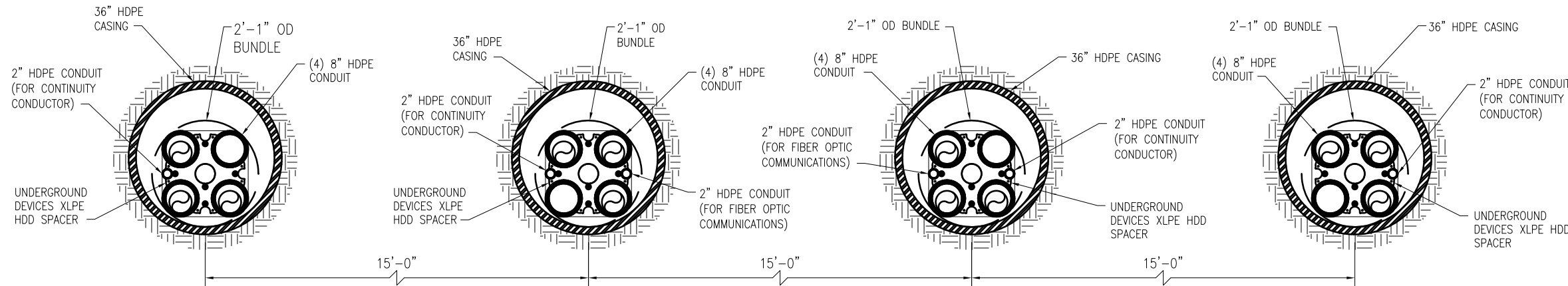
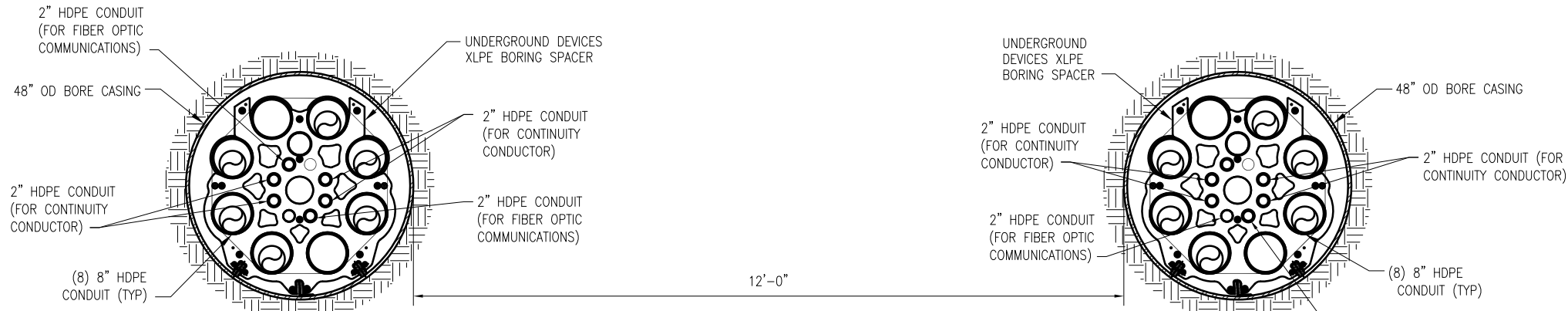


OPTION 1
TYPICAL XLPE DOUBLE CIRCUIT TWO CABLES
PER PHASE DUCTBANK
NTS

OPTION 2
TYPICAL XLPE DOUBLE CIRCUIT TWO CABLES
PER PHASE DUCTBANK
NTS



TYPICAL XLPE DOUBLE CIRCUIT TWO CABLES PER PHASE
HDPE DIRECTIONAL DRILL ARRANGEMENT
NTS



TYPICAL XLPE DOUBLE CIRCUIT TWO CABLES PER PHASE
JACK & BORE ARRANGEMENT
NTS

- NOTES**
- (1) 2" CONDUIT WILL BE INSTALLED IN TWO 2'-1" OD BUNDLE TO CARRY COMMUNICATION.
 - (1) 2" CONDUIT WILL BE INSTALLED IN EACH 2'-1" OD BUNDLE TO CARRY CONTINUITY CONDUCTOR.
 - 36" BORE HOLE WILL BE USED TO INSTALL CONDUIT BUNDLES IN DIRECTIONAL DRILL.
 - STAGGER BELL ENDS AND 8" COUPLINGS.
 - ANCHOR SPACERS WITH #14 STEEL TIE WIRE AND #4 REINFORCING BARS, OR APPROVED METHOD.
 - CEMENT ALL JOINTS IN ACCORDANCE WITH CONDUIT MANUFACTURERS SPECIFICATIONS.
 - AVOID STANDING ON CONDUIT.
 - BELL ENDS SHALL BE INSTALLED ALL IN THE SAME DIRECTION. DIRECTION TO BE DETERMINED BY CONDUIT MANUFACTURER AS REQUIRED BY PREFERRED CABLE PULLING DIRECTION.
 - CONSTRUCTION JOINT TO BE APPROXIMATELY 45° ANGLE.

