

SITE PLAN - ELECTRICAL

30' 15' 0' 30' 60'

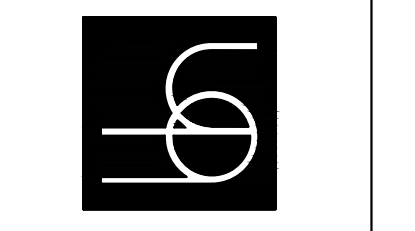
GRAPHIC SCALE: 1" = 30'-0"

NOTE:

1. PROVIDE BUILDING LIGHTING PROTECTION. SYSTEM SHALL INCLUDE AIR TERMINALS, DOWN CONDUCTORS, CONDUITS, GROUND RODS, ETC. PROVIDE SHOP DRAWINGS. SYSTEM SHALL BE UL CERTIFIED OR EQUIVALENT. SEE SPECIFICATIONS.

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PEGASUS TECHNOLOGIES BUSINESS OPERATIONS CENTER

932 PILOT DRIVE GREEN COVE SPRINGS, FL 32043

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 NAMIR A. 31967
 HADDAD P.E.

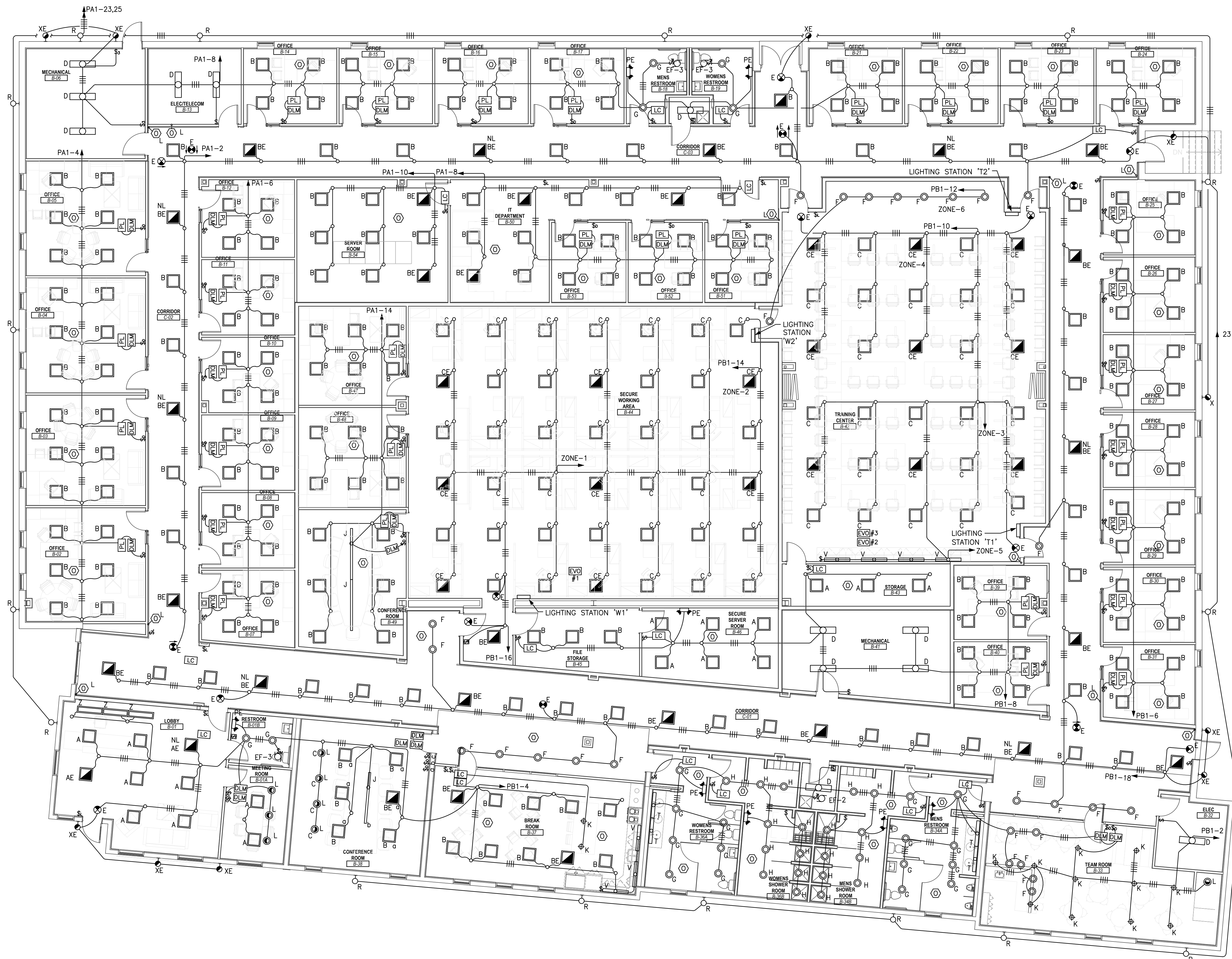
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Date	Revision	Seal / Signature
11/20/2019	1 ISSUED FOR BID	

ELECTRICAL SITE PLAN

DATE: 01/23/19
 D.B.: AW / WH
 C.B.: NAH
 JOB NO: 17072

E1.1



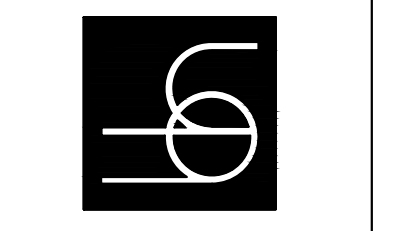
FLOOR PLAN - LIGHTING

8' 6' 4' 2' 0' 8' 16'

GRAPHIC SCALE 1/8" = 1'-0"

NOTE:

- ① PROVIDE 0-10 V DIMMING CONTROL CABLE.
- ② SEE DRAWING E5.6 FOR LIGHTING CONTROL DETAILS.



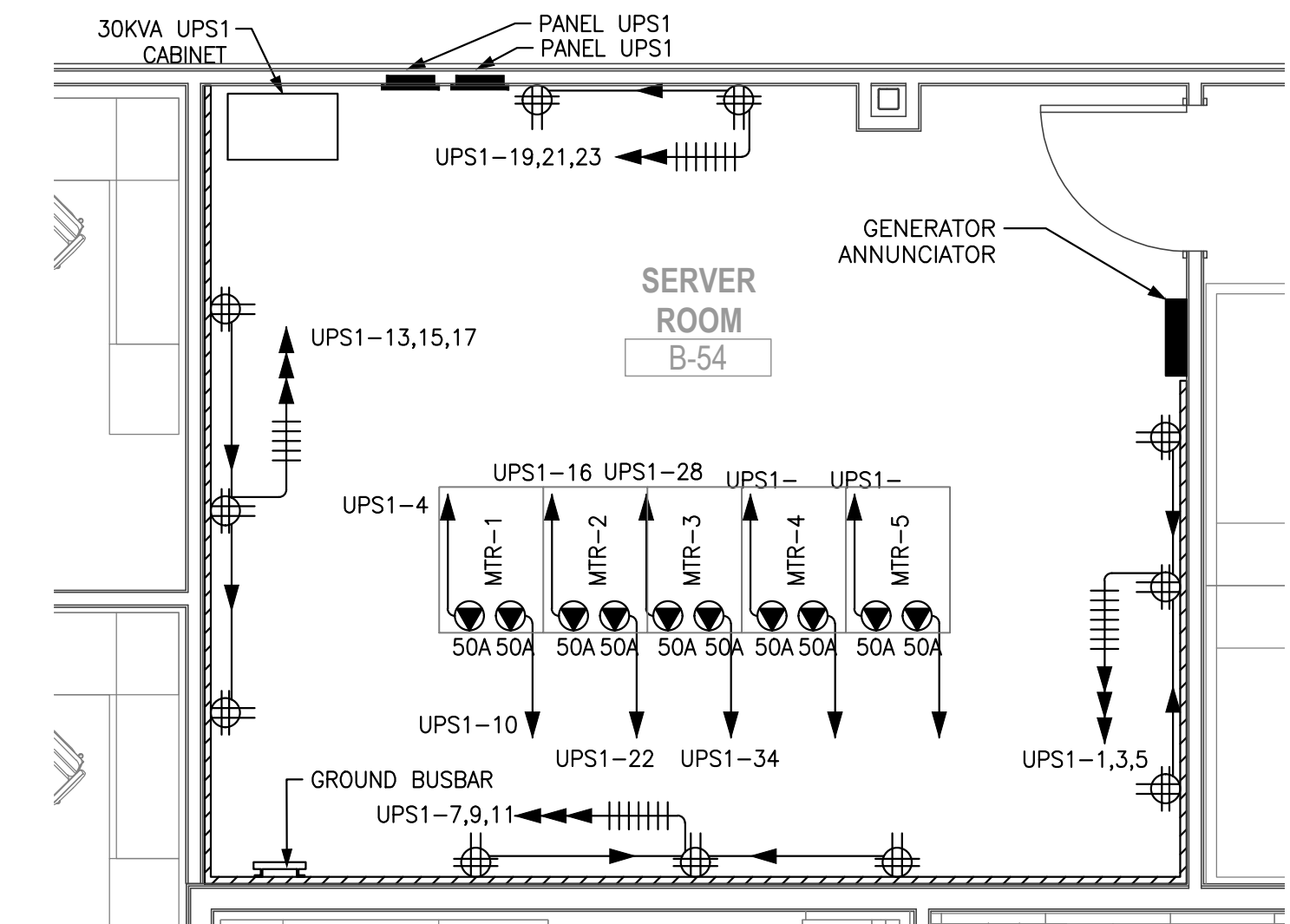
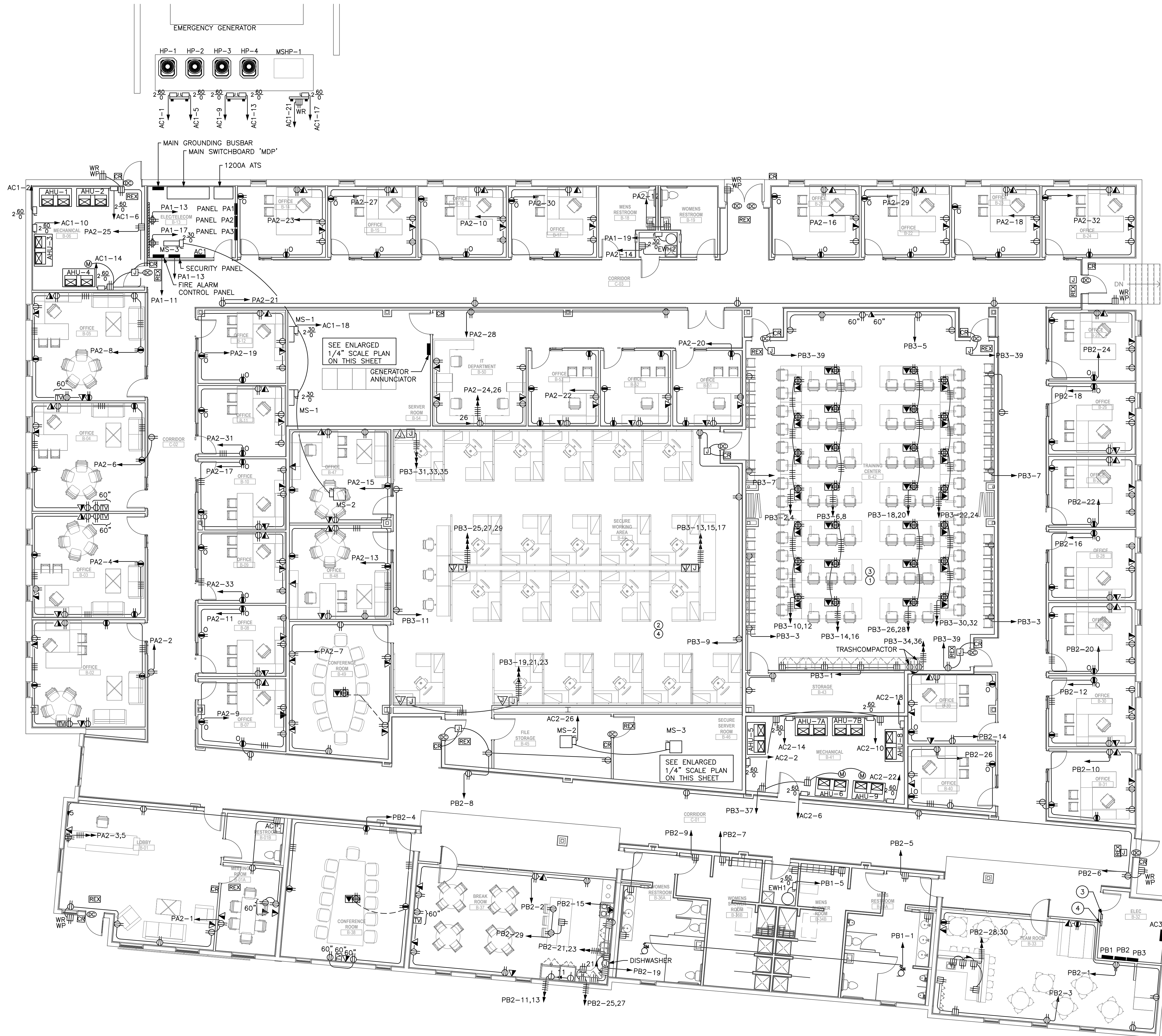
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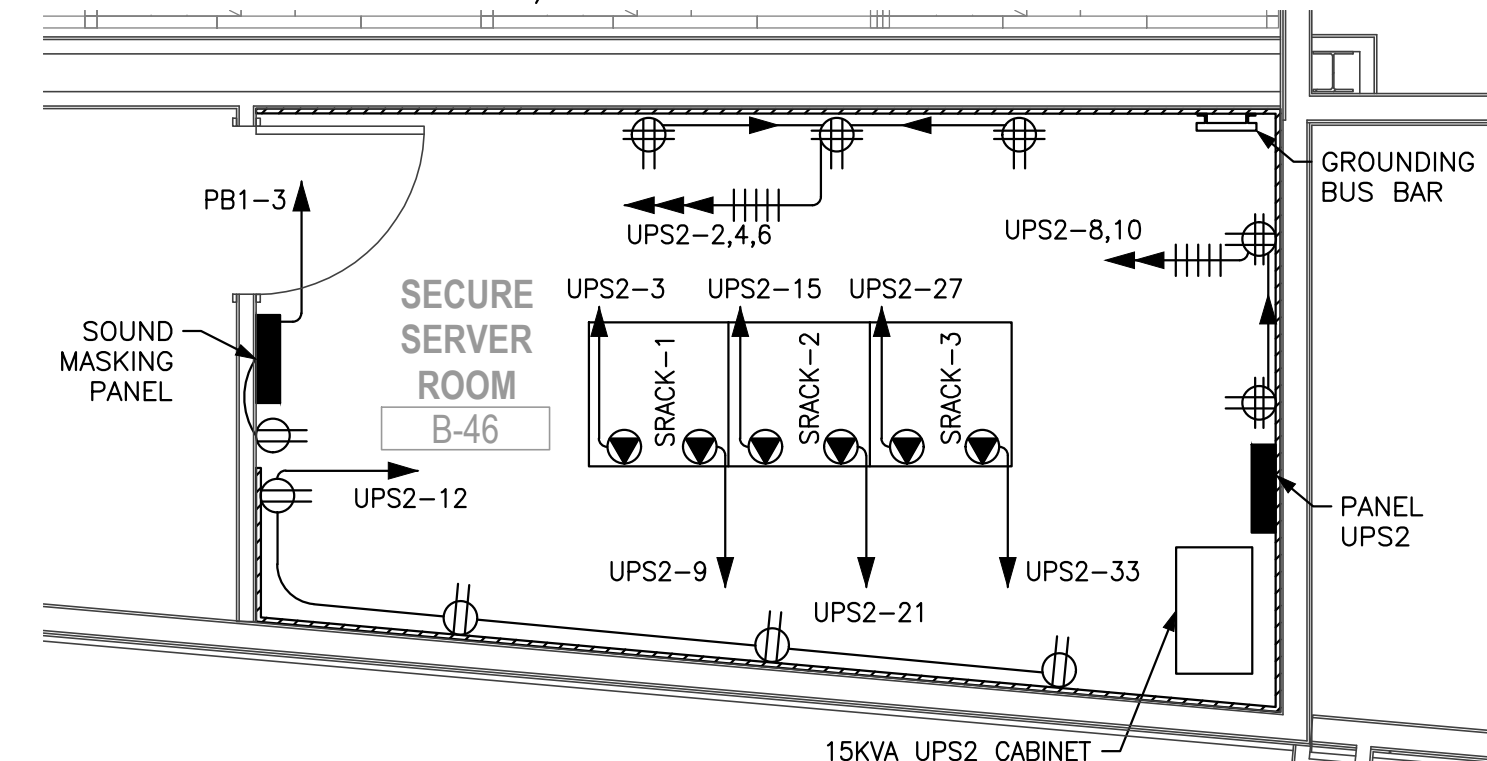
ELECTRICAL FLOOR PLAN - LIGHTING

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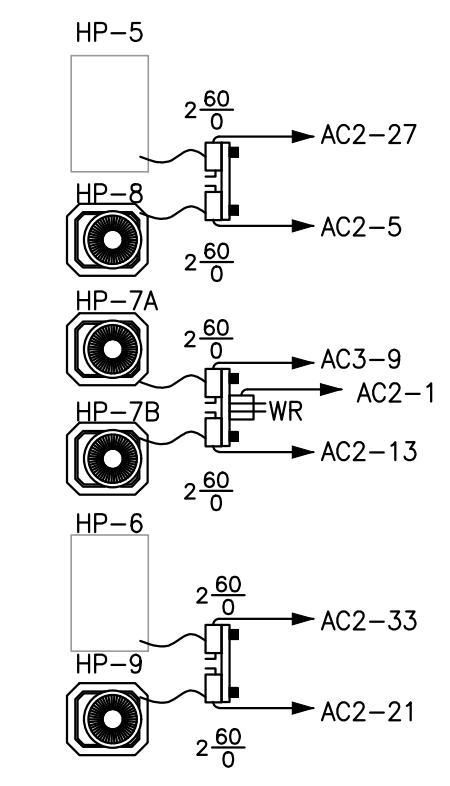
ENLARGED SERVER ROOM LAYOUT

GRAPHIC SCALE: 1/4" = 1'-0"



ENLARGED SECURE SERVER ROOM LAYOUT

GRAPHIC SCALE: 1/4" = 1'-0"



NOTES:

- ① 50% OF OUTLETS SHALL BE CONTROLLED BY OCCUPANCY CONTROL. PROVIDE REQUIRED QUANTITIES OF PLUG LOAD CONTROLLERS. (1) CONTROLLERS SHALL CONTROL CIRCUITS 2,5,6,7,18,22 AND (1) CONTROLLER SHALL CONTROL CIRCUITS 1,3,10,14,26,30. RECEPTACLES SHALL BE FACTORY LABELED FOR OCCUPANCY CONTROL.
- ② 50% OF OUTLETS SHALL BE CONTROLLED BY OCCUPANCY CONTROL. PROVIDE REQUIRED QUANTITIES OF PLUG LOAD CONTROLLERS. CONTROL CIRCUITS 9,11,13,19,25,31. RECEPTACLES SHALL BE FACTORY LABELED FOR OCCUPANCY CONTROL.
- ③ PROVIDE (2) 6 POLE CONTACTOR FOR PLUG LOAD IN TRAINING CENTER. SEE LIGHTING CONTROL DIAGRAM, SHEET E5.6
- ④ PROVIDE (1) 6 POLE CONTACTOR FOR PLUG LOAD IN WORKING AREA. SEE LIGHTING CONTROL DIAGRAM, SHEET E5.6.
- ⑤ ALL POWER AND DATA OUTLETS IN THE SECURE AREAS SHALL BE FIRE RATED. (COVER WITH THE RATED PUTTY). SEE DETAIL ON SHEET E1.0. THIS IS REQUIRED TO REDUCE SPEECH TRANSFERENCE TO NON SECURED AREAS.

