



LEGAL NOTICE

AND

INVITATION TO BID B027-25

The Brownsville Public Utilities Board will accept sealed bids for Material Package for Ocelot Substation, **until 5:00 PM, February 5, 2025** in the Brownsville PUB Purchasing Office, 1155 FM 511, Olmito, Texas. **Bids received after this time will not be considered.**

MATERIAL PACKAGE FOR OCELOT SUBSTATION

Bids received after this time will not be considered.

Bids will be publicly opened and read aloud on February 6, 2025 at 10:30 AM. Bidders can request a copy of the bid tabulation by emailing hlopez@brownsville-pub.com Vendors can call in at 10:30 AM, February 6, 2025 to (956) 214-6020 to listen to the bid opening.

Detailed specifications may be obtained at Brownsville Public Utilities Board website at https://www.brownsville-pub.com/rfp_status/open/.

Please mark on the **outside of the envelope and on any carrier's envelopes: "SEALED BIDS FOR MATERIAL PACKAGE FOR OCELOT SUBSTATION (B027-25), FEBRUARY 5, 2025 5:00 PM"**, and send to the attention of Diane Solitaire, Purchasing Department, 1155 FM 511, Olmito, TX 78575.

The Brownsville Public Utilities Board will not be responsible in the event that the U.S. Postal Service or any other courier system fails to deliver the sealed bids to the Brownsville Public Utilities Board, Purchasing Office by the given deadline above. **No bid will be accepted via electronic transmission or facsimile.**

The Brownsville PUB reserves the right to reject any or all bids and to waive irregularities contained therein and to accept any bid deemed most advantageous to the Brownsville PUB.

BY:

Diane Solitaire

Purchasing

Brownsville Public Utilities Board

(956) 983-6366 - Phone

INSTRUCTIONS TO BIDDERS

Please submit this page upon receipt.

Acknowledgment Form

B#027-25 Material Package for Ocelot Substation

For any clarifications, please contact Hugo E. Lopez at the Brownsville Public Utilities Board, Purchasing Department at (956) 983-6375 or (956) 983-6364 or via e-mail: hlopez@brownsville-pub.com

Please e-mail this page upon receipt of legal notice. If you only received the legal notice and you want the bid package mailed, please provide a method of shipment with account number in the space designated below.

Check one:

☐ **Yes, I will be able to send a bid; obtained bid package from website.**

☐ **Yes, I will be able to send a bid; please email the bid package.**

Email: _____

☐ **Yes, I will be able to send a bid; please mail the bid package using the carrier & account number listed below:**

Carrier: _____

Account: _____

☐ **No, I will not be able to send a bid for the following reason:**

If you are unable to send your bid, kindly indicate your reason for “No bid” above and return this form **via e-mail to:** hlopez@brownsville-pub.com or dsolitaire@brownsville-pub.com. This will ensure you remain active on our vendor list.

Date _____

Company: _____

Name: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Phone: _____

Email: _____

IF SPECIFICATIONS ARE DOWNLOADED FROM WEBSITE PLEASE EMAIL THIS PAGE TO E-MAIL ADDRESS LISTED ABOVE

Special Instructions

Contract Information

- **Interpretation**

Questions concerning terms, conditions, and technical specifications should be directed to:

Hugo E. Lopez
Purchasing Administrator
(956) 983-6375

or

Diane Solitaire,
Purchasing & Materials Manager
(956) 983-6366

- **Tentative Time Line**

1. January 21, 2025 through February 5, 2025 - Vendors work on bid.
2. February 5, 2025 at 5:00 PM - **Vendor must submit two (2) sets of bid documents sealed in an envelope to:**

Diane Solitaire, Purchasing
1155 FM 511
Olmito, TX 78575

B027-25 Material Package for Ocelot Substation

Due: February 5, 2025-at 5:00 PM.

Failure to provide the above noted information on bid envelope will disqualify bid. The Brownsville Public Utilities Board will not be held responsible for missing, lost or late mail. Brownsville Public Utilities Board will not accept facsimile or electronic transmission of sealed bids.

3. January 31, 2025 – Last day to submit questions
4. February 6, 2025 – Proposal Acknowledgement at 10:30 AM CST
5. February 7 - 21, 2025 - Evaluate proposal documents
6. February 24, 2025 - Provide Final Recommendations
7. March 10, 2025 - Send to Utilities Board for approval

- **Or Equal**

Brand name or manufacturer's reference used in this request is descriptive – not restrictive – it is intended to indicate type and quality desired. Brands of like nature and quality will be considered. If bidding on other than referenced specifications please provide complete descriptive information of said article.

- **Pricing**

Bid unit price on quantity specified, extend and show total. In case of errors in extension, unit prices shall govern. **Price shall remain firm until an award is made and for a period of one year after original date of Purchase Order, unless otherwise stipulated.**

All fields (UNIT PRICE, DELIVERY AND MANUFACTURER) in the Cost Sheets must be completed. The data must be complete to identify the bidding brand.

Failure to submit any of the above information with the sealed bid will disqualify bid.

- **Vendor Representative**

The successful vendor agrees to send a personal representative with binding authority for the company to the Brownsville Public Utilities Board upon request to make adjustments and/or assist with coordination of all transactions as needed.

- **Quality of Products**

All items must be new, in first class condition, including containers suitable for shipment and storage. No substitutions in standard grades or lesser quality will be accepted.

- **Determining Factors for Award**

1. Compliance with requirements of the technical specifications
2. Net price
3. Time and conditions of delivery
4. Safety record will be considered when determining the responsibility of the bidder
5. BPUB financial and legal responsibility evaluations of any identified teaming arrangements involving significant joint ventures, subcontractors and suppliers

- **Contract with Vendor/Entity Indebted to BPUB**

It is a policy of the BPUB to refuse to enter into a contract or other transaction with an individual, sole proprietorship, joint venture, Limited Liability Company or other entity indebted to BPUB.

- **Vendor ACH (Direct Deposit) Services**

The BPUB has implemented a payment service for vendors by depositing the payment directly to the vendor's bank account. Successful vendor(s) will be required to receive payments directly through Automated Clearing House (ACH) in lieu of a paper check. **The awarded vendor must agree to receive payments via ACH (Direct Deposit).**

- **Tax Identification Number (TIN)**

In accordance with IRS Publication 1220, aW9 form, or a W8 form in cases of a foreign vendor, will be required of all vendors doing business with the Brownsville PUB. If a W9 or W8 form is

not made available to Brownsville PUB, the first payment will be subject to income tax withholding at a rate of 28% or 30% depending on the U.S. status and the source of income as per IRS Publication 1220. **The W9 or W8 form must be included with bid response.** Attached are sample forms.

- **Taxes**

The Brownsville Public Utilities Board is exempt from Federal Excise Tax, State Tax and local Taxes. Do not include tax in the bid. If it is determined that tax was included in the bid it will not be included in the tabulation or any awards. Tax exemption certificates will be furnished upon request.

- **Signing of Bid**

Failure to sign bid will disqualify it. Person signing bid should show title or authority to bind their firm to a contract.

- **EEOC Guidelines**

During the performance of this contract, the contractor agrees not to discriminate against any employee or applicant for employment because of race, national origin, age, religion, gender, marital or veteran status, or physically challenging condition.

- **Contract and Purchase Order**

The Material Package for Ocelot Substation shall be delivered FOB Brownsville Public Utilities Board, Ocelot Substation, 500 W. Morrison Road, Brownsville, Texas 78526. If site is not ready, the Material Package for Ocelot Substation shall be delivered FOB Brownsville Public Utilities Board, 1495 Robinhood Drive, Brownsville, Texas 78521. A contract for the steel structure fabrication will be placed into effect by means of a purchase order issued by the Brownsville Public Utilities Board after tabulation and final approval by the Board.

- **Brownsville Public Utilities Board Rights**

1. If only one or no bid is received by "submission date", the BPUB has the right to reject, re-bid, accept and/or extend the bid by up to an additional two (2) weeks from original submission date.
2. The right to reject any/or all bids and to make award as they may appear to be advantageous to the Brownsville Public Utilities Board.
3. The right to hold bid for 90 days from submission date without action, and to waive all formalities in bid.
4. The right to extend the total bid beyond the original 90-day period prior to an award, if agreed upon in writing by all parties (BPUB and vendor/contractor) and if bidder/vendor holds original bid prices firm.
5. The right to terminate for cause or convenience all or any part of the unfinished portion of the Project resulting from this solicitation within Thirty (30) calendar

days written notice; for cause: upon default by the vendor/contractor, for delay or non-performance by the vendor/contractor; or if it is deemed in the best interest of the BPUB for BPUB's convenience.

6. The right to increase or decrease quantities. In bid, stipulate whether an increase or decrease in services will affect bid price.
7. The Brownsville PUB has the right to refuse to enter into a contract or other transaction with any individual or entity indebted to the municipality as per Local Government Code 252.0436.
8. BPUB reserves the right to award multiple contractors to perform this work.

- **Corrections**

Any interpretation, correction, or change to the invitation to bid will be made by ADDENDUM. Changes or corrections will be issued by the Brownsville PUB Purchasing Department. **Addenda will be emailed to all who have returned the Bid Acknowledgment form.** Addenda will be issued as expeditiously as possible. It is the responsibility of the vendors to determine whether all addenda have been received. It will be the responsibility of all respondents to contact the Brownsville PUB prior to submitting a response to the invitation to bid to ascertain if any addenda have been issued, and to obtain any all addenda, execute them, and return addenda with the response to the invitation to bid. Addenda may be posted on the Brownsville PUB's website.

**BID SCHEDULE
B027-25**

To: Brownsville Public Utilities Board, Brownsville, Texas (hereinafter called the "Owner".)

Attn: Ms. Diane Solitaire
Purchasing Department
1155 FM 511
Olmito, TX 78575

1. The undersigned (hereinafter called the "Bidder") hereby proposes to furnish and deliver the steel structure fabrication for the Ocelot Substation described in the Plans and Specifications attached hereto and made a part hereof for the following prices:

Substation Name: OCELOT SUBSTATION

Delivery Location: 500 W. MORRISON ROAD, BROWNSVILLE, TX 78526 OR 1495
ROBINHOOD DRIVE, BROWNSVILLE, TX 78521

ITEM	MANUFACTURER	PART NUMBER	DESCRIPTION	QTY	UNIT	Unit Price	Total Price	NOTES/OTHER	
			HIGH VOLTAGE EQUIPMENT						
A1	SOUTHWIRE OR EQUIV.	PENGUIN	CONDUCTOR, ACSR, BARE, 1/C – 4/0 AWG, 6/1 STRAND, “PENGUIN”, 0.563” DIAMETER, 357 AMP CURRENT RATING @ 75° C	400	FT				
A2	SOUTHWIRE OR EQUIV.	BLUEBIRD	CONDUCTOR, ACSR, BARE, 1/C – 2156 KCMIL, 84/19 STRAND, “BLUEBIRD”, 1.762” DIAMETER, 1,623 AMP CURRENT RATING @ 75° C	175	FT				
A3	SOUTHWIRE OR EQUIV.	750 KCMIL UG CU	15KV UG CONDUCTOR, INSULATED COPPER, 1/C – 750 KCMIL, Type MV-90	1,750	FT			3-Runs for Main & Tie BKR 2-Runs for Feeder BKR (By BPUB)	
A3A	SOUTHWIRE OR EQUIV.	4/0 AWG UG CU	15KV UG CONDUCTOR, INSULATED COPPER, 1/C – 4/0 AWG, Type MV-90	350	FT			1-Run for Cap Bank BKR	
A4	AFL OR EQUIV.	300S40YT6B	3” SPS ALUMINUM TUBE, 40 FT LENGTH, SCHEDULE 40, ALUMINUM ALLOY 6063-T6, SEAMLESS BUS PIPE, 2040 AMP CURRENT RATING @ 70° C	2	EA				
A5	NGK-LOCKE INSULATORS OR EQUIV.	PS01110	INSULATOR, 15 kV CLASS, 110 kV BIL, STATION POST, STANDARD STRENGTH, PORCELAIN, TR-205, ANSI 70 GRAY, 3" DIA BOLT CIRCLE W/ (4) 1/2" X 13 UNC TAPPED HOLES - TOP & BOTTOM	12	EA				
A5.01			MTG BOLTS: ½-13 X 1.00” GALV. CAP SCREW W/LW FW	24	EA			MBC100 BOLT ASSEMBLY	
A6	SEFCOR OR EQUIV.	ASWH-62-3-SE	CONNECTOR, WELDMENT, ALUMINUM, TUBE TO INSULATOR, BUS SUPPORT, SLIP/RIGID, 3” SPS TUBE TO 3” BOLT CIRCLE.	6	EA				
A6.01			MTG BOLTS: ½-13 X 1.00” GALV. CAP SCREW W/LW FW	12	EA			MBC100 BOLT ASSEMBLY	
A7	SEFCOR OR EQUIV.	WFC-13-4A	TERM CONNECTOR WELDMENT, 4/0 AWG ACSR TO LONGITUDINAL 3”, 4-HOLE PAD	36	EA			Pad width to match equipment terminal pad width	
A8	SEFCOR OR EQUIV.	ACF-20-4A	TEE CONNECTOR BOLTED, 4/0 AWG ACSR TO FLAT BAR 3”, 4-HOLE PAD	6	EA			Pad width to match equipment terminal pad width	
A9	SEFCOR OR EQUIV.	WFC-51-4A	TERM CONNECTOR WELDMENT, 2156 ACSR KCMIL TO LONGITUDINAL 3”, 4-HOLE PAD	6	EA			Pad width to match equipment terminal pad width	
A10	SEFCOR OR EQUIV.	AFC-56-4B	TEE CONNECTOR BOLTED, 2156 ACSR KCMIL TO FLAT BAR 4”, 4-HOLE PAD	6	EA			Pad width to match equipment terminal pad width	
A11	SEFCOR OR EQUIV.	WFC-51-4B	TERM CONNECTOR WELDMENT, 2156 ACSR KCMIL TO LONGITUDINAL 4”, 4-HOLE PAD	6	EA			Pad width to match equipment terminal pad width	
A12	SEFCOR OR EQUIV.	WFTC-62-4B	TERM CONNECTOR WELDMENT, 3”AL TO 4”, 4-HOLE PAD, CENTER SIDE FORMED	6	EA			Pad width to match equipment terminal pad width	
A13	SEFCOR OR EQUIV.	WTF-6269-2B	TEE CONNECTOR WELDMENT 3” AL TO 2-HOLE PAD	12	EA				
A	9/9/2024	FOR REVIEW	CDS		ELLETT AND GAYNOR	 BROWN SVILLE PUBLIC UTILITIES BOARD		BILL OF MATERIAL OCELOT SUBSTATION	
NO.	DATE	REVISION	ENGINEER	CHECKED	ENGINEERING FIRM			REV. NO.	A

ITEM	MANUFACTURER	PART NUMBER	DESCRIPTION	QTY	UNIT	Unit Price	Total Price	NOTES/OTHER
A13.01			BOLTS: 1/2" X 2.50" GALV. W/HN, LW, 2FW	24	EA			B250 BOLT ASSEMBLY (USE WITH A15)
A14	SEFCOR OR EQUIV.	WFT90-62-2B	TERM CONNECTOR WELDMENT, 3" AL TO 2-HOLE PAD, 90°	6	EA			
A14.01			BOLTS: 1/2" X 2.50" GALV. W/HN, LW, 2FW	12	EA			B250 BOLT ASSEMBLY (USE WITH A15)
A15	TE CONNECTIVITY OR EQUIV.	CSTO-154J-SL2-B7	POWER CABLE TERMINATION, COLD SHRINK, 1 CORE, CONCENTRIC NEUTRAL, 500 – 1250 KCMIL, XLPE/EPR, WITH BRACKET	54	EA			For Main Breakers, Tie Breaker, & 12.47kV Bus Connections
A16	SEFCOR OR EQUIV.	AVCA-13-3	CONNECTOR, BOLTED, ALUMINUM, CABLE TO INSULATOR, CABLE SUPPORT, #4 - #4/0 AWG ACSR TO 3" BOLT CIRCLE.	6	EA			
A16.01			MTG BOLTS: ½-13 X 1.00" GALV. CAP SCREW W/LW FW	12	EA			MBC100 BOLT ASSEMBLY
A17	TE CONNECTIVITY OR EQUIV.	CSTO-153J-SL2-B7	POWER CABLE TERMINATION, COLD SHRINK, 1 CORE, CONCENTRIC NEUTRAL, 4/0 – 500 KCMIL, XLPE/EPR, WITH BRACKET	12	EA			For Feeder Breaker & 12.47kV Cable Connections
A18	SEFCOR OR EQUIV.	WFC-13-2B	TERM CONNECTOR WELDMENT, 4/0 AWG ACSR TO LONGITUDINAL, 2-HOLE PAD	12	EA			
A18.01			BOLTS: 1/2" X 2.00" GALV. W/HN, LW, 2FW	24	EA			B200 BOLT ASSEMBLY (USE WITH A17 & G1)
A19	SEFCOR OR EQUIV.	FQD-68-SF	STRAIN CLAMP, DEAD-END, QUADRANT, WITH SOCKET, FOR 3/8" HSS SHIELD WIRE	8	EA			
A20	SEFCOR OR EQUIV.	AH-1222	Y-CLEVIS BALL, 30,000 LBS, GALVANIZED STEEL	8	EA			
A21	SEFCOR OR EQUIV.	AH-1219	ANCHOR SHACKLE, 30,000 LBS, GALVANIZED STEEL	8	EA			
B1	TBD	TBD	DISCONNECT SWITCH, 138 KV, 1200 AMP THREE-POLE, GROUP OPERATED CENTER BREAK PARALLEL STYLE, TR288 INSULATORS, 650 kV B.I.L., WITH WORM GEAR OPERATOR	2	EA			
B1.01			BOLTS: 1/2" X 2.25" GALV. W/HN, LW, 2FW	48	EA			B225 BOLT ASSEMBLY (USE WITH A7)
B2	TBD	TBD	DISCONNECT SWITCH, 15 kV, 2000 AMP THREE-POLE, GROUP OPERATED VERTICAL BREAK STYLE, TR205, 110 kV B.I.L., WITH WORM GEAR OPERATOR	2	EA			
B2.01			BOLTS: 1/2" X 2.50" GALV. W/HN, LW, 2FW	48	EA			B250 BOLT ASSEMBLY (USE WITH A11 & A12)
E1	TBD	TBD	CIRCUIT SWITCHER, 138 kV, 1200 AMP, 61KA MOM. AMP, 125 VDC CONTROL & MOTOR, 120/240 VAC	2	EA	-	-	PROVIDED BY BPUB
E1.01			BOLTS: 1/2" X 2.25" GALV. W/HN, LW, 2FW	48	EA			B225 BOLT ASSEMBLY (USE WITH A7)
E2	COOPER POWER	VCS-3	CAPACITOR SWITCH, 15KV, 400 AMP, 13.5KA MOM AMP, 125 VDC CONTROL, 1/0 – 500 KCMIL TERMINALS	2	EA	-	-	INCLUDED WITH CAP BANK

						 E LLETT & G AYNOR, LLC PROFESSIONAL ENGINEERS TX #F-562 5706 S.W. 45TH AVE., AMARILLO, TX 79109-5284	 BROWN SVILLE PUBLIC UTILITIES BOARD	BILL OF MATERIAL	
								OCELOT SUBSTATION	
A	9/9/2024	FOR REVIEW	CDS		ELLETT AND GAYNOR				
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G1	TBD	TBD	CAPACITOR BANK, 4.8 MVAR, 12.47KV	2	EA	-	-	PROVIDED BY BPUB	
H1	TBD	TBD	TRANSFORMER, STATION POWER 15/20/25//28 MVA, 138KV/12.47KV, 550KV @ 138KV & 110KV @ 12.47KV BIL, ONAN/ONAF/ONAF 55/65°C	2	EA	-	-	PROVIDED BY BPUB	
H1.01			BOLTS: 1/2" X 2.50" GALV. W/HN, LW, 2FW	24	EA			B250 BOLT ASSEMBLY (USE WITH A7)	
H1.02			BOLTS: 1/2" X 2.00" GALV. W/HN, LW, 2FW	24	EA			B200 BOLT ASSEMBLY (USE WITH A8)	
H1.03			BOLTS: 1/2" X 2.75" GALV. W/HN, LW, 2FW	24	EA			B275 BOLT ASSEMBLY (USE WITH A9)	
H1.04			BOLTS: 1/2" X 2.50" GALV. W/HN, LW, 2FW	24	EA			B250 BOLT ASSEMBLY (USE WITH A10)	
			HARDWARE						
HDG			HOT DIPPED GALVANIZED BOLTS FOR MOUNTING EQUIPMENT AND ELECTRICAL CONNECTIONS (60) 1/2”-13 X 1.00” HDG CAP SCREW (48) 1/2” X 2.00” HDG Hex Head Bolt (96) 1/2” X 2.25” HDG Hex Head Bolt (132) 1/2” X 2.50” HDG Hex Head Bolt (24) 1/2” X 2.75” HDG Hex Head Bolt (300) 1/2” HDG Hex Nut (360) 1/2” HDG Lock Washer (660) 1/2” HDG Flat Washer	1	LOT				
			STATION GROUNDING						
O1	SOUTHWIRE OR EQUIV.	Cu WIRE	#4/0 COPPER WIRE, BARE, CONCENTRIC LAY, 7-STRAND, SOFT DRAWN.	1,200	FT			Material Contractor - ABOVE GRADE	
	SOUTHWIRE OR EQUIV.	Cu WIRE	#4/0 COPPER WIRE, BARE, CONCENTRIC LAY, 7-STRAND, SOFT DRAWN.	9,000	FT	-	-	Provided by Others - BELOW GRADE	
O2	SOUTHWIRE OR EQUIV.	Cu WIRE	#2 AWG COPPER, SOLID, TINNED	350	FT	-	-	Provided by Others	
O3	TBD	TBD	3/8” HSS SHIELD WIRE	750	FT				
O4	ERICO OR EQUIV.	613400	GROUND ROD, COPPER CLAD, 10’-0” X 3/4”	62	EA	-	-	Provided by Others	
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O5	ERICO OR EQUIV.	XBQ2Q2Q	EXOTHERMIC, LAPPED HORIZONTAL CROSS, 4/0 BARE CU RUN TO 4/0 BARE CU RUN	5	EA	-	-	Provided by Others – MOLD (Requires Handle Clamp L160)
O5.01	ERICO OR EQUIV.	250	WELDING MATERIAL	121	EA	-	-	Provided by Others
O6	ERICO OR EQUIV.	PCC2Q2Q	EXOTHERMIC, PARALLEL TAP, 4/0 BARE CU RUN TO 4/0 BARE CU TAP	2	EA	-	-	Provided by Others – MOLD (Requires Handle Clamp L160)
O6.01	ERICO OR EQUIV.	150	WELDING MATERIAL	39	EA	-	-	Provided by Others
O7	ERICO OR EQUIV.	GYR182Q	EXOTHERMIC, SIDE THROUGH CABLE, 4/0 BARE CU RUN TO ¾” COPPER CLAD ROD TAP	3	EA	-	-	Provided by Others – MOLD (Requires Handle Clamp L160)
O7.01	ERICO OR EQUIV.	150	WELDING MATERIAL	62	EA	-	-	Provided by Others
O8	ERICO OR EQUIV.	TAC2Q2Q	EXOTHERMIC, HORIZONTAL TEE, 4/0 BARE CU RUN TO 4/0 BARE CU TAP	4	EA	-	-	Provided by Others – MOLD (Requires Handle Clamp L160)
O8.01	ERICO OR EQUIV.	150	WELDING MATERIAL	80	EA	-	-	Provided by Others
O9	BURNDY OR EQUIV.	BF12T716	FLEXIBLE COPPER BRAID, 1-HOLE, 12”	9	EA	-	-	Provided by Others
O10	SEFCOR OR EQUIV.	GTC-14-1/2	SINGLE CABLE TO FLAT, #4 AWG SOL – 300 MCM CU, SINGLE BOLT, TO ½” PLATE	130	EA			
O11	SEFCOR OR EQUIV.	GTT2-20-N	DOUBLE CABLE TO FLAT, 1/0 AWG SOL – 500 MCM CU, DOUBLE BOLT, TO ½” PLATE	30	EA			
O12	BURNDY OR EQUIV.	YGHC29C26-CN	CONCENTRIC NEUTRAL GROUNDING CONNECTOR, COMPRESSION, 3/0 AWG – 250 MCM CU, 11X-20X 12AWG SOL	24	EA			
O13	ERICO OR EQUIV.	PTC2Q2Q	EXOTHERMIC, PARALLEL HORIZONTAL RUN/TAP, 4/0 BARE CU RUN TO 4/0 BARE CU TAP	1	EA	-	-	Provided by Others – MOLD (Requires Handle Calmp L160)
O13.01	ERICO OR EQUIV.	200	WELDING MATERIAL	10	EA	-	-	Provided by Others
O14	SEFCOR OR EQUIV.	UKG-4052	TERM CONNECTOR BOLTED, 2 U-BOLT, 4/0 AWG CU TO 1.5”, 2-HOLE PAD, OFFSET	28	EA			
O15	BURNDY OR EQUIV.	GAR1726	FENCE GROUND, 1-5/8” – 1.90” O.D. PIPE TO ONE (1) #2 SOL. CU, 90° TO PIPE	42	EA	-	-	Provided by Others
O16	BURNDY OR EQUIV.	GD1829	FENCE GROUND, 2-3/8” O.D. PIPE TO TWO (2) 4/0 BARE CU (LOOP)	25	EA	-	-	Provided by Others
O17	BURNDY OR EQUIV.	GD1929	FENCE GROUND, 2-7/8” O.D. PIPE TO TWO (2) 4/0 BARE CU (LOOP)	4	EA	-	-	Provided by Others
O18	BURNDY OR EQUIV.	GAR2129	PIPE GROUND, 4” O.D. PIPE TO ONE (1) 4/0 BARE CU	1	EA			MAINTENANCE LIGHT GND
O19	BURNDY OR EQUIV.	GD8629	FENCE GROUND, 6-5/8” O.D. PIPE TO TWO (2) 4/0 BARE CU (LOOP)	4	EA	-	-	Provided by Others
O20	BURNDY OR EQUIV.	YGHC29C26	COMPRESSION GROUND, C-CONNECTOR, 4/0 BARE CU TO #2 SOL. CU.	34	EA	-	-	Provided by Others

