

# INSTALL NEW EMERGENCY BACKUP SYSTEM TRANSITION CENTER OF ST.LOUIS

---



St. Louis  
6 South Old Orchard  
St. Louis, MO 63119

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OWNER: STATE OF MISSOURI  
MIKE KEHOE,  
GOVERNOR  
  
DEPARTMENT OF  
CORRECTIONS

PROJECT  
MANAGEMENT: OFFICE OF ADMINISTRATION  
DIVISION OF FACILITIES MANAGEMENT,  
DESIGN AND CONSTRUCTION

DESIGNER: GARY FISCHER

PROJECT NUMBER: C2407-01

SITE NUMBER: 7026  
FACILITY NUMBER: 9327026001



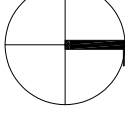






SHEET NUMBER:

**G-00**

01 OF 08 SHEETS  
MARCH 13, 2025

DRAWING INDEX	
NUMBER	TITLE
G-00	COVER SHEET
E-00	ELECTRICAL SYMBOLS AND LEGEND
E-10	EXISTING SITE PLAN
E-11	MOVE SERVICE SITE AND ENLARGED PLAN
E-50	ELECTRICAL DETAIL
E-51	ELECTRICAL DETAIL
E-60	DEMO EXISTING ONE-LINE
E-61	NEW WORK ONE-LINE


PHASING
CONTRACTOR TO INSTALL ALL GENERATOR EQUIPMENT, CONDUITS, FEEDERS, AND AMEREN CONDUITS PRIOR TO SWITCH OVER TO NEW SERVICES.
CONTRACTOR TO COORDINATE WITH END USER POWER OUTAGE 3 WEEKS IN ADVANCE.
BUILDING POWER OUTAGE LIMITED TO 8 HOURS MAX. CONTRACTOR TO PROVIDE STAFF TO DO THE AMEREN SIDE SWITCH OVER AND PROVIDE THE STAFF FOR THE MAIN SSB SWITCH OVER.

DRAWING REFERENCES	
	PLAN DETAIL REFERENCE TITLE
	KEYED NOTE DESIGNATION
	PLAN NORTH NORTH ARROW
ABBREVIATIONS	
A.F.F	: ABOVE FINISHED FLOOR
C	: CONDUIT
E.C.	: ELECTRICAL CONTRACTOR
ER	: EXISTING RELOCATED
ETR	: EXISTING TO REMAIN
E.D.	: GENERAL CONTRACTOR
G	: GROUND
GND	: GROUND
TYP.	: TYPICAL
U.O.N.	: UNLESS OTHERWISE NOTED
LINE TYPE LEGEND	
	EXISTING TO REMAIN OR NEW WORK BY OTHERS (LIGHT, SOLID LINE)
	NEW WORK BY THIS CONTRACTOR (DARK, SOLID LINE)
	EXISTING TO BE REMOVED BY THIS CONTRACTOR (DARK, DASHED LINE, DEMOLITION PLANS)
	2-HOUR FIRE RATED WALL
POWER EQUIPMENT	
	PANELBOARD (SURFACE)
	PANELBOARD (FLUSH)

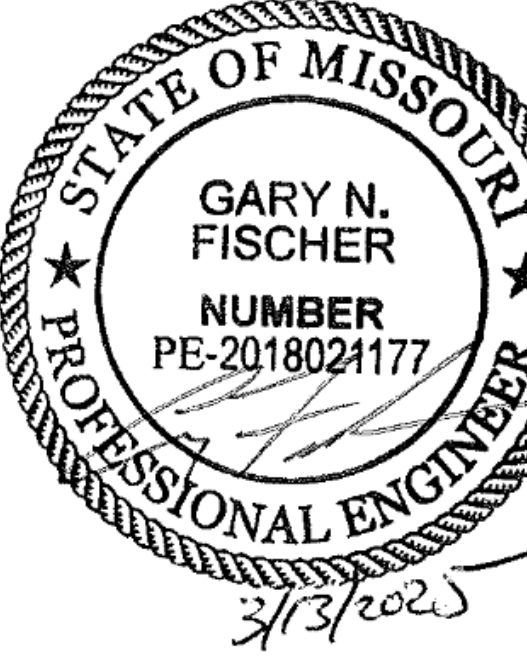
GENERAL NOTES	
1.	MAKE ALL INSTALLATIONS IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG).
2.	COORDINATE EXACT EQUIPMENT LOCATIONS WITH EXISTING CONDITIONS. EQUIPMENT LOCATIONS SHOWN ON ELECTRICAL PLANS ARE DIAGRAMMATICAL ONLY AND MIGHT NOT BE EXACT.
3.	CONCEAL ALL CONDUIT IN WALLS, PARTITIONS, ABOVE CEILINGS, ETC. UNLESS OTHERWISE INDICATED ON THE PLANS OR IN THE SPECIFICATIONS. CONDUIT ROUTED IN MECHANICAL ROOMS, ELECTRICAL ROOMS, AND STORAGE ROOMS WITHOUT CEILINGS MAY BE ROUTED EXPOSED.
4.	REPAIR ALL OPENINGS MADE IN EXISTING WALLS, PARTITIONS, ETC TO ACCOMMODATE WORK OF THIS DISCIPLINE TO MATCH THE SURROUNDING CONDITIONS, USING WORKERS QUALIFIED IN THE APPROPRIATE TRADE. APPROPRIATELY GROUT OR SEAL ALL CONDUITS THROUGH WALLS.
5.	ALL MATERIALS USED TO SEAL PENETRATIONS OF FIRE RATED WALLS AND FLOORS MUST HAVE BEEN TESTED AND CERTIFIED AS A SYSTEM PER ASTM E814 STANDARDS FOR FIRE TESTS OF THROUGH-PENETRATION FIRESTOPS.
6.	REPLACE OR REINSTALL ALL PORTIONS OF THE BUILDING (CEILING TILES, WALLS, ETC) REMOVED TO ACCOMMODATE THE INSTALLATION OF ANY FIRE ALARM DEVICE, EQUIPMENT, ETC., USING WORKERS QUALIFIED IN THE APPROPRIATE TRADE.
7.	TAKE PHOTOS OF ANY EXISTING CEILING TILE OR WALLS THAT ARE DAMAGED PRIOR TO THE COMMENCEMENT OF WORK. ANY DAMAGED WALLS OR CEILING SUSPECTED OF BEING DAMAGED DURING THE CONSTRUCTION OF THIS PROJECT WILL BE REPLACED/REPAIRED BY CONTRACTOR.

DEMOLITION NOTES	
1.	REMOVE, CAP AND RELOCATE EQUIPMENT, DEVICES, CONDUIT, WIRE, ETC., AS SHOWN AND SPECIFIED ON DRAWINGS, AND AS MAY BECOME NECESSARY BECAUSE OF EXISTING FIELD CONDITIONS. FAILURE TO VISIT THE SITE AND TO TAKE ALL EXISTING CONDITIONS INTO ACCOUNT WILL NOT ALLOW FOR CHANGES TO THE SCOPE OF WORK.
2.	MAINTAIN CIRCUIT CONTINUITY TO ALL EXISTING FIXTURES, EQUIPMENT, OUTLETS, ETC., TO REMAIN IN USE WHETHER NOTED ON THE PLANS OR NOT. FIELD VERIFY EXISTING ITEMS TO REMAIN IN USE. RECONNECT RACEWAYS AND WIRING FOR EXISTING CIRCUITS WHICH MUST BE RE-ROUTED OR WHICH ARE PARTIALLY ABANDONED TO POWER THE REMAINING OUTLETS ON THE CIRCUIT.
3.	FOR ALL WORK SHOWN TO BE REMOVED DURING THE DEMOLITION PHASE, REMOVE ALL WIRING AND CABLES BACK TO THEIR SOURCE UNLESS NOTED OTHERWISE TO BE RE-USED FOR NEW WORK. REMOVE ALL UNUSED CONDUIT THAT IS EXPOSED OR ABOVE ACCESSIBLE CEILINGS WHICH IS AFFECTED BY OR IS IN THE AREA OF THE DEMOLITION WORK.
4.	WHERE EQUIPMENT, DEVICES, CONDUIT, BOXES, AND SUPPORTING HARDWARE ARE REMOVED, PATCH AND FINISH THE SURFACE AS REQUIRED TO MATCH THE EXISTING, USING WORKERS QUALIFIED IN THE APPROPRIATE TRADE.
5.	TAKE ALL REMOVED MATERIALS FROM THE PROJECT SITE, EXCEPT FOR THOSE TO BE RELOCATED, STORED, OR TURNED OVER TO THE USING AGENCY.
6.	ACCEPTANCE OF CONTRACT MEANS INSTALLER ACCEPTS EXISTING CONDITIONS.
7.	PROVIDE A BLANK COVER PLATE WHERE A FLUSH DEVICE IS BEING REMOVED FROM WALLS THAT ARE TO REMAIN. MATCH THE COLOR, MATERIAL AND FIRE RATING TO THE EXISTING SURFACE IN THE ROOM OR SPACE.
8.	LEGALLY DISPOSE OF HAZARDOUS MATERIALS OR OTHER EQUIPMENT CONTAINING PCBs. COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS.
9.	MODIFY EXISTING PANEL DIRECTORIES (OR REPLACE) FOR PANELBOARDS WHICH HAVE HAD ALTERATIONS TO THE CIRCUITS ORIGINATING THEREIN. DESCRIBE THE LOAD AND LOCATION. TYPE, DO NOT HAND LETTER NEW PANELBOARD DIRECTORIES.
10.	PATCH OR FILL ANY EXPOSED GAP BETWEEN CONDUIT AND WALL WERE NEW HOLES ARE DRILLED IN EXISTING WALLS.
11.	PAINT TO A MINIMUM OF 1 FT ALL SIDE OF PATCH OR REMOVED SURFACE CONDUIT.

