

ELECTRICAL RISER DIAGRAM

NTS

RISER DIAGRAM NOTES

- UTILITY COMPANY POLE MOUNTED TRANSFORMER WITH 208Y/120V, 3-PHASE, 4-WIRE SECONDARY. VERIFY AFC AT TRANSFORMER SECONDARY WITH UTILITY COMPANY.
- 800A/3P, NON-FUSED, NEMA 3R DISCONNECT SWITCH.
- (2) 3.5" PVC CONDUITS WITH 4-#500 (CU) IN EACH. INSTALL CONDUITS WITH TOP MINIMUM 3'-6" BELOW FINISHED GRADE.
- UTILITY COMPANY C.T. CABINET AND METER CAN/SOCKET. 1-1/4" CONDUIT FOR METERING CABLES.
- #6 (CU) GROUND WIRE. CONNECT TO 1/2" ROUND x 8'-0" LONG COPPER CLAD STEEL DRIVEN GROUND ROD.
- 1/2" C, 1-#2/0 (CU) GROUND WIRE. CONNECT TO 3/4" ROUND x 10'-0" LONG COPPER CLAD STEEL DRIVEN GROUND ROD.
- 1/2" C, 1-#2/0 (CU) GROUND WIRE. CONNECT TO 20'-0" LONG CONDUCTOR IN CONCRETE BUILDING FOOTING.
- 1/2" C, 1-#0/0 (CU) GROUND WIRE. CONNECT TO COLD WATER SERVICE PIPE, AHEAD OF MAIN SHUT-OFF VALVE.
- 1/2" C, 1-#2/0 (CU) GROUND WIRE. CONNECT TO BUILDING STEEL.
- PANEL 'P' SHALL HAVE SERVICE ENTRANCE LABEL.