U0-1 TRENCH DETAILS.dwg

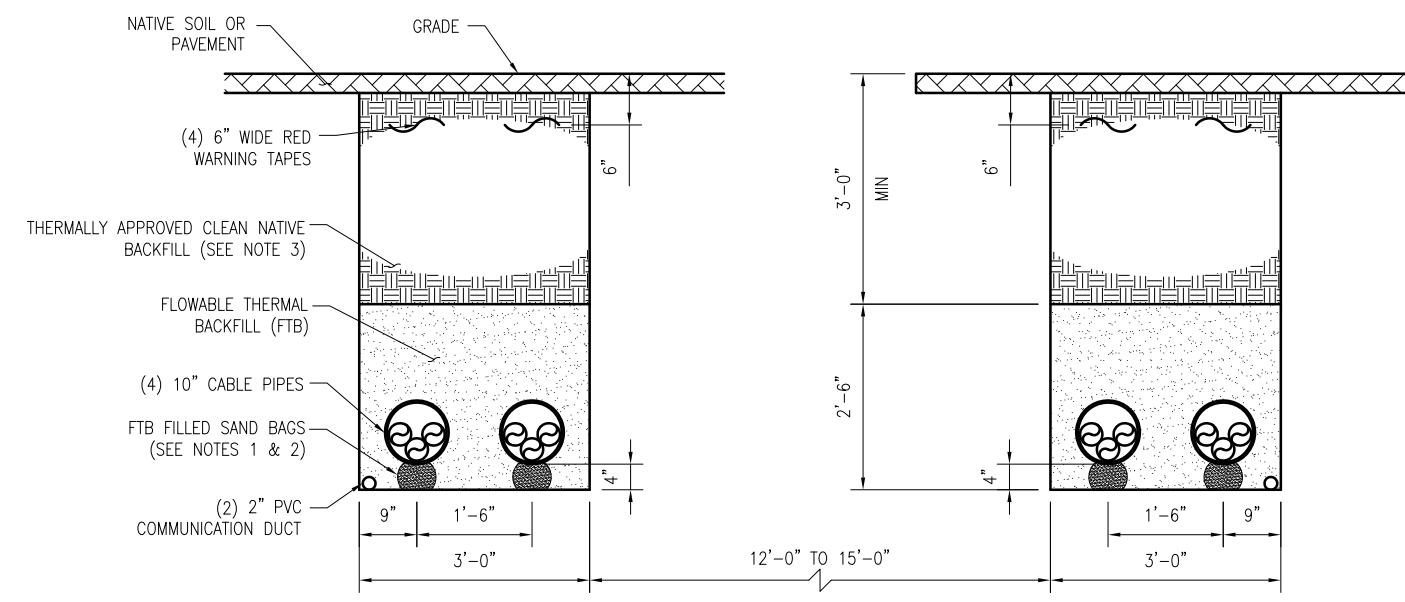
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REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD		

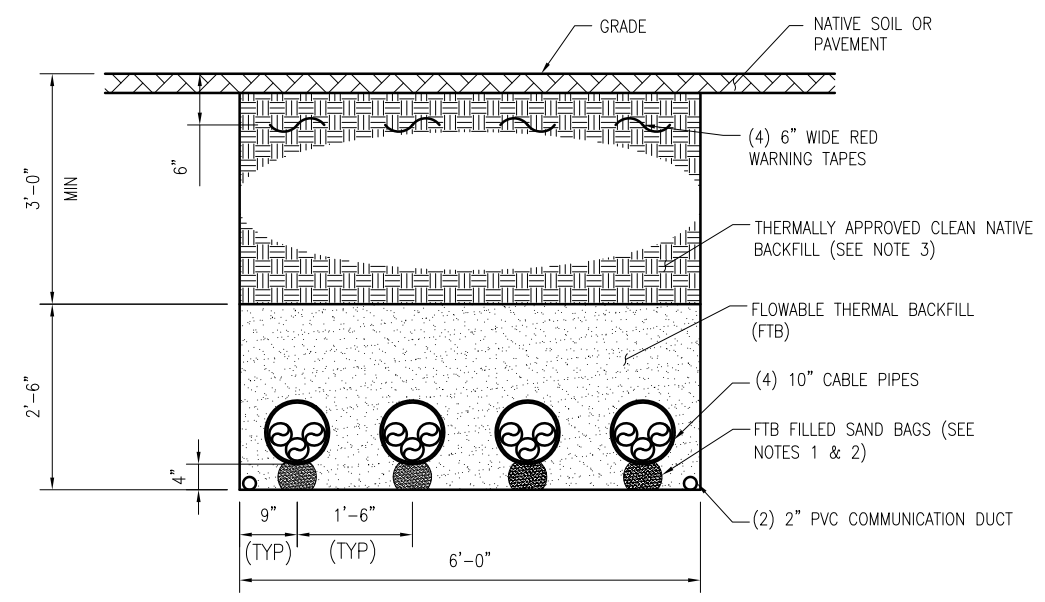
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CKD	MRM	07-13-2012
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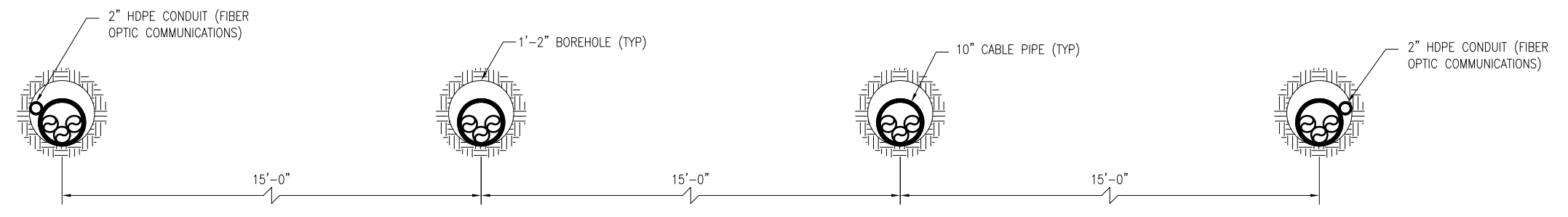
PUGET SOUND ENERGY		JOB NUMBER	REV
HDPE DETAILS		127031	A
TABLOTT SUBSTATION TO LAKESIDE SUBSTATION		DRAWING NUMBER	
		U0-1	



