STATE OF NEW HAMPSHIRE

Intra-Department Communication

Date: November 20, 2023
At (Office): NH Dept. of Energy

From: Bryan J Flynn BJF
Utility Analyst IV – Enforcement Division

Subject: CRE 2023-025 Eversource Energy
Application for License to Construct and Maintain Electric Lines over and across State-Owned Land and Public Waters in Goffstown, New Hampshire

Staff 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 of Enforcement Division
Elizabeth Nixon, Director of Electric Regulatory Support Division
Andrew Harmon, Hearings Examiner, Enforcement 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
- Recommendations.

1. Application Contents and History

On November 1, 2023, Public Service of New Hampshire d/b/a Eversource Energy (ES) submitted an application pursuant to RSA 371:17 to construct and maintain a portion of the F162 Line in Goffstown, New Hampshire. The ES F162 Line is a 115 kV transmission line that crosses State-owned land and public waters between Structures 1 to 4, and public waters from Structure 37 to 38, and 40 to 41 in Goffstown. Eversource requests that the Department of Energy (the Department) issue a license for the purpose of structure replacement and OPGW installation work.

Through its ongoing asset-inspection program, ES has determined that existing wood structures at the public water and State-owned land crossings identified in the application need to be replaced promptly in order to continue to function safely and reliably. Structures 4, 37, 38, 40, and 41 will be replaced utilizing weathering steel equivalents to be located within 10 feet of the existing structures.

Eversource is currently expanding and reconfiguring the Gregg's Reactor substation. The project will require the removal of Structure 1 on the F162 Line, and the construction of a new internal structure at the west edge of the expanded Gregg's Reactor substation that ES has designated as "Structure GR". Structure GR will be the origination point for the F162 Line, and it will be located in closer proximity to Structure 2. Exhibit 2, submitted by ES, has been drawn to reflect the proposed new location of Structure GR and Structure 2.

In addition to the substation construction and structure replacement, ES is removing an existing static wire and replacing it with a new OPG wire. The existing OPGW and three 1590 kcmil conductors will remain unchanged. Enforcement Division staff have reviewed the application, exhibits, and all supporting documentation.

The location of the referenced State-owned land and public water crossings are depicted on the Overview Map submitted by ES as Exhibit 1, and more detailed descriptions of the locations are as follows:

In support of Exhibit 2 and 3, the application states that the F162 Line crosses State-owned land in the Town of Goffstown between the Greggs Substation and Structure 4, which span commences from the take-off structure located at the west side of the Greggs Substation, which is located off Mast Road in Goffstown between the Goffstown Rail Trail Parking Lot and the Greggs Falls Dam/Hydroelectric Station. The State-owned land crossing extends west/southwest approximately 627 feet to the east edge of an inlet where Dan Little Brook deposits into Glen Lake, which is along the south shore of Glen Lake.

- The proposed structure locations create a total span of 1,041.3 feet with 627.7 feet crossing State-owned land.

In support of Exhibit 3, the application states that the F162 Line crosses the public waters of Glen Lake in the Town of Goffstown between Structures 3 and 4, which span commences at Structure 3

approximately 708 feet west from the west side of Greggs Substation. The waterbody crossing extends west approximately 244 feet to the west edge of the Glen Lake, which is on an inlet where Dan Little Brook deposits into Glen Lake along the south shore of Glen Lake.

- The proposed structure locations create a total span of 493 feet with 244.7 feet crossing public waters.

In support of Exhibit 4, the application states that the F162 Line crosses the Piscataquag River in the Town of Goffstown between Structures 37 and 38, which span commences at Structure 37 approximately 4,450 feet northwest from where the F162 Line crosses NH Route 13, which is approximately 415 feet west from the intersection of NH Route 13 and Bell Road in Goffstown. The waterbody crossing extends west approximately 59.1 feet to the west bank of the Piscataquag River.

- The proposed structure locations create a total span of 434.6 feet with 59.1 feet crossing public waters.