ELECTRICAL SYMBOLS

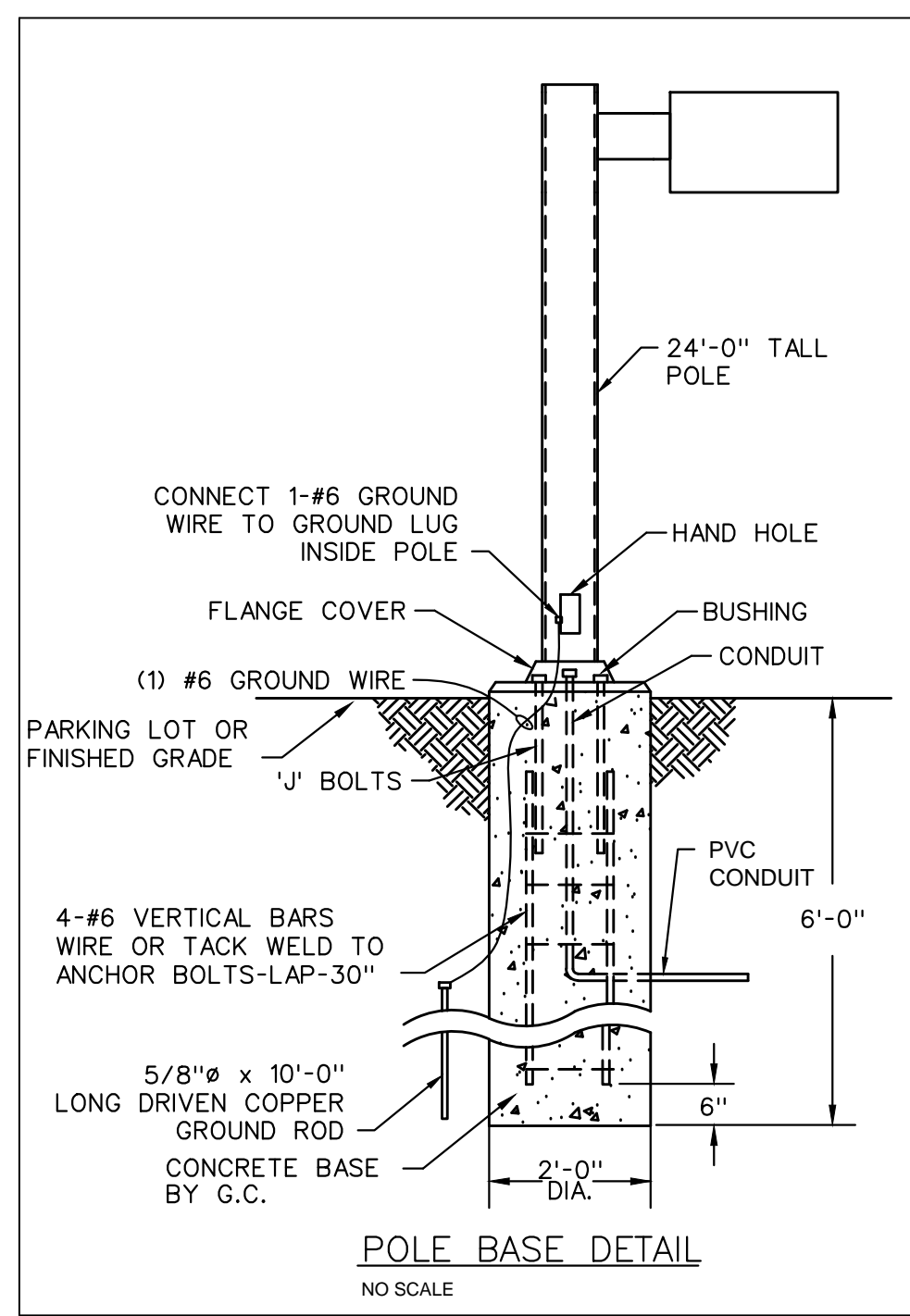
- BRANCH CIRCUIT CONCEALED IN CEILING OR WALL. ARROWS INDICATE HOMERUNS TO PANEL. ALL CONDUCTORS ARE #12 EXCEPT AS NOTED.
- CONDUIT RUN UNDERGROUND OR BENEATH FLOOR SLAB.
- GROUNDING CONDUCTOR #12 EXCEPT AS NOTED.
- WALL MOUNTED JUNCTION BOX.
- CEILING MOUNTED JUNCTION BOX.
- PANELBOARD (SURFACE MOUNTED). INSTALL W/TOP 6'-0" AFF. DISCONNECT SWITCH. SIZED AS NOTED.
- DISCONNECT SWITCH FURNISHED WITH EQUIPMENT.
- EXIT LIGHT - SINGLE FACE - ARROWS AS SHOWN.
- EXIT LIGHT - DOUBLE FACE - ARROWS AS SHOWN.
- COMBINATION EXIT/EMERGENCY LIGHT FIXTURE WITH (2) HEADS CEILING OR WALL MOUNTED EMERGENCY LIGHTING UNIT WITH (2) HEADS. 2'x4' LIGHT FIXTURE.
- NIGHT LIGHT FIXTURE. FIXTURE SHALL BE ON 24/7.
- FLUORESCENT STRIP FIXTURE.
- CEILING LIGHT FIXTURE.
- WALL MOUNTED LIGHT FIXTURE.
- REMOTE WEATHERPROOF EMERGENCY LIGHT FIXTURE.
- SINGLE POLE SWITCH. +3'-10" AFF.
- THREE-WAY SWITCH +3'-10" AFF.
- FOUR-WAY SWITCH +3'-10" AFF.
- OCCUPANCY SENSOR. +3'-10" AFF.
- DIMMER SWITCH +3'-10" AFF. SIZE AS NOTED.
- OCCUPANCY SENSOR POWER PACK.
- OCCUPANCY SENSOR.
- DUPLEX RECEPTACLE. +1'-6" AFF OR AS NOTED.
- DUPLEX RECEPTACLE INSTALLED ABOVE COUNTERTOP.
- DUPLEX RECEPTACLE WITH WEATHERPROOF PLATE. HEIGHT AS NOTED.
- DUPLEX RECEPTACLE W/GROUND FAULT PROTECTION. +1'-6" AFF OR AS NOTED.
- FOURPLEX RECEPTACLE. +1'-6" AFF OR AS NOTED.
- COMBINATION VOICE/DATA OUTLET WITH 3/4" CONDUIT STUBBED UP OUT OF BOX TO ABOVE ACCESSIBLE CEILING. +1'-6" AFF OR AS NOTED.
- COMBINATION VOICE/DATA OUTLET WITH 3/4" CONDUIT STUBBED UP OUT OF BOX TO ABOVE ACCESSIBLE CEILING. INSTALLED ABOVE COUNTERTOP.
- HEIGHT TO CENTERLINE OF OUTLET BOX ABOVE FINISHED FLOOR.
- WH-1 ELECTRIC WATER HEATER AND NUMBER.
- EF-1 EXHAUST FAN AND NUMBER.
- CU-1 CONDENSING UNIT AND NUMBER.
- F-1 FURNACE AND NUMBER.
- FC-1 FAN COIL UNIT AND NUMBER.
- HP-1 HEAT PUMP UNIT AND NUMBER.
- AFF ABOVE FINISH FLOOR.
- EC ELECTRICAL CONTRACTOR.
- EDF ELECTRIC DRINKING FOUNTAIN.
- NL NIGHT LIGHT. FIXTURE SHALL BE ON 24/7

