

STATE OF NEW HAMPSHIRE

Intra-Department Communication

Date: June 19, 2023

At (Office): NH Dept. of Energy

From: Bryan J. Flynn B J F
Utility Analyst IV – Enforcement Division

Subject: **CRE 2023-012** Eversource Energy
Application for License to Construct and Maintain Electric Lines Over and
Across Public Waters and State-Owned Land in Concord, Bow, Pembroke, and
Allenstown, 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 the 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 May 25, 2023, Public Service Company of New Hampshire d/b/a Eversource Energy (Eversource, ES, or the Company) filed an application for a license pursuant to RSA 371:17 to construct and maintain the Eversource G146 Line.

Originally constructed in 1951, the G146 Line is an overhead 115kV transmission line that crosses public waters and State-owned land in Concord, Bow, Pembroke, and Allenstown. Eversource has determined, through asset inspection, that the existing wood structures at the public water crossings and State-owned land crossing referenced in the application require prompt replacement to continue to function safely and reliably.

The wood structures 110 to 119, 176 to 177, and 184 to 185 shall be replaced with weathering steel equivalents that are to be located within 10 feet of the current structure locations. The three existing phase conductors, OPGW wire, and static wire shall remain unchanged in the course of performing the structure replacements. The specifications and configuration of the existing conductors, OPGW wire, static wire, and replacement structures are shown on the Cable Schedule and Structural Details on Exhibits 2 through 8.

The location of the public water and State-owned land crossings are depicted on the Overview Map as Exhibit 1 submitted by ES and the DOE Maps attached to this recommendation. Exact locations of the structures are expressed with Latitude and Longitude on Exhibit 2 through 8 submitted by ES and more detailed descriptions are as follows:

The G146 Line crosses a State-owned land parcel associated with Bear Brook State Park in the Towns of Allenstown and Pembroke between Structures 110 and 119, which span starts approximately 2,600 feet northwest from where the G146 Line crosses New Rye Road, which is approximately 3,100 feet northeast from the intersection of Deerfield Road and New Rye Road. The State-owned land crossing span extends northwesterly approximately 4,437 feet to the east bank of the Suncook River, where the State-owned land parcel ends.

- The designed location of structures 110 to 119 creates a total span of 4,686.9 ft with 4,437.9 ft crossing State-owned land.

The Suncook River crossing span in the Towns of Pembroke and Allenstown between Structures 118 and 119 commences approximately 7,060 feet northwesterly from where the G146 Line crosses New Rye Road, which is approximately 3,100 feet northeast from the intersection of Deerfield Road and New Rye Road. The waterbody crossing span extends west approximately 89 feet to the west bank of the Suncook River, which is adjacent to where the G146 Line crosses Bachelder Road, which is approximately 1,050 feet northeast from the intersection of Bachelder Road and N. Pembroke Rd.

- The designed location of structures 118 to 119 creates a span of 653 ft with 89.5 ft crossing the Suncook River.

The G146 Line crosses the Soucook River in the City of Concord and Town of Pembroke, NH between Structures 176 and 177, which span commences approximately 2,100 feet northeast from where the G146 Line crosses Garvin’s Falls Road, which is approximately 1.61 miles southeast from the intersection of Garvin’s Falls Road and Manchester Street (aka NH Route 3) in Concord. The waterbody crossing span extends northeast approximately 60.1 feet to the east bank of the Soucook River.

- The designed location of structures 176 to 177 creates a span of 569.8 ft with 60.1 ft crossing the Soucook River.

The G146 Line crosses the Merrimack River in the Town of Bow and City of Concord between Structures 184 and 185, which span commences near the end of Garvin’s Falls Road in the Town of Bow, approximately 265 feet south of where Garvin’s Falls Road crosses the existing Pan Am railroad and extending east approximately 790 feet to the east bank of the Merrimack River, to Structure 185. That easterly end of the span is approximately 1,500 feet west from where the G146 Line crosses Garvin’s Falls Road, which is approximately 1.65 miles southeast from the intersection of Garvin’s Falls Road and Manchester Street (State Route 3).

- The designed location of structures 184 to 185 creates a span of 790.8 ft with 528.4 ft crossing the Merrimack River.

The following table provides a summary of pertinent details included in the application to include structure numbers, types, spans, minimum NESC clearance, design clearance, and compliance.

