







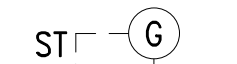


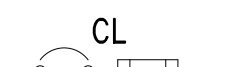


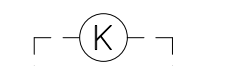


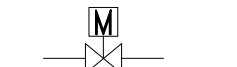


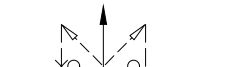


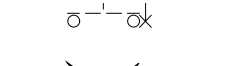


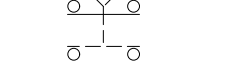


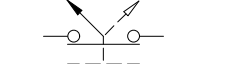








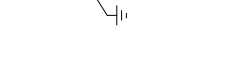


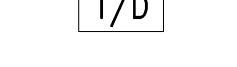


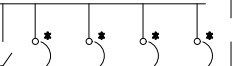


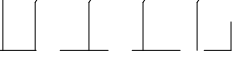














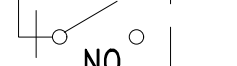


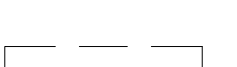






















CONTROL DIAGRAM		ONE-LINE DIAGRAM		ONE-LINE DIAGRAM		GENERAL NOTES:			
	ALARM LIGHT/STROBE, INDICATING LIGHT – TYPE AS NOTED LOWER CASE LETTER INDICATES SWITCHING GROUP A-AMBER; B-BLUE; G-GREEN; R-RED; W-WHITE		CONDUIT/CABLE/WIRING		MOTOR OPERATED CIRCUIT BREAKER NUMBER INDICATES TRIP SETTING AND NUMBER OF POLES	<div>1. ALL CONTACTS ARE SHOWN IN THE DE-ENERGIZED (SHELF POSITION).</div> <div>2. ABBREVIATIONS OTHER THAN SHOWN PER ANSI/ASME Y1.1.</div> <div>3. NEW EQUIPMENT SHALL BE DRAWN IN BOLD LINES. EXISTING EQUIPMENT SHALL BE DRAWN IN LIGHT LINES.</div> <div>4. ALL DETAILS AND DIMENSIONS ASSOCIATED WITH THESE DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE PERFORMING WORK THAT RELIES ON THIS INFORMATION. DESIGN TOLERANCES SHALL BE ALLOWED TO ENABLE WORK TO PROCEED WITHOUT DUE FRIVOLOUS DESIGN CHANGES FOR MINOR RELOCATIONS TO UN-ANTICIPATED FIELD CONDITIONS. THESE DESIGN TOLERANCES SHALL BE + OR – 5 % (OR AS ALLOWED BY THE SPECIFIC DESIGN ENGINEERING FIRM) IN ANY DIRECTION OR CONFIGURATION. THE CONTRACTOR SHALL INCLUDE ALL DESIGN TOLERANCE RELATIONS AND MINOR CHANGES ON THE AS BUILT DRAWINGS.</div> <div>5. STANDARD POS AVIATION ABBREVIATIONS AND SYMBOLS ARE SHOWN ON THE PRECEDING DRAWINGS AND COLUMNS. PROJECT SPECIFIC ABBREVIATIONS AND SYMBOLS ARE SHOWN BELOW.</div>			
	INDICATING INSTRUMENT: AM – AMMETER KWH – KILOWATT HOUR METER FM – FREQUENCY METER VARHM – VAR HOUR METER I – INTERLOCK VM – VOLTMETER kVA – KILOVOLT AMP METER		REMOVE OR DEMOLISH EQUIPMENT, CONDUIT, OR CABLE UNDER HATCH.		CIRCUIT BREAKER WITH EXTERNAL GROUND FAULT RELAY AND CT'S				
	INSTRUMENT SWITCH: AS – AMMETER SWITCH VS – VOLTMETER SWITCH SS – SYNCHRONIZING SWITCH SV – SUPERVISORY (LOCAL/REMOTE) SWITCH ATS – AUTOMATIC TRANSFER SWITCH 52CS – CIRCUIT BREAKER CONTROL SWITCH		GROUND WELL		SWITCH WITH SHUNT TRIP AND EXTERNAL GROUND FAULT RELAY AND CT'S				
