Trench Specifications

- 1) Minimum cover to be 36" from top of primary conduit to sub-grade.
- 2) Minimum cover to be 24" from top of secondary conduit to sub-grade.
- 3) Bottom of trench shall be soil backfill to provide smooth, even supports for conduits.
- 4) There is to be a minimum of 12" separation between electrical conduits and all other conduits.
- 5) Warning tape to be a minimum of 12" above primary electrical conduits.
- 6) Warning tape required in all TCEC trench. (Reference pictured)
- 7) Trench may be used jointly if NESC separation is maintained.
- 8) Primary Trench must maintain adequate depth. "Adequate depth" is defined as 36" from sub-grade to top of conduit.
- 9) With TCEC approval [signature form required] minimum cover requirements may be reduced by six inches with every two inches of 3000 PSI concrete poured directly onto conduit. See NESC Rule 2017-352D.2. (Red Dye Required) *CONTACT TCEC BEFORE POURING CONCRETE*
- 10) Schedule 40 electrical grade PVC conduit shall be used unless otherwise specified.
- 11) All conduit connections shall be primed with purple primer.
- 12) All conduit connections should be glued with PVC glue or PVC cement. Glue shall not match color of primer.
- 13) If any type of vault, pad-mounted equipment, or pedestal for the underground electric is planned then all other utilities should be routed around these facilities.
- 14) For 2" and larger waterlines special permission must be granted by TCEC.
- 15) Open cut road crossings shall be backfilled according to City/County requirements.
- 16) TCEC representative may require ducts to be concrete capped depending on degree of slope or other circumstances.
- 17) Spacers may be required in multi conduit ditches if determine necessary by TCEC. If required the spacers shall be spaced at 8'.
- 18) 11" spacing required between riser conduit and pole for TCEC stand-off installation.
- 19) Polyester pulling tape (2,500-pound tensile strength) in all conduit. Do not tie knots in the mule tape - it must be a continuous run. Footage markers required on tape.
- 20) Vented riser coupling required for meter base connection.
- 21) Schedule 80 PVC electrical conduit required between vented coupling and riser 90.
- All trenches shall be a minimum width of 6" (unless specified by TCEC personnel).
- 23) TCEC does not take possession of conduit and trench until the conductor is installed and energized.

Texas law, specifically the Underground Facility Damage Prevention and Safety Act (Utilities Code, Title 5, Chapter 251), requires anyone planning to dig to contact Texas 811 at least two business days (48 hours, excluding weekends and holidays) before starting any excavation project.

	3				
Typical in all Drawings					
Р	Primary Conduit	OU	Other Utilities		
S	Secondary Conduit	G	Gas Line		
AS	Alternate Secondary	(F)	Feeder		

6" Conduit

Leaend



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Typical Notes Reference Page

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Conduit

Member/Developer Contribution:

- 1) Payment to TCEC for materials per the Line Extension Policy
- 2) Trench
- 3) Conduit & sweeps (schedule 40 or greater electrical grade PVC conduit)
- 4) Conduit spacers (when required by TCEC)
- 5) Polyester pulling tape (2,500-pound tensile strength) in all conduits. Do not tie knots in the mule tape. Must be a continuous run.
- 6) Rock-free dirt over initial backfill
- 7) Concrete or flowable fill where required. Flowable fill is NOT allowed as a substitute for concrete for TCEC equipment pads. TCEC equipment pads. Flowable fill may be used as backfill in situations where trench settling may be an issue or anywhere that does not require structural strength. The 28-day compressive strength range, when tested, must be a minimum of 300 psi. Flowable fill is NOT a substitute for concrete except where explicitly listed in the Underground Installation Specifications.
- 8) Meter sockets (TCEC will provide sockets only on TCEC-supplied meter pedestals)
- 9) Primary enclosure sleeves (if applicable)
- 10) Meter sockets (TCEC will provide pedestal-mounted sockets only)
- 11) Bollards, if deemed necessary by TCEC to protect electrical equipment. The design must be approved by TCEC before installation.
- 12) Ground rod 5/8 inch x 8 foot copper coated ground rod
- 13) Transformer pad
- 14) Meter pedestals with meter socket
- 15) Switchgear pad
- 16) Sectionalizer pad
- 17) Vault and manholes (neck extensions as required)

TCEC Contribution Paid for by Member/Developer as Indicated in the Line Extension Policy:

- 1) Primary conductors
- 2) Secondary conductors
- 3) Primary connectors
- 4) Secondary connectors
- 5) Transformers
- 6) Switchgear
- 7) Primary enclosures

Inspections:

Inspections are required after the staking appointment and before the job can be released to construction. Please contact TCEC by emailing woclerks@tcectexas.com or calling 817.752.8172 to schedule inspections. Cost estimate only to be provided after appointment. The invoice to be paid will be issued after the completion of the first inspection.

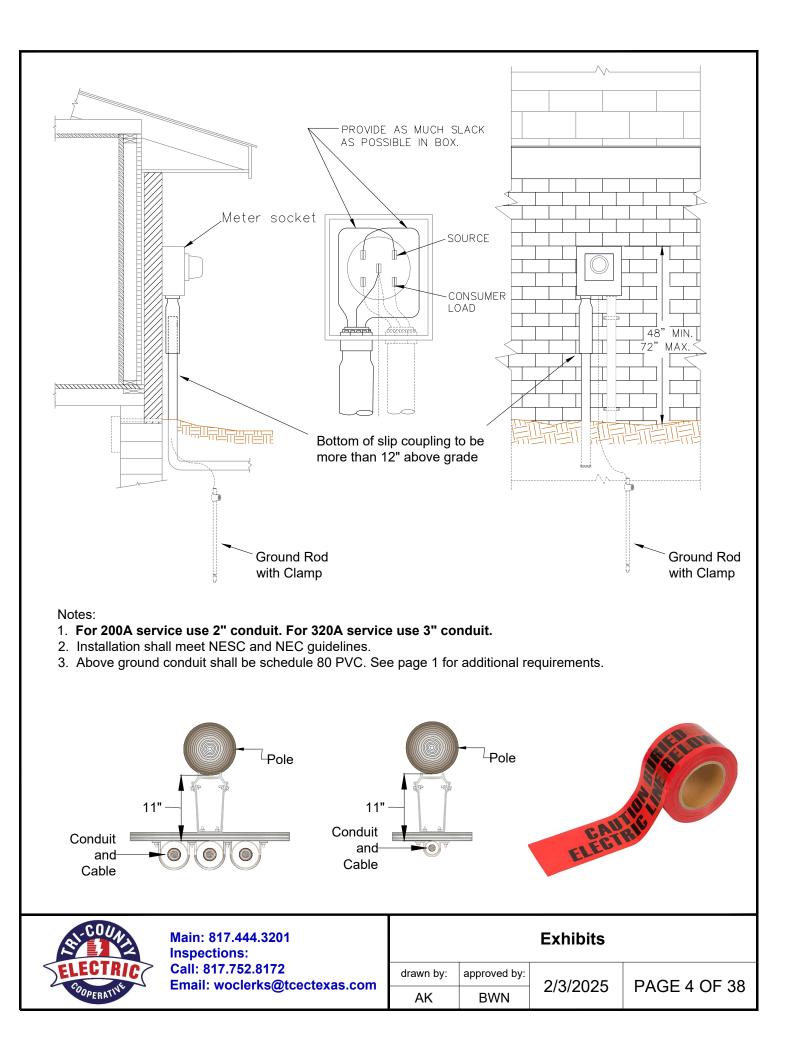
- 1) Trench, conduit, & pulling tape
- 2) Initial backfill & warning tape
- 3) Backfill

