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Kathleen M. Shanley Manager – Transmission Siting Tel: 860-728-4527

March 15, 2019

James Murphy, Jr., Acting Chairman Connecticut Siting Council Ten Franklin Square New Britain, CT 06051

Re: Docket No. 466: Frost Bridge to Campville 115-kV Project – Final Report

Dear Mr. Murphy:

The Connecticut Light and Power Company doing business as Eversource Energy (Eversource) hereby provides its Final Report for the Frost Bridge to Campville 115-kilovolt (kV) Project (Project) to the Connecticut Siting Council (Council). The Project consisted of the construction of a new approximately10.4-mile 115-kV transmission line between Frost Bridge Substation and Campville Substation, all within existing Eversource rights-of-way (ROWs) in the Litchfield County towns of Watertown, Thomaston, Litchfield, and Harwinton, as well as related modifications to Eversource's existing Frost Bridge Substation (Town of Watertown) and Campville Substation (Town of Harwinton).

This Final Report is submitted in accordance with the Regulations of Connecticut State Agencies (RSCA), Section 16-50j-62(c); the Council's Decision and Order regarding the Project; and the Council's approval of the Development and Management Plans for the Project. Pursuant RSCA Section 16-50j-62(c), the Final Report identifies the following:

- 1. All agreements with abutters or other property owners regarding special maintenance precautions;
- 2. Significant changes to the D&M plans that were required because of the property rights of underlying and adjoining owners or for other reasons;
- 3. The location of construction materials which have been left in place including, but not limited to, culverts, erosion control structures along watercourses and steep slopes, and corduroy roads in regulated wetlands;
- 4. The locations of areas where special planting and reseeding have been performed; and
- 5. The actual construction cost of the facility, including, but not limited to, the following costs:
  - a. Clearing and access;
  - b. Construction of the facility and associated equipment;
  - c. Rehabilitation; and
  - d. Property acquisition for the site or access to the site.

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In accordance with the Council's requirements, this Final Report is being provided within 180 days after the completion of all Project site construction and rehabilitation. Specifically, whereas the Project's new transmission facilities were placed in service on December 16, 2017 and work at Campville Substation was completed in May 2018, Eversource continued to perform Project restoration activities until August 31, 2018. Thereafter, Eversource monitored the areas affected by construction and, in mid-December 2018, verified that all restoration is effective. Accordingly, on January 8, 2019, Eversource submitted to the Council notice of Project construction completion.

Along with this filing, Eversource is submitting a motion for a Protective Order regarding the provision of certain Project cost information.

Should you or other Council members have any questions regarding this Final Report, please do not hesitate to contact me via e-mail at kathleen.shanley@eversource.com or telephone at (860) 728-4527.

Sincerely,

Kathleen M. Shanley

Manager, Transmission Siting

Encl.



## FROST BRIDGE TO CAMPVILLE 115-kV PROJECT

(Connecticut Siting Council Docket No. 466)

# FINAL REPORT

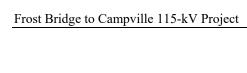
**MARCH 2019** 

Submitted to:

Connecticut Siting Council

Prepared by:

The Connecticut Light and Power Company doing business as Eversource Energy



Final Report

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#### LIST OF ATTACHMENTS

- **Attachment 1:** All agreements with abutters or other property owners regarding special maintenance precautions.
- **Attachment 2:** Significant changes to the Development and Management (D&M) plans that were required because of the property rights of underlying and adjoining owners or for other reasons.
- Attachment 3: The location of construction materials that have been left in place including, but not limited to, culverts, erosion control structures along watercourses and steep slopes, and corduroy roads in regulated wetlands.
- **Attachment 4:** The locations of areas where special planting and reseeding have been performed.
- **Attachment 5:** The actual construction cost of the facility, including, but not limited to, the following costs:
  - a. Clearing and access;
  - b. Construction of the facility and associated equipment;
  - c. Rehabilitation; and
  - d. Property acquisition for the site or access to the site.

