

STATE OF NEW HAMPSHIRE
Intra-Department Communication

Date: August 5, 2024

At (Office): NH Dept. of Energy

From: Kenneth G. Walsh *KGW*
Utility Analyst IV – Enforcement Division

Subject: **CRE 2024-007 Eversource Energy**
Application for License to Construct and Maintain Electric Lines Over and Across
State-Owned Land and Public Waters in Littleton, New Hampshire

Staff Recommendation

To: Jared Chicoine, Commissioner, Department of Energy
Christopher Ellms, Jr., Deputy Commissioner, Department of Energy

CC: Amanda Noonan, Director of Regulatory Support Division
Paul Kasper, Director of Enforcement Division
Michael Soucy Administrator, Enforcement Division
Elizabeth Nixon, Director of Electric Regulatory Support Division

Review by the Enforcement Division of the above application consisted of the following elements:

- Application contents, revised application contents, and history.
- Applicable State statutes.
- Review of existing crossing(s) previously licensed by the State of New Hampshire, if any.
- Review of land ownership and of existing pole structures.
- Review of NESC code requirements as described in PUC 300.
- Review of public need and public impact, including applicability of other State regulations; and
- Conclusions and Recommendations.

1. Application Contents and History

On July 11, 2024, Public Service Company of New Hampshire d/b/a Eversource Energy (Eversource, ES), applied pursuant to RSA 371:17 for a license to construct and maintain the U199 Line, which is an existing three phase 115 kV line that crosses public waters and State-owned land in Littleton. The land crossing is owned by the New Hampshire Department of Transportation.

On August 1, 2024, Eversource resubmitted this application due to errors and clarifications as identified and as required by Department of Energy (DOE) Enforcement staff.

Eversource is requesting that the DOE issue a license for the purpose of proposed structure replacements, reconductoring, replacement of two shield wires with OPGW, and installation of an under-build ADSS communication wire on the U199 Line.

This proposed project is to replace (6) existing wood structures with weathered steel structures and (1) existing steel structure with a new steel structure. The (3) existing transmission conductors will be replaced with (3) new conductors per the cable schedule. Additionally, the two existing pole top mounted shield wires will be replaced with two OPGW communication cables at crossing spans between Structures #25 and #26, #64 and #65, and renumbered Structures #77 and #78 having the specifications detailed under the Cable Schedule. The shield wires between renumbered Structures #70 and #71, and #72 and #73 will be replaced with one OPGW communication cable and one static shield wire and an additional wire, an ADSS communication cable, will be installed in an under-build configuration, which OPGW shield wire and ADSS cables have the specifications detailed under Cable Schedule.

Common to all these noted structures, the replacement conductors consist of (3) ACSS 1272 54/19 kcmil conductors. The OPGW wires (48F) will be vertically attached above the conductors. The ADSS communications cable (144F) will be under-build as noted.

The scope of this project begins at Structure #25 in Littleton around the Moore Reservoir boat launch then heading southeast crossing Moore Reservoir to Structure #26. The U199 Line then continues southeast to Structure # 64, which then crosses the Ammonoosuc River to Structure #65. The U199 then traverses southward again crossing the Ammonoosuc River in several locations and ultimately crossing State-owned land ending at Structure #78.

The water crossing in Littleton spans 975.9 feet between Structures #25 and #26 with 703.0 feet crossing the Moore Reservoir. See Enforcement Division Map 1.

The water crossing in Littleton spans 496.9 feet between Structures #64 and #65 with 139.9 feet (comprising 107.6 feet +32.3 feet) crossing the Ammonoosuc River. See Enforcement Division Map 2.

The water crossing in Littleton spans 419.8 feet between Structures #70 and #71 with 122.8 feet spanning the Ammonoosuc River. See Enforcement Division Map 3.

The water crossing in Littleton spans 775.4 feet between Structures #72 and #73 with 351.6 feet spanning the Ammonoosuc River. See Enforcement Division Map 3.

The land crossing in Littleton spans 391.4 feet between Structures #77 and #78 with 64.3 feet spanning State-owned land. See Enforcement Division Map 4.

