



**Connecticut Siting Council
Docket No. 272**

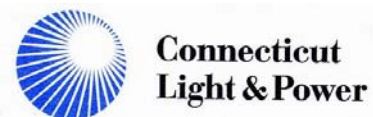
**Development & Management Plan
for the**

**Middletown-Norwalk
345-kV Transmission Line Project**

**Segment 4a – Singer Substation to
Fairfield/Westport Town Line**

Volume 1 of 3

December 2005



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345-kV Transmission Line Project**

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Town Line
Volume 1 of 3**

**Connecticut Siting Council
Docket No. 272**

**Submitted By:
The Connecticut Light and Power Company**

December 2005

**Prepared by:
Burns & McDonnell Engineering Company, Inc**

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- APPENDIX D – DOCUMENTATION OF USE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION ENCROACHMENT PROCESS

1.0 INTRODUCTION

The Connecticut Light and Power Company (CL&P) hereby submits this Development and Management (D&M) Plan for the portion of the Middletown-Norwalk Project (the Project) between Singer Substation in Bridgeport and the Fairfield/Westport town line at Sasco Creek (hereinafter “Segment 4a”), in accordance with the Connecticut Siting Council (Council) Decision and Order for Docket No. 272 of April 7, 2005, and pursuant to Sections 16-50j-60 through 16-50j-62 of the Regulations of Connecticut State Agencies, *Requirements for a right-of-way development and management plan*. The Middletown-Norwalk Project consists of approximately 69 miles of 345-kV transmission line from CL&P’s existing Scovill Rock Switching Station (located in the City of Middletown in Middlesex County), through New Haven County to CL&P’s existing Norwalk Substation (located in the City of Norwalk in Fairfield County). The Project will include approximately 45 miles of overhead transmission line construction and 24 miles of underground transmission line construction. The overhead portion of the Project will extend from the Scovill Rock Switching Station in the Town of Haddam to the East Devon Substation in the City of Milford. The underground portion will extend from the East Devon Substation to the Norwalk Substation in Norwalk. The Project will include the construction of two new electric substations (East Devon Substation in Milford and United Illuminating’s Singer Substation in the City of Bridgeport) and one new switching station (Beseck in Wallingford), as well as modifications to the existing Norwalk Substation and Scovill Rock Switching Station. CL&P will own all overhead portions of the Project, as well as the underground portion from East Devon Substation to the first vault west of the Housatonic River. CL&P ownership continues for the entire underground portion from the Singer Substation to the Norwalk Substation. United Illuminating Company will build and own the Singer Substation and from the Singer Substation to the first splice-vault, inclusive of the splice-vault west of the Housatonic River, a distance of approximately 5.75 miles.

CL&P plans to submit twelve D&M plans for its portion of the Project. The D&M plans will be developed based on the type of construction and geographic location along the route, as follows:

Switching Stations and Substations (4 D&M plans)

- Scovill Rock (Middletown) – Approved by the Council on August 25, 2005
- Beseck (Wallingford)
- East Devon (Milford)
- Norwalk (Norwalk)

Overhead Lines (4 D&M plans)

- Segment 1a: Scovill Rock Switching Station to Chestnut Junction, Oxbow Junction to Beseck Switching Station (with the exception of the Royal Oak Bypass), and Black Pond Junction to Beseck Switching Station
(Middletown, Haddam, Durham, Middlefield, Meriden, Wallingford)
- Segment 1b: Royal Oak By-pass
(Middletown)
- Segment 2a: Beseck Switching Station to Cheshire/Hamden Town line
(Wallingford, Cheshire)
- Segment 2b: Hamden/Cheshire Town line to East Devon Substation
(Hamden, Bethany, Woodbridge, West Haven, Orange, Milford)

Underground Lines (3 D&M plans)

- Segment 3: East Devon Substation to UI ownership point in Stratford
(Milford, Stratford)

- Segment 4a: Singer Substation to Fairfield/Westport Town line
(Bridgeport, Fairfield)
- Segment 4b: Fairfield/Westport Town line to Norwalk Substation
(Westport, Norwalk)

Underground Watercourse and Railroad Crossings (1 D&M plan)
(Milford, Stratford, Bridgeport, Fairfield, Westport, Norwalk)

1.1 PROJECT DESCRIPTION

This D&M Plan covers the work associated with the installation of two (2) underground 345-kV cross linked polyethylene (XLPE) transmission cable circuits and corresponding splice vaults from the proposed Singer Substation located in Bridgeport to the Fairfield/Westport town line at Sasco Creek excluding major water crossings between these locations. The underground cable system will be installed primarily within existing public road rights-of-way (ROW) and is described in detail in Section 2.4 of this D&M plan. The majority of the splice-vaults are being sited on new easements located off of the existing public road rights-of-way. This segment of the route covers approximately 7.0 of the 15.2 miles of Segment 4. The remaining 8.2 miles of Segment 4 and all major waterway crossings in this segment will be addressed in future D&M Plans.

The work in Segment 4a will include 5 separate construction activities that occur sequentially but not continuously. As described in greater detail below, these activities include:

- Duct Bank Installation;
- Splice Vault Installation;
- Cable Pulling;
- Cable Splicing;
- Restoration.

1.1.1 Duct Bank Installation

The typical duct bank configuration includes the double circuit 3000 kcmil copper XLPE transmission cables, associated communication fiber and grounding wires. At certain limited locations along the route (primarily river crossings) 3500 kcmil XLPE cables may be needed to meet ampacity requirements. The duct bank construction work zone will measure approximately 400 feet. The following activities will occur within this work zone:

- saw cutting pavement;
- trench excavation;
- duct placement;
- back filling;
- temporary pavement restoration.

1.1.1.1 Saw Cutting Pavement

Roadway pavement will be saw cut on both sides of the planned excavation to a width slightly greater than that for the standard duct bank configuration (Volume 2). Alternate duct bank configurations to avoid existing utilities will require slight variations in the width of pavement requiring saw cutting.

1.1.1.2 Trench Excavation

The standard duct bank configuration requires excavation of a 4-foot wide trench to a minimum depth of 5 feet. This depth provides a minimum cover of 2.5 feet, as will be set forth in the General Encroachment Agreement between CL&P and ConnDOT. As previously mentioned, at certain locations alternative duct bank configurations will be required to avoid existing utilities, and these locations will require various trench depths. Typical cross sections are provided in Volume 2. Trenching is anticipated to proceed at a rate of 50 to 200 linear feet per day. Steel plating of the open trench will be utilized as allowed by ConnDOT to facilitate the construction process and open up travel lanes between restricted construction periods. A soil management plan will be produced to handle spoil materials removed during excavation.

1.1.1.3 Duct Placement

Schedule 40 Polyvinyl Chloride (PVC) ducts housing the XLPE cables, grounding cables, and communication fibers will be placed into the excavated trench in a predefined arrangement. Six 8-inch ducts will house one of the three XLPE cables of each circuit. Two 4-inch ducts will house communication fiber optic cables and two 2-inch conduits will contain the coated copper grounding cables. The ducts will be supported by incrementally spaced duct spacers and, in certain locations, these ducts will be strapped together to prevent movement during backfilling operations. Spacing of the ducts is critical and is governed by system ampacity requirements that are negatively affected by mutual heating of the cables. Detailed information regarding spacing is provided in the duct bank cross section drawings noted as construction details in Volume 2.

1.1.1.4 Back Filling

Back filling will be performed incrementally with various materials. The ducts will be encased in 3000-psi concrete (earthen formed), then the trench will be backfilled with a 100-psi fluidized thermal backfill to a depth specified by ConnDOT (or Bridgeport and Fairfield in the case of municipal roadway rights-of-way). Aggregate material will then be installed in multiple lifts with alternating compaction techniques.

1.1.1.5 Temporary Pavement Restoration

Temporary pavement restoration using hot patch will be used until final pavement restoration occurs. The temporary hot patch will be installed in the width of the saw cut trench and will match the existing roadway grade.

Subsurface utility engineering (SUE), including the locating of potential conflicts with existing utilities, has been performed. Results of this study are incorporated into the Plan drawings in Volume 2. Excavations for relocation of existing utilities will be necessary at certain locations and this work will be performed prior to trenching for duct bank installation. Utilities scheduled for relocation are noted in the profile view of the Plan and Profile drawings of Volume 2. Specific measures for the relocation of existing utilities will be determined by the Owner.

1.1.2 Splice Vault Installation

Splice vaults serve as the location where successive lengths of cable are connected. Each vault will house three cable splices, one splice for each phase of the circuits. Pre-cast concrete splice vaults with outside dimensions of 32 feet in length, 10 feet in width and 10 feet in height with an approximate 1 foot wall thickness will be installed at approximate intervals of 1650 feet along the underground route. Each vault corresponds to a single circuit; therefore, each splice location will have two vaults. Vault excavations

will be to a minimal depth of 15 feet, providing a minimum cover of 2.5 feet, with over excavations of 2 feet on each side for workspace. Each vault will have two 36-inch entry manholes. Specific details are provided on the Plan and Profile drawings in Volume 2.

Typically two additional hand-holes, each measuring 2 feet in length by 2 feet in width by 2 feet in depth, will be located close to vault locations to provide equipment for monitoring cable sheath voltage. Typical drawings of these hand holes in relation to the vaults are included in the Construction Detail drawings of Volume 2. Hand hole installations will be performed simultaneously with vault construction.

