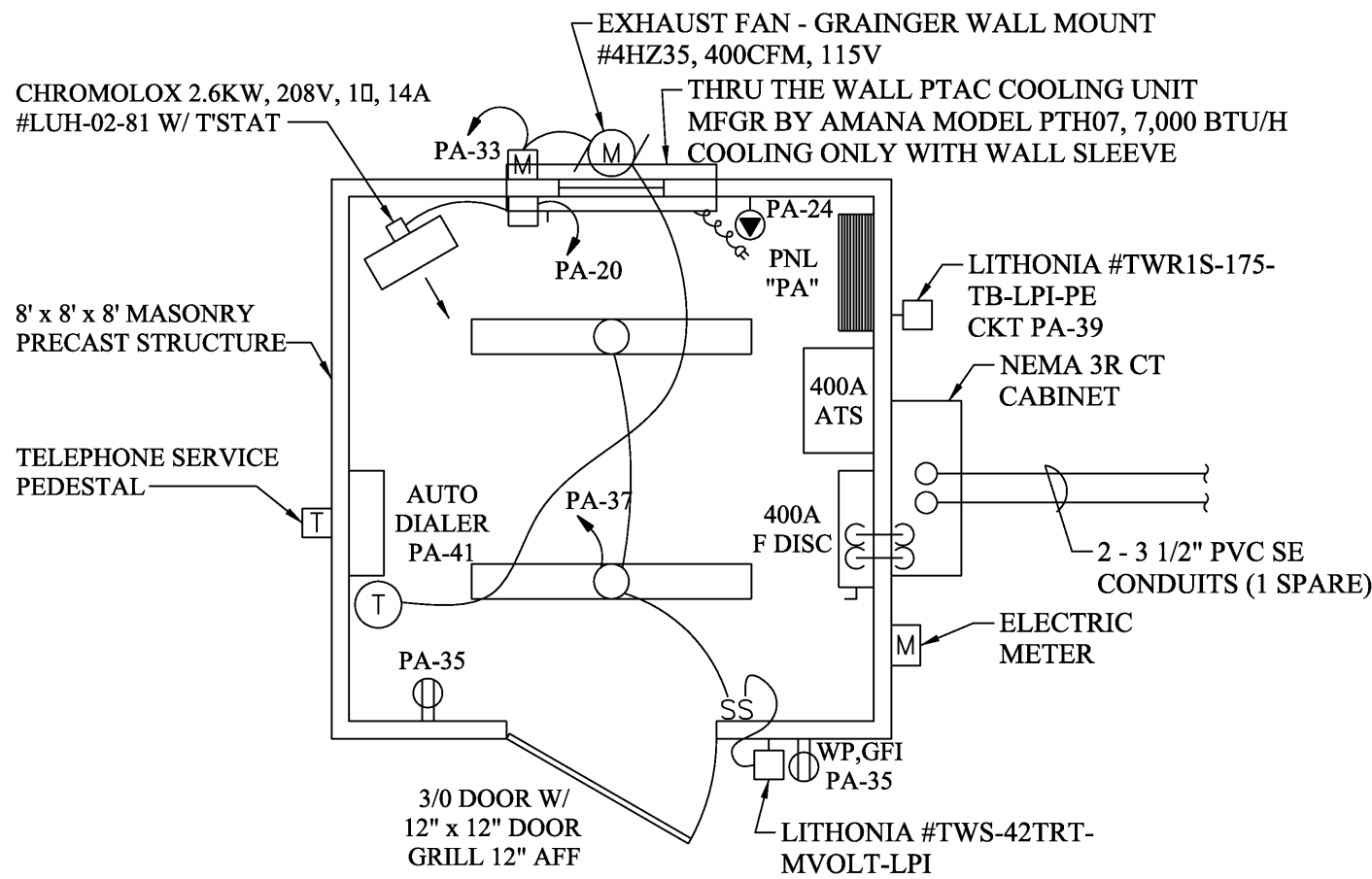


ELECTRICAL SPECIFICATIONS:

1. PROVIDE NECESSARY ITEMS FOR A COMPLETE INSTALLATION OF ELECTRICALLY OPERATED EQUIPMENT SPECIFIED OR SHOWN ON THE CONTRACT DRAWING. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL..
2. PROVIDE LAMINATED PHENOLIC NAMEPLATES ON EACH STARTER, DISCONNECT AND THE LIKE INDICATING THE EQUIPMENT CONTROLLED AND WHERE FEED FROM. LETTERS SHALL BE 3/8" HIGH.
3. ALL EQUIPMENT SHALL BE UL LISTED AS REQUIRED BY THE NATIONAL ELECTRICAL CODE "NEC".
4. TEST ALL CONDUCTORS AND EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
5. PROVIDE MOTORS THAT ARE DESIGNED FOR THE INTENDED USE. MOTORS SHALL BE ENERGY EFFICIENT TYPE.
6. CONDUCTORS SHALL BE STRANDED COPPER WITH TYPE "USE" INSULATION FOR DIRECT BURY INSTALLATION. CONDUCTORS FOR INTERIOR USE SHALL BE TYPE "THHN/THWN". ALL CONDUCTORS SHALL BE RATED FOR 600 VOLTS. CONDUCTORS SHALL BE COLOR CODED AS REQUIRED BY THE NEC.
7. BURIED CONDUITS SHALL BE PVC SCH 40, SIZE AS INDICATED. EXPOSED EXTERIOR CONDUITS SHALL BE GALVANIZED RIGID STEEL. INTERIOR DRY LOCATION CONDUITS SHALL BE ELECTRICAL METALLIC TUBING "EMT" TYPE. EMT CONDUIT FITTINGS SHALL BE COMPRESSION TYPE. WET AND/OR DAMP LOCATION CONDUITS SHALL BE PVC SCH 40, UL LISTED FOR THE INTENDED INSTALLATION. INSTALL RUNS OF CONDUIT PARALLEL OR PERPENDICULAR TO WALLS, STRUCTURAL MEMBERS, OR INTERSECTIONS OF VERTICAL PLANES.
8. PROVIDE PULL AND JUNCTION BOXES WHERE REQUIRED FOR CHANGES IN DIRECTION, AT JUNCTION POINTS, AND TO FACILITATE WIRE PULLING.
9. WIRING DEVICE AND JUNCTION BOXES SHALL BE METALLIC EXCEPT WHERE PVC CONDUITS ARE INSTALLED AND SHALL BE SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
10. WIRING DEVICES SHALL BE ROUGH SERVICE SPECIFICATIONS GRADE, 20 AMP RATED.
11. SEAL ALL WALL PENETRATIONS WITH SILICONE CAULKING DESIGNED FOR THE APPLICATION.
12. SAFETY SWITCHES OR DISCONNECTS SHALL BE HEAVY DUTY METAL ENCLOSED, WITH QUICK MAKE, QUICK-BREAK MECHANISM AND EXTERNAL PAD LOCKABLE OPERATING HANDLE. ENCLOSURES SHALL BE NEMA 1 INDOORS UNLESS OTHERWISE NOTED AND NEMA 4X EXTERIOR.
13. PANELBOARDS SHALL BE ENCLOSED DEAD-FRONT WITH FEATURES AND RATINGS AS SCHEDULED. CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE 120/208 VOLT COMMERCIAL GRADE. PANELS KNOWN AS LOAD CENTERS WILL NOT BE ACCEPTED. PROVIDE TYPED DIRECTORY CARDS.
14. PROVIDE GROUND CONDUCTORS IN ALL CONDUITS AND RACEWAYS. CONNECT TO ALL METAL ENCLOSURES IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
15. PROVIDE SERVICE ENTRANCE CONDUITS WHERE INDICATED ON THE DRAWINGS.
16. A COMPLETE EMERGENCY STANDBY GENERATOR POWER SYSTEM SHALL BE PROVIDED INCLUDING DIESEL ENGINE GENERATOR SET AND AUXILIARY SYSTEMS REQUIRED FOR AUTOMATIC OPERATION. GEN SET SHALL BE PROVIDED WITHIN WEATHERPROOF ENCLOSURE WITH BASE MOUNTED FUEL TANK. FUEL TANK SHALL BE SIZED FOR A MINIMUM OF 48 HOURS OF FUEL AT 100% LOADED. MOTOR STARTING SUB TRANSIENT VOLTAGE DIP SHALL NOT EXCEED 25 PERCENT. VOLTAGE REGULATION SHALL BE NO MORE THAN 4 PERCENT FROM NO LOAD TO FULL LOAD. TEST GEN SET IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION. REFILL FUEL TANK AFTER ALL TESTS ARE COMPLETED AND IS ACCEPTED BY THE OWNER.
17. AUTOMATIC TRANSFER SWITCH SHALL BE PROVIDED WITH FEATURES AND SIZES AS INDICATED ON THE DRAWINGS. SWITCH SHALL BE TOTALLY ENCLOSED IN NEMA 1 ENCLOSURE UNLESS OTHERWISE INDICATED ON THE DRAWINGS. AUTOMATIC TRANSFER SWITCH SHALL HAVE THE FOLLOWING SIGNAL AVAILABLE TO BE MONITORED REMOTELY FROM THE ATS: TRANSFER SWITCH IN NORMAL POWER POSITION, TRANSFER SWITCH ON EMERGENCY BACKUP POWER, GENERATOR RUNNING STATUS, ALARM WITH STANDBY GENERATOR, LOW FUEL LEVEL ON GENERATOR.