The following table provides the summary of this application with all crossings to include structure numbers, types, spans, ES design criteria, and NESC compliance:

Eversource U199 Line Structure Replacements - DOE Public Waterbody and State-Owned Land Crossing Details								
Existing Structure #	New Structure #	Structure Type	Height Change (feet)	Span (Pole to Pole)	Span Distance (feet)	Minimum NESC Table 232-1 Clearance (ft.)	ES Vertical Design Clearance (ft.)	Complies with NESC Table 232-1 (Y/N)
25	25	70' steel 3 pole, ADL, CLH5	-1.1	25-26	975.9	30.1	36.6	Y
26	26	65.5' steel 3 pole, ADL, CLH5	0.9					
64	64	88.0' steel 2 pole, T, CLH3	20.9	64-65	496.9	18.6	55.1	Y
65	65	70.0' steel 3 pole, ADL, CLH3	8.6					
71	70	75.0' steel 1 pole, SDE-1	0	70-71	419.8	14	17.6	Y
72	71	50.0' steel 1 pole, SDE-1	0					
73	72	88.0' steel 2 pole, T	16.3	72-73	775.4	14	15.4	Y
74	73	75.0' steel 1 pole, SDE-1	0					
78	77	56.5' steel 3 pole, ADL, CLH3	5.5	77-78	391.4	28.1	33.7	Y
79	78	61.0' steel 2 pole, T, CLH1	9.1					

2. New Hampshire statute referenced in application (modified by NH House Bill 1258, August 22, 2022)

RSA 371:17 Licenses for New Poles. – Whenever it is necessary, in order to meet the reasonable requirements of service to the public, that any public utility should construct a pipeline, cable, or conduit, or a line of poles or towers and wires and fixtures thereon, over, under or across any of the public waters of this state, or over, under or across any of the land owned by this state, modify a previously licensed installation, or license a previously constructed installation, it shall apply to the department of energy for a license to construct and maintain the same. For the purposes of this section, " public waters " are defined to be all ponds of more than 10 acres, tidewater bodies, and such streams or portions thereof as the department of energy may prescribe. Every corporation and individual desiring to cross any public water or land for any purpose herein defined shall apply to the department of energy for a license in the same manner prescribed for a public utility. The department of energy may condition any license issued under this paragraph in any manner necessary to assure that the license may be exercised without substantially affecting the public rights in public waters or state-owned lands. Using a non-adjudicative process, the department of energy may reject incomplete or improperly filed applications, and shall, also using non-adjudicative process, issue or deny the license within 90 days of receiving a complete application and all information subsequently requested of an applicant.

3. Review of existing license(s) and permissions previously granted by the State of New Hampshire, including additional permitting requirements, for the applicable public waters and State-owned land crossings in Littleton, New Hampshire.

Eversource has previously constructed and currently operates and maintains an overhead 115 kV electrical transmission line, designated as the Eversource U199 Line located between Littleton Substation in Littleton and Streeter Pond Tap Substation in Littleton that was constructed in 1971. The U199 Line crosses the public water at Moore Reservoir between existing Structures #25 and #26, and the Ammonoosuc River between existing Structures #64 and #65, #71 and #72, and #73 and #74, which were previously licensed under Order # 10,338 (D-E6077) and are the subject of this application. Existing Structures #71 and #72 were subsequently replaced pursuant to license issued under Order 25,726 (DE 14-194) and existing Structures #73 and #74 were subsequently replaced pursuant to license issued under Order 25,778 (DE 14-373). The U199 Line crosses State-owned land between existing Structure #78 and #79, which is an active rail trail administered by the NH Department of Transportation (DOT). Eversource states that this crossing was not licensed either owing to an oversight or that the line may have been built on land prior to State ownership, but which will be licensed because of this application.

Eversource states that for the current project, a New Hampshire Department of Environmental Services (NHDES) Standard Dredge and Fill Permit and a Shoreland Statutory Permit by notification will be required for temporary and permanent impacts associated with the structure replacements. The permit applications have been submitted and permits will be obtained prior to commencement of construction within jurisdictional areas.

