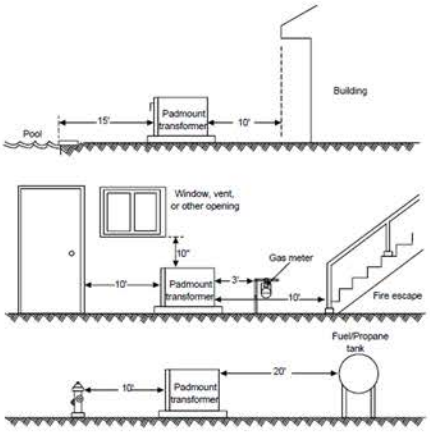
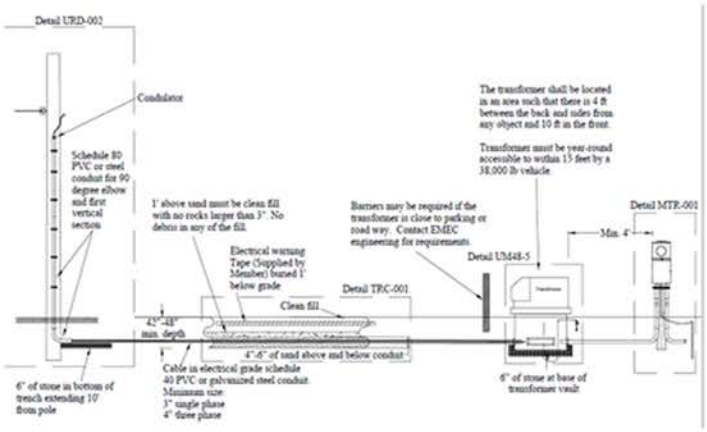
Eastern Maine Electric Cooperative

A Touchstone Energy Cooperative

Underground Primary Specifications





EMEC Engineering Department
(207) 454-7555, menu option 5
Engineering@emec.com

Updated 1/19/2026

Eastern Maine Electric Cooperative
A Touchstone Energy® Cooperative

Procedure for Underground Primary Installations

Member Responsibilities

1. The member is responsible for the primary cable conduit trench from the riser pole to the transformer location. The trench must be a minimum of 42" deep. Sand is required 4"-6" above and below the conduit and on both sides. One foot of clean fill is required above the sand with rocks no larger than 3" before backfilling. EMEC must inspect the trench prior to member beginning the backfill. EMEC may require the trench to be excavated if backfilling has begun or is finished before it is inspected. See drawings URD-001 and TRC-001.
2. Member is responsible for installing electrical grade PVC conduit for primary cable between riser pole and transformer location.[1] For single phase services, minimum 3" Schedule 40 PVC is required. For three phase services minimum 4" Schedule 40 PVC is required.[2] Schedule 80 PVC or steel conduit is required for the 90º elbow and the first section out of the ground. A pull string must be installed in the conduit by the member.
3. Member is responsible for procurement and installation of transformer vaults. The top of the vault should be no more than 12" above finished grade and there should be 6" of stone in the base for drainage. Three phase services require concrete vaults. For single phase services not greater than 50kVA, reinforced fiberglass vaults are sufficient. See drawing PAD-001.
4. Member is responsible for installation of the transformer ground grid prior to EMEC setting the transformer. See drawing PAD-001.
5. Member is responsible for the installation of meter socket in the desired location. The customer is required to run the secondary cable from the meter socket to the transformer pad location leaving a minimum of 4 feet of cable on the transformer side for termination with the neutral clearly marked. See drawing MTR-001 for an example.
6. All connections in the meter socket must be completed by the member prior to EMEC connecting the transformer.
7. The member will run the first 10' section of conduit up the riser pole and EMEC will assemble and connect the remaining sections. Member will supply all hardware. See drawing URD-002.
8. Secondary wire must be run in conduit from the transformer vault to the meter socket, and from the meter socket to the first overcurrent device.

9. Member will supply electrical buried cable warning tape for trench.
10. Member will provide meter socket and disconnect.

EMEC Responsibilities

1. EMEC will provide all specification drawings.
2. EMEC will provide, and install the primary cable.
3. EMEC will provide and mount the transformer after the transformer vault and ground grid have been installed, meter socket has been installed, and the primary and secondary cable have been pulled.
4. Inspect trench, vault, and meter socket installation.
5. EMEC will assemble and mount remaining sections of conduit on primary riser pole.
6. EMEC will make all terminations on the primary riser pole.
7. EMEC will make all primary and secondary terminations in the transformer.
8. EMEC will supply the condulator and all termination material.

Any deviations from the above-mentioned procedures or attached reference drawings require prior approval from EMEC engineering personnel.