Depending on site specific conditions such as overhead obstructions, proximity to existing structures and geotechnical conditions encountered, vault installation will take 7 - 14 days (assuming 12-hour shifts). Alternatively, installation could be completed in 2 - 4 days if 24-hour shifts were used. Handling and disposal of spoil materials will be included in the soil management plans.

ConnDOT has requested that all splice vaults be located outside the public roadway ROW. CL&P has made extensive efforts to locate vaults so as to minimize impacts to traffic, taking additional social factors into account. A temporary steel bridging system may be utilized at the vault locations located within roadways to maintain traffic flow during restricted work hours. Traffic control for each vault location, a concern of Bridgeport and Fairfield, is addressed in the Maintenance and Protection of Traffic (MPT) Plans that will be issued to the municipalities and ConnDOT.

1.1.3 Cable Pulling

The approximately 5" diameter XLPE transmission cable will be pulled into ducts between splice vaults utilizing reel carts located above splice vaults and pulling machines situated at the adjacent set of vaults along the alignment. Typical reels with 1,800 feet of cable measure 12-14 feet in height and 8 feet in width and weigh approximately 50,000 lbs. Due to the size of reel carts and clearance limitations along the route, an engineering review will be performed to designate shipping routes and approved travel routes from potential material staging areas. Pulling operations will typically take 6 days per set of vaults. Specific traffic control measures for each vault location are included in the MPT plans.

1.1.4 Cable Splicing

Cable splicing within the vaults requires controlled temperature and humidity, provided by splice trailers parked on top of the vault locations. Splicing trailers provide the conditioned atmosphere to the vaults via sealed hoses during the splicing operation. Splicing operations take 24 days per set of vaults (12 days for each vault) based on 12-hour shifts, as recommended by cable manufacturers.

1.1.5 Restoration

Pavement restoration will be performed to standards outlined by ConnDOT and/or Bridgeport and Fairfield for locations within public roadway ROW. Restoration plans for vault locations located outside of the public ROW will be site specific to each location. For cases involving restoration other than pavement (i.e., landscaping), final restoration may not occur until after the pulling and splicing operations have been completed.

1.2 CONDITIONS

In addition to the *Requirements for a right-of-way development and management plan*, found in Sections 16-5-j-60 et seq. of the Regulations of Connecticut State Agencies, the Council stipulated certain requirements for the D&M plans in its Decision and Order for the Middletown-Norwalk Project, in

conditions 14-21. A copy of this portion of the Decision and Order is provided in Appendix A. Those requirements have been incorporated in this D&M Plan either directly or by reference. Construction procedures will also be described in the *Method and Manner to Construct* filing that will be submitted to the Connecticut Department of Public Utility Control pursuant to Connecticut General Statutes §16-243. No permits from the Connecticut Department of Environmental Protection (DEP) or the U.S. Army Corps of Engineers are required for the work proposed in this D&M plan as water courses and wetlands will be handled in a separate D&M Plan. An Encroachment Agreement is currently being negotiated with the Connecticut Department of Transportation.

1.3 CONSULTATIONS

As part of the preparation of this D&M Plan, CL&P consulted with the following representatives of the Town of Fairfield on June 9, 2005:

- Bill Hurley - Town Engineer
- Eileen Kennelly - Town Attorney
- Sands Cleary - Fairfield Health Department.

During the meeting CL&P representatives outlined the D&M Plan process and reviewed the construction activities that would take place in Fairfield associated with the construction of Segment 4a. The main concerns voiced by Fairfield representatives focused on time of day for construction (the town prefers night construction), and vault placement. CL&P also provided information regarding points of contact at the Company for the Project. Mr. Dan Garstka from CL&P and Mr. Scott Newland from Burns & McDonnell are the designated contacts.

Another meeting was held with representatives of the Town of Fairfield on September 13, 2005 which included the following:

- Bill Hurley - Town Engineer
- Eileen Kennelly - Town Attorney
- Ken Flatto - First Selectman.

Topics of discussion were focused on concerns involving damages, such as tree removal, storm grates, curbs and sidewalks, documenting existing conditions, hours of construction and vault locations 6427-6429 and 7527 -7529. Mr. Hurley requested that existing conditions information be submitted electronically and he requested a copy of ConnDOT's comments. Burns & McDonnell representatives discussed the time frame for D&M Plan review, notified Town officials that potholing and geotechnical survey were to begin during the next month, discussed the review process for the traffic maintenance plan and discussed municipal and ConnDOT encroachment permit requirements.

CL&P initially consulted with the following representatives of the City of Bridgeport on May 19, 2005:

- George Estrada and John Cottell - Bridgeport Public Facilities
- Mike Nidoh - Office of Planning and Economic Development
- Barry Skinner - City Engineer
- Ravi Keerthy - Water Pollution Control Authority.

Concerns of City of Bridgeport officials' were focused on specific street closures as they related to time of year and time of day. They indicated that Chief Rooney of the Bridgeport Fire Department would have to be provided information concerning fire hazards and methods of suppression within splice vaults.

Bridgeport officials also stated that the Office of Overtime would need a schedule of activities prior to construction to anticipate police protection needs. CL&P provided information regarding points of contact at the Company for the Project, with Mr. Dan Garstka from CL&P and Mr. Scott Newland from Burns & McDonnell being the designated contacts.

A second meeting was held with representatives of the City of Bridgeport on October 4, 2005 which included the following:

- Mike Nidoh – Office of Planning and Economic Development
- Ravi Keerthy – Water Pollution Control Authority
- Barry Skinner – City Engineer
- George Estrada – Bridgeport Public Facilities
- Melanie Howlett – City Attorney.

Discussion focused on various permits and approvals that would be required by the City. The project team requested an additional meeting with the City where all municipal permits and ordinances would be outlined. The City requested an additional duct be installed for a “municipal gain.” CL&P mentioned the additional duct would require separate hand-holes due to facility access issues. The City pointed out various existing utilities that were of concern and should be avoided. Traffic control issues were discussed and the City was advised all items would be addressed in the forthcoming Maintenance and Protection of Traffic plans.

A third meeting was held with representatives of the City of Bridgeport on December 1, 2005 which included the following:

- Mike Nidoh – Office of Planning and Economic Development
- Barry Skinner – City Engineer
- John Cottell – Bridgeport Public Facilities
- Melanie Howlett – City Attorney.

The main topic of discussion focused on various permits the City required prior to construction. The City will provide a comprehensive list in the following weeks and the project team will review the list prior to follow-up discussions.

A meeting with ConnDOT engineers and staff was held on September 7, 2005. ConnDOT attendees included:

- Sohrab Afrazi, ConnDOT Utilities
- Charles Harlow, ConnDOT Traffic
- Tracy Fogarty, ConnDOT Traffic
- Barbara Ricozzi, ConnDOT Traffic
- Jerry Graci, ConnDOT Utilities
- Kurt W. Von Hone, ConnDot Utilities
- Carmine Cavallaro, ConnDOT DIST 3, Permits
- Brian Cunningham, ConnDOT Consultant Design
- Anthony Kwentoh, ConnDOT DIST 3, Construction
- Craig Bordere, ConnDOT Rails-Property
- Dennis Murphy, ConnDOT Rails
- Andrew Przybylowicz, ConnDOT CE-Design
- Andy Fesenmeyer, ConnDOT CE-Design
- Robert Brown, ConnDOT CE-Design.

The meeting began by discussing the strategy of D&M submittals, including the number and extent of D&M Plans, concurrent review with municipalities, and the plan to submit water crossings in a separate D&M Plan, and vault locations as they related to the ConnDOT right-of-way. The Project also requested that ConnDOT review and determine pavement restoration procedures. The time frame for review and subsequent submittals was addressed during this meeting. ConnDOT staff discussed inspection concerns and their concerns over the fact that the roads included in the transmission line route were rated for heavy loads and as such would require that all components of the transmission line be rated to weights equal to those required for the roads. ConnDOT personnel stated that telephone and sewer relocations should be avoided. The final concern addressed by ConnDOT was the impact to the Project by the lowering of State Route 130. Finally, ConnDOT requested that the Project provide 13 additional sets of the Segment 4a plans and profiles. These were provided.

2.0 DRAWINGS AND SITE INFORMATION

Segment 4a extends from the Singer Substation in Bridgeport to Sasco Creek in Fairfield, a distance of approximately 7 miles. It utilizes existing Connecticut Department of Transportation (ConnDOT) roadway right-of-way (ROW), municipal road ROW, and Metro North Railroad/New Haven Line ROW along the entire route with the exception of those vault locations to be located outside the ROW's on private property. The ConnDOT roads include Fairfield Avenue (Route 130) in Bridgeport and Boston Post Road in Fairfield (U.S. Rte. 1 and State Rte. 130). CL&P performed and reported on extensive research of environmental conditions and cultural resources as part of the Docket No. 272 application to the Council. The following provides descriptive information regarding the existing conditions at the site and the modifications that will take place along Segment 4a as part of the Project. This information is shown graphically on the drawings described below.

2.1 KEY MAP

The location of Segment 4a is shown on the Key Map in Figure 2.1.

2.2 PLAN DRAWINGS

In addition to the key map, this D&M Plan contains drawings showing the Plan and Profile for the transmission line using a scale of 1" = 30'. The Plan and Profile drawings are located under separate cover noted by municipal name and stationing in Volume 2. These drawings depict the engineering design for installation of the duct bank, location of existing underground utilities, right-of-way boundary, adjacent property owners, public lands, yet-to-be-acquired ROW easements for vaults, vault locations and access points other than ConnDOT roadways.