In support of Exhibit 5, the application states that the F162 Line crosses the Piscataquag River in the Town of Goffstown between Structures 40 and 41, which span commences at Structure 40 approximately 5,885 feet northwest from where the F162 Line crosses NH Route 13, which is approximately 415 feet west from the intersection of NH Route 13 and Bell Road in Goffstown. The waterbody crossing extends west approximately 48.3 feet to the west bank of the Piscataquag River, which is approximately 450 feet southeast from where the F162 Line crosses NH Route 114 (aka North Mast Road), at the intersection of Parker Road and NH State Route 114.

- The proposed structure locations create a total span of 423.5 feet with 48.3 feet crossing public waters.

The following table illustrates the structure and span details provided in the application, as well as required NESC clearance and the design clearance at the crossing span:

Eversource Energy F162 Line CRE 2023-025 Proposed Land and Water Crossing Design Details						
Structure Number	Structure Type	Measured Span	Distance (Feet)	Minimum NESC Table 232-1 Clearances (Feet)	ES Design Clearances (Feet)	Complies with NESC 232-1 (Y/N)
GR	Custom Steel	GR-2	202.3	20.1	33.3	Y
2	ADS Steel	2-3	346	20.1	33.8	Y

3	Type T Steel	3-4	493	Water 30.1	48.6	Y
4	Type T Steel			Land 20.1	33.5	Y
37	Type T Steel	37-38	434.6	18.6	35	Y
38	Type T Steel					
40	Type T Steel	40-41	423.5	18.6	54.3	Y
41	Type T Steel					

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

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 these public water and State-owned Land Crossings in Goffstown, New Hampshire

An original construction date for the F162 Line was not provided by Eversource in the application, however they maintain that there are easements for the referenced locations dating back to

1967. The line was rebuilt in 2008 and the public water crossings at the Piscataquag River were licensed under DE 07-071, Order No. 24,772 in 2007. The public water crossing at Glen Lake and the adjacent State-owned land crossing were most recently licensed in 2022 under crossing license CRE 2022-21.

The application states that a New Hampshire Department of Environmental Services (NHDES) Shoreland Permit Notification (PBN) and Statutory Permit by Notification (SPN) will be required for temporary impacts associated with the structure replacements and OPGW installation and will be obtained prior to commencement of construction. The U.S. Army Corps of Engineers (ACOE) does not regulate the subject portion of Glen Lake and Piscataquog River as navigable waters.

Per RSA 483-B:4 and RSA 371:17, the Piscataquog River and Glen Lake are deemed public waters, and a license must be granted for utility installations that cross over or under such waters. The Piscataquog River is defined as having South, Middle, and North Branches. The South Branch of the Piscataquog is the waterbody that the referenced portion of F162 Line crosses and is defined as originating from the outlet of Pleasant Pond in Francestown and its confluence with Rand Brook. Glen Lake is listed as being a waterbody in Goffstown on the Piscataquog River. The official list of public waters can be found on the NHDES website by using the following link:

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

4. Review of land ownership at proposed pole structures

As stated in the application by Eversource, the structure replacement work will be accomplished within existing right-of-way easements and on Eversource fee-owned property, thereby mitigating impacts and concerns of property owners affected by the project scope. A list of abutters is provided with the application.

5. Review of National Electric Safety Code (NESC) requirements as described in PUC 300

Eversource shall own, maintain, and operate the F162 line with clearances over public waters and State-owned land at a height of no less that what is required by the 2012 National Electric Safety Code (NESC), which is 20.1 feet for 115 kV wires over other areas traversed by vehicles, such as cultivated, grazing, forest and orchard lands, industrial sites, commercial sites, etc., 30.1 feet for water areas suitable for sail boating including lakes, ponds, reservoirs, tidal waters, rivers, streams, and canals with an unobstructed surface area of over 20 to 200 acres, and 18.6 feet for water areas not suitable for sail boating or where sail boating is prohibited. The actual minimum clearances designed by ES exceed the respective minimum requirements.

