

## ADDENDUM NO. 1

**TO: PLANS AND SPECIFICATIONS FOR STATE OF MISSOURI**

**Upgrade Electric Network  
Camp Rising Sun  
Lake of the Ozarks State Park  
Kaiser, Missouri  
PROJECT NO.: X2202-01**

**Bid Opening Date: 1:30 PM, Thursday, May 18, 2023 (Not Changed)**

**Bidders are hereby informed that the construction Plans and/or Specifications are modified as follows:**

### **SPECIFICATION CHANGES:**

None

### **DRAWINGS CHANGES:**

1. Sheet E-001 – Electrical Symbols, Abbreviations & General Notes
  - a. REVISE per attached Revision A, dated 05/11/2023.
2. Sheet ES-101 – Electrical Site Demolition Plan - North
  - a. REVISE per attached Revision A, dated 05/11/2023.
3. Sheet ES-102 – Electrical Site Demolition Plan - South
  - a. REVISE per attached Revision A, dated 05/11/2023.
4. Sheet ES-103 – Electrical Site Plan - North
  - a. REVISE per attached Revision A, dated 05/11/2023.
5. Sheet ES-104 – Electrical Site Plan - South
  - a. REVISE per attached Revision A, dated 05/11/2023.
6. Sheet ED-601 – One-Line Diagram - Demolition
  - a. REVISE per attached Revision A, dated 05/11/2023.
7. Sheet E-401 – Electrical Plans
  - a. REVISE per attached Revision A, dated 05/11/2023.
8. Sheet E-502 – Lighting Fixture Installation Details - Alt Bid No. 1
  - a. REVISE per attached Revision A, dated 05/11/2023.

9. Sheet E-601 – One-Line Diagram
  - a. REVISE per attached Revision A, dated 05/11/2023.
10. Sheet E-603 – Panelboard & Lighting Fixture Schedules & Alt Bid No. 1
  - a. REVISE per attached Revision A, dated 05/11/2023.

**GENERAL COMMENTS:**

1. The Pre-Bid Meeting was held May 3, 2023 followed by a walk-through of the project site. The Pre-bid Meeting sign-in sheet is attached.
2. Bidders who wish to perform a site inspection should contact DNR State Park's staff Larry Webb or Morgan Carson at (573) 348-2696, [Larry.Webb@dnr.mo.gov](mailto:Larry.Webb@dnr.mo.gov) or [Morgan.Carson@dnr.mo.gov](mailto:Morgan.Carson@dnr.mo.gov) to schedule a time to enter the Park.
3. Please contact Paul Girouard, Contract Specialist, at (573) 751-4797, [Paul.Girouard@oa.mo.gov](mailto:Paul.Girouard@oa.mo.gov) for questions about bidding procedures, MBE\WBE\SDVE Goals, and other submittal requirements.
4. The deadline for technical questions was May 10, 2023 at noon (12:00 PM).
5. Changes to, or clarification of, the bid documents are only made as issued in the addenda.
6. All correspondence with respect to this project must include the State of Missouri project number as indicated above.
7. Current Planholders list is available online at: [X2202-01 Upgrade Electric Network - Camp Rising Sun - Lake of the Ozarks State Park :: Plan Holders :: State of Missouri Office of Administration \(oafmdcplanroom.com\)](http://X2202-01 Upgrade Electric Network - Camp Rising Sun - Lake of the Ozarks State Park :: Plan Holders :: State of Missouri Office of Administration (oafmdcplanroom.com))
8. Prospective Bidders contact American Document Solutions, 1400 Forum Blvd Suite 7A, Columbia MO 65203, (573) 446-7768 to get plans and specifications.
9. **All bids shall be submitted on the bid form without additional terms and conditions, modifications, or stipulations. Each space on the bid form shall be properly filled including a bid amount for each alternate. Failure to do so will result in rejection of the bid.**
10. **MBE/WBE/SDVE participation requirements can be found in DIVISION 00. The MBE/WBE/SDVE participation goals are 10%/10%/3%, respectively. Only certified firms as of the bid opening date can be used to satisfy the MBE/WBE/SDVE participation goals for this project. If a bidder is unable to meet a participation goal, a Good Faith Effort Determination Form must be completed. Failure to complete this process will result in rejection of the bid.**

**ATTACHMENTS:**

1. Pre-Bid Meeting Sign-In Sheet
2. Revised Sheets E-001, ES-101, ES-102, ES-103, ES-104, ED-601, E-401, E-502, E-601, E-603

**May 11, 2023**

**END ADDENDUM NO. 1**

**Pre-Bid Meeting Attendance Sheet  
 Project-Upgrade Electric Network-Camp Rising Sun  
 Lake Ozark State Park  
 Kaiser, Missouri**

**Project No. X2202-01  
 10:00 AM, May 3, 2023**

Name & Title	Company Name Type of Contracting	MBE/WBE/ SDVE Status	Phone	E-Mail Address
Scott Zeller, Project Manager	OA-FMDC	-	573-751-2668	<u>Scott.Zeller@oa.mo.gov</u>
Nathan Graessle, Design Engineer	DNR State Parks	-	573-751-5360	<u>Nathan.Graessle@dnr.mo.gov</u>
Larry Webb, Superintendent	DNR State Parks	-	573-348-2694 ext. 236	<u>Larry.Webb@dnr.mo.gov</u>
Morgan Carson, Assistant Superintendent	DNR State Parks	-	573-348-2694 ext. 227	<u>Morgan.Carson@dnr.mo.gov</u>
Barry Freiner, A/E Rep	Rogers-Schmidt	-	636-600-1551	<u>bfreiner@rogers-schmidt.com</u>
Ken Stevens, Construction Administrator	OA-FMDC	-	573-526-5768	<u>Ken.Stevens@oa.mo.gov</u>

**Pre-Bid Meeting Attendance Sheet  
 Project-Upgrade Electric Network-Camp Rising Sun  
 Lake Ozark State Park  
 Kaiser, Missouri**

**Project No. X2202-01  
 10:00 AM, May 3, 2023**

<b>Name &amp; Title</b>	<b>Company Name Type of Contracting</b>	<b>MBE/WBE/ SDVE Status</b>	<b>Phone</b>	<b>E-Mail Address</b>
<b>Adam Enboden, Deputy Regional Director</b>	<b>DNR State Parks</b>	-	<b>417-532-7161</b>	<b><u>Adam.Enboden@dnr.mo.gov</u></b>
<b>Justin Adams, Regional Director</b>	<b>DNR State Parks</b>	-	<b>417-276-4259</b>	<b><u>Justin.Adams@dnr.mo.gov</u></b>
<b>Paul Girouard, Contract Specialist</b>	<b>OA-FMDC</b>	-	<b>573-751-4797</b>	<b><u>Paul.Girouard@oa.mo.gov</u></b>
<b>Laura Hendrickson, Deputy Director of Operations</b>	<b>DNR State Parks</b>	-	<b>573-751-2123</b>	<b><u>Laura.Hendrickson@dnr.mo.gov</u></b>
<i>Tim Otto Project Manager</i>	<i>Kaiser Electric</i>	-	<i>573-550-6188</i>	<i>totto@kaisercentralmo.com</i>

**ELECTRICAL SYMBOLS**

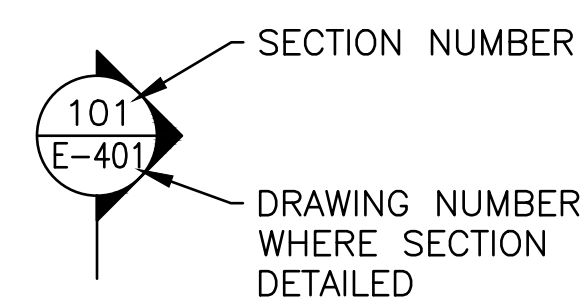
	KEYNOTE; SPECIFICALLY REFERENCED TO AN ITEM ON THE FIELD OF THE DRAWING. DIGITS IDENTIFY NOTE NUMBER.
	LTG FIXTURE TYPE PER LTG FIXTURE SCHEDULE
	FDR NUMBER PER FDR SCHEDULE
	CONDUIT EXPOSED
	CONDUIT OR CABLE TURNED DOWN
	CONDUIT OR CABLE TURNED UP
	CONDUIT BELOW GRADE
	FLEXIBLE CONDUIT OR CABLE
	DISCONNECT SWITCH
	F = FUSIBLE
	C = CIRCUIT BREAKER
	JUNCTION BOX
	JUNCTION BOX W/ SPLICE(S)
	NEW PANELBOARD
	EXISTING PANELBOARD
	SINGLE POLE SWITCH
	120V DUPLEX RECEPTACLE
	120V GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE
	120V DUPLEX RECEPTACLE W/ WEATHERPROOF COVER
	SURGE PROTECTIVE DEVICE
	SURGE ARRESTER
	GROUNDING ROD
	EARTH GROUNDING CONNECTION
	WIRING CROSSING, CONNECTION
	WIRING CROSSING, NO CONNECTION
	EQUIPMENT CONNECTION
	FUSED SWITCH
	CIRCUIT BREAKER
	TRANSFORMER
	ELECTRIC METER
	CT CABINET

**ELECTRICAL ABBREVIATIONS**

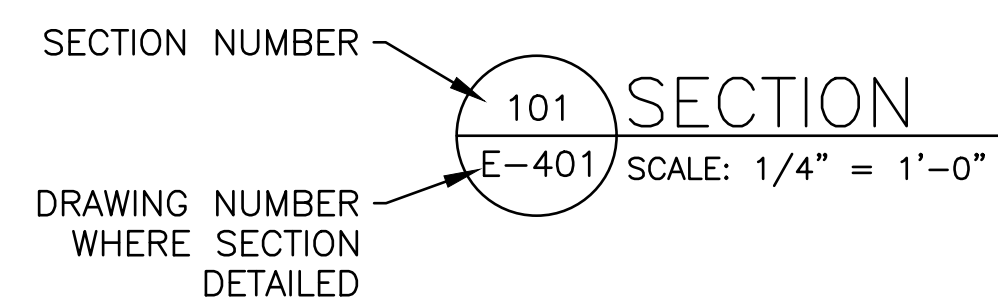
A	AMPERE(S)	LC	LOAD CENTER
ABAND	ABANDONED	LFMC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
AC	ALTERNATING CURRENT	LP	LIGHTING PANELBOARD
A/C	AIR-CONDITIONER	M	METER
AF	AMP FUSE OR AMP FRAME	MAX	MAXIMUM
AFF	ABOVE FINISHED FLOOR	MCB	MAIN CIRCUIT BREAKER
AFG	ABOVE FINISHED GRADE	MCCB	MOLDED CASE CIRCUIT BREAKER
AIC	AMPERE INTERRUPTING CAPACITY (RMS SYMMETRICAL)	MIN	MINIMUM
ALT	ALTERNATE	MLO	MAIN LUG ONLY
APPROX	APPROXIMATELY	MTD	MOUNTED
ASSOC	ASSOCIATED	N OR NEUT	NEUTRAL
ASSY	ASSEMBLY	N/A	NOT APPLICABLE
AVAIL	AVAILABLE	NEC	NATIONAL ELECTRICAL CODE
AWG	AMERICAN WIRE GAUGE	NFPA	NATIONAL FIRE PROTECTION AGENCY
BFG	BELOW FINISHED GRADE	NIC	NOT IN CONTRACT
BKR	BREAKER	NTS	NOT TO SCALE
BLDG	BUILDING	OH	OVERHEAD
C	CONDUIT OR CONDUCTOR	OHE	OVERHEAD ELECTRIC
CB	CIRCUIT BREAKER	P	POLE(S)
CKT	CIRCUIT	P/O	PART OF
CNTRL	CONTROL	PNL	PANEL
CONC	CONCRETE	PNLBD	PANELBOARD
CT	CURRENT TRANSFORMER	PSI	POUNDS PER SQUARE INCH
CTR	CENTER	PVC	SCHEDULE 40 POLYVINYLCHLORIDE CONDUIT
CU	COPPER	PWR	POWER
D OR DP	DEEP	REC OR RECP	RECEPTACLE
DG	DOWN GUY	REQD	REQUIRED
DIA	DIAMETER	REQMTS	REQUIREMENTS
DISC	DISCONNECT	RM	ROOM
DN	DOWN	RMC	RIGID METAL CONDUIT
DS	DISCONNECT SWITCH	RMS	ROOT MEAN SQUARE
DWG	DRAWING	RV	RECREATIONAL VEHICLE
ELEV	ELEVATION	SA	SURGE ARRESTOR
ELEC	ELECTRIC OR ELECTRICAL	S.C.	SHORT CIRCUIT
ENCL	ENCLOSURE	SCH	SCHEDULE
EQUIP	EQUIPMENT	SE	SERVICE ENTRANCE OR SERVICE EQUIP
EWH	ELECTRIC WATER HEATER	SP	SINGLE POLE
EXIST	EXISTING	SPD	SURGE PROTECTIVE DEVICE
EXT	EXTERIOR	SS	STAINLESS STEEL
F	FUSE OR FUSIBLE	STL	STEEL
FDR	FEEDER	STRD	STRANDED
FL	FLOOR	SYM	SYMMETRICAL
FRT	FRONT	TEMP	TEMPORARY
GA	GAUGE	TERM	TERMINATION
GALV	GALVANIZED	TMCB	THERMAL MAGNETIC CIRCUIT BREAKER
GF	GROUND FAULT	TYP	TYPICAL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	UE	UNDERGROUND ELECTRIC
GRC	GALVANIZED RIGID STEEL CONDUIT	UG	UNDERGROUND
G OR GRD	GROUND	UP	UTILITY POLE
HZ	FREQUENCY IN CYCLES PER SECOND	V	VOLT(S)
INCL	INCLUDING	VA	VOLT-AMPERE(S)
INFO	INFORMATION	W	WATT(S), WIRE(S) OR WIDE
INS	INSULATED	W/	WITH
J, JB, J-BOX	JUNCTION BOX	W/G	WITH GROUND
kA	KILOAMPERE(S)	W/O	WITHOUT
kAIC	KILOAMPERE INTERRUPTING CAPACITY (RMS SYMMETRICAL)	WP	WEATHERPROOF
KCM	THOUSAND CIRCULAR MIL(S)	XFMR	TRANSFORMER
kV	KILOVOLT(S)	Z	IMPEDANCE
kVA	KILOVOLT-AMPERE(S)	&	AND
kW	KILOWATT(S)	Δ	DELTA
kWh	KILOWATT-HOUR(S)	#	NUMBER
L	LINE OR LONG	%	PERCENT
LA	LIGHTING ARRESTER	∅	PHASE OR DIAMETER

**GENERAL ELECTRICAL NOTES:**

- A. THE CONTRACTOR SHALL PROVIDE ALL HOLES IN FLOORS AND WALLS AS REQUIRED FOR CONDUIT ROUTING. SEAL PENETRATIONS IN ACCORDANCE WITH THE SPECIFICATIONS.
- B. COORDINATE EXACT LOCATIONS OF CONDUIT RUNS WITH EXISTING CONDITIONS AND WITH THE OWNER'S REPRESENTATIVE. INDICATE FINAL ROUTING OF ALL CONDUITS ON "AS BUILT" DRAWINGS.
- C. ALL INFORMATION CONTAINED ON THIS DRAWING APPLIES TO ES, ED AND E SERIES DRAWINGS.
- D. THERE MAY BE SYMBOLS AND/OR ABBREVIATIONS SHOWN ON THIS SHEET THAT ARE NOT APPLICABLE TO THIS PROJECT.