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BACKUP SYSTEM

TRANSITION CENTER  
OF ST. LOUIS  
1621 N. 1ST STREET  
ST. LOUIS, MO 63102

PROJECT # C2407-01  
SITE # 7026  
FACILITY # 9327026001

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
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REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: 3/13/2025

CAD DWG FILE:E-00  
DRAWN BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_

SHEET TITLE:  
ELECTRICAL  
SYMBOLS AND  
LEGEND

SHEET NUMBER:  
E-00

02 OF 08 SHEETS  
03/13/2025

BID SET

3-13-2025



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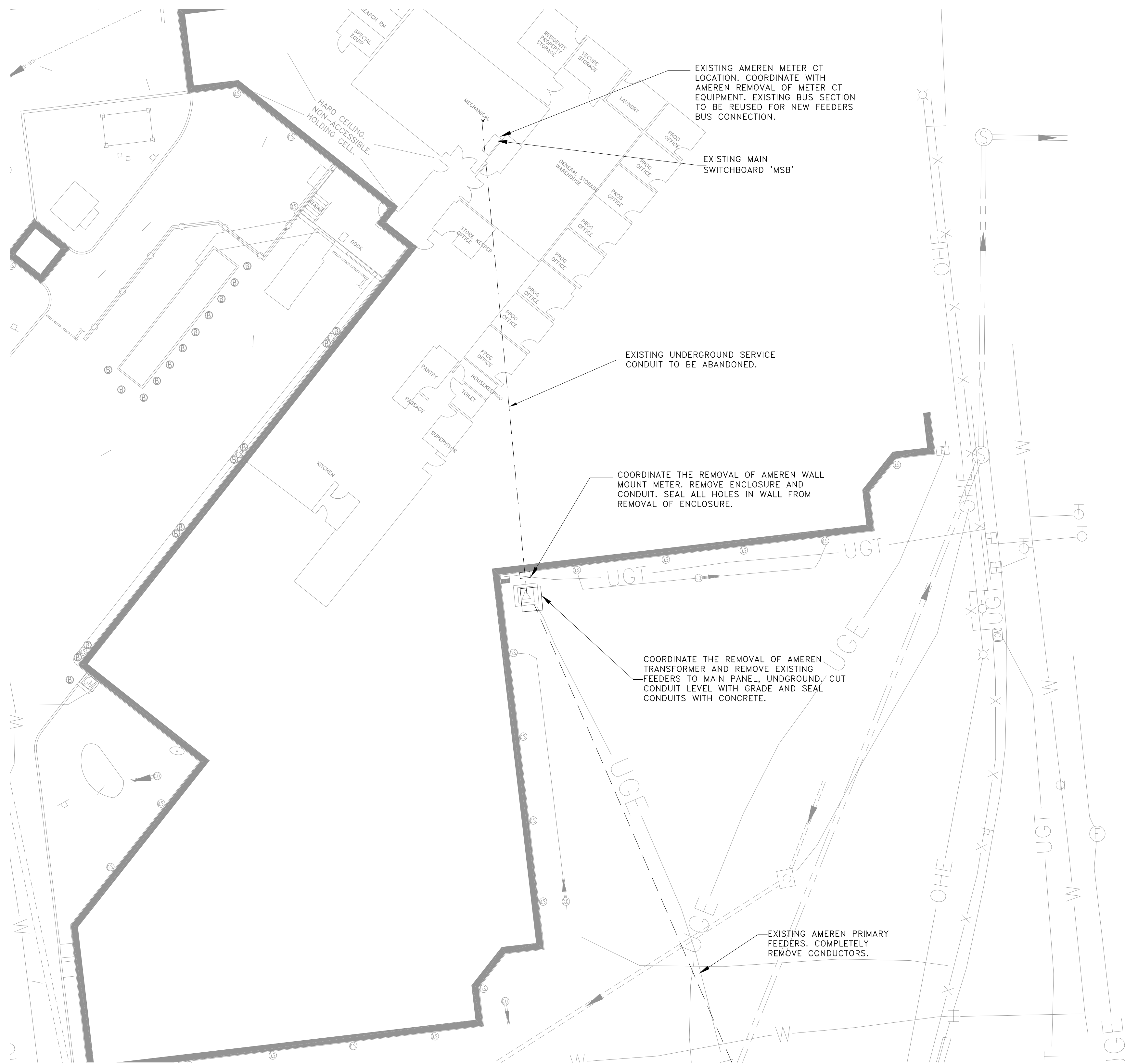
CAD DWG FILE: E-10  
DRAWN BY: AO  
CHECKED BY: GF  
DESIGNED BY: AO

SHEET TITLE:  
EXISTING  
SITE PLAN

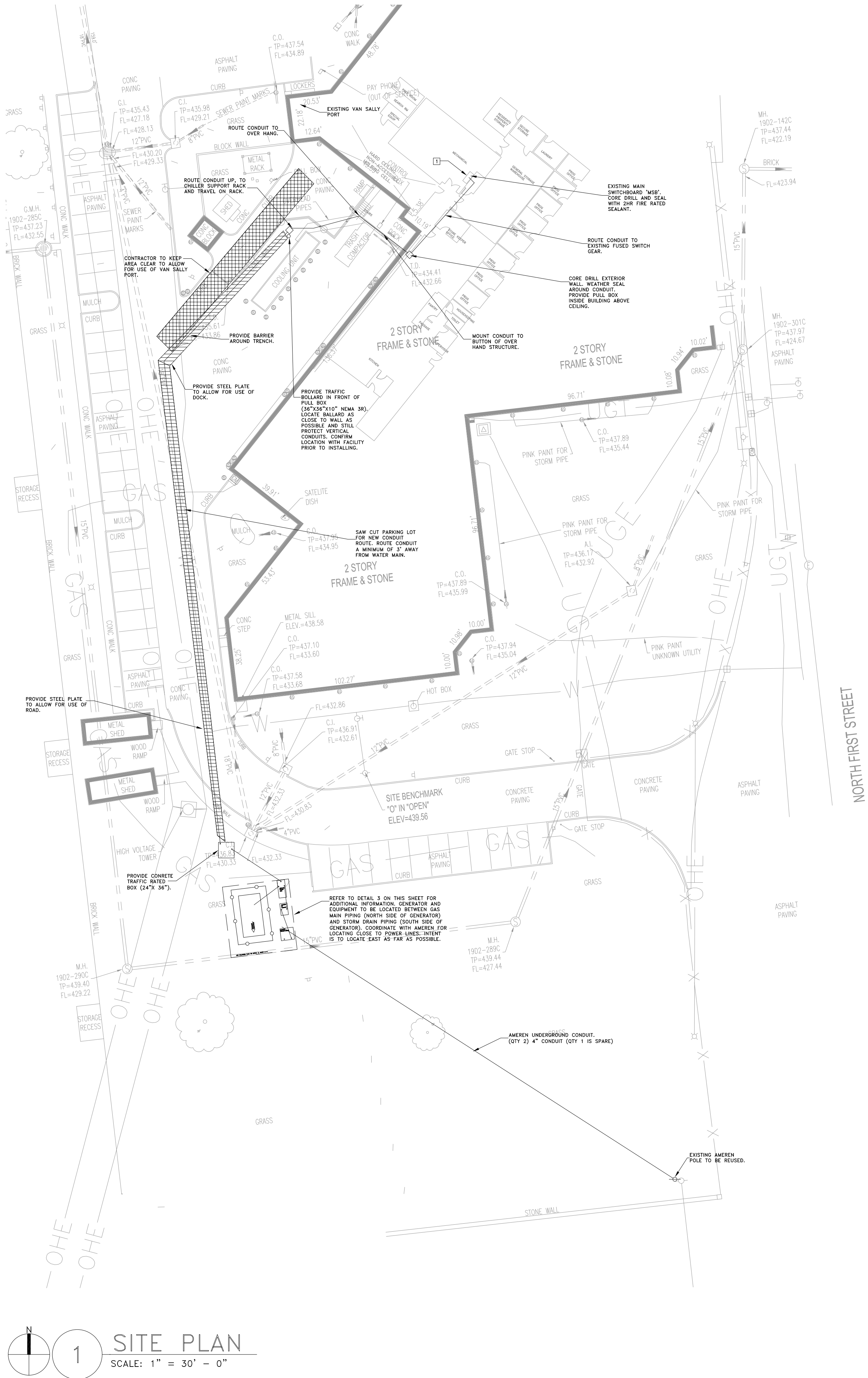
SHEET NUMBER:

