

APPENDIX 17
NHDOT Applications

April 4, 2016

Commissioner Victoria Sheehan
N. H. Department of Transportation
John O. Morton Building
7 Hazen Drive
Concord, NH 03302-0483

Dear Commissioner Sheehan:

The Public Service Company of New Hampshire d/b/a Eversource Energy (PSNH), petitions for permission to install an electric transmission line, including related conduit, cable, wires, poles, structures and devices across, over and along certain state highways pursuant to RSA 231:160 as detailed in this document. Accordingly, PSNH requests issuance of a Use and Occupancy Agreement, appropriate licenses and permissions authorizing the proposed use.

The N.H. Department of Transportation (NHDOT) has jurisdiction and authority to grant this Petition and such permits, agreements, licenses and approvals necessary for state-maintained highways pursuant to RSA 231:161, I (c). The NHDOT adopted a *Utility Accommodation Manual* (Hereinafter UAM), dated February 24, 2010 to guide its process for accommodating and licensing utilities within highway corridors.

Consistent with commonly accepted design and construction realities, an appropriate traffic control plan, fully compliant with the *Manual on Uniform Traffic Control Devices* (MUTCD), is included in the appendices as required in UAM Section V and Section XV, A, d, 1 to ensure all work performed will be conducted in manner to protect the public. Any and all necessary highway access (driveway) permits will be submitted for review and approval as necessary in advance of construction.

PROJECT DESCRIPTION

The Seacoast Reliability Project (Project) consists of a new 115-kV electric transmission line along with modifications for the line terminals. The Project will primarily consist of overhead design and will run approximately 12.9 miles from the Madbury Substation to the Portsmouth Substation. The line crosses the towns of Madbury, Durham and Newington and the city of Portsmouth. Approximately 1.1 miles of the Project will require a submarine cable crossing of Little Bay (Durham, NH to Newington, NH). Underground electric cable will be utilized for 0.4 miles at UNH in Durham and 0.3 miles through Gundalow Landing in Newington.

Madbury

The entire section of the Project through Madbury will be overhead, utilizing self-weathering steel monopole structures.

Durham

The Project through Durham will utilize the existing distribution ROW and a portion of expanded right of way along the existing corridor, from Madbury Road to the UNH Campus. The majority of the line will consist of an aerial installation constructed on self-weathering steel monopole structures with some H-frame structures. A short section of the transmission line (approximately 0.4 miles) will be placed underground to cross under Main Street, which is a municipally maintained Class IV Highway.

Little Bay Crossing (Durham to Newington)

Little Bay will be crossed utilizing submarine cable, placed in the sea floor within an existing, mapped cable corridor. On the west side of Little Bay (Durham), the submarine cables will terminate on a transition structure in the existing right of way, approximately 360 feet from the edge of the bay. On the east side of Little Bay (Newington), the submarine cable will terminate in a man-hole approximately 250 ft. from the edge of the bay. From the man-hole, the underground cable continues through Gundalow Landing, terminating on a transition structure on the east side of Little Bay Road in the existing distribution ROW.

Newington

Once the Project has transitioned to overhead, it will be constructed in the existing distribution ROW. The section from Little Bay Road to Fox Point Road will utilize self-weathering steel monopole and H-frame structures.

The section of the transmission line from Fox Point Road to the Spaulding Turnpike will utilize self-weathering steel monopole structures. From Spaulding Turnpike through the area of the Newington Mall, five existing H-frame structures will require relocation and rebuilding to make room for the new line within the existing transmission corridor. The new and relocation construction will utilize self-weathering steel monopole structures.

Portsmouth

The Project will travel a short distance in the city of Portsmouth within existing transmission corridor, on PSNH property, from the Newington town line to Portsmouth Substation, near Schiller Station. The newline will be constructed utilizing self-weathering steel structures with a monopole design.

AERIAL ROAD CROSSINGS

Construction of the above described PSNH Project requires permission from the Department of Transportation for 7 aerial crossings over state maintained highways. This correspondence constitutes notice of these proposed crossings and locations in accordance with the procedures set forth in the UAM Appendix G, Detail G2; *Pole Licensing Procedures Step-by-Step*. The highways to be crossed include: Madbury Road in Madbury, NH Route 4 in Durham, NH Route 108 in Durham, newly constructed access ramps to the Spaulding Turnpike in Newington, the Spaulding Turnpike mainline in Newington and Woodbury Avenue in Newington. General plans and specific aerial crossing design plans for each crossing including location and height above the highway surface are found in Attachment A. Additionally, traffic control plans consistent with the Manual on Uniform Traffic Control Devices (MUTCD) are included in Attachment D for review and approval by the Department as required in UAM Section V and Section XV, A, d, 1.

The transmission line crossings of Madbury Road and NH Route 4 in Durham are located within NHDOT controlled access right-of-ways (CAROW), which were laid out in accordance with RSA 230:45. Additionally, NH Route 16 (Spaulding Turnpike) in Newington is a limited access highway (LAROW) per RSA 237:13. As such, all locations are treated as LAROW for the purposes of the Utility Accommodation Manual (UAM) Section XIII, A, 1.

Therefore, PSNH requests a Use and Occupancy Agreement be granted in accordance with Section XIII, A, 3 for these LAROW crossings. PSNH further requests that permission be granted to cross NH Route 108 in Durham and Woodbury Avenue in Newington.

Presently, it is anticipated that several aerial structures will be placed within the public right of way as shown on the attached plans. In accordance with the UAM Section XVIII, structures will be so located as to pose minimal hazard to highways users. PSNH will petition for pole licenses for these structures with final approval to be issued upon field verification of the final installation as set forth in UAM Section XVIII.

PERMISSION TO CROSS CONTROLLED ACCESS ROW FOR CONSTRUCTION AND MAINTENANCE PURPOSES

As noted above the Project will utilize the existing distribution ROW when traversing Madbury and Durham. Access to the segment of the line that lies between the crossing of the Madbury Road and the crossing of NH Route 4 is restricted. The existing distribution line at this location lies within the railroad ROW, which passes beneath the both state highways. The space between the active rail line and highway bridge abutments is not sufficiently wide enough to allow access for the construction or future maintenance of the proposed transmission line within the ROW from the north or south. Therefore, PSNH is requesting permission be granted via the Use and Occupancy Agreement to cross the Controlled Access ROW of NH Route 4 for the purposes of

accessing the site to construct and maintain the facility. The proposed access will be sited within the stone wall boundaries of an old roadway and proceed from a point off Beech Hill Road to the Transmission line ROW. In accordance with the provisions of RSA 231:184-186 and/or RSA 236:9-11, an Excavation (Trench) Permit application and plan are included in Attachment B.

Consistent with other access roads for the project, clean gravel or trap rock will be placed at 6 to 8 inches in depth to stabilize and level the road surface. An access apron, utilizing crushed stone, will be installed at the entrance to the public road to clean the tires of construction vehicles. To avoid impacting wetlands the access road will be installed in a manner consistent with the NHDRED approved document "*Best Management Practices Manual for Utility Maintenance In and Adjacent to Wetlands and Waterbodies in New Hampshire*", which was developed by the NH Department of Resource and Economic Development. Additionally, a gate will be installed at the entrance off Beech Hill Road to prevent unauthorized access.

ENCROACHMENT AGREEMENT FOR TEMPORARY ACCESS ACROSS TURNPIKE ROW

In Newington, the Project transmission line will utilize the existing distribution line ROW that lies to the west of the Spaulding Turnpike before crossing the highway just north of Exit 1. Access to construct the proposed structures will be from within the distribution line ROW for most of this segment, however due to the existence of wetlands in the vicinity of the Southbound Exit 1 Off-ramp, PSNH is requesting permission to temporarily access the Project transmission line ROW from the southbound shoulders of the Spaulding Turnpike and Exit 1 Off-ramp at several locations. In accordance with the provisions of RSA 231:184-186 and/or RSA 236:9-11, a Turnpike Encroachment Permit Application is included in Attachment C. Traffic control plans consistent with the Manual on Uniform Traffic Control Devices (MUTCD) are included in Attachment D as required in UAM Section V and Section XV, A, d, 1 to ensure all work performed will be conducted in manner to protect the public.

Based on the foregoing, PSNH asserts that approval of this Petition is in the public good and should be granted in accordance with N.H. law.

Sincerely,



Kurt I. Nelson
Specialist, Project Siting & Permitting

Cc: Michael P. Pillsbury, PE, Louis Berger

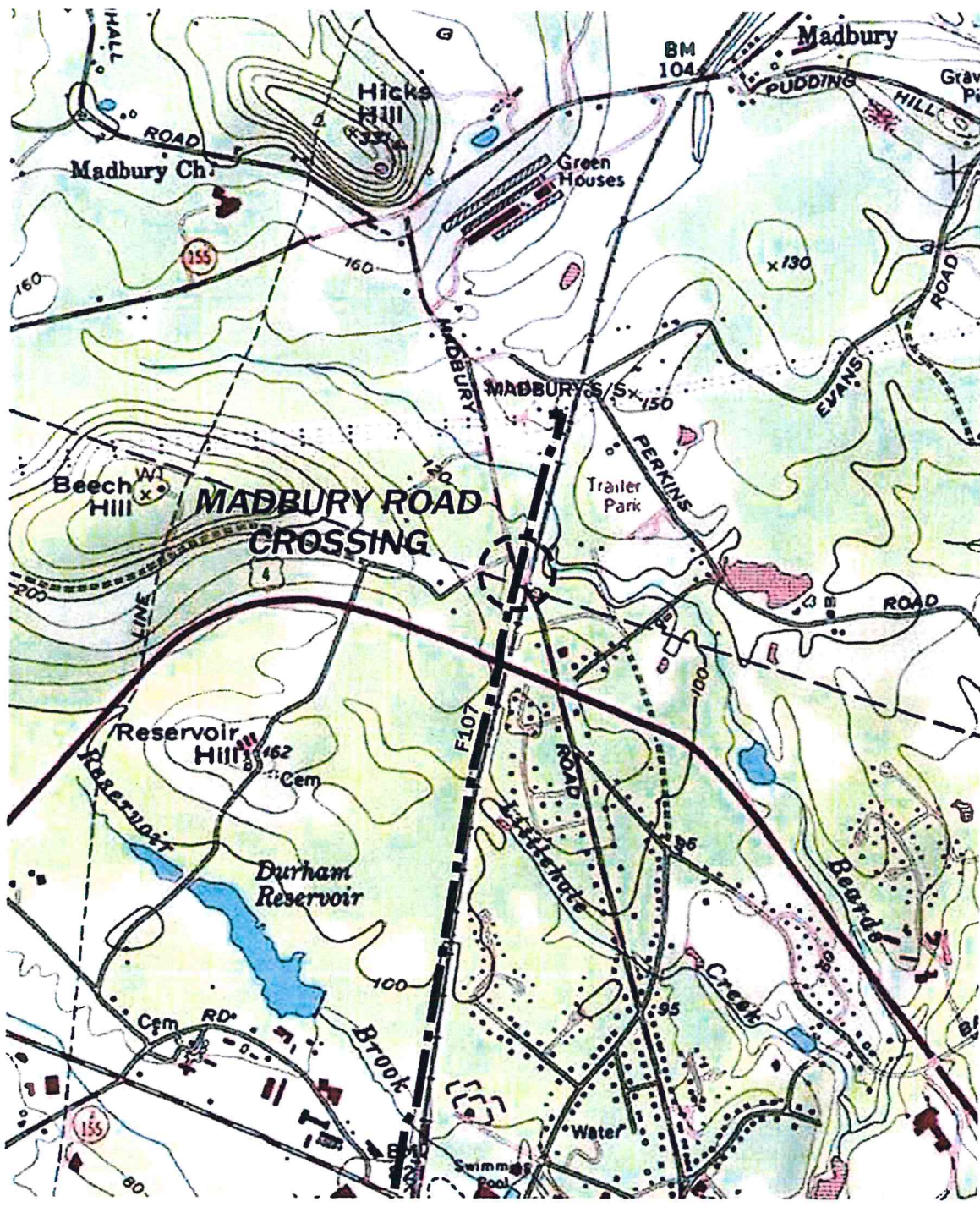
ATTACHMENT A

**LIST OF AERIAL CROSSINGS OVER STATE HIGHWAYS &
AERIAL CROSSING DESIGN PLANS FOR STATE HIGHWAYS**

Highway	Town	Highway Classification	Right of Way	Line	Between Structures
Madbury Road	Madbury	II	CAROW	F107	#6* & #7
Route 4	Durham	I	CAROW	F107 & 380	#9* & #10*
Route 108	Newmarket	I	Easement ROW	F107 & 3162	#60 & #61
Spaulding TPK: Ramp 1	Newington	I	LAROW	F107	#123 & #124*
				3850	#9 & #10*
Spaulding TPK: Ramp 2	Newington	I	LAROW	F107	#125* & #126*
				3850	#11* & #12*
Spaulding TPK: Mainline	Newington	I	LAROW	F107	#137 & #138
Woodbury Avenue	Newington	II	Easement ROW	F107	#142 & #143
				E194	#5 & #6

* Note: aerial structures will be placed within the public right of way at these locations

Note: aerial structures F107 #127 & #128 and 3850 #13 & #14 will be placed in the public way but have no aerial crossings over state highways



NO.	REVISION	DATE	DRWN	CHK	APPR
2	UPDATED CENTERLINE	12/23/15	RWP	APJ	
1	UPDATED ALIGNMENT	8/7/15	SCF	APJ	
0	ISSUED FOR PERMITTING	4/10/15	SCF	APJ	

DRAWN SCF	Public Service of New Hampshire		System Projects
DESIGNED KMS	LOCATION PLAN SINGLE CIRCUIT F107 LINE CROSSING MADBURY ROAD MADBURY AND DURHAM, NEW HAMPSHIRE		
CHECKED APJ			
APPROVED	SCALE 1"=1500'	DATE 3/17/15	SHEET 1 of 1
			DRAWING NO. F10740702

08/2012

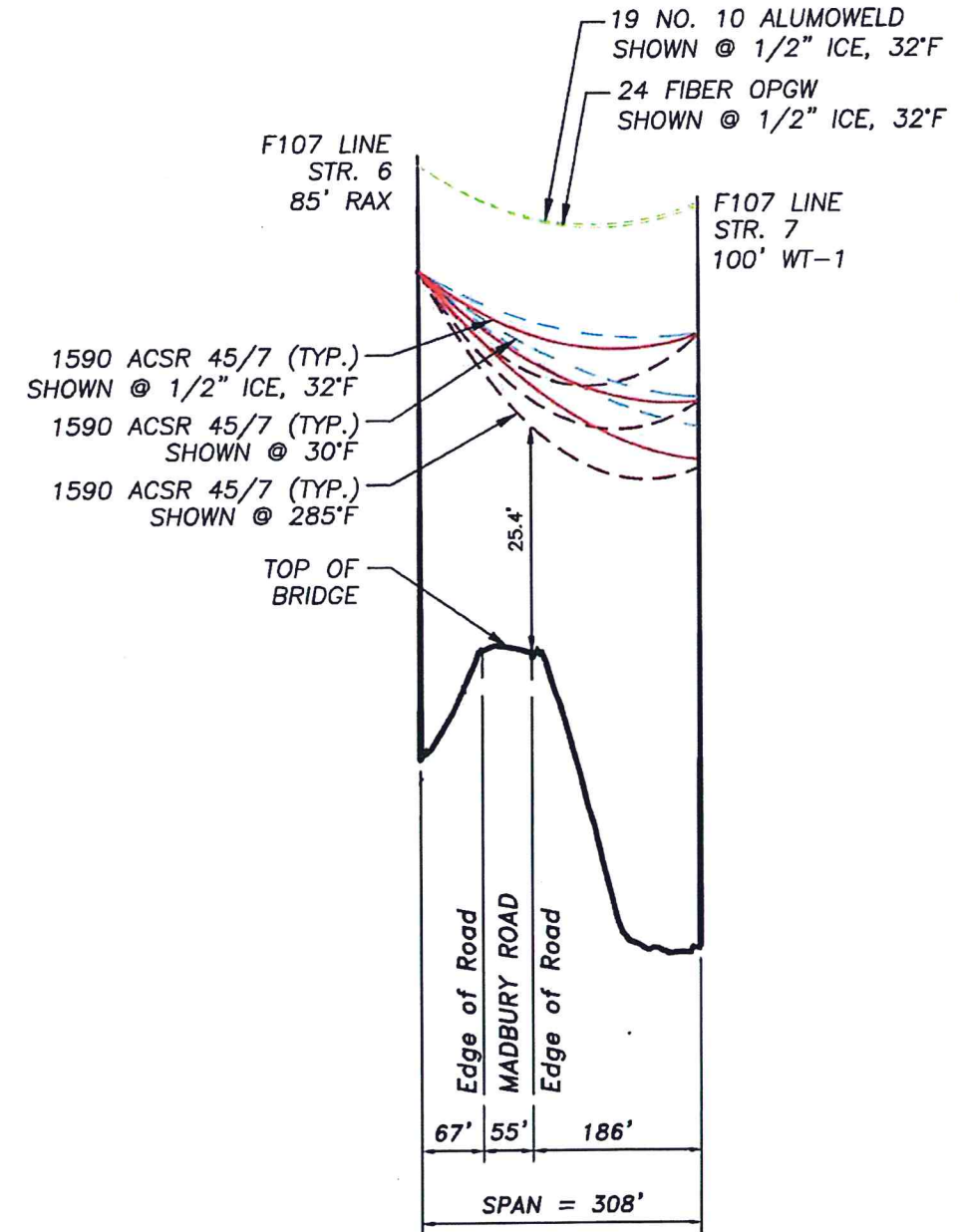
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THIS PLAN FOR REFERENCE ONLY.
NO REPRESENTATION OR WARRANTY IS
MADE AS TO LOCATION OF
BOUNDARIES OR OTHER POINTS OF
REFERENCE. RIGHT OF WAY LOCATION
HAS BEEN SURVEYED AND PROVIDED
BY DOUCET SURVEY INC.



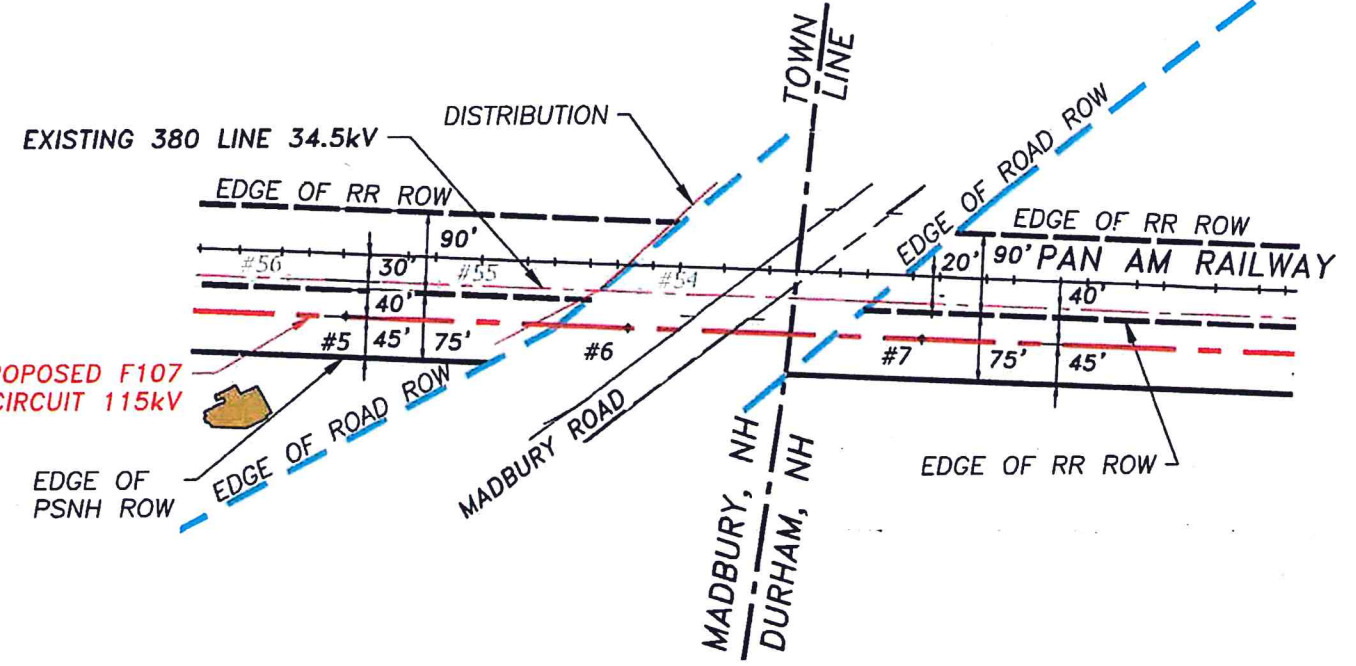
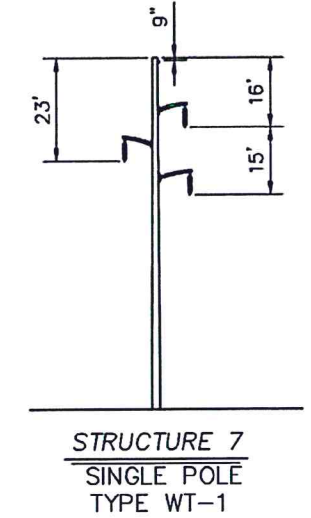
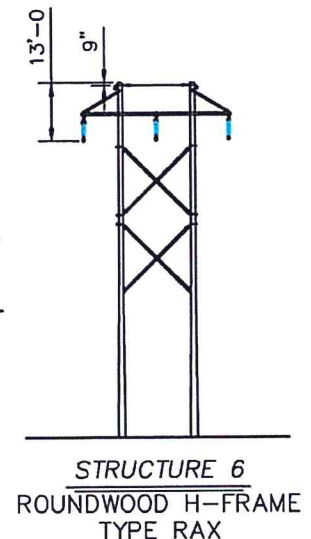
MAD B U R Y, N. H.

D U R H A M, N. H.



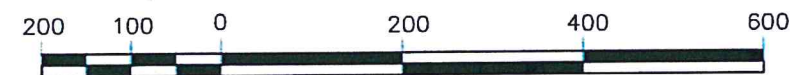
PROFILE

SCALE: 1"=200' HORIZ.
20' VERT.