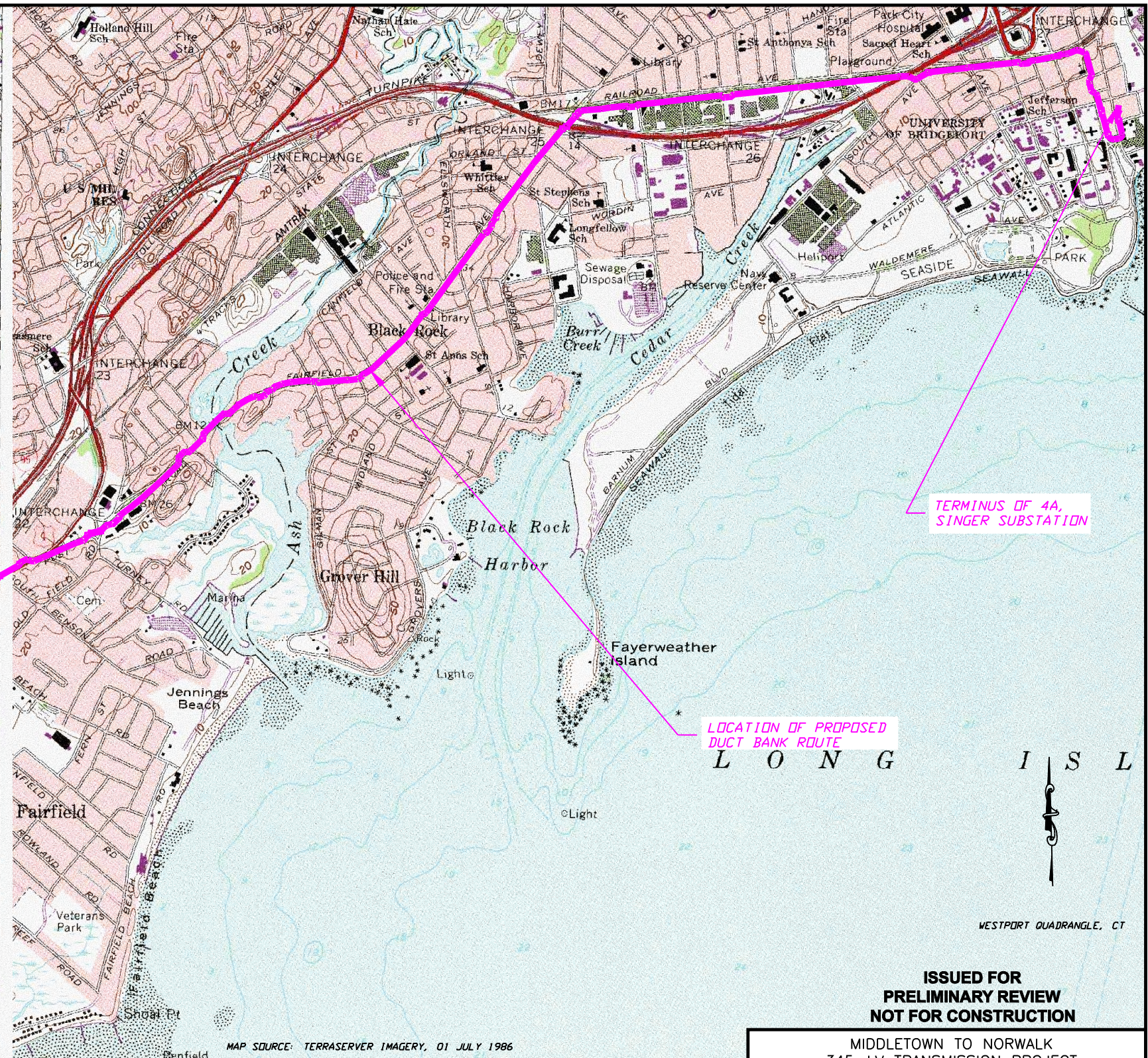
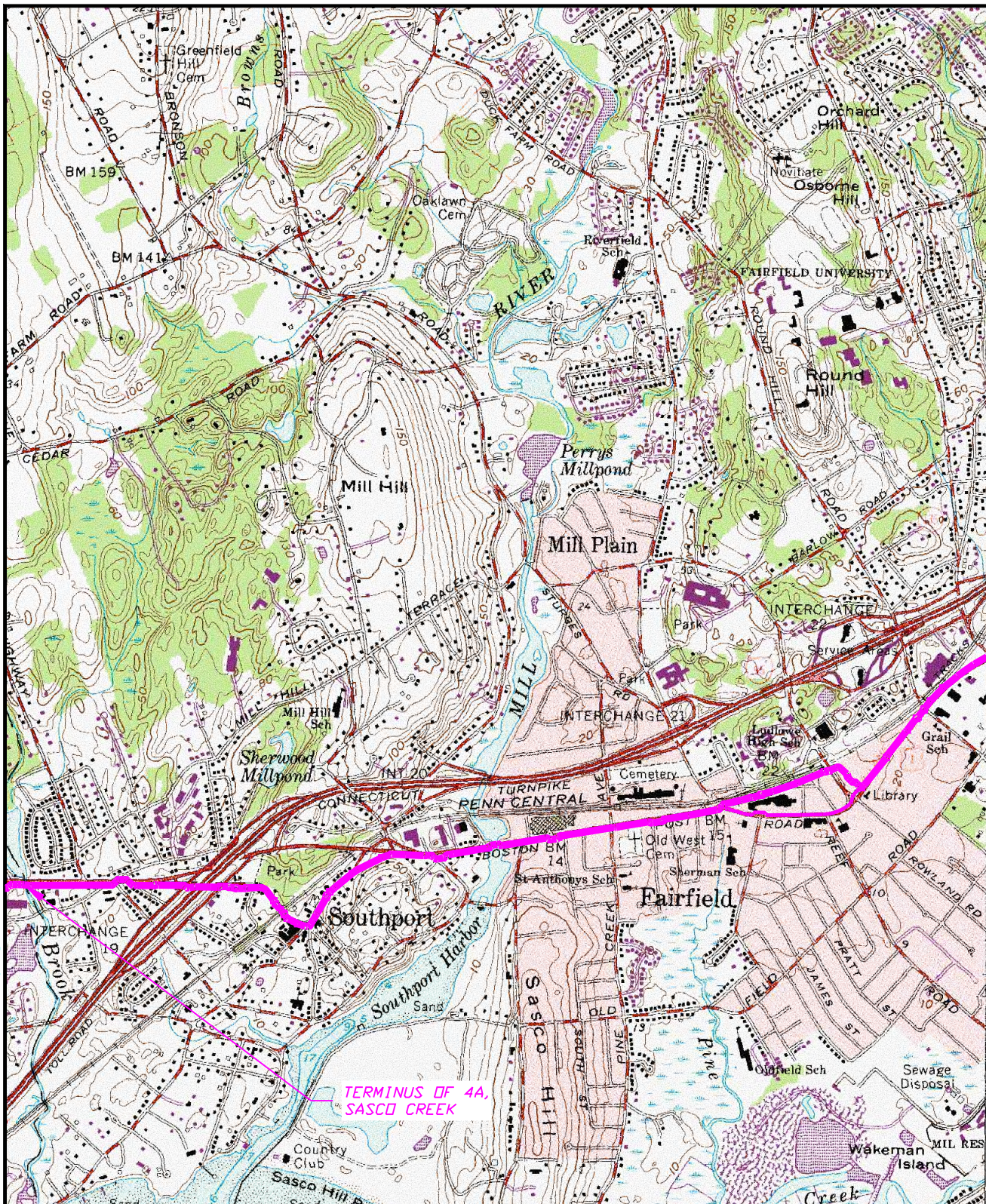
2.3 LAND OWNERSHIP

The 345-kV cable system to be installed in segment 4a is primarily situated within ROW owned either by the City of Bridgeport, the Town of Fairfield, or the Connecticut Department of Transportation (ConnDOT). In addition, twenty-two pairs of splice vaults will be located in Bridgeport and Fairfield. The location of the 22 pairs of splice vaults will be as follows:

- Fifteen pairs will be situated outside the ConnDOT ROW on privately property;
- Three pairs will be within the ConnDOT ROW inside the roadway;
- Two pairs will be within the ConnDOT ROW but outside the roadway;
- Two pairs will be located within the municipal ROW; and,
- One pair will be located partially in the municipal highway ROW and partially on private property.

A list of private property owners identified on the Plan drawings in Volume 2 from whom temporary and permanent easements will have to be acquired is provided in Table 2-1 below. Figure 2-2 depicts the typical temporary and permanent easement dimensional layout needed for splice-vault locations. This typical layout incorporates approximately 10,000 square feet of permanent easement area and 6,500 square feet of temporary easement area to be acquired. Site specific conditions, including but not limited to rock, existing utilities, available workspace, and overhead obstructions, will dictate the actual dimensions of the temporary and permanent easements at each location.