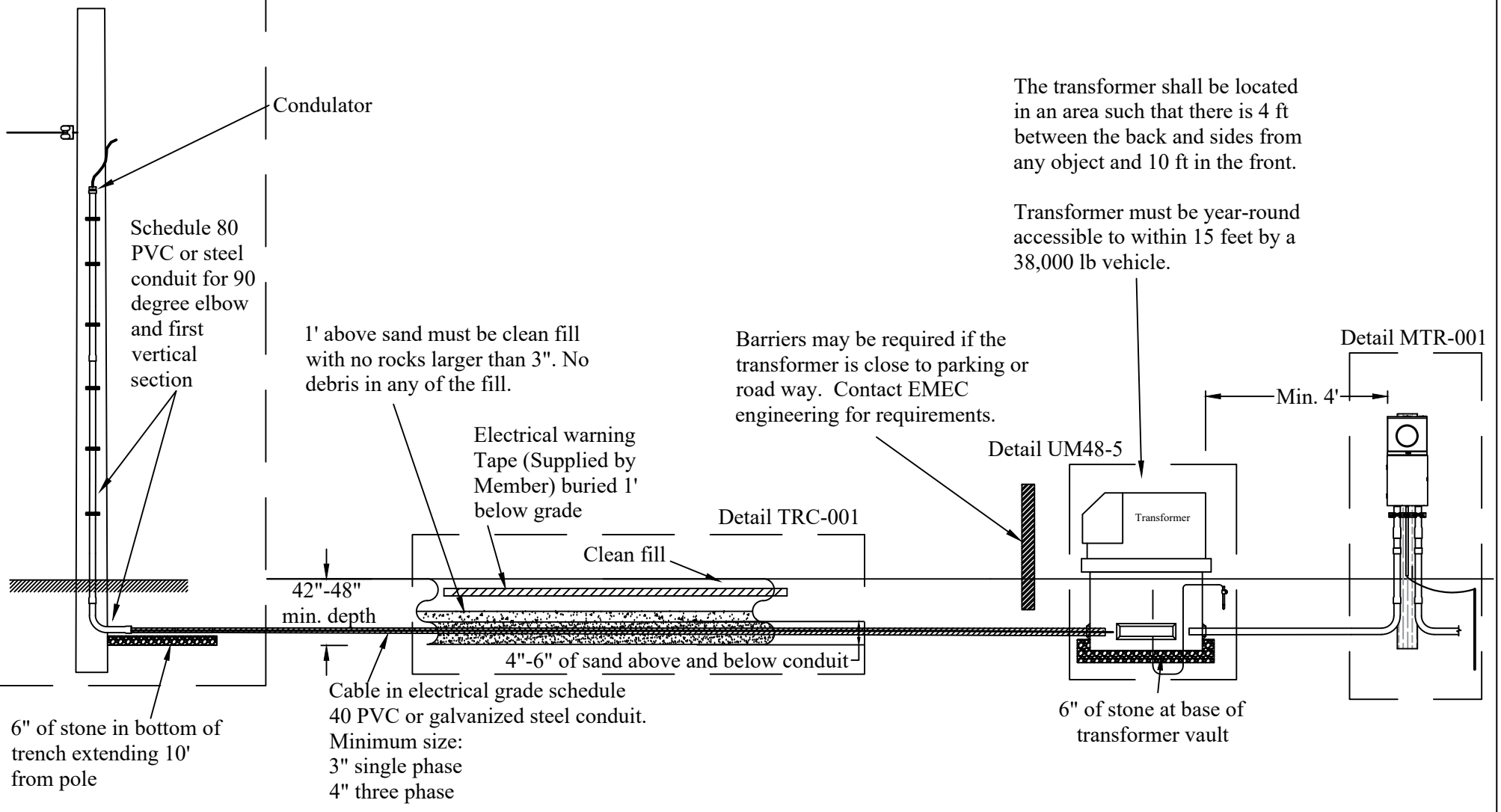
Reference Drawings

- URD-001 – Underground Primary Installation Overview
- URD-002 – Underground Primary Pole Attachment
- PAD-001 – Transformer and Ground Grid Installation
- MTR-001 – Meter Pedestal for Underground Services
- TRC-001 – Underground Trench Specifications
- TRF-001 – Padmount Transformer Clearances
- Approved concrete vault for three phase transformers
- Approved fiberglass vault for single phase transformers
- Approved concrete vault for 3 phase pull box

Notes

1. EMEC may request a second conduit run or additional vaults between the riser pole and transformer location depending on the length and complexity of the underground run.
2. EMEC may require a larger conduit size for single phase and three phase services depending on the length and complexity of the run.

Detail URD-002



Drawing not to scale. Some details are exaggerated to show detail.

Eastern Maine Electric Cooperative
A Touchstone Energy® Cooperative
The power of human connections®

Serving the Eastern Border of the United States

DES: EMEC	DRN: ASB
CKD: ASB	SCALE: NONE
DATE: 1/15/2026	

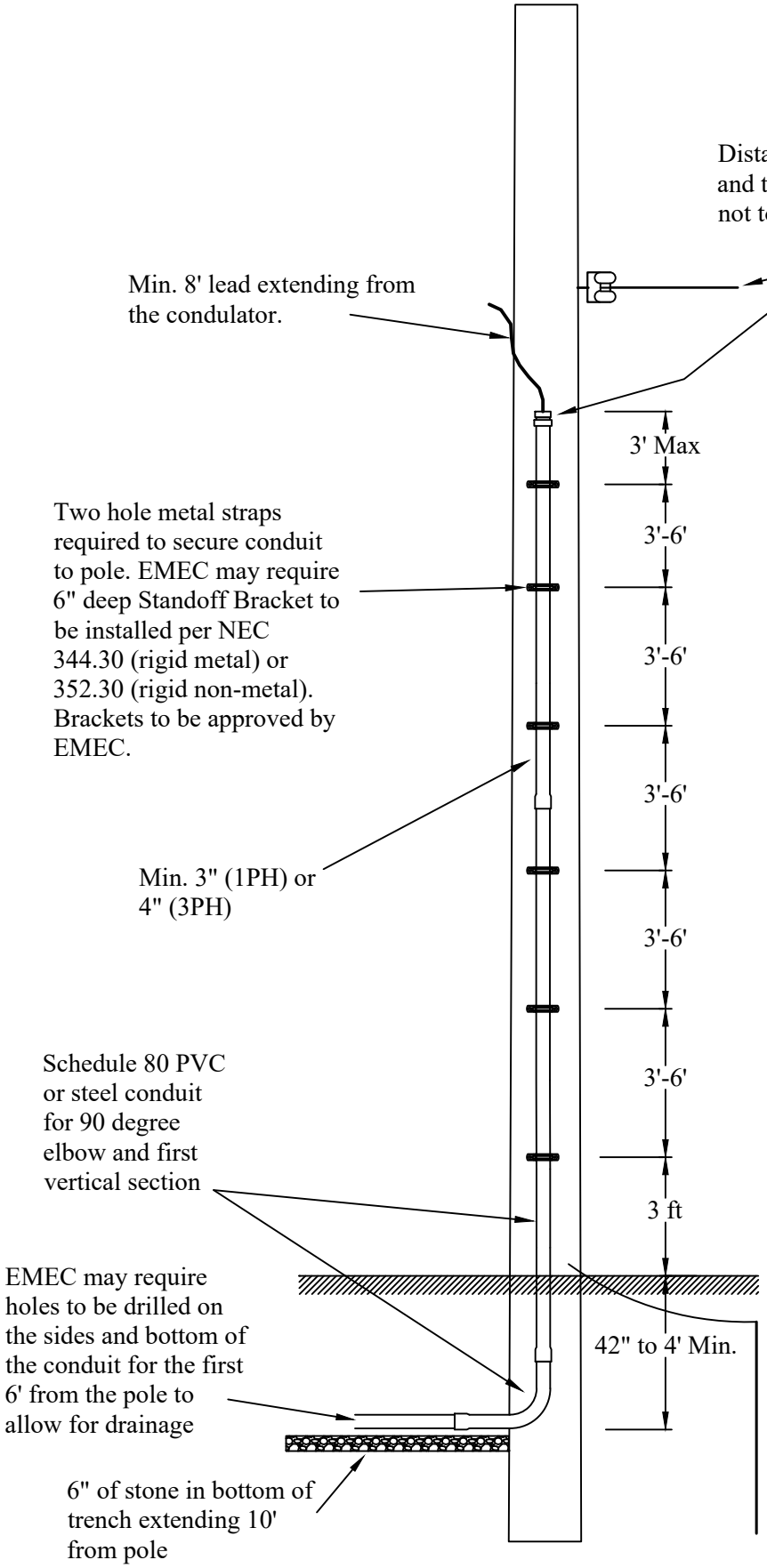
EASTERN MAINE ELECTRIC COOPERATIVE

CALAIS, ME

UNDERGROUND PRIMARY OVERVIEW

DWG. NO. URD-001

REV 1



35	40	45	pole height, ft
5'	5'	5'	Top of pipe to top of pole
24'	29'	33.5'	Total of pipe required above final grade
5	6	7	Min. Number of straps/ standoffs Brackets required

Member will provide all conduit (cut to length) and straps or standoffs in accordance with the table

Member will mount the first 10' of conduit **(ONLY EMEC personell are authorized to go above the 10' point)**.