FLOOR PLAN - POWER & SYSTEMS

8' 6' 4' 2' 0' 8' 16'
GRAPHIC SCALE 1/8" = 1'-0"

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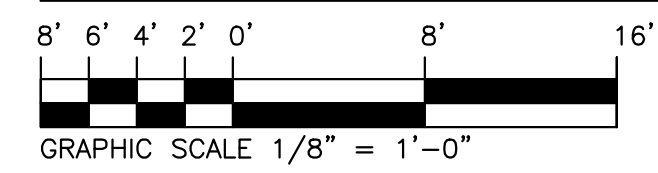
ELECTRICAL FLOOR PLAN - POWER AND SYSTEMS

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E3.1



FLOOR PLAN - COMMUNICATIONS PATHWAY



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ELECTRICAL FLOOR PLAN - COMMUNICATIONS PATHWAY

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E3.2

FIRE ALARM SYSTEM NOTES:

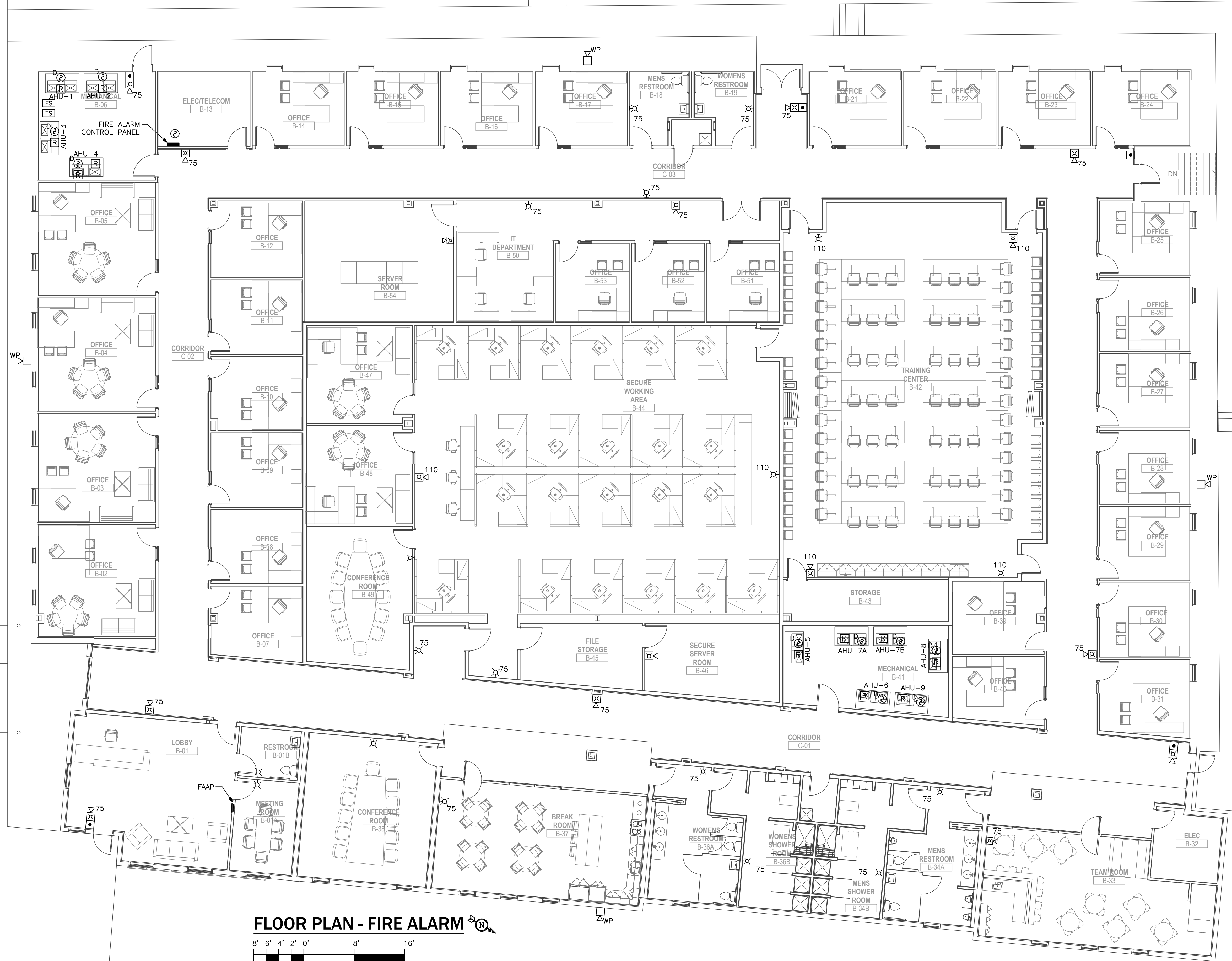
- CONTRACTOR SHALL PROVIDE LABELS FOR ALL FIRE ALARM DEVICES (ONE LABEL FOR EACH FIRE ALARM DEVICE). LABELS SHALL BE CLEARLY VISIBLE FROM THE GROUND AND IDENTIFY IDNET CIRCUIT AND DEVICE ADDRESS.
- AT COMPLETION OF FIRE ALARM SYSTEM PROGRAMMING, PROVIDE (3) COPIES OF PROGRAM PRINT OUT. INCLUDE PRINT OUT AS PART OF OPERATION AND MAINTENANCE MANUAL.
- ALL FIRE ALARM WIRING SHALL BE COLOR CODED IN ACCORDANCE TO THE FOLLOWING TABLE:

DATA	218-18-1-1STP 1 PR TWISTED SHIELDED CABLE	COLOR
24vdc POWER	RED-BLACK	
HORN-STROBE	WHITE-PURPLE	
A/C SHUT DOWN	ORANGE-BROWN	
CABLE JACKET (WHERE APPLICABLE)	RED	
- PROVIDE SURGE PROTECTORS FOR FIRE ALARM CABLES LEAVING OR ENTERING A BUILDING. ALL EXTERIOR DEVICE'S CABLES SHALL BE PROTECTED BY SURGE SUPPRESSORS.
- FIRE ALARM SHOP DRAWINGS: SUBMIT TO STATE FIRE MARSHAL AND CODE ENFORCEMENT.
- PROVIDE SHUTDOWN RELAY AT ALL AHU'S AND SUPPLY FANS. ACTIVATION OF FIRE ALARM SYSTEM SHALL SHUT DOWN ALL AHU'S AND SUPPLY FANS. FIELD LOCATE AHU'S AND SUPPLY FANS.
- WHERE NAC'S ARE REQUIRED IN THE BUILDING, PROVIDE A SMOKE DETECTOR AT EACH LOCATION.
- CONTRACTOR PERFORMING FIRE ALARM WORK MUST BE QUALIFIED AS REQUIRED BY FLORIDA STATUTES CHAPTER 489 AND RULE CHAPTER 6168 OF FLORIDA ADMINISTRATIVE CODE. DESIGNATED PERSONNEL MUST HAVE FIRE ALARM SYSTEM AGENT IDENTIFICATION CARD IN THEIR POSSESSION AT ALL TIMES.
- ALL FIRE ALARM PULL STATIONS MUST BE LOCATED WITHIN 5 FEET OF DOORS. FOR LOCATIONS CONSTRUCTED WITH WINDOWS AND/OR GLASS, THE CONTRACTOR SHALL CONSTRUCT A CUSTOM BACKPLATE. BACKPLATE SHALL BE METAL WITH NO SHARP EDGES. GAUGE OF METAL SHALL BE OF SUFFICIENT THICKNESS TO PROVIDE SECURE/STATIONARY MOUNTING.

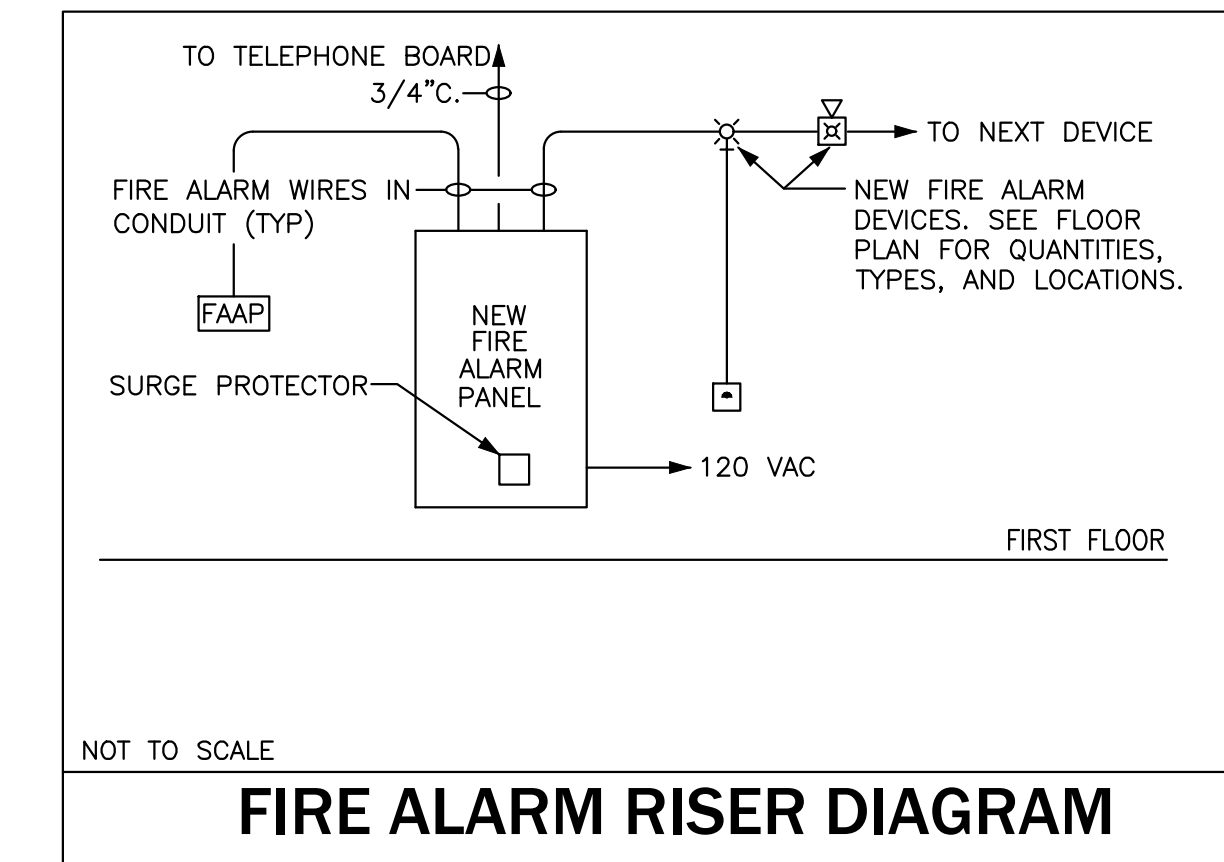
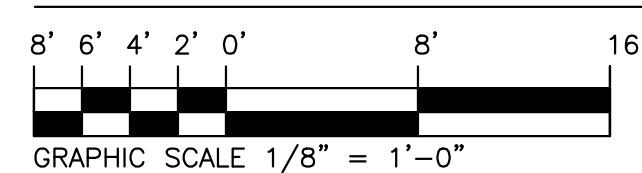
EMERGENCY GENERATOR

FIRE ALARM LEGEND

- ① CEILING MOUNTED HEAT DETECTOR.
- F.A.C.P. DENOTES FIRE ALARM CONTROL PANEL.
- F.A.A.P. DENOTES FIRE ALARM ANNUNCIATOR PANEL.
- ☐ FLUSH MOUNTED MANUAL FIRE ALARM PULL STATION, 46 INCH MOUNTING HEIGHT.
- ⊠ SEMI-FLUSH MOUNTED FIRE ALARM AUDIO/VISUAL WARNING DEVICE, 80 INCH (TO BOTTOM OF DEVICE) MOUNTING HEIGHT. 110 INDICATES 110 CANDELA STROBE. UTILIZE 75 CANDELA IN SMALL ROOMS AND CORRIDORS. USE 110 CANDELA IN ROOMS LARGER THAN 30' IN WIDTH OR LENGTH.
- ② DUCT MOUNTED SMOKE DETECTOR, MOUNTED IN A/C DUCT. SEE MECHANICAL DRAWING FOR MOUNTING LOCATION AND QUANTITY.
- RL DUCT MOUNTED SMOKE DETECTOR REMOTE INDICATOR WITH RESET/TEST CAPABILITY, FLUSH MOUNTED IN CEILING. LABEL COVERPLATE TO INDICATE RESPECTIVE A/C UNIT.
- ⊙ CEILING MOUNTED SMOKE DETECTOR.
- R AIR CONDITIONING/HEAT PUMP SHUT DOWN RELAY.
- FS FIRE ALARM SPRINKLER FLOW SWITCH.
- TS FIRE ALARM SPRINKLER VALVE TAMPER SWITCH.
- ⊗ SEMI-FLUSH FIRE ALARM VISUAL WARNING DEVICE, WALL MOUNTED. 80 INCH MOUNTING HEIGHT. (FROM FLOOR TO BOTTOM OF DEVICE)



FLOOR PLAN - FIRE ALARM

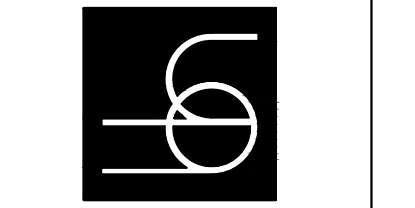


FIRE ALARM RISER DIAGRAM

	FIRE ALARM OUTPUT SIGNAL									
	SIGNAL	DISPLAY AT FACP	ACTIVATED IDENTIFICATION							
ACTIVATE COMMON ALARM LED	X	X								
ACTIVATE COMMON ALARM AUDIBLE SIGNAL	X	X								
ACTIVATE COMMON SUPERVISORY LED	X	X								
ACTIVATE COMMON SUPERVISORY AUDIBLE SIGNAL	X	X								
ACTIVATE COMMON TROUBLE LED			X	X						
ACTIVATE COMMON TROUBLE AUDIBLE SIGNAL			X	X						
DISPLAY DEVICE LOCATION AND DESCRIPTION			X	X						
ACTIVATE NOTIFICATION DEVICES			X	X						
ACTIVATE LOCAL ALARM			X	X						
ACTIVATE DESCRIPTION OF ALARM OF SIGNAL TO			X	X						
ACTIVATE DESCRIPTION OF SUPERVISORY SIGNAL TO			X	X						
ACTIVATE DESCRIPTION OF TROUBLE SIGNAL TO			X	X						
SHUT DOWN HVAC UNITS			X	X						

- SYSTEM TEST REQUIREMENTS**
- FIELD TESTS SHALL BE WITNESSED BY AUTHORITIES HAVING JURISDICTION.
 - PERFORM THE FOLLOWING TESTS AND INSPECTIONS WITH THE ASSISTANCE OF A FACTORY-AUTHORIZED SERVICE REPRESENTATIVE.
 - VISUAL INSPECTION: CONDUCT VISUAL INSPECTION PRIOR TO TESTING.
 - SYSTEM TESTING: COMPLY WITH THE "TEST METHODS" TABLE IN THE "TESTING" SECTION OF THE "INSPECTION, TESTING AND MAINTENANCE" CHAPTER IN NFPA 72.
 - TEST AUDIBLE APPLIANCES FOR THE PUBLIC OPERATING MODE ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS. PERFORM THE TEST USING A PORTABLE SOUND-LEVEL METER COMPLYING WITH TYPE 2 REQUIREMENTS IN ANSI S1.4.
 - TEST AUDIBLE APPLIANCES FOR THE PRIVATE OPERATING MODE ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - TEST VISIBLE APPLIANCES FOR THE PUBLIC OPERATING MODE ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - FACTORY-AUTHORIZED SERVICE REPRESENTATIVE SHALL PREPARE THE "FIRE ALARM SYSTEM RECORD OF COMPLETION" IN THE "DOCUMENTATION" SECTION OF THE "FUNDAMENTALS" CHAPTER IN NFPA 72 AND THE "INSPECTION AND TESTING FORM" IN THE "RECORDS" SECTION OF THE "INSPECTION, TESTING AND MAINTENANCE" CHAPTER IN NFPA 72.

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E4.1

PANEL 'UPS1'											
FLUSH MTD. CIRCUIT BREAKER TYPE EATON TYPE 124100028-003					120/208 VOLTS 3 PHASE 4 WIRE (3) 110 AMP CIRCUIT BREAKERS (MAINTENANCE BYPASS. SEE WIRING DIAGRAM)						
CKT NO.	DESIGNATION	CIRCUIT			CIRCUIT BREAKER	KVA	CIRCUIT			DESIGNATION	CKT NO.
		WIRE	GND	COND			POLE	TRIP	WIRE		
1	REC - MTR ROOM	12			1	20	1.0				2
3	REC - MTR ROOM	12	12	3/4	1	20	1.0				4
5	REC - MTR ROOM	12			1	20	1.0				6
7	REC - MTR ROOM	12			1	20	1.0				8
9	REC - MTR ROOM	12	12	3/4	1	20	1.0				10
11	REC - MTR ROOM	12			1	20	1.0				12
13	REC - MTR ROOM	12			1	20	1.0				14
15	REC - MTR ROOM	12	12	3/4	1	20	1.0				16
17	REC - MTR ROOM	12			1	20	1.0				18
19	REC - MTR ROOM	12			1	20	1.0				20
21	REC - MTR ROOM	12	12	3/4	1	20	1.0				22
23	REC - MTR ROOM	12			1	20	1.0				24
25	REC - MTR ROOM	12			1	20	1.0				26
27	REC - MTR ROOM	12	12	3/4	1	20	1.0				28
29	REC - MTR ROOM	12			1	20	1.0				30
31	SPACE										32
33	SPACE										34
35	SPACE										36
TOTAL KVA		31.8			10,000 AMP. RMS. SYMMETRICAL SHORT CIRCUIT CURRENT RATING						

PANEL 'UPS1A'											
FLUSH MTD. CIRCUIT BREAKER TYPE EATON TYPE 124100028-003					120/208 VOLTS 3 PHASE 4 WIRE 125 AMP MAIN LUGS ONLY						
CKT NO.	DESIGNATION	CIRCUIT			CIRCUIT BREAKER	KVA	CIRCUIT			DESIGNATION	CKT NO.
		WIRE	GND	COND			POLE	TRIP	WIRE		
1											2
3	REC. SERVER-4	10	10	1/2	1	50	2.8				4
5											6
7											8
9	REC. SERVER-4	10	10	1/2	1	50	2.8				10
11											12
13	SPACE										14
15	SPACE										16
17	SPACE										18
19	SPACE										20
21	SPACE										22
23	SPACE										24
25	SPACE										26
27	SPACE										28
29	SPACE										30
31	SPACE										32
33	SPACE										34
35	SPACE										36
TOTAL KVA		16.2			10,000 AMP. RMS. SYMMETRICAL SHORT CIRCUIT CURRENT RATING						

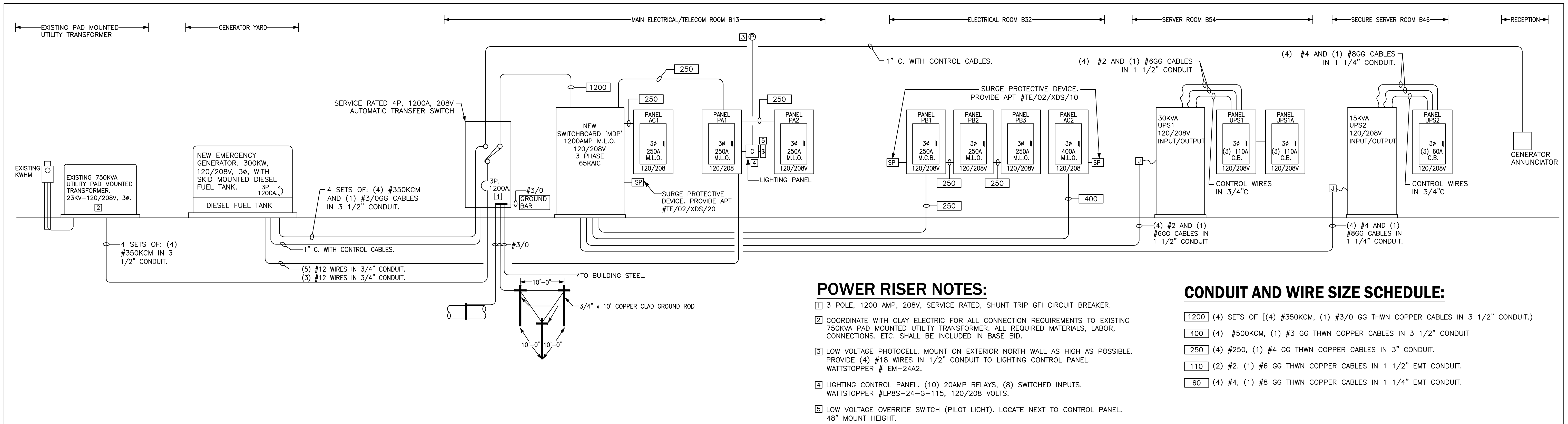
PANEL 'UPS2'											
FLUSH MTD. CIRCUIT BREAKER TYPE EATON TYPE 124100028-003					120/208 VOLTS 3 PHASE 4 WIRE (3) 60 AMP CIRCUIT BREAKERS (MAINTENANCE BYPASS)						
CKT NO.	DESIGNATION	CIRCUIT			CIRCUIT BREAKER	KVA	CIRCUIT			DESIGNATION	CKT NO.
		WIRE	GND	COND			POLE	TRIP	WIRE		
1											2
3	REC. SRACK-1	10	10	1/2	1	50	2.8				4
5											6
7											8
9	REC. SRACK-1	10	10	1/2	1	50	2.8				10
11											12
13											14
15	REC. SRACK-2	10	10	1/2	1	50	2.8				16
17											18
19											20
21	REC. SRACK-2	10	10	1/2	1	50	2.8				22
23											24
25											26
27	REC. SRACK-3	10	10	1/2	1	50	2.8				28
29											30
31											32
33	REC. SRACK-3	10	10	1/2	1	50	2.8				34
35											36
TOTAL KVA		30.8			10,000 AMP. RMS. SYMMETRICAL SHORT CIRCUIT CURRENT RATING						

PANEL SCHEDULE NOTES:

- ① PROVIDE 50A, 120V, RECESSED CEILING MOUNTED TWIST LOCK RECEPTACLE. PROPERLY SUPPORT FROM BUILDING STRUCTURE.

