THE STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION

PETITION OF PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE FOR A LICENSE TO CONSTRUCT AND MAINTAIN ELECTRIC LINES, STATIC WIRE AND FIBER OPTIC CABLE OVER AND ACROSS THE MERRIMACK RIVER, IN THE TOWNS OF MERRIMACK AND LITCHFIELD, NEW HAMPSHIRE.

TO THE PUBLIC UTILITIES COMMISSION:

Public Service Company of New Hampshire ("PSNH"), a public utility engaged in the generation, transmission, distribution and sale of electricity in the State of New Hampshire, hereby petitions the Public Utilities Commission ("Commission"), pursuant to RSA 371:17, for a license to construct and maintain electric lines, static wire and fiber optic cable at one location over and across the public waters of the Merrimack River in the Towns of Merrimack and Litchfield, New Hampshire, and in support of its petition states as follows:

1. In order to meet the reasonable requirements of service to the public, PSNH has previously constructed and currently operates and maintains a 345 kV transmission line, designated as Line 380. The 380 line connects PSNH's Scobie Pond Substation in Londonderry, New Hampshire and PSNH's Amherst Substation, in Amherst, New Hampshire, and is an integral part of the PSNH transmission system and the overall New England transmission grid. The 380 Line, as presently constructed, crosses the public waters of the Merrimack River in the Towns of Merrimack and Litchfield, New Hampshire. The existing overhead crossing of the 380 line (consisting of phase conductors, one static wire and one optical ground wire (OPGW)) was previously licensed by the Commission while designated as Line 379 running between PSNH's Scobie Pond Substation and the Vermont Yankee substation inVernon, Vermont.[1] The portion of the 379 line which crosses the Merrimack River in Merrimack and Litchfield, New Hampshire was re-designated as the 380 line when PSNH's Amherst Substation was constructed and resulted in segmenting the 379 line into two separate lines (the line between Vermont and the Amherst Substation remained the 379 line, while the line from Amherst to Scobie Pond Substation was re-designated as the 380 line).

2. In order to continue to meet the reasonable requirements of service to the public, PSNH has determined it is necessary to raise certain structures of the existing 380 line, including one of the two structures supporting the span crossing the Merrimack River. This need results from the future addition of a new PSNH 115 kV transmission substation, to be named Eagle Substation, which is now being permitted and will be

[1] The existing 379 line crossing was licensed by two prior Commission orders. The phase conductors and static wires were licensed in Docket D-E5805; Order No. 9,883; dated February 24, 1970. The OPGW, which replaced one of the static wires, was licensed in Docket DE 97-117; Order No. 22,660; dated July 14, 1997.

constructed adjacent to the 380 Line (and other PSNH 115 kV lines) on property owned by PSNH on the west side of the Merrimack River in Merrimack, New Hampshire. The Eagle Substation is needed to power a new PSNH distribution substation, also being permitted and to be constructed on PSNH's property in Merrimack in the same vicinity as the Eagle Substation, and which is being built to increase electric system infrastructure reliability in the area. Several 115kV interconnection lines to be run in to and out of these two new PSNH susbstations will need to cross under the existing 380 line. To allow for these lines, the 380 line has to be raised to maintain clearances required by the National Electrical Safety Code. This project will affect an approximate half mile length of the 380 line between 380 line structures 91 and 94, which is constructed with horizontal 850.8 ACSR conductors, 7#8 Alumoweld static wire and an OPGW cable. This project will raise the existing conductors, shield wire and OPGW cable for the half mile length of the line between structures 91 and 94. A planned outage on the 380 line to allow this project's construction is presently scheduled between January 10 and January 22, 2011.

3. The necessary replacement of the four transmission line structures of the 380 line will require that the line and its associated water crossing be rebuilt. The four existing 380 structures, which are wood H-frame type construction, will be replaced with new structures designed to handle the required loading. The design of these structures has been based on NESC Grade B construction requirements. The existing 850.8 ACSR phase wires, 7#8 alumoweld static wire and OPGW cable will be raised and attached to the new structures. The structures will be rebuilt utilizing direct embed steel pole H-frame structures.

4. The general location of the 380 line Merrimack River crossing is shown on the U.S. Geologic Survey location plan attached hereto and marked as Exhibit 1.

5. The design and proposed construction of the crossing is shown on the attached Northeast Utilities Transmission Business plan and profile drawing entitled "380 LINE (345 KV) CROSSING BETWEEN STR. #90 & #91 MERRIMACK RIVER CROSSING, MERRIMACK & LITCHFIELD, NEW HAMPSHIRE", marked as Exhibit 2. The required clearance calculations for the new crossing are attached to this petition as Appendix A.

6. The required technical information provided in this petition is based on the 2007 National Electrical Safety Code (NESC) C2-2007.

7. The Merrimack River crossing will be spanned using the one existing wood structure (structure 90) and one new steel pole structure (structures 91). These structures will be two pole H-frame tangent structures (Type EA-1). A detail design specification for each of these structures is attached to this petition as FIGURE 1 and FIGURE 2. As shown in the attached figures, the phase wires are arranged in a horizontal configuration and have an approximate separation at the structure of 26' horizontally. The static wire and OPGW are carried on the structure by support brackets approximately 6" below the top of the structure, with one on each pole.

8. Flood water elevations for the crossings are calculated based on information found on FEMA flood Map #33011C0503D Panel 503 of 701 and Flood Insurance Study #33017CV001A. Clearance is required to the 10-yr flood elevation in accordance to note 18 Section 232 of the NESC Code. Clearances will be above this level. All elevations are based on NAVD 88 datum.