**SECTION MARK**



**SECTION IDENTIFICATION SYMBOL**



**BARRY D. FREINER**  
Registered Professional Engineer  
MO # E-24220  
Expires 12-31-2024

**ROGERS-SCHMIDT  
ENGINEERING CO., P.C.**  
CONSULTING ENGINEERS  
1736 WEST PARK CENTER DR.  
SUITE 204  
ST. LOUIS, MO 63026  
PHONE: 636-600-1551  
EMAIL: bfreiner@rogers-schmidt.com  
MISSOURI STATE CERTIFICATE  
OF AUTHORITY #000408

**OFFICE OF ADMINISTRATION  
DIVISION OF FACILITIES  
MANAGEMENT,  
DESIGN AND CONSTRUCTION**

DEPARTMENT OF  
NATURAL RESOURCES  
DIVISION OF STATE PARKS

UPGRADE ELECTRIC  
NETWORK  
CAMP RISING SUN

LAKE OF THE OZARKS  
STATE PARK  
403 HIGHWAY 134  
KAISER, MISSOURI 65047

PROJECT # X2202-01  
SITE # 5306  
ASSET # 7815306134

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: ADDENDUM 1  
DATE: 05/11/2023

ISSUE DATE: 03/28/2023

CAD DWG FILE: X2202-01-5306-7815306134- E-001.DWG  
DRAWN BY: MNS  
CHECKED BY: BDF  
DESIGNED BY: BDF

SHEET TITLE:  
**ELECTRICAL  
SYMBOLS,  
ABBREVIATIONS &  
GENERAL NOTES**

SHEET NUMBER:

**E-001**

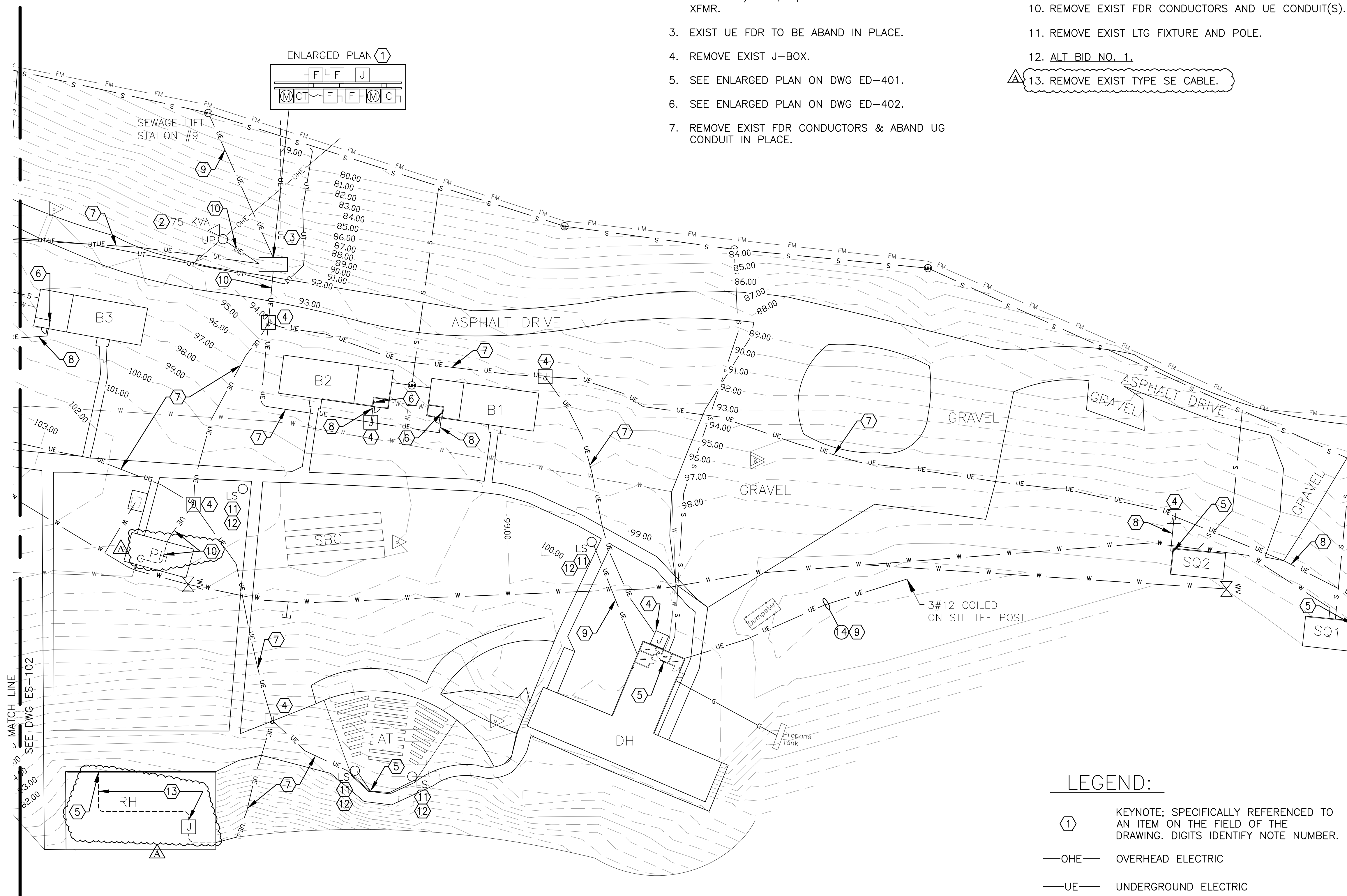


**KEY NOTES:**

1. REMOVE EXIST ELECT SERVICE EQUIP, INCL RACK AND POSTS. CONTACT AMEREN MISSOURI FOR REMOVAL OF CT CABINET & REVENUE METERS.
2. EXIST 120/240V, 1 $\phi$  POLE MTD AMEREN MISSOURI XFMR.
3. EXIST UE FDR TO BE ABAND IN PLACE.
4. REMOVE EXIST J-BOX.
5. SEE ENLARGED PLAN ON DWG ED-401.
6. SEE ENLARGED PLAN ON DWG ED-402.
7. REMOVE EXIST FDR CONDUCTORS & ABAND UG CONDUIT IN PLACE.
8. REMOVE EXIST FDR CONDUCTORS. UE CONDUIT TO REMAIN FOR INSTALLATION OF NEW CONDUCTORS.
9. EXIST UE FDR TO REMAIN.
10. REMOVE EXIST FDR CONDUCTORS AND UE CONDUIT(S).
11. REMOVE EXIST LTG FIXTURE AND POLE.
12. ALT BID NO. 1.
13. REMOVE EXIST TYPE SE CABLE.

**GENERAL NOTES:**

- A. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PROCEEDING.
- B. FIELD VERIFY ALL DIMENSIONS.
- C. ALL UG UTILITIES ARE PRIVATELY (STATE) OWNED. FIELD LOCATE ALL UTILITIES PRIOR TO ANY EXCAVATING.
- D. COORDINATE ELECTRICAL SERVICE DISCONNECTIONS WITH AMEREN MISSOURI (866-992-6619).
- E. REMOVE ABOVE GRADE PORTION OF CONDUIT DOWN TO 2'-0" MIN BFG FOR UE FDRS THAT ARE SHOWN TO BE ABAND.
- F. SEE DWGS ED-401 & ED-402 FOR BLDG ELECTRICAL DEMOLITION PLANS.
- G. SEE DWG ED-601 FOR DEMO FDR SCHEDULE.
- H. REFERENCE SPECIFICATION SECTION 012300 FOR DESCRIPTION OF ALTERNATE BID ITEMS.



**LEGEND:**

- ① KEYNOTE; SPECIFICALLY REFERENCED TO AN ITEM ON THE FIELD OF THE DRAWING. DIGITS IDENTIFY NOTE NUMBER.
- OHE— OVERHEAD ELECTRIC
- UE— UNDERGROUND ELECTRIC
- W— UNDERGROUND WATER
- S— UNDERGROUND SANITARY SEWER
- FM— FORCE MAIN
- UT— UNDERGROUND TELEPHONE
- G— UNDERGROUND LP GAS
- <sub>UP</sub> UTILITY POLE
- ← DOWN GUY
- ▽ EXIST POLE MTD XFMR
- <sub>LS</sub> LIGHTING STANDARD

**STRUCTURE LEGEND:**

- AT AMPHITHEATER
- B\_ BARRACKS
- DH DINING HALL
- PH PUMP HOUSE
- RH RECREATION HALL
- SQ\_ STAFF QUARTERS
- SBC SHUFFLE BOARD COURTS

**ELECTRICAL SITE PLAN-NORTH**  
SCALE: 1"=30'-0"  
NORTH



BARRY D. FREINER  
Registered Professional Engineer  
MO # E-24220  
Expires 12-31-2024  
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PROJECT # X2202-01  
SITE # 5306  
ASSET # 7815306134

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: **ADDENDUM 1**  
DATE: 05/11/2023  
ISSUE DATE: 03/28/2023

CAD DWG FILE: X2202-01-5306-7815306134-ES-101.DWG  
DRAWN BY: MNS/KET  
CHECKED BY: BDF  
DESIGNED BY: BDF

SHEET TITLE:  
**ELECTRICAL SITE  
DEMOLITION PLAN  
- NORTH**

SHEET NUMBER:  
**ES-101**  
6 OF 20 SHEETS  
MARCH 28, 2023

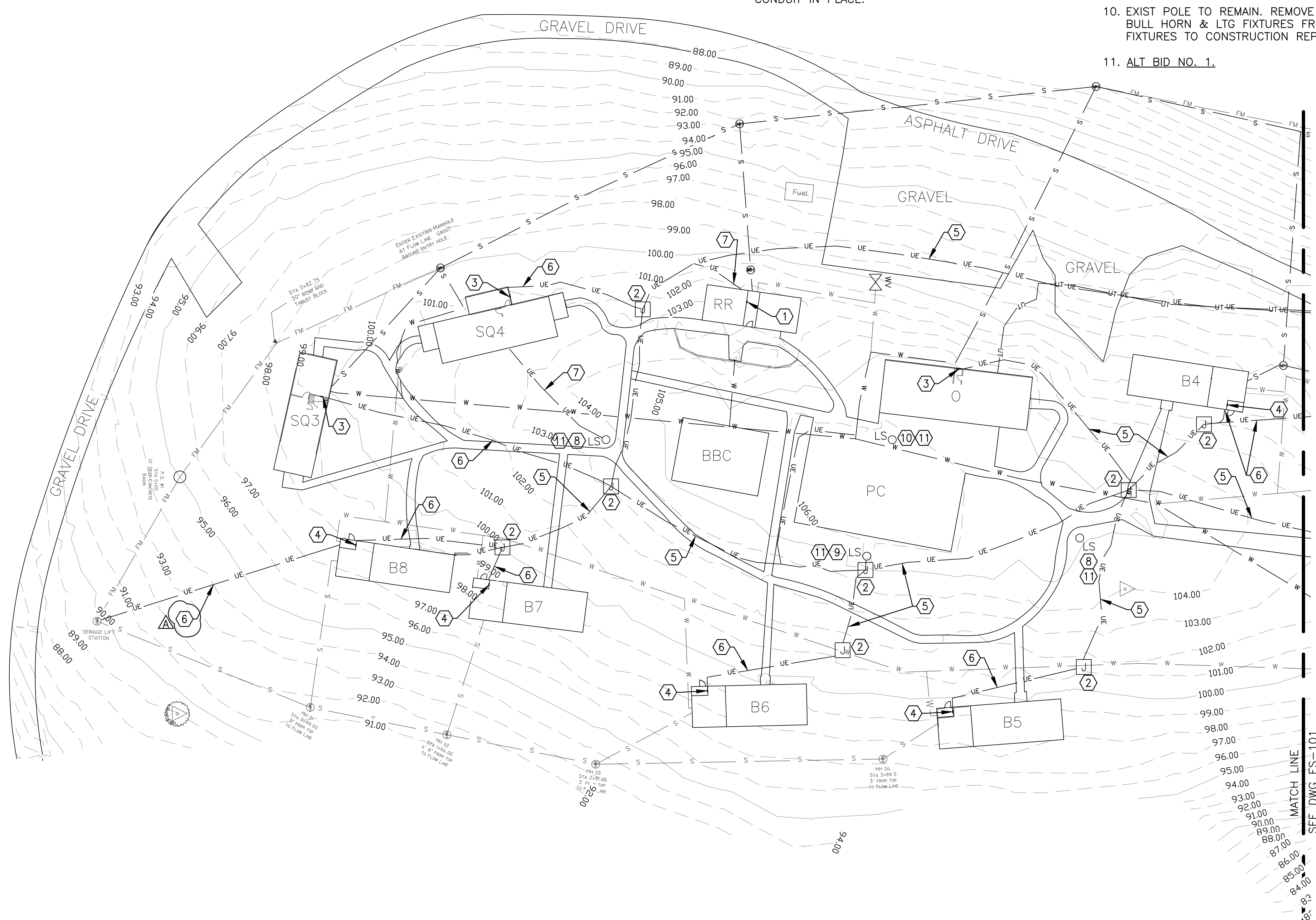


**KEY NOTES:**

- EXIST LOAD CENTER TO REMAIN.
- REMOVE EXIST UG J-BOX.
- SEE ENLARGED PLAN ON DWG ED-401.
- SEE ENLARGED PLAN ON DWG ED-402.
- REMOVE EXIST FDR CONDUCTORS & ABAND UG CONDUIT IN PLACE.
- REMOVE EXIST FDR CONDUCTORS. UE CONDUIT TO REMAIN FOR INSTALLATION OF NEW CONDUCTORS.
- EXIST UE FDR TO REMAIN.
- REMOVE EXIST LTG FIXTURE AND POLE.
- EXIST LTG FIXTURES & POLE TO BE REMOVED. RETURN LTG FIXTURES TO CONSTRUCTION REPRESENTATIVE.
- EXIST POLE TO REMAIN. REMOVE EXIST CB DISC SW, BULL HORN & LTG FIXTURES FROM POLE. RETURN LTG FIXTURES TO CONSTRUCTION REPRESENTATIVE.
- ALT BID NO. 1.

**GENERAL NOTES:**

- FIELD VERIFY EXISTING CONDITIONS PRIOR TO PROCEEDING.
- FIELD VERIFY ALL DIMENSIONS.
- ALL UG UTILITIES ARE PRIVATELY (STATE) OWNED. FIELD LOCATE ALL UTILITIES PRIOR TO ANY EXCAVATING.
- REMOVE ABOVE GRADE PORTION OF CONDUIT DOWN TO 2'-0" MIN BFG FOR UE FDRS THAT ARE SHOWN TO BE ABAND.
- SEE DWGS ED-401 & ED-402 FOR BLDG ELECTRICAL DEMOLITION PLANS.
- SEE DWG ED-601 FOR DEMO FDR SCHEDULE.
- REFERENCE SPECIFICATION SECTION 012300 FOR DESCRIPTION OF ALTERNATE BID ITEMS.