Condulator is supplied and installed by EMEC

Ground Rod Supplied by Member 8' ($\frac{5}{8}$" dia.) rod connected to pole ground with a minimum of #6 AWG copper wire placed at least 24" from pole below grade. All metal within reach must be bonded to ground.

Drawing not to scale. Some details are exaggerated to show detail.

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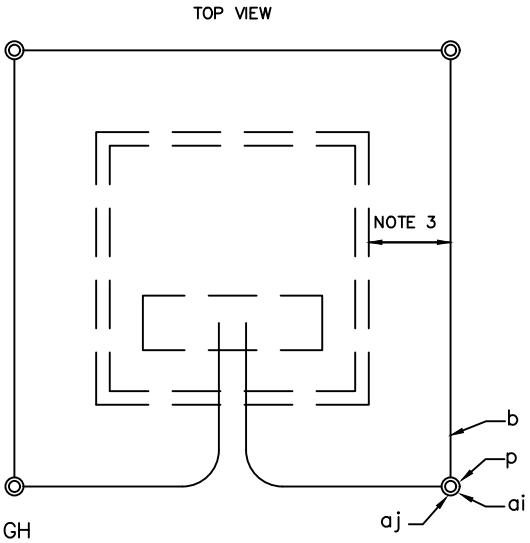
DATE: 1/15/26	

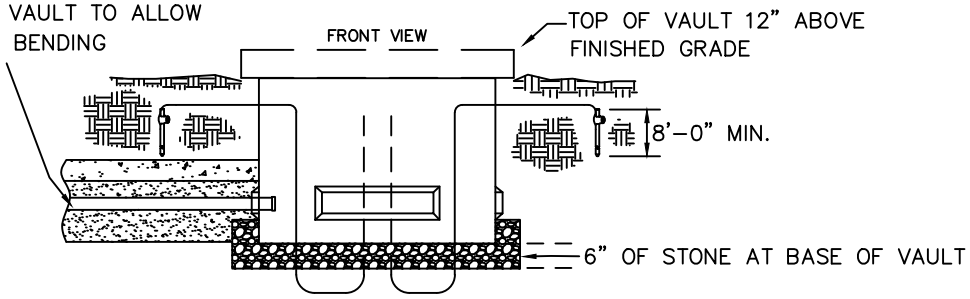
EASTERN MAINE ELECTRIC COOPERATIVE
CALAIS, ME

UNDERGROUND PRIMARY POLE ATTACHMENT

DWG. NO. URD-002 REV 1



CONDUIT MAY ENTER THROUGH MANUFACTURED ENTRANCES OR UNDERNEATH VAULT WITH A 90 DEGREE ELBOW ELBOWS MUST LEAVE A MIN. OF 24" FROM THE TOP OF THE VAULT TO ALLOW FOR CABLE BENDING



ITEM	QTY.	MATERIAL
av		Minimum #6 AWG bare copper (as required) 30'-0" Min.
p		Connectors (as required)
ai	4	Ground rods
aj	4	Clamp, ground rod, 1 per rod

NOTES:

1. FOR THREE PHASE INSTALLATIONS, PLACE ONE GROUND ROD AT EACH CORNER. FOR SINGLE PHASE INSTALLATIONS, ONE GROUND ROD IS SUFFICIENT.
2. GROUNDING GRID #6 AWG BARE COPPER BURIED 12" BELOW GROUND, RUN WIRE INTO BASEMENT AND ALLOW 5'-0" FOR GROUNDING LIVE FRONT SWITCH / FUSE ENCLOSURES.
3. PLACE GROUND WIRE A MINIMUM OF 24" AWAY FROM THE SIDE OR SIDES OF PAD THAT A PERSON WOULD STAND TO OPERATE THE EQUIPMENT. THE GROUND WIRE MAY BE PLACED WITHIN 12" OF THE OTHER SIDES.
4. 8' GROUND RODS AT EACH CORNER.