9. Based on Table 232-1.7 of the NESC, for open supply conductors 750 V to 22 kV to ground, the minimum clearance to the water surface during normal flood level for water bodies suitable for sail boating is 28.5' (for waters 20-200 acres). NESC Rule 232.C.1.a states that the minimum clearance increases by 0.4 inches for every kilovolt in excess of 22 kV. It also specifies that at voltages above 50 kV the minimum clearance is based on the maximum operating voltage of the line. Based on this rule, an additional clearance of 5.9' or [*199.2 kV* - 22 kV) x 0.4] is needed for 345 kV, which brings the total required minimum clearance to 34.4'. For overhead shield/surge protection wires and OPGW cables that meet NESC Rule 230.E.1, the minimum clearance to the water surface at the normal flood level is 25.5'. As the static wire and fiber optic cable are located above the phase wires at all crossings, this NESC minimum clearance requirement will always be met. Minimum distances to the road for truck traffic, based on Table 232-1.2 of the NESC for open supply conductors for 750V to 22kV to ground, is 18.5'. With the additional 5.9' of clearance required for 345 kV, the total required clearance is 24.4'.

10. The crossing location detailed above has a total of six phase wires, one OPGW cable and one shield wire spanning the water body. All six 850.8 ACSR 45/7 phase conductors, the OPGW cable and static wire were sagged using the NESC Heavy Loading (0 degrees F., 4 pounds per square foot wind loading, ½-inch radial ice) sag charts upon original installation in the field. The 850.8 ACSR conductors were sagged using a maximum tension of 7,000 pounds at NESC Heavy Load conditions. The OPGW cable and 7#8 Alumoweld static wire were sagged using a maximum tension of 4,100 pounds and 4,200 pounds respectively at NESC Heavy Load conditions. As part of this project the wires will be raised and placed on the new structure 91. The tensions and clearances of each wire and cable will be confirmed by survey at the time of the transfer to ensure the tensions have not been affected and will be retensioned to the original values if necessary. The sag and clearance to the water surface for the proposed crossing is provided in the attached Appendix A.

11. There will be no new crossing structures that need to be set inside of jurisdictional wetlands or other areas that require New Hampshire Department of Environmental Services (NHDES) permitting or any other regulatory agency permitting at the location of the crossing.

12. Replacement of structure 91 will occur within the protected shoreland of the Merrimack River as defined by RSA 483-B. While RSA 483-B:5-b(1)a requires a shoreland permit for construction, excavation or filling activities within the protected shoreland, Administrative Rule Env-Wq 1406.04(d)(7) exempts from these permitting

requirements the replacement of utility poles and guy wires using mechanized equipment, provided that appropriate siltation and erosion controls are used and all temporary impacts are restored. PSNH will comply with this Administrative Rule in the installation of replacement structure 91.

13. As the Merrimack River is a federally-designated navigable water, PSNH has previously consulted with the U.S. Army Corps of Engineers and has been advised that, when wire and cable clearances will be increased over those presently in place, no Army Corps permit modifications are required.

14. The proposed crossing will be maintained and operated by PSNH in accordance with the applicable requirements of the NESC.

15. PSNH owns permanent easements 320' wide for its lines and facilities on the East side of the Merrimack River at the proposed crossing, and owns the land in fee on the West side of the Merrimack River at the crossing. The crossing will be raised within the limits of those easements and the PSNH owned land.

16. PSNH submits that the license petitioned for herein may be exercised without substantially affecting the rights of the public in the public waters of the Merrimack River. Minimum safe line clearances above all water surfaces and affected shorelines will be maintained at all times. The use and enjoyment by the public will not be diminished in any material respect as a result of the overhead line and cable crossings.

WHEREFORE, PSNH respectfully requests that the Commission:

a. Find that the license petitioned for herein may be exercised without substantially affecting the public rights in the public waters which are the subject of this Petition;

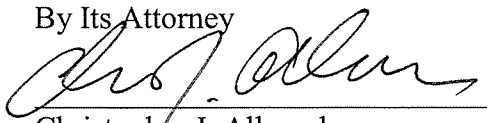
b. Grant PSNH a license to construct and maintain electric lines, static wire and fiber optic cable over and across the public waters of the Merrimack River as specified in the Petition; and

c. Issue an Order Nisi and orders for its publication.

Dated at Manchester this 3rd day of DECEMBER, 2010.

Respectfully submitted,

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
By Its Attorney



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Senior Counsel, Legal Department
PSNH Energy Park
780 North Commercial Street
Manchester, NH 03101
(603) 634-2459

APPENDIX A
380 LINE
MERRIMACK RIVER
MERRIMACK - LITCHFIELD, NH

1. The 380 line will cross the Merrimack River on one new two-pole 120' steel tangent structure (West – structure 91) and one existing, two pole 100' wood tangent structure (East – structure 90) with a span of 936.4'. Both structures will have the same configuration. A detailed drawing of these structures has been provided with the petition as FIGURE 1 (structure 90) and FIGURE 2 (structure 91). As shown on the attached figures, the phase wires are spaced 26' horizontally. The OPGW cable and static wire are carried on the structures above the phase wires by a support bracket approximately 23' above and 13' laterally from the center phase wire. Minimum distance to ground for truck traffic for 345kV is 24.4'and has been met as 34.9' of clearance is provided. A minimum of 29' has been kept throughout the newly adjusted portion of the line as the line is raised to clear new 115kV transmission lines.

2. Flood water elevations for the Merrimack River were based on information contained in FEMA Flood Insurance Rate Map #33011C0503D Panel 503 of 701 and Flood Insurance Study #33017CV001A Table 5, page 25 and Table 8, page 66, cross-section H. Both documents have an effective date of September 25, 2009. The closest given flood elevation provided in this study is at a point approximately 700 feet downstream (cross-section H). FEMA maps provide flood elevation contours for the 100 year flood only. The flood insurance study provides flow discharges and velocity for the 10, 50, 100 and 500 year floods. In order to determine the 10 year flood elevation a basic hydrologic calculation was completed based on the rule that discharge (flow) equals the velocity of the river multiplied by the cross-sectional area (river width x depth) of water. According to FEMA the elevation of the river at this location given a 100 year flood is approximately 116.4' with a channel width approximately 505' wide and a mean velocity of 5.9 ft/sec. According to the study the peak discharge rates of this area are 45,000 ft^3/sec and 90,000ft^3/sec for 10 year and 100 year flood elevations respectively. Using the flow calculation the depth of the 100 year flood at this location is approximately 30.2' [90,000ft^3/s ÷ (5.9ft/sec x 505ft)] above the river bed and the 10 year flood elevation is 15.1' [45,000ft^3/s ÷ (5.9ft/sec x 505ft)] above the river bed. Using the elevation difference of 15.1' to calculate the 10 year flood elevation at the crossing the elevation would be 101.3' (116.4'-15.1'). Due to the uncertainties of the available flood data this value was rounded up to 103.0' which was used as the design (10 year) flood elevation at the location of this crossing. These elevations are based on the North American Vertical Datum of 1988.

