

PLAN SYMBOLS

	HOME RUN TO PANELBOARD. NO. OF ARROWS INDICATE NO. OF CIRCUITS, HASH MARKS INDICATE NO. OF #12 AWG. CONDUCTORS. NO HASH MARKS INDICATE 2#12 CONDUCTORS & 1#12 GND IN 3/4" CONDUIT.
	CONDUIT CONCEALED IN WALL, IN SLAB ABOVE, OR ABOVE CEILING
	CONDUIT CONCEALED IN OR BELOW FLOOR OR UNDERGROUND.
	CONDUIT RUN EXPOSED. RUN PARALLEL OR PERPENDICULAR TO STRUCTURE OR WALL.
	FLEXIBLE CONDUIT WITH EQUIPMENT CONNECTION.
	CONCRETE ENCASED DUCTBANK.
	WALL MOUNTED LIGHTING FIXTURE.
	LED LIGHTING FIXTURE, CEILING MOUNTED.
	EXTERIOR LUMINAIRE AND MOUNTING STANDARD.
	EXISTING EXTERIOR LIGHTING.
	EMERGENCY BATTERY PACK LIGHTING FIXTURE.
	JUNCTION BOX N.E.C. SURFACE MOUNTED UNLESS INDICATED OTHERWISE.
	NEMA 4X 316 STAINLESS STEEL JUNCTION BOX PER N.E.C., RACK MOUNTED UNLESS INDICATED OTHERWISE.
	FLUSH OR SURFACE MOUNTED LIGHTING PANELBOARD.
	FLUSH OR SURFACE MOUNTED POWER PANELBOARD.
	DRY TYPE TRANSFORMER. NO. INDICATES KVA RATING.
	LIQUID FILLED TRANSFORMER, KVA RATING AS SHOWN
	SINGLE RECEPTACLE, RATING AS SHOWN
	20A, 125V, 3W DUPLEX RECEPTACLE IN FLUSH OUTLET BOX, 18" ABOVE FINISHED FLOOR.
	20A, 125V, 3W DUPLEX RECEPTACLE IN FLUSH OUTLET BOX, 48" ABOVE FINISHED FLOOR OR 6" ABOVE FINISHED COUNTER AS REQUIRED (AFC)
	20A, 125V, 3W DUPLEX RECEPTACLE IN FLUSH, FLOOR MOUNTED OUTLET BOX.
	20A, 125V, 3W DUPLEX RECEPTACLE, SURFACE MOUNTED.
	SURFACE MOUNTED GROUND FAULT DUPLEX WEATHERPROOF RECEPTACLE 20A, 125V, 3W - MOUNTED 48" ABOVE FINISHED GRADE, UNLESS OTHERWISE NOTED.
	20A, 125, 3W DOUBLE DUPLEX RECEPTACLE IN FLUSH OUTLET BOX.
	FLUSH MOUNTED GROUND FAULT DUPLEX RECEPTACLE 20A, 125V, 3W -MOUNTED 48" ABOVE FINISHED FLOOR.
	DISCONNECT RACK MOUNTED.
	HANDS/OFF/AUTOMATIC & DISCONNECT RACK MOUNTED WITH JUNCTION BOX MOUNTED BELOW OFF/REMOTE, SEE DETAIL
	S SINGLE POLE SWITCH IN FLUSH OUTLET BOX, 48" ABOVE FINISHED FLOOR, UNLESS OTHERWISE NOTED (TYPICAL).
	S SINGLE POLE SWITCH, SURFACE MOUNTED.
	S3 THREE-WAY SWITCH IN FLUSH OUTLET BOX.
	S4 FOUR-WAY SWITCH IN FLUSH OUTLET BOX.
	NON-FUSIBLE DISCONNECT SWITCH, 30A,3P UNLESS OTHERWISE INDICATED.
	30/20 NON-FUSIBLE DISCONNECT SWITCH, 30A,3P UNLESS OTHERWISE INDICATED, WITH REMOTE CONTROL STATION AS REQUIRED BY ELEMENTARY DIAGRAMS OR SPECS.
	10 ELECTRIC A.C. MOTOR, NO. INDICATES HORSEPOWER.
	FUSED DISCONNECT SWITCH(30/20: 30=SWITCH RATING, 20=FUSE RATING) 3 POLE-UNLESS NOTED OTHERWISE.
	M MOTORIZED VALVE AND GATE
	T DUCT SMOKE DETECTOR REMOTE TEST SWITCH AND INDICATING LIGHT
	VFD VARIABLE FREQUENCY DRIVE
	T THERMOSTAT
	H ELECTRIC HEATER
	FLUSH OUTLET BOX AND TELEPHONE COVER PLATE AND SUITABLE FOR DATA DEVICE CONNECTION 48" ABOVE FINISHED FLOOR.
	FLUSH FLOOR MOUNTED OUTLET BOX AND TELEPHONE COVER PLATE.
	C CONTROL PULLBOX
	P POWER MANHOLE.

PLAN SYMBOLS (CONTINUED)

	MOTOR DUTY, SINGLE PHASE DISCONNECT, NEMA 1
	FLOW SWITCH
	FLOW ELEMENT
	LEVEL ELEMENT
	CHECK VALVE LIMIT SWITCH
	PRESSURE SWITCH
	PRESSURE SWITCH HIGH
	SOLENOID VALVE
	LIQUID LEVEL SWITCH
	LOW PRESSURE SWITCH
	ANALYZING INDICATING TRANSMITTER
	FLOW INDICATING TRANSMITTER
	LEVEL INDICATING TRANSMITTER
	TEMPERATURE SWITCH
	TORQUE SWITCH
	SPACE HEATER
	ANALYTICAL ELEMENT
	ON/OFF/REMOTE
	HAND/OFF/AUTO
	OPEN/CLOSE/AUTO SWITCH
	LOCKOUT SWITCH
	PRESSURE DIFFERENTIAL SWITCH
	HEAT DETECTOR w/ FORM A (SPST) N.O. CONTACTS FOR CONNECTION TO ALARM OUTPUT CIRCUITRY
	DUCT DETECTOR w/ FORM A (SPST) N.O. CONTACTS FOR CONNECTION TO ALARM OUTPUT CIRCUITRY
	SMOKE DETECTOR w/ FORM A (SPST) N.O. CONTACTS FOR CONNECTION TO ALARM OUTPUT CIRCUITRY
	EMERGENCY STOP
	START/STOP

SINGLE LINE DIAGRAM SYMBOLS

	COMBINATION MOTOR STARTER, NO. INDICATES STARTER SIZE
	V VOLTMETER
	A AMMETER
	ST SHUNT TRIP
	PM PHASE MONITOR
	GFI GROUND FAULT INTERRUPTER
	F FUSE
	C CAPACITOR
	DRW-OUT DRAW-OUT CIRCUIT BREAKER
	MOLDED CASE CIRCUIT BREAKER
	TYPICAL SELECTOR SWITCH AND CONTROL. SEE ELEMENTARY DIAGRAMS FOR EXACT TYPE.
	10 ELECTRIC A.C. MOTOR, NO. INDICATES HORSEPOWER.
	SE SERVICE OR EQUIPMENT GROUND.
	NON-FUSIBLE DISCONNECT SWITCH, 30A,3P UNLESS OTHERWISE INDICATED.
	NON-FUSIBLE DISCONNECT SWITCH, 30A,3P UNLESS OTHERWISE INDICATED, WITH REMOTE CONTROL STATION AS REQUIRED BY ELEMENTARY DIAGRAMS OR SPECS.
	L LIGHTING PANELBOARD
	P POWER PANELBOARD

CONTROL DIAGRAM SYMBOLS

	DUPLEX RECEPTACLE
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT
	LIMIT SWITCH, NORMALLY OPEN
	LIMIT SWITCH, NORMALLY CLOSED
	PRESSURE SWITCH, NORMALLY OPEN
	PRESSURE SWITCH, NORMALLY CLOSED
	FLOAT SWITCH, NORMALLY OPEN
	FLOAT SWITCH, NORMALLY CLOSED
	FLOW SWITCH, NORMALLY OPEN
	FLOW SWITCH, NORMALLY CLOSED
	TEMPERATURE SWITCH, NORMALLY OPEN
	TEMPERATURE SWITCH, NORMALLY CLOSED
	NORMALLY OPEN, TIMED TO CLOSE CONTACT
	NORMALLY CLOSED, TIMED TO OPEN CONTACT
	NORMALLY CLOSED, TIMED TO CLOSE CONTACT
	NORMALLY OPEN, TIMED TO OPEN CONTACT
	LIMIT SWITCH
	FLOW SWITCH
	PRESSURE SWITCH
	SOLENOID VALVE
	LIQUID LEVEL SWITCH
	VIBRATION SWITCH
	ALARM RELAY
	ALARM TIMER
	CONTROL RELAY
	MOTOR STARTER
	TIMING RELAY
	TORQUE SWITCH
	ALARM INDICATING LIGHT
	RUN INDICATING LIGHT
	MOMENTARY CONTACT PUSHBUTTON
	MOMENTARY BREAK PUSHBUTTON OR RESET
	EMERGENCY LOCKOUT SWITCH. LOCKABLE IN THE OFF POSITION
	KEYED SWITCH
	MAINTAINED CONTACT ON-OFF SWITCH
	START/STOP(S/S) CONTROL SWITCH MAINTAINED CONTACT
	THREE POSITION MAINTAINED CONTACT SELECTOR SWITCH
	FUSE
	MOLDED CASE CIRCUIT BREAKER
	CONTROL POWER TRANSFORMER
	REMOTE TERMINAL BLOCK POINT

ABBREVIATIONS

A	AMPERES
ACCU	AIR COOLED CONDENSING UNIT
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AIC	AMPS INTERRUPTING CURRENT BREAKER
BKRG	BUILDING
BLDG	BIOLOGICAL NUTRIENT REMOVAL BELT FILTER PRESS CONTROL PANEL
BNR	BAR SCREEN CONTROL PANEL
BPCP	CHLORINE CONTACT CHAMBER
BSCP	CLARIFIER CONTROL PANEL
CCC	CIRCUIT
CCP	CONTROL POWER TRANSFORMER
CKT	CURRENT TRANSFORMER
CPT	DATA HIGHWAY
CT	DISCONNECT
DH	DISSOLVED OXYGEN
DISC	EFFLUENT
DO	EMERGENCY
EFF	ENCLOSURE
EM	ENERGY SAVING BALLAST
ENCL	ELAPSED TIME METER
ESB	ELECTRIC UNIT HEATER
ETM	EXHAUST
EUH	EXISTING
EXH	FIRE ALARM CONTROL PANEL
EXIST	FIBER OPTIC
FACP	FIBER OPTIC TERMINATION PANEL
FO	FIBER PATCH PANEL
FOTC	FIBER OPTIC TERMINATION PANEL
FPP	FIBER PATCH PANEL
FVR	FULL VOLTAGE REVERSING
FVNR	FULL VOLTAGE NON-REVERSING
GCP	GRIT CONTROL PANEL
GFR	GROUND FAULT RECEPTACLE
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GRS	GALVANIZED RIGID STEEL
HOA	HAND-OFF-AUTOMATIC
HOR	HAND-OFF-REMOTE
HCP	HEADWORKS CONTROL PANEL
HP	HORSEPOWER
HPU	HYDRAULIC POWER UNIT
HWY	HIGHWAY
IR	INTERNAL RECYCLE
KVA	KILO VOLT-AMPERES
KW	KILOWATT
LA	LIGHTNING ARRESTOR
LBCP	LOCAL BLOWER CONTROL PANEL
LF	LINEAR FEET
LTG	LIGHTING
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MFR	MANUFACTURER
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MOV	MOTORIZED VALVE
MSC	MANUFACTURER SUPPLIED CABLE MOUNTED
MTD	MANUAL TRANSFER SWITCH
MTS	NATIONAL ELECTRIC CODE
NEC	NEUTRAL
N	NOT TO SCALE
NTS	OVERHEAD
OH	ON/OFF REMOTE
OOR	ORLANDO UTILITIES COMMISSION
OUC	POLE
P	PROCESS CONTROL PANEL
PCP	POWER EQUIPMENT CENTER
PEC	PROGRAMMABLE LOGIC CONTROLLER
PLC	PHASE MONITOR
PM	PANEL
PNL	PANEL
PVC	POLYVINYL CHLORIDE
RIO	REMOTE I/O PANEL
RVSS	REDUCED VOLTAGE SOLID STATE STARTER
SH	SHIELDED
SPD	SURGE PROTECTIVE DEVICE
SS	STAINLESS STEEL
SSS	SOLID STATE STARTER
STR	STARTER
SWGR	SWITCHGEAR
TBR	TO BE REMOVED
TC	TERMINATION CABINET
TYP	TYPICAL
V	VOLT
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
W	WITH
WP	WEATHERPROOF
XFMR	TRANSFORMER
ø	PHASE

NOTES

- ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ALL NEW ELECTRICAL WORK INDICATED.
- ELECTRICAL CONTRACTOR SHALL VISIT JOB SITE AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING ELECTRICAL INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. EXISTING CONDITIONS OF ELECTRICAL EQUIPMENT, LIGHT FIXTURES, ETC... THAT ARE PART OF THE FINAL SYSTEM SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO SUBMITTING HIS BID.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2014 NATIONAL ELECTRICAL CODE, 2017 FLORIDA BUILDING CODE AND SHALL COMPLY WITH ALL LOCAL RULES AND ORDINANCES.
- MINIMUM WIRE SIZE SHALL BE #12 A.W.G. EXCLUDING CONTROL WIRING, UNLESS OTHERWISE NOTED.
- IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
- ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED BY THE 2014 EDITION OF THE N.E.C. OR LOCAL CODES. ALL CONDUITS SHALL HAVE A BOND WIRE SIZED PER TABLE 250-122 OF THE 2014 NATIONAL ELECTRICAL CODE.
- ALL MATERIALS SHALL BE NEW AND BEAR UNDERWRITERS' LABELS WHERE APPLICABLE.
- ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY ENGINEER/OWNER.
- CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN THREE YEARS FROM DATE OF ACCEPTANCE.
- CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED OF HIS WORK.
- ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS W/ TYPE WRITTEN DIRECTORIES (NEW & EXISTING).
- ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO THE MECHANICAL DRAWINGS & THE APPROVED MANUFACTURER'S SHOP DRAWINGS FOR THE EXACT LOCATION OF ALL EQUIPMENT.
- NON-SHADED TEXT DENOTES NEW EQUIPMENT, STRUCTURES AND WORK. SHADED AND SLANTED TEXT DENOTES EXISTING EQUIPMENT OR STRUCTURES.
- ALL CONTROL PANELS SHALL BE UL LISTED AND SHALL COMPLY WITH ARTICLE 409 OF THE NEC.
- ALL BURIED CONDUITS SHALL BE ENCASED IN RED CONCRETE.
- WITHIN 30 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE, RECORD DRAWINGS OF THE ACTUAL INSTALLATION SHALL BE PROVIDED TO THE BUILDING OWNER.

