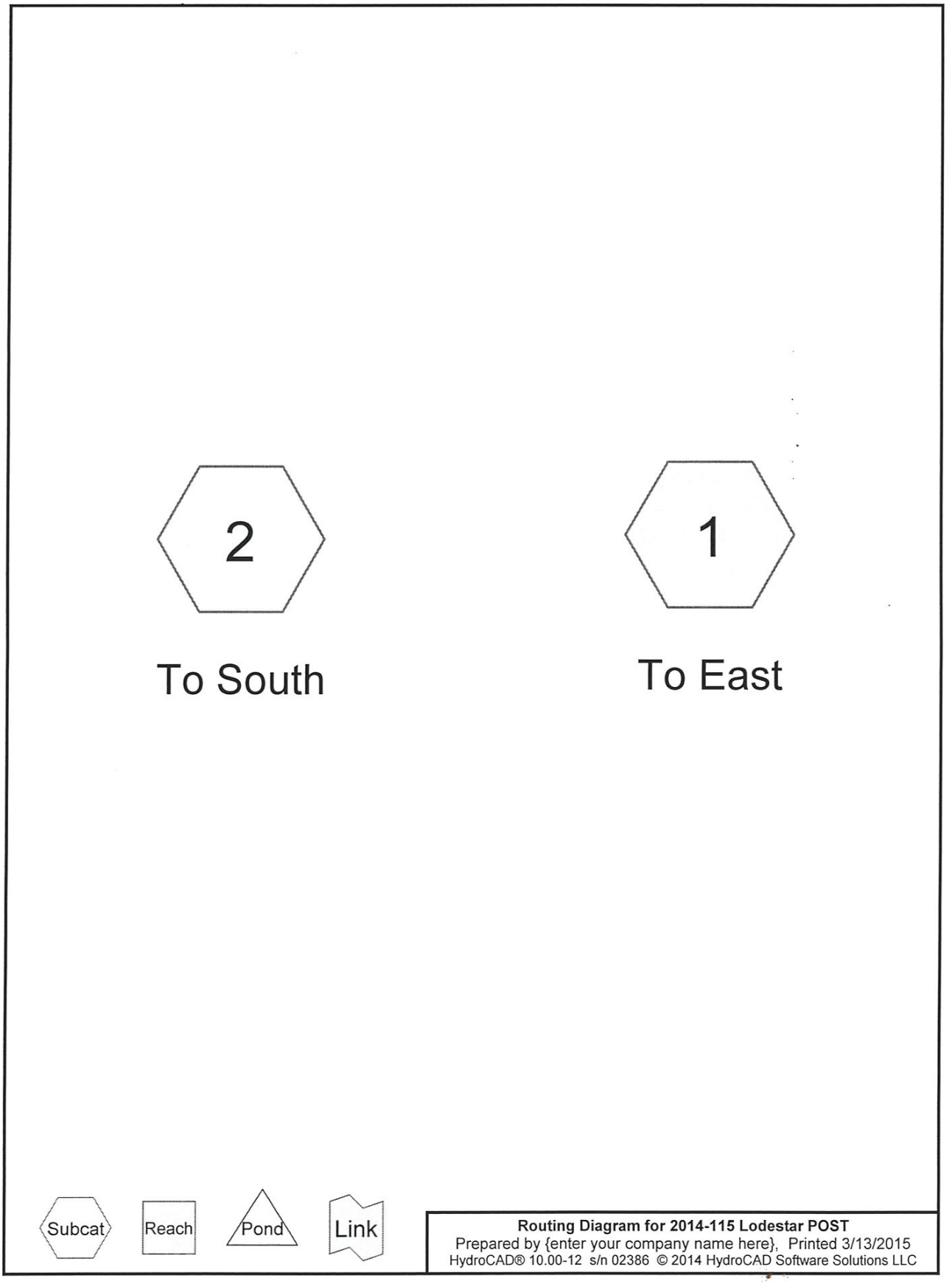
Runoff = 32.69 cfs @ 12.13 hrs, Volume= 2.658 af, Depth= 4.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-yr Rainfall=6.90"

	Area (ac)	CN	Description
*	1.509	98	Wetland
	0.543	67	Row crops, straight row, Good, HSG A
	3.202	89	Row crops, straight row, Good, HSG D
	0.669	30	Woods, Good, HSG A
	0.081	70	Woods, Good, HSG C
	0.609	77	Woods, Good, HSG D
	6.613	82	Weighted Average
	5.104		77.18% Pervious Area
	1.509		22.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.6	150	0.0330	0.54		**Sheet Flow,** Fallow n= 0.050 P2= 3.20"
4.9	470	0.0320	1.61		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
9.5	620	Total			

Appendix 4:
POST DEVELOPMENT ANALYSES


2
To South
1
To East
Subcat
Reach
Pond
Link
Routing Diagram for 2014-115 Lodestar POST
Prepared by {enter your company name here}, Printed 3/13/2015
HydroCAD® 10.00-12 s/n 02386 © 2014 HydroCAD Software Solutions LLC

Summary for Subcatchment 1: To East

Runoff = 14.04 cfs @ 12.42 hrs, Volume= 1.806 af, Depth= 1.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-yr Rainfall=3.20"

	Area (ac)	CN	Description
*	4.686	98	Wetland
*	0.945	96	Gravel Road
	1.247	39	>75% Grass cover, Good, HSG A
	0.493	61	>75% Grass cover, Good, HSG B
	4.869	74	>75% Grass cover, Good, HSG C
	3.745	80	>75% Grass cover, Good, HSG D
	1.377	30	Woods, Good, HSG A
	0.878	55	Woods, Good, HSG B
	0.577	70	Woods, Good, HSG C
	0.999	77	Woods, Good, HSG D
	19.816	75	Weighted Average
	15.130		76.35% Pervious Area
	4.686		23.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.1	35	0.1100	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.20"
14.5	115	0.0700	0.13		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
1.0	30	0.0100	0.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.9	265	0.0150	2.35	2.65	**Trap/Vee/Rect Channel Flow,** Bot.W=1.00' D=0.50' Z= 3.0 & 2.0 '/' Top.W=3.50' n= 0.035
3.6	170	0.0250	0.79		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.3	850	0.0200	3.26	8.16	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=0.50' Z= 2.0 '/' Top.W=6.00' n= 0.035
28.4	1,465	Total			

Summary for Subcatchment 2: To South

Runoff = 7.02 cfs @ 12.29 hrs, Volume= 0.771 af, Depth= 1.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-yr Rainfall=3.20"