SWITCHBOARD 'MDP'										
SURFACE MTD. CIRCUIT BREAKER TYPE EATON					120/208 VOLTS 3 PHASE 4 WIRE 1200 AMP MAIN LUGS ONLY					
CKT	POLE	TRIP	FR	KVA	WIRE	GRND	COND	DESIGNATION		
1	3	150							SPARE	
2	3	250		71	250	4	3		PANEL AC1	
3	3	400		126	500	3	3 1/2		PANEL AC2	
4	3	150							SPARE	
5	3	250		62	250	4	3		PANELS PA1, PA2	
6	3	250		81	250	4	3		PANELS PB1, PB2, PB3	
7	3	110		30.0	2	6	1 1/2		UPS1	
8	3	60		15.0	4	8	1 1/4		UPS2	
9	3	30			8	8	3/4		SURGE PROTECTIVE DEVICE	
10	3	225							EQUIPPED SPACE	
11	3	225							EQUIPPED SPACE	
12	3	225							EQUIPPED SPACE	
13	3	225							EQUIPPED SPACE	
14	3	225							EQUIPPED SPACE	
TOTAL KVA		397.0			65,000 AMP. RMS. SYMMETRICAL SHORT CIRCUIT CURRENT RATING					

LOAD CALCULATIONS	
ELECTRICAL SERVICE	
ITEM	LOAD KVA
LIGHTING	40.0
RECEPTACLES	100.0
HEAT (VAV'S)	50.0
AHU-FANS	15.0
EXHAUST FANS	2.0
WATER HEATERS	9.0
MISC	114.0
ESTIMATED CONNECTED LOAD 330.0	
TOTAL ESTIMATED LOAD CURRENT AT 120/208V 916 AMPS	
ELECTRICAL SERVICE 1200 AMPS	



NOT TO SCALE

POWER RISER DIAGRAM

BHIDE & HALL ARCHITECTS, P.A.
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ELECTRICAL RISER DIAGRAMS

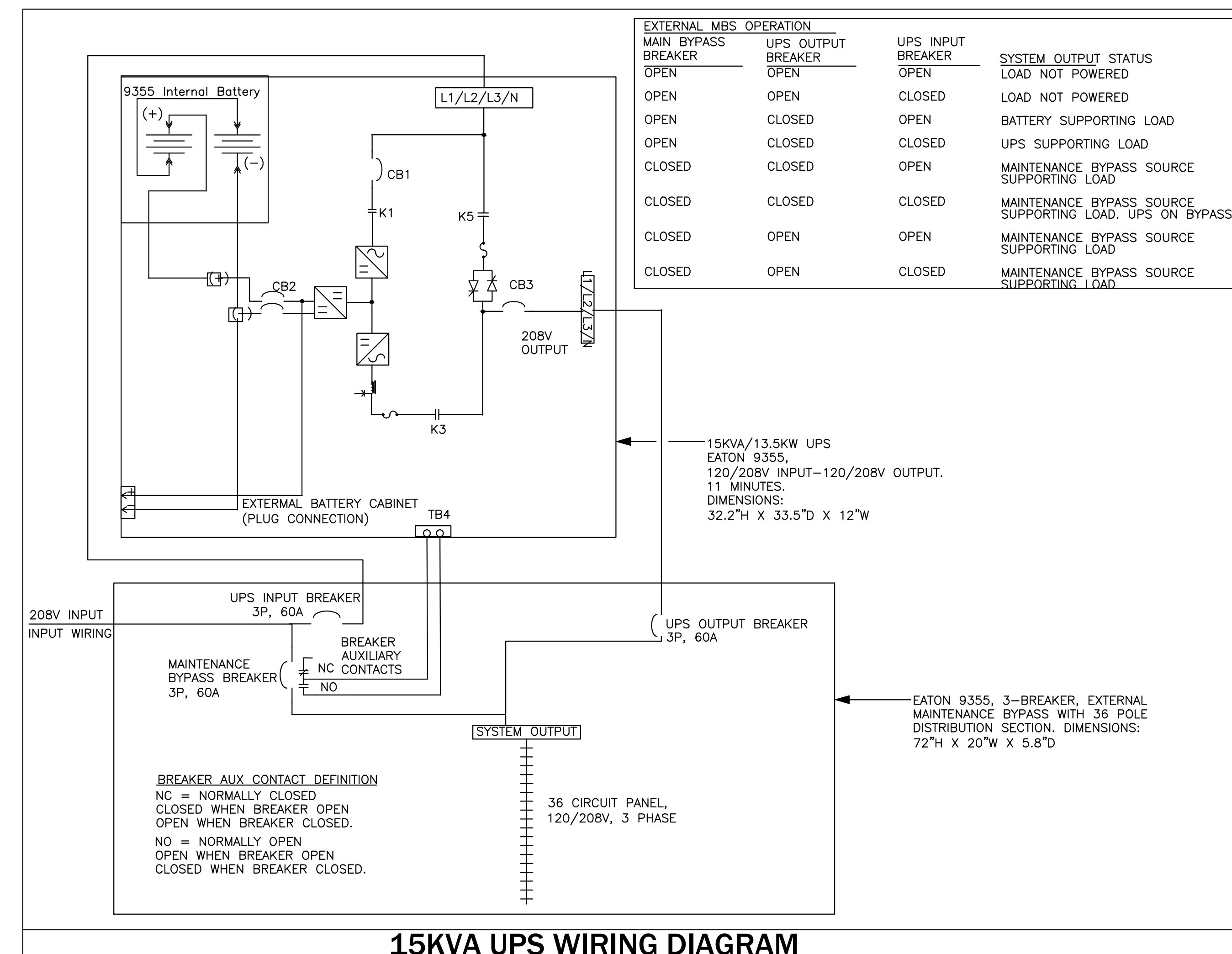
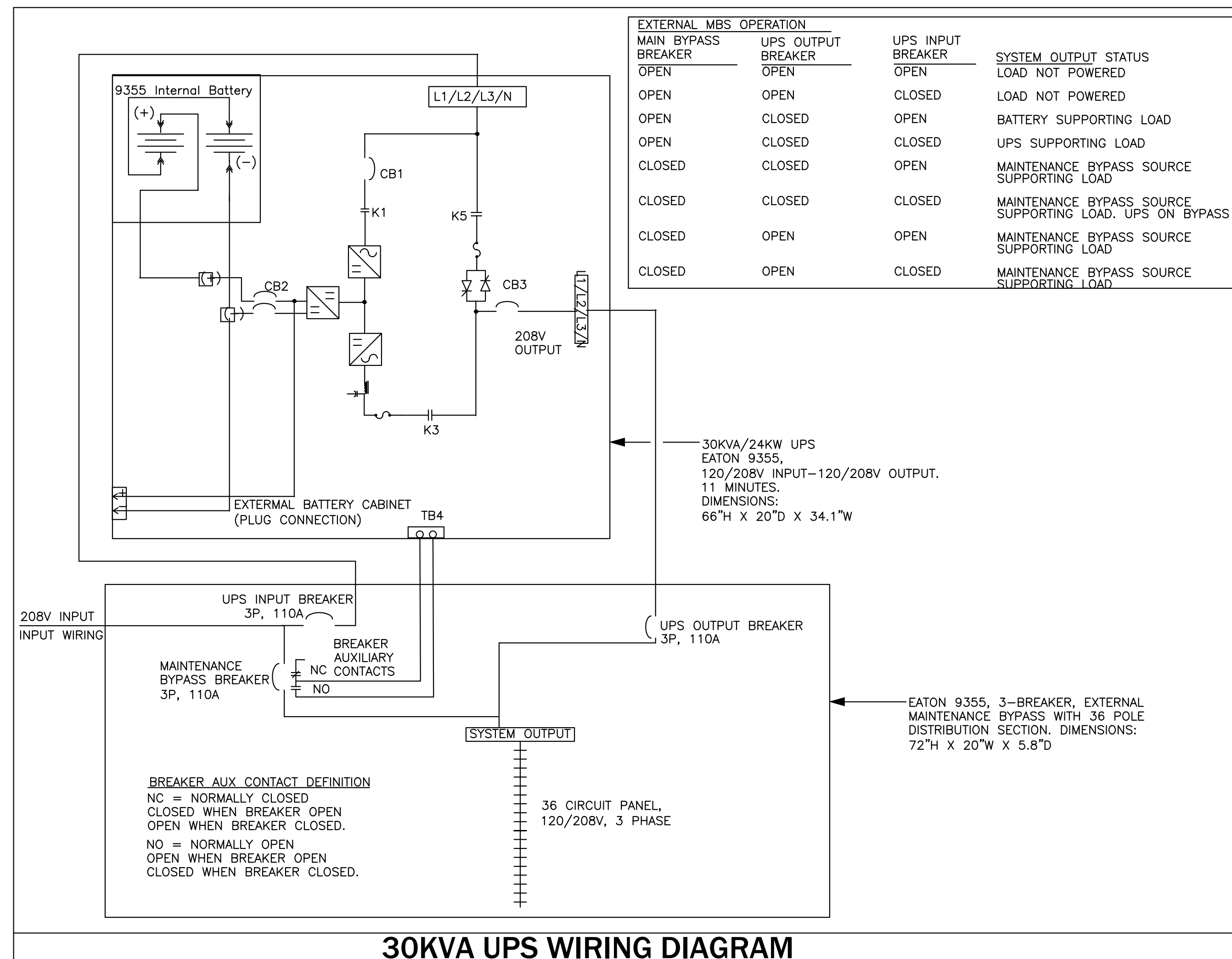
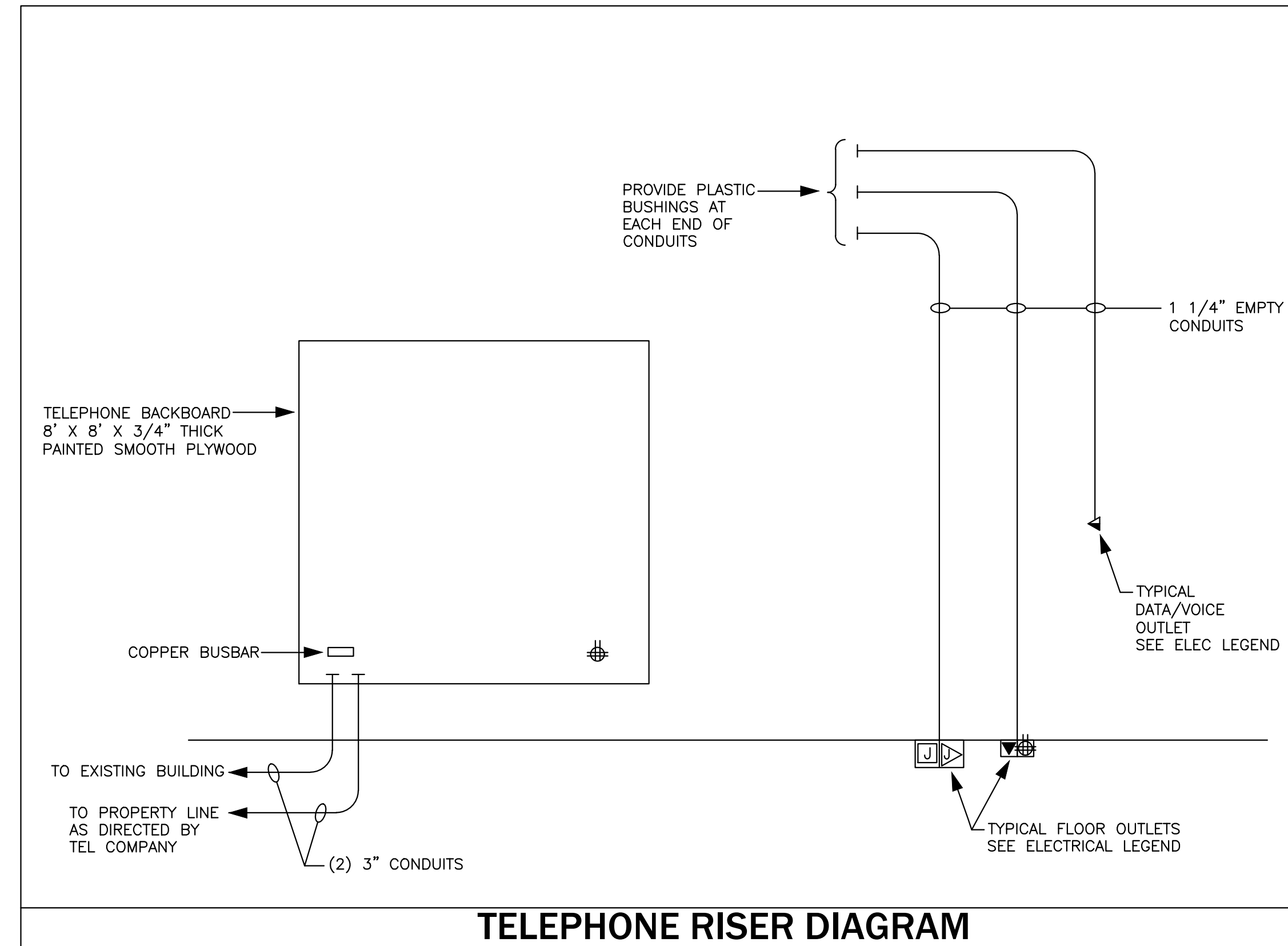
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PANEL AC1										120/208 VOLTS 3 PHASE 4 WIRE												
SURFACE MTD. CIRCUIT BREAKER TYPE										225 AMP MAIN LUGS ONLY												
CKT NO.	DESIGNATION	CIRCUIT			CIRCUIT BREAKER	KVA	CIRCUIT			DESIGNATION	CKT NO.	DESIGNATION	CIRCUIT			CIRCUIT BREAKER	KVA	CIRCUIT			DESIGNATION	CKT NO.
		WIRE	GND	COND			POLE	TRIP	TRIP				POLE	COND	GND			WIRE	WIRE	GND		
1	HP-1	8	10	1	2	40	4.9	11.2	60	2	1	10	6	AHU-1	2							4
3																						6
5	HP-2	8	10	1	2	40	4.9	11.2	60	2	1	10	6	AHU-2	6							8
7																						10
9	HP-3	8	10	1	2	40	4.9	11.2	60	2	1	10	6	AHU-3	8							12
11																						14
13	HP-4	8	10	1	2	40	4.9	11.2	60	2	1	10	6	AHU-4	14							16
15																						18
17	MSHP-1	8	10	1	2	40	4.9	0.9	15	2	1/2	12	12	MS-1/MS-1/MS-2	18							20
19																						22
21	REC - EXTERIOR	12	12	1/2	1	20	0.8							SPACE	22							24
23	SPARE													SPACE	24							26
25	SPARE													SPACE	26							28
27	SPARE													SPACE	28							30
29	SPARE													SPACE	30							32
31	SPARE													SPACE	32							34
33	SPARE													SPACE	34							36
35	SPARE													SPACE	36							38
37	SPARE													SPACE	38							40
39	SPARE													SPACE	40							42
41	SPARE													SPACE	42							
TOTAL KVA					71.0					22,000 AMP. RMS. SYMMETRICAL SHORT CIRCUIT CURRENT RATING												