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)

ORANGE COUNTY UTILITIES DEPARTMENT ENGINEERING DIVISION
 9150 CURRY FORD ROAD ORLANDO, FL. 32825

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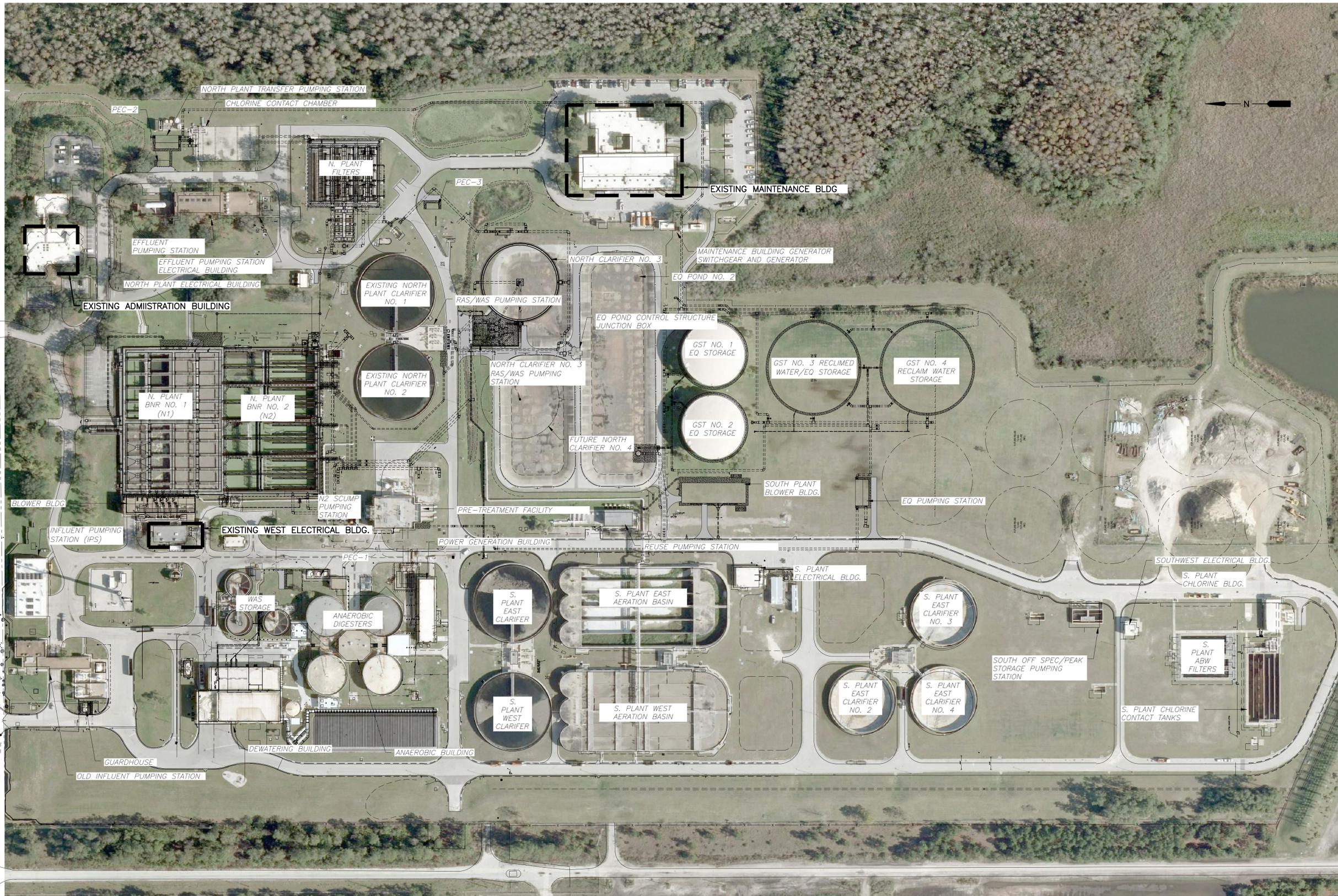
Licenses:
 Eng. C.O.A. No. 3215
 Survey L.B. No. 7143
 Arch. Lic. No. AA2800928
 Lndscp. Lic. No. LC0000298

ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS

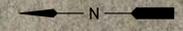
OCU FILE NO. O28427
 DESIGNED BY: LMR
 DRAWN BY: RRM
 CHECKED BY: WCN
 CADD FILE: E01 LGND

SCALE: As Shown
 DRAWING NO.: **E01**
 SHEET: 44 OF 71

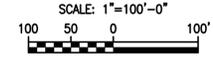
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 C.O.A. No. 8079
 WILLIAM C. NELSON, P.E.
 Florida P.E. No. 42017



SAND LAKE ROAD (STATE ROAD #482)



OVERALL ELECTRICAL SITE PLAN



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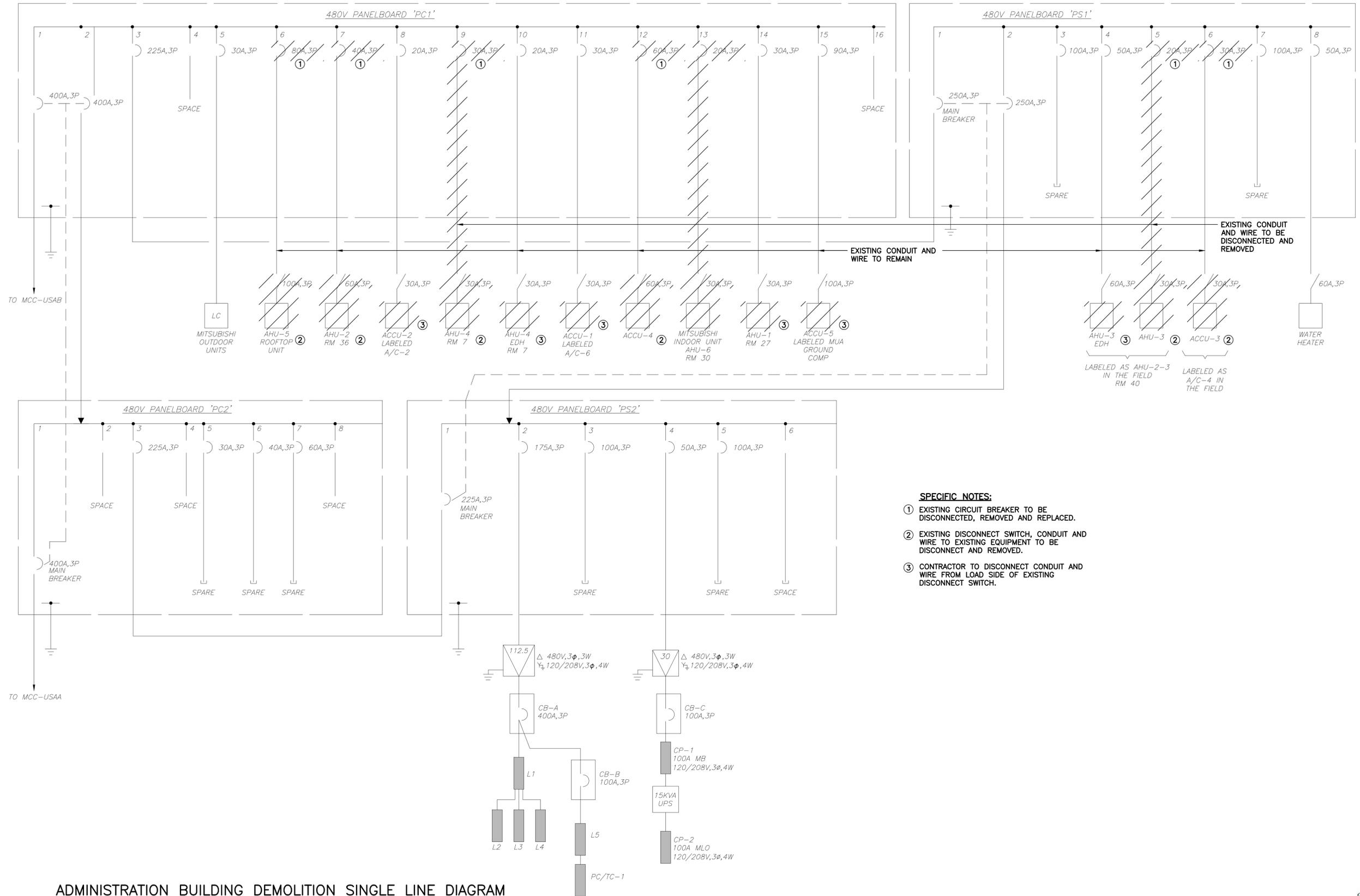
OVERALL ELECTRICAL SITE PLAN

WILLIAM C. NELSON
 PROFESSIONAL ENGINEER
 FLORIDA LICENSE #42017

OCU FILE NO. O28427
 DESIGNED BY: LMR
 DRAWN BY: RRM
 CHECKED BY: WCN
 CADD FILE: E02 SITE

SCALE: As Shown
 DRAWING NO.: **E02**
 SHEET: 45 OF 71

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- SPECIFIC NOTES:**
- ① EXISTING CIRCUIT BREAKER TO BE DISCONNECTED, REMOVED AND REPLACED.
 - ② EXISTING DISCONNECT SWITCH, CONDUIT AND WIRE TO EXISTING EQUIPMENT TO BE DISCONNECT AND REMOVED.
 - ③ CONTRACTOR TO DISCONNECT CONDUIT AND WIRE FROM LOAD SIDE OF EXISTING DISCONNECT SWITCH.

ADMINISTRATION BUILDING DEMOLITION SINGLE LINE DIAGRAM

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REV	DATE	DESCRIPTION

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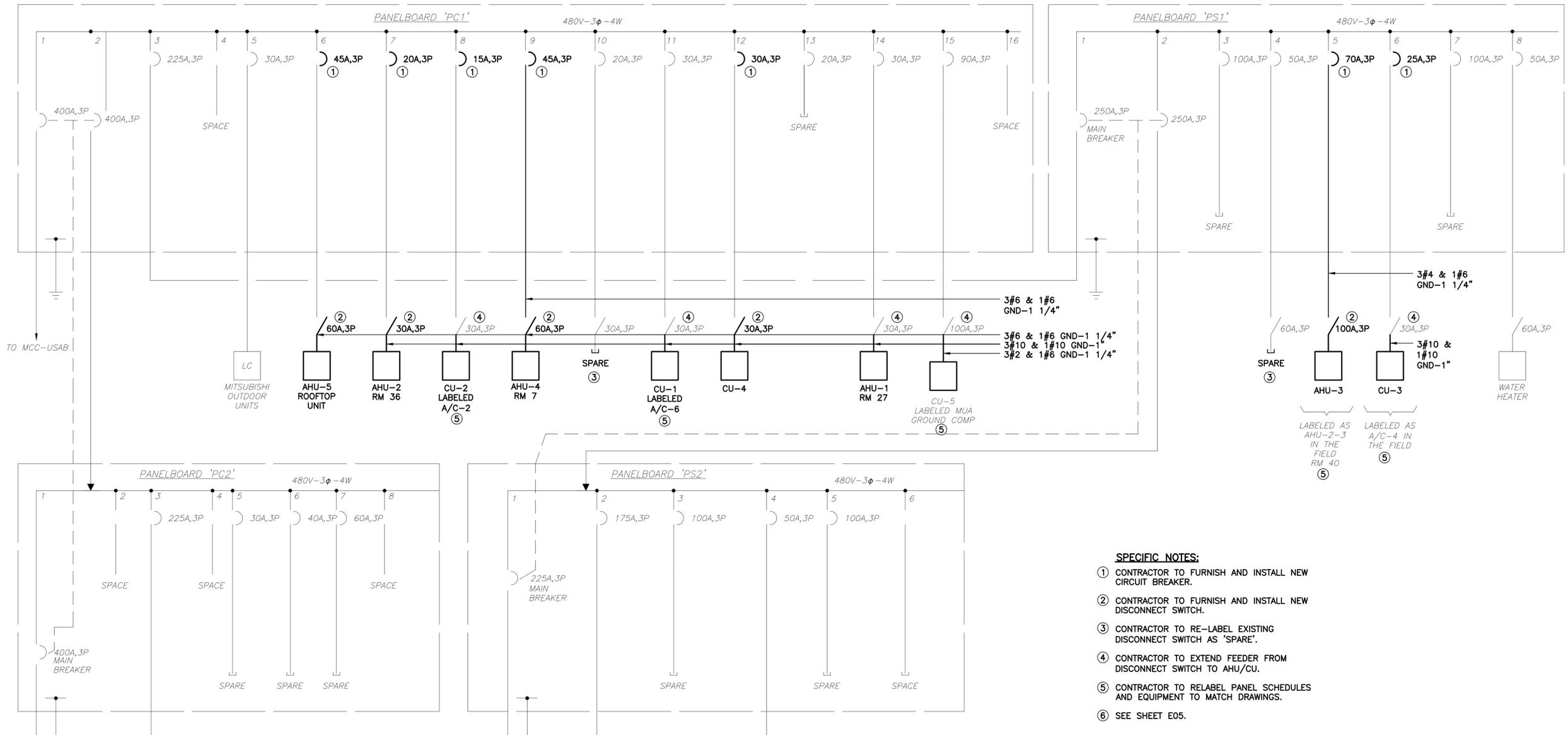
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ADMINISTRATION BUILDING
 DEMOLITION SINGLE LINE DIAGRAM

OCU FILE NO. O28427
 DESIGNED BY: LMR
 DRAWN BY: RRM
 CHECKED BY: WCN
 CADD FILE: E03 ADMIN BLDG SLD

SCALE: As Shown
 DRAWING NO.:
E03
 SHEET: 46 OF 71



- SPECIFIC NOTES:**
- ① CONTRACTOR TO FURNISH AND INSTALL NEW CIRCUIT BREAKER.
 - ② CONTRACTOR TO FURNISH AND INSTALL NEW DISCONNECT SWITCH.
 - ③ CONTRACTOR TO RE-LABEL EXISTING DISCONNECT SWITCH AS 'SPARE'.
 - ④ CONTRACTOR TO EXTEND FEEDER FROM DISCONNECT SWITCH TO AHU/CU.
 - ⑤ CONTRACTOR TO RELABEL PANEL SCHEDULES AND EQUIPMENT TO MATCH DRAWINGS.
 - ⑥ SEE SHEET E05.

ADMINISTRATION BUILDING PROPOSED SINGLE LINE DIAGRAM



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ADMINISTRATION BUILDING PROPOSED SINGLE LINE DIAGRAM

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 Lndscp. Lic. No. LC0000298

OCU FILE NO. O28427
 DESIGNED BY: LMR
 DRAWN BY: RRM
 CHECKED BY: WCN
 CADD FILE: E04 ADMIN BLDG SLD



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 DRAWING NO.: **E04**
 SHEET: 47 OF 71

EXISTING PANEL TO BE MODIFIED

100 AMP MAIN LUG ONLY										PANELBOARD L3, FED FROM PANEL L1										LOCATION: SWRF ADMIN COPY ROOM									
100 AMP BUS RATING										10 KA SHORT CIRCUIT RATING										ENCLOSURE RATING: NEMA 1									
208/120 VOLTS										ELECTRONIC GRADE: NO										MOUNTING: RECESS									
CIRCUIT NO.	DESCRIPTION	LOAD KVA			BREAKER AMPS/POLES	NOTES	CIRCUIT NO.	DESCRIPTION	LOAD KVA			BREAKER AMPS/POLES	NOTES																
		PHASE A	PHASE B	PHASE C					PHASE A	PHASE B	PHASE C																		
1	ACTIVE CIRCUIT				20 /1		2	WATER COOLER				20 /1																	
3	ROOM 10 LIGHTING				20 /1		4	ROOM 11,12,13,14 RECEPTACLES				20 /1																	
5	SPARE				20 /1		6	ROOM 10 RECEPTACLES				20 /1																	
7	ROOM 10 SOUTH DIMMERS				20 /1		8	CONF ROOM EAST, ROOM 8,9,10 RECEPTACLES				20 /1																	
9	ROOM 10 NORTH DIMMERS				20 /1		10	A/C CONT CONF ROOM WEST, 6,7,8 RECEPTACLES				20 /1																	
11	SPARE				20 /1		12	FOYER AREA RECEPTACLES				20 /1																	
13	ROOM 11,12,13,14 LIGHTS				20 /1		14	ROOM 2,3 RECEPTACLES				20 /1																	
15	CONFERENCE ROOM LIGHTS				20 /1		16	ROOM 1,5,6 RECEPTACLES				20 /1																	
17	CONFERENCE ROOM DIMMERS				20 /1		18	ROOM 10 RECEPTACLES				20 /1																	
19	CORRIDOR DIMMER				20 /1		20	ROOM 10 COUNTER RECEPTACLES				20 /1																	
21	SECRETARY LIGHTING				20 /1		22	SPARE				20 /1																	
23	ROOM 2,3,4 LIGHTING				20 /1		24	VAV4-3 (NEW BKR)				15 /2	7.9																
25	ROOM 1,6 LIGHTING				20 /1		26																						
27	EMERGENCY LIGHTING				20 /1		28	RESTROOM EXHAUST FAN				20 /1																	
29	EMERGENCY & EXIT LIGHTS				20 /1		30	NORTH CONF ROOM RECEPTACLES				20 /1																	
31	WATER HEATER ROOM 11				30 /2		32	VAV4-4 (NEW BKR)				15 /2	7.9																
33							34																						
35	VAV4-1 (NEW BKR)				15 /2	7.8	36	VAV4-5 (NEW BKR)				15 /2	7.9																
37							38																						
39	VAV4-2 (NEW BKR)				15 /2	7.8	40	VAV4-6 (NEW BKR)				20 /2	7.9																
41							42																						
TOTAL PHASE KVA THIS SIDE						TOTAL PHASE KVA THIS SIDE						TOTAL PHASE KVA THIS SIDE																	
						TOTAL KVA PER PHASE						TOTAL KVA PER PHASE																	
						TOTAL THREE PHASE KVA						TOTAL THREE PHASE KVA																	
NOTES:													NOTES CONT.:																
1. PROVIDE LOCKING HARDWARE													2. 5 ma GROUND FAULT INTERRUPTER (GFI) CIRCUIT BREAKER																
3. 30 ma GFI CIRCUIT BREAKER FOR EQUIPMENT PROTECTION ONLY (HEAT TRACE)													4. PROVIDE LOCKING HARDWARE & PAINT BREAKER HANDLE RED (FACP)																
5. BRANCH CIRCUIT WIRING: 3/4"C, 3#12 & 1#12G													6. BRANCH CIRCUIT WIRING: 3/4"C, 3#10 & 1#12G																
7. BRANCH CIRCUIT WIRING: 3/4"C, 2#12 & 1#12G													8. REMOVE EXISTING 20-1P & 70-3P BKR INSTALL TWO 15A-2P BKRS																
9. REMOVE EXISTING 20A-1P BREAKERS & INSTALL NEW BKRS AS SHOWN																													
11.							12.																						
13.							14.																						
15.							16.																						
17.							18.																						
19.							20.																						