**ELECTRICAL SITE PLAN-SOUTH**  
 SCALE: 1"=30'-0"  
 NORTH

**STRUCTURE LEGEND:**

- BBC BASKETBALL COURT
- B\_ BARRACKS
- O OFFICE
- PC PLAY COURT
- RR REST ROOMS
- SQ\_ STAFF QUARTERS

**LEGEND:**

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- UT— UNDERGROUND TELEPHONE
- Q<sub>LS</sub> LIGHTING STANDARD



BARRY D. FREINER  
 Registered Professional Engineer  
 MO # E-24220  
 Expires 12-31-2024

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 SITE # 5306  
 ASSET # 7815306134

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 REVISION: **ADDENDUM 1**  
 DATE: 05/11/2023

ISSUE DATE: 03/28/2023

CAD DWG FILE: X2202-01-5306-  
 7815306134-ES-102.DWG  
 DRAWN BY: MNS/KET  
 CHECKED BY: BDF  
 DESIGNED BY: BDF

SHEET TITLE:  
**ELECTRICAL SITE  
 DEMOLITION PLAN  
 - SOUTH**

SHEET NUMBER:

**ES-102**

7 OF 20 SHEETS  
 MARCH 28, 2023



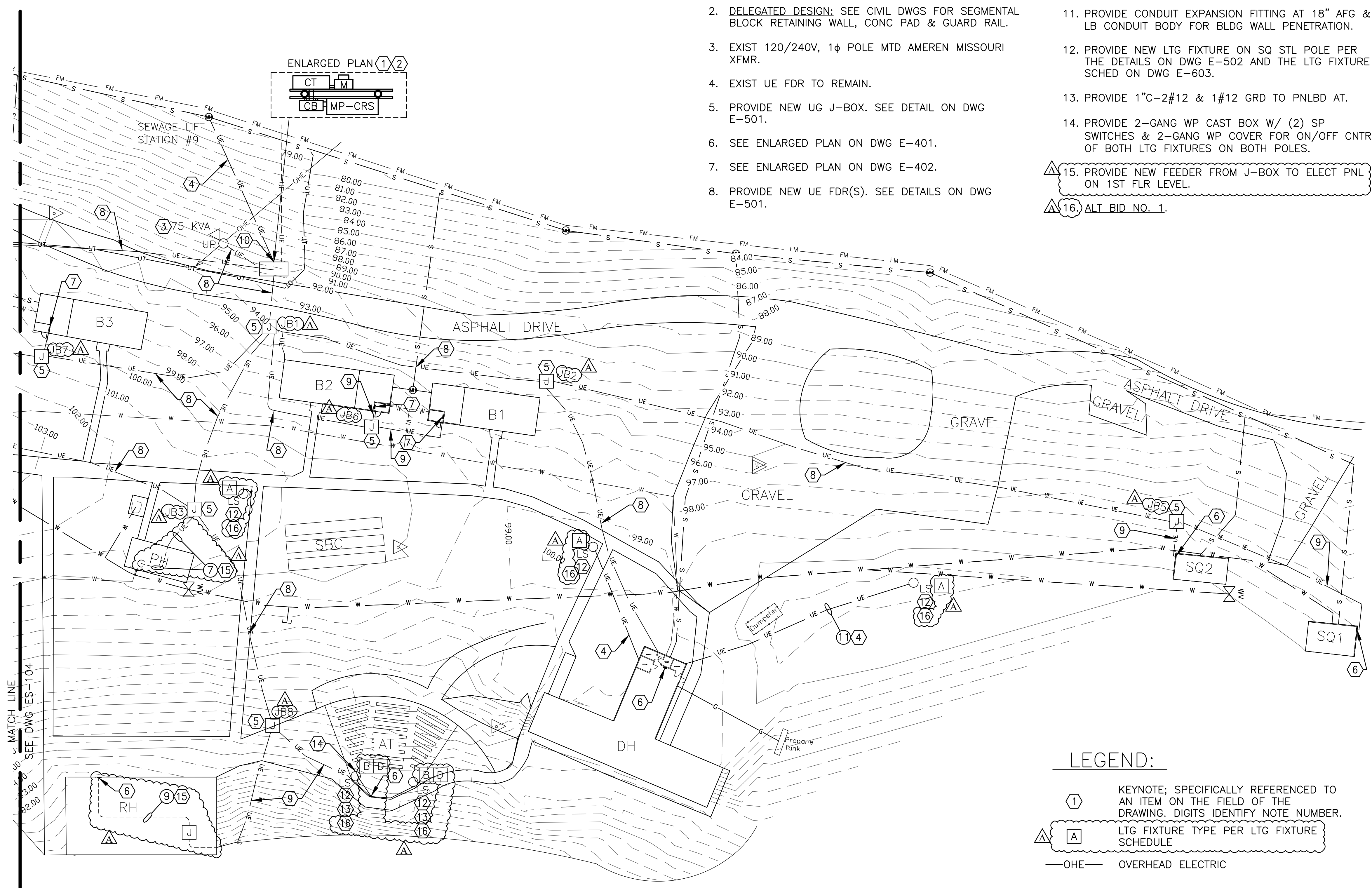
**KEY NOTES:**

- SEE ELEVATION VIEW 103 & PLAN VIEW 104 ON DWG E-501 FOR ELECTRICAL SERVICE EQUIP ARRANGEMENT. COORDINATE EQUIP LOCATION WITH AMEREN MISSOURI.
- DELEGATED DESIGN:** SEE CIVIL DWGS FOR SEGMENTAL BLOCK RETAINING WALL, CONC PAD & GUARD RAIL.
- EXIST 120/240V, 1 $\phi$  POLE MTD AMEREN MISSOURI XFMR.
- EXIST UE FDR TO REMAIN.
- PROVIDE NEW UG J-BOX. SEE DETAIL ON DWG E-501.
- SEE ENLARGED PLAN ON DWG E-401.
- SEE ENLARGED PLAN ON DWG E-402.
- PROVIDE NEW UE FDR(S). SEE DETAILS ON DWG E-501.
- PROVIDE NEW CONDUCTORS IN EXIST UG CONDUIT.
- REWORK EXIST UG 2" PVC-3#6 & 1#10 GRD INTO NEW PNLBD MP-CRS.
- PROVIDE CONDUIT EXPANSION FITTING AT 18" AFG & LB CONDUIT BODY FOR BLDG WALL PENETRATION.
- PROVIDE NEW LTG FIXTURE ON SQ STL POLE PER THE DETAILS ON DWG E-502 AND THE LTG FIXTURE SCHED ON DWG E-603.
- PROVIDE 1" C-2#12 & 1#12 GRD TO PNLBD AT.
- PROVIDE 2-GANG WP CAST BOX W/ (2) SP SWITCHES & 2-GANG WP COVER FOR ON/OFF CNTRL OF BOTH LTG FIXTURES ON BOTH POLES.

- ▲ 15. PROVIDE NEW FEEDER FROM J-BOX TO ELECT PNL ON 1ST FLR LEVEL.
- ▲ 16. ALT BID NO. 1.

**GENERAL NOTES:**

- FIELD VERIFY EXISTING CONDITIONS PRIOR TO PROCEEDING.
- FIELD VERIFY ALL DIMENSIONS.
- ALL UG UTILITIES ARE PRIVATELY (STATE) OWNED. FIELD LOCATE ALL UTILITIES PRIOR TO ANY EXCAVATING.
- CONTACT THE OSAGE BEACH FIRE DEPARTMENT (573-348-1221) FOR AN ELECTRICAL SERVICE INSPECTION. ONCE OBFD INSPECTION TAG HAS BEEN APPLIED TO THE ELEC SERVICE EQUIP, COORDINATE ELECTRICAL SERVICE CONNECTIONS WITH AMEREN MISSOURI (1-866-992-6619).
- THE ENTIRE INSTALLATION MUST BE INSTALLED IN ACCORDANCE WITH NFPA 70 (NEC) AND ANY AND ALL OTHER GOVERNING CODES AND ORDINANCES.
- ALL ELECTRICAL CONDUCTORS SHALL BE COPPER.
- ALL DIRECT BURIED CABLE SHALL BE XLPE-USE INSULATED POWER CABLES.
- DIRECT BURIED CABLES ENTERING OR LEAVING A TRENCH SHALL BE PROTECTED BY SCH 40 PVC CONDUIT.
- SCH 40 PVC CONDUIT SHALL BE USED FOR SE CONDUCTORS TO SE PNLBD. CABLES ARE ONLY PERMITTED TO BE DIRECT BURIED BETWEEN THE SE PANELBOARD AND THE MAIN PNLBD AT EACH BLDG.
- ALL EXTERIOR SWITCHES, CIRCUIT BREAKERS, RECEPTACLES, CONTROL EQUIPMENT, AND METERING DEVICES SHALL HAVE WEATHERPROOF ENCL.
- PROVIDE A 5/8-INCH x 8-FOOT GROUND ROD WITH #2 AWG STRANDED CU GRD AT THE MAIN PNLBD AT EACH BLDG.
- CARE SHALL BE TAKEN TO AVOID DAMAGING TREES. ROUTE NEW UG CONDUITS/CONDUCTORS AS REQD TO MINIMIZE ROOT DAMAGE. TRENCHES SHALL BE OUTSIDE THE CROWN WIDTH OF TREES OR A MIN OF 10FT FROM BASE OF TRUNK, WHICHEVER IS SHORTER. IF THE TREE SPACING DOES NOT PERMIT THIS, THEN BISECT THE DISTANCE BETWEEN THE TREES. UG FDRS MAY BE DIRECTIONAL BORED WITH SCH 40 HDPE CONDUIT IF NECESSARY TO AVOID DAMAGING LARGE ROOTS THAT MIGHT KILL TREES.
- SUBMIT A COPY OF THIS DWG AS A SHOP DWG SUBMITTAL SHOWING THE PROPOSED ROUTING & LENGTH OF THE UG FDR CONDUCTORS FROM THE SE PNLBD TO THE MAIN PNLBD FOR EACH BLDG TO ALLOW FOR VERIFICATION OF THE VOLTAGE DROP CALCULATIONS.
- MAINTAIN 6" MIN SEPARATION BETWEEN UG FDR CONDUITS/CABLES SHARING A COMMON TRENCH, 12" MIN SEPARATION BETWEEN UG FDR CONDUITS/CABLES AND UG SE CONDUITS AND 12" MIN SEPARATION BETWEEN UG FEEDER CONDUITS/CABLES AN ALL OTHER UG UTILITIES.
- SEE DWGS E-401 & E-402 FOR BLDG ELECTRICAL PLANS.
- SEE DWG E-601 FOR FDR SCHEDULE.
- REFERENCE SPECIFICATION SECTION 012300 FOR DESCRIPTION OF ALTERNATE BID ITEMS.
- PATCH ALL CONCRETE WALKS AT UE FDR CROSSINGS WITH CONC THICKNESS AND EXPOSED AGGREGATE FINISH TO MATCH EXISTING.



**LEGEND:**

- ① KEYNOTE; SPECIFICALLY REFERENCED TO AN ITEM ON THE FIELD OF THE DRAWING. DIGITS IDENTIFY NOTE NUMBER.
- ▲ A LTG FIXTURE TYPE PER LTG FIXTURE SCHEDULE
- OHE— OVERHEAD ELECTRIC
- UE— UNDERGROUND ELECTRIC
- W— UNDERGROUND WATER
- S— UNDERGROUND SANITARY SEWER
- FM— FORCE MAIN
- UT— UNDERGROUND TELEPHONE
- G— UNDERGROUND LP GAS
- <sub>UP</sub> UTILITY POLE
- ← DOWN GUY
- ▽ EXIST POLE MTD XFMR
- <sub>LS</sub> LIGHTING STANDARD

**STRUCTURE LEGEND:**

- AT AMPHITHEATER
- B\_ BARRACKS
- DH DINING HALL
- PH PUMP HOUSE
- RH RECREATION HALL
- SQ\_ STAFF QUARTERS
- SBC SHUFFLE BOARD COURTS



BARRY D. FREINER  
Registered Professional Engineer  
MO # E-24220  
Expires 12-31-2024  
**ROGERS-SCHMIDT  
ENGINEERING CO., P.C.**  
CONSULTING ENGINEERS  
1736 WEST PARK CENTER DR.  
SUITE 204  
ST. LOUIS, MO 63026  
PHONE: 636-600-1551  
EMAIL: bfreiner@rogers-schmidt.com  
MISSOURI STATE CERTIFICATE  
OF AUTHORITY #000408

OFFICE OF ADMINISTRATION  
DIVISION OF FACILITIES  
MANAGEMENT,  
DESIGN AND CONSTRUCTION

DEPARTMENT OF  
NATURAL RESOURCES  
DIVISION OF STATE PARKS  
UPGRADE ELECTRIC  
NETWORK  
CAMP RISING SUN

LAKE OF THE OZARKS  
STATE PARK  
403 HIGHWAY 134  
KAISER, MISSOURI 65047

PROJECT # X2202-01  
SITE # 5306  
ASSET # 7815306134

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: ▲ ADDENDUM 1  
DATE: 05/11/2023

ISSUE DATE: 03/28/2023

CAD DWG FILE: X2202-01-5306-7815306134-ES-103.DWG  
DRAWN BY: MNS/KET  
CHECKED BY: BDF  
DESIGNED BY: BDF

SHEET TITLE:  
**ELECTRICAL SITE  
PLAN - NORTH**

SHEET NUMBER:

**ES-103**

8 OF 20 SHEETS  
MARCH 28, 2023



**KEY NOTES:**

- EXIST LOAD CENTER TO REMAIN.
- PROVIDE NEW UG J-BOX. SEE DETAIL ON DWG E-501.
- SEE ENLARGED PLAN ON DWG E-401.
- SEE ENLARGED PLAN ON DWG E-402.
- PROVIDE NEW UE FDR(S). SEE DETAILS ON DWG E-501.
- PROVIDE NEW CONDUCTORS IN EXIST UG CONDUIT.
- EXIST UE-FDR TO REMAIN.
- PROVIDE NEW LTG FIXTURE ON SQ STL POLE PER THE DETAILS ON DWG E-502 AND THE LTG FIXTURE SCHED ON DWG E-603.
- PROVIDE NEW BULLHORN & LTG FIXTURES ON EXIST ROUND TAPERED STL POLE PER THE LTG FIXTURE SCHED ON DWG E-603.
- PROVIDE 1" C-3#10 & 1#10 GRD TO PNLBD 0 IN THE OFFICE BLDG.
- PROVIDE 240V, 20A/2P, 10kA, GFCI CB DISC SW IN NEMA 3R ENCL ON POLE AT LOCATION WHERE EXIST CB DISC SW WAS REMOVED. SEE DWG ES-102.
- ALT BID NO. 1.

**GENERAL NOTES:**

- FIELD VERIFY EXISTING CONDITIONS PRIOR TO PROCEEDING.
- FIELD VERIFY ALL DIMENSIONS.
- ALL UG UTILITIES ARE PRIVATELY (STATE) OWNED. FIELD LOCATE ALL UTILITIES PRIOR TO ANY EXCAVATING
- THE ENTIRE INSTALLATION MUST BE INSTALLED IN ACCORDANCE WITH NFPA 70 (NEC) AND ANY AND ALL OTHER GOVERNING CODES AND ORDINANCES.
- ALL ELECTRICAL CONDUCTORS SHALL BE COPPER.
- ALL DIRECT BURIED CABLE SHALL BE XLPE-USE INSULATED POWER CABLES.
- DIRECT BURIED CABLES ENTERING OR LEAVING A TRENCH SHALL BE PROTECTED BY SCH 40 PVC CONDUIT.
- SCH 40 PVC CONDUIT SHALL BE USED FOR SE CONDUCTORS TO SE PNLBD. CABLES ARE ONLY PERMITTED TO BE DIRECT BURIED BETWEEN THE SE PANELBOARD AND THE MAIN PNLBD AT EACH BLDG.
- ALL EXTERIOR SWITCHES, CIRCUIT BREAKERS, RECEPTACLES, CONTROL EQUIPMENT, AND METERING DEVICES SHALL HAVE WEATHERPROOF ENCL.
- PROVIDE A 5/8-INCH x 8-FOOT GROUND ROD WITH #2 AWG STRANDED CU GRD AT THE MAIN PNLBD AT EACH BLDG.
- CARE SHALL BE TAKEN TO AVOID DAMAGING TREES. ROUTE NEW UG CONDUITS/CONDUCTORS AS REQD TO MINIMIZE ROOT DAMAGE. TRENCHS SHALL BE OUTSIDE THE CROWN WIDTH OF TREES OR A MIN OF 10FT FROM BASE OF TRUNK, WHICHEVER IS SHORTER. IF THE TREE SPACING DOES NOT PERMIT THIS, THEN BISECT THE DISTANCE BETWEEN THE TREES. UG FDRS MAY BE DIRECTIONAL BORED WITH SCH 40 HDPE CONDUIT IF NECESSARY TO AVOID DAMAGING LARGE ROOTS THAT MIGHT KILL TREES.
- SUBMIT A COPY OF THIS DWG AS A SHOP DWG SUBMITTAL SHOWING THE PROPOSED ROUTING & LENGTH OF THE UG FDR CONDUITS/CABLES FROM THE PNLBD TO THE MAIN PNLBD FOR EACH BLDG TO ALLOW FOR VERIFICATION OF THE VOLTAGE DROP CALCULATIONS.
- MAINTAIN 6" MIN SEPARATION BETWEEN UG FDR CONDUITS/CABLES SHARING A COMMON TRENCH, 12" MIN SEPARATION BETWEEN UG FDR CONDUITS/CABLES AND UG SE CONDUITS AND 12" MIN SEPARATION BETWEEN UG FEEDER CONDUITS/CABLES AN ALL OTHER UG UTILITIES.
- SEE E-400 SERIES DWGS FOR BLDG ELECTRICAL PLANS.
- SEE DWG E-601 FOR FDR SCHEDULE.
- REFERENCE SPECIFICATION SECTION 012300 FOR DESCRIPTION OF ALTERNATE BID ITEMS.