# AGREEMENTS WITH ABUTTERS OR OTHER PROPERTY OWNERS REGARDING SPECIAL MAINTENANCE PRECAUTIONS

For the construction of the Frost Bridge to Campville 115-kilovolt (kV) Project (Project) facilities, The Connecticut Light and Power Company doing business as Eversource Energy (Eversource) used its existing easements and fee-owned properties and, as necessary, entered into real estate agreements with property owners for use of private properties. In addition, for the installation of the sections of the new 10.4-mile 115-kV transmission line (i.e., 1854 Line) across the Mattatuck State Forest (towns of Watertown and Thomaston) and Black Rock State Park (Town of Watertown), Eversource obtained a Special Use License from the Connecticut Department of Energy and Environmental Protection (CT DEEP), which manages these public properties.

The only landowner/abutter agreements for the Project regarding right-of-way (ROW) maintenance are those that pertain to permanent access roads, as shown on the Project's Development and Management (D&M) Plan maps, and the installation of gates or other barriers across on- or off-ROW access roads. Table 1-1 lists the locations where gates/barriers were installed.

Table 1-1: Gates/Barriers Installed along ROW or off-ROW Access Roads

Line List No. / Town	D&M Plan Map No.	Vicinity of Structure No.	Gate/Barrier
Watertown			
40003, 40006	1	2	Gate at access road entrance from Echo Lake Road to Structures 2, 1911, and 3080
40019	6	16	Gate along access road to Structure 16
40035, 40036	8	22	Pole barrier installed across ROW on the north side of Nova Scotia Hill Road
Thomaston			
41023, 41024	17	47	Gate at access road entrance from State Route 109 (per request of CT DOT)
41024, 41025	17	48	Gate at access road entrance from State Route 109 (per request of CT DOT)
41030	20	56	Two gates along access road to Structure 56 through 51
41031	20	57	Gate replaced along access road to Structure 57
Litchfield			
42014, 42015	26	73	Gate replaced across access road on the south side of Mason Hill Road
42014, 42015	26	73	Pole barrier installed across ROW on the south side of Mason Hill Road

Line List No. / Town	D&M Plan Map No.	Vicinity of Structure No.	Gate/Barrier
42049, 42050	29	83	Gate replaced along access road to Structure 83
42054	30	85	Gate at access road entrance from State Route 8 (per request of CT DOT)
42054	31A	86, 3236, 3171	Gate at access road entrance from State Route 8 (per request of CT DOT)
Harwinton			
42062, 42064	32	87, 3174, 3235	Gate along access road from Valley Road (per request of Town of Harwinton).
42062, 42064	32	87, 3174, 3235	Pole barrier installed across ROW on north side of Valley Road (per request of Town of Harwinton)
42074	34	94	Gate replaced across access road entrance from Wildcat Hill Road
42072	34	93	Gate replaced along access road to Structure 93
43000	35	97	Gate at access road off Wildcat Hill Road leading to Structures 96 97 and rear entrance to Campville Substation

#### SIGNIFICANT CHANGES TO THE D&M PLANS

During the construction of the Project, Eversource requested and the Connecticut Siting Council (Council or CSC) approved various changes to the Project's D&M Plans. Table 2-1 summarizes these changes, including the rationale for the change, date requested, and date approved by the Council. The majority of these D&M Plan changes pertained to the property rights of underlying and adjoining owners or for other reasons in order to facilitate the completion of defined construction tasks.

Table 2-1: Significant D&M Plan Changes

Description Of D&M Plan Change	Date Approved by CSC
D&M Plan Volume 3 was re-issued in its entirety to reflect changes due to final engineering design (2-4-foot change in above-ground heights of direct embed structures; need for temporary 3-pole structures during the installation of the new 115-kV lines across the Naugatuck River), modifications to limits of disturbance to account for spoil spreading and some additional grading/fill in areas of rugged terrain, and modifications to limits of vegetation removal (mostly narrowing, except as required to maintain conductor clearances).	1/18/2017
A shift of Structure 3236 on the adjacent 1921 Line approximately 75 feet to the north as required to provide additional access and room to establish a work area for this new structure. This shift enabled work to be sequenced between Structure 3236 and the adjacent Structure 3171, as required to adhere to the Project's designated outage sequence.	4/7/2017
Modified location of access road between Structures 60 and 61 to avoid a steep slope. Modified access road is on-ROW, replacing a section of off-ROW access road. The revised on-ROW access is approximately 100 feet shorter than the segment of the road to be replaced.	4/12/2017
Revisions to access roads to provide ingress/egress to structures following elimination of a proposed pull pad between Structures 16 and 17. Access modifications included the upgrade and utilization of an existing spur access road to Structures 16 and 17.	5/12/2017
Installation of temporary guy wires/anchors on 12 vertical tangent direct embed structures (Structures 5-10, 15-17, 19-20, 22 all in Watertown) during necessary backfill replacement/remediation.	6/21/2018