						 ELLETT & GAYNOR, LLC PROFESSIONAL ENGINEERS TX #F-562 5706 S.W. 45TH AVE., AMARILLO, TX 79109-5284	 BROWNSVILLE PUBLIC UTILITIES BOARD	BILL OF MATERIAL OCELOT SUBSTATION	
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O21	BURNDY OR EQUIV.	FFGC2	FENCE FABRIC GROUND CLAMP, #2 SOL. CU.	76	EA	-	-	Provided by Others
O22	BURNDY OR EQUIV.	KS22	FENCE BARBED WIRE GROUND, SPLIT BOLT, #6 TO #2 SOL. CU.	114	EA	-	-	Provided by Others
O23	BURNDY OR EQUIV.	GD1829	LIGHTNING SPIKE, 2 – 2-3/8” O.D. PIPE TO TWO (2) 4/0 BARE CU.	4	EA			
O24	TBD	TBD	3’-0” X 4’-0” OPERATOR GROUNDING PLATFORM, GALVANIZED STEEL GRATING	6	EA			
			STATION LIGHTING					
Q1	LITHONIA LIGHTING	RSX1 LED P2 30K R4 MVOLT IS PE DBLXD	SECURITY LIGHTING, 10,000 LUMENS, 3000K COLOR TEMPERATURE, 120-277 VAC, PHOTOCELL, 2-3/8” SLIPFITTER, BLACK FINISH	6	EA			
Q2	LITHONIA LIGHTING	RSXF4 LED P8 30K WFL MVOLT IS DBLXD	MAINTENANCE LIGHTING, 84,000 LUMENS, 3000K COLOR TEMPERATURE, 120-277 VAC, 2-3/8” SLIPFITTER, BLACK FINISH	4	EA			
Q3	HUBBELL OR EQUIV.	BHH-2-180-PT35-BL	BULLHORN BRACKET, 2-LUMINAIRES, 3.5” (4.0” O.D.) POLE TENON, 2-3/8” SLEEVE, BLACK FINISH	1	EA			
Q4	VALMONT OR EQUIV.	DS30 R660A300 4S GV	ROUND TAPERED STEEL LIGHT POLE, SINGLE LUMINAIRE 2-3/8” O.D. ARM, 4’-0” ARM LENGTH, 31’-0” MOUNTING HEIGHT, W/ HANDHOLE AT BASE	2	EA			
Q5	LITHONIA LIGHTING	FRWB GALV	GALVANIZED STEEL WALL MOUNT W/ 2-3/8” O.D. TENON SIZE AND 12”X13” (8” RADIUS CURVE) (TENON LENGTH/RISE)	6	EA			
Q6	TBD		SCH. 40 PIPE, 3.5” GALV. STEEL, 10 FT. LENGTH	1	EA	-	-	Provided by Others
			STATION SWITCH NUMBERS AND SAFETY SIGNS					
R1	ALMETEK	TR22x_HL	2” PLATES EMBOSSED BLACK/YELLOW ALUMINUM (2.5” X 1.56” X 0.025”), WITH HOLES 0 (19), 1 (25), 2 (23), 3 (8), 4 (6), 5 (27), A (6), B (4), C (33), P (2), T (2), # (2)	1	LOT			Replace “x” in part number with number/letter/character
R2	ALMETEK	PH2H05A	2” PLATE HOLDERS, 5 CHARACTERS, HORIZONTAL ALUMINUM (2.62” X 9.19” X 0.024”)	25	EA			
R3	ALMETEK	PH2H02A	2” PLATE HOLDERS, 2 CHARACTERS, HORIZONTAL ALUMINUM (2.62” X 4.37” X 0.024”)	2	EA			
R4	ALMETEK	PH2V05A	2” PLATE HOLDERS, 5 CHARACTERS, VERTICAL ALUMINUM (14” X 1.62” X 0.024”)	2	EA			
R5	ALMETEK	PH2V04A	2” PLATE HOLDERS, 4 CHARACTERS, VERTICAL ALUMINUM (11.5” X 1.62” X 0.024”)	2	EA			
R6	TBD	TBD	WARNING SIGN	17	EA			SEE DRAWING E2-6
R7	TBD	TBD	DANGER SIGN, 138,000 VOLTS	4	EA			SEE DRAWING E2-6
R8	TBD	TBD	DANGER SIGN, 12,470 VOLTS	4	EA			SEE DRAWING E2-6
A	9/9/2024	FOR REVIEW	CDS					
NO.	DATE	REVISION	ENGINEER	CHECKED	ENGINEERING FIRM			
 ELLETT & GAYNOR, LLC PROFESSIONAL ENGINEERS TX #F-562 5706 S.W. 45TH AVE., AMARILLO, TX 79109-5284						 BROWNSVILLE PUBLIC UTILITIES BOARD		BILL OF MATERIAL OCELOT SUBSTATION REV. NO. A

ITEM	MANUFACTURER	PART NUMBER	DESCRIPTION	QTY	UNIT	Unit Price	Total Price	NOTES/OTHER
			STATION STEEL					
S1	TBD	TBD	138 KV SWITCH STRUCTURE, THREE PHASE; BUS HEIGHT 13'-0"	2	EA			
S2	TBD	TBD	12.47 KV SWITCH STRUCTURE, THREE PHASE; BUS HEIGHT 13'-0"	2	EA			
S3	TBD	TBD	12.47 KV BUS/CABLE SUPPORT STRUCTURE, THREE PHASE; BUS HEIGHT 13'-0", WITH SUPPORTS FOR THREE (3) 6" CONDUIT.	4	EA			
S4	TBD	TBD	STATIC POLE STRUCTURE, 55'-0", WITH MOUNTING PROVISIONS FOR LIGHTS, CAMERA, AND JUNCTION BOX	4	EA			

						 ELLETT & GAYNOR, LLC PROFESSIONAL ENGINEERS TX #F-562 5706 S.W. 45TH AVE., AMARILLO, TX 79109-5284	 BROWNSVILLE PUBLIC UTILITIES BOARD	BILL OF MATERIAL	
								OCELOT SUBSTATION	
A	9/9/2024	FOR REVIEW	CDS		ELLETT AND GAYNOR			REV. NO.	A
NO.	DATE	REVISION	ENGINEER	CHECKED	ENGINEERING FIRM				

The owner is exempt from Texas sales tax on materials. The prices quoted shall exclude such sales tax.

2. The prices of Equipment set forth herein shall include the cost of delivery to the Ocelot Substation Site.

Preferred Delivery Schedule: The steel anchor bolts and below grade grounding to delivered no earlier than August 15, 2025.

The steel and other materials to be delivered no later than October 15, 2025.

Circle one: Yes / No

Time of Delivery shall be as follows: Monday through Friday 9:00 a.m. to 4:00 p.m. local time.

3. This Bid is made pursuant to the provisions of the Notice and Instructions to Bidders, if any shall be attached hereto, and the Bidder agrees to the terms and conditions thereof.
4. The Bidder warrants the accuracy of all statements contained in the Bidder's Qualifications, if any shall be submitted, and agrees that the Owner shall rely upon such accuracy as a condition of the Contract in the event that this Bid is accepted.
5. The Bidder warrants that this Bid is made in good faith and without collusion or connection with any other person or persons bidding for the same work.
6. The Bidder agrees that, in the event this Bid is accepted, it will execute a Contract in the form attached hereto.
7. The Bidder warrants that the Equipment will conform to the performance data and guarantees which are attached hereto and by this reference made a part hereof.
8. If, in submitting this Bid, the Bidder has made any change in the form of Bid or Contract furnished by the Owner, the Bidder understands that the Owner may evaluate the effect of such change as they see fit or they may exclude the Bid from consideration in determining the award of the Contract.
9. This bid is void unless an equipment contract based on this bid is entered into by the owner and the bidder within forty-five (45) days after the date hereof.

NAME OF BIDDER

ADDRESS OF BIDDER

By _____
Signature (Failure to sign disqualifies Bid)

DATE

TITLE OF OFFICER

Bidder's Contact person for additional information on this bid:

NAME

TELEPHONE NUMBER

EMAIL ADDRESS

ADDRESS

REQUIRED FORMS CHECKLIST

The following forms are to be submitted as a part of the Bid/RFP/RFQ document

NAME	FORM DESCRIPTION	SUBMITTED WITH BID	
		YES	NO
Legal Notice	Acknowledgement Form	☐	☐
	Debarment Certification	☐	☐
	Ethics Statement	☐	☐
	Conflict of Interest Questionnaire	☐	☐
	W9 or W8 Form	☐	☐
	Direct Deposit Form (will be provided to the awarded vendor)	☐	☐
	Residence Certification Form	☐	☐
Special Instructions	Bid Schedule/Cost sheet completed and signed	☐	☐
	Cashier Check or Bid Bond of 5% of Total Amount of Bid (if applicable)	☐	☐
	OSHA 300 Log (if applicable)	☐	☐
	Contractor Pre-Bid Disclosure completed, signed and notarized (if applicable)	☐	☐
	Sub-Contractor Pre-Bid Disclosure completed, signed, and notarized (if applicable)	☐	☐
		☐	☐
References	Complete the Previous Customer Reference Worksheet for each reference provided	☐	☐
Addenda			

ETHICS STATEMENT

(THIS FORM MUST BE COMPLETED IN ITS ENTIRETY AND SUBMITTED WITH BID RESPONSE)

The undersigned bidder, by signing and executing this bid, certifies and represents to the Brownsville Public Utilities Board that bidder has not offered, conferred or agreed to confer any pecuniary benefit, as defined by (1.07 (a) (6) of the Texas Penal Code, or any other thing of value as consideration for the receipt of information or any special treatment of advantage relating to this bid; the bidder also certifies and represents that the bidder has not offered, conferred or agreed to confer any pecuniary benefit or other thing of value as consideration for the recipient's decision, opinion, recommendation, vote or other exercise of discretion concerning this bid, the bidder certifies and represents that bidder has neither coerced nor attempted to influence the exercise of discretion by any officer, trustee, agent or employee of the Brownsville Public Utilities Board concerning this bid on the basis of any consideration not authorized by law; the bidder also certifies and represents that bidder has not received any information not available to other bidders so as to give the undersigned a preferential advantage with respect to this bid; the bidder further certifies and represents that bidder has not violated any state, federal, or local law, regulation or ordinance relating to bribery, improper influence, collusion or the like and that bidder will not in the future offer, confer, or agree to confer any pecuniary benefit or other thing of value of any officer, trustee, agent or employee of the Brownsville Public Utilities Board in return for the person having exercised their person's official discretion, power or duty with respect to this bid; the bidder certifies and represents that it has not now and will not in the future offer, confer, or agree to confer a pecuniary benefit or other thing of value to any officer, trustee, agent, or employee of the Brownsville Public Utilities Board in connection with information regarding this bid, the submission of this bid, the award of this bid or the performance, delivery or sale pursuant to this bid.

THE BIDDER SHALL DEFEND, INDEMNIFY, AND HOLD HARMLESS THE BROWNSVILLE PUBLIC UTILITIES BOARD, ALL OF ITS OFFICERS, AGENTS AND EMPLOYEES FROM AND AGAINST ALL CLAIMS, ACTIONS, SUITS, DEMANDS, PROCEEDING, COSTS, DAMAGES, AND LIABILITIES, ARISING OUT OF, CONNECTED WITH, OR RESULTING FROM ANY ACTS OR OMISSIONS OF CONTRACTOR OR ANY AGENT, EMPLOYEE, SUBCONTRACTOR, OR SUPPLIER OF CONTRACTOR IN THE EXECUTION OR PERFORMANCE OF THIS BID.

I have read all of the specifications and general bid requirements and do hereby certify that all items submitted meet specifications.

COMPANY: _____

AGENT NAME: _____

AGENT SIGNATURE: _____

ADDRESS: _____

CITY: _____

STATE: _____ ZIP CODE: _____

TELEPHONE: _____ TELEFAX: _____

FEDERAL ID#: _____ AND/OR SOCIAL SECURITY #: _____

DEVIATIONS FROM SPECIFICATIONS IF ANY:

NOTE: QUESTIONS AND CONCERNS FROM PROSPECTIVE CONTRACTORS SHOULD BE RAISED WITH OWNER AND ITS CONSULTANT (IF APPLICABLE) AND RESOLVED, IF POSSIBLE, PRIOR TO THE BID SUBMITTAL DATE. ANY LISTED DEVIATIONS IN A FINALLY SUBMITTED BID MAY ALLOW THE OWNER TO REJECT A BID AS NON-RESPONSIVE.

**CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER
RESPONSIBILITY MATTERS (THIS FORM MUST BE COMPLETED IN ITS
ENTIRETY AND SUBMITTED WITH BID RESPONSE)**

Name of Entity: _____

The prospective participant certifies to the best of their knowledge and belief that they and their principals:

- a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b) Have not within a three year period preceding this bid been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or Local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, Local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification; and
- d) Have not within a three year period preceding this application/bid had one or more public transactions (Federal, State, or Local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this bid or termination of the award. In addition, under 18 USC Section 1001, a false statement may result in a fine up to a \$10,000.00 or imprisonment for up to five (5) years, or both.

Name and Title of Authorized Representative (Typed)

Signature of Authorized Representative

Date

☐ **I am unable to certify to the above statements. My explanation is attached**

FORM CIQ

THIS FORM MUST BE COMPLETED IN ITS ENTIRETY AND SUBMITTED WITH PROPOSAL RESPONSE

CONFLICT OF INTEREST QUESTIONNAIRE For vendor doing business with local governmental entity		FORM CIQ
This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session. This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a). By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. See Section 176.006(a-1), Local Government Code. A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.	OFFICE USE ONLY 	
1 Name of vendor who has a business relationship with local governmental entity.		
2 ☐ Check this box if you are filing an update to a previously filed questionnaire. (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)		
3 Name of local government officer about whom the information is being disclosed.		
Name of Officer		
4 Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.		
A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor? ☐ Yes ☐ No B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity? ☐ Yes ☐ No		
5 Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.		
6 ☐ Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).		
7		
Signature of vendor doing business with the governmental entity		Date

CONFLICT OF INTEREST QUESTIONNAIRE
For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at <http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm>. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

- (A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;
- (B) a transaction conducted at a price and subject to terms available to the public; or
- (C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

Local Government Code § 176.003(a)(2)(A) and (B):

- (a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

- (2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds \$2,500 during the 12-month period preceding the date that the officer becomes aware that

- (i) a contract between the local governmental entity and vendor has been executed;
- or

- (ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than \$100 in the 12-month period preceding the date the officer becomes aware that:

- (i) a contract between the local governmental entity and vendor has been executed; or
- (ii) the local governmental entity is considering entering into a contract with the vendor.

Local Government Code § 176.006(a) and (a-1)

- (a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

- (1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);
- (2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or
- (3) has a family relationship with a local government officer of that local governmental entity.

- (a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

- (1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

- (2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.

CERTIFICATE OF INTERESTED PARTIES-FORM 1295

Special message: Please read the Special Notification regarding HB 1295 effective January 1, 2016, implemented by the Texas Ethics Commission, which requires business entities to provide a completed Form 1295 to Brownsville PUB with signed contracts in order to execute them.

In 2015, the Texas Legislature adopted House Bill 1295. The law states that a governmental entity or state agency may not enter into certain contracts with a business entity unless the business entity submits a disclosure of interested parties to the governmental entity or state agency at the time the business entity submits the signed contract to the governmental entity or state agency. The law applies to a contract of a governmental entity or state agency that either (1) requires an action or vote by the governing body of the entity or agency before the contract may be signed or (2) has a value of at least \$1 million. The disclosure requirement applies to a contract entered into on or after January 1, 2016.

To implement the law, the Texas Ethics Commission (TEC) adopted new rules necessary to prescribe the disclosure of interested parties form, and post a copy of the form on the commission's website. The commission adopted the Certificate of Interested Parties form, Form 1295, on October 5, 2015. The commission also adopted new rules as part of Chapter 46 of the Texas Administrative Code on November 30, 2015.

On January 1, 2016, TEC made a new filing application available on their website for business entities to use to both create and file Form 1295. Business entities will enter the required information on Form 1295 within the application and print a copy of the completed form, which will include a certification of filing with a unique certification number. An authorized agent of the business entity will need to sign the printed copy of the form and have the form notarized. The completed Form 1295 with the certification of filing must be included with the signed contract to the governmental body or state agency in order for the governmental body to execute the contract.

Brownsville PUB will then notify the commission, using TEC's filing application, of the receipt of the filed Form 1295 with the certification of filing not later than the 30th day after the date the contract binds all parties to the contract.

TEC will then post the business entity's completed Form 1295 to its website within seven (7) business days after receiving notice from Brownsville PUB acknowledging that it was received.

To obtain additional information on HB 1295, to learn more about TEC's process to create a new account or to complete an electronic version of Form 1295 for submission with a signed contract, please go to the following link: https://ethics.state.tx.us/whatsnew/elf_info_form1295.htm

NOTE: IF AWARDED THIS CONTRACT, FORM 1295 WILL BE SUBMITTED AT THE TIME THE SIGNED CONTRACT IS SUBMITTED TO BPUB. ___YES___NO

CERTIFICATE OF INTERESTED PARTIES**FORM 1295**

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the goods or services to be provided under the contract.

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary

5 Check only if there is NO Interested Party. ☐

6 UNSWORN DECLARATION

My name is _____, and my date of birth is _____.

My address is _____,
(street) (city) (state) (zip code) (country)

I declare under penalty of perjury that the foregoing is true and correct.

Executed in _____ County, State of _____, on the _____ day of _____, 20____.
(month) (year)

Signature of authorized agent of contracting business entity
(Declarant)

ADD ADDITIONAL PAGES AS NECESSARY

Organization Name
State Law Verifications

I, _____ (Person's name), the undersigned representative of (Company or Business name) _____ (hereafter referred to as the "Company") being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath as follows:

- **IRAN, SUDAN AND FOREIGN TERRORIST ORGANIZATIONS:** By submission of a response to City of Brownsville Public Utilities Board ("BPUB") **Request for Formal Bid B027-25 (the "BID")**, the responding Company represents that, to the extent this proposal submission or any contracts executed in response to this proposal constitutes a governmental contract within the meaning of Section 2252.151 of the Texas Government Code, as amended, solely for purposes of compliance with Section 2252.152 of the Texas Government Code, and except to the extent otherwise required by applicable federal law, neither the responding Company, nor any wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of the Company is a company listed by the Texas Comptroller of Public Accounts under Sections 806.051, 807.051, or 2252.153 of the Texas Government Code.
- **ANTI-BOYCOTT ISRAEL VERIFICATION:** By submission of a response to the BPUB RFQ, the responding Company represents that, to the extent this proposal submission, or any contracts executed in response to this proposal, constitutes a contract for goods or services within the meaning of Section 2271.002 of the Texas Government Code, as amended, solely for purposes of compliance with Chapter 2271 of the Texas Government Code, and subject to applicable federal law, including without limitation, 50 U.S.C. Section 4607, the responding Company, as well as any wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of the Company, (1) does not boycott Israel and (2) will not boycott Israel through the term of any such contract. The term "boycott Israel" as used in this paragraph has the meaning assigned to such term in Section 808.001 of the Texas Government Code, as amended.
- **VERIFICATION REGARDING NO DISCRIMINATION AGAINST FIREARMS:** By submission of a response to the BPUB RFQ, the responding Company represents that, to the extent this proposal submission, or any contracts executed in response to this proposal, constitutes a contract for goods or services for which a written verification is required under Section 2274.002, Texas Government Code (as added by Senate Bill 19, 87th Texas Legislature, Regular Session), as amended, the responding Company hereby verifies that it, as well as any wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of the Firm, (1) does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association; and (2) will not discriminate during the term of any such contract against a firearm entity or firearm trade association. The foregoing verification is made solely to comply with Section 2274.002, Texas Government Code (as added by Senate Bill 19, 87th Texas Legislature, Regular Session), as amended, to the extent such section does not contravene applicable Texas or

federal law. As used in the foregoing verification, “discriminate against a firearm entity or firearm trade association” shall have the meaning assigned to such term in Section 2274.001, Texas Government Code (as added by Senate Bill 19, 87th Texas Legislature, Regular Session).

- **VERIFICATION REGARDING NO ENERGY COMPANY BOYCOTTS:** By submission of a response to the BPUB RFQ, the responding Company represents that, to the extent this proposal submission, or any contracts executed in response to this proposal, constitutes a contract for goods or services for which a written verification is required under Section 2274.002, Texas Government Code (as added by Senate Bill 13, 87th Texas Legislature, Regular Session), as amended, the responding Company hereby verifies that the responding Company, as well as any wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of the Firm, (1) does not boycott energy companies and (2) will not boycott energy companies during the term of any such contract. The foregoing verification is made solely to comply with Section 2274.002, Texas Government Code (as added by Senate Bill 13, 87th Texas Legislature, Regular Session), as amended, to the extent such section does not contravene applicable Texas or federal law. As used in the foregoing verification, “boycott energy companies” shall have the meaning assigned to such term in Section 809.001(1), Texas Government Code.

DATE

SIGNATURE OF COMPANY REPRESENTATIVE

On this the ____ day of _____, 20____, personally appeared

_____, the above-named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

NOTARY SEAL _____

NOTARY SIGNATURE _____

Date

BROWNSVILLE PUBLIC UTILITIES BOARD
RESIDENCE CERTIFICATION

In accordance with Art. 601g, as passed by the 1985 Texas Legislature, the following will apply. The pertinent portion of the Act has been extracted and is as follows:

Section 1. (a)

(1) "Nonresident bidder" means a bidder whose principal place of business is not in this state, but excludes a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

(2) "Texas resident bidder " means a bidder whose principal place of business is in this state, and includes a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

Section 1. (b)

The state or governmental agency of the state may not award a contract for general construction, improvements, services, or public works projects or purchases of supplies, materials or equipment to a nonresident bidder unless the nonresident's bid is lower than the lowest bid submitted by a responsible Texas resident bidder by the same amount that a Texas resident bidder would be required to underbid a nonresident bidder to obtain a comparable contract in the state in which the nonresident's principal place of business is located.

I certify that _____ (Company Name) is a **resident Texas bidder** as defined in Art. 601g.

Signature: _____

Print Name: _____

I certify that _____ (Company Name) is a **nonresident bidder** as defined in Art. 601g, and our principal place of business is:

(City and State)

Signature: _____

Print Name: _____

Organization Name
House Bill 89 Verification

I, _____ (Person name), the undersigned representative of (Company or Business name) _____ (hereafter referred to as company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named- above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

1. Does not boycott Israel currently; and
2. Will not boycott Israel during the term of the contract providing that:
 - (1) “company” does not include a sole proprietorship; and
 - (2) the law applies only to a contract that:
 - (a) is between a governmental entity and a company with 10 or more full-time employees; and
 - (b) has a value of \$100,000 or more that is to be paid wholly or partly from public funds or the governmental entity

Pursuant to Section 2270.001, Texas Government Code:

1. “Boycott Israel” means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes; and
2. “Company” means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or any limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business associations that exist to make a profit.