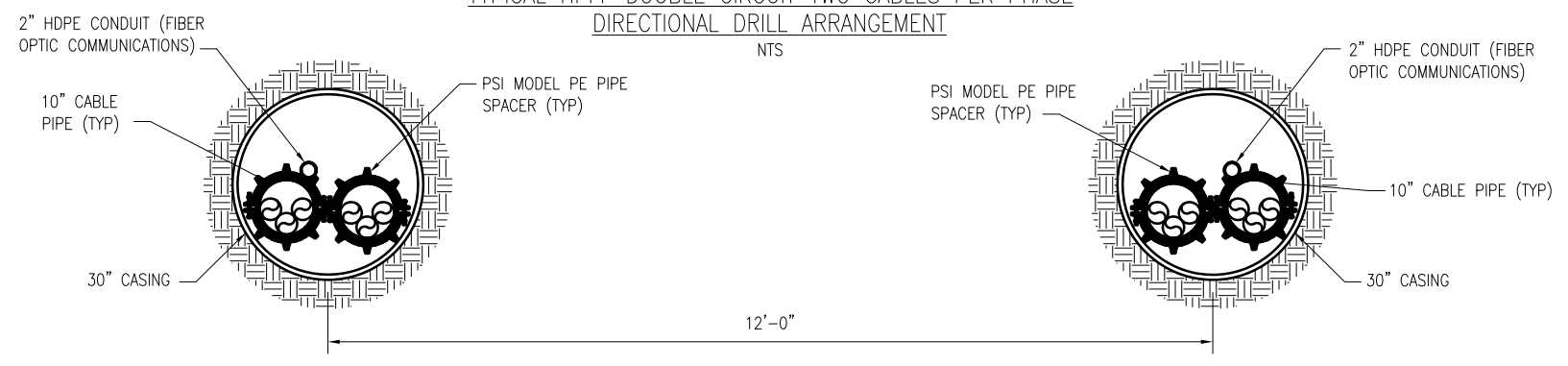
OPTION 1
TYPICAL HPFF DOUBLE CIRCUIT TWO CABLES
PER PHASE DUCTBANK
NTS



OPTION 2
TYPICAL HPFF DOUBLE CIRCUIT TWO CABLES
PER PHASE DUCTBANK
NTS



TYPICAL HPFF DOUBLE CIRCUIT TWO CABLES PER PHASE
DIRECTIONAL DRILL ARRANGEMENT
NTS



TYPICAL HPFF DOUBLE CIRCUIT TWO CABLES PER PHASE
JACK & BORE ARRANGEMENT
NTS

- NOTES**
1. THE SIZE OF EACH BAG IS APPROXIMATELY 1'-0" LONG BY 6" WIDE. THE SPACING BETWEEN BAGS ALONG THE LENGTH OF THE DUCTBANK APPROXIMATELY 15'-0" (MAX).
 2. THERMAL SAND MAY BE USED TO FILL SAND BAGS.
 3. CONTRACTOR MAY ELECT TO USE A WEAK CONCRETE BACKFILL TO EXPEDITE THE CLOSING OF THE EXCAVATION.
 4. (1) 2" CONDUIT WILL BE INSTALLED IN TWO DIRECTIONAL DRILLS TO CARRY COMMUNICATION CABLES.
 5. 1'-2" BORE HOLE WILL BE USED TO INSTALL PIPE AND CONDUIT.

U0-1 TRENCH DETAILS.dwg

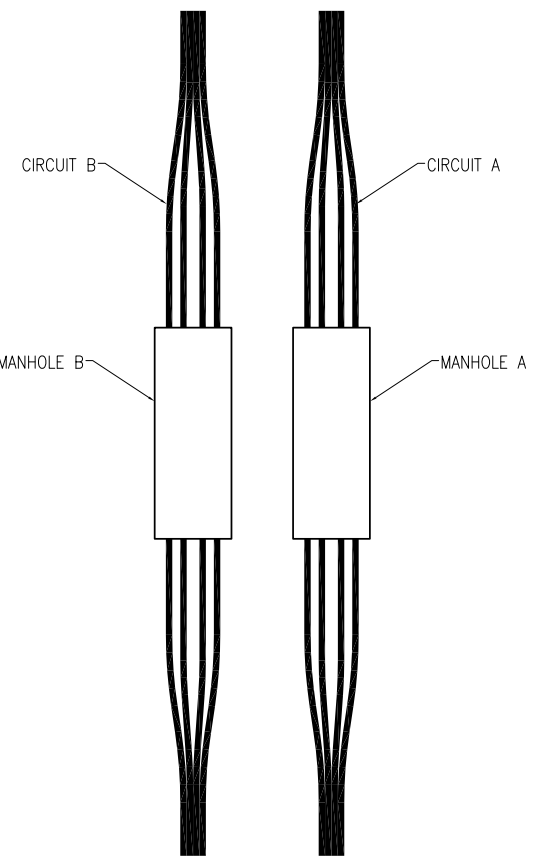
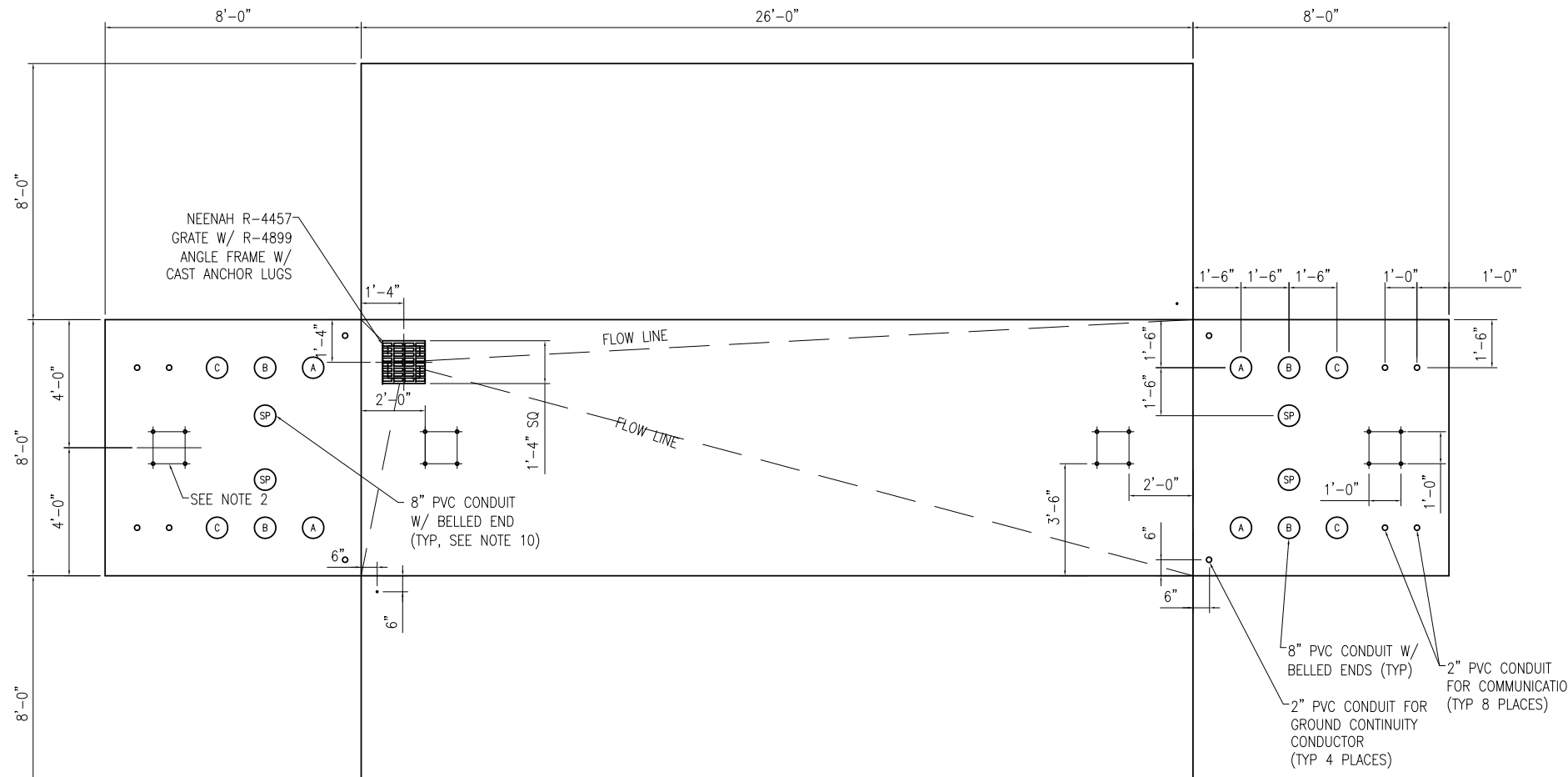
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REV	REVISIONS		DATE	DRN	DSGN	CKD	APPD				
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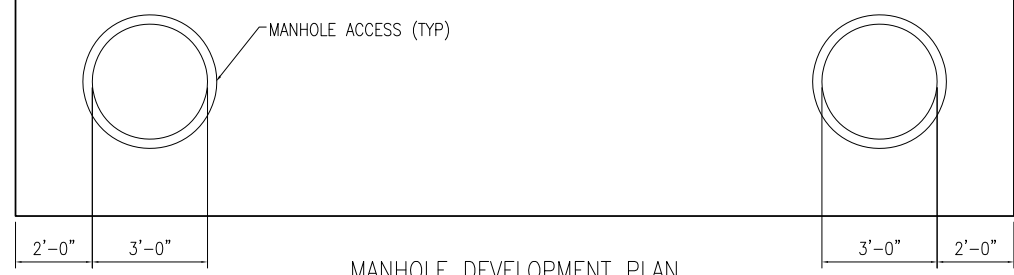
SCALE:	NTS
FOR	11x17 DWG ONLY



