

FILE: C:\PROJECT FILES\2025\2025-438 VCS- INDIAN RIVER ES SWGR REPLACE\DRAWINGS\1600--E001--2025-438.DWG
PRINTED: 06/25/2026 LAST SAVED BY: MARK

POWER DISTRIBUTION

	120/208V PANELBOARD, RECESSED
	120/208V PANELBOARD, SURFACE MOUNT
	277/480V PANELBOARD, SURFACE MOUNT
	277/480V PANELBOARD, RECESSED
	FEEDER OR BRANCH CIRCUIT CONCEALED IN WALL, CEILING OR FLOOR
	HOMERUN CONSISTING OF ONE SINGLE-PHASE, 1-POLE CIRCUIT. SEE SPECIFICATIONS AND/OR FEEDER SCHEDULES FOR WIRE SIZES. PANELBOARD AND CIRCUIT DESIGNATION ARE INDICATED.
	HOMERUN CONSISTING OF ONE SINGLE-PHASE, 2-POLE CIRCUIT: SEE SPECIFICATIONS AND/OR FEEDER SCHEDULES FOR WIRE SIZES. PANELBOARD AND CIRCUIT DESIGNATIONS ARE INDICATED.
	HOMERUN CONSISTING OF TWO SINGLE-PHASE CIRCUITS: SEE SPECIFICATIONS AND/OR FEEDER SCHEDULES FOR WIRE SIZES. PANELBOARD AND CIRCUIT DESIGNATION ARE INDICATED.
	HOMERUN CONSISTING OF THREE SINGLE-PHASE CIRCUITS: SEE SPECIFICATIONS AND/OR FEEDER SCHEDULES FOR WIRE SIZES. PANELBOARD AND CIRCUIT DESIGNATIONS ARE INDICATED.
	HOMERUN CONSISTING OF ONE THREE-PHASE CIRCUITS: SEE SPECIFICATIONS AND/OR FEEDER SCHEDULES FOR WIRE SIZES. PANELBOARD AND CIRCUIT DESIGNATIONS ARE INDICATED.

POWER DEVICES

	SINGLE RECEPTACLE
	DUPLEX RECEPTACLE
	DOUBLE DUPLEX RECEPTACLE
	SPECIAL PURPOSE RECEPTACLE
	SINGLE 250V NON-LOCKING TYPE RECEPTACLE
	DUPLEX RECEPTACLE, GROUND FAULT
	DUPLEX RECEPTACLE, GROUND FAULT, ABOVE COUNTER
	QUAD RECEPTACLE, GROUND FAULT
	DUPLEX RECEPTACLE, GROUND FAULT WITH CAST ALUMINUM PADLOCKABLE (1/4" HASP) WEATHERPROOF "IN USE" COVER. TAYMAC MX3200 OR EQUAL
	QUAD RECEPTACLE, GROUND FAULT WITH CAST ALUMINUM PADLOCKABLE (1/4" HASP) WEATHERPROOF "IN USE" COVER. TAYMAC MX 6200 OR EQUAL.
	DUPLEX RECEPTACLE LOCATED WITHIN ELECTRIC WATER COOLER PER MANUFACTURER'S INSTRUCTIONS. CIRCUIT BREAKER IS TO BE GFCI.
	DUPLEX RECEPTACLE, GROUND FAULT FOR COMPUTER WORKSTATION
	QUAD RECEPTACLE, GROUND FAULT FOR COMPUTER WORKSTATION
	DUPLEX RECEPTACLE, GROUND FAULT FOR TV LOCATED AT 84" AFF UNLESS NOTED OTHERWISE.
	CLOCK
	POWER/DATA POLE
	POWER POLE
	DISCONNECT SWITCH
	MOTOR STARTER
	STARTER/DISCONNECT SWITCH
	VARIABLE FREQUENCY DRIVE
	JUNCTION BOX
	FLOOR MOUNTED JUNCTION BOX
	PULL BOX
	EQUIPMENT CONNECTION
	PUSH BUTTON
	TRANSFORMER
	SHUNT TRIP. MTD. AT 6"5" AFF/AFG TO TOP OF ENCLOSURE
	JUNCTION BOX WITH MOTOR RATED SWITCH
	MOTOR
	GENERATOR
	LOCKBOX
	GROUND BUS BAR
	GROUND ROD WITH TEST INSPECTION WELL. SEE SPECIFICATIONS.
	SURGE PROTECTION DEVICE, SEE SPECIFICATIONS.

SWITCHES

	SWITCH
	MOTOR RATED SWITCH
	SWITCH, EXPLOSION PROOF
	SWITCH, LOW VOLTAGE MOMENTARY, HUBBELL I-5571 OR EQUAL
	SWITCH, WEATHERPROOF

MISCELLANEOUS SYMBOL LEGEND

	DETAIL NUMBER
	TITLE
	DETAIL TITLE REFERENCE
	SCALE:
	SHEET NUMBER WHERE DETAIL IS REFERENCED
	ADDITIONAL SHEET REFERENCES
	DETAIL NUMBER
	SHEET NUMBER TO WHERE DETAIL IS REFERENCED

LIGHTING FIXTURES

	4' STRIP FIXTURE
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ABBREVIATIONS

A	AMPERES	MCB	MAIN CIRCUIT BREAKER
AE	AUDIO ENHANCEMENT	MCC	MOTOR CONTROL CENTER
AF	ABOVE FINISHED CEILING	MCP	MOTOR CIRCUIT PROTECTOR
AF	ABOVE FINISHED FLOOR	MFR	MANUFACTURER
AFG	ABOVE FINISHED GRADE	MH	METAL HALIDE
AIC	AMPERES INTERRUPTING CAPACITY	MIN	MINIMUM
AL	ALUMINUM	MISC	MISCELLANEOUS
AWG	AMERICAN WIRE GAUGE	MLO	MAIN LUG ONLY
BFC	BELOW FINISHED CEILING	MMS	MANUAL MOTOR STARTER SWITCH
BFG	BELOW FINISHED GRADE	MTR	MOTOR
C	CONDUIT	MTD	MOUNTED
CAB	CABINET	MTG	MOUNTING
CKT	CIRCUIT	NAC	NOTIFICATION APPLIANCE CIRCUIT
CLG	CEILING	NEC	NATIONAL ELECTRICAL CODE
CL	CENTERLINE	NL	NIGHT LIGHT, UNSWITCHED
CTs	CURRENT TRANSFORMERS	PNL	PANEL
CU	COPPER	PSI	PULL STATION INSIDE
DISC	DISCONNECT(ING)	PVC	POLYVINYL CHLORIDE
DWG	DRAWING(S)	REC	RECEPTACLE
EA	EACH	RGS	RIGID GALVANIZED STEEL
ECB	ENCLOSED CIRCUIT BREAKER	SPD	SURGE PROTECTION DEVICE
EF	EXHAUST FAN	TEL	TELEPHONE
ENIT	ELECTRICAL METALLIC TUBING	TYP	TYPICAL
EQUIP	EQUIPMENT	UON	UNLESS OTHERWISE NOTED
EUH	ELECTRIC UNIT HEATER	V	VOLTS
EWC	ELECTRIC WATER COOLER	VA	VOLT-AMPERES
EWB	ELECTRIC WATER HEATER	VFD	VARIABLE FREQUENCY DRIVE
EXH	EXHAUST	W	WATTS
EXIST	EXISTING	WP	WEATHER PROOF
EXP	EXPLOSION PROOF	XFMR	TRANSFORMER
FA	FIRE ALARM		
FLA	FULL LOAD AMPERES		
FLUOR	FLUORESCENT		
GFCI	GROUND FAULT CIRCUIT INTERRUPTER		
GFP	GROUND FAULT PROTECTION		
GND	GROUND		
HGT	HEIGHT		
HID	HIGH INTENSITY DISCHARGE		
HPS	HIGH PRESSURE SODIUM		
HOA	HAND-OFF-AUTOMATIC		
HP	HORSEPOWER		
HVAC	HEATING/VENTILATING/ AIR CONDITIONING		
HV	HIGH VOLTAGE		
INC	INCANDESCENT		
JB	JUNCTION BOX		
KV	KILO-VOLTS		
KVA	KILO-VOLTS-AMPERES		
KVAR	KILO-VOLTS-AMPERES REACTIVE		
KW	KILO-WATTS		
KWH	KILO-WATT-HOURS		
LTG	LIGHTING		
m	METER		
mm	MILLIMETER		
MAX	MAXIMUM		

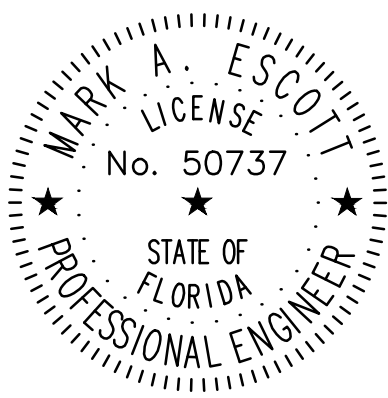
LIGHTING FIXTURE SCHEDULE					
TYPE	DESCRIPTION	DESIGN SELECTION	VOLTS	LAMPS/FIXTURE	MAX INPUT WATTAGE
FNE	LED SURFACE MOUNT LENSED STRIPLIGHT, MINIMUM 4000 LUMEN OUTPUT, 0-10 VOLT DIMMING, DAMP LOCATION RATED. PROVIDE WITH 90 MIN BATTERY BACK UP.	COLUMBIA CSL4-A-LSCS-ELL14ST	120/277V	LED	42W

NOTES

- ALL LED FIXTURES SHALL HAVE MINIMUM 80 CRI.
- ALL LED FIXTURES SHALL HAVE CORRELATED COLOR TEMPERATURE OF 4000/4100K, UNLESS OTHERWISE NOTED.
- FIXTURES WITH ELECTRONIC BALLAST SHALL HAVE 20% MAXIMUM HARMONIC DISTORTION.
- ALL FIXTURES SHALL BE LABELED WITH MAXIMUM ALLOWABLE WATTAGE. MAXIMUM IS THE WATTAGE OF LAMP AS SHOWN IN SCHEDULE.
- ALL FIXTURES, WHETHER STANDARD OR NOT, REQUIRE LISTING BY A NATIONALLY RECOGNIZED TESTING LABORATORY.
- ALL FIXTURE NOTED AS EMERGENCY FIXTURES SHALL SUPPLY A MINIMUM OF 90MIN BACK-UP BATTERY POWER.
- ALL LED FIXTURES SHALL HAVE INTERNAL DISCONNECTING MEANS ON LINE SIDE INCLUDING GROUNDED CONDUCTOR PER NEC 410.130(G), UL INTERNAL DISCONNECT TO BE INSTALLED BY FACTORY AND TO BE INCLUDED IN ALL SUBMITTALS.
- WHEN FIXTURE MODEL DIFFERS FROM FIXTURE DESCRIPTION, THEN THE FIXTURE DESCRIPTION SHALL GOVERN.