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DATE: 1/15/26	

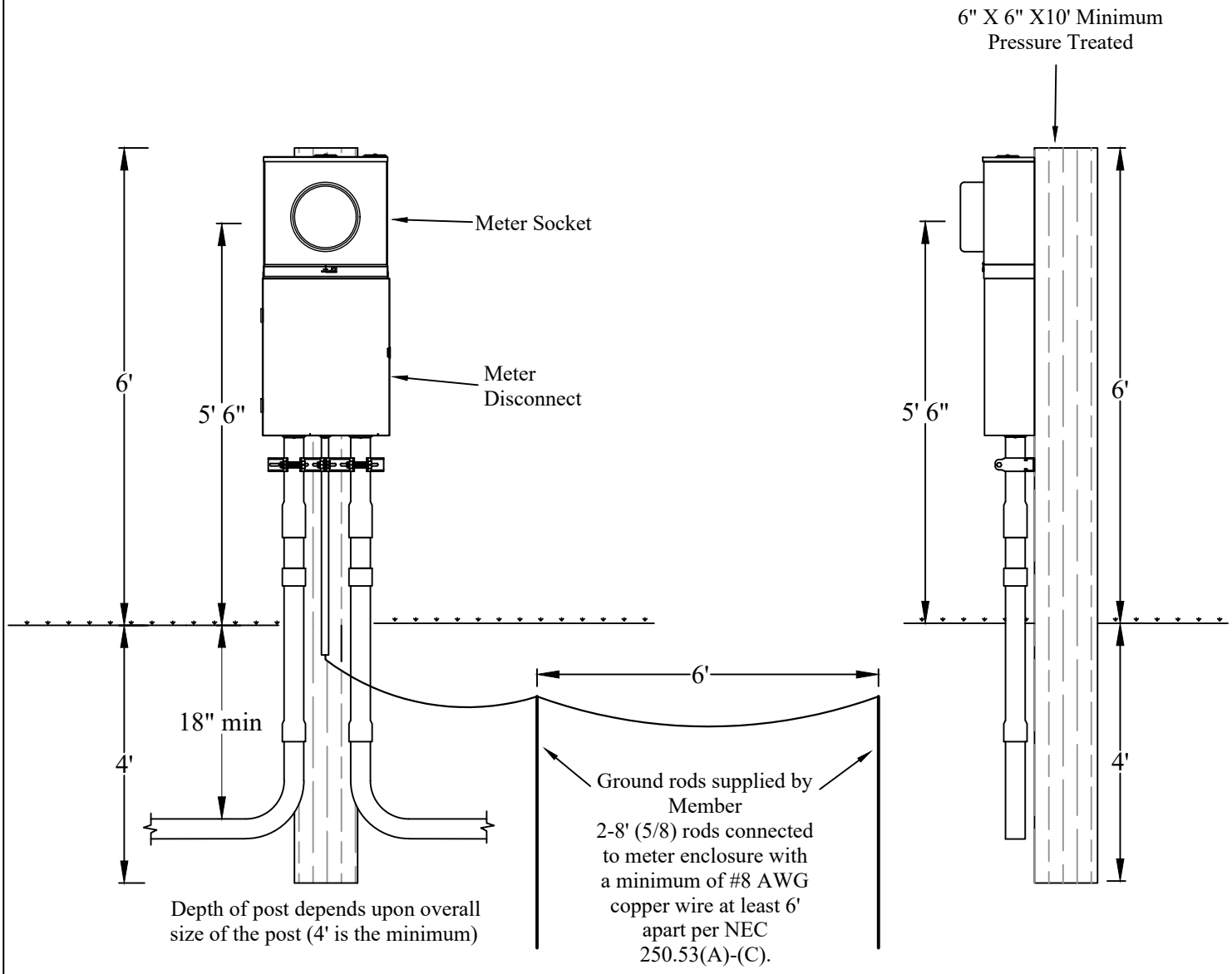
EASTERN MAINE ELECTRIC COOPERATIVE

CALAIS, ME

GROUNDING AND TRANSFORMER VAULT INSTALLATION

DWG. NO. PAD-001

REV 1



NOTES:

1. Schedule 80 PVC or greater is required for all service and grounding conductor ground penetrations subject to physical damage per NEC 300.5(D)(1)-(4) and NEC 250.64(B)(2)-(3).
2. Mounting dimensions and codes apply to dwelling mounted services.

Drawing not to scale. Some details are exaggerated to show detail.

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CKD: ASB	SCALE: NONE
DATE: 1/15/26	