	Area (ac)	CN	Description
*	0.407	96	Gravel Road
*	1.509	98	Wetland
	0.930	39	>75% Grass cover, Good, HSG A
	0.044	61	>75% Grass cover, Good, HSG B
	0.374	74	>75% Grass cover, Good, HSG C
	3.870	80	>75% Grass cover, Good, HSG D
	0.434	30	Woods, Good, HSG A
	0.018	70	Woods, Good, HSG C
	0.442	77	Woods, Good, HSG D
	8.028	76	Weighted Average
	6.519		81.20% Pervious Area
	1.509		18.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.5	132	0.0400	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.20"
0.3	18	0.0200	0.98		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.20"
6.1	455	0.0320	1.25		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
19.9	605	Total			

Summary for Subcatchment 1: To East

Runoff = 29.54 cfs @ 12.40 hrs, Volume= 3.647 af, Depth= 2.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-yr Rainfall=4.70"

	Area (ac)	CN	Description
*	4.686	98	Wetland
*	0.945	96	Gravel Road
	1.247	39	>75% Grass cover, Good, HSG A
	0.493	61	>75% Grass cover, Good, HSG B
	4.869	74	>75% Grass cover, Good, HSG C
	3.745	80	>75% Grass cover, Good, HSG D
	1.377	30	Woods, Good, HSG A
	0.878	55	Woods, Good, HSG B
	0.577	70	Woods, Good, HSG C
	0.999	77	Woods, Good, HSG D
	19.816	75	Weighted Average
	15.130		76.35% Pervious Area
	4.686		23.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.1	35	0.1100	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.20"
14.5	115	0.0700	0.13		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
1.0	30	0.0100	0.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.9	265	0.0150	2.35	2.65	**Trap/Vee/Rect Channel Flow,** Bot.W=1.00' D=0.50' Z= 3.0 & 2.0 '/' Top.W=3.50' n= 0.035
3.6	170	0.0250	0.79		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.3	850	0.0200	3.26	8.16	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=0.50' Z= 2.0 '/' Top.W=6.00' n= 0.035
28.4	1,465	Total			

Summary for Subcatchment 2: To South

Runoff = 14.48 cfs @ 12.28 hrs, Volume= 1.532 af, Depth= 2.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-yr Rainfall=4.70"

	Area (ac)	CN	Description
*	0.407	96	Gravel Road
*	1.509	98	Wetland
	0.930	39	>75% Grass cover, Good, HSG A
	0.044	61	>75% Grass cover, Good, HSG B
	0.374	74	>75% Grass cover, Good, HSG C
	3.870	80	>75% Grass cover, Good, HSG D
	0.434	30	Woods, Good, HSG A
	0.018	70	Woods, Good, HSG C
	0.442	77	Woods, Good, HSG D
	8.028	76	Weighted Average
	6.519		81.20% Pervious Area
	1.509		18.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.5	132	0.0400	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.20"
0.3	18	0.0200	0.98		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.20"
6.1	455	0.0320	1.25		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
19.9	605	Total			

Summary for Subcatchment 1: To East

Runoff = 38.49 cfs @ 12.40 hrs, Volume= 4.724 af, Depth= 2.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-yr Rainfall=5.50"

	Area (ac)	CN	Description
*	4.686	98	Wetland
*	0.945	96	Gravel Road
	1.247	39	>75% Grass cover, Good, HSG A
	0.493	61	>75% Grass cover, Good, HSG B
	4.869	74	>75% Grass cover, Good, HSG C
	3.745	80	>75% Grass cover, Good, HSG D
	1.377	30	Woods, Good, HSG A
	0.878	55	Woods, Good, HSG B
	0.577	70	Woods, Good, HSG C
	0.999	77	Woods, Good, HSG D
	19.816	75	Weighted Average
	15.130		76.35% Pervious Area
	4.686		23.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.1	35	0.1100	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.20"
14.5	115	0.0700	0.13		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
1.0	30	0.0100	0.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.9	265	0.0150	2.35	2.65	**Trap/Vee/Rect Channel Flow,** Bot.W=1.00' D=0.50' Z= 3.0 & 2.0 '/' Top.W=3.50' n= 0.035
3.6	170	0.0250	0.79		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.3	850	0.0200	3.26	8.16	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=0.50' Z= 2.0 '/' Top.W=6.00' n= 0.035
28.4	1,465	Total			

Summary for Subcatchment 2: To South

Runoff = 18.76 cfs @ 12.28 hrs, Volume= 1.976 af, Depth= 2.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-yr Rainfall=5.50"

	Area (ac)	CN	Description
*	0.407	96	Gravel Road
*	1.509	98	Wetland
	0.930	39	>75% Grass cover, Good, HSG A
	0.044	61	>75% Grass cover, Good, HSG B
	0.374	74	>75% Grass cover, Good, HSG C
	3.870	80	>75% Grass cover, Good, HSG D
	0.434	30	Woods, Good, HSG A
	0.018	70	Woods, Good, HSG C
	0.442	77	Woods, Good, HSG D
	8.028	76	Weighted Average
	6.519		81.20% Pervious Area
	1.509		18.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.5	132	0.0400	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.20"
0.3	18	0.0200	0.98		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.20"
6.1	455	0.0320	1.25		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
19.9	605	Total			

Summary for Subcatchment 1: To East

Runoff = 54.73 cfs @ 12.40 hrs, Volume= 6.707 af, Depth= 4.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-yr Rainfall=6.90"

	Area (ac)	CN	Description
*	4.686	98	Wetland
*	0.945	96	Gravel Road
	1.247	39	>75% Grass cover, Good, HSG A
	0.493	61	>75% Grass cover, Good, HSG B
	4.869	74	>75% Grass cover, Good, HSG C
	3.745	80	>75% Grass cover, Good, HSG D
	1.377	30	Woods, Good, HSG A
	0.878	55	Woods, Good, HSG B
	0.577	70	Woods, Good, HSG C
	0.999	77	Woods, Good, HSG D
	19.816	75	Weighted Average
	15.130		76.35% Pervious Area
	4.686		23.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.1	35	0.1100	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.20"
14.5	115	0.0700	0.13		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
1.0	30	0.0100	0.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.9	265	0.0150	2.35	2.65	**Trap/Vee/Rect Channel Flow,** Bot.W=1.00' D=0.50' Z= 3.0 & 2.0 '/' Top.W=3.50' n= 0.035
3.6	170	0.0250	0.79		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.3	850	0.0200	3.26	8.16	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=0.50' Z= 2.0 '/' Top.W=6.00' n= 0.035
28.4	1,465	Total			