	SOLENOID		GROUND WELL		CURRENT LIMITING CIRCUIT BREAKER WITH FUSES				
	BATTERY		MEDIUM VOLTAGE CABLE TERMINATION		KIRK-KEY INTERLOCK				
	CONTACTOR 3 POLE UNLESS NOTED OTHERWISE		PRIMARY FUSED CUTOUT SWITCH		MOTOR OPERATED VALVE				
	NORMALLY OPEN		ELECTRICALLY OPERATED SWITCH		3-POSITION SELECTOR SWITCH HAND-OFF-AUTOMATIC				
	NORMALLY CLOSED		GROUP OPERATED SWITCH – VERTICAL BREAK WITH MANUAL OPERATOR MECHANISM		2-POSITION SELECTOR SWITCH				
	TIME DELAY SWITCH: NORMALLY OPEN CONTACT CLOSSES AFTER TIME DELAY WHEN COIL IS ENERGIZED, OPENS INSTANTANEOUSLY WHEN DE-ENERGIZED		SEPARABLE CONNECTOR		ON-OFF SELECTOR SWITCH				
	NORMALLY CLOSED CONTACT OPENS AFTER TIME DELAY WHEN COIL IS ENERGIZED, CLOSSES INSTANTANEOUSLY WHEN DE-ENERGIZED		FUSE WITH RATING		EQUIPMENT CONNECTION				
	NORMALLY OPEN CONTACT CLOSSES INSTANTANEOUSLY WHEN COIL IS ENERGIZED, OPENS AFTER TIME DELAY WHEN DE-ENERGIZED		RESISTOR		MOTOR CONNECTION				
	NORMALLY OPEN CONTACT CLOSSES INSTANTANEOUSLY WHEN COIL IS ENERGIZED, OPENS AFTER TIME DELAY WHEN DE-ENERGIZED		MOV SURGE PROTECTION		GENERATOR				
	NORMALLY CLOSED CONTACT OPENS INSTANTANEOUSLY WHEN COIL IS ENERGIZED, CLOSSES AFTER TIME DELAY WHEN DE-ENERGIZED		MOTOR THERMAL OVERLOADS (3) UNLESS NOTED OTHERWISE		POWER TRANSFORMER				
	PUSHBUTTON SWITCH – MOMENTARY CONTACT: P – INDICATES PILOT LIGHT CIRCUIT CLOSING		EQUIPMENT CONNECTION		DELTA				
	CIRCUIT OPENING		MOTOR CONNECTION		WYE, SOLIDLY GROUNDED NEUTRAL				
	LIMIT SWITCH DIRECTLY ACTUATED, SPRING RETURN: NORMALLY OPEN		CURRENT TRANSFORMER RATIO AND QUANTITY AS INDICATED		REPRESENTATION OF ROOM OR FACILITY ENCLOSING THE EQUIPMENT SHOWN				
	NORMALLY OPEN – HELD CLOSED		POTENTIAL TRANSFORMER – QUANTITY AS INDICATED		MEDIUM VOLTAGE DUPLEX SWITCH AIR INSULATED 3-POLE				
	NORMALLY CLOSED		MICROPROCESSOR CONTROLLED MONITOR SEE NOTES FOR FUNCTIONS		MEDIUM VOLTAGE, VAC PAC SWITCH, MEDIUM VOLTAGE, 3-POLE, 3-WAY, 2-WAYS SWITCHED				
	NORMALLY CLOSED – HELD OPEN		CAPACITOR BANK		MEDIUM VOLTAGE VAC PAC, 3-POLE, 4-WAY SWITCH				
	RELAY COIL: CR – CONTROL RELAY M – MOTOR CONTACTOR TD – TIME DELAY RELAY UV – UNDER VOLTAGE RELAY NUMBER INDICATES UNIT NUMBER		TERMINAL BLOCK		MEDIUM VOLTAGE OIL INSULATED, 3-POLE, TWO POSITION SWITCH				
	CONTACT, NORMALLY OPEN, CONTROLLED BY RELAY INDICATED		CABLE SPLICE, 3 SINGLE CONDUCTORS UNLESS OTHERWISE NOTED		MEDIUM VOLTAGE, AIR INSULATED, 3-POLE SWITCH				
	CONTACT, NORMALLY CLOSED		DISCONNECT SWITCH 3-POLE UNLESS NOTED OTHERWISE		MOTOR OPERATED CIRCUIT BREAKER NUMBER INDICATES TRIP SETTING AND NUMBER OF POLES ST – INDICATES SHUNT TRIP				