PANEL		P		120/208		VOLTS		800 A. BUS		SERVICE ENTRANCE	
SECTION		1		OF		1		3		PHASE	
CIRC. NO.		CIRCUIT DESCRIPTION		CIRC. BRKR. AMPS		POLES		VA		Ø	
1	LIGHTING	20	1	675	A	2	RECEPTACLES	20	1	900	
3	LIGHTING	20	1	1920	B	4	RECEPTACLES	20	1	900	
5	EM/EXIT LTG	20	1	250	C	6	RECEPTACLES	20	1	720	
7	LIGHTING	20	1	1920	A	8	RECEPTACLES	20	1	720	
9	LIGHTING	20	1	420	B	10	RECEPTACLES	20	1	720	
11	EXTERIOR LTG.	20	1	1200	C	12	RECEPTACLES	20	1	1000	
13	OHD OPERATOR	20	1	1920	A	14	RECEPTACLES	20	1	1000	
15	OHD OPERATOR	20	1	1920	B	16	RECEPTACLES	20	1	1000	
17	OHD OPERATOR	20	1	1920	C	18	RECEPTACLES	20	1	360	
19	OHD OPERATOR	20	1	1920	A	20	DRINK FOUNTAIN	20	1	528	
21	RECEPTACLES	20	1	360	B	22	RECEPTACLES	20	1	720	
23	RECEPTACLES	20	1	360	C	24	RECEPTACLES	20	1	720	
25	RECEPTACLES	20	1	360	A	26	RECEPTACLES	20	1	720	
27	SPARE	20	1	-	B	28	RECEPTACLES	20	1	540	
29	F-1	20	1	1920	C	30	WATER HEATER	30	2	2250	
31	MOTORIZED DMPR	20	1	500	A	32				2250	
33	UH-2	20	1	528	B	34	RECEPTACLES	20	1	720	
35	UH-1	20	1	1920	C	36		20	1	-	
37	UH-1	20	1	1920	A	38				2617	
39	EF-2	60	2	2912	B	40	CU-1	35	3	2617	
41				2912	C	42				2617	
TOTAL CONNECTED LOAD		51,376 VA		DEMAND FACTORS:		LIGHTS @ 125 % = 1,596 VA		RECEPTS @ 100 % = 10,000 VA		POWER FACTOR 100 %	
						OTHER @ 100 % = 33,171 VA		TOTAL DEMAND LOAD = 52,972 VA		DEMAND CURRENT 147 AMPS	
<input type="checkbox"/> SURFACE MOUNTED											
<input type="checkbox"/> FLUSH MOUNTED											