EXISTING PANEL TO BE MODIFIED

100 AMP MAIN LUG ONLY										PANELBOARD L4, FED FROM PANEL L1										LOCATION: SWRF ADMIN PROJECTION ROOM									
100 AMP BUS RATING										22 KA SHORT CIRCUIT RATING										ENCLOSURE RATING: NEMA 1									
208/120 VOLTS										ELECTRONIC GRADE: NO										MOUNTING: RECESS									
CIRCUIT NO.	DESCRIPTION	LOAD KVA			BREAKER AMPS/POLES	NOTES	CIRCUIT NO.	DESCRIPTION	LOAD KVA			BREAKER AMPS/POLES	NOTES																
		PHASE A	PHASE B	PHASE C					PHASE A	PHASE B	PHASE C																		
1	TRAINING ROOM LIGHTS				20 /1		2	PROJECTION ROOM RECEPTS				20 /1																	
3	TRAINING ROOM LIGHTS				20 /1		4	TRAINING ROOM RECEPTS				20 /1																	
5	VAV4-7 (NEW BKR)				30 /2	8,9	6	TRAINING ROOM RECEPTS				20 /1																	
7							8	HANDICAP FRONT DOOR MOTORS				20 /1																	
9	SPARE				20 /1		10	SPARE				20 /1																	
11	SPARE				20 /1		12	SPARE				20 /1																	
13	EMERGENCY & EXIT LIGHTS				20 /1		14	SPARE				20 /1																	
15	EMERGENCY & EXIT LIGHTS				20 /1		16	DIMMERS-N TRAINING ROOM LIGHTS				20 /1																	
17	SPARE				20 /1		18	SPARE				20 /1																	
19	SPARE				20 /1		20	SPARE				20 /1																	
21	SPARE				20 /1		22	SPARE				20 /1																	
23	SPARE				20 /1		24	SPARE				20 /1																	
25	SPARE				20 /1		26	SPARE				20 /1																	
27	SPARE				20 /1		28	SPARE				20 /1																	
29	SPARE				20 /1		30	SPARE				20 /1																	
TOTAL PHASE KVA THIS SIDE						TOTAL PHASE KVA THIS SIDE						TOTAL PHASE KVA THIS SIDE																	
						TOTAL KVA PER PHASE						TOTAL KVA PER PHASE																	
						TOTAL THREE PHASE KVA						TOTAL THREE PHASE KVA																	
NOTES:													NOTES CONT.:																
1. PROVIDE LOCKING HARDWARE													2. 5 ma GROUND FAULT INTERRUPTER (GFI) CIRCUIT BREAKER																
3. 30 ma GFI CIRCUIT BREAKER FOR EQUIPMENT PROTECTION ONLY (HEAT TRACE)													4. PROVIDE LOCKING HARDWARE & PAINT BREAKER HANDLE RED (FACP)																
5. BRANCH CIRCUIT WIRING: 3/4"C, 3#12 & 1#12G													6. BRANCH CIRCUIT WIRING: 3/4"C, 3#10 & 1#12G																
7. BRANCH CIRCUIT WIRING: 3/4"C, 2#12 & 1#12G													8. REMOVE EXISTING 20A-1P BKRS, INSTALL 30-2P BKR AS SHOWN																
11.							12.																						
13.							14.																						
15.							16.																						
17.							18.																						
19.							20.																						

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)

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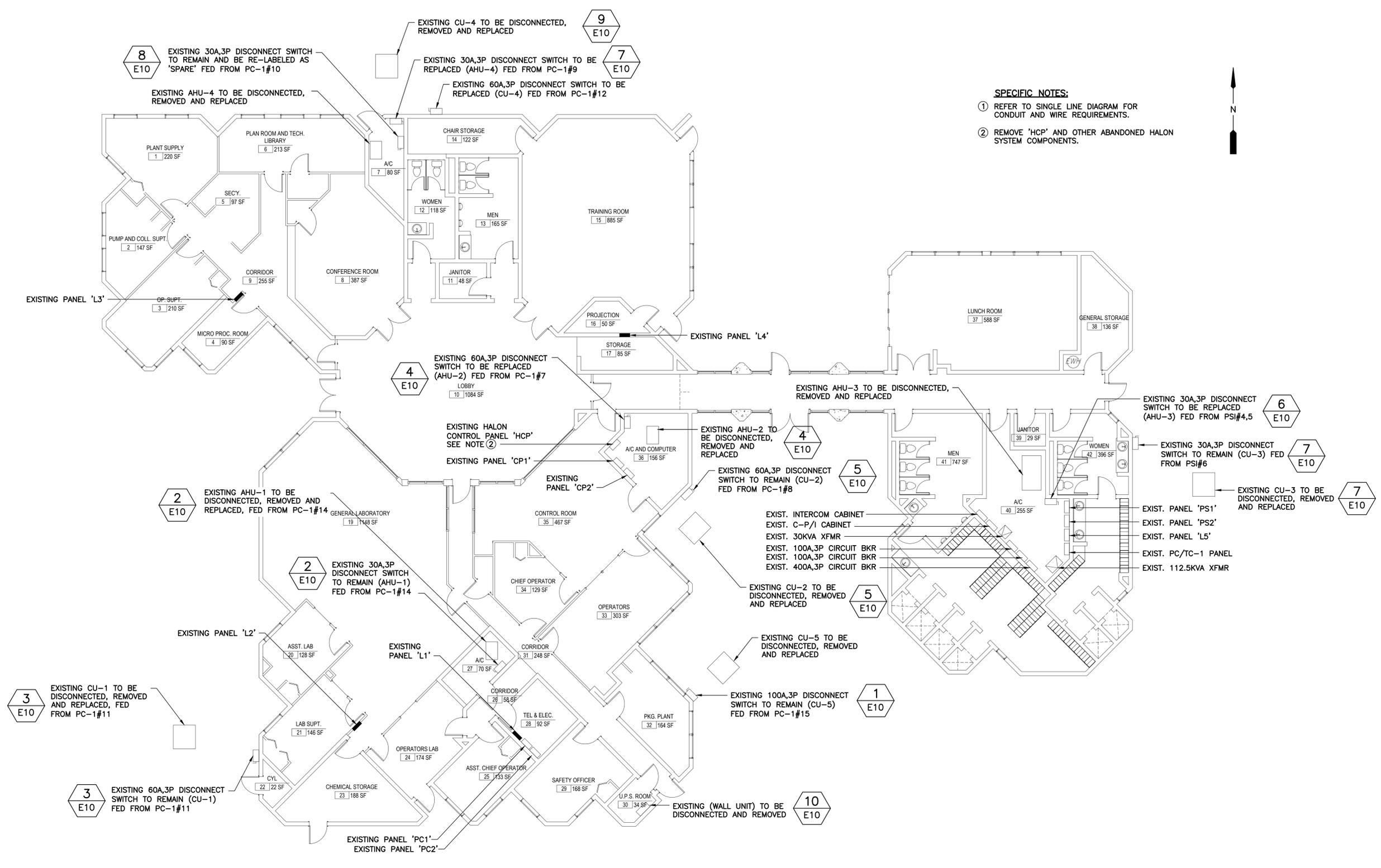
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Survey L.B. No. 7143
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**ADMINISTRATION BUILDING
REVISED PANELBOARD
SCHEDULES**

OCU FILE NO. O28427	SCALE: As Shown
DESIGNED BY: LMR	DRAWING NO.:
DRAWN BY: RRM	E05
CHECKED BY: WCN	SHEET: 48 OF 71
CADD FILE: E05 PNL SCH_1	

Electrical Design Associates

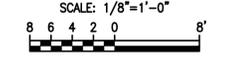
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PHONE: (407) 745-5604
FAX: (407) 745-5603
C.O.A. No. 8079
WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017



- SPECIFIC NOTES:**
- ① REFER TO SINGLE LINE DIAGRAM FOR CONDUIT AND WIRE REQUIREMENTS.
 - ② REMOVE 'HCP' AND OTHER ABANDONED HALON SYSTEM COMPONENTS.



ADMINISTRATION BUILDING ELECTRICAL DEMOLITION PLAN



REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)

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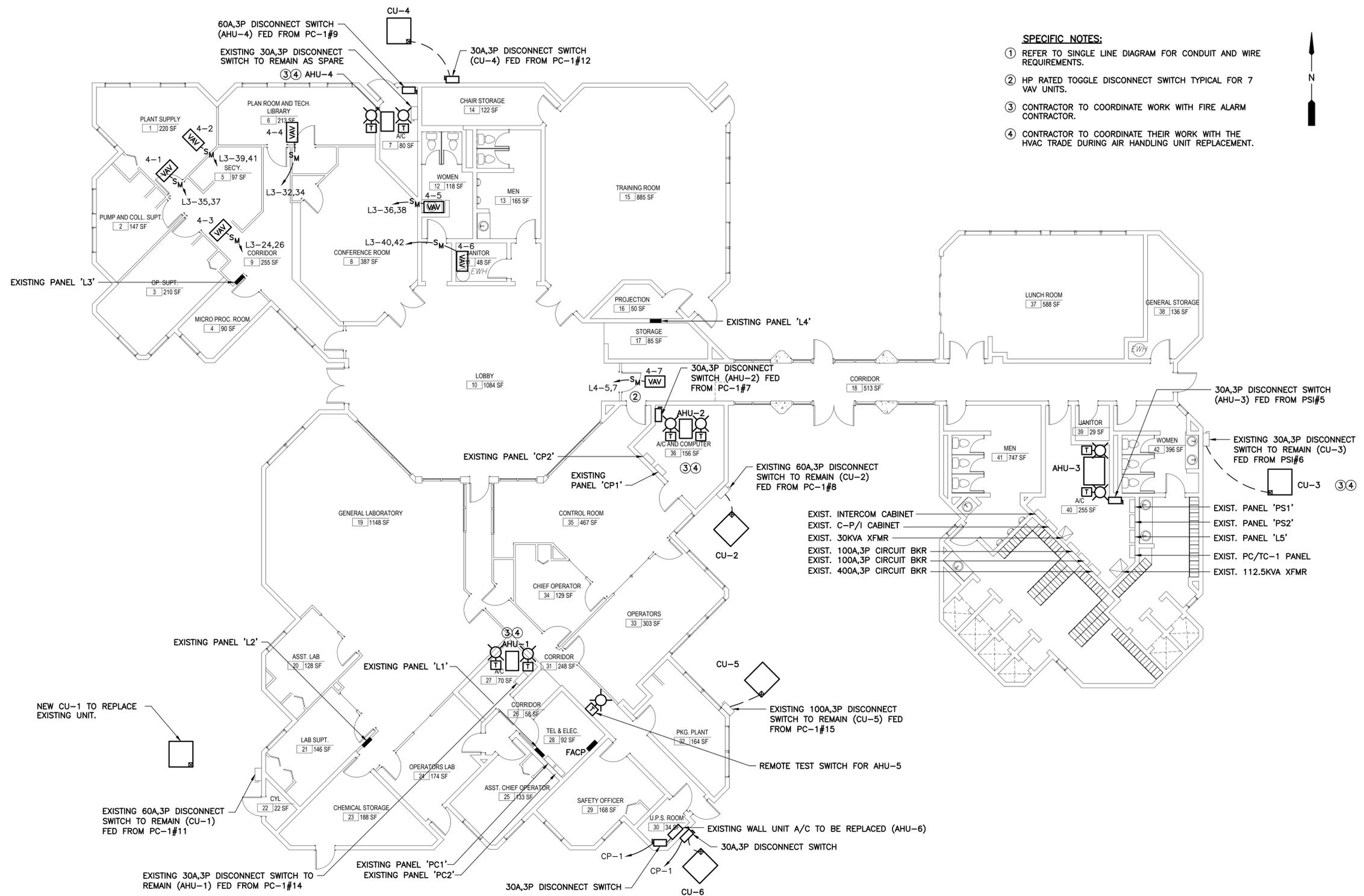
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ADMINISTRATION BUILDING ELECTRICAL DEMOLITION PLAN

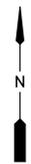
OCU FILE NO. O28427
DESIGNED BY: LMR
DRAWN BY: RRM
CHECKED BY: WCN
CADD FILE: E06 DEMO ADMIN

SCALE: As Shown
DRAWING NO.: **E06**
SHEET: 49 OF 71

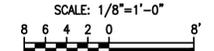
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Florida P.E. No. 42017



- SPECIFIC NOTES:**
- REFER TO SINGLE LINE DIAGRAM FOR CONDUIT AND WIRE REQUIREMENTS.
 - HP RATED TOGGLE DISCONNECT SWITCH TYPICAL FOR 7 VAV UNITS.
 - CONTRACTOR TO COORDINATE WORK WITH FIRE ALARM CONTRACTOR.
 - CONTRACTOR TO COORDINATE THEIR WORK WITH THE HVAC TRADE DURING AIR HANDLING UNIT REPLACEMENT.



ADMINISTRATION BUILDING ELECTRICAL PLAN



REV	DATE	DESCRIPTION

LINE IS 2 INCHES
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(IF NOT SCALE ACCORDINGLY)

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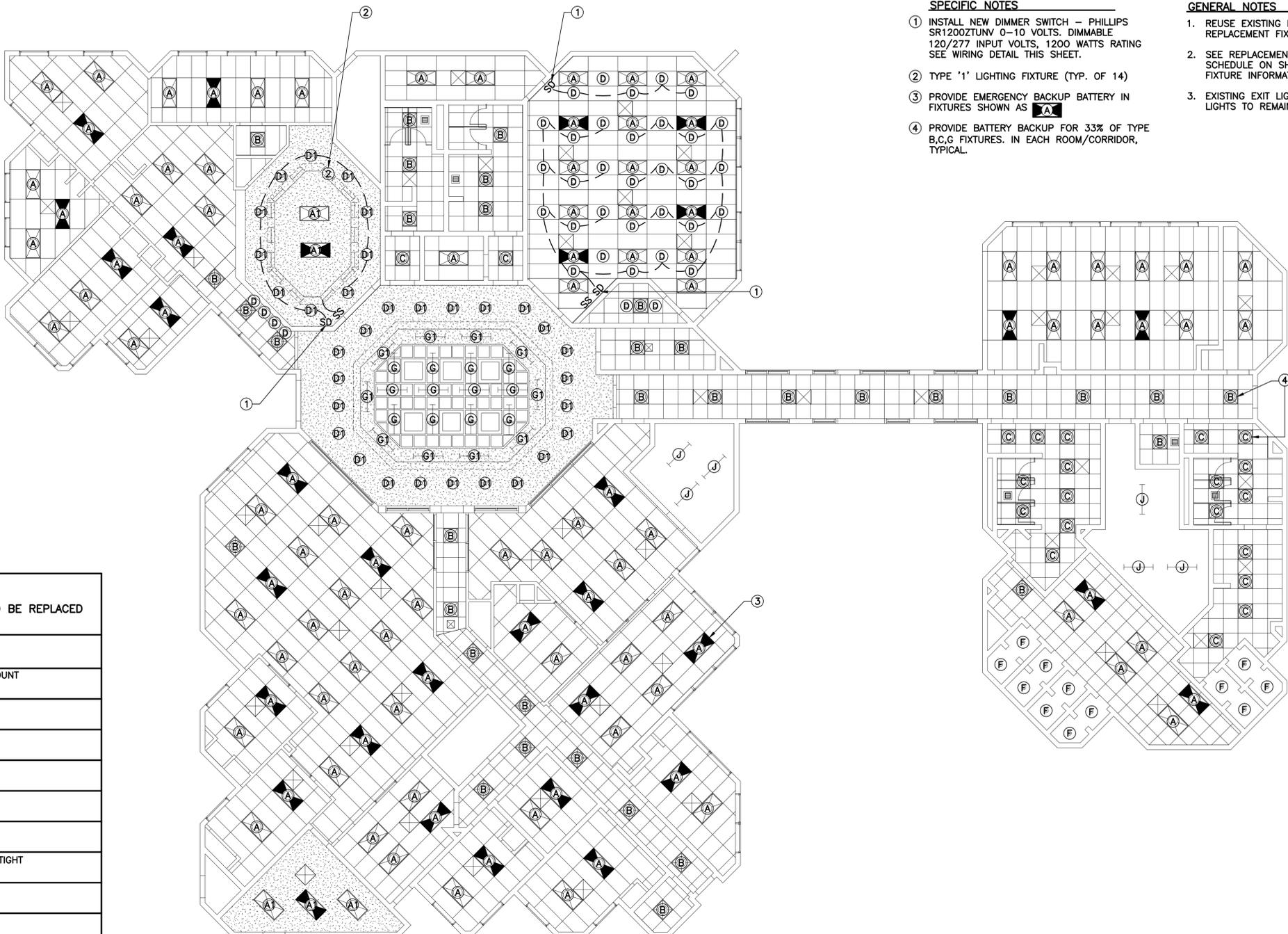
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ADMINISTRATION BUILDING ELECTRICAL PLAN

OCU FILE NO. O28427
DESIGNED BY: LMR
DRAWN BY: RRM
CHECKED BY: WCN
CADD FILE: E07 ADMIN BLDG

SCALE: As Shown
DRAWING NO.: **E07**
SHEET: 50 OF 71

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SPECIFIC NOTES

- ① INSTALL NEW DIMMER SWITCH - PHILLIPS SR1200ZTUNV 0-10 VOLTS. DIMMABLE 120/277 INPUT VOLTS, 1200 WATTS RATING SEE WIRING DETAIL THIS SHEET.
- ② TYPE '1' LIGHTING FIXTURE (TYP. OF 14)
- ③ PROVIDE EMERGENCY BACKUP BATTERY IN FIXTURES SHOWN AS **A**
- ④ PROVIDE BATTERY BACKUP FOR 33% OF TYPE B,C,G FIXTURES. IN EACH ROOM/CORRIDOR, TYPICAL.