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REVISIONS

DOCUMENT HISTORY

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INDIAN RIVER ELEMENTARY

REPLACE SWITCHGEAR BLDG. 4

VCS Project NO. 2648222

650 ROBERTS ROAD
EDGEWATER, FL 32141

ENGINEER
MARK A. ESCOTT

ENDOR OF RECORD

DESIGNED BY

DRAWN BY

ISSUE DATE

06/26/26

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2025-438

SHEET TITLE

SYMBOLS, SPECIFICATIONS, FIXTURE
SCHEDULES

DRAWING NO.

E001



REVISIONS		DOCUMENT HISTORY		DESCRIPTION
NO	DATE			

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EDGEWATER, FL 32141

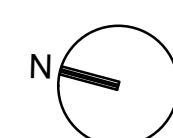
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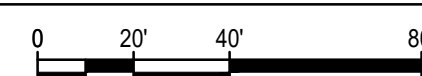
ELECTRICAL SITE PLAN

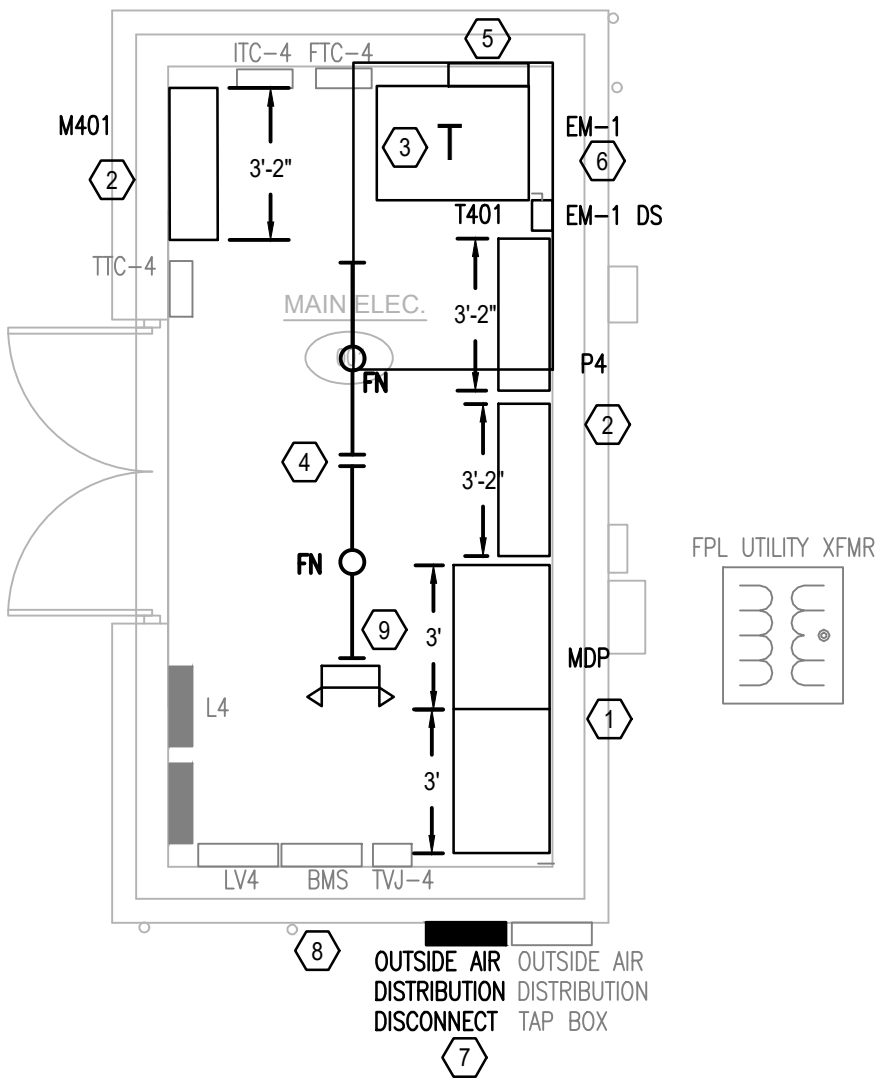
E101



ELECTRICAL SITE PLAN

SCALE: 1"=40'





 **DEMO PLAN BLDG. 4**
SCALE: 1/4"=1'-0"



GENERAL NOTES:

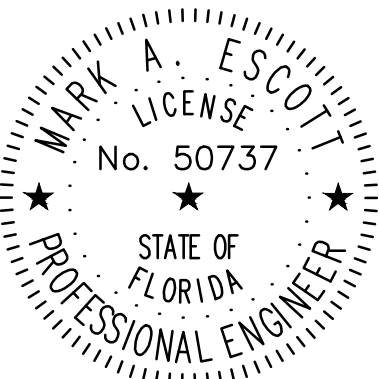
- REFER TO SYMBOL LEGEND ON SHEET E001.
- REFER TO BOOK SPECIFICATIONS.
- CONTRACTOR SHALL PERFORM CIRCUIT TRACE ON ALL BRANCH CIRCUITS IN PANEL BEING WORKED UPON AND PROVIDE AN UPDATED TYPEWRITTEN PANEL SCHEDULE IDENTIFYING CIRCUITS FED AND LOCATION AND/OR ROOM NUMBER.
- CONTRACTOR TO SEGREGATE ALL GROUNDS AND NEUTRALS ONTO THE CORRECT BUS.
- CONTRACTOR TO CONFIRM THAT THERE IS A GROUND CONDUCTOR FOR EACH LOAD OR THAT THE CONDUIT PATH GROUND IS CONTINUOUS FOR EACH LOAD.
- CONTRACTOR SHALL PROVIDE ARC FLASH WARNING LABELS FOR ALL PANELS BEING REPLACED.
- CONTRACTOR TO CHECK PHASE ROTATION PRIOR TO DISCONNECTION AND AFTER RECONNECTION OF POWER.
- CONTRACTOR TO IDENTIFY CONDUITS EXITING PANEL WITH CIRCUIT NUMBER INFORMATION.
- ENSURE ALL WIRES ARE TAGGED PER IDENTIFICATION SPECIFICATION.
- EQUIPMENT SHOWN SCREENED IS EXISTING TO REMAIN. EQUIPMENT SHOWN DARK IS EXISTING TO BE REMOVED.

PLAN KEY NOTES:

- EXISTING SWITCHBOARD TO BE REMOVED. PROTECT ALL FEEDERS IDENTIFIED FOR REUSE, GROUND ELECTRODE AND CONDUIT FOR RENOVATION PHASE. SEE ONLINE DIAGRAM ON SHEET ED501.
- EXISTING DISTRIBUTION PANEL TO BE REMOVED. PROTECT ALL FEEDERS IDENTIFIED FOR REUSE, AND CONDUIT FOR RENOVATION PHASE. SEE ONLINE DIAGRAM ON SHEET ED501.
- EXISTING TRANSFORMER TO BE REMOVED. REMOVE ALL WIRE AND PROTECT UNDERGROUND CONDUIT IN PLACE FOR EXTENSION THRU NEW EQUIPMENT PAD. REMOVE EXISTING GROUND ELECTRODE CONDUCTOR FOR EXISTING TRANSFORMER. PROVIDE NEW GROUND CONDUCTOR TO NEW GROUND BUS AT SWITCHGEAR. SEE ONLINE DIAGRAM ON SHEET ED501.
- EXISTING STRIP LIGHTS ARE TO BE REMOVED AND REPLACED WITH NEW LED STRIP LIGHTS IN EXISTING LOCATIONS. REFER TO LIGHTING FIXTURE SCHEDULE ON SHEET ON E001 AND RENO PLAN. CONFIRM FIXTURE VOLTAGE PRIOR TO ORDERING NEW. REMOVE EXISTING SPARE FUSE CABINET AND TURN OVER TO OWNER.
- REMOVE PANEL EM1 AND THE DISCONNECT SERVING IT. REMOVE ALL FEEDER CONDUIT AND WIRE FEEDING THIS PANEL. PROTECT ALL EXISTING BRANCH CIRCUITS LEAVING THIS PANEL FOR RELOCATION TO PANEL P4 IN THE RENOVATION PHASE.
- REMOVE EXISTING ENCLOSED CIRCUIT BREAKER AND CONDUIT AND WIRE BACK TO MDP TAP. REMOVE WIRE TO TAP BOX FROM ECB. SAFE OFF WIRE AT TAP BOX TO EXISTING LOAD FOR CONNECTION TO NEW FEEDER FROM NEW CIRCUIT BREAKER IN MDP.
- REMOVE SERVICE DISCONNECT SIGNS FROM ALL 3 EXISTING SERVICE DISCONNECTS.
- REMOVE EBU, BOX, CONDUIT AND WIRE.