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TERMINUS OF 4A,
SINGER SUBSTATION

LOCATION OF PROPOSED
DUCT BANK ROUTE

L O N G I S L

WESTPORT QUADRANGLE, CT

**ISSUED FOR
PRELIMINARY REVIEW
NOT FOR CONSTRUCTION**


MIDDLETOWN TO NORWALK
345-kV TRANSMISSION PROJECT
PROPOSED DUCT BANK ROUTE
WESTPORT FAIRFIELD TOWN LINE
TO SINGER SS

LOCATION: TOWN OF FAIRFIELD, TOWN OF BRIDGEPORT
COUNTY: FAIRFIELD STATE: CT

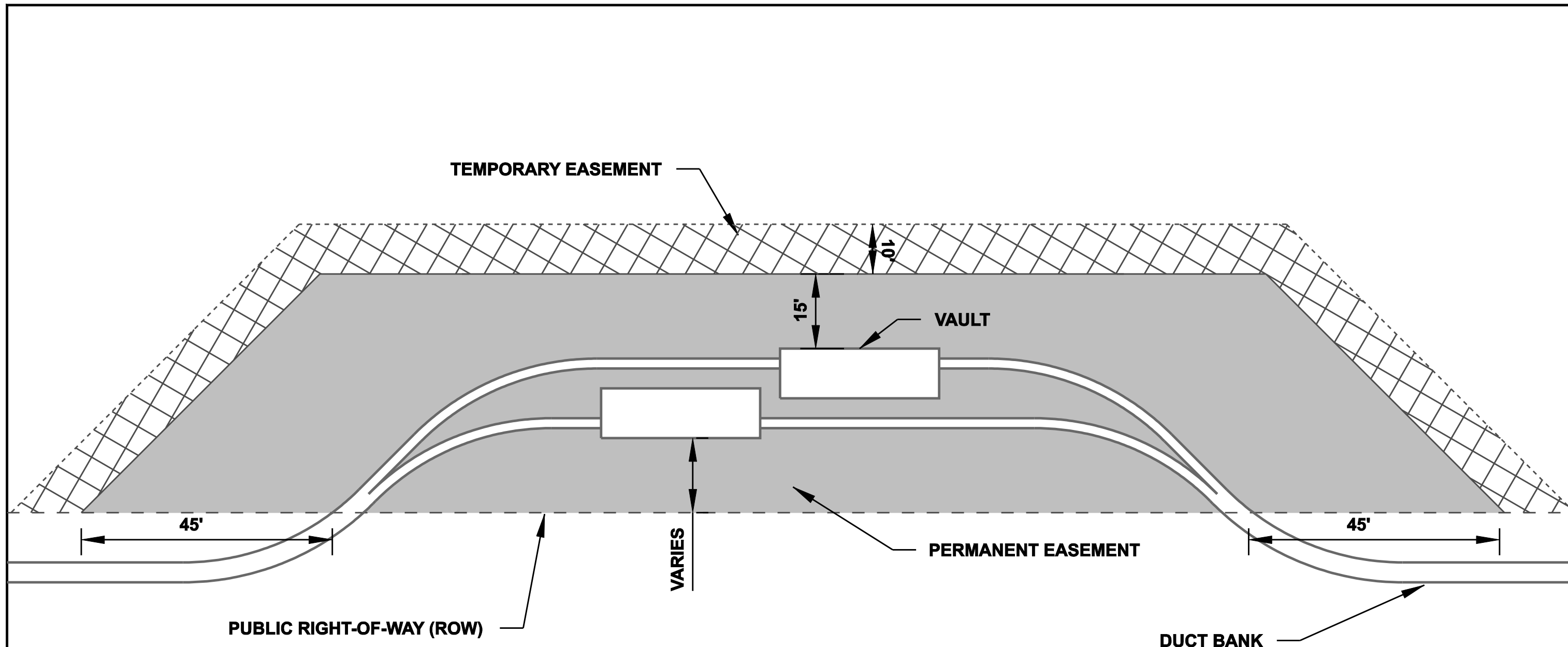
 **Connecticut
Light & Power**
The Northeast Utilities System
DATE: 08/15/05

FIGURE 2.1

KEY MAP

SCALE
1" = 2,000'
1: 24,000


MAP SOURCE: TERRASERVER IMAGERY, 01 JULY 1986



TYPICAL EASEMENT LAYOUT



**ISSUED FOR
PRELIMINARY REVIEW
NOT FOR CONSTRUCTION**

MIDDLETOWN TO NORWALK
345-kV TRANSMISSION PROJECT
TYPICAL EASEMENT LAYOUT

Table 2-1. Land Owner Information for Parcels Requiring a New Easement.

| Owner | Street Address | City/State/ ZIP |
|---|-------------------------|------------------------|
| Casale Properties, LLC. | 3430 Post Road | Fairfield, CT. 06824 |
| Southport Village Partners, LLC | 275 Old Post Road | Fairfield, CT. 06824 |
| Southport Athletic Club, Inc. | 213 & 233 Old Post Road | Fairfield, CT. 06824 |
| Bi-Max Management Group, LLC | 8 John Street | Fairfield, CT. 06824 |
| Lark Properties, LLP. | 2537 Post Road | Fairfield, CT. 06824 |
| Post Road Investors, LLC. (Tenant = Devan Infinity) | 2269 Post Road | Fairfield, CT. 06824 |
| Bruce Czapla | 2217 Post Road | Fairfield, CT. 06824 |
| Levinson, Morton H. and Sally M. | 1949 Post Road | Fairfield, CT. 06824 |
| Topar, Thomas N. (Tenant - Cortiginos Car Care) | 1927 Post Road | Fairfield, CT. 06824 |
| Heritage Square, LLC | 1700 Post Road | Fairfield, CT. 06824 |
| Serre Limited Liability Company (Tenant - Joe's American Bar & Grill) | 750 Post Road | Fairfield, CT. 06824 |
| Fairfield Motor Inn Associates, LLC. (& Circle Diner) | 441 Post Road | Fairfield, CT. 06824 |
| Giansanti, Luigi and Maria Stella | 122 Post Road | Fairfield, CT. 06824 |
| Kramerica LLC | 3353 Fairfield Avenue | Bridgeport, CT. 06605 |
| Bepe LLC | 3309 Fairfield Avenue | Bridgeport, CT. 06605 |
| Sixteen Sac Self-Storage Corporation | 3025 Fairfield Avenue | Bridgeport, CT. 06605 |
| Michael Morin (Formerly McCarthy, Charles Jr.) | 2423 Fairfield Avenue | Bridgeport, CT. 06605 |
| Michael Morin (Formerly Hosanna Ministry, Inc.) | 2407 Fairfield Avenue | Bridgeport, CT. 06605 |
| Dinardo, Kenneth S. | 2383 Fairfield Avenue | Bridgeport, CT. 06605 |
| Haight, Allen D. | 1565 Railroad Avenue | Bridgeport, CT. 06605 |
| Harvey Hubbell, Inc. | 1535 Railroad Avenue | Bridgeport, CT. 06605 |
| Siegal, Edward L., et als ("et als are 3 sons operating at Hartford headquarters) | 410 Howard Avenue | Bridgeport, CT. 06605 |
| Housing Authority City of Bridgeport | 400 Iranistan Avenue | Bridgeport, CT. 06605 |
| First Macadams, LLC | 275 Warren Street | Bridgeport, CT. 06605 |
| Shiloh Baptist Church of Bridgeport | 477-487 Broad Street | Bridgeport, CT. 06605 |
| Housing Authority of City of Bridgeport | 375 Main Street | Bridgeport, CT. 06605 |
| Turner's Faith Temple Church | 350 Lafayette Street | Bridgeport, CT. 06605 |
| Jessie Askew, Agnes Askew, Mary Bedell | 39 Cottage Place | Bridgeport, CT. 06605 |
| Thai Nguyen | 134 Atlantic Street | Bridgeport, CT. 06605 |
| Douglas, Phillip E. | 133 Atlantic Street | Bridgeport, CT. 06605 |
| Vo, Minh Hue | 294 Broad Street | Bridgeport, CT. 06605 |
| Davis, Carolyn | 282 Broad Street | Bridgeport, CT. 06605 |
| Davis, Carolyn H. and Hardiman, Thomas J. | 274 Broad Street | Bridgeport, CT. 06605 |
| Steponova, Tatyana | 270 Broad Street | Bridgeport, CT. 06605 |
| Plotkin, Nathaniel W. | 268 Broad Street | Bridgeport, CT. 06605 |
| Laverree, Bruce B. | 264 Broad Street | Bridgeport, CT. 06605 |
| Prinner, John P. | 262 Broad Street | Bridgeport, CT. 06605 |
| Hyer, Charles W. | 258 Broad Street | Bridgeport, CT. 06605 |
| Myers, Richard J., et al | 256 Broad Street | Bridgeport, CT. 06605 |
| Laconte, Clara | 30 University Avenue | Bridgeport, CT. 06605 |
| City of Bridgeport (Seaside Park) | University Ave | Bridgeport, CT. 06605 |

2.4 PUBLIC ROADS AND LANDS

The Key Map in Appendix A and Plan drawings in Volume 2 depict all of the roads crossed by the Project. The Project crosses 87 public roads in Segment 4a, including 50 streets in the City of Bridgeport and 62 in the Town of Fairfield. The roads under which the duct bank will be located in Bridgeport include the following:

- Main Street
- University Avenue
- Broad Street
- Railroad Avenue
- Fairfield Avenue (also known as State Route 130).

The road under which the duct bank is located in Fairfield is Post Road a/k/a Boston Post Road. Proceeding west from Ash Creek to Kings Highway, Post Road is also known as State Route 130. Proceeding west after Kings Highway Post Road, the Post Road is also known as U. S. Route 1.