PLAN VIEW

SCALE: 1"=200'



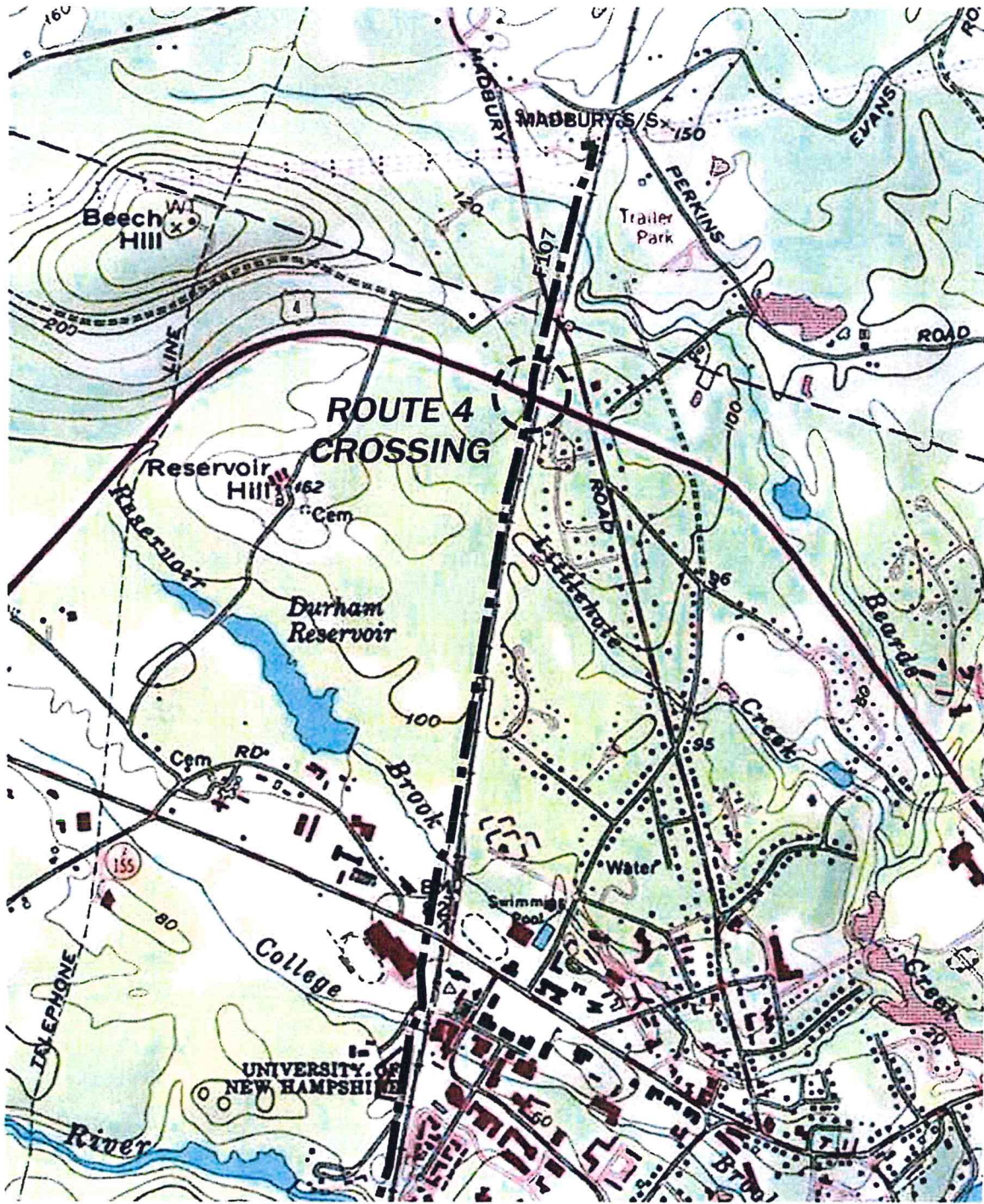
GRAPHIC SCALE

1" = 200'

19 NO. 10 ALUMOWELD INSTALLED @ 4,200 LBS. NESC HVY. INITIAL
24 FIBER OPGW INSTALLED @ 4,500 LBS. NESC HVY. INITIAL
1590 ACSR 45/7 INSTALLED @ 11,400 LBS. NESC HVY. INITIAL

NO.	REVISION	DATE	DRWN	CHKD	APPR
1	UPDATED ALIGNMENT	12/15	RWP	APJ	-
0	ISSUED FOR PERMITTING	4/15	SCF	APJ	-

<p>Public Service of New Hampshire A Northeast Utilities Company</p>	TRANSMISSION BUSINESS		1	
	<p>SINGLE CKT F107 BETWEEN STR. 6 & 7 MADBURY ROAD, MADBURY & DURHAM, NEW HAMPSHIRE</p>		T	
<p>DRAWN SCF</p> <p>ENGINEER KMS</p> <p>CHECKED APJ</p> <p>APPROVED</p>	SCALE AS NOTED	DATE 3/17/15	SHEET 1 OF 1	DRAWING NO. F10740701



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				SCF		of New Hampshire		Projects	
				DESIGNED		LOCATION PLAN SINGLE CIRCUIT F107 LINE CROSSING ROUTE 4 DURHAM, NEW HAMPSHIRE			
				KMS					
				CHECKED					
				APJ		APPROVED			
2	UPDATED CENTERLINE	12/23/15	RWP	APJ	SCALE	DATE	SHEET	DRAWING NO.	
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NO.	REVISION	DATE	DRWN	CHKD	APPR				

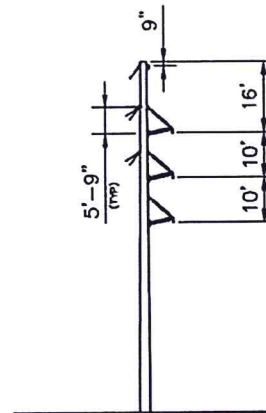
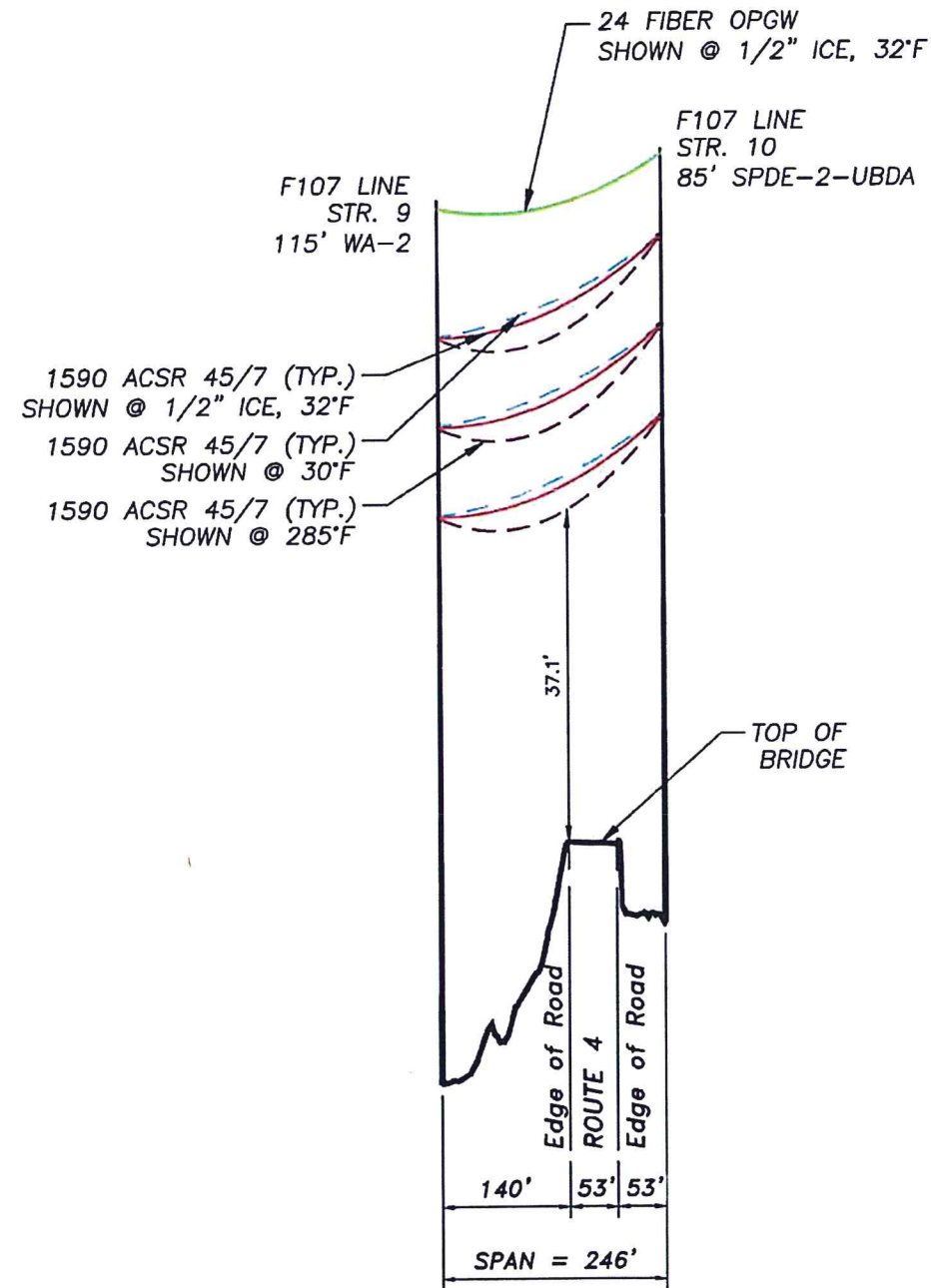
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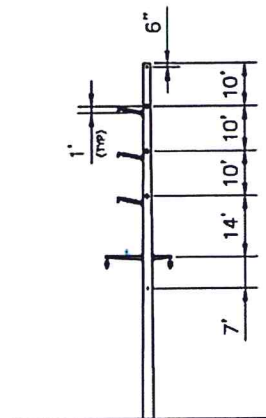
THIS PLAN FOR REFERENCE ONLY. NO REPRESENTATION OR WARRANTY IS MADE AS TO LOCATION OF BOUNDARIES OR OTHER POINTS OF REFERENCE. RIGHT OF WAY LOCATION HAS BEEN SURVEYED AND PROVIDED BY DOUCET SURVEY INC.



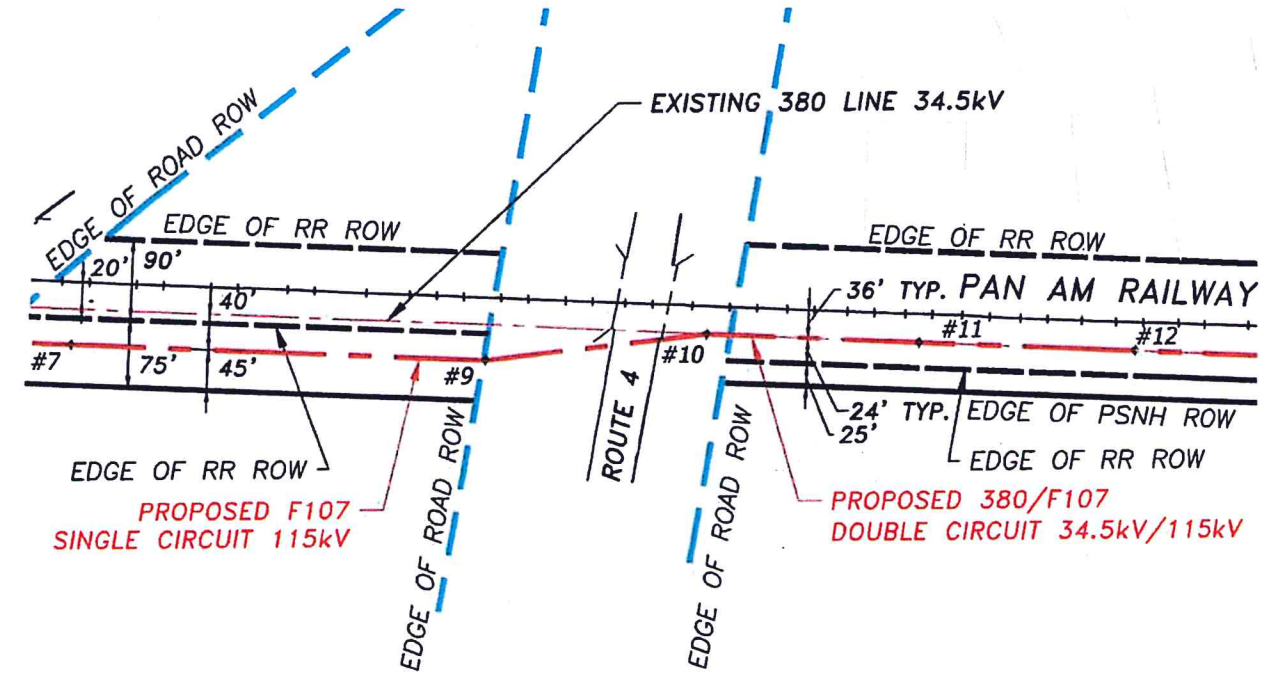
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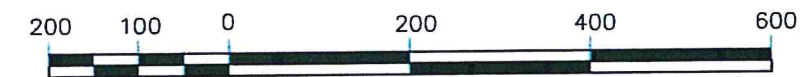
STRUCTURE 9 SINGLE POLE TYPE WA-2



STRUCTURE 10 SINGLE POLE TYPE SPDE-2-UBDA



PLAN VIEW SCALE: 1"=200'



GRAPHIC SCALE 1" = 200'

PROFILE SCALE: 1"=200' HORIZ. 20' VERT.

24 FIBER OPGW INSTALLED @ 4,500 LBS. NESC HVY. INITIAL
1590 ACSR 45/7 INSTALLED @ 11,400 LBS. NESC HVY. INITIAL

4	UPDATED ALIGNMENT	12/15	RWP	APJ	-
3	UPDATED ROW	11/15	SCF	APJ	-
NO.	REVISION	DATE	DRWN	CHKD	APPR

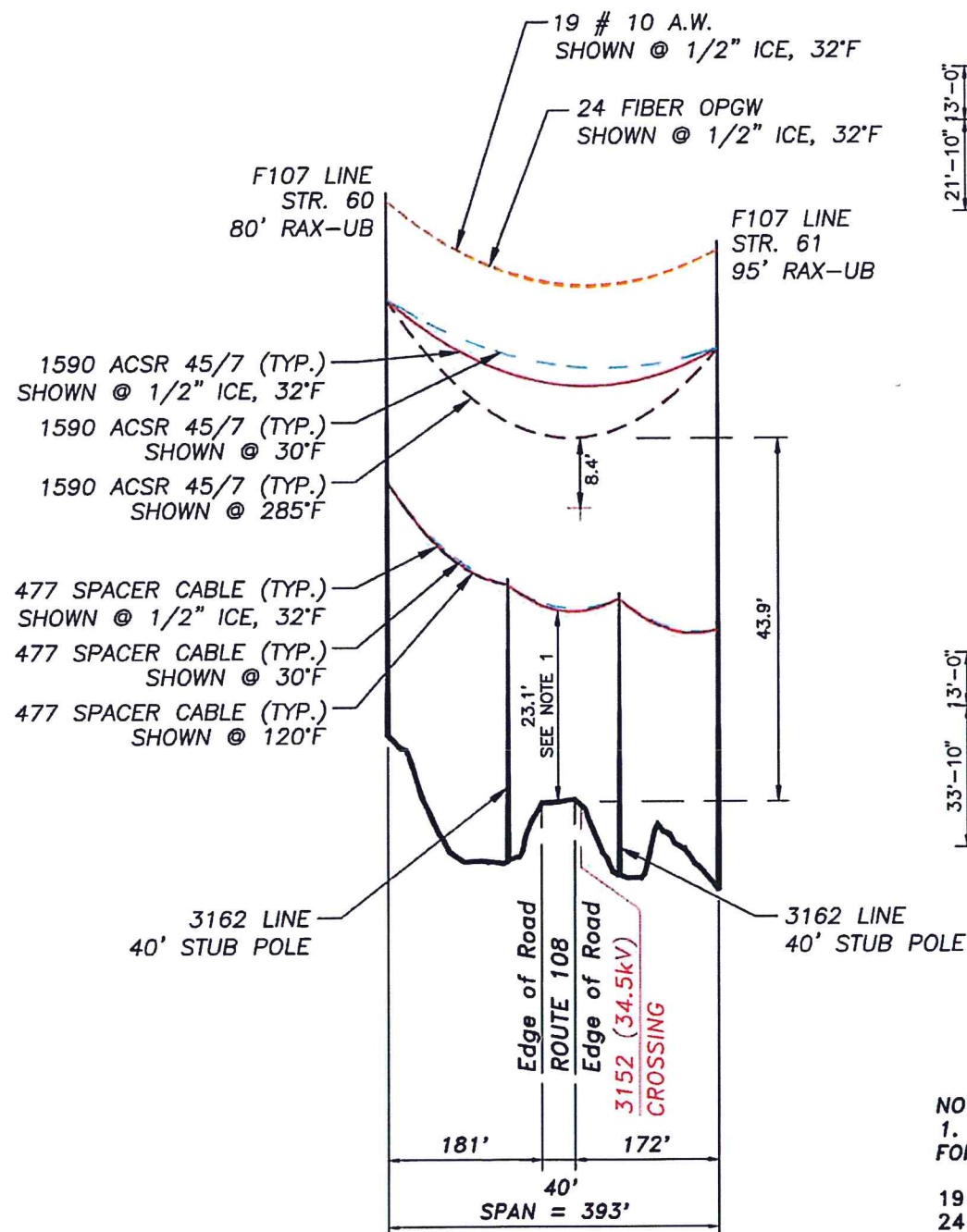
<p>Public Service of New Hampshire A Northeast Utilities Company</p>	TRANSMISSION BUSINESS		4	
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<p>DRAWN SCF</p> <p>ENGINEER KMS</p> <p>CHECKED APJ</p> <p>APPROVED</p>	SCALE AS NOTED	DATE 3/17/15	SHEET 1 OF 1	DRAWING NO. F10740703

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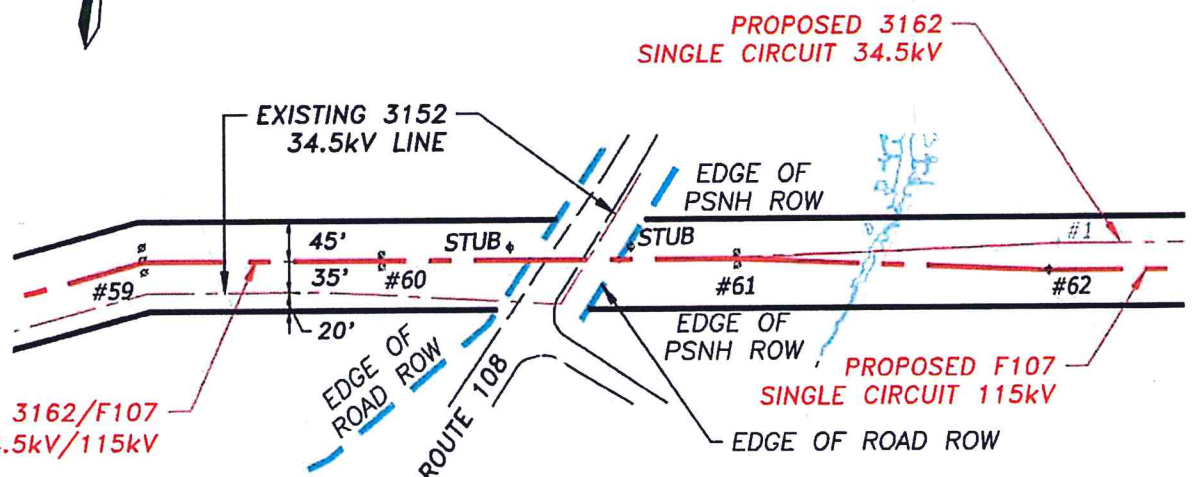
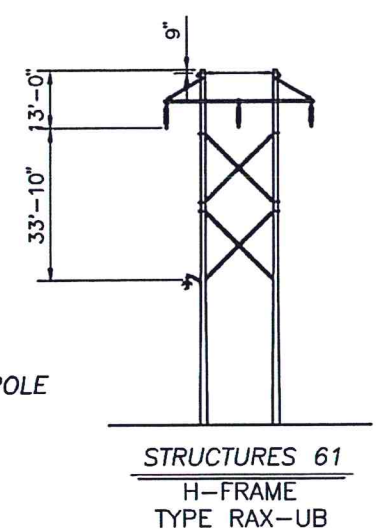
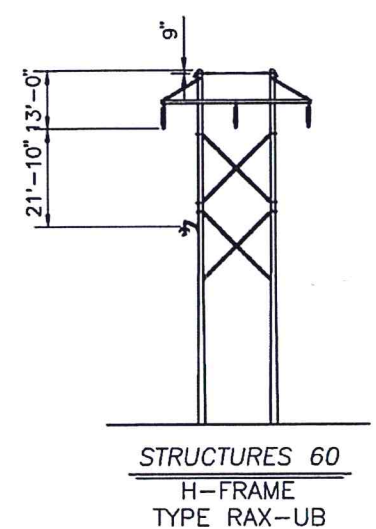
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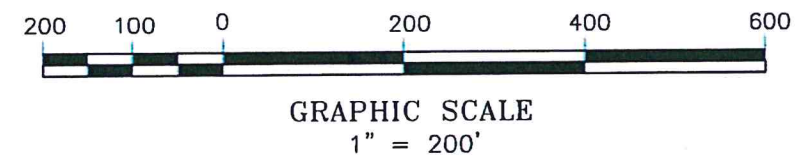
D U R H A M, N. H.



PROFILE
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20' VERT.



PLAN VIEW
SCALE: 1"=200'

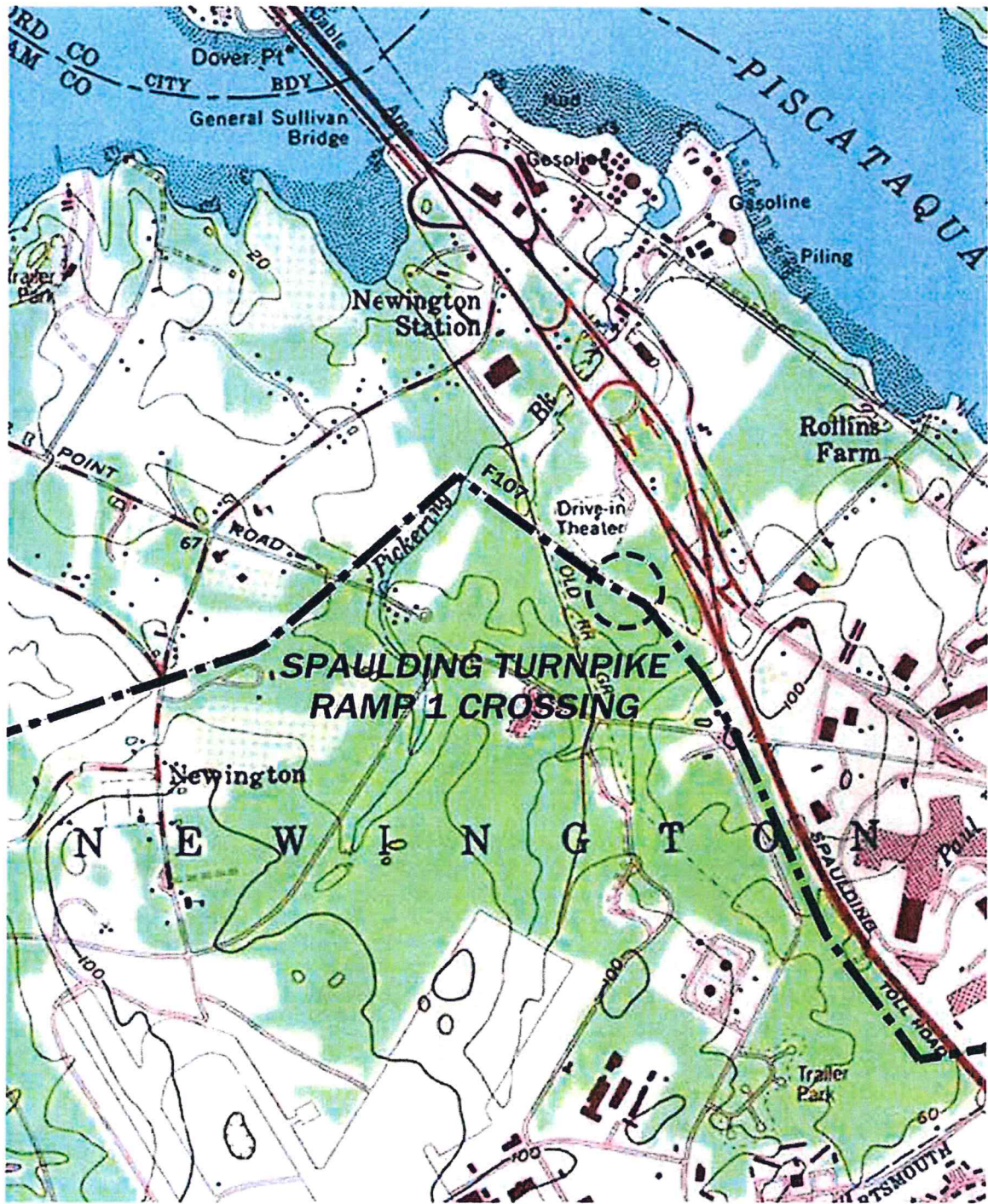


NOTE:
1. CLEARANCE PROVIDED INCLUDES 3-FOOT BUFFER TO ACCOUNT FOR DEPTH OF SPACERS.