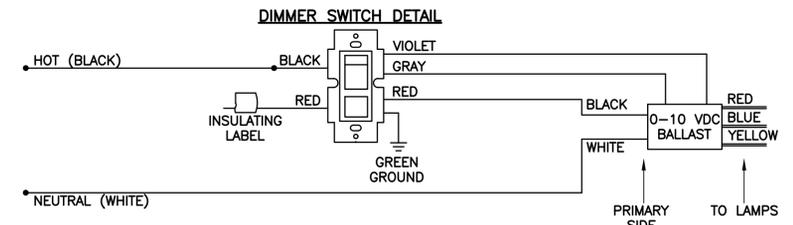
GENERAL NOTES

- 1. REUSE EXISTING ELECTRICAL CIRCUITS FOR REPLACEMENT FIXTURES.
- 2. SEE REPLACEMENT LIGHT FIXTURE SCHEDULE ON SHEET E21 FOR NEW FIXTURE INFORMATION.
- 3. EXISTING EXIT LIGHTS AND EMERGENCY LIGHTS TO REMAIN.

TYPE	EXISTING LIGHTING FIXTURE TO BE REPLACED
A	2X4 GRID MOUNT 4 LAMP
A1	2X4 CEILING MOUNT 4 LAMP, CLIP MOUNT
B	2X2 GRID MOUNT 2 LAMP
C	1X1 CEILING DOWNLIGHT PAR 40
D	6" ROUND CEILING RECESSED PAR 40
D1	6" ROUND CEILING RECESSED
E	8" ROUND CEILING RECESSED PAR 40
F	6" ROUND CEILING RECESSED VAPOR TIGHT
G	4' OPEN STRIP 2 LAMP W/REFLECTOR
G1	4' OPEN STRIP COVE LIGHT, 1LAMP
H	8' OPEN STRIP , 1 LAMP
I	2' OPEN STRIP COVE LIGHT, 1 LAMP
J	4' OPEN STRIP, W/GUARD 1 LAMP
K	4' VAPOR TIGHT FIXTURE, 2 LAMP
L	8' VAPOR TIGHT FIXTURE, 2 LAMP
M	CLASS 1, DIV 2, HAZARDOUS AREA FIXTURE

ADMINISTRATION BUILDING LIGHTING PLAN

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



WIRING DIAGRAM 1: SINGLE LOCATION CONTROL

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
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ADMINISTRATION BUILDING LIGHTING PLAN

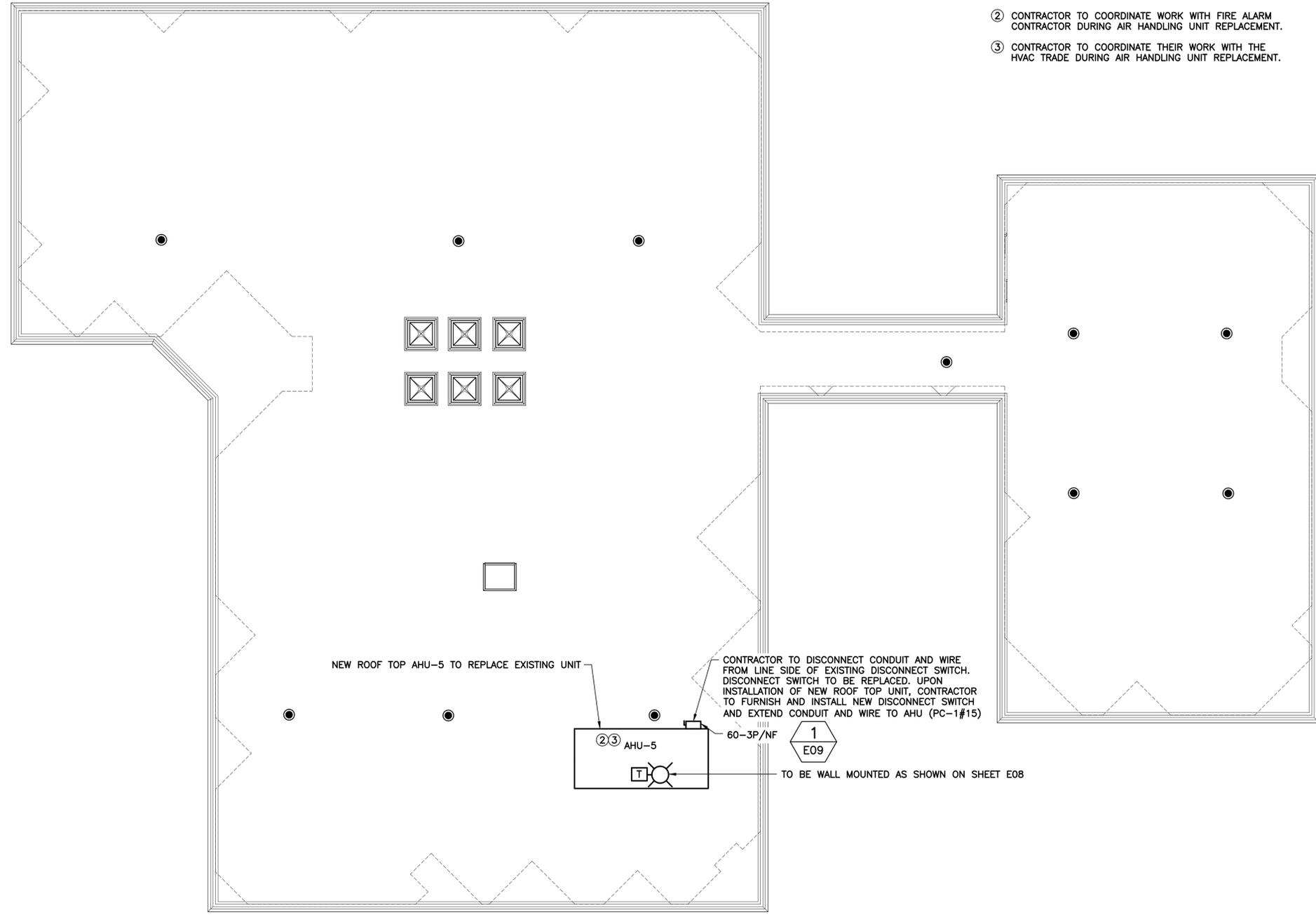
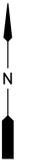
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 PROFESSIONAL ENGINEER
 FLORIDA LICENSE #42017
 CHECKED BY: WCN
 CADD FILE: E08 ADMIN BLDG LGT PLAN

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 Florida P.E. No. 42017

SCALE: As Shown
 DRAWING NO.: **E08**
 SHEET: 51 OF 71

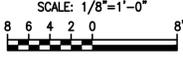
SPECIFIC NOTES:

- ① REFER TO SINGLE LINE DIAGRAM FOR CONDUIT AND WIRE REQUIREMENTS.
- ② CONTRACTOR TO COORDINATE WORK WITH FIRE ALARM CONTRACTOR DURING AIR HANDLING UNIT REPLACEMENT.
- ③ CONTRACTOR TO COORDINATE THEIR WORK WITH THE HVAC TRADE DURING AIR HANDLING UNIT REPLACEMENT.



1
E09 **FIGURE NO. 1**
SCALE: N.T.S.

ADMINISTRATION BUILDING ROOF ELECTRICAL PLAN



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WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)

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ADMINISTRATION BUILDING ROOF ELECTRICAL PLAN

WILLIAM C. NELSON
PROFESSIONAL ENGINEER
FLORIDA LICENSE #42017

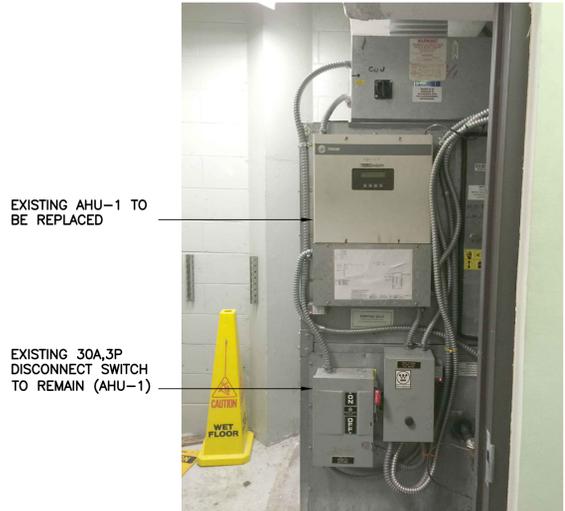
OCU FILE NO. O28427
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DRAWN BY: RRM
CHECKED BY: WCN
CADD FILE: E09 ADMIN BLDG PROP ROOF

SCALE: As Shown
DRAWING NO.: **E09**
SHEET: 52 OF 71



EXISTING 100A,3P DISCONNECT SWITCH TO REMAIN (CU-5) FED FROM PC-1#15

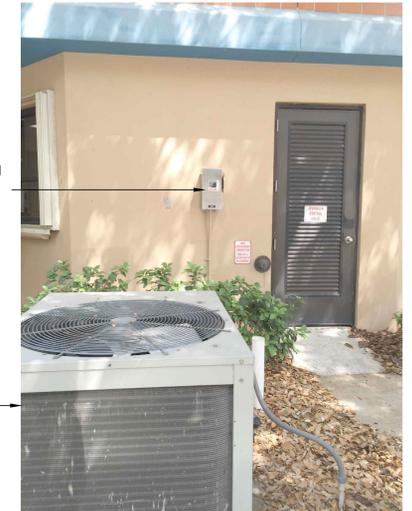
1 **FIGURE NO. 1**
E06 SCALE: N.T.S.



EXISTING AHU-1 TO BE REPLACED

EXISTING 30A,3P DISCONNECT SWITCH TO REMAIN (AHU-1)

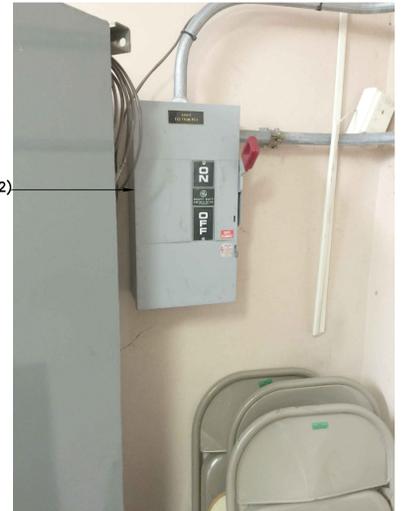
2 **FIGURE NO. 2**
E06 SCALE: N.T.S.



EXISTING 60A,3P DISCONNECT SWITCH TO REMAIN (CU-1)

EXISTING CU-1 TO BE REPLACED

3 **FIGURE NO. 3**
E06 SCALE: N.T.S.



EXISTING 60A,3P DISCONNECT SWITCH TO BE DISCONNECTED AND REMOVED (AHU-2)

4 **FIGURE NO. 4**
E06 SCALE: N.T.S.



EXISTING 30A,3P DISCONNECT SWITCH TO REMAIN (CU-2)

EXISTING CU-2 TO BE REPLACED

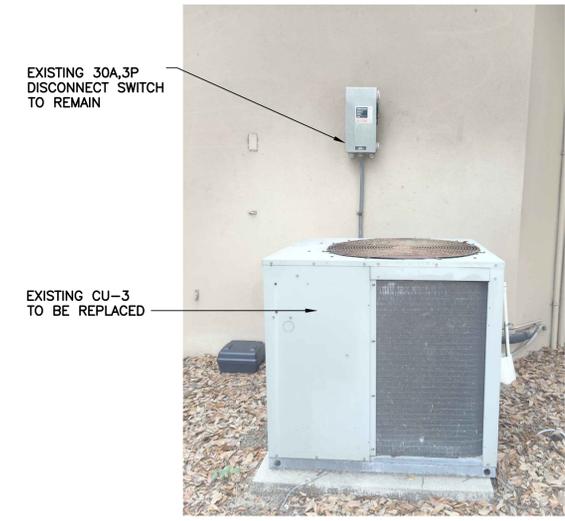
5 **FIGURE NO. 5**
E06 SCALE: N.T.S.



EXISTING AHU-3 TO BE REPLACED

EXISTING 30A,3P DISCONNECT SWITCH TO BE DISCONNECTED AND REMOVED

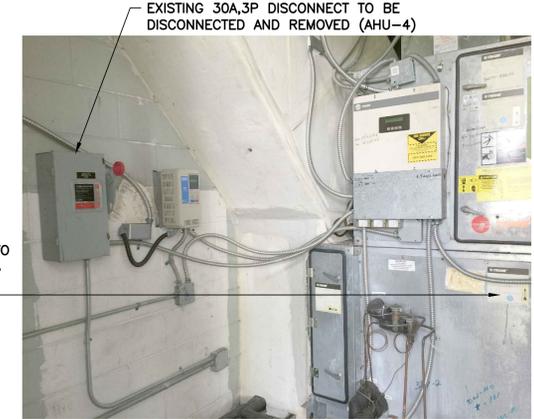
6 **FIGURE NO. 6**
E06 SCALE: N.T.S.



EXISTING 30A,3P DISCONNECT SWITCH TO REMAIN

EXISTING CU-3 TO BE REPLACED

7 **FIGURE NO. 7**
E06 SCALE: N.T.S.



EXISTING AHU-4 TO BE DISCONNECTED, REMOVED AND REPLACED

EXISTING 30A,3P DISCONNECT TO BE DISCONNECTED AND REMOVED (AHU-4)

8 **FIGURE NO. 8**
E06 SCALE: N.T.S.



EXISTING 60A-3P DISCONNECT TO BE REPLACED

EXISTING CU-4 TO BE REPLACED

9 **FIGURE NO. 9**
E06 SCALE: N.T.S.



EXISTING WALL UNIT TO BE REMOVED

10 **FIGURE NO. 10**
E06 SCALE: N.T.S.

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE (IF NOT SCALE ACCORDINGLY)

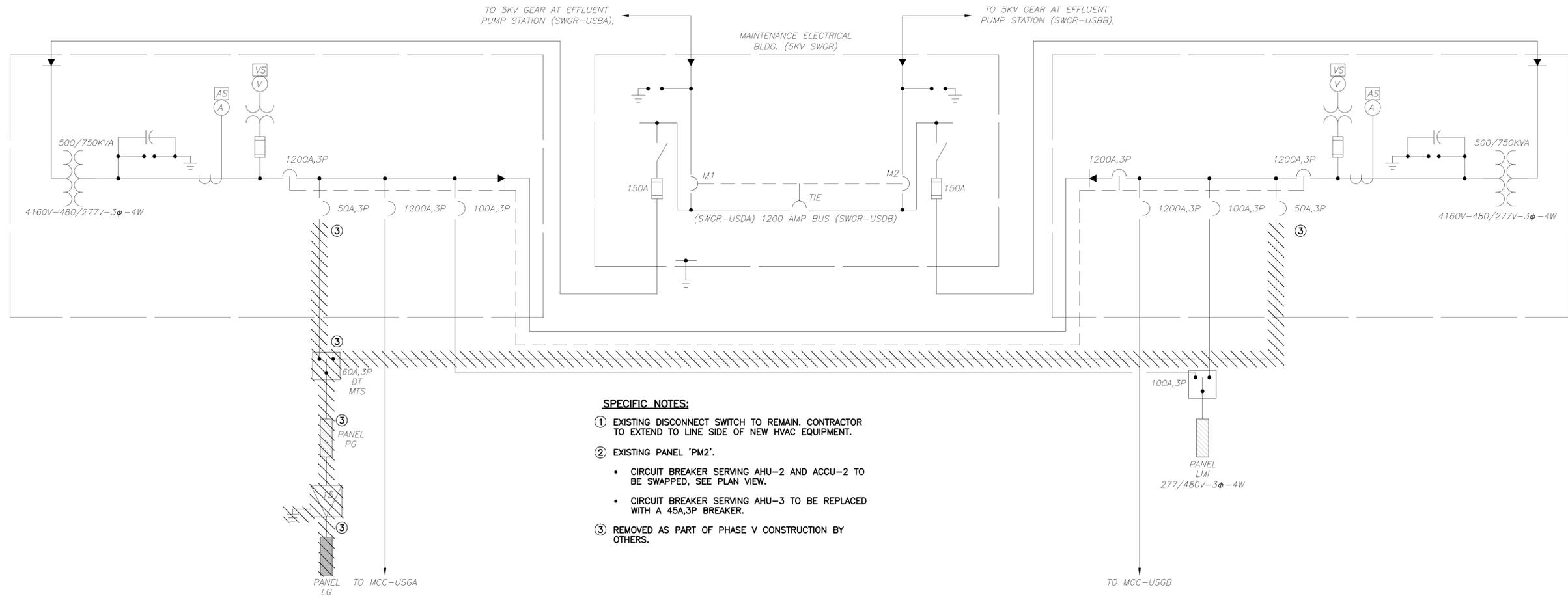
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ADMINISTRATION BUILDING ELECTRICAL DETAILS

OCU FILE NO. O28427	SCALE: As Shown
DESIGNED BY: LMR	DRAWING NO. : E10
DRAWN BY: RRM	SHEET: 53 OF 71
CHECKED BY: WCN	
CADD FILE: E10 ADMIN DTLs	

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C.O.A. No. 8079 WILLIAM C. NELSON, P.E. Florida P.E. No. 42017



SPECIFIC NOTES:

- ① EXISTING DISCONNECT SWITCH TO REMAIN. CONTRACTOR TO EXTEND TO LINE SIDE OF NEW HVAC EQUIPMENT.
- ② EXISTING PANEL 'PM2'.
 - CIRCUIT BREAKER SERVING AHU-2 AND ACCU-2 TO BE SWAPPED, SEE PLAN VIEW.
 - CIRCUIT BREAKER SERVING AHU-3 TO BE REPLACED WITH A 45A,3P BREAKER.
- ③ REMOVED AS PART OF PHASE V CONSTRUCTION BY OTHERS.