DATE

SIGNATURE OF COMPANY REPRESENTATIVE

On this the ____ day of _____, 20____, personally appeared

_____, the above-named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

NOTARY SEAL _____

NOTARY SIGNATURE _____

Date

Previous Customer Reference Worksheet

Name of Customer:		Customer Contact:
Customer Address:		Customer Phone Number:
		Customer Email:
Name of Company Performing Referenced Work:		

What was the Period of Performance?		What was the Final Acceptance Date?
From:		
To:		
Dollar Value of Contract? \$_____		What Type of Contract? Firm Fixed Price Time and Material Not to Exceed Cost Plus Fixed

[illegible]

**Request for Taxpayer
Identification Number and Certification**

Go to www.irs.gov/FormW9 for instructions and the latest information.

**Give form to the
requester. Do not
send to the IRS.**

Before you begin. For guidance related to the purpose of Form W-9, see *Purpose of Form*, below.

Print or type. See Specific Instructions on page 3.	1 Name of entity/individual. An entry is required. (For a sole proprietor or disregarded entity, enter the owner's name on line 1, and enter the business/disregarded entity's name on line 2.)	
	2 Business name/disregarded entity name, if different from above.	
	3a Check the appropriate box for federal tax classification of the entity/individual whose name is entered on line 1. Check only one of the following seven boxes. ☐ Individual/sole proprietor ☐ C corporation ☐ S corporation ☐ Partnership ☐ Trust/estate ☐ LLC. Enter the tax classification (C = C corporation, S = S corporation, P = Partnership) _____ Note: Check the "LLC" box above and, in the entry space, enter the appropriate code (C, S, or P) for the tax classification of the LLC, unless it is a disregarded entity. A disregarded entity should instead check the appropriate box for the tax classification of its owner. ☐ Other (see instructions)	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from Foreign Account Tax Compliance Act (FATCA) reporting code (if any) _____ <i>(Applies to accounts maintained outside the United States.)</i>
	3b If on line 3a you checked "Partnership" or "Trust/estate," or checked "LLC" and entered "P" as its tax classification, and you are providing this form to a partnership, trust, or estate in which you have an ownership interest, check this box if you have any foreign partners, owners, or beneficiaries. See instructions. ☐	
	5 Address (number, street, and apt. or suite no.). See instructions.	Requester's name and address (optional)
	6 City, state, and ZIP code	
	7 List account number(s) here (optional)	

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. See also *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number	
	- -
or	
Employer identification number	
	-

Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
 - I am not subject to backup withholding because (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
 - I am a U.S. citizen or other U.S. person (defined below); and
 - The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.
- Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and, generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here	Signature of U.S. person	Date
------------------	--------------------------	------

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.

What's New

Line 3a has been modified to clarify how a disregarded entity completes this line. An LLC that is a disregarded entity should check the appropriate box for the tax classification of its owner. Otherwise, it should check the "LLC" box and enter its appropriate tax classification.

New line 3b has been added to this form. A flow-through entity is required to complete this line to indicate that it has direct or indirect foreign partners, owners, or beneficiaries when it provides the Form W-9 to another flow-through entity in which it has an ownership interest. This change is intended to provide a flow-through entity with information regarding the status of its indirect foreign partners, owners, or beneficiaries, so that it can satisfy any applicable reporting requirements. For example, a partnership that has any indirect foreign partners may be required to complete Schedules K-2 and K-3. See the Partnership Instructions for Schedules K-2 and K-3 (Form 1065).

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS is giving you this form because they

Form **W-8BEN-E**

(Rev. October 2021)

Department of the Treasury
Internal Revenue Service**Certificate of Status of Beneficial Owner for
United States Tax Withholding and Reporting (Entities)**

► For use by entities. Individuals must use Form W-8BEN. ► Section references are to the Internal Revenue Code.
► Go to www.irs.gov/FormW8BENE for instructions and the latest information.
► Give this form to the withholding agent or payer. Do not send to the IRS.

OMB No. 1545-1621

Do NOT use this form for:

- U.S. entity or U.S. citizen or resident W-9
- A foreign individual W-8BEN (Individual) or Form 8233
- A foreign individual or entity claiming that income is effectively connected with the conduct of trade or business within the United States (unless claiming treaty benefits) W-8ECI
- A foreign partnership, a foreign simple trust, or a foreign grantor trust (unless claiming treaty benefits) (see instructions for exceptions) . . . W-8IMY
- A foreign government, international organization, foreign central bank of issue, foreign tax-exempt organization, foreign private foundation, or government of a U.S. possession claiming that income is effectively connected U.S. income or that is claiming the applicability of section(s) 115(2), 501(c), 892, 895, or 1443(b) (unless claiming treaty benefits) (see instructions for other exceptions) W-8ECI or W-8EXP
- Any person acting as an intermediary (including a qualified intermediary acting as a qualified derivatives dealer) W-8IMY

Instead use Form:**Part I Identification of Beneficial Owner**

1 Name of organization that is the beneficial owner	2 Country of incorporation or organization
--	---

3 Name of disregarded entity receiving the payment (if applicable, see instructions)

- 4** Chapter 3 Status (entity type) (Must check one box only):
- | | | | |
|--|---|--|---|
| ☐ Simple trust | ☐ Tax-exempt organization | ☐ Corporation | ☐ Partnership |
| ☐ Central Bank of Issue | ☐ Private foundation | ☐ Complex trust | ☐ Foreign Government - Controlled Entity |
| ☐ Grantor trust | ☐ Disregarded entity | ☐ Estate | ☐ Foreign Government - Integral Part |
| | ☐ International organization | | |

If you entered disregarded entity, partnership, simple trust, or grantor trust above, is the entity a hybrid making a treaty claim? If "Yes," complete Part III. ☐ Yes ☐ No

- 5** Chapter 4 Status (FATCA status) (See instructions for details and complete the certification below for the entity's applicable status.)
- | | |
|---|---|
| ☐ Nonparticipating FFI (including an FFI related to a Reporting IGA FFI other than a deemed-compliant FFI, participating FFI, or exempt beneficial owner). | ☐ Nonreporting IGA FFI. Complete Part XII. |
| ☐ Participating FFI. | ☐ Foreign government, government of a U.S. possession, or foreign central bank of issue. Complete Part XIII. |
| ☐ Reporting Model 1 FFI. | ☐ International organization. Complete Part XIV. |
| ☐ Reporting Model 2 FFI. | ☐ Exempt retirement plans. Complete Part XV. |
| ☐ Registered deemed-compliant FFI (other than a reporting Model 1 FFI, sponsored FFI, or nonreporting IGA FFI covered in Part XII). See instructions. | ☐ Entity wholly owned by exempt beneficial owners. Complete Part XVI. |
| ☐ Sponsored FFI. Complete Part IV. | ☐ Territory financial institution. Complete Part XVII. |
| ☐ Certified deemed-compliant nonregistering local bank. Complete Part V. | ☐ Excepted nonfinancial group entity. Complete Part XVIII. |
| ☐ Certified deemed-compliant FFI with only low-value accounts. Complete Part VI. | ☐ Excepted nonfinancial start-up company. Complete Part XIX. |
| ☐ Certified deemed-compliant sponsored, closely held investment vehicle. Complete Part VII. | ☐ Excepted nonfinancial entity in liquidation or bankruptcy. Complete Part XX. |
| ☐ Certified deemed-compliant limited life debt investment entity. Complete Part VIII. | ☐ 501(c) organization. Complete Part XXI. |
| ☐ Certain investment entities that do not maintain financial accounts. Complete Part IX. | ☐ Nonprofit organization. Complete Part XXII. |
| ☐ Owner-documented FFI. Complete Part X. | ☐ Publicly traded NFFE or NFFE affiliate of a publicly traded corporation. Complete Part XXIII. |
| ☐ Restricted distributor. Complete Part XI. | ☐ Excepted territory NFFE. Complete Part XXIV. |
| | ☐ Active NFFE. Complete Part XXV. |
| | ☐ Passive NFFE. Complete Part XXVI. |
| | ☐ Excepted inter-affiliate FFI. Complete Part XXVII. |
| | ☐ Direct reporting NFFE. |
| | ☐ Sponsored direct reporting NFFE. Complete Part XXVIII. |
| | ☐ Account that is not a financial account. |

6 Permanent residence address (street, apt. or suite no., or rural route). **Do not use a P.O. box or in-care-of address** (other than a registered address).

City or town, state or province. Include postal code where appropriate.

Country

7 Mailing address (if different from above)

City or town, state or province. Include postal code where appropriate.

Country

For Paperwork Reduction Act Notice, see separate instructions.

Cat. No. 59689N

Form **W-8BEN-E** (Rev. 10-2021)

SUBSTATION SPECIFICATION FOR MATERIAL

for



B R O W N S V I L L E PUBLIC UTILITIES BOARD

OCELOT SUBSTATION

1425 ROBINHOOD DRIVE

BROWNSVILLE, TEXAS 78520

REV-0

ELLETT & GAYNOR, LLC

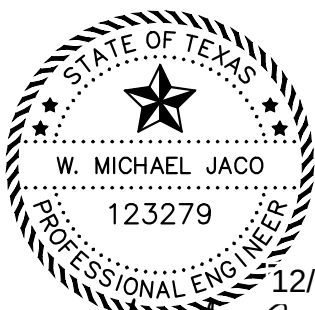
Professional Engineers

5706 SW 45th Avenue

Amarillo, Texas 79109-5284

Phone: (806) 376-9678

Fax: (806) 376-1931



12/19/2024

Michael Jaco

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SUBSTATION MATERIAL PACKAGE SPECIFICATION

1.0 SCOPE

These specifications describe the scope of responsibilities and required materials for the Material Contractor (Bidder) to supply for a two (2) 15/20/25 MVA transformer, outdoor type 138kV Delta-12.47kV Grounded Wye, substation, complete with steel structures, static masts, switches, insulators, bus, wire, cable, terminals, ground material, and station lighting.

All equipment and material shall be in accordance with the latest NEMA, ANSI, ASTM, IEEE, EEI, and RUS Standards, where applicable, and delivered to the Project Job Site per the bid documents to the complete satisfaction of the Owner and Engineer.

Supplemental specifications to the material specifications include.

- “BPUB – 138kV & 12.47kV GOAB Switch Spec”

The Bidder shall furnish all material included in these specifications not specifically excluded and indicated as Owner or Owner’s Erection Contractor provided.

2.0 PROPOSAL AND GENERAL REQUIREMENTS

Bidders shall supply one PDF of all proposal information with descriptive illustrations, bill of material, catalog cut sheets, and drawings with dimensions, all as accurate as reasonably can be anticipated in advance of actual manufacture or procurement.

The attached diagrams, drawings and material lists are, and shall become, a part of the Bidder’s Proposal. The bidder shall furnish equipment specifications, material lists, and the completed Bill of Material pricing documents with the bid proposal. After acceptance of the bid proposal and prior to delivery of material the successful Bidder shall coordinate with the Owner’s Engineer to ensure that general arrangement and elevation view drawings include all items on the site Bill of Material. The successful bidder shall furnish three copies of erection diagrams, steel details and fabrication drawings, anchor bolt details, and foundation details marked as “FOR APPROVAL” for review and comments by the Engineer. The successful bidder shall furnish three complete hard copies of all drawings marked as “FINAL”, plus one electronic copy of all drawings on a flash drive in AutoCAD 2016 or earlier format, including instruction books and related information prior to delivery of the equipment. All “FINAL” documentation and drawings shall be provided in PDF format on the flash drive as well. The hard copies and flash drive of all data and drawings shall be delivered to the Owner and Engineer:

Owner:

Mr. Cesar A. Cortinas, P.E.

Brownsville PUB

1425 Robinhood Drive

Brownsville, Texas 78521

Telephone: (956) 983-6216

Email: CCortinas@brownsville-pub.com

Mr. Brian Garza

Brownsville PUB

1425 Robinhood Drive

Brownsville, Texas 78521

Telephone: (956) 983-6203

Email: BGarza@brownsville-pub.com

SUBSTATION MATERIAL PACKAGE SPECIFICATION

Engineer:

Mr. Michael Jaco, P.E.
Ellett & Gaynor, LLC
5706 SW 45th Ave.
Amarillo, TX 79109-5284
Telephone: (806) 376-9678
Email: MichaelJ@egpe.biz

The anchor bolts, approved site plans and foundation details shall be shipped a minimum of 30 days prior to delivery of the substation steel structures, equipment and materials. Steel structures, if possible, should be shipped in advance of the balance of material.

All shipping packages, whether shipped by the Material Contractor or shipped direct by the manufacturer, shall include the specific item's mark number or customer reference number on the outside label of the box to assist the Erection Contractor with their on-site inventory management.

Material Schedule shall be as follows:

<u>Activity</u>	<u>Date</u>
Bids due (2:00 PM CST)	/ /
Notification of Award of Contract	/ /
Submit Approval Drawings (4 weeks)	/ /
Complete Review & Return Approval Drawings (1 weeks)	___/___/___
Anchor Bolt Delivery (30 days after drawing approval)	___/___/___
Delivery Steel to Moriarty (___ weeks)	___/___/___

Equipment accessories shall include the grounding, bushing connectors, and any other material needed to connect the equipment to grounding or high voltage connections.

All invoices shall be addressed and delivered to the Owner for processing and payment. A copy of all invoices shall be delivered to the Engineer for record purposes.

The Engineer (Ellett & Gaynor, LLC) is acting as an agent of the Owner and shall not be listed as the end user, client, responsible party, or Owner in any contracts, agreements, or invoices.

3.0 STRUCTURES

3.1 General

- 3.1.1 The outdoor station structures shall be of the tube type (preferred) or wide flange (no lattice type columns will be allowed) designed in accordance with the latest revision of NEMA Standard SG-6 except that the structure

SUBSTATION MATERIAL PACKAGE SPECIFICATION

shall be capable of withstanding a load of 2,000 pounds per external overhead conductor. Horizontal tube type members shall utilize vent and drain holes, grate covers shall not be allowed. Trusses shall be shipped assembled. The weather protection for steel surfaces shall be hot dip galvanized.

- 3.1.2 The steel structure thicknesses shall be designed to prevent warping during fabrication and welding.
- 3.1.3 The location of this substation is in seismic design category A, at 23 feet above sea level, and can expect ambient air temperatures as high as 110°F and as low as 20°F. The region is in the NESC light loading area.
- 3.1.4 The Successful Bidder shall furnish to the Engineer for review and approval design dimensions, reinforcements, calculations, and related information for the all the equipment structure foundations. The concrete footings and/or piers applicable for adequate support of the loads imposed by the structures supplied on this project shall not exceed the allowable bearing pressures presented in the project specific geotechnical engineering report. Reinforced drilled pier foundations or spread footings shall be designed. All concrete to be placed in the footings, piers, and pads will have a 28-day strength of 4,000 PSI. The Engineer reserves the right to modify anchor bolt and concrete footing arrangements deemed necessary to adequately support the load at no additional cost. If the pier foundation design requires transverse reinforcement (hoops) that include hooked terminations, then the pier diameter shall be increased to provide sufficient installation and constructability clearances from the outside edge of the anchors and embedded anchor template to the inside face of the hooked hoop terminations. All pier foundation designs, and rebar cage diameters shall be sized (or oversized, as needed) so that the Erection Contractor may utilized the embedded anchor bolt templates (provided by the Material Contractor) to ensure that the anchor plumbness and spacing are maintained.
- 3.1.5 Electrical clearances shall not be less than those set forth in the NEMA Standards and AIEE Committee Report Paper 54-80, ANSI C37.32. In addition, no energized terminals or connectors shall be mounted with clearances less than those recommended in NESC Tables 110-1 & 124-1. The mounting of equipment shall be designed such that the base of the equipment bushing shall never be less than 8.5 feet above the top of the foundation. Increased electrical clearances by voltage of equipment shall be provided per RUS 1724E-300, Section 4.9.
- 3.1.6 All anchor bolts shall be furnished hot dip galvanized with a 90-degree angle bend at the bottom of at least four times the diameter of the bolt or shall be headed bolts. The thread length and projection shall be of adequate length to allow nuts for leveling and plumbing of structures and

SUBSTATION MATERIAL PACKAGE SPECIFICATION

supports, shims shall not be used for leveling. Anchor bolts shall be furnished with three (3) nuts, one below for leveling and two above the base plate, and washers. If the base plate design incorporates oversized holes, the Material Contractor shall design and provide plate washers (top and bottom) in accordance with AISC Steel Construction Manual Table 14-2 in addition to the standard ASTM F436 washers.

- 3.1.7 The Successful Bidder shall furnish two (2) steel anchor bolt templates with each anchor bolt assembly/cluster to ensure accurate anchor placement, layout, and spacing. The lower template shall be permanently embedded in the concrete and shall have a large hole in the middle of the template to allow the concrete to freely flow.
- 3.1.8 All structure members shall be built in a manner to prevent bird nesting to the extent possible. Metal guards of sheet metal or expanded metal shall be placed over all openings that cannot otherwise be covered. Supports for the bus insulators shall be a “X” design rather than a “U” design to prevent bird nesting.

3.2 138kV Voltage Structures

- 3.2.1 Two (2) 138kV switch support structures shall be provided for mounting manual group-operated air-break disconnect switches, with worm gear operators.
- 3.2.2 Welded connectors shall be provided to connect the 4/0 AWG ACSR 6/1 “Penguin” stranded conductor to the 4-Hole NEMA pads on the utility provided 138kV bus terminal.

3.3 12.47kV Voltage Structures

- 3.3.1 The 12.47kV voltage bus shall utilize EEI-NEMA gray TR #205 outdoor standard strength station post insulators.
- 3.3.2 Two (2) three phase 12.47kV bus support structures shall be provided to mount the 3” rigid tubular bus and support the RMC conduit risers.
- 3.3.3 Two (2) three phase 12.47kV cable support structures shall be provided to mount the 4/0 AWG ACSR 6/1 “Penguin” stranded conductor and RMC conduit riser.
- 3.3.4 Two (2) 12.47kV switch support structures shall be provided for mounting manual group-operated air-break disconnect switches, with worm gear operators.

SUBSTATION MATERIAL PACKAGE SPECIFICATION

- 3.3.5 All 3" IPS AL bus shall utilize welded connections to connect the 4-Hole or 2-Hole NEMA pads. Bolted connectors shall only be utilized when a welded connector is not available.

3.4 Static Pole Structures

- 3.4.1 Two (2) self-supporting static pole/mast structures shall be provided and equipped to support one (1) 3/8" high strength steel 7 strand overhead ground wire and one (1) security LED light. The static structure shall include provisions for a total of four (4) light/security camera mounts. The light mounts shall be installed on the static structure faces that coordinate with the four cardinal directions. The static structure shall also have provisions for attaching a 4/0 copper ground wire from the ground to the static wire at intervals not to exceed three feet (3'-0"). The structure shall be a minimum of 55'-0" tall from top-of-concrete to the static wire connection point with a ten foot (10'-0") tall lightning mast.
- 3.4.2 Two (2) self-supporting static pole/mast structures shall be provided and equipped to support two (2) 3/8" high strength steel 7 strand overhead ground wire, one (1) security LED light, and one (1) maintenance LED light. The static structure shall include provisions for a total of four (4) light/security camera mounts. The light mounts shall be installed on the static structure faces that coordinate with the four cardinal directions. The static structure shall also have provisions for attaching a 4/0 copper ground wire from the ground to the static wire at intervals not to exceed three feet (3'-0"). The structure shall be a minimum of 55'-0" tall from top-of-concrete to the static wire connection point with a ten foot (10'-0") tall lightning mast.
- 3.4.3 Each self-supporting static structure shall be designed for installation on a drilled pier concrete foundation with anchor bolts provided (anchor bolts shall be equally spaced around the base plate).
- 3.4.4 Each self-supporting static pole structure shall also have mounting provisions for a lighting junction box affixed to the south face of the static structure, located two feet (2'-0") above the static pole base. The static pole structures shall also have provisions for extending cable through the tube shaft up through the static pole to the lighting fixtures. Hand holes shall be provided at the lighting fixture and junction box locations as shown on the elevation view drawing.

4.0 AIR SWITCHES

4.1 138kV GOAB Switches

- 4.1.1 Two (2) 138kV, air, three-pole, group-operated center-break parallel style air-break switches shall be furnished. The switch shall be rated: 138kV,

SUBSTATION MATERIAL PACKAGE SPECIFICATION

650kV BIL, minimum 1,200 ampere load current. The switch shall employ ANSI #70 gray TR #288 outdoor apparatus standard strength station post insulators. The switch shall utilize a worm gear operator that shall be affixed to the switch support column at three feet (3'-0") above the column base plate. All material of the proper metallic content shall be furnished for adequate grounding of the operation mechanism, including a flexible copper braid ground strap.

4.1.2 Welded connectors shall be provided for the switches to connect the 4/0 AWG ACSR 6/1 "Penguin" stranded conductor to the 4-Hole NEMA pads on the switch terminals.

4.1.3 See attached "BPUB - 138kV & 12.47kV GOAB Switch" specification for more information.

4.2 12.47kV GOAB Switches

4.2.1 Two (2) 12.47kV, air, three-pole, group-operated vertical-break style air-break switches shall be furnished. The switch shall be rated: 15kV, 110kV BIL, 2,000 ampere load current. The switch shall employ ANS #70 gray TR #205 outdoor apparatus standard strength station post insulators. The switch shall utilize a worm gear operator that shall be affixed to the switch column at three feet (3'-0") above the column base plate. All material of the proper metallic content shall be furnished for adequate grounding of the operating mechanism, including a flexible copper braid ground strap.

4.2.2 Welded connectors shall be provided to connect the 2156 MCM ACSR 84/19 "Bluebird" stranded wire and 3" IPS AL bus to the 4-Hole NEMA pads on the switch terminals.

4.3 Operator Ground Platforms

4.3.1 Six (6) operator's grounding platforms (3'X4') consisting of galvanized steel grating shall be furnished as shown on the switch platform ground detail drawing. Platform design and material specification shall be submitted with approval drawings.

4.3.2 Bolted connectors to connect 4/0 copper stranded wire to the operator ground platforms shall be provided.

5.0 138KV CIRCUIT SWITCHER

5.1 The Owner shall furnish two (2) three phase, 1,200 amp, 138kV Circuit Switchers with 4-Hole NEMA pad terminals.

5.2 Welded connectors shall be provided to connect the 4/0 AWG ACSR 6/1 "Penguin" stranded conductor to the 4-Hole NEMA pads on the circuit switcher.

SUBSTATION MATERIAL PACKAGE SPECIFICATION

6.0 SUBSTATION POWER TRANSFORMER

- 6.1 The Owner shall furnish two (2) Power Transformers with the following specifications: 138kV Delta-12.47kV Grounded Wye, 15/20/25 MVA transformer.
- 6.2 The transformer manufacture shall provide the surge arresters for the 138kV and 12.47kV sides of the transformer.
- 6.3 The transformer manufacturer shall provide the stud connectors with a NEMA 4-hole terminal at each transformer bushing.
- 6.4 Welded connectors shall be provided to connect the 4/0 AWG ACSR 6/1 “Penguin” stranded conductor to the 4-Hole NEMA pads on the transformer 138kV terminals.
- 6.5 Bolted Tee connectors shall be provided to connect the 4/0 AWG ACSR 6/1 “Penguin” stranded conductor to the 4-Hole NEMA pads on the transformer 138kV arrester terminals.
- 6.6 Welded connectors shall be provided to connect the 2156 MCM ACSR 84/19 “Bluebird” stranded conductor to the 4-Hole NEMA pads on the transformer 12.47kV terminals.
- 6.7 Bolted Tee connectors shall be provided to connect the 2156 MCM ACSR 84/19 “Bluebird” stranded conductor to the 4-Hole NEMA pads on the transformer 12.47kV arrester terminals.

7.0 15kV SWITCHGEAR

- 7.1 The Owner shall furnish two (2) switchgears. The first switchgear will include seven (7) cubicles with one (1) main breaker, one (1) transfer breaker, and four (4) feeder breakers. The second switchgear will include six (6) cubicles with one (1) main breaker, one (1) terminal for primary cables, and four (4) feeder breakers. The switchgears will include NEMA 4-Hole pads for the incoming cables.
- 7.2 Cold Shrink Power Cable terminations shall be provided to connect the 4/0 AWG and 750 MCM Type MV-90 underground primary cable to the 4-Hole NEMA pads in the switchgear cubicles.

8.0 15kV CAPACITOR BANK

- 8.1 The Owner shall furnish two (2) 4.8 MVAR, three phase, 12.47kV capacitor banks with 2-Hole NEMA pad terminals.

SUBSTATION MATERIAL PACKAGE SPECIFICATION

- 8.2 The Capacitor Bank Manufacturer shall furnish two (2) three phase, 400 amp, 15kV vacuum capacitor switch with 1/0 – 500 MCM bolted terminals.
- 8.3 Welded connectors shall be provided to connect the 4/0 AWG ACSR 6/1 “Penguin” stranded conductor to the 2-Hole NEMA pads on the capacitor bank terminals.