E-10

03 OF 08 SHEETS  
03/13/2025



1 SITE PLAN  
SCALE: 1/16" = 1' - 0"



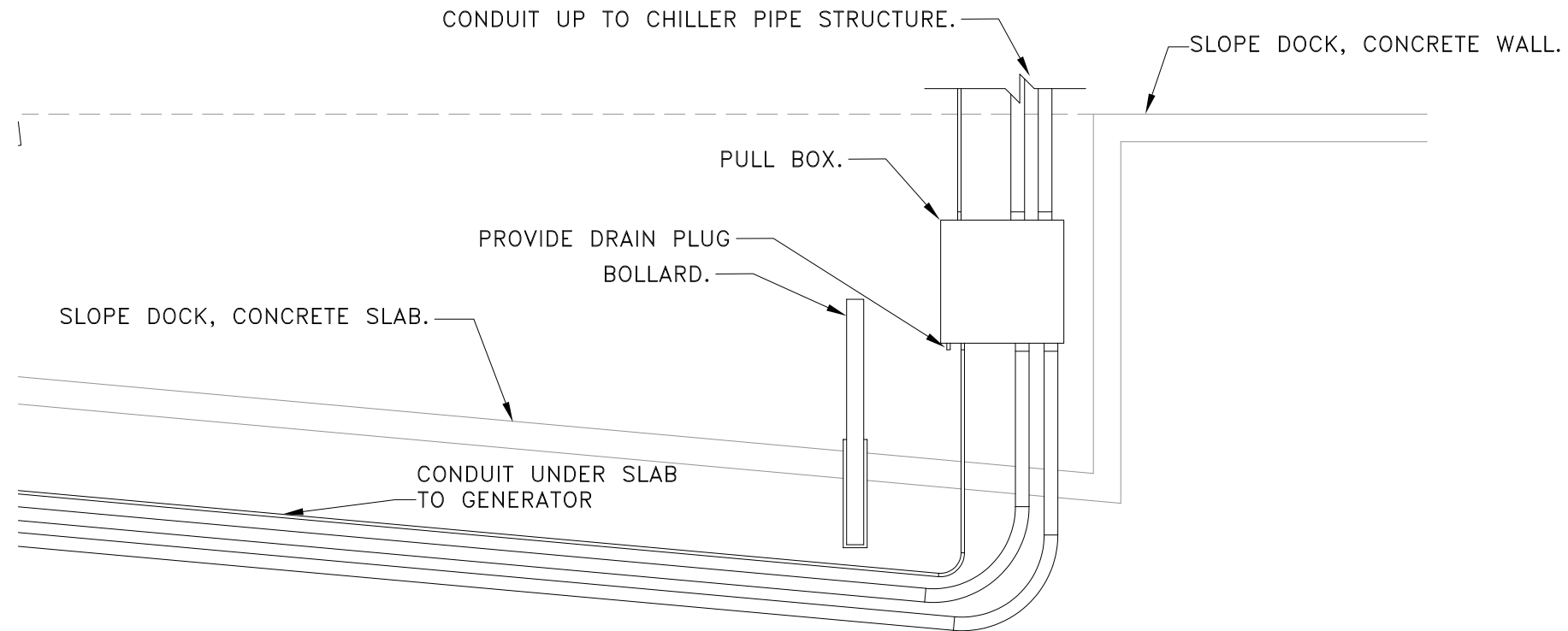
1 SITE PLAN  
SCALE: 1" = 30' - 0"

### GENERAL NOTES:

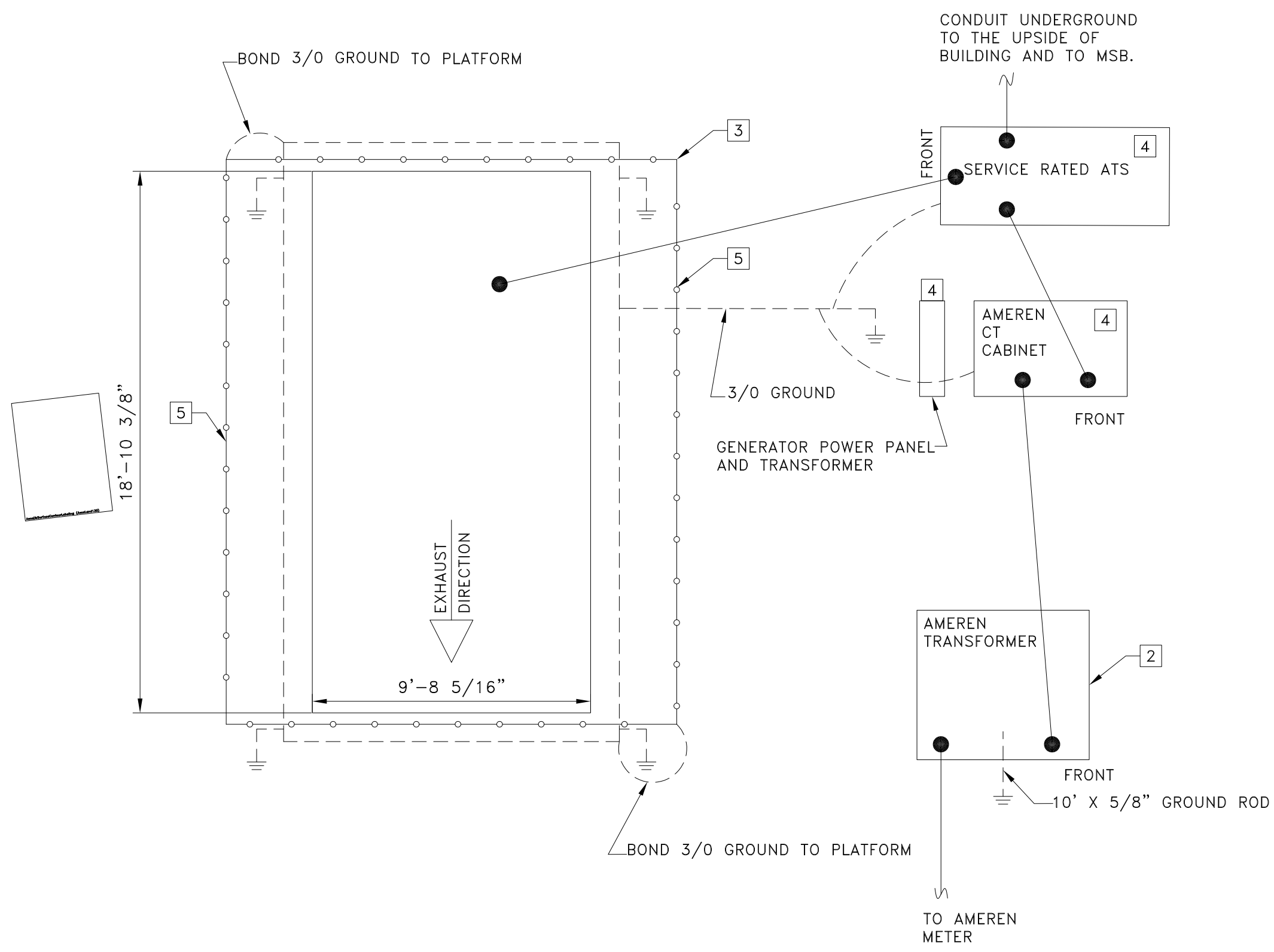
1. REFER TO DETAILS ON SHEET E-50 FOR TRENCHING REQUIREMENTS.

