



December 22, 2020

Ms. Debra A. Howland
Executive Director and Secretary
New Hampshire Public Utilities Commission
21 S. Fruit Street, Suite 10
Concord, New Hampshire 03301

RE: DOCKET 20-195
Engineering Discussion of Changes Under Revised Petition

An investigation of the discrepancy between the plans associated with DE 19-097 for a wire span on the 373 line between structure 212 and 213 crossing the Lamprey River in Deerfield and the plans associated with DE 20-195 depicting the same line and over the same crossing of the Lamprey River in Deerfield. In order to clarify which plan is correct and why, Eversource is providing the following explanation.

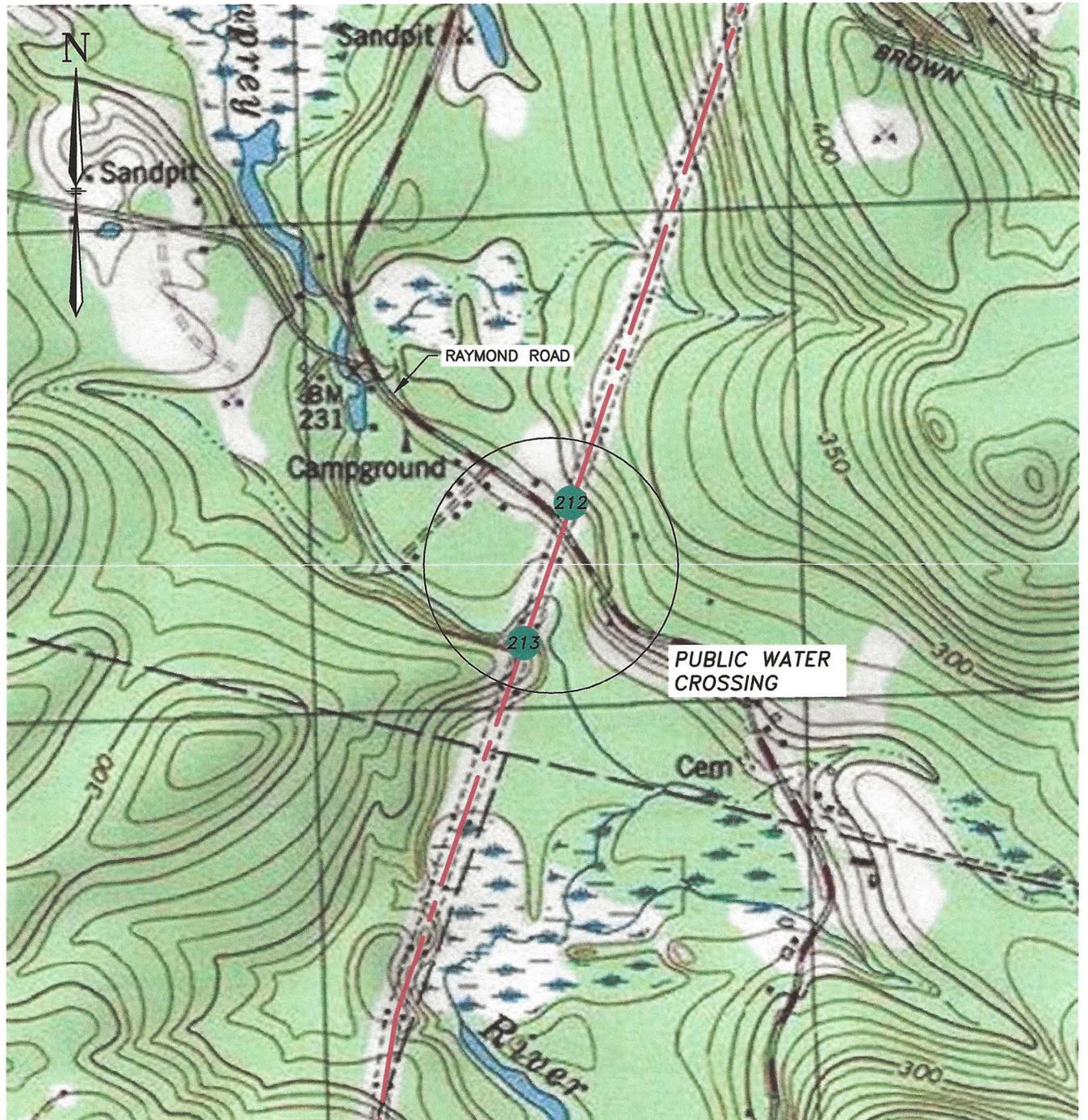
There were two differences that affected the clearances shown between these two plans. The first difference is that after the structure replacements associated with the 19-097 submittal were completed, as-built surveys were collected and incorporated into DE 20-195. These as-built elevations are more accurately shown in this REV3 submittal of DE 20-195. This is an improvement over the 19-097 submission as it accurately reflects the installed structure positions.