#### LOCATION OF CONSTRUCTION MATERIALS LEFT IN PLACE

Table 3-1 lists the locations where construction materials were left in place along the transmission line ROW and adjacent to the Frost Bridge and Campville substations. All of the construction materials left in place pertain to long-term ROW/site access and stabilization, consistent with Eversource's best management practices (BMPs) for permanent erosion/sedimentation control, including the use of sedimentation basins, drainage swales, and water bars.

In addition, as shown on the D&M Plan maps, in most upland areas of the ROW, gravel roads and work pads at structure sites remain in place to provide access to facilitate Eversource's future transmission line maintenance, vegetation management activities, and emergency repairs. Construction materials were left in place only in uplands and, with the exception of the permanent culvert and rock stream fjord installed to facilitate ROW access in Harwinton, no permanent access roads were left in place in wetlands.

**Table 3-1: Locations where Project Construction Materials Remain in Place** 

Line List No./Town	D&M Plan Map No.	Vicinity of Structure No.	Materials Left in Place (Water bars, plunge pools, riprap, culverts)
Watertown			
40000	1	1A	Water bar and plunge pool along access road to Structure 1A; riprap berm along northeast corner of work pad; stone runoff swales within work pad
40006	2	3-4	Water bar along access road between Structures 3 and 4
40009	3	7-8	Riprap slope and runoff swale on west side of Structure 7 work pad; three water bars and plunge pools along access road between Structures 7 and 8
40009	3A, 3B	-	Water bars and plunge pools along access road from Echo Lake Road to ROW
40009	4	8-9	Three stone fords along permanent access road crossings of wetland WA-8/WA-9 (including Turkey Brook [Stream S-A6] and un-named Stream S-A5
40025	7	18	Riprap slope on east side of Structure 18 work pad; two water bars along access road leading to work pad
40025	8	20	Riprap armored slope on north-northeast border of Structure 20 work pad
41000, 41002, 41007	10-11	26-29	Four water bars with plunge pools along access road between Structures 26 and 27; stone swale within work pad for Structures 27/28; three water bars and stone ford along access road between Structures 28 and 29
41010	11	30	Two water bars and plunge pool, as well as stone swale, along access road to Structure 30
41010, 41012	11	31	Two stone swales and three water bars with plunge pool along access road west of Structure 31

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Line List	D&M Plan	Vicinity of	Materials Left in Place
No./Town	Map No.	Structure No.	(Water bars, plunge pools, riprap, culverts)
41013	11	32	Stone swale along east side of access road adjacent to Structure 32 work pad; water bar adjacent to work pad, stone swale on north side of work pad; water bar and plunge pool on access road to north of Structure 32 work pad
41013	12	33-34	Two water bars and plunge pool along access road to Structure 33; riprap slope runoff protection and stone berm along east side of Structure 33 work pad; stone swale and plunge pool along east side of access road between Structures 33 and 34; water bars along access road to Structure 34 work pad; riprap berm and runoff protection along east side of Structure 34 work pad; water bar and riprap protection along access road immediately north of Structure 34 work pad
41013, 41014	12	34-35	Three areas of stone swales with water bars/plunge pool along access road between Structures 34 and 35; stone berm along east side of Structure 35 work pad; riprap runoff protection on Structure 35 work pad; stone swale, and three water bars with plunge pools along access road to north of Structure 35
41013	13	36-38	Stone swales along main access road and access road spur leading to and north of Structure 36 and 37, as well as to Structure 38; 10 water bars with plunge pools along main access road and access road spur; riprap berm and riprap runoff protection along east side of Structure 38 work pad
41013	14	39	Three water bars and plunge pools along access road leading to Structure 39; riprap berm and plunge pool along east side of Structure 39 work pad; vegetated berm across work pad; three water bars and plunge pools along access road to north of Structure 39
41013	14	40-41	Four water bars along main access road between Structures 40 and 41; armored slope along access road spur to Structure 41, with water bar and plunge pool
41013	15	42-44	Seven water bars, three plunge pools along main access road, including curtain drain swale and riprap curtain drain along access road between Structures 42 and 43; armored slope along east side of Structure 42 work pad and spur access road; water bar with plunge pool along spur access road to Structure 44; stone ford of area near Wetland W-C22
41013	16	45-46	Armored slope along north side of Structure 45 work pad; water bars/dips along access roads to Structures 45 and 46; water bar and plunge pool along access road to Structure 46; two berms with natural rock plunge pools across Structure 46 work pad
Thomaston			
41023, 41024	17	47	Four water bars with plunge pools along access road to Structure 47; riprap berm along west side of structure work pad
41024, 41025	17	48	Water bar; water bar with plunge pool along access road to Structure 48
41025	17	49	Riprap berm along southern and eastern portions of Structure 49 work pad; riprap runoff in southeast corner of work pad
41025	18	50	Riprap berm along eastern portion of Structure 50 work pad; riprap slope and berm along north side of work pad and access road spur to work pad; three water bars and plunge pools; stone swale along access road to north to Structure 51

