

STATE OF NEW HAMPSHIRE

Intra-Department Communication

DATE: February 22, 2022

AT (OFFICE): NH Dept. of Energy

FROM: Michael Soucy *MRS*
Utility Analyst IV – Division of Enforcement

SUBJECT: CR2022-002 Eversource Energy
Petition for License and License Amendments to Construct and Maintain
Electric Lines Over and Across State Owned Land, and Public Water in
Manchester, New Hampshire.

Division of Enforcement, **Safety Bureau Recommendation**

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

CC: Thomas Frantz, Director of Regulatory Support Division
Paul Kasper, Director, Enforcement Division
Elizabeth Nixon, Director-Electric Regulatory Support Division

The Division of Enforcement's review of the above petition consisted of the following elements:

- Petition contents, replacement petition contents, and history.
- Applicable State statute.
- Review of the existing crossing(s) previously licensed by the PUC, if any.
- Review of land ownership 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. Petition contents and history

On January 27, 2022, Public Service New Hampshire d/b/a Eversource Energy (Eversource, or the Company) filed a petition for a license pursuant to RSA 371:17 to construct and maintain the Eversource 393 Line, which is an existing 34.5kV distribution line that crosses public waters in Manchester, New Hampshire. The original constructed date of the 393 Line is believed to have been circa 1950 and was not licensed.

The scope of this project is focused on where the 393 Line crosses Cohas Brook in the City of Manchester. The crossing is located approximately 350 feet west from where the 393 Line crosses South Mammoth Road, which is approximately 235 feet south from the intersection of South Mammoth Road and Bodwell Road. The crossing extends approximately 36 feet west over Cohas Brook, where the line then continues west through agricultural pastureland that is bounded by the Cohas Brook to the south and east by Interstate 293/State Route 101 to the north.

The proposed project is to replace current wood structures with new Class 1 steel monopole structures. Structure 21 will be placed approximately 30 feet east of the original location to avoid offsetting the new structure in a farm road maintained by the landowner, and Structure 22 will be placed within 10' of the original structure location. The (3) existing transmission conductors, (1) neutral conductor and (1) ADSS conductor will remain unchanged and will be transferred to the new structures.

Existing conductors consist of (3) 336.4 kcmil, ACSR 18/1 phase conductors, (1) 2668 kcmil, ACSR 26/4 neutral conductor and (1) 64F ADSS cable.

The conductor cable clearance requirements were met using the National Electrical Safety Code (NESC) based on the design conditions at 285 deg F. for the crossings within this petition. This scenario was the governing condition, which yielded the greatest sag and lowest clearance. Only 14 feet clearance is required by the NESC Table 232-1 for the ADSS cable over water areas not suitable for sail boating. 17 feet clearance is required by the NESC Table 232-1 for phase conductors over water areas not suitable for sail boating. Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the petition.

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

Dept. of Energy Safety Bureau Summary Table

Eversource 393 - State Land and Waterbody Crossing Details						
Structure	Type	Span (Pole to Pole)	Distance (feet)	Minimum NESC Table 232-1 Clearance (ft.)	ES Vertical Design Clearance (ft.)	Complies with NESC Table 232-1 (Y/N)
21	40.5' Tangent Monopole, Steel	21-22	318.2	14	16.1	Y
22	40.5' Tangent Monopole, Steel					

2. New Hampshire statute referenced in petition

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, it shall petition 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 petition the department of energy for a license in the same manner prescribed for a public utility.

371:17 Licenses for New Poles (2021, 91:260, eff. July 1, 2021)

3. Review of existing license(s) and permissions previously granted by the PUC for these locations of the State-owned water in Manchester.

The State-owned water crossing span in Manchester was not previously licensed.

In Manchester, Cohas Brook from the Juncture of unnamed 4th order stream is listed under the category "Public Rivers and Streams" in the Official List of Public Waters (OLPW). The entire list of public waters can be accessed through the following web link:

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

Eversource asserts that environmental impacts from this project will require permits from the NH Department of Environmental Services and that the Company will obtain these before commencing work.