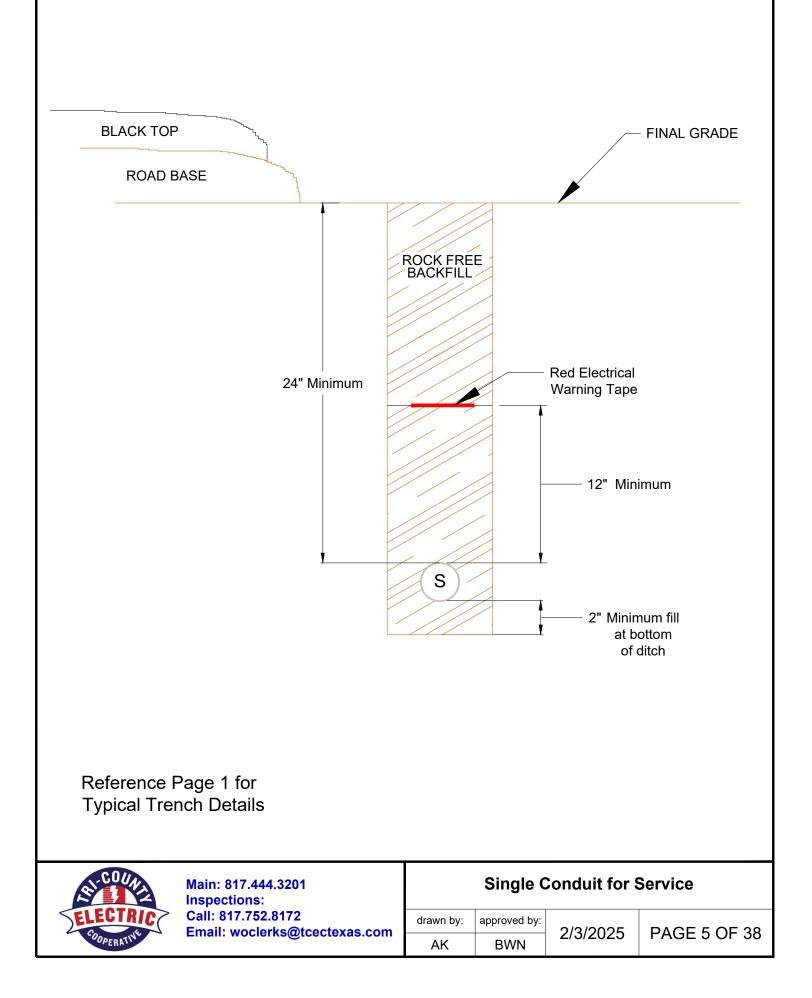


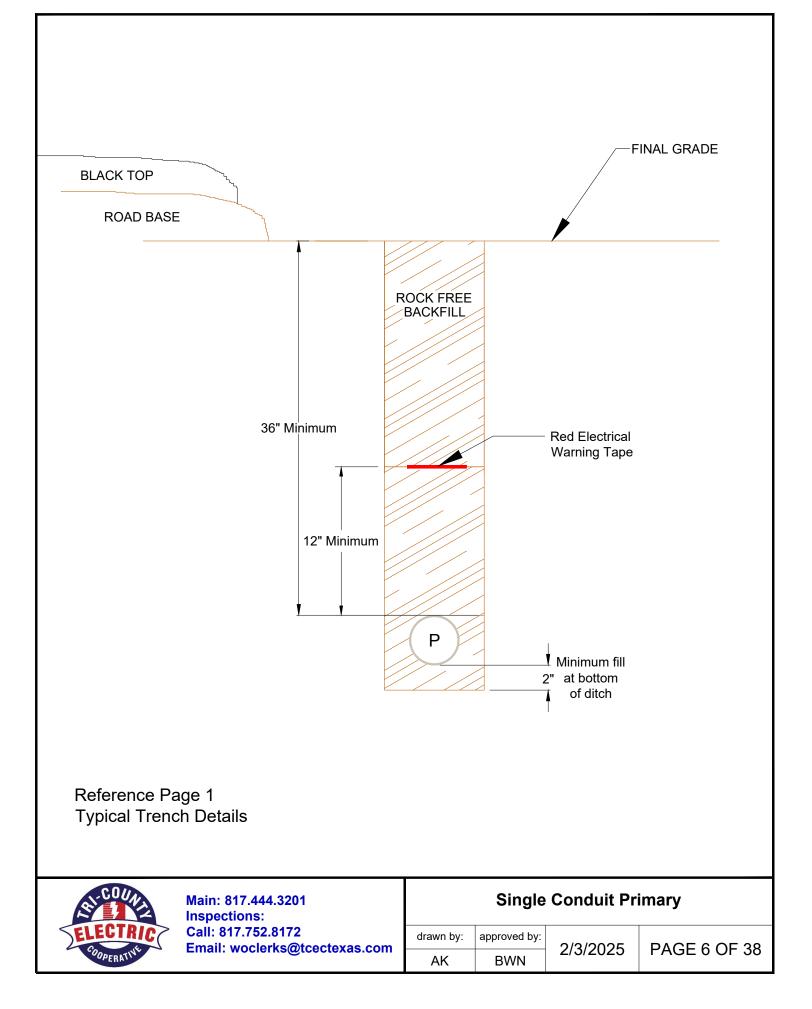
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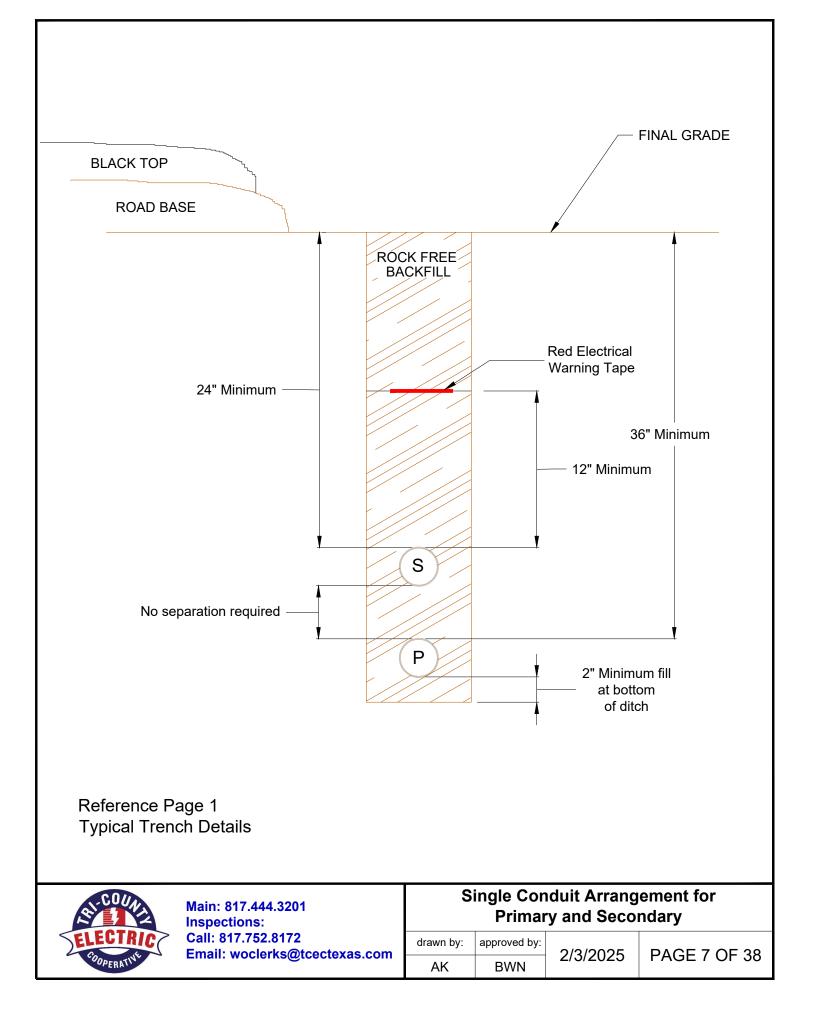
	Notes				
	drawn by:	approved by:	5/20/2025	PAGE 2 OF 38	
n	AK	BWN	5/20/2025	PAGE 2 UF 30	

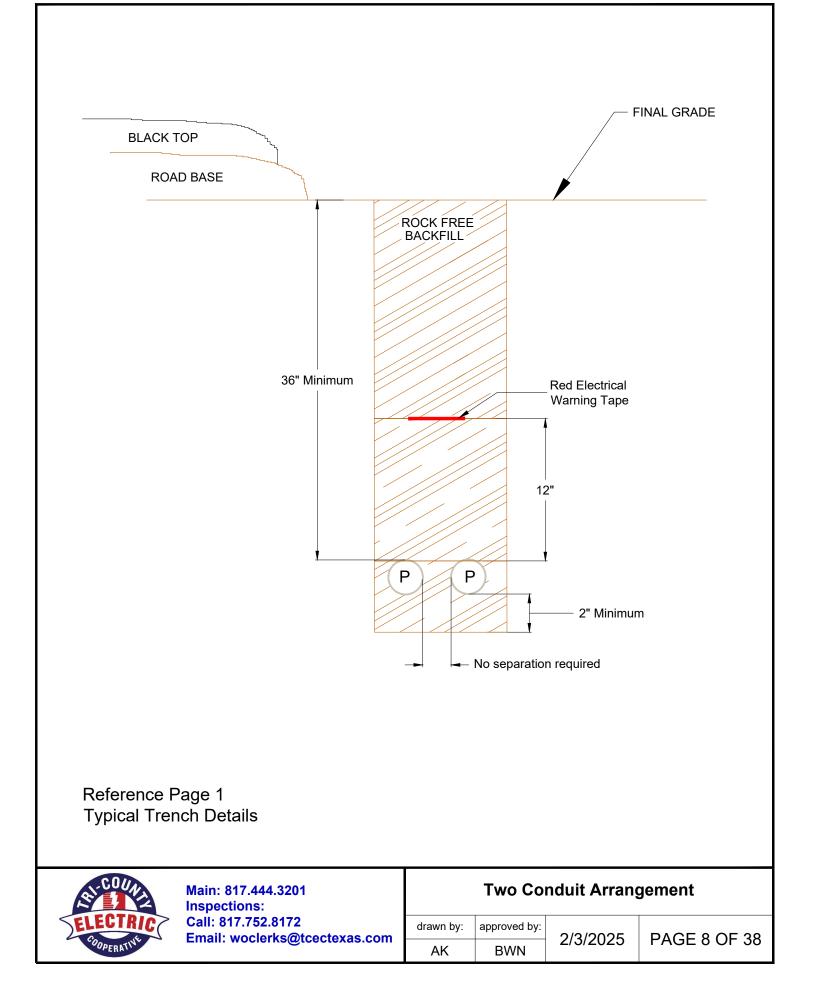
Typical Conduit Schedule						
Unit	t Unit Description			Recommended Conduit Size		
Service						
12Romex Streetlight Wire 12				2"		
6DXU	Cable 6 Duplex Underground			2"		
4DXU	Cable #4 Duplex Underground			2"		
4TXU	Cable #4 Triplex Underground			2"		
1/0TXU	Cable 1/0 Triplex Underground		2"			
1/0QXU	Cable 1/0 Quadraplex Underground		2"			
4/0TXU	Cable 4/0 Triplex Underground			2"		
•	Cable 4/0 Quadraplex Underground		3"			
350TXU	350 MCM Triplex Underground		3"			
	350 MCM Quadraplex Underground		3"			
	Wire - 500 MCM Triplex Undergrour	d		3"		
	Cable 500 MCM Quadraplex URD			4"		
600CU	Wire Thhn 600 CU Stranded			6"		
750CU	Wire Thhn 750 CU Stranded		6"			
1000CUWire Thhn 1000 CU Stranded6"						
	Primary Si	ngle Pha	se			
1/0UC	1/0 Underground Primary			2"		
4/0UC	4/0UC 4/0 Underground Primary			2"		
Primary Two Phase						
1/0UC	1/0 Underground Primary 4"					
4/0UC	4/0 Underground Primary 4"					
	Primary Th	ree Pha	se			
1/0UC	1/0 Underground Primary			4"		
4/0UC	4/0 Underground Primary 4"					
500UC	500 MCM Underground Primary 6"					
1000UC	1000 MCM Primary Underground Aluminum 6"					
1000UCC	1000 MCM Primary Underground Copper 6"					
Notes: 1. For 200A service use 2" conduit. For 320A service use 3" conduit.						
Main: 817.444.3201 Typical Conduit Sche			chedule			
SELEC	drawn by:	approved by:	2/2/2025	PAGE 3 OF 38		
COOPERI	AK	BWN	2/3/2025	FAGE 3 UF 30		