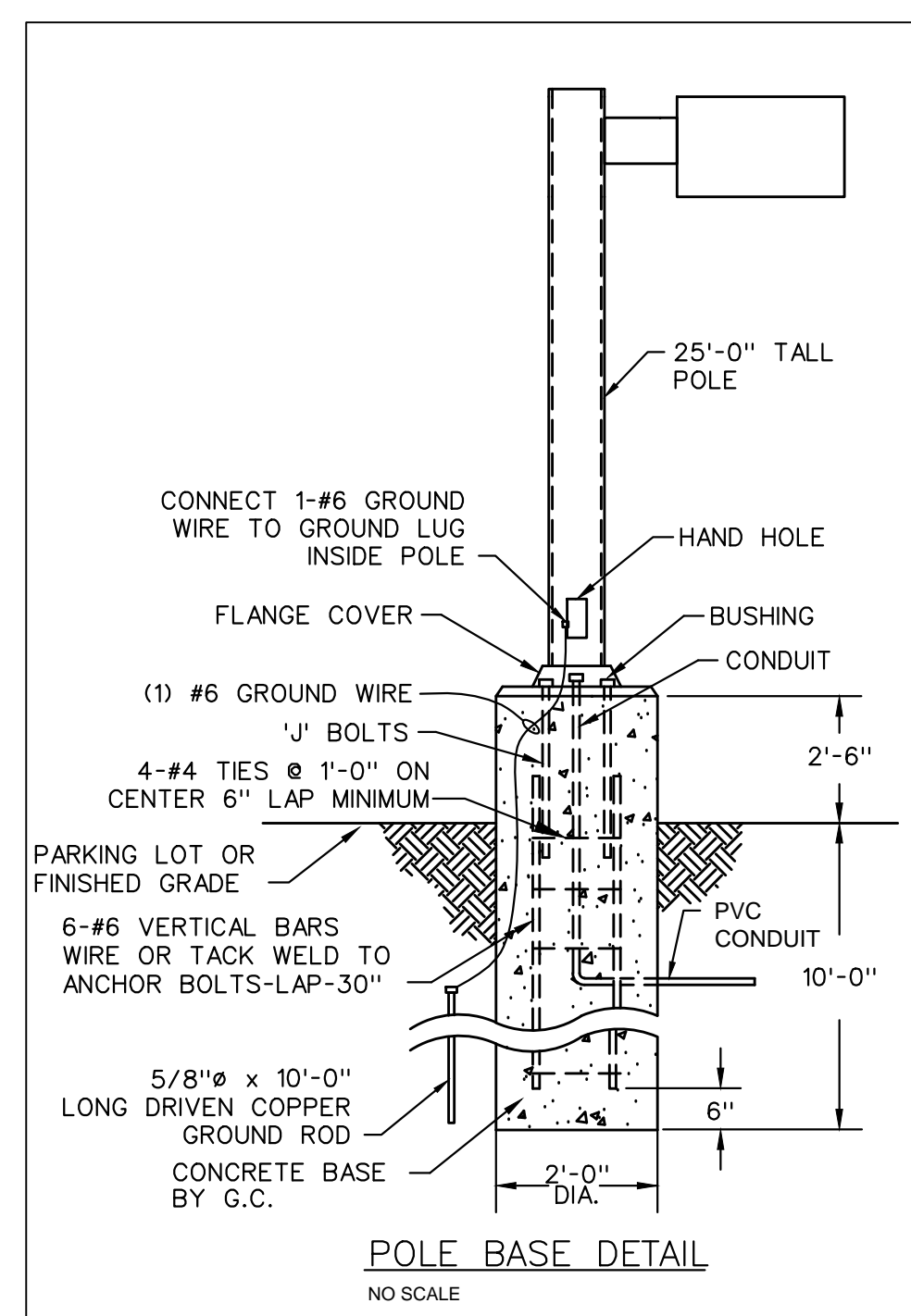
TYPE	MANUFACTURER	LAMP	WATTS/VOLTAGE	DESCRIPTION
A	BY OWNER	LED	TBD	2X4 LAY-IN FIXTURE, ACRYLIC LENS. NL = NIGHTLIGHT 24/7 OPERATION.
B	BY OWNER	LED	TBD	2X4 LAY-IN FIXTURE, ACRYLIC LENS
C	BY OWNER	LED	TBD	2X4 SUSPENDED FIXTURE, ACRYLIC LENS NL = NIGHTLIGHT 24/7 OPERATION
D	BY OWNER	LED	TBD	EXTERIOR WALL PAK
E	BY OWNER	LED	TBD	EXTERIOR RATED ARCHITECTURAL FIXTURE.
EM	BY OWNER	LED	TBD	EMERGENCY LIGHTING UNIT, 90MIN BATTERY
X	BY OWNER	LED	TBD	EXIT SIGN, UNIVERSAL MOUNT, 90MIN. BATTERY