9.0 BUS, CONDUCTORS, CONNECTORS AND INSULATORS

- 9.1 All jumpers on the 138kV system shall be 4/0 AWG ACSR 6/1 “Penguin” stranded conductor, unless otherwise noted on the drawings.
- 9.2 All jumpers on the 12.47kV system shall be 2156 MCM ACSR 84/19 “Bluebird” stranded conductor, unless otherwise noted on the drawings.
- 9.3 All primary 12.47kV underground cable to the switchgear shall be 750 MCM Type MV-90, unless otherwise noted on the drawings.
- 9.4 All primary 12.47kV underground cable to the capacitor banks shall be 4/0 AWG Type MV-90, unless otherwise noted on the drawings.
- 9.5 All rigid bus shall be 6063-T6 alloy schedule 40 aluminum tubing. Conductor for installation within the tubular bus and damping vibrations shall also be provided.
- 9.6 Bi-metallic transition plates shall be supplied where needed.
- 9.7 All bus support and switch insulators shall be standard strength NEMA station post type and ANSI #70 gray in color. Porcelain bushings shall be ANSI #70 gray in color.
- 9.8 Rigid, slip, and expansion tubular bus support connectors shall be provided where indicated on the drawings.
- 9.9 Bolted conductor cable support connectors shall be provided where indicated on the drawings.
- 9.10 Welded bus terminals from the 3" IPS AL bus to 2-Hole pads shall be provided where applicable.
- 9.11 Bolted bus tees from the 3" IPS AL bus to 2-Hole pads shall be provided where applicable.

10.0 GROUNDS AND GROUNDING SYSTEMS

- 10.1 All below grade 4/0 AWG 19 strand bare soft drawn copper cables, #2 AWG solid tinned copper, ground rods, and exothermic connections, i.e. tees and crosses, shall be provided by the Erection Contractor. All fence grounding

SUBSTATION MATERIAL PACKAGE SPECIFICATION

material, i.e. fence post, gate post, and barbed wired connectors, shall be provided by the Erection Contractor.

- 10.2 The following above grade grounding material shall be supplied by the Material Contractor:
- 10.2.1 84kV MCOV Power Transformer Arresters - Above grade 4/0 AWG 19 strand bare soft drawn copper and grounding terminals.
 - 10.2.2 12.7kV MCOV Power Transformer Arresters – Above grade 4/0 AWG 19 strand bare soft drawn copper and grounding terminals.
 - 10.2.3 138/12.47kV Power Transformer Tank - Above grade 4/0 AWG 19 strand bare soft drawn copper and grounding terminals.
 - 10.2.4 138/12.47kV Power Transformer Containment Foundation Grating Supports – Above grade 4/0 AWG 19 strand bare soft drawn copper and grounding terminals.
 - 10.2.5 138kV Circuit Switcher – Above grade 4/0 AWG 19 strand bare soft drawn copper and grounding terminals.
 - 10.2.6 138kV GOAB Switches – Above grade 4/0 AWG 19 strand bare soft drawn copper, flexible copper braid strap, and grounding terminals.
 - 10.2.7 15kV Switchgear - Above grade 4/0 AWG 19 strand bare soft drawn copper and grounding terminals.
 - 10.2.8 15kV Primary Underground Cable - Above grade 4/0 AWG 19 strand bare soft drawn copper, grounding terminals, and concentric neutral grounding connector.
 - 10.2.9 15kV Capacitor Banks – Above grade 4/0 AWG 19 strand bare soft drawn copper and grounding terminals.
 - 10.2.10 15kV GOAB Switches – Above grade 4/0 AWG 19 strand bare soft drawn copper, flexible copper braid strap, and grounding terminals.
 - 10.2.11 Static Structures – Above grade 4/0 AWG 19 strand bare soft drawn copper, pipe ground for lightning mast, grounding terminals.
 - 10.2.12 Steel Structures (including Static Masts) – 3/8” HSS shield wire, static wire deadend clamp and hardware, above grade 4/0 AWG 19 strand bare soft drawn copper, and grounding terminals.
 - 10.2.13 Control House – Grounding terminals.
 - 10.2.14 Maintenance Light Post – Above grade 4/0 AWG 19 strand bare soft drawn copper and grounding terminal.
 - 10.2.15 Operator Grounding Platforms – Above grade 4/0 AWG 19 strand bare soft drawn copper and grounding terminals.
- 10.3 The high voltage and low voltage station arresters on the power transformers shall be connected to the grounding grid via a 4/0 AWG 19 strand bare soft drawn copper cable across the transformer arrester mounting trusses and down the adjacent tank sides, such that each arrester has two electrical paths connected to the ground grid.
- 10.4 The 4/0 AWG 19 stranded bare soft drawn copper shall extend up the structure columns and static masts for connection to the ground grid.

SUBSTATION MATERIAL PACKAGE SPECIFICATION

- 10.5 The circuit switcher mechanism enclosure shall be connected to the ground grid by 4/0 AWG 19 stranded bare soft drawn copper.
- 10.6 Galvanized metal grates shall be furnished and installed on the ground at the air switch control handles and circuit switcher mechanism enclosure. The size of the metal grate shall be approximately three feet by four feet (3'-0" X 4'-0").
 - 10.6.1 The grates at the air switch control handles shall be connected to the switch handle and the ground grid with 4/0 AWG 19 stranded bare soft drawn copper. The switch operating mechanism shall be connected to the 4/0 AWG 19 stranded bare soft drawn copper with a flexible braid of tinned copper 1-1/2 inches wide by 3/16 inches thick.

11.0 SWITCH NUMBERS AND SAFETY SIGNS

- 11.1 Number holders, mounting hardware, and numbers shall be provided for switches, disconnects, circuit switchers, power transformers, switchgear, capacitor banks, and circuit breakers as identified on the one-line diagram and signage layout drawing (E2-7).
- 11.2 The number holders shall be aluminum with 2, 4, and 5 characters to be attached to the steel structures and equipment enclosure doors with self-tapping screws. Reference the signage layout drawing (E2-7) to determine which locations utilize horizontal or vertical mounts. Mounting provisions shall be provided on the steel structures near each GOAB switch operator or three-phase group of disconnect switches. Number holders will be affixed to the control cabinet door of the breakers and circuit switcher by the Erection Contractor.
- 11.3 The individual characters will slide into the holder and shall be UV resistant, embossed aluminum with Yellow with Black lettering, such as Almetek "TR22x_HL" (with holes), or Engineer approved alternative.
- 11.4 Safety signs in English and Spanish shall be provided. The lettering on the signs shall be at least four inches (0'-4") high. The signs shall be metal with a minimum thickness of 0.20 inches. These "Danger" and "Warning" signs are detailed on drawing E2-6 and shall be located according to drawing E2-7.

12.0 SUBSTATION LIGHTING

- 12.1 All lighting shall comply with the latest NESC Table 111-1 – Illumination Levels.
- 12.2 Security LED Lights
 - 12.2.1 Six (6) 10,000 lumen, 240-volt LED lights with photoelectric controls shall be provided with slip fitter accessories to mount the fixtures on 2" IPS (2-3/8" O.D.) rigid galvanized steel conduit. Lithonia RSX1 LED

SUBSTATION MATERIAL PACKAGE SPECIFICATION

catalog number RSX1 LED P2 30K R4 MVOLT IS PE DBLXD or Engineer approved alternative shall be furnished with slip fitter to mount the fixtures on 2" IPS (2-3/8" O.D.) rigid galvanized steel conduit. The PE shall be rated for 240 volts. One (1) light fixture shall be mounted on each of the four (4) static pole structures and one (1) light fixture shall be mounted on each of the two (2) light poles.

12.2.2 Two (2) round tapered steel light poles shall be provided. The light pole shall include provisions for a single luminaire with a mounting height of 31'-0" and a 2-3/8" O.D. arm with a length of 4'-0". The light pole shall include a handhole 18" above the base plate. Valmont catalog number DS30-R660A300-4S-GV or Engineer approved alternative shall be furnished.

12.2.3 The security lights mounted on the static structures (4) shall utilize a Lithonia FRWB galvanized steel bracket with a 2-3/8" O.D. tenon size; catalog number FRWB GALV or Engineer approved alternative.

12.3 Maintenance LED Lights

12.3.1 Four (4) 84,000 lumen, 240-volt LED lights shall be provided. Lithonia RSXF4 LED catalog number RSXF4 LED P8 30K WFL MVOLT IS DBLXD or Engineer approved alternative shall be furnished with lamp and slip fitter accessories to mount the fixtures on 2" IPS (2-3/8" O.D.) rigid galvanized steel conduit. Two (2) light fixtures shall be mounted on a maintenance light post (provided by the Erection Contractor) and two (2) light fixtures shall be mounted on the two (2) center static pole structures.

12.3.2 The maintenance lights mounted on the static structures (2) shall utilize a Lithonia FRWB galvanized steel bracket with a 2-3/8" O.D. tenon size; catalog number FRWB GALV or Engineer approved alternative.

12.3.3 One (1) bull horn fixture shall be provided to support two (2) RSXF4 maintenance lights with a 180-degree configuration. The bull horn shall be furnished with a tendon slip fitter to mount the fixture on a 3.5" IPS (4" O.D.) rigid galvanized steel conduit. The bull horn luminaire arms shall have an outside diameter of 2-3/8". Hubbell Lighting manufacture number BHH-2-180-PT35-BL or Engineer approved alternative shall be furnished.

13.0 CABLE AND CONDUIT

13.1 All cable and conduit shall be provided by the Erection Contractor.

SUBSTATION MATERIAL PACKAGE SPECIFICATION

14.0 DRAWING LIST

- E2-2 – General Arrangement
- E2-3 – Elevation Sections A-A & B-B
- E2-4 – Elevation Sections C-C, D-D, E-E, F-F, & G-G
- E2-5 – Electrical Assembly Details
- E2-6 – Safety Signs
- E2-7 – Signage Layout
- E5-1 – Ground Grid
- E5-2 – Grounding Details Sheet 1 of 4
- E5-3 – Grounding Details Sheet 2 of 4
- E5-4 – Grounding Details Sheet 3 of 4
- E5-5 – Grounding Details Sheet 4 of 4

138 KV & 12.47kV GOAB SWITCH SPECIFICATION

and

CONTRACT FORM

for

BROWNSVILLE PUBLIC UTILITIES BOARD (BPUB)

OCELOT SUBSTATION

1425 ROBINHOOD DRIVE

BROWNSVILLE, TEXAS 78521

REV – 0

ELLETT & GAYNOR, LLC

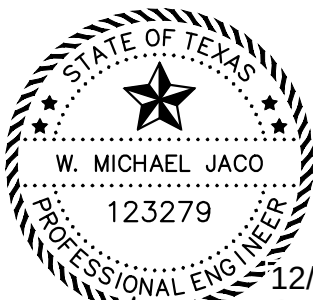
Professional Engineers

5706 SW 45th Avenue

Amarillo, Texas 79109-5284

Phone: (806) 376-9678

Fax: (806) 376-1931



12/19/2024

Michael Jaco

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SUBSTATION POWER TRANSFORMER SPECIFICATION

1.0 GENERAL

- 1.1 These specifications are for the purchase of two (2) 138kV Group Operated Air-Break (GOAB) Switches and two (2) 12.47kV Group Operated Air-Break (GOAB) Switches for an electric substation (Ocelot) for the Brownsville Public Utilities Board (BPUB) located in Brownsville, Texas.
- 1.2 The switch manufacturer shall furnish all parts and accessories required to install a complete operating switch; including insulators, switch base frame, operating mechanism, and equipment mounting hardware. The equipment shall be factory assembled, as much as feasible, and provided with detailed field assembly instructions.
- 1.3 The structural steel support structure, bus, conductor, terminal connectors, and grounding materials, except for the switch handle grounding strap, shall be provided by the Owner.
- 1.4 High voltage switch quantity, configuration, and delivery schedule
 - 1.4.1 Two (2) 138kV GOAB Center-Break Parallel Style Air-Break Switches are required for the Ocelot substation.
 - 1.4.2 Two (2) 12.47kV GOAB Vertical-Break Style Air-Break Switches are required for the Ocelot substation.
 - 1.4.3 The GOAB Switches shall be delivered to the job site on October 9th, 2025. If the Manufacturer is unable to meet the required delivery date, the Manufacturer shall provide the Owner with a guaranteed delivery date as part of their proposal.

2.0 STANDARDS

- 2.1 The GOAB switches described in this specification shall be in accordance with the latest IEEE, NEMA, ANSI, UL, NESC, NFPA, and ASTM standards and guidelines, as applicable. The order of precedence shall be this specification, then the following standards:

- ANSI C29.9; Wet-Process Porcelain Insulators
- ANSI C37.32; Schedule of Preferred Ratings, Manufacturing Specifications, and Application Guide of High Voltage Air Switches
- ANSI C37.34; Test Code for High-Voltage Air Switches
- ASTM 123; Zing Coating (Hot Dip) on Iron and Steel Hardware
- NEMA SG6; Power Switching Equipment

- 2.2 Standards Definition:

- IEEE: Institute of Electrical and Electrical Engineers
- NEMA: National Electrical Manufacturers Association

- ANSI: American National Standards Institute
- UL: Underwriters Laboratories
- NESC: National Electrical Safety Code
- NFPA: National Fire Protection Association
- ASTM: American Society for Testing and Materials

3.0 138kV GOAB SWITCH – RATING AND TYPE

- 3.1 The 138kV switches shall be group operated center side-break style, mounted horizontal upright, with parallel insulator configuration.
- 3.2 The 138kV GOAB Switch shall be rated as follows:
- | | |
|-----------------------|------------|
| 1. Nominal Voltage | 138 kV |
| 2. Maximum Voltage | 145 kV |
| 3. BIL | 650 kV |
| 4. Continuous Current | 1,200 Amp |
| 5. Momentary Current | 61,000 Amp |

4.0 12.47kV GOAB SWITCH – RATING AND TYPE

- 4.1 The 12.47kV switches shall be group operated vertical break style, mounted horizontal upright, with parallel insulator configuration.
- 4.2 The 12.47kV GOAB Switch shall be rated as follows:
- | | |
|-----------------------|-------------|
| 1. Nominal Voltage | 15 kV |
| 2. Maximum Voltage | 15.5 kV |
| 3. BIL | 110 kV |
| 4. Continuous Current | 2,000 Amp |
| 5. Momentary Current | 100,000 Amp |

5.0 ENVIRONMENTAL CONDITIONS

- 5.1 The GOAB switches shall comply with the following geo-physical data and weather data:
- | | |
|---|-----------------------------|
| 1. Latitude: 25° 57' 55.00" N | Longitude: 97° 31' 17.00" W |
| 2. Altitude: | 23 feet MSL |
| 3. Minimum Temperature: | 20 Degrees Fahrenheit |
| 4. Maximum Temperature: | 110 Degrees Fahrenheit |
| 5. Maximum Wind Loading: | 151 MPH Wind (ASCE 7-16) |
| 6. Maximum Humidity: | 100% |
| 7. Salt Contamination: | 100% |
| 8. NESC Loading District: | LIGHT |
| 9. Seismic Design Parameters: | |
| a. Seismic Design Category "A". | |
| b. Mapped MCE_R , 5% damped, spectral response acceleration parameters, $S_s = 0.037$ (short period) and $S_1 = 0.012$ (1 second). | |
| 10. Note that all specifications are at nominal sea level ratings. Actual quoted specifications shall include any modifiers for specified environmental conditions. | |

6.0 SWITCH DESIGN AND CONSTRUCTION

6.1 Switch Blade

- 6.1.1 Each switch blade shall form one solid piece and shall be assembled so that no part of the blade can move relative to another.
- 6.1.2 The ends of the switch blades shall be completely closed except for drain holes.
- 6.1.3 The switch blades shall be high conductivity copper alloy and of tubular construction.

6.2 Terminal Pads

- 6.2.1 The terminal pads on each end of the switch shall be located at the same height above the insulator.
- 6.2.2 The terminal pads shall have a machined flat surface.
- 6.2.3 The terminal pads for the 138kV switch shall be NEMA standard 4-hole pads with a 3-inch width.
- 6.2.4 The terminal pads for the 12.47kV switch shall be NEMA standard 4-hole pads with a 4-inch width.

6.3 Switch Assembly

- 6.3.1 The switch shall be designed so that when installed, its operation will not be prevented or hindered by accumulated water, salt spray, sleet, ice, snow, dirt, or other contamination.
- 6.3.2 Metal live parts shall be non-rusting and corrosion resistant. All current carrying parts shall be non-ferrous.
- 6.3.3 The live parts shall be designed to use a minimum of three mounting holes in the insulator or insulator adapter.
- 6.3.4 All bolts, screws, and pins shall be provided with lock washers, keys, or equivalent locking facilities.
- 6.3.5 No parts of the switch blade assembly shall project beyond the terminal pads.

6.4 Switch Mechanism

- 6.4.1 The mechanism shall be designed so that all three phases are in positive continuous control throughout the entire operating cycle.
- 6.4.2 Each rotating insulator stack shall have double roller or double ball bearings in the base bearing assembly. The bearing housing shall be weatherproof. If an open type bearing assembly is used, then the assembly must be rustproof, non-corroding, and shall be designed to completely drain water and moisture accumulation.

- 6.4.3 All roller or ball bearings shall be greaseless or maintenance-free type.
- 6.4.4 The rotating insulator stacks shall have leveling provisions at the base of each stack.
- 6.4.5 All operating pipes shall be sufficiently rigid to maintain positive control under the most adverse conditions and over the full life of the switch.
- 6.4.6 It shall be impossible, after proper and final adjustments have been made, for any part of the mechanisms to be displaced sufficiently, at any point in the travel, to allow improper functioning of the switch when the switch is opened or closed and at any operating speed.
- 6.4.7 All ferrous parts, except springs, shall be hot-dip galvanized in accordance with ASTM A153, latest revision.
- 6.5 Operating Mechanism
 - 6.5.1 The operating mechanism shall be positively toggled when the switch is closed to ensure correct, complete switch operation and to provide operating personnel with visual confirmation.
 - 6.5.2 All vertical operating shafts shall be supported on ball or roller thrust bearings. Guides shall be provided on the vertical shaft at regular intervals to ensure proper operation.
 - 6.5.3 Switches for 138kV and 12.47kV shall be furnished with geared mechanisms.
 - 6.5.4 Provisions shall be made for padlocking the mechanism in the open or closed position.
 - 6.5.5 The switch manufacturer shall provide a flexible copper braid shunt on the operating mechanism for ground connection.
 - 6.5.6 The maximum operating effort shall be thirty-five pounds-force (35 lbf) for a manually operated gear mechanism.
 - 6.5.7 The switch manufacturer shall provide a detailed drawing of the switch operating mechanism (including, but not limited to, the swing handle, gear, and vertical operating shaft guides) that identifies all mounting points and structural loads for use by the Owner in the design of the structural steel support structure. The mounting details shall include the attachment locations, bolt hole patterns and diameters, bolt diameter, length, and strength requirements, and any other pertinent details necessary for the design of the support structure. The structural loads provided by the switch manufacturer shall include all climatic, atmospheric, and operational loads applied to the supporting structure.
- 6.6 Switch Base
 - 6.6.1 The switch bases shall be constructed of ASTM A36 steel with sufficient rigidity to maintain proper insulator alignment, to maintain contact engagement, and to resist excessive displacements under all climatic and loading conditions. All steel shall be hot-dipped galvanized in accordance with ASTM A123.

- 6.6.2 For parallel insulator configurations, switch bases shall be bolted or welded channel construction.
- 6.6.3 For Vee insulator configurations, switch bases shall be welded tubular construction.
- 6.6.4 The switch manufacturer shall provide a detailed drawing of the switch base layout that identifies all mounting points and structural loads for use by the Owner in the design of the structural steel support structure. The base mounting details shall include the attachment locations, bolt hole patterns and diameters, bolt diameter, length, and strength requirements, and any other pertinent details necessary for the design of the support structure. The structural loads provided by the switch manufacturer shall include all climatic, atmospheric, and operational loads applied to the supporting structure.
- 6.7 Insulators
 - 6.7.1 The insulators shall be supplied by the switch manufacturer.
 - 6.7.2 The insulators shall conform with ANSI C29.8 and C29.9.
 - 6.7.3 The insulators supplied shall be standard strength, ANSI 70 gray.
 - 6.7.4 The insulators shall be wet-processed porcelain.
- 6.8 Nameplate
 - 6.8.1 All switches shall be equipped with a non-corrosive, stamped nameplate in accordance with ANSI C37.30, permanently attached with stainless steel screws or rivets.
 - 6.8.2 The nameplates shall include the switch manufacturer name, catalog number, electrical ratings, fabrication date, and serial number.
- 6.9 Quality Assurance and Quality Control (QA/QC)
 - 6.9.1 The switch manufacturer shall implement a Quality Assurance (QA) program that employs processes and methods to prevent errors in the design and manufacturing process and to ensure adherence to all requirements.
 - 6.9.2 The switch manufacturer shall administer a Quality Control (QC) program that includes inspections and fabrication oversight to identify and resolve defects in the final product(s).
- 6.10 Shipping
 - 6.10.1 Center-break switches shall be shipped completely assembled and adjusted, with insulators, base bearings, and live parts bolted into position on the bases.
 - 6.10.2 Vertical-break switches shall be shipped completely assembled and adjusted, with insulators, base bearings, and live parts bolted into position on the bases.
 - 6.10.3 The operating pipe shall be shipped unassembled and banded together, with assembly instructions and proper identification to the associated switch.

6.10.4 All other switch components shall be shipped in a wooden crate, with proper identification to the associated switch.

6.10.5 All switches and accessories shall be shipped FOB factory, freight prepaid.

7.0 DRAWINGS, INSTRUCTION MANUALS, AND PARTS LISTS

- 7.1 All Bidders shall furnish detailed plans, typical performance data, typical outline drawings, specifications, and equipment component information for evaluation with their proposals. One multi-page PDF and one (1) hard copy proposal package shall be sent to the Engineer:

Mr. Michael Jaco, P.E.
Ellett & Gaynor, LLC
5706 SW 45TH AVE.
Amarillo, TX 79109-5284
Telephone: (806) 376-9678
FAX: (806) 376-1931
Email: MichaelJ@egpe.biz

- 7.2 One multi-page PDF and one (1) hard copy proposal package shall be sent to the Owner:

Hugo E. Lopez (Purchasing Department)
Brownsville Public Utilities Board
1425 Robinhood Drive
Brownsville, TX 78521
Telephone: (956) 983-6375
Email: hlopez@brownsville-pub.com

- 7.3 The Successful Bidder shall furnish one multi-page PDF package and three (3) hard copy sets of approval drawings for review by the Owner and Engineer. Five (5) complete sets of instruction books, outline, assembly, and control drawings marked as FINAL shall be bound in a heavy duty 3-ring binder and sent prior to delivery of the GOAB switches. All FINAL drawings and documents shall be provided on a flash drive in .pdf and AutoCAD 2015 or later format or via electronic submittal to the Engineer:

Mr. Michael Jaco, P.E.
Ellett & Gaynor, LLC
5706 SW 45TH AVE.
Amarillo, TX 79109-5284
Telephone: (806) 376-9678
FAX: (806) 376-1931
Email: MichaelJ@egpe.biz

- 7.4 The outline and assembly drawings shall include all physical, mechanical, and operational dimensions and weights necessary for the customer to design structural steel equipment supports and foundations. This shall include all mounting details and any not-to-exceed steel member sizes, as necessary.

- 7.5 Instruction Manuals and Parts Lists

- 7.5.1 In addition to the requirements of Section 7.3, one (1) set of instruction books and documentation shall be furnished with each GOAB switch and shall include all specific information necessary for the Owner to install, service, and properly maintain the GOAB switch. The books shall contain an adequate number of drawings and pictures of all components. These drawings and pictures shall indicate all dimensions (with tolerances) which are necessary to check or adjust to ensure proper operation of the GOAB switch during its lifetime.
- 7.5.2 Complete maintenance instructions shall be provided with a check list of all points and dimensions to be considered during maintenance checks. Maintenance instructions may be included in the instruction books above.
- 7.5.3 Complete renewal parts list shall be provided showing all sub-components identified by ordering designations. Renewal parts lists may be included in the instruction books above.
- 7.5.4 Recommended spare parts list shall be provided with identifying ordering designation. Recommended spare parts lists may be included in the instruction books above.

8.0 SHIPPING INSTRUCTIONS

- 8.1 The price quoted shall include shipping. Shipment shall be in accordance with the instructions in the bid request and on the purchase order.
- 8.2 The GOAB switches shall be shipped by open freight air-ride type truck to the designated substation site, FOB Brownsville.
- 8.3 Upon shipment of GOAB switches by truck, the BPUB Storekeeper at 1425 Robinhood Drive shall be notified at (956) 983-6370 of the intended delivery a minimum of 48 hours prior to the actual delivery to the designated location in order that the Owner's personnel and equipment may be available to accept delivery. The purchasing agent may be contacted Monday through Friday between 8:00 a.m. and 4:00 p.m. at telephone number (956) 983-6216. Deliveries will only be accepted during normal working hours.
- 8.4 All delivery tickets must show the Owner's Purchase Order number and the number of crates, packages, pallets, etc. being delivered to the Owner.