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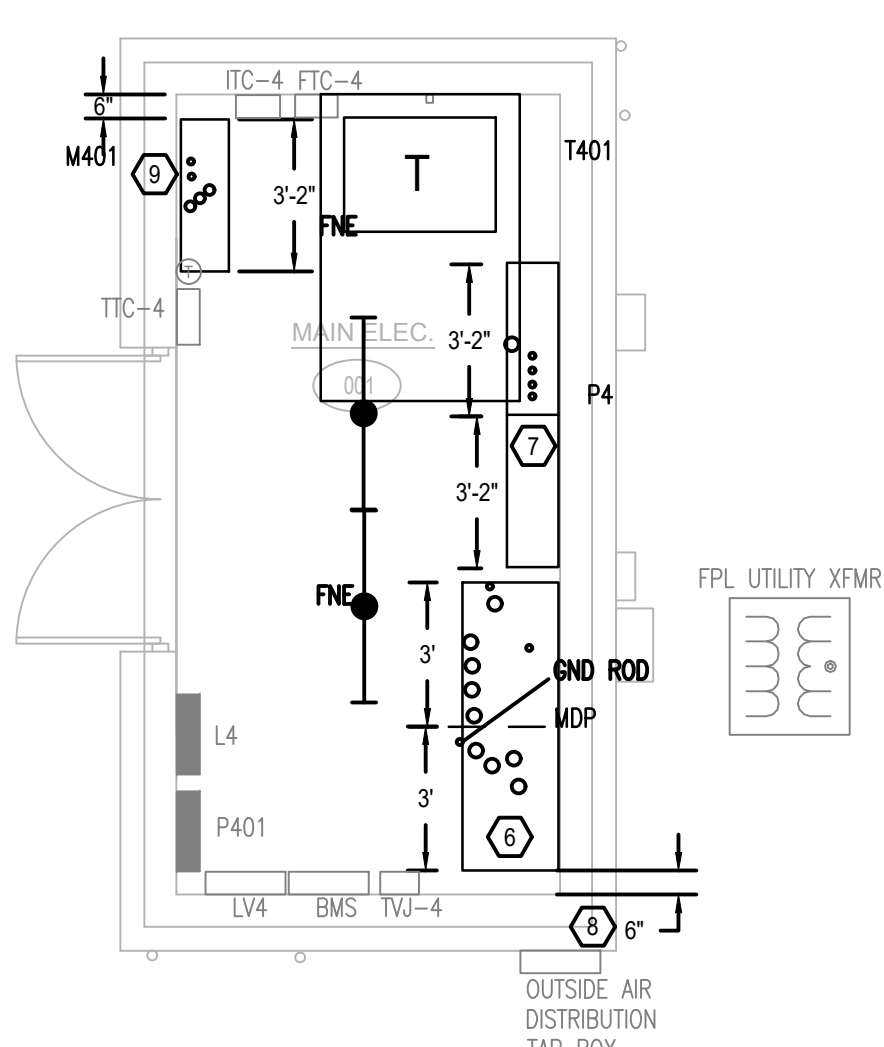
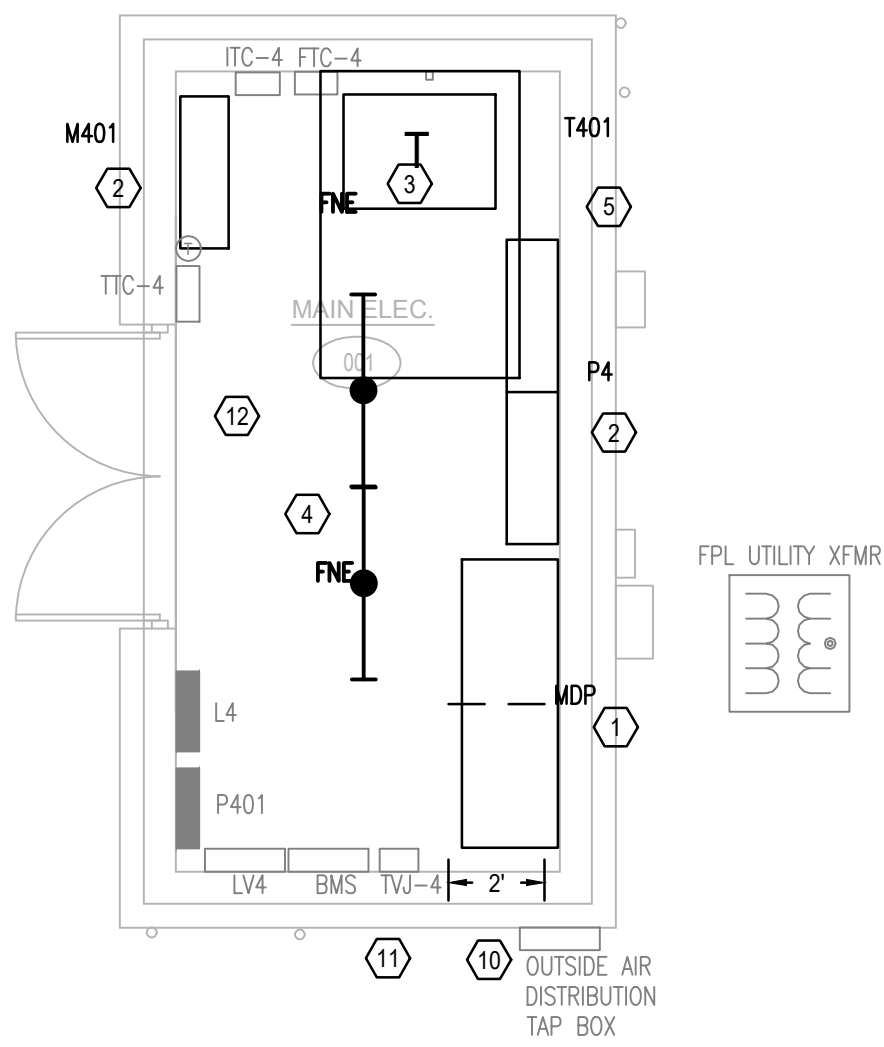
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SHEET TITLE

DEMO PLAN BLDG. 4

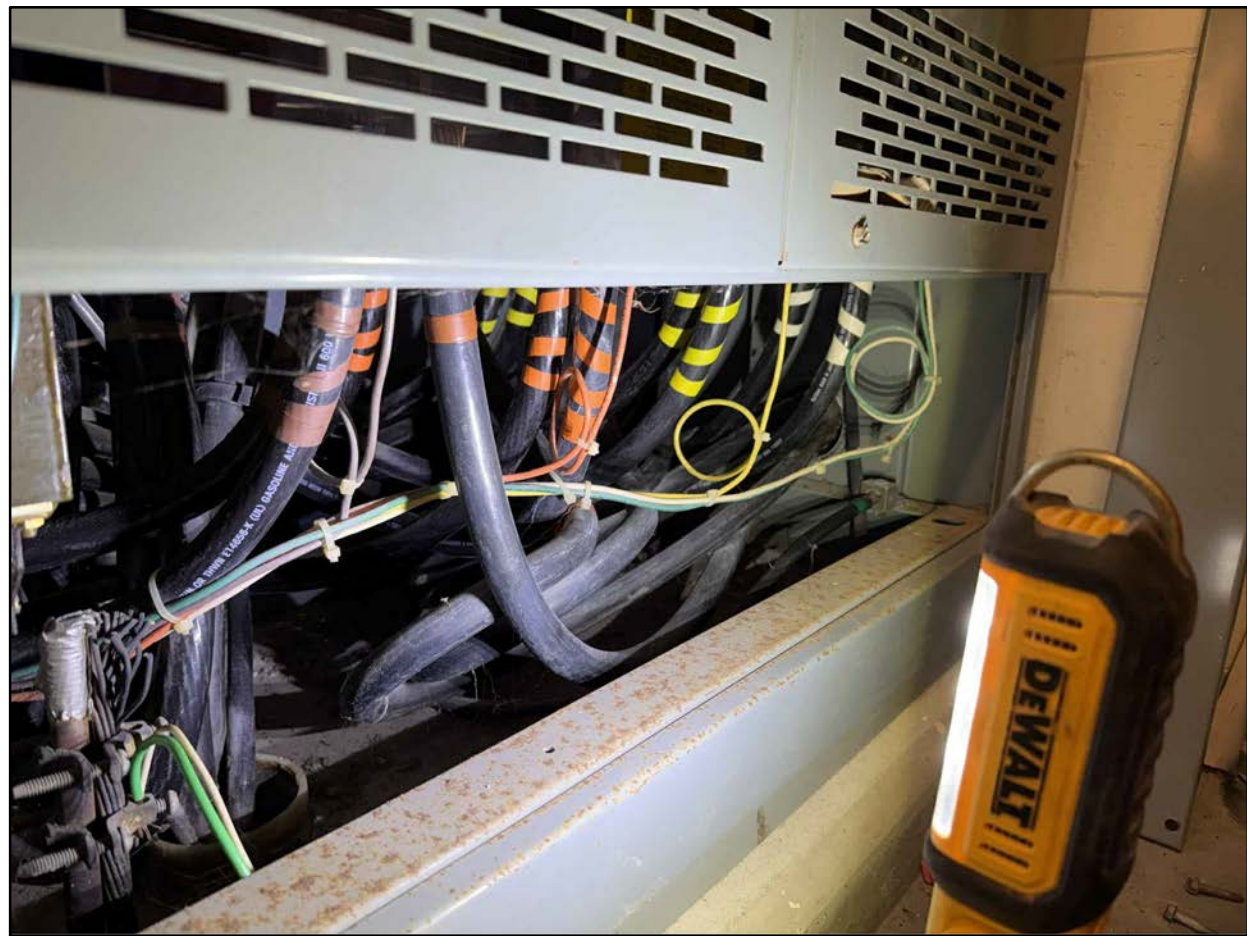
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ED301