Eversource G146 Line (115kV) – State-owned Land and Public Water Crossing

Structure Number	Structure Type	Measured Span	Distance (Feet)	Minimum NESC Table 232-1 Clearance (Feet)	ES Vertical Design Clearance (Feet)	Complies with NESC Table 232-1
110	ES Type ST-2, Steel Tangent	110-111	512.6	20.1	45.3	Y
111	ES Type BP, Steel Pole Angle	111-112	616.6	20.1	28.9	Y
112	ES Type T-1, Steel Tangent	112-113	521.1	20.1	30.9	Y
113	ES Type T-1, Steel Tangent,	113-114	376.6	20.1	33	Y
114	ES Type T-1, Steel Tangent	114-115	499.9	20.1	33.8	Y
115	ES Type T-1, Steel Tangent	115-116	668.1	20.1	34.9	Y
116	ES Type T-1, Steel Tangent	116-117	463.5	20.1	29.0	Y
117	ES Type T-1, Steel Tangent	117-118	375.5	20.1	33.1	Y
118	ES Type T-1, Steel Tangent	118-119	653	20.1	34.8 (land)	Y
119	ES Type T-1, Steel Tangent			18.6	35.8 (water)	Y
176	ES Type T-1, Steel Tangent					

177	ES Type ST-2, Steel Tangent	176-177	569.8	18.6	40.3	Y
184	ES Type ADS-1, Steel Dead-end	184-185	790.8	18.6	24.9	Y
185	ES Type ADS-1, Steel Dead-end					

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 crossings over public waters and across State-owned land in Concord, Bow, Pembroke, and Allenstown, New Hampshire

The public water crossing at the Merrimack River, spanning from Structures 184 to 185, was previously licensed in 1976 under order DE 76-22. The State-owned land crossing and additional public water crossings included in the application were not previously licensed. With the approval of the application by the Department, the crossings of the Eversource G146 Line will be licensed in entirety.

Eversource states that a New Hampshire Department of Environmental Services (NHDES) Statutory Permit by Notification (PBN) and Shoreland Permit Notification (SPN) will be required for temporary impacts associated with certain structure replacements and will be obtained prior to the commencement of construction.

The U.S. Army Corps of Engineers (ACOE) regulates the referenced part of the Merrimack River as navigable waters. Replacement work at Structure 184 and Structure 185 is covered through a Self-Verification process under ACOE New Hampshire Programmatic General Permit #4, provided that there will be no decrease in existing clearances, which is the

intent of the work, conveyed in the application. The ACOE does not regulate the Suncook nor Soucook Rivers.

As described in the Comprehensive Shoreland Protection Act (RSA 483-B:4, XVI(c)), the jurisdictional section of the Merrimack River to be licensed in Bow and Concord is designated “from the confluence of the Winnepesaukee and Pemigewasset Rivers in Franklin to Garvin Falls in Bow”. The jurisdictional section of the Suncook River to be licensed in Allenstown and Pembroke is designated from “the outflow of Suncook Lake in Gilmanton”. The jurisdictional section of the Soucook river to be licensed in Concord and Pembroke is designated from the “juncture of Gues Meadow Brook and Bumfagon Brook in Loudon”.

The Official List of Public Waters (OLPW) can be accessed through the following link:

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

Part 2, “Public Rivers and Streams” is a partial listing of a set of common law waters. The current list is primarily based on the listing of rivers that fall under the jurisdiction of the CSPA.

4. Review of land ownership of proposed pole structures

All structure replacement work will be done within existing right-of-way easements according to the application, thereby mitigating the impacts to and concerns of property owners affected by the project scope. A list of abutters was submitted by Eversource with the application.

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

The Enforcement Division reviewed the specifications related to the structure replacement work of this project as described in the application, attachments, and all supplemental support documents filed by the Company and found them to be in conformance with N.H. Admin. Rule PUC 306. The minimum clearance requirements pursuant to NESC table 232.1 at ground level and the FEMA 10-year flood level have been met. The Enforcement Division verified the depicted sag clearances using Sag10 commercial software with the data inputs provided in the application.

The wire specifications and loading condition used to calculate maximum sag for the crossing spans are included on the Profile View and Cable Schedule of Exhibits 2 through 8 submitted by Eversource. Also detailed in Exhibits 2 through 8 are ES design clearances for all conductors at maximum sag conditions. The flood elevations for the Merrimack, Suncook, and Soucook Rivers are detailed using FEMA 100-year Flood Map data, included as note 3 in Exhibits 6, 7, and 8.

For State-land crossings at structures 110 to 119, Eversource shall maintain NESC clearances of no less than 20.1 ft for 115kV lines. For the public water crossings at structures 118 to 119, 176 to 177, and 184 to 185, Eversource shall maintain NESC clearances of no less than 18.6 ft for 115kV lines.