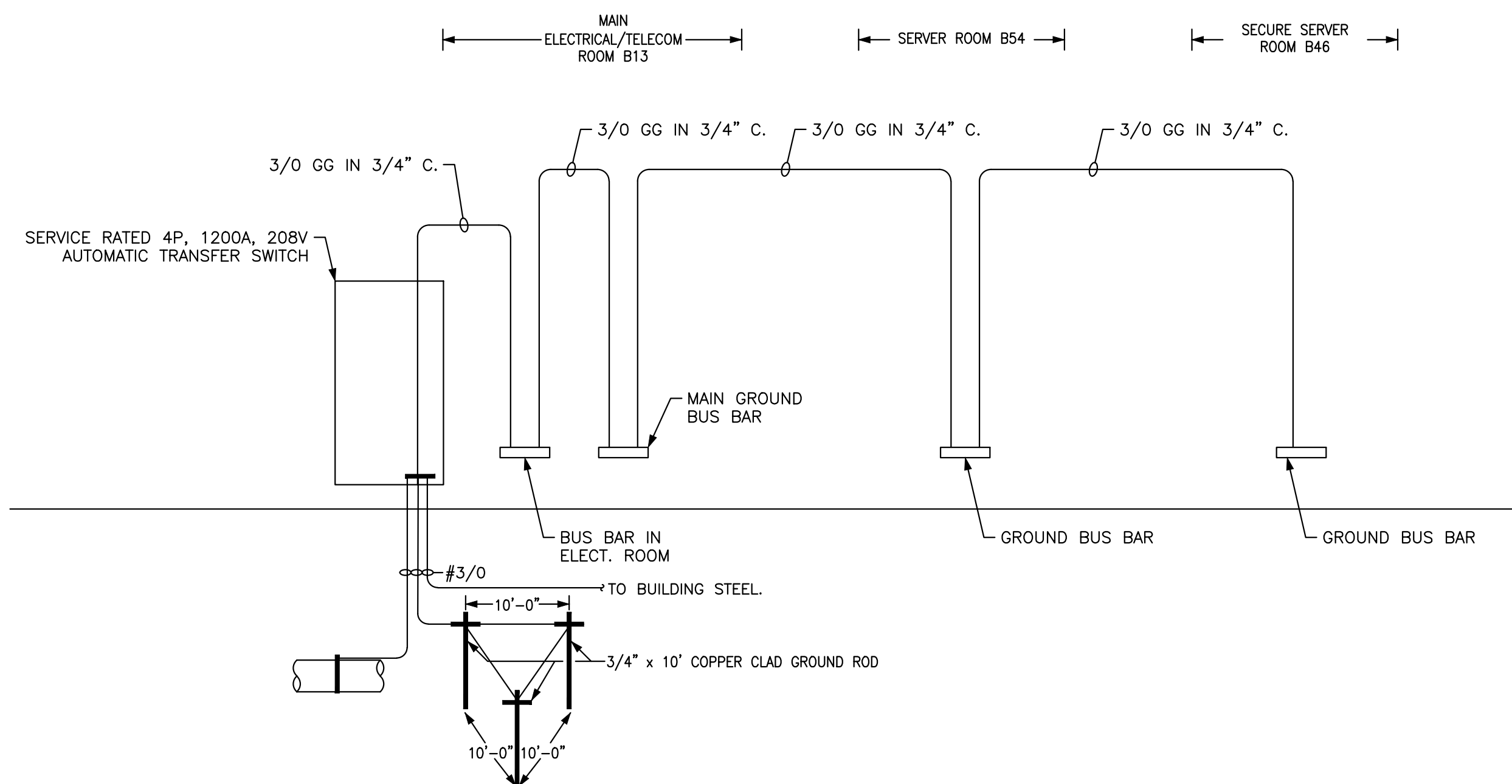
PANEL AC2										120/208 VOLTS 3 PHASE 4 WIRE												
SURFACE MTD. CIRCUIT BREAKER TYPE										400 AMP MAIN LUGS ONLY												
CKT NO.	DESIGNATION	CIRCUIT			CIRCUIT BREAKER	KVA	CIRCUIT			DESIGNATION	CKT NO.	DESIGNATION	CIRCUIT			CIRCUIT BREAKER	KVA	CIRCUIT			DESIGNATION	CKT NO.
		WIRE	GND	COND			POLE	TRIP	TRIP				POLE	COND	GND			WIRE	WIRE	GND		
1	REC - EXTERIOR	12	12	1/2	1	20	0.8	17.0	60	3	1	10	6	AHU-5	2							4
3	SPACE																					6
5	HP-8	8	10	1	2	40	4.9															8
7														SPACE	8							10
9	HP-7A	8	10	1	2	40	4.9	11.2	60	2	1	10	6	AHU-7B	10							12
11																						14
13	HP-7B	8	10	1	2	40	4.9	11.2	60	2	1	10	6	AHU-7A	14							16
15																						18
17	SPACE							11.2	60	2	1	10	6	AHU-8	18							20
19	SPACE																					22
21	HP-9	8	10	1	2	40	4.9	11.2	60	2	1	10	6	AHU-9	22							24
23																						26
25								0.6	15	2	1/2	12	12	MS-2/MS-3	26							28
27	HP-5	8	10	1	3	45	13.7															30
29																						32
31								16.0	60	3	1	10	6	AHU-6	32							34
33	HP-6	8	10	1	3	45	13.7															36
35														SPACE	36							38
37	SPACE													SPACE	38							40
39	SPACE													SPACE	40							42
41	SPACE													SPACE	42							
TOTAL KVA					126.2					22,000 AMP. RMS. SYMMETRICAL SHORT CIRCUIT CURRENT RATING												

PANEL PA1										FEED THROUGH LUGS												
SURFACE MTD. CIRCUIT BREAKER TYPE										120/208 VOLTS 3 PHASE 4 WIRE												
CKT NO.	DESIGNATION	CIRCUIT			CIRCUIT BREAKER	KVA	CIRCUIT			DESIGNATION	CKT NO.	DESIGNATION	CIRCUIT			CIRCUIT BREAKER	KVA	CIRCUIT			DESIGNATION	CKT NO.
		WIRE	GND	COND			POLE	TRIP	TRIP				POLE	COND	GND			WIRE	WIRE	GND		
1	LTG POLES	8		1	1/4	2	2.0	0.7	20	1	1/2	12	12	LTG CORRIDOR	2							4
3								0.8	20	1	1/2	12	12	LTG B7 - B12	4							6
5	LTG POLES	8		1	1/4	2	2.0	0.7	20	1	1/2	12	12	LTG B2 - B5	6							8
7								1.2	20	1	1/2	12	12	LTG B6, B13-B24	8							10
9	SPARE							0.8	20	1	1/2	12	12	LTG B50-B53	10							12
11	FIRE ALARM	12	12	1/2	1	20	1.0	0.8	20	1	1/2	12	12	LTG B54	12							14
13	SECURITY	12	12	1/2	1	20	1.0	0.8	20	1	1/2	12	12	LTG B47-B49	14							16
15	ABC - ELEC ROOM	12	12	1/2	1	20	1.0	1.0	20	1	3/4	12	12	GENERATOR CHARGER	16							18
17	ABC - ELEC ROOM	12	12	1/2	1	20	1.0	1.0	20	1				GENERATOR LTG	18							20
19	EW1H	10	10	3/4	2	40	4.5	2.0	20	2	1/2	10	10	GENERATOR HEATER	20							22
21																						24
23	LTG. WALL PACKS	10	10	1/2	1	20	1.0	1.0	20	1	3/4	12	12	FUEL FILTER	24							26
25	LTG. WALL PACKS	10	10	1/2	1	20	1.0	1.0	20	1				SPARE	26							28
27	CARD READER/GATE	12	12	3/4	1	20	1.0	1.0	20	1				SPARE	28							30
29	SPARE							1.0	20	1				SPARE	30							32
31	LTG POLES	8	8	1	1/4	2	2.0	1.0	20	1				SPARE	32							34
33								1.0	20	1				SPARE	34							36
35	SPARE							1.0	20	1				SPARE	36							38
37	SPARE																					40
39	SPARE							30	3	3/4	8	8	SURGE PROTECTIVE DEVICE	40								42
41	SPARE																					
TOTAL KVA					26.2					22,000 AMP. RMS. SYMMETRICAL SHORT CIRCUIT CURRENT RATING												

PANEL PA2										FEED THROUGH LUGS												
SURFACE MTD. CIRCUIT BREAKER TYPE										120/208 VOLTS 3 PHASE 4 WIRE												
CKT NO.	DESIGNATION	CIRCUIT			CIRCUIT BREAKER	KVA	CIRCUIT			DESIGNATION	CKT NO.	DESIGNATION	CIRCUIT			CIRCUIT BREAKER	KVA	CIRCUIT			DESIGNATION	CKT NO.
		WIRE	GND	COND			POLE	TRIP	TRIP				POLE	COND	GND			WIRE	WIRE	GND		
1	REC - MEET RM B-01A	12	12	1/2	1	20	1.4	1.2	20	1	1/2	12	12	REC - OFFICE B-02	2							4
3	REC - LOBBY B-01	12	12	3/4	1	20	0.8	1.0	20	1	1/2	12	12	REC - OFFICE B-03	4							6
5	REC - LOBBY B-01	12	12		1	20	0.8	1.2	20	1	1/2	12	12	REC - OFFICE B-04	6							8
7	REC - CONF RM B-49	12	12	1/2	1	20	1.2	1.0	20	1	1/2	12	12	REC - OFFICE B-05	8							10
9	REC - OFFICE B-07	12	12	1/2	1	20	1.0	0.8	20	1	1/2	12	12	REC - OFF B-16	10							12
11	REC - OFFICE B-08, B09	12	12	1/2	1	20	1.6	0.4	20	1	1/2	12	12	REC - RESTRM B-18,19	12							14
13	REC - OFFICE B-48	12	12	1/2	1	20	1.0	0.4	20	1	1/2	12	12	REC - CORR C-03	14							16
15	REC - OFFICE B-47	12	12	1/2	1	20	1.0	0.8	20	1	1/2	12	12	REC - OFFICE B-21	16							18
17	REC - OFF B-10	12	12	1/2	1	20	1.0	1.0	20	1	1/2	12	12	REC - OFFICE B-23	18							20
19	REC - OFFICE B-12	12	12	1/2	1	20	0.8	0.8	20	1	1/2	12	12	REC - OFFICE B-51	20							22
21	REC - CORR C-03	12	12	1/2	1	20	0.2	1.6	20	1	1/2	12	12	REC - OFFICE B-53	22							24
23	REC - OFF B-14	12	12	1/2	1	20	0.8	1.0	20	1	1/2	12	12	REC - IT DEPT B-50	24							26
25	REC - MECH B-06	12	12	1/2	1	20	0.8	1.0	20	1	1/2	12	12	REC - IT DEPT B-50	26							28
27	REC - OFFICE B-15	12	12	1/2	1	20	0.8	0.4	20	1	1/2	12	12	REC - IT DEPT B-50	28							30
29	REC - OFFICE B-22	12	12	1/2	1	20	0.8	0.8	20	1	1/2	12	12	REC - OFF B-17	30							32
31	REC - OFF B-11	12	12	1/2	1	20	1.0	0.8	20													

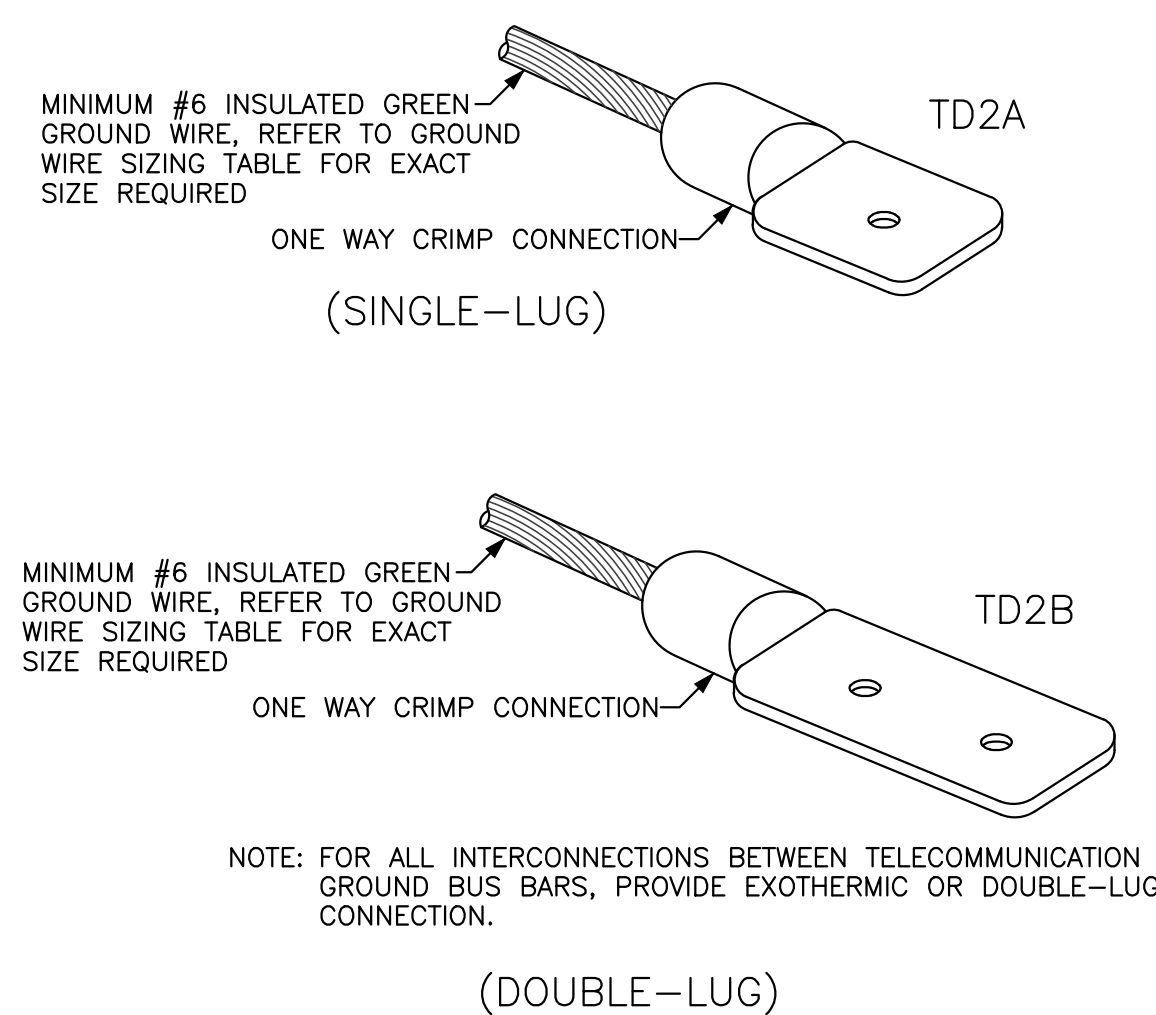


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1	11/20/2019	ISSUED FOR BID



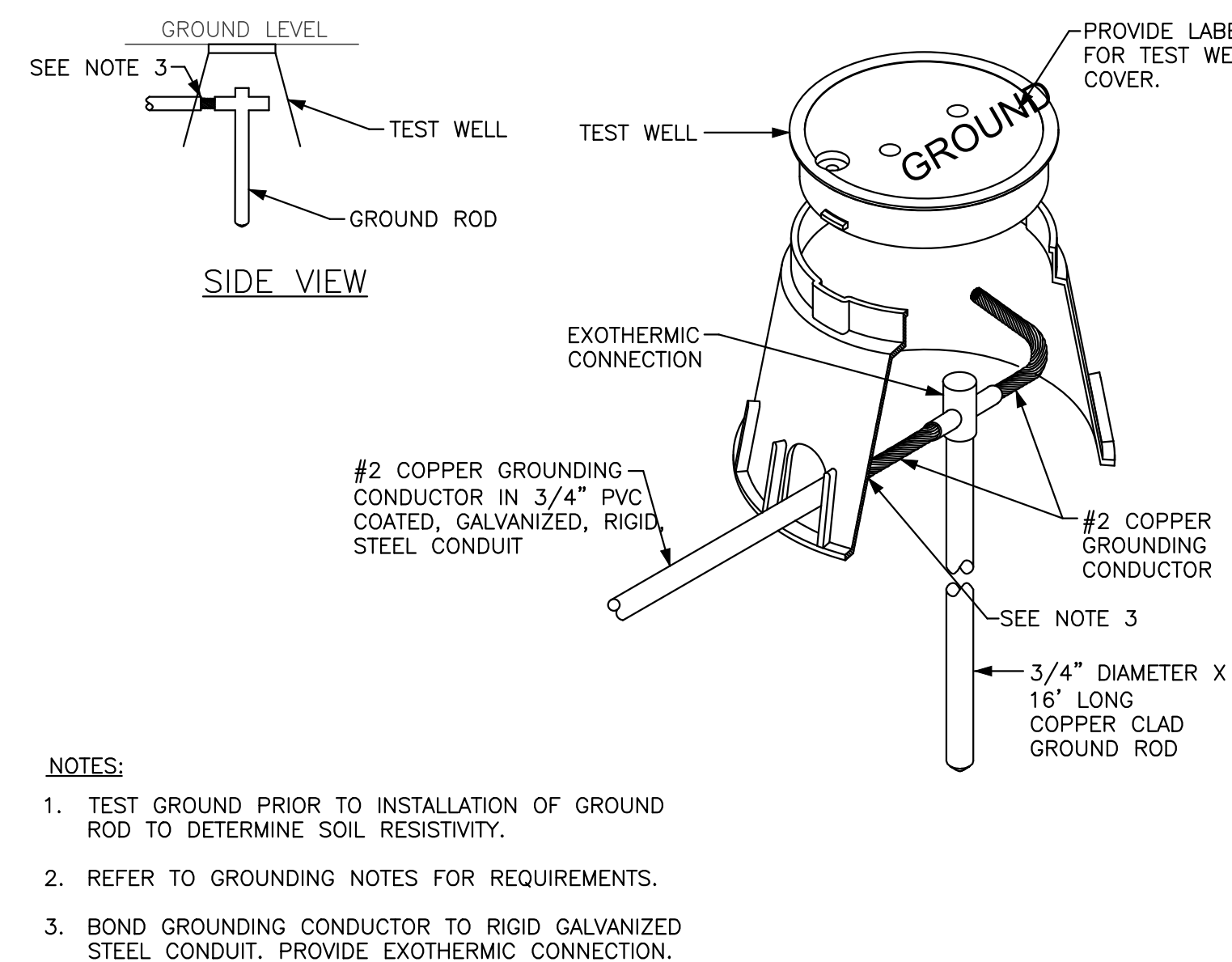
NOT TO SCALE

GROUNDING RISER DIAGRAM



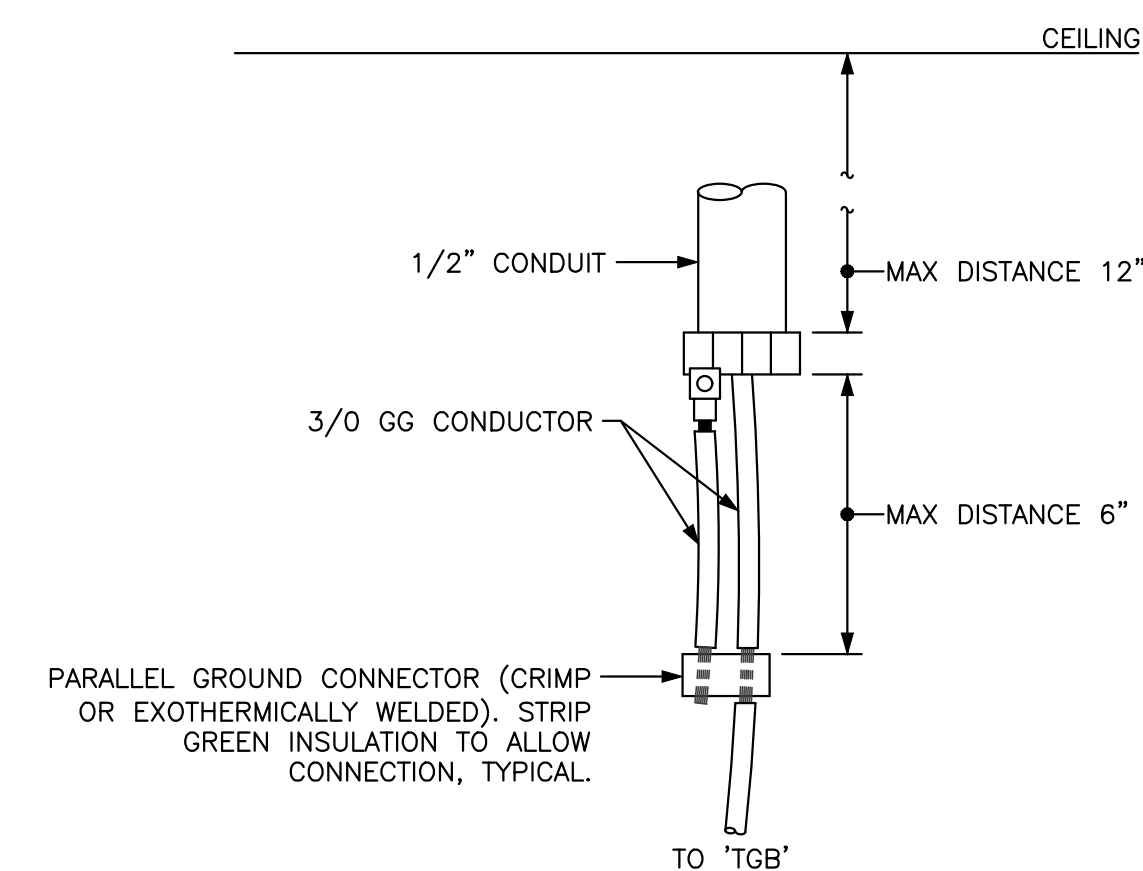
NOT TO SCALE

BONDING CONNECTOR DETAIL



NOT TO SCALE

GROUND ROD INSTALLATION DETAIL

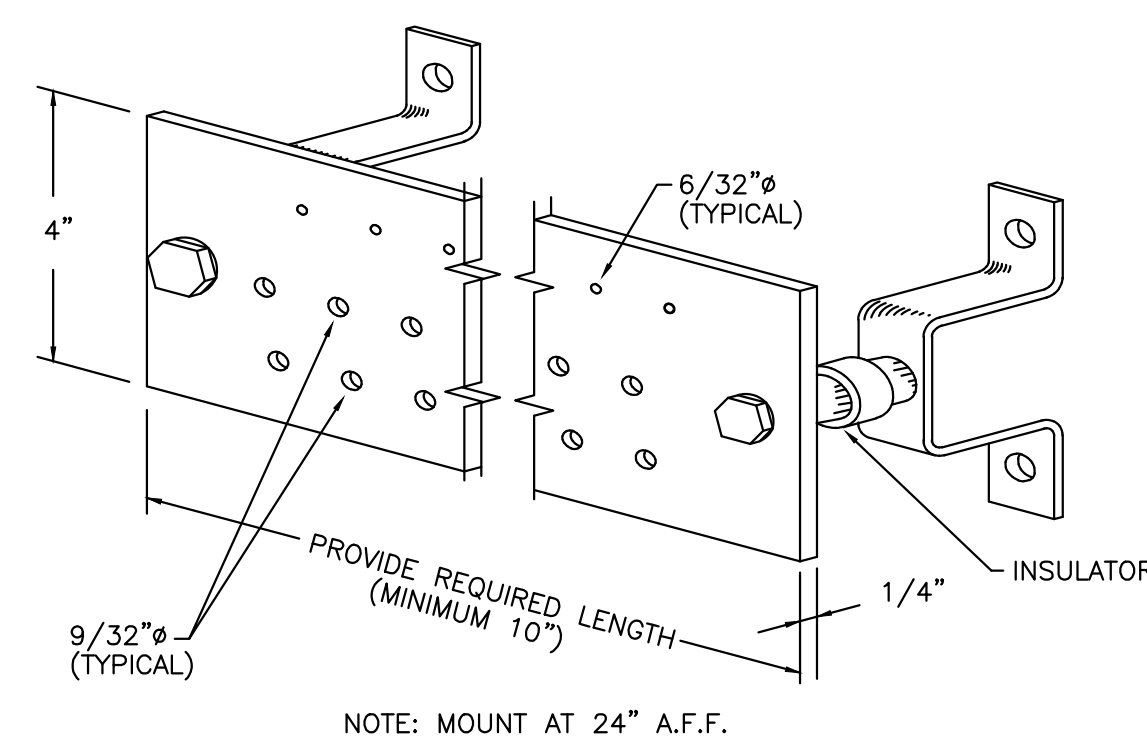


NOT TO SCALE

GROUND CONDUIT CONNECTION (TD4)