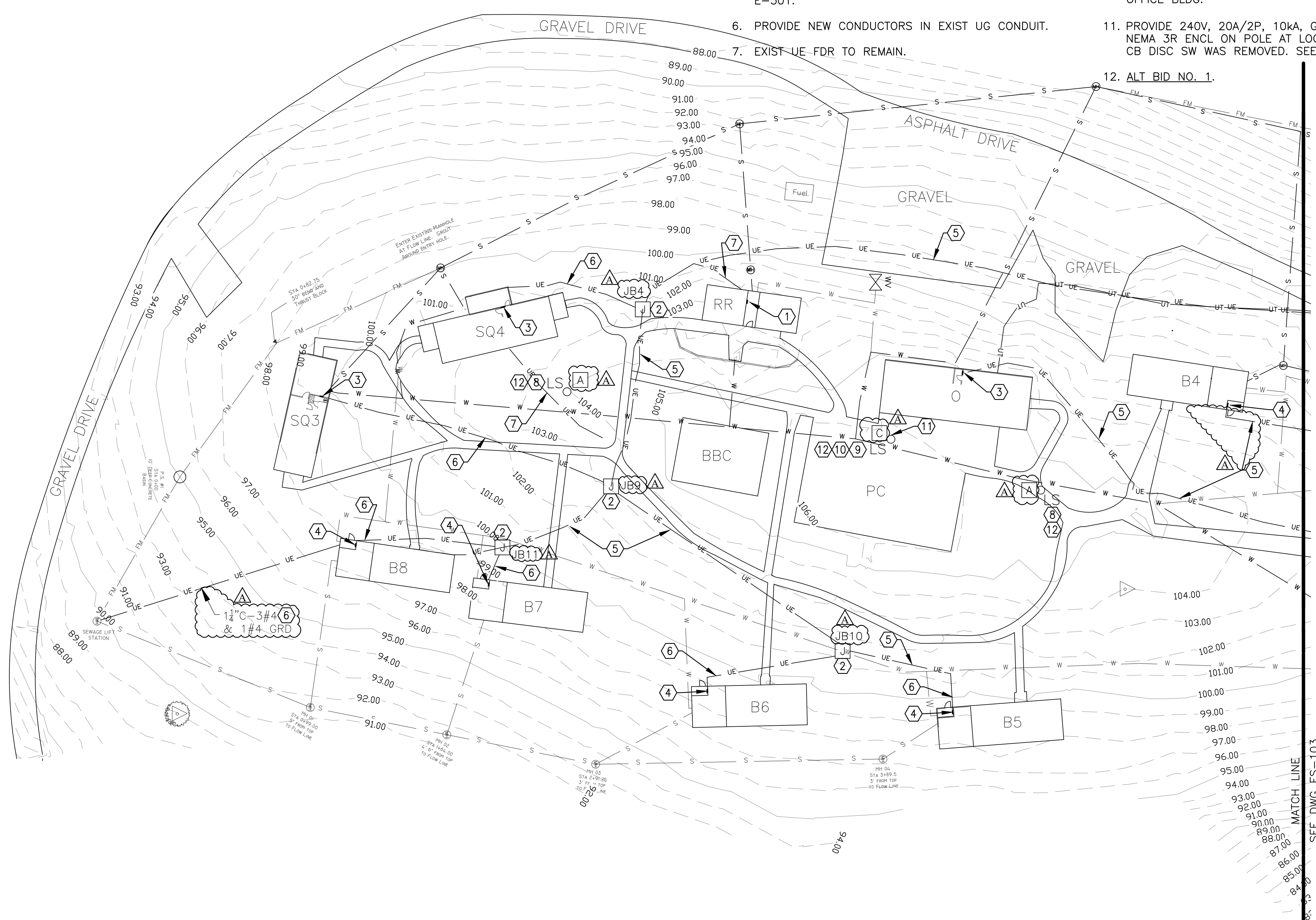
Q. PATCH ALL CONCRETE WALKS AT UE FDR CROSSINGS WITH CONC THICKNESS AND EXPOSED AGGREGATE FINISH TO MATCH EXISTING.

**LEGEND:**

- ① KEYNOTE; SPECIFICALLY REFERENCED TO AN ITEM ON THE FIELD OF THE DRAWING. DIGITS IDENTIFY NOTE NUMBER.
- △ A LTG FIXTURE TYPE PER LTG FIXTURE SCHEDULE
- OHE— OVERHEAD ELECTRIC
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- W— UNDERGROUND WATER
- S— UNDERGROUND SANITARY SEWER
- FM— FORCE MAIN
- UT— UNDERGROUND TELEPHONE
- Q<sub>LS</sub> LIGHTING STANDARD

**STRUCTURE LEGEND:**

- BBC BASKETBALL COURT
- B\_ BARRACKS
- O OFFICE
- PC PLAY COURT
- RR REST ROOMS
- SQ\_ STAFF QUARTERS



BARRY D. FREINER  
Registered Professional Engineer  
MO # E-24220  
Expires 12-31-2024  
**ROGERS-SCHMIDT  
ENGINEERING CO., P.C.**  
CONSULTING ENGINEERS  
1736 WEST PARK CENTER DR.  
SUITE 204  
ST. LOUIS, MO 63026  
PHONE: 636-600-1551  
EMAIL: bfreiner@rogers-schmidt.com  
MISSOURI STATE CERTIFICATE  
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CAMP RISING SUN

LAKE OF THE OZARKS  
STATE PARK  
403 HIGHWAY 134  
KAISER, MISSOURI 65047

PROJECT # X2202-01  
SITE # 5306  
ASSET # 7815306134

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: △ ADDENDUM 1  
DATE: 05/11/2023  
ISSUE DATE: 03/28/2023

CAD DWG FILE: X2202-01-5306-7815306134-ES-104.DWG  
DRAWN BY: MNS/KET  
CHECKED BY: BDF  
DESIGNED BY: BDF

SHEET TITLE:  
**ELECTRICAL SITE  
PLAN - SOUTH**

SHEET NUMBER:  
**ES-104**  
9 OF 20 SHEETS  
MARCH 28, 2023





BARRY D. FREINER  
Registered Professional Engineer  
MO # E-24220  
Expires 12-31-2024

**ROGERS-SCHMIDT  
ENGINEERING CO., P.C.**  
CONSULTING ENGINEERS  
1736 WEST PARK CENTER DR.  
SUITE 204  
ST. LOUIS, MO 63026  
PHONE: 636-600-1551  
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KAISER, MISSOURI 65047

PROJECT # X2202-01  
SITE # 5306  
ASSET # 7815306134

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: **ADDENDUM 1**  
DATE: 05/11/2023

ISSUE DATE: 03/28/2023

CAD DWG FILE: X2202-01-5306-  
7815306134- ED-601.DWG  
DRAWN BY: MNS  
CHECKED BY: BDF  
DESIGNED BY: BDF

SHEET TITLE:  
**ONE-LINE  
DIAGRAM -  
DEMOLITION**

SHEET NUMBER:

**ED-601**

12 OF 20 SHEETS  
MARCH 28, 2023

**DEMOLITION FEEDER SCHEDULE**

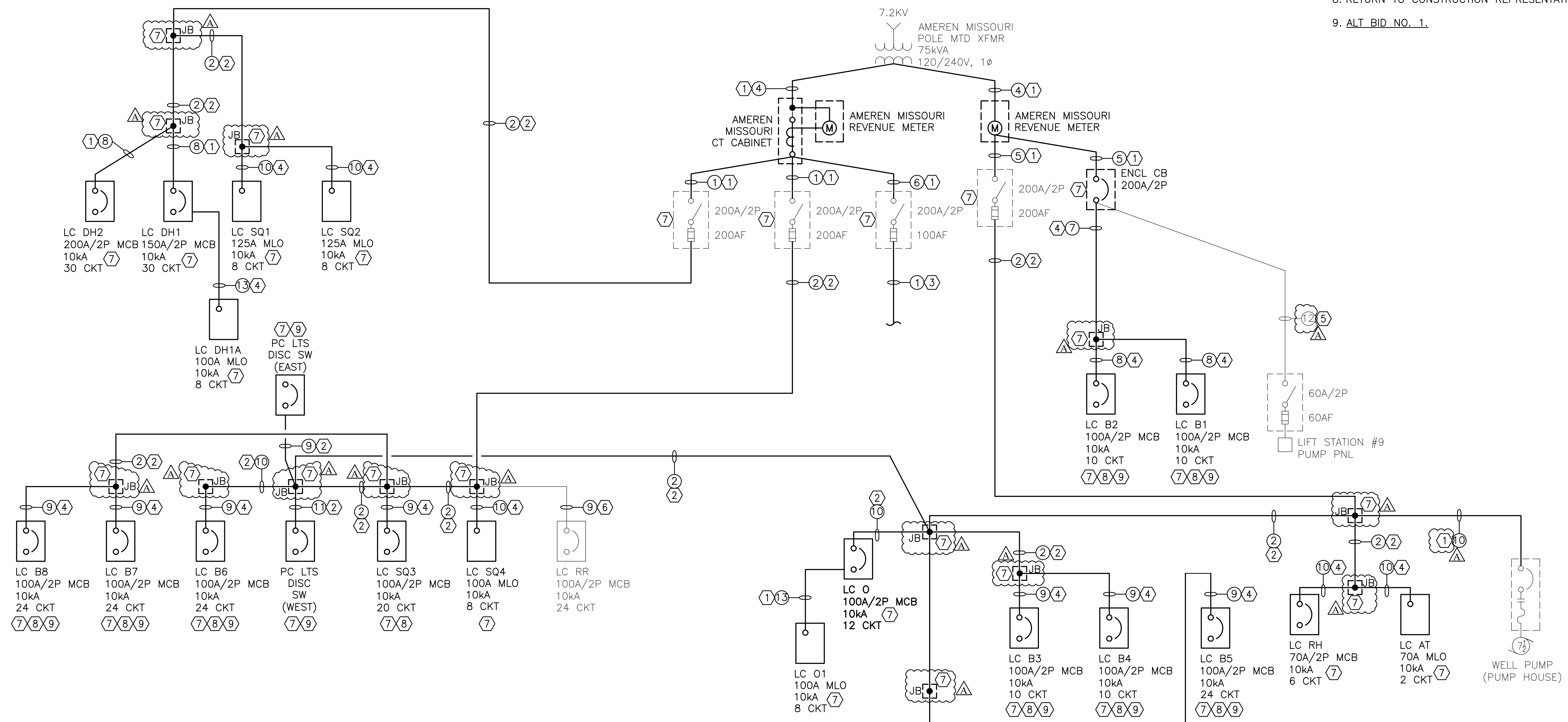
FEEDER NUMBER	CIRCUIT VOLTAGE	PHASE CONDUCTORS			NEUTRAL CONDUCTOR		GROUNDING CONDUCTOR		RACEWAY
		PHASE	QTY PER PHASE	SIZE	QTY	SIZE	QTY	SIZE	
①	120/240	2	1	300 KCM	1	300 KCM	-	-	2 1/2"
②	120/240	2	1	4/0	1	3/0	-	-	2"
③	120/240	2	1	4/0	1	2/0	-	-	3"
④	120/240	2	1	4/0 AL	1	3/0 AL	-	-	3"
⑤	120/240	2	1	3/0 AL	1	3/0 AL	-	-	3"
⑥	120/240	2	1	3/0 AL	1	2/0 AL	-	-	2"
⑦	120/240	2	1	3/0	1	2/0	1	6	2"
⑧	120/240	2	1	2/0	1	2/0	-	-	2"
⑨	120/240	2	1	2	1	2	-	-	2"
⑩	120/240	2	1	2	1	2	-	-	1 1/4"
⑪	120	1	1	3	1	3	1	8	1 1/4"
⑫	120/240	2	1	6	1	6	1	8	2"
⑬	120/240	2	1	6	1	6	1	10	1"
⑭	120	1	1	12	1	12	1	12	3/4"

**GENERAL NOTES:**

- A. ALL CONDUCTORS ARE COPPER UNLESS NOTED OTHERWISE.
- B. REFERENCE SPECIFICATION SECTION 012300 FOR DESCRIPTION OF ALTERNATE BID ITEMS.

**KEY NOTES:**

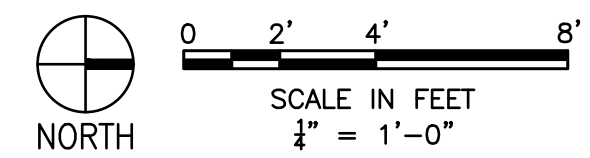
- 1. REMOVE CONDUIT AND CONDUCTORS.
- 2. REMOVE CONDUCTORS AND ABAND BELOW GRADE CONDUIT IN PLACE.
- 3. ABAND BELOW GRADE PORTION OF EXIST FDR IN PLACE.
- 4. REMOVE CONDUCTORS AND LEAVE CONDUIT IN PLACE FOR REUSE FOR NEW FDR.
- 5. EXIST FDR TO BE EXTENDED INTO NEW PNLBD MP-CRS. SEE DWG E-601.
- 6. EXIST FDR TO REMAIN.
- 7. EXIST ITEM(S) TO BE REMOVED.
- 8. RETURN TO CONSTRUCTION REPRESENTATIVE.
- 9. ALT BID NO. 1.