Summary for Subcatchment 2: To South

Runoff = 26.49 cfs @ 12.27 hrs, Volume= 2.789 af, Depth= 4.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-yr Rainfall=6.90"

	Area (ac)	CN	Description
*	0.407	96	Gravel Road
*	1.509	98	Wetland
	0.930	39	>75% Grass cover, Good, HSG A
	0.044	61	>75% Grass cover, Good, HSG B
	0.374	74	>75% Grass cover, Good, HSG C
	3.870	80	>75% Grass cover, Good, HSG D
	0.434	30	Woods, Good, HSG A
	0.018	70	Woods, Good, HSG C
	0.442	77	Woods, Good, HSG D
	8.028	76	Weighted Average
	6.519		81.20% Pervious Area
	1.509		18.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.5	132	0.0400	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.20"
0.3	18	0.0200	0.98		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.20"
6.1	455	0.0320	1.25		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
19.9	605	Total			

SOURCE:
FEMA FLOD INSURANCE RATE MAP, PANEL 09003C0094F, EFFECTIVE DATE: SEPTEMBER 26, 2008

FLOOD MAP

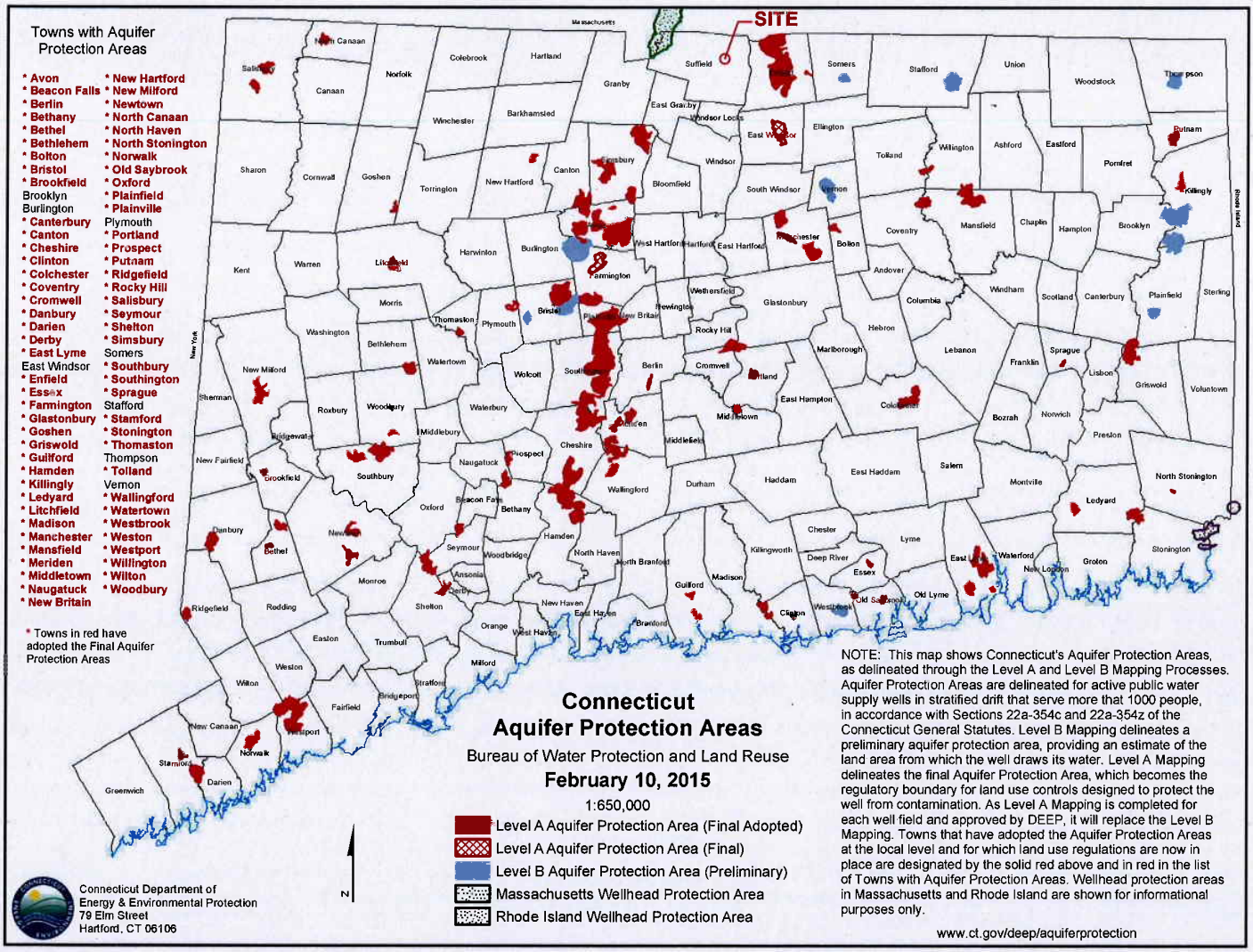
Canis Major Solar
Sullivan Farm

1005 North Road
Suffield, Connecticut

RUSSO
SURVEYORS · ENGINEERS
SERVING CT & MA

J.R. Russo & Associates, LLC
1 Shoham Rd East Windsor CT 06088 • CT 860.623.0569 • MA 413.785.1158
www.jrrusso.com • info@jrrusso.com

DATE	4-30-15
SCALE	1"=1,000'
JOB NUMBER	2014-115
SHEET	EXHIBIT XII


SITE
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
* 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
Connecticut Aquifer Protection Areas
Bureau of Water Protection and Land Reuse
February 10, 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
N

RUSSO
SURVEYORS · ENGINEERS

February 25, 2015

Daniel Forrest
Director of Arts & Historic Preservation &
State Historic Preservation Officer
One Constitution Plaza, Second Floor
Hartford, CT 06103

Re: Request for Cultural Resources Review
Proposed Sullivan Solar Farm Development
1005 North Street
Suffield, CT

Dear Mr. Forrest:

Lodestar Energy LLC (Lodestar), a developer of renewable energy projects, is currently developing plans for a 2.0 MW AC/2.88 MW DC ground mounted solar photovoltaic facility at 1005 North Street in Suffield Connecticut. In the near future, Lodestar plans to submit a petition to the Connecticut Siting Council (CSC) for approval of the proposed project. As part of the process, Lodestar is seeking written verification from the State Historic Preservation Office (SHPO) that the proposed project will have no adverse effect on cultural resources. The purpose of this letter and attachments is to provide your office with information regarding the project location and planned construction activities to assist in your evaluation.