### # KEYED NOTES:

1. CONTRACTOR TO PROVIDE PERMANENT LABEL ON MAIN ELECTRICAL EQUIPMENT TO READ "MAIN SERVICE DISCONNECT LOCATED AT ATS NEXT TO GENERATOR".
2. PROVIDE TRANSFORMER CONCRETE PAD, REFER TO DETAIL 3 ON SHEET E-50 FOR EXAMPLE OF PAD. PAD SHALL MEET AMEREN STANDARDS.
3. PROVIDE CONCRETE PAD FOR GENERATOR. REFER TO DETAIL 4 ON SHEET E-50 FOR MINIMAL REQUIREMENTS. CONTRACTOR TO PROVIDE SEISMIC ANCHOR TO CONCRETE PAD. CONTRACTOR TO PROVIDE SEISMIC CALCULATION FOR GENERATOR AND FUEL TANK. REFER TO SPEC SECTION 20 08 00 FOR SEISMIC REQUIREMENTS. GENERATOR PAD SHALL BE SIZED FOR THE GENERATOR AND THE RAISED ACCESS PLATFORM.
4. PROVIDE CONCRETE PAD FOR ATS, PANELBOARD, AND METER.
5. PROVIDE 3 FOOT WIDE, METAL RAISED ACCESS PLATFORM ON EACH SIDE OF THE GENERATOR MOUNTED TO CONCRETE PAD. PROVIDE HAND RAILS AND STAIRS. COORDINATE WITH HAND RAIL AND STAIRS WITH GENERATOR ACCESS DOORS. PLATFORM SHALL BE SELF SUPPORTING AND ANCHORED TO PAD.



2 BOLLARD AND PULL BOX DETAIL  
SCALE: NOT TO SCALE



3 ENLARGED PLAN DETAIL - GENERATOR  
SCALE: 1/4" = 1' - 0"

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REVISION:  
DATE:  
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REVISION:  
DATE:  
ISSUE DATE: 3/13/2025

CAD DWG FILE: E-11  
DRAWN BY: AO  
CHECKED BY: GF  
DESIGNED BY: AO

SHEET TITLE:  
MOVE SERVICE  
SITE AND  
ENLARGED PLAN

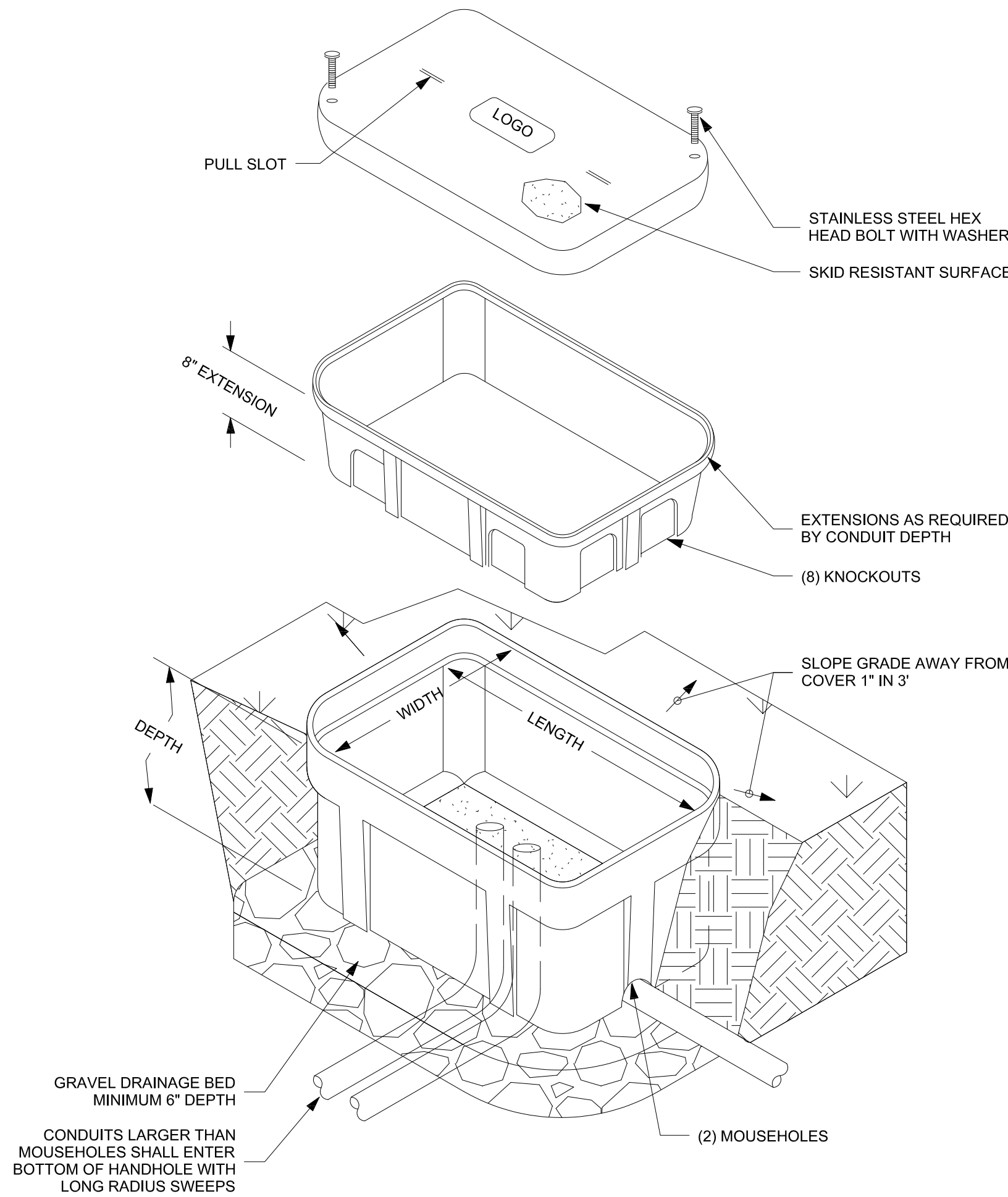
SHEET NUMBER:

E-11

04 OF 08 SHEETS  
03/13/2025

BID SET 3-13-2025

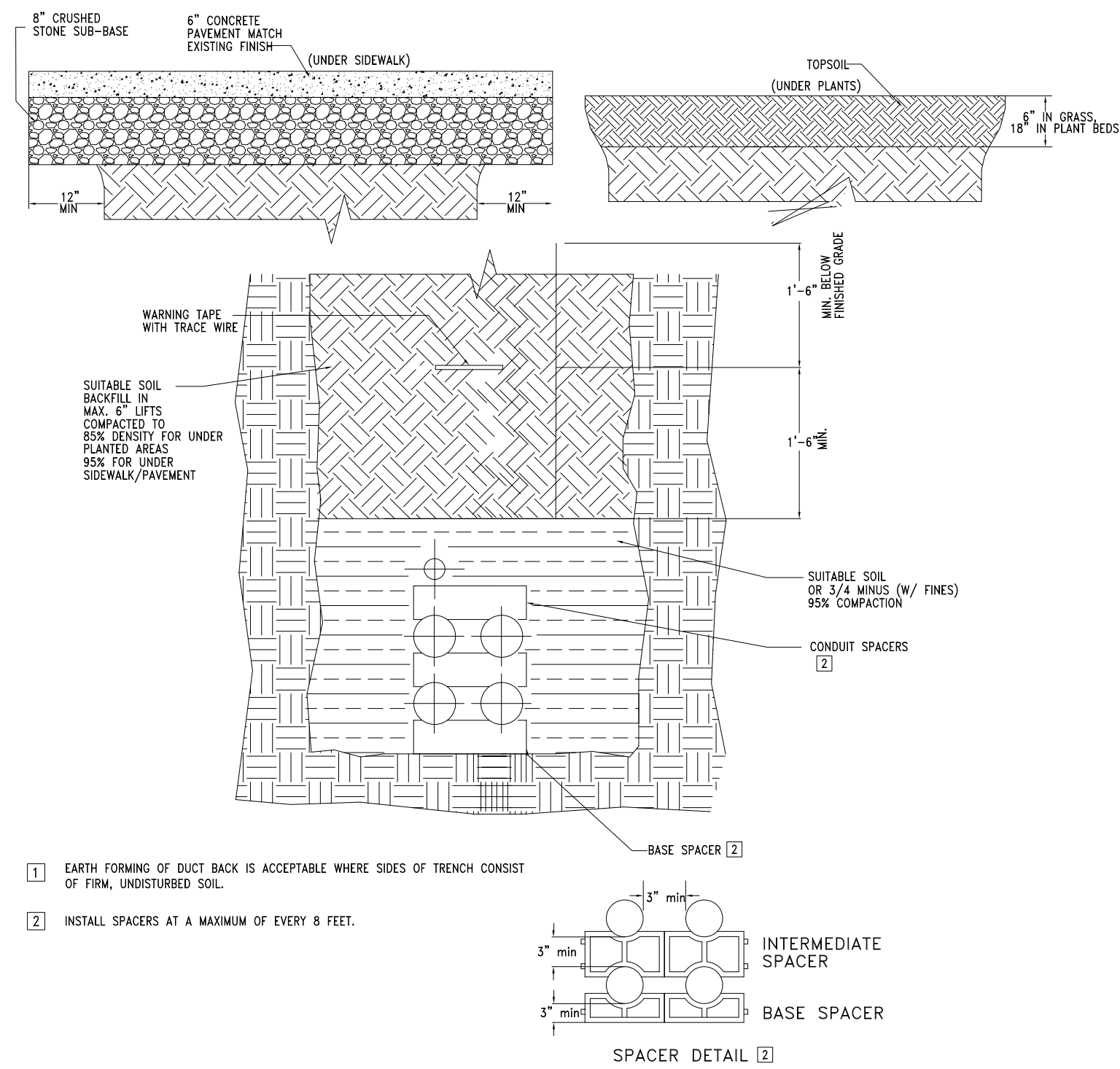




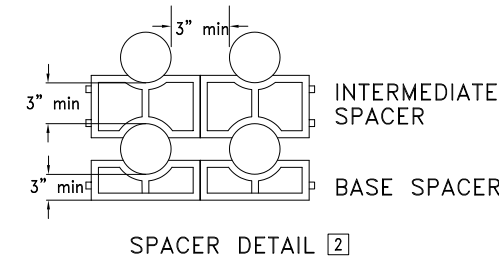
- GENERAL NOTES
- ALL DIMENSIONS ARE NOMINAL INSIDE CLEARANCES.
  - TRAFFIC RATING TIER 15.

## 1 HAND HOLE DETAIL

SCALE: NOT TO SCALE

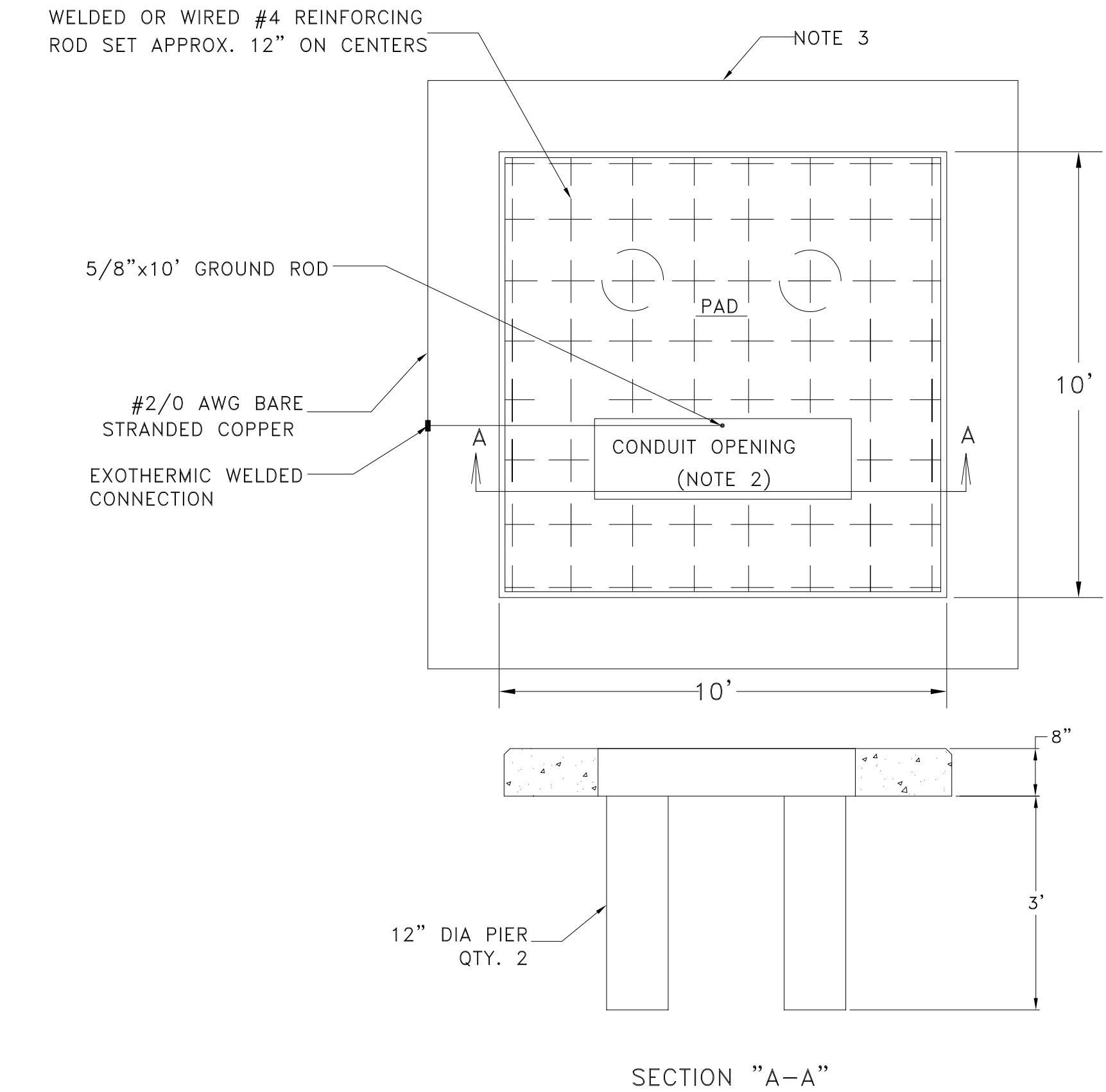


- EARTH FORMING OF DUCT BANK IS ACCEPTABLE WHERE SIDES OF TRENCH CONSIST OF FIRM, UNDISTURBED SOIL.
- INSTALL SPACERS AT A MAXIMUM OF EVERY 8 FEET.