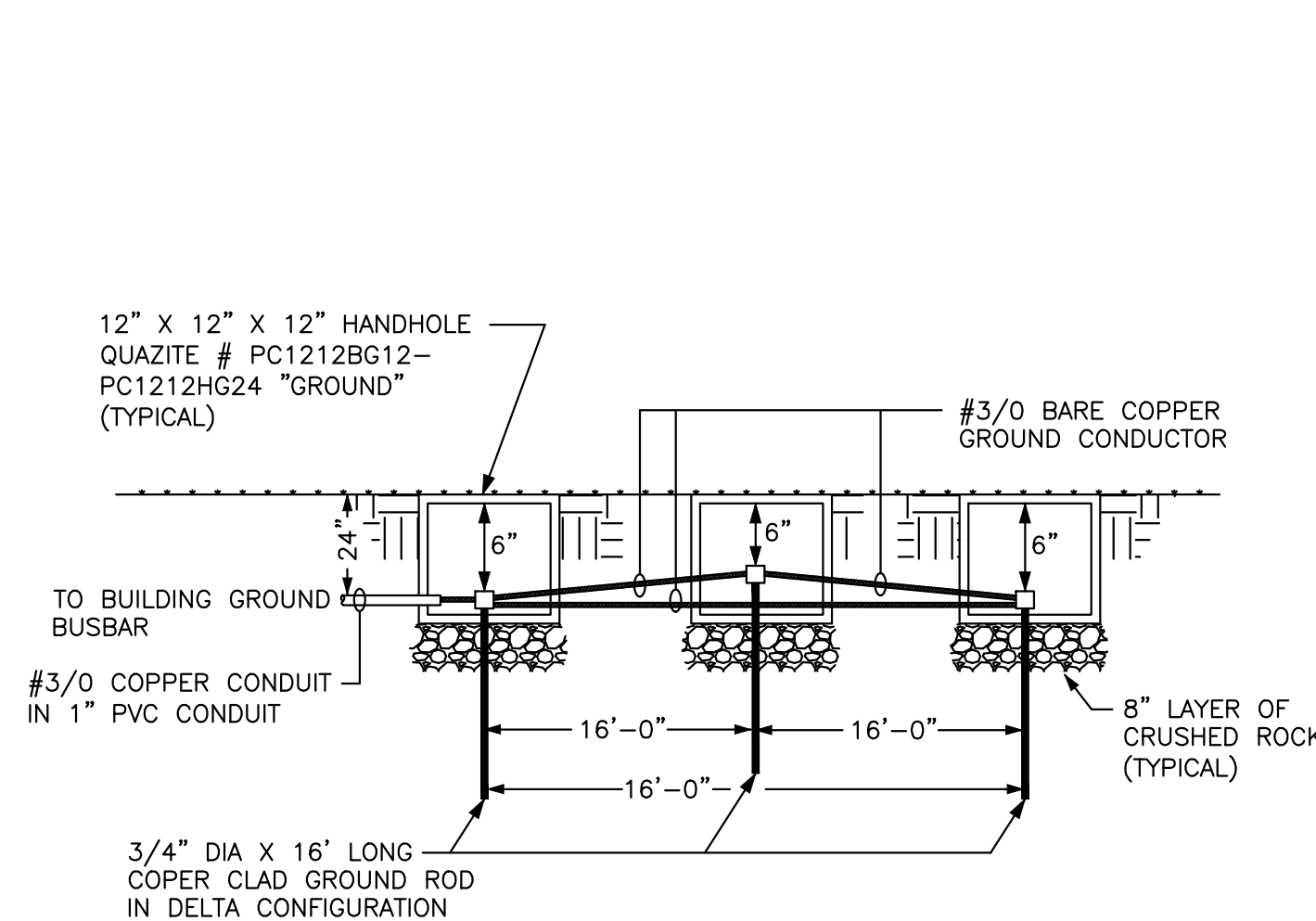
- BOND ALL METAL PARTS AND PATHWAYS. PROVIDE PIPE CLAMPS AND TERMINALS. ALL MATERIALS SHALL BE COPPER. BONDING CABLE SHALL BE MINIMUM #6 COPPER INSULATED GREEN GROUNDING CONDUCTOR.
- CONNECT ALL METALLIC OBJECTS IN ITR AND MTR ROOMS TO THE TGB, INCLUDING BUILDING STEEL, ELECTRICAL PANELS (WITHIN 50') AND RACKS.
- TGBI SHALL BE CONTINUOUS TO ITS FINAL TERMINATION. IF DISTANCES ARE GREATER THAN 1000 FEET, CROWDED OR CRIMP CONNECTORS SHALL BE USED TO CONNECT CABLES. CONNECTION MUST BE SERVICEABLE FOR INSPECTION.
- USE MINIMUM #6 GREEN AT TGB. RUN STRAIGHT (NO SLACK OR LOOPS) WITH CRIMP CONNECTORS. BOLT TO EACH RAIL.
- ALL GROUNDING CABLES SHALL TERMINATE WITH A 1-WAY CRIMP CONNECTOR. USE MINIMUM #6 GREEN. RUN CABLE AS STRAIGHT AND SHORT AS POSSIBLE.
- SCRAPE ALL PAINTS OR SEALANTS AT CONNECTION POINTS OF ALL METALLIC INTERCONNECTIONS (I.E.: PATCH PANELS, RAILS, CABINETS, ETC.). USE PAINT PIERCING HARDWARE AS NEEDED.
- PROVIDE PHENOLIC LABEL AT ALL PANEL CONNECTIONS, BUS BAR CONNECTIONS AND TGBI SERVICE LOCATIONS. LABEL TO READ "IF THIS CONNECTION IS LOOSE OR DISCONNECT FOR SERVICE CONTACT TELECOMMUNICATION MANAGER". LABEL TO HAVE RED BACKGROUND AND WHITE LETTERING.
- ALL RUNS OF GROUNDING CABLES FROM ONE ROOM TO ANOTHER SHALL BE ENCLOSED IN MINIMUM 1/2" CONDUIT. EXACT CONDUIT SIZE SHALL BE DETERMINED BASED ON BONDING CONDUCTOR SIZE.
- IF GROUNDING CABLES ARE UNAVAILABLE WITH GREEN INSULATION, PROVIDE GREEN PHASING FOR ALL EXPOSED GROUNDING CABLES.
- ALL CONNECTIONS TO GROUND ROD SHALL BE EXOTHERMICALLY WELDED.
- LABEL ALL GROUNDING CABLES AS TO SOURCE AND TERMINATION POINTS.
- MAXIMUM OF 5.0 OHMS RESISTANCE THROUGHOUT THE GROUNDING SYSTEM.
- ALL MAIN CONNECTIONS TO GROUND BUS BARS SHALL BE DOUBLE LUGGED.
- BONDING OF CABINET RAILS SHALL OCCUR AS HIGH AS POSSIBLE BETWEEN ALL FOUR RAILS.

GROUNDING NOTES



NOT TO SCALE

GROUND BUS BAR



NOT TO SCALE

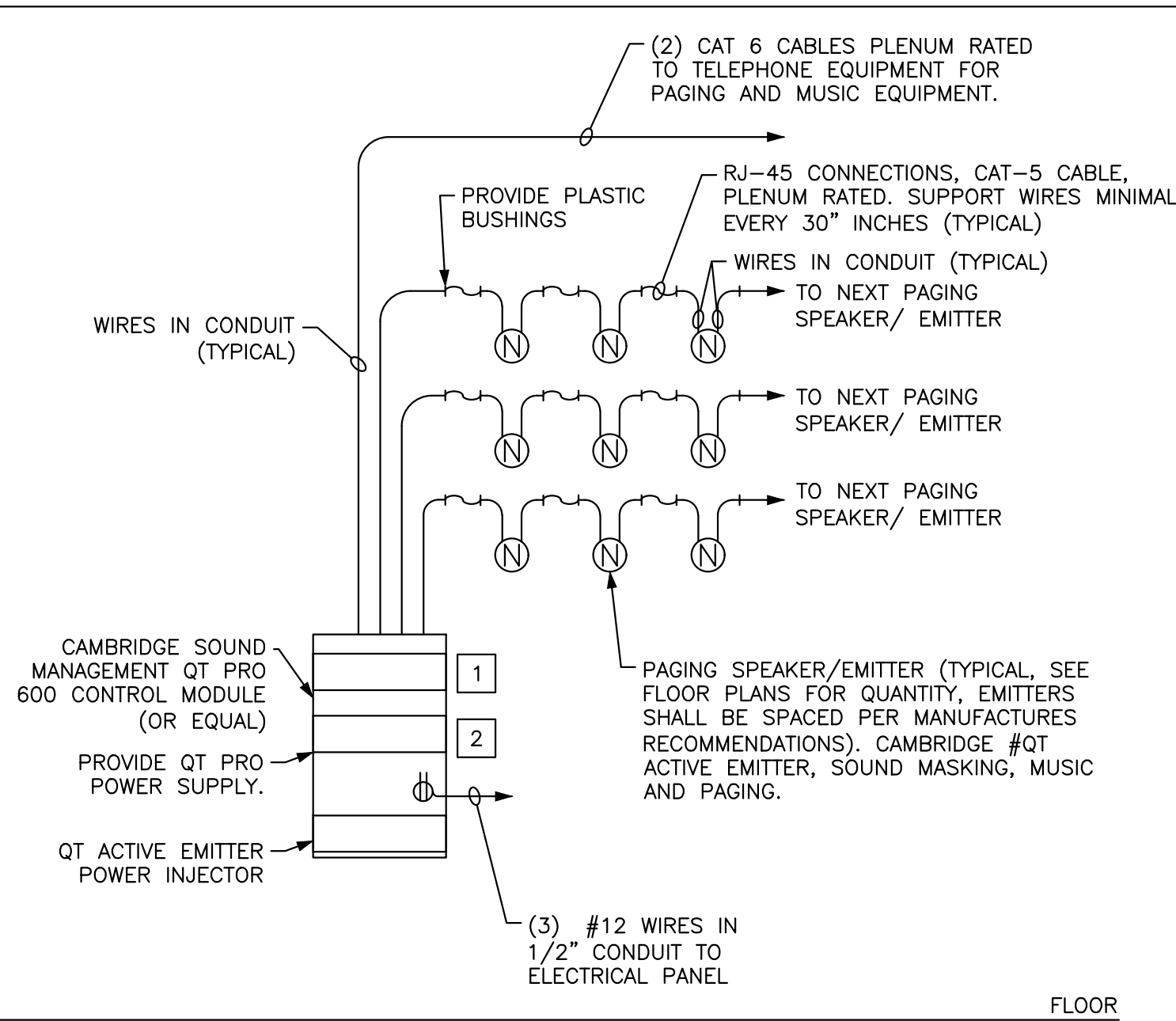
GROUND WELL DETAIL



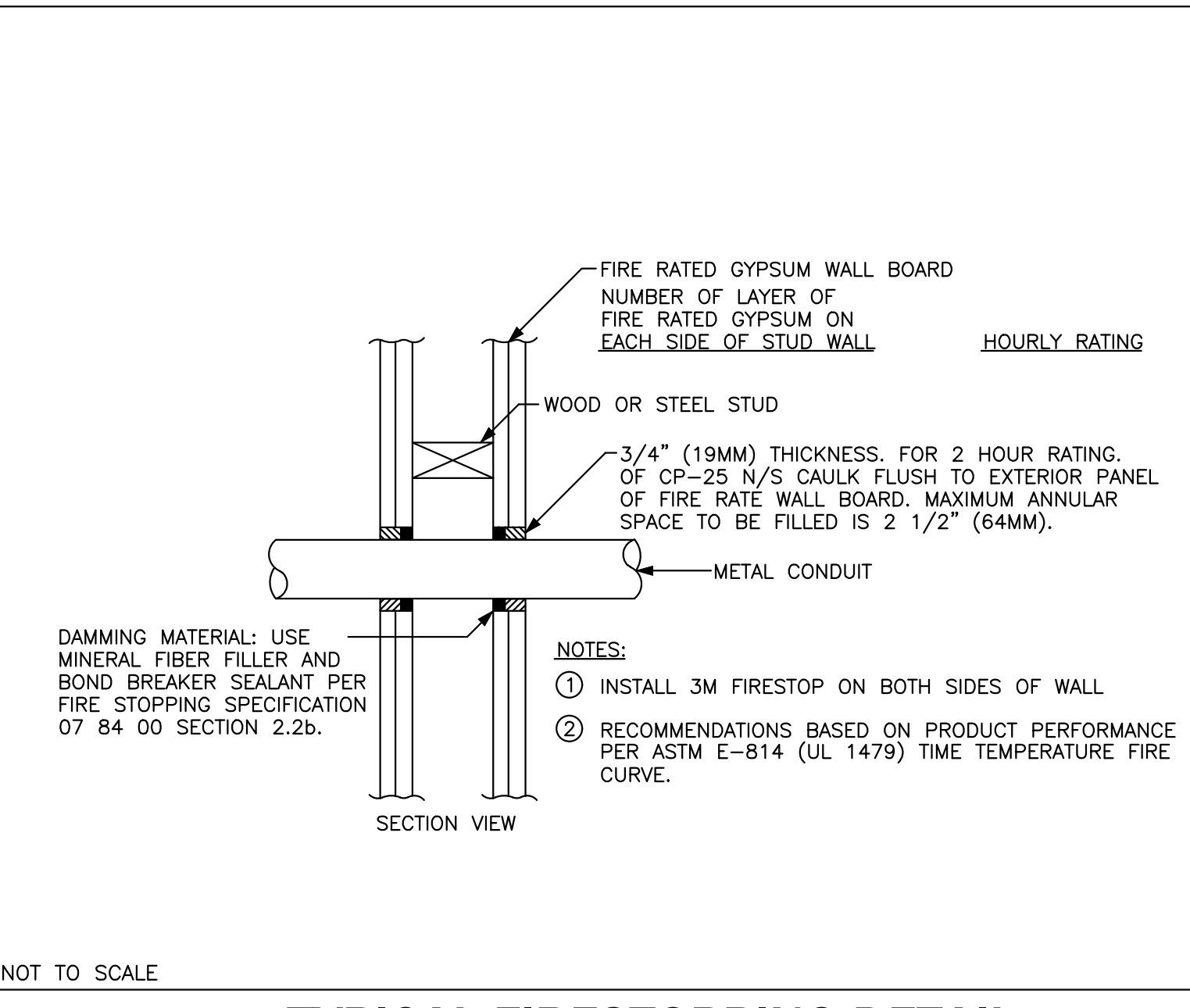
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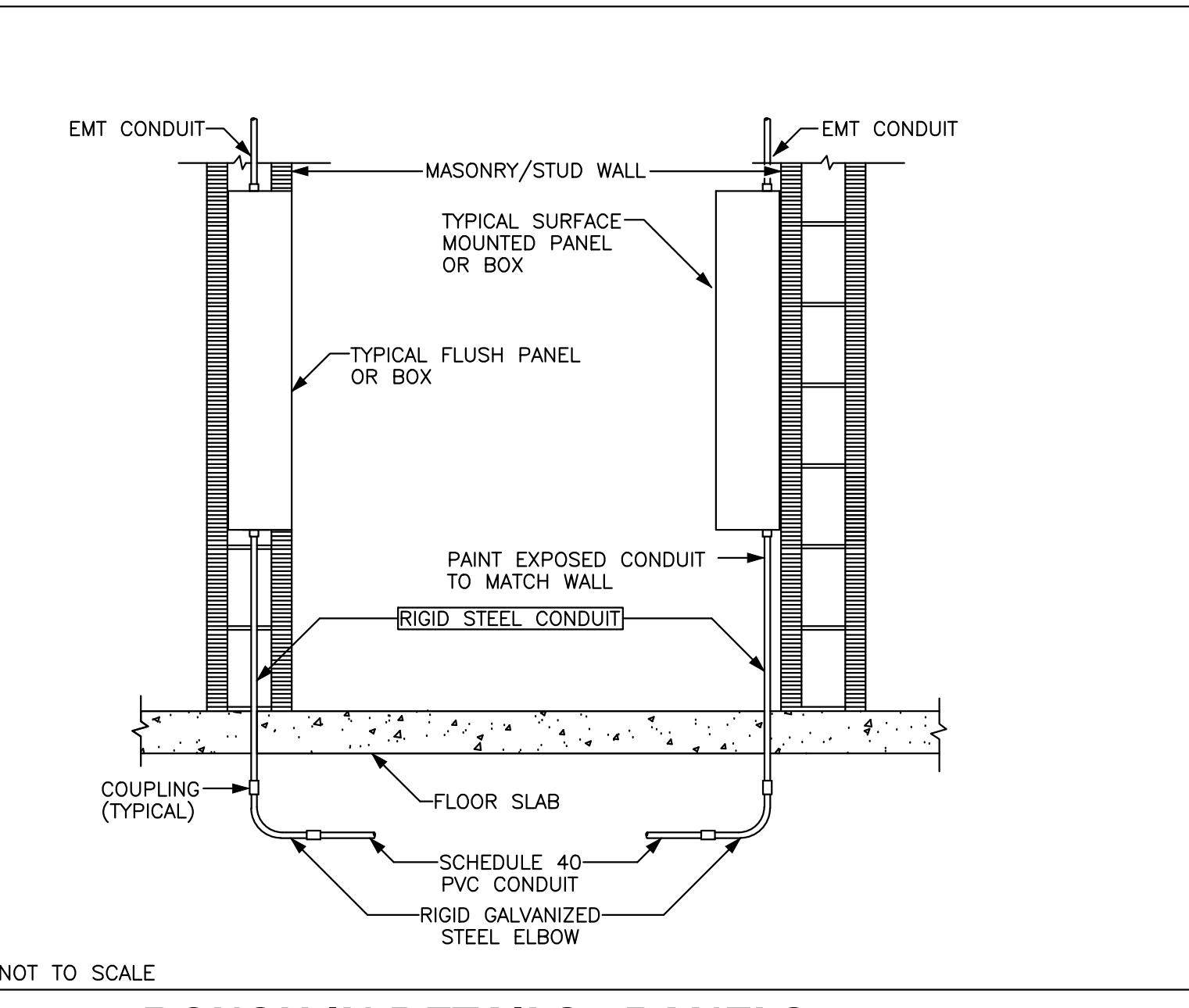
ELECTRICAL DETAILS