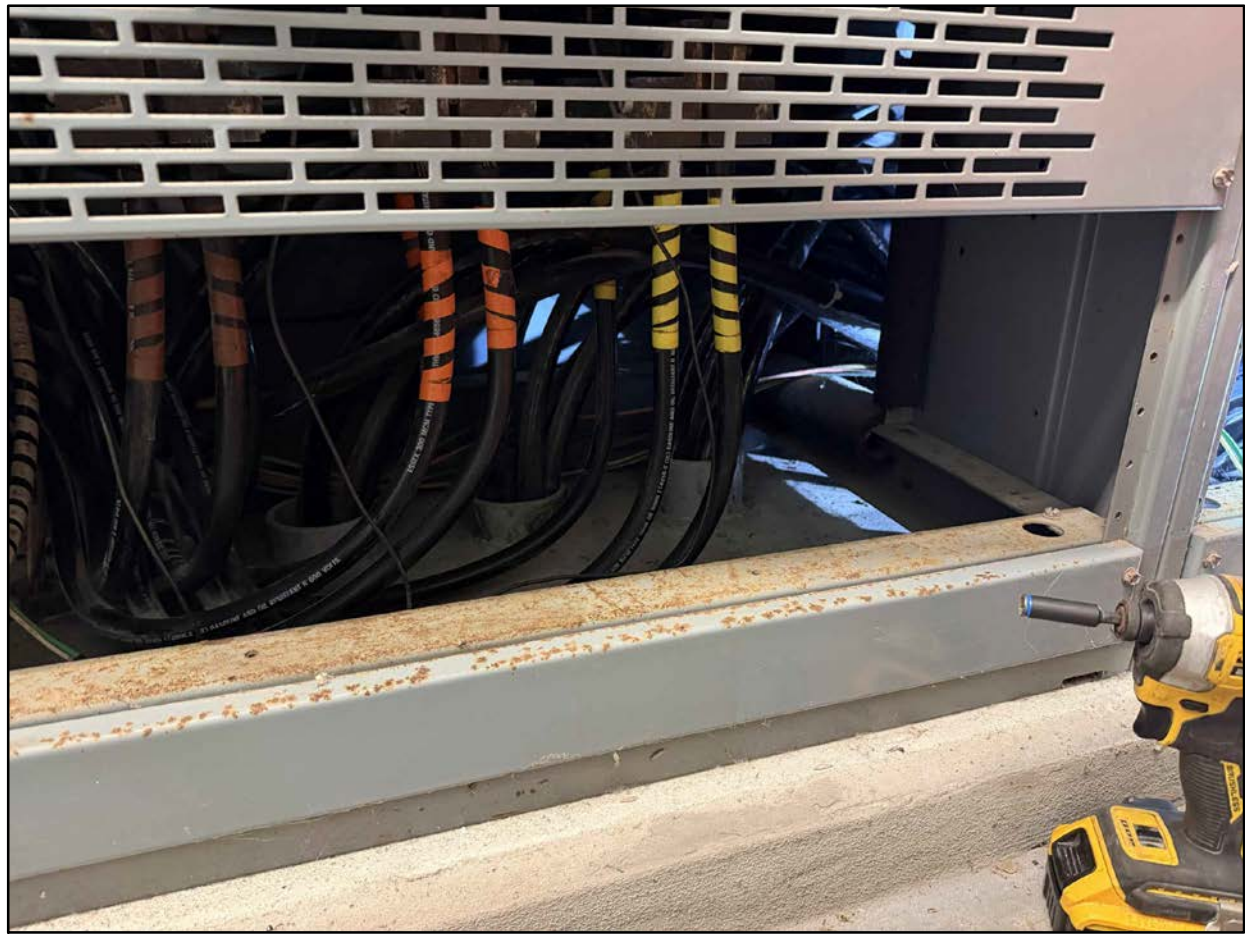


RENO ELECTRICAL FLOOR PLAN - BLDG. 4

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



MDP EXIST MAIN SECTION



MDP EXIST DIST SECTION



M401 PANEL



P4 SECTION 2 LEFT



P4 SECTION 2

GENERAL NOTES:

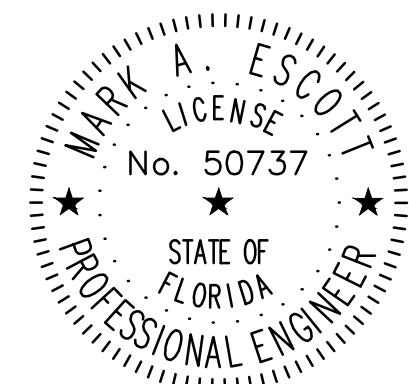
- REFER TO SYMBOL LEGEND ON SHEET E001.
- REFER TO BOOK SPECIFICATIONS.
- CONTRACTOR SHALL PROVIDE ARC FLASH WARNING LABELS FOR ALL PANELS BEING REPLACED.
- CONTRACTOR TO CHECK PHASE ROTATION PRIOR TO DISCONNECTION AND AFTER RECONNECTION OF POWER.
- ENSURE ALL WIRES ARE TAGGED PER IDENTIFICATION SPECIFICATION.
- EQUIPMENT SHOWN SCREENED IS EXISTING TO REMAIN. EQUIPMENT SHOWN DARK IS NEW TO BE PROVIDED.

PLAN KEY NOTES:

- NEW SWITCHBOARD. EXTEND/MODIFY EXISTING CONDUIT FOR CONNECTION TO NEW SWITCHBOARD. TERMINATE EXISTING WIRES TO NEW BREAKERS. IF LOAD WIRES ARE NOT LONG ENOUGH TO REACH NEW BREAKER LOCATION, EXTEND WIRE WITH COMPRESSION BUTT SPLICE AND HEAT SHRINK. MINIMIZE THE EXTENSION OF FEEDERS BY CHOOSING THE MOST EFFICIENT LOCATION OF BREAKERS IN THE NEW SWITCHBOARD. CURRENTLY THE MAIN CONDUCTORS COME UP UNDER THE DISTRIBUTION SECTION AND DISTRIBUTION FEEDERS COME UP UNDER THE MAIN SECTION. THE SECTIONS SHOULD BE REVERSED FROM EXISTING WHEN ORDERING. OVERHEAD FEEDER CONDUITS ENTERING THE WRONG SECTION SHALL BE ROUTED TO THE CORRECT SECTION AND WIRING EXTENDED WITHIN THE SWITCHBOARD OR SWBD PROVIDED WITH APPROPRIATE WIREWAY AT THE TOP TO MAKE THE TRANSITION WITH SEPARATION FROM THE MAIN.
- NEW DISTRIBUTION PANEL. EXTEND/MODIFY EXISTING CONDUIT FOR CONNECTION TO NEW DISTRIBUTION PANEL. TERMINATE EXISTING WIRES TO NEW BREAKERS. IF WIRE IS NOT LONG ENOUGH TO REACH NEW BREAKER LOCATION, EXTEND WIRE WITH COMPRESSION BUTT SPLICE AND HEAT SHRINK. MINIMIZE THE EXTENSION OF FEEDERS BY CHOOSING THE MOST EFFICIENT LOCATION OF BREAKERS IN THE NEW DISTRIBUTION PANEL.
- NEW 150KVA XFMR TO REPLACE EXISTING. PROVIDE NEW CONDUIT AND WIRE.
- PROVIDE NEW LED STRIP LIGHT FIXTURES IN LOCATION OF EXISTING STRIP LIGHTING FIXTURE REMOVED IN DEMOLITION PHASE.
- EXTEND CIRCUITS THAT WERE CONNECTED TO EM1 TO PANEL P4.
- APPROXIMATE LOCATION OF EXISTING CONDUITS. CARE IS TO BE TAKEN DURING ORDERING TO MAKE SURE CONDUITS ARE IN THE CORRECT SECTION, UNDER THE SWITCHBOARD AND ABLE TO BE REUSED. PROVIDING SWITCHBOARD OF THE SAME EXACT SIZE WILL ELIMINATE ANY POSSIBLE OBSTRUCTIONS. CHANGING SIZE OF THE PANEL OR SWITCHBOARD WILL BE AT THE CONTRACTORS RISK. NOTHING IN THE SPECS OR DRAWINGS PREVENTS THE CONTRACTOR FROM PROVIDING CUSTOM SWITCHGEAR TO ENSURE THE SIZES ARE APPROPRIATE.
- APPROXIMATE LOCATION OF EXISTING CONDUITS. CARE IS TO BE TAKEN DURING ORDERING TO MAKE SURE UNDER THE PANEL AND ABLE TO BE REUSED. PROVIDING PANELS OF THE SAME EXACT SIZE WILL ELIMINATE ANY POSSIBLE OBSTRUCTIONS. CHANGING SIZE OF THE PANEL WILL BE AT THE CONTRACTORS RISK.
- NEW SWITCHBOARD IS TO BE INSTALLED 6" OFF THE SIDE WALL TO ENSURE CLEAR WORK SPACE WITHOUT BAS OR TVJ ENCLOSURES OBSTRUCTING THE CLEAR WORK SPACE.
- APPROXIMATE LOCATION OF EXISTING CONDUITS. CARE IS TO BE TAKEN DURING ORDERING TO MAKE SURE CONDUITS ARE UNDER THE PANEL AND ABLE TO BE REUSED. PROVIDE NEW PANEL THAT IS 6" SMALLER TO ELIMINATE CLEAR WORK SPACE OBSTRUCTION BY FTAC 4.
- PROVIDE NEW FEEDER FROM TAP BOX TO NEW BREAKER IN MDP. SEE FEEDER SCHEDULE.
- CHANGE SHUNT TRIP SIGNS TO STATE "SERVICE DISCONNECT 1 OF 2 and 2 OF 2 RESPECTIVELY.
- CLEAN EXISTING ELECTRICAL ROOM CONCRETE FLOOR OF ALL OIL, GREASE, STAINS AND DIRT. OPEN CONCRETE WITH ETCHING SOLUTION AND PROVIDE PRIMER COAT AND SUSSEX GRAY CONCRETE COATING ROKREZ PRO INDUSTRIAL FLOOR COATING OR EQUAL WITH DECORATIVE CHIP.

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REPLACE SWITCHGEAR BLDG. 4

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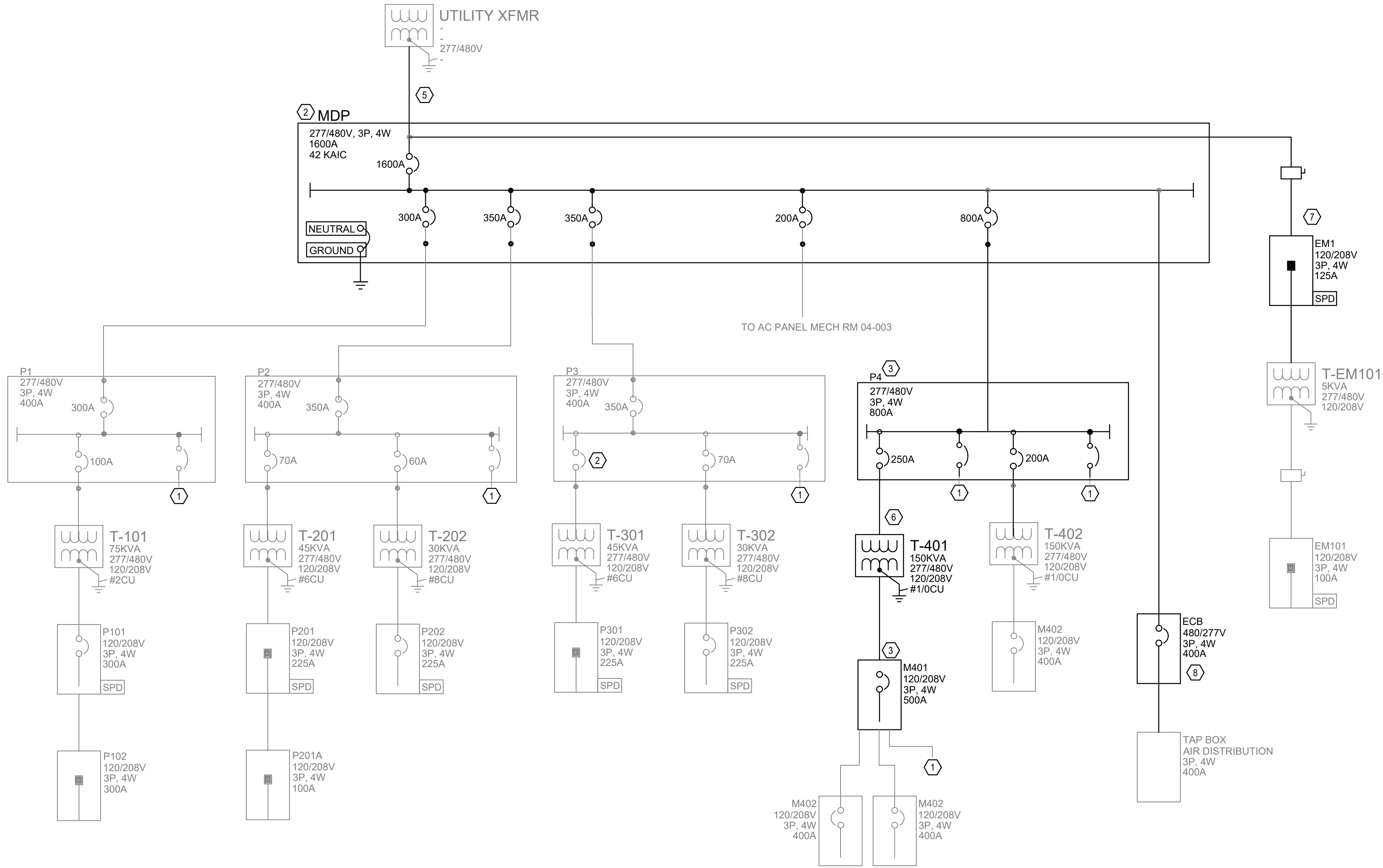
SHEET TITLE