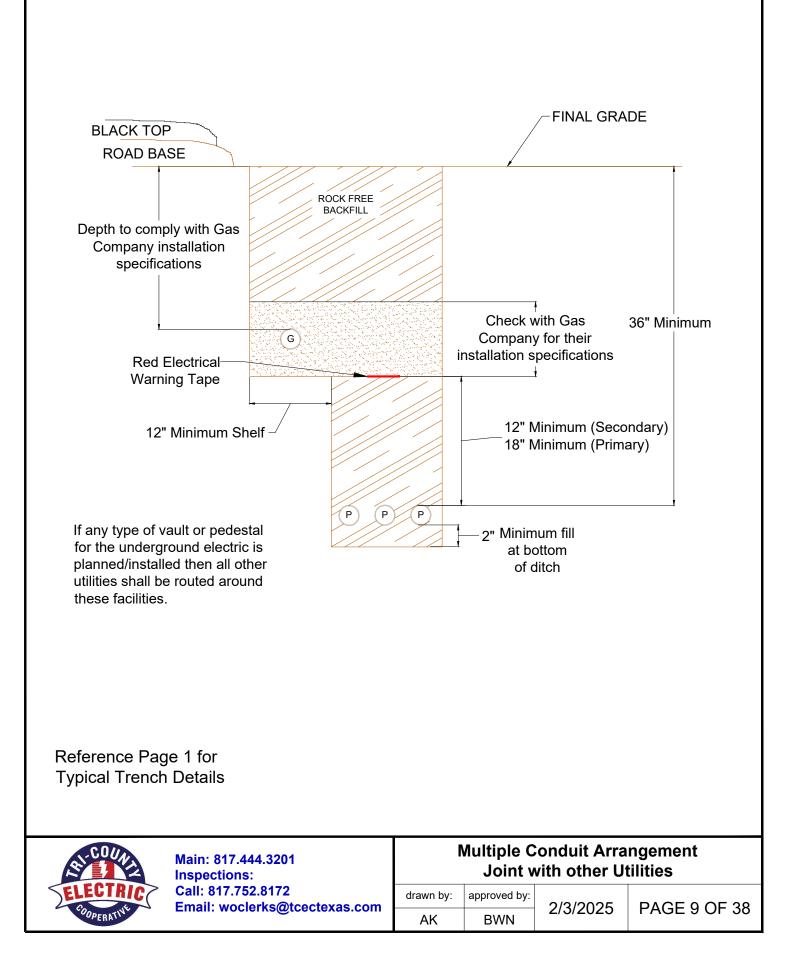


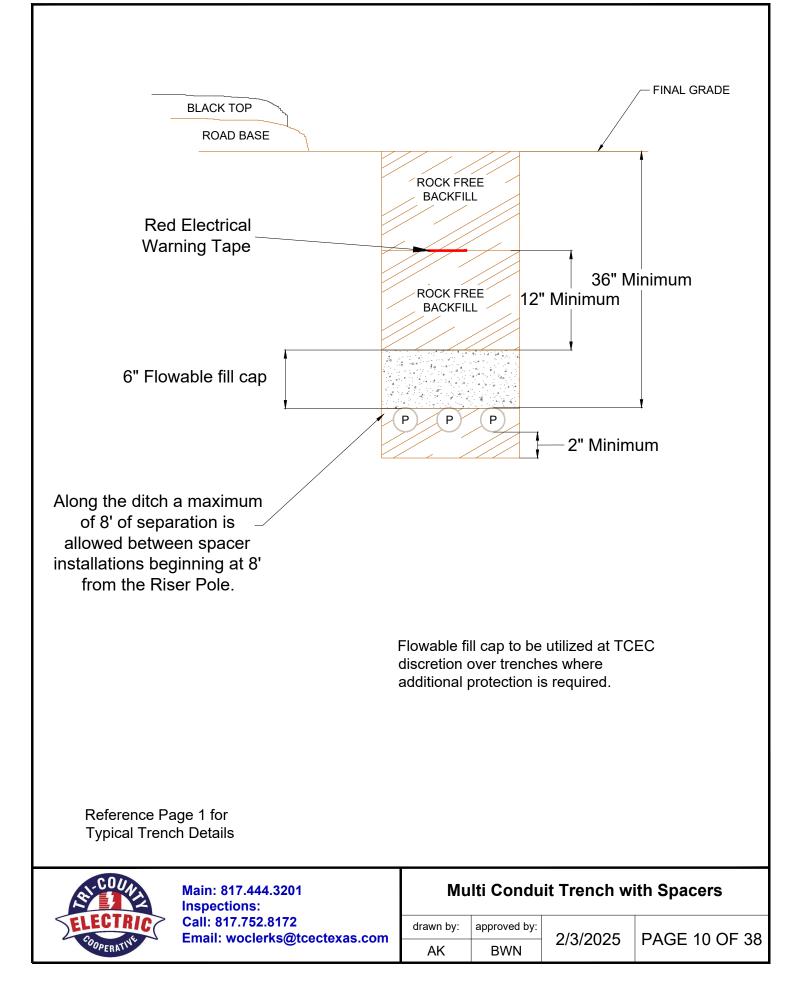


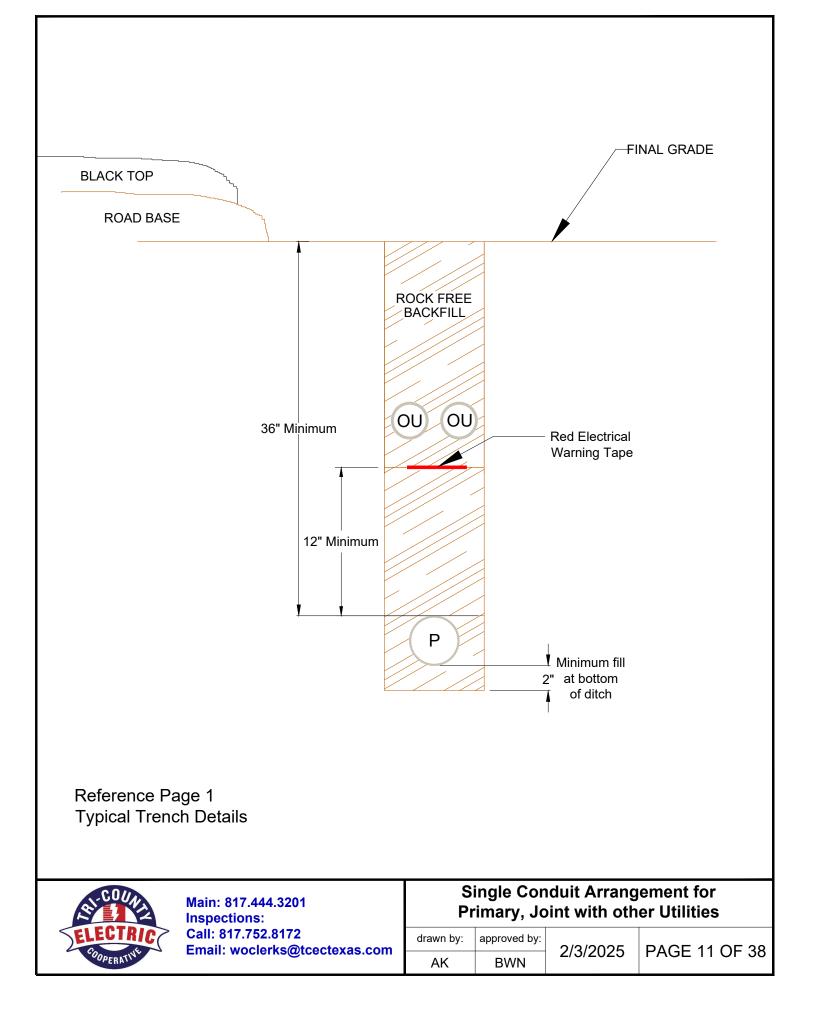


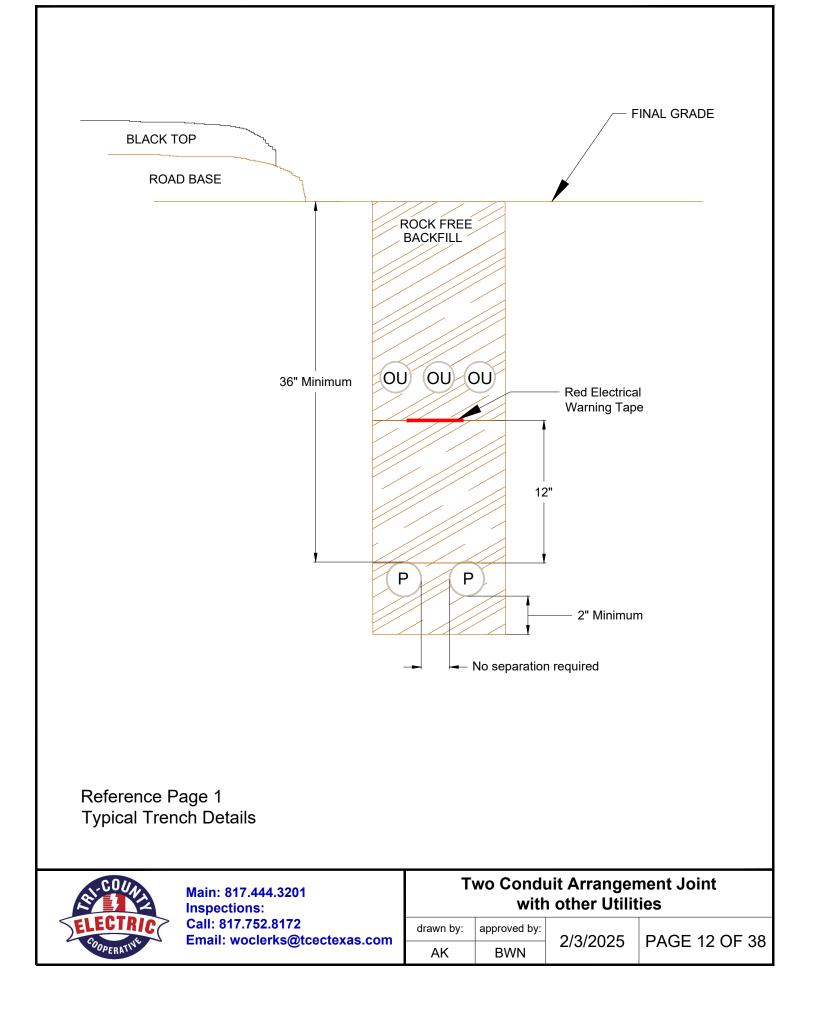


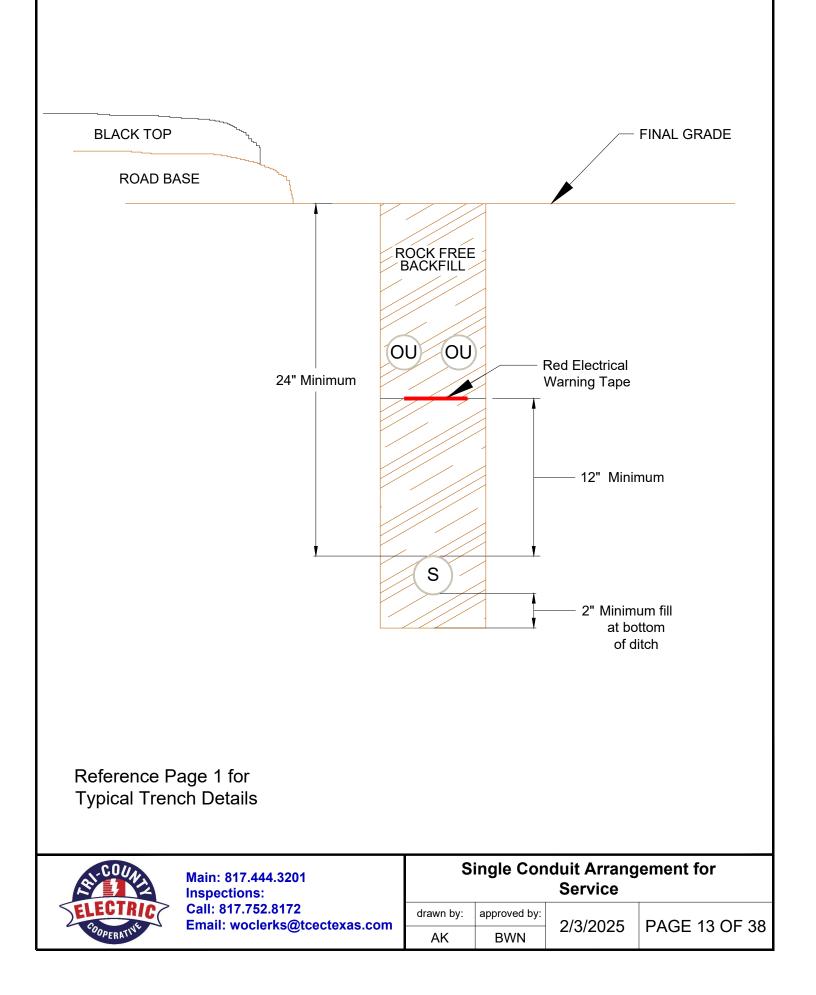


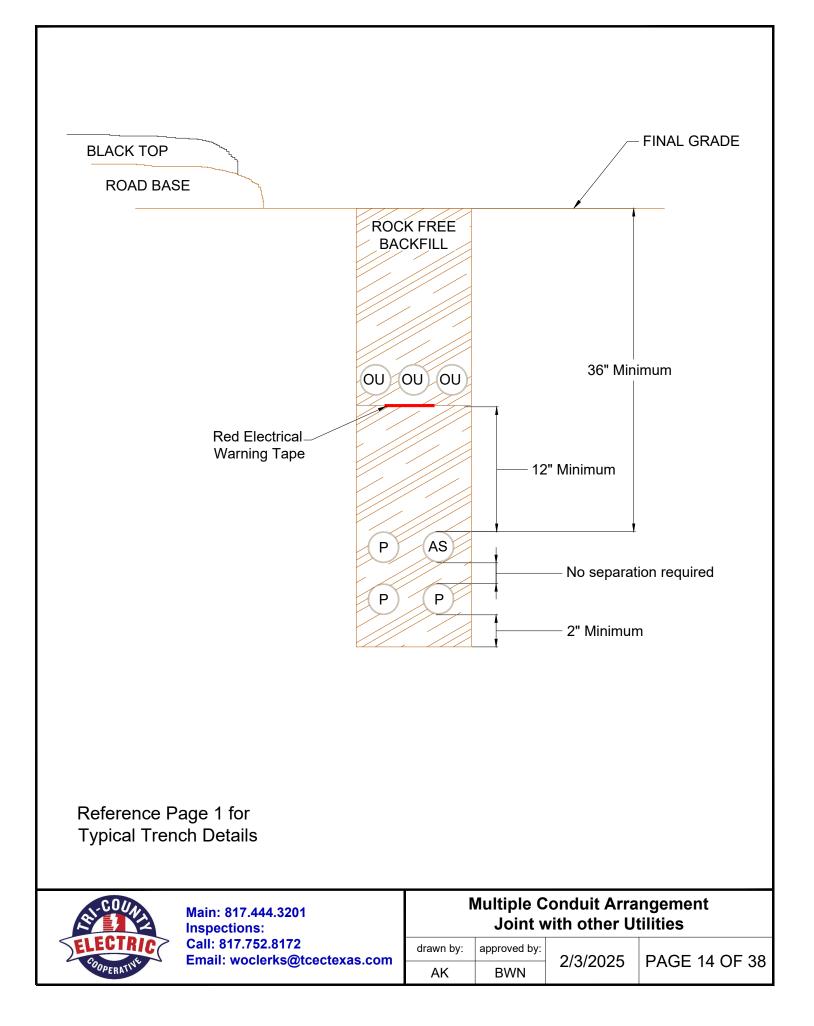


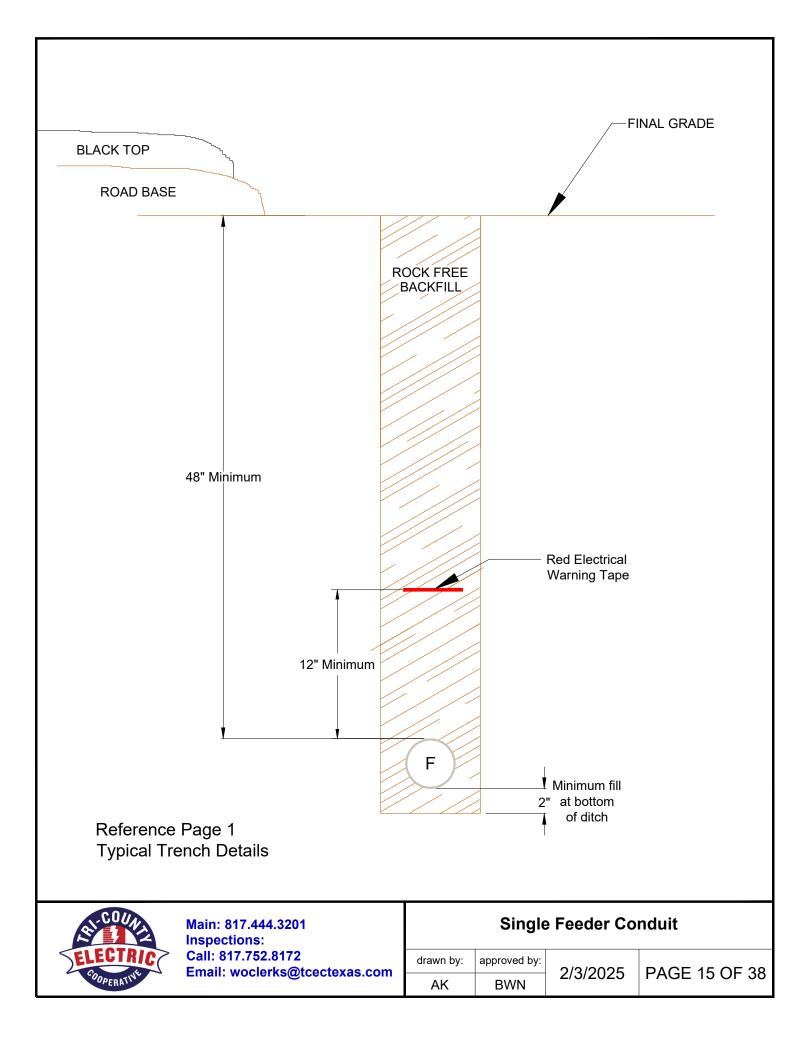


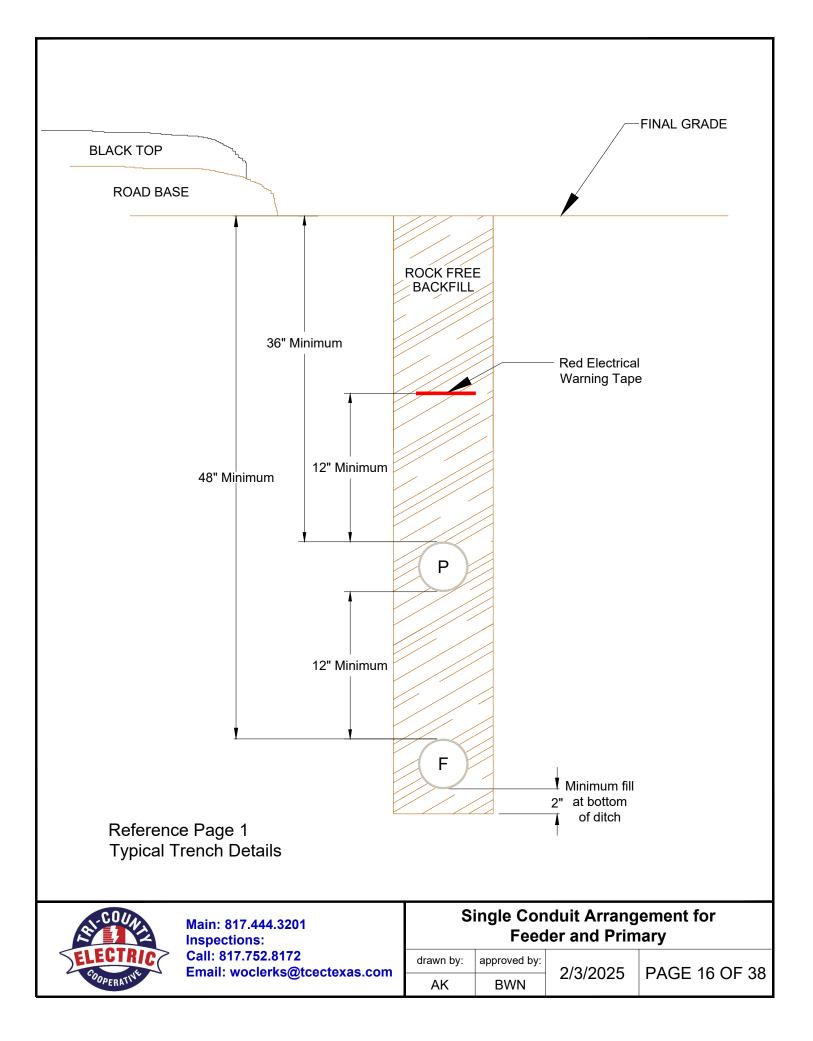


