

DRAWING INDEX

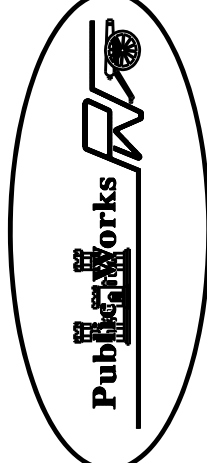
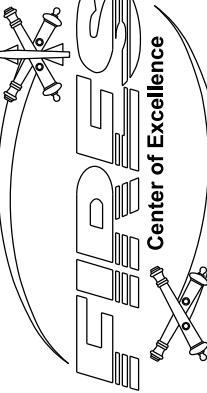
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DPW - BLDG. 1950

MICC - BLDG. 1803

PROJECT LOCATION,
BLDG. 2434

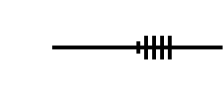
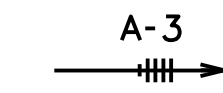
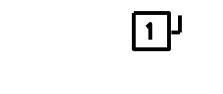

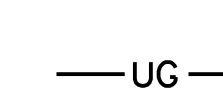
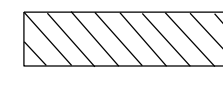
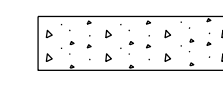

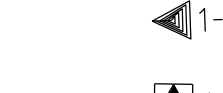
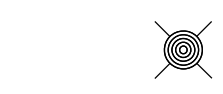




**MAP OF
U. S. ARMY
FIRES CENTER OF EXCELLENCE
AND
FORT SILL**

PROJECT NO HS00518-31	DATE SEP 2023	DRAWN BY G. Y.	DESIGNED BY G. Y.
	LOCATION MAP & DRAWING INDEX		
UGRADE ELECTRICAL SYSTEM, BUILDING 2434			
 DIRECTORATE OF PUBLIC WORKS FORT SILL, OKLAHOMA			
 FIRES Center of Excellence			
DRAWING NO 23016		BY CHIEF, ENGR DIV	
a		PPD	
REVISION		DATE	
CHECKED BY		PPD	

ELECTRICAL ABBREVIATIONS:

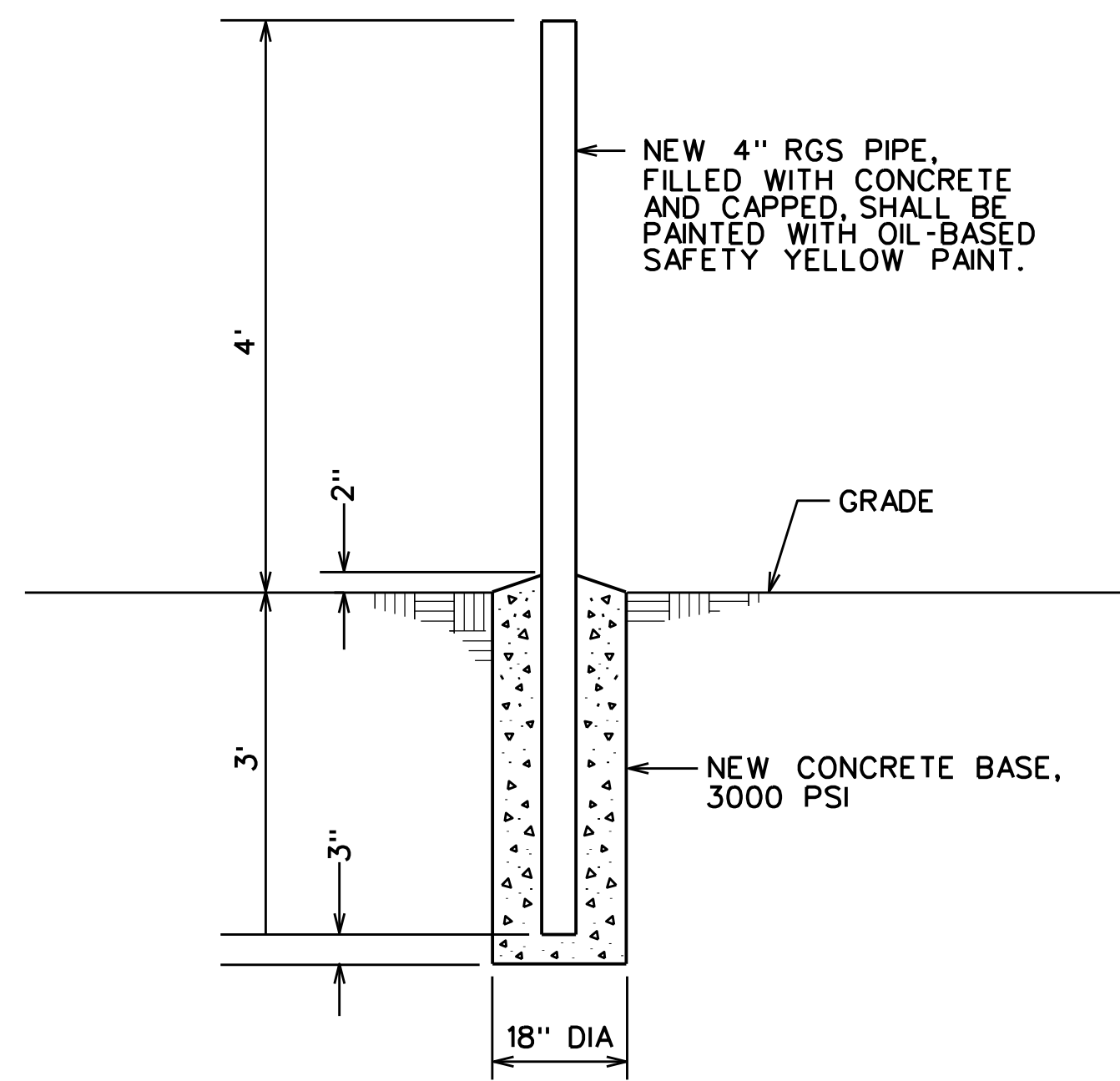
A.I.C.	AMPS INTERRUPTING CAPACITY
CT	CURRENT TRANSFORMER
EMT	ELECTRICAL METALLIC TUBING
G	GROUND
HCT	HOWITZER CREW TRAINER
N	NEUTRAL
∅	PHASE
RGS	RIGID GALVANIZED STEEL
RGSC	RIGID GALVANIZED STEEL CONDUIT
SCH	SCHEDULE
UG	UNDERGROUND
W	WEATHERPROOF

ELECTRICAL LEGEND:

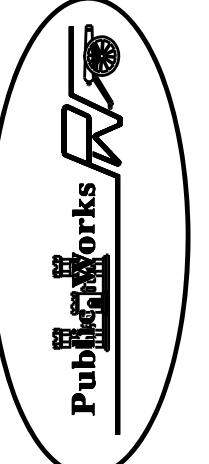
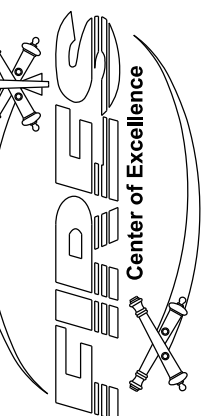
-  NEW WIRING, LONG CROSS MARKS INDICATE PHASE AND NEUTRAL, SHORT CROSS MARK INDICATES GROUND
 -  A-3 NEW HOMERUN CIRCUIT, CIRCUIT #3 WITH NEUTRAL AND A GROUND HOMERUN TO PANEL "A"
 -  NEW SAFETY SWITCH, NUMBER INDICATES THE SWITCH NUMBER IN THE "NEW SAFETY SWITCH SCHEDULE"
 -  NEW JUNCTION BOX
 -  NEW GROUND ROD, 3/4" X 10', COPPER CLAD.
 -  UG NEW UNDERGROUND CIRCUIT
 -  REMOVE AND REPLACE EXISTING ASPHALT. PROVIDE NEW ASPHALT AS REQUIRED.
 -  REMOVE AND REPLACE EXISTING CONCRETE. PROVIDE NEW CONCRETE AS REQUIRED.
 -  40-3 EXISTING WOOD POLE TO REMAIN. NUMBERS INDICATE LENGTH AND CLASS.
 -  1-37.5 EXISTING POLE MOUNTED TRANSFORMER TO REMAIN.
 -  1-500 EXISTING PAD MOUNTED TRANSFORMER TO REMAIN.
 -  EXISTING LIGHTING FIXTURE TO REMAIN.
 -  EXISTING SAFETY SWITCH TO REMAIN.
 -  EXISTING CONTROL PANEL TO REMAIN.
- D FOR DETAIL AND S FOR SECTION
 SHEET NUMBER WHERE SHOWN
 SHEET NUMBER WHERE TAKEN