The U.S. Army Corps of Engineers (USACOE) does not regulate the subject portion of the Moore Reservoir and the Ammonoosuc River as navigable waters. Therefore, no crossing permits are required from USACOE.

The following is listed under the NHDES category “Public Rivers and Streams” in the Official List of Public Waters (OLPW):

- In Littleton, the Ammonoosuc River from the White Mountain National Forest boundary near Lower Falls in Carroll to the confluence with the Connecticut River in Haverhill.

The entire list of public waters can be found on the NHDES website by using the following web link:

<https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/olpw.pdf>

4. Review of land ownership at proposed pole structures

Eversource attests that the proposed structure replacements, OPGW and ADSS installation work will be accomplished within existing right-of-way easements, thereby mitigating impacts and concerns of property owners adjacent to the project locations. A list of abutters was provided by Eversource in addition to the application and exhibits.

5. Review of National Electrical Safety Code (NESC) requirements as described in N.H. Admin. R., Puc 306.01 (b)

The Enforcement Division reviewed the specifications related to the design and reconstruction of this crossing project as described in the application, attachments, and all supplemental support documents and corrections filed by ES and found them to be in conformance with N.H. Admin. Rule Puc 306 and applicable sections of the National Electrical Safety Code (NESC) C2-2012.

The conductor cable clearance requirements were met using the NESC based on the design conditions at 392⁰ F. for all crossings within this petition. This scenario was the governing condition, which yielded the greatest sag and lowest clearance. Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the application.

Eversource will maintain and operate the clearances of the crossings at a height no less than what is required by the 2012 National Electrical Safety Code (NESC, Table 232-1) which is: 30.1 feet for 115 kV wires over water areas suitable for sail boating including lakes, ponds, reservoirs, tidal waters, rivers, streams and canals with an unobstructed surface areas of 20 to 200 acres in respect to the public water crossing depicted in Exhibit 2; 18.6 feet for 115 kV wires over water areas not suitable for sail boating or where sail boating is prohibited in respect to the public water crossing depicted in Exhibits 3; 14.0 feet for ADSS wires (0 kV) over water areas not suitable for sail boating or where sail boating is prohibited in respect to the public water crossings depicted in Exhibits 4 and 5; and 28.1 feet for 115 kV wires over top of track of railroads in respect to the state-owned land crossing depicted on Exhibit 6.

The actual minimum height over the public water and State-owned land crossings are depicted on the attached Exhibit 2 through 6 and exceeds the minimum requirement.

6. Review of public need and impact

The U199 transmission line is an integral part of Eversource's existing electric transmission system in New Hampshire. The crossing locations identified in the petition are in Littleton, New Hampshire.

RSA 371:17 requires the Department of Energy to review applications for licenses to construct, maintain, or modify installations that exist or are proposed to exist, over, under, or across public waters or State-owned land. This review is to provide for safety of the public and the preservation of perpetual access and use of public waters and State-owned land in New Hampshire.

Eversource declares that the license, if granted, may be exercised without substantially affecting the use or enjoyment of public waters or State-owned land, that safe clearances will always be maintained, and precautions undertaken to ensure the safety of recreational users. The Enforcement Division's review of design specifications verified that minimum safe clearances above water and land will be maintained during and after construction; and therefore, determines that public use and enjoyment of said water and land will not be diminished in any respect because of the proposed project.

7. Enforcement Division Recommendations

Based on the results of its review of the application, resubmission, attachments, and all other supporting documents, the Enforcement Division recommends that the Department:

1. Find that the license that Eversource requests in the application may be exercised without substantially affecting public rights on public waters and State-owned land; and
2. Grant Eversource a license to construct and maintain electric lines pursuant to RSA 371:17 and N.H. Admin. R., Puc 306.01, over and across public waters in Littleton, New Hampshire as specified in the application.