**ONE-LINE DIAGRAM - DEMOLITION**

NO SCALE





BARRY D. FREINER  
Registered Professional Engineer  
MO # E-24220  
Expires 12-31-2024

**ROGERS-SCHMIDT  
ENGINEERING CO., P.C.**  
CONSULTING ENGINEERS  
1736 WEST PARK CENTER DR.  
SUITE 204  
ST. LOUIS, MO 63026  
PHONE: 636-600-1551  
EMAIL: bfreiner@rogers-schmidt.com  
MISSOURI STATE CERTIFICATE  
OF AUTHORITY #000408

OFFICE OF ADMINISTRATION  
DIVISION OF FACILITIES  
MANAGEMENT,  
DESIGN AND CONSTRUCTION

DEPARTMENT OF  
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UPGRADE ELECTRIC  
NETWORK  
CAMP RISING SUN

LAKE OF THE OZARKS  
STATE PARK  
403 HIGHWAY 134  
KAISER, MISSOURI 65047

PROJECT # X2202-01  
SITE # 5306  
ASSET # 7815306134

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: **ADDENDUM 1**  
DATE: 05/11/2023

ISSUE DATE: 03/28/2023

CAD DWG FILE: X2202-01-5306-  
7815306134- E-401.DWG  
DRAWN BY: MNS  
CHECKED BY: BDF  
DESIGNED BY: BDF

SHEET TITLE:  
**ELECTRICAL  
PLANS**

SHEET NUMBER:

**E-401**

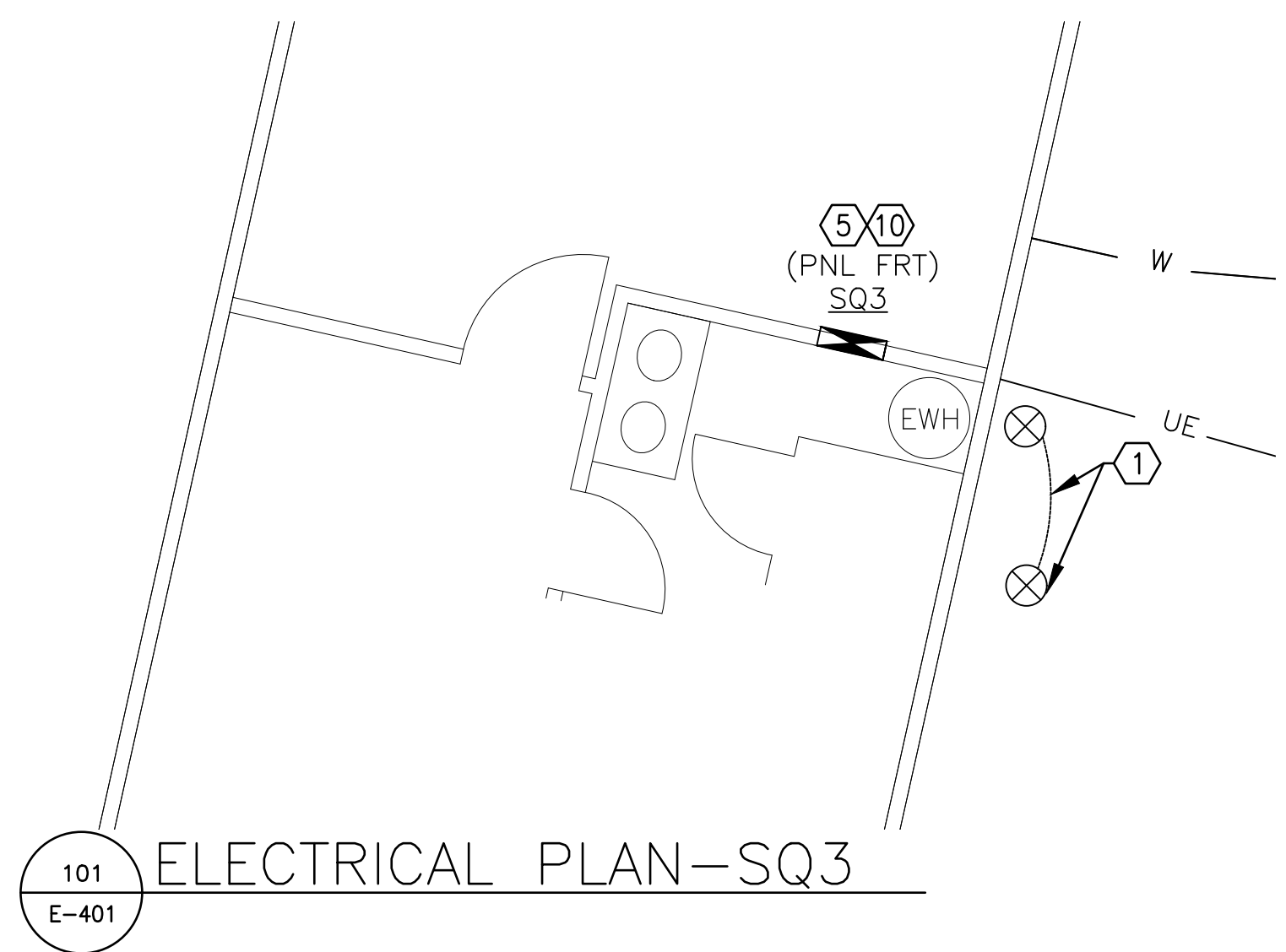
13 OF 20 SHEETS  
MARCH 28, 2023

**GENERAL NOTES:**

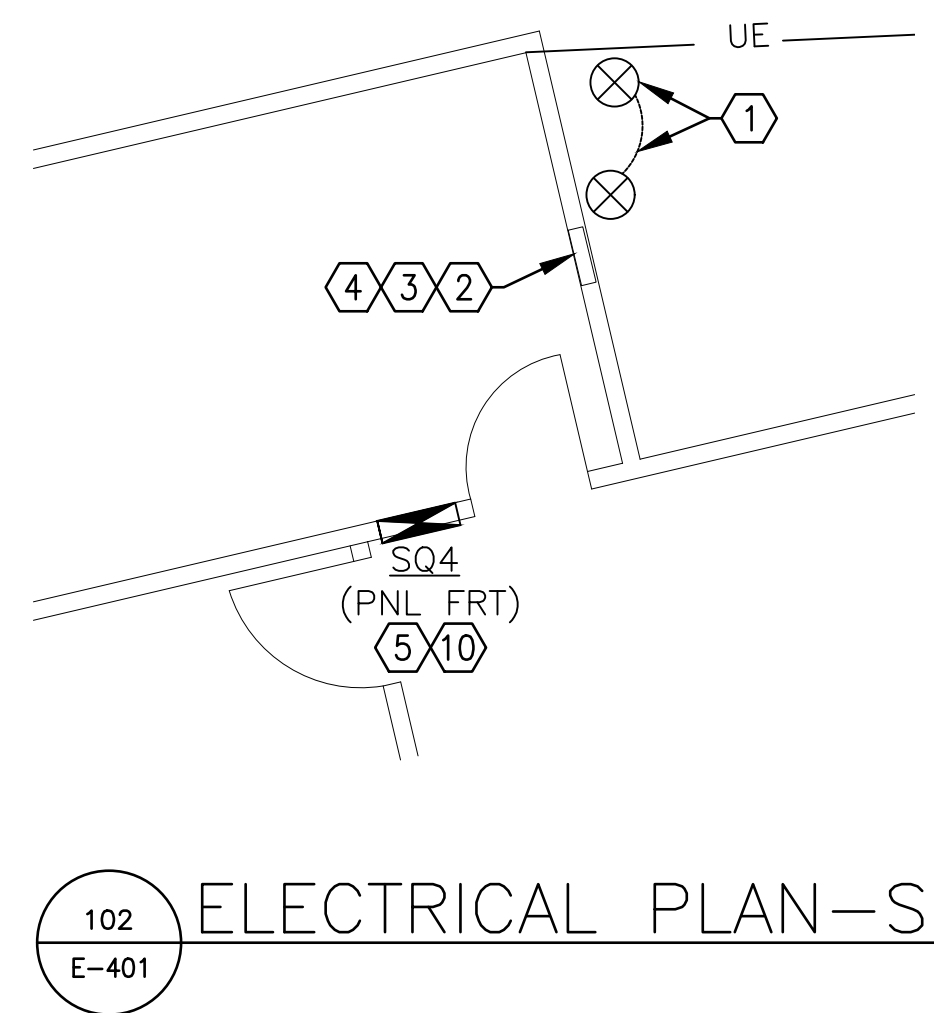
- A. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PROCEEDING.
- B. FIELD VERIFY ALL DIMENSIONS.
- C. PROVIDE SCH 80 PVC CONDUIT OVER EXIST #6 GRD ELECTRODE CONDUCTOR ON EXTERIOR OF BLDG TO 12" BFG.
- D. PATCH ALL WALLS DISTURBED BY CONSTRUCTION ACTIVITIES TO MATCH EXIST AND TOUCH UP FINISH WITH PAINT/STAIN/SEALER TO MATCH EXIST SUBJECT TO APPROVAL OF CONSTRUCTION REPRESENTATIVE.**

**KEY NOTES:**

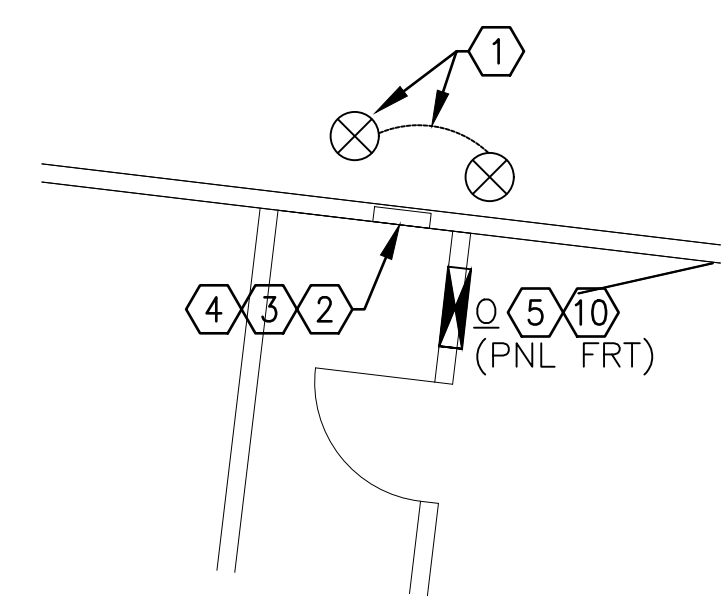
- 1. PROVIDE 5/8"ØX8'L COPPERCLAD STL GRD ROD 3'-0" FROM EXIST GRD ROD. BOND THE NEW GRD ROD TO EXIST W/ BFG #6 SOLID COPPER CONDUCTOR.
- 2. PROVIDE 12 GAUGE STL COVER WITH EDGES GROUND SMOOTH FOR EXPOSED PORTION OF EXIST FLUSH MTD LOAD CENTER ENCLOSURE THAT IS BEING USED AS A JUNCTION BOX. PAINT TO MATCH WALL.
- 3. PROVIDE 1 1/2"C THROUGH ATTIC BETWEEN EXIST FLUSH MTD LOAD CENTER ENCL AND NEW SEMI-FLUSH MTD PNLBD FOR 3#2 & 1#6 GRD MAIN FDR CONDUCTORS.
- 4. PROVIDE 3/4"C-2#10, 4#12 & 1#10 GRD & 1"C-10#10 & 1#10 GRD FROM EXIST FLUSH MTD LOAD CENTER ENCL THROUGH ATTIC TO NEW SURFACE MTD PNLBD.
- 5. PROVIDE NEW PNLBD PER SPECIFICATION SECTION 262416. RECONNECT EXISTING BRANCH CKT WIRING. DO NOT BOND EQUIP GRD BUS TO NEUT BUS.
- 6. PROVIDE #2 GRD ELECTRODE CONDUCTOR TO NEW 5/8"DIAx8'L COPPERCLAD STL GRD ROD AND METAL COLD WATER PIPE THAT IS IN CONTACT WITH THE EARTH FOR 6' OR MORE (IF AVAILABLE).
- 7. PROVIDE (3) 2" CHASE NIPPLES BETWEEN BACK OF NEW PNLBD AND EACH OF THE TWO EXIST FLUSH MTD LOAD CENTER ENCLOSURE AND EXTEND EXIST BRANCH CKT WIRING INTO NEW PNLBD.
- 8. BOLT NEW PNLBD TO FLR ON 1 1/2" U-CHANNEL SUPPORTS INSTALLED BETWEEN FLR & BOTTOM OF ENCLOSURE.
- 9. PROVIDE RECPT IN TYPE FD CAST BOX UNDER SS COUNTERTOP WITH 2#12 & 1#12 GRD IN EXIST DH FOR EXIST WATER SOFTENER.
- 10. TRIM WOOD WALL PANELING AND HEADER OFF 2X4 WALL STUDS ABOVE AND BELOW NEW RECESSED PNLBD ENCLOSURE AS REQD. PATCH WALL TO MATCH EXIST MATERIALS AND FINISH. PROVIDE WOODEN QUARTER ROUND MOLDING TO TRIM AROUND EXPOSED PORTION OF NEW PNLBD ENCL PROTRUDING THROUGH WALL. PAINT/STAIN/SEAL TO MATCH EXIST FINISH.**