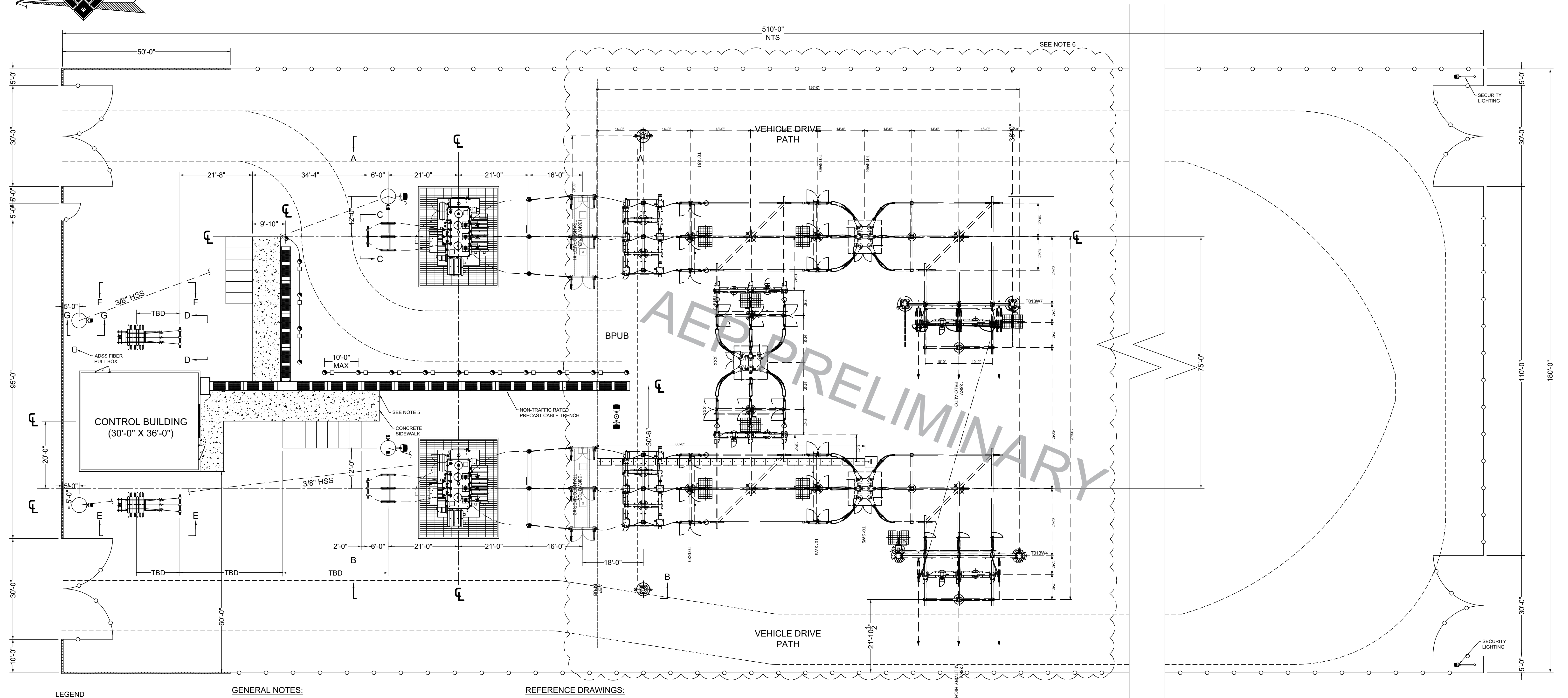
9.0 PROPOSAL INFORMATION

- 9.1 Bidders shall specify the manufacturer's designated GOAB switch type and provide copies of published brochures which contain information on the voltage and current ratings of the specific switch assemblies they propose to furnish.
- 9.2 Drawings shall be furnished which show the phase spacing, general dimensions, mounting requirements, weights, etc. of the GOAB switch(es) proposed. This information shall include bushing creepage distance as extra creepage. Dimensions and pricing shall be furnished for other creepage distances that are available.
- 9.3 The bid must list, individually, all specific exceptions. If there are no exceptions, the words "No Exceptions" must appear on the bid.
- 9.4 The Bidder shall specify the unit cost for each unique switch type (voltage and configuration), as well as, the total, all-inclusive bid price.

10.0 DRAWING LITS

E2-2 GENERAL ARRANGEMENT

E2-3 ELEVATION SECTIONS A-A & B-B



LEGEND	
	CHAIN LINK FENCE
	CONCRETE FENCE
	CONCRETE SIDEWALK
	CABLE TRENCH
	TRAFFIC BOLLARD
	MAINTENANCE LIGHT
	SECURITY LIGHT
	DEMARCATIION LINE

- GENERAL NOTES:**
- ALL BPUB 138KV GOAB SWITCHES SHALL BE HORIZONTAL CENTER-BREAK WITH A 12'-0" CENTERLINE-TO-CENTERLINE PHASE SPACING.
 - ALL 12.47KV GOAB SWITCHES SHALL BE VERTICAL BREAK.
 - TOP OF CONCRETE ELEVATIONS VARY ACROSS THE SITE.
 - TRAFFIC BOLLARDS SHALL BE INSTALLED AS SHOWN ON DRAWING AND REFERENCE DRAWING #6.
 - CONCRETE SIDEWALK TO EXTEND TO CABLE TRENCH. INSTALL 1/2" FIBER BOARD EXPANSION MATERIAL BETWEEN SIDE WALK AND CABLE TRENCH.
 - ALL DIMENSIONS AND LAYOUT DETAILS SHOWN FOR THE 138KV AEP EQUIPMENT IS SUBJECT TO CHANGE PENDING AEP'S DESIGN.

- REFERENCE DRAWINGS:**
- E2-3: ELEVATION - SECTIONS A-A & B-B.
 - E2-4: ELEVATION - SECTIONS C-C, D-D, E-E, F-F, & G-G.
 - E2-5: ELECTRICAL ASSEMBLY DETAILS.
 - E4-1: FOUNDATION LAYOUT.
 - E5-1: GROUND GRID.
 - E6-1: CONDUIT LAYOUT.

**FOR BID
PURPOSES
ONLY**

NO.	DATE	REVISION	DRAFTER	ENGINEER	CHECKED	ENGINEERING FIRM
C	11/07/2024	ISSUE FOR BID	JLM	CDS	MGS	ELLETT AND GAYNOR
B	10/8/2024	ISSUE FOR BID	JLM	CDS	MGS	ELLETT AND GAYNOR
A	7/22/2024	ISSUE FOR REVIEW	JLM	CDS	WMJ	ELLETT AND GAYNOR

ELLETT & GAYNOR, LLC
PROFESSIONAL ENGINEERS TX #F-562
5706 S.W. 45TH AVE., AMARILLO, TX 79109-5284



GENERAL ARRANGEMENT

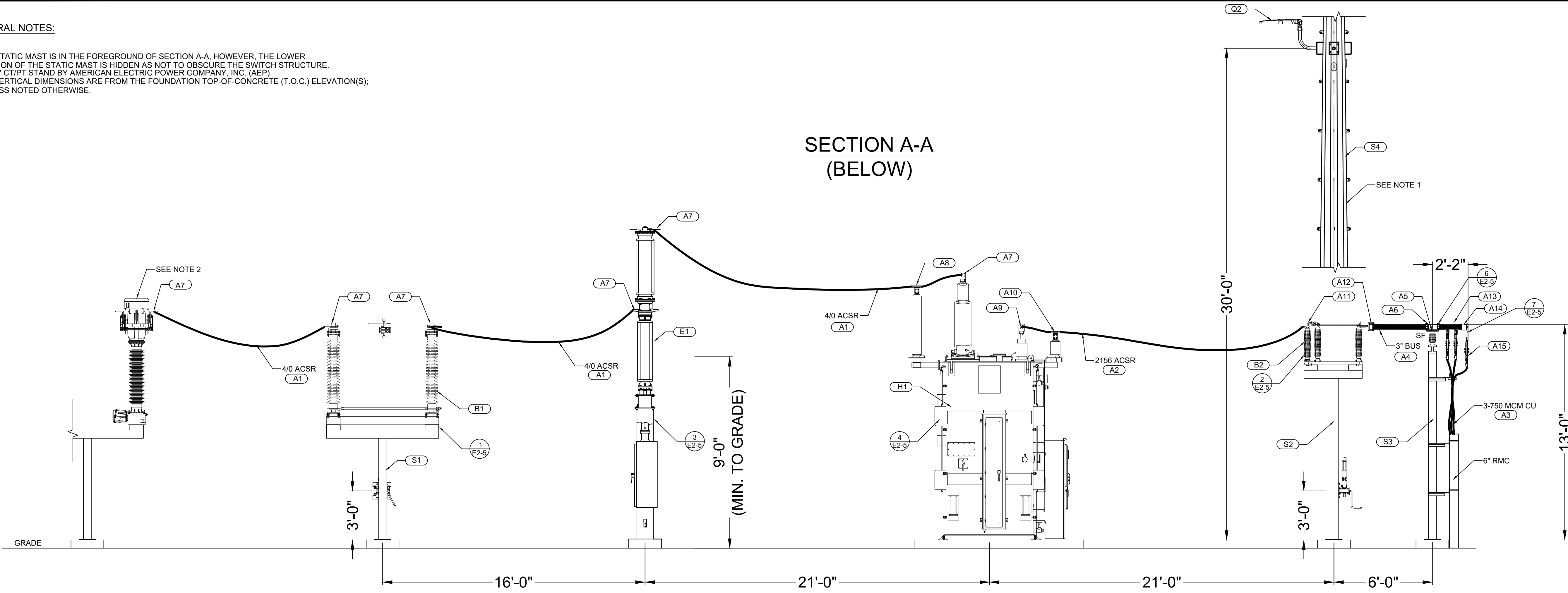
OCELOT SUBSTATION

DWG. NO.	REV. NO.
E2-2	C

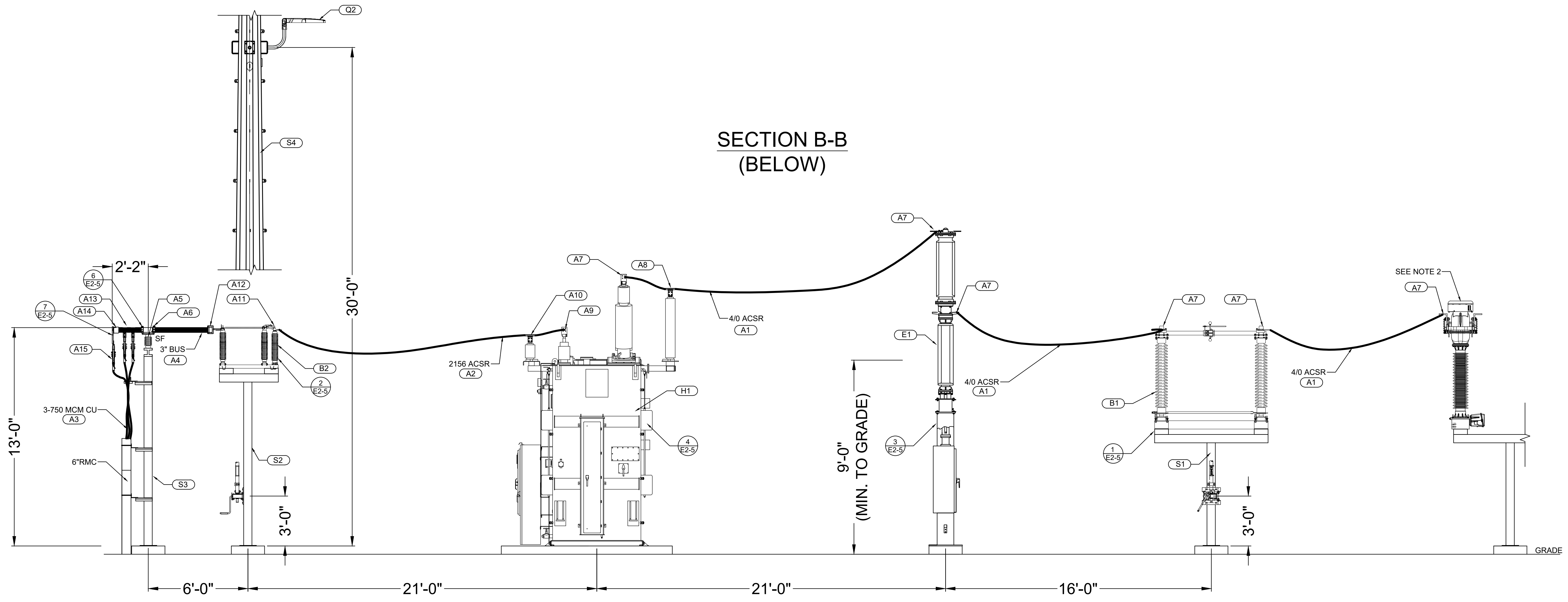
GENERAL NOTES:

1. THE STATIC MAST IS IN THE FOREGROUND OF SECTION A-A, HOWEVER, THE LOWER SECTION OF THE STATIC MAST IS HIDDEN AS NOT TO OBSCURE THE SWITCH STRUCTURE.
2. 138KV CT/PT STAND BY AMERICAN ELECTRIC POWER COMPANY, INC. (AEP).
3. ALL VERTICAL DIMENSIONS ARE FROM THE FOUNDATION TOP-OF-CONCRETE (T.O.C.) ELEVATION(S); UNLESS NOTED OTHERWISE.

SECTION A-A
(BELOW)



SECTION B-B
(BELOW)



FOR BID
PURPOSES
ONLY

NO.	DATE	REVISION	DRAFTER	ENGINEER	CHECKED	ENGINEERING FIRM
C	10/25/2024	ISSUE FOR BID	JLM	CDS	MGJ	ELLETT AND GAYNOR
B	10/08/2024	ISSUE FOR BID	JLM	CDS	MGJ	ELLETT AND GAYNOR
A	9/11/2024	ISSUE FOR REVIEW	JLM	CDS	WMJ	ELLETT AND GAYNOR

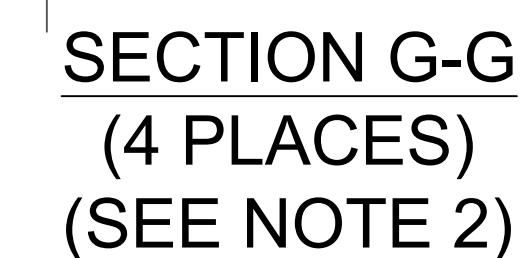
ELLETT & GAYNOR, LLC
PROFESSIONAL ENGINEERS TX #F-562
5706 S.W. 45TH AVE., AMARILLO, TX 79109-5284



ELEVATION
SECTIONS A-A & B-B
OCELOT SUBSTATION

DWG. NO.	REV. NO.
E2-3	C

1. PROVIDE INTERNAL J-HOOKS, OR OTHER CABLE STRAIN SUPPORTS, ADJACENT TO ALL HAND HOLES AND EQUIPMENT MOUNTS (EXCLUDING HAND HOLES AT BASE OF COLUMNS).
2. POLE MANUFACTURER AND ERECTION CONTRACTOR TO COORDINATE WITH THE ENGINEER TO LOCATE THE LIGHT, CAMERA, & JUNCTION BOX MOUNTS.
3. SEE GENERAL ARRANGEMENT DRAWING (E2-2) FOR LOCATION OF SECURITY LIGHTS (Q01) AND MAINTENANCE LIGHTS (Q02).



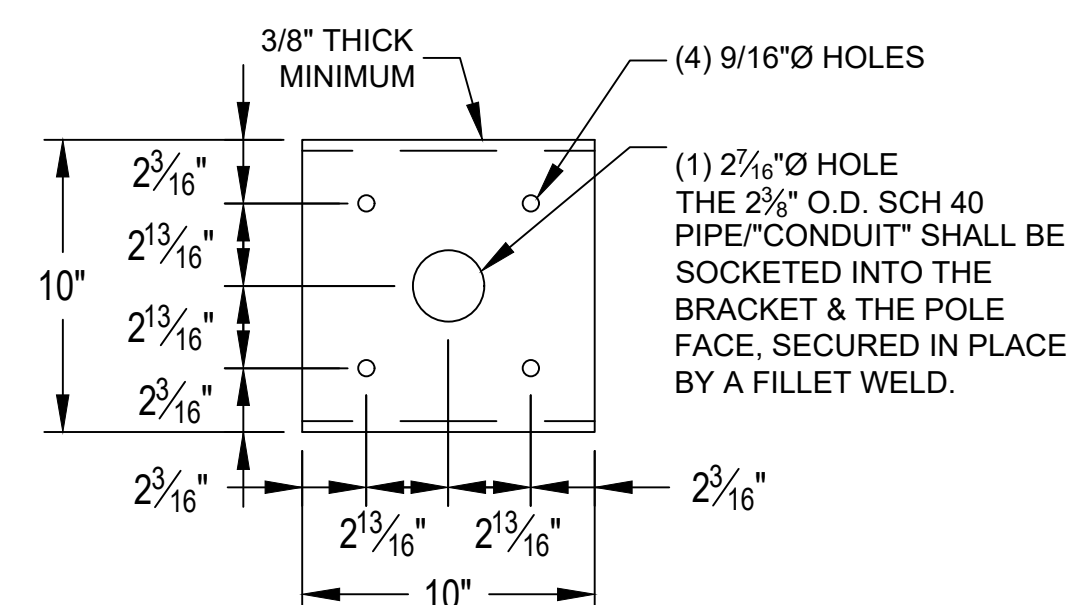
0'-5"

3/8" THICK MINIMUM

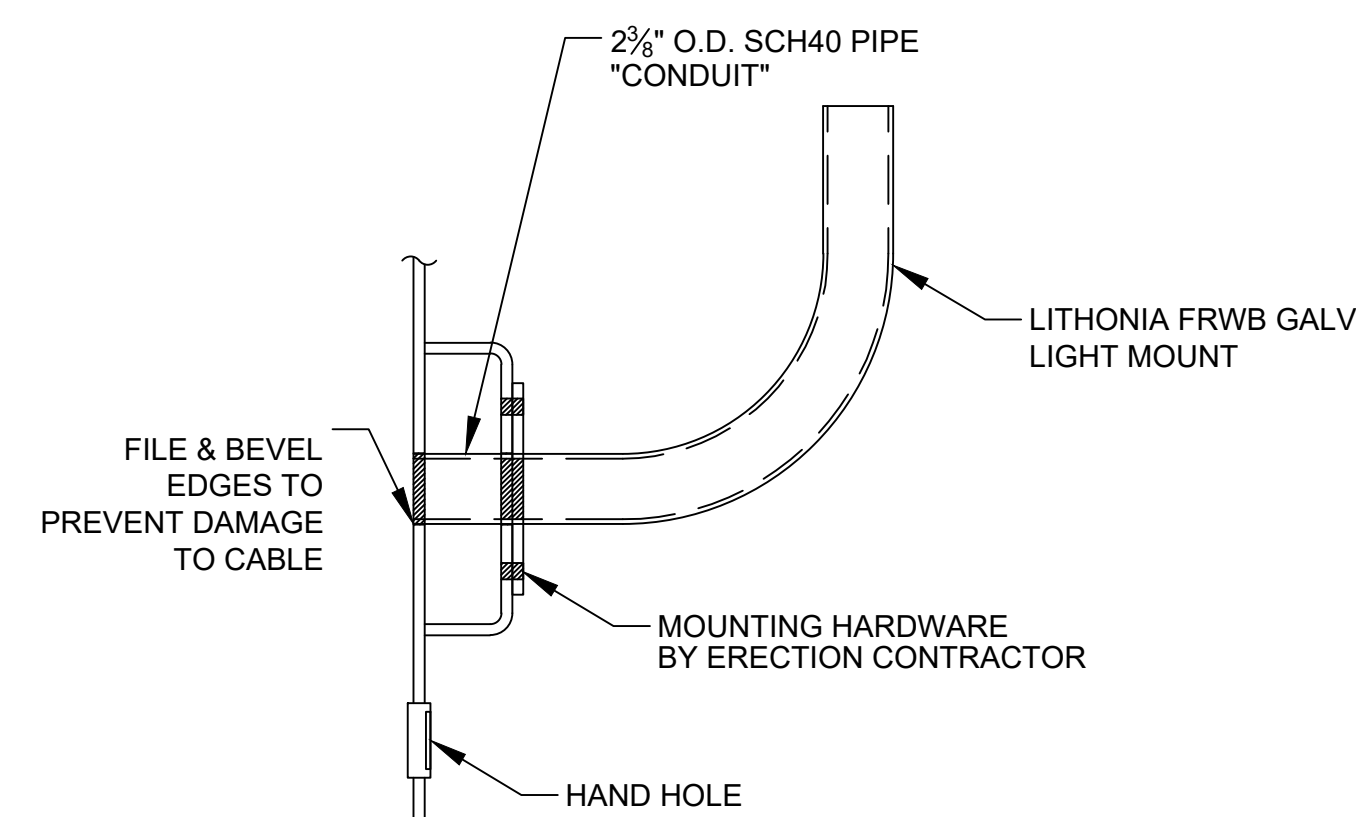
1'-0" (50)

DETAIL "A"

LIGHTING JUNCTION BOX MOUNT
(FIELD DRILL MOUNTING HOLES)



DETAIL "B"
LIGHTING MOUNT DETAIL
(4 FACES OF POLE)



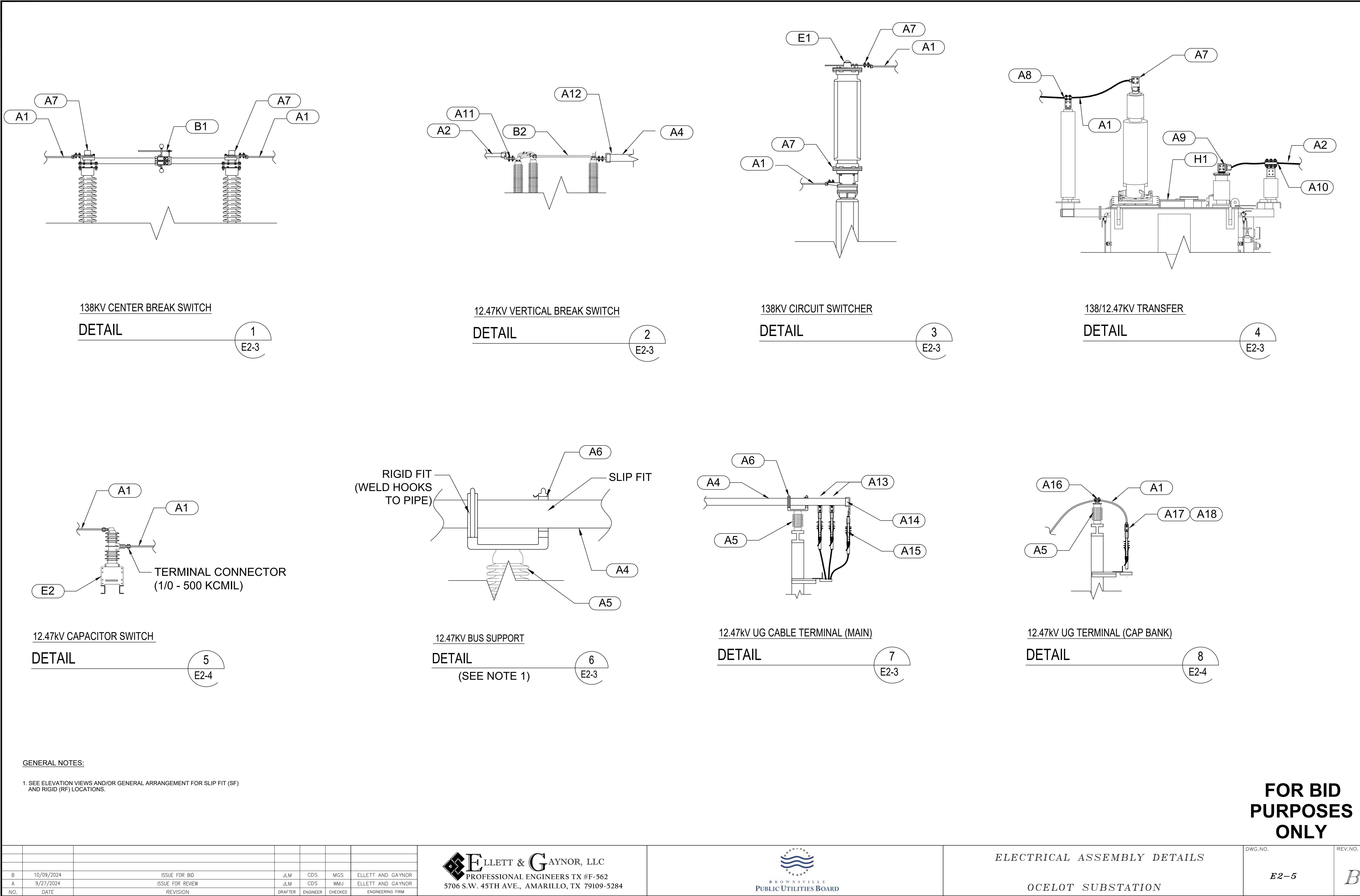
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A	9/27/2024	ISSUE FOR REVIEW	JLM	CDS	WMJ	ELLETT AND GAYNOR
NO.	DATE	REVISION	DRAFTER	ENGINEER	CHECKED	ENGINEERING FIRM