There are 17 publicly owned parcels in Segment 4a adjacent to the ROW. These include the following 11 tracts in Bridgeport:

- 1) City of Bridgeport Community Development (Tract #181)
- 2) Seaside Park
- 3) University of Bridgeport
- 4) Bridgeport Housing Authority (3 tracts)
- 5) City of Bridgeport (Tracts #476 and 2676 and Public Library)
- 6) Connecticut Resources Recovery Authority
- 7) State of Connecticut (2 tracts)
- 8) Connecticut Department of Transportation (2 parcels with I-95)
- 9) Burroughs Community Center (Tract #2468)
- 10) Bridgeport Redevelopment Authority (2 tracts)
- 11) U. S Post Office.

The route passes the following 6 publicly owned tracts in the City of Fairfield:

- 1) State of Connecticut
- 2) Palmer's Neck Park, Town of Fairfield
- 3) Town of Fairfield public cemetery
- 4) Town of Fairfield
- 5) Town of Fairfield Public Library
- 6) U. S. Post Office.

2.5 TOPOGRAPHY AND GRADING

All portions of the Project route will be returned to pre-existing topographic conditions. Therefore, there will be no change in grade for Segment 4a.

2.6 STRUCTURE AND FOUNDATION LOCATIONS

Locations for the 22 vault pairs and the duct bank are depicted in the Plans and Profiles provided under separate cover in Volume 2.

2.7 ACCESS POINTS FOR CONSTRUCTION

Access to the Project will be via Main Street, University Avenue, Broad Street, Railroad Avenue, State Route 130 and U.S. 1, except for off-road vault locations. Short access roads off of the Connecticut DOT right-of-way will be used to provide construction equipment ingress and egress to vault locations. Rights of use for these short access roads will be negotiated with the property owner.

2.8 VEGETATION AND CLEARING

Tree removal will be required in limited areas along the medians on Fairfield Avenue and Post Road and at select vault locations as noted on the plan view of the Plan and Profile drawings in Volume 2.

2.9 ENVIRONMENTALLY SENSITIVE AREAS

No sensitive areas, such as watercourses, wetlands, areas of high erosion potential, or federal or state protected species, will be affected by the construction and installation of the duct bank in roadways for Segment 4a. The crossings of Ash Creek and Sasco Creeks, and the Mill River (Southport Harbor) will be addressed in a separate D&M Plan.

2.10 EXISTING UNDERGROUND UTILITIES

Subsurface utility engineering (SUE) has been performed for Segment 4a. All utilities noted during this study are included in the Plans and Profiles in Volume 2.

2.11 STAGING AREA AND CONSTRUCTION FACILITIES

The staging areas for materials and equipment for Segment 4a have yet to be determined. Municipal consultation with regards to available areas has commenced and final locations will be determined after consultation with the company selected as the civil contractor. Material staging areas proposed for use will be submitted to Council staff for review and approval prior to use through the Change Approval Process described in Appendix F of this Plan.

3.0 CONSTRUCTION INFORMATION

This section contains information concerning construction practices and mitigation measures related to the construction and installation of the duct banks and splice-vaults along Segment 4a.

3.1 TIMBER AND SNAG TREES

There will be no clearing of marketable timber within, or adjacent to, the route of the cable system in Segment 4a. Due to the developed nature of the route in Segment 4a, there is no opportunity for snag tree management.

3.2 CONSTRUCTION AND REHABILITATION PROCEDURES

Construction procedures for water crossings, sedimentation and erosion control, protected species, hydrologic features and cultural resource properties are described below.

3.2.1 Water Crossing Techniques

As discussed in Section 2.9 above, all water crossings will be addressed in a separate D&M Plan.

3.2.2 Sedimentation and Erosion Control Procedures

The sediment and erosion control procedures are located in Appendix B. The procedures comply with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*.

3.2.3 Precautions for Protected Species

Pursuant to consultation with the DEP personnel and review of the Natural Diversity Database, there are no federal or state protected species located along the route in Segment 4a.

3.2.4 Restoration of Hydrologic Features

Construction and installation of the duct bank along Segment 4a will not require any changes to hydrologic features.

3.2.5 Protection of Cultural Resources

CL&P contracted with Raber Associates to perform a Cultural Resources Assessment Survey as part of the Application to the Council. Locations of sensitive, or potentially sensitive, cultural resources were identified during the Phase I survey. Further studies performed during Phase II Field Reconnaissance will be used to assess potential effects on sensitive resources.

The protocol for the survey, as well as the results, will be coordinated with the Connecticut Department of Culture and Tourism, State Historic Preservation Office. Correspondence with the State Historic Preservation Officer (SHPO) will be provided to CSC staff as it is available and prior to construction.

3.2.6 Herbicide Use

No herbicides will be used for installation and construction, or maintenance, of the cable system along Segment 4a.

3.2.7 Public Recreation Areas

There are two city parks located along Segment 4a. Seaside Park is located between University Avenue and the Long Island Sound in Bridgeport, Connecticut. It includes benches, playground

equipment and other recreational equipment. The Project route will be installed along the south curb line of University Avenue in the bounds of the Park. No significant impacts to park access are anticipated as all construction activities will be conducted at night during periods of low use.

The second Park is a small, unnamed area at the intersection of Benson and Post Road that was donated by railroad interests and is maintained by the Town of Fairfield. The park has several benches, but there is no recreational equipment or playground at this park. Impacts to these resources include temporary aesthetic impacts associated with construction along the long side of the park and minimal restricted access during nighttime hours due to construction.

There is an open space in Fairfield at the intersection of River Street and Post Road called Palmer's Neck Park. This area does not contain any recreational equipment, such as playground equipment, picnic tables or benches.

3.2.8 Disposal and Maintenance Procedures

The Contractor will remove all construction debris and excess soil and dispose of it in accordance with local, state, and federal regulations. No burning will occur as a result of construction or installation of the duct bank.

All contaminated spoil removed and/or groundwater encountered from installation of the Project will be handled by CL&P in accordance with local, state, and federal laws and regulations.

3.2.9 Blasting Procedures

No blasting is required for construction and installation of the duct bank in Segment 4a.

3.2.10 Rehabilitation Plans

Because the cable system will be installed primarily beneath existing roadways, it will be subject to a rigorous rehabilitation protocol reviewed and approved by ConnDOT and the municipalities. All roadways, curbs and other adjacent properties and/or structures impacted by construction and installation of the duct bank will be returned to a condition equivalent to pre-existing conditions.

Any landscaped vegetation, such as that in the median of Fairfield Avenue, will be replaced in-kind based on variety, number and size of plants. All grassed areas will be returned to pre-existing condition, including variety and density.

3.2.11 Independent Environmental Consultant

CL&P will select and retain an independent environmental consultant, approved by the Council, to monitor environmental issues of the Project. The consultant will report regularly to the Council.

4.0 NOTICES AND REPORTS

This section outlines requirements regarding notifications and reporting procedures per Section 16-50j-62 of the Regulations of Connecticut State Agencies.

4.1 STAGING AND MATERIAL LAYDOWN AREAS

The staging and laydown areas for this work are currently being identified, as described in Section 2.11. CL&P will notify the Council when areas are identified in accordance with Section 16-50j-62(a) of the Regulations of Connecticut State Agencies.

4.2 NOTICES TO THE COUNCIL

Three types of notices are required by the Council for construction. Each type is described below.

4.2.1 Notice of Beginning

CL&P will provide written notification to the Council a minimum of two weeks prior to the beginning of construction at the site.

4.2.2 Notice of Changes to the D&M Plan

For all segments of this Project, CL&P intends to utilize a uniform procedure for interfacing with the Council regarding any changes to approved D&M Plans, namely, the procedure that the Council has already approved in connection with the D&M Plan for Scovill Rock Switching Station. This model, which has also been successfully applied for the Bethel-Norwalk Project (Docket No. 217), is described and depicted in Appendix C.

4.2.3 Notice of Completion

CL&P will provide the Council written notification of the completion of construction and site rehabilitation.

4.3 NOTICE TO MUNICIPALITIES

CL&P will provide written notification to the Chief Elected Officials of Bridgeport and Fairfield at least three weeks prior to the beginning of construction. CL&P will also notify the Chief Elected Officials when the work along Segment 4a is complete.

4.4 NOTICE TO LANDOWNERS

CL&P will provide written notification to adjacent landowners at a minimum of two weeks prior to the beginning of construction.

4.5 MONTHLY REPORTS

CL&P will provide the Council with written monthly progress reports, which will include changes or deviations from the approved D&M Plan, if any.

4.6 FINAL REPORT

CL&P will provide a final report to the Council as required in Section 16-50j-62 of the Regulations of Connecticut State Agencies. The final report will contain the following information as prescribed in the regulations:

1. All agreements with abutters or other property owners regarding special maintenance precautions.
2. Significant changes to the D&M Plan that were required because of the property rights of underlying and adjoining owners or for other reasons.
3. Location of non-transmission materials which have been left in place.
4. Actual construction cost of the facility, including but not limited to the cost of the following:
 - Clearing and access
 - Construction
 - Rehabilitation.

5.0 ADDITIONAL ELEMENTS PER COUNCIL ORDER

The listing of additional elements identified in the Decision and Order for Docket No. 272 pertaining to D&M Plans is included in Appendix B. All applicable information is contained within the above portions of the plan and the related permits.