PUGET SOUND ENERGY	JOB NUMBER	REV
HPFF DETAILS	127031	A
TABLBOT SUBSTATION TO LAKESIDE SUBSTATION	DRAWING NUMBER	
	U0-2	



MANHOLE LAYOUT PLAN
NTS



MANHOLE DEVELOPMENT PLAN
NTS

NOTES

1. ALL DIMENSIONS ARE INSIDE DIMENSIONS.
2. PULLING HARDWARE USING A MINIMUM OF FOUR INDIVIDUAL ANCHORS AND WALLS SHALL BE GOOD FOR 20,000lbs TENSION, MINIMUM.
3. SUMP SHALL BE CAPABLE OF HANDLING SUMP PUMP, MINIMUM 4" DEEP.
4. CONDUITS MUST ALWAYS BE INSTALLED IN THE SAME DIRECTION.
5. CABLE & ACCESSORIES CONTRACTOR TO FIELD VERIFY ACTUAL MANHOLE DEPTHS. CONTRACTOR IS RESPONSIBLE FOR ALL SAFETY & ENTRY/EXIT REQUIREMENTS.
6. ALL CHIMNEY RINGS SHALL BE MORTARED OR OTHERWISE "KEYED" TO PREVENT HORIZONTAL DISPLACEMENT AND SHALL BE SECURELY MORTARED TO MANHOLE ROOF.
7. MANHOLE RING SHALL BE SECURELY FASTENED TO THE MANHOLE ROOF OR CHIMNEY USING INSERTS AND BOLTS OR OTHER MEANS WITH PRIOR APPROVAL.
8. REINFORCING STEEL SHALL BE BONDED TO 4/0 AWG SOFT DRAWN BARE COPPER BONDING JUMPERS.
9. MULTISECTION MANHOLES SHALL INCORPORATE EITHER SHIPLAP OR TONGUE AND GROOVE JOINTS UTILIZING APPROPRIATE SILICONE, POLYMERIC OR ELASTOMERIC SEALANTS.
10. ALL SPARE CONDUITS SHALL HAVE A MULE TAPE PULL LINE INSTALLED AND SHALL BE PLUGGED.