19 # 10 ALUMOWELD INSTALLED @ 4,200 LBS. NESC HVY. INITIAL
24 FIBER OPGW INSTALLED @ 4,500 LBS. NESC HVY. INITIAL
1590 ACSR 45/7 INSTALLED @ 11,400 LBS. NESC HVY. INITIAL
477 SPACER CABLE INSTALLED @ 9,000 LBS. NESC HVY. INITIAL

3	UPDATED ALIGNMENT, F107 STRUCTURE NUMBERS, AND STRUCTURE DETAILS	11/15	SCF	APJ	-
2	UPDATED ALIGNMENT	8/15	SCF	APJ	-
NO.	REVISION	DATE	DRWN	CHKD	APPR

<p>Public Service of New Hampshire A Northeast Utilities Company</p>	TRANSMISSION BUSINESS		3	
	<p>DOUBLE CKT F107 & 3162 BETWEEN STR. 60 & 61 ROUTE 108, DURHAM, NEW HAMPSHIRE</p>			T
<p>DRAWN SCF</p> <p>ENGINEER KMS</p> <p>CHECKED APJ</p> <p>APPROVED</p>	SCALE AS NOTED	DATE 3/17/15	SHEET 1 OF 1	DRAWING NO. F10740707

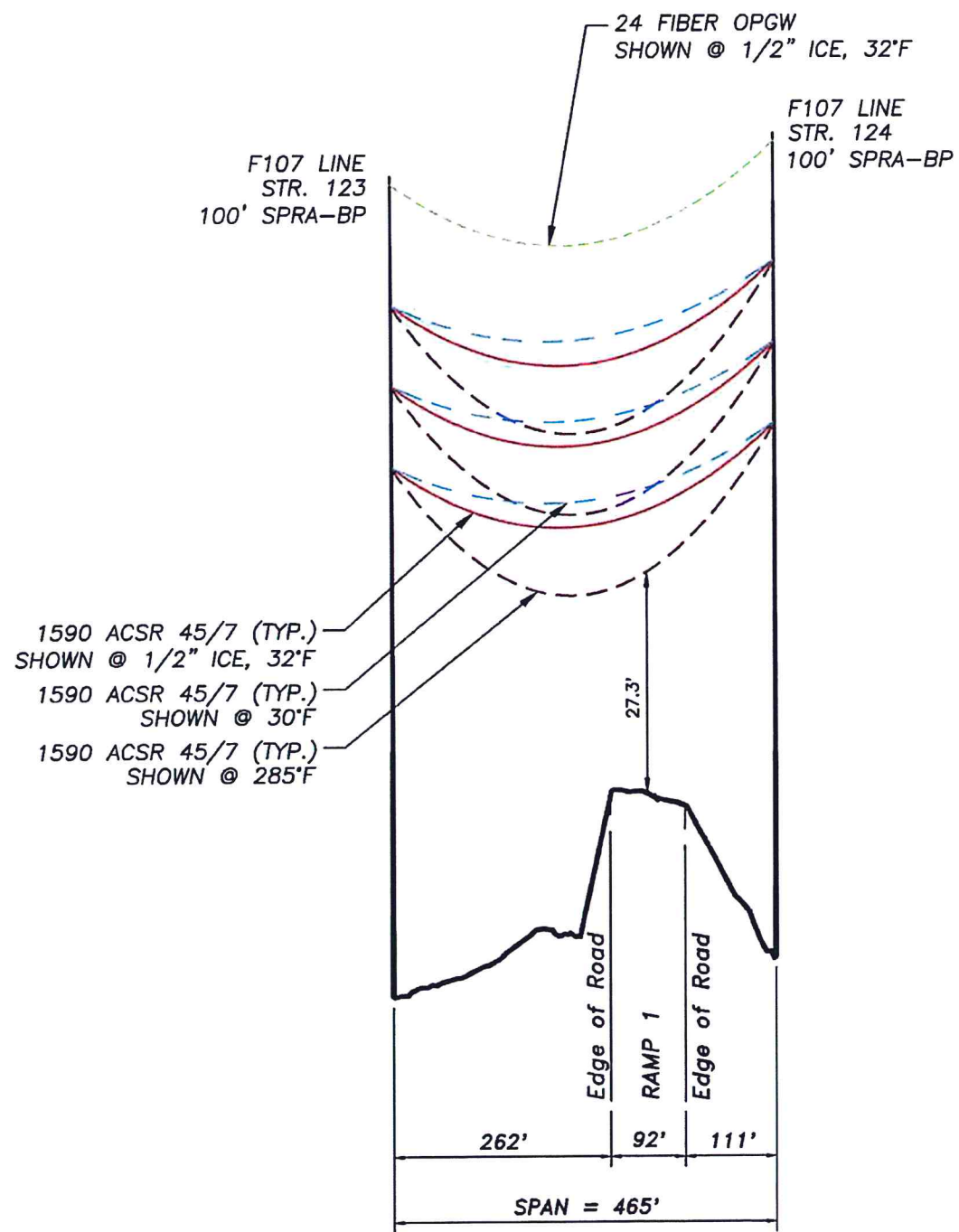


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				KMS					
				CHECKED					
				APJ					
				APPROVED					
1		UPDATED ALIGNMENT		8/1/15		SCF		APJ	
0		ISSUED FOR PERMITTING		4/10/15		SCF		APJ	
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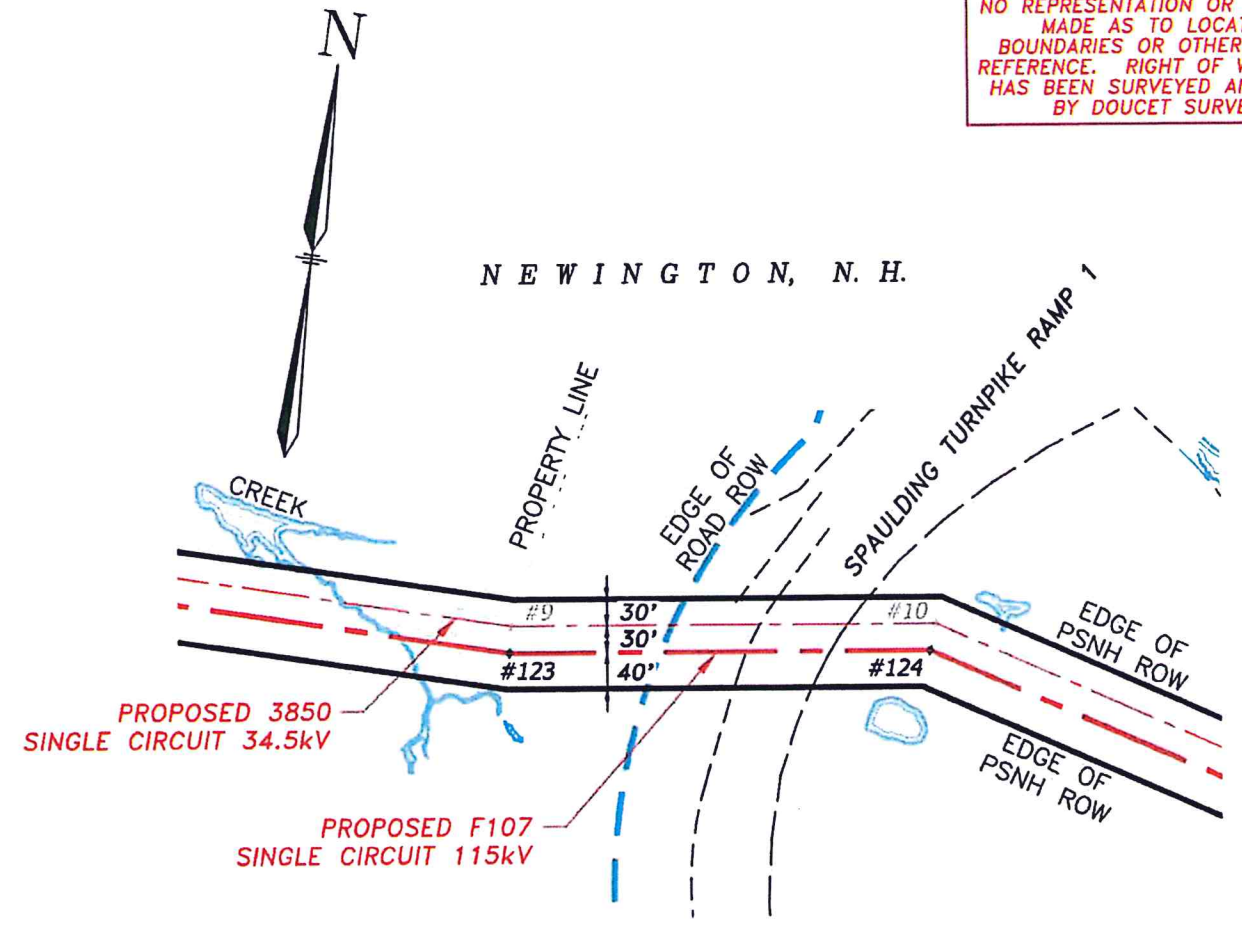
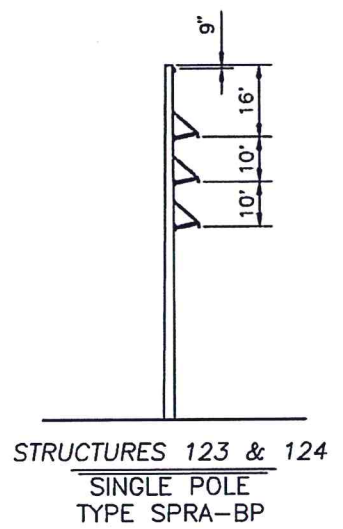
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PROFILE
SCALE: 1"=200' HORIZ.
20' VERT.



PLAN VIEW
SCALE: 1"=200'

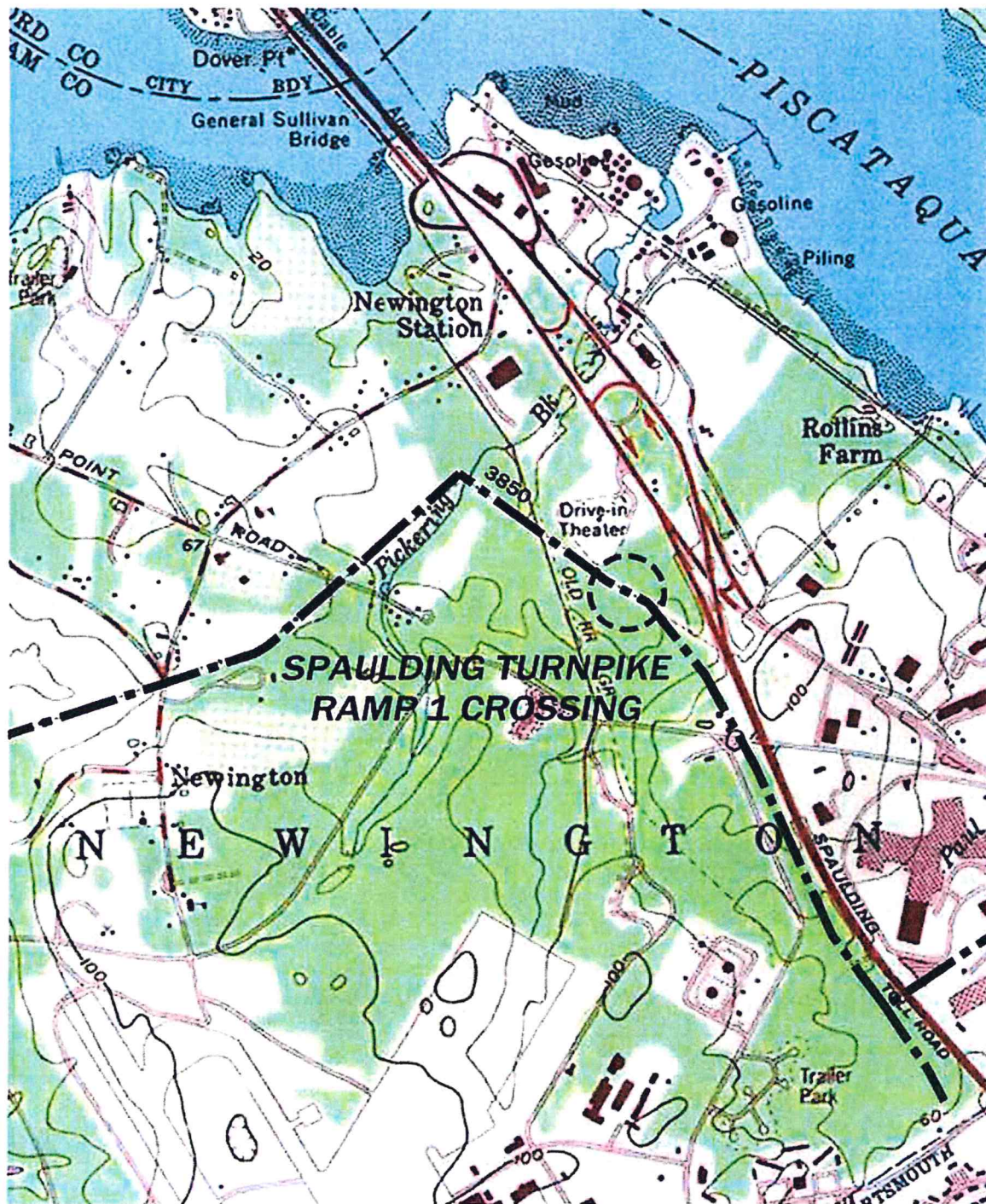


GRAPHIC SCALE
1" = 200'

24 FIBER OPGW INSTALLED @ 4,500 LBS. NESC HVY. INITIAL
1590 ACSR 45/7 INSTALLED @ 11,400 LBS. NESC HVY. INITIAL

NO.	REVISION	DATE	DRWN	CHKD	APPR
4	UPDATED F107 STRUCTURE NUMBERS	12/15	SCF	APJ	-
3	UPDATED 3850 & F107 STRUCTURE NUMBERS	11/15	SCF	APJ	-

Public Service of New Hampshire A Northeast Utilities Company	TRANSMISSION BUSINESS		4
	SINGLE CKT F107 BETWEEN STR. 123 & 124 SPAULDING TURNPIKE RAMP 1, NEWINGTON, NEW HAMPSHIRE		
DRAWN SCF	ENGINEER KMS	CHECKED APJ	APPROVED -
SCALE AS NOTED	DATE 3/17/15	SHEET 1 OF 1	DRAWING NO. F10740709

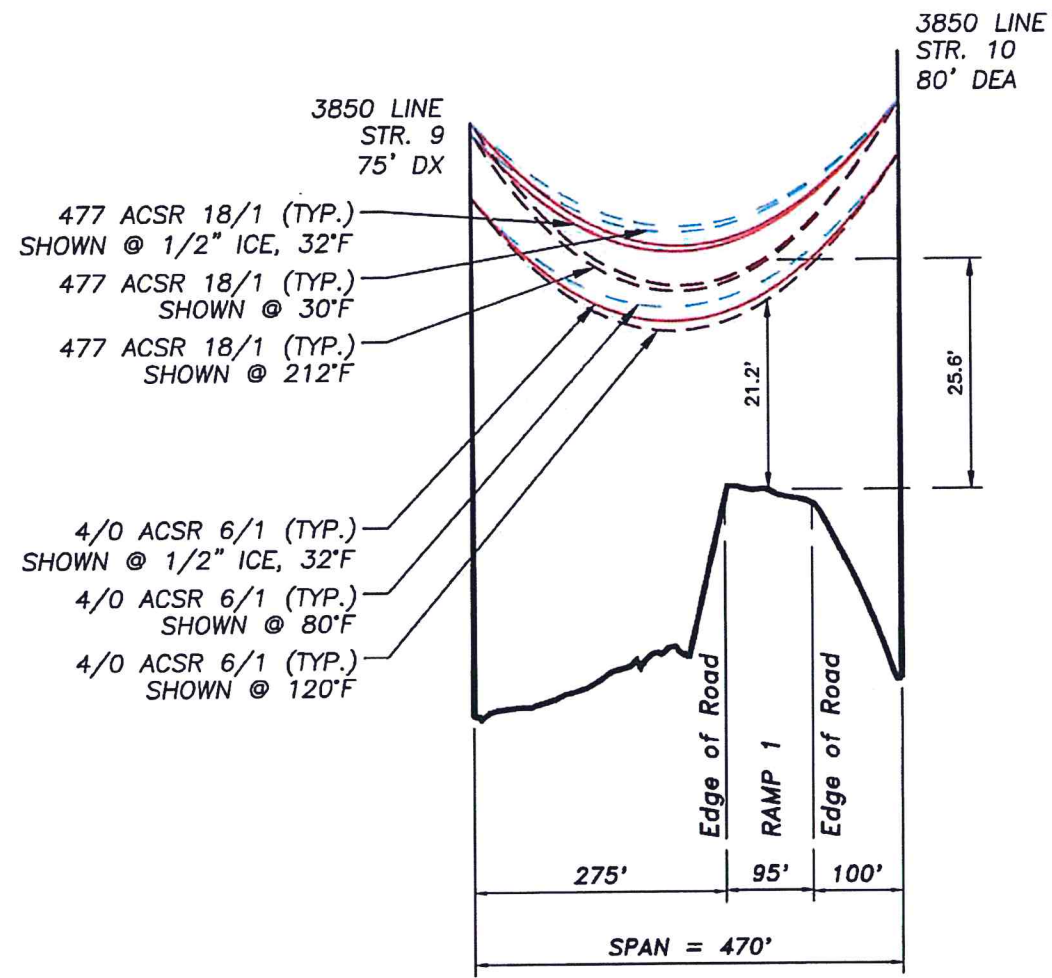


				DRAWN		Public Service		System	
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				KMS					
				CHECKED					
				APJ					
				APPROVED					
ISSUED FOR PERMITTING		8/7/15	SCF	APJ	SCALE	DATE	SHEET	DRAWING NO.	
REVISION		DATE	DRWN	CHK	1"=1500'	8/3/15	1 of 1	385040702	

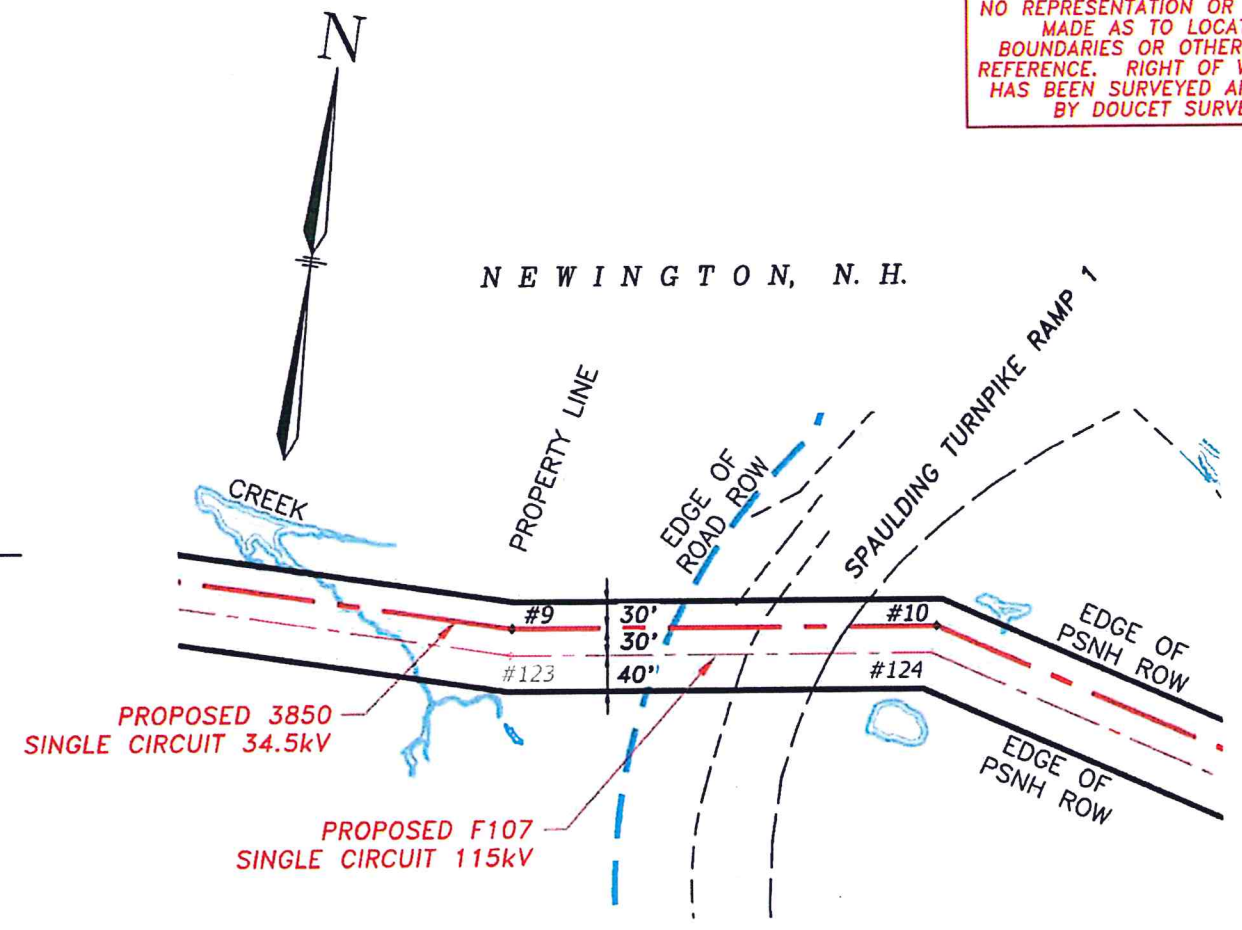
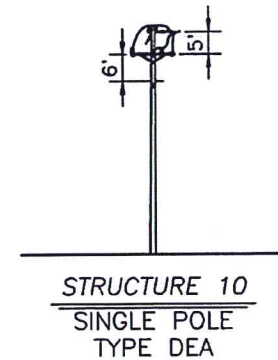
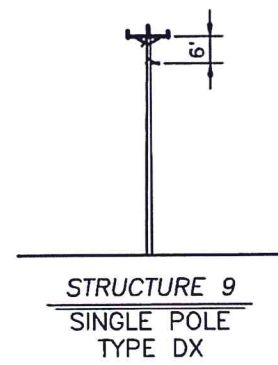
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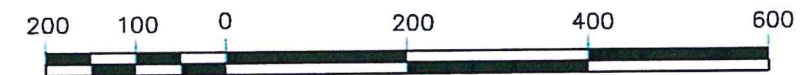
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PROFILE
SCALE: 1"=200' HORIZ.
20' VERT.