5.1 Decision and Order Checklist

Following is a synopsis of the requirements for the D&M Plans for the Middletown-Norwalk Project as stated in the Decision and Order, followed by the location of the information in the Plan, or a statement if not applicable for Segment 4a.

| ITEM FROM DECISION | LOCATION/APPLICABILITY |
|--|---|
| 14. D&M Plan Elements | |
| a. Detailed site plan showing access roads, foundations, staging areas for overhead route | Not Applicable (no overhead) |
| b. Detailed site plan showing splice vaults, duct banks, staging areas for underground route | Volume 2 |
| c. Identification of HDD and Jack and Bore sites for underground | Not Applicable (Associated with water crossings to be handled in a separate D&M Plan) |
| d. Erosion and Sediment Control Plan | Appendix B |
| e. Provisions for crossing wetlands and watercourses | Not Applicable (Associated with water crossings to be handled in a separate D&M Plan) |
| f. Vegetation Clearing Plan | Not Applicable (no clearing) |
| g. Wetland Restoration Plan | Not Applicable (no wetlands) |
| h. Invasive Species Management Plan | Not Applicable (no vegetation) |
| i. Plan for Pre-Construction Survey for species of concern | Not Applicable (no species noted by USFWS or DEP) |
| j. Post-construction EMF Monitoring Plan | Please refer to Section 5.2 below |
| k. Fencing of vernal pools; buffer around wetlands | Not Applicable (no vernal pools or wetlands) |
| l. Inland Wetlands Restoration Plan | Not Applicable (no wetlands) |
| m. Monitoring and Operations Plan for each water crossing | Not Applicable (water crossings to be handled in a separate D&M Plan) |
| n. Traffic Control Plan | Volume 3 |
| o. Blasting Plan | Section 3.2.9 (No blasting required) |
| p. Groundwater Best Management Practices | Section 3.2.4 |
| q. Identification of staging areas | Section 2.11 and 4.1 |

| | |
|---|---|
| r. May spread excavated material in uplands. Stockpile excavated soil from wetlands | Section 3.2.2 |
| s. Limit conductor installation sites to cleared right-of-way, not in wetlands | Not Applicable (no overhead conductors) |
| t. Plan to remove or adjust selected structures | Not Applicable (no structures for overhead lines to be removed or adjusted) |
| 15. DEP Consultation (river crossings) | Not Applicable (water crossings to be handled in a separate D&M Plan) |
| 16. Regional Water Authority (RWA) Conditions | Not Applicable (not on RWA property) |
| 17. Documentation of DOT Encroachment Permit Process | Appendix D |
| 18. Provide the Following Permits Prior to Construction (Public Health, OLISP, Water Crossings) | Not Applicable |
| 19. Waste Management Permits | Section 3.2.8 |
| 20. Independent Environmental Consultant | Section 3.2.11 |
| 21. Phase II Archeological Reconnaissance Survey | Section 3.2.5 |

5.1.1 Supplemental Plans and Information

The Traffic Inventory Report, precursor to the Maintenance and Protection of Traffic Plan, has been provided in Volume 3.

With regard to magnetic fields, item 12 of the Council’s Decision and Order states that, “[w]here the underground portions of the line are in the vicinity of facilities listed in Conn. Gen. Stat. § 16-50p(i), the Certificate Holders are directed to utilize measures necessary to ensure that public health and safety is protected no less than in the vicinity of statutory facilities adjacent to the approved overhead portions of the line.” The chosen option to minimize magnetic fields along the underground route is placement of the duct bank, where feasible, along the opposite side of the road at the location of statutory facilities. The ConnDOT requirement that splice vaults be located off ConnDOT right-of-way has restricted CL&P’s available options in several instances. In other locations, existing utilities limit placement of the cable duct so that there is very little that can be done to increase the distance from the cable duct to the statutory facility.

Specific instances in Segment 4a where statutory facilities are located directly along the route and the duct bank has been routed on the opposite side of the road are:

- Jamie A. Hulley Child Care Center-Volume 2 pg. 109
- The Children’s Place at the Burroughs, a child care facility,-Volume 2 pg. 109

CL&P and UI intend to file a single electric and magnetic field monitoring plan for locations along the project route at a future date.

6.0 PROJECT SCHEDULE

The construction and installation of the duct bank in Segment 4a, from survey to energizing, will take approximately 48 months. The following items summarize the projected schedule:

- Survey - May 2, 2005 thru October 19, 2005
- Engineering - July 1, 2005 thru October 23, 2006
- Procurement - January 17, 2005 thru March 29, 2007
- Fabrication/delivery of large equipment - April 25, 2006 thru March 26, 2009
- Civil work - April 25, 2006 thru October 20, 2006
- Landscaping - March 12, 2007 thru December 21, 2007
- Cable installation - March 17, 2008 thru October 3, 2008
- Testing - March 27, 2009 thru May 21, 2009.

Construction activities are expected to take place during ConnDOT and municipal approved hours.

APPENDICES

- A Selected Portions of Decision and Order**
- B Sediment and Erosion Control Procedures**
- C D&M Plan Change Approval Process**
- D Documentation of Use of ConnDOT Encroachment Process**

APPENDIX A

Selected Portions of Decision and Order

APPENDIX A

DOCKET 272

SELECTED PORTIONS OF DECISION AND ORDER

14. The Certificate Holders shall not commence construction of the overhead and underground electric transmission system until securing Council approval of a D&M Plan, consistent with the Regulations of Connecticut State Agencies Section 16-50j-60 through Section 16-50j-62 and which includes the following elements:
 - a. A detailed site plan showing the placement of the access roads, structure foundations, equipment and material staging area for the overhead route;
 - b. A detailed site plan showing the underground route, splice boxes, provisions for underground cable protection, and equipment and material staging area;
 - c. Identification of horizontal directional drill and jack and boring sites;
 - d. An erosion and sediment control plan, consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control as amended for both overhead and underground routes;
 - e. Provisions for crossing inland wetland and watercourses for both overhead and underground routes;
 - f. Vegetative clearing plan;
 - g. A wetland restoration plan;
 - h. Invasive species management plan;
 - i. A Plan for a pre-construction survey for all other endangered, threatened and species of special concern, flag areas of mudwort and bayonet grass, sweep areas for eastern box turtle and wood turtle prior to construction and abide to construction periods as outlined by the DEP Wildlife Division;
 - j. A post-construction electric and magnetic field monitoring plan;
 - k. A plan for installing construction fencing at vernal pools near construction activities and a buffer area be established around inland wetlands;
 - l. An inland wetlands restoration plan;
 - m. Monitoring and Operations Plan for each water body crossing;
 - n. A traffic control plan to include scheduling of construction hours during nights and/or weekends and mitigation of lighting and noise;
 - o. A blasting plan
 - p. Groundwater best management practices plan;
 - q. Identification of developed areas for staging and equipment lay down, field office trailers, sanitary facilities and parking before establishing a new area;
 - r. Excavated material in upland construction may be allowed to be graded in proximity to the structure and excavated soil in wetland construction shall be stockpiled in an upland area for use in wetland restoration;
 - s. Conductor installation sites shall be within the existing ROW, use of existing cleared areas, to the extent possible, and pulling sites will not be allowed in wetlands;
 - t. A plan for the following: structure #4010 may be eliminated; in Woodbridge, details on removal of structure #3920 and new poles may be eliminated in the area of wetland #133; a number of structures within wetland #70 adjacent to Tamarac Swamp in Wallingford may be reduced, especially structures #8769 and 8800; and a set of existing pole structures immediately adjacent to the Farmington Can Recreational Trail in Hamden could be removed.

15. The Certificate Holders are directed to consult with DEP on the following matters:
 - a. Concerning horizontal directional drill and the jack and bore crossing techniques;
 - b. Forging streams; and
 - c. Construction scheduling at the Milford boat launch and the line should be sited so as to not interfere unreasonably with any future maintenance needs.

16. The Certificate Holders shall abide to the following Regional Water Authority (RWA) conditions:
 - a. Shall provide all information necessary for the RWA to prepare a DPH Change in Use Application and Revocable License Agreement for the construction activities on RWA owned watershed land.
 - b. Shall prepare a Stormwater Pollution Prevention Plan (SWPPP) during the development of the Development and Management Plan (D&M Plan). The D&M Plan shall be prepared in accordance with the Connecticut Guidelines for Soil Erosion and Sediment Control.
 - c. Refueling of construction equipment on public water supply watershed and aquifer areas shall only be conducted over portable spill container areas. Absorbent spill response materials shall be readily available on-site. The RWA shall be immediately notified of any hazardous material spills or other water quality incidents on its public water supply watershed or aquifers.
 - d. Any fuel, oils, paints solvents, or other hazardous material stored on-site during the construction process shall be in a secure area with at least 100 percent secondary containment.
 - e. Submittal of an Integrated Pest Management Plan for long-term maintenance of right-of-ways and submittal of an annual summary of pesticide use and other maintenance activities on RWA property.
 - f. If blasting is required, pre-blast surveys of RWA facilities shall be done, recording seismographs shall be in place during blasting and copies of the survey and sand seismograph results shall be provided to the RWA.
 - g. Provision of reimbursement for reasonable costs incurred by the RWA regarding review and inspection of the Project, including costs for review by its special consultants, and costs associated with designing and relocating the RWA's facilities, if required.
 - h. Preliminary and final D&M Plans shall be provided to the RWA for its review comments. The RWA shall be allowed at least 30 days to review and comment.
 - i. The RWA shall receive between three and five days notice prior to commencement of construction activity on public water supply watershed or aquifers, or in the vicinity of RWA facilities.

17. The Certificate Holders shall use the DOT encroachment permit process developed for Docket No. 217 project as a template.