POWER PLAN BLDG. 4

DRAWING NO.

E301

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PARTIAL DEMO ONE LINE DIAGRAM

GENERAL NOTES:

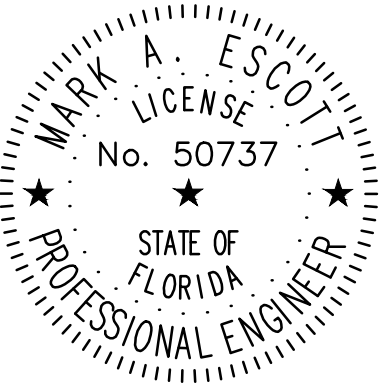
- a. REFER TO SYMBOL LEGEND ON SHEET E001.
- b. REFER TO BOOK SPECIFICATIONS.
- c. CONTRACTOR SHALL PERFORM CIRCUIT TRACE ON ALL BRANCH CIRCUITS IN PANEL BEING WORKED UPON AND PROVIDE AN UPDATED TYPEWRITTEN PANEL SCHEDULE IDENTIFYING CIRCUITS FED AND LOCATION AND/OR ROOM NUMBER.
- d. CONTRACTOR TO SEGREGATE ALL GROUNDS AND NEUTRALS ONTO THE CORRECT BUS.
- e. CONTRACTOR TO CONFIRM THAT THERE IS A GROUND CONDUCTOR FOR EACH LOAD OR THAT THE CONDUIT PATH GROUND IS CONTINUOUS FOR EACH LOAD.
- f. CONTRACTOR SHALL PROVIDE ARC FLASH WARNING LABELS FOR ALL PANELS BEING REPLACED.
- g. CONTRACTOR TO CHECK PHASE ROTATION PRIOR TO DISCONNECTION AND AFTER RECONNECTION OF POWER.
- h. CONTRACTOR TO IDENTIFY CONDUITS EXITING PANEL WITH CIRCUIT NUMBER INFORMATION.
- i. ENSURE ALL WIRES ARE TAGGED PER IDENTIFICATION SPECIFICATION.
- j. EQUIPMENT SHOWN SCREENED IS EXISTING TO REMAIN. EQUIPMENT SHOWN DARK IS NEW TO BE PROVIDED.

PLAN KEY NOTES: #

1. ADDITIONAL EXISTING LOADS ARE NOT SHOWN AND NOT IN SCOPE EXCEPT FOR DISCONNECT AND RECONNECT.
2. REMOVE EXISTING SWITCHBOARD. TIE BACK AND PROTECT ALL FEEDERS AND CONDUIT DURING REPLACEMENT OF SWITCHBOARD FOR REUSE IN THE RENOVATION PHASE.
3. REMOVE EXISTING DISTRIBUTION PANEL. TIE BACK AND PROTECT ALL FEEDERS AND CONDUIT DURING REPLACEMENT OF DISTRIBUTION PANEL FOR REUSE IN THE RENOVATION PHASE.
4. REMOVE EXISTING TRANSFORMER AND ALL ABOVE SLAB CONDUIT AND ALL WIRE.
5. REMOVE FEEDER WIRE TO FPL TRANSFORMER FROM MDP.
6. CONDUIT TO BE REMOVED AND MODIFIED TO NOT PASS WIRING BACK THRU PANELBOARD.
7. REMOVE PANEL EM1 AND THE DISCONNECT SERVING IT. REMOVE ALL FEEDER CONDUIT AND WIRE FEEDING THIS PANEL. PROTECT ALL EXISTING BRANCH CIRCUITS LEAVING THIS PANEL FOR RELOCATION AND EXTENSION TO PANEL P4 IN THE RENOVATION.
8. REMOVE EXISTING ENCLOSED CIRCUIT BREAKER AND CONDUIT AND WIRE BACK TO MDP TAP. REMOVE WIRE TO TAP BOX FROM ECB. SAFE OFF WIRE AT TAP BOX TO EXISTING LOAD FOR CONNECTION TO NEW FEEDER FROM NEW CIRCUIT BREAKER IN MDP.

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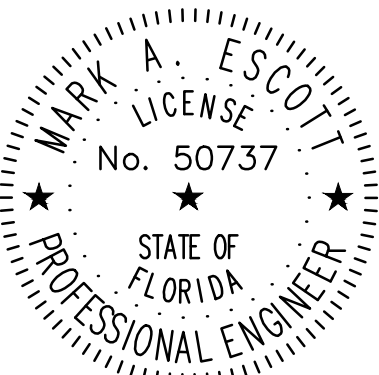
2025-438

SHEET TITLE

DEMO ONE LINE
DIAGRAMS

DRAWING NO.

ED501



MARK ESCOTT FL- 50737

REVISIONS

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REPLACE SWITCHGEAR BLDG. 4

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ONE LINE DIAGRAMS

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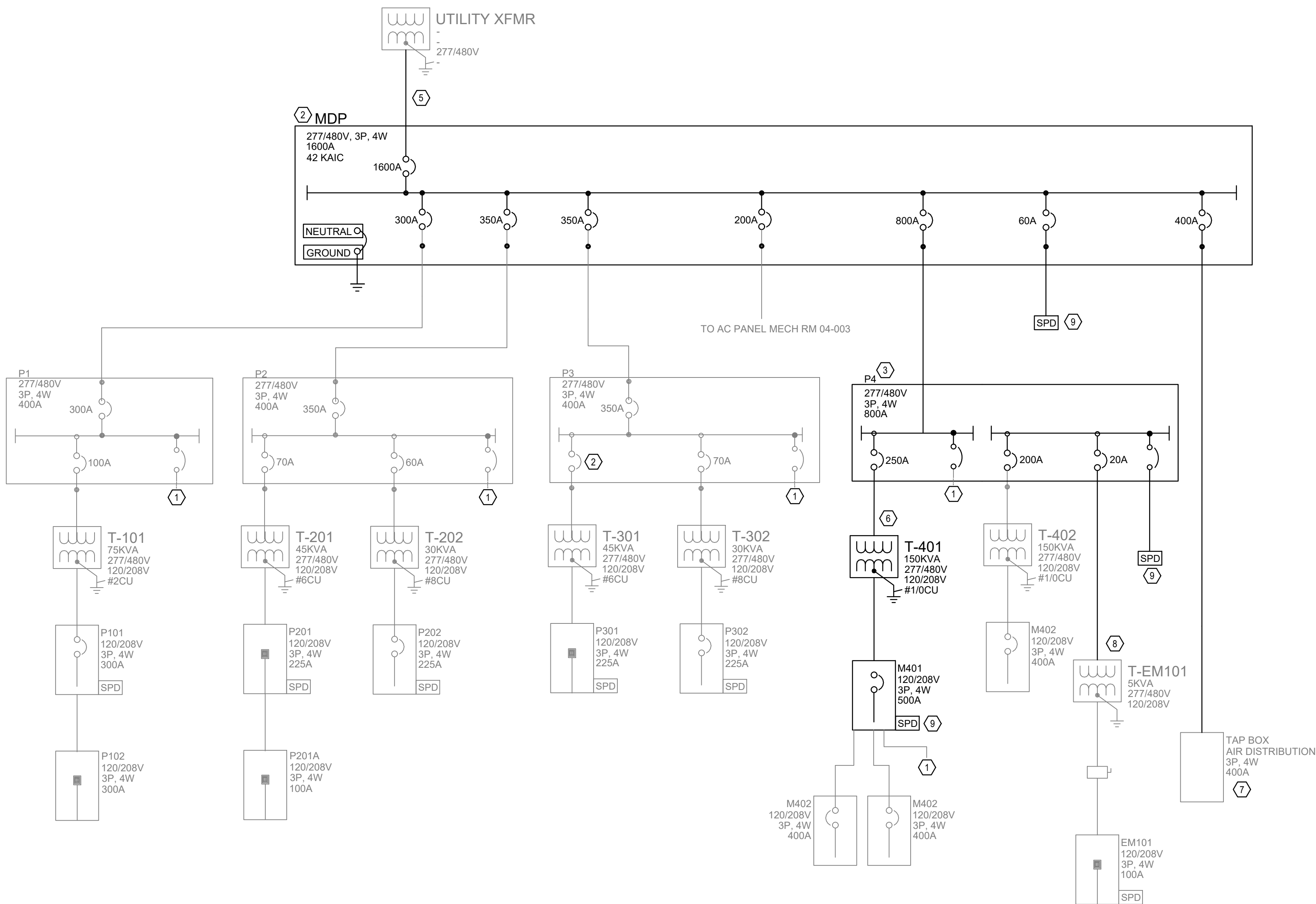
E501

GENERAL NOTES:

- REFER TO SYMBOL LEGEND ON SHEET E001.
- REFER TO BOOK SPECIFICATIONS.
- REFER TO EQUIPMENT SCHEDULE ON THIS DRAWING FOR CONDUIT AND WIRE SIZES.
- ALL FEEDERS ARE TO HAVE LESS THAN 2% TOTAL VOLTAGE DROP AND ALL BRANCH CIRCUITS SHALL HAVE LESS THAN 3% VOLTAGE DROP.
- CONTRACTOR SHALL PERFORM CIRCUIT TRACE ON ALL BRANCH CIRCUITS IN PANEL BEING WORKED UPON AND PROVIDE AN UPDATED TYPEWRITTEN PANEL SCHEDULE IDENTIFYING CIRCUITS FED AND LOCATION AND/OR ROOM NUMBER.
- CONTRACTOR TO SEGREGATE ALL GROUNDS AND NEUTRALS ONTO THE CORRECT BUS.
- CONTRACTOR TO CONFIRM THAT THERE IS A GROUND CONDUCTOR FOR EACH LOAD OR THAT THE CONDUIT PATH GROUND IS CONTINUOUS FOR EACH LOAD.
- CONTRACTOR SHALL PROVIDE ARC FLASH WARNING LABELS FOR ALL PANELS BEING REPLACED.
- CONTRACTOR TO CHECK PHASE ROTATION PRIOR TO DISCONNECTION AND AFTER RECONNECTION OF POWER.
- CONTRACTOR TO IDENTIFY CONDUITS EXITING PANEL WITH CIRCUIT NUMBER INFORMATION.
- ENSURE ALL WIRES ARE TAGGED PER IDENTIFICATION SPECIFICATION.
- EQUIPMENT SHOWN SCREENED IS EXISTING TO REMAIN. EQUIPMENT SHOWN DARK IS NEW TO BE PROVIDED.

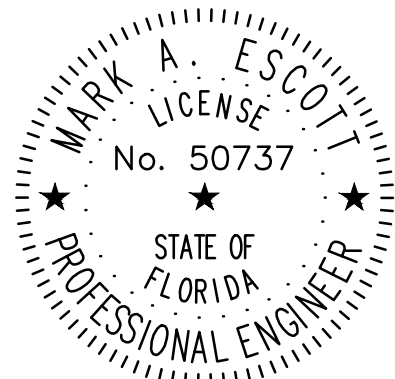
PLAN KEY NOTES:

- ADDITIONAL EXISTING LOADS ARE NOT SHOWN. SEE PANEL SCHEDULE FOR ALL LOADS THAT MUST BE RECONNECTED TO THE SWITCHGEAR BEING REPLACED.
- NEW SWITCHBOARD TO BE THE SAME SIZE AND FOOTPRINT AS EXISTING BOARD SO THAT SERVICE AND LOAD FEEDERS ARE NOT IMPACTED BY SUPPORT FRAMING OR IN THE WIRING SECTION. USE PROTECTED LOAD FEEDERS AND CONDUIT FOR CONNECTIONS TO NEW SWITCHBOARD.
- NEW SURGE PROTECTION DEVICE.
- NEW GROUND ELECTRODE. REFER TO DETAIL ON SHEET E801 FOR MORE INFORMATION.
- CONDUIT AND WIRE TO BE MODIFIED TO NOT PASS BACK THRU PANELBOARD. PROVIDE NEW WIRING SO THERE IS NO SPLICE.
- ADD NEW #1A 3P IN EM1 TO FEED NEW SURGE SUPPRESSOR.
- PROVIDE NEW FEEDER FROM NEW CIRCUIT BREAKER IN MDP TO EXISTING TAPS INSIDE ENCLOSURE FOR AIR DISTRIBUTION EQUIPMENT.
- ALL EXISTING LOADS FROM EM1 THAT WAS DELETED WILL BE EXTENDED TO PANEL P4 NEW BREAKERS.
- PROVIDE NEW SPD. CONDUCTORS CONNECTING THE SPD SHALL BE KEPT AS SHORT AS POSSIBLE.



PARTIAL RENO ONE LINE DIAGRAM

PANEL FEEDER SCHEDULE:										* WIRE SIZES ARE BASED ON NFPA 70 TABLE 310.15(B)(16) 60 DEGREE C.U. COLUMN FOR SIZES OF 100A AND LESS, ALL OTHERS BASED ON 75 DEGREE COLUMN														
										**LOAD AMPS AND DISTANCE SHOWN FOR V/D CALCULATION ONLY. SEE PANEL SCHEDULE FOR ACTUAL LOAD. ACTUAL DISTANCE MAY VARY DEPENDENT ON ROUTING.														
FEEDER DESCRIPTION		VOLTS	PH	NEUT	200% NEUT	GRND	ISO	MAIN OCP RATING	LOAD AMPS**	DISCONNECT SIZE	FUSE	NEMA		WIRE PER PHASE	NEUT WIRE	ADD NEUT	GRD WIRE	ISO GND	SYST BOND JUMP	# OF RUNS	CONDUIT SIZE	APPROX DIST. FT	VOLT DROP %	NOTES
UTIL	MDP	480	3	Y	N	N	N	1600	1280					500	4/0				4/0	4	3"	20	0.06%	
MDP	P1	480	3	Y	N	Y	N	300	240					350	1/0		#3			1	3"			
MDP	P2	480	3	Y	N	Y	N	350	280					#500	3/0		#3			1	3"			
MDP	P3	480	3	Y	N	Y	N	350	280					#500	1/0		#10			1	3"			
MDP	P4	480	3	Y	N	Y	N	800	640					#300	3/0		#10			3	3"	10	0.03%	
MDP	AIR DIST TAP BOX	480	3	Y	N	Y	N	400	320					#500	#500		#3			1	4"	10	0.03%	
P4	T-401	480	3	N	N	Y	N	250	200					#4/0						1	2"	10	0.04%	
T-401	M401	208	3	Y	N	Y	N	500	400					#250	#250		2/0			2	3"	25	0.22%	
MDP	AC PANEL 04-003	480	3	Y	N	Y	N	200	160					#3/0	#3/0		#6			1	2-1/2"			
GENERAL NOTES:										NOTES:														
(1) - PROVIDE DISC. SW. AT ALL PECS OF EQUIPMENT, UNLESS OTHERWISE NOTED ON THIS SCHEDULE										(a) - ROUTE ALL FEEDERS CONCEALED FROM PUBLIC VIEW														
(2) - FUSES SHOWN FOR REFERENCE ONLY, PROVIDE FUSES AS RECOMMENDED BY EQUIP. MANUF.																								
(3) - PROVIDE NEMA OUTDOOR RATED ENCLOSURES FOR ALL DISC. SW'S MOUNTED OUTDOORS.																								
(4) - COORDINATE STARTER TYPE WITH MECHANICAL EQUIPMENT INSTALLER.																								
(5) - E.C. TO VERIFY THAT C.B. FOR COMPRESSORS IS SUFFICIENT TO ALLOW STARTING OF UNIT, IF																								
(6) - #12 FEEDERS SHOWN AND OVER 50FT. LONG TO BE #10 WIRE FOR 120V CIRCUITS.																								
#12 FEEDERS SHOWN AND OVER 100FT. LONG TO BE #10 WIRE FOR 277V CIRCUITS.																								
ABBREVIATIONS:																								
N.F. = NON-FUSED																								
ECB = ENCLOSED CIRCUIT BREAKER																								
3R = NEMA 3R ENCLOSURE																								
4X = NEMA 4 W.P. STAINLESS STEEL ENCL.																								



MARK ESCOTT FL- 50737

REVISIONS

DOCUMENT HISTORY

NO. DATE DESCRIPTION

INDIAN RIVER ELEMENTARY

REPLACE SWITCHGEAR BLDG. 4

VCS Project NO. 2648222

650 ROBERTS ROAD
EDGEWATER, FL 32141

ENGINEER
MARK A. ESCOTT

ENDOR OF RECORD

DESIGNED BY

DRAWN BY

ISSUE DATE

AE PROJECT NUMBER

06/26/26

2025-438

SHEET TITLE

PANEL SCHEDULES

DRAWING NO.

E701

MDP	M401
P4.S1	P4.S2

MANUFACTURER:		SQ. D.	MAIN OPTIONS REQUIRED				PANEL NAME:		MDP
TYPE:		65	MCB: 1600		AMPS		LOCATION:		04-001
AIC RATING:		277	MLO:		AMPS		SECTIONS:		2
VOLTS L-L:		480	S.E. RATED:		YES		NEMA TYPE:		1
PHASE:		3	GFI PROT:		YES		WIDTH:		75.00 IN
			SHUNT TRIP:		YES		DEPTH:		24.00 IN
NOTES	CKT NO.	IDENTIFICATION	CIRCUIT BREAKER			LOAD TYPE	LOAD (KVA)		NOTES
			FRAME	TRIP	P				
	1	P1	400	300	3	E	188		
	2	P2	400	350	3	E	157		
	3	P3	400	350	3	E	141		
	4	P4	800	800	3	E	495		
	5	SPARE	30	20	3	L	1		
	6	AC PANEL 04-003	200	200	3	E	70		
	7	OUTSIDE AIR DISTRIBUTION PANEL	400	400	3	E	110		
	8	SPARE	400	400	3	E	0		
	9								
	10	SPD	60	60	3	E	0		
	11								
	12								
	13								
	14								
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	21								
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	26								
	27								
	28								
	29								
	30								
						TOTAL	1162		
			CONN. LOAD (KVA)		DEMAND FACTOR	DEMAND LOAD (KVA)	TOTAL CONNECTED KVA: 1162		
			LIGHTING (L)		0.00	1.25	0.00	TOTAL CONNECTED AMPS/PH: 1399	
			RECEPTACLES 1ST 10 KVA(R)		0.00	0.50	0.00	TOTAL DEMAND KVA: 1162	
			RECEPTACLES OVER 10KVA(R)		0.00	0.50	0.00	TOTAL DEMAND AMPS/PH: 1399	
			HVAC EQUIPMENT (H)		0.00	1.00	0.00		
			APPLIANCES (A)		0.00	1.00	0.00		
			EQUIPMENT (E)		1161.00	1.00	1161.00		
			LARGEST MOTOR (M)		0.00	1.25	0.00		
			OTHER (O)		0.00	1.00	0.00		
			SPARE (S)		0.00	1.00	0.00		
			LINKED PANEL (P)		INCLUDED IN ABOVE TOTALS				
								GENERAL NOTES:	
								a. PROVIDE ARC FLASH LABELING FOR THE PANEL IN ACCORDANCE WITH NFPA 70 & 70E	
								AS SPECIFIED.	
								b. PANEL SCHEDULE MADE FROM BEST KNOWN AS-BUILTS.	
								c. NO LOADS ARE BEING ADDED OR REMOVED IN SCOPE.	
								SCHEDULE NOTES:	