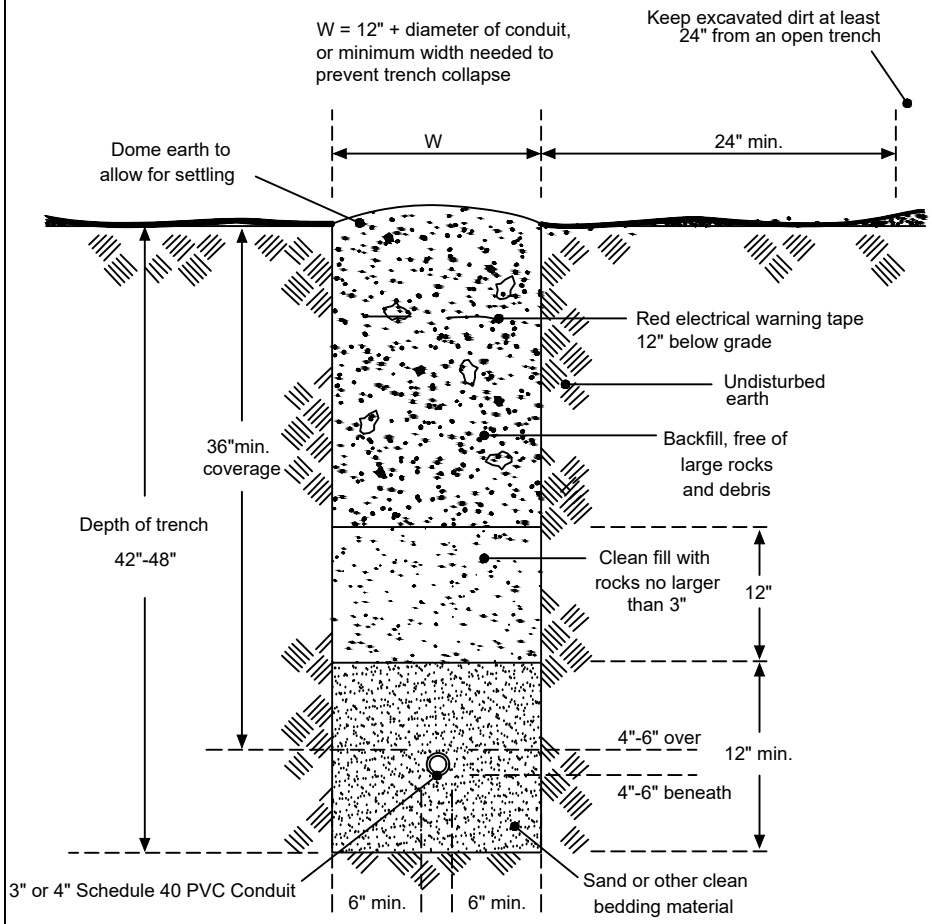
EASTERN MAINE ELECTRIC COOPERATIVE

CALAIS, ME

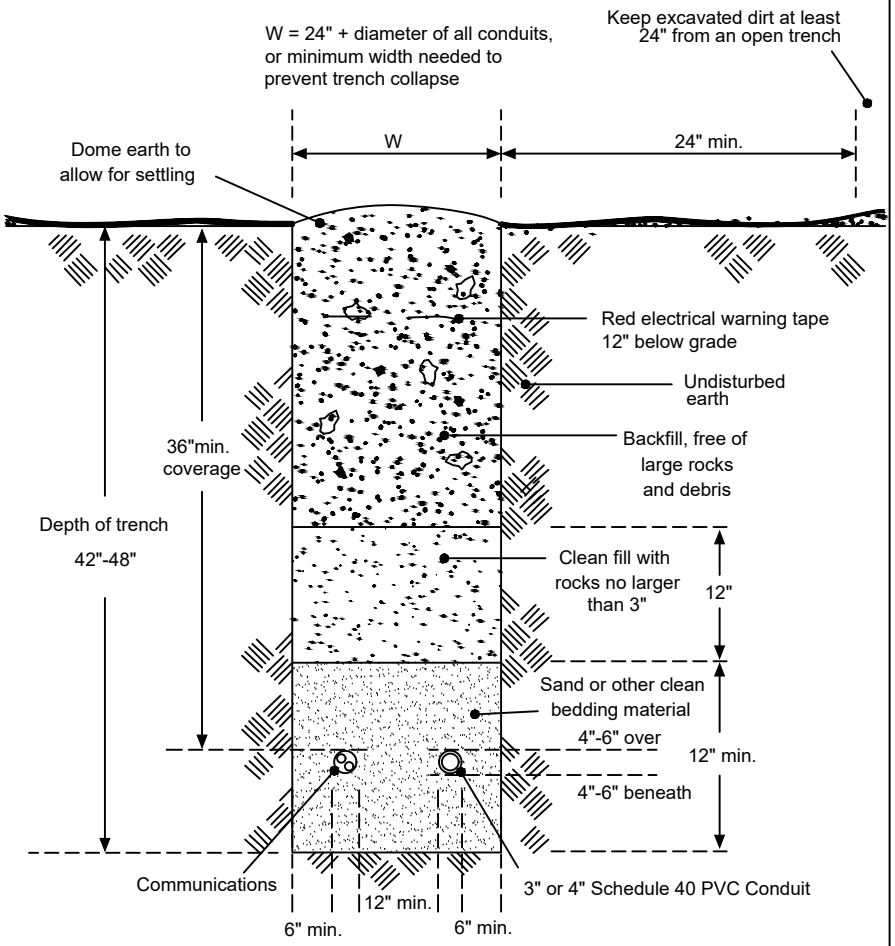
METER PEDESTAL FOR UNDERGROUND SERVICES

DWG. NO. MTR-001

REV 1



SINGLE USE CABLE TRENCH



JOINT USE CABLE TRENCH

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DES: EMEC	DRN: ASB
CKD: ASB	SCALE: NONE
DATE: 1/15/26	