U1-1 MANHOLE DETAILS.dwg

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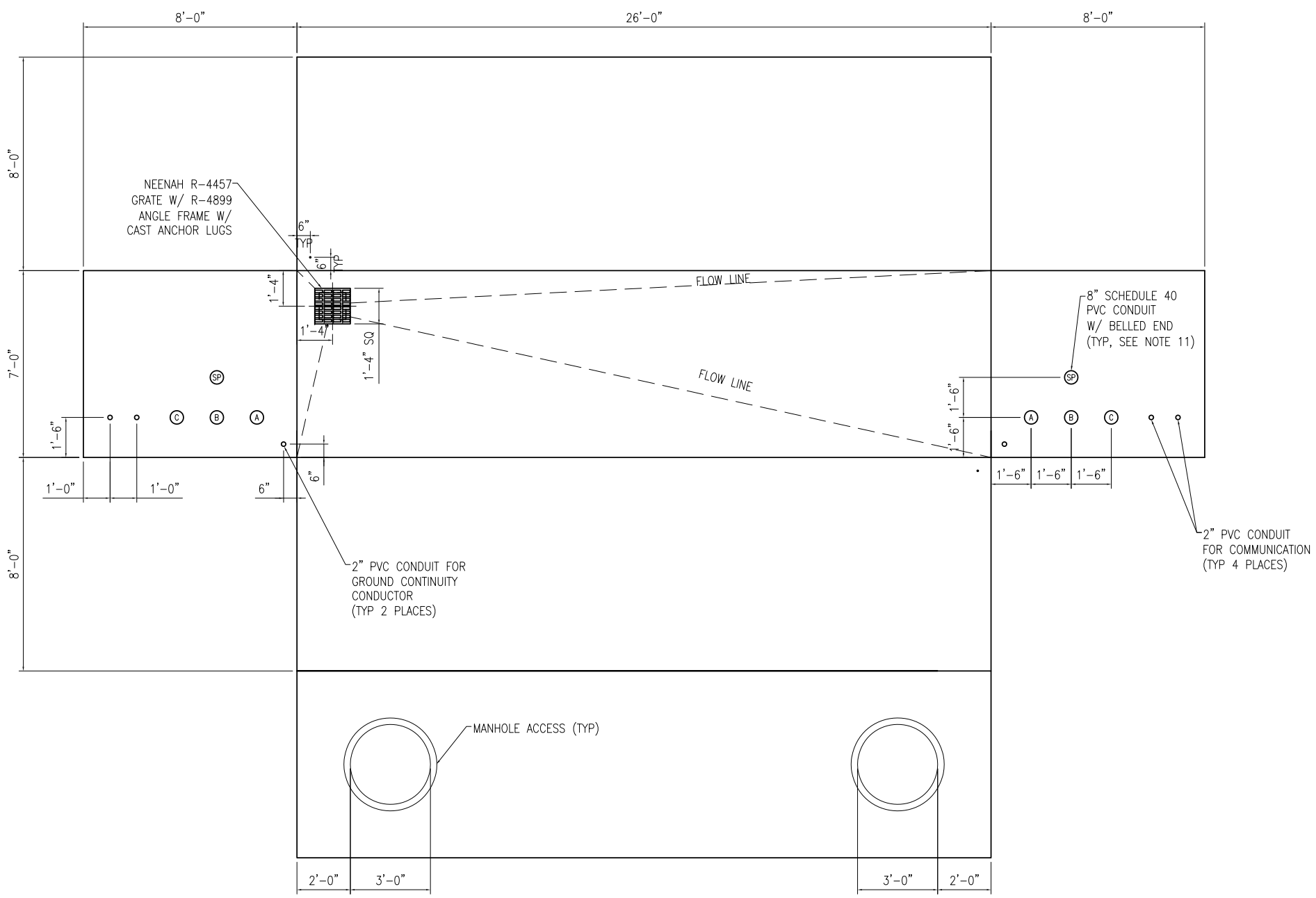
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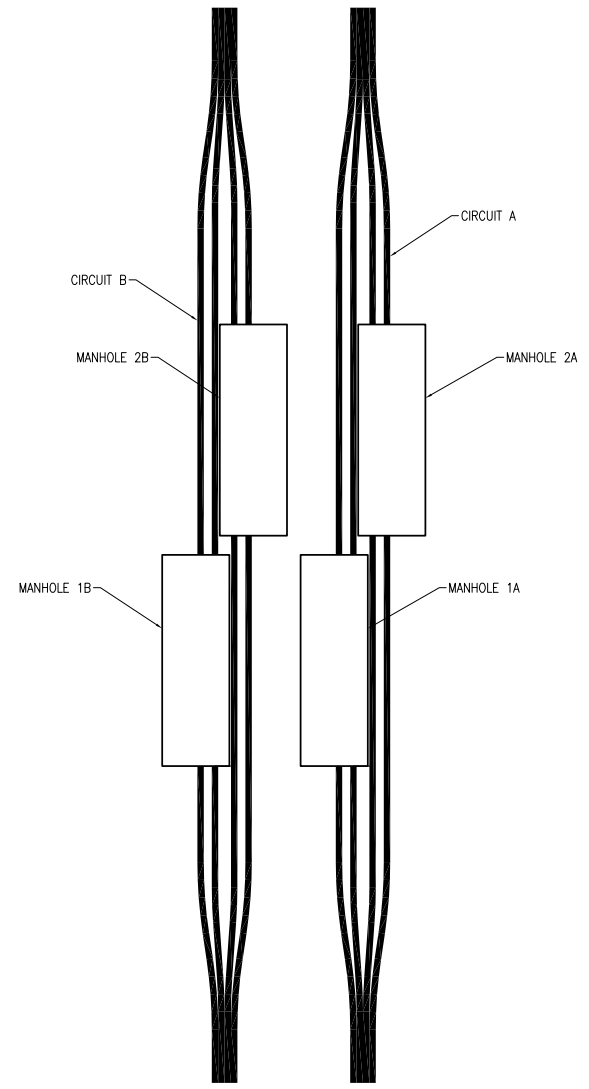
PUGET SOUND ENERGY
XLPE MANHOLE DETAILS
TABLBOT SUBSTATION TO LAKESIDE SUBSTATION

JOB NUMBER	REV
127031	A
DRAWING NUMBER	
U1-1	

FOR 11x17 DWG ONLY



MANHOLE DEVELOPMENT PLAN
NTS



MANHOLE LAYOUT PLAN
NTS

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8. REINFORCING STEEL SHALL BE BONDED TO 4/0 AWG SOFT DRAWN BARE COPPER BONDING JUMPERS.
9. MULTISECTION MANHOLES SHALL INCORPORATE EITHER SHIPLAP OR TONGUE AND GROOVE JOINTS UTILIZING APPROPRIATE SILICONE, POLYMERIC OR ELASTOMERIC SEALANTS.
10. NO STEEL REINFORCING BAR MAY ENCAPSULATE ANY INDIVIDUAL CONDUIT.
11. ALL SPARE CONDUITS SHALL HAVE A MULE TAPE PULL LINE INSTALLED AND SHALL BE PLUGGED.