Attachments:

Moore Reservoir - CRE 2024-007 Eversource Crossing - Map 1



Utility Structure



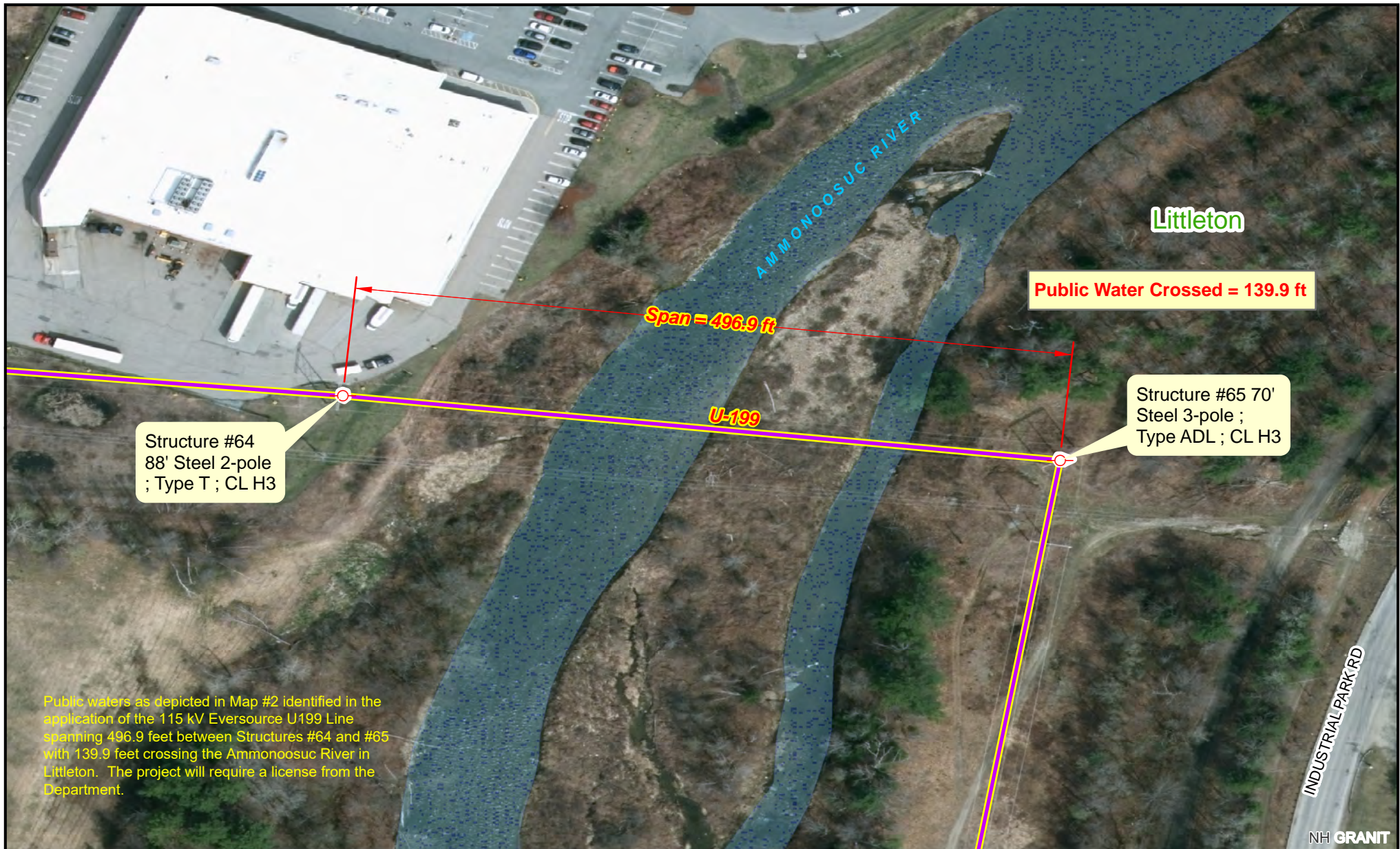
115 kV Line



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Ammonoosuc River - CRE 2024-007 Eversource Crossing - Map 2