PLAN VIEW
SCALE: 1"=200'



GRAPHIC SCALE
1" = 200'

477 ACSR 18/1 INSTALLED @ 3,500 LBS. NESC HVY. INITIAL
4/0 ACSR 6/1 INSTALLED @ 2,500 LBS. NESC HVY. INITIAL

NO	REVISION	DATE	DRWN	CHKD	APPR
2	UPDATED F107 STRUCTURE NUMBERS	11/15	SCF	APJ	-
1	UPDATED 3850 & F107 STRUCTURE NUMBERS	11/15	SCF	APJ	-

<p>Public Service of New Hampshire A Northeast Utilities Company</p>	TRANSMISSION BUSINESS	2		
	<p>SINGLE CKT 3850 BETWEEN STR. 9 & 10 SPAULDING TURNPIKE RAMP 1, NEWINGTON, NEW HAMPSHIRE</p>			
<p>DRAWN SCF</p> <p>ENGINEER KMS</p> <p>CHECKED APJ</p> <p>APPROVED -</p>	SCALE AS NOTED	DATE 8/3/15	SHEET 1 OF 1	DRAWING NO. 385040701



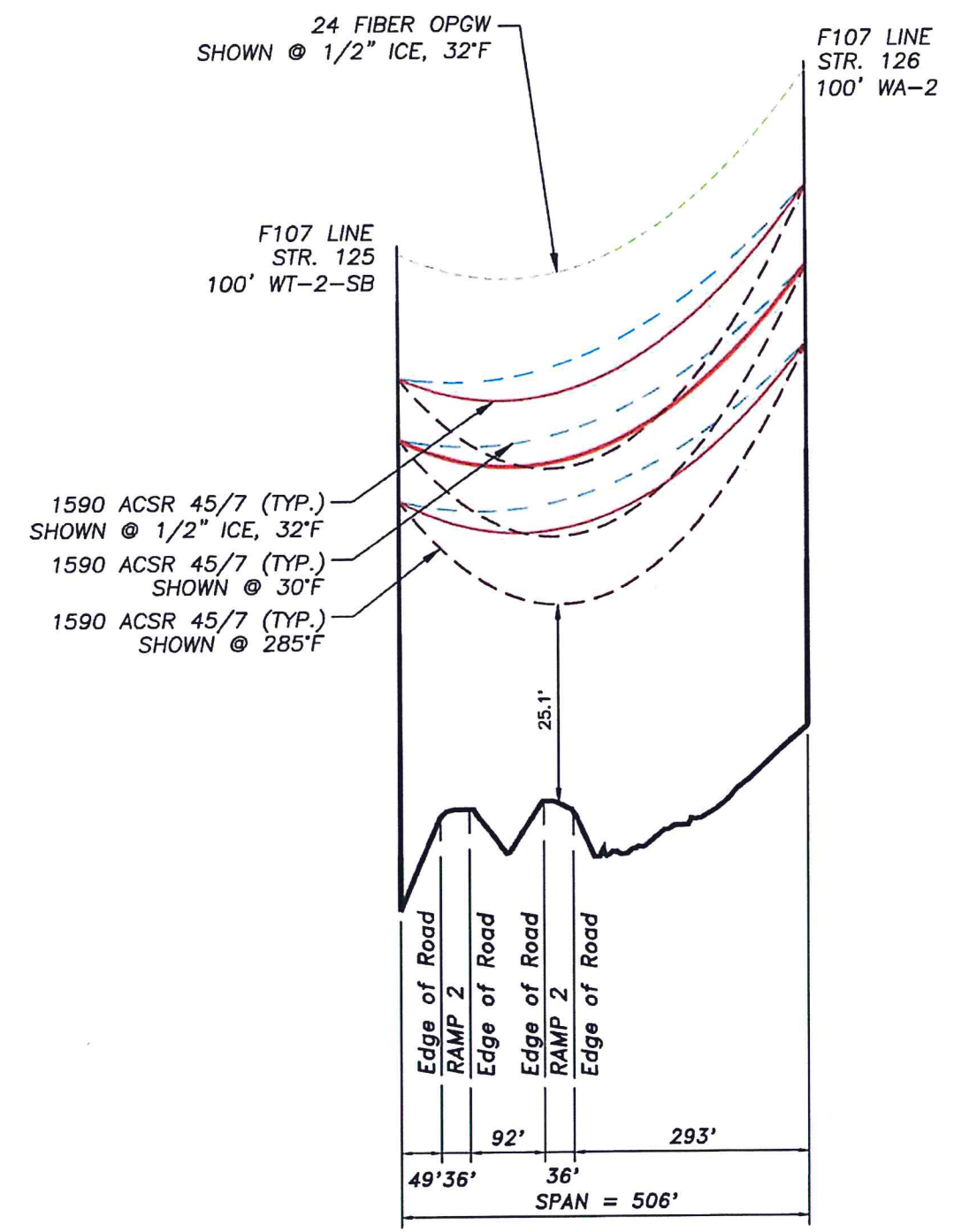
				DRAWN		Public Service of New Hampshire		System Projects	
				DESIGNED		LOCATION PLAN SINGLE CIRCUIT F107 LINE CROSSING SPAULDING TURNPIKE RAMP 2 NEWINGTON, NEW HAMPSHIRE			
				CHECKED					
				APPROVED					
				APJ		SCALE	DATE	SHEET	DRAWING NO.
				APJ		1"=1500'	3/17/15	1 of 1	F10740712
1	UPDATED ALIGNMENT	8/7/15	SCF	APJ					
0	ISSUED FOR PERMITTING	4/10/15	SCF	APJ					
NO.	REVISION	DATE	DRWN	CHEK	APPR				

08/2012

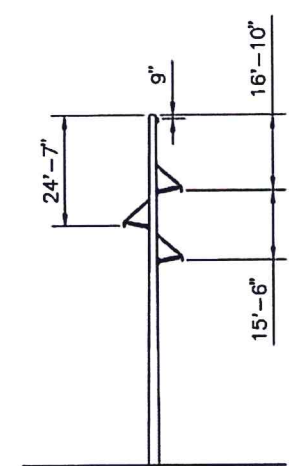
12/8/2015 9:48 AM - SFISHER - F10740700.DWG - F10740711

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NO REPRESENTATION OR WARRANTY IS
MADE AS TO LOCATION OF
BOUNDARIES OR OTHER POINTS OF
REFERENCE. RIGHT OF WAY LOCATION
HAS BEEN SURVEYED AND PROVIDED
BY DOUCET SURVEY INC.

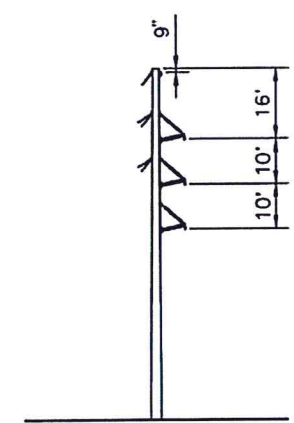
NEWINGTON, N. H.



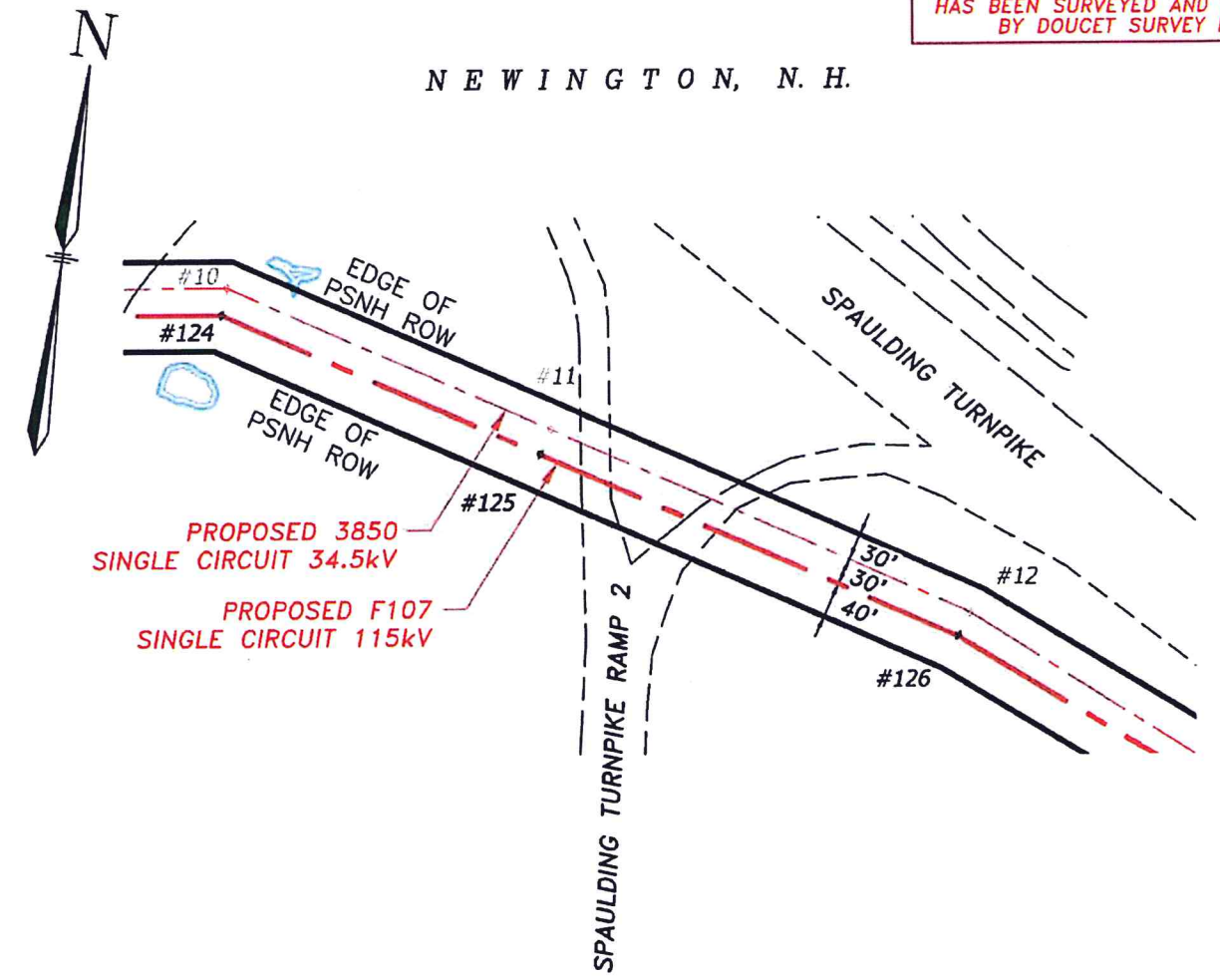
PROFILE
SCALE: 1"=200' HORIZ.
20' VERT.



STRUCTURE 125
SINGLE POLE
TYPE WT-2-SB



STRUCTURE 126
SINGLE POLE
TYPE GUYED WA-2



PLAN VIEW
SCALE: 1"=200'



GRAPHIC SCALE
1" = 200'

24 FIBER OPGW INSTALLED @ 4,500 LBS. NESC HVY. INITIAL
1590 ACSR 45/7 INSTALLED @ 11,400 LBS. NESC HVY. INITIAL

NO	REVISION	DATE	DRWN	CHKD	APPR
4	UPDATED F107 STRUCTURE NUMBERS	12/15	SCF	APJ	-
3	UPDATED 3850 & F107 STRUCTURE NUMBERS	11/15	SCF	APJ	-

<p>Public Service of New Hampshire A Northeast Utilities Company</p>	TRANSMISSION BUSINESS		4	
	<p>SINGLE CKT F107 BETWEEN STR. 125 & 126 SPAULDING TURNPIKE RAMP 2, NEWINGTON, NEW HAMPSHIRE</p>			T
<p>DRAWN SCF</p> <p>ENGINEER KMS</p> <p>CHECKED APJ</p> <p>APPROVED</p>	SCALE AS NOTED	DATE 3/17/15	SHEET 1 OF 1	DRAWING NO. F10740711



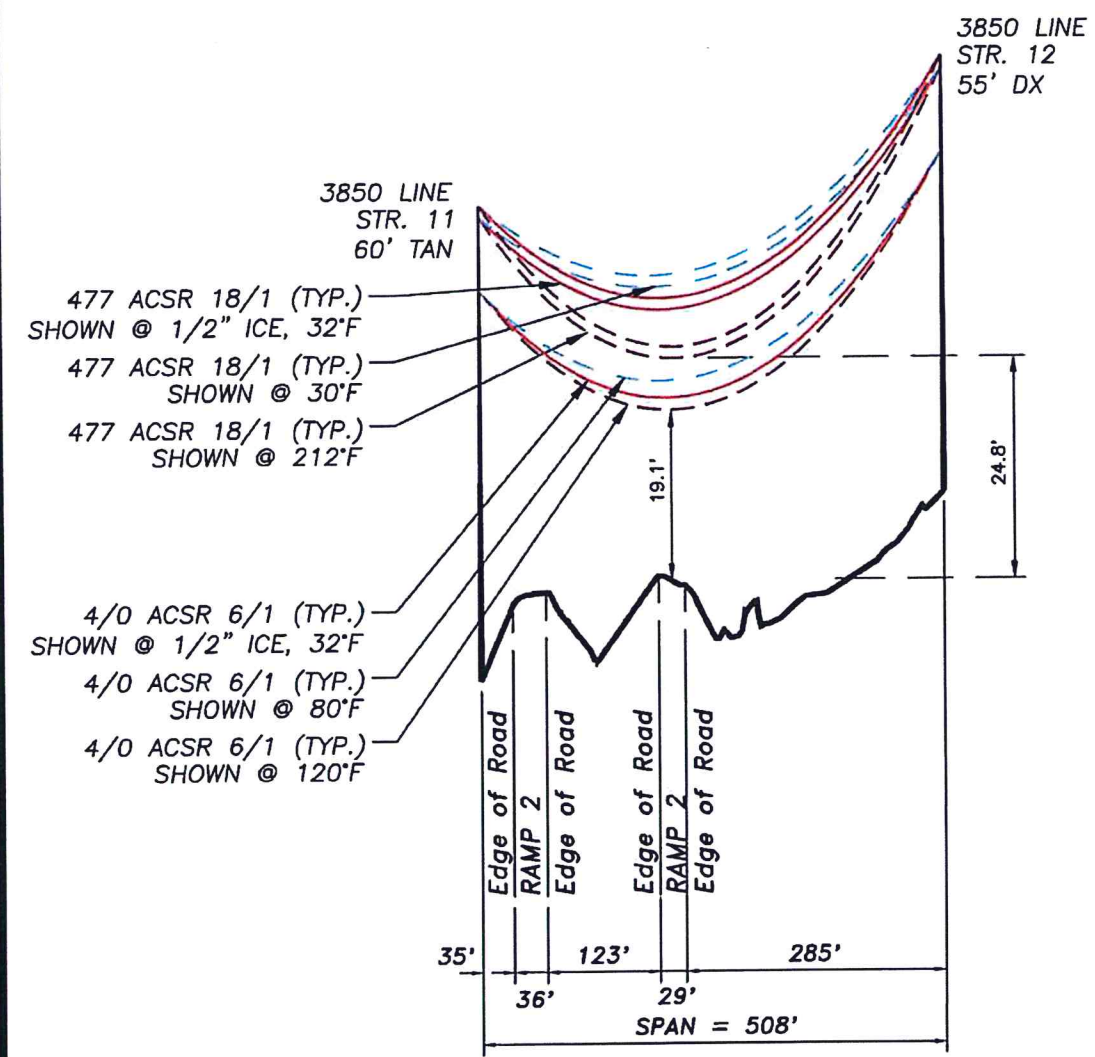
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				DESIGNED KMS		LOCATION PLAN SINGLE CIRCUIT 3850 LINE CROSSING SPAULDING TURNPIKE RAMP 2 NEWINGTON, NEW HAMPSHIRE			
				CHECKED APJ					
				APPROVED					
ISSUED FOR PERMITTING		8/7/15	SCF	APJ	SCALE	DATE	SHEET	DRAWING NO.	
NO. REVISION		DATE	DRWN	CHEK	APPR	1"=1500'	8/3/15	1 of 1	385040704

08/2012

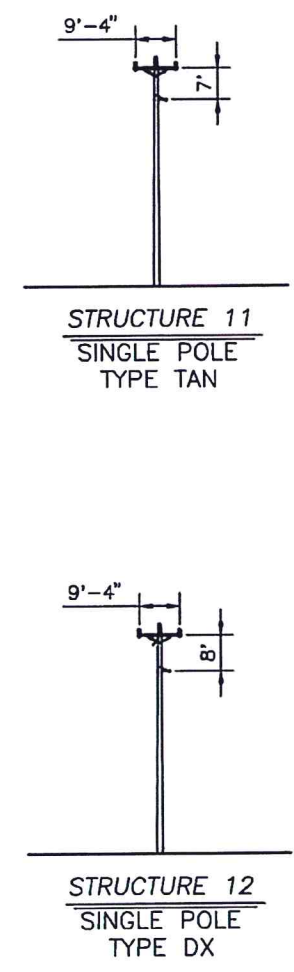
12/8/2015 9:34 AM - SFISHER - 385040700.DWG - 385040703

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NEWINGTON, N. H.

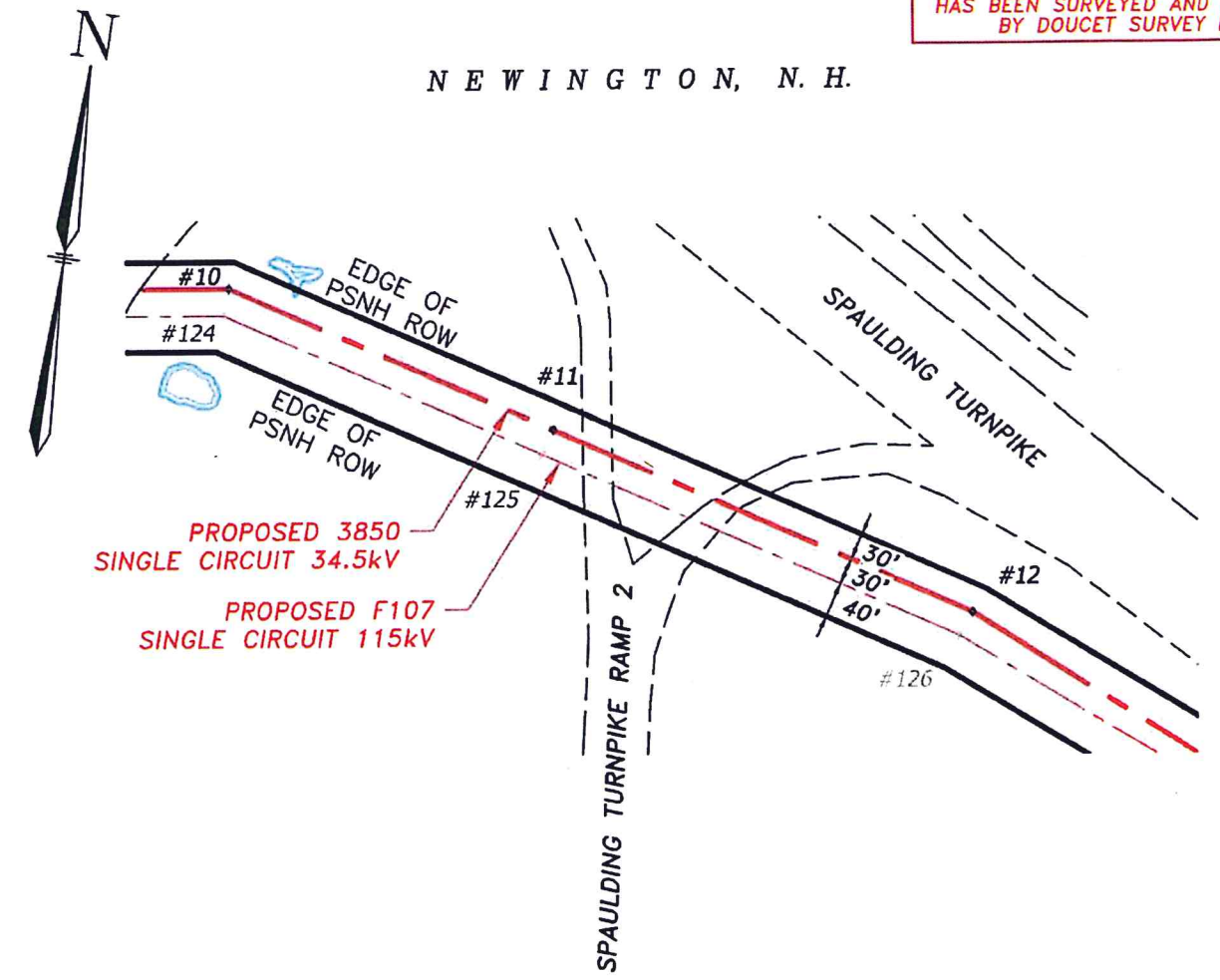


PROFILE
SCALE: 1"=200' HORIZ.
20' VERT.



477 ACSR 18/1 INSTALLED @ 3,500 LBS. NESC HVY. INITIAL
4/0 ACSR 6/1 INSTALLED @ 2,500 LBS. NESC HVY. INITIAL

NO	REVISION	DATE	DRWN	CHKD	APPR
2	UPDATED F107 STRUCTURE NUMBERS	12/15	SCF	APJ	-
1	UPDATED 3850 & F107 STRUCTURE NUMBERS	11/15	SCF	APJ	-



PLAN VIEW
SCALE: 1"=200'



GRAPHIC SCALE
1" = 200'

 Public Service of New Hampshire A Northeast Utilities Company	TRANSMISSION BUSINESS		2
	SINGLE CKT 3850 BETWEEN STR. 11 & 12 SPAULDING TURNPIKE RAMP 2, NEWINGTON, NEW HAMPSHIRE		
DRAWN SCF	SCALE AS NOTED	DATE 3/17/15	SHEET 1 OF 1
ENGINEER KMS	DRAWING NO. 385040703		
CHECKED APJ			
APPROVED			



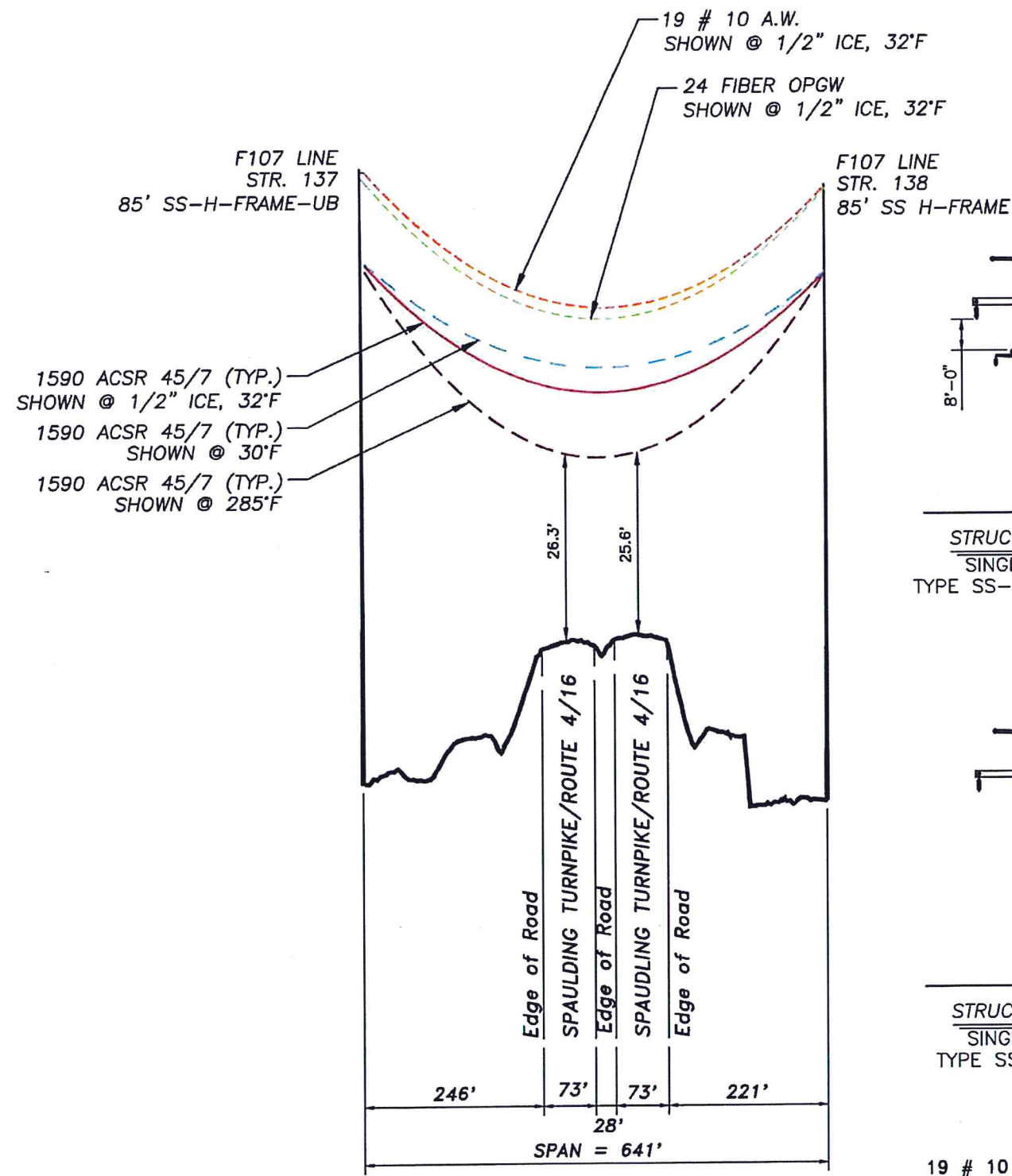
**SPAULDING TURNPIKE/
ROUTE 4/16 CROSSING**

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				SCF		of New Hampshire		Projects	
				DESIGNED		LOCATION PLAN SINGLE CIRCUIT F107 LINE CROSSING SPAULDING TURNPIKE/ROUTE 4/16 NEWINGTON, NEW HAMPSHIRE			
				KMS					
				CHECKED					
				APJ					
				APPROVED		SCALE		DATE	
						1"=1500'		3/17/15	
						SHEET		DRAWING NO.	
						1 of 1		F10740714	
1		UPDATED ALIGNMENT		8/7/15		SCF		APJ	
0		ISSUED FOR PERMITTING		4/10/15		SCF		APJ	
NO.		REVISION		DATE		DRWN		CHKD	

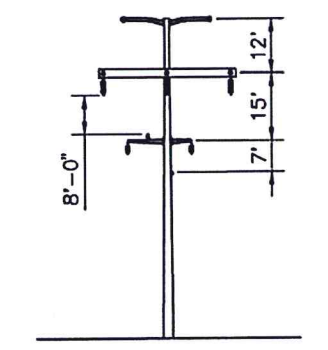
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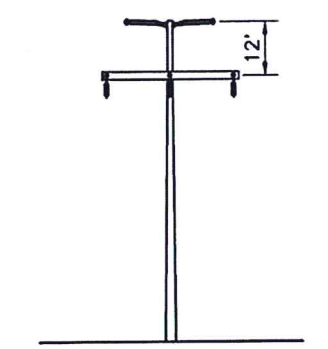
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PROFILE
SCALE: 1"=200' HORIZ.
20' VERT.