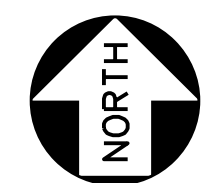
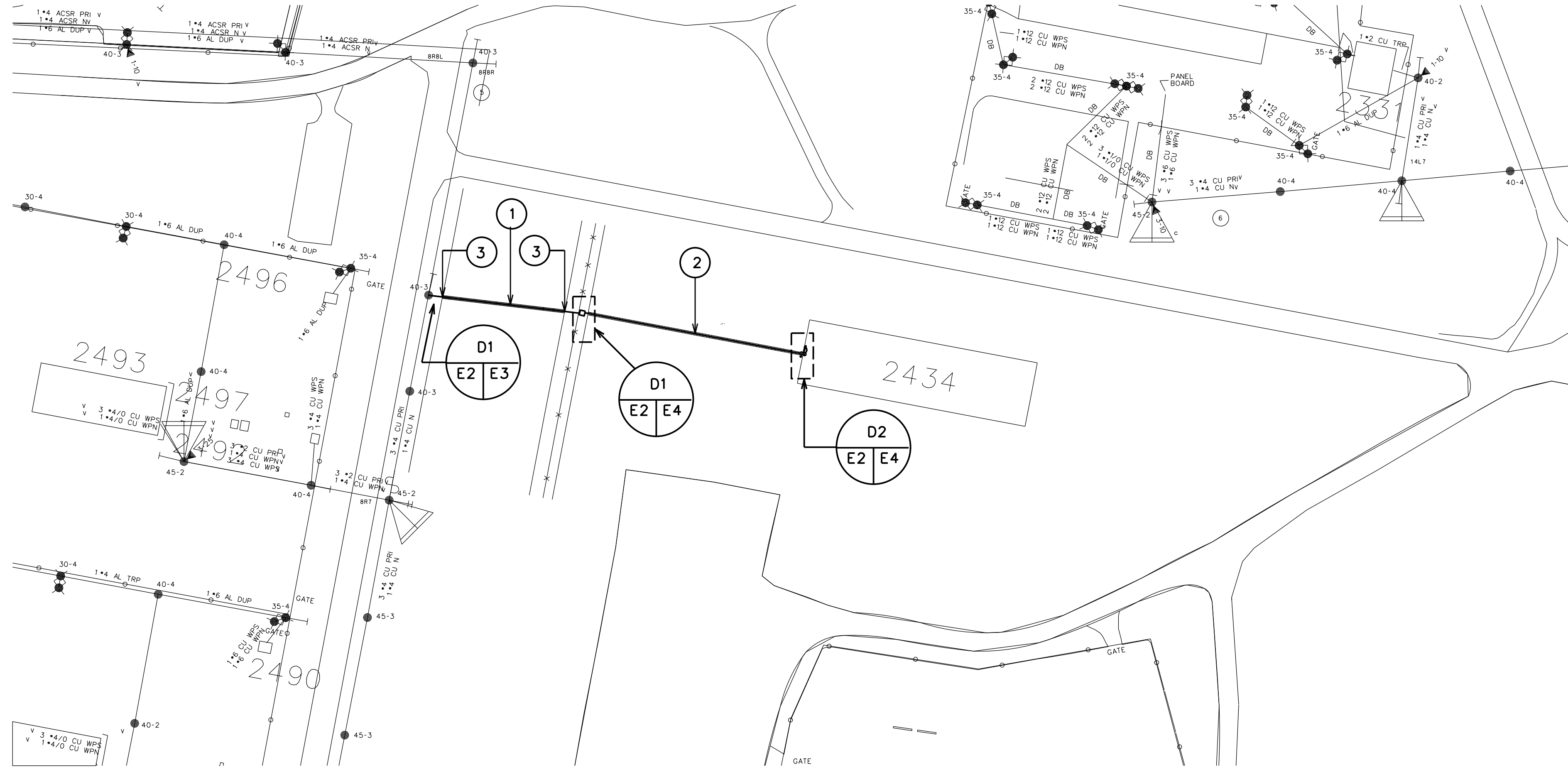
ELECTRICAL GENERAL NOTES:

1. THE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE NFPA 70 AND ANSI C2 UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED OR SHOWN.
2. THE DRAWINGS INDICATE THE GENERAL LOCATION AND ARRANGEMENT OF EQUIPMENT, CONDUITS AND WIRING. THE CONTRACTOR SHALL BECOME FAMILIAR WITH ALL DETAILS OF THE WORK AND VERIFY ALL DIMENSIONS IN THE FIELD SO THAT THE OUTLETS AND EQUIPMENT WILL BE PROPERLY LOCATED AND READILY ACCESSIBLE.
3. ALL UTILITIES AND ANY ITEMS DAMAGED BY CONSTRUCTION OPERATIONS SHALL BE RESTORED TO ITS ORIGINAL CONDITION BY WORKERS SKILLED IN THE TRADES INVOLVED, AT NO ADDITIONAL COST TO THE GOVERNMENT.
4. IF FLOORS OR WALLS ARE NECESSARY TO BE BORED FOR INSTALLING PIPES OR DUCTS, AND IF EXISTING ELECTRICAL ITEMS ARE IN THE WAY, CONTRACTOR SHALL RELOCATE EXISTING ELECTRICAL ITEMS AND SHALL PROVIDE NEW WIRING AS REQUIRED FOR INSTALLING THE RELOCATED ELECTRICAL ITEMS, AT NO ADDITIONAL COST TO THE GOVERNMENT.
5. IF FLOORS OR WALLS ARE NECESSARY TO BE BORED FOR INSTALLING PIPES OR DUCTS, AND IF EXISTING ELECTRICAL ITEMS ARE DAMAGED BY BORING, CONTRACTOR SHALL RESTORE THEM TO THEIR ORIGINAL CONDITION, AT NO ADDITIONAL COST TO THE GOVERNMENT.
6. CONTRACTOR SHALL PROVIDE TEMPORARY POWER AS REQUIRED TO KEEP THE FACILITIES IN OPERATION DURING THE CONSTRUCTION PERIOD.
7. CONTROL WIRING NOT SHOWN ON THE DRAWINGS SHALL BE PROVIDED.
8. AFTER REMOVING ELECTRICAL ITEMS, HOLES IN WALLS AND CEILINGS SHALL BE PATCHED. THE PATCHED AREAS SHALL BE PAINTED. THE COLOR OF PAINT SHALL MATCH THE COLOR OF ADJACENT SURFACE.
9. CONTRACTOR SHALL ARRANGE A WORK SCHEDULE WITH CONTRACTING OFFICER AND USER TWO WEEKS PRIOR TO STARTING ANY WORK.
10. CONTRACTOR SHALL VERIFY EXISTING CIRCUITS PRIOR TO REMOVING THE EXISTING CIRCUITS.
11. CONTRACTOR SHALL VISIT PROJECT SITE TO OBTAIN EXISTING ELECTRICAL DATA OF EXISTING ELECTRICAL EQUIPMENT.



NEW GUARD POST DETAIL
SCALE: NOT TO SCALE

	DIRECTORATE OF PUBLIC WORKS FORT SILL, OKLAHOMA				REVISION DATE CHECKED BY
UPGRADE ELECTRICAL SYSTEM, BUILDING 2434	ELECTRICAL : NOTES, LEGEND AND DETAIL	PROJECT NO KS00518-3J	DATE SEP 2023	DRAWN BY DESIGNED BY	G.Y. G.Y.
DRAWING NO 23016 E1					



NEW PARTIAL ELECTRICAL SITE PLAN

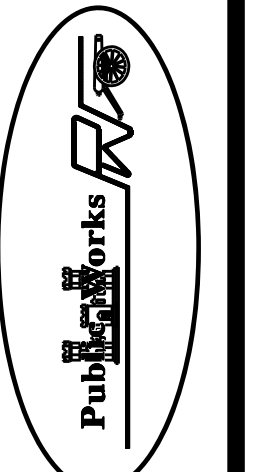


SCALE: 1" = 100'-0"

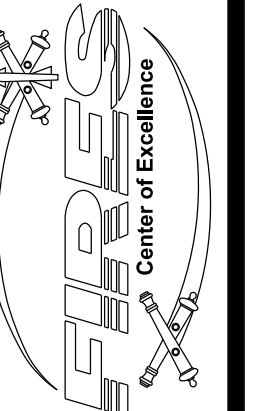
NOTES FOR THIS SHEET:

- ① NEW 3 *2 XLP, 15 kV, SHIELDED, AND 1*2 XLP-RHW-2, 600V GROUNDING CONDUCTOR IN CONCRETE ENCASED 4" SCHEDULE 40 PVC CONDUIT.
- ② NEW 2 RUNS OF 3 *400 kcmil RHW-2, 1*1/0 RHW-2 G EACH RUN INSTALLED IN CONCRETE ENCASED 4" SCH 40 PVC CONDUIT.
- ③ THE NEW 4" SCH 40 PVC CONDUIT SHALL BE BORED 30" UNDER THE EXISTING CONCRETE CURB.