MANUFACTURER:				SQ. D.	MAIN OPTIONS REQUIRED						PANEL NAME:				M401	
TYPE:				22	K	MCB: 600AF/500AT						LOCATION:				04-001
AIC RATING:				120	V	MLO:						MOUNTING:				SURFACE
VOLTS L-L:				208	V	S.E. RATED:						NEMA TYPE:				1
VOLTS L-N:				208	V	GFI PROT:						WIDTH:				36.00
PHASE				3		SHUNT TRIP:						DEPTH:				12.00
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MANUFACTURER:				SQ. D.	MAIN OPTIONS REQUIRED				PANEL NAME: P4 - SEC 1 (RIGHT)				
TYPE:				65	K AMPS	MCB: 800				LOCATION: 04-001			
AIC RATING:				277		MLO: 800				MOUNTING: SURFACE			
VOLTS L-N:				480	V	S.E. RATED: N/A				NEMA TYPE: 1			
PHASE				3		GFI PROT: YES				WIDTH: 36.00 IN			
						SHUNT TRIP: N/A				DEPTH: 12.00 IN			

NOTES	CKT NO.	IDENTIFICATION	LOAD/PHASE (KVA)	CIRCUIT BREAKER						LOAD/PHASE (KVA)	IDENTIFICATION	NOTES		
				A	B	C	TRIP	P	TRIP					
	1	SPARE	E 0.00				30	3	3	20	E 2.20	AC-41	2	
	3		E 0.00								E 2.2		4	
	5		E 0.00										6	
	7	IRRIGATION PUMP #2	E 2.00				20	3	3	20	E 1.60	AC-42	8	
	9		E 2.00								E 1.60		10	
	11		E 2.00								E 1.60		12	
	13	IRRIGATION PUMP #1	E 2.00				20	3	2	20	E 2.00	WH-7	14	
	15		E 2.00								E 2.00		16	
	17		E 2.00								E 2.00	EM1 CKT	18	
	19	SPARE	E 0.00								E 0.00	OLD AC-39 (SPARE)	20	
	21		E 0.00				50	3	3	30	E 0.00			22
	23		E 0.00								E 0.00			24
	25	L4	E 7.30								E 5.70	WIREWAY	26	
	27		E 7.30				60	3	3	60	E 5.70			28
	29		E 7.30								E 5.70			30
	31	SPARE	E 0.00									SPARE	32	
	33		E 0.00				50	3	3	30				34
	35		E 0.00											36
	37	SPARE	E 0.00									SURGE PROTECTION	38	
	39		E 0.00				40	1	3	30				40
	41		E 0.00											42

SUB FEED LUGS AS INDICATED, IF BLANK (NOT USED)									
			P 143.00						
			P 143.00				800	3	
			P 154.3	154.3	154.3				
							11.5	11.5	9.3

		CONN. LOAD (KVA)	DEMAND FACTOR	DEMAND LOAD (KVA)
		0.00	1.25	0.00
		0.00	1.00	0.00
		0.00	0.50	0.00
		48.20	1.00	48.20
		0.00	1.00	0.00
		447.00	1.00	447.00
		0.00	1.25	0.00
		0.00	1.00	0.00
		0.00	1.00	0.00
		0.00	1.00	0.00
		INCLUDED IN ABOVE TOTALS		

TOTAL CONNECTED KVA: 495.20	
TOTAL DEMAND AMPS/PH: 595	
TOTAL DEMAND KVA: 495.20	
TOTAL DEMAND AMPS/PH: 595	

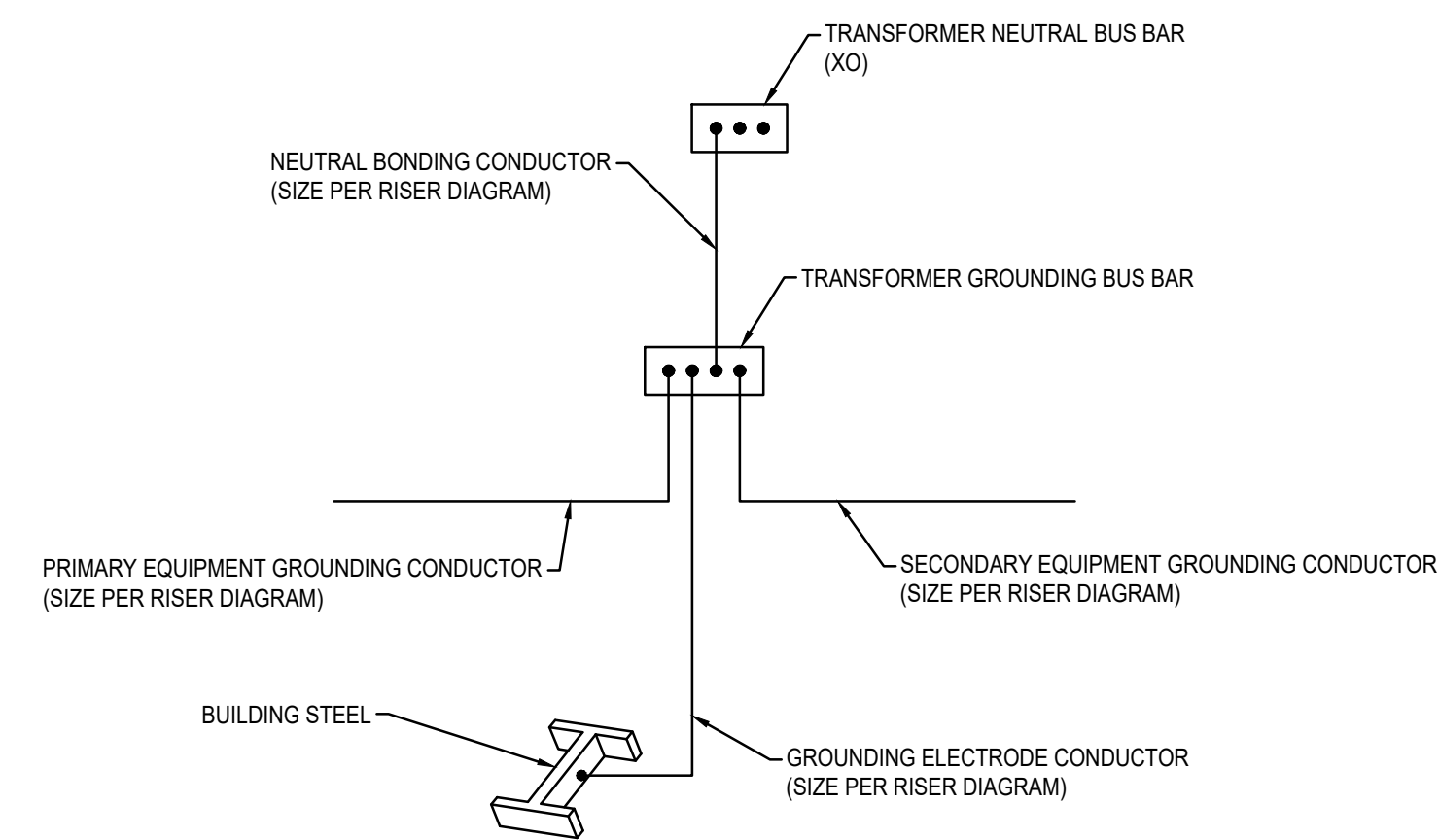
GENERAL NOTES:

a. PROVIDE ARC FLASH LABELING FOR THE PANEL IN ACCORDANCE WITH NFPA 70 & 70E AS SPECIFIED

b. PANEL SCHEDULE MADE FROM BEST KNOWN AS-BUILTS.

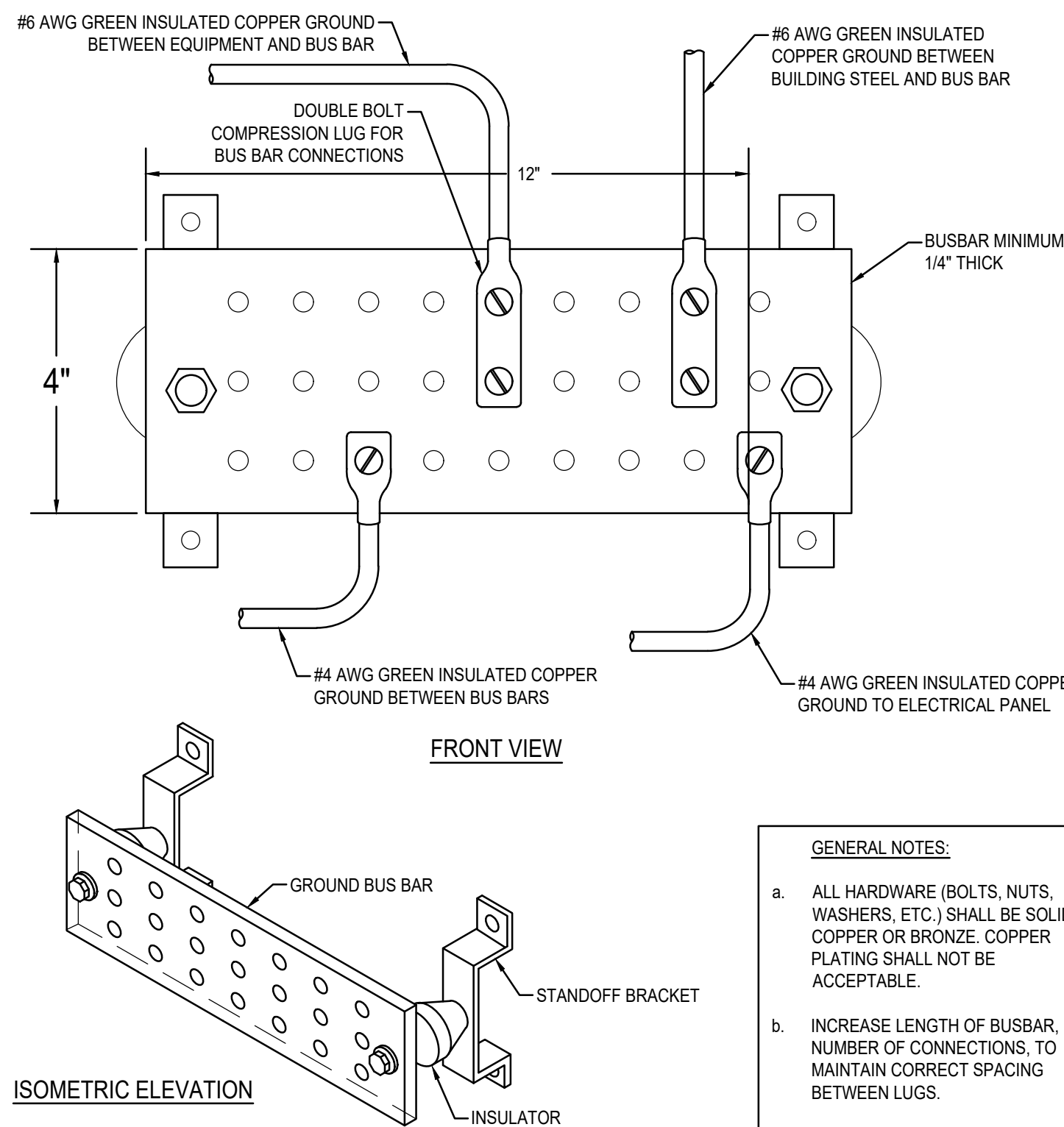
c. NO LOADS ARE BEING ADDED OR REMOVED IN SCOPE.