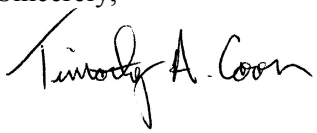
The subject site consists of 26.7 acres of undeveloped land, part of a larger 51.3 acre parcel owned by Kevin and Krist Sullivan at 1005 North Street in Suffield. Approximately half of the proposed development site is maintained in agriculture, while the remaining half consists of a former gravel pit which has become overgrown and wooded. Lodestar will enter into a lease agreement with the Sullivans that will give them the right to construct, operate and maintain the solar farm. The project will involve the construction of approximately 10 acres of ground mounted solar photovoltaic panels and improvements to an existing farm road to provide access to the site from North Street. The work will include clearing and grubbing, grading, construction of access roads, layout and placement of foundation systems, racking, and solar PV panels, installation of utility pads and associated electrical equipment, installation of electrical conduit, conduit supports, electrical poles, and overhead wire, and security fencing. No existing structures will be impacted by the proposed project.

The following materials are attached to illustrate the location and current site conditions and assist in your review:

- SHPO Project Review Cover Form
- Property Card
- Vicinity Map (USGS Topographic Map)
- Aerial Photo Overlay
- NRCS Soils Map
- 1934 Aerial Photo
- 1868 Historic Map

On behalf of Lodestar, J.R. Russo & Associates, LLC requests the assistance of your office in identifying archaeological or historic resources that may be affected by the project and recommendations to mitigate or avoid potential impacts. We appreciate your assistance and timely response. Please let me know if you have any questions or require further information for your initial review.

Sincerely,



Timothy A. Coon, P.E.
J.R. Russo & Associates, LLC

cc: Lodestar Energy, LLC
Murtha Cullina LLP

Department of Economic and Community Development

Connecticut
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State Historic Preservation Office

One Constitution Plaza | Hartford, CT 06103 | 860.256.2800 | Cultureandtourism.org

PROJECT REVIEW COVER FORM

1. **This information relates to a previously submitted project.** ☐ You do not need to complete the rest of the form if you have been previously issued a SHPO Project Number. Please attach information to this form and submit

SHPO Project Number _____
(Not all previously submitted projects will have project numbers)

Project Address _____
(Street Address and City or Town)

2. **This is a new Project.** ☒ If you have checked this box, it is necessary to complete ALL entries on this form .

Project Name Sullivan Solar Farm

Project Location 1005 North Street (Rte. 75)
Include street number, street name, and or Route Number. If no street address exists give closest intersection.

City or Town Suffield
In addition to the village or hamlet name (if appropriate), the municipality must be included here.

County Hartford
If the undertaking includes multiple addresses, please attach a list to this form.

Date of Construction (for existing structures)_____

PROJECT DESCRIPTION SUMMARY (include full description in attachment):
Development of a 2.0 MW AC/2.88 MW DC Ground mounted solar photovoltaic facility (see attached cover letter).

TYPE OF REVIEW REQUESTED

a. Does this undertaking involve funding or permit approval from a State or Federal Agency?

☒ Yes ☐ No

Agency Name/Contact	Type of Permit/Approval	State	Federal
Connecticut Siting Council	Declaratory Ruling	☒	☐
		☐	☐
		☐	☐

	Yes	No
b. Have you consulted the SHPO and UCONN Dodd Center files to determine the presence or absence of previously identified cultural resources within or adjacent to the project area?	☐	☒
If yes: Was the project site wholly or partially located within an identified archeologically sensitive area?	☐	☐
Does the project site involve or is it substantially contiguous to a property listed or recommended for listing in the CT State or National Registers of Historic Places?	☐	☐
Does the project involve the rehabilitation, renovation, relocation, demolition or addition to any building or structure that is 50 years old or older?	☐	☐

Department of Economic and Community Development

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PROJECT REVIEW COVER FORM

The Historic Preservation Review Process in Connecticut Cultural Resource Review under the National Historic Preservation Act – Section 106 http://www.achp.gov/106summary.html involves providing technical guidance and professional advice on the potential impact of publicly funded, assisted, licensed or permitted projects on the state's historic, architectural and archaeological resources. This responsibility of the State Historic Preservation Office (SHPO) is discharged in two steps: (1) identification of significant historic, architectural and archaeological resources; and (2) advisory assistance to promote compatibility between new development and preservation of the state's cultural heritage.

Project review is conducted in two stages. First, the SHPO assesses affected properties to determine whether or not they are listed or eligible for listing in the Connecticut State or National Registers of Historic Places. If so, it is deemed "historic" and worthy of protection and the second stage of review is undertaken. The project is reviewed to evaluate its impact on the properties significant materials and character. Where adverse effects are identified, alternatives are explored to avoid, or reduce project impacts; where this is unsuccessful, mitigation measures are developed and formal agreement documents are prepared stipulating these measures. For more information and guidance, please see our website at: http://www.cultureandtourism.org/cet/cwp/view.asp?a=3933&q=293820

ALL PROJECTS SUBMITTED FOR REVIEW MUST INCLUDE THE FOLLOWING MATERIALS*:

☒ **PROJECT DESCRIPTION** Please attach a full description of the work that will be undertaken as a result of this project. Portions of environmental statements or project applications may be included. The project boundary of the project should be clearly defined**

☒ **PROJECT MAP** This should include the precise location of the project – preferably a clear color image showing the nearest streets or roadways as well as all portions of the project. Tax maps, Sanborn maps and USGS quadrangle maps are all acceptable, but Bing and Google Earth are also accepted if the information provided is clear and well labeled. The project boundary should be clearly defined on the map and affected legal parcels should be identified.

☒ **PHOTOGRAPHS** Clear, current images of the property should be submitted. Black and white photocopies will not be accepted. Include images of the areas where the proposed work will take place. May require: exterior elevations, detailed photos of elements to be repaired/replaced (windows, doors, porches, etc.) All photos should be clearly labeled.

For Existing Structures	Yes	N/A	Comments
Property Card	☐	☐	
For New Construction	Yes	N/A	Comments
Project plans or limits of construction (if available)	☐	☐	
If project is located in a Historic District include renderings or elevation drawings of the proposed structure	☐	☐	
Soils Maps http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm	☐	☐	
Historic Maps http://magic.lib.uconn.edu/	☐	☐	
For non-building-related projects (dams, culverts, bridge repair, etc)	Yes	N/S	Comments
Property Card	☒	☐	
Soils Map (see above)	☒	☐	
Historic Maps (see above)	☒	☐	

STAFF REVIEW AREA	Above	Date	Below	Date
Indicate date of Review and Initials of Reviewer				

PROJECT CONTACT

Name Timothy Coon Title Project Engineer
Firm/Agency J.R. Russo + Associates, LLC
Address 1 Shoham Road
City East Windsor State CT Zip 06088
Phone 860-623-0569 Cell Fax 860-623-2485
Email tcoon@jrrusso.com

*Note that he SHPO's ability to complete a timely project review depends largely on the quality of the materials submitted.
** Please be sure to include the project name and location on *each page* of your submission.