3. These lines were designed to safely exceed the 10-year flood elevation. The area of the crossing, as required by the NESC (Table 232-1.7, Note 19), is approximately 66.7 acres. This is based on the total area of the River for a 1-mile stretch in either direction of the crossing (575' x 5,280')/43,560 sf/ac = 69.7 ac). As stated in

paragraph 9 of the Petition, the minimum required 345 kV conductor clearances for water surface area between 20 and 200 acres is 34.4'.

4. The sags and clearances to the water surface during a 10-year flood event for this crossing are as follows:

- PSNH investigated a multitude of weather and loading conditions for its design. The conditions investigated include NESC C2-2007 Heavy Load Conditions, minus 20 degrees F and 30 degrees F ambient temperature for the phase conductors, static wires and OPGW cable, 120 degrees F ambient temperature for the static wires and OPGW cable, and 285 degrees F for the phase conductors. PSNH used these design conditions and combinations thereof to determine the minimum clearance of all conductors to the water and land surfaces, between the phase conductors and static wires and between the phase conductors and the OPGW cable. PSNH has determined that the weather cases and combinations listed below result in the minimum clearances and control over all other weather conditions and combinations.

- OPGW wire – Due to the fact that the OPGW wire is located above the phase wires, its clearance to the water surface will always exceed the minimum required NESC distance.

- Static wire – Due to the fact that the 7#8 alumoweld static wire is located above the phase wires, its clearance to the water surface will always exceed the minimum required NESC distance.

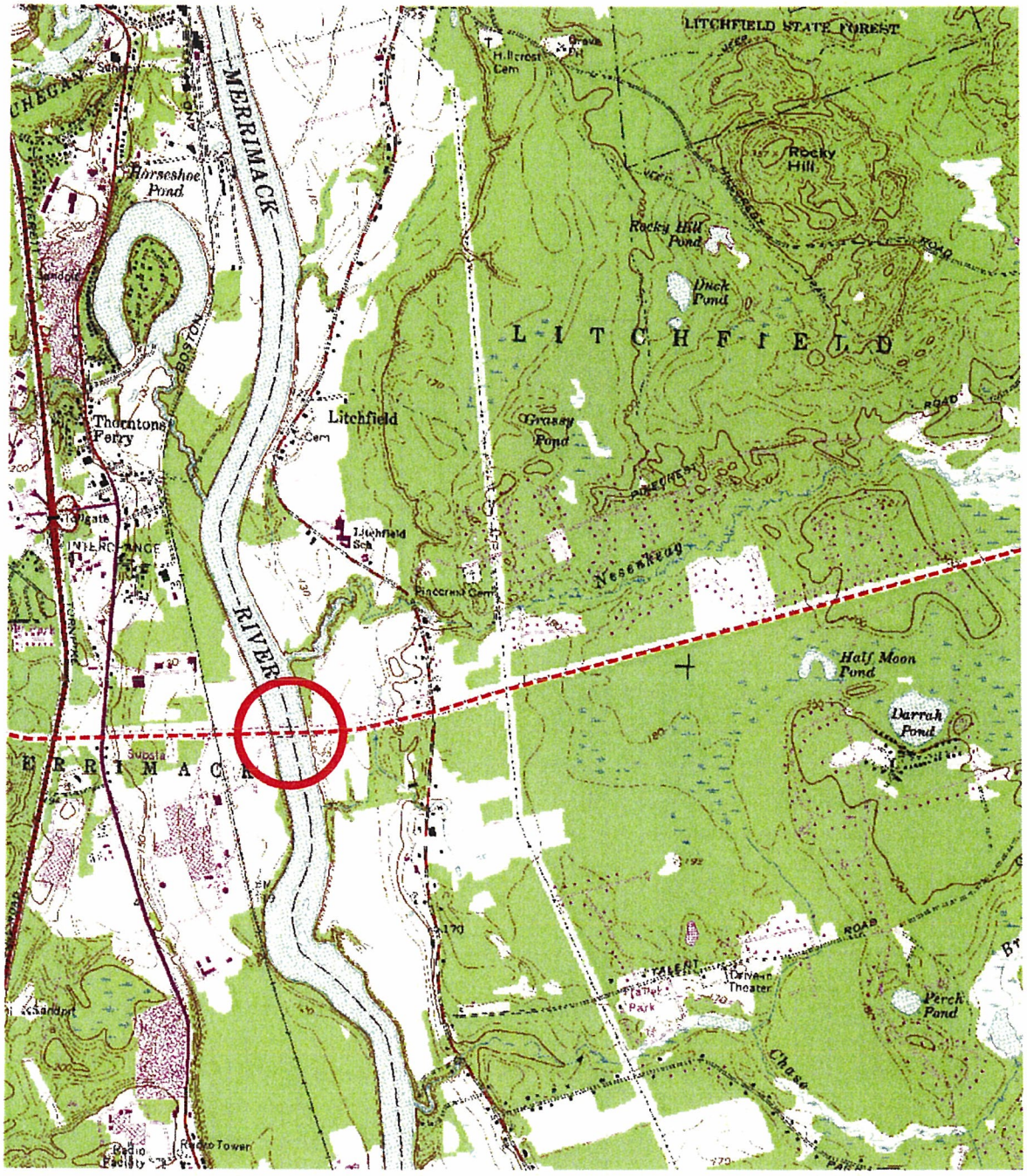
- NESC Heavy Loading - The maximum conductor sag for this weather case will be 36.9' with a clearance to the water surface of 55.0.'