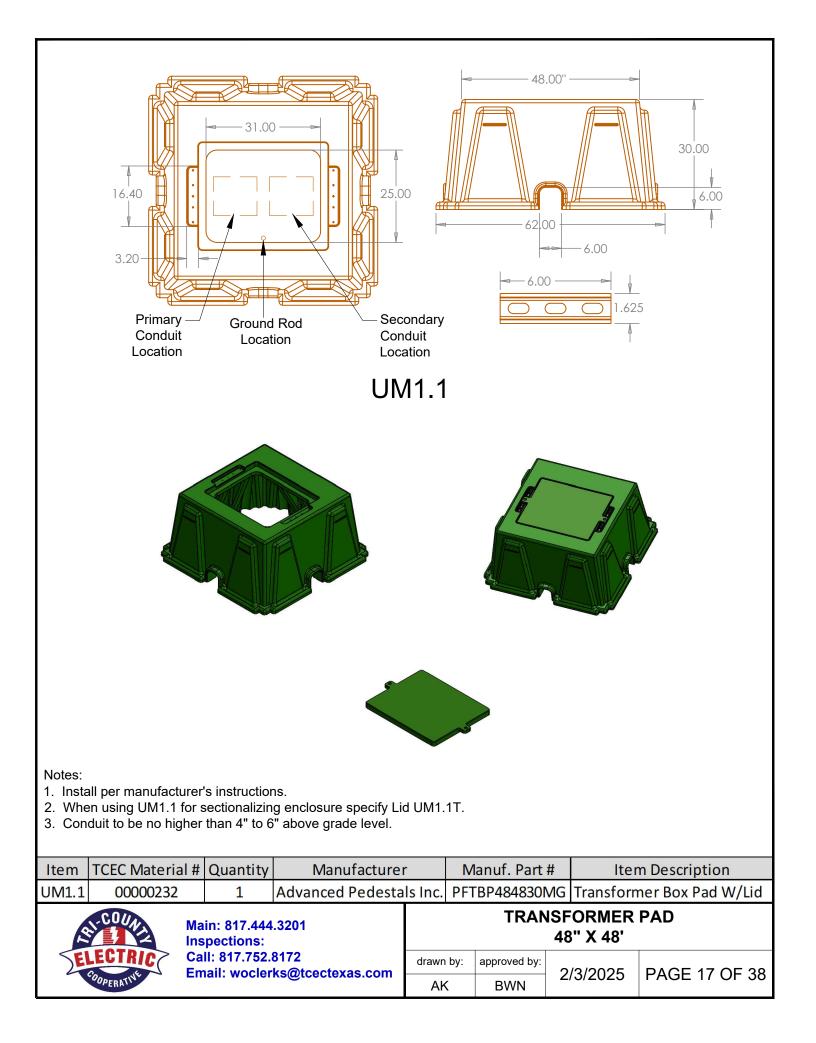


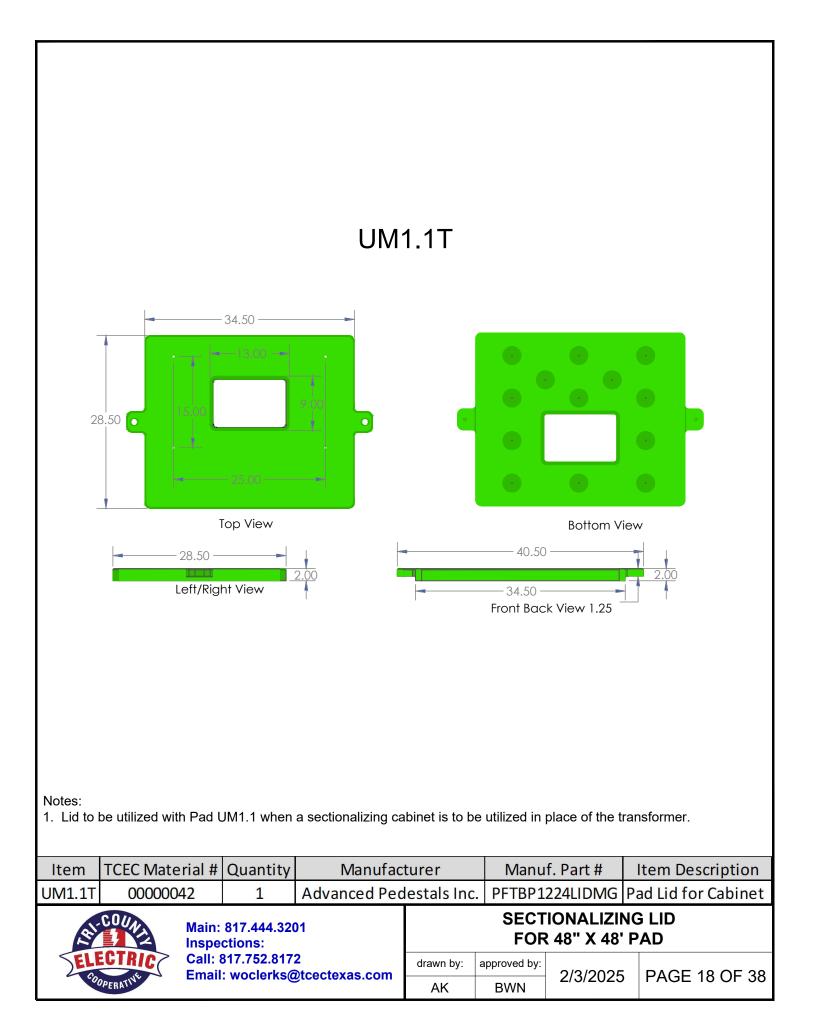












NOTES:

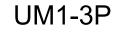
- 1. SOIL TO BE COMPACTED AT PAD SITE.
- 2. 12" PIERS DRILLED AT CORNERS OF PAD SHALL EXTEND 5' INTO THE GROUND. PIERS SHALL HAVE #4 BARS AT 90 DEGREE INTERVALS WITH 9" RINGS EVERY 12". PIER BARS MUST BE TIED TO PAD.