U1-1 MANHOLE DETAILS.dwg

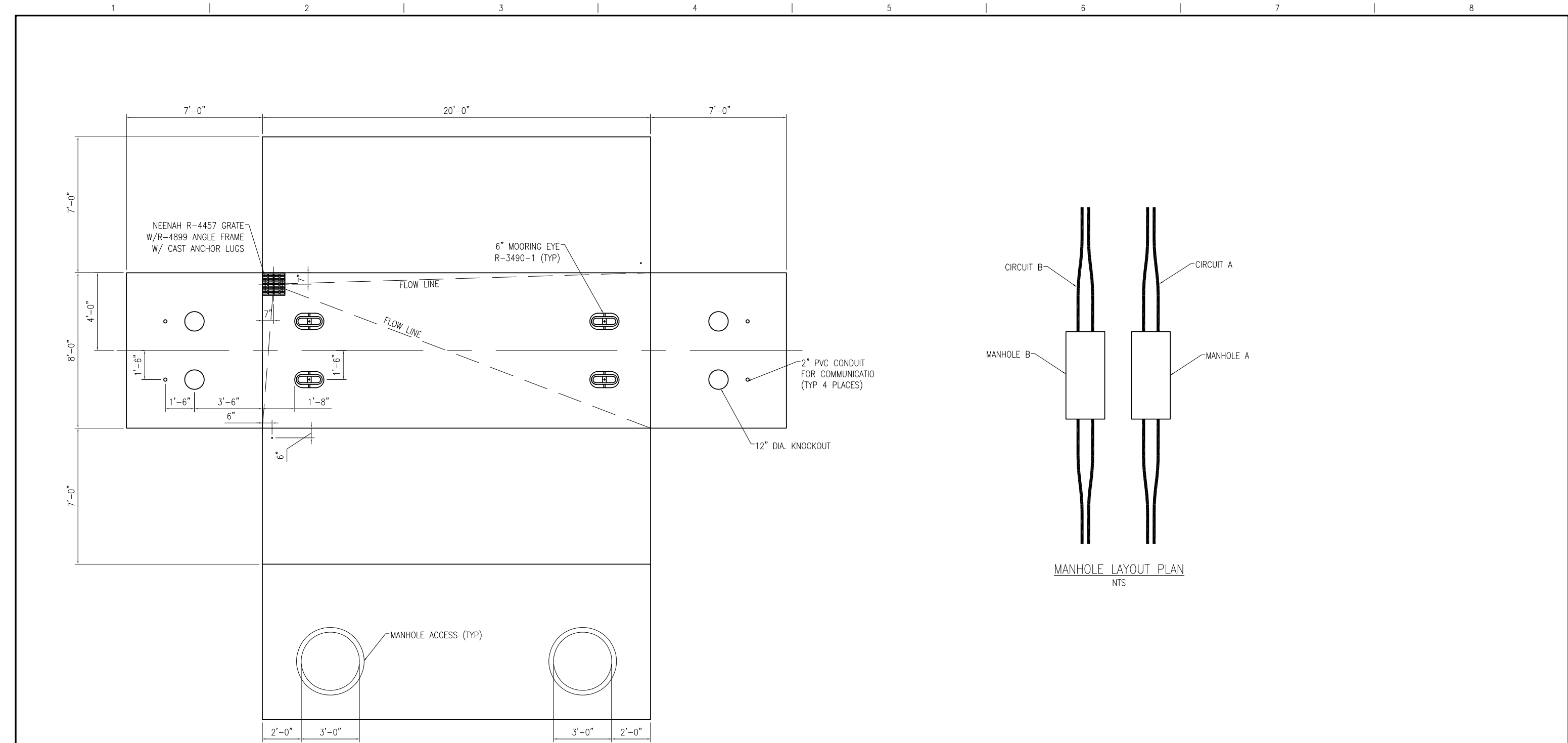
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CKD	MRM	07-13-2012
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JOB NUMBER	REV
127031	△
DRAWING NUMBER	
U1-2	



