



PANEL SCHEDULE										
NAME	RATING	VOLTAGE	# POLES	BRANCH BREAKERS	I.C. RATING	MFR/MODEL	MOUNTING	NOTES		
MDP	200A-3P M.C.B.	208/120V 3W-4W	42	(2) 40A-3P - ACU (2) 50A-3P - RECT (1) 20A-2P - BLK HTR (1) 50A-2P - PORTABLE GEN (26) 20A-1P - MISC	10 KA	SQ. D/NQ	SURFACE	NEW PANEL 20" WIDE MAX CONFIRM RECT CB REQ'S		

PANEL SCHEDULE NOTES:

- ALL PANELS SHALL HAVE CU BUSSING.
- PANEL MODEL #'S BASED ON SQUARE D, EQUAL PANELS BY G.E., CUTLER-HAMMER, OR SIEMENS SHALL BE ACCEPTED.
- ALL PANELS SHALL HAVE FULL HEIGHT HINGED TRIM AND HINGED COVER.
- SHORT CIRCUIT RATINGS BASED ON A FULLY RATED SYSTEM. (i.e. SERIES RATING NOT PERMITTED.)
- PROVIDE LOCKING PROVISIONS ON ALL BREAKERS COMPLYING WITH OSHA STANDARD 1910.147.
- PROVIDE LAMACOID LABEL AT EACH PANEL LISTING PANEL NAME IN LARGE TYPE. 2ND LINE TO LIST SOURCE PANEL AND BREAKER NUMBER IN SMALLER TYPE.
- WHERE SPACE AND PROVISIONS FOR FUTURE CIRCUIT BREAKERS (ABBREVIATED S&P) ARE SHOWN IN NEW PANELS AND SWITCHBOARDS, PROVIDE SPACE, BUSSING, AND ALL REQUIRED HARDWARE TO MOUNT FUTURE BREAKERS.

- NOTES:**
- UNLESS NOTED OTHERWISE, EQUIPMENT SHOWN ON THIS DRAWING IS AS FOLLOWS: CIRCUIT BREAKERS, SWITCHES, AND STARTERS ARE 3-POLE. PANELS ARE 3-PHASE 4-WIRE. TRANSFORMERS ARE 480 VOLT DELTA PRIMARY, 208/120 VOLT WYE SECONDARY.
 - FINAL TIGHTENING OF LUGS AND BUSSING SHALL BE TO MFR'S SPEC'S, USING A TORQUE WRENCH. WHERE MFR GUIDELINES ARE NOT AVAILABLE REFER TO NEC HANDBOOK ARTICLE 110-14 FOR UL STANDARDS.
 - BOND EQUIPMENT GROUND CONDUCTORS TO ALL FEEDER CONDUITS ENTERING ENCLOSURES USING GROUNDING BUSHINGS EQUAL TO OZ GEDNEY TYPE HBLG.
 - NEW WORK OR EQUIPMENT IS SHOWN WITH HEAVY PEN WEIGHT. EXISTING IS SHOWN LIGHT.
 - ELECTRICAL SERVICE EQUIPMENT AND INSTALLATION SHALL MEET LOCAL UTILITY COMPANY STANDARDS AND GUIDELINES. CONTRACTOR SHALL PAY ALL UTILITY COMPANY FEES FOR ELECTRICAL SERVICE WORK.
 - THE FOLLOWING CONNECTIONS SHALL BE MADE USING LONG BARREL, COPPER COMPRESSION LUGS HAVING (2) BOLT HOLES:
 - ALL GROUND CONNECTIONS IN SWITCHBOARDS, TRANSFORMERS, MOTORS, MOTOR CONTROL CENTERS, AND TRANSFER SWITCHES. EXCEPTION: GROUND CONNECTIONS FOR BRANCH CIRCUITS IN PANELBOARDS SHALL BE PERMITTED TO BE MADE USING COPPER MECHANICAL LUG GROUND BUS.
 - ALL GROUND AND POWER WIRING CONNECTIONS MADE TO BUSSING.
 - MAIN LUGS (PHASE, NEUTRAL, & GROUND) ON SWITCHBOARDS, TRANSFER SWITCHES.
 - WHERE NEW LUGS ARE TO BE INSTALLED ON EXISTING EQUIPMENT; MODIFY EXISTING BUSSING AND PROVIDE BUS BAR EXTENSIONS AS REQUIRED TO MAKE NEW CONNECTIONS.
 - PROVIDE THE SERVICES OF AN NETA CERTIFIED FIRM FOR CIRCUIT BREAKER TESTING. BREAKERS WITH FRAME RATINGS 150 AMPERES OR LARGER SHALL BE TESTED. BREAKERS WITH TRIP RATINGS 100 AMPERES OR LARGER SHALL BE TESTED. TESTING SHALL BE IN ACCORDANCE WITH NETA ACCEPTANCE TESTING SPECIFICATION 7.6.1.
 - LOW VOLTAGE COPPER CABLE SPLICES SHALL BE MADE USING LONG BARREL COMPRESSION BUTT SPLICES EQUAL TO BURNDY TYPE YS. INSULATE SPLICES USING 3M COLD SHRINK 1KX INSULATING SLEEVES OR BURNDY VISI-SHRINK FIRE RETARDANT CLEAR HEAT SHRINK TUBING.
 - PROVIDE TESTING AND START-UP OF GENERATOR AND TRANSFER SWITCH. PROVIDE THE SERVICES OF FACTORY TRAINED PERSONNEL FOR SYSTEM START-UP AND INSTALLATION ASSISTANCE. PROVIDE FULL LOAD TESTING (RESISTIVE) AS FOLLOWS:
 - GENERATOR AT 25% LOAD FOR 15 MINUTES.
 - GENERATOR AT 50% LOAD FOR 15 MINUTES.
 - GENERATOR AT 75% LOAD FOR 15 MINUTES.
 - GENERATOR AT 100% LOAD FOR 15 MINUTES.
 - SHUT DOWN GENSET, RESTART, APPLY 100% LOAD FOR 3 HOURS.
 - PERFORM BUILDING LOAD TEST FOR ONE HOUR.
 - PROVIDE ALL REQUIRED LOAD BANKS, CABLES, TERMINATIONS, ANF FUEL. MEASURE VOLTAGE, CURRENT, FREQUENCY, FUEL PRESSURE, OIL PRESSURE AND WATER TEMPERATURE, EXHAUST GAS TEMPERATURE AT ENGINE EXHAUST OUTLET AND AMBIENT TEMPERATURE AND RECORD EVERY 10 MINUTES DURING TEST. PROVIDE THERMO-SCANS AT END OF TEST. INCLUDE CABLES, CABLE TERMINATIONS, AND LOAD BANK.
 - PROVIDE FACTORY STARTUP FROM ASCO FOR AUTOMATIC TRANSFER SWITCH.
 - PROVIDE LAYOUT DRAWING SHOWING ALL ELECTRICAL EQUIPMENT WITH SUBMITTAL DRAWINGS. DIMENSIONS ARE CRITICAL DUE TO SPACE BEING LIMITED.

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REVISIONS / AUTHORIZATIONS		
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UNION STATION PLAZA
240-280 SAINT JOHN ST
PORTLAND

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SHEET TITLE:
ELECTRICAL ONE-LINE RISER

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**CONSTRUCTION DOCUMENT
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