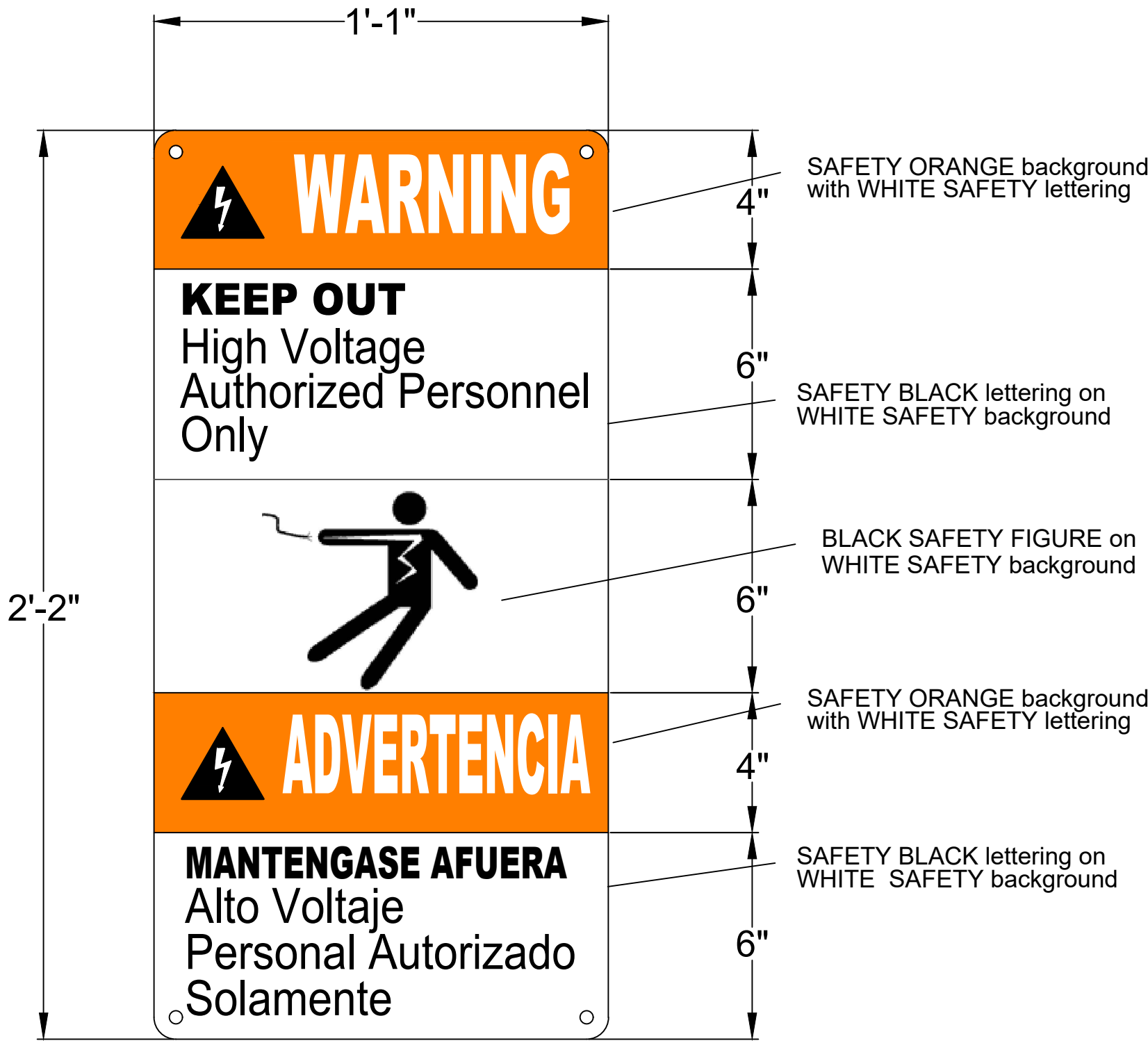
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5706 S.W. 45TH AVE., AMARILLO, TX 79109-5284



ELEVATION
SECTIONS C-C, D-D, E-E, F-F & G-G
OCELOT SUBSTATION

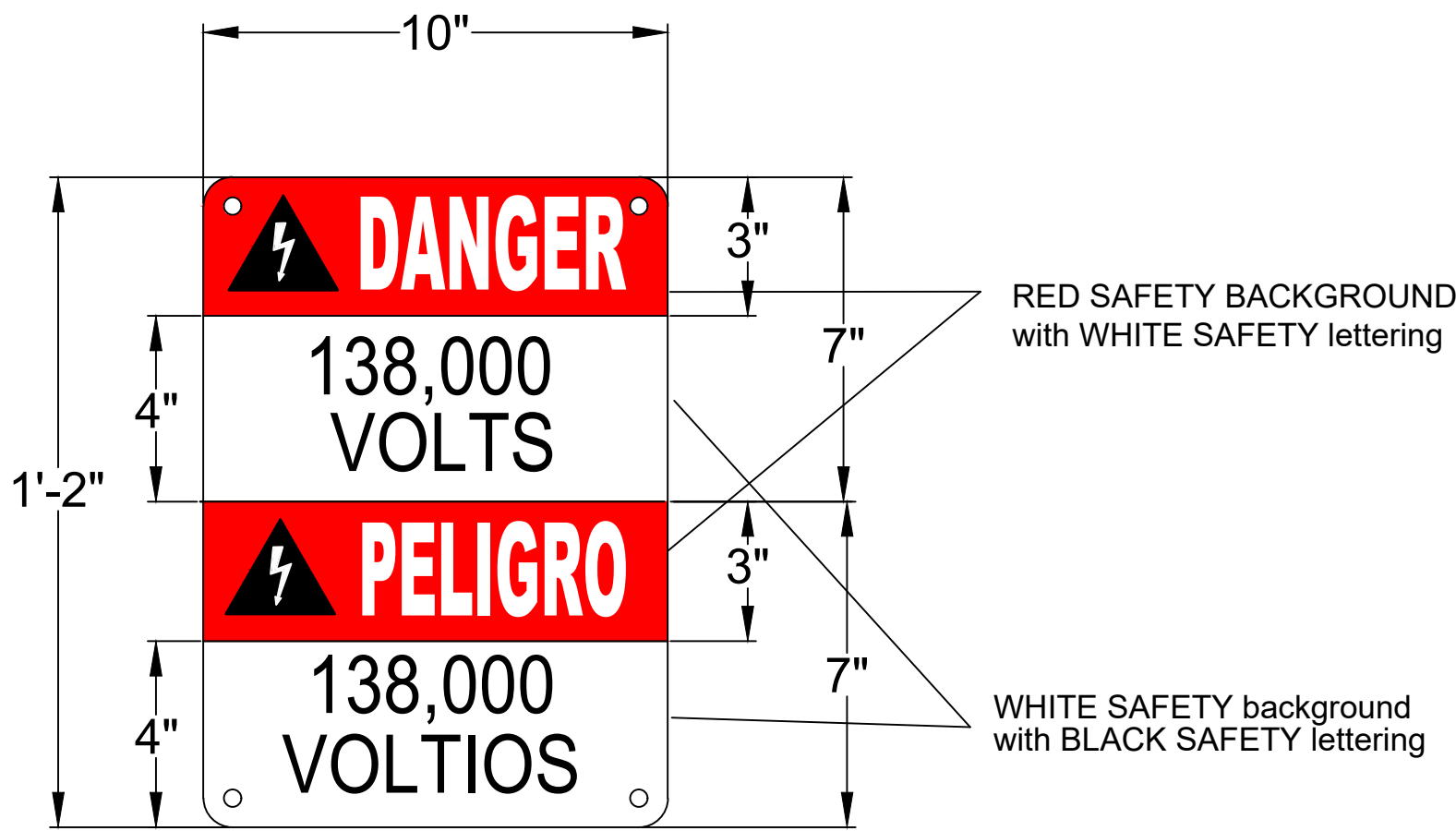
DWG.NO.	REV.NO.
<i>E2-4</i>	<i>B</i>



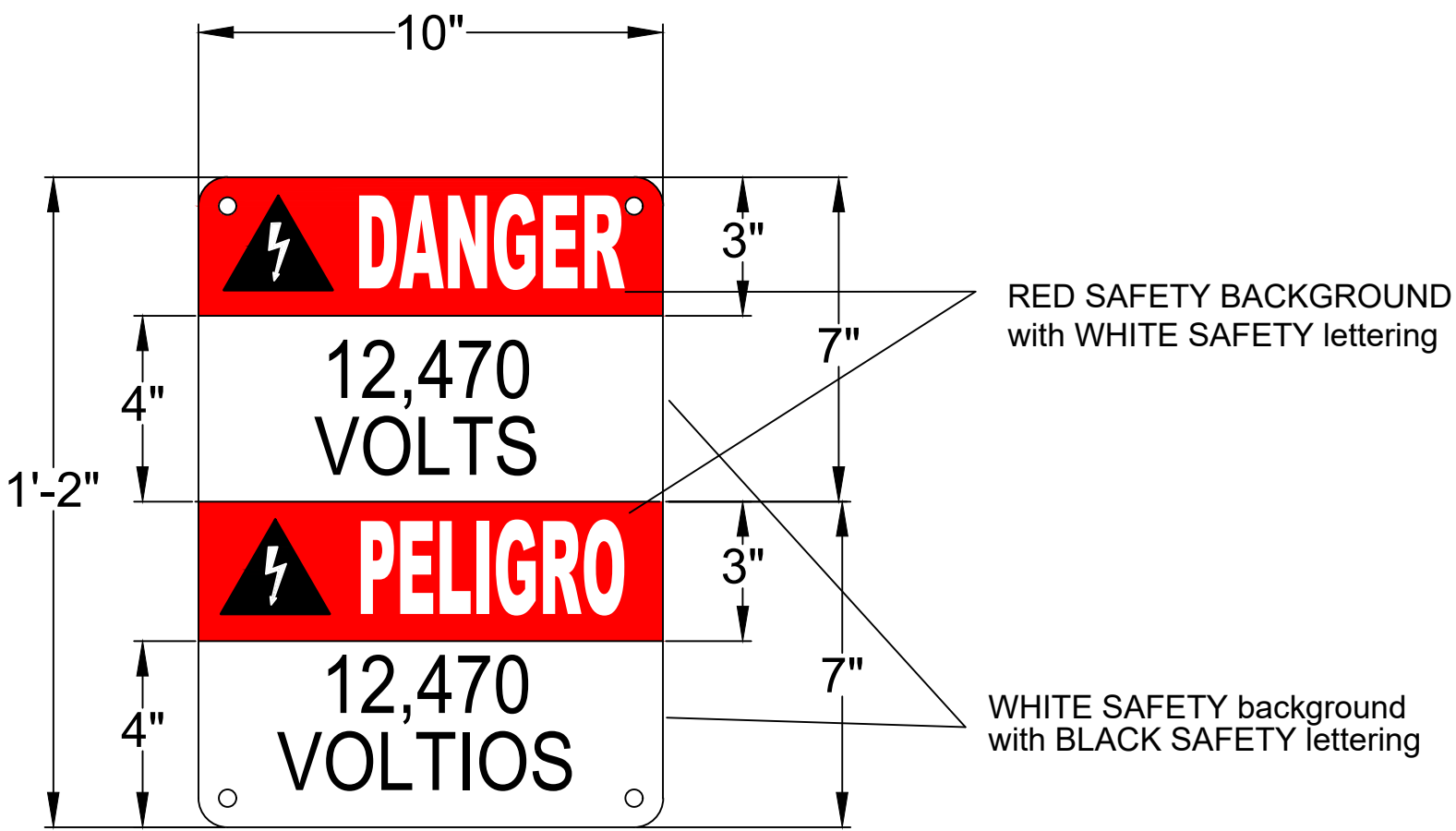


33 Required

EXTERNAL FENCE SIGNS



4 Required



4 Required

INTERNAL EQUIPMENT SIGNS

FOR BID
PURPOSES
ONLY

B	12/16/2024	ISSUE FOR BID	JLM	CDS	MGS	ELLETT AND GAYNOR
A	7/15/2024	ISSUE FOR REVIEW	JLM	CDS	WMJ	ELLETT AND GAYNOR
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SAFETY SIGNS

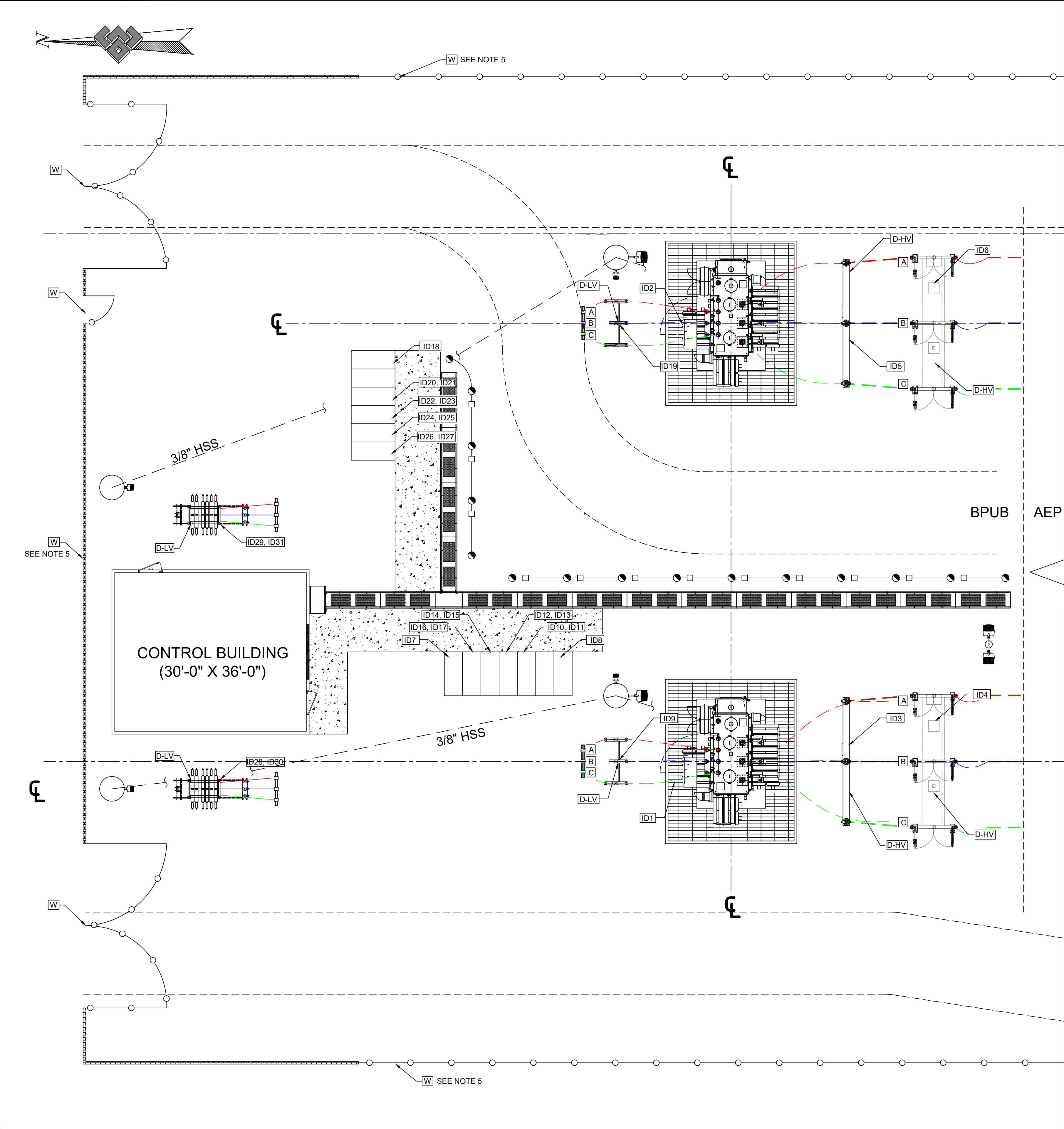
OCELOT SUBSTATION

DWG.NO.

E2-6

REV.NO.

B



GENERAL NOTES:

- 1. ALL PLATE HOLDERS & PHASE PLATES SHALL BE MOUNTED TO ENCLOSURES OR STEEL MEMBERS VIA TWO (2)SELF TAPPING SCREWS, ADHESIVES ARE NOT PERMITTED.
- 2. EQUIPMENT WITH ENCLOSURES SHALL HAVE THEIR PLATE HOLDERS INSTALLED ON THE ENCLOSURE DOOR.
- 3. SWITCHES SHALL HAVE THEIR PLATE HOLDERS INSTALLED ON THE STEEL MEMBER NEXT TO THE SWITCH HANDLE.
- 4. PHASE MARKERS SHALL BE INSTALLED ON THE STEEL MEMBERS BELOW THE SWITCH PHASE INSULATOR.
- 5. INSTALL WARNING SIGNS ON EVERY GATE AND EVERY 50' ALONG THE FENCE PERIMETER.

Item	Plate Holder Characters	Holder Length	Mount Style	Mount Location
ID1	T1	2	Horizontal	T1 Enclosure Door
ID2	T2	2	Horizontal	T2 Enclosure Door
ID3	C220	4	Horizontal	Circuit Switcher Enclosure Door
ID4	C225	4	Vertical	Column; Above Switch Handle
ID5	C230	4	Horizontal	Circuit Switcher Enclosure Door
ID6	C235	4	Vertical	Column; Above Switch Handle
ID7	C5000	5	Horizontal	Circuit Breaker Enclosure Door
ID8	C5100	5	Horizontal	Circuit Breaker Enclosure Door
ID9	C5105	5	Vertical	Column; Above Switch Handle
ID10	C5110	5	Horizontal	Circuit Breaker Enclosure Door
ID11	C5111	5	Horizontal	MOS Enclosure Door
ID12	C5120	5	Horizontal	Circuit Breaker Enclosure Door
ID13	C5121	5	Horizontal	MOS Enclosure Door
ID14	C5130	5	Horizontal	Circuit Breaker Enclosure Door
ID15	C5131	5	Horizontal	MOS Enclosure Door
ID16	C5140	5	Horizontal	Circuit Breaker Enclosure Door
ID17	C5141	5	Horizontal	MOS Enclosure Door
ID18	C5200	5	Horizontal	Circuit Breaker Enclosure Door
ID19	C5205	5	Vertical	Column; Above Switch Handle
ID20	C5210	5	Horizontal	Circuit Breaker Enclosure Door
ID21	C5211	5	Horizontal	MOS Enclosure Door
ID22	C5220	5	Horizontal	Circuit Breaker Enclosure Door
ID23	C5221	5	Horizontal	MOS Enclosure Door
ID24	C5230	5	Horizontal	Circuit Breaker Enclosure Door
ID25	C5231	5	Horizontal	MOS Enclosure Door
ID26	C5240	5	Horizontal	Circuit Breaker Enclosure Door
ID27	C5241	5	Horizontal	MOS Enclosure Door
ID28	CAP#1	5	Horizontal	Capacitor Bank Enclosure Door
ID29	CAP#2	5	Horizontal	Capacitor Bank Enclosure Door
ID30	C5143	5	Horizontal	Capacitor Bank Enclosure Door
ID31	C5243	5	Horizontal	Capacitor Bank Enclosure Door
D-HV	SEE DWG E2-6	NA	None	High Voltage Switch Columns & Circuit Switcher Column
D-LV	SEE DWG E2-6	NA	None	Low Voltage Switch Columns & Cap Bank Support Structure
W	SEE DWG E2-6	NA	None	Gates and Fence
A	A	NA	None	High & Low Voltage Switch
B	B	NA	None	High & Low Voltage Switch
C	C	NA	None	High & Low Voltage Switch

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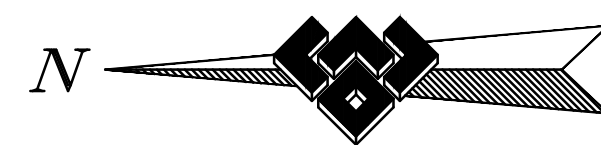


SIGNAGE LAYOUT

OCELOT SUBSTATION

FOR BID
PURPOSES
ONLY

DWG.NO.	REV.NO.
E2-7	B



LEGEND

- | | |
|---|------------------|
|  | 4/0 CU |
|  | #2 CU |
|  | GROUND PLATFORM |
|  | GROUND ROD |
|  | GROUND CONNECTOR |

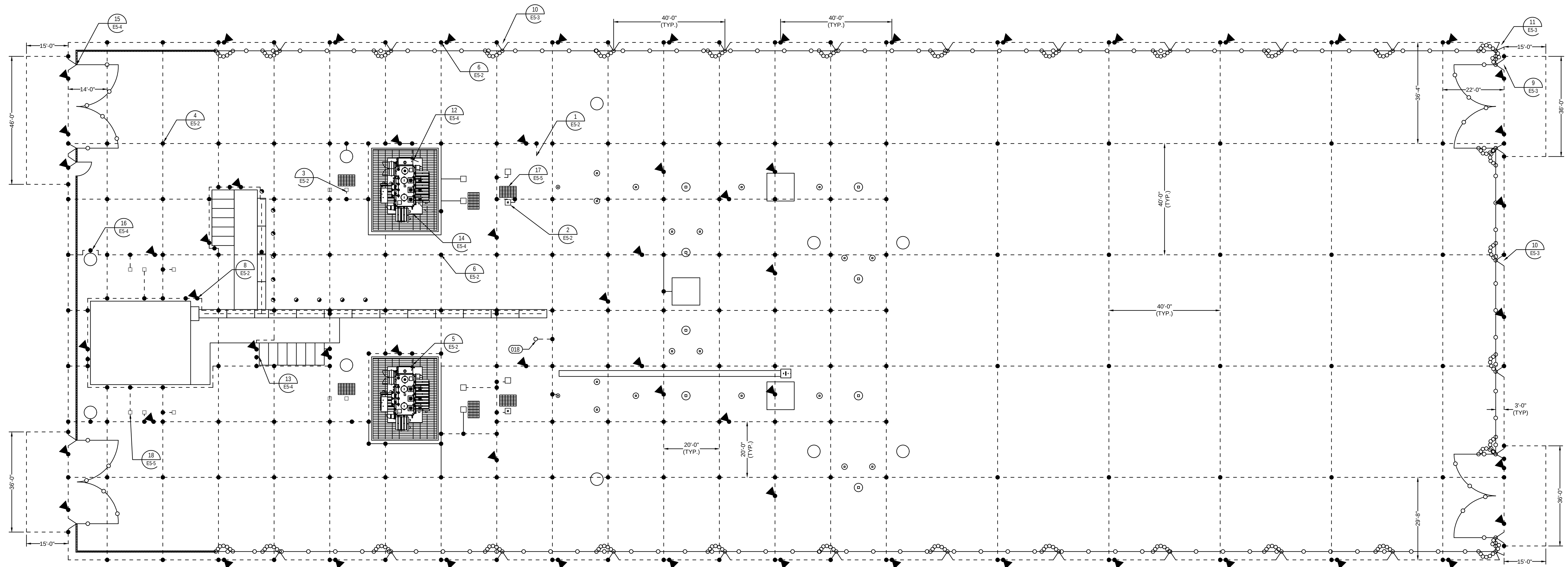
GENERAL NOTES:

1. WIRE QUANTITIES ARE BASED ON A GRID BURIED 18" BELOW GRADE
2. THERE SHALL BE TWO GROUND CONNECTIONS TO ALL ACTIVE ELEMENTS (TRANSFORMERS, P.T.'S, C.T.'S, BREAKERS, REGULATORS, AND CIRCUIT BREAKER.)
3. EQUIPMENT FOUNDATIONS SHOWN ARE APPROXIMATE AND DO NOT REFLECT THE FINAL DESIGN.
4. A BARE 4/0 COPPER SHALL BE RAN THE ENTIRE LENGTH OF CABLE TRENCH AND BONDED TO THE GROUND GRID EVERY 60 FEET.
5. ESTIMATED LENGTH OF 40 CU ONLY INCLUDES BELOW GRADE HORIZONTAL RUNS TO BE PROVIDED BY THE ERECTION CONTRACTOR. ABOVE GRADE 4/0 CU TO BE PROVIDED BY THE MATERIAL CONTRACTOR AND AEP.
6. AEP SHALL PROVIDE THE DESIGN AND MATERIALS FOR THEIR STRUCTURE AND EQUIPMENT CONNECTIONS, ABOVE GRADE COPPER (CU), OPERATOR GROUND PLATFORMS, TAILS/"STINGERS", AND BELOW GRADE TAP CONNECTIONS FOR ALL EQUIPMENT AND STRUCTURES SOUTH OF THE DEMARCATION LINE SHOWN ON THE GENERAL ARRANGEMENT DRAWING (E2-2).