- 285 degrees F – Max operating temperature (phase wires) based on PSNH transmission standards - The maximum conductor sag for this loading case will be 57.4' with a clearance to the water surface of 34.5'. This condition produces the greatest sag in the phase wires and therefore the minimum clearance to the water surface. This design will exceed the minimum clearance requirement of 34.4' by 0.1' under temporary emergency conditions during a 10-yr storm event.

- Minimum phase to OPGW clearance – The weather case that would produce the minimum clearance between the phase wires and the OPGW wire would be a combination of winter weather factors. First, the phase wires would have to be at 30 deg. F just after an ice storm and would have just dropped their ice. The OPGW wire would also be at 30 deg. F and would still be iced with 1" of radial ice. Under these conditions the clearance would be 8.8' vertically and 13'

horizontally from the OPGW cable to the closest phase wire. This results in a minimum clearance of 15.7' diagonally. Based on Section 235.C.2.a.1 and Table 235-6 section 2.a of the NESC, the minimum clearance required in any direction is 147", or approximately 12.3' [29" + (345 kV-50 kV) x 0.4"/kV].

- Minimum phase to static wire clearance – The weather case that would produce the minimum clearance between the phase wires and the static wire would be a combination of winter weather factors. First, the phase wires would have to be at 30 deg. F just after an ice storm and would have just dropped their ice. The static wire would also be at 30 deg. F and would still be iced with 1" of radial ice. Under these conditions the clearance would be 14.3' vertically and 13' horizontally from the shield wires to the closest phase wire. This results in a minimum clearance of 19.3' diagonally. Based on Section 235.C.2.a.1 and Table 235-6 section 2.a of the NESC, the minimum clearance required in any direction is 147", or approximately 12.3' [29" + (345 kV-50 kV) x 0.4"/kV].



200 100 0 300

GRAPHIC SCALE
1"=200'