The U.S. Army Corps of Engineers (ACOE) does not regulate the subject portion of Cohas Brook as navigable waters.

4. Review of land ownership of proposed pole structures

In its petition, Eversource specifies that the unlicensed structures to be replaced pursuant to this petition cross public waters in Manchester, New Hampshire.

5. Review of NESC code requirements as described in Puc 300

The Safety Bureau reviewed the specifications related to the design and re-construction of this crossing project as described in the petition, attachments, and all supplemental support documents and corrections filed by the Company and found them to be in conformance with N.H. Admin. Rule Puc 306 and applicable sections of NESC C2-2012.

6. Review of public need and public impact

The 393 Line is an integral part of Eversource's existing electric distribution system in New Hampshire. The crossing locations identified in the petition are in Manchester, New Hampshire. The Company asserts in its petition that the existing crossings will be exercised without substantially affecting public rights in the identified State land and public waters in New Hampshire.

The Safety Bureau verified that minimum safe line clearances above the public waters will be maintained at all times and determined that public use and enjoyment of the State-owned land and public water will not be diminished in any material respect as a result of the proposed overhead line crossings.

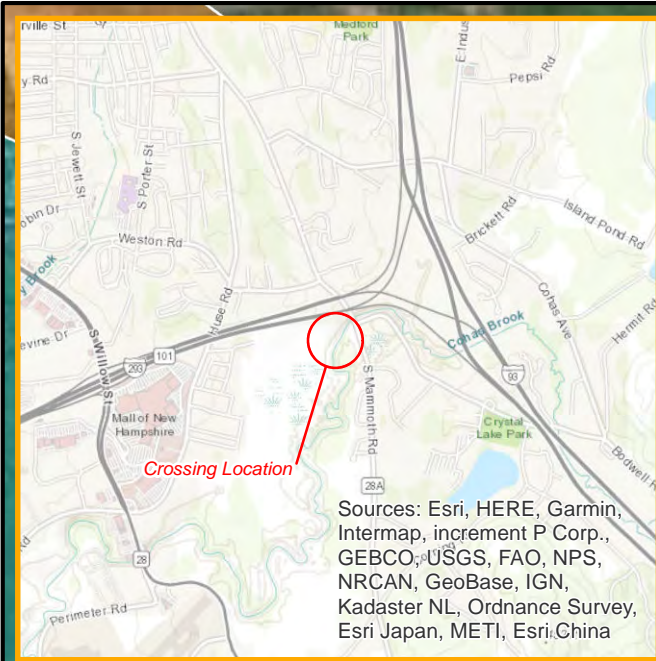
7. Safety Bureau Recommendation:

Based on the results of its review of the petition, attachments, and all other supporting documents, the Safety Bureau recommends that the Department:

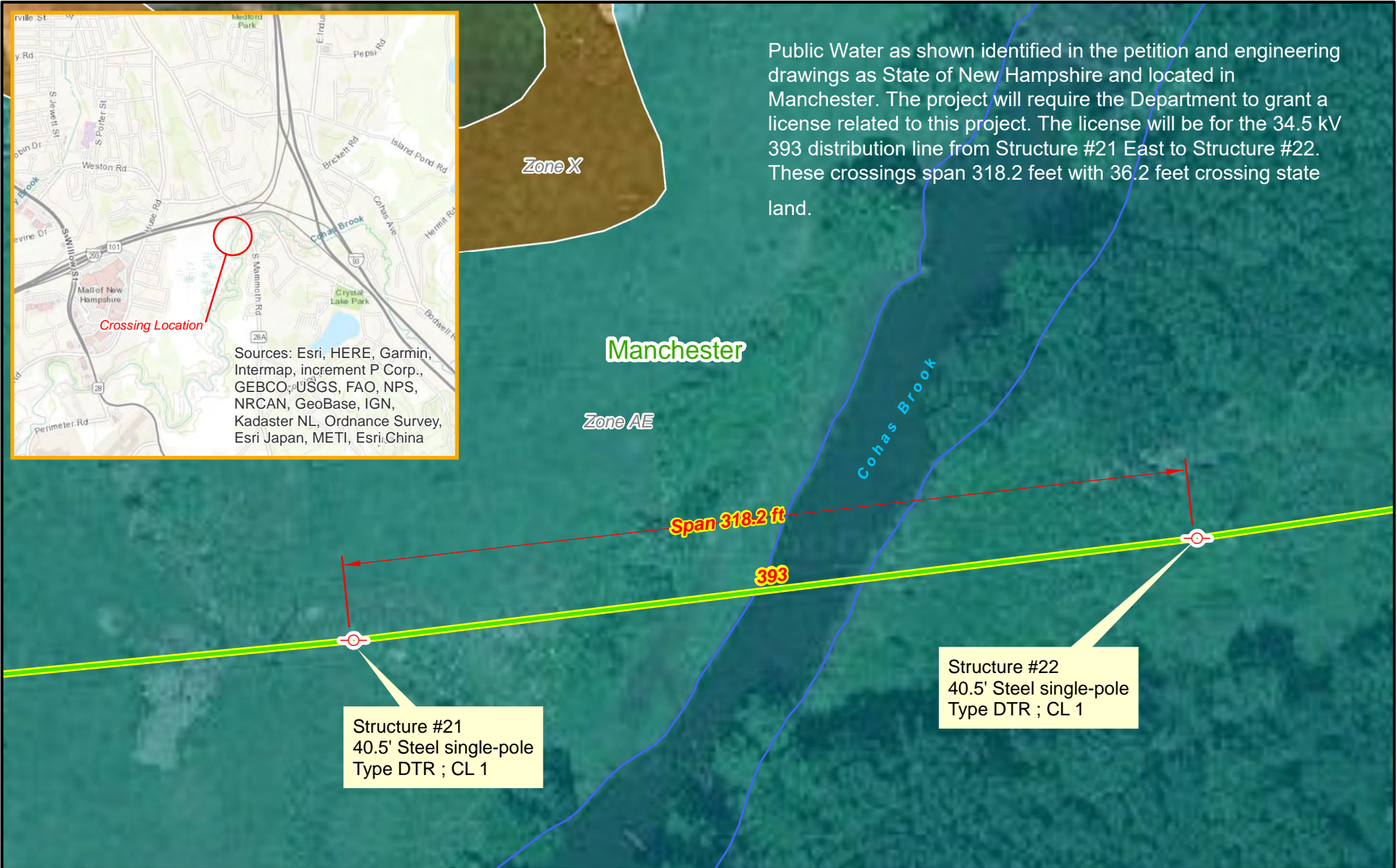
- 1) Find that the license Eversource requests in this docket may be exercised without substantially affecting the public rights in State owned land and public waters; and
- 2) Grant Eversource a license to construct, install, operate, and maintain electric lines and communication cables pursuant to RSA 371:17 and Puc 306.01, over and across State owned land and public water in Manchester, New Hampshire as specified in the petition.

Attachments

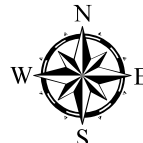
Cohas Brook - CRE 2022-002 Eversource Crossing



Public Water as shown identified in the petition and engineering drawings as State of New Hampshire and located in Manchester. The project will require the Department to grant a license related to this project. The license will be for the 34.5 kV 393 distribution line from Structure #21 East to Structure #22. These crossings span 318.2 feet with 36.2 feet crossing state land.



Utility Structure	Area of Undetermined Flood Hazard
34.5 kV Lines	0.2% Annual Chance Flood Hazard
1% Annual Chance Flood Hazard	Future Conditions 1% Annual Chance Flood Hazard
Regulatory Floodway	Area with Reduced Risk Due to Levee
Special Floodway	Area with Risk Due to Levee



Prepared by:
NH Department of Energy
Enforcement Division
Safety Bureau