ELECTRICAL GENERAL NOTES

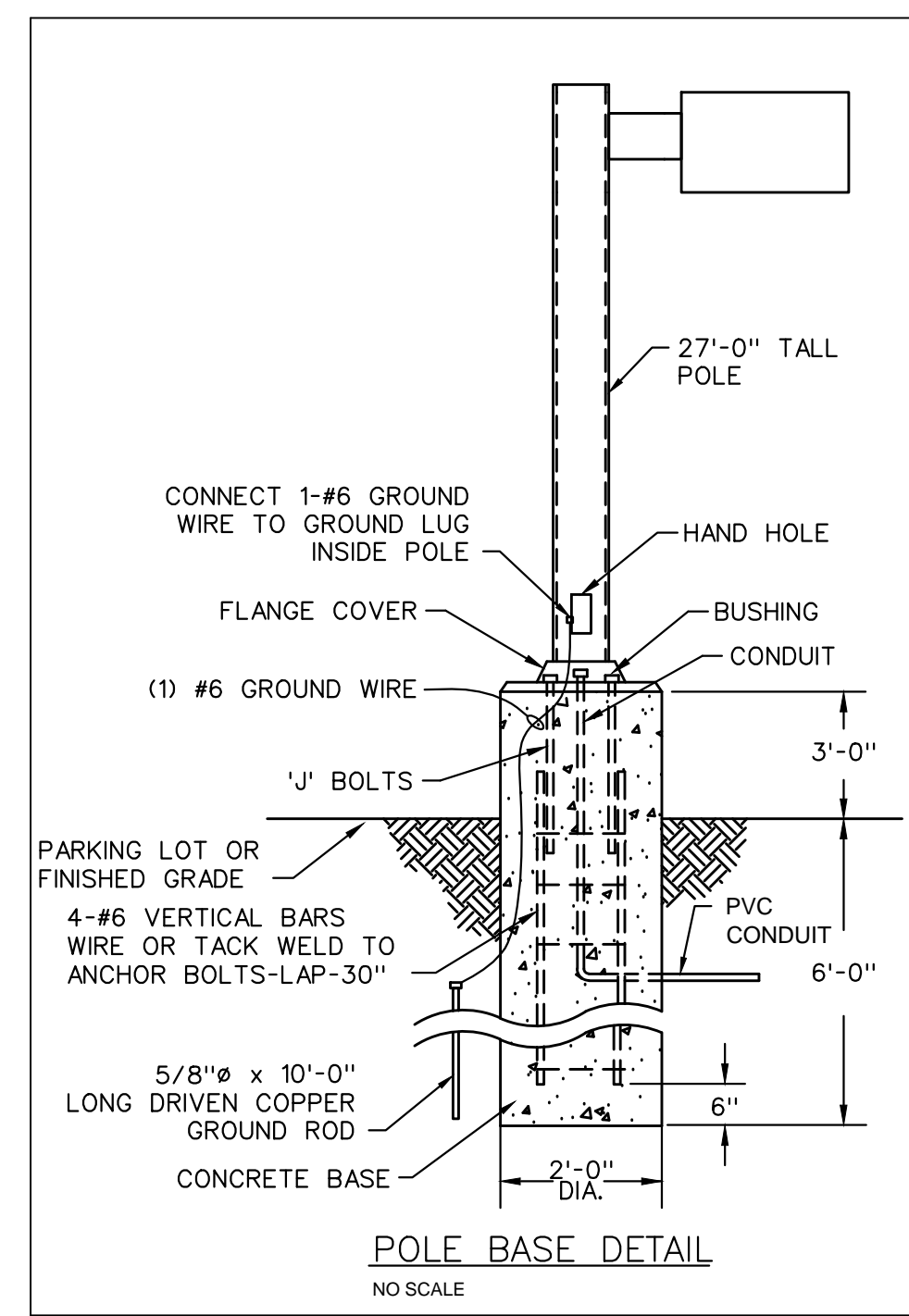
- INSTALLATION SHALL COMPLY WITH LATEST EDITION OF N.E.C. AND LOCAL AUTHORITY HAVING JURISDICTION.
- CONTRACTOR SHALL BE LICENSED TO PERFORM WORK IN MUNICIPALITY WHERE PROJECT IS LOCATED.
- ALL WIRING SHALL BE INSTALLED IN CONDUIT. EMT CONDUIT WITH SET SCREW FITTINGS MAY BE UTILIZED WHERE PERMITTED BY CODE. MINIMUM CONDUIT SIZE SHALL BE 1/2".
- ALL WIRING SHALL BE COPPER WITH 600 VOLT INSULATION AND COLOR CODED.
- CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMIT AND INSPECTION FEES.
- INSTALL BLANK COVER PLATE ON ALL PULL BOXES AND JUNCTION BOXES.
- TYPEWRITTEN PANELBOARD DIRECTORY SHALL BE PROVIDED FOR PANELBOARD AND CORRECTLY FILLED OUT.
- ALL WIRING DEVICES SHALL BE RATED 20 AMP, OR AS NOTED.
- ALL NEW BRANCH CIRCUIT CONDUITS SHALL BE INSTALLED CONCEALED ABOVE LAY-IN CEILING OR IN WALLS.
- CONTRACTOR SHALL FIELD VERIFY EXACT ROUTING OF ALL CONDUITS TO NEW EQUIPMENT.
- DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE, NEMA 1 FOR INDOOR AND NEMA 3R FOR OUTDOOR INSTALLATIONS. MANUFACTURED BY SQUARE D, ITE/SIEMENS, GE, OR CUTLER-HAMMER.
- FURNISH MATERIALS AND LABOR FOR A COMPLETE AND OPERATIONAL ELECTRICAL INSTALLATION.
- MATERIAL AND EQUIPMENT SHALL BE NEW AND SHALL BEAR THE 'UL' LABELS AS REQUIRED.
- EMERGENCY AND EXIT LIGHT FIXTURES SHALL BE PROVIDED WITH BATTERY BACK-UP FOR MINIMUM OF (90) MINUTES. EMERGENCY AND EXIT LIGHT FIXTURES SHALL BE CONNECTED TO HOT LEG OF CIRCUIT, NOT SWITCHED.
