

STATE OF NEW HAMPSHIRE

Inter-Department Communication

DATE: April 28, 2021

AT (OFFICE): NHPUC

FROM: Kenneth Walsh *KGW*
Utility Analyst IV – Safety Division

SUBJECT: Docket No. DE 21-070 Public Service New Hampshire d/b/a
Eversource Energy
Petition for License to Construct and Maintain Electric Lines Over and
Across State Owned Land in Merrimack, New Hampshire
Staff Recommendation

TO: Debra Howland, Executive Director
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The Safety Division's review of the above petition consisted of the following elements:

- Petition contents and history;
- Applicable State Statute;
- Review of the existing crossing(s) previously licensed by the PUC;
- 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 March 31, 2021, Public Service New Hampshire d/b/a Eversource Energy (ES), filed a petition for a license pursuant to RSA 371:17 to construct, maintain and operate the Eversource K105 line, which is a three phase 115 kV transmission line, over State owned land in Merrimack.

ES is continuing a maintenance project that includes replacement of laminated wood structures due to environmental damage and the scope of this project is to replace two existing laminated wood structures #22 and #23 with weathered steel. One additional laminated wood structure #21 had been replaced without a license in December, 2020 due to public safety concerns from a severely degraded structure condition.

This crossing was not previously licensed reportedly due to a misunderstanding as to jurisdiction as the land parcel abuts the westerly boundary of the limited access corridor encompassing the F.E. Everett Turnpike.

The existing three (3) conductors and one (1) communication fiber optical ground wire (OPGW) will be transferred to the new steel structures. The OPGW wire will be vertically attached above the conductors.

The scope of this project begins in Merrimack approximately 3,300 feet south of the Bedford Toll Plaza on the F.E. Everett Turnpike at Structure #19, which is on the east side of F.E. Everett Turnpike. The K105 Line then heads west crossing the F.E. Everett Turnpike to structure #21 continuing then west to structures #22 and #23.

Common to all structures noted in this petition, all conductors for the 115 kV K105 transmission line consist of (3) 1272 kcmil ACSR 45/7 cables. The static wire will consist of (1) 24 Fiber communication cable OPGW, which is vertically attached above the conductors. Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the petition. The conductor cable clearance requirements were met using the National Electrical Safety Code (NESC) conditions at 285 deg F. This scenario was the governing condition, which yielded the greatest sag and lowest clearance. Only 20.1 feet clearance is required by the NESC Table 232-1 for areas traversed by vehicles such as forest areas.

As shown in Exhibit 2, existing steel Structure #19 was constructed of (1)-102 ft. AGH Type AD, CL H9 weathered steel pole. Structure #21 was constructed of (1)-102 ft. AGH Type SA-2, CL H9 weathered steel pole. In its petition, ES provides sufficient detail to show how the required clearance from the conductor cables to the land surface will be maintained at 62.7 feet. This crossing creates a total span of 539.8 feet with 48.9 feet spanning state-owned land.

Structure #22 is to be constructed with (1)-70 ft. AGH Type ST-2, CL H9 weathered steel pole. The crossing between Structure #21 and #22 spans 518.5 feet of state-owned land with a clearance maintained at 32.6 feet.

Structure #23 is to be constructed with (1)-61.0 ft. AGH Type ST-2, CL H9 weathered steel pole. This crossing creates a total span of 401.2 feet between Structures #22 and #23 with 343.4 feet with a clearance maintained at 25.0 feet spanning state-owned land. See attached PUC Safety Map.

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 commission 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 commission may prescribe. Every corporation and individual desiring to cross any public water or land for any purpose herein defined shall petition the commission for a license in the same manner prescribed for a public utility.

Source. 1921, 82:1. PL 244:8. RL 294:16. 1951, 203:48 par.17. 1953, 52:1, eff. March 30, 1953. 2013, 82:1, eff. June 19, 2013.

3. Review of existing license(s) and permissions previously granted by the PUC for this location of the State owned land in Merrimack.

The State owned land crossing span in Merrimack was not previously licensed.

ES asserts environmental impact from this project and that permits will be obtained from the NH Department of Environmental Services prior to commencement of this project.

4. Review of land ownership of proposed pole structures

In its petition, ES specifies that the replacement of the structures is over state owned land in Merrimack, New Hampshire.

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

Under N.H. Code Admin. Rules Puc 306, each utility is required to construct, install, operate and maintain its plant, structures and equipment and lines, as follows:

In accordance with good utility practice;

After weighing all factors, including potential delay, cost and safety issues, in such a manner to best accommodate the public; and

To prevent interference with other underground and above ground facilities, including facilities furnishing communications, gas, water, sewer or steam service.

For purposes of that section, "good utility practice" means in accordance with the standards established by the "National Electrical Safety Code C2-2012."

ES states that the current crossing has been designed and will be re-constructed, maintained, and operated in accordance with the NESC C2-2012.

Safety Division Staff reviewed the specifications related to the design and re-construction of this crossing project as described in the petition, the attachments, and all supplemental support documents, and found them to be in conformance with the applicable sections of NESC C2-2012 and Puc 300.

6. Review of public need and public impact

In order to meet the reasonable requirements of electric service to the public, ES proposes to replace existing wood laminated structures with weathered steel structures and transfer existing conductors and fiber optic communication cable and maintain a three-phase 115 kV transmission line designated as the K105 Line over and across state owned land in Merrimack, New Hampshire. This transmission line is an integral part of ES's electric transmission system in this area.