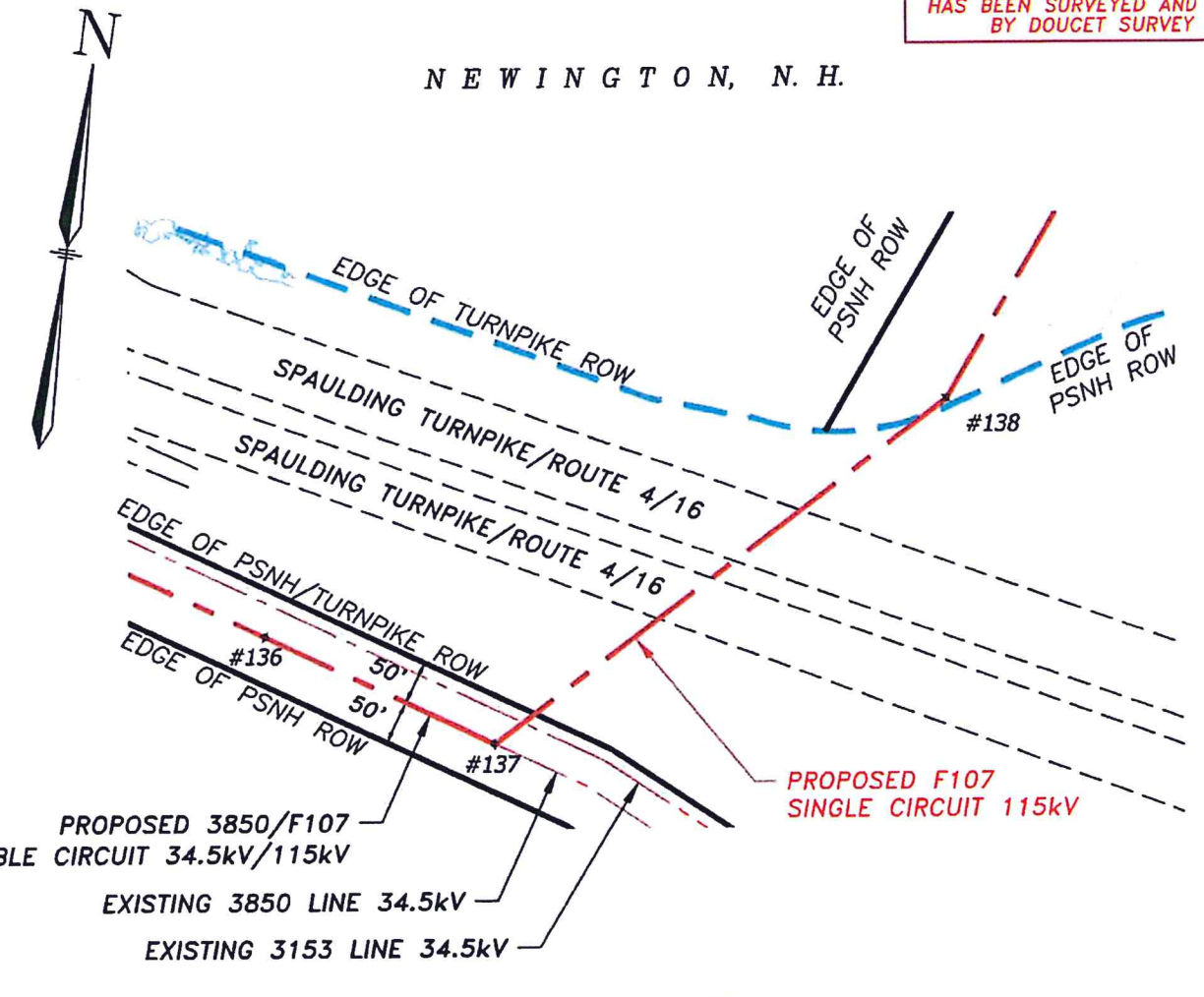
STRUCTURE 137
SINGLE POLE
TYPE SS-H-FRAME-UB



STRUCTURE 138
SINGLE POLE
TYPE SS-H-FRAME

19 # 10 ALUMOWELD INSTALLED @ 4200 LBS. NESC HVY. INITIAL
24 FIBER OPGW INSTALLED @ 4,500 LBS. NESC HVY. INITIAL
1590 ACSR 45/7 INSTALLED @ 11,400 LBS. NESC HVY. INITIAL

NO	REVISION	DATE	DRWN	CHKD	APPR
3	UPDATED F107 STRUCTURE NUMBERS	12/15	SCF	APJ	-
2	UPDATED F107 STRUCTURE NUMBERS	11/15	SCF	APJ	-

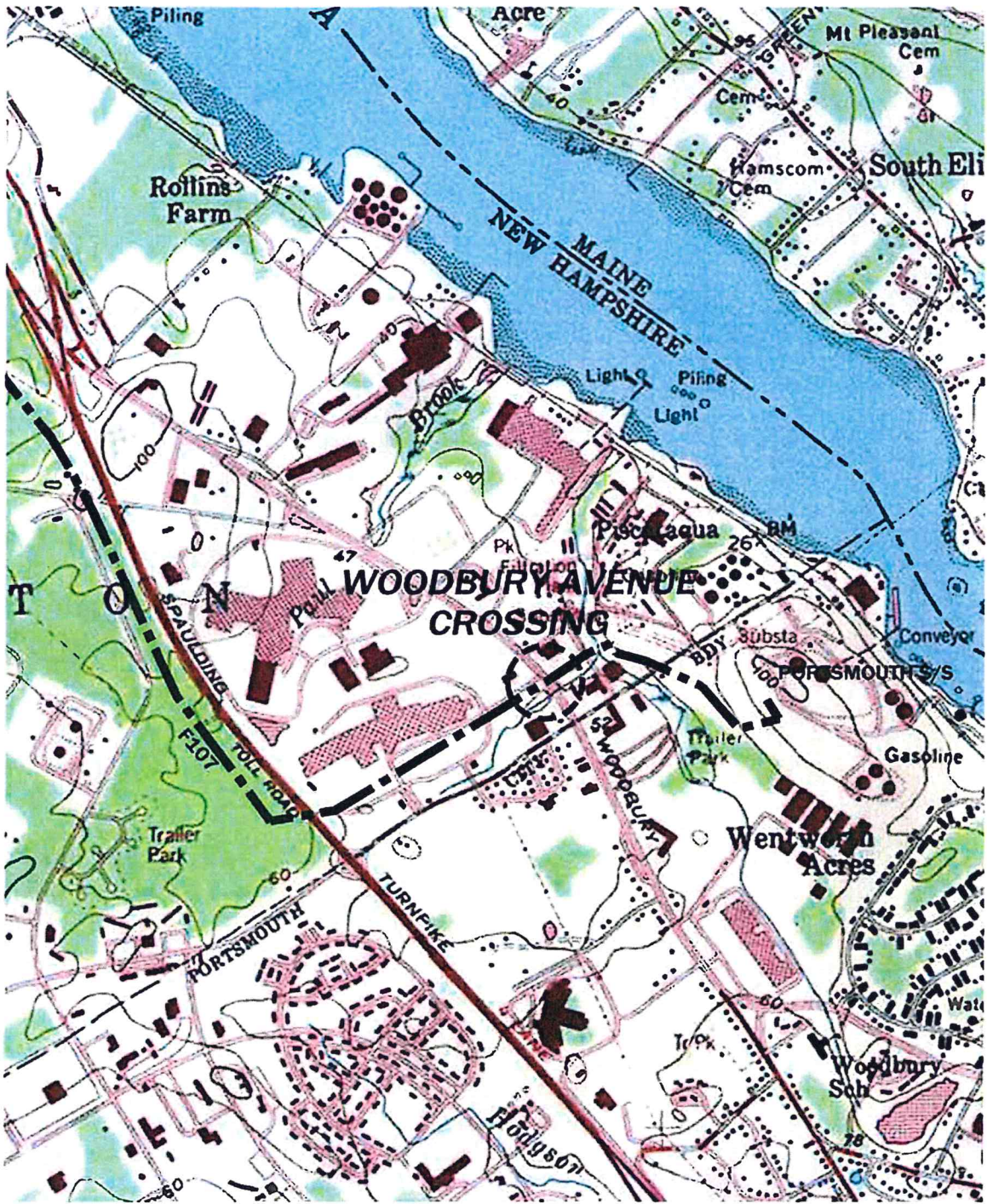


PLAN VIEW
SCALE: 1"=200'



GRAPHIC SCALE
1" = 200'

 Public Service of New Hampshire A Northeast Utilities Company	TRANSMISSION BUSINESS		3
	SINGLE CKT F107 BETWEEN STR. 137 & 138 SPAULDING TURNPIKE/ROUTE 4/16, NEWINGTON, NEW HAMPSHIRE		
DRAWN SCF	ENGINEER KMS	CHECKED APJ	APPROVED -
SCALE AS NOTED	DATE 3/17/15	SHEET 1 OF 1	DRAWING NO. F10740713



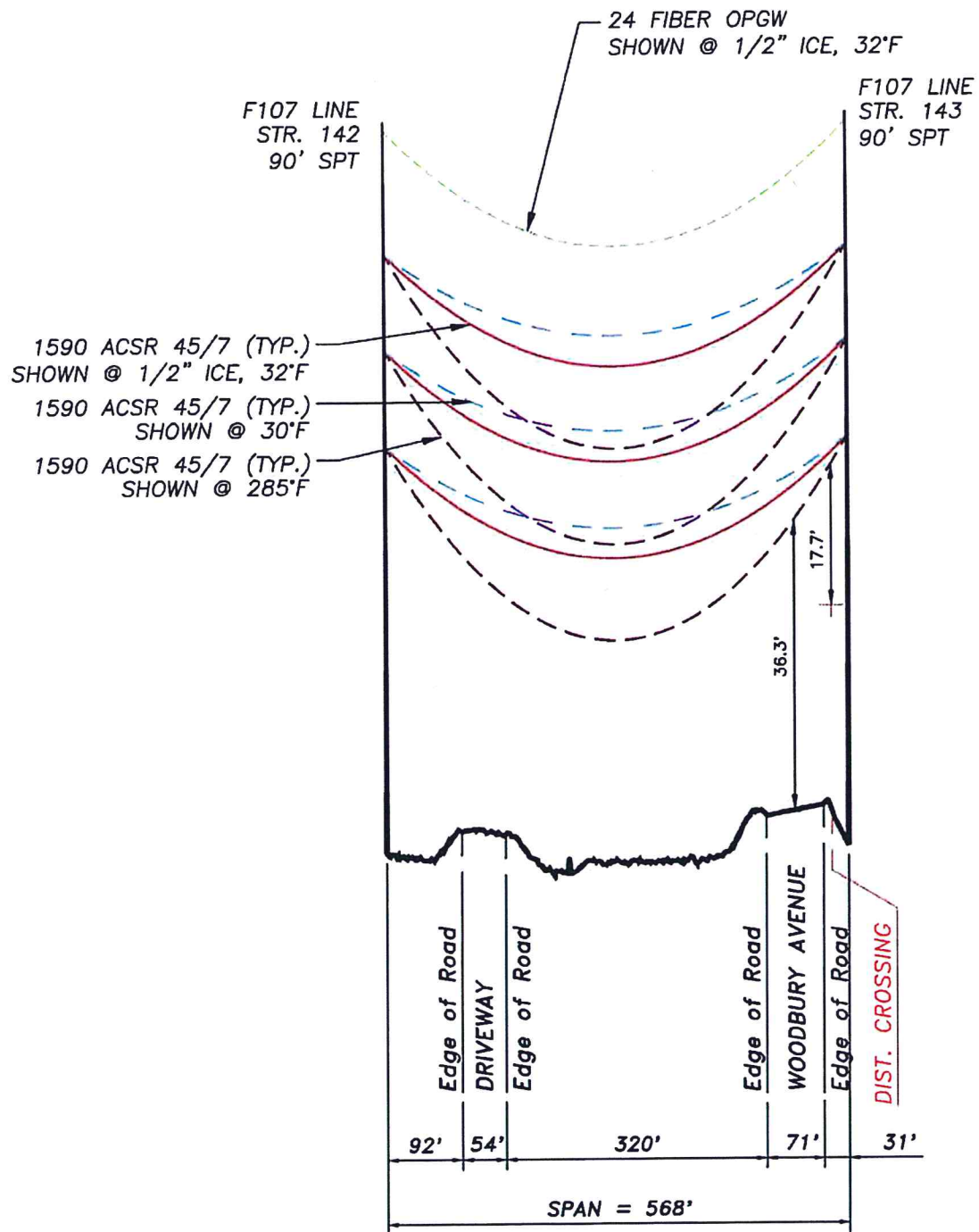
						DRAWN		Public Service of New Hampshire		System Projects																			
						DESIGNED		LOCATION PLAN SINGLE CIRCUIT F107 LINE CROSSING WOODBURY AVENUE NEWINGTON, NEW HAMPSHIRE																					
						CHECKED																							
						APPROVED																							
						SCALE		DATE		SHEET																			
						1" = 1500'		3/17/15		1 of 1																			
						DRAWING NO.		F10740716																					
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NO.	REVISION	DATE	DRWN	CHCK	APPR																								
1	UPDATED ALIGNMENT	8/7/15	SCF	APJ																									
0	ISSUED FOR PERMITTING	4/10/15	SCF	APJ																									

08/2012

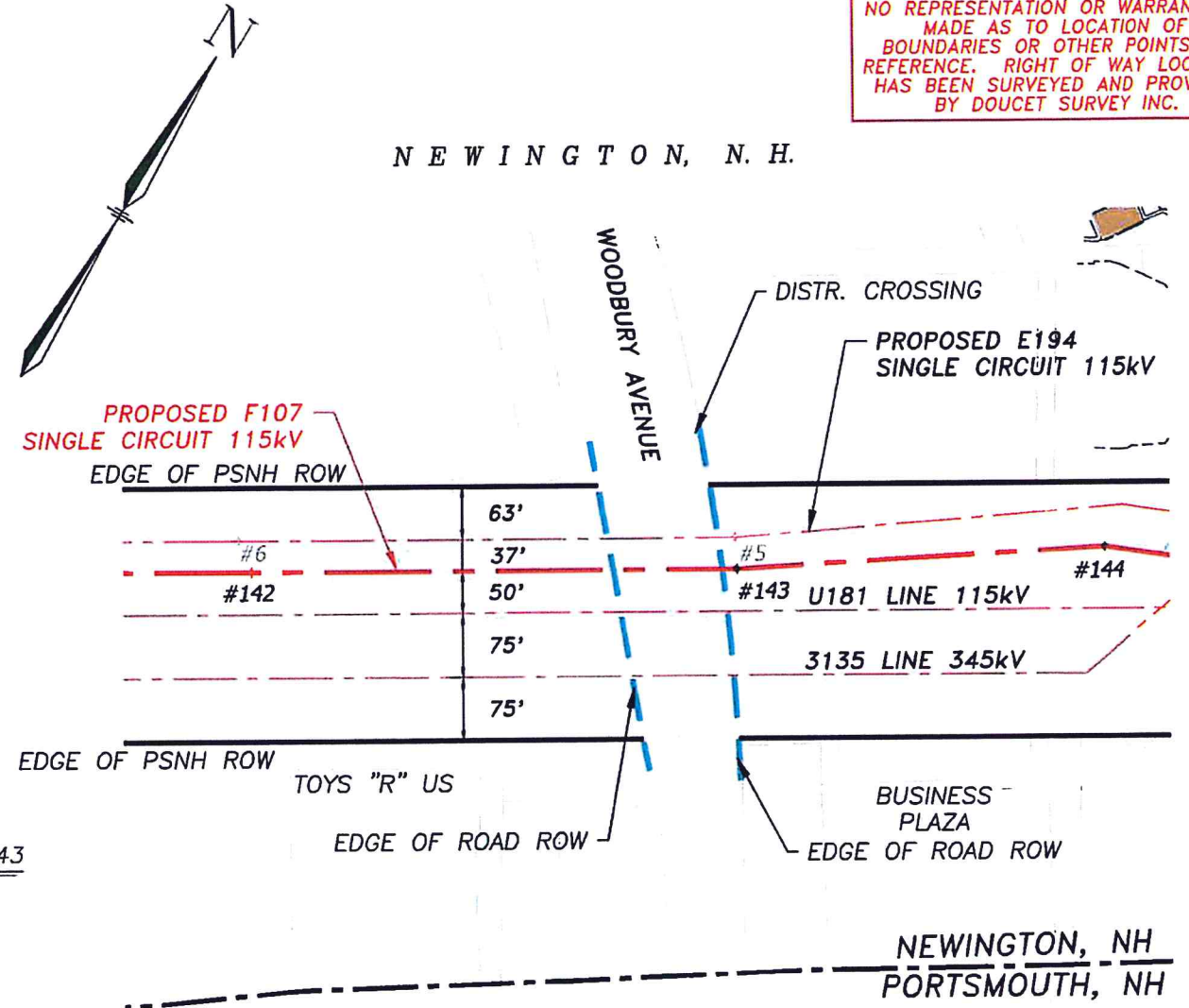
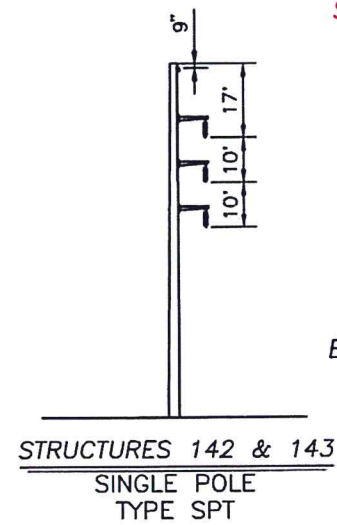
12/8/2015 9:48 AM - SFISHER - F10740700.DWG - F10740715

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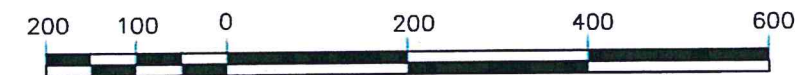
NEWINGTON, N. H.



PROFILE
SCALE: 1"=200' HORIZ.
20' VERT.



PLAN VIEW
SCALE: 1"=200'



GRAPHIC SCALE
1" = 200'

24 FIBER OPGW INSTALLED @ 4,500 LBS. NESC HVY. INITIAL
1590 ACSR 45/7 INSTALLED @ 11,400 LBS. NESC HVY. INITIAL
477 ACSR 26/7 INSTALLED @ 3,500 LBS. NESC HVY. INITIAL
4/0 ACSR 6/1 INSTALLED @ 2,500 LBS. NESC HVY. INITIAL

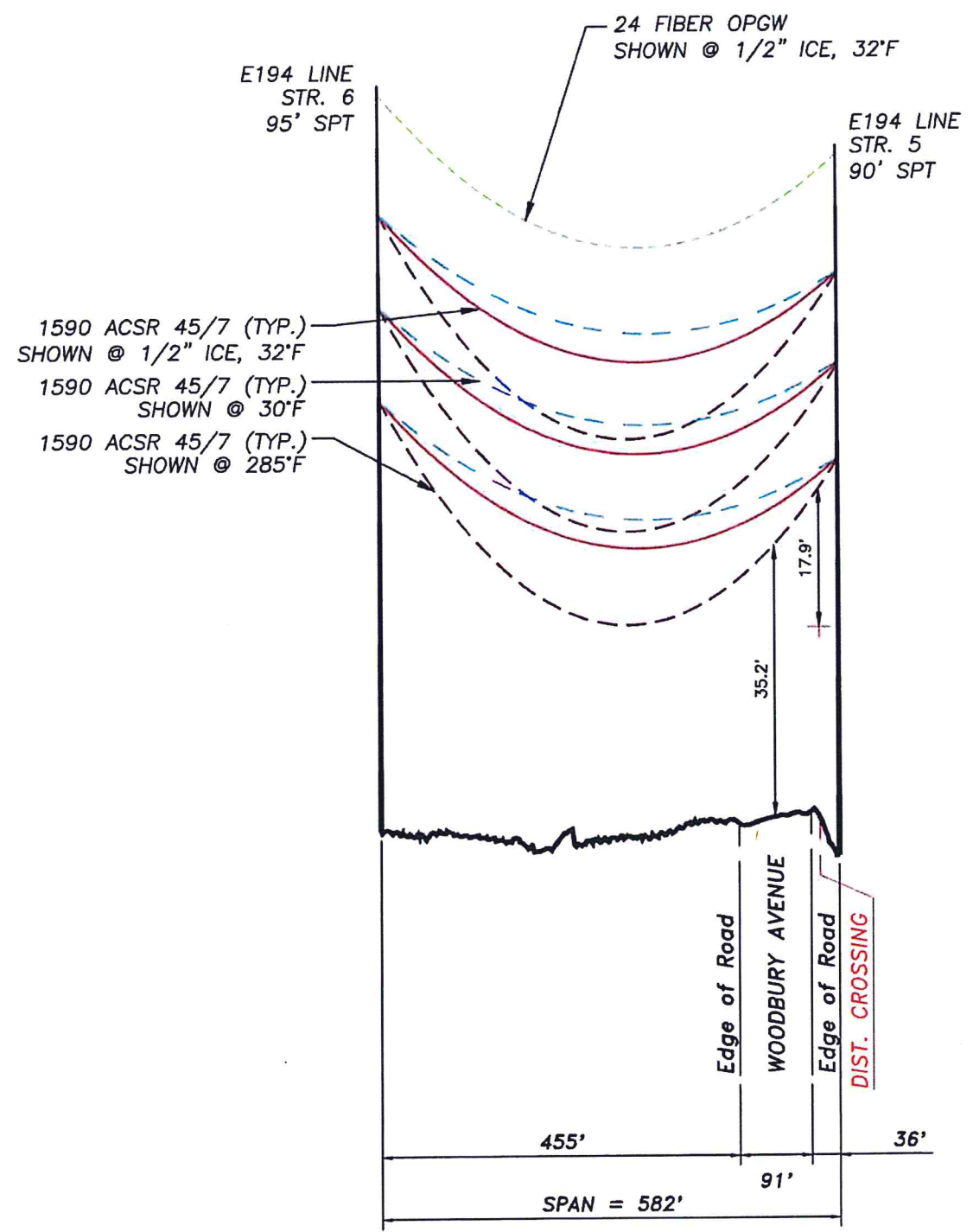
NO	REVISION	DATE	DRWN	CHKD	APPR
3	UPDATED F107 STRUCTURE NUMBERS	12/15	SCF	APJ	-
2	UPDATED F107 STRUCTURE NUMBERS	11/15	SCF	APJ	-

 Public Service of New Hampshire A Northeast Utilities Company	TRANSMISSION	3
	BUSINESS	T
SINGLE CKT F107 BETWEEN STR. 142 & 143 WOODBURY AVENUE, NEWINGTON, NEW HAMPSHIRE		
DRAWN SCF ENGINEER KMS CHECKED APJ APPROVED -	SCALE AS NOTED	DATE 3/17/15 SHEET 1 OF 1 DRAWING NO. F10740715