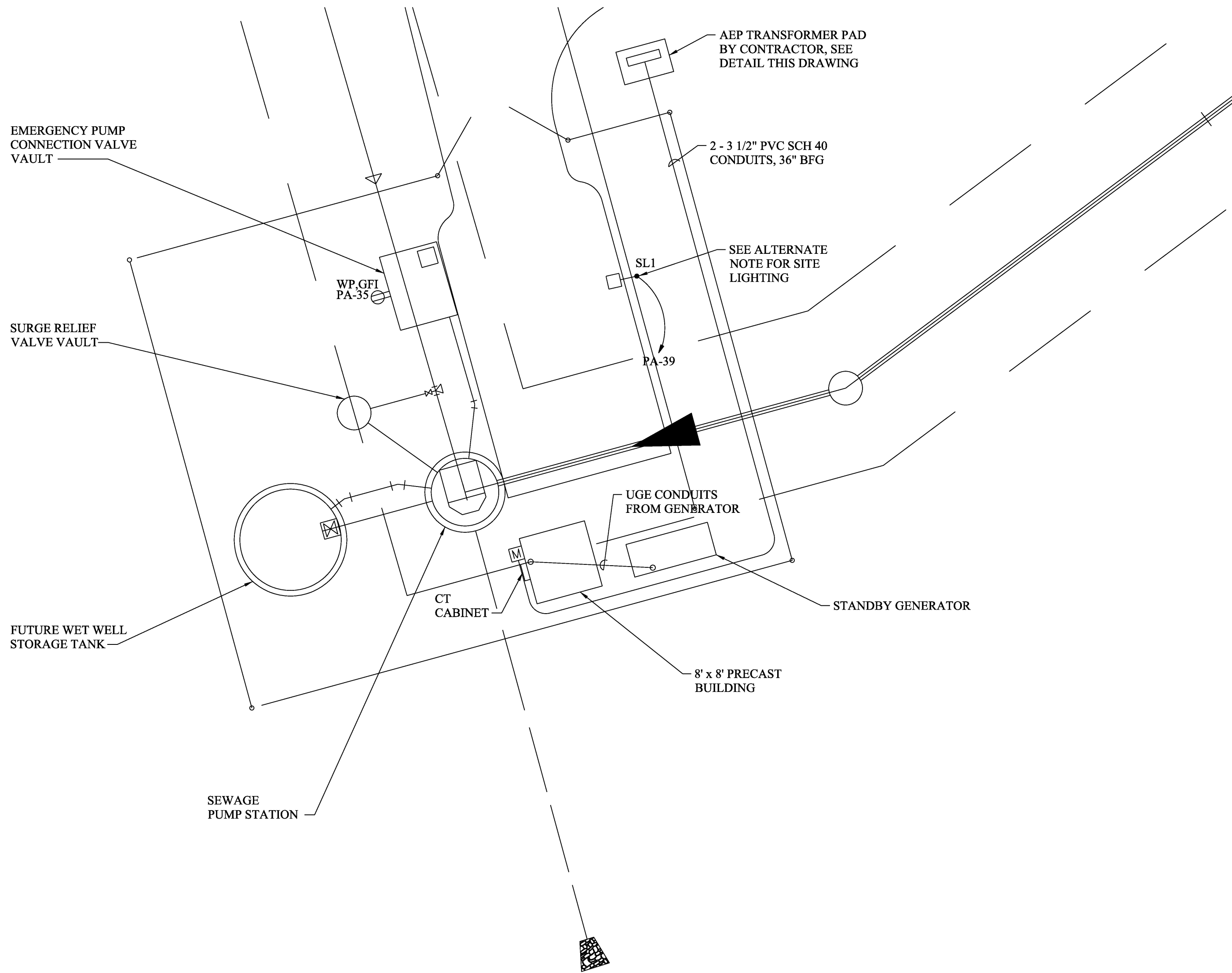
PUMP STATION CONTROL BUILDING