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- 3. 8" THICK #4 BARS SET ON 8" CENTERS TO EXTEND 1" INSIDE THE EDGE OF PAD.
- 4. CONCRETE TO HAVE MINIMUM OF STRENGTH OF 3000 PSI.

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5. PADS TO BE SQUARE AND LEVEL.



NA



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IRANSFORMER PAD - POURED IN PLACE				
75 KVA to 500 KVA				
drawn by:	approved by:			

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drawn by:	approved by:	2/2/2025	PAGE 19 OF 38
AK	BWN	2/3/2025	FAGE 19 OF 30

NOTES:

- 1. SOIL TO BE COMPACTED AT PAD SITE.
- 2. 12" PIERS DRILLED AT CORNERS OF PAD SHALL EXTEND 5' INTO THE GROUND. PIERS SHALL HAVE #4 BARS AT 90 DEGREE INTERVALS WITH 9" RINGS EVERY 12". PIER BARS MUST BE TIED TO PAD.
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- 5. PADS TO BE SQUARE AND LEVEL.



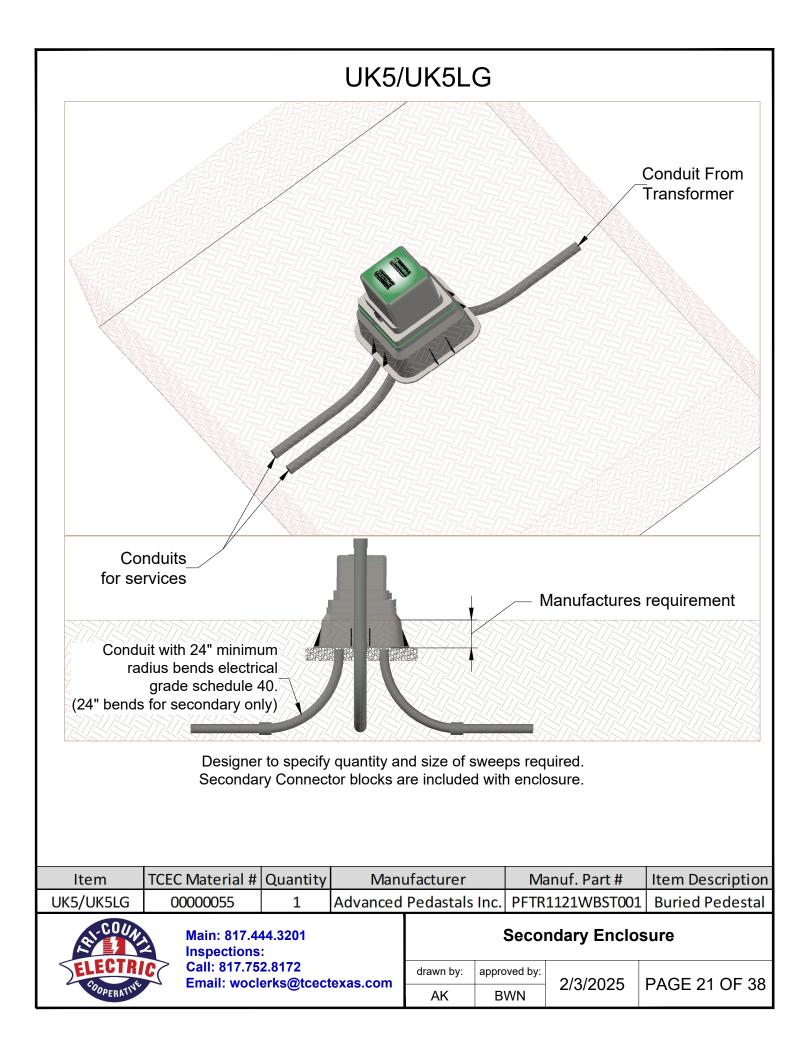
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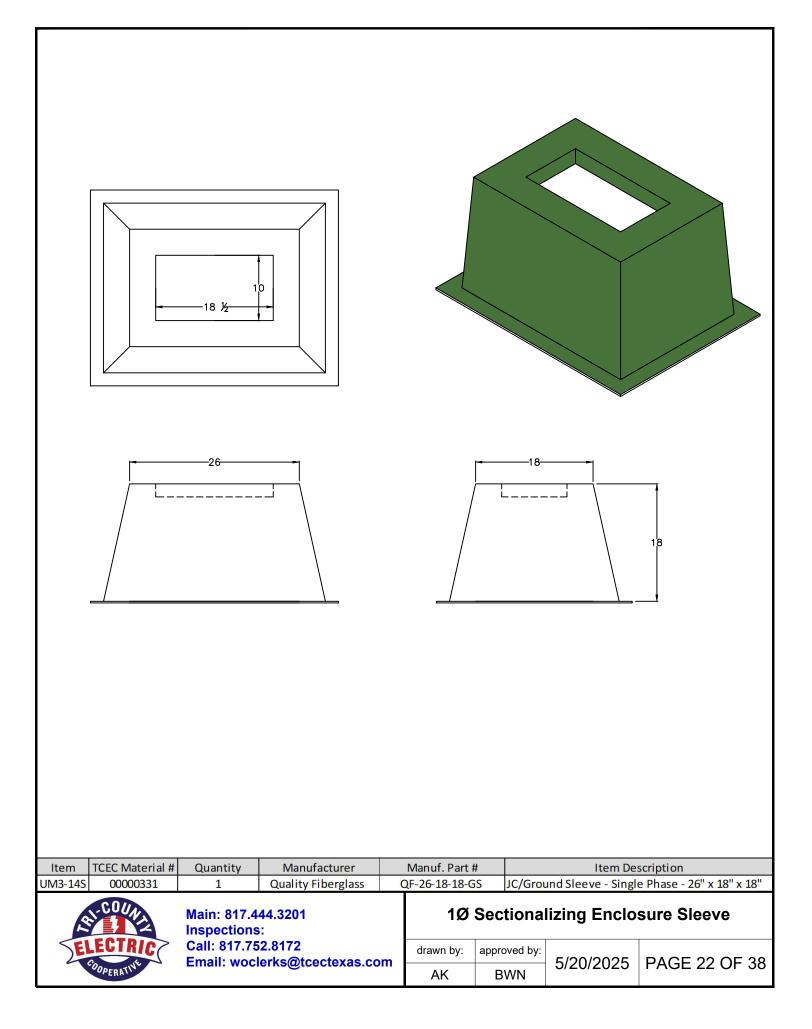
TRANSFORMER PAD POURED IN PLACE 750 KVA to 3500 KVA