LIST OF MATERIALS

GROUND RODS	62
4/0 CU (ESTIMATED)	8,640'
GROUND PLATFORM	6

(SEE NOTE 5)



**FOR BID
PURPOSES
ONLY**

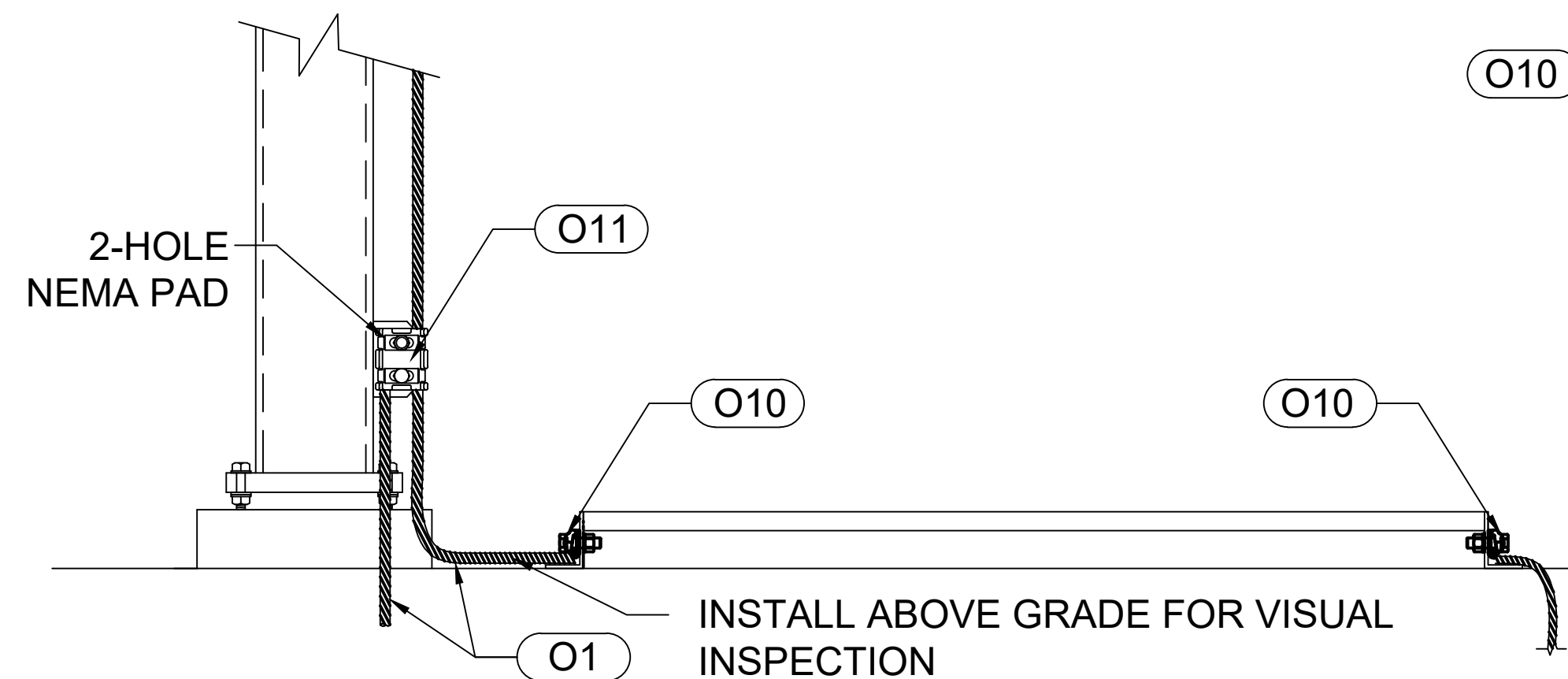
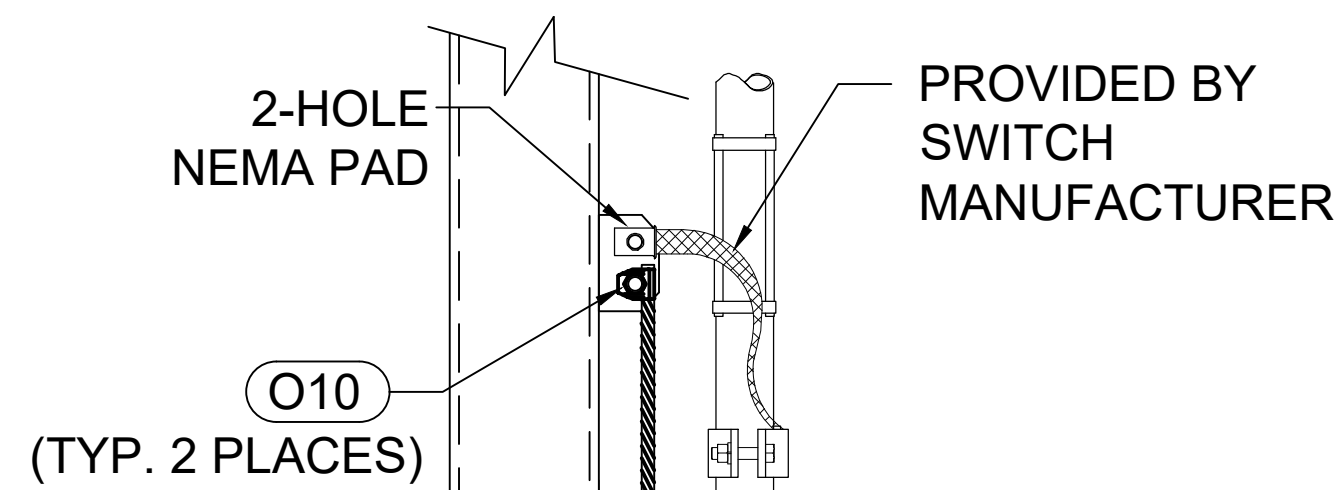
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GROUND GRID

OCELOT SUBSTATION

DWG.NO.	REV.NO.
<i>E5-1</i>	<i>B</i>



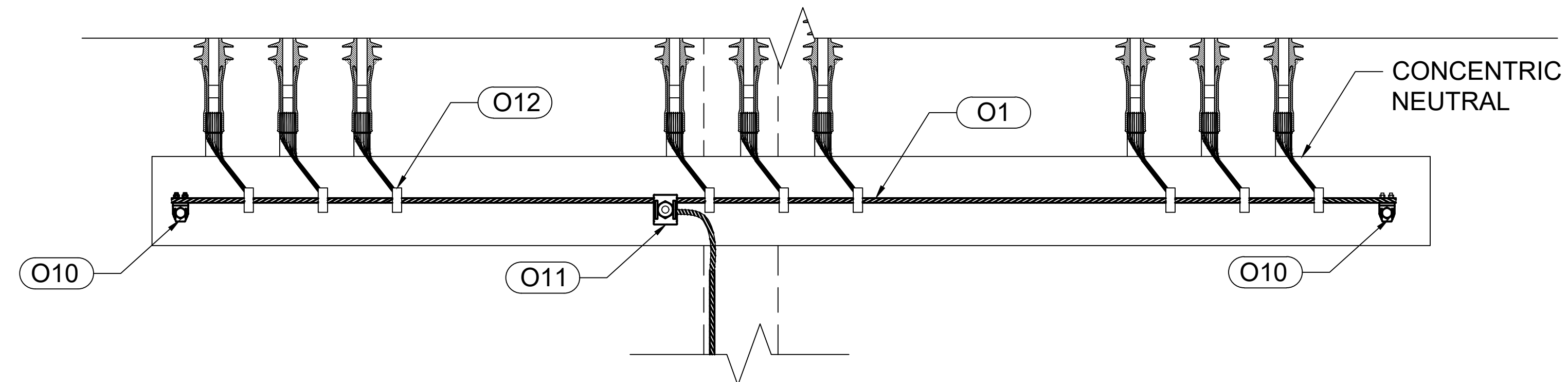
SWITCH OPERATOR PLATFORM & SWING HANDLE

DETAIL

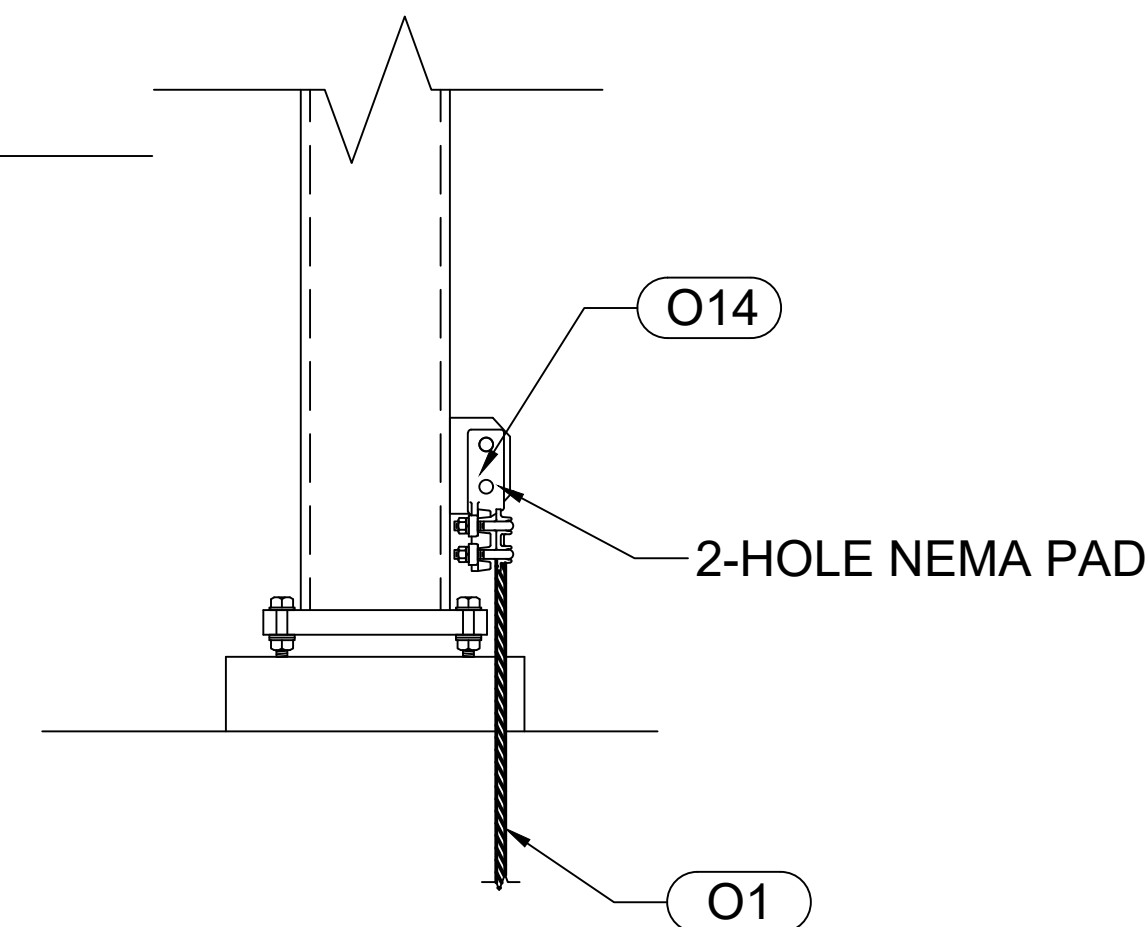
(6 PLACES)

1

E5-1



DETAIL A



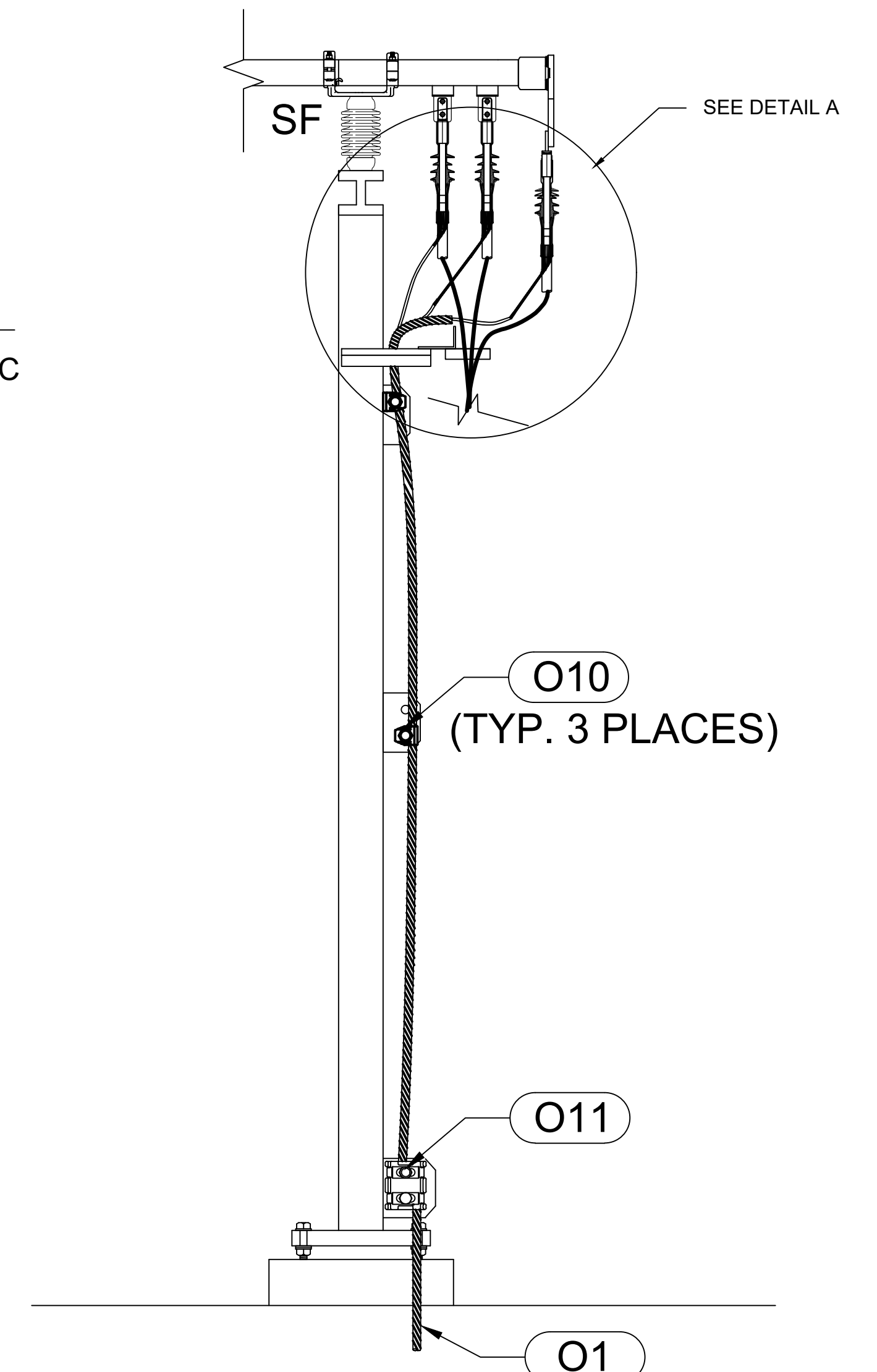
STRUCTURE LEG-SINGLE GROUND

DETAIL

(AS NEEDED)

2

E5-1



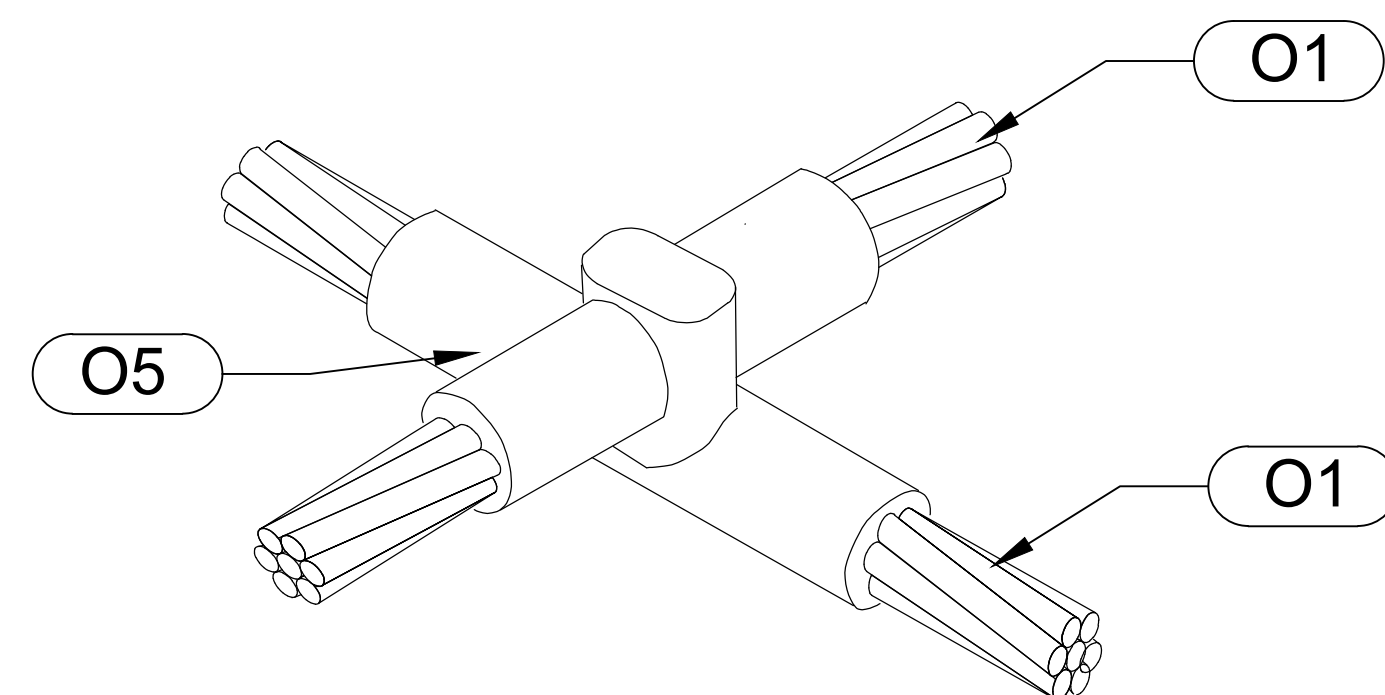
STRUCTURE RISER POLE

DETAIL

(2 PLACES)

3

E5-1

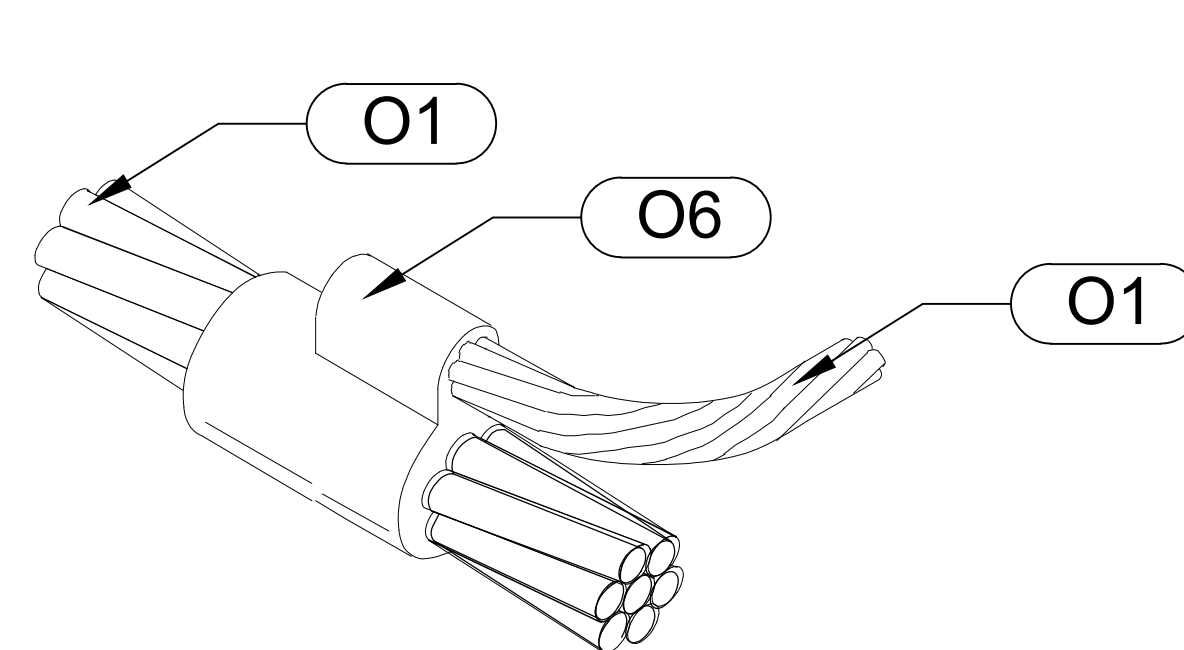


4/0 AWG Cu TO 4/0 AWG Cu CROSS

DETAIL

4

E5-1



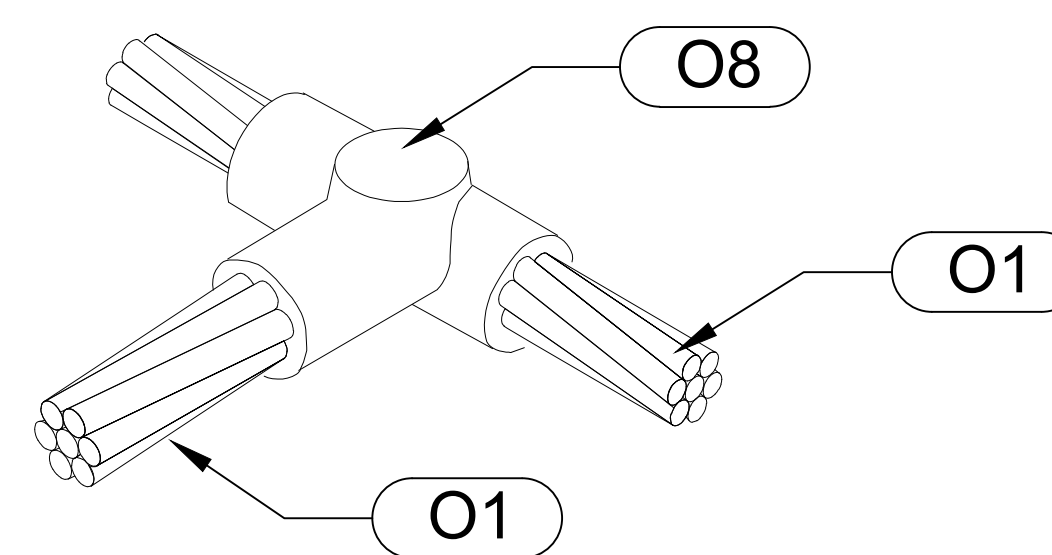
4/0 AWG Cu TO 4/0 AWG Cu TAP

DETAIL

(USE AT EQUIPMENT TAPS)

5

E5-1



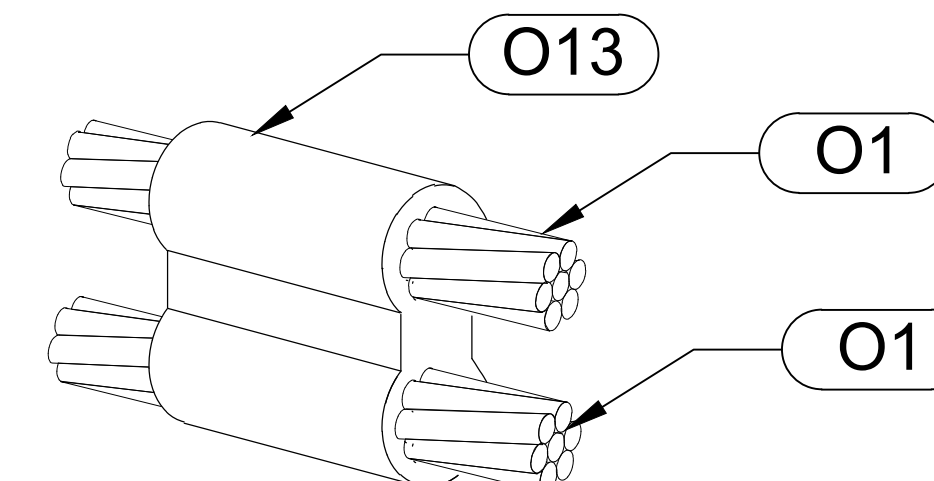
4/0 AWG Cu TO 4/0 AWG Cu TEE

DETAIL

(USE AT GROUND GRID TEES)