MANHOLE DEVELOPMENT PLAN
NTS

MANHOLE LAYOUT PLAN
NTS

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U1-1 MANHOLE DETAILS.dwg

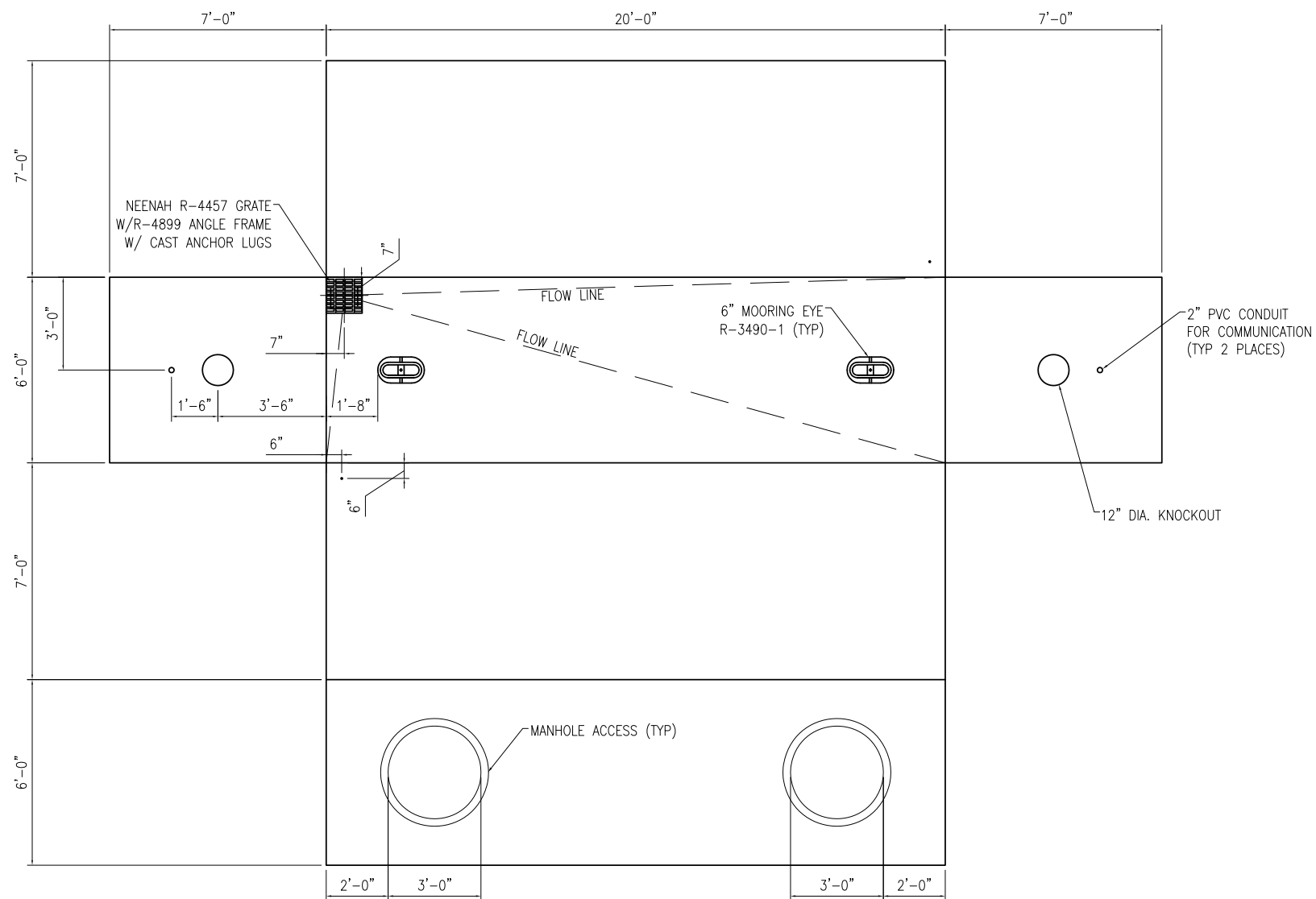
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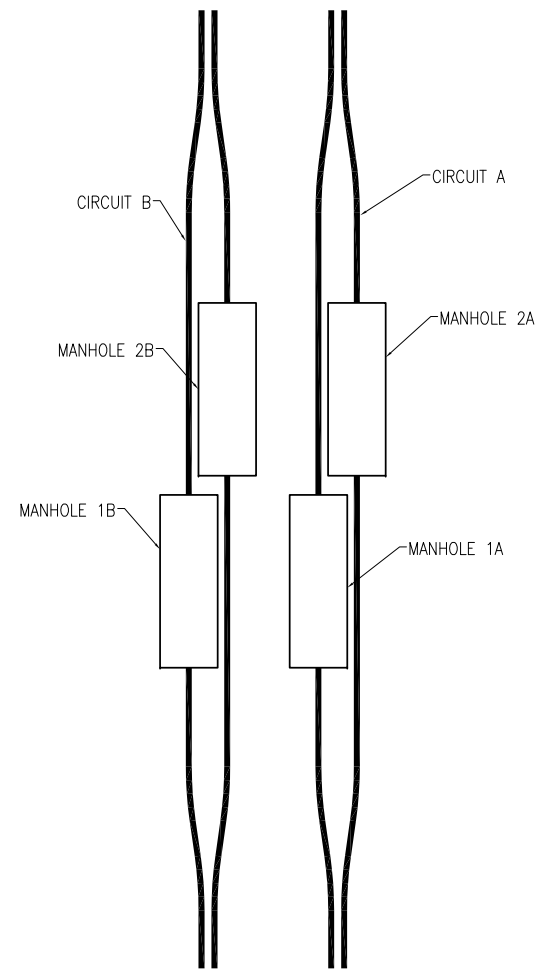
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SCALE: NTS		
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PUGET SOUND ENERGY		JOB NUMBER	REV
HPFF MANHOLE DETAILS		127031	A
TABLBOT SUBSTATION TO LAKESIDE SUBSTATION		DRAWING NUMBER	
		U1-3	