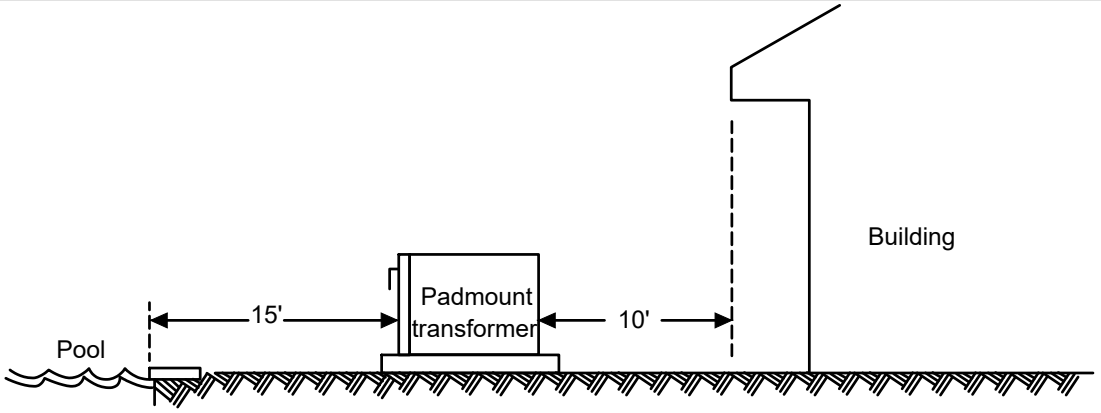
EASTERN MAINE ELECTRIC COOPERATIVE

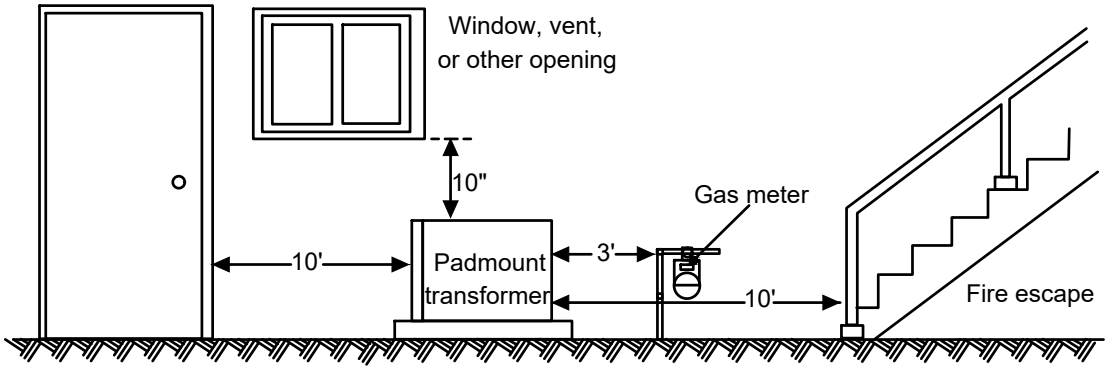
CALAIS, ME

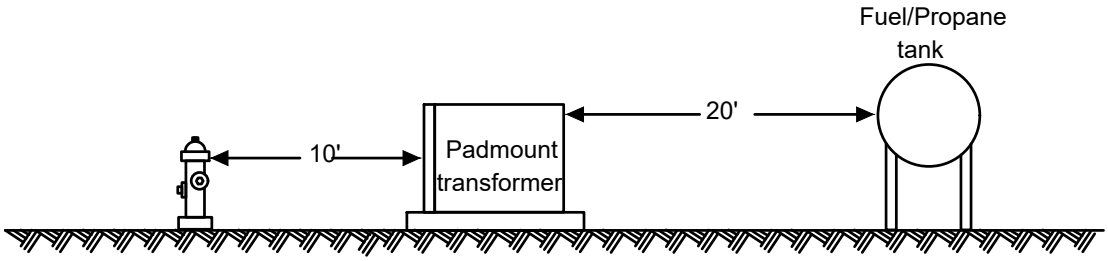
UNDERGROUND TRENCH SPECIFICATIONS

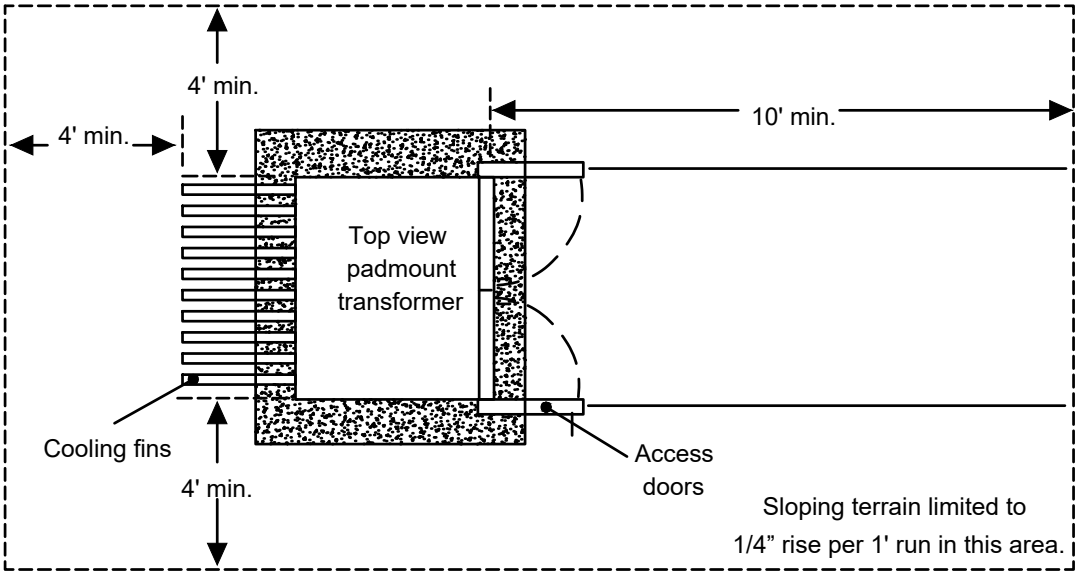
DWG. NO. TRC-001

REV 1









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DES: EMEC	DRN: ASB
CKD: ASB	SCALE: NONE
DATE: 1/15/2026	

EASTERN MAINE ELECTRIC COOPERATIVE

CALAIS, ME

PADMOUNT TRANSFORMER CLEARANCE SPECIFICATIONS

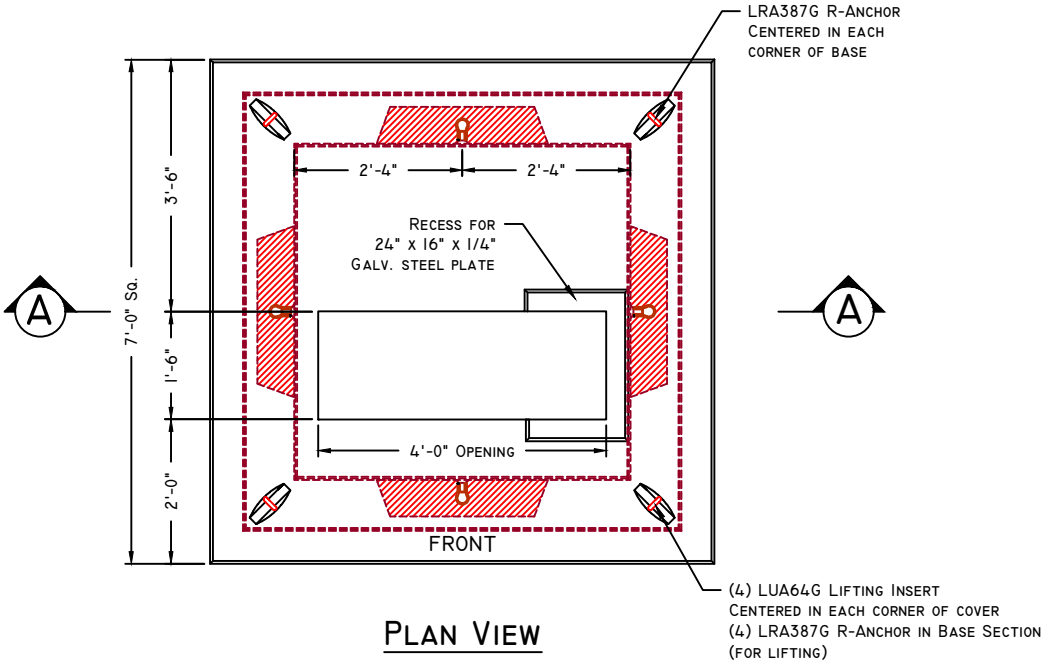
DWG. NO. TRF-001

REV 1

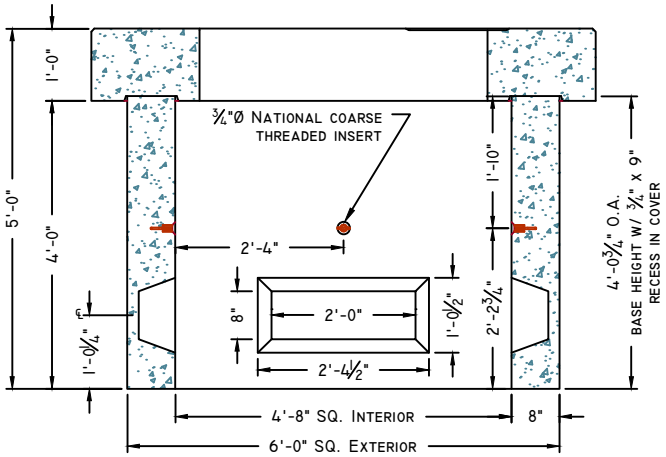
American Concrete Industries

3 Phase 7' x 7' Transformer Pad

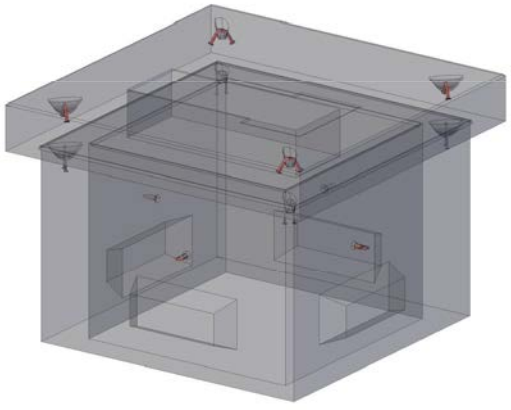
WWW.AMERICANCONCRETE.COM
1717 Stillwater Ave.
Veazie, ME. 04401
Tel: (207) 947-8334
Fax: (207) 947-3580