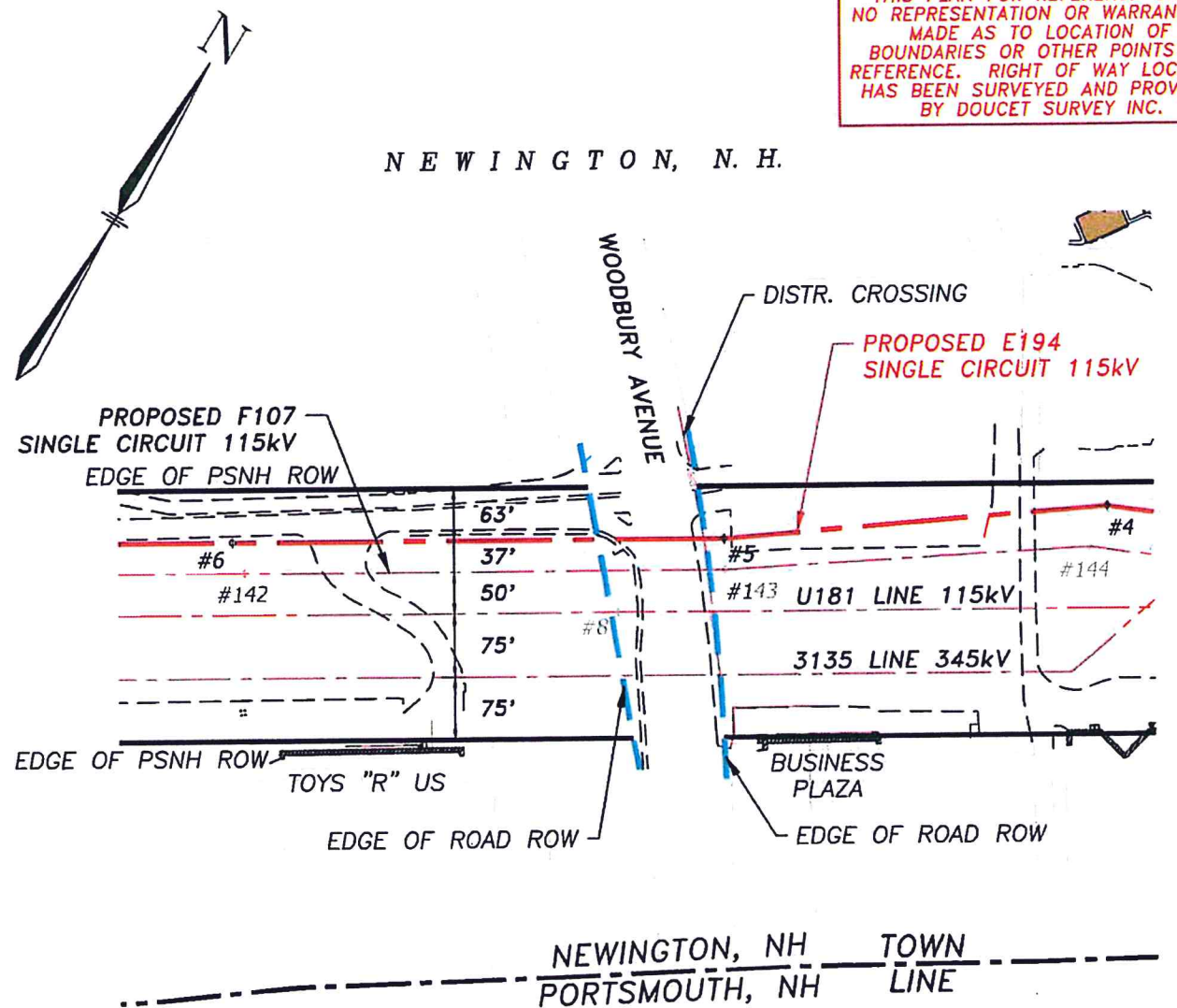
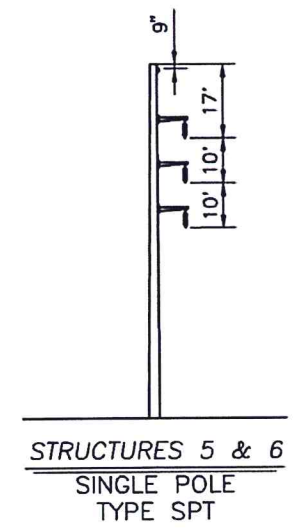
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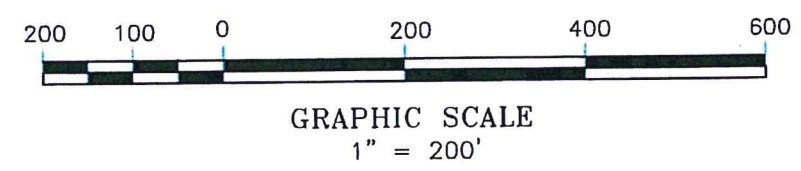
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PROFILE
SCALE: 1"=200' HORIZ.
20' VERT.



PLAN VIEW
SCALE: 1"=200'



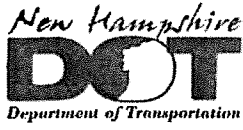
24 FIBER OPGW INSTALLED @ 4,500 LBS. NESC HVY. INITIAL
1590 ACSR 45/7 INSTALLED @ 11,400 LBS. NESC HVY. INITIAL

NO	REVISION	DATE	DRWN	CHKD	APPR
3	UPDATED F107 STRUCTURE NUMBERS	12/15	SCF	APJ	-
2	UPDATED F107 STRUCTURE NUMBERS	11/15	SCF	APJ	-

<p>Public Service of New Hampshire A Northeast Utilities Company</p>	TRANSMISSION BUSINESS		3	
	<p>SINGLE CKT E194 BETWEEN STR. 5 & 6 WOODBURY AVENUE, NEWINGTON, NEW HAMPSHIRE</p>			T
<p>DRAWN SCF</p> <p>ENGINEER KMS</p> <p>CHECKED APJ</p> <p>APPROVED -</p>	SCALE AS NOTED	DATE 3/17/15	SHEET 1 OF 1	DRAWING NO. E19440701

ATTACHMENT B

**NHDOT EXCAVATION (TRENCH) PERMIT APPLICATION
(To obtain permission to construct an access road across CAROW)**



THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION
EXCAVATION PERMIT
DISTRICT 6

PERMIT NO:
TOWN/CITY:
ROAD/ROUTE:
DATE:

District 1, 641 Main St, Lancaster, NH 03584
District 2, 8 Eastman Hill Road, Enfield, NH 03748
District 3, 2 Sawmill Road, Gilford, NH 03249

District 4, 19 Base Hill Road, Swanzey, NH 03446
District 5, 16 East Point Drive, Bedford, NH 03110
District 6, PO Box 740, Durham, NH 03824

I. Pursuant to Chapter 236:9-11 and/or 231:184-186, New Hampshire Revised Statutes Annotated, 2007, and amendments thereto, permission is requested to disturb the pavement, shoulders and slopes within the right-of way

- 1) on the North side of Route 4 or Road
2) in the town of Durham
3) for the purpose of Constructing an access road from Beech Hill Road across CAROW for the construction and continuing maintenance of the transmission line crossing NH Route 4.
4) located (give distance to nearest crossroad and/or other local landmark and include sketch or plan) From a point 800 feet westerly of the Route 4 bridge over the railroad (#097/14/) to the bridge.
5) during the period of dates between TBD and TBD

LOCATION/DESCRIPTION: The proposed access road will cross CAROW and be sited within the stone wall boundaries of an old roadway. There will be no impact to NH Route 4 for the construction or use of this access road.

As shown on the attached plans, sketches, letters, and notes which shall be made a part of this permit.

Construction shall be performed as shown on the attached plans, topographical, and description of work. Any variation shall require prior approval from the District Engineer.

This permit concerns only the type and manner of work to be performed in the New Hampshire Department of Transportation (NHDOT) ROW. NHDOT cannot and does not hereby grant permission to enter upon or utilize any privately owned land.

I/We TBD, Contractor, and I/We
Public Service Company of New Hampshire, Owner, agree to conform to the
dba Eversource Energy

NHDOT Standard Specifications for Road and Bridge Construction (Standard Specifications), as revised, the following provisions, instructions and regulations in processing the work under this request, and to any additional instructions issued by the District Engineer or designee during the process of the work.

STATE LAW REQUIRES THAT "DIG SAFE" BE NOTIFIED 72 HOURS IN ADVANCE OF EXCAVATION. CONTACT DIG SAFE BY TELEPHONE: 1-888-344-7233.

THE DISTRICT OFFICE MUST BE NOTIFIED AT LEAST FORTY EIGHT (48) HOURS BEFORE PERFORMING ANY WORK. A COPY OF THIS PERMIT SHALL BE PRESENT AT THE WORK SITE AT ALL TIMES.

- 1. Photographs or videos in sufficient detail to show the existing condition of the area to be disturbed within the ROW shall be furnished to the District Engineer prior to the start of work. Photographs of all State underground structures shall be taken just prior to backfill and furnished to the District Engineer.
2. No work in the highway ROW shall be permitted during the following conditions:
a. Inclement weather.
b. The hours of darkness*.
c. Saturdays, Sundays or Holidays. **
d. During the period from November 15th to April 15th. **
* Work after dark may be permitted at the discretion of the District Engineer if adequate lighting is in place and is sufficient to protect the traveling public and workers.
** Work during these periods may be permitted at the discretion of the District Engineer.

- 3. Traffic must be maintained in accordance with the Manual on Uniform Traffic Control Devices (MUTCD), as revised during the performance of the work. Traffic shall be protected by suitable barricades, standard warning and advance warning signs, uniformed officers, as appropriate, and/or flaggers during performance of the work, and proper lighting at night. All signs shall be kept clean and in good repair.
- 4. Detour of state highway traffic requires prior approval by the District Engineer and shall be in accordance with an approved Traffic Control Plan.
- 5. All temporary yellow centerline overlay markers in place on two-way roadways prior to placement of full MUTCD standard pavement markings shall be removable. The temporary overlay markers shall be placed in pairs, separated by a lateral space of approximately three (3) inches, using a maximum spacing of eighty (80) feet. On sections of roadway with severe curvature, lesser spacing should be used so that at least three (3) pairs of markers are visible to approaching traffic at all times. Temporary overlay markers shall be removed following placement of standard pavement markings.
- 6. During the hours the job is inactive, a standby crew shall be available in case they are needed for the protection and maintenance of traffic. One or more telephone numbers, which will reach the standby crew, shall be furnished to the following people: local NHDOT District Dispatch, NHDOT Transportation Management Center, local police chief, local superintendent of public works or road agent (if the project is municipally owned), and the local NHDOT highway patrolman foreman.

The standby contact people will be: (List two)

NAME: **TBD** _____

TEL# (DAY): _____

TEL# (NIGHT): _____

CELL#: _____

- 7. The Contractor shall be responsible for the acquisition of all other applicable permits and compliance with all local, state or federal rules, ordinances, and regulations.
- 8. The Contractor shall be responsible for the construction and maintenance of all necessary sediment and erosion control facilities required to protect storm water runoff.
- 9. In areas where the pavement is to be excavated, it shall be neatly and uniformly cut, with square edges by machine, at each side of all trenches. Every precaution shall be used to prevent undermining of the remaining pavement, utilizing sheeting as required, to prevent cave-in. Undermined areas inadvertently developed shall have the projecting pavement cut square and removed.
- 10. Excavation and handling of material shall be performed in a manner that will minimize trench width and the possibility of cave-ins. The pavement and base course materials are to be discarded. Excavation below subgrade is to be saved and used for backfill to prevent differential frost heaving. Any blasting required shall be cautiously performed to minimize disturbance beyond the trench limits. Overburden shall be removed prior to blasting. All blasting operations shall be performed in accordance with the Standard Specifications Section 203.
- 11. All backfill material in trenches and below base courses shall consist of excavated material suitable for backfill as defined in Standard Specifications, Section 603. All backfill shall be compacted at or near optimum moisture content, in layers not exceeding six (6) inches compacted thickness, using pneumatic tampers, vibratory compactors, or other approved means. The material shall be compacted to not less than ninety five (95) percent of maximum density as determined by AASHTO T99 (Standard Proctor Test). Water shall be uniformly applied during compaction in the amount necessary for proper compaction.

12. Within paved areas, crushed gravel, Standard Specifications Section 304, or approved equal to the existing gravel course, shall be placed in layers not exceeding six (6) inches compacted thickness, and thoroughly compacted. An approved bituminous plant mix, Standard Specifications Section 401, shall be placed the same day and carefully graded and rolled to the adjacent pavement grade, as a temporary patch. Just before completion of the project and after suitable exposure of temporary patches to traffic compaction, the pavement shall be sawn, as directed, on either side of the trench to provide a two (2) foot minimum overlap of the final patch on undisturbed material. Within the sawn limits, the existing pavement and temporary patch material shall be removed, the sawn edges tack coated, and the material replaced with an equal depth, but not less than four (4) inches, of hot bituminous concrete, placed as directed, and compacted to meet the existing pavement edge exactly. Finished pavement must replicate the original pavement design including normal crown, superelevations, and breaks in superelevated shoulders. Saw cuts for final patching shall be as directed by the District Engineer. In all cases, trench is to be flush with the existing pavement at the end of each working day.
13. Shoulders, other than paved, disturbed during the construction, shall be restored by providing a similar depth of crushed bank run gravel which shall be graded and compacted on a slope to match the cross slope of the existing roadway shoulder or as directed by the District Engineer.
14. In other areas, the present surface type shall be restored, by placing similar material to a depth and quality equal to that existing before excavation. Reestablish existing grassland to equal what existed before excavation. Reestablish lawns to pre-construction condition, using a minimum of four (4) inches of loam, lime, fertilizer, similar seed, and mulch. The surface shall be reasonably smooth, free of stones larger than two (2) inches or debris, and be graded to drain.
15. No trench shall be left open at night or over weekends. Suitable unrestricted ingress and egress to properties abutting the highway shall be maintained at all times. Two-way traffic shall be maintained at all times during nights, weekends, and holidays.
16. Any future surface distortion within the trench area, due to settlement or other causes attributable to the construction shall be corrected as required during construction and for a period of two (2) years following the acceptance of the project by NHDOT.
17. The roadway shall be cleared of all foreign material at the end of each working day or as directed by the District Engineer.
18. Equipment must be removed to a minimum distance of eight (8) feet from the edge of pavement during weekends, holidays, and periods of shutdown. Suitable barricades shall be erected to properly protect the work areas. Periodic maintenance of signs during periods of shutdown is required to restore blown over or missing signs, cones, and other traffic control devices. Routine NHDOT maintenance operations shall not be hindered by the Contractor's activities.
19. Pipe, equipment, and supplies shall not be stored within the NHDOT ROW without prior approval by the Engineer. Pipe or materials shall not be laid out ahead of construction.
20. Excavation dewatering shall not be pumped onto the State highway pavement. The Contractor may be required to plow, salt, and/or sand any portion of the State highway that becomes encumbered due to the Contractor's operations. NHDOT snow removal and maintenance operations shall not be impeded.
21. The District Engineer shall have the right to suspend any or all construction activities, which, in the District Engineer's opinion are unsafe to the traveling public.
22. Damage to existing drainage structures and systems shall be repaired in a manner approved by the District Engineer. Methods and materials utilized shall be subject to prior approval. Drainage structures or systems shall be cleaned of all material that has accumulated as a result of the work.

- 23. Damage resulting from work or detoured traffic to the roadway shall be repaired to the District Engineer's satisfaction.
- 24. If a highway sign or guardrail must be moved to allow construction of the facility, said sign and guardrail shall be reinstalled or replaced at the location of removal at the end of each work day or replaced by approved temporary devices pending permanent installation.
- 25. The District Engineer may inspect, test, or monitor any and all of the Contractor's activities within the highway ROW to insure compliance with this permit.
- 26. Following completion of the construction activities, the District Engineer will inspect the completed work. Final acceptance may be reasonably withheld should the work not be completed in an acceptable manner and in accordance with the terms of this permit.
- 27. The Owner shall, upon project completion, submit a complete set of "as-built" drawings to the District Engineer.

II. I/We, the Contractor, agree to save harmless the State of New Hampshire from any and all claims arising from the construction, trench settlement, pavement damage or other deficiencies attributable to the said construction for a period of two (2) years following acceptance of the project by NHDOT.

I/We, the Contractor, agree to assume such additional cost as the State may incur by reason of failure to perform this work in the manner prescribed above and in accordance with said plans and specifications, and are familiar with the penalty imposed by Chapter 236, and amendments thereto.

I/We, the Contractor, agree to furnish prior to the start of work a continuing Surety Bond in the amount of \$_____ dollars guaranteeing the fulfillment of the provisions, instructions, and regulations prescribed herein, and any later instructions that may be issued by the District Engineer during the performance of the work. Following the acceptance of the project by NHDOT, the bond amount may be reduced to \$_____ dollars guaranteeing satisfactory maintenance of the disturbed areas for a period of two (2) years.

I/We, the Contractor, agree to reimburse the State of New Hampshire fully for the services of a State Inspector(s) when assigned to this project to insure compliance with the terms of this permit.

(PLEASE PRINT)

CONTRACTOR: TBD

STREET ADDRESS: _____

CITY, STATE & ZIP: _____

SIGNATURE: _____ TITLE: _____

PRINTED NAME: _____ TEL. NO.: _____

III. I/We, the Owners, agree to save harmless the State of New Hampshire from any and all claims arising from the construction, maintenance, and operation of the said facility and its appurtenances and agree to obtain permits from the District Engineer before performing any future excavation for maintenance or renewal of the facility or appurtenances thereto within the ROW limits.

I/We, the Owners, agree to assume such additional cost as the State may incur due to the maintenance, operation, renewal, or extension of said facility or appurtenances thereto within the highway limits.

I/We, the Owners, understand and agree that this permit is for the right of construction, operation, and future maintenance of the said facility. Occupancy is by sufferance only, with the State reserving the right to require, in event of future alterations of the highway or highway ROW, certain alterations, relocations or complete removal of said facility.

I/We, the Owners, agree to perform required alterations, relocations or removal of said facility promptly and at our own expense upon notification by the State.

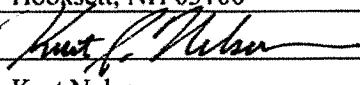
Where Applicable, in accordance with RSA 72:23, I(b), this agreement is made between the parties subject to the condition that the Owner/Operator shall pay all properly assessed real and personal property taxes. Failure of the Owner/Operator to pay duly assessed personal and real taxes when due shall be cause to terminate this agreement. In accordance with the requirements of RSA 72:23, I(b), the Owner/Operator shall be obligated to pay real and personal property taxes on structures or improvements added.

(PLEASE PRINT)

OWNER: Public Service Company of New Hampshire,

STREET ADDRESS: 13 Legends Drive

TOWN/CITY, STATE & ZIP: Hooksett, NH 03106

SIGNATURE:  TITLE: Siting and Permitting

PRINTED NAME: Kurt Nelson TEL. NO.: 603-714-3031

24 HOUR CONTACT PERSON: Kurt Nelson TEL. NO.: 603-714-3031

IV. Permission for the above described construction, maintenance and operation is granted, subject to the instructions, regulations, conditions, and agreements above.

This permit does not abrogate the rights of abutting Owners.

WORK TO BEGIN: TBD WORK TO END: TBD

DATE APPROVED: _____

APPROVED BY: _____
DISTRICT ENGINEER, FOR DIRECTOR OF ADMINISTRATION,
NH DEPARTMENT OF TRANSPORTATION

Before using permit, the *Contractor shall notify the District Office and Patrol Foreman:*

DISTRICT OFFICE TEL.: District 6 (603)868-1133

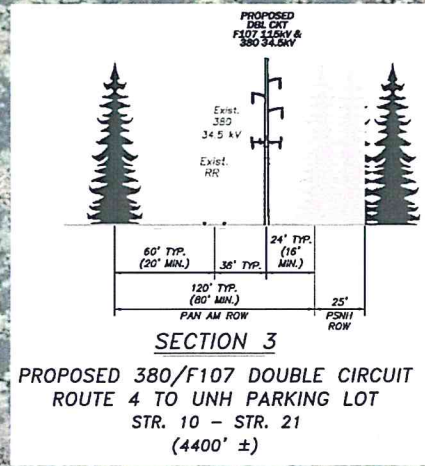
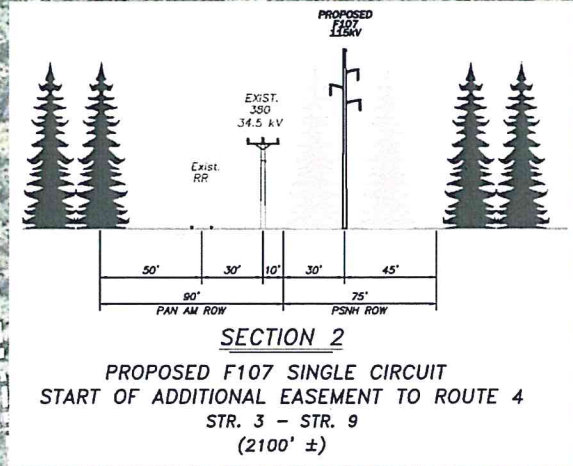
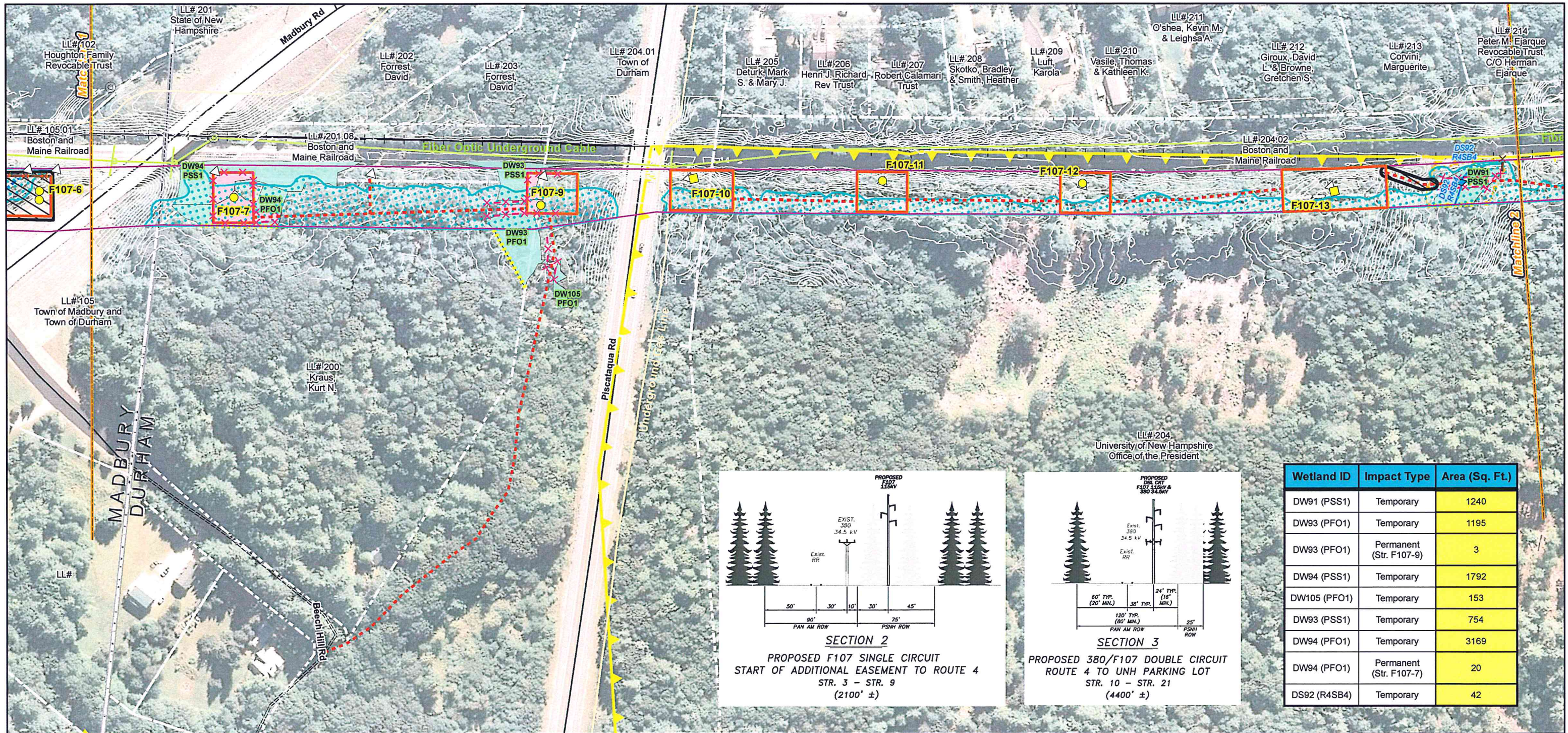
PATROL FOREMAN NAME: _____