Eversource proposes to install one custom steel structure, one ADS steel structure dead-end, and five Type T steel two-pole structures with cross-bracing. Structure heights range from 46.9 feet to 79 feet. Line supporting structures are required to conform to strength and loading specifications described in NESC 2012 rule 252, 260, and 261.

Enforcement Division staff reviewed the specifications of the proposed replacement work and proposed structure locations and found them to be in conformance with N.H. admin. Rule PUC 306 and 2012 NESC rules. The minimum clearance requirements with respect to ground level and design conditions at 285° F as well as the FEMA 10-year flood level have been met. Staff verified the depicted sag clearances using Sag10 commercial software and the wire specifications and loading conditions provided by ES in application Exhibits 2 through 5.

6. Review of public need and impact

The ES F162 Line is a 115 kV transmission line that supplies electricity between Weare Reactor (Substation) in Weare, NH and Gregg's Reactor (Substation) in Goffstown, NH. The reactors serve to maintain appropriate voltage and/or fault current levels in the electric transmission system.

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 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 in that safe clearances will be maintained at all times 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 as a result of the proposed project.

7. Enforcement Division Recommendations

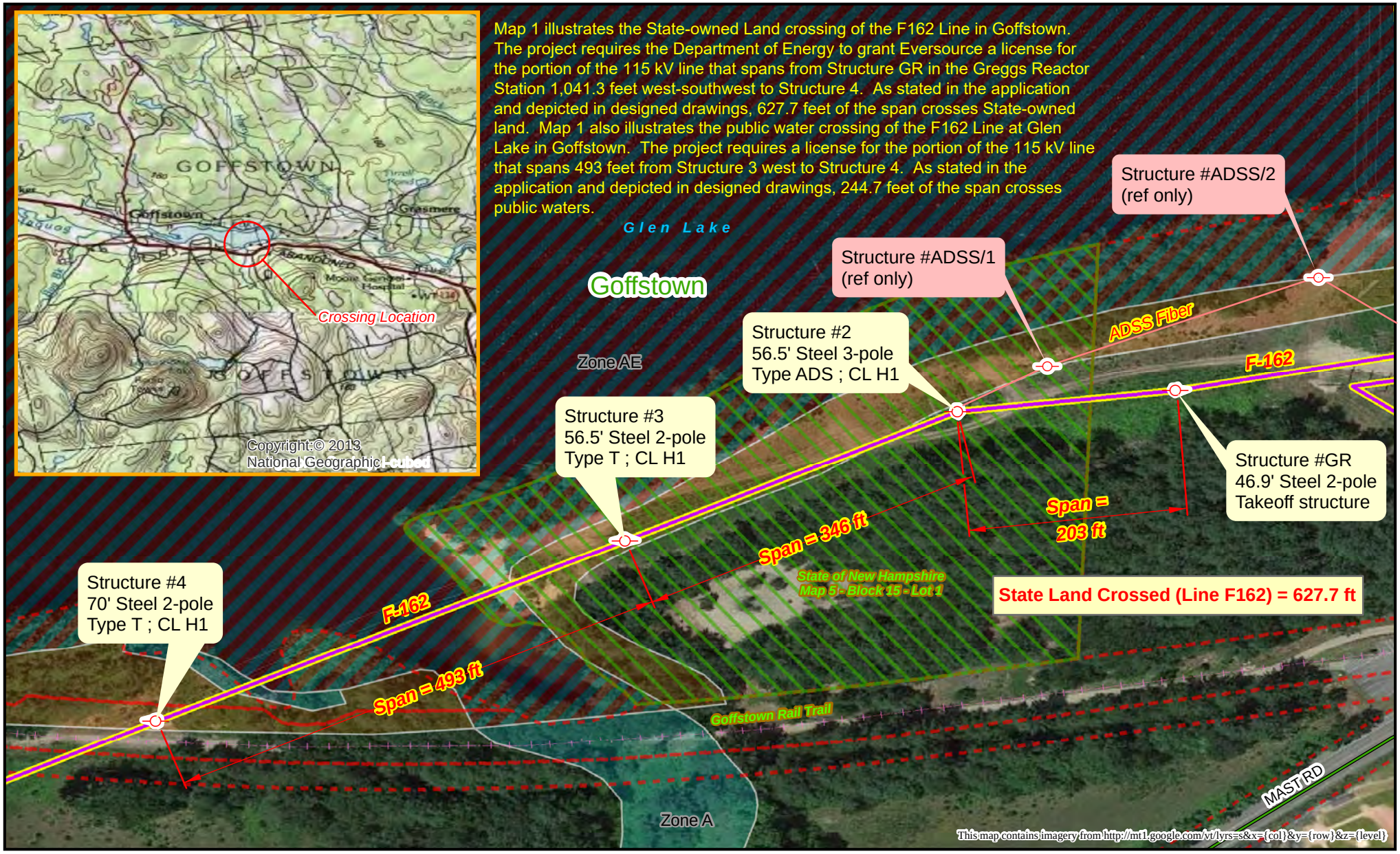
Based on the results of its review of the application, attachments, and all other supporting documents, the Enforcement Division recommends that the Department:

1. Find that the license Eversource requests in the application may be exercised without substantially affecting public rights on State-owned land or public waters; and

2. Grant Eversource a license to construct and maintain electric lines pursuant to RSA 371:17 and PUC 306.01, over and across State-owned land and public waters in the Town of Goffstown, New Hampshire, as specified in the application.

Attachments:

Glen Lake & NH State Land - CRE 2023-025 Eversource Crossing - Map 1



Utility Structure
115 kV Line
ADSS Fiber
Town Parcel
State Land Parcel

Flood Hazard Zones
Regulatory Floodway
1% Annual Chance Flood Hazard
0.2% Annual Chance Flood Hazard

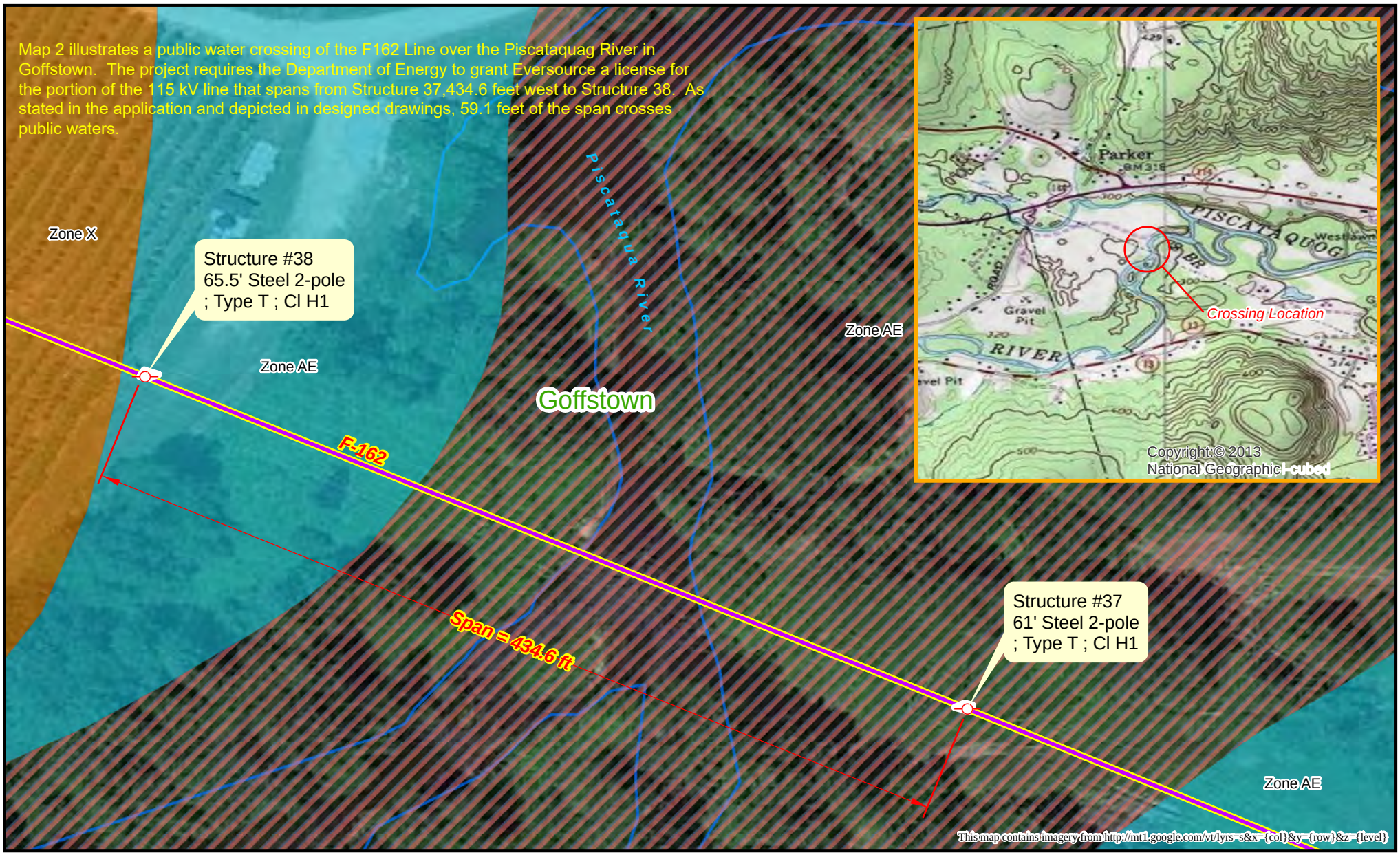
N W E S

Prepared by:
NH Department of Energy
Enforcement Division
Safety Bureau

0 50 100 200 300 400 Feet

Piscataqua River - CRE 2023-025 Eversource Crossing - Map 2

Map 2 illustrates a public water crossing of the F162 Line over the Piscataquag River in Goffstown. The project requires the Department of Energy to grant Eversource a license for the portion of the 115 kV line that spans from Structure 37,434.6 feet west to Structure 38. As stated in the application and depicted in designed drawings, 59.1 feet of the span crosses public waters.