EXHIBIT 1

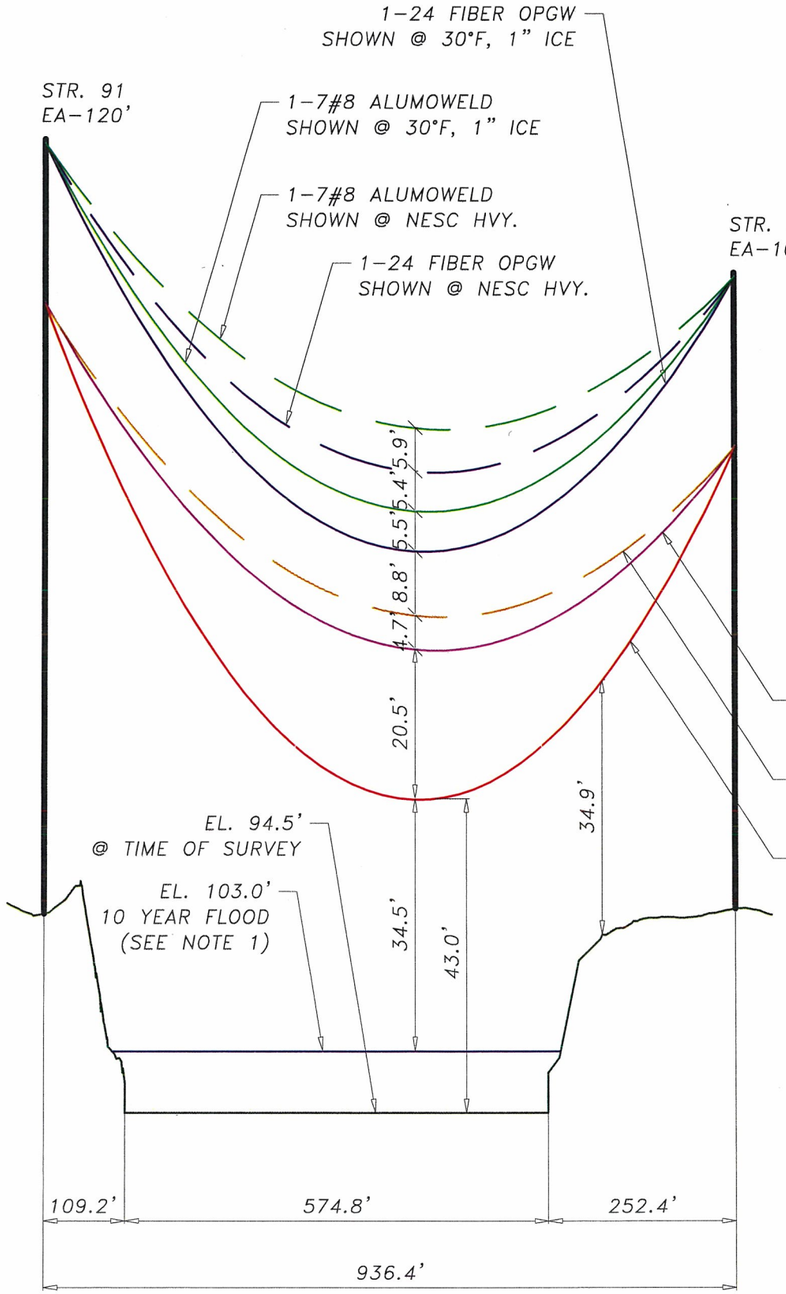
NO.	REVISION	DATE	DRWN	CHCK	APPR

DRAWN: KMW
DESIGNED: NDL
CHECKED: RPL
APPROVED: ESC

Northeast Utilities — Transmission Business

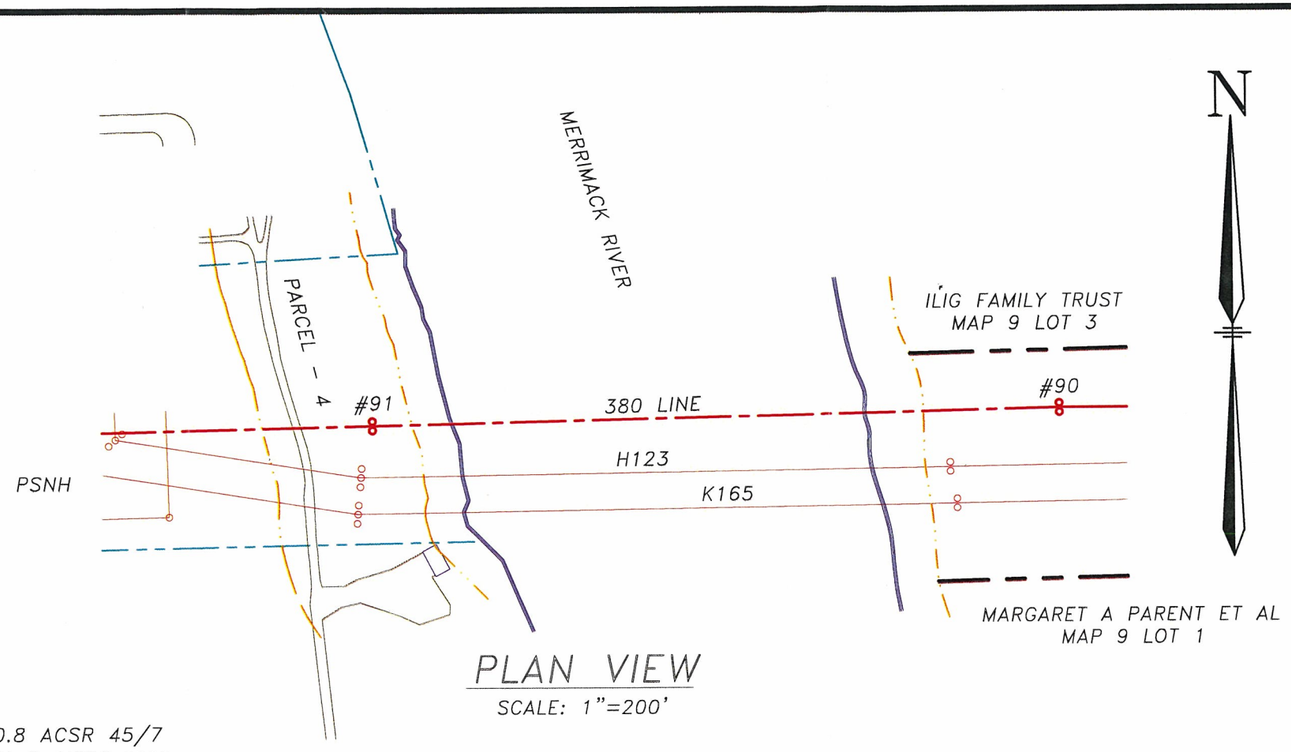
LOCATION PLAN
380 LINE (345 KV)
MERRIMACK RIVER WATER CROSSING
MERRIMACK–LITCHFIELD, NEW HAMPSHIRE

SCALE	DATE	SHEET	DRAWING NO.
1"=200'	11/10	1 OF 1	D–7649–78A



PROFILE VIEW

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



PLAN VIEW

SCALE: 1"=200'

NOTES:

1. THE 10 YEAR FLOOD ZONE WAS CALCULATED USING NAVD88 DATUM.

LEGEND:

- PROPERTY LINE
- EDGE OF UTILITY EASEMENT
- RIVER
- T–LINE CENTERLINE
- CSPA BOUNDARY

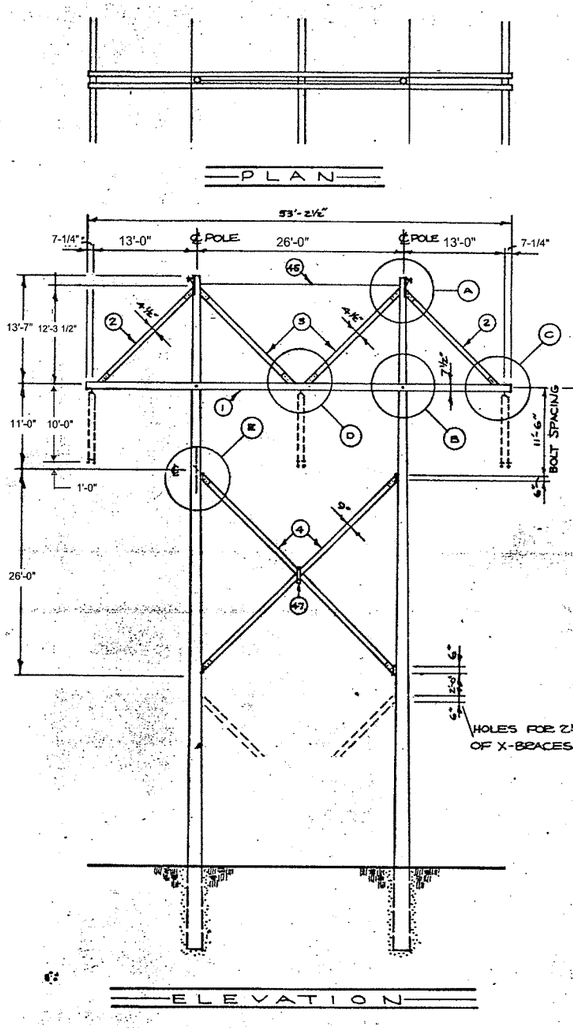
EXHIBIT 2

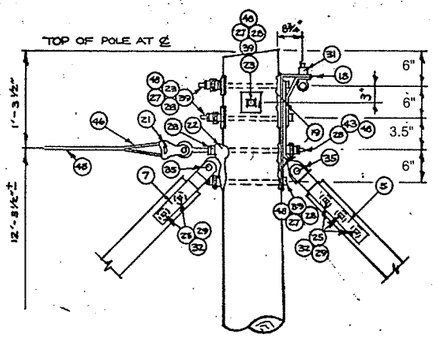
200 100 0 200 500

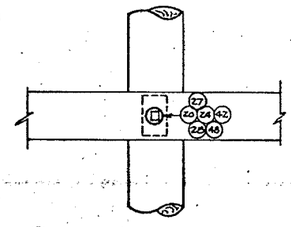
NO.	REVISION	DATE	DRWN	CHCK	APPR

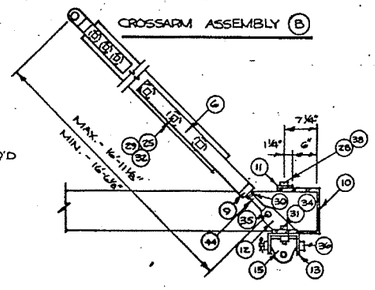
Northeast Utilities | Transmission Business