PATROL FOREMAN TELEPHONE: #: _____

DISTRIBUTION: District Office, Patrol Foreman, Utility Owners and Contractor

ADDITIONAL REQUIREMENTS

Additional Requirements Attached

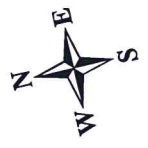
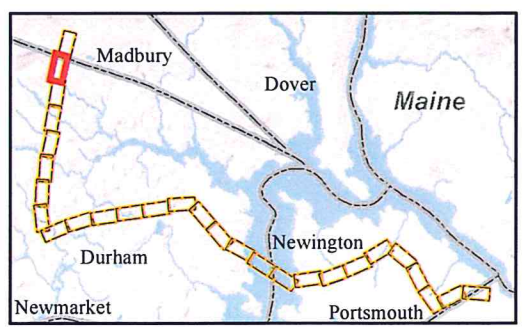
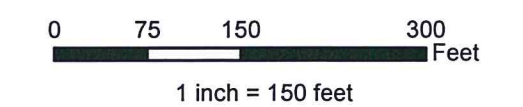


Wetland ID	Impact Type	Area (Sq. Ft.)
DW91 (PSS1)	Temporary	1240
DW93 (PFO1)	Temporary	1195
DW93 (PFO1)	Permanent (Str. F107-9)	3
DW94 (PSS1)	Temporary	1792
DW105 (PFO1)	Temporary	153
DW93 (PSS1)	Temporary	754
DW94 (PFO1)	Temporary	3169
DW94 (PFO1)	Permanent (Str. F107-7)	20
DS92 (R4SB4)	Temporary	42

Drawn By: althompson
Date: 2/25/2016
Project No: 22880.003

<ul style="list-style-type: none"> Town Boundary Approximate Parcel Boundary PSNH Fee Area Project Corridor Work Pad Roads <ul style="list-style-type: none"> Local Not Maintained Private State Railroad 	<ul style="list-style-type: none"> Existing Str (Remain) Existing Str (Removed/Modified) Structures <ul style="list-style-type: none"> Direct Embed Drilled Pier Relocated Distribution Access Roads Underground Cable Silt Curtain Silt Fence, Hay Bale, Erosion Control Mix Berm Straw Wattle 	<ul style="list-style-type: none"> Wetland Prime Wetland Wetland Extends Wetlands Impact Stream Centerline Stream Top of Bank Temporary Culvert Temporary Mat Bridge Historical Sites 	<ul style="list-style-type: none"> Designated River Buffer 250' Conservation Lands 100 Year Floodplain Steep Slope BMPs Tree Clearing Stream Buffer 2ft Contour
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NORMANDEAU ASSOCIATES
Environmental Consultants

Seacoast Reliability Project

Environmental Maps

1/25/16

ATTACHMENT C

**NHDOT TURNPIKE ENCROACHMENT PERMIT APPLICATION
(To obtain permission to access the Transmission ROW from the
Spaulding Turnpike)**

April 4, 2016

Commissioner Victoria Sheehan
N. H. Department of Transportation
John O. Morton Building
7 Hazen Drive
Concord, NH 03302-0483

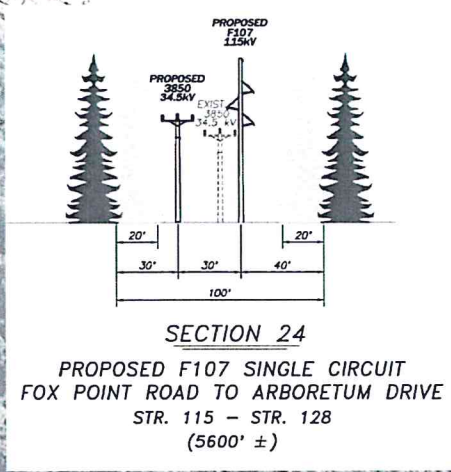
Dear Commissioner Sheehan:

The Public Service Company of New Hampshire (PSNH), dba Eversource Energy (PSNH), 780 North Commercial Street, Manchester NH, 03101, in collaboration with an application to the Site Evaluation Committee to construct a new 115-kV line approximately 12.9 miles from Madbury, NH to Portsmouth, NH respectfully requests a temporary encroachment agreement within the LAROW of the Spaulding Turnpike in the vicinity of Exit 1.

In response to the attached document: **NHDOT Bureau of Turnpikes Encroachment Permit Application** we offer the following for your consideration:

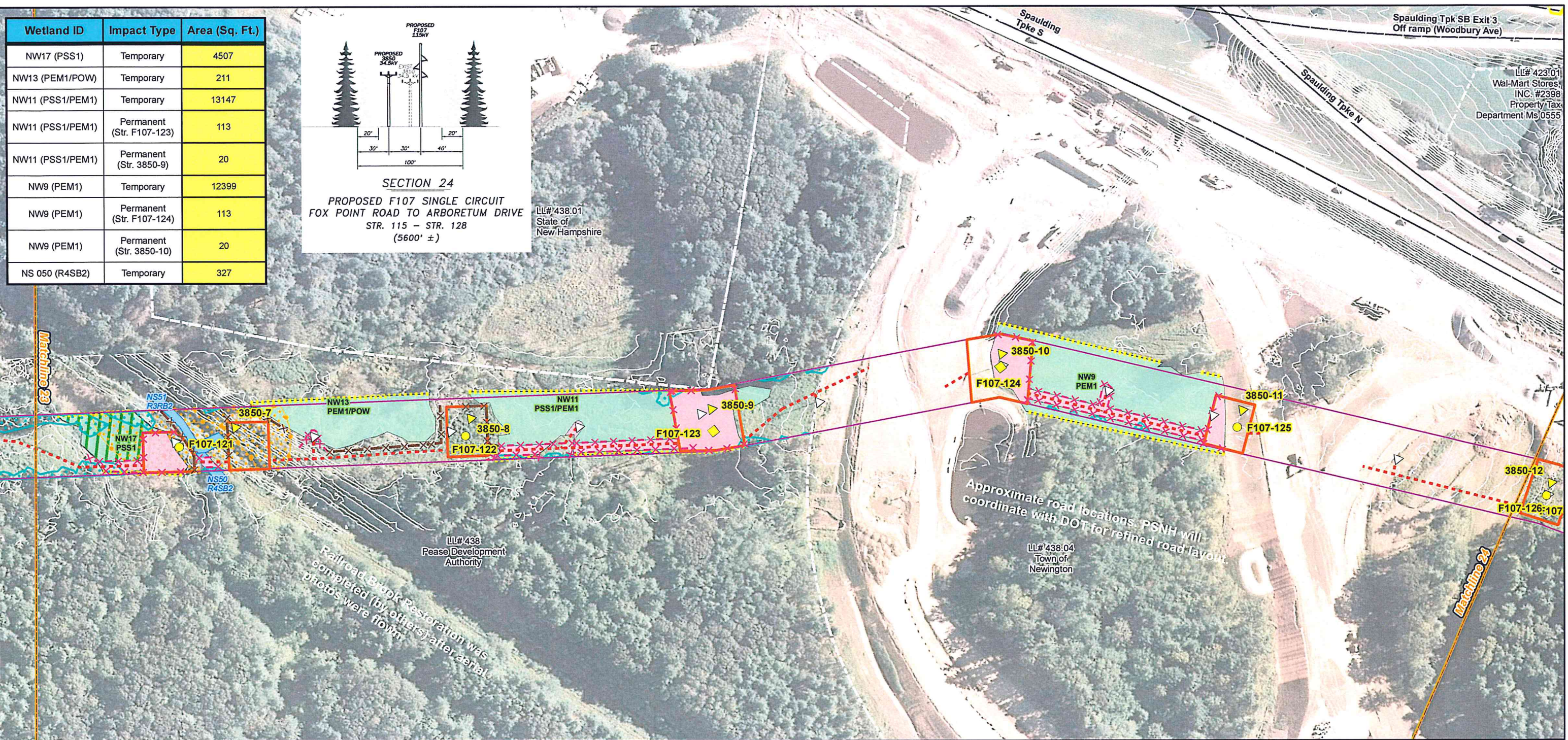
- At this time, a contractor has not yet been selected, however, the name and address of the contractor performing the work as well as the contractor's contact person and contact information will be provided to the New Hampshire Department of Transportation (NHDOT) Bureau of Turnpikes prior to the commencement of any work within the LAROW.
- Please refer to the attached plans prepared by Normandeau Environmental Consultants entitled Seacoast Reliability Project Environmental Maps for the location and limits of work to be addressed by the temporary encroachment agreement.
- In Newington NH the proposed electric transmission line will be located in the existing distribution line ROW that lies to the west of the Spaulding Turnpike before crossing the highway just north of Exit 1. For most of this work, access to construct the proposed structures will be from within the existing distribution line ROW, however due to the extensive existence of wetlands in the vicinity of the Southbound Exit 1 Off-ramp, PSNH is requesting permission to temporarily access the distribution line ROW from the southbound shoulders of the Spaulding Turnpike and Exit 1 Off-ramp at several locations.
- Consistent with other temporary access roads constructed for the project, clean gravel or trap rock will be placed at a depth of 6 to 8 inches to stabilize and level the road surface. An access apron, utilizing crushed stone, will be installed at the entrance to the shoulder to clean the tires of construction vehicles. To avoid impacting wetlands within the LAROW the access will be installed in a manner consistent with the NHDES approved document "*Best Management Practices Manual for Utility Maintenance In and Adjacent to Wetlands and Waterbodies in New Hampshire*", which was developed by the NH Department of Resource and Economic Development. When construction of the transmission line is complete the temporary access road will be removed and the roadway slopes restored to their previously existing grade and condition. The area will be seeded and mulched to restore vegetation. All work will comply with the latest

Wetland ID	Impact Type	Area (Sq. Ft.)
NW17 (PSS1)	Temporary	4507
NW13 (PEM1/POW)	Temporary	211
NW11 (PSS1/PEM1)	Temporary	13147
NW11 (PSS1/PEM1)	Permanent (Str. F107-123)	113
NW11 (PSS1/PEM1)	Permanent (Str. F107-9)	20
NW9 (PEM1)	Temporary	12399
NW9 (PEM1)	Permanent (Str. F107-124)	113
NW9 (PEM1)	Permanent (Str. 3850-10)	20
NS 050 (R4SB2)	Temporary	327



LL# 438.01
State of
New Hampshire

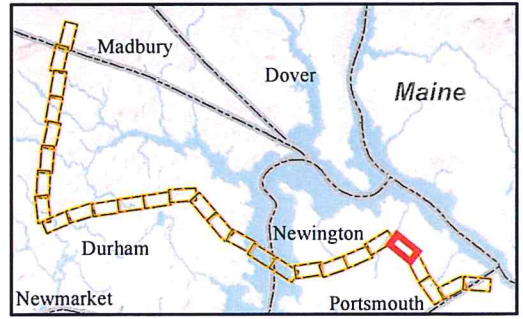
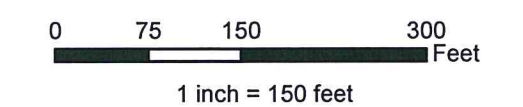
LL# 423.01
Wal-Mart Stores,
INC. #2398
Property Tax
Department Ms 0555



Date: 2/25/2016
Drawn By: althompson
Project No: 22860.003

<ul style="list-style-type: none"> Town Boundary Approximate Parcel Boundary PSNH Fee Area Project Corridor Work Pad Roads <ul style="list-style-type: none"> Local Not Maintained Private State Railroad 	<ul style="list-style-type: none"> Existing Str (Remain) Existing Str (Removed/Modified) Structures <ul style="list-style-type: none"> Direct Embed Drilled Pier Relocated Distribution Access Roads Underground Cable Silt Curtain Silt Fence, Hay Bale, Erosion Control Mix Berm Straw Wattle 	<ul style="list-style-type: none"> Wetland Prime Wetland Wetland Extends Wetlands Impact Stream Centerline Stream Top of Bank Temporary Culvert Temporary Mat Bridge Historical Sites 	<ul style="list-style-type: none"> Designated River Buffer 250' Conservation Lands 100 Year Floodplain Steep Slope BMPs Tree Clearing Stream Buffer 2ft Contour
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NORMANDEAU ASSOCIATES
Environmental Consultants

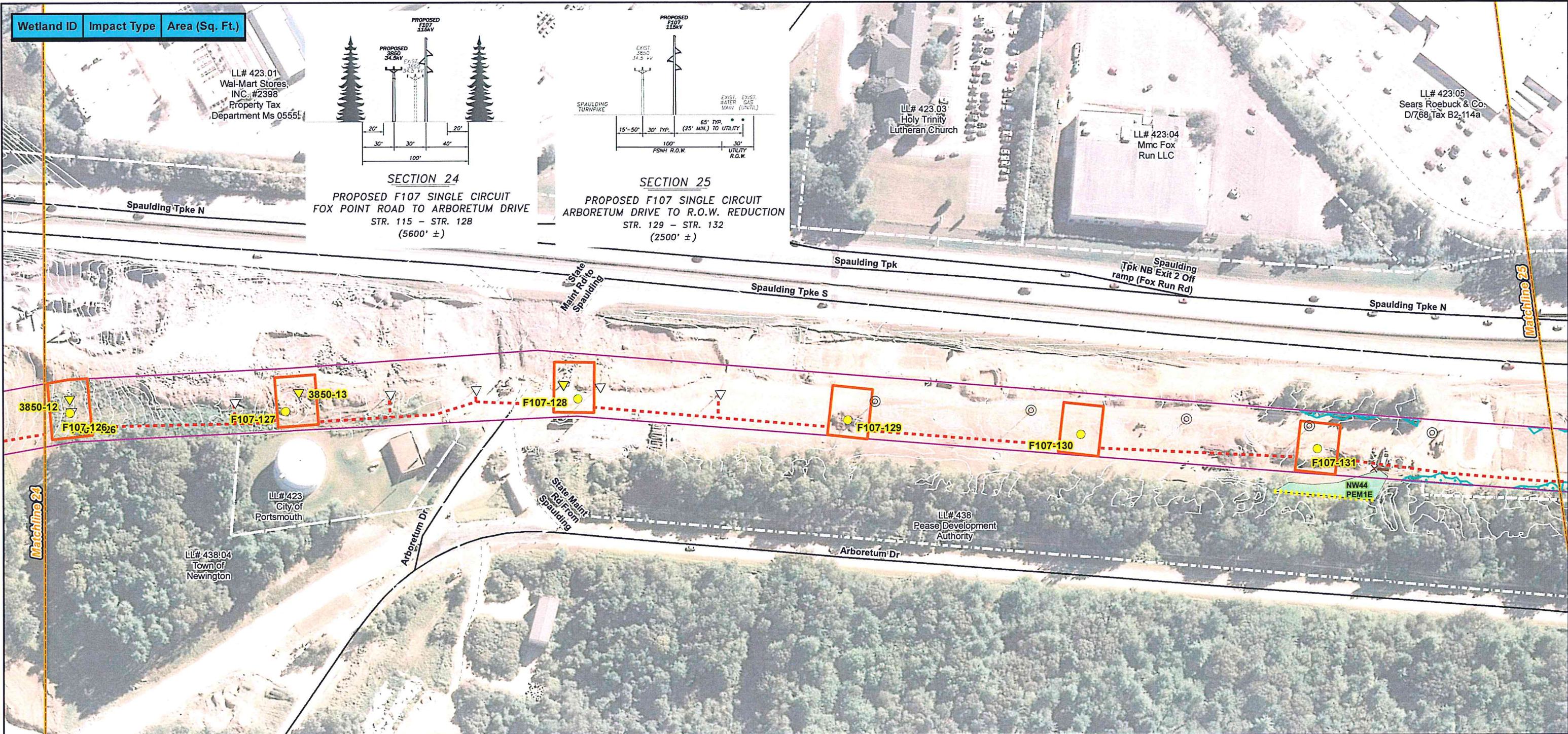
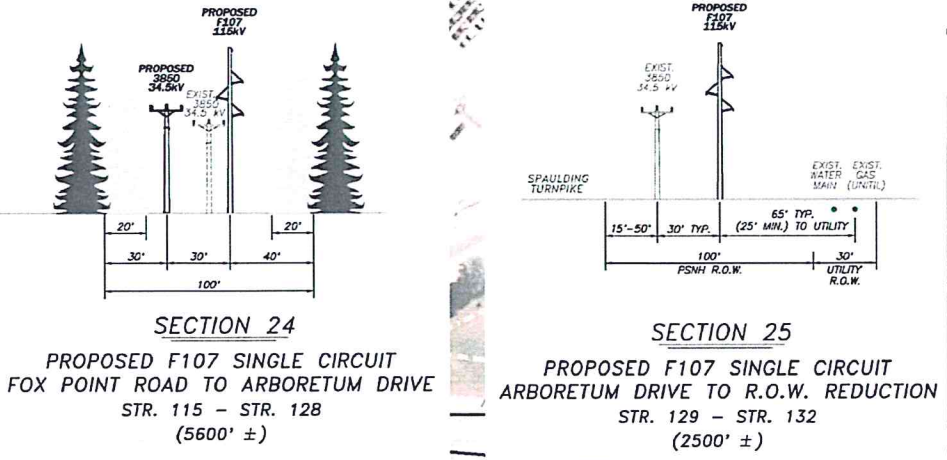
Seacoast Reliability Project

Environmental Maps

STATE OF NEW HAMPSHIRE
SARAH D. ALLEN
No. 083
CERTIFIED WETLAND SCIENTIST

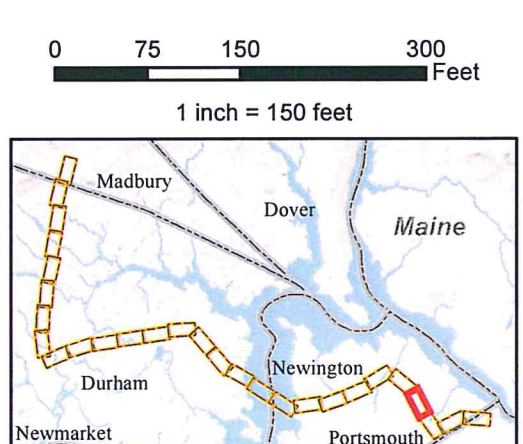
1/25/16

Wetland ID	Impact Type	Area (Sq. Ft.)
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Drawn By: althompson
Date: 2/25/2016
Project No: 22860.003

<ul style="list-style-type: none"> Town Boundary Approximate Parcel Boundary PSNH Fee Area Project Corridor Work Pad Roads <ul style="list-style-type: none"> Local Not Maintained Private State Railroad 	<ul style="list-style-type: none"> Existing Str (Remain) Existing Str (Removed/Modified) Structures <ul style="list-style-type: none"> Direct Embed Drilled Pier Relocated Distribution Access Roads Underground Cable Silt Curtain Silt Fence, Hay Bale, Erosion Control Mix Berm Straw Wattle 	<ul style="list-style-type: none"> Wetland Prime Wetland Wetland Extends Wetlands Impact Stream Centerline Stream Top of Bank Temporary Culvert Temporary Mat Bridge Historical Sites 	<ul style="list-style-type: none"> Designated River Buffer 250' Conservation Lands 100 Year Floodplain Steep Slope BMPs Tree Clearing Stream Buffer 2ft Contour
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NORMANDEAU ASSOCIATES
Environmental Consultants

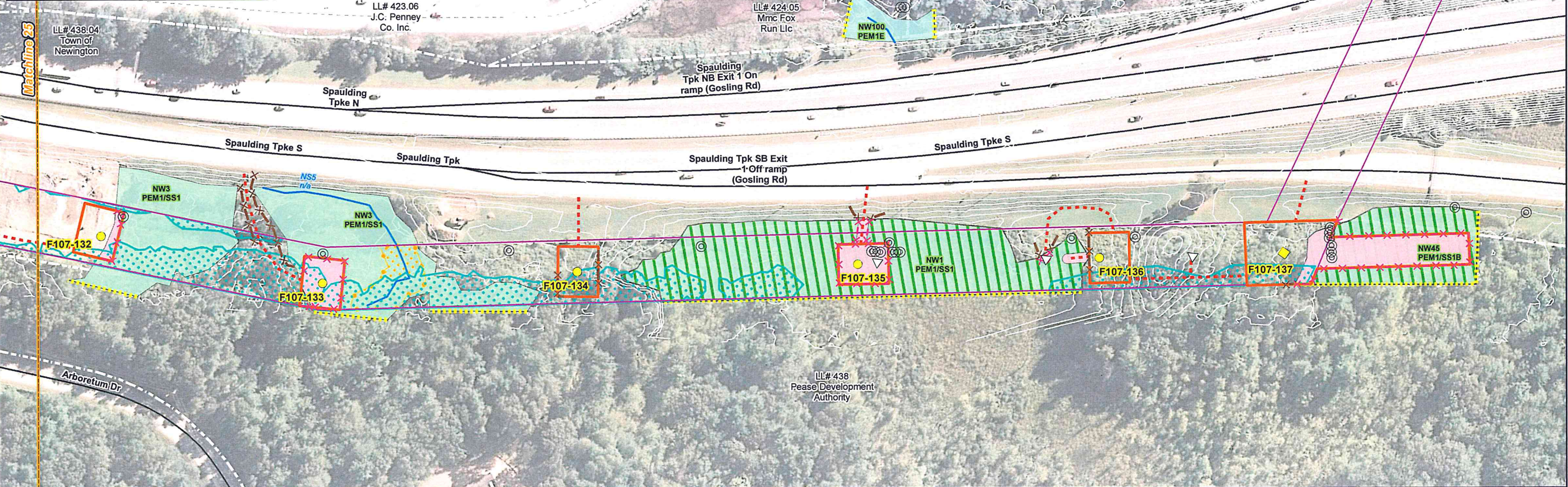
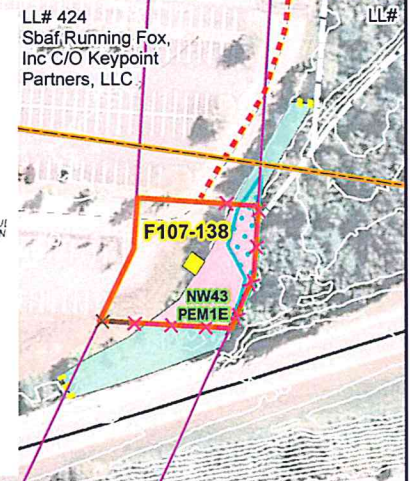
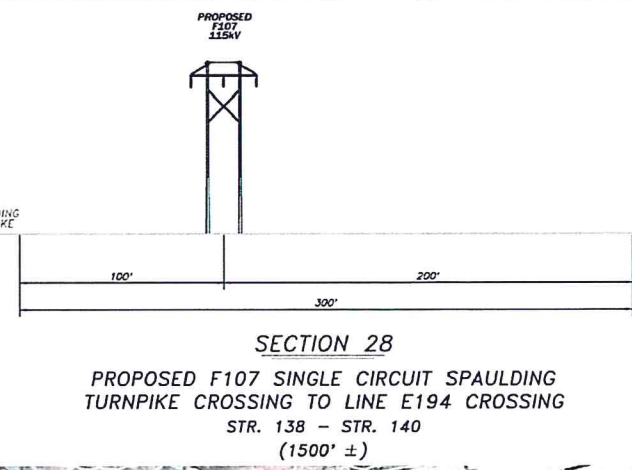
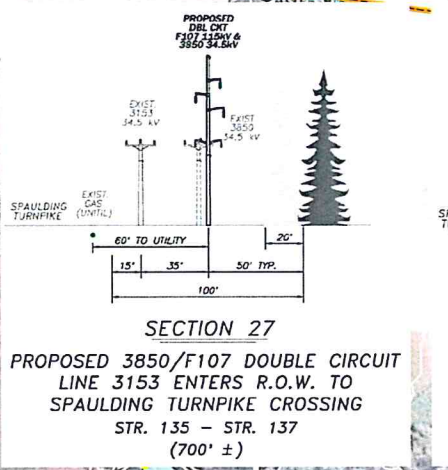
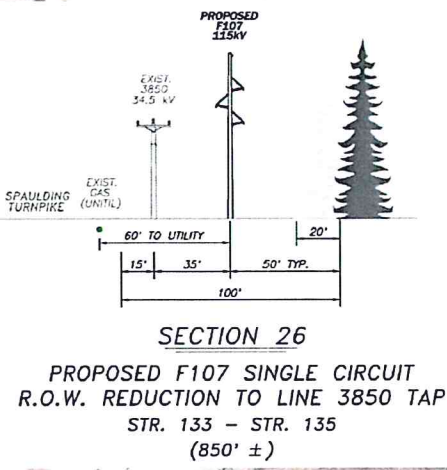
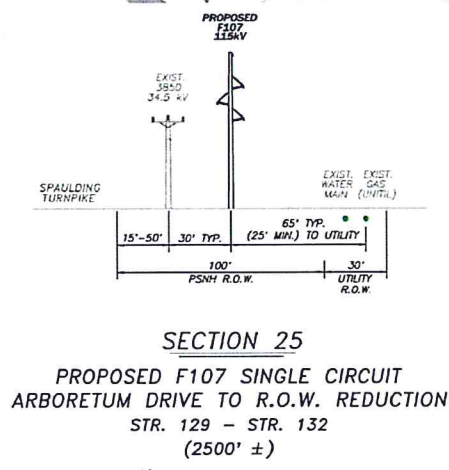
Seacoast Reliability Project