Plan View



Section A-A

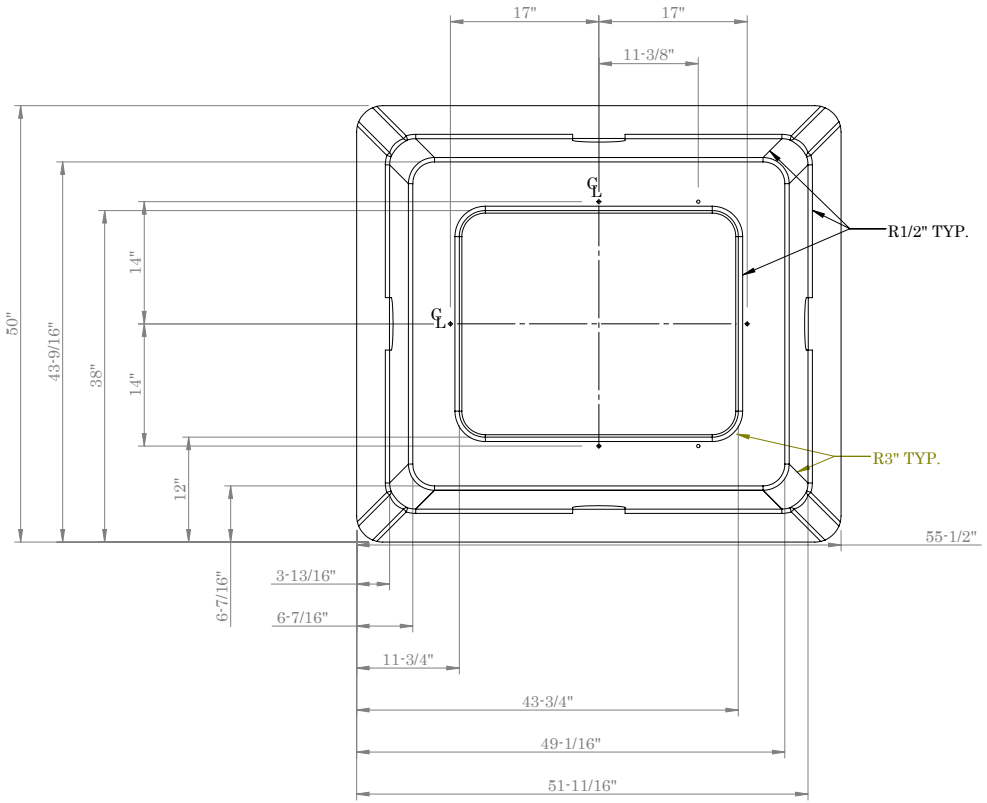


Conceptual View

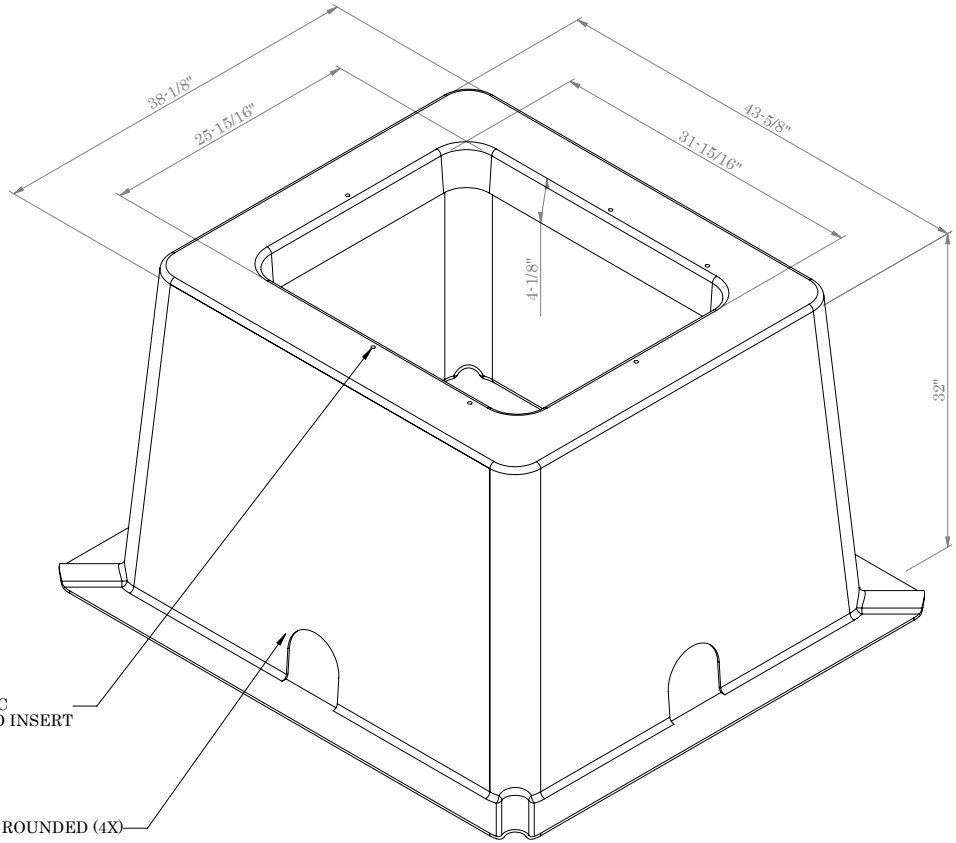
1. **Site Preparation Notes:**
   - 1.1. Pad shall be set on a properly prepared gravel base and oriented so the front* of the transformer has truck access, and is protected from traffic.
   - 1.2. Finished grade shall be prepared in such a way as to shed water away from the pad
2. **Manufacturing Notes:**
   - 2.1. Concrete compressive strength: 4,000psi @ 28 days
   - 2.2. Air entrainment: 4%-6%
   - 2.3. Grade 60 reinforcement
   - 2.4. 3/4"Ø National course threaded inserts cast-in as shown for pulling eyes
3. **Physical Specifications:**
   - **3.1. Cover Weight (#321540): 6,290 lbs**
   - **3.2. Base Weight (#321520): 8,080 lbs**
   - **3.3. Total Weight: 14,370 lbs**

*Front denotes the side on which the access doors are located.

Utility | Transformer Pad | CMP | 3 Phase 7'x7' CMP		Scale: 3/8" = 1'-0" Unless otherwise noted	Revision #: 0.01
American Concrete Industries Catalog	Item#321500	Drawn Date: 12/18/2017 JWP/OLM	Revision Date: 10/03/18

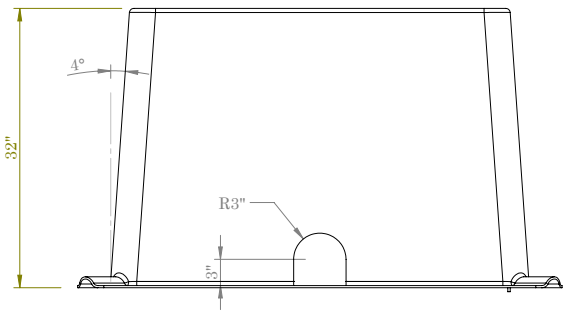


TOP VIEW



ISOMETRIC

APPROXIMATE WEIGHT 105lbs.
STACKING CAPACITY APPROXIMATELY 12



SIDE VIEW

Alternatives:
-Electri-Glass BP2000
-Other alternatives please consult with EMEC

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN:	
INCHES	
TOLERANCES ARE:	
ANSI CLASS	2A

Oldcastle Infrastructure
A CRH COMPANY
2300 HIGHWAY 11 NORTH, SWEETWATER, TN. 37874
TEL. (806) 628-4380