DRAWN: PES	380 LINE (345kV) CROSSING BETWEEN STR. #90 & #91			
DESIGNED: PES	MERRIMACK RIVER CROSSING			
CHECKED: PES	MERRIMACK & LITCHFIELD, NEW HAMPSHIRE			
APPROVED: PSNH	SCALE: AS NOTED	DATE: 11/2010	SHEET: 1 OF 1	DRAWING NO.: D–7649–78

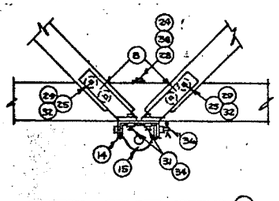




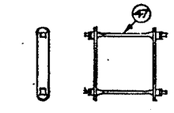




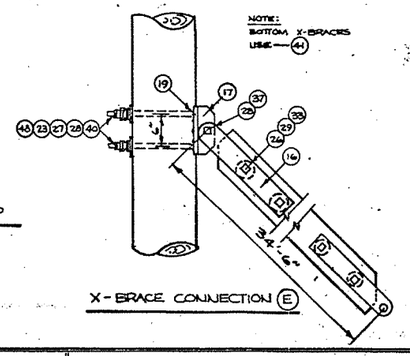
OUTSIDE SPACER FITTING (C)



CENTER SPACER FITTING (D)



CENTER CLAMP



X-BRACE CONNECTION (E)

NOTES:

1. ± INDICATES CONTRACTOR MUST EXERCISE JUDGEMENT TO COMPENSATE FOR VARYING POLE DIAMETERS.
2. FOR STRUCTURES OVER 95'-0" TALL, ADD ADDITIONAL SET OF X-BRACES OR EQUIVALENT.

FIGURE 1

BILL OF MATERIAL

ITEM	QUAN.	DESCRIPTION	REF. DWG.
1	2	CROSSARM 6¼" x 7½" - 53'- 2½" LNOC GR2	
2	2	STRAIN BRACE 3½" x 4½" MARK SB-1	
3	2	VEE BRACE 3½" x 4½" — MARK VB-1 —	I 14650 SHT. 6
4	2	X-BRACE 5¼" x 9" — — — MARK X-51 —	I 14650 SHT. 9
5	4	STRAIN BRACE BENT STRAP (3-BOLT) — —	I 14650 SHT. 7
6	2	STRAIN BRACE "U" STRAP (3-BOLT) — — —	I 14650 SHT. 8
7	4	VEE & STRAIN BRACE END FITTING (2-BOLT)	I 14650 SHT. 14
8	2RH & 2LH	VEE BRACE FOLDED STRAP — — — — — — —	I 14671 SHT. 7
9	2	THREADED WASHER ¾" x 3" x 3" — — — — —	I 14671 SHT. 8
10	4	BENT BEARING STRAP ¼" x 3" — — — — —	I 14671 SHT. 6
11	2	TIE STRAP ¼" x 3" x 21¼" — — — — — —	I 14671 SHT. 4
12	2RH & 2LH	STRAIN BRACE FOLDED ANGLE — — —	I 14671 SHT. 2
13	2	OUTSIDE PHASE FITTING 6" x 15.3# I 21¼"	I 14671 SHT. 3
14	1	CENTER PHASE FITTING 6" x 15.3# I 21¼"	I 14671 SHT. 5
15	3	HINGE PLATE — — — — — — — — — — —	I. 14671 SHT. 1
16	8	X-BRACE SIDE PLATE ⅝" x 4" - 22½"	I. 14671 SHT. 14
17	4	X-BRACE FOLDED PLATE ⅜" x 9" — — —	I. 14671 SHT. 13
18	2	SHIELD WIRE SUPPORT MARK W-101 —	I 14674 SHT. 13
19	8	GRID GAIN MIP PX-26082	
20	4	GRID GAIN MIP PX-261 W/PIGTAIL	
21	2	THIMBLE CLEVIS MIP PA-2728	
22	2	POLE EYE PLATE MIP PX-378	
23	16	4" SQ. CURVED WASHER MIP P-1448	
24	6	4" ROUND WASHER MIP P-85-1	
25	40	TECO SHEAR PLATE 25/8" DIA.	
26	16	TECO SHEAR PLATE 4" DIA.	
27	20	⅞" HELICAL SPRING WASHER	
28	34	⅞" LOCKNUT	
29	28	¾" LOCKNUT	
30	2	1" LOCKNUT	
31	10	⅞" ANCO NUT	
32	20	¾" x 5½" MACHINE BOLT (3" THREAD) W/NUT	
33	8	¾" x 8" MACHINE BOLT (3" THREAD) W/NUT	
34	8	⅞" x 2" MACHINE BOLT (STANDARD THREAD)	
35	6	⅞" x 3" MACHINE BOLT&NUT (STANDARD THR) W/COTTER	
36	3	⅞" x 8" MACHINE BOLT&NUT (3" THREAD) W/COTTER	
37	4	⅞" x 8" MACHINE BOLT (3" THREAD) W/NUT	
38	6	⅞" x 10½" MACHINE BOLT (3" THREAD) W/NUT	
39	8	⅞" x 15" MACHINE BOLT (6" THREAD) W/NUT	
40	4	⅞" x 18" MACHINE BOLT (6" THREAD) W/NUT	
41	4	⅞" x 22" MACHINE BOLT (6" THREAD) W/NUT	
42	2	⅞" x 30" STUD BOLT W/2NUTS (6" THREAD EACH END)	
43	2	⅞" x 19" EYE BOLT (FULL THREAD) W/2NUTS	
44	2	1" x 8" EYE BOLT (FULL THREAD) W/NUT	
45	1	POLE TIE ALUMOWELD 7 No.4 (25'-0")	
46	2	PREFORMED GRIP BG-4168	
47	1	CENTER CLAMP FOR 5¼" x 9" X-BRACE (HUGHES NO. 2840-EV)	
48	20	BONDING CLIP w/ ⅜ NUT (HUGHES NO. 2727-8)(NIC)	