## 2 CONCRETE DUCTBANK DETAIL

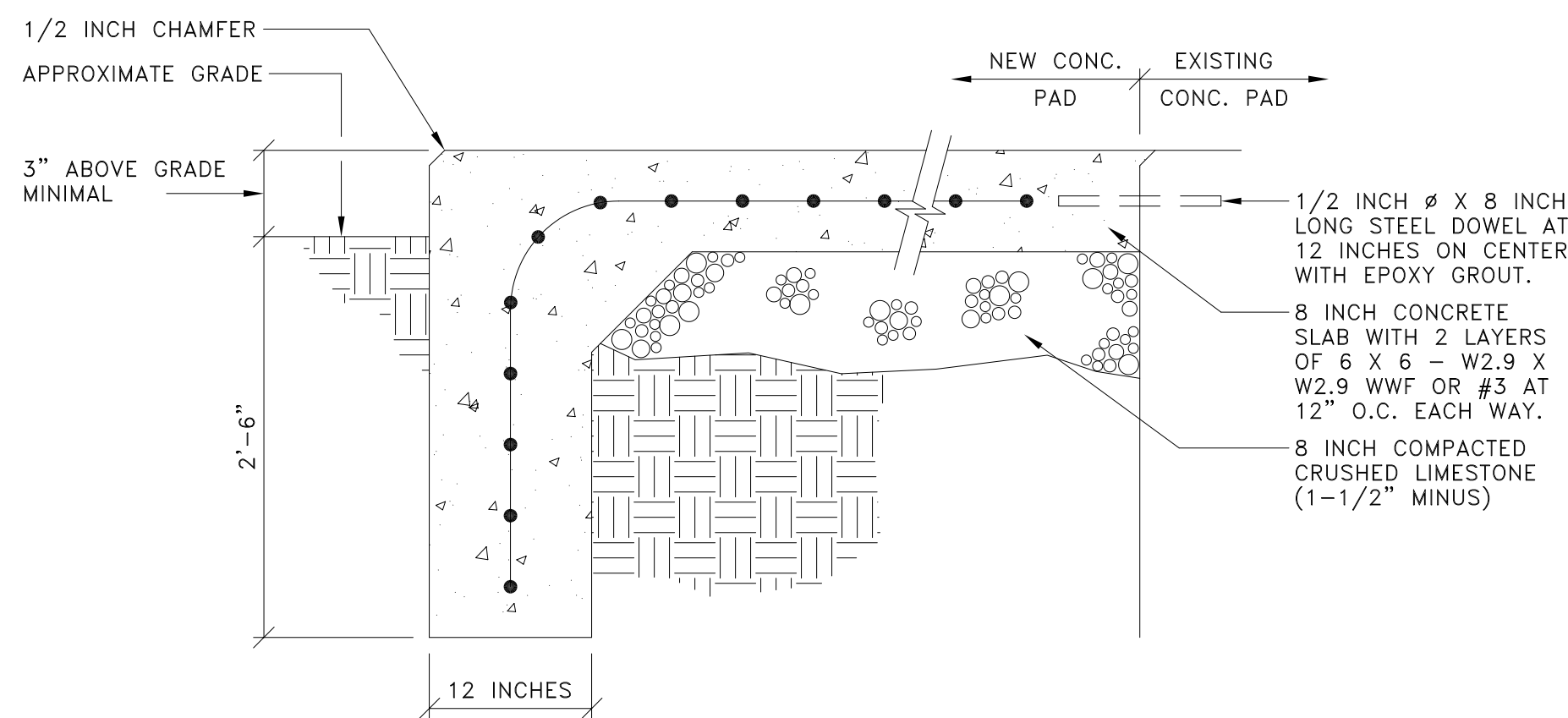
SCALE: NOT TO SCALE



- NOTES:
- REINFORCED CONCRETE PAD SHALL BE CONSTRUCTED IN ACCORDANCE WITH CSI STANDARD SPECIFICATIONS FOR REINFORCED CONCRETE, LATEST EDITION.
  - CONDUITS SHOULD BE CAREFULLY LOCATED IN CONDUIT OPENING SO THEY WILL NOT INTERFERE WITH TRANSFORMER HIGH & LOW VOLTAGE COMPARTMENT DIVIDER OR OIL DRAINAGE VALVE.
  - GROUND LOOP TO BE INSTALLED 12" OUT AND 12" DEEP WITH EXOTHERMIC CONNECTIONS.
  - 8 FT. MINIMUM CLEARANCE IN FRONT OF TRANSFORMER. CONFIRM CLEARANCE PRIOR TO INSTALLATIONS.
  - PROVIDE DETAIL 3/E-11 TO AMEREN MARKED UP WITH WORKING CLEARANCE DIMENSIONS FOR AMEREN'S ACCEPTANCE.

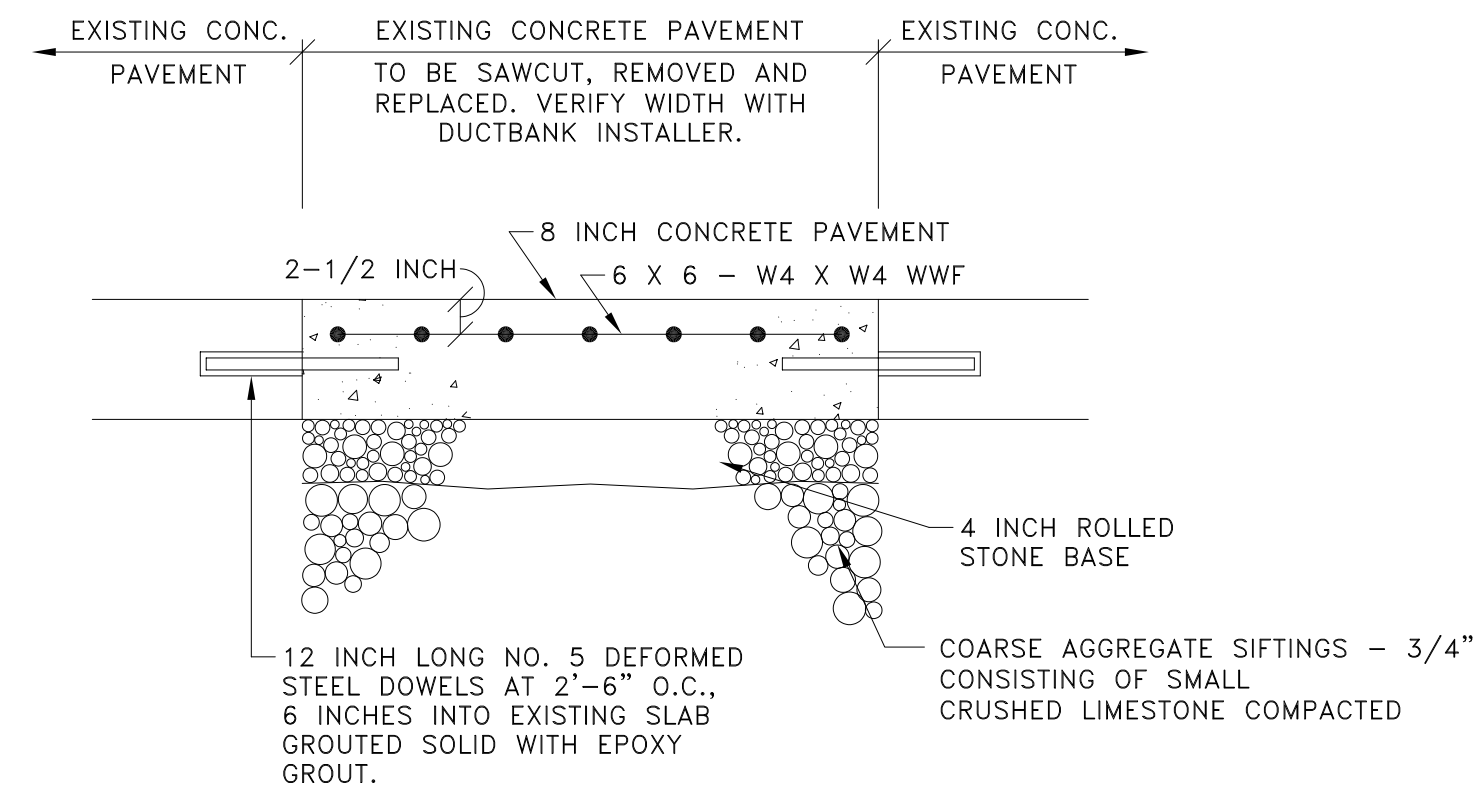
## 3 TRANSFORMER PAVEMENT DETAIL

SCALE: NOT TO SCALE



## 4 PAD DETAIL

SCALE: 1" = 1'-0"



## 5 DRIVEWAY CONCRETE PAVEMENT DETAIL

SCALE: 1" = 1'-0"

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DATE: \_\_\_\_\_  
ISSUE DATE: 3/13/2025

CAD DWG FILE: E-50  
DRAWN BY: AO  
CHECKED BY: GF  
DESIGNED BY: AO

SHEET TITLE:

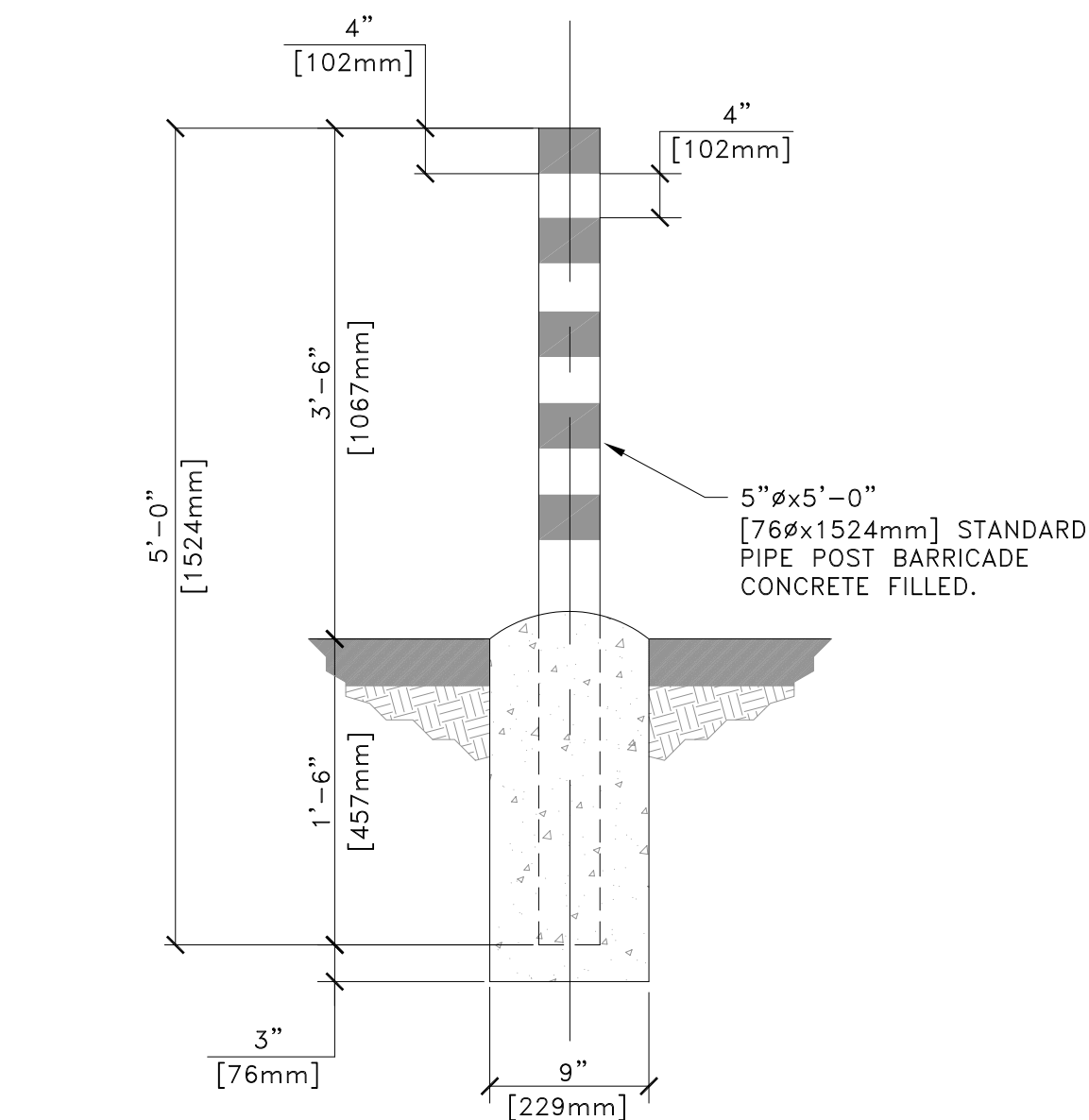
ELECTRICAL  
DETAIL

SHEET NUMBER:

E-50

05 OF 08 SHEETS  
03/13/2025

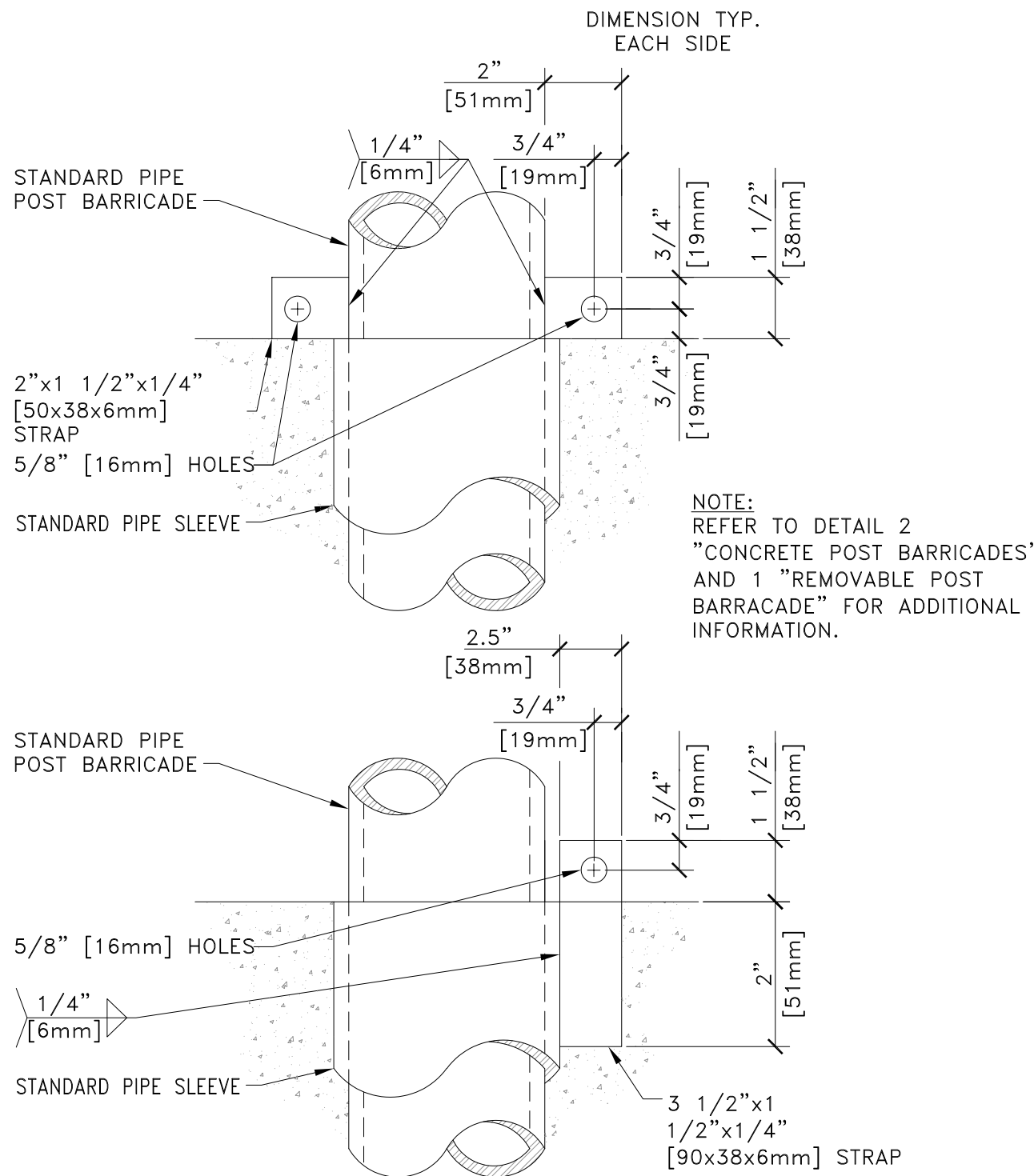
BID SET 3-13-2025



- NOTES:
1. POST BARRICADES WILL BE PAINTED WITH ONE PRIME COAT OF RED OXIDE (PAINT NO.1), ONE FINISH COAT OF DULL BLACK ENAMEL PER VA SPECIFICATIONS, AND STRIPES CONSISTING OF 4" [102mm] BANDS OF YELLOW REFLECTORIZED TAPE WILL BE USED UNLESS OTHERWISE SPECIFIED ON THE PLANS.
  2. FINISH COLOR COMBINATIONS, OTHER THAN THAT SPECIFIED ABOVE, WILL BE SUBMITTED TO THE AGENCY FOR APPROVAL.