Environmental Maps

SARAH D. ALLEN
No. 083
CERTIFIED WETLAND SCIENTIST

1/28/16

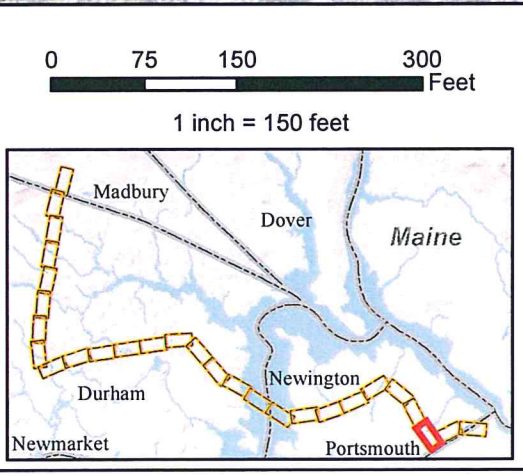
Wetland ID	Impact Type	Area (Sq. Ft.)
NW3 (PEM1/SS1)	Temporary	1256
NW1 (PEM1/SS1)	Temporary	6583
NW1 (PEM1/SS1)	Permanent (Str. F107-135)	20
NW45 (PEM1/SS1B)	Temporary	14112
NW43 (PEM1E)	Temporary	4101
NW43 (PEM1E)	Permanent (Str. F107-138)	0
NW3 (PEM1/SS1)	Temporary	4885
NW3 (PEM1/SS1)	Permanent (Str. F107-133)	20



Drawn By: athompson
Date: 2/25/2016
Project No: 22860.003

<ul style="list-style-type: none"> Town Boundary Approximate Parcel Boundary PSNH Fee Area Project Corridor Work Pad Roads <ul style="list-style-type: none"> Local Not Maintained Private State Railroad 	<ul style="list-style-type: none"> Existing Str (Remain) Existing Str (Removed/Modified) Structures <ul style="list-style-type: none"> Direct Embed Drilled Pier Relocated Distribution Access Roads Underground Cable Silt Curtain Silt Fence, Hay Bale, Erosion Control Mix Berm Straw Wattle 	<ul style="list-style-type: none"> Wetland Prime Wetland Wetland Extends Wetlands Impact Stream Centerline Stream Top of Bank Temporary Culvert Temporary Mat Bridge Historical Sites 	<ul style="list-style-type: none"> Designated River Buffer 250' Conservation Lands 100 Year Floodplain Steep Slope BMPs Tree Clearing Stream Buffer 2ft Contour
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Environmental Consultants

Seacoast Reliability Project

Environmental Maps

SARAH D. ALLEN
CERTIFIED WETLAND SCIENTIST
No. 083
1/28/16

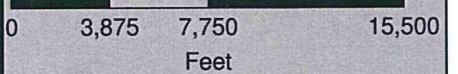
ATTACHMENT D
TRAFFIC CONTROL PLANS

Seacoast Reliability Project

Access Points Exhibit
Route Selection based on AADT

Legend

- Access Points
- Railroad
- Town/City Boundary
- Heavy Commuter Traffic (Avoid 6-9 AM and 3-6PM)
- Light Commuter Traffic (Use Anytime)
- Residential Traffic (Avoid 7 PM - 8 AM)

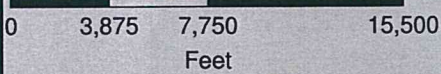


Seacoast Reliability Project

Authorized Overheight & Overweight Routes

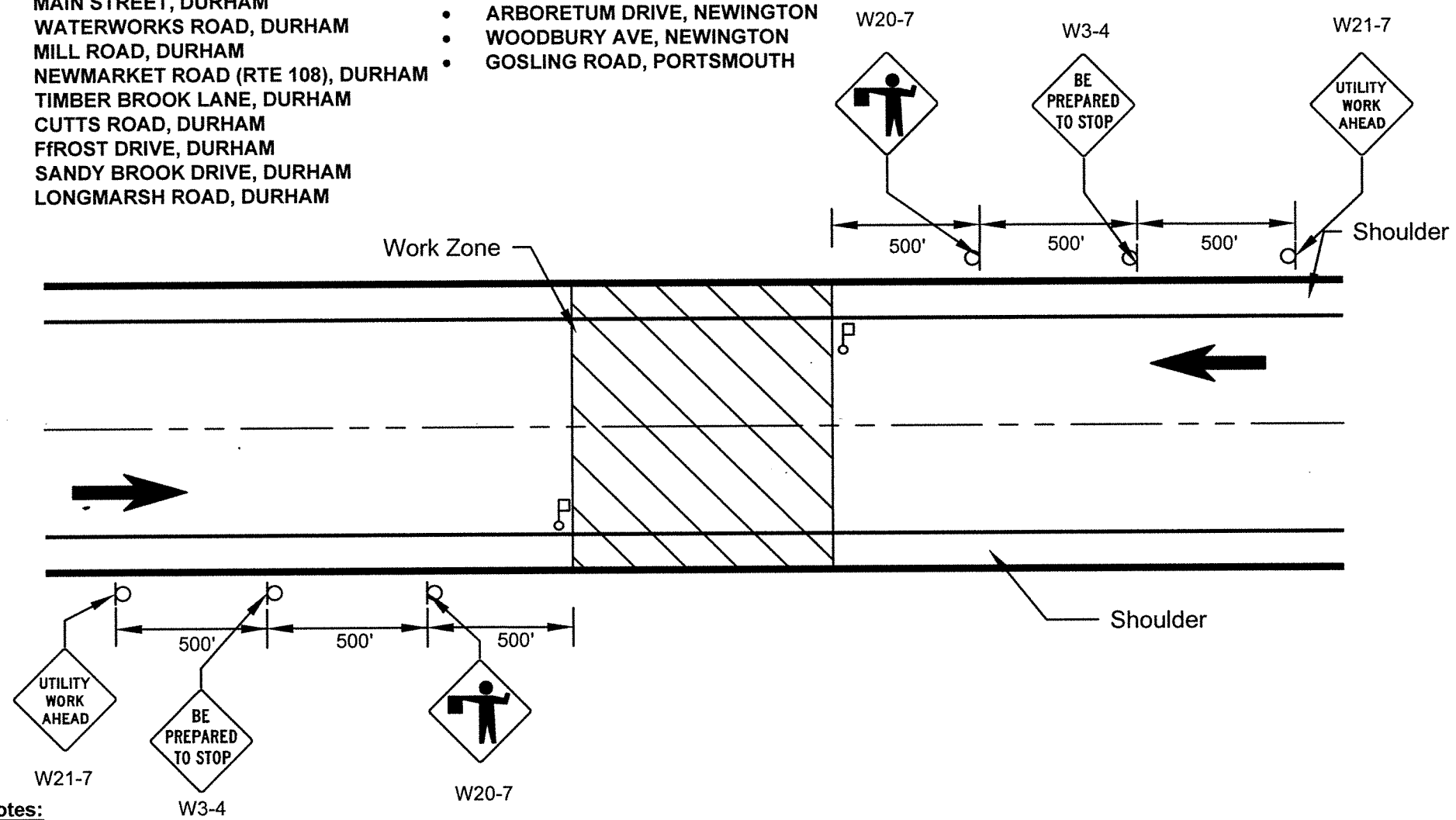
Legend

- Access Points
- Railroad
- Town/City Boundary
- Authorized Routes With No Restrictions
- Authorized Routes with Temporary Restrictions
- Authorization Required



PROPOSED LOCATIONS FOR IMPLEMENTATION

- MADBURY ROAD, MADBURY
- ROUTE 4, DURHAM
- MAIN STREET, DURHAM
- WATERWORKS ROAD, DURHAM
- MILL ROAD, DURHAM
- NEWMARKET ROAD (RTE 108), DURHAM
- TIMBER BROOK LANE, DURHAM
- CUTTS ROAD, DURHAM
- FROST DRIVE, DURHAM
- SANDY BROOK DRIVE, DURHAM
- LONGMARSH ROAD, DURHAM
- DURHAM POINT ROAD, DURHAM
- NIMBLE HILL ROAD, NEWINGTON
- FOX POINT ROAD, NEWINGTON
- ARBORETUM DRIVE, NEWINGTON
- WOODBURY AVE, NEWINGTON
- GOSLING ROAD, PORTSMOUTH



Notes:

1. Traffic will only need to be stopped in the event that the line being pulled bellies down into the roadway. A traffic controller will be stationed at the crossing until the pull is complete.
2. All lane closures shall be in conformance with the latest edition of the MUTCD manual.

NOT TO SCALE



Louis Berger

Manchester, New Hampshire
(603) 644 5200

PUBLIC SERVICE OF NEW HAMPSHIRE A NORTHEAST UTILITIES COMPANY			
SEACOAST RELIABILITY PROJECT TYPICAL TEMPORARY CLOSURE FOR AERIAL INSTALLATIONS TWO WAY ROADWAYS			
DGN	PROJECT NO.	SHEET NO.	TOTAL SHEETS
TRAFFIC CONTROL PLAN.DWG	2884421.01	1	4

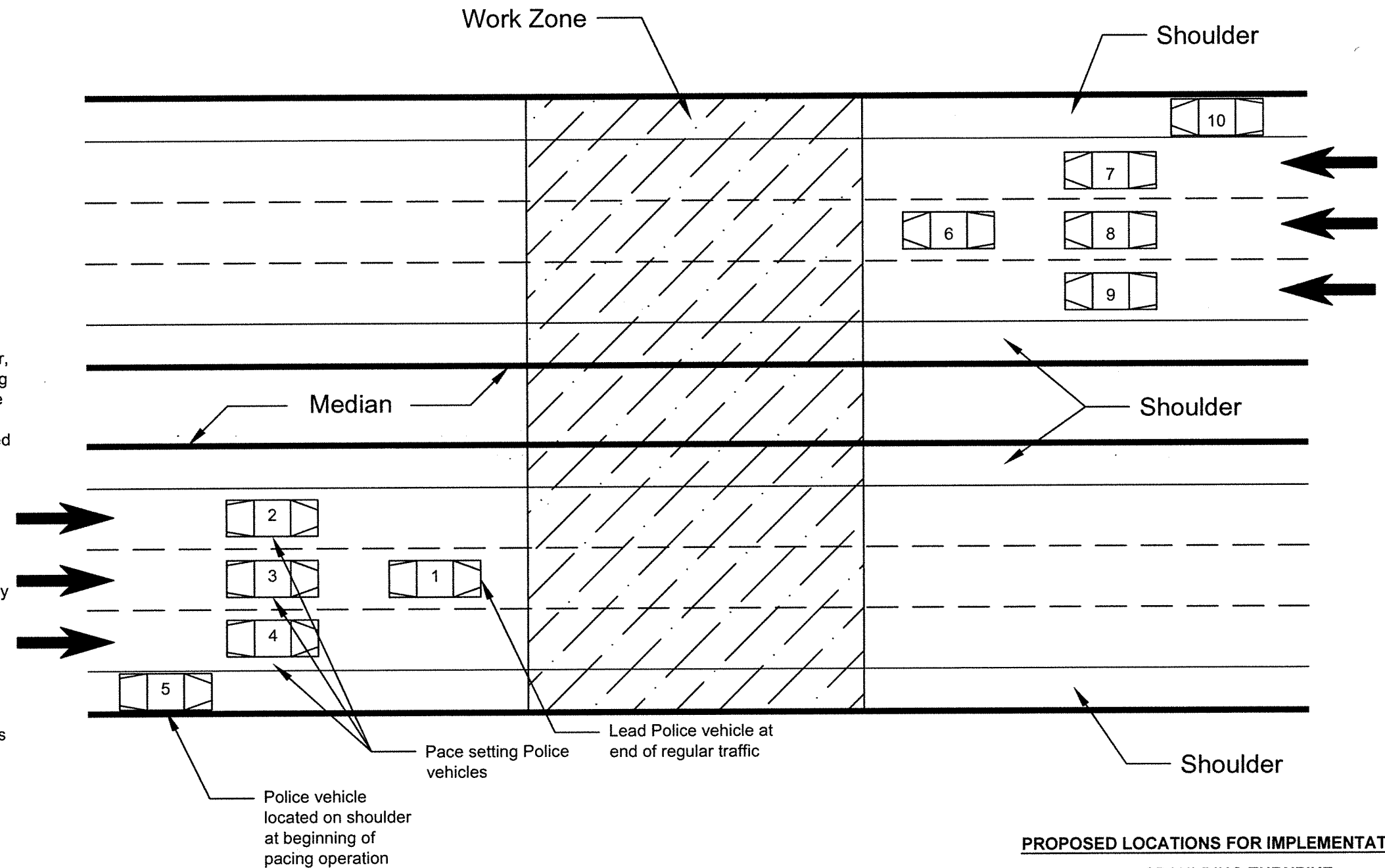
Pacing Distance is defined as the total distance for which officers pace or slow the traffic to a low speed to allow for overhead construction. Calculated total pacing distance for 10 mph pacing speed and a 25 minute roadway closure is **4 miles**.

Stage 1 of the operation begins with all vehicles in the rolling roadblock operation being positioned on the right shoulder of the road at the total pacing distance from the work area with flashing lights off.

Stage 2 begins, after receiving the signal from the lead coordinator, with the pacing and lead vehicles entering the traffic stream. During this stage, the pacing vehicles get into side-by-side positions in the travel lanes, slowing traffic behind them. Once in position, the pacing vehicles turn their flashing lights on and slow to the specified pacing speed (**10 mph**).

Stage 3 begins when the lead vehicle, which has its lights off, reaches the work area and stops prior to the work area to block any errant vehicle which may have circumvented the pace setting vehicles. At this point, the lead vehicle turns its flashing lights on.

Stage 4 begins when the pace setting vehicles are within two miles of the work area, at which point they must notify the lead coordinator of their position. If the work is completed and the work space is cleared, the pace setting vehicles would proceed through the cleared work area and immediately move to the right shoulder.



PROPOSED LOCATIONS FOR IMPLEMENTATION

- SPAULDING TURNPIKE

Notes:

1. On-ramps within 4 miles of the work zone will be closed prior to the lead vehicle at the end of regular traffic reaching the merge of the on-ramp and will remain closed until the pace setting vehicle passes.

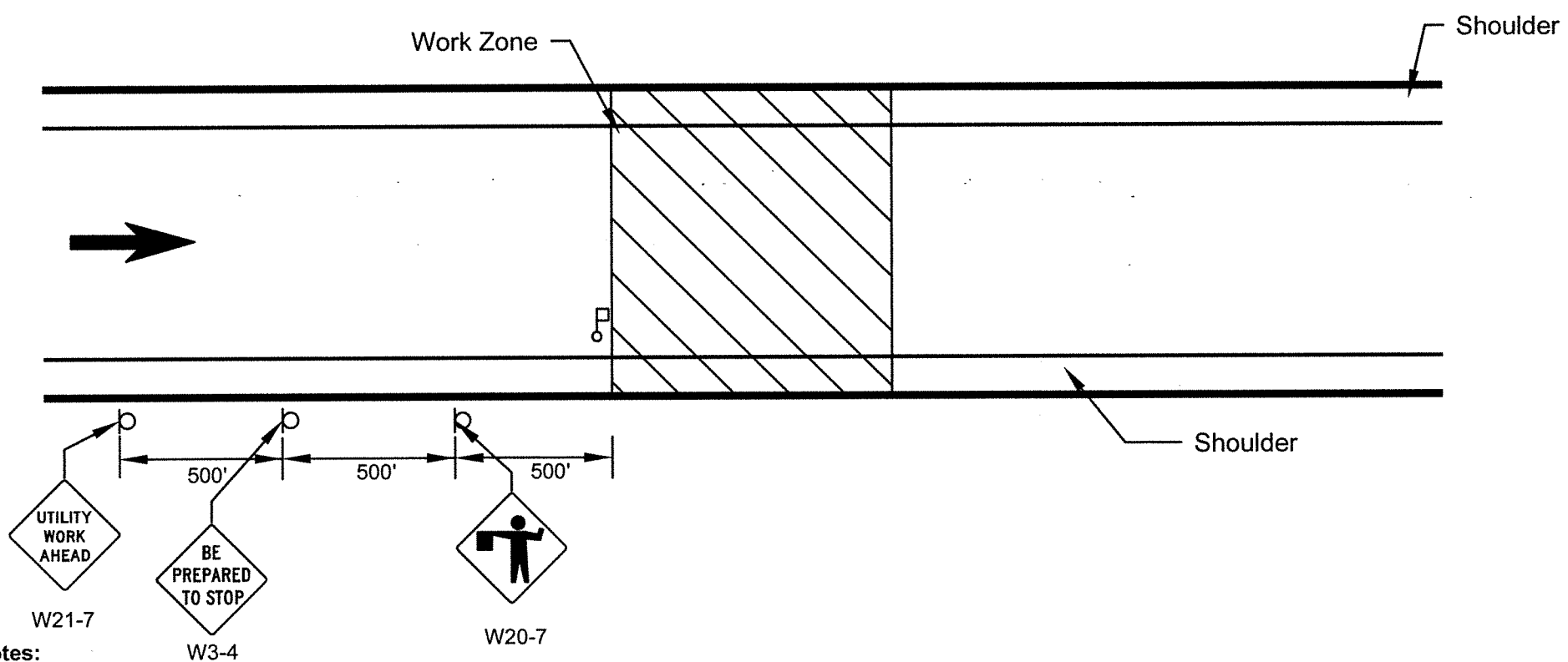
NOT TO SCALE



Louis Berger

Manchester, New Hampshire
(603) 644 5200

PUBLIC SERVICE OF NEW HAMPSHIRE A NORTHEAST UTILITIES COMPANY			
SEACOAST RELIABILITY PROJECT			
TYPICAL ROLLING CLOSURE FOR AERIAL INSTALLATIONS CONTROLLED ACCESS HIGHWAY			
DGN	PROJECT NO.	SHEET NO.	TOTAL SHEETS
TRAFFIC CONTROL PLAN.DWG	2884421.01	2	4

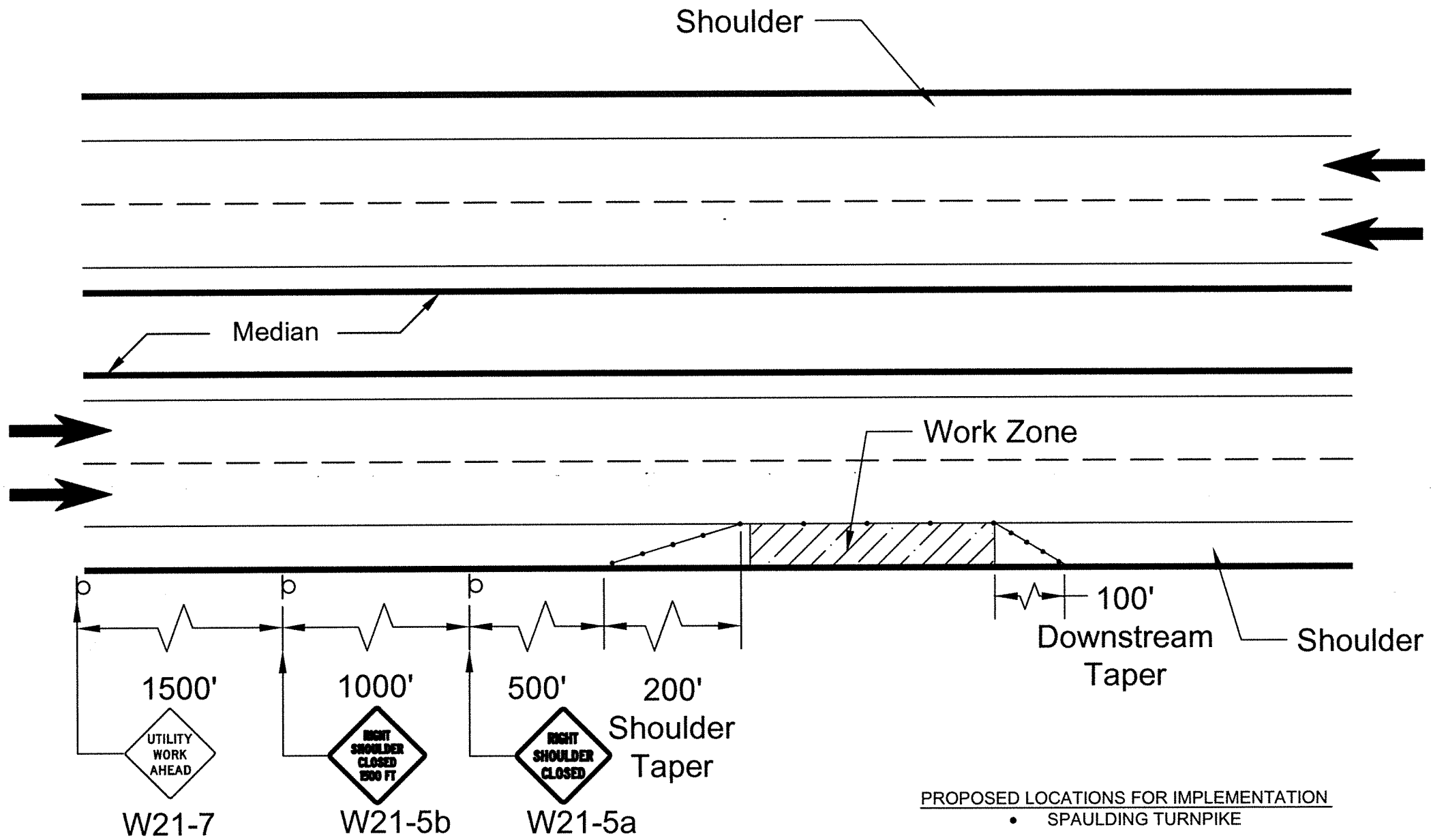


Notes:

1. Traffic will only need to be stopped in the event that the line being pulled bellies down into the roadway. A traffic controller will be stationed at the crossing until the pull is complete.
2. All lane closures shall be in conformance with the latest edition of the MUTCD manual.

NOT TO SCALE
Louis Berger
 Manchester, New Hampshire
 (603) 644 5200

PUBLIC SERVICE OF NEW HAMPSHIRE A NORTHEAST UTILITES COMPANY			
SEACOAST RELIABILITY PROJECT TYPICAL TEMPORARY CLOSURE FOR AERIAL INSTALLATIONS SPAULDING TURNPIKE ON AND OFF RAMPS			
DGN	PROJECT NO.	SHEET NO.	TOTAL SHEETS
TRAFFIC CONTROL PLAN.DWG	2884421.B1	3	4



Notes:

1. All lane closures shall be in conformance with the latest edition of the MUTCD manual.

PROPOSED LOCATIONS FOR IMPLEMENTATION
 • SPAULDING TURNPIKE

NOT TO SCALE



Louis Berger

Manchester, New Hampshire
 (603) 644 5200

PUBLIC SERVICE OF NEW HAMPSHIRE A NORTHEAST UTILITES COMPANY			
SEACOAST RELIABILITY PROJECT TYPICAL SHOULDER CLOSURE FOR DIVIDED HIGHWAY SPAULDING TURNPIKE			
DGN	PROJECT NO.	SHEET NO.	TOTAL SHEETS
TRAFFIC CONTROL PLAN.DWG	2884421.01	4	4