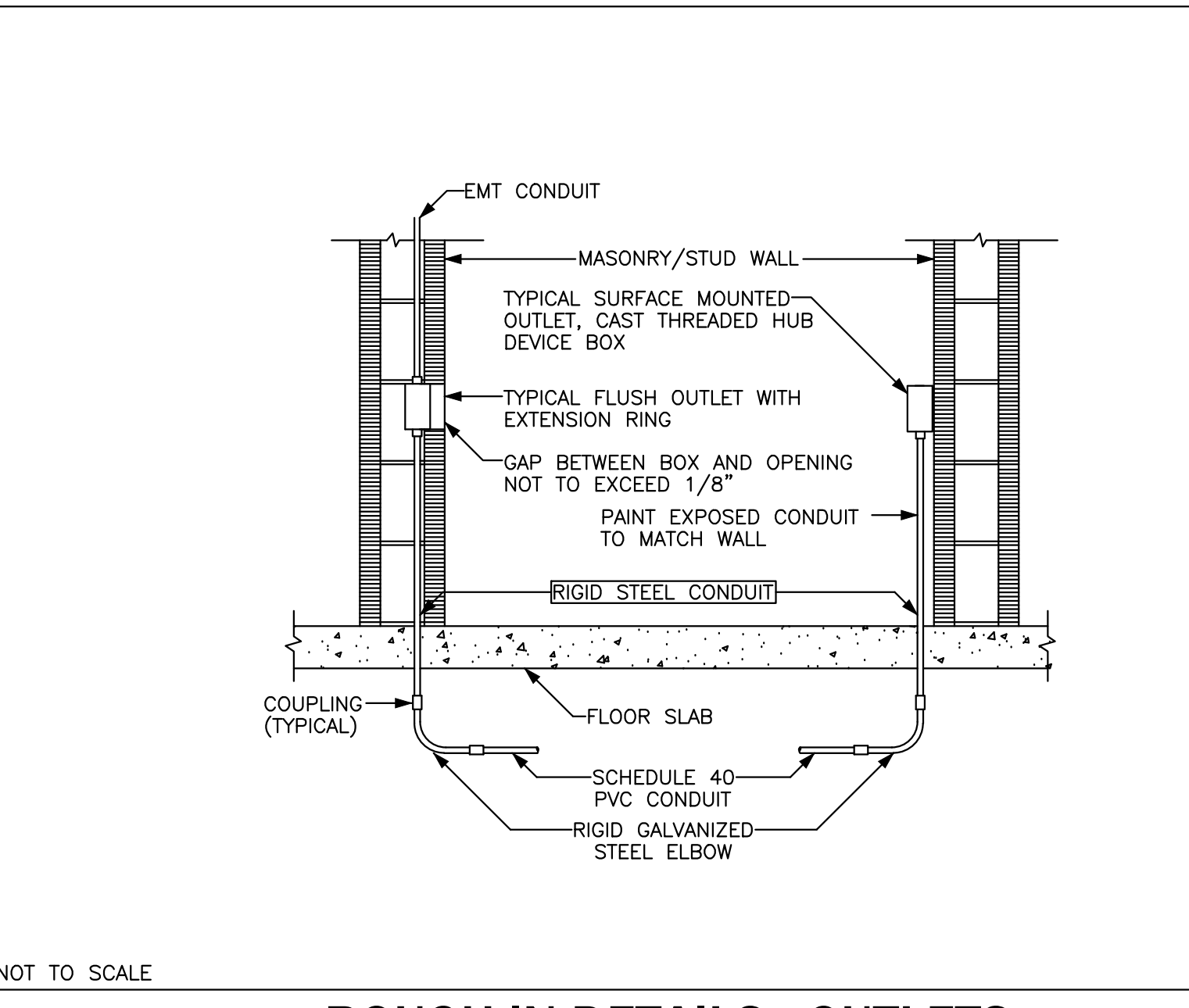
FLOOR



NOT TO SCALE



NOT TO SCALE

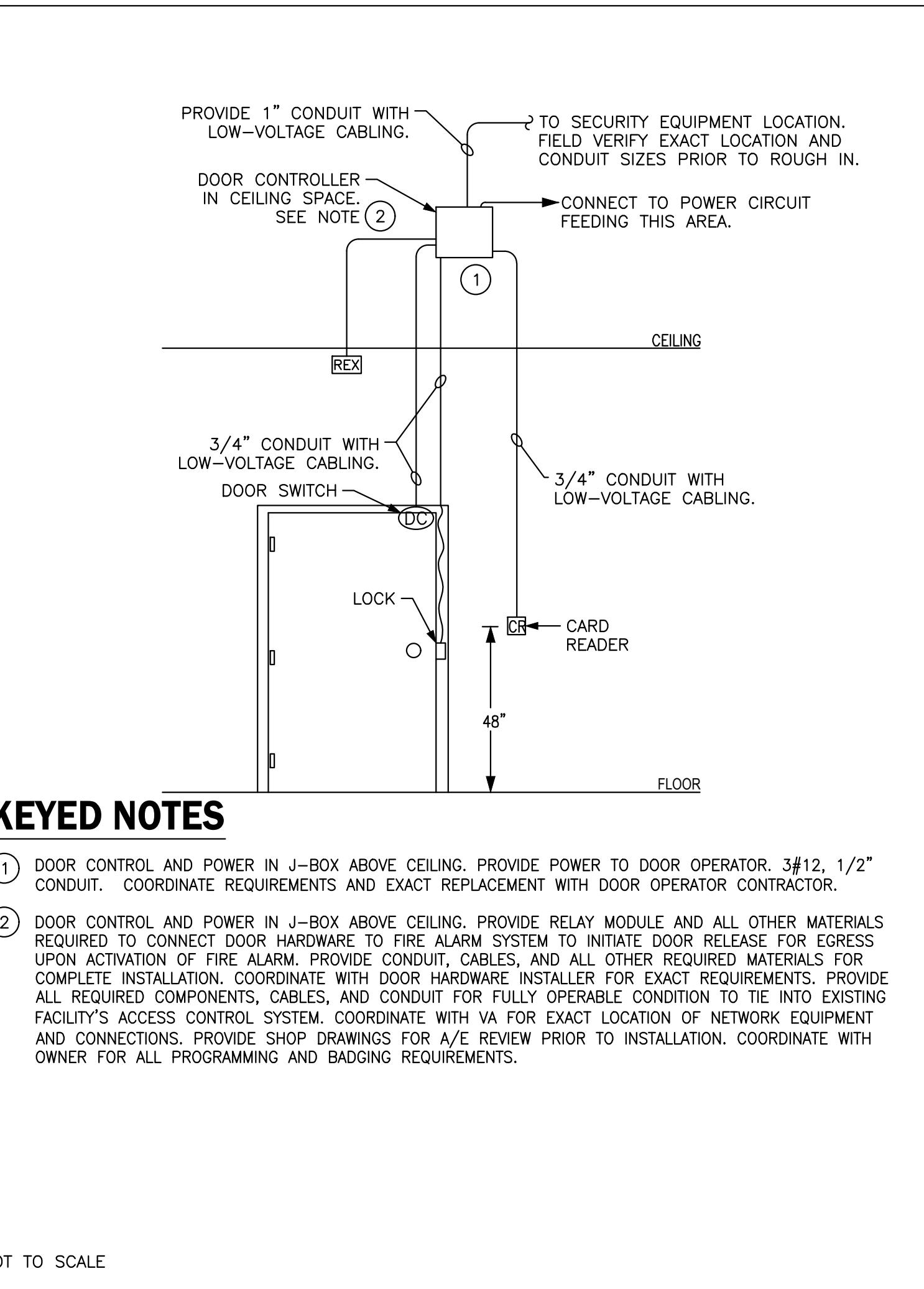


NOT TO SCALE

KEYED NOTES

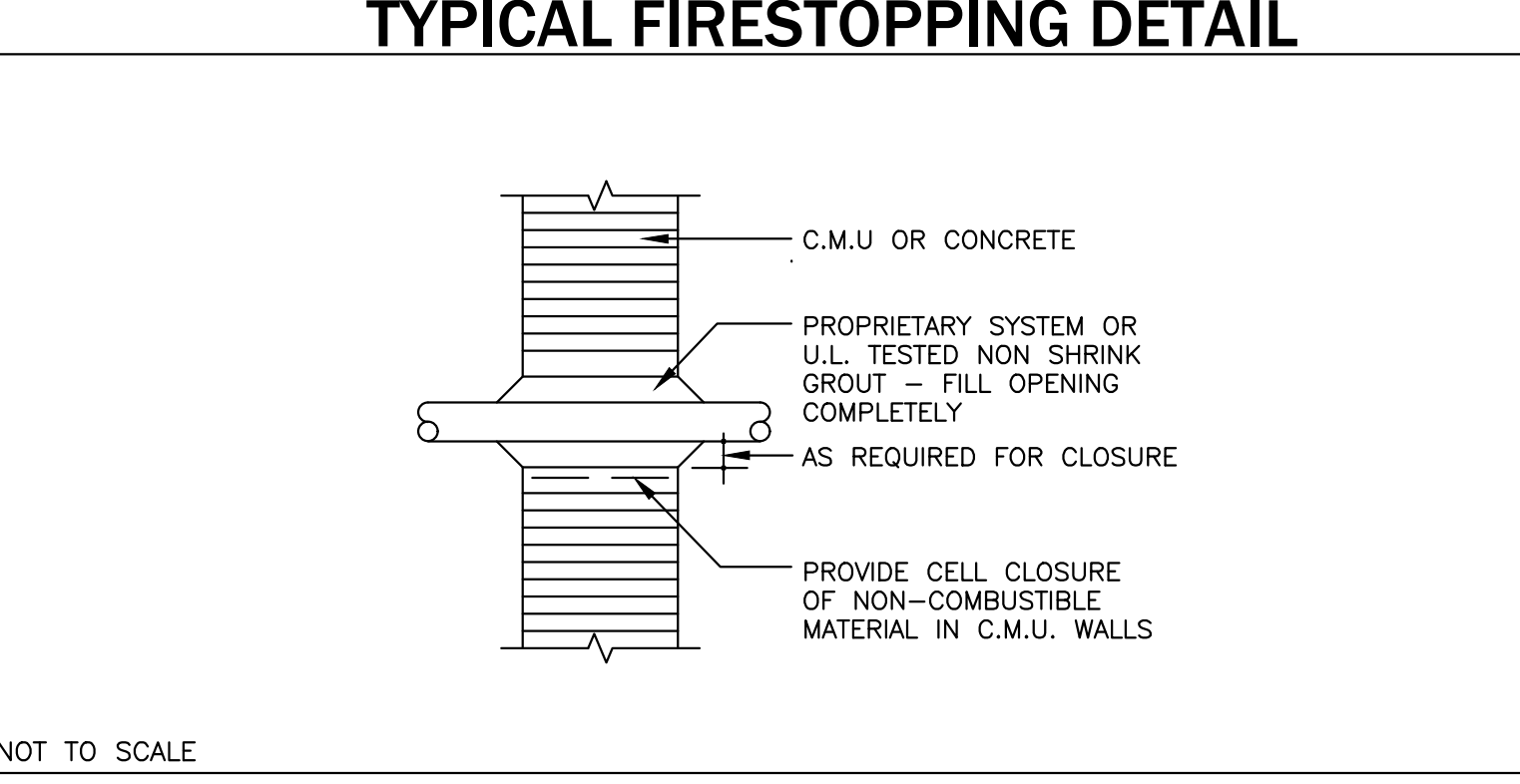
- 1 PROVIDE WALL RACK TO HOUSE EQUIPMENT.
- 2 PROVIDE SOFTWARE, PROGRAMMING AND TRAINING. MAKE CONNECTION TO TELEPHONE EQUIPMENT FOR PAGING. COORDINATE WITH OWNER FOR MUSIC INPUT.

NOISE SOUND MASKING SYSTEM RISER DIAGRAM

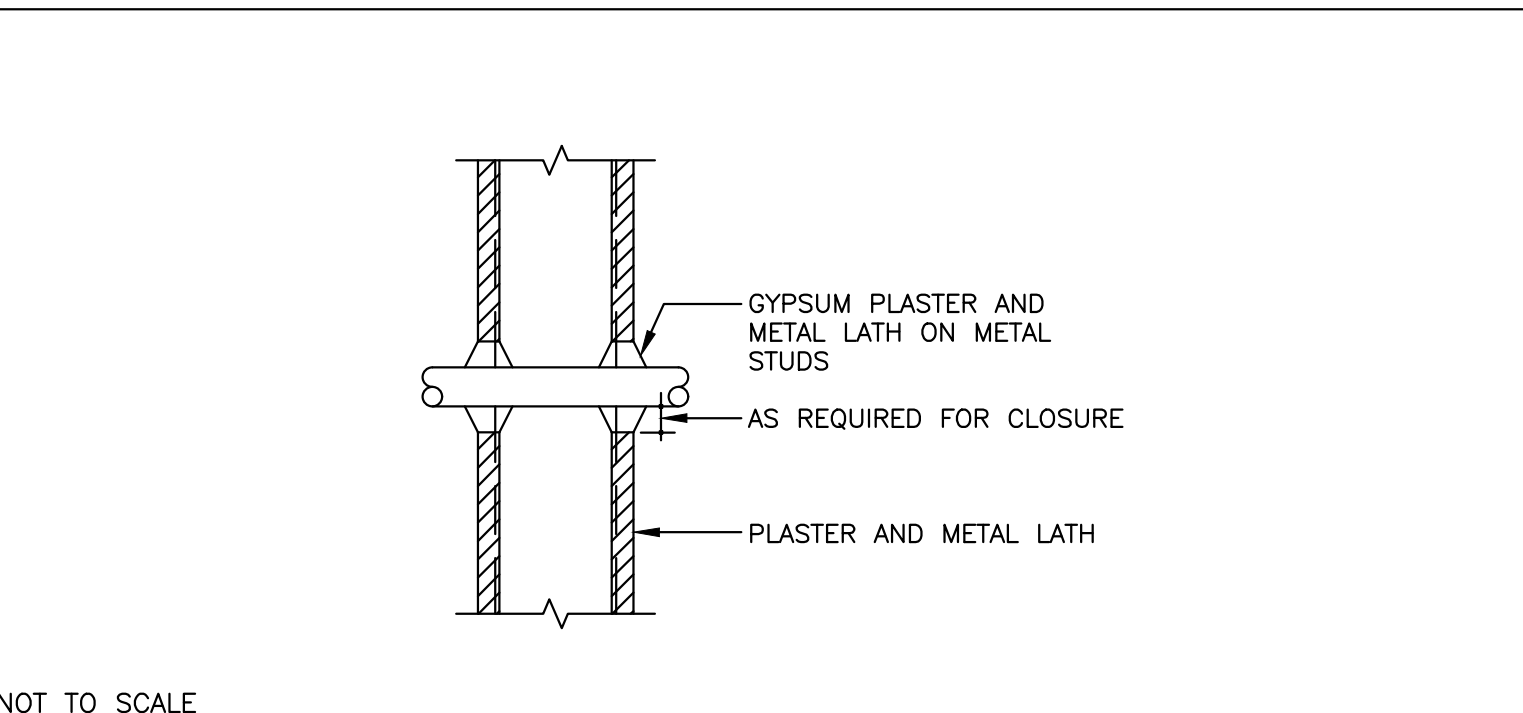


DOOR CONTROL DIAGRAM

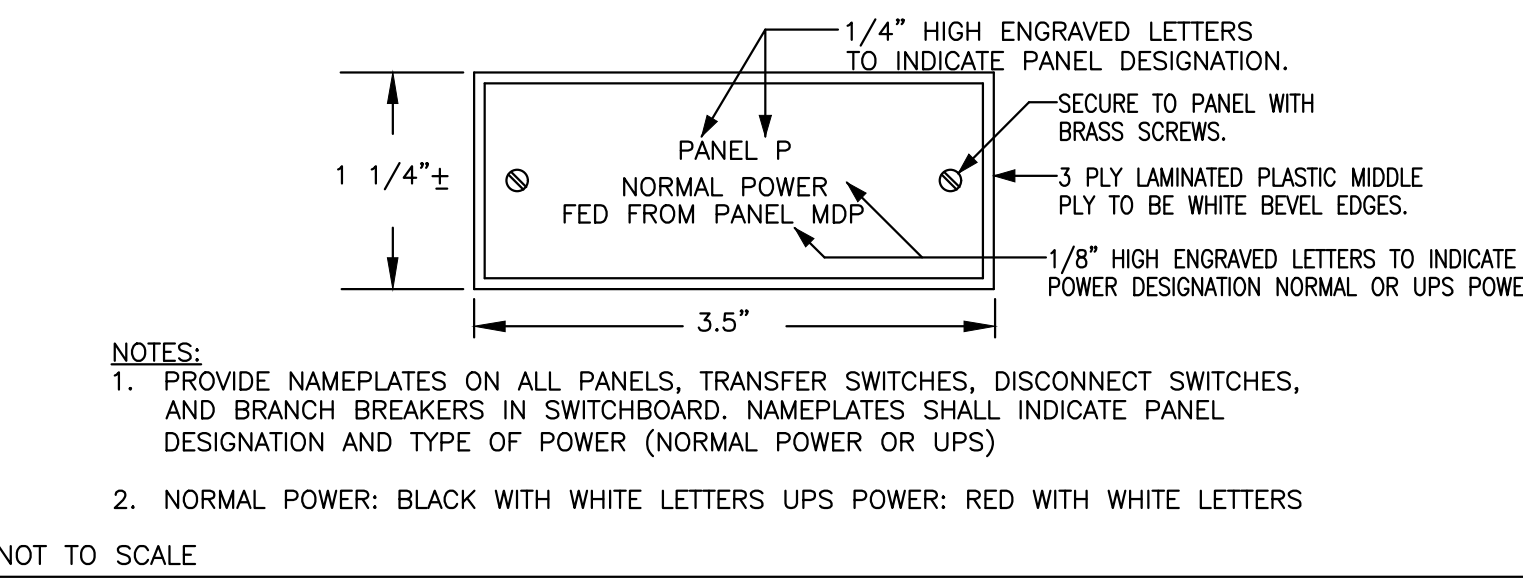
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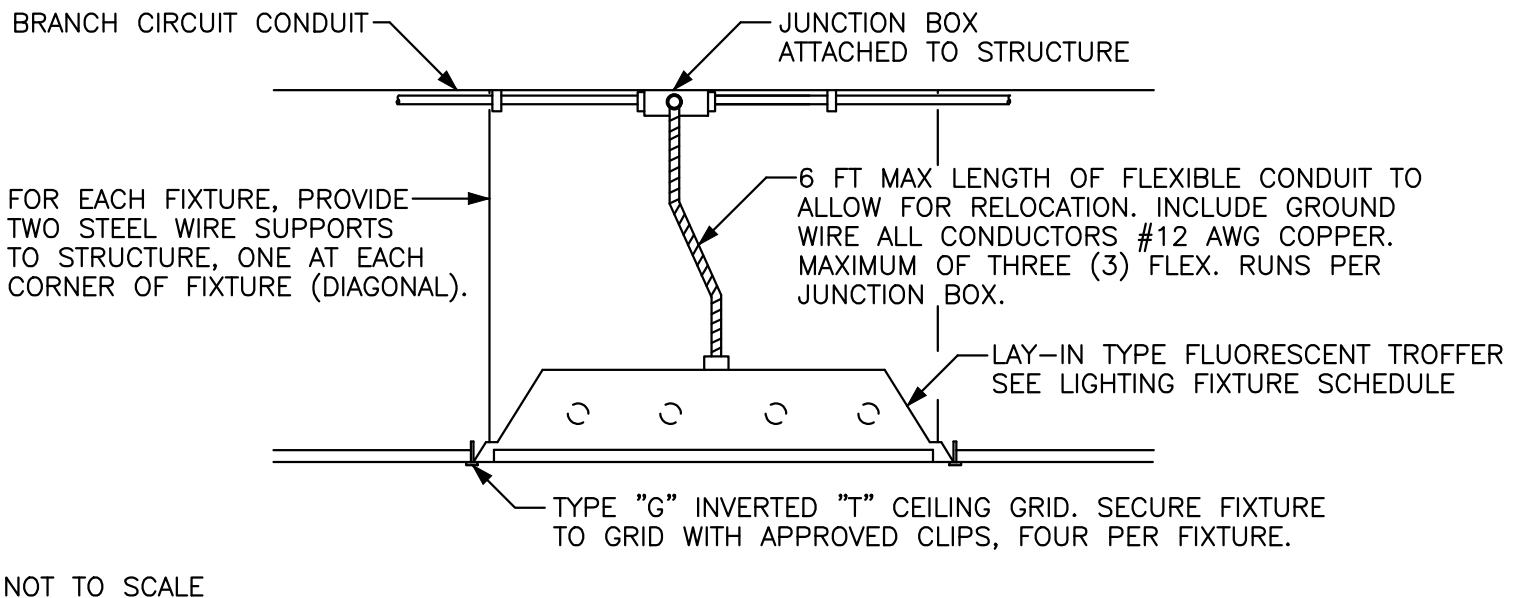
CONCRETE MASONRY OR SOLID CONCRETE WALLS