SCHEDULE NOTES:



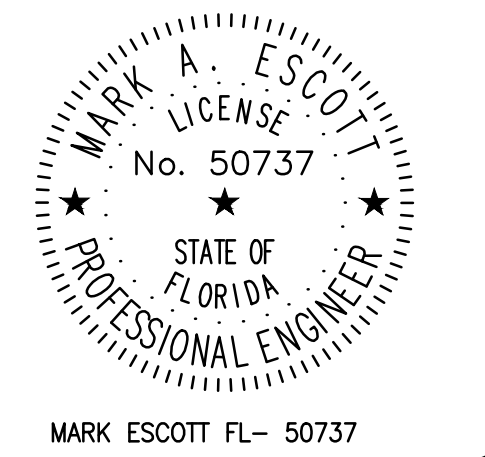
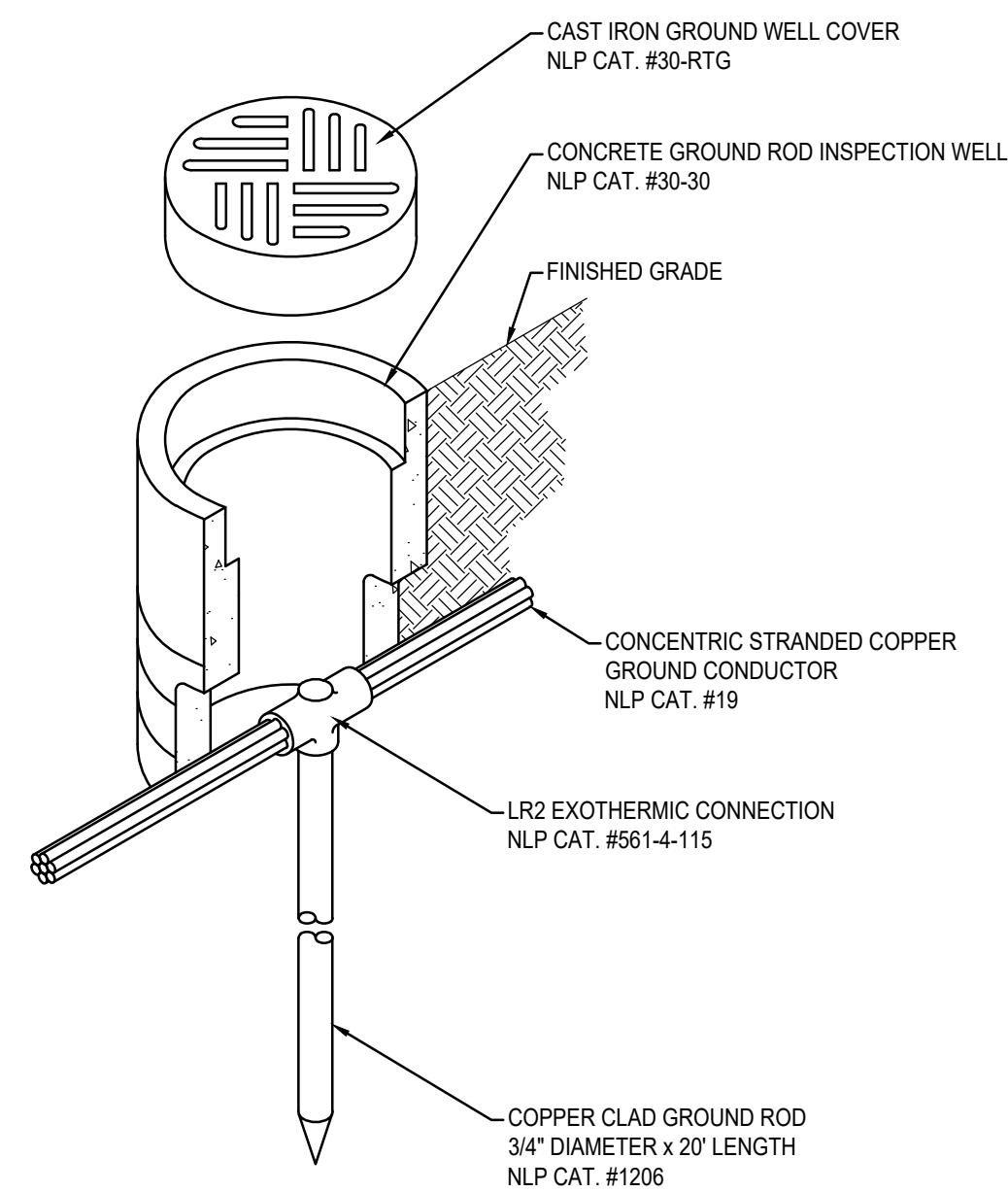
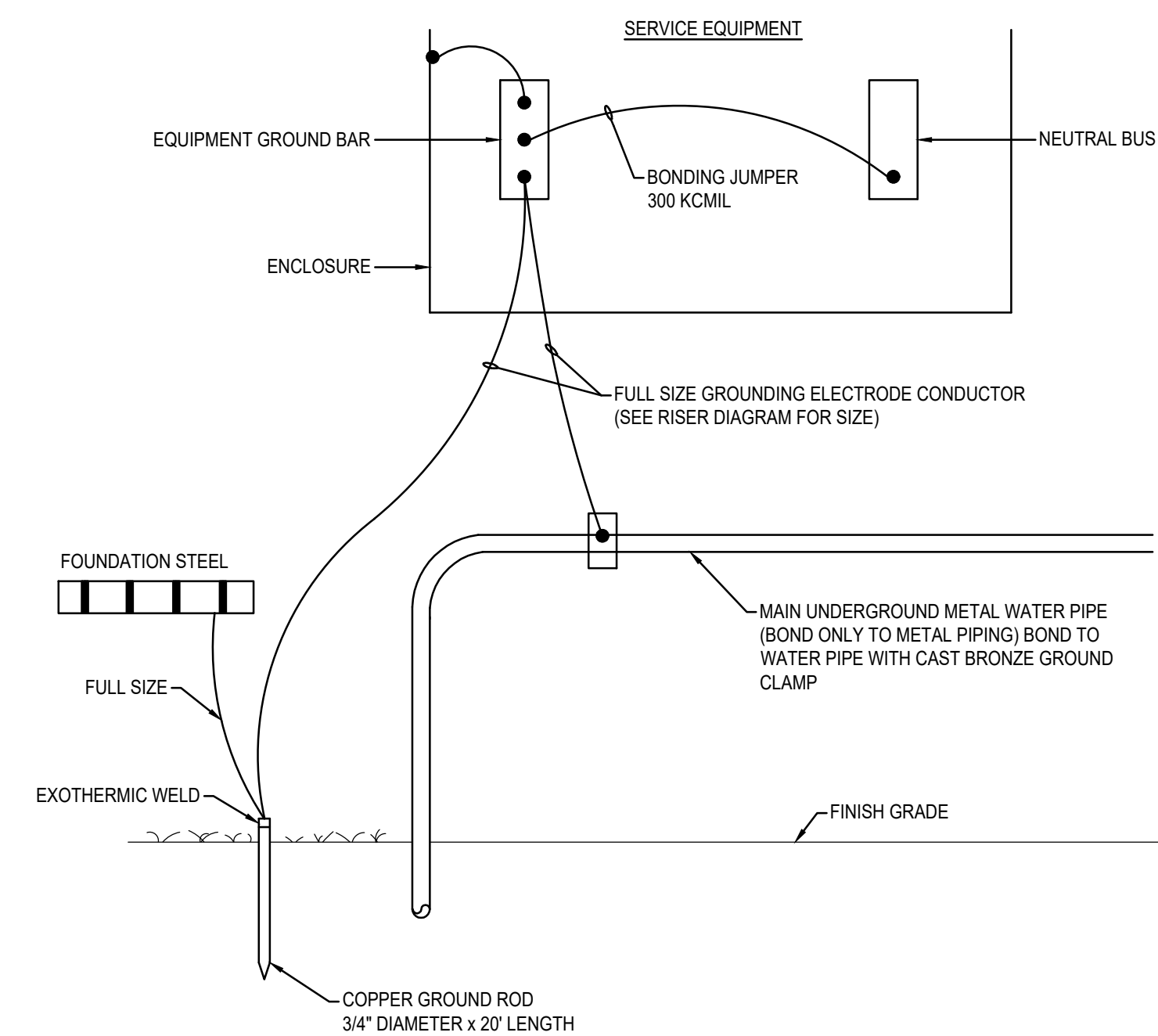
DETAIL NOTE:

SERVICE GROUND PER N.E.C. AND SPECIFICATIONS.
ALL CONNECTIONS TO GROUND RODS AND BUILDING STEEL SHALL
BE EXOTHERMIC TYPE. ALL OTHERS SHALL BE TORQUE BOLTED.



GENERAL NOTES

- a. ALL HARDWARE (BOLTS, NUTS, WASHERS, ETC.) SHALL BE SOLID COPPER OR BRONZE. COPPER PLATING SHALL NOT BE ACCEPTABLE.
- b. INCREASE LENGTH OF BUSBAR, FOR NUMBER OF CONNECTIONS, TO MAINTAIN CORRECT SPACING BETWEEN LUGS.

[illegible]

INDIAN RIVER ELEMENTARY

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DETAILS

DRAWING NO.

E801