The second difference is an error in measurement using AutoCAD. This measurement was taken between the surveyed water surface and the conductor instead of between the 100-year flood plain elevation and the conductor.

These differences resulted in a change in wire clearance from the 100-year flood plain elevation of the Lamprey River (El. 217.00) in both plans. In the DE 19-097 plans, the wire clearance was measured at 37'-5". In the DE 20-195 plans, the wire clearance was measured at 43'-6". The correct wire clearance distance is measured at 41' using the wire condition from DE 19-097 and the as-built surveys from DE 20-195 REV2.

The changes discussed above have been made to the DE 20-195 plans as REV3 and will be submitted to the Docket as an amendment for PUC's review and consideration.

Angus Strachan P.E.
Engineer - Eversource Transmission Line Engineering



LOCATION PLAN

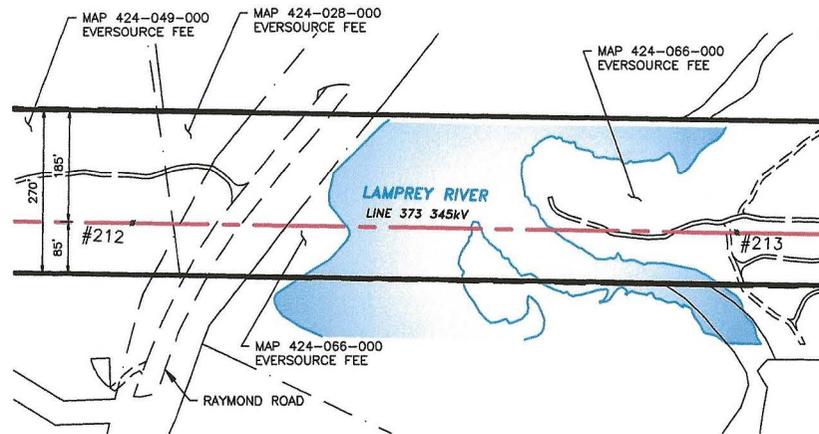
EXHIBIT 1

LEGEND:

373 LINE 
 PROPOSED 373 STR 

DWG REV	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR
3	PUC REVIEW UPDATES WO# T1391A17		LEIDOS 12/17/20	GEB	DWW	APS
2	ISSUED TO PUC WO# T1391A17		LEIDOS 12/04/20	GEB	DWW	APS
1	ISSUED TO PUC WO# TL9R19U1		LEIDOS 4/23/19	DGM	RSN	KLM

		T	3
		DRAWN	DGM
LINE 373 345kV TRANSMISSION LAMPREY RIVER WATERBODY CROSSING DEERFIELD, NH EXHIBIT #1		ENGINEER	RSN
		CHECKED	DWW
SCALE 1" = 1000'		APPROVED	KLM
		DATE	4/23/19
FILE: 037343901.DWG IMAGE:		DRAWING NO. 037343901	



PLAN VIEW

SCALE: 1"=200'



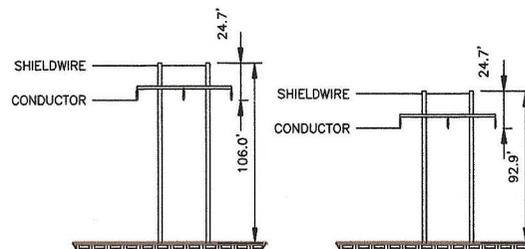
PLAN LEGEND:

- STRUCTURE
- LINE 373
- PARCEL LINE
- MAJOR ROAD

STRUCTURE LOCATION		
STRUCTURE	LONGITUDE	LATITUDE
212	-71.22882118	43.08464956
213	-71.23004056	43.08206534

NESC VERTICAL CLEARANCE (FT)

NATURE OF SURFACE UNDERNEATH WIRES, CONDUCTORS OR CABLES	345kV
WATER AREAS NOT SUITABLE FOR SAIL BOATING OR WHERE SAIL BOATING IS PROHIBITED	23.2



STRUCTURE 212
TYPE SEA-HF
STR 212: IS A EVERSOURCE TYPE SEA-HF, SINGLE CIRCUIT STEEL POLE TANGENT.