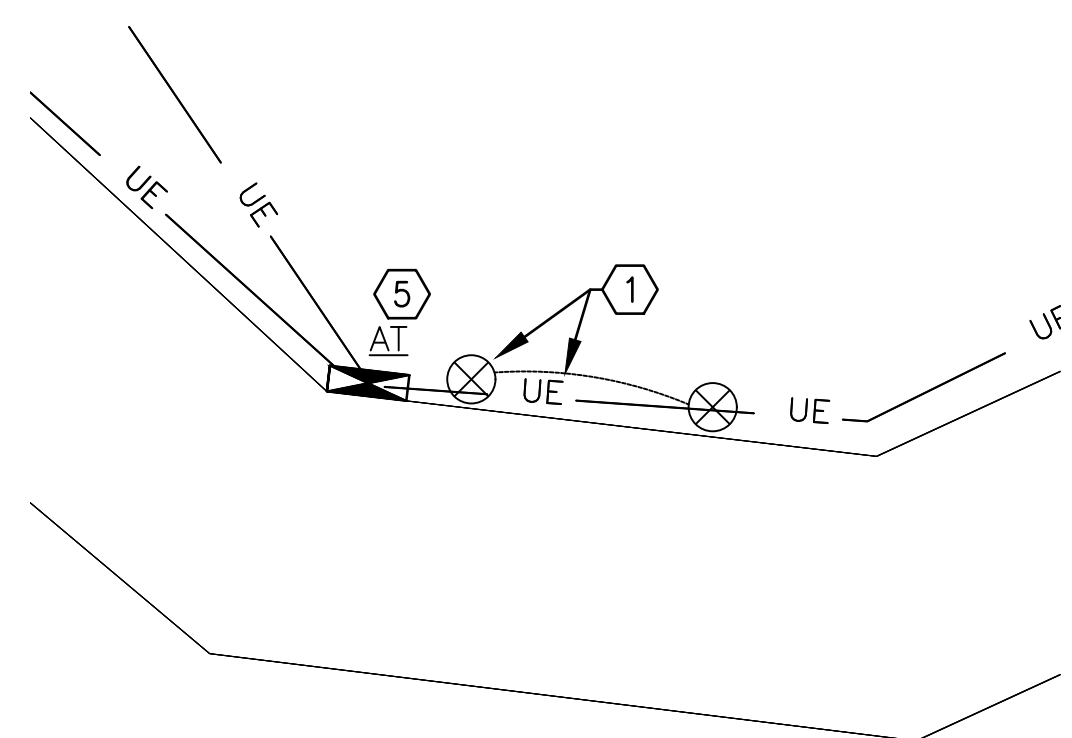
101 ELECTRICAL PLAN-SQ3  
E-401



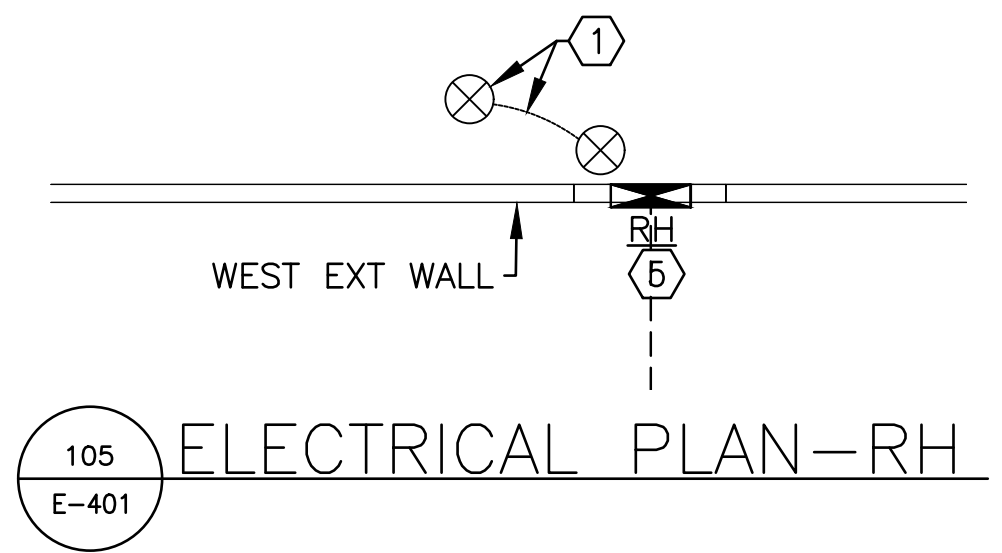
102 ELECTRICAL PLAN-SQ4  
E-401



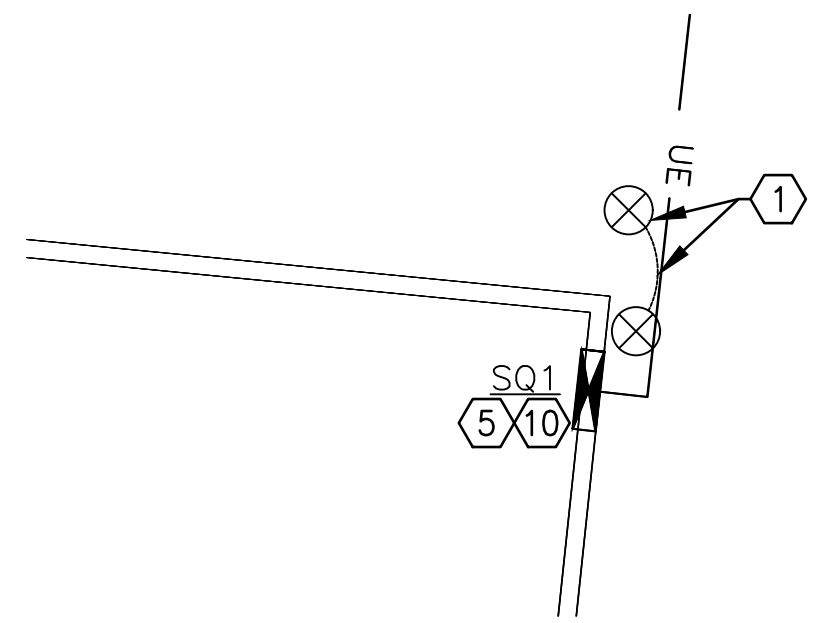
103 ELECTRICAL PLAN-O  
E-401



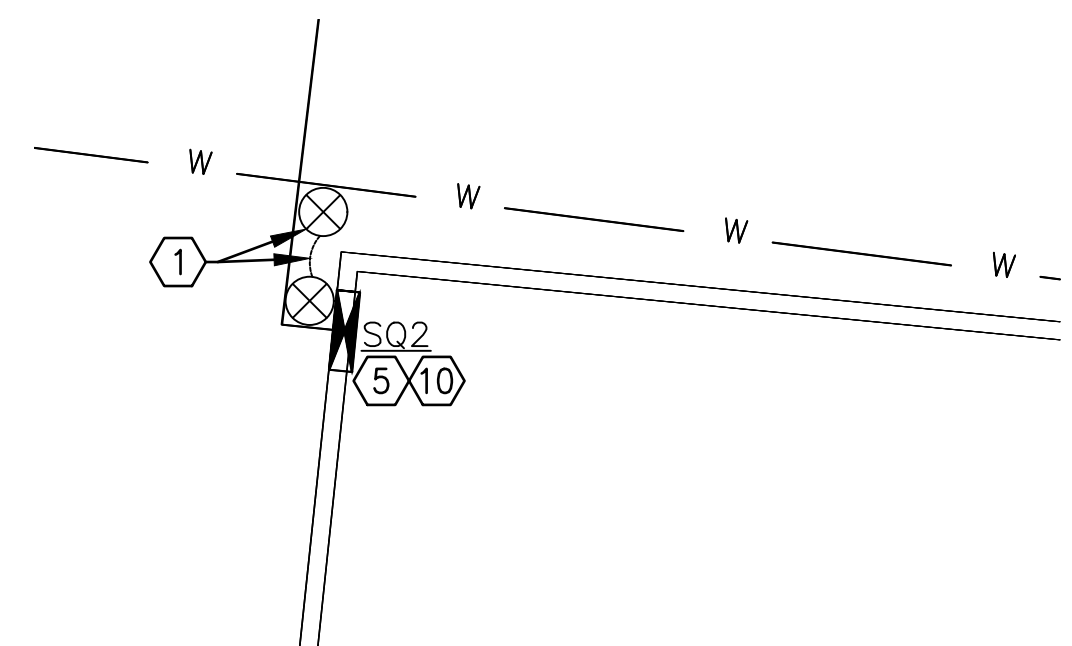
104 ELECTRICAL PLAN-AT  
E-401



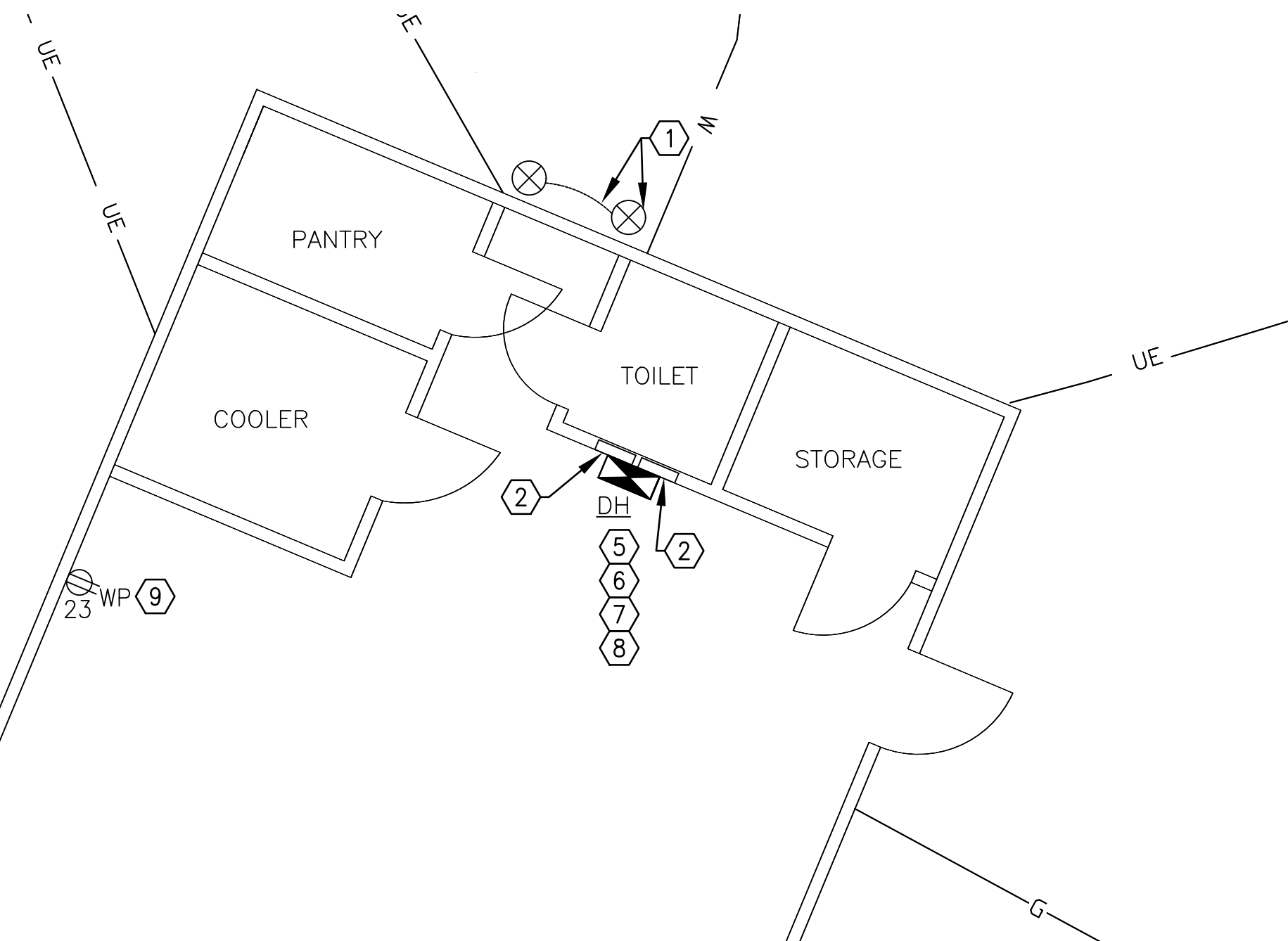
105 ELECTRICAL PLAN-RH  
E-401



106 ELECTRICAL PLAN-SQ1  
E-401



107 ELECTRICAL PLAN-SQ2  
E-401



108 ELECTRICAL PLAN-DH  
E-401





BARRY D. FREINER  
Registered Professional Engineer  
MO # E-24220  
Expires 12-31-2024

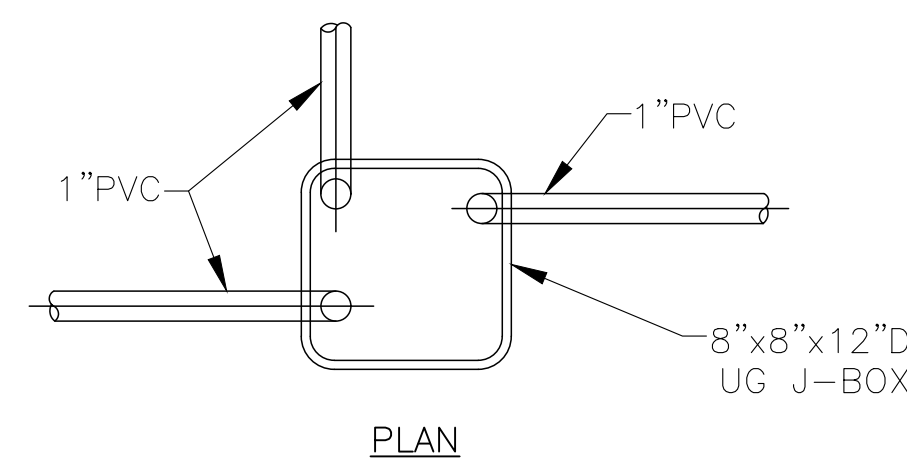
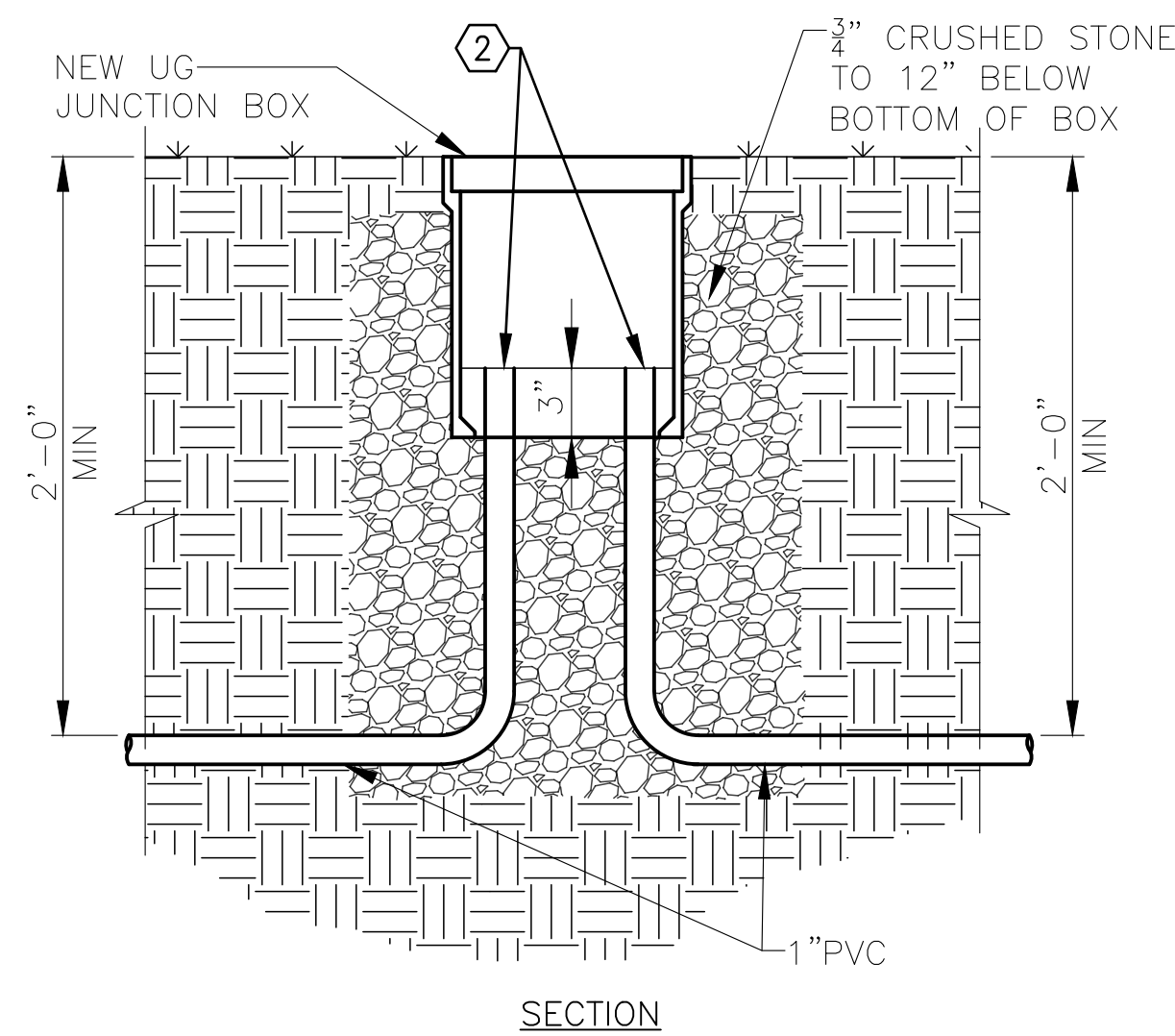
ROGERS-SCHMIDT  
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PHONE: 636-600-1551  
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**GENERAL NOTES:**

- A. ALL WORK ON THIS DRAWING IS P/O ALT BID NO. 1.
- B. REFERENCE SPECIFICATION SECTION 012300 FOR DESCRIPTION OF ALTERNATE BID ITEMS.

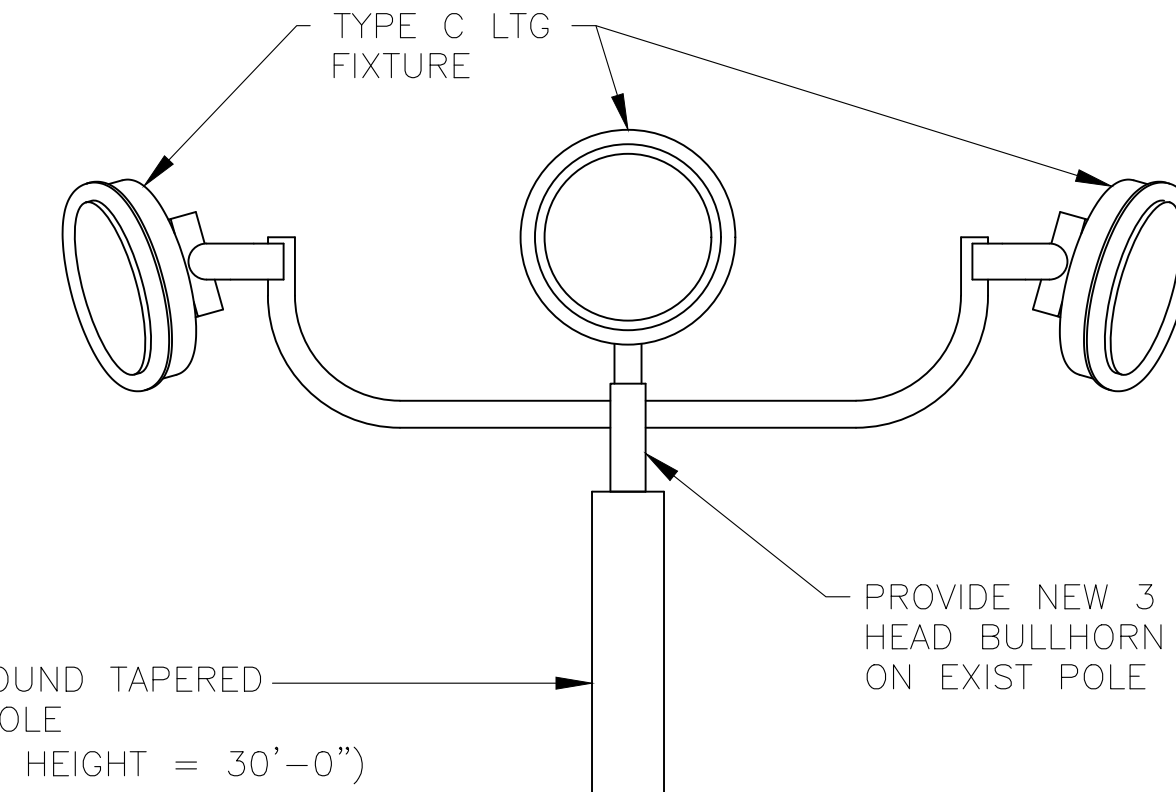
**KEY NOTES:**

- 1. CAP UNUSED CONDUIT STUB WITH PVC END CAP SIMILAR TO CARLON CAT. NO. E958FEND CAP OR APPROVED EQUAL AS REQUIRED AND BACKFILL WITH 1" CLEAN ROCK OR SAND.
- 2. SEAL AROUND CONDUCTORS AT END OF CONDUIT WITH WATER TIGHT SEALANT PER SPECIFICATION SECTION 260533.13.
- 3. PROVIDE UG J-BOX IF REQUIRED.