## 1 CONCRETE POST BARRICADES

SCALE: NOT TO SCALE

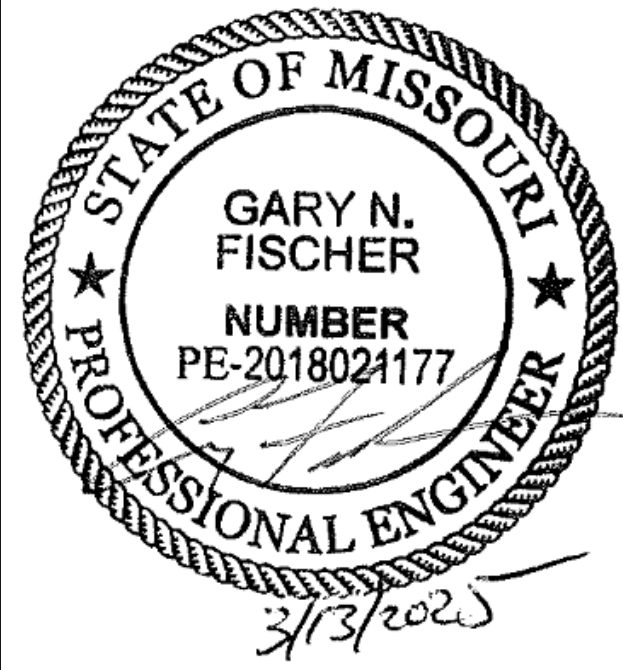


## 2 REMOVABLE POST BARRICADE – STRAP DETAIL

SCALE: NOT TO SCALE

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ISSUE DATE: 3/13/2025

CAD DWG FILE: E-51  
DRAWN BY: AO  
CHECKED BY: GF  
DESIGNED BY: AO

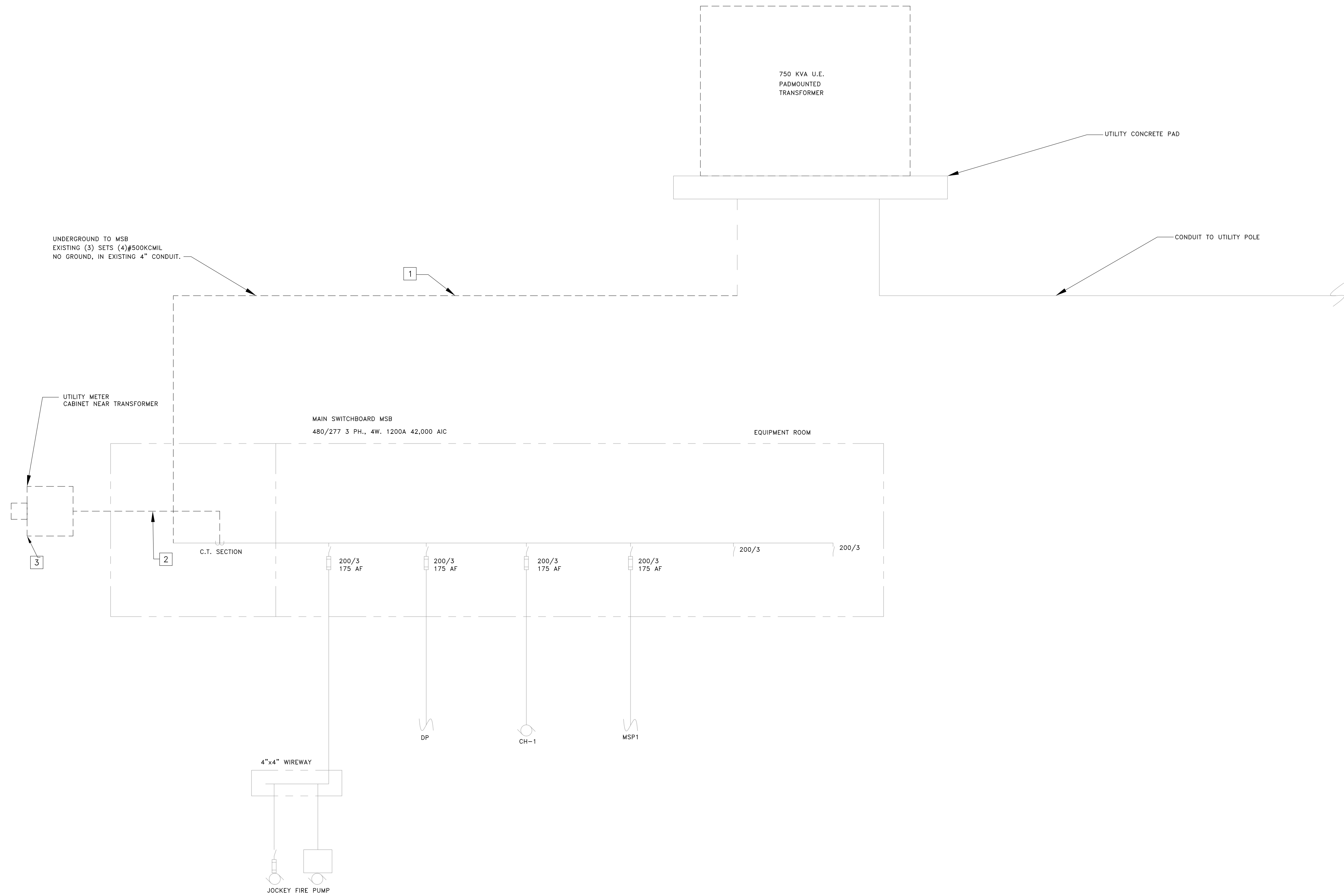
SHEET TITLE:  
ELECTRICAL  
DETAIL

SHEET NUMBER:

E-51

06 OF 08 SHEETS  
03/13/2025

BID SET 3-13-2025



- # KEYED NOTES:
1.

DEMO UNDERGROUND CONDUIT TO EXISTING MAIN SWITCHBOARD.
2.

DEMO AND REPLACE C.T. WIRING.
3.

DEMO AMEREN METER CABINET.

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ISSUE DATE: 3/13/2025

CAD DWG FILE: E-60  
DRAWN BY: AO  
CHECKED BY: GF  
DESIGNED BY: AO

SHEET TITLE:

EXISTING  
ONE-LINE  
DIAGRAM

SHEET NUMBER:

E-60

07 OF 08 SHEETS  
03/13/2025



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CAD DWG FILE: E-61  
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DESIGNED BY: AO

SHEET TITLE:

NEW ONE-LINE  
DIAGRAM

SHEET NUMBER:

E-61

08 OF 08 SHEETS  
03/13/2025

Load Center Panel: Generator												
Location: GENERATOR				Volts: 240V/120V				A.I.C. Rating: 10KAIC				
Supply From: DP1				Phases: 1				Mains Type: MCB				
Mounting: SURFACE				Wires: 3				Mains Rating: 60 A				
Enclosure: NEMA 3R								MCB Rating: 60 A				
CKT	Circuit Description			Trip	Poles	A (VA)	B (VA)	Poles	Trip	Circuit Description		CKT
1	GFCI			20 A	1	180		1	20 A	SPARE		2
3	BATTERY CHARGER			20 A	1		720	1	20 A	SPARE		4
5	JACKET WATER HEATER			20 A	1	252		1	20 A	SPARE		6
7	JACKET WATER HEATER			20 A	1		252	1	20 A	SPARE		8
9	ALTERNATOR HEATER			20 A	1	1800		1	20 A	SPARE		10
11	ALTERNATOR HEATER			20 A	1		1800	1	20 A	SPARE		12
						Total Load VA:	2232	2772				
						Total Amps:	18.6A	23.1A				
Panel Totals						Panel Totals						
Total Conn. Load: 5004 VA						Total Conn.: 20.85 A						
Total Est. Demand: 5310 VA						Total Est. Demand: 22.13 A						

NOTE: PANEL BOARD SHOP DRAWING WILL BE REVIEWED ONCE GENERATOR HAS BEEN SUBMITTED. PANEL NEEDS TO BE COORDINATED WITH GENERATOR MISCELLANEOUS LOADS.