**MAINTENANCE BUILDING EXISTING
SINGLE LINE DIAGRAM**



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REV	DATE	DESCRIPTION

LINE IS 2 INCHES
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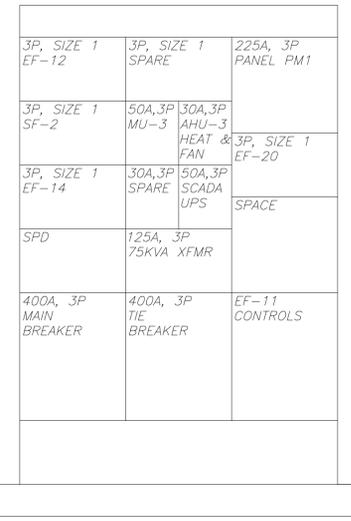
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**MAINTENANCE BUILDING SWITCHGEAR
SINGLE LINE DIAGRAM**

WILLIAM C. NELSON
 PROFESSIONAL ENGINEER
 FLORIDA LICENSE #42017

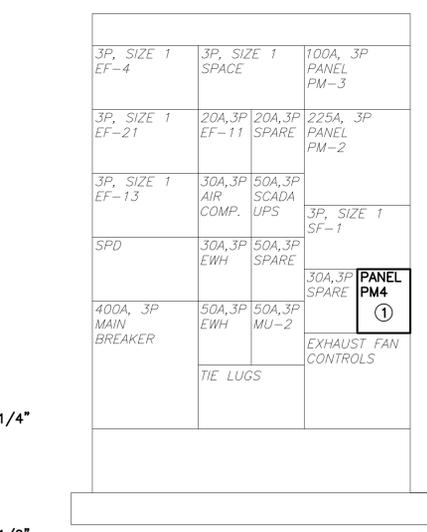
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CHECKED BY: WCN
CADD FILE: E11 MAINT BLDG SLD

SCALE: As Shown
DRAWING NO. : E11
SHEET: 54 OF 71



MCC-USGA

MAINTENANCE BUILDING EXISTING SINGLE LINE DIAGRAM



MCC-USGB

MAINTENANCE BUILDING EXISTING SINGLE LINE DIAGRAM

SPECIFIC NOTES:

- ① REPLACE EXISTING 100A,3P BREAKER FOR FEED TO NEW 30KVA TRANSFORMER.

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
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MAINTENANCE BUILDING PROPOSED SINGLE LINE DIAGRAM

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CADD FILE:

SCALE: As Shown
DRAWING NO.: **E12**
SHEET: 55 OF 71

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Florida P.E. No. 42017

EXISTING PANEL TO BE MODIFIED

225 AMP MAIN LUG ONLY 225 AMP BUS RATING 60 POLES DISTRIBUTION PB 22 KA SHORT CIRCUIT RATING ENCLOSURE RATING: NEMA 1 , LOCATION: SWRF Maintenance Building 480/277 VOLTS 3 PHASE 4 WIRE 60 Hz. ELECTRONIC GRADE: NO MOUNTING: SURFACE													
CIRCUIT NO.	DESCRIPTION	LOAD KVA			BREAKER AMPS/POLES	NOTES	CIRCUIT NO.	DESCRIPTION	LOAD KVA			BREAKER AMPS/POLES	NOTES
		PHASE A	PHASE B	PHASE C					PHASE A	PHASE B	PHASE C		
1	VEHICLE BAY SPACE HEATER NE				20 /3		2	HIGH BAY DISCONNECT SOUTH WALL				20 /3	
3							4						
5							6						
7	VEHICLE BAY SPACE HEATER WEST				20 /3		8						
9							10	HIGH BAY DISCONNECT SW WALL				20 /3	
11							12						
13							14						
15	VEHICLE BAY SPACE HEATER SW WALL				20 /3		16	CU-3 (NEW UNIT)				30 /3	8,10
17							18						
19							20						
21	HIGH BAY SPACE HEATER NORTH WALL				20 /3		22	AHU-3 (NEW UNIT)				50 /3	9,10
23							24						
25							26						
27	HIGH BAY SPACE HEATER WEST WALL				20 /3		28	WEST DOCK LIFT				20 /3	
29							30						
31							32						
33	HIGH BAY SPACE HEATER WEST WALL				20 /3		34	DOCK LIFT & SMALL PARTS ROOM				20 /3	
35							36						
37							38						
39	OVERHEAD CRANE				20 /3		40	WELDING ROOM DISCONNECT				20 /3	
41							42						
43							44						
45	HIGH BAY DISCONNECT WEST WALL				20 /3		46	HIGH BAY DISCONNECT WEST WALL				30 /3	
47							48						
49							50						
51	HIGH BAY DISCONNECT WEST WALL				20 /3		52	ACTIVE BREAKER				20 /3	
53							54						
55							56						
57	SPARE				20 /3		58	SPARE				40 /3	
59							60						
TOTAL PHASE KVA THIS SIDE		-	-	-			TOTAL PHASE KVA THIS SIDE		-	-	-		
							TOTAL KVA PER PHASE		-	-	-		
							TOTAL THREE PHASE KVA		-	-	-		
NOTES:													
1. PROVIDE LOCKING HARDWARE													
3. 30 ma GFI CIRCUIT BREAKER FOR EQUIPMENT PROTECTION ONLY (HEAT TRACE)													
5. BRANCH CIRCUIT WIRING: 3/4" C, 3#12 & 1#12G													
7. BRANCH CIRCUIT WIRING: 3/4" C, 2#12 & 1#12G													
9. PROVIDE NEW 50A-3P CIRCUIT BREAKER & 3-#8, #10 GR. FOR NEW HVAC EQUIPMENT													
11.													
13.													
15.													
17.													
19.													

EXISTING PANEL TO BE MODIFIED

225 AMP MAIN LUG ONLY 225 AMP BUS RATING 66 POLES DISTRIBUTION PB 22 KA SHORT CIRCUIT RATING ENCLOSURE RATING: NEMA 1 , LOCATION: SWRF Maintenance Building 480/277 VOLTS 3 PHASE 4 WIRE 60 Hz. ELECTRONIC GRADE: NO MOUNTING: SURFACE													
CIRCUIT NO.	DESCRIPTION	LOAD KVA			BREAKER AMPS/POLES	NOTES	CIRCUIT NO.	DESCRIPTION	LOAD KVA			BREAKER AMPS/POLES	NOTES
		PHASE A	PHASE B	PHASE C					PHASE A	PHASE B	PHASE C		
1	VEHICLE BAY SPACE HEATER NE				20 /3		2	SPARE				20 /3	
3							4						
5							6						
7	VEHICLE BAY SPACE HEATER NW				20 /3		8	CU-1 (NEW UNIT)				30 /3	8,11
9							10						
11							12						
13							14						
15	VEHICLE BAY SPACE HEATER NW				20 /3		16	AHU-1 (NEW UNIT)				30 /3	9,11
17							18						
19							20						
21	VEHICLE BAY SPACE HEATER WEST WALL				20 /3		22	HIGH BAY N.W. WALL DISCONNECT				20 /3	
23							24						
25							26						
27	VEHICLE BAY SPACE HEATER				20 /3		28	CU-2 (NEW UNIT)				30 /3	9,11
29							30						
31							32						
33	VEHICLE BAY SPACE HEATER				20 /3		34	AHU-2 (NEW UNIT)				40 /3	8,11
35							36						
37							38						
39	DOCK LIFT NORTH DISCONNECT				20 /3		40	HIGH BAY SE WALL DISCONNECT				20 /3	
41							42						
43							44						
45	HIGH BAY EAST WALL DISCONNECT				20 /3		46	HIGH BAY NE WALL DISCONNECT				20 /3	
47							48						
49							50						
51	HIGH BAY NE WALL DISCONNECT				20 /3		52	HIGH BY NORTH WALL DISCONNECT				20 /3	
53							54						
55							56						
57	ROLL UP DOOR SOUTH				20 /3		58	ROLL UP DOOR NORTH				20 /3	
59							60						
61							62						
63	SPARE				20 /3		64						
65							66						
TOTAL PHASE KVA THIS SIDE		-	-	-			TOTAL PHASE KVA THIS SIDE		-	-	-		
							TOTAL KVA PER PHASE		-	-	-		
							TOTAL THREE PHASE KVA		-	-	-		
NOTES:													
1. PROVIDE LOCKING HARDWARE													
3. 30 ma GFI CIRCUIT BREAKER FOR EQUIPMENT PROTECTION ONLY (HEAT TRACE)													
5. BRANCH CIRCUIT WIRING: 3/4" C, 3#12 & 1#12G													
7. BRANCH CIRCUIT WIRING: 3/4" C, 2#12 & 1#12G													
9. PROVIDE NEW 30A-3P CIRCUIT BREAKER & 3-#10, #10 GR. FOR NEW HVAC EQUIPMENT													
11. UPDATE PANELBOARD SCHEDULE TO REFLECT REVISED CIRCUITS													
12.													
13.													
14.													
15.													
16.													
17.													
18.													
19.													
20.													

NEW PANEL

100 AMP MAIN BREAKER 100 AMP BUS RATING 30 POLES DISTRIBUTION PB 22 KA SHORT CIRCUIT RATING ENCLOSURE RATING: NEMA 1 , LOCATION: Maint Bldg Rm 17B VIA XMFR 208/120 VOLTS 3 PHASE 4 WIRE 60 Hz. ELECTRONIC GRADE: NO MOUNTING: SURFACE													
CIRCUIT NO.	DESCRIPTION	LOAD KVA			BREAKER AMPS/POLES	NOTES	CIRCUIT NO.	DESCRIPTION	LOAD KVA			BREAKER AMPS/POLES	NOTES
		PHASE A	PHASE B	PHASE C					PHASE A	PHASE B	PHASE C		
1	VAV1-1	0.75			15 /2		2	SPARE BKR				20 /2	
3			0.75				4						
5	VAV1-2			0.75	15 /2		6	VAV3-2			0.75	15 /2	7
7		0.75					8		0.75				
9	VAV2-1		0.75		15 /2		10	VAV3-3		0.5		15 /2	7
11				0.75			12			0.5			
13	VAV2-2	2.5			35 /2		14						
15			2.5				16						
17	VAV3-4			1.02	15 /2		18						
19		1.02					20						
21	VAV3-1		1.5		20 /2		22						
23				1.5			24						
25							26						
27							28						
29							30						
TOTAL PHASE KVA THIS SIDE		5.02	5.5	4.02			TOTAL PHASE KVA THIS SIDE		0.75	0.5	1.25		
							TOTAL KVA PER PHASE		5.77	6	5.27		
							TOTAL THREE PHASE KVA				17.04		
NOTES:													
1. PROVIDE LOCKING HARDWARE													
3. 30 ma GFI CIRCUIT BREAKER FOR EQUIPMENT PROTECTION ONLY (HEAT TRACE)													
5. BRANCH CIRCUIT WIRING: 3/4" C, 3#12 & 1#12G													
7. BRANCH CIRCUIT WIRING: 3/4" C, 2#12 & 1#12G													
9.													
11.													
13.													
15.													
17.													
19.													

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
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(IF NOT SCALE ACCORDINGLY)

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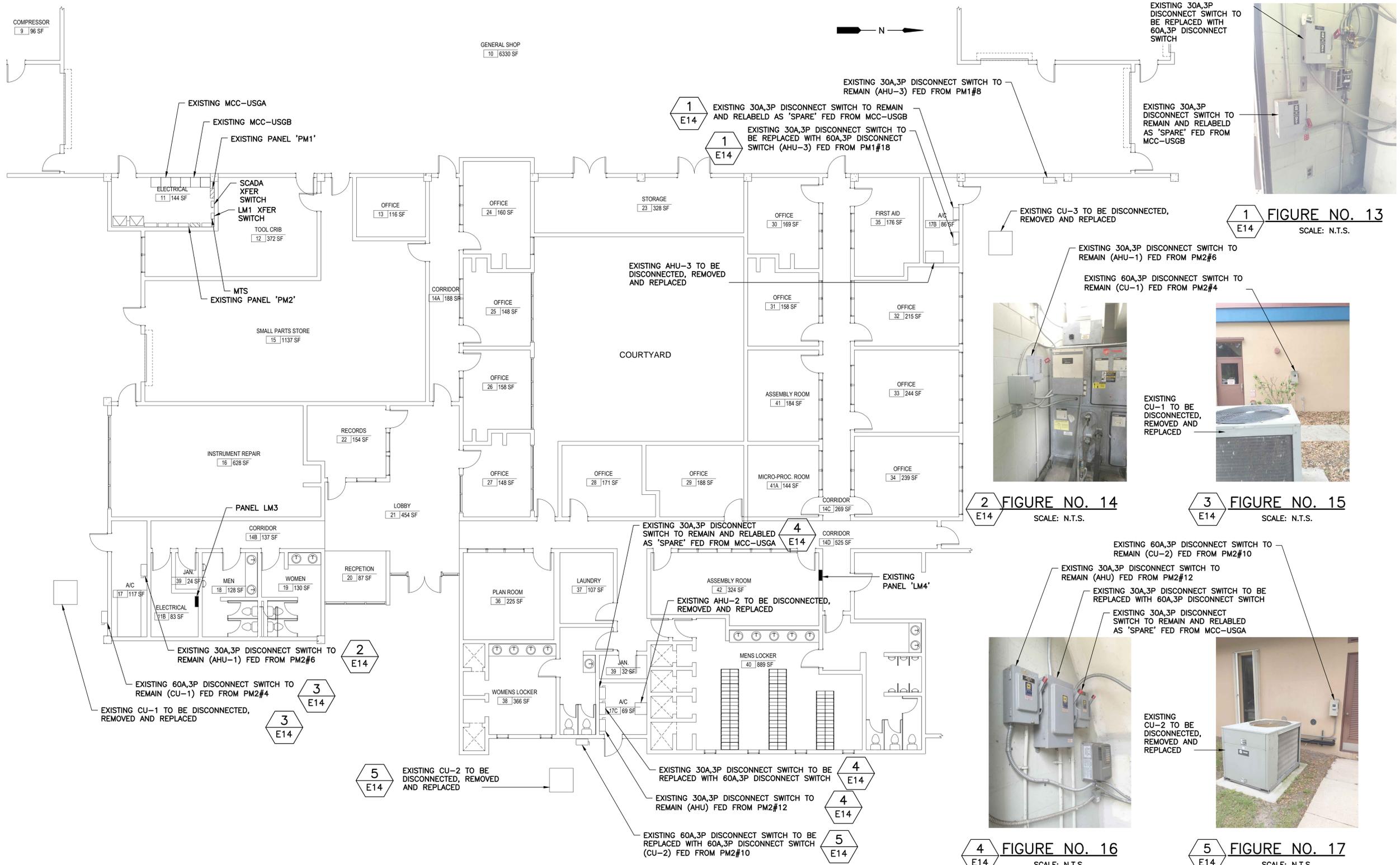
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MAINTENANCE BUILDING REVISED PANELBOARD SCHEDULES

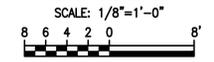
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DESIGNED BY: LMR	DRAWING NO. : E13
DRAWN BY: RRM	CHECKED BY: WCN
WILLIAM C. NELSON PROFESSIONAL ENGINEER FLORIDA LICENSE #42017	CADD FILE: E13 PNL SCH
SHEET: 56 OF 71	

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WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