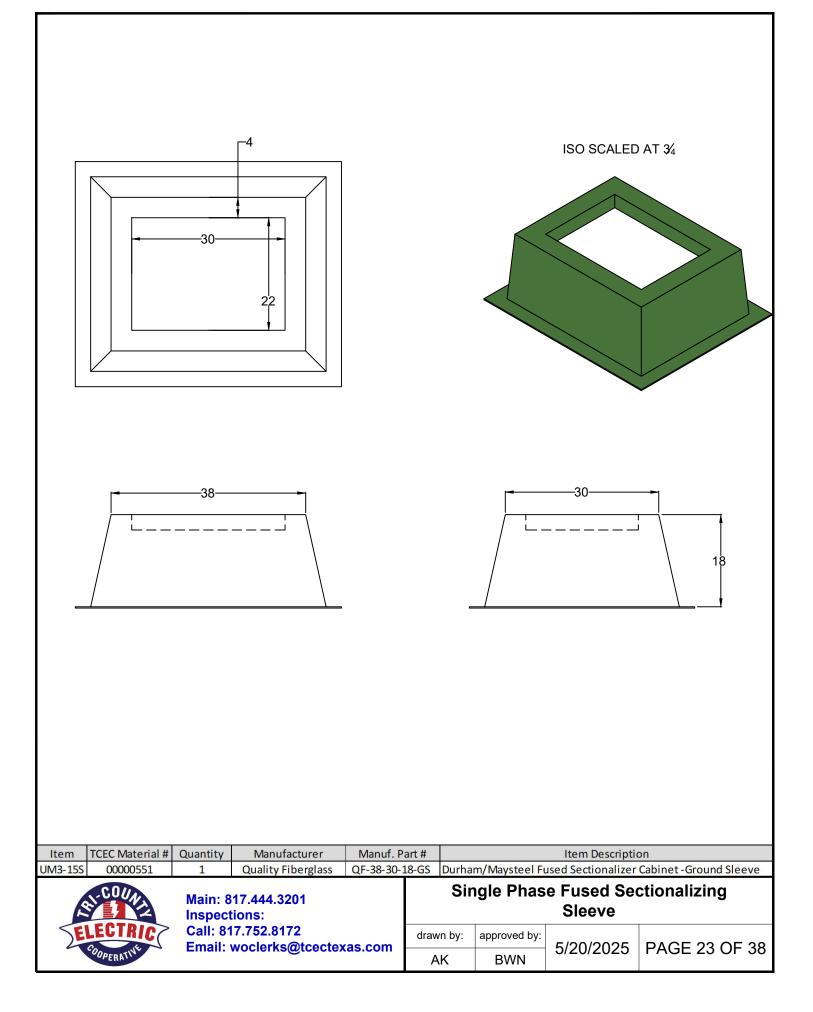
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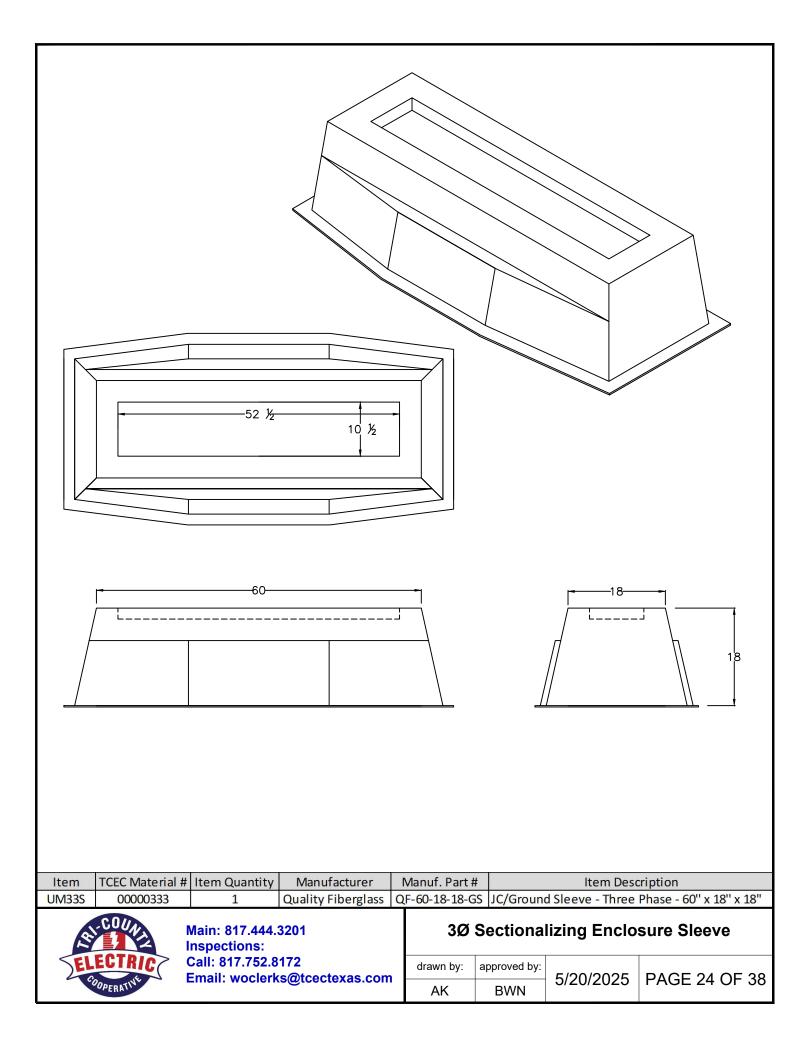
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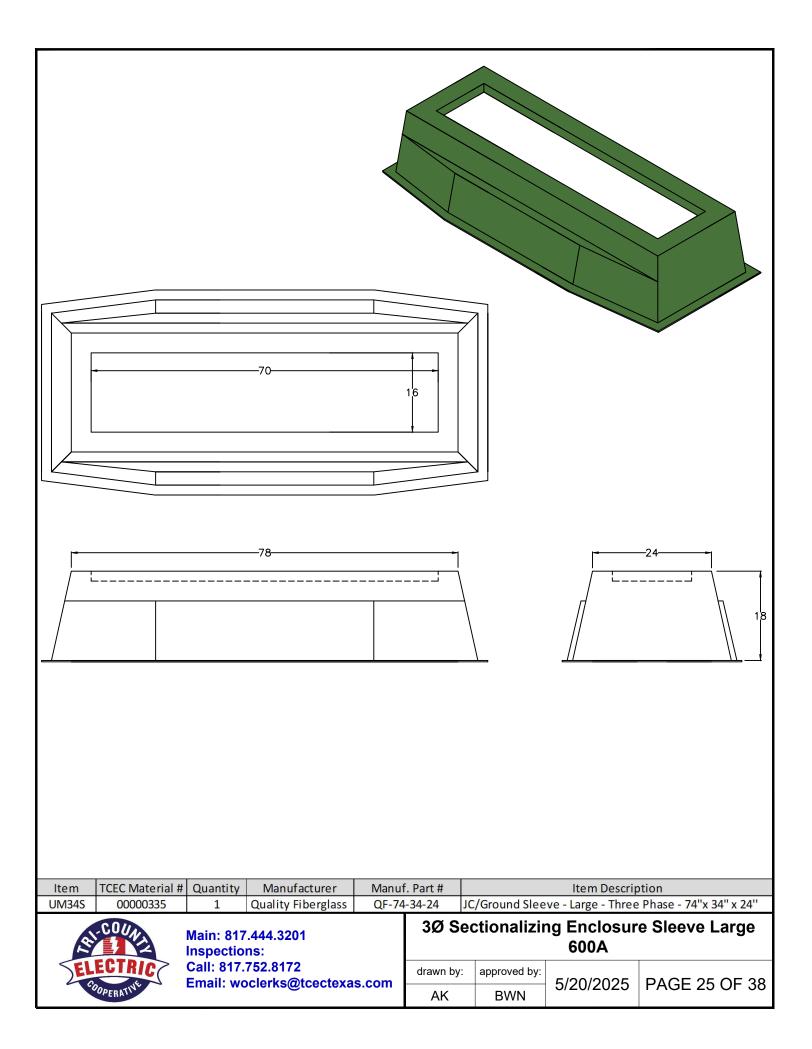
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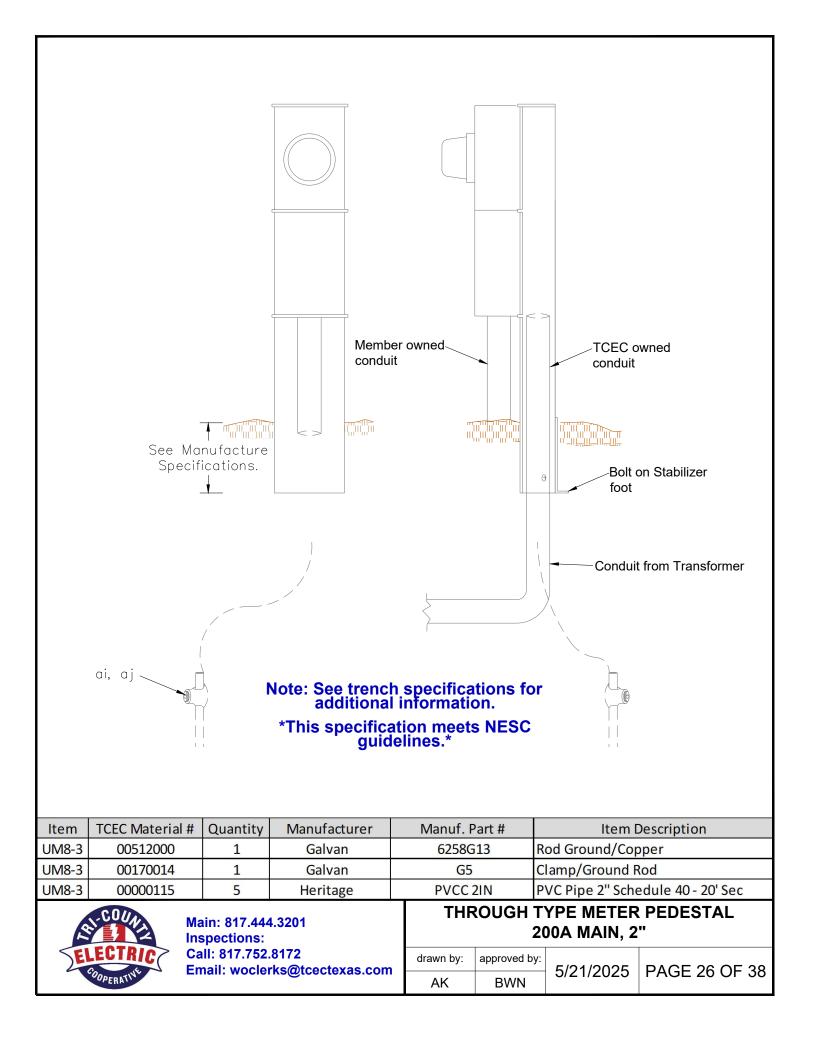