18. The Certificate Holders shall provide the following permits prior to the commencement of construction:
 - a. Department of Public Health change-in-use permit;
 - b. Office of Long Island Sound Programs (OLISP) coastal permits for the Singer and East Devon Substations; and
 - c. DEP water body crossing permits.

19. The Certificate Holders shall obtain necessary waste management permits for activity in any solid waster disposal areas and remove and dispose of contaminated soil per municipal, state and federal regulations.
20. The Certificate Holders shall hire an independent environmental consultant, subject to Council approval, to monitor and report on the installation of the overhead and underground transmission system.
21. The Certificate Holders shall conduct a Phase II Archeological Reconnaissance Survey in consultation with the Connecticut Historical Commission prior to construction.

APPENDIX B

Sediment and Erosion Control Procedures

APPENDIX B

SEDIMENT AND EROSION CONTROL PROCEDURES

CL&P will implement the erosion and sediment control measures contained in this section. These erosion and sediment control measures will comply with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* and serve as minimum standards during construction. In general, the measures are designed to minimize erosion and sedimentation by:

- Minimizing the quantity and duration of soil exposure;
- Protecting areas of critical concern during construction by redirecting and reducing the velocity of runoff;
- Installing and maintaining erosion and sediment control measures during construction;
- Establishing vegetation where required as soon as possible following final grading; and
- Inspecting the work areas and maintaining erosion and sediment controls as necessary until final stabilization has been achieved.

CL&P will be responsible for ensuring that all contractors implement and maintain erosion and sediment control measures during construction. This plan includes erosion and sediment control techniques that apply to all areas of construction, expands on the impact minimization associated with clearing, grading, ditching, installation, backfilling and restoration phases and discusses the use of construction safety precautions.

Construction and installation of an underground electric transmission line typically consists of several distinct phases: clearing, grading, ditching, installation, backfilling and restoration.

1.0 CLEARING

All clearing activities will conform to the methods dictated in this section. Public road right-of-way boundaries, transmission line right-of-way boundaries, and off right-of-way workspace limits will be clearly delineated in the field before commencement of clearing activities. The Environmental Inspector will ensure that no clearing occurs beyond these boundaries.

1.1. Vegetation

Stemmed vegetation such as brush, shrubs and trees shall be removed at or near the ground surface to allow the root systems to remain intact. Trees and limbs will not be permitted to fall into watercourses.

The construction contractor will dispose of brush piles and/or tree stumps immediately. Trees and brush shall be disposed of in one or more of the following ways depending on applicable permit conditions and/or as designated by the Environmental Inspector:

- Brush Pile - All brush will be removed from wetland areas.
- Chipping
 - a. Chips may be left on the workspace with EI approval if placement does not inhibit revegetation.
- Off-site Disposal
 - a. Done when brush piles or chipping are not permitted.
 - b. Taken to an approved landfill or other approved facility approved for disposal of construction debris.

1.2 **Storm Inlet Protection**

Before commencing any land disturbing or pavement removal, storm water inlets that receive runoff from the proposed work area will be protected. The temporary inlet protection will remain in place until construction activities have been completed, the street has been swept, and any exposed soils are stabilized. The utility is also responsible for removing any temporary inlet protection they installed. After all disturbed areas have been stabilized, temporary inlet protection will be removed. Temporary protection of the inlets will be accomplished by one or more of the following:

- Use of gravel bags to filter the sediment from any runoff.
- Use of sediment logs to filter the sediment from any runoff.
- Use of under-grate filter bags to filter the sediment from any runoff.

2.0 **GRADING**

When existing topography and/or terrain does not permit crews and equipment to operate safely and does not provide access or an efficient work area, grading may be required. The following general construction methods will be employed by CL&P during grading:

2.1 **Temporary Erosion Control Barriers**

Hay / straw bales and silt fences are herein interchangeable except where noted. Temporary erosion control barriers will be installed prior to initial disturbance of soil and maintained until final restoration is completed. Temporary erosion control barriers will be installed in, near or abutting the right-of-way in the following areas:

- along banks of waterbodies between the workspace and waterbody after clearing. They will also be installed downslope of any stockpiled soil in the vicinity of waterbodies and vegetated wetlands.
- between wetlands and adjacent disturbed upland areas and as necessary to prevent siltation of ponds, wetlands, or other waterbodies adjacent to/downslope of the work areas.
- at the edge of the construction workspace as needed to contain soil and sediment.

Silt fence will be installed as directed by manufacturer and applicable permit conditions. A sufficient supply of silt fence shall be stockpiled onsite for emergency use and maintenance. Hay bales will be installed using stakes, minimum 2-inch diameter with bindings horizontal to the surface of the ground as noted in the 2002 CT Guidelines for Soil Erosion and Sediment Control. Bales will be replaced as deemed necessary by the EI if damaged or if they are improperly installed. A sufficient supply of bales shall be maintained on site for emergency use. Bales bound with wire or plastic shall not be used.

Temporary erosion control barriers will be maintained throughout construction and remain in place until permanent soil stabilization has been judged successful, upon which they will be removed (hay bales may be left in place). They will be inspected on a daily basis in areas of active construction or equipment operation, on a weekly basis in areas with no construction or equipment operation and within 24 hours of a storm event that is 0.5 inches or greater.

2.2 **Rock Disposal**

CL&P will not dispose of excess rock or other excavated spoils on the ConnDOT ROW. Excess Rock, including blast rock, shall be used or disposed of by one or more of the following methods:

- Hauled to disturbed property per landowner agreement. As part of the agreement, the landowner will accept responsibility for the rock and not place it in a wetland area.
- Removed and disposed at an approved site that is traditionally used for rock debris disposal.
- Used as riprap for stream bank stabilization where allowed by applicable permits.
- Used to construct stone walls or fences, if approved by CL&P per landowner agreement.

3.0 TRENCHING

During construction activities on impervious surfaces such as streets and parking lots, measures will be implemented to reduce or prevent off-site discharge of sediments from vehicle tracking or storm water runoff. Measures include the following:

- Care in loading trucks to minimize spillage onto pavements.
- Stockpiles of material, either excavated or new material brought to the site, will be kept to a minimum and covered for extended storage periods (more than seven days).
- Impervious areas that have been tracked with sediments, or have sediments spilled or eroded onto them, will be swept and the sediments removed within 24 hours.
- Temporary storage of street sweepings prior to reuse or disposal will be located in an area where the sweepings will not wash into wetlands or watercourses.

4.0 INSTALLATION / BACKFILLING

The proposed transmission line will be installed by the conventional bury method unless specialized construction techniques are specified. During excavation, excavated native soils will be transported, stored and/or disposed of properly.

4.1 Trench Dewatering

Trench dewatering will occur when perched water tables are encountered, when there has been a significant precipitation event or as otherwise needed to remove accumulated water. Hose intakes will be elevated off the ditch bottom to prevent sediment intake. Secondary containment of pumps will be used to avoid fuel and contaminants from entering wetlands and waterbodies. All dewatering locations will be approved by the EI prior to discharge. Discharges will be greater than 100 feet from a wetland or stream bank and will be directed into a well-vegetated area. If discharges are less than 100' the discharge will be directed to a filter bag and/or erosion control barriers. Under no circumstances will trench water or other forms of turbid water be directly discharge onto exposed soil or into any wetland, waterbody or ConnDot drainage system.

4.2 Backfilling

Excavations within the roadway will be backfilled with fluidized thermal backfill in accordance with municipal codes or state codes. The fluidized thermal backfill will limit any settling and provide controlled thermal characteristics. A final inspection will be made prior to backfilling to ensure that all debris has been removed from the ditch and the line coating is undamaged. Settling will be minimized with the use of compaction equipment, or a crown of soil will be placed over the facility to compensate for future soil settling. If crowning is used, openings shall be installed at regular intervals in the crown to allow for lateral surface drainage. Excess or unsuitable material shall be disposed of in accordance with applicable regulations.

5.0 RESTORATION, REVEGETATION, AND PAVEMENT REHABILITATION

The final phase of construction is returning to the right-of-way to pre-existing conditions, or better. This will be accomplished using the following methodology.

5.1 Restoration

Restoration and revegetation of the work areas incorporates permanent erosion and sediment control measures. However, in the event that final restoration cannot occur in a timely manner due to weather or soil conditions, temporary erosion and sediment control measures will be maintained until the weather is suitable for final cleanup and revegetation. In no case shall final cleanup be delayed beyond the end of the next growing season.

Temporary restoration measures will be initiated as soon as practical on portions of the workspace where activities have ceased temporarily or permanently when:

- Initiation of stabilization measures are precluded by weather. Stabilization measures shall be initiated as soon as machinery is able to obtain access to the work areas.
- Activities will resume within 21 days. Stabilization measures will not need to be initiated by the fourteenth day following the cessation of activity.

If construction is completed more than 30 days before the perennial vegetation seeding season, wetlands areas and adjacent to waterbodies shall be mulched with straw or equivalent for a minimum of 100 feet on either side of the waterbody. Temporary plantings will be fertilized in accordance with the recommendations of the local NRCS office(s) or other soil conservation authority. Temporary sediment barriers will be removed when an area is successfully revegetated in compliance with applicable regulatory approvals.

Final grading will be completed immediately after backfilling, weather permitting. Construction debris shall be removed from the workspace, and the area will be graded so that the soil is left in the proper condition for mulching, seeding or natural revegetation.