REVISION	DATE	DESCRIPTION
CHECKED BY	DATE	DESCRIPTION
PPD		CHIEF ENGR DW

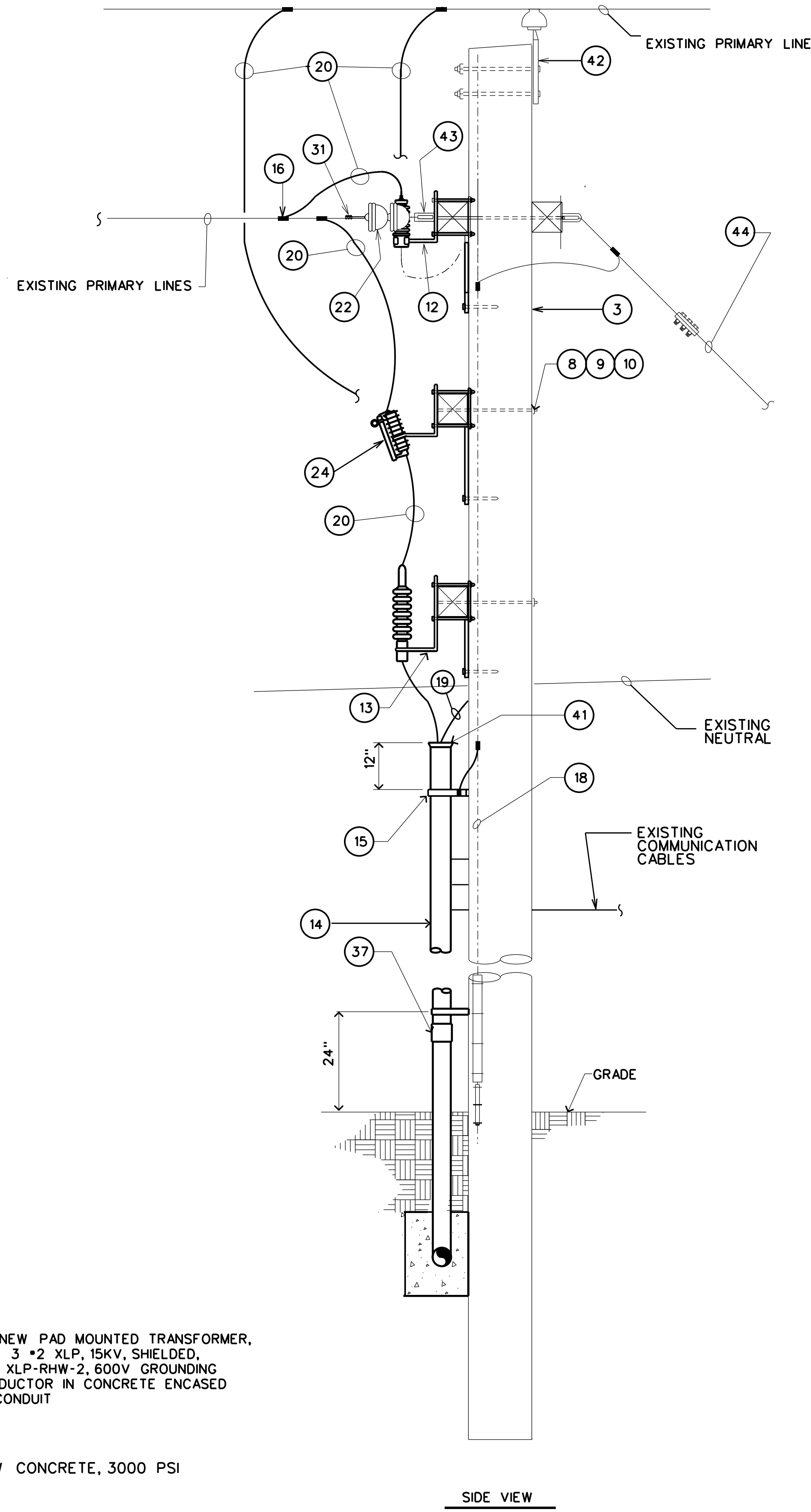
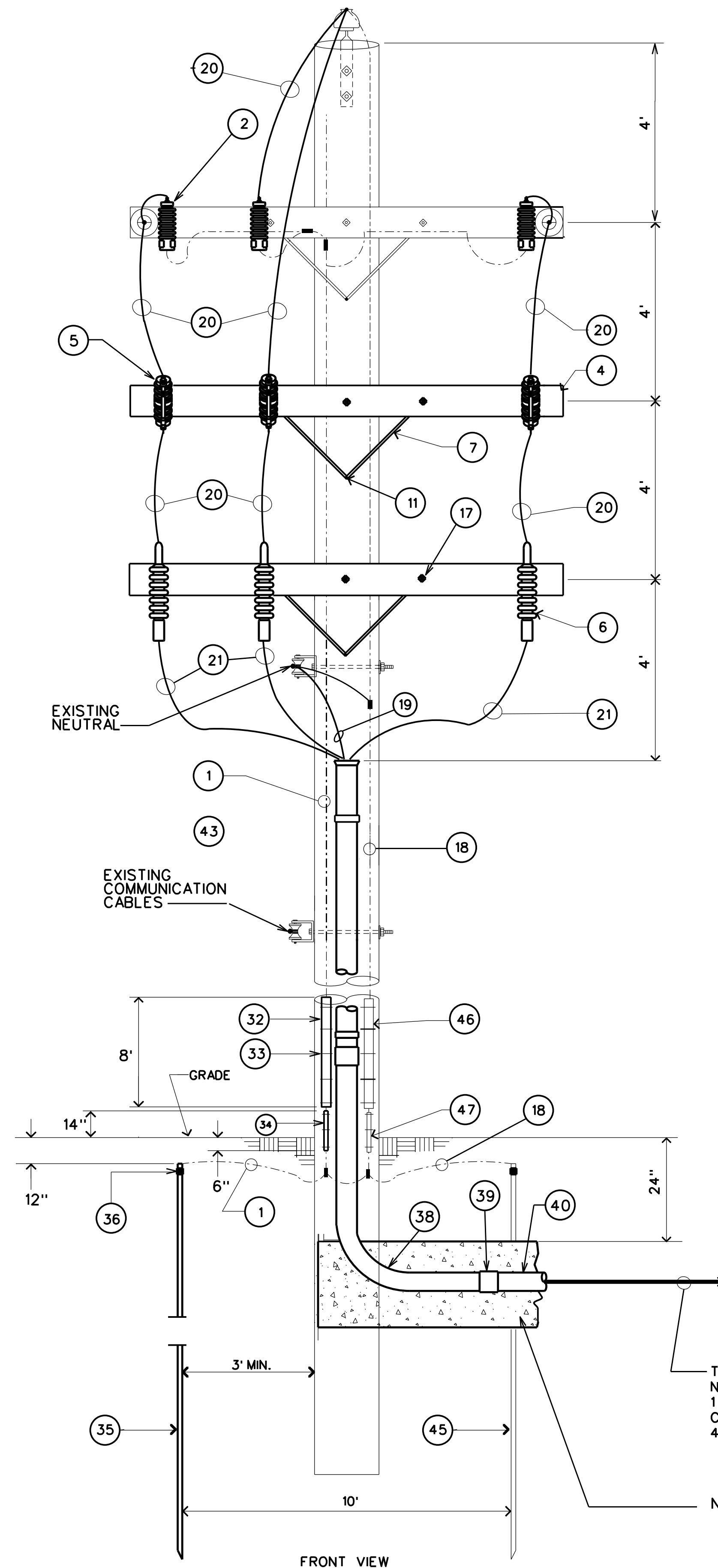


DIRECTORATE OF PUBLIC WORKS
FORT SILL, OKLAHOMA



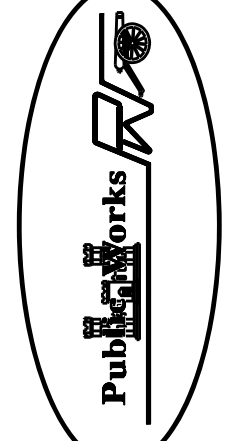
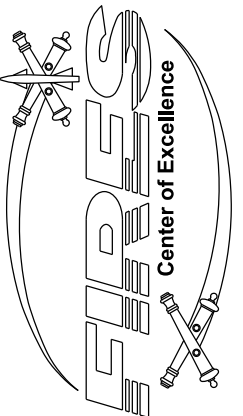
UPGRADE ELECTRICAL SYSTEM, BUILDING 2434	DESIGNED BY	G. Y.
ELECTRICAL : NOTES AND PLAN	DRAWN BY	G. Y.
PROJECT NO KS00518-3J	DATE	SEP 2023