Line List	D&M Plan	Vicinity of	Materials Left in Place
No./Town	Map No.	Structure No.	(Water bars, plunge pools, riprap, culverts)
41026	18	51	Riprap berms within work pad to protect Wetland W-D3. Water bar and stone
			swale along access road leading to spur access road
41025,	18	51-52	Nine water bars with plunge pools, as well as stone swale along access road
41026, 41028			between Structures 51 and 52
41031	20	57	Riprap runoff protection on northeastern portion of Structure 57 work pad
41033	20A, 21	58	Water bar along access road to Structure 58
41035	20A, 21	59	Riprap swale, drainage ditch and plunge pool along access road to Structure 59
41037	21	60	Natural rock curtain drain underneath northern portion of Structure 60 work pad
42003	23	65	Water bars along spur access road to Structure 65
42005	23	68	Water bar along access road north of Structure 68 work pad
42005, 42006	24	69	Four water bars with plunge pools and stone berm along access road to Structure
•			69 work pad; stone berm along eastern portion of work pad, with riprap runoff
			protection and plunge pool
42009	25	70	Water bars and plunge pool along access road to Structure 70 (from Structure 71).
			Stone berm with plunge pool and riprap runoff protection along southern and eastern sides of work pad
Litchfield			
42010, 42014	25	72	Riprap berm and natural rock armored slope with riprap runoff protection along
			west side of work pad and riprap berm along the south side of work pad; water
			bar and plunge pool along access road spur to the north of work pad
42014	26	73	Plunge pool with water bars and stone drainage swales along access road
			extending north to Structure 73 work pad; water bar and plunge pool along
			access road spur leading to the work pad; stone berms within work pad
42016, 42017	26	74, 75	Riprap drainage swale with culvert pipe across Structure 74 work pad; berm and
			drainage swale along the east side of Structure 75 work pad
42019	27	76	Drainage ditch (vegetated) along the eastern side of Structure 76 work pad
42050	29	83	Four water bars and plunge pools along access road to work pad; riprap berm
			along the southern and eastern portions of work pad
42054	30	85	Stone berm with riprap runoff protection within work pad
42054	31A	86, 3236,	Rock swale under portion of access road near State Route 8 (directs runoff to
		3171	plunge pool); remaining portions of new permanent access road to structures are
			lined with rock swales and water bars that direct flows to multiple plunge pools.  Entire slope to the north is armored with rock. Riprap berms and rock swales
			along the east and south sides of Structure 3171 work pad and along the west

Line List No./Town	D&M Plan Map No.	Vicinity of Structure No.	Materials Left in Place (Water bars, plunge pools, riprap, culverts)  side of Structure 86 work pad; stone runoff outlets adjacent to Structures 86, 3171 and 3236 work pads
Harwinton			
42063, 42064, 42069	32	87, 3174, 3235	Six riprap water bars and five plunge pools (two with stone runoff swales) along access road to Structure 87 from Valley Road; new culvert bridge over Stream S-E10; stone berm along east side of work pad; riprap water bars within work pad; riprap slope between Structures 87 and 3235
42069	32, 33	88	Riprap runoff protection; riprap water bar with plunge pool; riprap berms. Riprap berm along east side of work pad
42069, 42070	33	3176/3233 - 91	Nine water bars with five plunge pools; two dips; riprap berm along access road between Structures 3176/3233 and 91
42070	34	93	One water bar along access road
43000	35	97	Drainage pipe beneath access road adjacent to Campville Substation; riprap drainage swale on east side of access road to Structure 97; stone berm with riprap runoff protection, as well as water pool with plunge pool within/adjacent to Structure 97 work pad.