5.2 Revegetation

Revegetation will be used to establish long-term control of releases of sediment and erosion. The establishment of vegetation is critical to successfully restoring the right-of-way to pre-existing conditions. The workspace will be seeded within seven working days of final grading, weather and soil conditions permitting, and planted in accordance with recommended seeding dates. The seedbed will be prepared to an average depth of 3 to 4 inches using appropriate equipment to provide a firm, smooth seedbed, free of debris. Slopes steeper than 3:1 shall be seeded immediately after final grading in accordance with recommended seeding dates, weather permitting. The seed shall be applied and covered uniformly in accordance with the 2002 Connecticut Guidelines for Erosion and Sedimentation Control Guidelines.

When broadcast or hydro-seeding is utilized, the seedbed will be scarified to ensure sites for seeds to lodge and germinate, will be firmed after seeding and will be mulched with hay or straw to prevent erosion. Broadcast or hydro-seeding, when used, will be performed at double the recommended seeding rates.

Turf, ornamental shrubs and other landscaping materials shall be restored in accordance with individual landowner agreements.

5.3 Mulching

After seeding, mulch will be applied at a rate of approximately 2 tons per acre on the entire ROW except wetlands, lawns, agricultural (crop) areas and areas where hydro-mulch is used. Mulch will also be applied if construction or restoration activity is interrupted for extended periods (greater than 21 days). If mulching is performed prior to seeding, mulch application will be increased on all slopes within 100 feet of waterbodies and wetlands to a rate of 3 tons/acre at a 4-inch depth. Mulch will be anchored immediately after placement on steep slopes and stream

banks. Mechanically anchoring mulch will utilize a mulch anchoring tool or tracked equipment to crimp the mulch to a depth of 2 to 3 inches. Liquid mulch binders will be applied using application rates recommended by the manufacturer. Liquid mulch binders will not be used within 100 feet of wetlands or water bodies.

Matting or netting will be applied to sensitive areas (i.e., steep slopes, banks of waterbodies, bar ditches, etc.) in accordance with permit requirements and will be anchored with pegs or staples.

6.0 MONITORING/REPORTING

CL&P, or their authorized agent, will file quarterly activity reports with the appropriate authorities documenting problems, including those identified by landowners, and corrective actions take for 2 years following construction. Follow-up inspections will be preformed after the first and second growing seasons after seeding to monitor the success of revegetation. Revegetation will be considered successful if vegetative cover is sufficient to prevent erosion of soils disturbed in the workspace. Typically, sufficient vegetation coverage is consistent with adjacent off right-of-way vegetation in both percent coverage and species present. If sufficient vegetative cover has not been achieved after two full growing seasons, additional restoration measures will be implemented. Erosion control devices will be removed upon successful stabilization and revegetation of disturbed areas.

APPENDIX C

D&M Plan Change Approval Process

APPENDIX C
DOCKET 272
D&M PLAN CHANGE APPROVAL PROCESS

Identification of Significant Changes:

Once CL&P identifies a required change to the D&M Plan, it must determine whether it is a “significant change,” because such changes require advance Council approval. CL&P proposes the following criteria for identifying significant changes: a “significant change” is a change to the Project that significantly reduces the amount of protection to the environment or significantly increases potential public concerns. To be “significant”, the change must have a meaningful impact to the environment, public, or other permits.

For the underground portion of the Project, once CL&P identifies a potential change, it will consult with a Connecticut Department of Transportation (CDOT) representative to reach an agreement as to whether the change is “significant.” Any changes to existing CDOT facilities or affecting planned projects of CDOT would be considered “significant.”

Procedure for Council Review of “Significant Changes” to D&M Plan:

“Urgent” Case: If the change is “urgent” (i.e., if having to wait until the next regularly scheduled meeting of the Council to obtain approval of the change would have a material impact on construction cost or scheduling), then CL&P will contact Council staff to determine if the Council chairman will grant oral permission for the change so as to allow construction to continue in accordance with the proposed change. If oral permission is granted, CL&P will continue construction in accordance with the change and will file documentation regarding the change within 24 hours. If oral permission is denied, CL&P will file the proposed D&M Plan Change with the Council for review and will hold construction impacted by the change pending the Council’s determination.

“Non-Urgent” Case: If the change is not “urgent,” then CL&P will file the proposed D&M Plan Change with the Council for review at its next meeting and will delay the construction impacted by the change pending the Council’s determination.

Procedure for Council Review of Other Types of Changes to the D&M Plan:

For purposes of reviewing and processing changes to an approved D&M Plan that are not deemed to be “significant”, CL&P will categorize the change as one of the following:

Non-significant change: a change to the Project that may reduce the amount of protection to the environment or may increase potential public concerns, but only in a minor or trivial manner.

Positive Change: A change to the Project that increases the amount of protection to the environment or decreases public concerns, having no negative aspects in this regard (that is, positive impacts may not be considered to offset any negative impacts).

Minor Change: A change to a design aspect of a drawing, where the design has no bearing on the environment or potential public concerns.

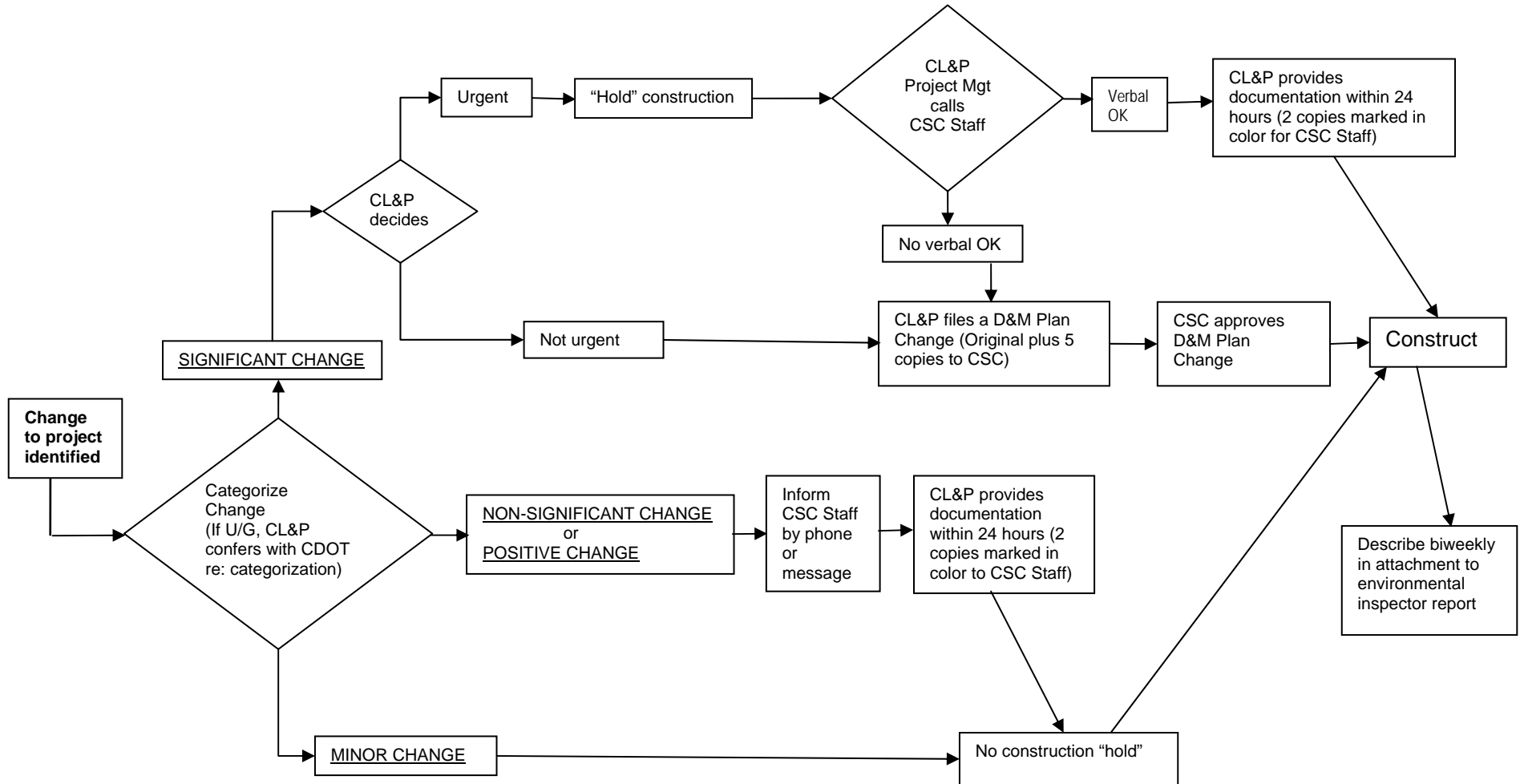
For “non-significant” and “positive” changes, CL&P will inform Council staff of the change by phone (or telephone message) and will file appropriate documentation with the Council within 24 hours. There will be no “hold” on construction for such non-significant and positive changes.

For “minor changes”, there will be no formal notification process prior to proceeding with construction incorporating the change, and the reporting of such changes will occur biweekly, as described below.

Biweekly Reporting of All Changes to D&M Plans

CL&P will document all D&M Plan changes - significant, non-significant, positive, and minor – in an attachment to the environmental inspector’s biweekly report.

Middletown-Norwalk Transmission Project
D&M Plan Change Approval Process



APPENDIX D

Documentation of Use of ConnDOT Encroachment Process

APPENDIX D

DOCUMENTATION OF USE OF ConnDOT ENCROACHMENT PROCESS

To be included after agreement is reached with ConnDOT.