GYPSON PLASTER AND METAL STUD PARTITIONS

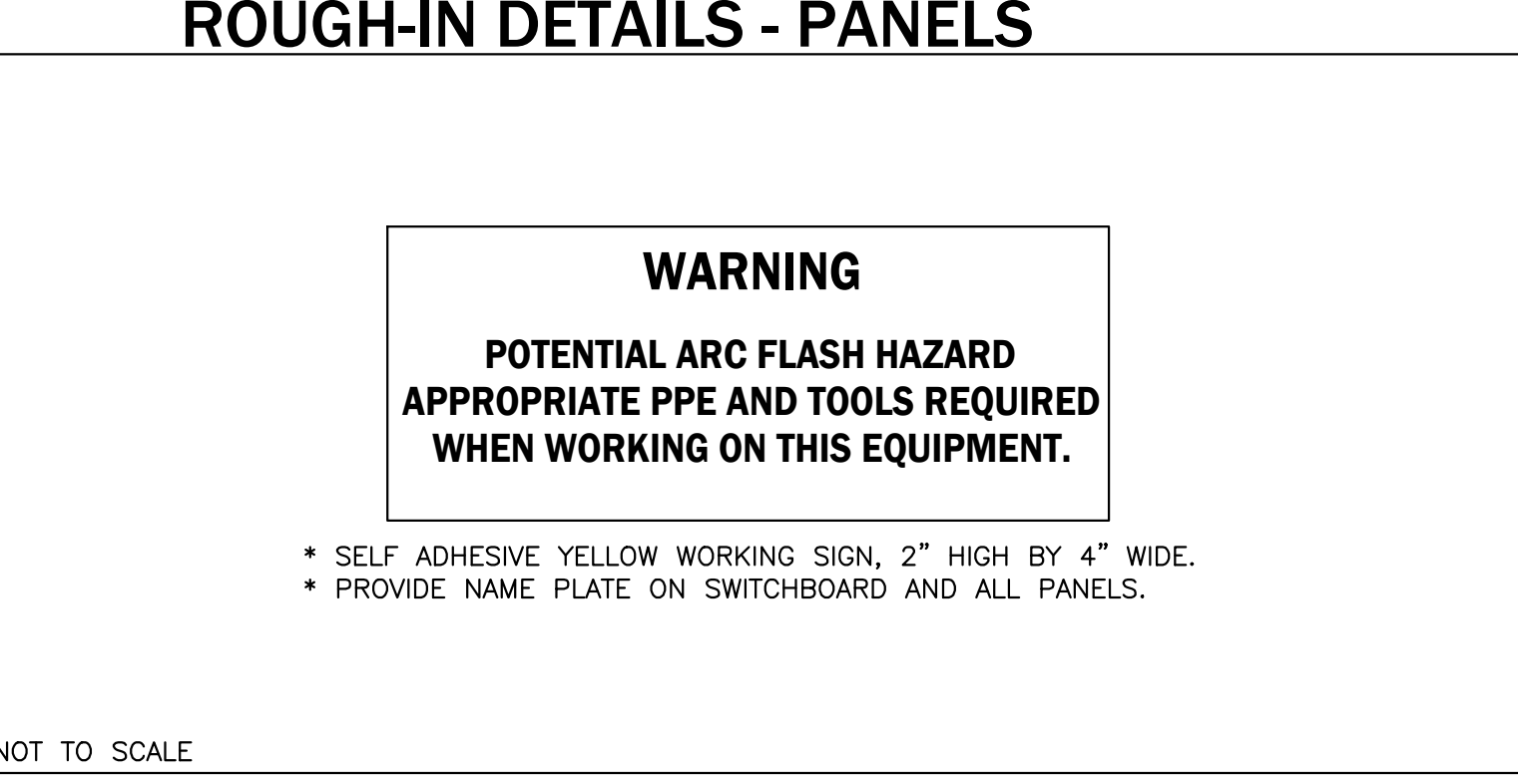


NAME PLATE DETAIL

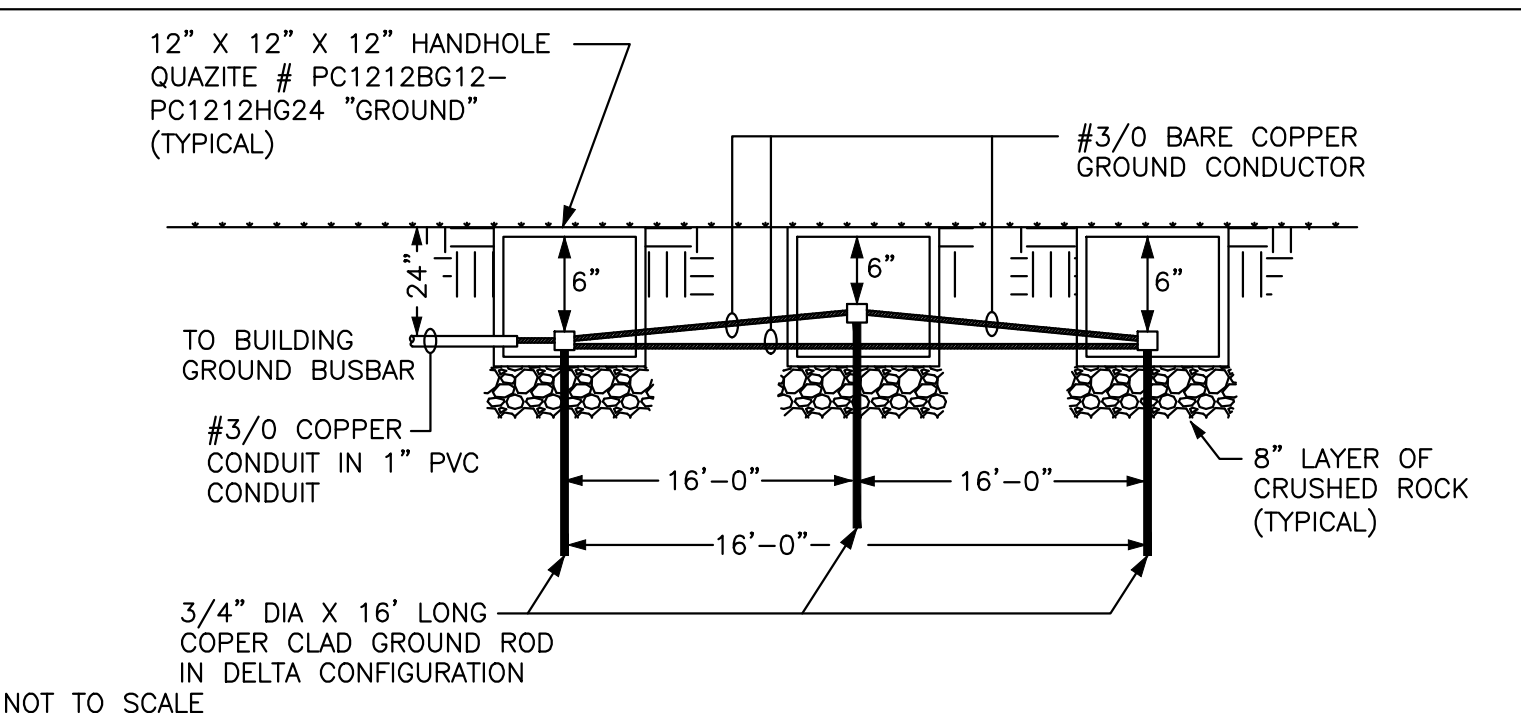


DETAIL-TYPICAL LAY-IN FIXTURE INSTALLATION

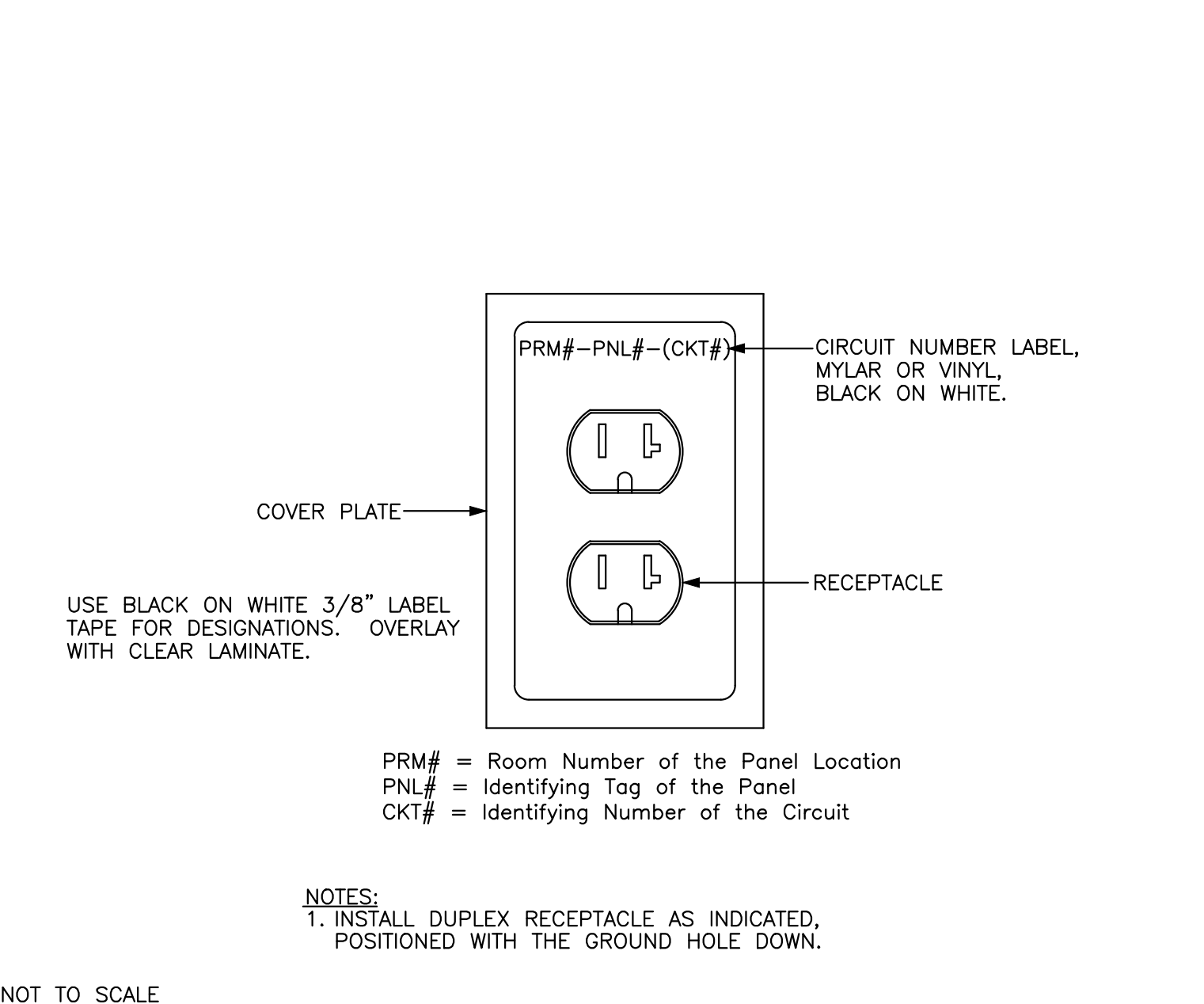
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WARNING