DRAWING NO
23016
E2

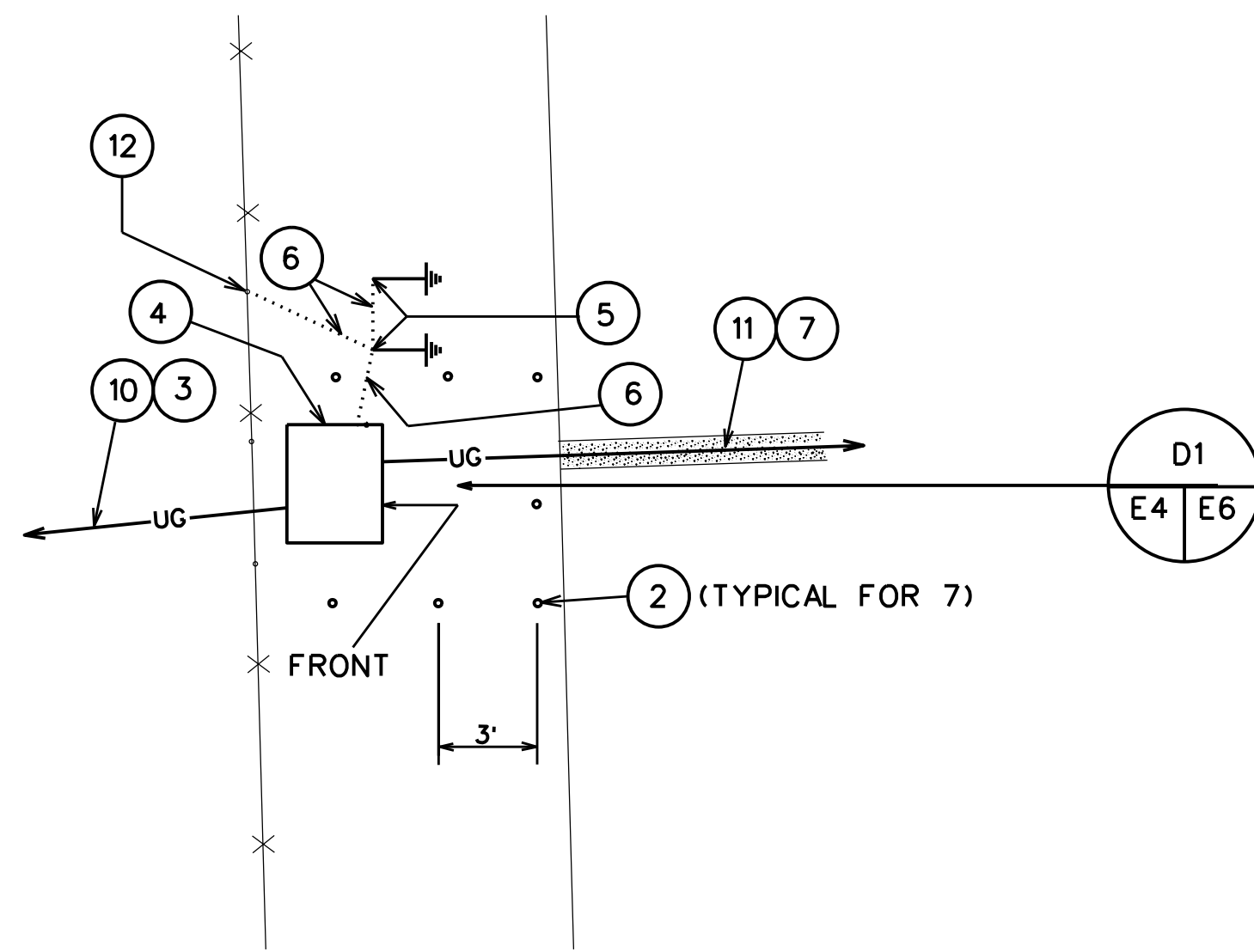


NEW MATERIAL SCHEDULE		
ITEM	QUANT.	DESCRIPTION
1	1	ARRESTER GROUND, #4 BARE COPPER
2	3	ARRESTER, 10KV
3	1	EXISTING WOOD POLE
4	2	WOOD CROSSARM, SINGLE, 3 5/8" x 4 5/8" x 8'
5	3	CUTOUT, 15KV, 100A
6	3	CABLE TERMINATOR, 15KV
7	4	STEEL CROSSARM BRACE, 1/4" x 1-1/4" x 28"
8	8	MACHINE BOLT, 5/8"
9	AS REQ'D.	CURVED SQUARE WASHER, 1-1/16" HOLE
10	AS REQ'D.	LOCKNUT, 3/8"
11	2	LAG SCREW, 1/2" x 4"
12	6	ARRESTER OR CUTOUT MOUNTING BRACKET
13	3	TERMINATOR MOUNTING BRACKET
14	1	RGS CONDUIT, 4"
15	AS REQ'D.	CONDUIT STANDOFF BRACKET, AT 5' INTERVALS
16	AS REQ'D.	CONNECTOR, COMPRESSION TYPE (TYPICAL)
17	4	3/8" CARRIAGE BOLT W/WASHER & LOCKNUT
18	1	EXISTING POLE GROUND, #4 BARE COPPER
19	1	#2 XLP-RHW-2, 600V GROUNDING CONDUCTOR
20	1	#4 BARE COPPER
21	1	#2 XLP, 15KV, SHIELDED
22	4	EXISTING DEADEND INSULATOR, 15KV
24	3	FUSE, 12A, SLOW SPEED TYPE
31	2	EXISTING DEADEND, 3 U-BOLT STRAIGHT
32	1	HALF ROUND PLASTIC MOLDING
33	AS REQ'D.	STAPLE, COPPERWELD, AT 12" INTERVALS
34	1	RGS CONDUIT, 1/2"
35	1	GROUND ROD, 3/4" x 10'
36	AS REQ'D.	EXOTHERMICALLY WELDED CONNECTION
37	AS REQ'D.	RGS COUPLING, 4"
38	1	RGS 90 DEGREE ELBOW, PLASTIC COATED
39	1	RGS TO PVC ADAPTER
40	1	SCHEDULE 40 PVC CONDUIT, 4"
41	1	4" BUSHING & SEAL
42	1	EXISTING POLE TOP PIN
43	2	EXISTING EYELET, 5/8"
44	1	EXISTING 3/8" EHS DOWN GUY
45	1	EXISTING GROUND ROD, 3/4" x 10'
46	1	EXISTING HALF ROUND PLASTIC MOLDING
47	1	EXISTING RGS CONDUIT, 1/2"

D1
E2 E3
RISER POLE DETAIL
SCALE: NOT TO SCALE


DIRECTORATE OF PUBLIC WORKS
 FORT SILL, OKLAHOMA


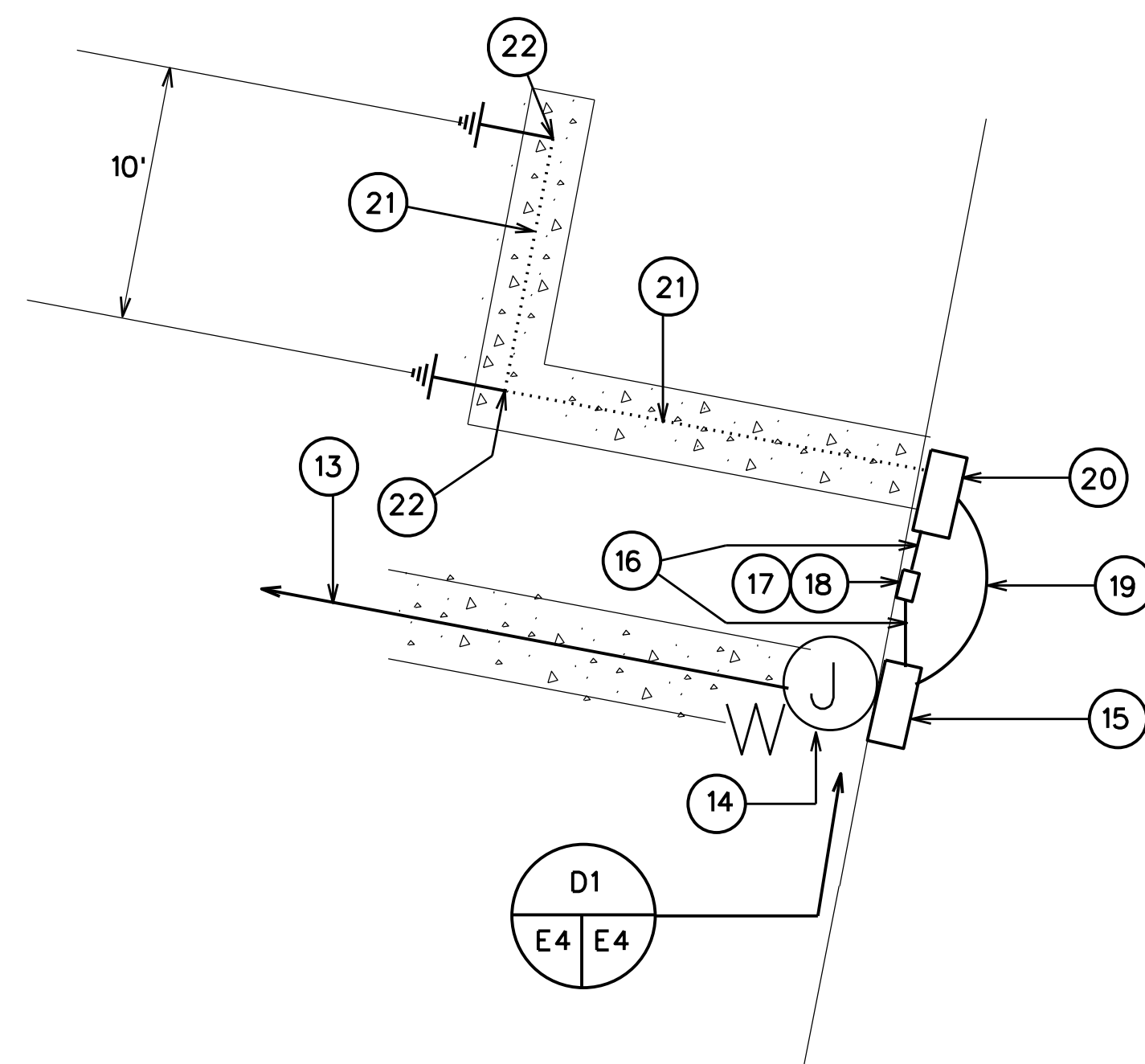
UPGRADE ELECTRICAL SYSTEM, BUILDING 2434
 ELECTRICAL : DETAIL
 PROJECT NO: H500518-3J
 DRAWING NO: 23016 E3
 DATE: SEP 2023
 DESIGNED BY: G.Y.
 DRAWN BY: G.Y.
 CHECKED BY: FPD
 DATE: _____
 DESCRIPTION: CHIEF, ENGR DIV



D1
E2 E4

ENLARGED NEW PAD MOUNTED TRANSFORMER AREA

SCALE: 1"=6.25'



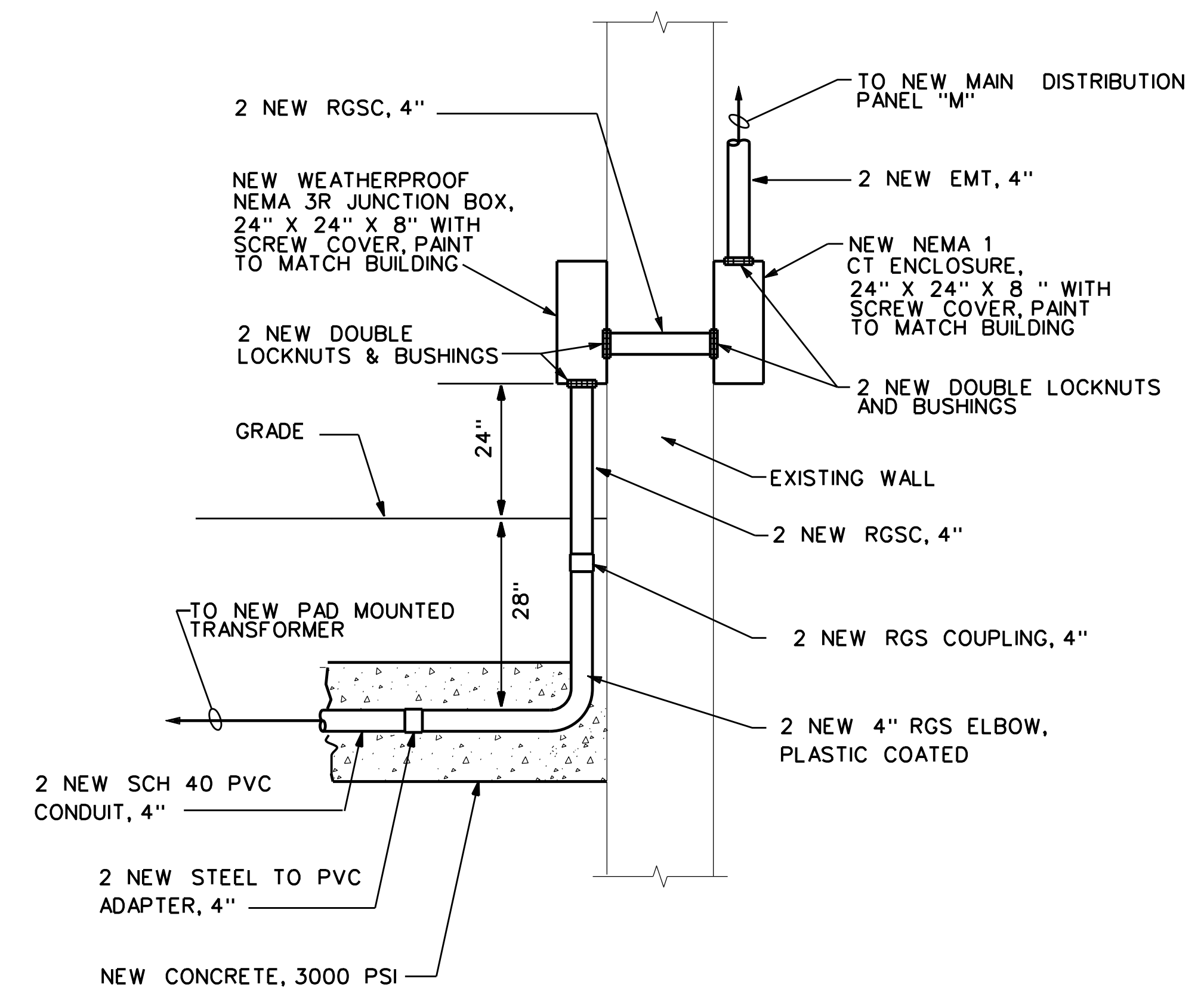
D1
E2 E4

ENLARGED NEW SERVICE ENTRANCE AREA

SCALE: 1"=6.25'