REVISIONS	BY	DESIGNED
2-26-68	PAS	
4-4-68	RLA	DRAWN PAS 1-18-68
		CHECKED WJP 1-22-68
		FILE

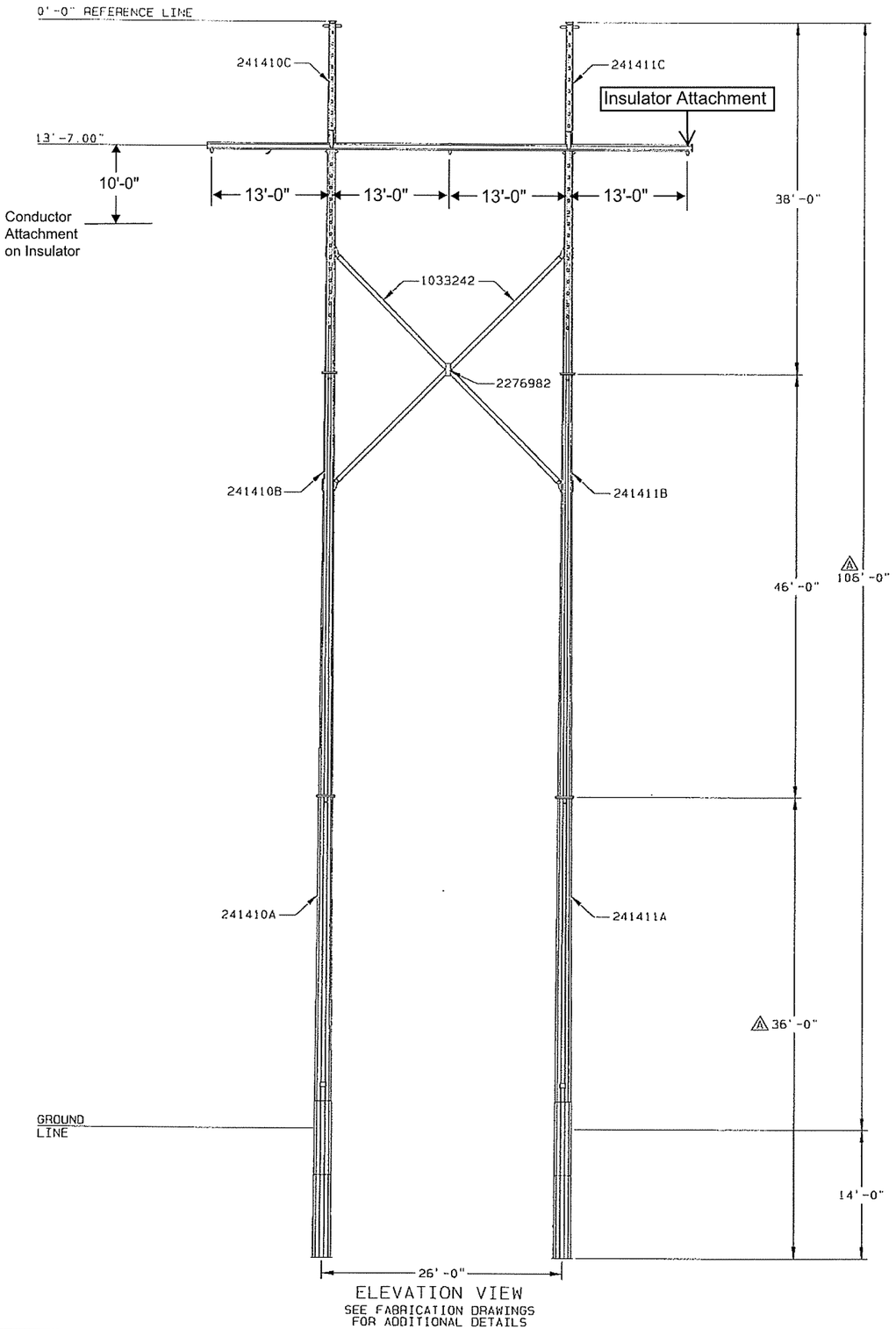
CENTRAL MAINE POWER CO. & PUBLIC SERVICE CO. OF NEW HAMPSHIRE -- 345 KV TANGENT STRUCTURE TYPE EA-1

Weyerhaeuser Company
Utility Department

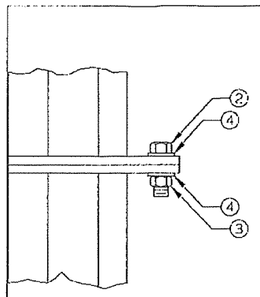
SHEET NO. 1 OF 2

DRAWING NO. E-14682

SPAN

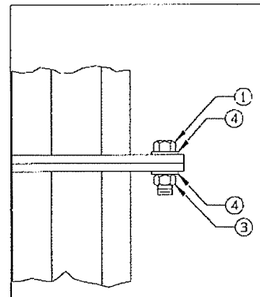


ELEVATION VIEW
SEE FABRICATION DRAWINGS FOR ADDITIONAL DETAILS



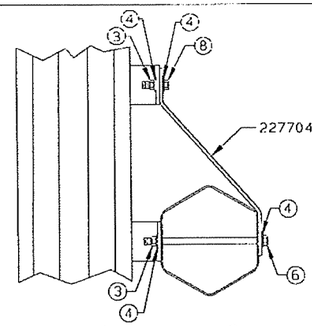
BOLT QTY/CONNECTION 12
1 NUT/BOLT, 2 WASHERS/BOLT