SCALE: 3/8" = 1'



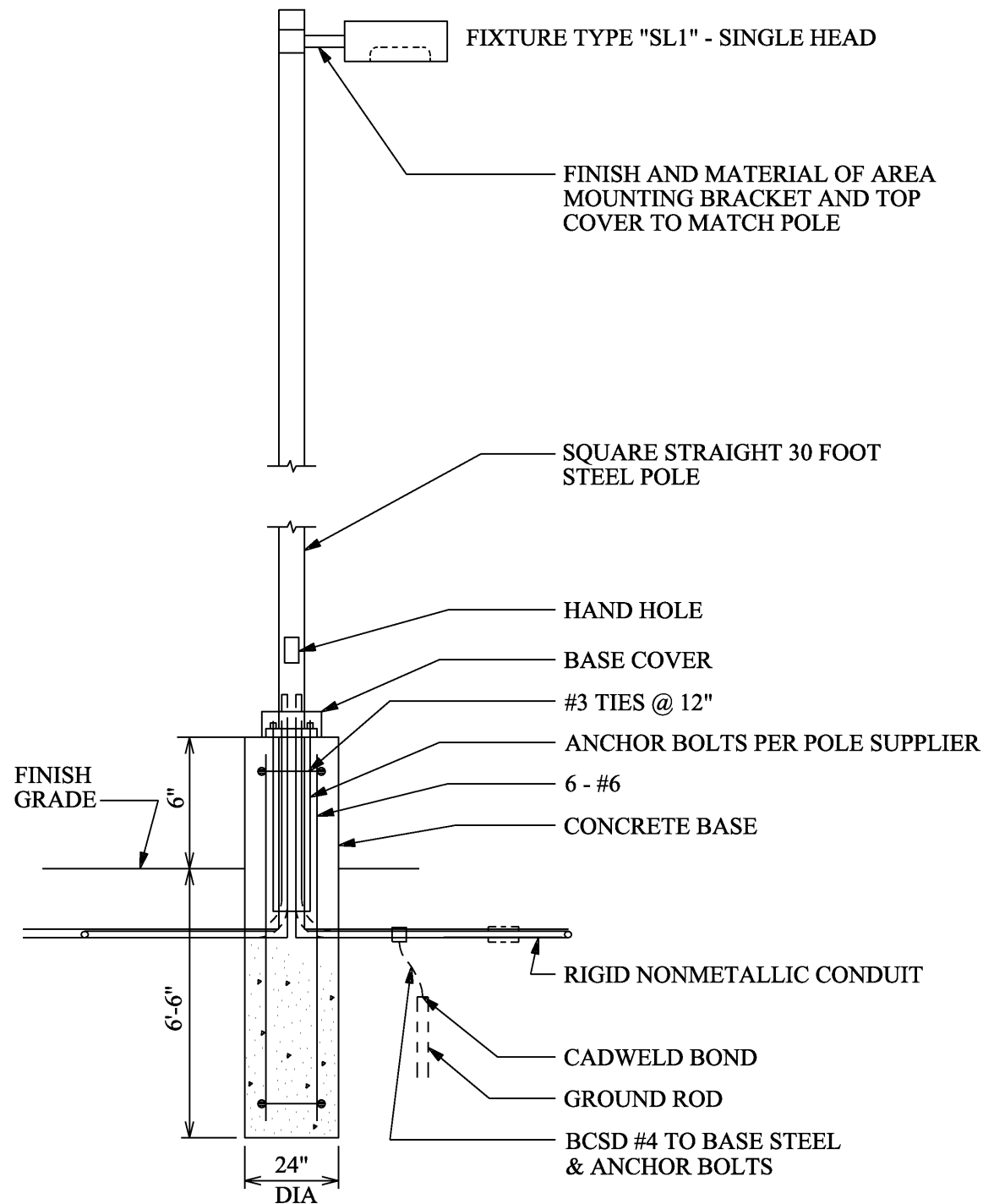
ALTERNATE NOTE:

PROVIDE 30' CLASS "3" TREATED WOOD POLE TO INSTALL LIGHT FIXTURE 20' AFG. BURY BASE OF POLE 7' BELOW FINISHED GRADE. PROVIDE LITHONIA DUSK TO DAWN AREA LIGHT FIXTURE MODEL No. TDD-150S-120 OR APPROVED EQUAL. PROVIDE COMPLETE WITH MOUNTING ARM AND ACCESSORIES AS REQUIRED TO INSTALL LIGHT FIXTURE ON POLE. LIGHT FIXTURE SHALL BE CONTROLLED FROM A SINGLE POLE LIGHT SWITCH MOUNTED ON THE WOOD POLE, 5' AFG. SWITCH SHALL BE WEATHERPROOF. CONUIT ON POLE SHALL BE PVC SCH 40.



PUMP STATION SITE PLAN

SCALE: 1" = 10'-0"



LIGHT FIXTURE - "SL1"

LITHONIA NO. KAD-400M-R4-120-SPD09-LPI400M-PEI

POLE NO. SQUARE-STRAIGHT-STEEL SSS-30-6J-DDB-DM19

TYPE "SL1" LIGHT FIXTURE

POLE BASE DETAIL - BASE BID

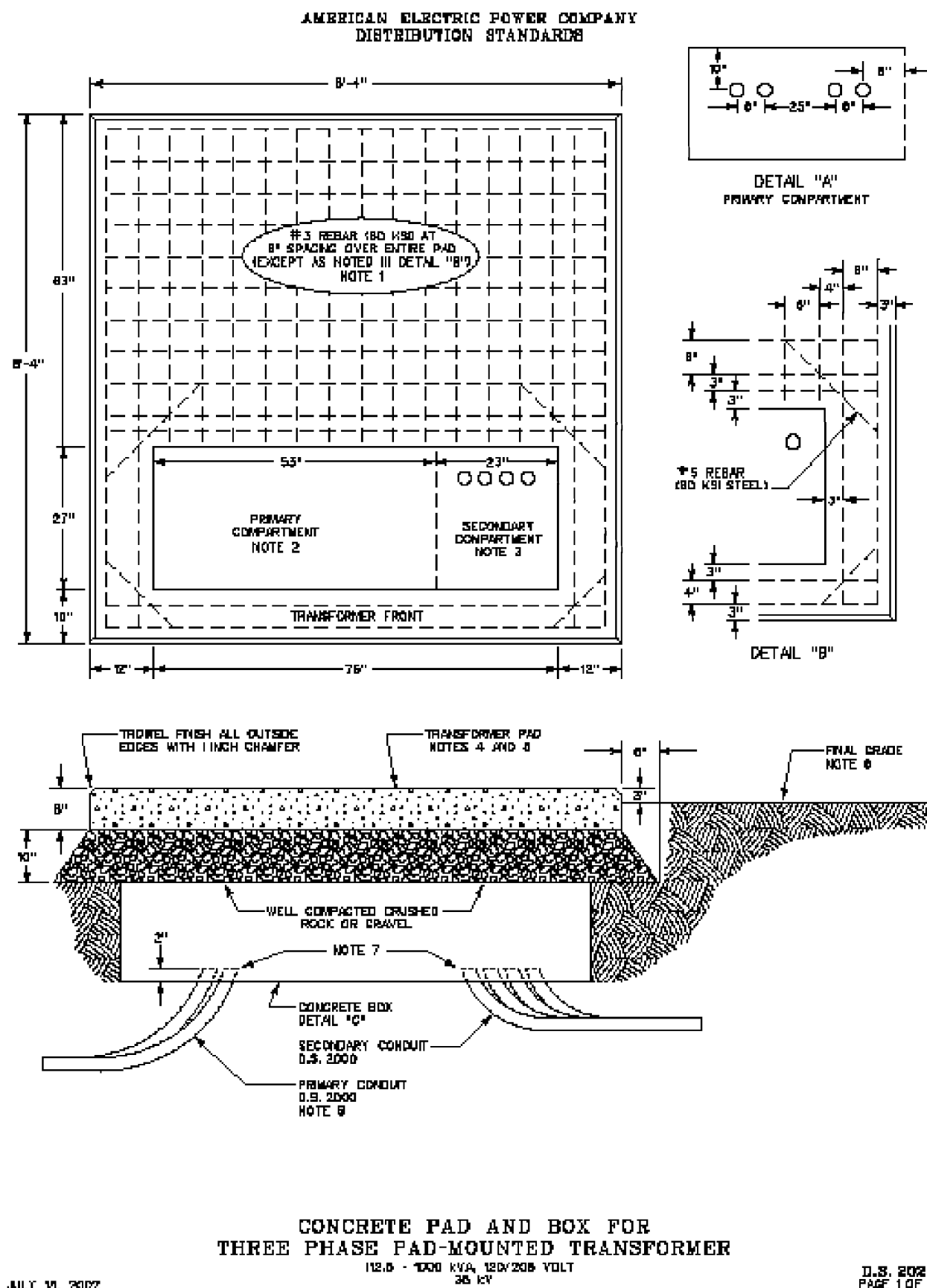
NOT TO SCALE

PANEL "PA" SCHEDULE

PANELBOARD CHARACTERISTICS:  
VOLTS: 120/208  
PHASES: 3  
WIRES: 4  
SOLID NEUTRAL, GROUND BAR

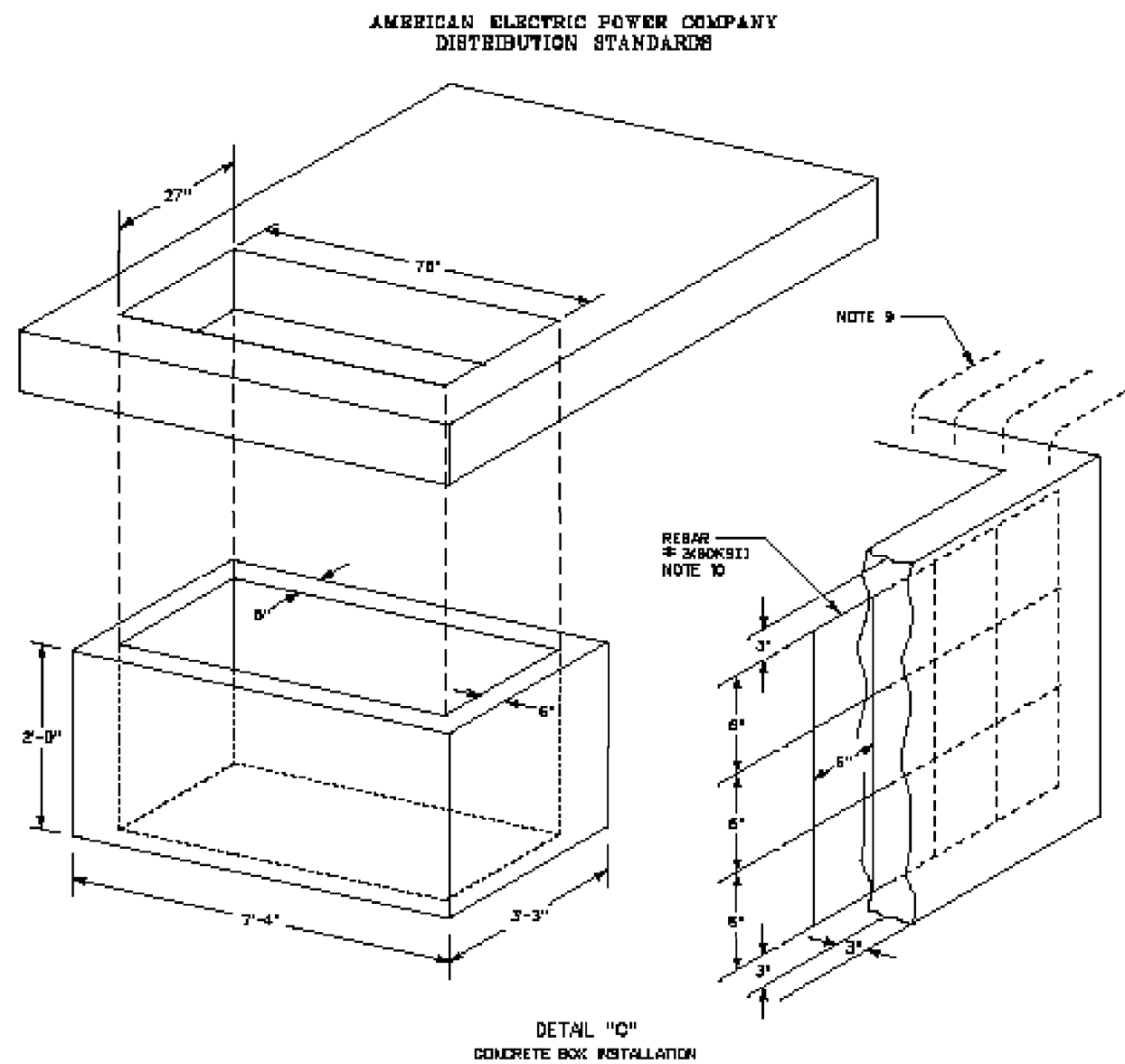
PHASE TO PHASE VOLTS: 208  
PHASE TO NEUT. VOLTS: 120  
400 AMP MAIN LUGS ONLY  
MINIMUM SHORT CIRCUIT RATING: 18,000 RMS SYM AMPS