NOTES FOR THIS SHEET:

- 1 NEW 2 RUNS OF 3 #400 kcmil RHW-2, 1#1/0 RHW-2 G EACH RUN INSTALLED IN 4" SCH 80 PVC CONDUIT.
- 2 NEW GUARD POST SHALL BE 4" RGS PIPE FILLED WITH CONCRETE AND CAP. THE HEIGHT OF NEW GUARD POST SHALL BE 4'. EACH NEW GUARD POST SHALL BE INSTALLED IN A CONCRETE BASE.
- 3 NEW 3 #2 XLP, 15 kV, SHIELDED, AND 1#2 XLP-RHW-2, 600V GROUNDING CONDUCTOR IN CONCRETE ENCASED 4" SCHEDULE 40 PVC CONDUIT.
- 4 PROVIDE A NEW 225 KVA PAD MOUNTED TRANSFORMER ON A NEW CONCRETE PAD. THE NEW 225 KVA PAD MOUNTED TRANSFORMER SHALL BE 3-PHASE, 13200V DELTA PRIMARY TO 208/120V SECONDARY. THE TOP OF NEW CONCRETE PAD SHALL BE 4" ABOVE EXISTING GRADE.
- 5 NEW EXOTHERMICALLY WELDED CONNECTION, 2' BELOW GRADE.
- 6 NEW #2 BARE COPPER, 2' BELOW GRADE.
- 7 NEW 2 RUNS OF 3 #400 kcmil RHW-2, 1#1/0 RHW-2 G EACH RUN INSTALLED IN CONCRETE ENCASED 4" SCH 40 PVC CONDUIT.
- 8 EXISTING CONCRETE CURB TO REMAIN.
- 9 NOT USED.
- 10 TO RISER POLE.
- 11 TO BUILDING 2434
- 12 EXOTHERMICALLY WELD THE NEW #2 BARE COPPER TO THE EXISTING FENCE POST.
- 13 TO NEW PAD MOUNTED TRANSFORMER, NEW 2 RUNS OF 3 #400 kcmil RHW-2, 1#1/0 RHW-2 G. EACH RUN INSTALLED IN CONCRETE ENCASED 4" SCH 40 PVC CONDUIT.
- 14 NEW WEATHERPROOF NEMA 3R JUNCTION BOX, 24" X 24" X 8" WITH SCREW COVER, PAINT TO MATCH BUILDING
- 15 3 NEW CURRENT TRANSFORMERS, 800:5A, 60HZ, 2 WIRE, 4" WINDOW, 0.3 ANSI ACCURACY CLASS, IN NEMA 1 ENCLOSURE, 24" X 24" X 8".
- 16 NEW 3 #12THHN, 1#12THHN G IN 1/2" EMT
- 17 NEW SQUARE D POWERLOGIC POWER METER, CATALOG NUMBER PM5500.
- 18 PROVIDE FUSES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- 19 NEW 2 RUNS OF 3 #400 kcmil RHW-2, 1#1/0 RHW-2 G. EACH RUN INSTALLED IN 4" EMT.
- 20 NEW MAIN DISTRIBUTION PANEL "M".
- 21 NEW #2 BARE COPPER, 2' BELOW GRADE.
- 22 NEW EXOTHERMICALLY WELDED CONNECTION, 2' BELOW GRADE.

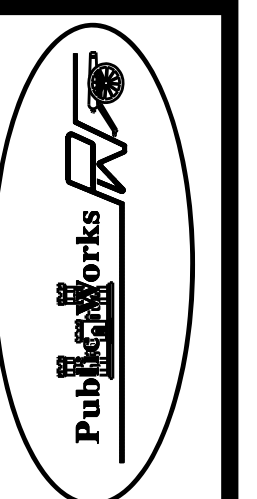


D1
E4 E4

DETAIL

SCALE: NOT TO SCALE

BY	
DESCRIPTION	CHIEF, ENGR DIV
CHECKED BY	
DATE	FPD
REVISION	



DIRECTORATE OF PUBLIC WORKS
FORT SILL, OKLAHOMA



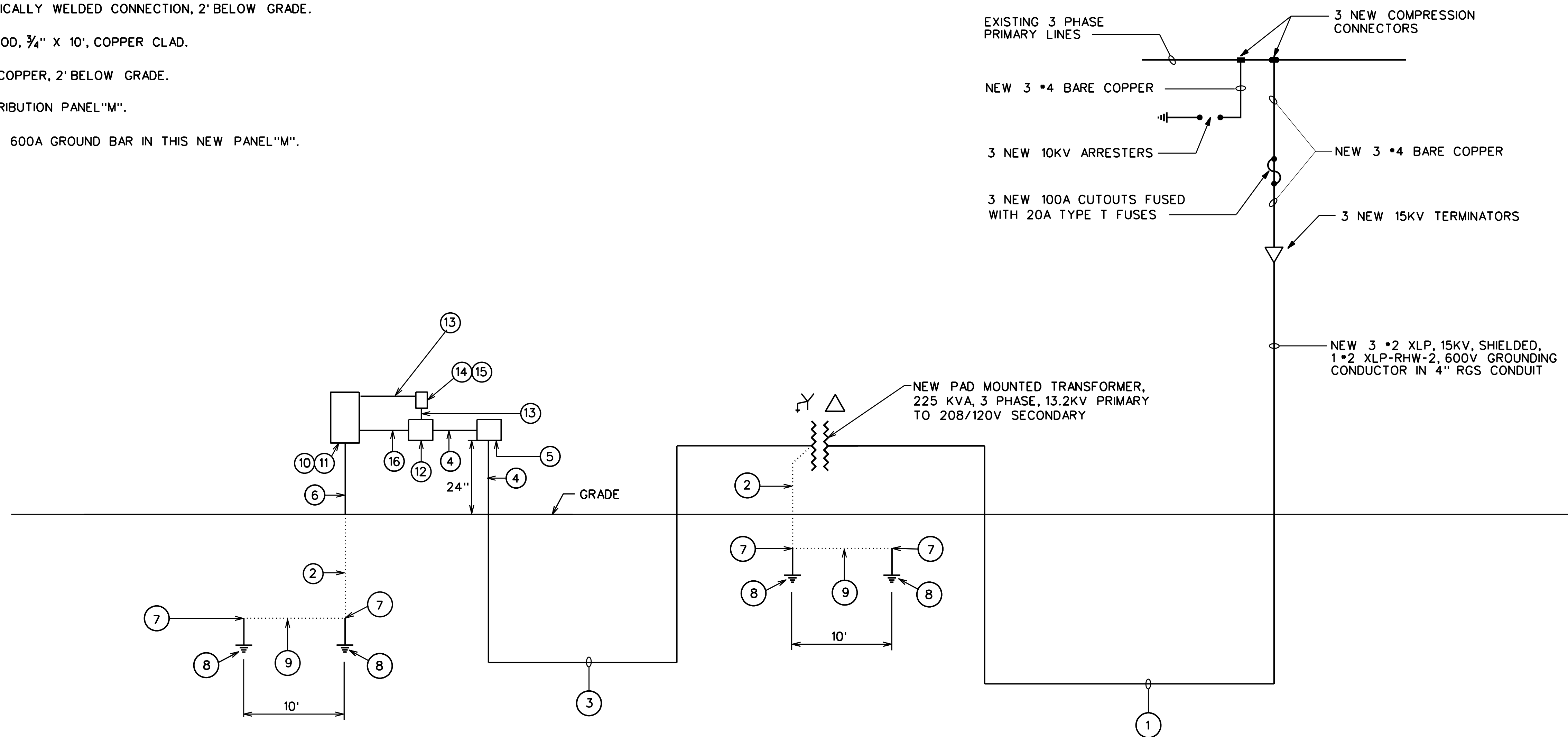
UPGRADE ELECTRICAL SYSTEM,
BUILDING 2434

ELECTRICAL: NOTES, PLANS AND DETAIL
PROJECT NO: KS00518-3J
DATE: SEP 2023
DRAWN BY: G.Y.
DESIGNED BY: G.Y.