Utility Structure

115 kV Line

Flood Hazard Zones

Regulatory Floodway

1% Annual Chance Flood Hazard

0.2% Annual Chance Flood Hazard

N W E S

Prepared by:
NH Department of Energy
Enforcement Division

0 25 50 100 150 200 Feet

Piscataqua River - CRE 2023-025 Eversource Crossing - Map 3

Map 3 illustrates a public water crossing of the F162 line over the Piscataquag River in Goffstown. The project requires the Department of Energy to grant Eversource a license for the portion of the 115 kV line that spans from Structure 40, 423.5 feet west to Structure 41. As stated in the application and depicted in designed drawings, 48.3 feet of the span crosses public waters.

N MAST RD

Zone X

Structure #41
79' Steel 2-pole
; Type T ; CL H1

Goffstown

Zone AE

F-162

Span = 423.5 ft

Zone AE

Structure #40
79' Steel 2-pole
; Type T ; CL H1

Zone AE

Piscataqua River

This map contains imagery from http://mt1.google.com/vt/lyrs=s&x={col}&y={row}&z={level}

Utility Structure

115 kV Line

Flood Hazard Zones

Regulatory Floodway

1% Annual Chance Flood Hazard

0.2% Annual Chance Flood Hazard

N W E S

Prepared by:
NH Department of Energy
Enforcement Division

0 25 50 100 150 200 Feet