CKT. NO.	POLE NO.	DESCRIPTION	LOAD TYPE	CONN. KVA	CONN. AMPS			BREAKER	NO. & WIRE SIZE			COND. SIZE
					A	B	C		PHASE	NEUT.	GND	
3	3	PUMP CONTROL PANEL 4 - 1SHIP PUMPS	E	69.6	193.2	193.2	193.2	3	250	250	-	4 2 1/2"
	5									250		
	7											
9	9	SPARE						3	100			
	11											
	13											
15	15	SPARE						3	30			
	17											
	19											
21	21	SPACE						3				
	23											
	25											
27	27	SPACE						3				
	29											
31	31	SPARE						1	20			
33	33	EXHAUST FAN	M	0.2		1.7		1	20	12	12	12 3/4"
35	35	RECEPTACLES	R	0.6		5.0		1	20	12	12	
37	37	LIGHTING - INTERIOR	L	0.4	3.3			1	20	12	12	
39	39	LIGHTING - EXTERIOR	L	1.0		8.3		1	20	12	12	12 3/4"
41	41	AUTO DIALER	E	0.5		4.2		1	20	12	12	
	2								8			
4	4	TVSS PANEL	-					3	30	8	8	1"
	6								8			
8	8	GENERATOR BATTERY CHARGER E	I					1	20	12	12	
10	10	GENERATOR BLOCK HEATER	E	2.0		9.6	9.6	2	30	10	-	10 1"
	12								10			
	14											
16	16	SPACE						3				
	18											
20	20	UNIT HEATER	M	2.0	9.6		9.6	2	20	12	-	12 3/4"
	22								12			
24	24	PTAC UNIT	M	3.0		14.4	14.4	2	20	12	-	12 3/4"
	26								12			
28	28	SPARE						1	20			
30	30	SPARE						1	20			
32	32	SPARE						1	20			
34	34	SPARE						1	20			
36	36	SPARE						1	20			
	38											
40	40	SPACE						3				
	42											
TOTALS				79.3	220.6	222.4	226.4					



JULY 10, 2022

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NOTES:

1. PROVIDE 3500 PSI CONCRETE WITH A MINIMUM 3 INCH COVER OVER ALL REBAR. ONE REBAR WITH A MINIMUM CROSS SECTIONAL AREA OF SIXTY SQUARE INCHES PER FOOT OF PAD WIDTH MAY BE USED IN PLACE OF REBAR.
2. FOR PRIMARY COMPARTMENT CONDUIT PLACEMENT DIMENSIONS, REFER TO DETAIL "A".
3. THE NUMBER AND PLACEMENT OF SECONDARY/RETURNING CONDUITS AND SIZE OF SERVICE CABLES TO BE DETERMINED BY CUSTOMER ENGINEER AND LOCAL POWER COMPANY. SECONDARY CONDUIT MAY EXTEND IN ANY DIRECTION AS REQUIRED BY THE CUSTOMER.
4. FOR TRANSFORMER PAD AND GROUND POINT LOCATIONS REFER TO D.S. 2550.
5. FINAL PAD INSTALLATION SHALL BE LEVEL AS MEASURED BY SURVEYORS LEVEL FOR ALL DIRECTIONS.
6. FINAL GRADE SHALL BE ESTABLISHED BEFORE INSTALLATION OF PAD.
7. IN ORDER TO ACHIEVE CABLE FLEXIBILITY, CONDUIT EXTENDING INTO CONCRETE SHALL BE TO BE CUT AS SHOWN.
8. PRIMARY CONDUIT NUMBER, BASIC LOCATION AND DIRECTION TO BE DETERMINED BY ENGINEERING. CONDUIT CAN BE FLEXIBLE TYPE EDS OR CPE PVC CONDUIT WITH RPT-300 RICH SQUARE TO AVOID DISTURBING THE GROUND UNDER THE REAR OF THE PAD AND TO MINIMIZE SETTLING. BRING CONDUITS TO THE FRONT OR SIDES WHEREVER POSSIBLE AND MARK THE CONDUIT END LOCATIONS.
9. IF CUSTOMER WISHES TO CONNECT BACK TO TRANSFORMER PAD EXTEND REBAR ON REAR OF BOX AS SHOWN. REBAR CAN BE ATTACHED TO TRANSFORMER PAD REBAR.
10. REBAR TO BE SPACED AS SHOWN AND USED ON ALL FOUR SIDES OF BOX.

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WESTLAKE PUMP STATION

FRANKLIN COUNTY, VIRGINIA

PUMP STATION POWER & LIGHTING  
PLANS, SECTIONS, ELECTRICAL  
SPECIFICATIONS & NOTES

DATE: 01-10-08

DRAWN: RNM/WKH

CHECKED: BCP

REVISIONS

NO. DATE

1 03-04-08

SCALES

HORIZ: AS SHOWN

VERT: AS SHOWN

COMM. NO.

K08007

SHEET NO.

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