- E.C. SHALL VERIFY RATINGS, LOCATIONS, AND CONNECTIONS OF ALL EQUIPMENT PROVIDED BY OTHERS AND INSTALLED AND/OR CONNECTED BY THE ELECTRICAL CONTRACTOR.
- NEW PANELBOARDS SHALL BE ITE/SIEMENS TYPE 'P2', WITH BOLT-ON CIRCUIT BREAKERS, ALUMINUM BUS, NEMA 1 ENCLOSURE, GROUND, AND NEUTRAL BUS. AIC RATING TO MATCH EXISTING SYSTEM. EQUALS BY SQUARE 'D', G.E., OR CUTLER-HAMMER.



E100



NO SCALE



NO SCALE

Gladfelter Engineering Group assumes design responsibility for this project for only the mechanical, plumbing and electrical disciplines with drawing sheet number beginning with M, P and E. All other drawings should be considered the work of others. Further, drawings in this project set may contain drawing information, including but not limited to: architectural plans, sections and elevations, site plans and surveys and other information pertinent to showing the mechanical, plumbing and electrical work which is furnished by others, generally indicated by screened or light type. Gladfelter Engineering Group assumes no responsibility or liability for the accuracy or regulatory compliance for work prepared by others even though shown on MPE drawings. Gladfelter Engineering Group assumes responsibility only for the design of mechanical, plumbing and electrical disciplines contained herein, generally indicated in bold type.

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09/10/18	CITY COMMENTS
11/09/18	CITY COMMENTS

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