11/21/2014 10:57:44 AM



MAINTENANCE BUILDING ELECTRICAL DEMOLITION PLAN



REV	DATE	DESCRIPTION

LINE IS 2 INCHES
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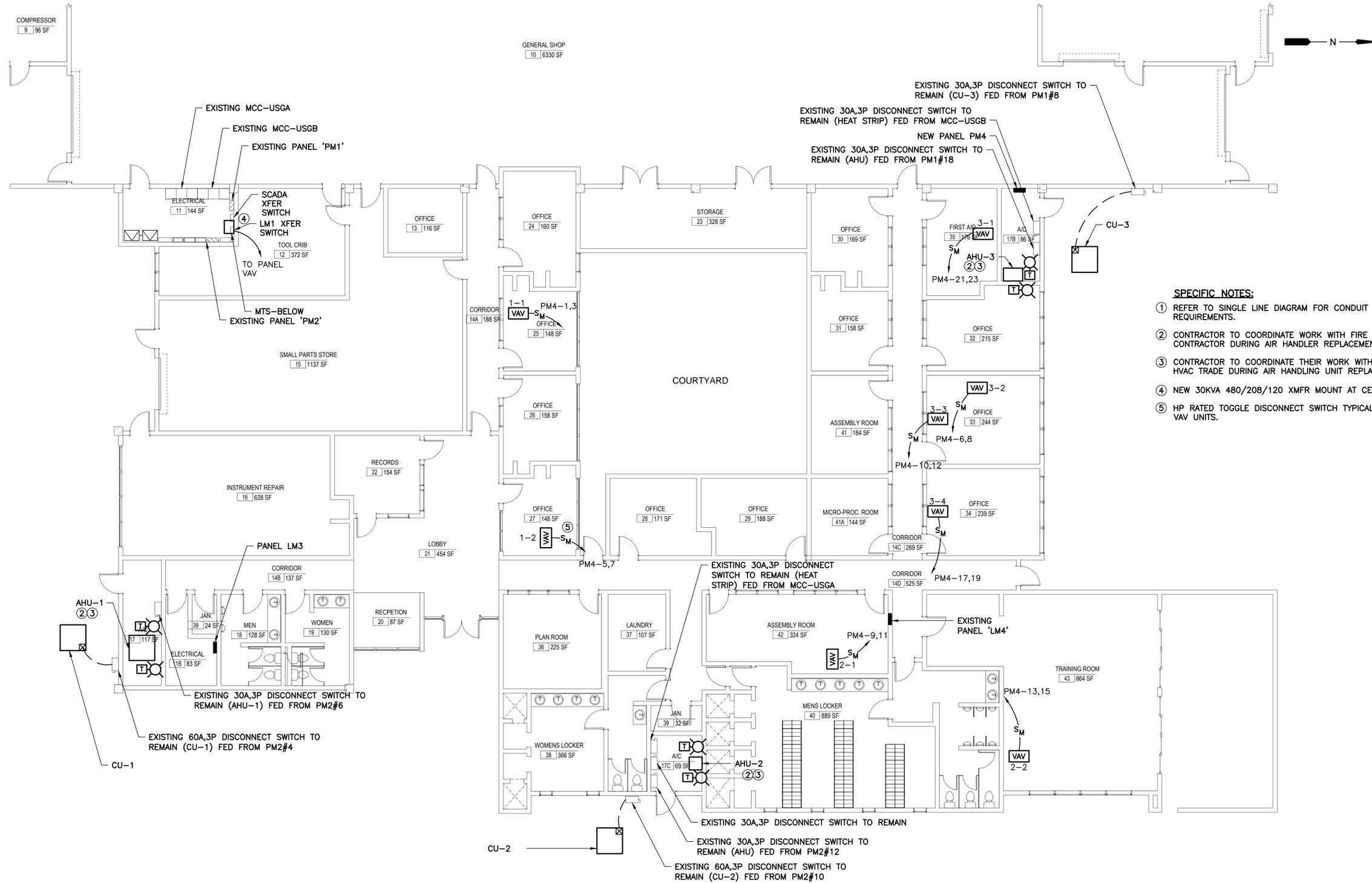
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MAINTENANCE BUILDING ELECTRICAL DEMOLITION PLAN

OCU FILE NO. O28427
 DESIGNED BY: LMR
 DRAWN BY: RRM
 CHECKED BY: WCN
 CADD FILE: E14 DEMO MT BLDG

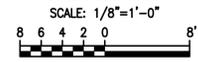
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SCALE: As Shown
 DRAWING NO.: **E14**
 SHEET: 57 OF 71



- SPECIFIC NOTES:**
- ① REFER TO SINGLE LINE DIAGRAM FOR CONDUIT AND WIRE REQUIREMENTS.
 - ② CONTRACTOR TO COORDINATE WORK WITH FIRE ALARM CONTRACTOR DURING AIR HANDLER REPLACEMENTS.
 - ③ CONTRACTOR TO COORDINATE THEIR WORK WITH THE HVAC TRADE DURING AIR HANDLING UNIT REPLACEMENT.
 - ④ NEW 30KVA 480/208/120 XMF MOUNT AT CEILING.
 - ⑤ HP RATED TOGGLE DISCONNECT SWITCH TYPICAL FOR 8 VAV UNITS.

MAINTENANCE BUILDING ELECTRICAL PLAN



REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)

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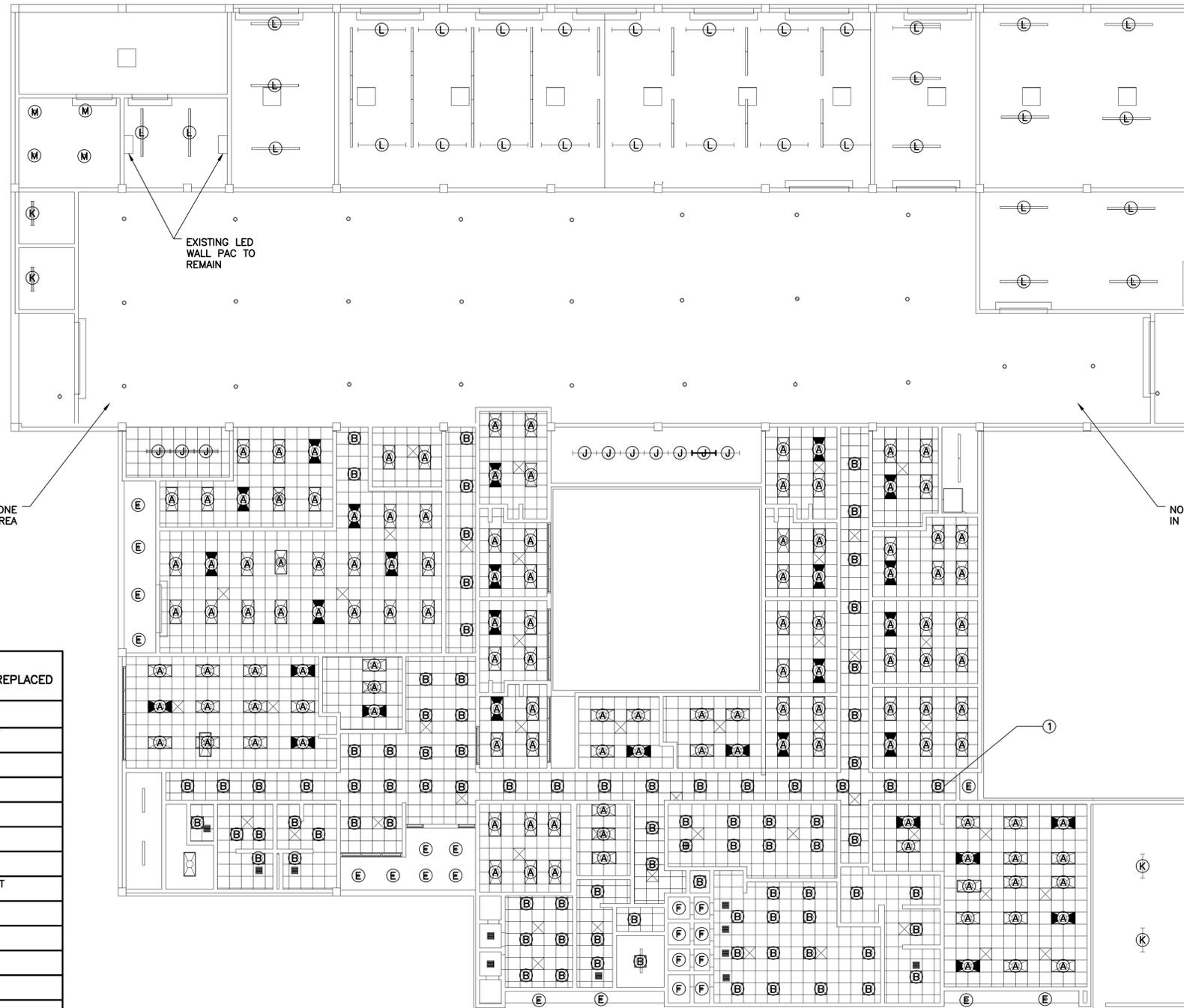
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MAINTENANCE BUILDING ELECTRICAL PLAN

OCU FILE NO. O28427
 DESIGNED BY: LMR
 DRAWN BY: RRM
 CHECKED BY: WCN
 CADD FILE: E15 MAINT BLDG

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 FLORIDA P.E. No. 42017

SCALE: As Shown
 DRAWING NO.: **E15**
 SHEET: 58 OF 71



GENERAL NOTES

1. REUSE EXISTING ELECTRICAL CIRCUITS FOR REPLACEMENT FIXTURES.
2. SEE REPLACEMENT LIGHT FIXTURE SCHEDULE ON SHEET E21 FOR NEW FIXTURE INFORMATION.
3. EXISTING EXIT LIGHTS AND EMERGENCY LIGHTS TO REMAIN.

SPECIFIC NOTES

- ① PROVIDE BATTERY BACKUP FOR 33% OF TYPE B,C,G,L FIXTURES IN EACH ROOM/CORRIDOR. FIXTURES TO BE EVENLY DISTRIBUTED WITHIN EACH AREA, TYPICAL.
- ② PROVIDE EMERGENCY BACKUP BATTERY IN FIXTURES SHOWN AS **A**

TYPE	EXISTING LIGHTING FIXTURE TO BE REPLACED
A	2X4 GRID MOUNT 4 LAMP
A1	2X4 CEILING MOUNT 4 LAMP, CLIP MOUNT
B	2X2 GRID MOUNT 2 LAMP
C	1X1 CEILING DOWNLIGHT PAR 40
D	6" ROUND CEILING RECESSED PAR 40
D1	6" ROUND CEILING RECESSED
E	8" ROUND CEILING RECESSED PAR 40
F	6" ROUND CEILING RECESSED VAPOR TIGHT
G	4' OPEN STRIP 2 LAMP W/REFLECTOR
G1	4' OPEN STRIP COVE LIGHT, 1LAMP
H	8' OPEN STRIP, 1 LAMP
I	2' OPEN STRIP COVE LIGHT, 1 LAMP
J	4' OPEN STRIP, W/GUARD 1 LAMP
K	4' VAPOR TIGHT FIXTURE, 2 LAMP
L	8' VAPOR TIGHT FIXTURE, 2 LAMP
M	CLASS 1, DIV 2, HAZARDOUS AREA FIXTURE

MAINTENANCE BUILDING LIGHTING PLAN

SCALE: 3/32"=1'-0"
 10 8 6 4 2 0 11'

REV	DATE	DESCRIPTION

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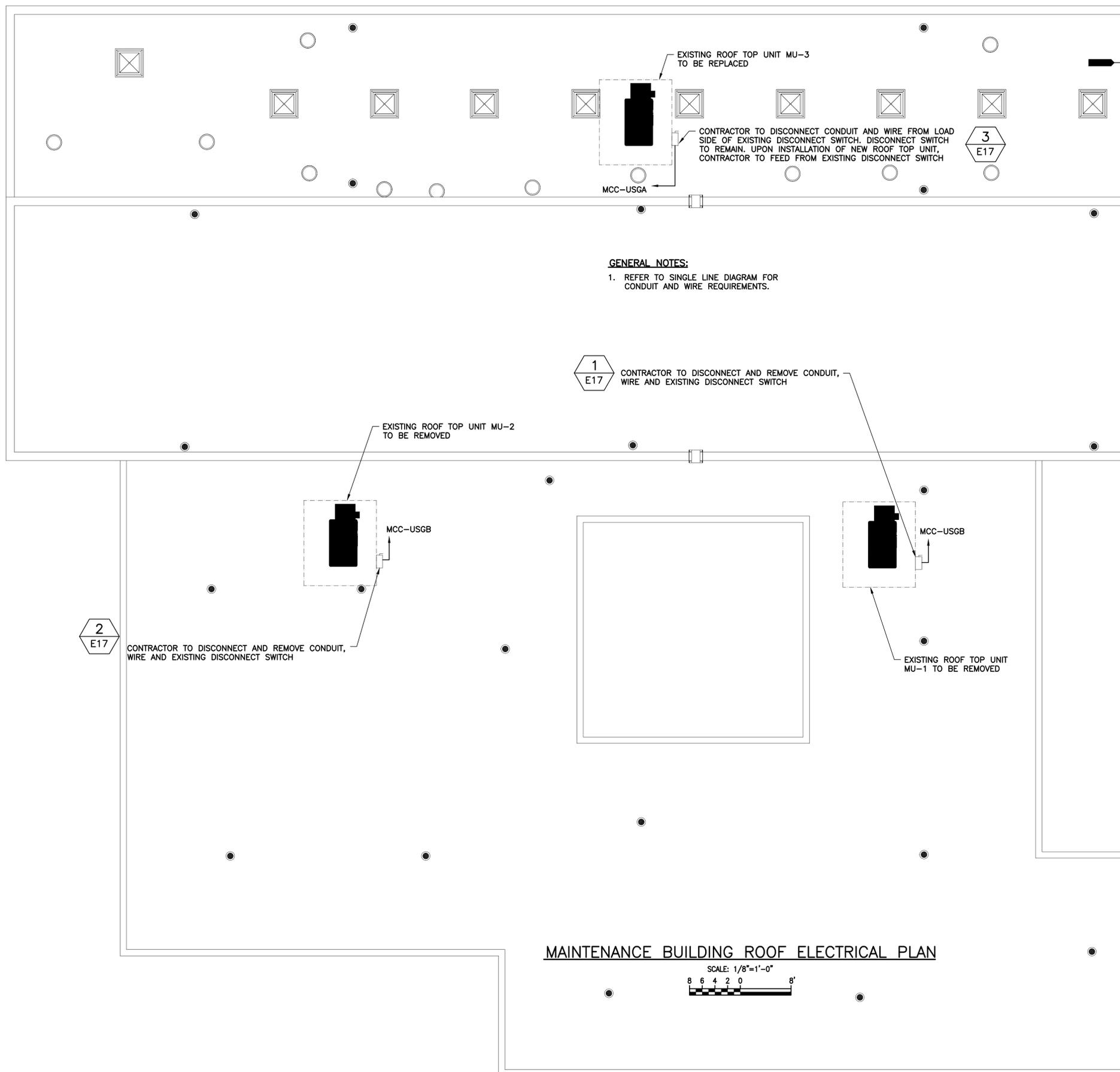
MAINTENANCE BUILDING LIGHTING PLAN

WILLIAM C. NELSON
 PROFESSIONAL ENGINEER
 FLORIDA LICENSE #42017

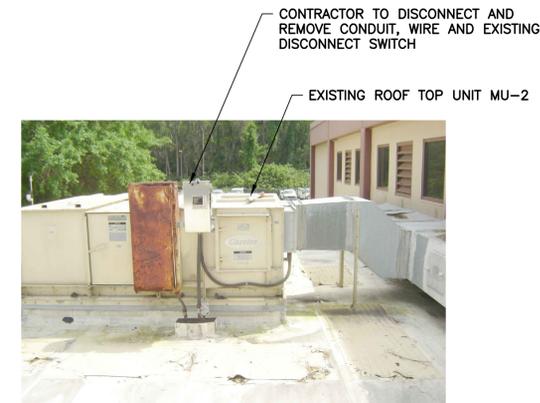
OCU FILE NO. O28427
 DESIGNED BY: LMR
 DRAWN BY: RRM
 CHECKED BY: WCN
 CADD FILE: E16 MAINT BLDG LGT PLAN

SCALE: As Shown
 DRAWING NO.: **E16**
 SHEET: 59 OF 71

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 Florida P.E. No. 42017



1 E17 **FIGURE NO. 10**
SCALE: N.T.S.



2 E17 **FIGURE NO. 11**
SCALE: N.T.S.



3 E17 **FIGURE NO. 12**
SCALE: N.T.S.

REV	DATE	DESCRIPTION

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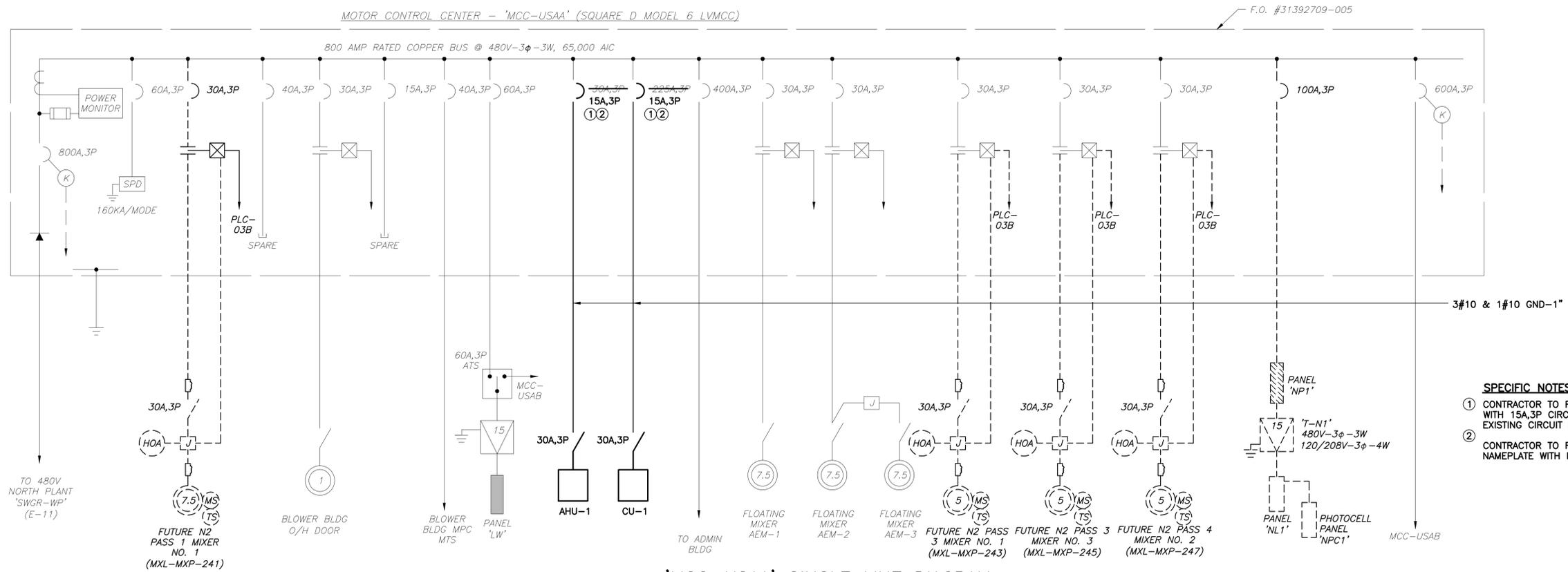
MAINTENANCE BUILDING ROOF ELECTRICAL PLAN