	LIQUID LEVEL ACTUATED SWITCH: OPENS ON RISING LIQUID		WITH OVERCURRENT PROTECTION AS REQUIRED BY EQUIPMENT MANUFACTURER OR AS NOTED						
	CLOSES ON RISING LIQUID		DRAWOUT AC TYPE CIRCUIT BREAKER, MEDIUM VOLTAGE UNLESS OTHERWISE INDICATED.						
	PRESSURE OR VACUUM ACTUATED SWITCH: OPENS ON RISING PRESSURE		DRAWOUT AC TYPE CIRCUIT BREAKER (600V OR BELOW)						
	CLOSES ON RISING PRESSURE		CIRCUIT BREAKER NUMBER INDICATES TRIP SETTING AND NUMBER OF POLES ST – INDICATES SHUNT TRIP						
	TEMPERATURE ACTUATED SWITCH: OPENS ON RISING TEMPERATURE		ANSI DEVICE 25 – SYNCHRONIZING DEVICE 27 – UNDERVOLTAGE RELAY 32 – DIRECTIONAL POWER RELAY 50 – INSTANTANEOUS OVERCURRENT RELAY 51 – AC TIME OVERCURRENT RELAY 59 – OVERVOLTAGE RELAY 62BF – BREAKER FAILURE RELAY 64 – GROUND PROTECTIVE RELAY 83 – AUTOMATIC TRANSFER RELAY 86 – LOCKOUT RELAY 86BFA – LOCKOUT ON BUS A FEEDER BREAKER FAILURE 86BFB – LOCKOUT ON BUS B FEEDER BREAKER FAILURE 87 – DIFFERENTIAL PROTECTIVE RELAY						
	CLOSES ON RISING TEMPERATURE		CIRCUIT BREAKER WITH GROUND FAULT PROTECTION NUMBER INDICATES TRIP SETTING AND NUMBER OF POLES CL – INDICATES CURRENT LIMITING ST – INDICATES SHUNT TRIP						
	FLOW ACTUATED SWITCH: OPENS ON INCREASE IN FLOW		CIRCUIT BREAKER WITH GROUND FAULT PROTECTION NUMBER INDICATES TRIP SETTING AND NUMBER OF POLES CL – INDICATES CURRENT LIMITING ST – INDICATES SHUNT TRIP						
	CLOSES ON INCREASE IN FLOW		CIRCUIT BREAKER WITH GROUND FAULT PROTECTION NUMBER INDICATES TRIP SETTING AND NUMBER OF POLES CL – INDICATES CURRENT LIMITING ST – INDICATES SHUNT TRIP						
	TEST SWITCH		CIRCUIT BREAKER WITH GROUND FAULT PROTECTION NUMBER INDICATES TRIP SETTING AND NUMBER OF POLES CL – INDICATES CURRENT LIMITING ST – INDICATES SHUNT TRIP						
	TEST SWITCH, SHORTING TYPE		CIRCUIT BREAKER WITH GROUND FAULT PROTECTION NUMBER INDICATES TRIP SETTING AND NUMBER OF POLES CL – INDICATES CURRENT LIMITING ST – INDICATES SHUNT TRIP						

CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555		*CONSULTANT'S LOGO		PROJECT ENGR./ARCH:		DESIGNER:		DRAWN BY:		SCALE:		DATE:		CHECKED BY:		CHECKED/APPROVED BY:		REVISIONS		PROJECT MANAGER:		PROJECT ENGINEER:		DESIGN ENGINEER:		DRAFTER:		SCALE:		DATE:		CHECKED/APPROVED BY:		Port of Seattle SEA-TAC INTERNATIONAL AIRPORT		PROJECT: F&I STANDARD DETAILS		SHEET TITLE: ELECTRICAL DIAGRAM AND SYMBOLS LEGEND		WORK PROJECT NO.		CONSULTANT'S NO.		PORT OF SEATTLE NO. G04	
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