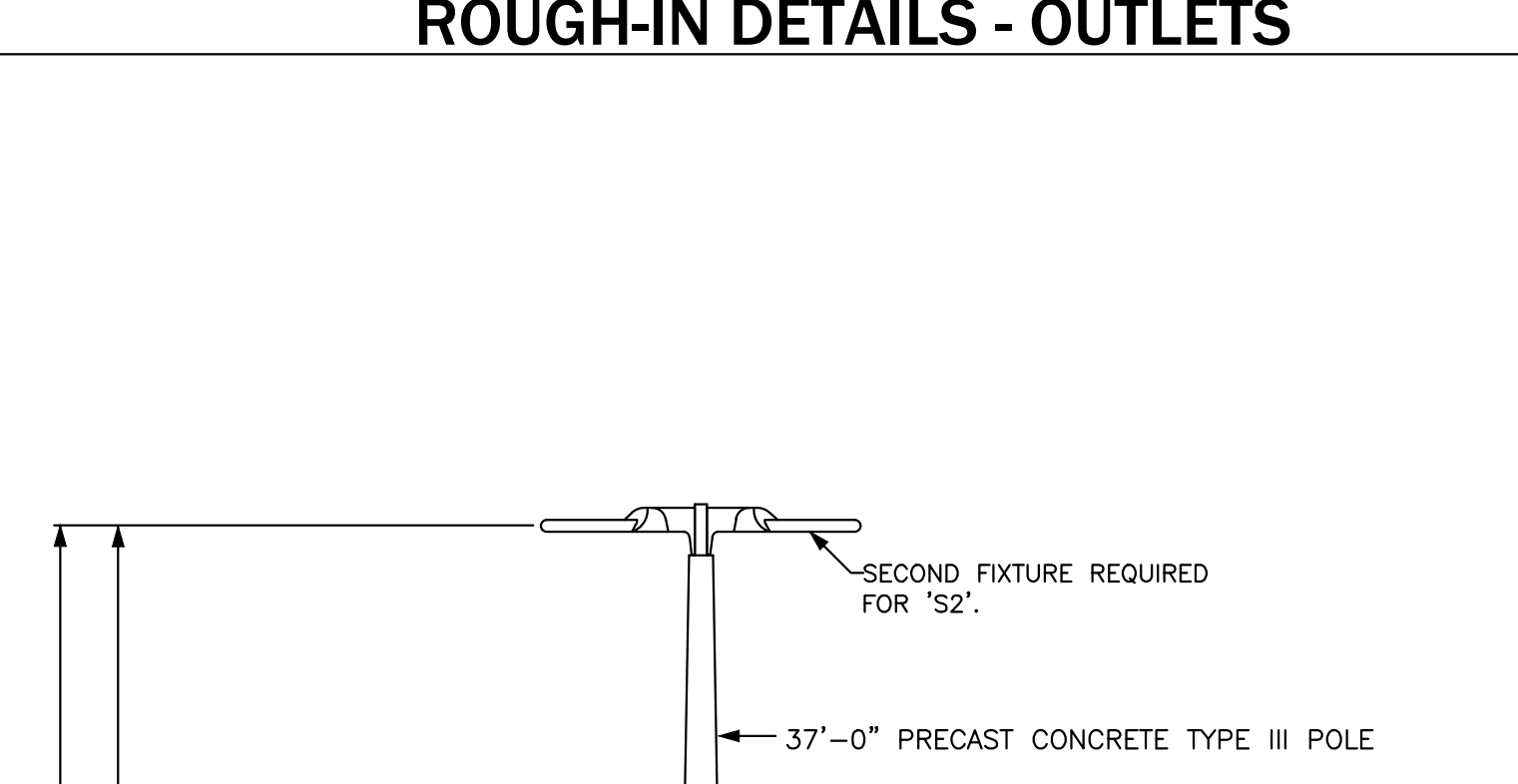


SERVICE GROUND DETAIL

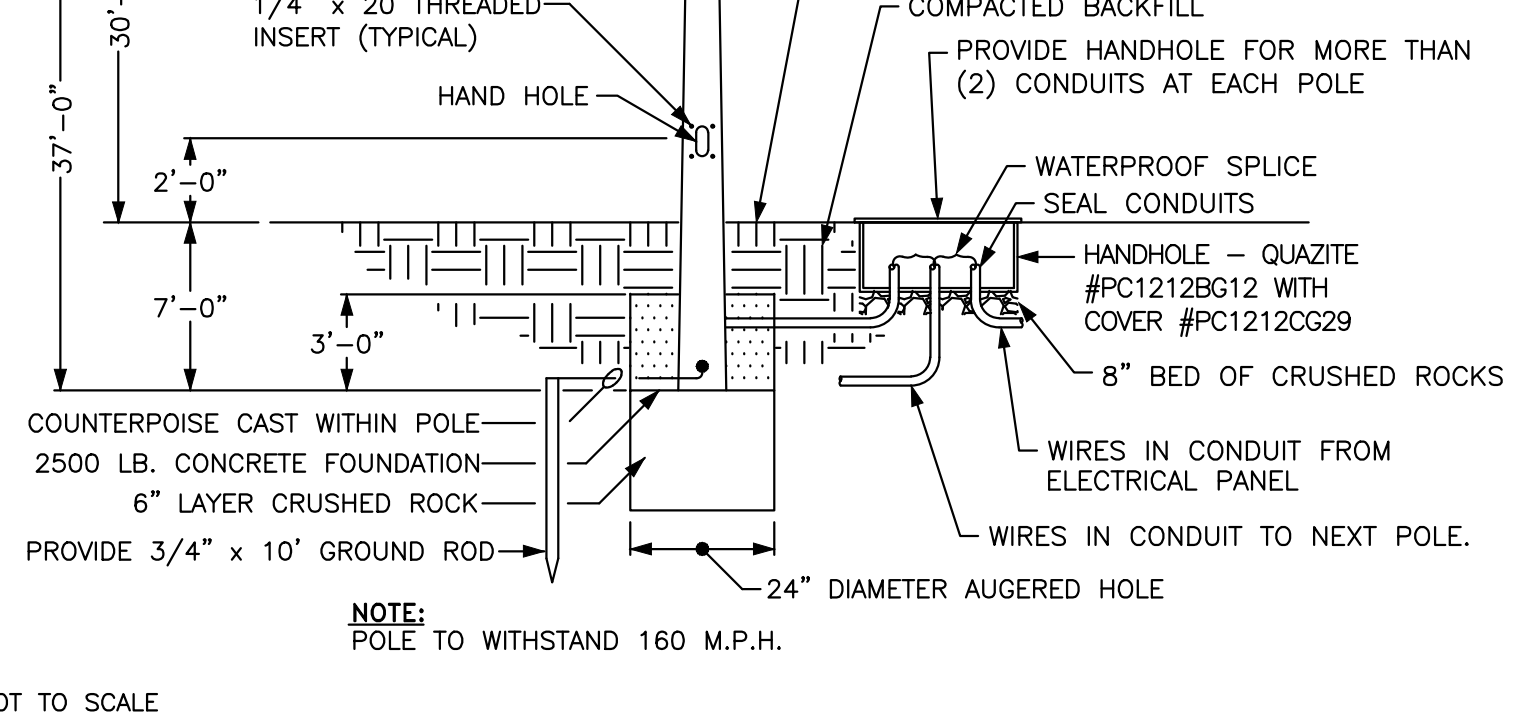


OUTLET CIRCUIT IDENTIFICATION DETAIL

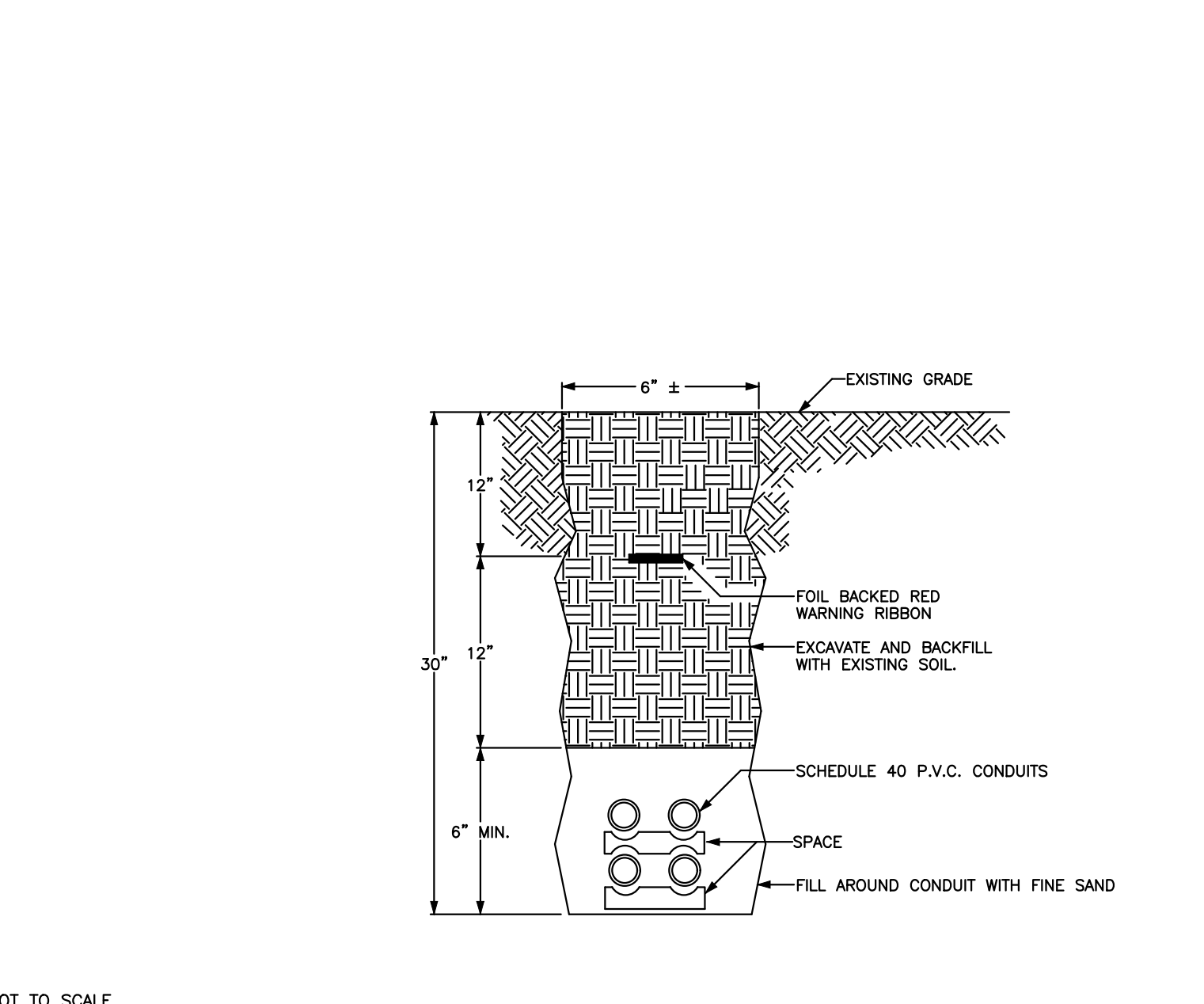
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POLE BASE DETAIL

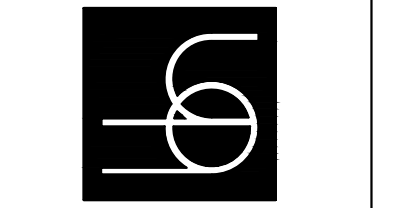


DIRECT BURIED CONDUIT DETAIL



NAME PLATE DETAIL

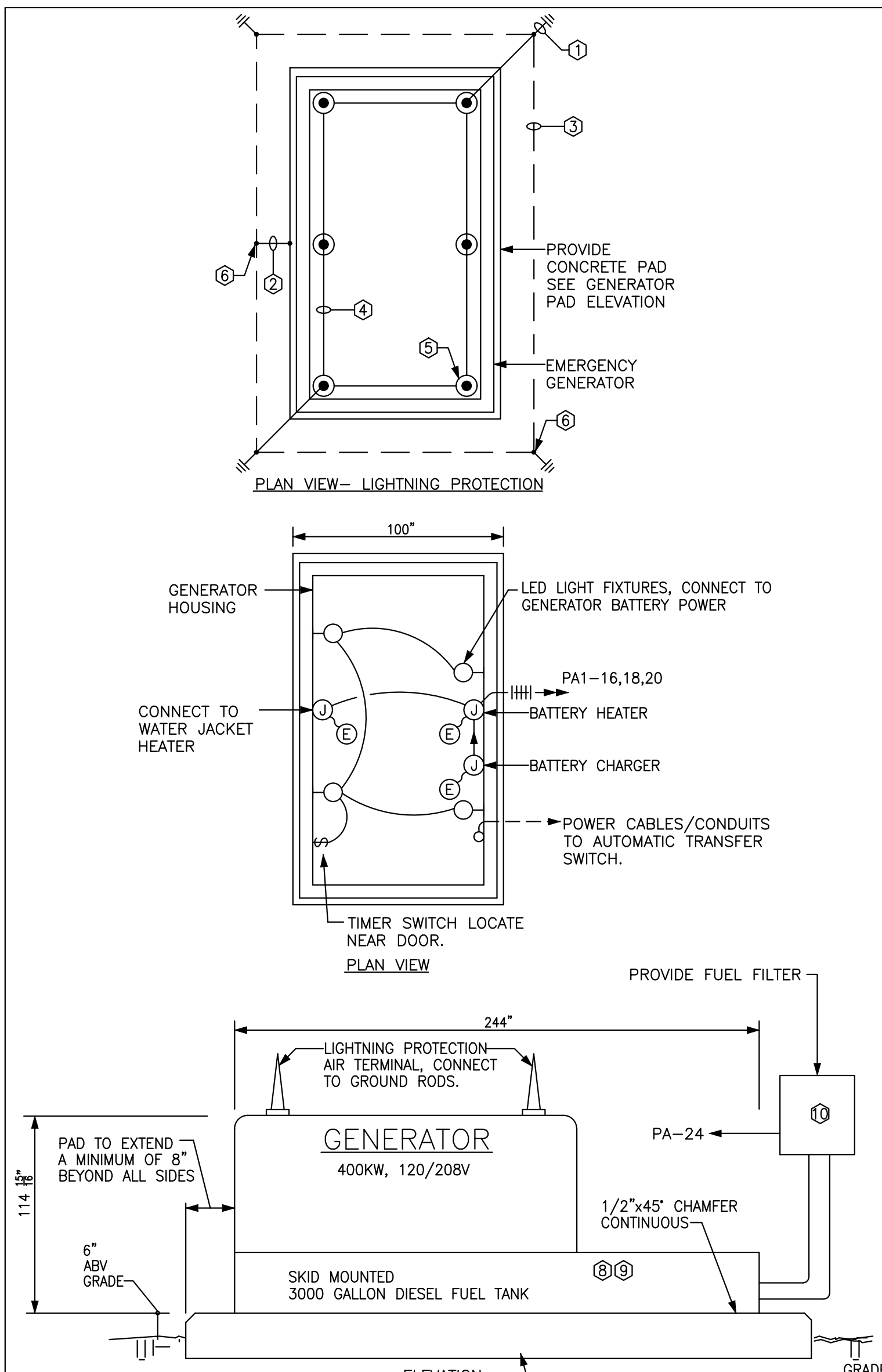
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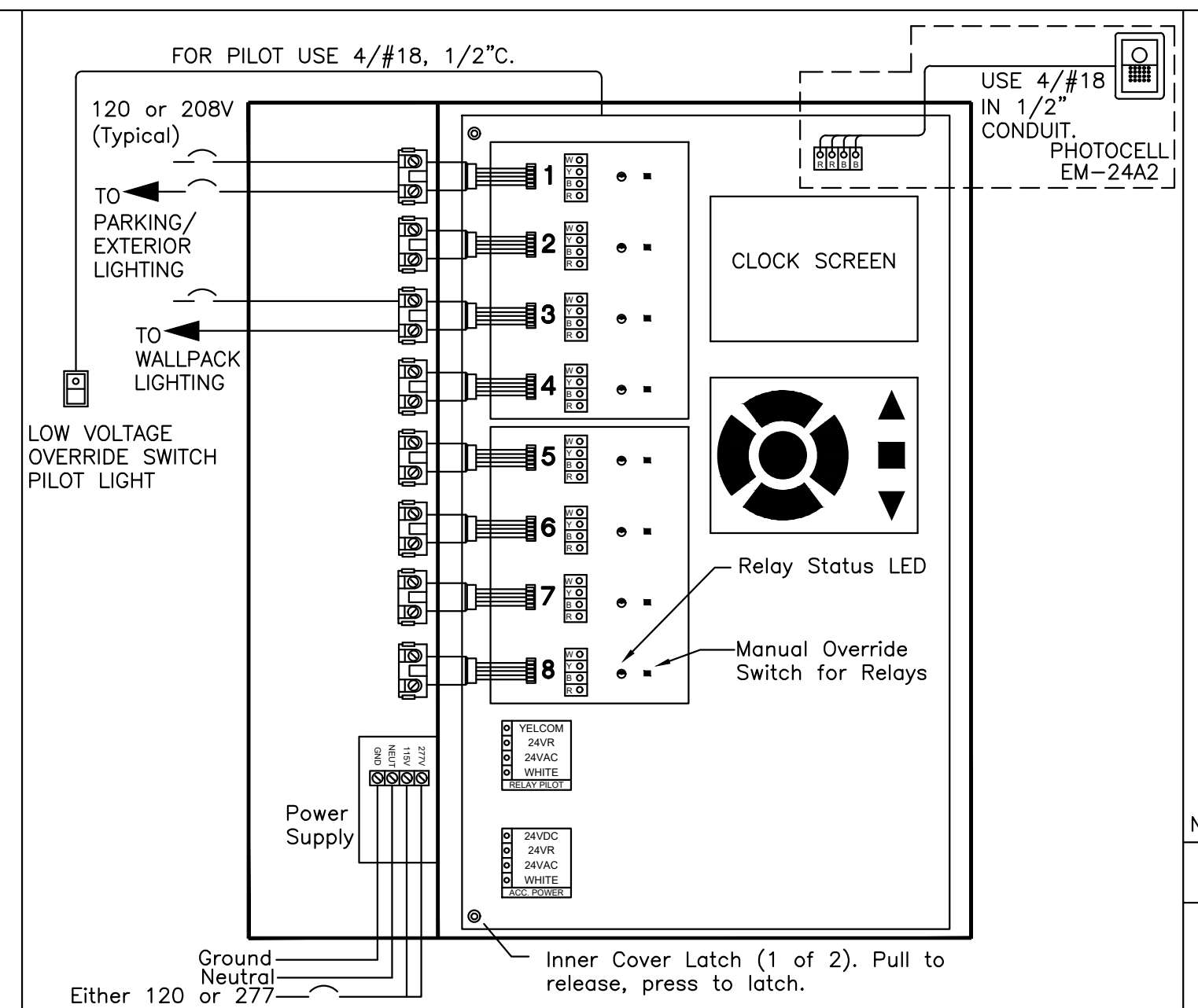
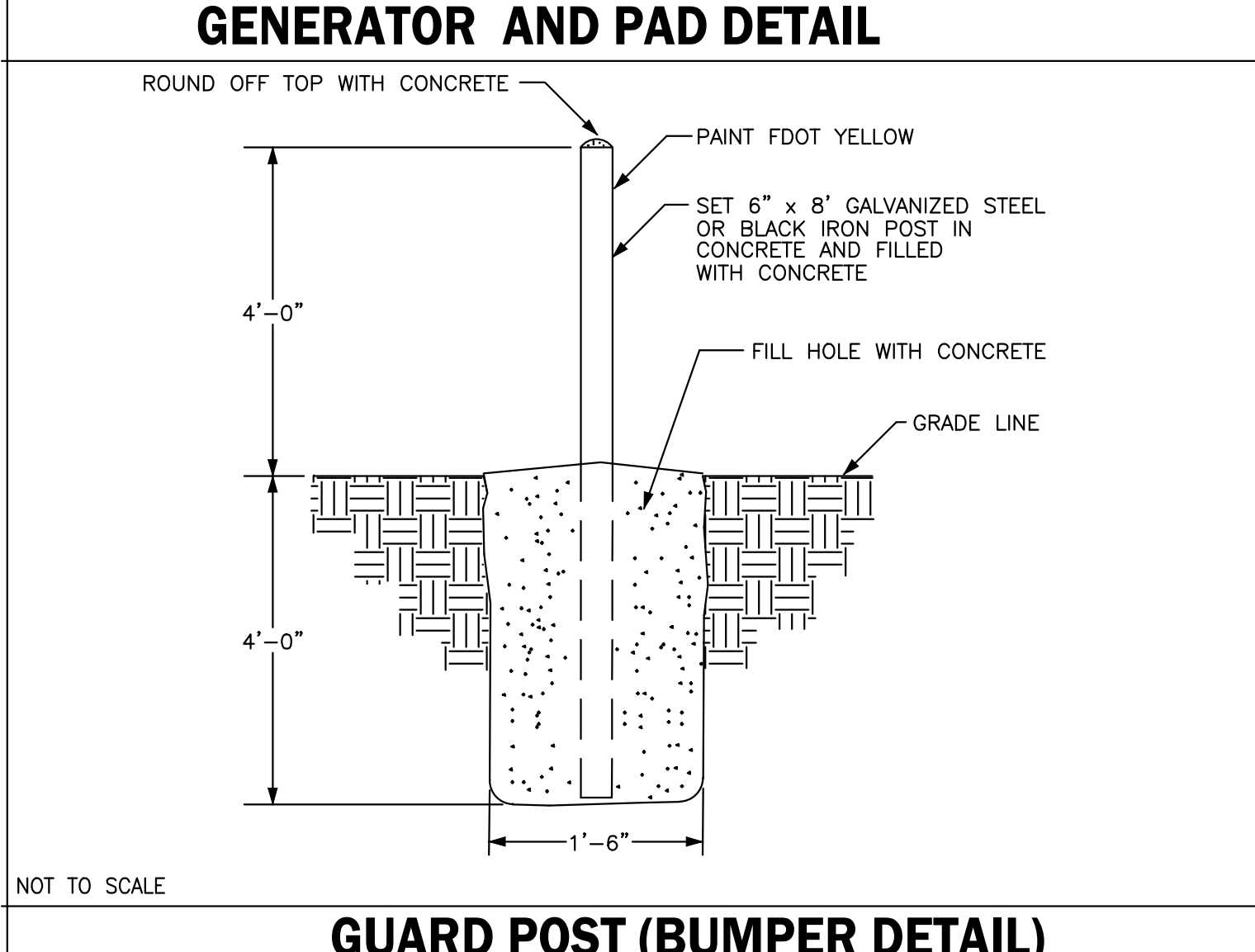
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ELECTRICAL DETAILS



- NOTES:**
- GROUND ROD. 3/4" DIAMETER, 10' LONG COPPER CLAD.
 - 1 #2/0 GROUND CONDUCTOR. GENERATOR CASE GROUND.
 - 1 #2/0 GROUND CONDUCTOR. 12" BELOW GRADE. BARE
 - LIGHTNING PROTECTION CONDUCTOR.
 - AIR TERMINAL. 12" COPPER.
 - CAD WELD
 - GENERATOR LIGHTNING PROTECTION SYSTEM SHALL CONFORM TO NFPA 780.
 - 400 KW, 120/208V DIESEL GENERATOR, WITH SKID MOUNTED DIESEL FUEL TANK. GENERATOR FUEL CONSUMPTION AT 100% LOAD = 27.8 GPH, 75% = 23.1 GPH. SKID MOUNTED DIESEL FUEL TANK. MINIMUM CAPACITY: 2,670 GPH. PROVIDE LOW LEVEL ALARM AT 36 HOURS OF FUEL.
 - PROVIDE THE SERVICES OF FACTORY CERTIFIED TECHNICIAN TO CONDUCT GENERATOR SITE TESTING AND PROVIDE TEST REPORT. TECHNICIAN SHALL BE PRESENT AT THE APCA INSPECTION TO DEMONSTRATE GENERATOR FUNCTIONS. PROVIDE DIESEL FUEL AS REQUIRED AT TESTING.
 - PROVIDE FUEL FILTER SUITABLE FOR 3,000 GALLONS OF DIESEL FUEL. PROVIDE REQUIRED ALL PIPING.
- NOT TO SCALE



LCP Name: Electric Room 145A

Location: Surface

Surface/Flush: Surface

Power Circuit: PA1-26

Relay #	Circuit	Description	LV Switch/Sensor	Channel
1	PA1-1	LTG. PARKING LOT	PC ON/SCHED. OFF	A
2	PA1-5	LTG. PARKING LOT	PC ON/SCHED. OFF	B
3	PA1-23	LTG. WALL PACKS	PC ON/SCHED. OFF	C
4	PA1-25	LTG. WALL PACKS	PC ON/SCHED. OFF	D
5	PA1-9	LTG. STEP LIGHTS	PC ON/SCHED. OFF	E
6	SPARE	WALL PACKS	PHOTOCELL ON/OFF	F
7	SPARE	MONUMENT SIGN	PHOTOCELL ON/OFF	G
8	SPARE	SPARE		H

SPECIFICATIONS:

PROVIDE A SINGLE RELAY PANEL WITH 8 RELAYS. EACH RELAY TO BE INDIVIDUALLY SCHEDULED THROUGH AN EASY TO USE INTEGRAL CLOCK WITH A BACKLIT 8-LINE LCD DISPLAY. RELAYS ARE TO BE SPST 20 AMP RATED, MECHANICALLY HELD CONTACTORS CAPABLE OF SWITCHING EITHER 120 OR 208VAC LOADS. MOUNTED NEXT TO EACH RELAY SHOULD BE A LED TO ANNUNCIATE STATUS AND A PUSHBUTTON TO TOGGLE THE RELAY'S STATE. PANEL SHALL HAVE A MULTI-TAP TRANSFORMER AND ACCEPT EITHER 120V OR 208V FOR POWER.

PANEL ENCLOSURE TO BE NEMA 1, RATED FOR ENVIRONMENTS FROM 32 - 139F, 5 - 95% RH NON-CONDENSING. PANEL TO COME WITH A SPLIT COVER HINGED IN THE CENTER SUCH THAT THE HIGH VOLTAGE SIDE MUST BE UNSCREWED TO ACCESS THE RELAYS, BUT THE LOW VOLTAGE SIDE CAN BE OPENED VIA A LOCKING LATCH. SURFACE OR FLUSH COVERS SHALL BE AVAILABLE.

ALL PROGRAMMING TO BE ENTERED VIA A SIMPLE KEYPAD. EACH RELAY CAN BE PROGRAMMED INDEPENDENTLY, OR RELAYS CAN BE GROUPED TOGETHER IN FIRMWARE TO FOLLOW THE SAME CHANNEL SCHEDULE.

THE LCD SCREEN SHOULD NORMALLY SHOW THE CURRENT TIME AND DATE, AS WELL AS SUNRISE AND SUNSET TIMES FOR THAT DAY. RELAY CHANNELS CAN ALSO BE MONITORED FROM THE DISPLAY TO SEE THEIR STATUS - EITHER ON, OFF, OR MIXED. ADDITIONALLY THE RELAY GROUPS CAN BE OVERRIDDEN FROM THE SCREEN. CONTEXT SENSITIVE HELP SHALL BE AVAILABLE FOR EACH SCREEN.

NOT TO SCALE