6. Review of public need and public impact

The G146 Line is an integral part of Eversource's existing electric transmission system in New Hampshire, specifically for this application in the land and waters of Concord, Bow, Pembroke, and Allenstown. The Company asserts in the submitted application that the license to maintain the existing crossings, if approved, shall be exercised without substantially affecting public rights regarding the identified State-owned land and public waters in New Hampshire.

Enforcement Division staff verified that minimum safe line clearances above State-owned land and public waters will be maintained and therefore determines that public use and enjoyment of State-owned land and public waters will not be diminished in any material respect as a result of the proposed project.

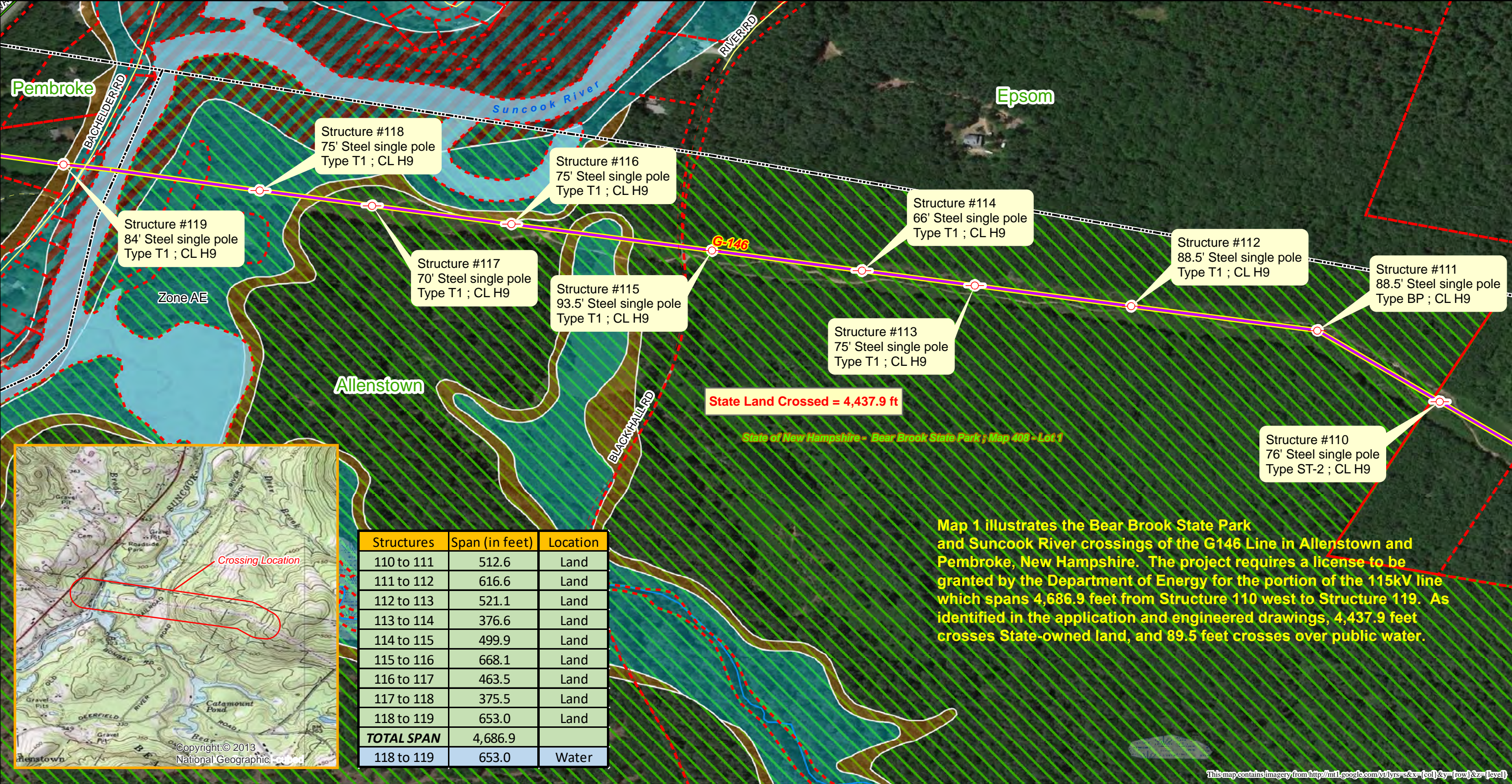
7. Enforcement Division Recommendations

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 this application may be exercised without substantially affecting the public rights on State-owned land and 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 Concord, Bow, Pembroke, and Allenstown, New Hampshire as specified in the application.