A-B FLANGE CONNECTION



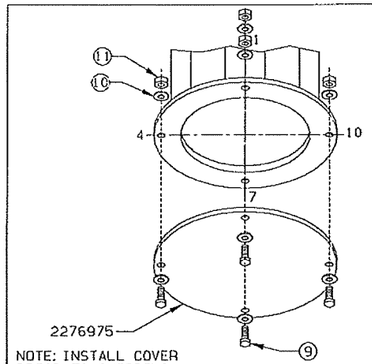
BOLT QTY/CONNECTION 8
1 NUT/BOLT, 2 WASHERS/BOLT

B-C FLANGE CONNECTION



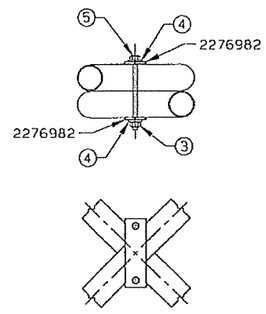
BOLT QTY/CONNECTION 2
1 NUT/BOLT, 2 WASHERS/BOLT
FOR 1033243

ARM CONNECTION



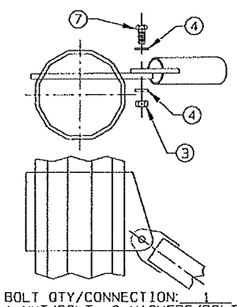
NOTE: INSTALL COVER PRIOR TO SHIPPING

BOLT ON BEARING PLATE



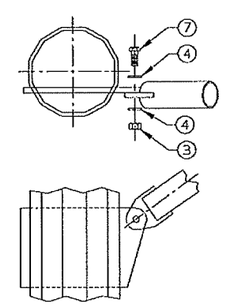
BOLT QTY/CONNECTION: 2
2 NUT/BOLT, 2 WASHERS/BOLT

CROSS BRACE CONN.



BOLT QTY/CONNECTION: 1
1 NUT/BOLT, 2 WASHERS/BOLT
FOR 1033242

TOP CROSS BRACE CONN.



BOLT QTY/CONNECTION: 1
1 NUT/BOLT, 2 WASHERS/BOLT
FOR 1033242

BOTTOM CROSS BRACE CONN.

NOTES:

1. POLE SHAFT-GOVERNING REACTIONS
   MOMENT = 4,011 IN-KIPS
   SHEAR = 8,899 #
   VERTICAL = 31,075 #
2. COMPONENT IDENTIFICATION: TAG LOCATIONS ARE INDICATED BY CALLOUTS ON DRAWING. SUBSEQUENT DIGITS WILL INDICATE SEQUENCE MANUFACTURED.
3. ASSEMBLY AND ERECTION GUIDELINES: SEE VALMONT TRANSMISSION INSTALLATION GUIDELINE 1002.
4. ITEM #12 TO BE SHIPPED LOOSE WITH EACH STRUCTURE.

BILL OF MATERIAL
(SHIPPING SEQ.=1 FOR ALL)

VALMONT PART NUMBER	DESCRIPTION	UNIT WEIGHT (LBS)	QTY PER STR
241410A	SECTION ASSEMBLY	2,305	1
241410B	SECTION ASSEMBLY	1,722	1
241410C	SECTION ASSEMBLY	1,113	1
1033243	CROSS ARM	1,169	1
241411A	SECTION ASSEMBLY	2,305	1
241411B	SECTION ASSEMBLY	1,722	1
241411C	SECTION ASSEMBLY	1,113	1
2276982	CROSS BRACE PLATE	14	2
2277043	STRAP	14	2
2276975	BOLT ON BEARING PLATE	31	2
1033242	CROSS BRACE	526	2

ITEM NO	VALMONT PART NUMBER	DESCRIPTION: HARDWARE SIZE (IN) BOLT DIA	BOLT LONG	NUT	WSHR	GENERAL	FINISH	ASTM SPEC	QTY PER STR
1	161112	1.00	4.50				HDGV	A325 *	16
2	161107	1.00	5.00				HDGV	A325 *	24
3	131188			1.00		DH,LOCK	HDGV	A563	50
4	141183				1.00	CS,FLAT	HDGV	F436	100
5	169826	1.00	14.00				HDGV	A325 *	2
6	169286	1.00	11.00				HDGV	A325 *	2
7	163958	1.00	3.50				HDGV	A325 *	4
8	163748	1.00	3.00				HDGV	A325 *	2
9	169718	0.50	1.50				HDGV	A325 *	8
10	143044				0.50	CS,FLAT	HDGV	F436	16
11	131088			0.50		DH,LOCK	HDGV	A563	8
12	1002676	0.75	6.00				SS	A276	7

* PER ASTM A325-91C, EXCLUDE SECTIONS 6.3 & 9.2

NEU STR #91,92,93,94

DUPLICATE DRAWING DISTRIBUTION

PED131214106' AGH, STR. # 91,92,93,94

DWG SIZE D CLASS CODE (1) 1 CLASS NO. (3) 450

REV ID	DATE	REV BY	CHK BY	REVISION DESCRIPTION
B	08/30/10	WTH	AG2	REVISED PER DRAFTING
A	08/25/10	WTH	AG2	REVISED PER CUSTOMER

DRAWN WTH | ENGR EB7 | DATE 08/17/10 | SCALE NONE
P.A. CHK AG22 08/17/10 | SHOP CHK AG22 08/27/10
OTHER SPECIFICATIONS
MATERIAL | THICKNESS | WEIGHT 12,725#

ORDER NO. 131214 | CUSTOMER NORTHEAST UTILITIES | DESCRIPTION 106' AGH H-FRAME | DWG NO. 241410Z

valmont

FIGURE 2