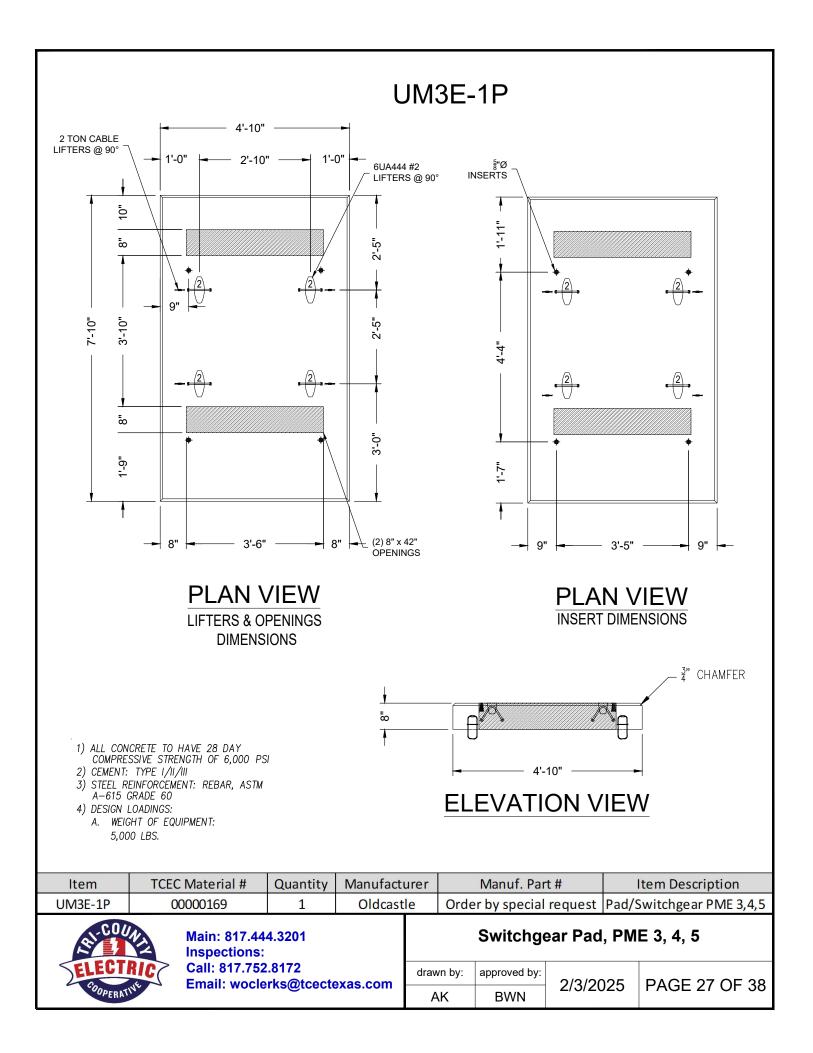


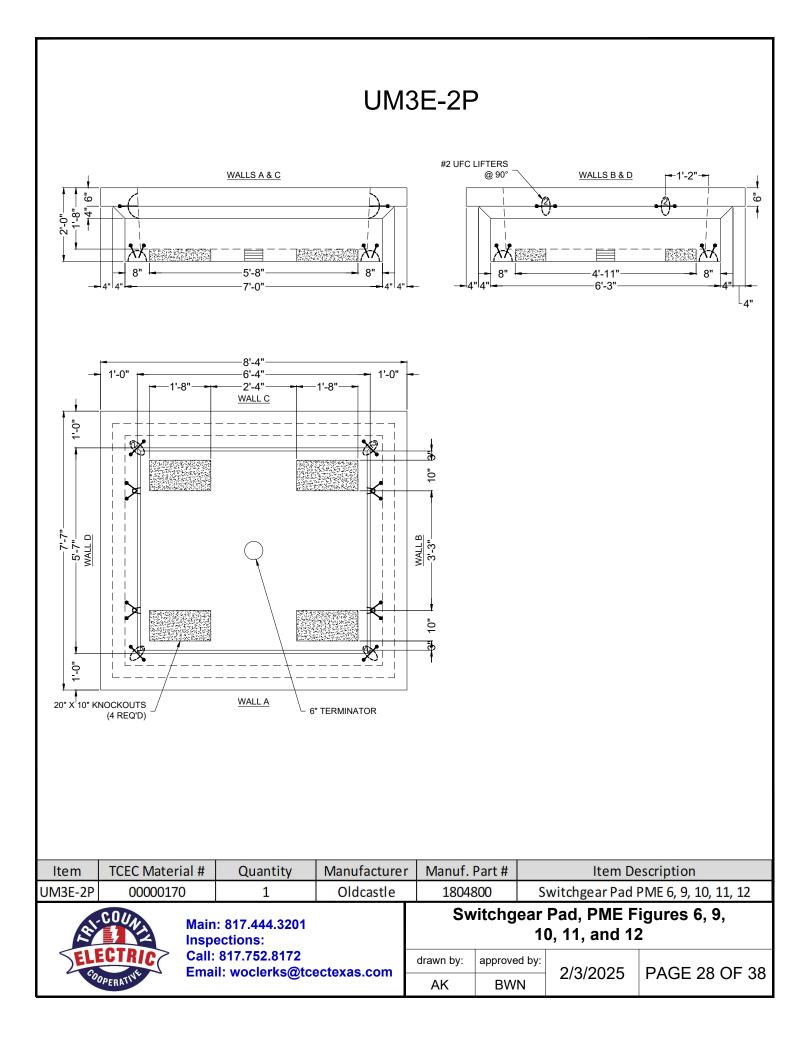


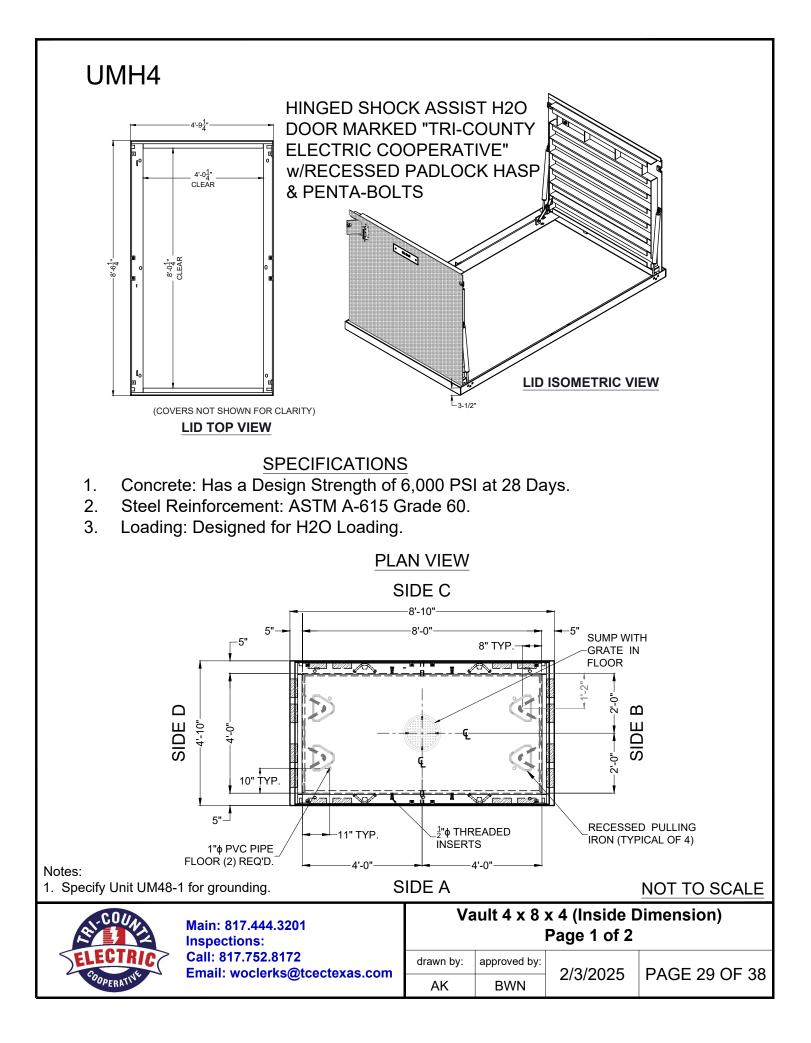


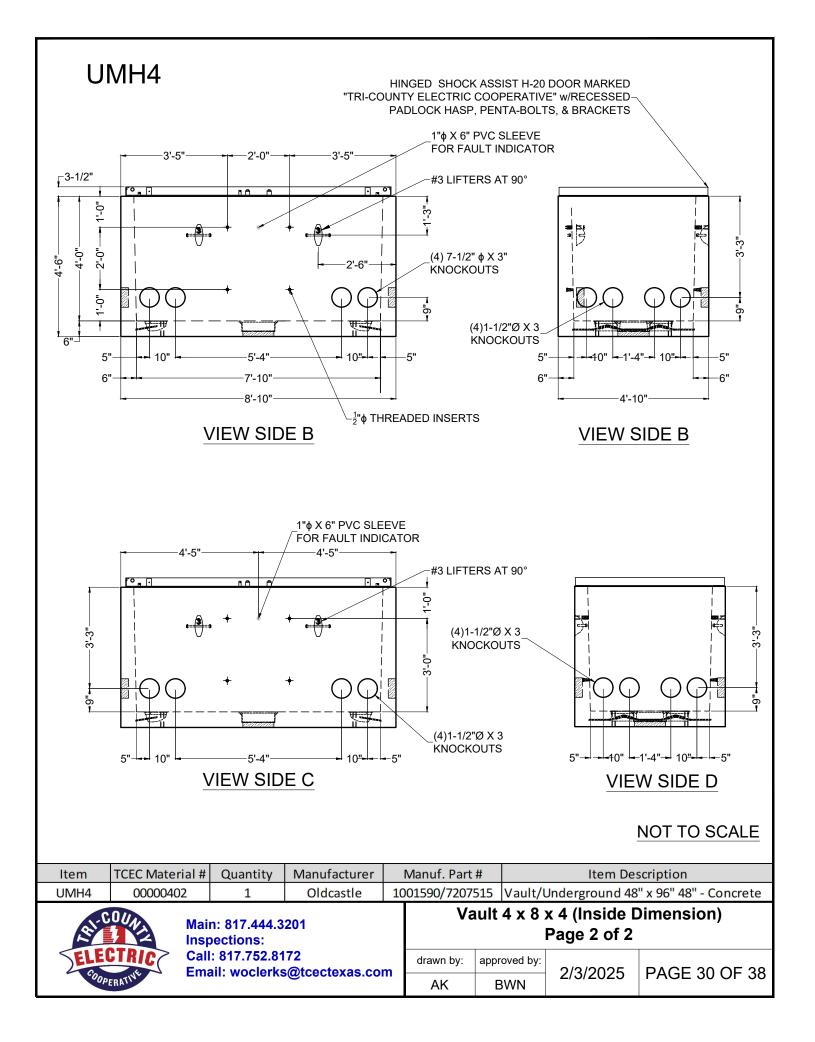


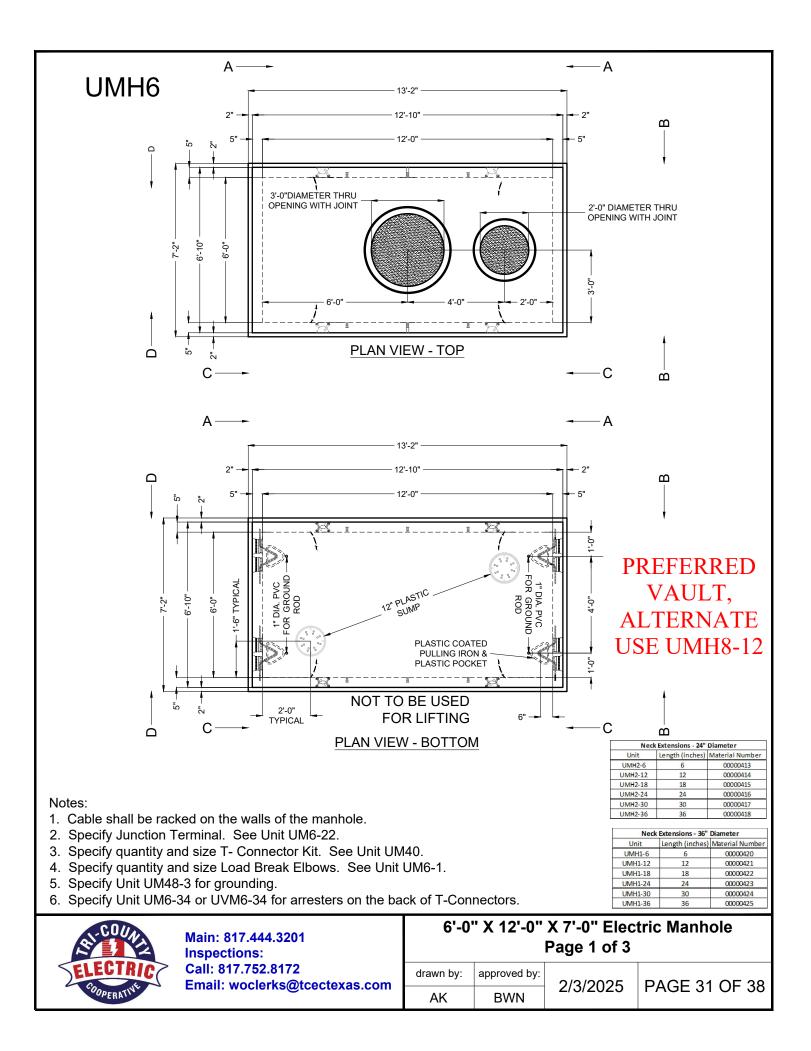


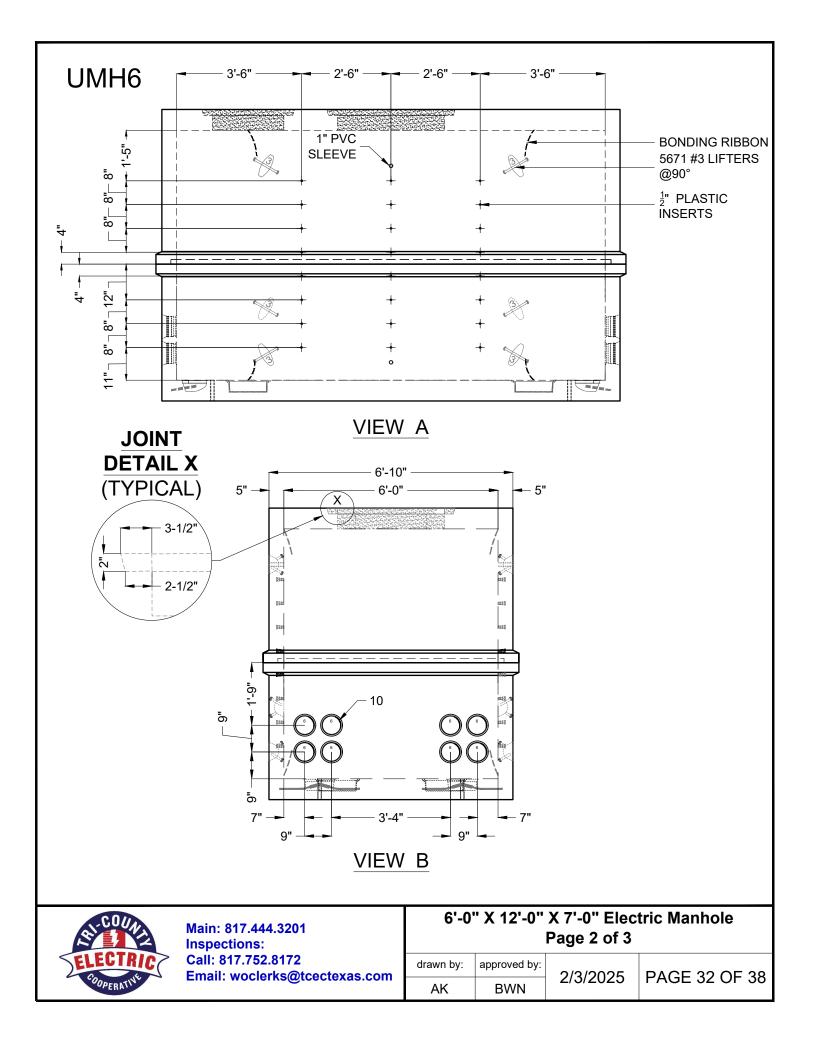


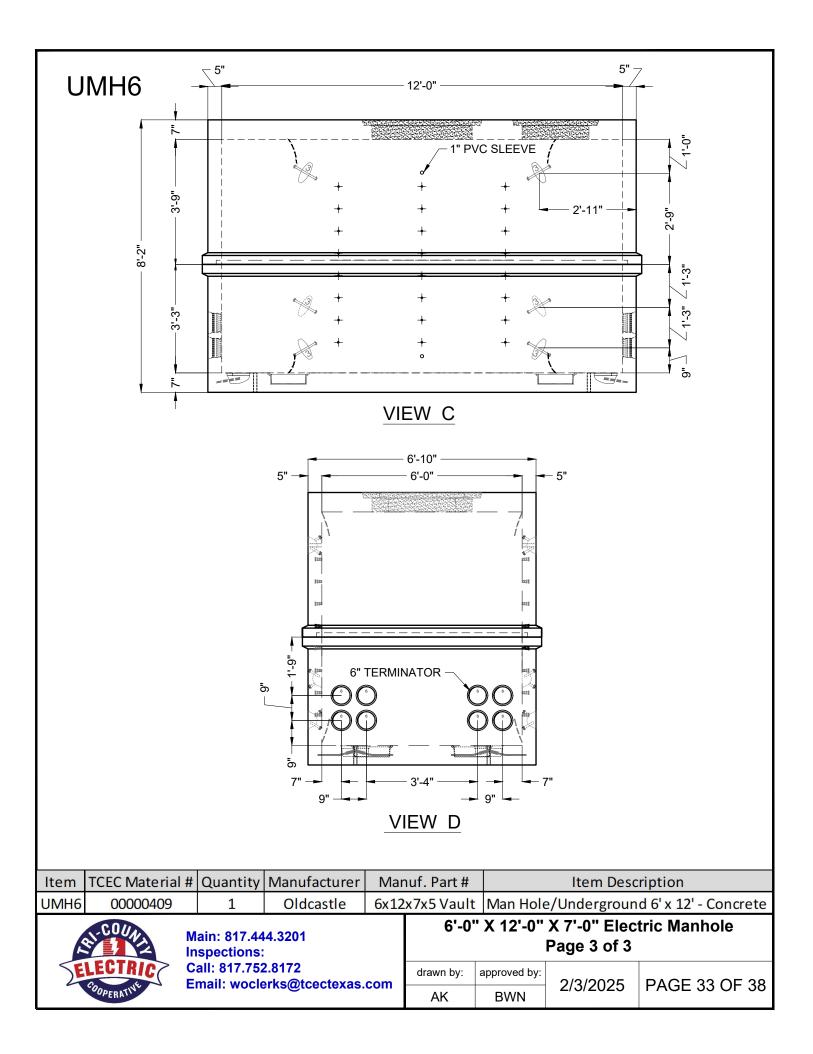












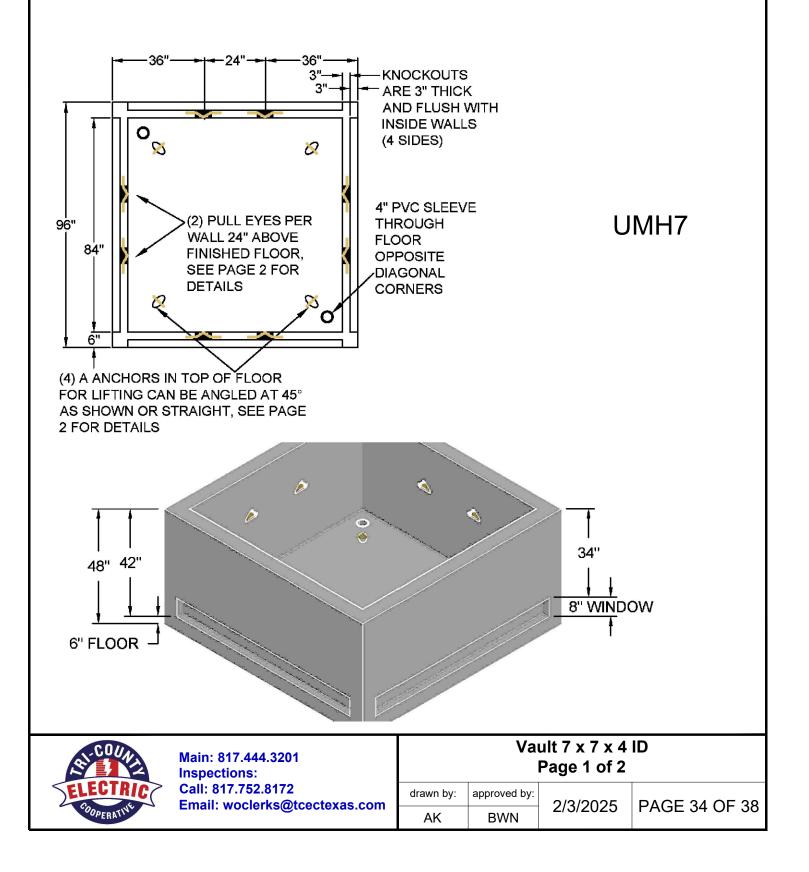
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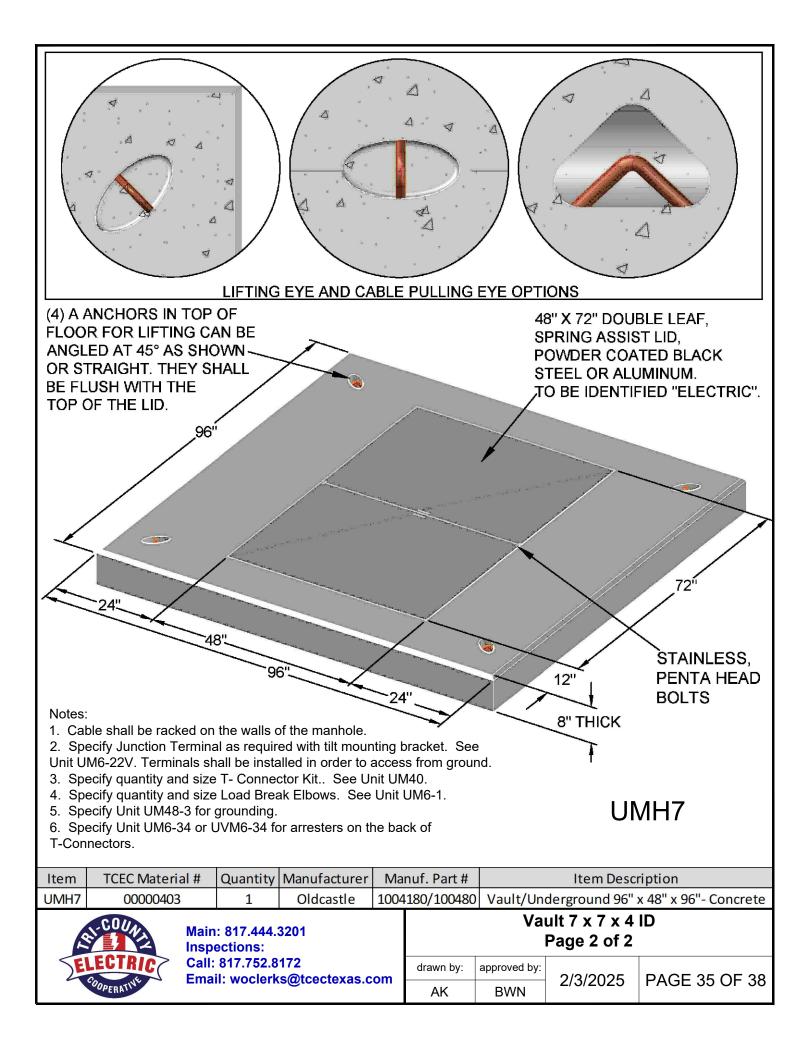
1. All concrete to have a 28 day compressive strength of 5000PSI. Shall comply with AASHTO HS 20-44 loading.