Department of Economic and Community Development
Connecticut still revolutionary

State Historic Preservation Office
One Constitution Plaza | Hartford, CT 06103 | 860.256.2800 | Cultureandtourism.org

PROJECT REVIEW COVER FORM

SHPO USE ONLY

Based on our review of the information provided to the State Historic Preservation Office, it is our opinion that:

☐ No historic properties will be affected by this project. No further review is requested.

☐ This project will cause no adverse effects to the following historic properties. No further review is requested:

☐ This project will cause no adverse effects to the following historic properties, conditional upon the stipulations included in the attached letter:

☐ Additional information is required to complete our review of this project. Please see the attached letter with our requests and recommendations.

☐ This project will adversely affect historic properties as it is currently designed or proposed. Please see the attached letter for further details and guidance.

Daniel T. Forrest — Date
Deputy State Historic Preservation Officer

Town of Suffield, CT

Property Listing Report

Map Block Lot 39H-29-21 Account 39531

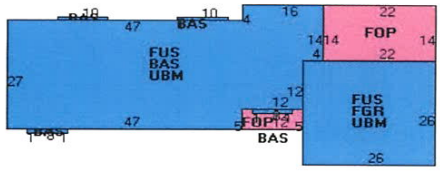
Property Information

Property Location	1005 NORTH ST
Owner	SULLIVAN KEVIN S JR & KRIST A
Co-Owner	
Mailing Address	1005 NORTH ST SUFFIELD CT 06078
Land Use	1012 SFR w/Apt
Land Class	R
Zoning Code	R90
Census Tract	4771.01

Neighborhood	5
Acreage	50.46
Utilities	Well,Septic
Lot Setting/Desc	Rural Level
Additional Info	

Photo

Sketch



Primary Construction Details

Year Built	1975
Stories	2
Building Style	Colonial
Building Use	Residential
Building Condition	Good
Floors	Hardwood
Total Rooms	12

Bedrooms	05
Full Bathrooms	4
Half Bathrooms	1
Bath Style	Average
Kitchen Style	Above Average
Roof Style	Gambrel
Roof Cover	Wood Shingle

Exterior Walls	Clapboard
Interior Walls	Drywall
Heating Type	Hot Water
Heating Fuel	Oil
AC Type	None
Gross Bldg Area	7343
Total Living Area	3986

Report Created On 2/24/2015

Town of Suffield, CT

Property Listing Report | Map Block Lot 39H-29-21 | Account 39531

Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	398800	279160
Extras	7700	5390
Improvements	435000	304500
Outbuildings	28500	19950
Land	445400	77160
Total	880400	381660

Outbuilding and Extra Items

Type	Description
Fireplace 2 Story	2.00 UNITS
Fireplace Extra Opening	3.00 UNITS
Kitchen	
IG Pool - Vinyl/Plastic	648.00 S.F.
Bath House/Cabana	990.00 S.F.

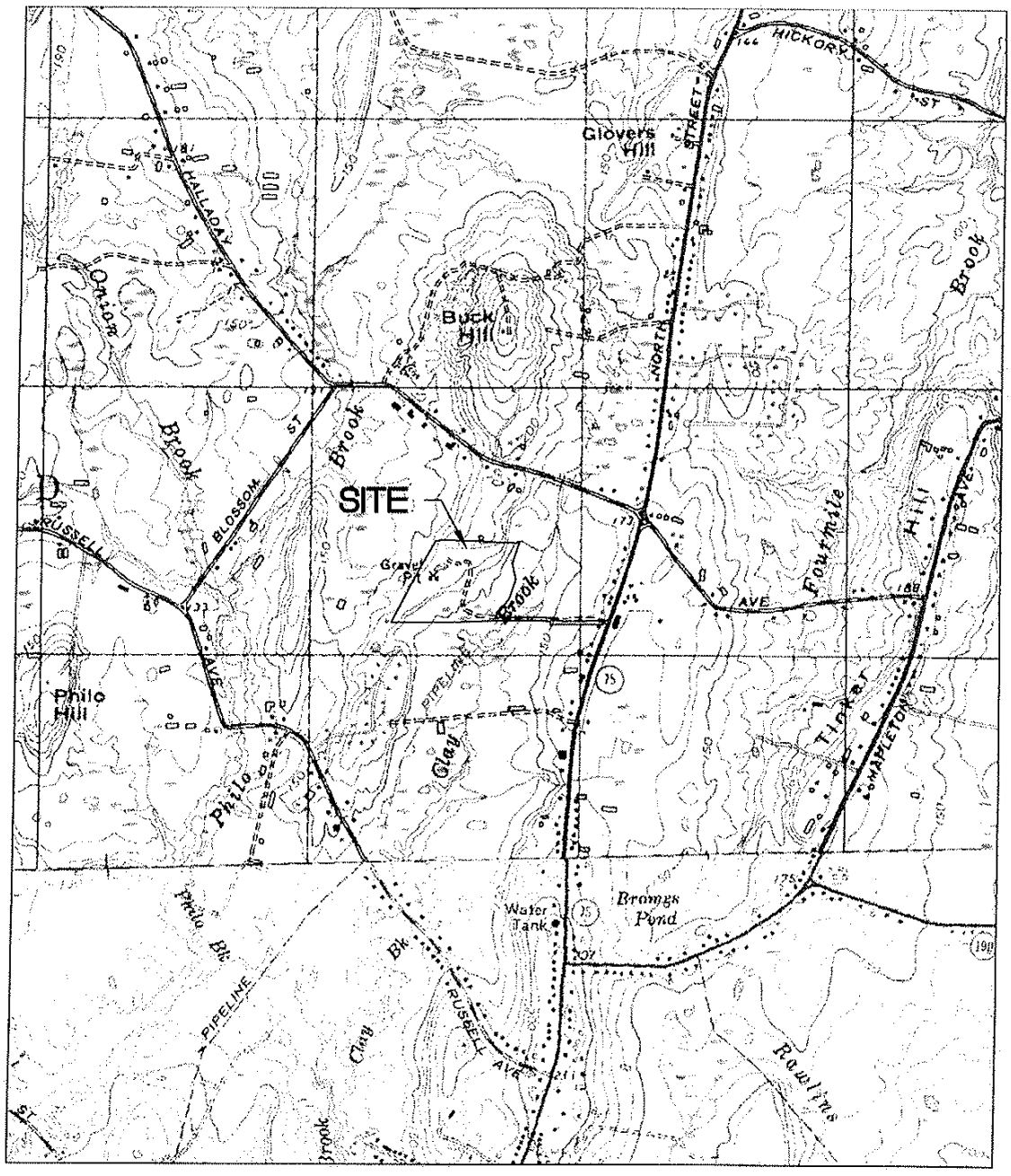
Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
First Floor	1673	1673
Garage	676	0
Porch, Open	368	0
Upper Story, Finished	2313	2313
Basement, Unfinished	2313	0
Total Area		

Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
SULLIVAN KEVIN S JR & KRIST A	261/ 364	6/30/1995	255000
VAKALIS MARY DIANA	148/1008	8/17/1977	0

Report Created On



VICINITY MAP
West Springfield USGS Quadrangle

Solar PV Development
Sullivan Farm

1005 North Road
Suffield, Connecticut

RUSSO
SURVEYORS · ENGINEERS
SERVING CT & MA

J.R. Russo & Associates, LLC

DATE	2-22-15
SCALE	1"=2,000'
JOB NUMBER	2014-115
SHEET	VC-1

REQUESTOR: TIMOTHY COON
J.R. RUSSO & ASSOCIATES LLC

CRCOG

February 20, 2015

Property Information

Property ID	09003139-2959
Location	1005 NORTH ST
Owner	SULLIVAN KEVIN S JR & KRI

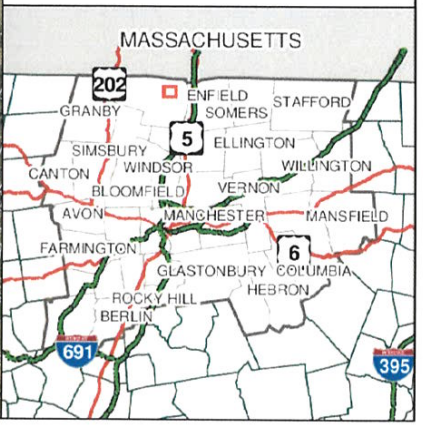
REQUESTOR: *TIMOTHY COON*
J.R. RUSSO & ASSOCIATES, LLC
SITE: *SOLAR PV DEVELOPMENT*
SULLIVAN FARM
1005 NORTH ST., SUFFIELD, CT
DATE: *2-22-15*

CRCOG

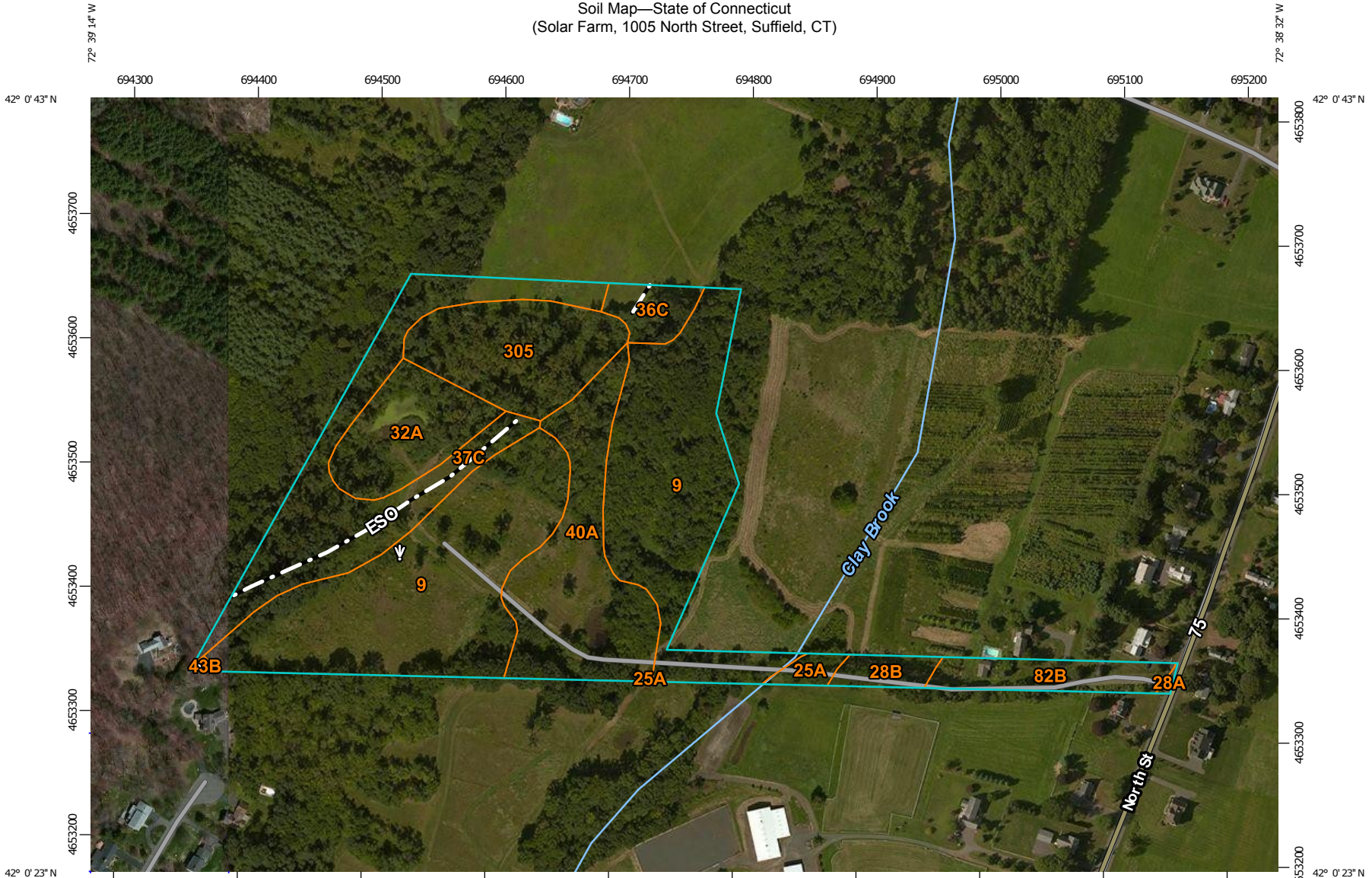
MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