ES asserts in the petition that the existing crossings will be exercised without substantially affecting the rights of the public in the State owned land in Merrimack. Minimum safe line clearances above the land will be maintained at all times. The use and enjoyment of the state owned land by the public will not be diminished in any material respect as a result of the overhead line crossing.

Safety Division Staff concludes the impact to the public will be de minimis and not measurable. The crossing does not appear to affect the rights of the public on the state owned land because minimum safe line clearances above the land surface will be maintained at all times.

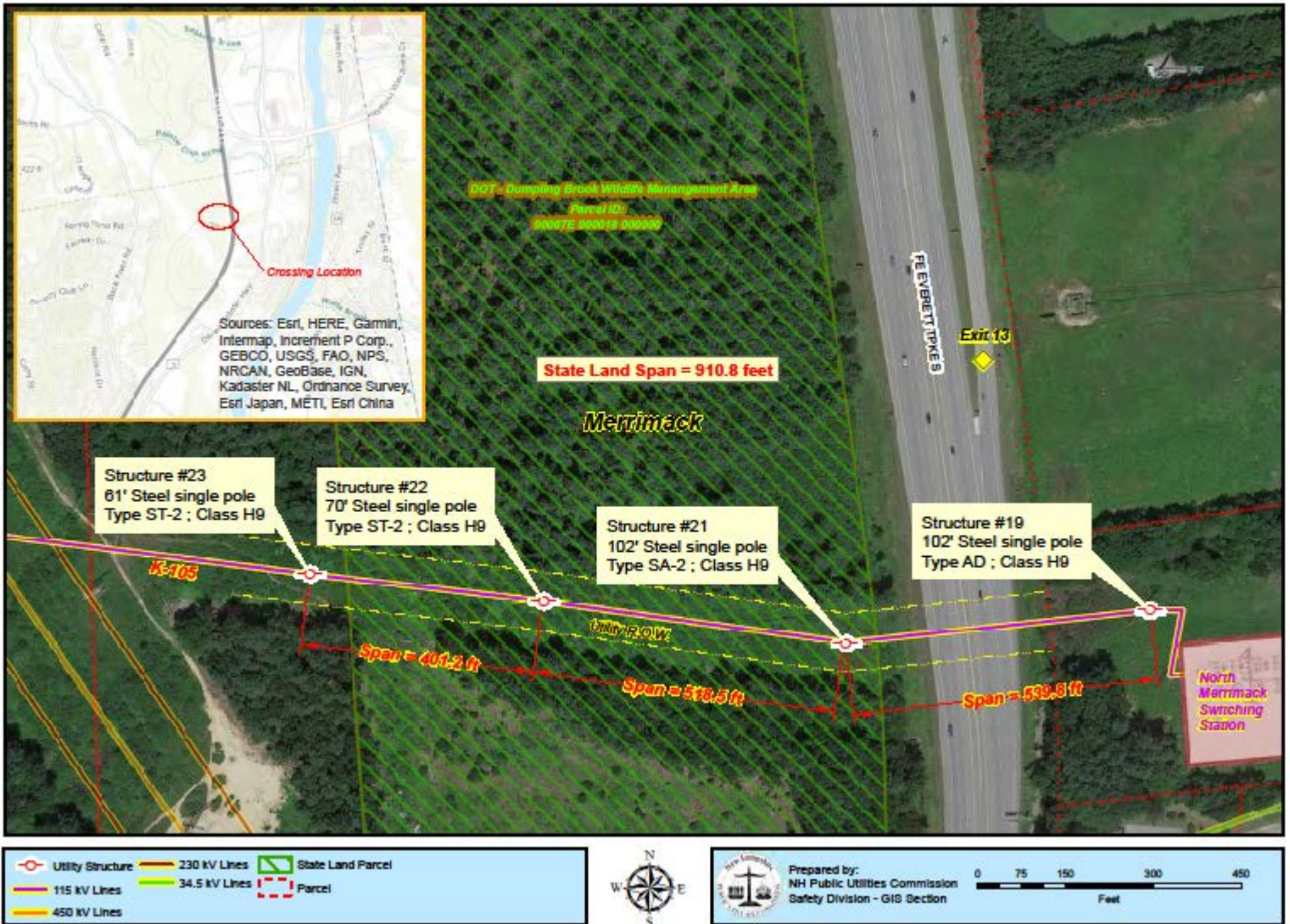
Staff Recommendation:

Based on the results of its review of the petition, its attachments, and all other supporting documents filed to this docket, the Safety Division Staff recommends that the Commission:

- 1) Find that the license ES requests in this docket may be exercised without substantially affecting the public rights in State owned land, which is the subject of the petition;
- 2) Grant ES a license to construct, operate and maintain electric lines and telecommunication cables over and across the State owned land in Merrimack, New Hampshire, as specified in the petition;
- 3) Issue an Order Nisi and orders for its publication.

Attachment

State of NH - Dept of Transportation - DE 21-070 Eversource Crossing



State owned Land as shown above identified in the petition and engineering drawings as State of New Hampshire and located in Merrimack. The project will require the Commission to grant a license related to this project. The license will be for the 115 kV K105 transmission line from Structure #19 west to Structure #23. This crossing spans approximately 1459.5 feet with 910.8 feet crossing state owned land.

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