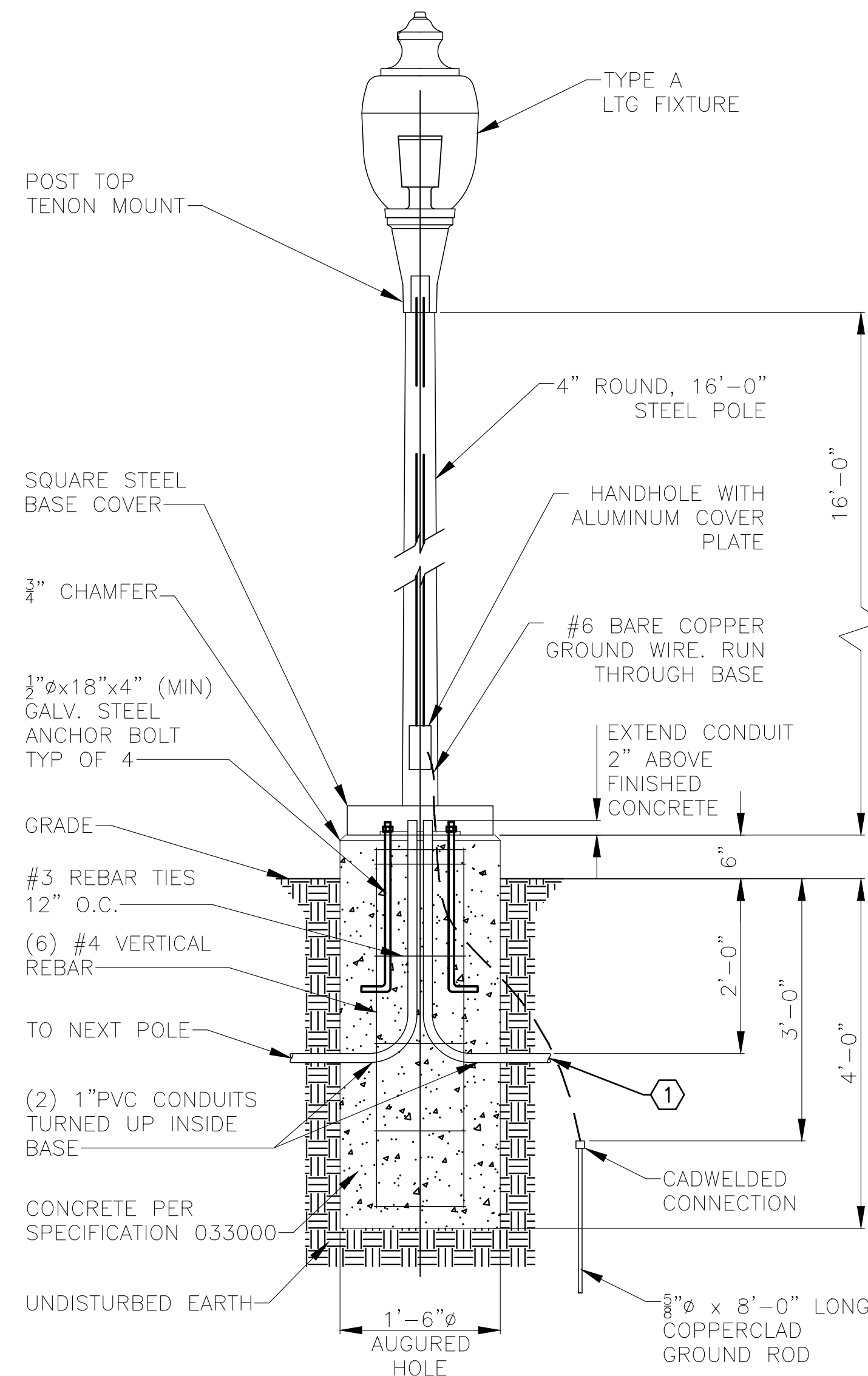


**NEW UNDERGROUND ELECTRIC JUNCTION BOX DETAIL FOR SITE LTG 3**

201  
E-502 NO SCALE

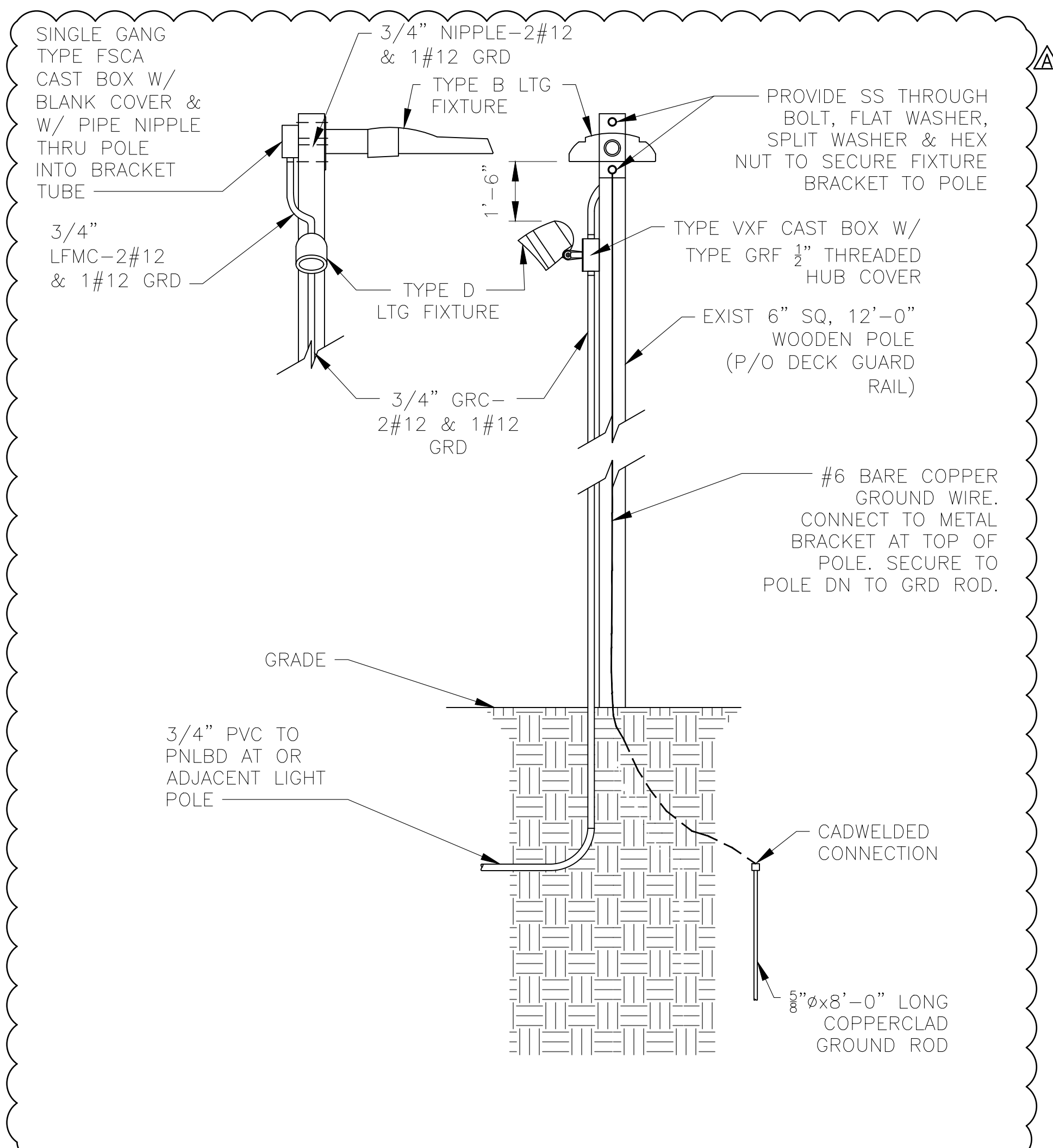


EXIST ROUND TAPERED STEEL POLE (APPROX HEIGHT = 30'-0")



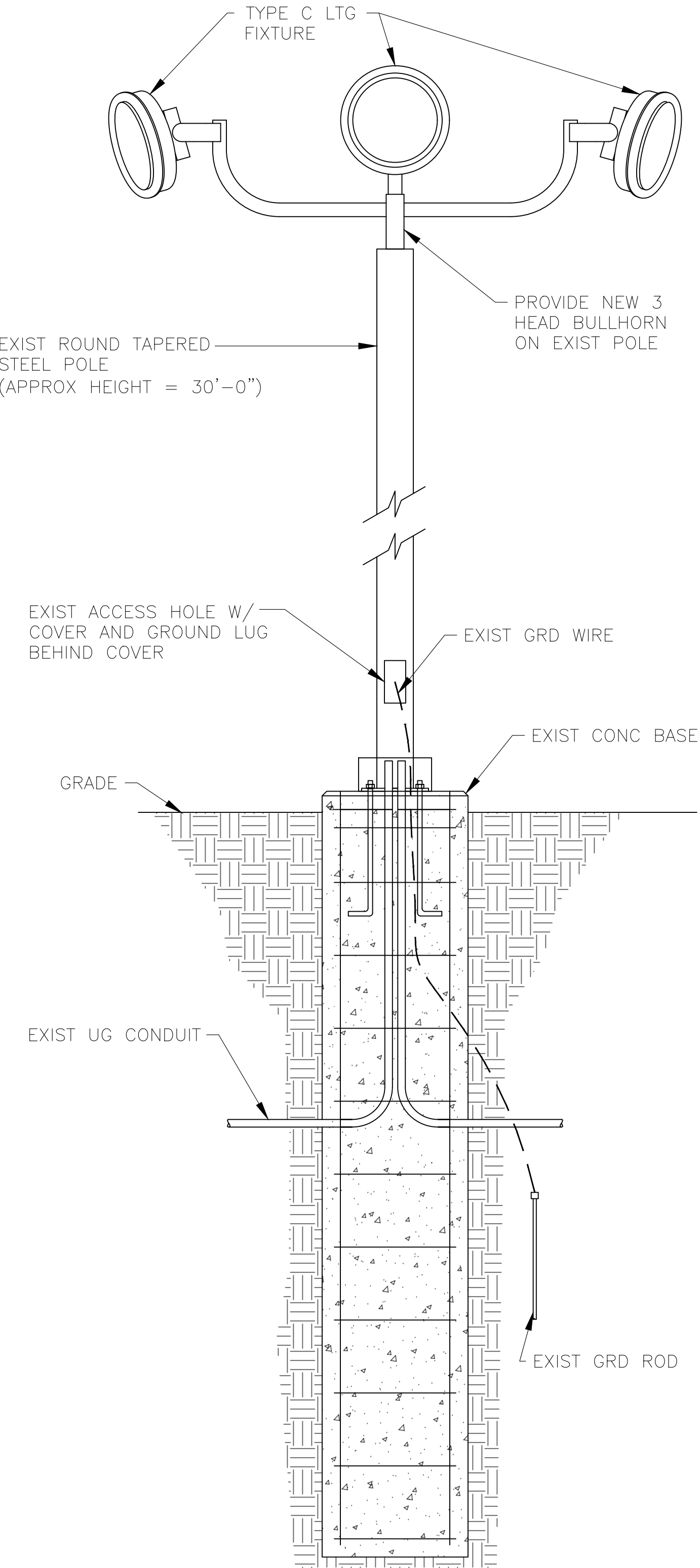
**POLE MOUNTED LIGHTING FIXTURE TYPE A**  
SCALE: 3/4"=1'-0"

202  
E-502



**POLE MOUNTED LTG FIXTURES TYPE B & D**  
SCALE: 3/4"=1'-0"

203  
E-502



**POLE MOUNTED LTG FIXTURE TYPE C**  
SCALE: 3/4"=1'-0"

204  
E-502

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KAISER, MISSOURI 65047

PROJECT # X2202-01  
SITE # 5306  
ASSET # 7815306134

REVISION: \_\_\_\_\_  
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REVISION: **ADDENDUM 1**  
DATE: 05/11/2023  
ISSUE DATE: 03/28/2023

CAD DWG FILE: X2202-01-5306-7815306134- E-502.DWG  
DRAWN BY: K E T/M N S  
CHECKED BY: B D F  
DESIGNED BY: B D F

SHEET TITLE:  
**LIGHTING FIXTURE  
INSTALLATION  
DETAILS -  
ALT BID NO. 1**

SHEET NUMBER:

**E-502**

16 OF 20 SHEETS  
MARCH 28, 2023





BARRY D. FREINER  
Registered Professional Engineer  
MO # E-24220  
Expires 12-31-2024

**ROGERS-SCHMIDT  
ENGINEERING CO., P.C.**  
CONSULTING ENGINEERS  
1736 WEST PARK CENTER DR.  
SUITE 204  
ST. LOUIS, MO 63026  
PHONE: 636-600-1551  
EMAIL: bfreiner@rogers-schmidt.com  
MISSOURI STATE CERTIFICATE  
OF AUTHORITY #000408

OFFICE OF ADMINISTRATION  
DIVISION OF FACILITIES  
MANAGEMENT,  
DESIGN AND CONSTRUCTION

DEPARTMENT OF  
NATURAL RESOURCES  
DIVISION OF STATE PARKS

UPGRADE ELECTRIC  
NETWORK  
CAMP RISING SUN

LAKE OF THE OZARKS  
STATE PARK  
403 HIGHWAY 134  
KAISER, MISSOURI 65047

PROJECT # X2202-01  
SITE # 5306  
ASSET # 7815306134

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: **ADDENDUM 1**  
DATE: 05/11/2023

ISSUE DATE: 03/28/2023  
CAD DWG FILE: X2202-01-5306-7815306134- E-601.DWG  
DRAWN BY: MNS  
CHECKED BY: BDF  
DESIGNED BY: BDF

SHEET TITLE:  
**ONE-LINE  
DIAGRAM**

SHEET NUMBER:

**E-601**

17 OF 20 SHEETS  
MARCH 28, 2023

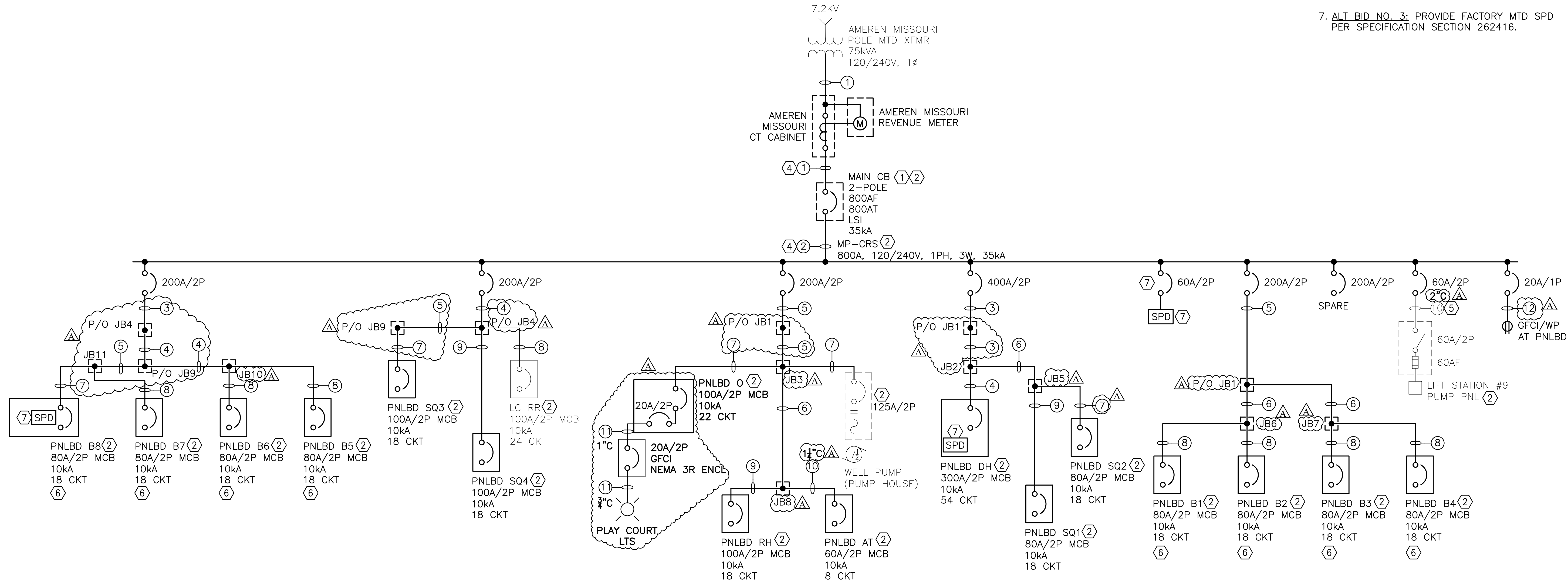
**GENERAL NOTES:**

- A. PROVIDE ARC FLASH HAZARD WARNING LABEL PER SPECIFICATION SECTIONS 260553 AND 260573 ON ENCLOSED MCB, EACH PNLBD, WELL PUMP MS & EACH DISC SW.
- B. ALL CONDUCTORS SHALL BE COPPER.
- C. REFERENCE SPECIFICATION SECTION 012300 FOR DESCRIPTION OF ALTERNATE BID ITEMS.

**KEY NOTES:**

- 1. MCB TO BE IN SEPARATE NEMA 3R ENCL W/ AN ISOLATED NEUT BUS & AN EQUIP GRD BUS BONDED TOGETHER W/ 1#3/0 MAIN BONDING JUMPER.
- 2. PROVIDE LABEL INDICATING MAXIMUM AVAILABLE FAULT CURRENT AND DATE THE FAULT CURRENT CALCULATION WAS PERFORMED PER NEC 110.24(A). LABEL MUST BE WEATHER AND UV RESISTANT FOR OUTDOOR EQUIP.
- 3. FDR SIZES SHOWN ARE MIN REQD SIZES.
- 4. CONDUCTORS FROM CT CAB TO MCB AND FROM MCB TO PNLB TO BE RUN IN ONE 3/4" GRC NIPPLE WITH THREADED CONDUIT HUBS.
- 5. REWORK EXIST UG FDR INTO NEW PNLBD.
- 6. **ALT BID NO. 1.**
- 7. **ALT BID NO. 3:** PROVIDE FACTORY MTD SPD PER SPECIFICATION SECTION 262416.

FEEDER NUMBER	CIRCUIT VOLTAGE	PHASE CONDUCTORS			NEUTRAL CONDUCTOR		GROUNDING CONDUCTOR		RACEWAY
		PHASE	QTY PER PHASE	SIZE	QTY	SIZE	QTY	SIZE	
①	120/240	2	2	500 KCM	2	500 KCM	-	-	(2) 3"
②	120/240	2	2	500 KCM	2	500 KCM	1	3/0	3 1/2" NIPPLE
③	120/240	2	1	600 KCM	1	600 KCM	1	1/0	3 1/2"
④	120/240	2	1	500 KCM	1	500 KCM	1	1/0	3"
⑤	120/240	2	1	250 KCM	1	250 KCM	1	2	2 1/2"
⑥	120/240	2	1	4/0	1	4/0	1	2	2" $\Delta$
⑦	120/240	2	1	1/0	1	1/0	1	4	2"
⑧	120/240	2	1	2	1	2	1	4	2"
⑨	120/240	2	1	2	1	2	1	4	1 1/4"
⑩	120/240	2	1	6	1	6	1	10	2" OR 1 1/4"
⑪	120/240	2	1	10	1	10	1	10	3/4" OR 1"
⑫	120	1	1	12	1	12	1	12	3/4"



**ONE-LINE DIAGRAM**  
NO SCALE





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**GENERAL NOTES:**

- A. PROVIDE ARC FLASH HAZARD WARNING LABEL PER SPECIFICATION SECTIONS 260553 AND 260573 ON EACH PNLBD.
- B. REFERENCE SPECIFICATION SECTION 012300 FOR DESCRIPTION OF ALTERNATE BID ITEMS.

**KEY NOTES:**

- 1. PROVIDE NEW PNLBD PER SPECIFICATION SECTION 262416.
- 2. TRACE EXIST CIRCUITS & IDENTIFY LOADS SERVED FOR COMPLIANCE WITH NEC 408.4. UPDATE PNLBD CKT DIRECTORIES ON AS-BUILT DWGS.
- 3. ALT BID NO. 1

CKT NO	AMPS	POLES	LOAD	VOLT-AMPERES		VOLT-AMPERES		LOAD	POLES	AMPS	CKT NO	
				ØA	ØB	ØA	ØB					
1	20	1	BATHROOM GFCI RECPT	180		2250					2	
3	20	1	EAST & CENTER ROOM & EAST EXTERIOR LIGHTS		-		2250	WATER HEATER	2	30	4	
5	20	1	WEST & CENTER ROOM RECPTS	-		-		WEST ROOM & WEST EXTERIOR LIGHTS	1	20	6	
7	20	1	EAST ROOM RECPTS		-		-	BATHROOM LTS & EXH FAN & SHOWER LIGHTS	1	20	8	
9	20	1	SPARE	-		75		SMOKE DETECTORS	1	15	10	
11	20	1	SPARE		-		-	SPARE	1	20	12	
13	20	1	SPARE	-		-		SPARE	1	20	14	
15	20	1	SPARE		-		-	SPARE	1	20	16	
17	100	2	MAIN	-		-		SPARE	1	15	18	
100 AMP MCB, 120/240V-1Ø-3W, 18 CKT, 10kA NEMA TYPE 1 SEMI-FLUSH MTD ENCLOSURE W/ SURFACE COVER				180	0	2325	2250	TOTAL LOAD:	VA			

CKT NO	AMPS	POLES	LOAD	VOLT-AMPERES		VOLT-AMPERES		LOAD	POLES	AMPS	CKT NO	
				ØA	ØB	ØA	ØB					
1	30	2	WATER HEATER	-		-	75	SOUTH BUNK & SOUTH PORCH LIGHTS	1	20	2	
3					-		-	SMOKE DETECTORS	1	20	4	
5	20	1	BATHROOM LIGHTS & DUSK TO DAWN LIGHT	-		-		NORTH BUNK & NORTH PORCH LIGHTS	1	20	6	
7	20	1	MIDDLE ROOM RECPTS & BATHROOM GFCI RECPTS		-		-	SOUTH BUNK RECPTS	1	15	8	
9	20	1	SPARE	-		-		NORTH BUNK RECPTS	1	20	10	
11	20	1	SPARE		-		-	SPARE	1	20	12	
13	20	1	SPARE	-		-		SPARE	1	20	14	
15	20	1	SPARE		-		-	SPARE	1	20	16	
17	100	2	MAIN	-		-	75	SPARE	1	15	18	
100 AMP MCB, 120/240V-1Ø-3W, 18 CKT, 10kA NEMA TYPE 1 SEMI-FLUSH MTD ENCLOSURE W/ SURFACE COVER				0	0	0	75	TOTAL LOAD:	VA			

CKT NO	AMPS	POLES	LOAD	VOLT-AMPERES		VOLT-AMPERES		LOAD	POLES	AMPS	CKT NO	
				ØA	ØB	ØA	ØB					
1	20	1	?? OUTSIDE LIGHTS / BACK LIGHTS	-		-		?? 4 BACK WALL LIGHTS / MAIL ROOM	1	20	2	
3	20	1	CEILING FANS		-		-	?? 2 RIGHT SIDE LIGHTS	1	20	4	
5	20	1	?? BSMT LIGHTS & RECPTS	-		-		?? RECEPTACLES	1	20	6	
7	20	1	SPARE		-		-	?? 2 MIDDLE LIGHTS & RIGHT SIDE RECPT	1	20	8	
9	20	1	SPARE	-		-		SPARE	1	20	10	
11	20	1	SPARE		-		-	SPARE	1	20	12	
13	20	1	SPARE	-		-		SPARE	1	20	14	
15	20	1	SPARE		-		-	SPARE	1	20	16	
17	100	2	MAIN	-		-		SPARE	1	15	18	
100 AMP MCB, 120/240V-1Ø-3W, 18 CKT, 10kA NEMA TYPE 1 SEMI-FLUSH MTD ENCLOSURE W/ SURFACE COVER				0	0	0	0	TOTAL LOAD:	VA			

CKT NO	AMPS	POLES	LOAD	VOLT-AMPERES		VOLT-AMPERES		LOAD	POLES	AMPS	CKT NO	
				ØA	ØB	ØA	ØB					
1	30	2	WATER HEATER	-		-		?? LIGHTS	1	20	2	
3					-		-	?? RECPTS	1	20	4	
5	20	1	?? RECPTS	-		-		BATHROOM & ?? LIGHTS	1	20	6	
7	20	1	?? RECPTS		-		-	?? OUTLETS	1	15	8	
9	20	1	?? RECPTS	-		180		BATHROOM GFCI RECPT	1	20	10	
11	20	1	NORTH ROOM & HALL RECPTS		-		-	?? OUTSIDE LEFT RECPT	1	20	12	
13	20	1	INTERIOR & PORCH LIGHTS	-		-		SPARE	1	20	14	
15	20	1	NORTH ROOM & HALL RECPTS		-		-	?? OUTSIDE LEFT RECPT	1	20	16	
17	20	1	INTERIOR & PORCH LIGHTS	-		-		SPARE	1	20	18	
19	20	1	SPARE		-		-	?? RECPTS UNDER PANELS	1	20	20	
21	15	1	SPARE	-		75		SMOKE DETECTORS	1	15	22	
23	20	1	SPARE		-		950				24	
25	100	2	MAIN	-		950		PLAY COURT LIGHTS	2	20	26	
100 AMP MCB, 120/240V-1Ø-3W, 18 CKT, 10kA NEMA TYPE 1 SEMI-FLUSH MTD ENCLOSURE W/ SURFACE COVER				0	0	1205	950	TOTAL LOAD:	VA			

CKT NO	AMPS	POLES	LOAD	VOLT-AMPERES		VOLT-AMPERES		LOAD	POLES	AMPS	CKT NO	
				ØA	ØB	ØA	ØB					
1				-		180		GFCI RECPT AT PANEL	1	20	2	
3	20	2	SPARE		-		140	AMPHITHEATER LIGHTING	1	20	4	
5	20	1	SPARE	-		-		SPARE	1	20	6	
7	15	1	SPARE		-		-	SPARE	1	15	8	
9	-	1	SPACE	-		-		SPACE	1	-	10	
11	-	1	SPACE		-		-	SPACE	1	-	12	
13	-	1	SPACE	-		-		SPACE	1	-	14	
15	-	1	SPACE		-		-	SPACE	1	-	16	
17	60	2	MAIN	-		-		SPACE	1	-	18	
60 AMP MCB, 120/240V-1Ø-3W, 18 CKT, 10kA NEMA TYPE 3R SURFACE MTD OUTDOOR ENCLOSURE				0	0	180	140	TOTAL LOAD:	VA			

TYPE	DESCRIPTION	MANUFACTURER CATALOG NUMBER	LAMP DATA		VOLTAGE	FIXTURE WATTAGE	MOUNTING	FINISH	REMARKS
			TYPE	WATTS					
A	ACORN POST LIGHT	GLP BH1/AB40AC-CL/G3LED40-T5-40K/PCLL/SP1BT W/ LUMECON H-RSS16B4-4-T304-BA ROUND STEEL POLE OR APPROVED EQUAL BY ACCUITY OR COOPER	LED	41	120	41	POLE ON CONCRETE BASE ON GRADE	TEXTURED BLACK	4" ROUND, 16' TALL STEEL POLE FURNISHED W/ GALV STL ANCHORAGE KIT, SQ STL BASE COVER PAINTED TO MATCH POLE, AND WITH PHOTOCONTROL AND 10kA/10kV SURGE PROTECTION ON FIXTURE
B	ARM MTD AREA LIGHT	LUMECON LDS-SAL-45-BK-T3-1-40-TM W/ MORRIS CAT #79904 8" LONG BRACKET OR APPROVED EQUAL BY ACCUITY OR COOPER	LED	45	120	45	EXIST WOODEN POLE	BLACK	20kA/40kV SURGE PROTECTION ON FIXTURE. THROUGH BOLT MORRIS BRACKET TO SIDE OF POLE AT TOP AND MOUNT FIXTURE TENON TO MORRIS BRACKET.
C	SPORTS LIGHT	EIKO SIG/600W/740/UD W/ SIG/SF W/ MORRIS 79954 3 HEAD BULLHORN OR APPROVED EQUAL BY ACCUITY OR COOPER	LED	600	240	600	3 HEAD BULLHORN ON EXIST 3Ø STEEL POLE	BLACK	20kA/20kV SURGE PROTECTION ON FIXTURE PROVIDE WITH SLIPFITTER FOR 2-3/8" PIPE AND 4 HEAD VERTICAL BLACK STEEL OR ALUMINUM BULLHORN FOR EXISTING ROUND STEEL POLE
D	BULLET SPOT LIGHT	CREE C-FL-B-RDN-2L-40K-BLK OR APPROVED EQUAL BY ACCUITY OR COOPER	LED	22	120	22	CAST BOX ON POLE FOR TYPE B LTG FIXTURE	BLACK	MOUNT TO 1/2" THREADED CAST COVER ON CAST BOX ON TYPE B FIXTURE POLE AT 18" DOWN FROM TOP OF POLE.

LAMP TYPE: LED = LIGHT EMITTING DIODE

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DATE: \_\_\_\_\_  
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REVISION: ADDENDUM 1  
DATE: 05/11/2023  
ISSUE DATE: 03/28/2023

CAD DWG FILE: X2202-01-5306-7815306134- E-603.DWG  
DRAWN BY: MNS  
CHECKED BY: BDF  
DESIGNED BY: BDF

SHEET TITLE:  
**PANELBOARD &  
LIGHTING FIXTURE  
SCHEDULES &  
ALT BID NO. 1**

SHEET NUMBER:

**E-603**