STRUCTURE 213
TYPE SEA-HF
STR 213: IS A EVERSOURCE TYPE SEA-HF, SINGLE CIRCUIT STEEL POLE TANGENT.

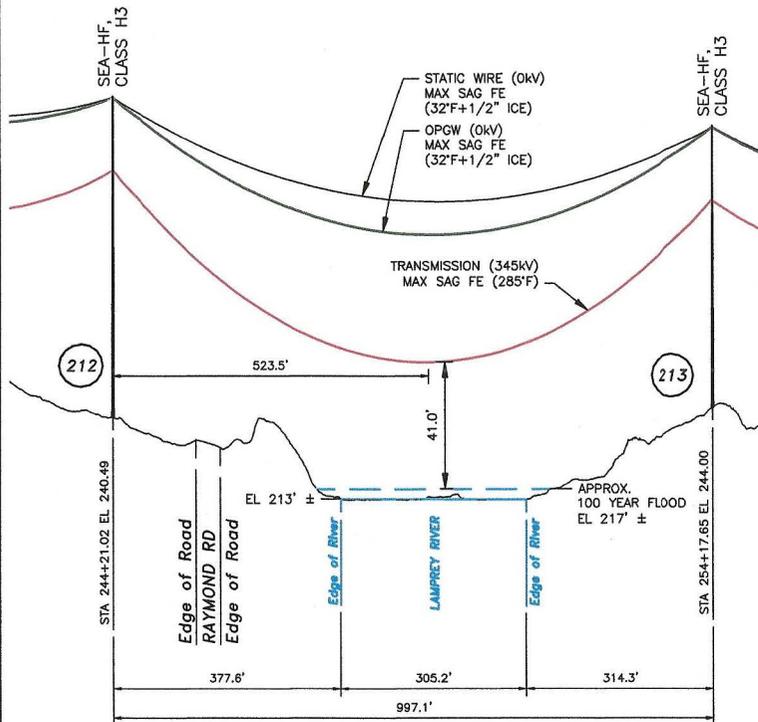
STRUCTURE DETAIL

SCALE: NTS

CABLE SCHEDULE						
WIRE	# OF CABLES	TYPE	DIA. (IN.)	WEIGHT/1000 FT (LBS.)	CABLE STRENGTH (LBS.)	CABLE TENSION
STATIC	1	7#8 ALUMOWELD	0.3850	262	15,930	4,400 LBS. NESC HEAVY
OPGW	1	48F OPGW	0.6460	417	17,250	5,000 LBS. NESC HEAVY
TRANSMISSION COND.	6	850.8 KCMIL ACSR 45/7 BUZZARD	1.1000	985	24,300	7,500 LBS. NESC HEAVY

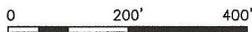
NOTES:

- GROUND ELEVATION PROFILE DETERMINED USING INFORMATION FROM LIDAR SURVEY.
- VERTICAL DATUM IS NAVD88.
- ONLY LOWEST CONDUCTOR PHASE SHOWN FOR CLARITY.
- PARCEL INFORMATION PROVIDED BY NH GRANIT.
- 100-YEAR FLOODLINE ELEVATION BASED ON FEMA FLOOD MAP WITH AN EFFECTIVE DATE OF 5/17/2005.



PROFILE VIEW

SCALE: HORIZONTAL 1"=200'
VERTICAL 1"=40'



DWG REV	EPN/DESCRIPTION	CONT/PEP	DATE	DRN	CHKD	APPR
3	PUC REVIEW UPDATES WO# 11391A17	LEIDOS	12/17/20	GEB	DWW	APS
2	ISSUED TO PUC WO# 11391A17	LEIDOS	12/04/20	GEB	DWW	APS
1	ISSUED TO PUC WO# 11918U1	LEIDOS	4/23/19	DGM	RSN	KLM

	T	3
	DRAWN	DCM
	ENGINEER	RSN
	CHECKED	DWW
LINE 373 345 kV TRANSMISSION LAMPREY RIVER WATERBODY CROSSING DEERFIELD, NH EXHIBIT #2		APPROVED
		KLM
		DATE
		4/23/19
SCALE AS SHOWN FILE: 037343901.DWG IMAGE:		DRAWING NO.
		037343901

EXHIBIT 3 - Site Location Map

Line 373, 345 kV
Lamprey River Waterbody Crossing
Deerfield, New Hampshire
Imave credit: Google Earth (7/7/2019)

Legend

-  Deerfield Fair
-  Deerfield Family Dentistry
-  Deerfield Transfer Station
-  Line 373 Structures