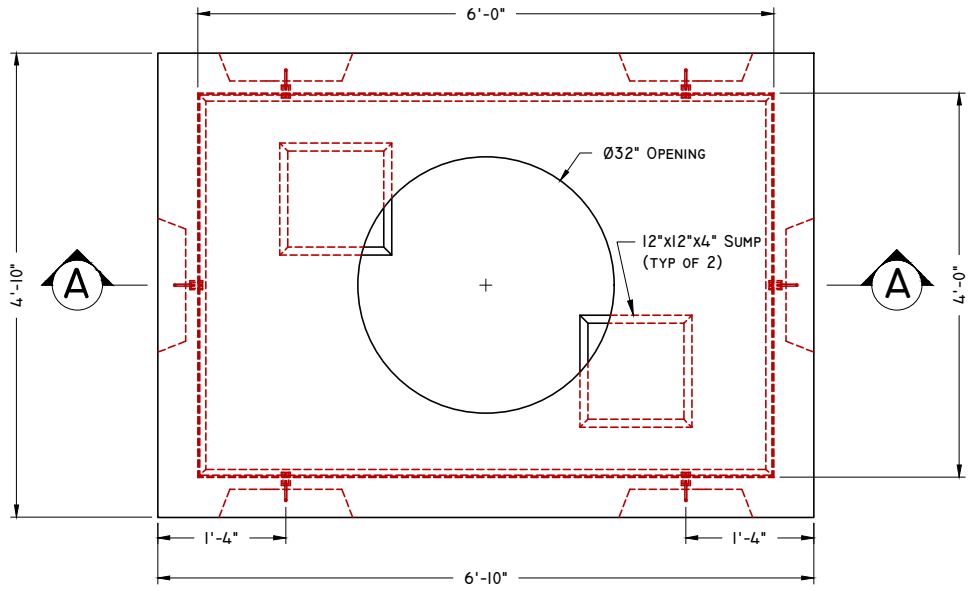
DRAWING NAME:	HL48 BOX PAD 6x6 ROUNDED MOUSE
SHEET NAME:	1 OF 1
DRAWING DESCRIPTION:	50"x55.5"x32" FIBERGLASS BOX PAD 6x6 ROUNDED MOUSE
DRAWING SCALE:	NTS
FILE NAME:	ROUNDED BOX PAD 6x6 MOUSE ROUND 4DEG 2-3-17

DO NOT SCALE DRAWING	
CAD GENERATED DRAWING DO NOT MANUALLY UPDATE	
DESIGN DATE:	1/18/17
DRAWN BY:	RJ
CHECKED	WHO
APPROVED	WHO
REV	A
REV DATE	1/18/17

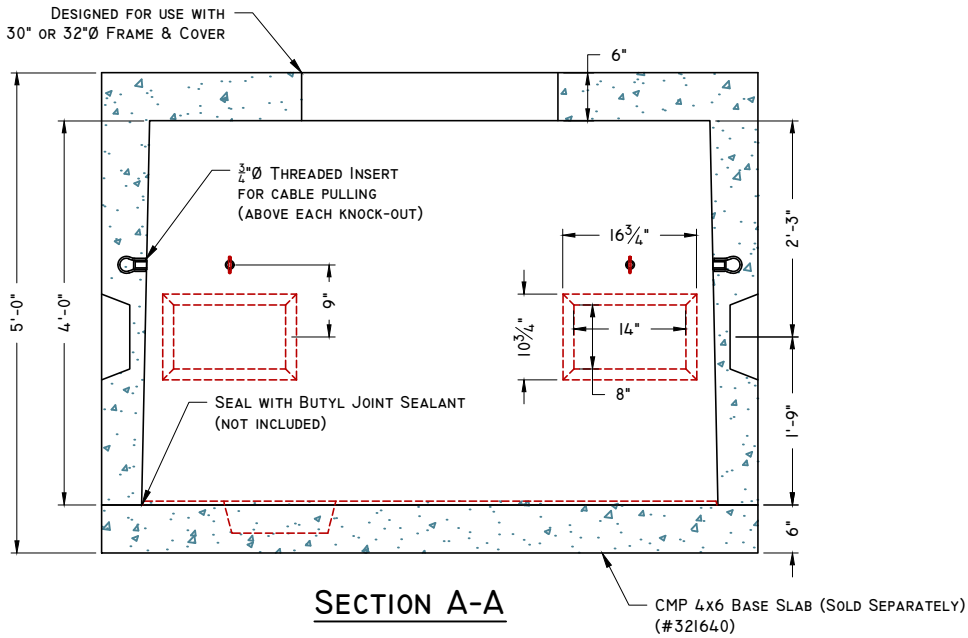
American Concrete Industries

4'x6' CMP Splice Box

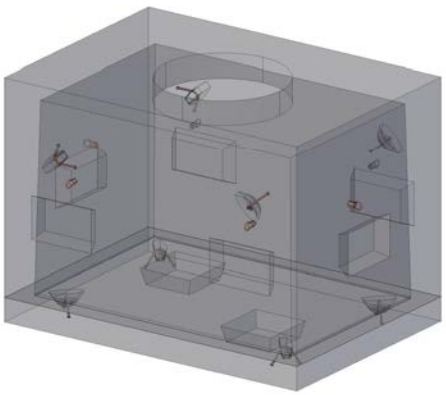
WWW.AMERICANCONCRETE.COM
1717 Stillwater Ave.
Veazie, ME. 04401
Tel: (207) 947-8334
Fax: (207) 947-3580



Plan View



Section A-A



Conceptual View

1. **Site Preparation Notes:**
   - 1.1. Pad shall be set on a properly prepared <1" gravel or crush stone base
   - 1.2. Finished grade shall be prepared in such a way as to shed water away from the pad
2. **Manufacturing Notes:**
   - 2.1. Concrete compressive strength: 4,000psi @ 28 days
   - 2.2. Air entrainment: 4%-6%
   - 2.3. Grade 60 reinforcement
   - 2.4. Designed for H-20 traffic loading
   - 2.5. 3/4"Ø National course threaded inserts as shown for pulling eyes
3. **Physical Specifications:**
   - **3.1. Upper Unit Weight (#321660): 7,692 lbs**
   - **3.2. Base Slab Weight (#321640): 2,493 lbs**
   - **3.3. Total Weight: 10,185 lbs**

Utility | Pull Boxes | CMP | 4'x6' CMP Splice Box		Scale: 1/2" = 1'-0" Unless otherwise noted	Revision #: 0.00
American Concrete Industries Catalog	Item#321660	Drawn Date: 10/4/2018 OLM	Revision Date: 00/00/00