Map Attachments:

State Land (Bear Brook State Park) & Suncook River - CRE 2023-012 Eversource Crossing - Map 1



Utility Structure

Town Parcel

115 kV Line

State Land Parcel

Regulatory Floodway

1% Annual Chance Flood Hazard

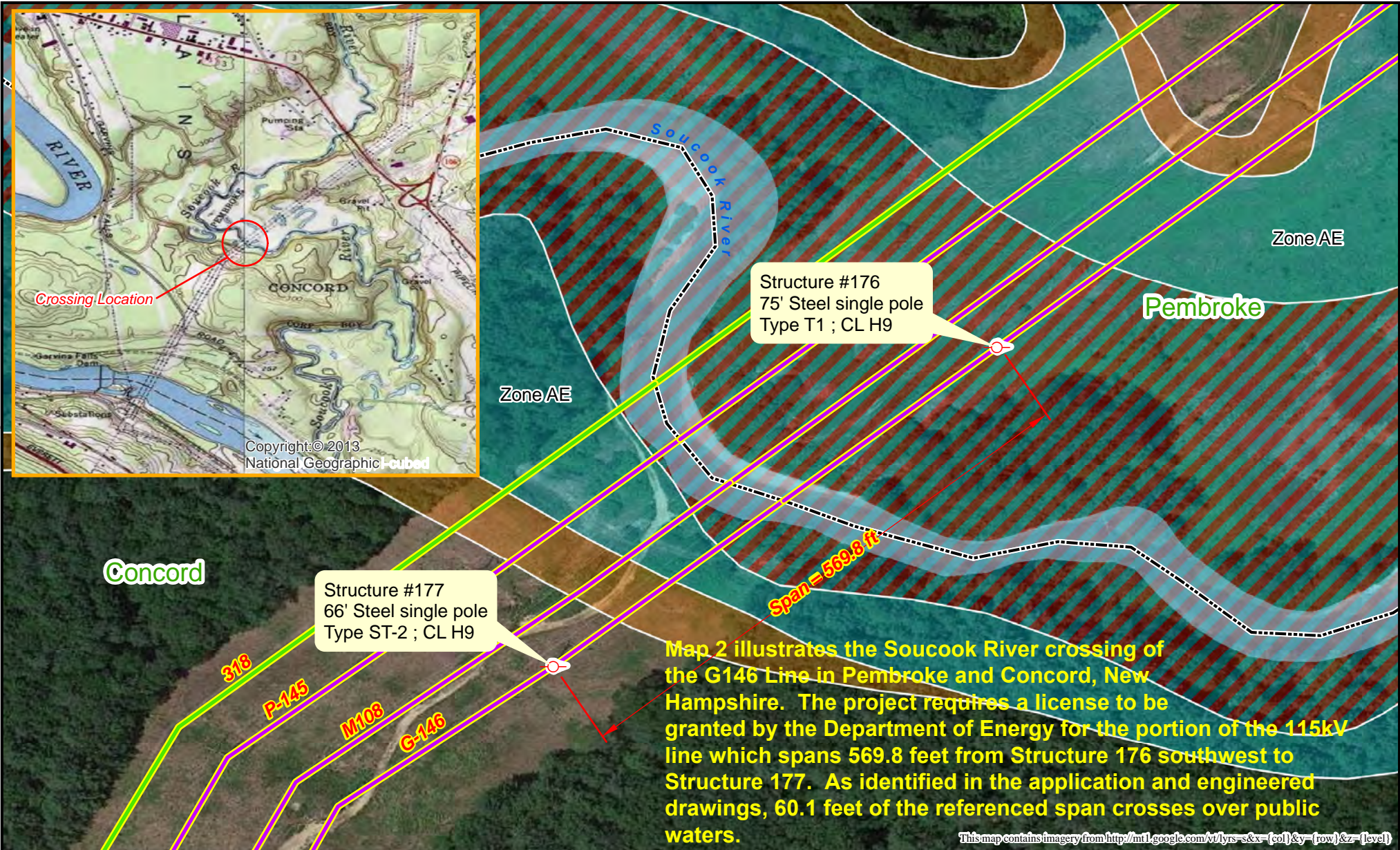
0.2% Annual Chance Flood Hazard

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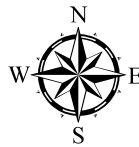
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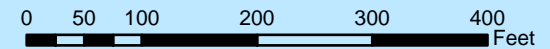
Soucook River - CRE 2023-012 Eversource Crossing - Map 2