#### LOCATIONS OF AREAS OF SPECIAL PLANTINGS AND RESEEDING

Eversource restored the areas affected by Project construction in accordance with the standard protocols identified in the D&M Plans. In addition, as listed in Table 4-1, in certain areas affected by the Project, Eversource installed special plantings or performed reseeding, per landowner requests.

Table 4-1: List of Locations of Special Plantings or Reseeding along the Project ROW

Line List No./Town	Structure No. (Vicinity)	Plantings / Seeding	
Watertown			
40000	1B	Installed landscape plantings between Frost Bridge Road and substation fence (per CSC D&O Condition 2.d).	
40012	11 – 14	Removed stone and restored agricultural areas for hay (Timothy, Brome and Orchard mix).	
Thomaston			
41033, 41035	58, 59	Restored grass along driveway and access road. Seeded stone work pads.	
41037, 41038	60 – 62	Seeded stone work pads.	
41037	62	Installed arborvitaes off-ROW for screening.	
41038	62	Installed evergreen plantings along restored access road entrance.	
41047	63	Restored lawn areas. Installed spruce trees.	
42003, 42005	65 – 67	Restored grass along access roads and work pads.	
42004	65	Installed evergreen plantings. Access road removed from Walnut Hill Road to barn and reseeded with lawn mix.	
42005	66	Evergreen plantings installed along ROW for screening.	
42009 - 42014	70 – 73	Seeded stone work pads.	
42010, 42011	71	Evergreen plantings installed along ROW for screening.	
Litchfield			
42021	77	Restored lawn areas and all previously landscaped areas. Removed work pad, stone, and brush piles, per landowner request. Re-established trail from shed to back yard on the east side of Structure 77. Installed plantings for visual mitigation to re-establish buffer between the house and Hopkins Road. Compatible species were planted between a parking area and the driveway, as well as on the opposite side of the driveway.	
42032	79 to 80	Installed evergreen plantings for screening.	

Line List No./Town	Structure No. (Vicinity)	Plantings / Seeding	
Litchfield			
42034	80	Installed evergreen and flowering trees for screening.	
42035	80 to 81	Installed plantings of shrubs and evergreens for screening. Restored lawn area.	
42035, 42038	80 to 81	Installed shrubs to restore vegetative buffer between properties.	
42038	80 to 81	Restored lawn area. Seeded wildflower seed mix in cleared area. Installed plantings of shrubs, evergreens, and flowering trees for screening.	
42038, 42040	81	Removed all stone from work pad and restored area with a lawn seed mix.	
42040	81	Restored lawn area and installed trees for screening	
42042	81 to 82	Restored area with lawn seed. Installed evergreen and flowering trees for screening.	
42047	82	Removed all stone from work pad and restored with lawn seed mix. Installed shrubs to restore vegetative buffer removed for access.	
42050	83 and 84	Restored grass along driveway.	
Harwinton			
42066	87	Installed evergreen plantings to provide visual screening from Valley Road.	
43014	93	Installed evergreen and flowering trees for screening.	
42074	94	Installed shrubs along edge of access road, restored work pad and cleared area behind home.	

## ACTUAL CONSTRUCTION COST OF THE FACILITY

The actual construction cost of the Project is as follows:

Cost Categories	Total (\$1,000)
a. Clearing and Access	*
b. Construction of the Facility and Associated Equipment	
Overhead Transmission Line Construction	*
Substation Modifications: Construction	*
c. Rehabilitation	*
d. Property Rights Acquisition	\$0.00
TOTAL	\$48,041

<sup>\*</sup>This cost data is proprietary information that is subject to Eversource's proposed protective order.