MANHOLE DEVELOPMENT PLAN
NTS



MANHOLE LAYOUT PLAN
NTS

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U1-1 MANHOLE_DETAILS.dwg

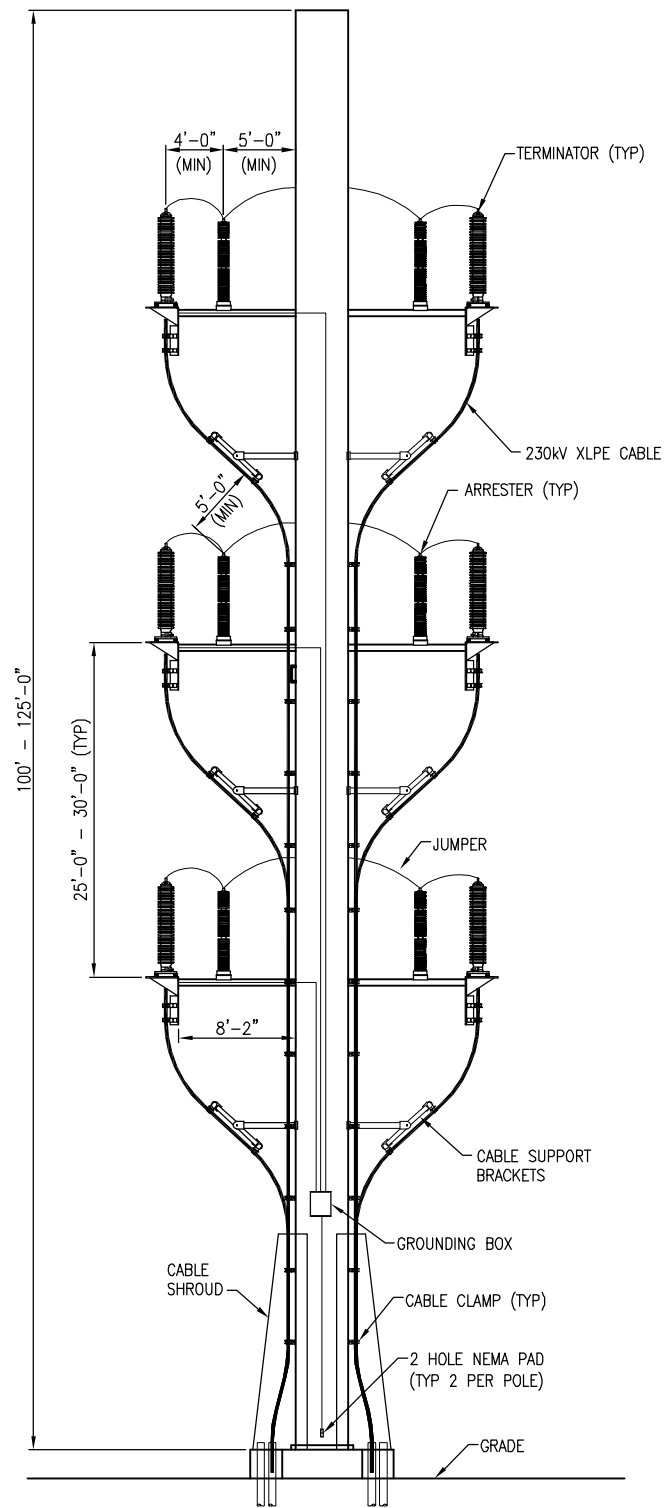
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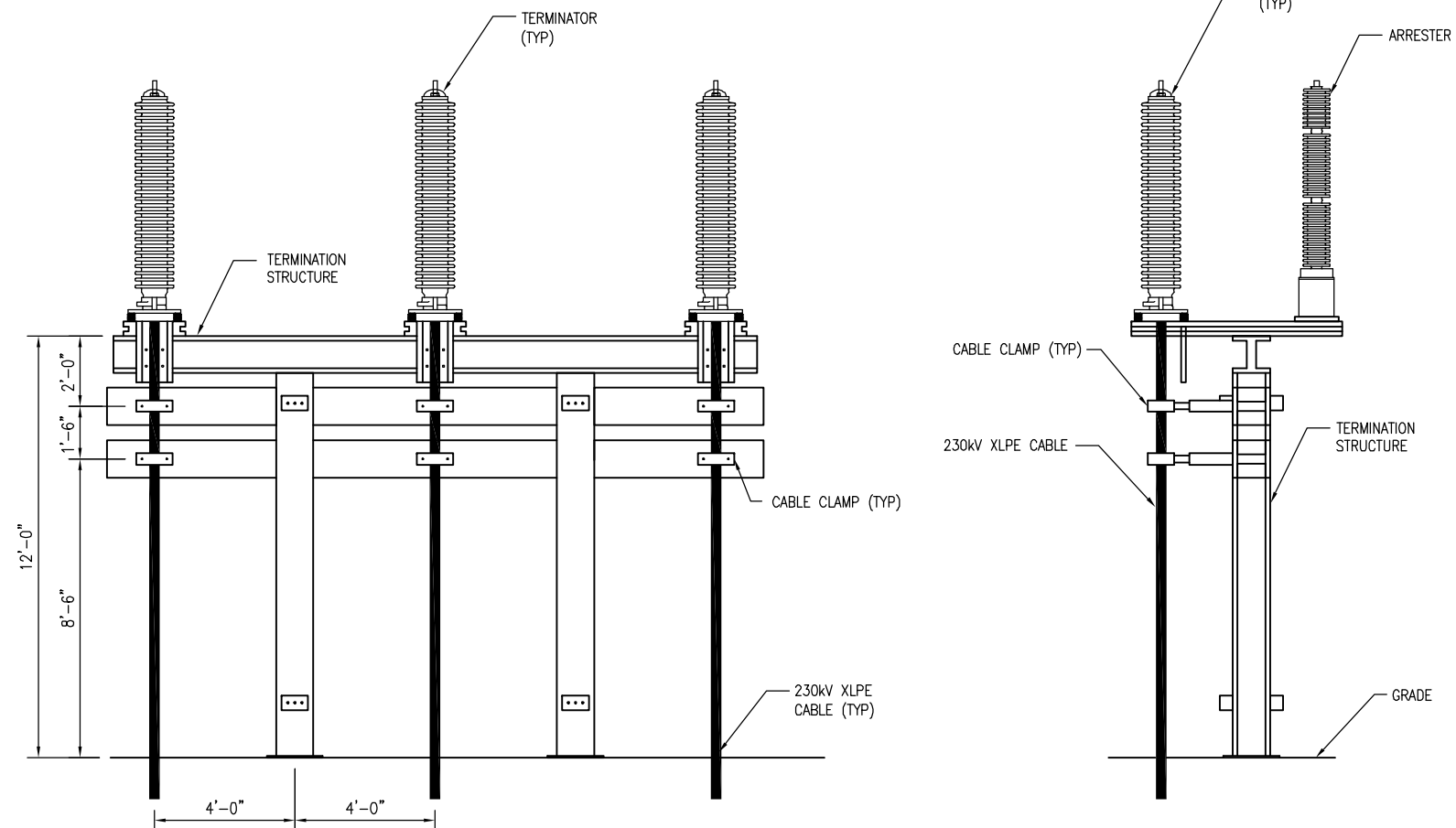
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PUGET SOUND ENERGY	JOB NUMBER	REV
HPFF MANHOLE DETAILS	127031	A
TABLBOT SUBSTATION TO LAKESIDE SUBSTATION	DRAWING NUMBER	U1-4



TYPICAL TWO CABLE PER PHASE RISER STRUCTURE DETAIL
NTS



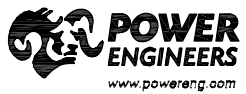
TYPICAL HPFF TERMINATION STRUCTURE DETAIL
NTS

U2-1 RISER STRUCTURE DETAILS.dwg

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SCALE:	NTS	
FOR 11x17 DWG ONLY		



PUGET SOUND ENERGY
RISER TERMINATION DETAILS
TABLBT SUBSTATION TO LAKESIDE SUBSTATION

JOB NUMBER	127031	REV	A
DRAWING NUMBER	U2-1		