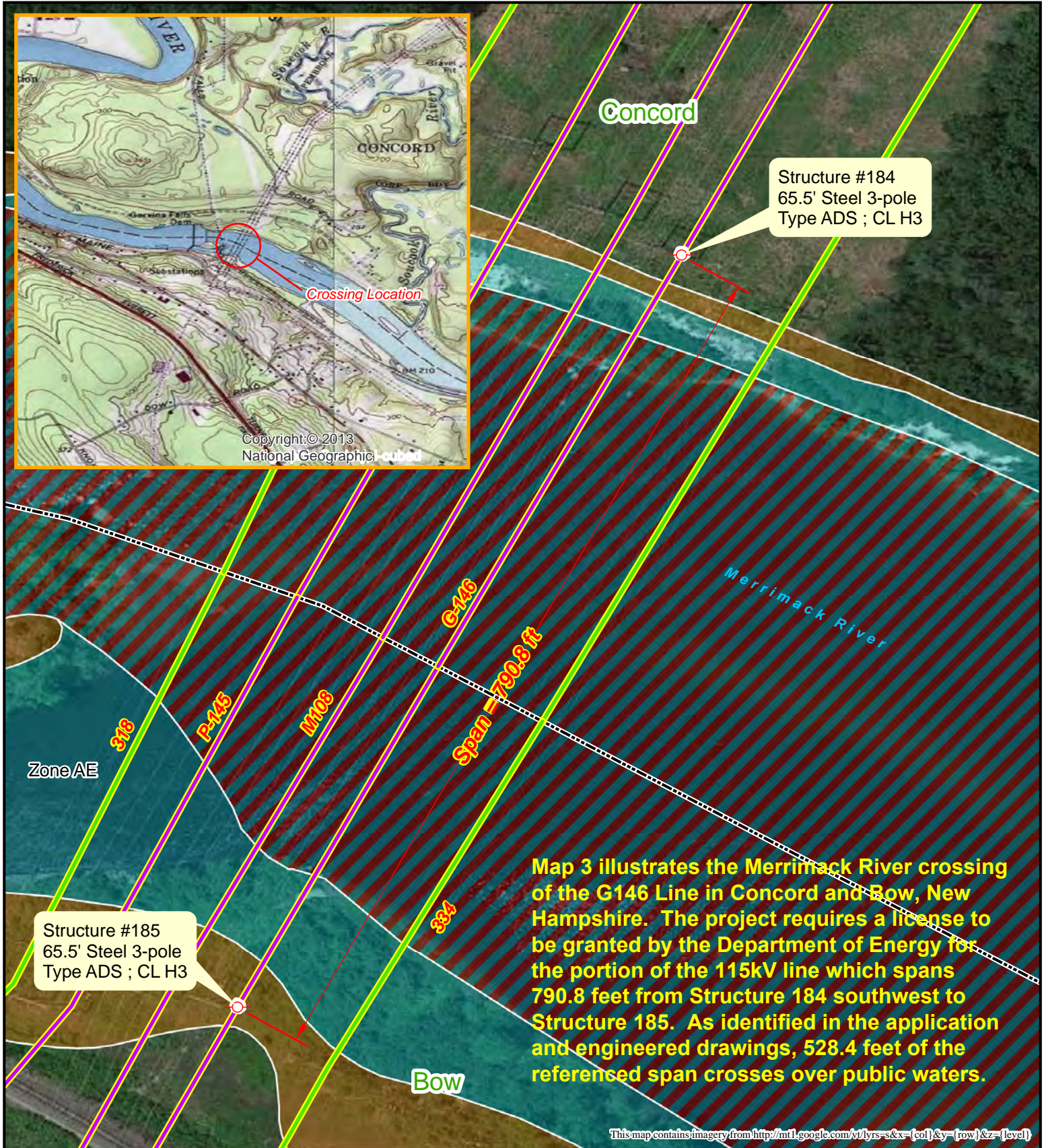
 Utility Structure	Flood Hazard Zones
 115 kV Line	 Regulatory Floodway
 34.5 kV Line	 1% Annual Chance Flood Hazard
	 0.2% Annual Chance Flood Hazard



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Merrimack River - CRE 2023-012 Eversource Crossing - Map 3



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

	Utility Structure		Flood Hazard Zones
	115 kV Line		Regulatory Floodway
	34.5 kV Line		1% Annual Chance Flood Hazard
			0.2% Annual Chance Flood Hazard



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