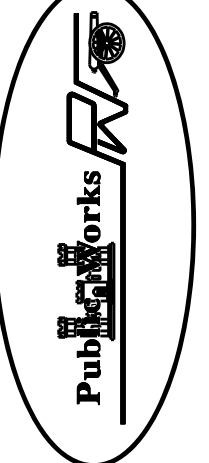
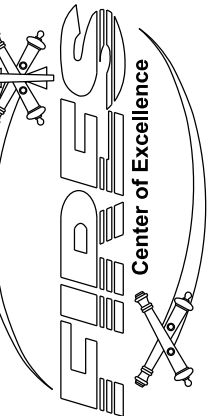
DRAWING NO
23016
E4

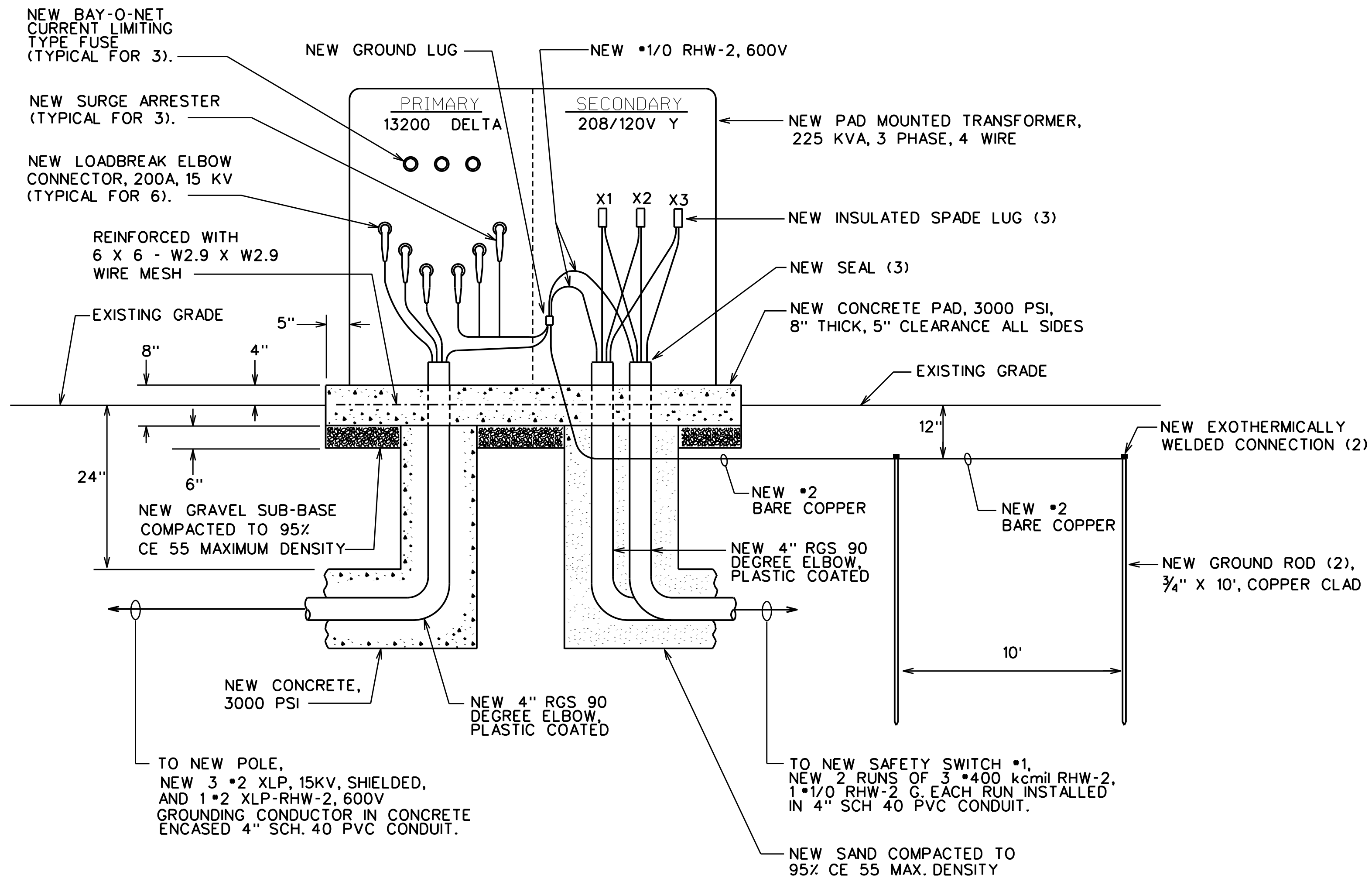
NOTES FOR THIS SHEET:

- ① NEW 3 *2 XLP, 15 kV, SHIELDED, AND 1*2 XLP-RHW-2, 600V, GROUNDING CONDUCTOR IN CONCRETE ENCASED 4" SCH 40 PVC CONDUIT.
- ② NEW *2 BARE COPPER.
- ③ NEW 2 RUNS OF 3 *400 kcmil RHW-2, 1*1/0 RHW-2 G. EACH RUN INSTALLED IN CONCRETE ENCASED 4" SCH 40 PVC CONDUIT.
- ④ NEW 2 RUNS OF 3 *400 kcmil RHW-2, 1*1/0 RHW-2 G. EACH RUN INSTALLED IN 4" RGS CONDUIT.
- ⑤ NEW WEATHERPROOF NEMA 3R JUNCTION BOX, 24" X 24" X 8" WITH SCREW COVER, PAINT TO MATCH BUILDING
- ⑥ NEW *2 BARE COPPER IN 1" RGS CONDUIT.
- ⑦ NEW EXOTHERMICALLY WELDED CONNECTION, 2' BELOW GRADE.
- ⑧ NEW GROUND ROD, 3/4" X 10', COPPER CLAD.
- ⑨ NEW *2, BARE COPPER, 2' BELOW GRADE.
- ⑩ NEW MAIN DISTRIBUTION PANEL "M".
- ⑪ PROVIDE A NEW 600A GROUND BAR IN THIS NEW PANEL "M".
- ⑫ 3 NEW CURRENT TRANSFORMERS, 800:5A, 60HZ, 2 WIRE, 4" WINDOW, 0.3 ANSI ACCURACY CLASS, IN NEMA 1 ENCLOSURE, 24" X 24" X 8".
- ⑬ NEW 3 *12 THHN, 1*12 THHN G IN 1/2" EMT.
- ⑭ NEW SQUARE D POWERLOGIC POWER METER, CATALOG NUMBER PM5500.
- ⑮ PROVIDE FUSES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ⑯ NEW 2 RUNS OF 3 *400 kcmil RHW-2, 1*1/0 RHW-2 G. EACH RUN INSTALLED IN 4" EMT.



NEW PARTIAL ELECTRICAL RISER DIAGRAM - BUILDING 2434
SCALE: NOT TO SCALE

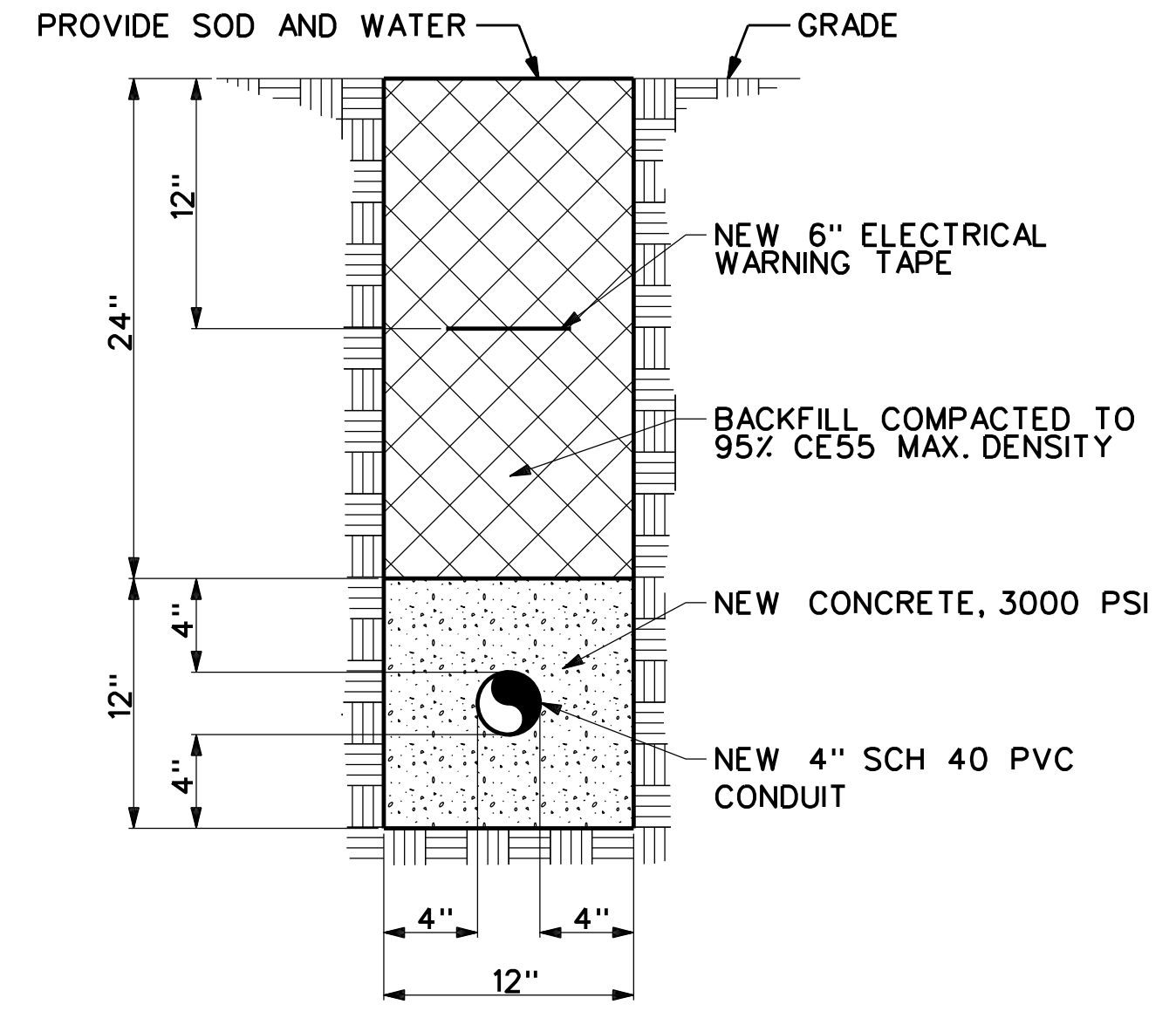
	DIRECTORATE OF PUBLIC WORKS FORT SILL, OKLAHOMA				
	UPGRADE ELECTRICAL SYSTEM, BUILDING 2434				
PROJECT NO IS00518-3J	DATE SEP 2023	DRAWN BY G.Y.	DESIGNED BY G.Y.	CHECKED BY FPD	DESCRIPTION CHIEF, ENGR DIV
DRAWING NO 23016 E5					