6

E5-1

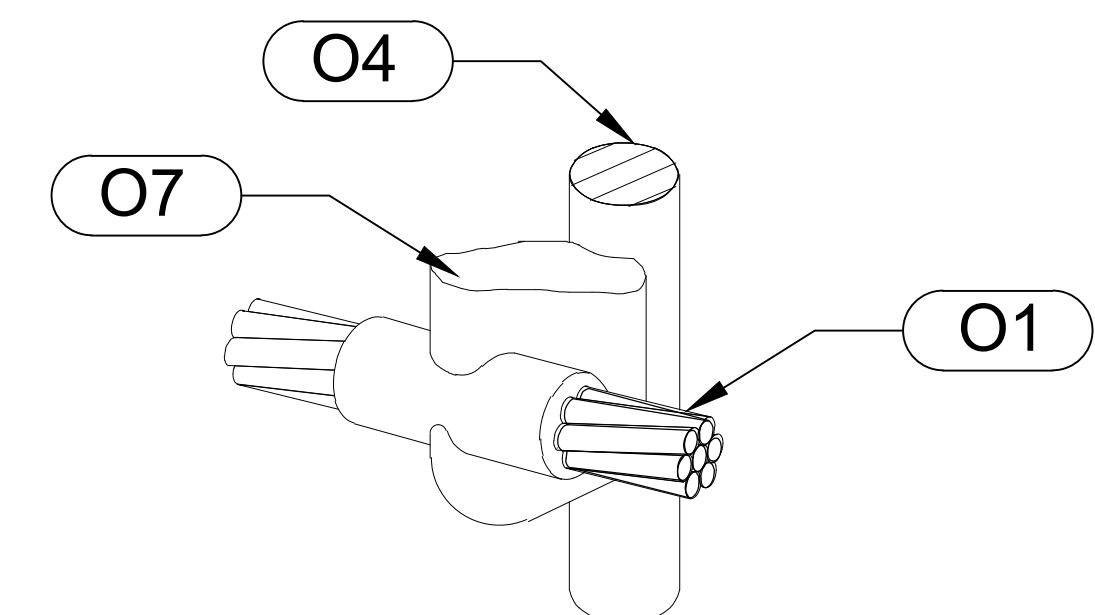


MISC 4/0 AWG Cu TO 4/0 AWG Cu TAP/CROSS

DETAIL

7

E5-1



4/0 AWG Cu TO GROUND ROD TAP

DETAIL

8

E5-1

FOR BID
PURPOSES
ONLY

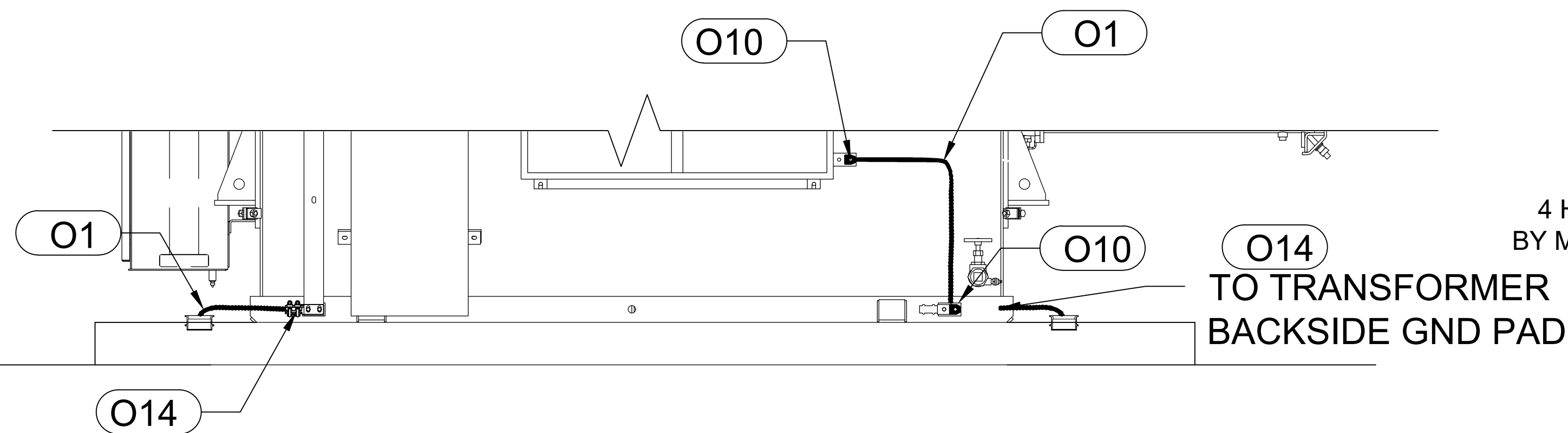
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GROUNDING DETAILS
SHEET 1 OF 4
OCELOT SUBSTATION

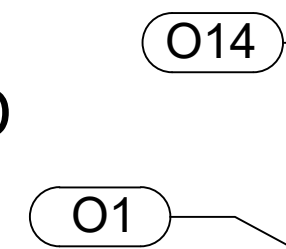
DWG. NO.	REV. NO.
E5-2	B



TRANSFORMER GROUNDING
DETAIL

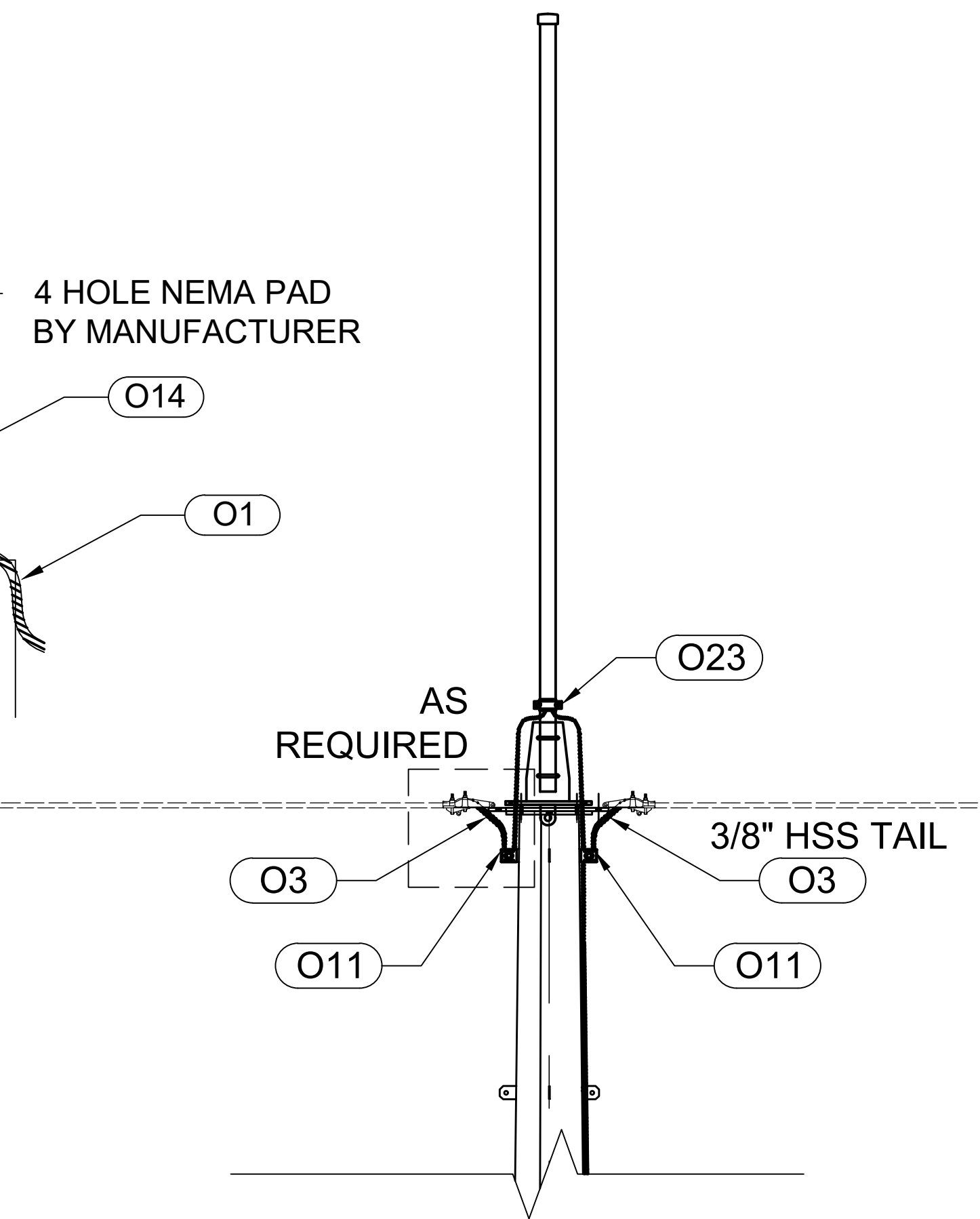
12
E5-1

4 HOLE NEMA PAD
BY MANUFACTURER



CONTROL HOUSE/SWITCHGEAR GROUNDING
DETAIL

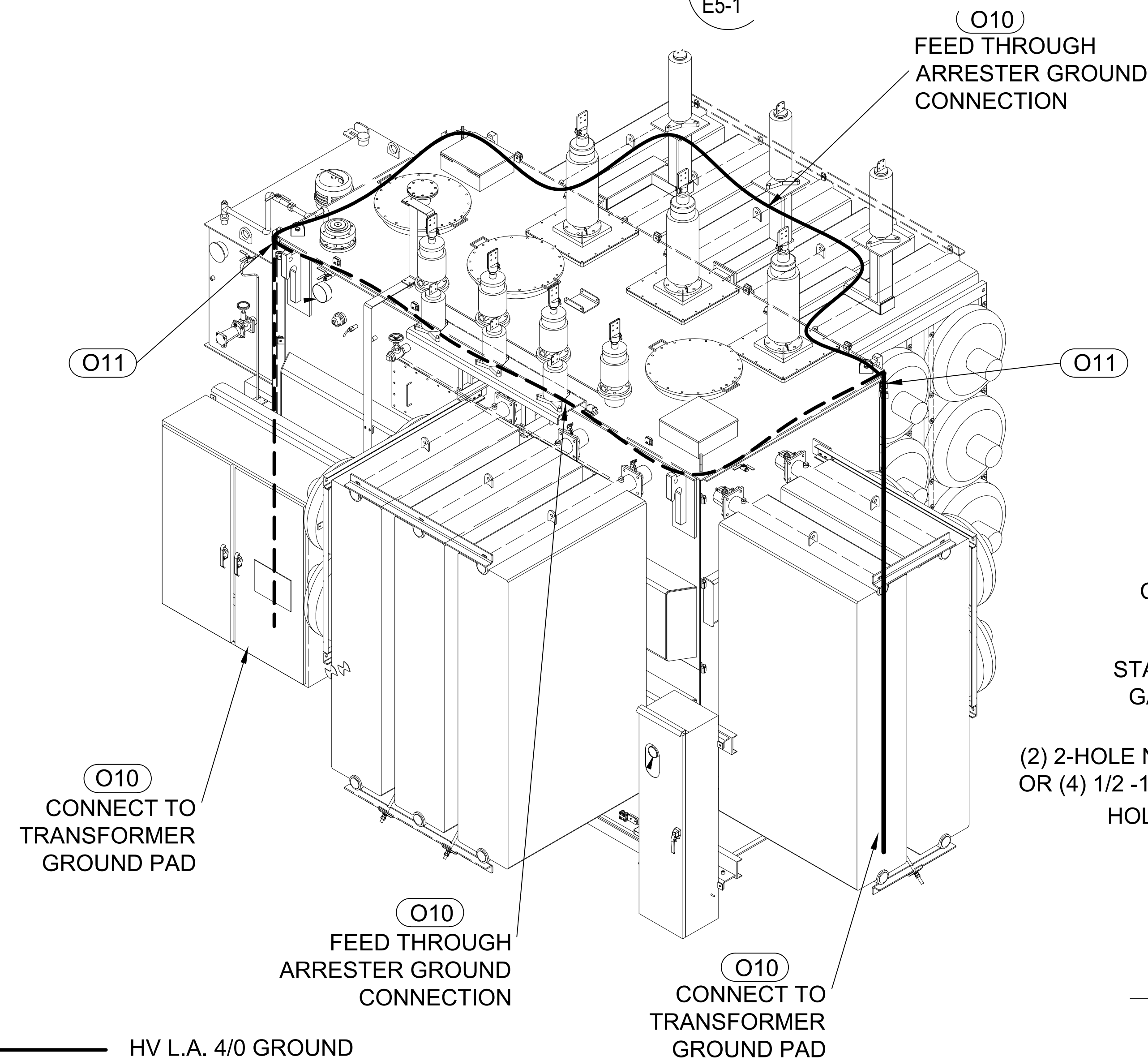
13
E5-1



STATIC MAST GROUND

DETAIL

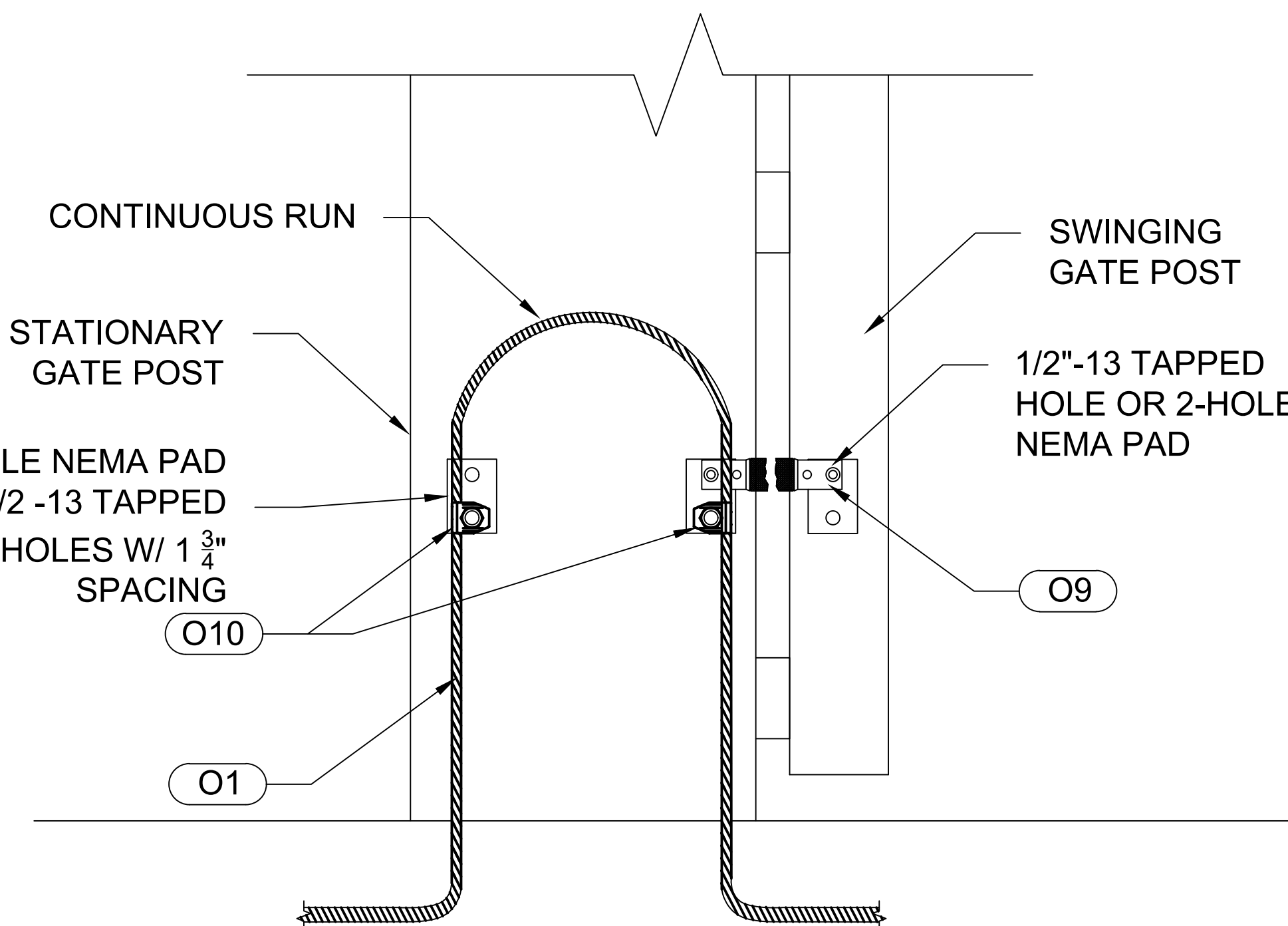
16
E5-1



TYPICAL TRANSFORMER LIGHTING ARRESTER GROUNDING

DETAIL

14
E5-1



SQUARE TUBULAR FENCE POST GROUND

DETAIL

15
E5-1

—— HV L.A. 4/0 GROUND
- - - - LV L.A. 4/0 GROUND

**FOR BID
PURPOSES
ONLY**

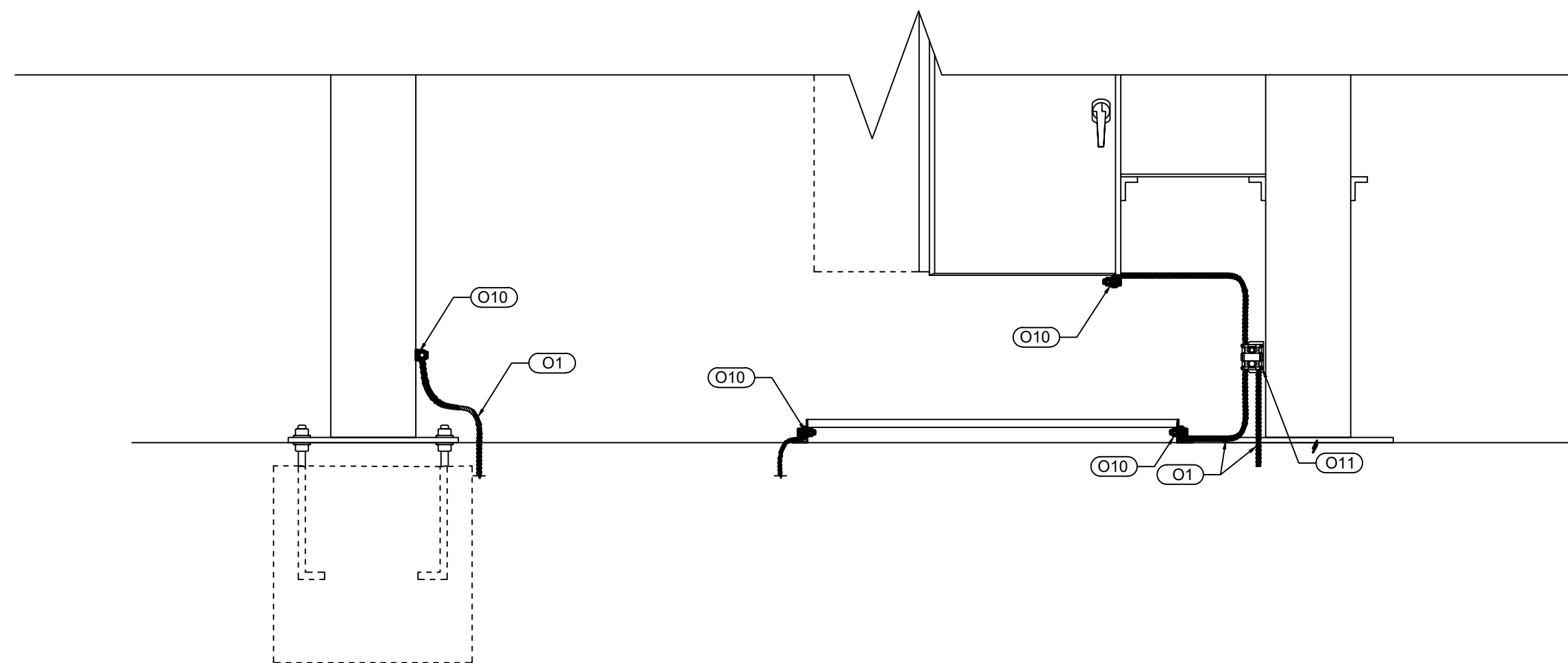
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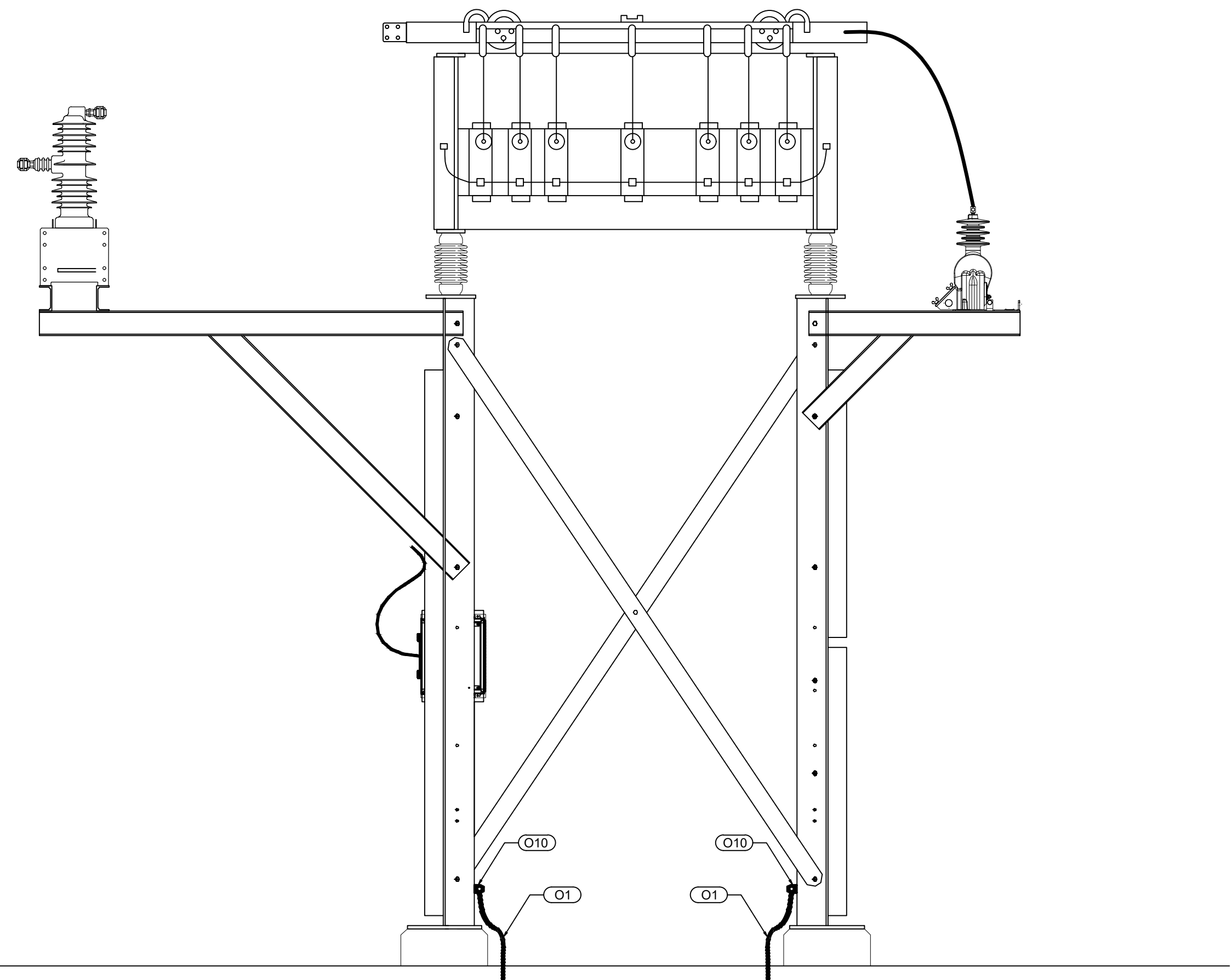
GROUNDING DETAILS
SHEET 3 OF 4
OCELOT SUBSTATION

DWG. NO.	REV. NO.
E5-4	B



TYPICAL CIRCUIT SWITCHER GROUNDING
DETAIL

17
E5-1



CAPACITOR BANK GROUNDING
DETAIL

18
E5-1

**FOR BID
PURPOSES
ONLY**

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GROUNDING DETAILS
SHEET 4 OF 4
OCELOT SUBSTATION

DWG. NO.	REV. NO.
E5-5	B