CRCOG and AppGeo make no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Parcels updated October 1, 2013



Soil Map—State of Connecticut
(Solar Farm, 1005 North Street, Suffield, CT)



Map Scale: 1:4,390 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

Soil Map—State of Connecticut
(Solar Farm, 1005 North Street, Suffield, CT)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
Survey Area Data: Version 13, Oct 28, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 28, 2011—Sep 9, 2013

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

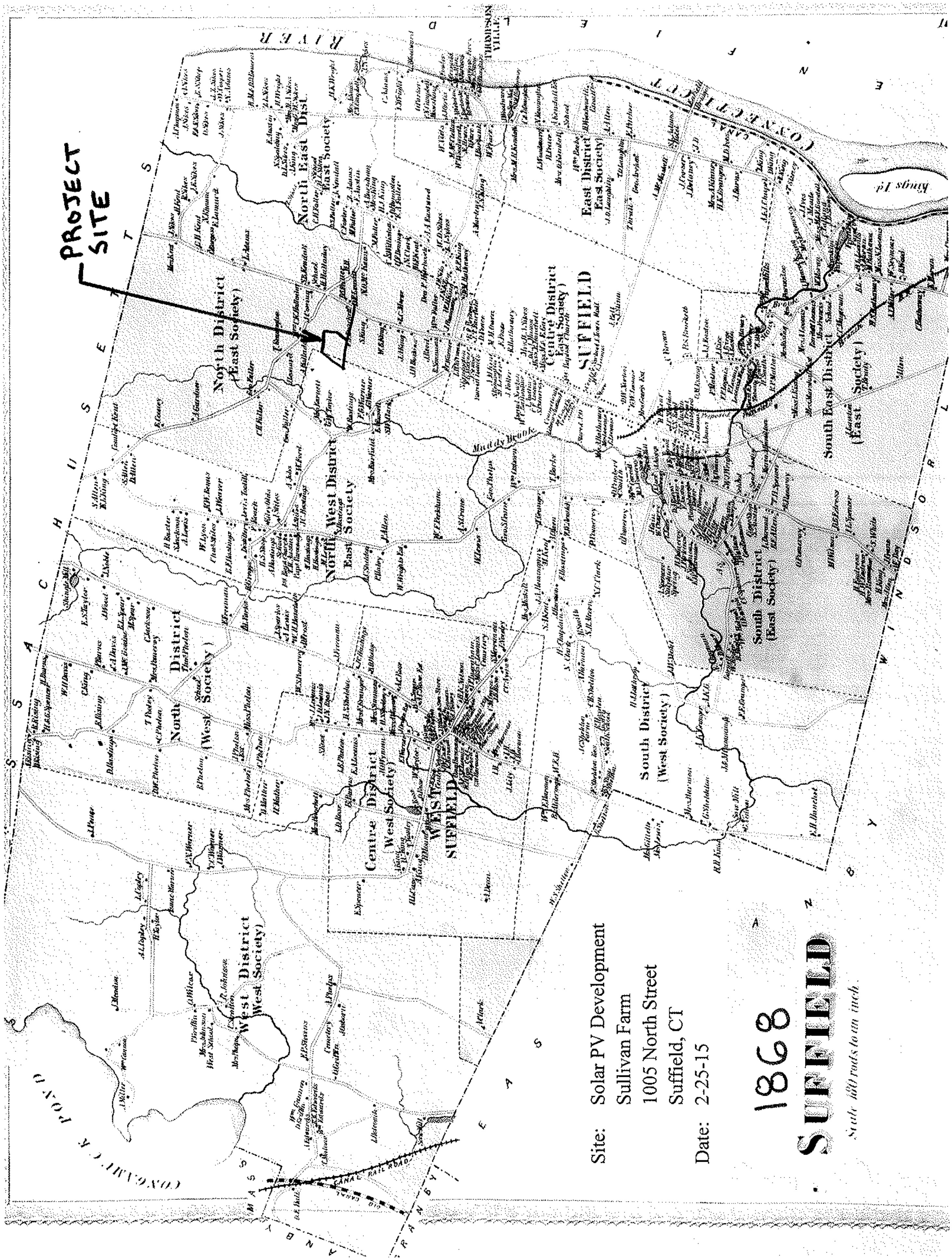
State of Connecticut (CT600)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
9	Scitico, Shaker, and Maybid soils	12.5	42.9%
25A	Brancroft silt loam, 0 to 3 percent slopes	0.3	1.0%
28A	Elmridge fine sandy loam, 0 to 3 percent slopes	0.0	0.1%
28B	Elmridge fine sandy loam, 3 to 8 percent slopes	0.5	1.7%
32A	Haven and Enfield soils, 0 to 3 percent slopes	2.2	7.4%
36C	Windsor loamy sand, 8 to 15 percent slopes	0.7	2.4%
37C	Manchester gravelly sandy loam, 3 to 15 percent slopes	4.6	15.9%
40A	Ludlow silt loam, 0 to 3 percent slopes	4.2	14.3%
43B	Rainbow silt loam, 3 to 8 percent slopes	0.0	0.1%
82B	Broadbrook silt loam, 3 to 8 percent slopes	1.2	4.0%
305	Udorthents-Pits complex, gravelly	3.0	10.2%
Totals for Area of Interest		**29.1**	**100.0%**

1934 HISTORIC AERIAL PHOTOGRAPH

Source: UConn Magic Historical Map Collection

Site: Solar PV Development
Sullivan Farm
1005 North Street
Suffield, CT

Date: 2-25-15


PROJECT SITE
Site: Solar PV Development
Sullivan Farm
1005 North Street
Suffield, CT
Date: 2-25-15
1868
SUFFIELD
North District (East Society)
North East Dist.
East District East Society
Centre District (East Society)
SUFFIELD
North West District
South East District (East Society)
South District (East Society)
South District (West Society)
North District (West Society)
Centre District (West Society)
WEST SUFFIELD
West District (West Society)
Muddy Brook
CONNECTICUT
RIVER
MASSACHUSETTS
EAST GRANBY
WINDSOR

Department of Economic and Community Development

Connecticut
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March 16, 2015

Mr. Timothy A. Coon, P.E.
J.R. Russo & Associates, LLC
1 Shoham Road
East Windsor, CT 06088

Subject: Sullivan Solar Farm Development
1005 North Street
Suffield, Connecticut.