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PROFESSIONAL ENGINEER
FLORIDA LICENSE #42017

OCU FILE NO. O28427
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DRAWN BY: RRM
CHECKED BY: WCN
CADD FILE: E17 MAINT BLDG ROOF

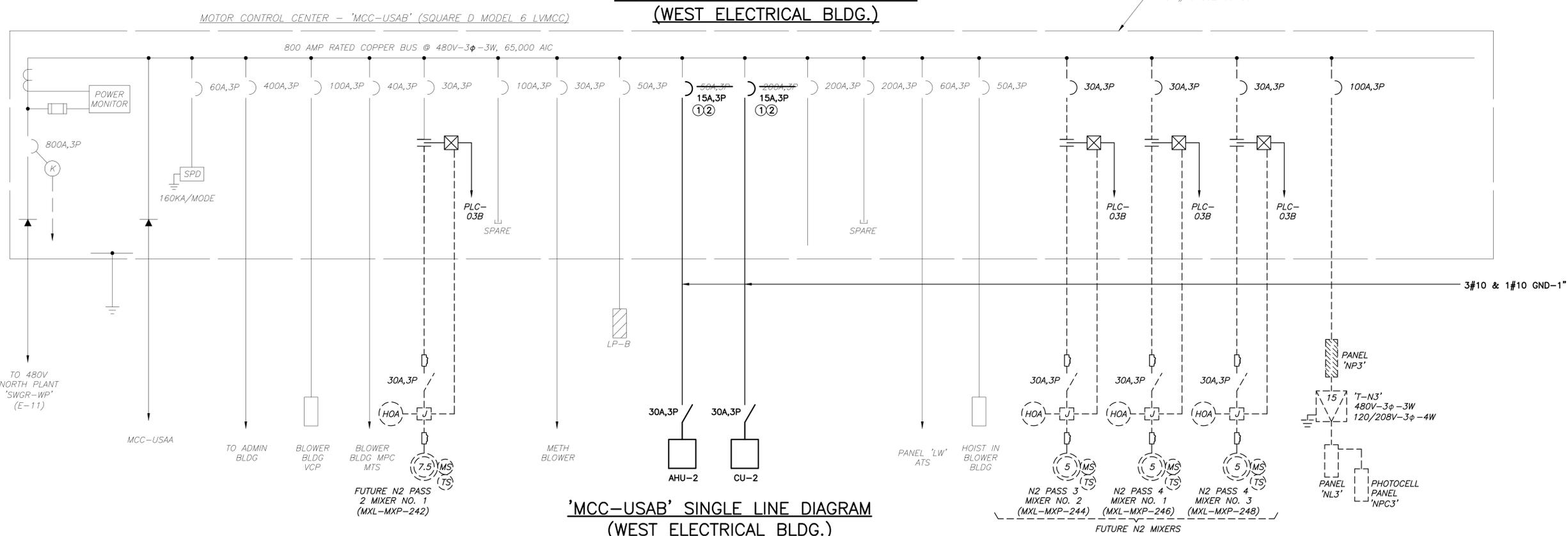
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WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

SCALE: As Shown
DRAWING NO.: **E17**
SHEET: 60 OF 71



- SPECIFIC NOTES:**
- CONTRACTOR TO REPLACE EXISTING BREAKER WITH 15A,3P CIRCUIT BREAKER RETURN EXISTING CIRCUIT BREAKER TO OWNER.
 - CONTRACTOR TO REPLACE EXISTING NAMEPLATE WITH NEW LOAD DESIGNATION.

'MCC-USAA' SINGLE LINE DIAGRAM (WEST ELECTRICAL BLDG.)



'MCC-USAB' SINGLE LINE DIAGRAM (WEST ELECTRICAL BLDG.)



REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE (IF NOT SCALE ACCORDINGLY)

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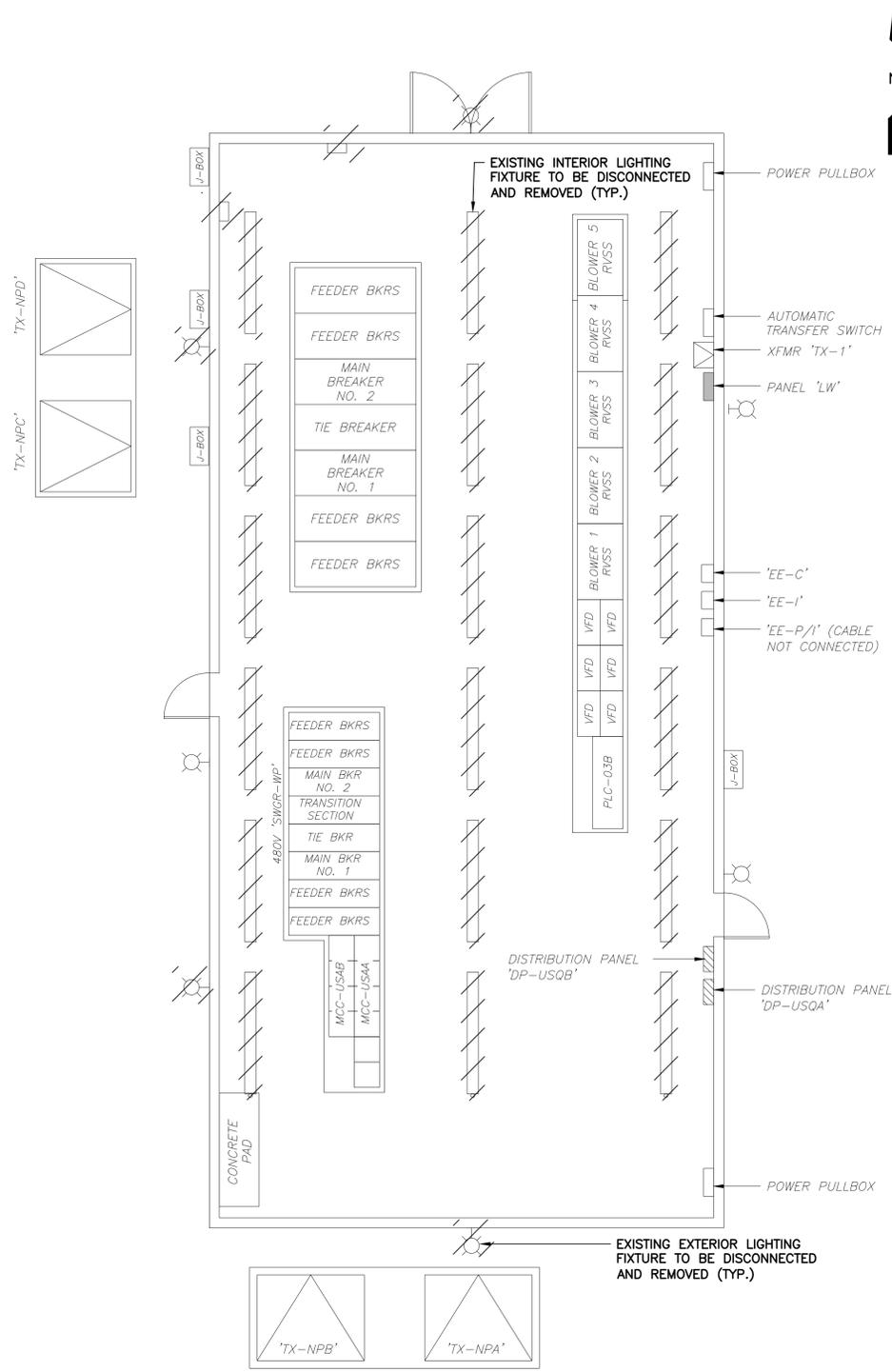
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WEST ELECTRICAL BUILDING SINGLE LINE DIAGRAM

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DRAWN BY: RRM
CHECKED BY: WCN
CADD FILE: E18 W ELECT BLDG SLD

SCALE: As Shown
DRAWING NO.: **E18**
SHEET: 61 OF 71



WEST ELECTRICAL BLDG. DEMOLITION PLAN

SCALE: 3/16"=1'-0"
6 4 2 0 5'



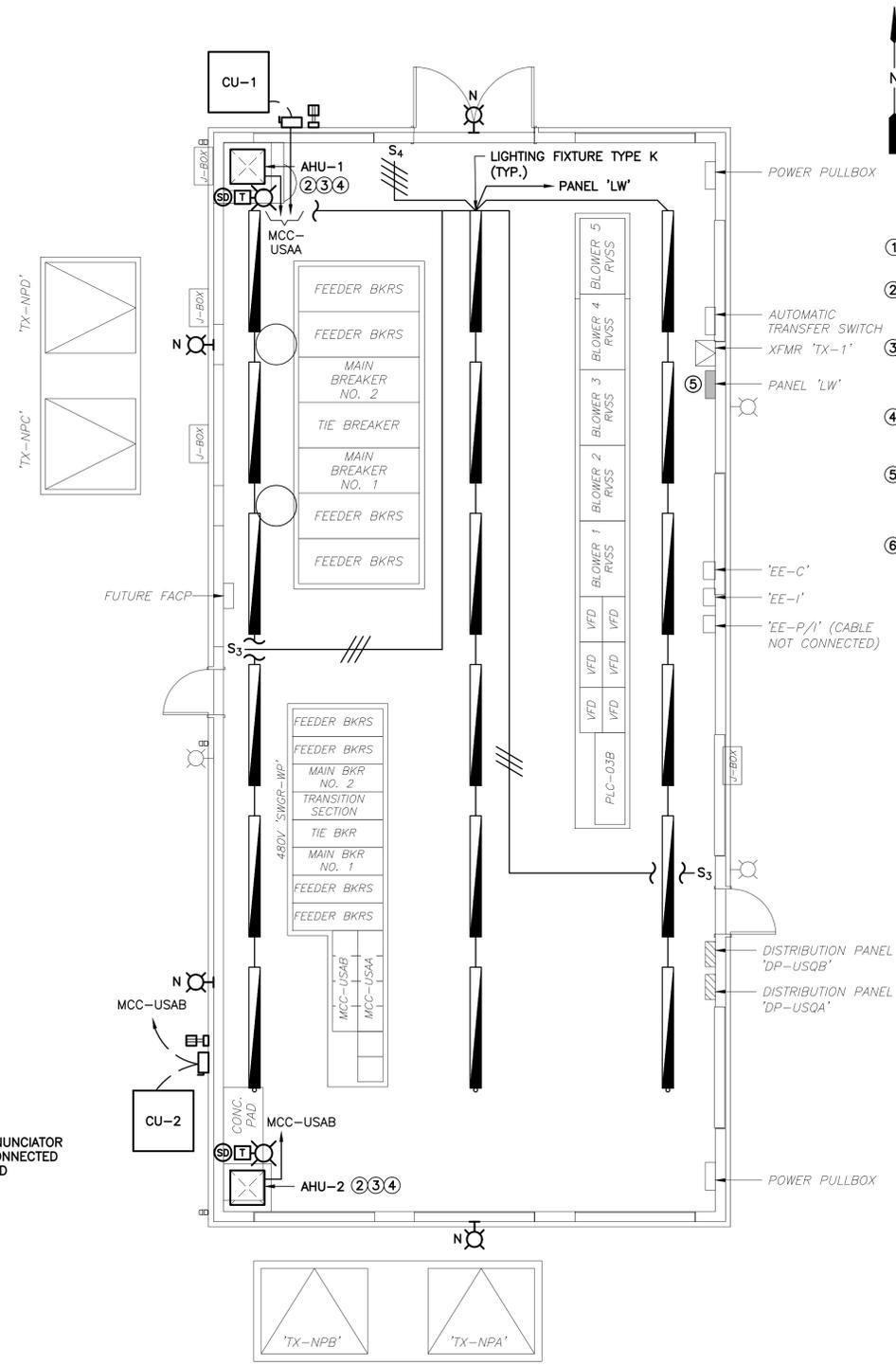
1 FIGURE NO. 19
E19 SCALE: N.T.S.



2 FIGURE NO. 20
E19 SCALE: N.T.S.



3 FIGURE NO. 21
E19 SCALE: N.T.S.



WEST ELECTRICAL BLDG. ELECTRICAL PLAN

SCALE: 3/16"=1'-0"
6 4 2 0 5'

- SPECIFIC NOTES:**
- ① REFER TO SINGLE LINE DIAGRAM FOR CONDUIT AND WIRE REQUIREMENTS.
 - ② CONTRACTOR TO FIELD VERIFY ACTUAL NUMBER OF DUCT SMOKE DETECTORS CURRENTLY INSTALLED AND REPLACE WITH NEW DETECTORS.
 - ③ SMOKE DETECTOR INSTALLATION SHALL COMPLY WITH SECTION 606 OF THE 2014 FLORIDA MECHANICAL CODE (5th EDITION) AND ALL NFPA REQUIREMENTS.
 - ④ CONTRACTOR TO COORDINATE THEIR WORK WITH THE HVAC TRADE DURING AIR HANDLING UNIT REPLACEMENT.
 - ⑤ CONTRACTOR TO REUSE EXISTING CIRCUIT LW-35 FOR NEW OUTSIDE LIGHTING. PROVIDE PHOTOCELL CONTROL WITH HOA BYPASS SWITCH MOUNTED ADJACENT TO PANEL LW.
 - ⑥ CONTRACTOR TO REUSE EXISTING INTERIOR LIGHTING CIRCUIT FOR NEW INTERIOR LIGHTING. ALL INTERIOR LIGHTS TO HAVE INTERIOR BACKUP.

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE (IF NOT SCALE ACCORDINGLY)

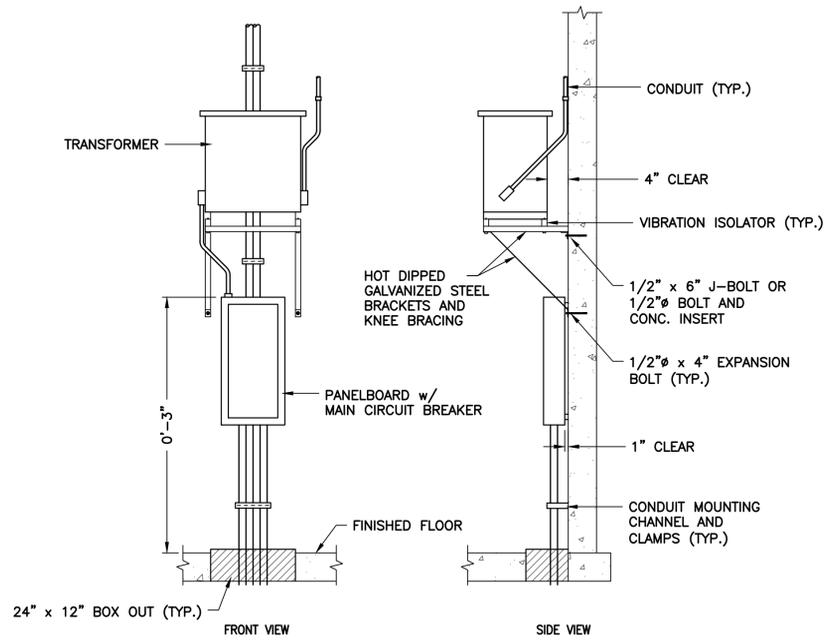
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WEST ELECTRICAL BUILDING ELECTRICAL PLAN

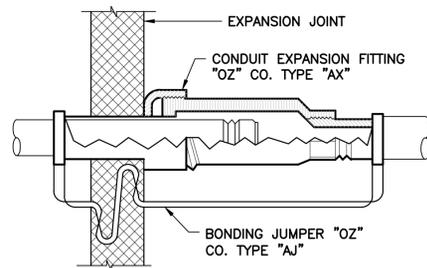
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DESIGNED BY: LMR	DRAWING NO.: E19
DRAWN BY: RRM	CHECKED BY: WCN
WILLIAM C. NELSON PROFESSIONAL ENGINEER FLORIDA LICENSE #42017	CADD FILE: E19 ELEC BLDG

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C.O.A. No. 8079 WILLIAM C. NELSON, P.E. Florida P.E. No. 42017



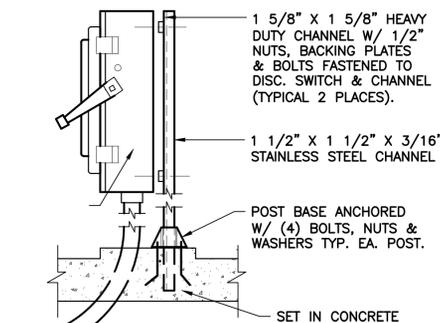
1 TYP. WALL MOUNTED TRANSFORMER & PANELBOARD

SCALE: N.T.S.