Utility Structure



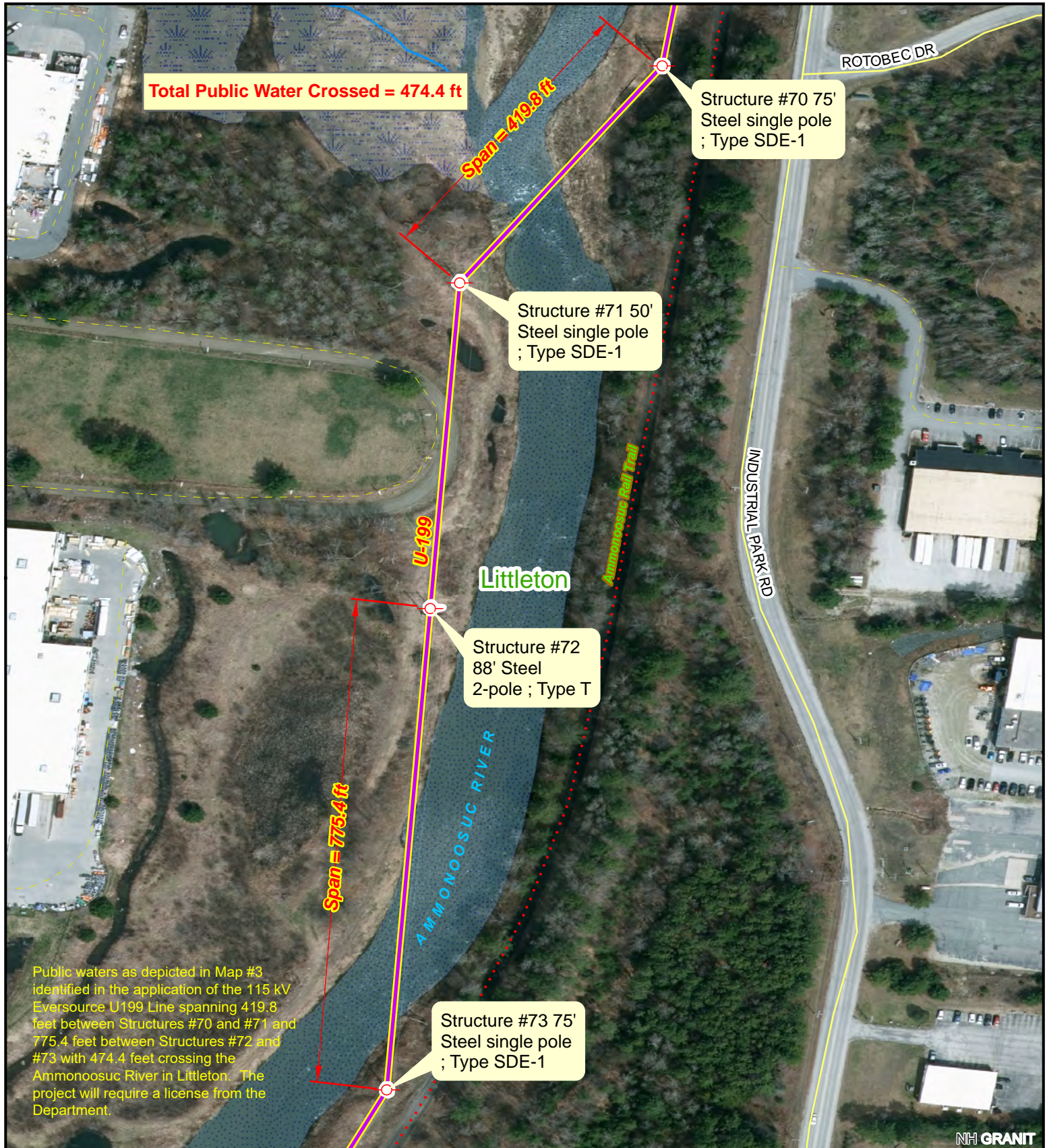
115 kV Line



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0 50 100 200 300 Feet

Ammonoosuc River - CRE 2024-007 Eversource Crossing - Map 3



NH GRANIT

Utility Structure

115 kV Line

Trail



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0 50 100 200 300 400
Feet

State Land (NHDOT) - CRE 2024-007 Eversource Crossing - Map 4



- Utility Structure
- 115 kV Line
- Trail
- State Land Parcel
- Town Parcel



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0 50 100 200
Feet