Dear Mr. Coon:

The State Historic Preservation Office (SHPO) has reviewed your request for information concerning the potential effects to historic properties associated with the referenced project. SHPO understands that the proposed solar voltaic facility will entail the construction of approximately 10 acres of ground-mounted solar panels within a larger 51.3 acre parcel. Ancillary features include an access road, underground cabling, security fencing, and an equipment pad.

SHPO notes that the project parcel is situated within a gently rolling rural section of Suffield comprised of modern homes and historic farmsteads. This type of environmental setting also is associated with pre-contact Native American settlement. As noted in your review request, a portion of the proposed project area consists of a filled gravel pit. SHPO does not consider these fill areas to be sensitive for archeological resources, but it is SHPO's opinion that intact and relatively well-drained soils within other portions of the Area of Potential Effect have an elevated potential to contain significant archeological resources. We are therefore requesting that a professional cultural resources assessment and reconnaissance survey be completed prior to construction. The survey should consider both the direct and indirect effects of the proposed project on above ground and below ground cultural resources. The survey should take into consideration potential viewshed impacts on structures older than fifty years that are listed on or may be eligible for listing on the National Register of Historic Places. In addition, subsurface testing should assess all areas of anticipated ground disturbance that are considered to have a moderate/high sensitivity for containing significant archeological deposits, unless sufficient research or fieldwork documents that this level of effort is unwarranted. All work should be in compliance with our *Environmental Review Primer for Connecticut's Archaeological Resources* and no construction or other project-related ground disturbance should be initiated until SHPO has had an opportunity to review and comment upon the requested survey. A list of qualified consultants is attached for your convenience.

This office appreciates the opportunity to review and comment upon this project. These comments are provided in accordance with the Connecticut Environmental Policy Act. 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

cc: Dr. Brain Jones, OSA

Department of Economic and Community Development

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TO WHOM IT MAY CONCERN

The following archaeologists, as known to us, meet the professional qualification guidelines of the National Park Service (36 CFR 61):

ACS [Archaeological Consulting Services]
Attn: Dr. Gregory Walwer
10 Stonewall Lane
Guilford, CT 06437-2949
Phone: 203-458-0550
Fax: 203-672-2442
acsinfo@yahoo.com

American Cultural Specialists LLC
Attn: Lucianne Lavin, Ph.D.
755 Riverside Avenue
Torrington, CT 06790
Phone: 860-626-8210
Fax: 877-903-0269
Luci.ACS@pobox.com

Archaeological & Historical Services
Attn: Ms. Mary Harper
PO Box 543
Storrs, CT 06268
Phone: 860-429-2142
Fax: 860-429-1724
mharper@ahs-inc.biz

Aspetuck Landways
Attn: Dr. Stuart A. Reeve
PO Box 11024
Greenwich, CT 06831
Phone: 203- 470-7874
Sreeve2000@yahoo.com

Marc L. Banks, Ph.D., LLC
11 Lincoln Lane
Weatogue, CT 06089
Phone: 860-658-7482
Fax: 860-658-7482
banksmarc@sbcglobal.net

BL Companies
Attn: Ms. Gretchen Yarnall
150 Trumbull Street, 6th Floor
Hartford, CT 06103
Phone: 800-577-3267

Gray & Pape Inc.
Attn: Mr. Patrick O'Bannon
60 Valley Street, Suite 103
Providence, RI 02909
Phone: 401-273-9900
Fax: 401-273-9944
pobannon@graypape.com

Hartgen Archaeological Associates Inc.
Attn: Mr. Matthew Kirk
1744 Washington Avenue Ext.
Rensselaer, New York 12144
Phone: 518-283-0534
Fax: 518-283-6276
mkirk@hertgen.com

Heritage Consultants LLC
Attn: Nicholas Griffis, M.A.
P.O. Box 310249
Newington, CT 06131
Phone: 860-667-3001
Fax: 860-667-3008
info@heritage-consultants.com

Historical Perspectives Inc.
Attn: Ms. Cece Saunders
Historical Perspectives, Inc.
P. O. Box 529
Westport, CT 06881
Phone: 203-226-7654
cece@historicalperspectives.org

Sarah L Holmes, PhD
31 Mistuxet Ave
Mystic, CT 06355
Phone: 860-501-1446
slh@att.net

LaPorta Geological Consultants, LLC
Attn: Dr. Phillip LaPorta
P.O. Box 237
Goshen, New York 10924
Phone: 845-360-2522

Department of Economic and Community Development

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Louis Berger Group Inc.
Attn: Dr. Hope Luhman, Cultural Resources
20 Corporate Woods Boulevard
Albany, NY 12211
Phone: 518-514-9303
Fax: 518-514-0731
hluhman@louisberger.com

JMA, a CCRG Company
Attn: Mr. Martin Dudek
410 Great Pond Road, Suite B-14
Littleton, MA 01460
Phone: 978-793-2579
mdudek@johnmilnerassociates.com

Public Archaeology Laboratory Inc.
Attn: Ms. Deborah Cox
26 Main Street
Pawtucket, RI 02860
Phone: 401-728-8780
Fax: 401-728-8784
dcox@palinc.com

Public Archaeology Survey Team Inc.
Attn: Ms. Mary Harper
PO Box 209
Storrs, CT 06268
Phone: 860-429-1723
Fax: 860-429-9454
mharper@past-inc.org

Raber Associates
Attn: Dr. Michael S. Raber
81 Dayton Road, PO Box 46
South Glastonbury, CT 06073
Phone: 860-633-9026
Fax: 860-633-9026
msraber@aol.com

Cosimo Sgarlata, Ph.D.
1 Roscoe Street
Norwalk, CT 06851
Phone: 203-847-5882
Sgarlata@wcsu.edu

TRC Solutions
850 Bear Tavern Road, Suite 104
Trenton, NJ 08628
Phone: 609-882-7704, ext. 108

Mr. Ernest Wiegand
152 Silver Spring Road
Wilton, CT 06897
Phone: 203-733-5184

This information updates and supersedes all previous material provided by the State Historic Preservation Office with respect to the identification of archaeological consultants. Further, this list has been arranged alphabetically; no preferential rating or evaluation should be inferred. The State Historic Preservation Office does not recommend, endorse, or assume responsibility for the quality of work for any individual or firm on this list, nor is there any guarantee, implicit or implied, that any work product produced by those on this list will necessarily meet federal and state requirements.

At its discretion, the State Historic Preservation Office may remove consultants from its informational list if no work has been undertaken in Connecticut over a three year period.

For further information please contact Catherine Labadia, Staff Archaeologist, at catherine.labadia@ct.gov.

Revised 3/15