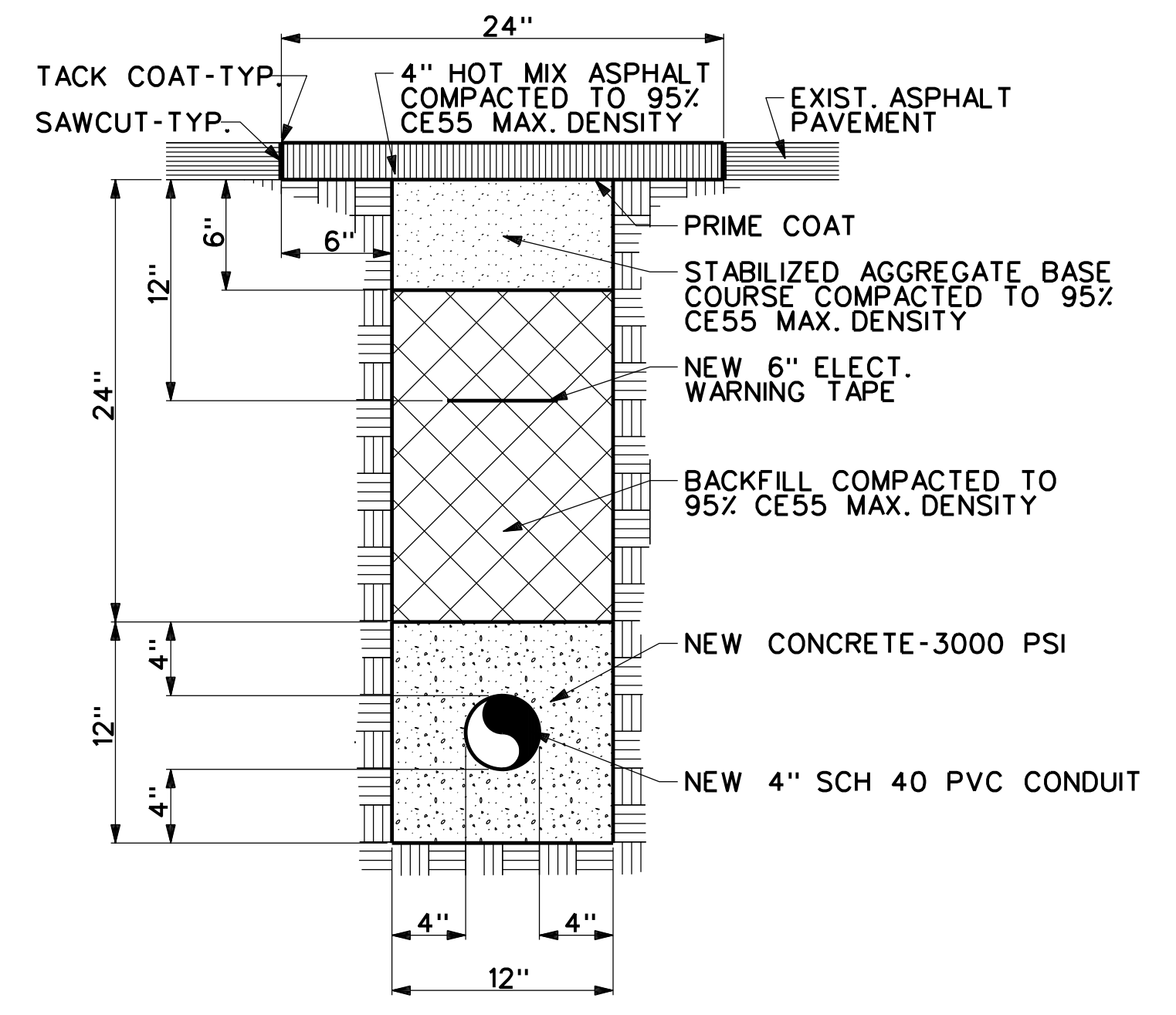
D1
E4 E6
NEW PAD MOUNTED TRANSFORMER DETAIL
SCALE: NOT TO SCALE

NEW SAFETY SWITCH SCHEDULE


SAFETY SWITCH NUMBER	RATED VOLT	RATED AMP	NO. OF POLES	FUSIBLE	FUSE			NEMA TYPE	REMARKS
					VOLT	AMP	TYPE		
1	240	100	3	YES	250	100	DUAL ELEMENT	1	HEAVY DUTY, SINGLE THROW
2	240	100	3	YES	250	100	DUAL ELEMENT	1	HEAVY DUTY, SINGLE THROW
3	240	100	3	YES	250	100	DUAL ELEMENT	1	HEAVY DUTY, SINGLE THROW
4	240	100	3	YES	250	100	DUAL ELEMENT	1	HEAVY DUTY, SINGLE THROW

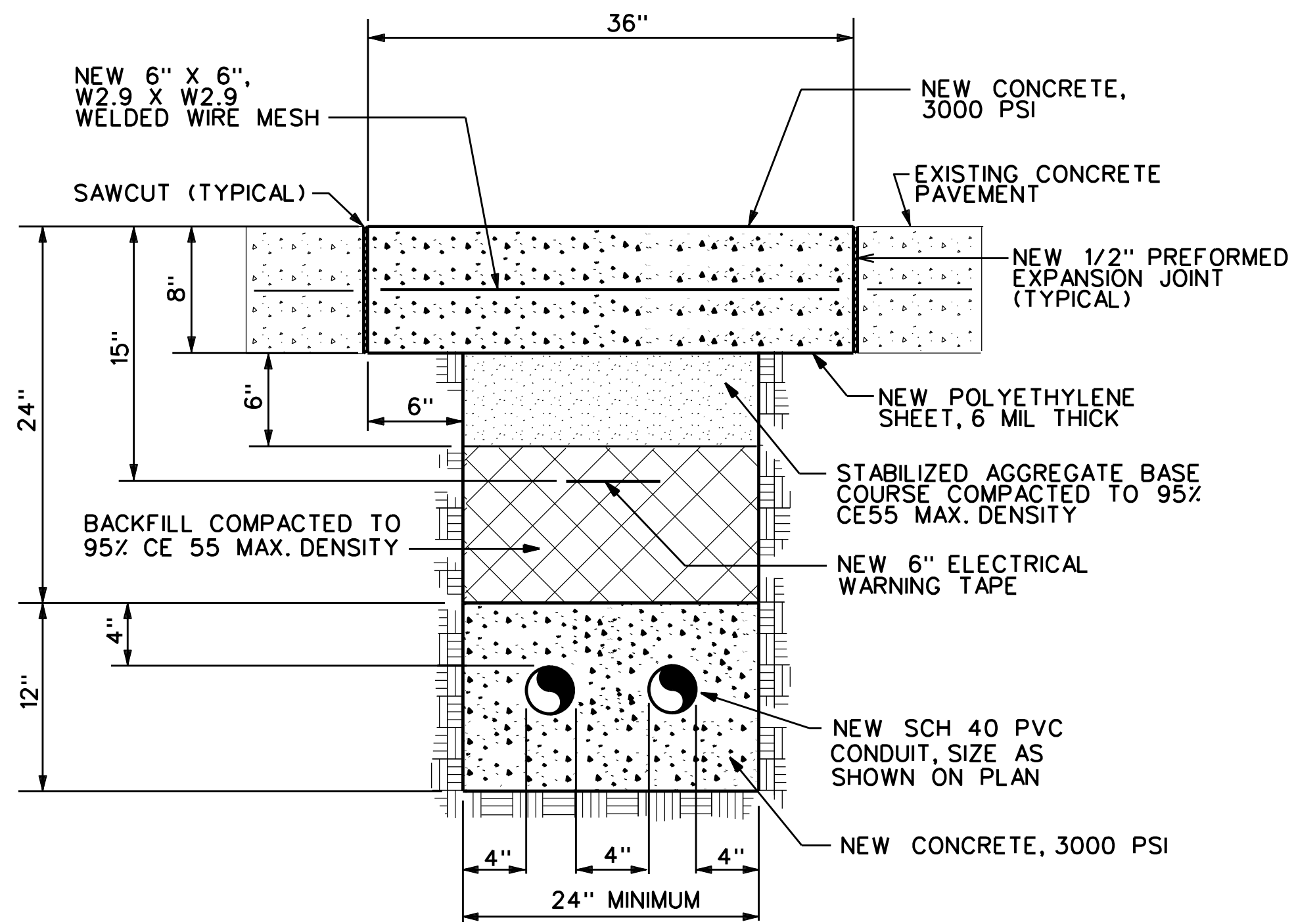


NEW CONCRETE ENCASED DUCT DETAIL
SCALE: NOT TO SCALE



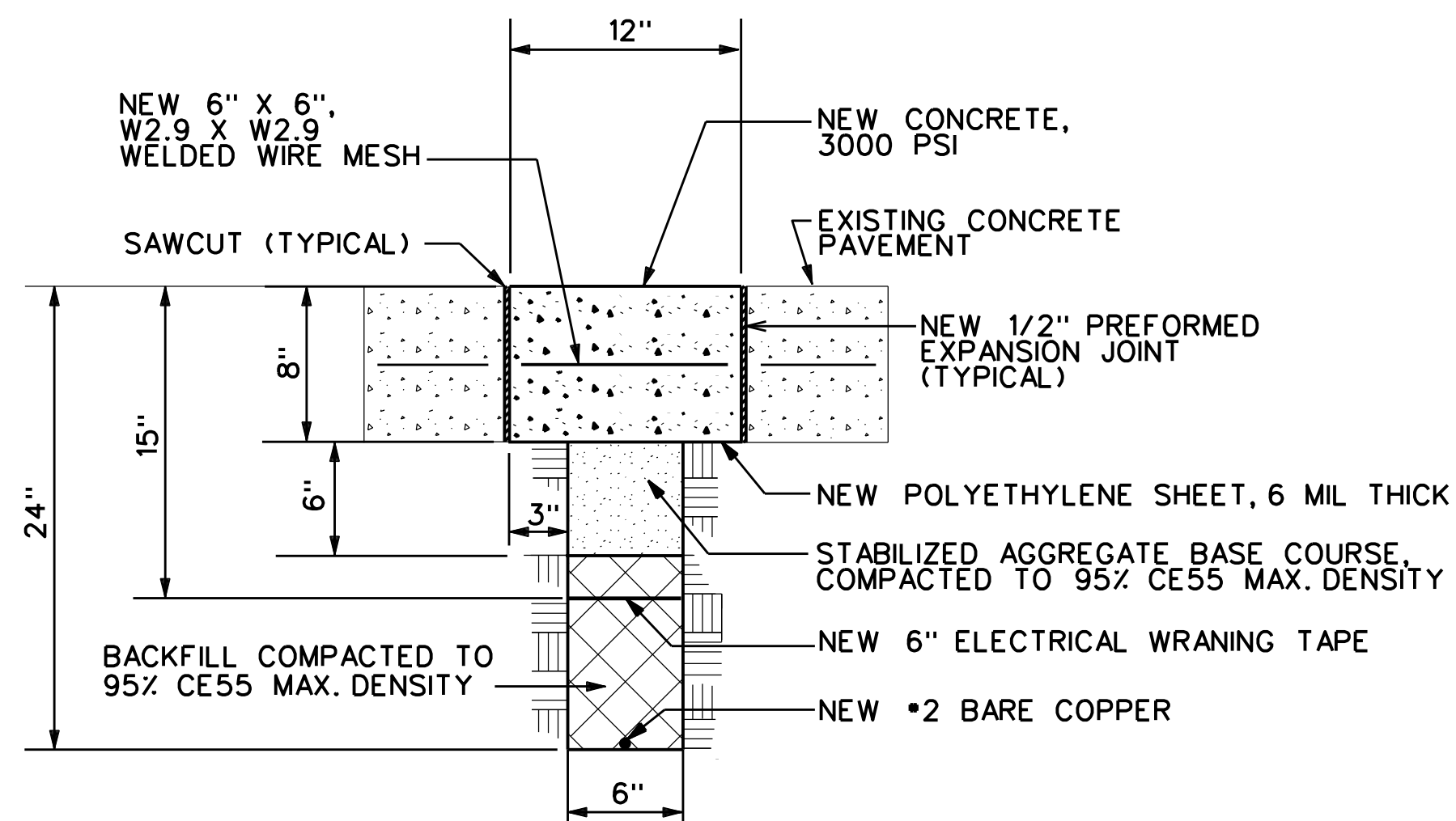
ASPHALT PAVEMENT REPLACEMENT DETAIL
SCALE: NOT TO SCALE