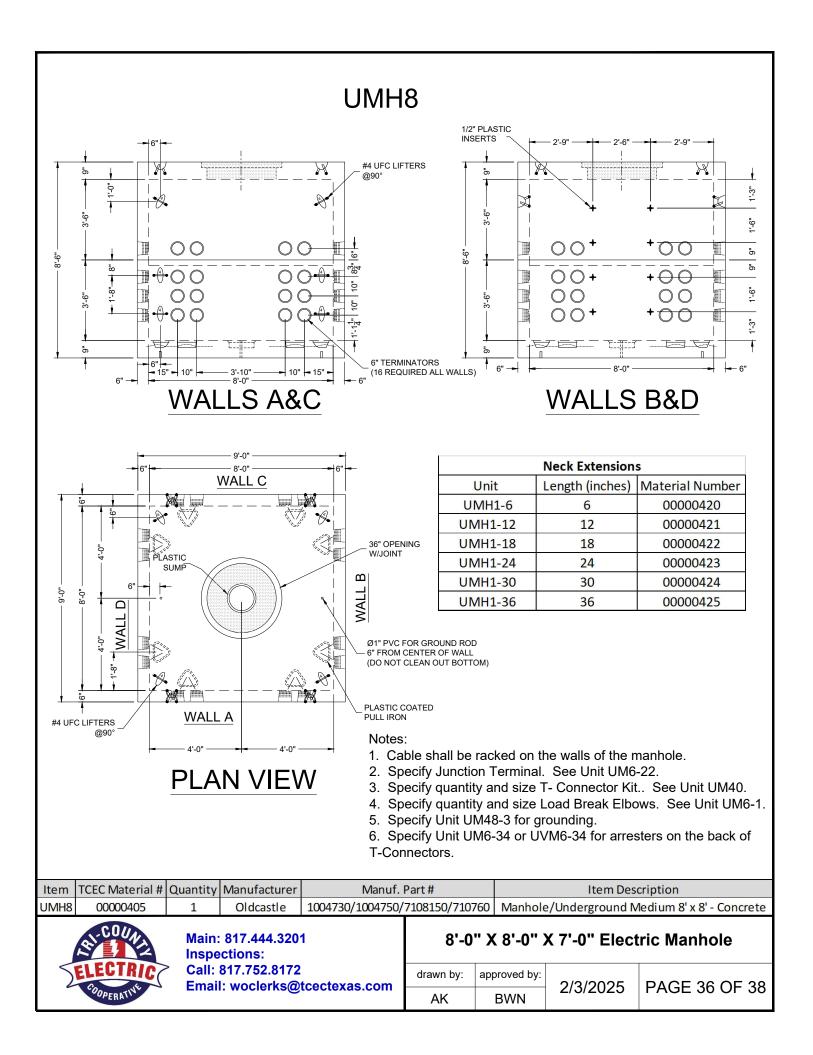
2. Each side wall shall have two pulling eyes located 24" apart, evenly spaced between the inside walls and 24" from bottom of the vault.

2. All lifting and pulling eyes shall be rated for a minimum of 5,000 pounds each.

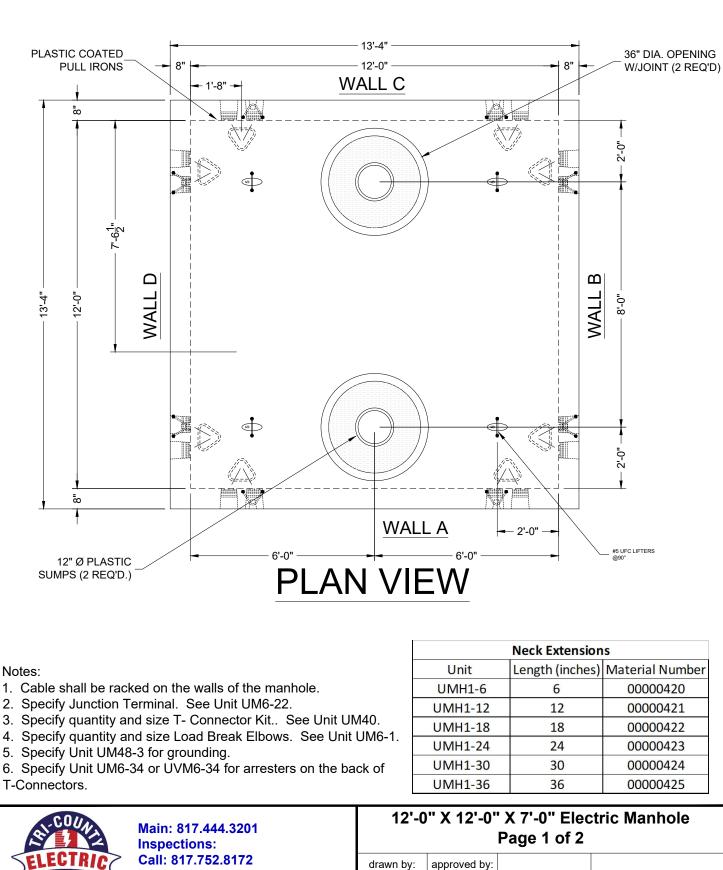
3. 6"above the bottom of the vault, an 8" knockout shall extend around the entire perimeter of the vault (except for 6" from each corner). The knockouts shall be 3" thick and flush with inside of the vault.







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