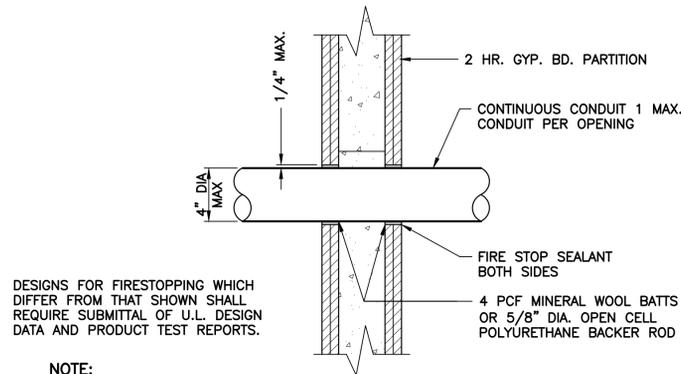
4 TYP. EXPANSION FITTING DETAIL

SCALE: NOT TO SCALE



7 TYP. TYPICAL DISCONNECT

SCALE: NOT TO SCALE



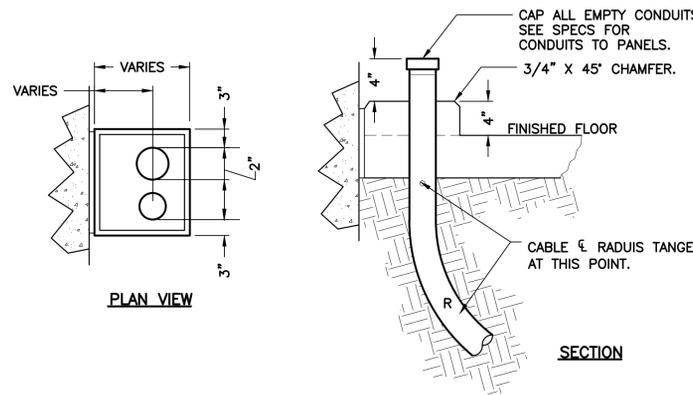
DESIGNS FOR FIRESTOPPING WHICH DIFFER FROM THAT SHOWN SHALL REQUIRE SUBMITTAL OF U.L. DESIGN DATA AND PRODUCT TEST REPORTS.

NOTE:

THIS DETAIL USED IN BOTH 1 HR. AND 2 HR. PARTITIONS. THIS DETAIL USED FOR BOTH DRYWALL AND PLASTER/STUD PARTITIONS, DESIGNATED AS IF. FIELD VERIFY CONDITIONS

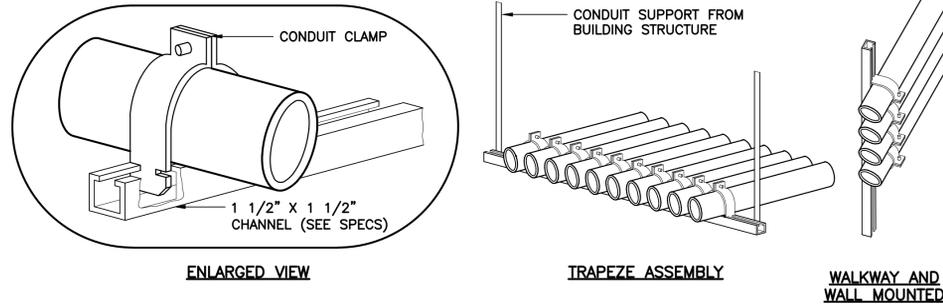
2 TYP. FIRE STOP DETAIL/WALL

SCALE: NOT TO SCALE



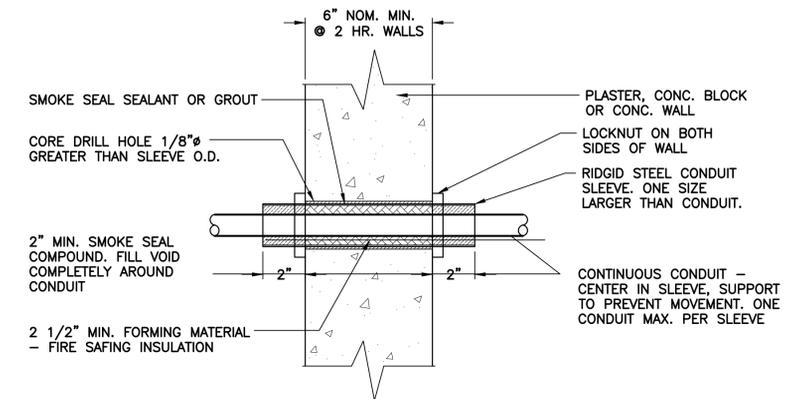
5 TYP. TYPICAL CONDUIT THRU SLAB

SCALE: NOT TO SCALE



8 TYP. CONDUIT PIPE STRAP MOUNTING DETAILS

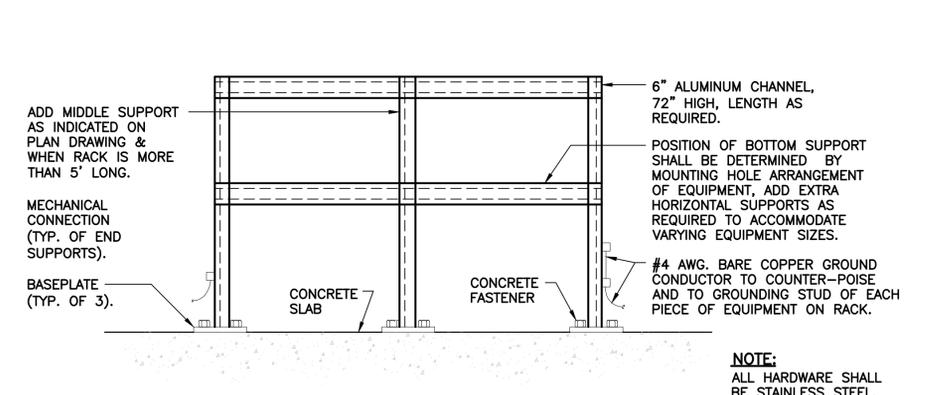
SCALE: NOT TO SCALE



NOTE: THIS DETAIL USED IN BOTH 1 HR. AND 2 HR. PARTITIONS.

3 TYP. CONDUIT SLEEVE DETAIL AT WALL

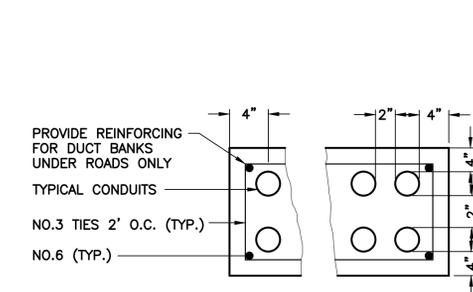
SCALE: NOT TO SCALE



NOTE: ALL HARDWARE SHALL BE STAINLESS STEEL.

6 TYP. EQUIPMENT RACK DETAIL

SCALE: NOT TO SCALE



NOTE: REQUIRED FOR ALL BURIED CONDUITS.

9 TYP. TYPICAL DUCTBANK SECTION

SCALE: NOT TO SCALE

REV	DATE	DESCRIPTION

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CADD FILE: E20 ELEC DTLs

SCALE: As Shown
DRAWING NO.: E20
SHEET: 63 OF 71

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WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

REPLACEMENT LIGHTING FIXTURE SCHEDULE

TYPE	EXISTING TO BE REPLACED	DESCRIPTION NEW FIXTURE	WATTS	MANUFACTURER	MODEL NUMBER/PART NUMBER	NOTES
A	2X4 GRID MOUNT 4 LAMP	2X4 LOW PROFILE TROFFER, GRID MOUNT, GASKETED DOOR FRAME, CLEAR ACRYLIC PATTERN #12 SHIELDING, PAINTED WHITE, 82 CRI, 4000K CCT, 6700 LUMENS, 120/277 VOLT	65	H. E. WILLIAMS	LPT-24-L67/840-S-A12125-DIM-UNV	REPLACE EXISTING FIXTURE IN PLACE. PROVIDE BATTERY BACKUP WHERE NOTED ON DWGS.
A1	2X4 CEILING MOUNT 4 LAMP, CLIP MOUNT	2X4 LOW PROFILE TROFFER, DRYWALL KIT FOR MOUNTING, GASKETED DOOR FRAME, CLEAR ACRYLIC PATTERN #12 SHIELDING, PAINTED WHITE, 82 CRI, 4000K CCT, 6700 LUMANS, 120/277 VOLT	65	H. E. WILLIAMS	LPT-24-L67/840-S-A12125-DIM-UNV WITH DRYWALL MOUNTING KIT	REPLACE EXISTING FIXTURE IN PLACE. PROVIDE BATTERY BACKUP WHERE NOTED ON DWGS.
B	2X2 GRID MOUNT 2 LAMP	2X2 LOW PROFILE TROFFER, GRID MOUNT, GASKETED DOOR FRAME, CLEAR ACRYLIC PATTERN #12 SHIELDING, PAINTED WHITE, 82 CRI, 4000K CCT, 4300 LUMENS, 120/277 VOLT	50	H. E. WILLIAMS	LPT-22-L43/840-S-A12125-DIM-UNV	REPLACE EXISTING FIXTURE IN PLACE. PROVIDE BATTERY BACKUP WHERE NOTED ON DWGS.
C	1X1 CEILING DOWNLIGHT PAR 40	6" DOWNLIGHT, OPEN , CLEAR DIFFUSER, WHITE FLANGE, 8- CRI, 4000K CCT, 1500 LUMENS, 120/277 VOLT	17	PHILLIPS	L6R-A-Z10-U-VA FRAME L6R-15-8-40-VA LIGHT ENGINE L6R-D-D TRIM	PROVIDE NEW CEILING TILE, AND REPLACE EXISTING 12"X12" FIXTURE IN PLACE WITH NEW 6" ROUND CEILING RECESSED FIXTURE. PROVIDE BATTERY BACKUP WHERE NOTED ON DWGS.
D	6" ROUND CEILING RECESSED PAR 40	6" DOWNLIGHT, OPEN , CLEAR DIFFUSER, WHITE FLANGE, 8- CRI, 4000K CCT, 1500 LUMENS, 120/277 VOLT	17	PHILLIPS	L6R-A-Z10-U-VA FRAME L6R-15-8-40-VA LIGHT ENGINE L6R-D-D TRIM	REPLACE EXISTING FIXTURE IN PLACE.
D1	6" ROUND CEILING RECESSED	6" DOWNLIGHT, OPEN , CLEAR DIFFUSER, WHITE FLANGE, 8- CRI, 4000K CCT, 1500 LUMENS, REMODELER KIT FOR SOLID CEILING, 120/277 VOLT	17	PHILLIPS	L6R-R-Z10-U-VA FRAME L6R-15-8-40-VA LIGHT ENGINE L6R-D-D TRIM	REPLACE EXISTING FIXTURE IN PLACE.
E	8" ROUNT CEILING RECESSED PAR 40	8" LED DOWNLIGHT, RETROFIT KIT,	19	LITON	LRALD8-SWF-100-R25UE-T40	REPLACE EXISTING FIXTURE IN PLACE.
F	6" ROUND CEILING RECESSED VAPOR TIGHT	6" DOWNLIGHT, OPEN , CLEAR DIFFUSER, WHITE FLANGE, 8- CRI, 4000K CCT, 1500 LUMENS, REMODELER KIT FOR SOLID CEILING, 120/277 VOLT	17	PHILLIPS	L6R-R-Z10-U-VA FRAME L6R-15-8-40-VA LIGHT ENGINE L6R-D-D TRIM	REPLACE EXISTING FIXTURE IN PLACE.
G	4' OPEN STRIP 2 LAMP W/REFLECTOR	4' LED TROFFER, FROSTED ACRYLIC LENS, WHITE PAINTED REFLECTOR, 120/277 VOLTS, 82 CRI, 4000K CCT, 7300 LUMENS.	71	H. E. WILLIAMS	LT-24-L73/840-AF-DIM-UNV	REPLACE EXISTING FIXTURE IN PLACE. PROVIDE BATTERY BACKUP WHERE NOTED ON DWGS.
G1	4' OPEN STRIP COVE LIGHT, 1LAMP	4' LED STRIP LIGHT, 5,000 LUMENS, 80 CRI, 4000K CCT, 120/277 VOLTS.	44	H. E. WILLIAMS	75-4-L50/840-DIM-UNV	REPLACE EXISTING FIXTURE IN PLACE. PROVIDE BATTERY BACKUP WHERE NOTED ON DWGS.
H	8' OPEN STRIP , 1 LAMP	8' LED STRIP LIGHT, 10,000 LUMENS, 80 CRI, 4000K CCT, 120/277 VOLTS.	77	H. E. WILLIAMS	75-8-L100/840-DIM-UNV	REPLACE EXISTING FIXTURE IN PLACE. PROVIDE BATTERY BACKUP WHERE NOTED ON DWGS.
I	2' OPEN STRIP COVE LIGHT, 1 LAMP	2' LED STRIP LIGHT, 2,000 LUMENS, 80 CRI, 4000K CCT, 120/277 VOLTS.	20	H. E. WILLIAMS	75-2-L20/840-DIM-UNV	REPLACE EXISTING FIXTURE IN PLACE. PROVIDE BATTERY BACKUP WHERE NOTED ON DWGS.
J	4' OPEN STRIP, W/GUARD 1 LAMP	4' LED STRIP LIGHT, 5,000 LUMENS, 80 CRI, 4000K CCT, 14 GAUGE WHITE POWDER COATED WIRE GUARD, 120/277 VOLTS.	44	H. E. WILLIAMS	75-4-L50/840-WG-7540-LED-DIM-UNV	REPLACE EXISTING FIXTURE IN PLACE. PROVIDE BATTERY BACKUP WHERE NOTED ON DWGS.
K	4' VAPOR TIGHT FIXTURE, 2 LED	4' VAPOR TIGHT, LED FULLY ENCLOSED AND GASKETED, ACRYLIC DIFFUSER, STAINLESS STEEL LATCHES, 82 CRI, 4000K CCT, 4000 NOMINAL LUMENS, 120/277 VOLT	40	H. E. WILLIAMS	96-4-L40/840-HIAFR-DIM-UNV	REPLACE EXISTING FIXTURE IN PLACE. PROVIDE BATTERY BACKUP WHERE NOTED ON DWGS.
L	8' VAPOR TIGHT FIXTURE, 2 LED	8' VAPOR TIGHT, FULLY ENCLOSED AND GASKETED, ACRYLIC DIFFUSER, STAINLESS STEEL LATCHES, 82 CRI, 4000K CCT, 8000 NOMINAL LUMENS, 120/277 VOLT	76	H. E. WILLIAMS	96-8-L80/840-HIAFR-DIM-UNV	REPLACE EXISTING FIXTURE IN PLACE. PROVIDE BATTERY BACKUP WHERE NOTED ON DWGS.
M	CLASS 1, DIV 2, HAZARDOUS AREA FIXTURE	LED HAZARDOUS LIGHTING, ALUMINUM HOUSING, GRAY POWDER COAT FINISH, WITH GLASS REFRACTOR GLOBE, 5800 LUMENS, 120/277 VOLT	45	LDPI INDUSTRIAL LIGHTING	DL-0-UN-0-R5-C2 EU-G	REPLACE EXISTING FIXTURE IN PLACE.
N	WALL PACK OUTDOOR FIXTURE	OPEN FACE WALL PACK, 30W LED 4100 NOMINAL LUMENS, BRONZE FINISH, 120 VOLTS	30	ILP	WP50-30WLED-UNIV-40	REPLACE EXISTING FIXTURE IN PLACE.

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 WILLIAM C. NELSON, P.E.
 Florida P.E. No. 42017

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
 AT FULL SIZE
 (IF NOT SCALE ACCORDINGLY)

ORANGE COUNTY GOVERNMENT
ORANGE COUNTY UTILITIES DEPARTMENT ENGINEERING DIVISION
 9150 CURRY FORD ROAD ORLANDO, FL. 32825

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LIGHTING FIXTURE SCHEDULE

OCU FILE NO. O28427
 DESIGNED BY: LMR
 DRAWN BY: RRM
 WILLIAM C. NELSON
 PROFESSIONAL ENGINEER
 FLORIDA LICENSE #42017

SCALE: As Shown
 DRAWING NO.: **E21**
 SHEET: 64 OF 71