PROJECT NO. 1500518-31	DATE SEP 2023	DRAWN BY G.Y.	DESIGNED BY G.Y.	CHECKED BY FPD	REVISION DATE	DESCRIPTION CHIEF, ENGR DIV	BY
							
DIRECTORATE OF PUBLIC WORKS FORT SILL, OKLAHOMA							
UPGRADE ELECTRICAL SYSTEM, BUILDING 2434 ELECTRICAL : SCHEDULE AND DETAIL							
DRAWING NO 23016 E6							



CONCRETE PAVEMENT REPLACEMENT 2-DUCT DETAIL

SCALE: NOT TO SCALE



NEW UNDERGROUND GROUNDING CONDUCTOR DETAIL

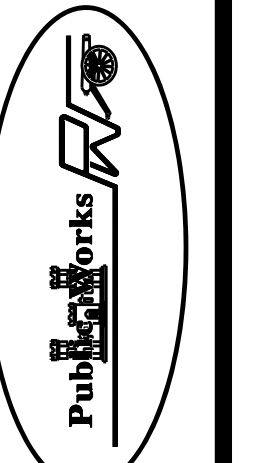
SCALE: NOT TO SCALE

208/120V, 3 PHASE, 4 WIRE, 60Hz, 600A, 22K A.I.C. SURFACE MOUNTED, WITH 600A MAIN CIRCUIT BREAKER, NEUTRAL BAR, GROUND BAR, AND BRANCH CIRCUIT BREAKERS AS SHOWN BELOW					
SWITCH #1	100A, 3P, 240V CIRCUIT BREAKER	1	2	100A, 3P, 240V CIRCUIT BREAKER	SWITCH #2
SWITCH #3	100A, 3P, 240V CIRCUIT BREAKER	3	4	100A, 3P, 240V CIRCUIT BREAKER	SWITCH #4
SPARE	100A, 3P, 240V CIRCUIT BREAKER	5	6		BUSSED SPACE
BUSSED SPACE		7	8		BUSSED SPACE
	600A GROUND BAR			600A NEUTRAL BAR	-(2)
TO NEW PAD MOUNTED TRANSFORMER	600A, 3P, 600V MAIN CIRCUIT BREAKER				

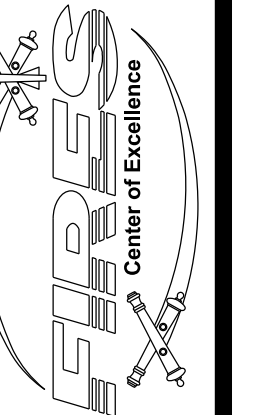
NEW MAIN DISTRIBUTION PANEL "M" SCHEDULE

SCALE: NOT TO SCALE

BY	
DESCRIPTION	CHIEF, ENGR DIV
DATE	FPD
REVISION	CHECKED BY

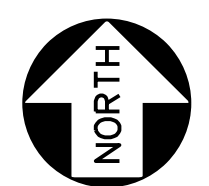
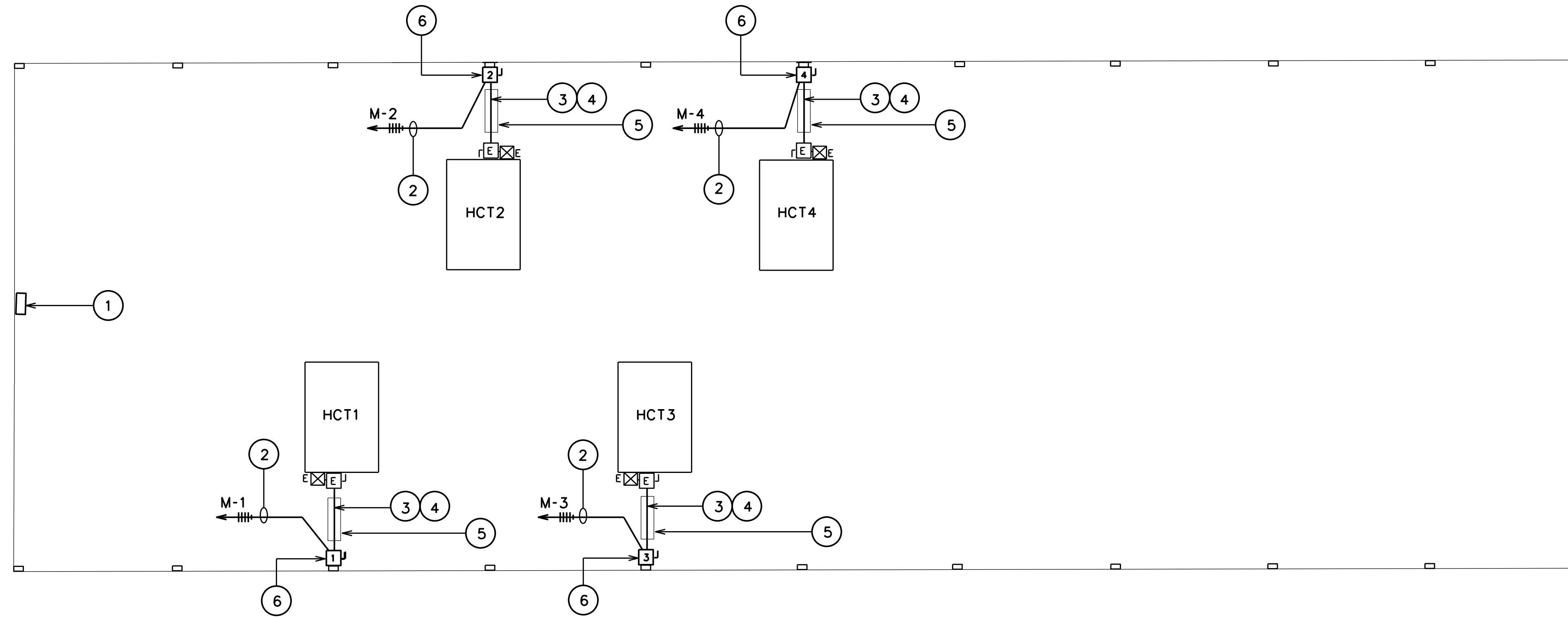


DIRECTORATE OF PUBLIC WORKS
FORT SILL, OKLAHOMA

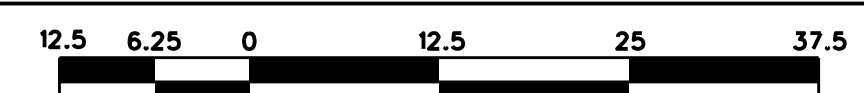


UPGRADE ELECTRICAL SYSTEM, BUILDING 2434	DESIGNED BY	G. Y.
ELECTRICAL : DETAILS	DRAWN BY	G. Y.
PROJECT NO. KS00518-3J	DATE	SEP 2023

DRAWING NO
23016
E7



NEW PARTIAL ELECTRICAL POWER PLAN - BUILDING 2434



SCALE: 1" = 12.5'

NOTES FOR THIS SHEET:

- ① NEW MAIN DISTRIBUTION PANEL "M".
- ② NEW 4 *2 THHN, 1*8 THHN G IN 1 1/4" EMT.
- ③ NEW 4 *2 THHN, 1*8 THHN G IN 1 1/4" RGS CONDUIT.
- ④ THE RGS CONDUIT SHALL BE MOUNTED ON EXISTING CONCRETE FLOOR, NEW RGS CONDUIT MOUNTING CLAMPS SHALL BE PROVIDED AS REQUIRED.
- ⑤ SAFETY RAMP WILL BE PROVIDED BY USER.
- ⑥ THIS SAFETY SWITCH SHALL BE MOUNTED 4' ABOVE EXISTING FLOOR, NEW RGS MOUNTING RACK SHALL BE PROVIDED FOR MOUNTING THE SAFETY SWITCH AS REQUIRED.

DIRECTORATE OF PUBLIC WORKS FORT SILL, OKLAHOMA				
UPGRADE ELECTRICAL SYSTEM, BUILDING 2434	ELECTRICAL : NOTES AND PLAN	DATE SEP 2023	DRAWN BY G.Y.	DESIGNED BY G.Y.
PROJECT NO KS00518-3J				
DRAWING NO 23016 E8				
REVISION DATE CHECKED BY DESCRIPTION BY				
FPD CHIEF ENGR DIV				