

CONVENTIONAL DIAGRAM

	ALARM LIGHT/STROBE, INDICATING LIGHT - TYPE AS NOTED LOWER CASE LETTER INDICATES SWITCHING GROUP A-AMBER; B-BLUE; G-GREEN; R-RED; W-WHITE
	INDICATING INSTRUMENT: AM - AMMETER FM - FREQUENCY METER I - INTERLOCK kVA - KILOVOLT AMP METER kWH - KILOWATT HOUR METER VARHM - VAR HOUR METER VM - VOLTMETER
	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
	SOLENOID
	BATTERY
	CONTACTOR 3 POLE UNLESS NOTED OTHERWISE
	NORMALLY OPEN
	NORMALLY CLOSED
	TIME DELAY SWITCH: NORMALLY OPEN CONTACT CLOSING AFTER TIME DELAY WHEN COIL IS ENERGIZED, OPENS INSTANTANEOUSLY WHEN DE-ENERGIZED
	NORMALLY CLOSED CONTACT OPENS AFTER TIME DELAY WHEN COIL IS ENERGIZED, CLOSING INSTANTANEOUSLY WHEN DE-ENERGIZED
	NORMALLY OPEN CONTACT CLOSING INSTANTANEOUSLY WHEN COIL IS ENERGIZED, OPENS AFTER TIME DELAY WHEN DE-ENERGIZED
	NORMALLY CLOSED CONTACT OPENS INSTANTANEOUSLY WHEN COIL IS ENERGIZED, CLOSING AFTER TIME DELAY WHEN DE-ENERGIZED
	PUSHBUTTON SWITCH - MOMENTARY CONTACT: P - INDICATES PILOT LIGHT CIRCUIT CLOSING
	CIRCUIT OPENING
	LIMIT SWITCH DIRECTLY ACTUATED, SPRING RETURN: NORMALLY OPEN
	NORMALLY OPEN - HELD CLOSED
	NORMALLY CLOSED
	NORMALLY CLOSED - HELD OPEN
	RELAY COIL: CR - CONTROL RELAY M - MOTOR CONTACTOR TD - TIME DELAY RELAY UV - UNDER VOLTAGE RELAY NUMBER INDICATES UNIT NUMBER
	CONTACT, NORMALLY OPEN, CONTROLLED BY RELAY INDICATED
	CONTACT, NORMALLY CLOSED
	LIQUID LEVEL ACTUATED SWITCH: OPENS ON RISING LIQUID
	CLOSING ON RISING LIQUID
	PRESSURE OR VACUUM ACTUATED SWITCH: OPENS ON RISING PRESSURE
	CLOSING ON RISING PRESSURE
	TEMPERATURE ACTUATED SWITCH: OPENS ON RISING TEMPERATURE
	CLOSING ON RISING TEMPERATURE
	FLOW ACTUATED SWITCH: OPENS ON INCREASE IN FLOW
	CLOSING ON INCREASE IN FLOW
	TEST SWITCH
	TEST SWITCH, SHORTING TYPE

ONE-LINE DIAGRAM

	CONDUIT/CABLE/WIRING
	REMOVE OR DEMOLISH EQUIPMENT, CONDUIT, OR CABLE UNDER HATCH.
	GROUND CONNECTION
	GROUND WELL
	SURGE ARRESTORS
	MEDIUM VOLTAGE CABLE TERMINATION
	PRIMARY FUSED CUTOFF SWITCH
	ELECTRICALLY OPERATED SWITCH
	GROUP OPERATED SWITCH – VERTICAL BREAK WITH MANUAL OPERATOR MECHANISM
	SEPARABLE CONNECTOR
	FUSE WITH RATING
	RESISTOR
	MOV SURGE PROTECTION
	MOTOR THERMAL OVERLOADS (3) UNLESS NOTED OTHERWISE
	EQUIPMENT CONNECTION
	MOTOR CONNECTION
	GENERATOR
	POWER TRANSFORMER
	DELTA
	WYE, SOLIDLY GROUNDED NEUTRAL
	CURRENT TRANSFORMER RATIO AND QUANTITY AS INDICATED
	POTENTIAL TRANSFORMER – QUANTITY AS INDICATED
	MICROPROCESSOR CONTROLLED MONITOR SEE NOTES FOR FUNCTIONS
	CAPACITOR BANK
	TERMINAL BLOCK
	CABLE SPLICE, 3 SINGLE CONDUCTORS UNLESS OTHERWISE NOTED
	DISCONNECT SWITCH 3-POLE UNLESS NOTED OTHERWISE
	WITH OVERCURRENT PROTECTION AS REQUIRED BY EQUIPMENT MANUFACTURER OR AS NOTED
	DRAWOUT AC TYPE CIRCUIT BREAKER, MEDIUM VOLTAGE UNLESS OTHERWISE INDICATED.
	DRAWOUT AC TYPE CIRCUIT BREAKER (600V OR BELOW)
	CIRCUIT BREAKER
	NUMBER INDICATES TRIP SETTING AND NUMBER OF POLES ST – INDICATES SHUNT TRIP
	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
	CIRCUIT BREAKER WITH GROUND FAULT PROTECTION NUMBER INDICATES TRIP SETTING AND NUMBER OF POLES CL – INDICATES CURRENT LIMITING ST – INDICATES SHUNT TRIP

ONE—LINE DIAGRAM	
	MOTOR OPERATED CIRCUIT BREAKER NUMBER INDICATES TRIP SETTING AND NUMBER OF POLES
	CIRCUIT BREAKER WITH EXTERNAL GROUND FAULT RELAY AND CT'S
	SWITCH WITH SHUNT TRIP AND EXTERNAL GROUND FAULT RELAY AND CT'S
	CURRENT LIMITING CIRCUIT BREAKER WITH FUSES
	KIRK-KEY INTERLOCK
	MOTOR OPERATED VALVE
	3-POSITION SELECTOR SWITCH HAND-OFF-AUTOMATIC
	2-POSITION SELECTOR SWITCH
	ON-OFF SELECTOR SWITCH
	EQUIPMENT BUSHING WELL WITH RATING IN AMPS
	LOAD INTERRUPTING SWITCH WITH INTEGRAL GROUND POSITION
	TRANSDUCER
	6-WAY PMI W/ 4 FAULT INTERRUPTORS(*) AND 2 KIRK-KEYED LOAD INTERRUPTORS. ALL SWITCHES AND INTERRUPTORS ARE 3-POLE, GANG-OPERATED, UNLESS OTHERWISE SHOWN ON THE DRAWINGS
	REPRESENTATION OF ROOM OR FACILITY ENCLOSING THE EQUIPMENT SHOWN
	MEDIUM VOLTAGE DUPLEX SWITCH AIR INSULATED 3-POLE
	MEDIUM VOLTAGE, VAC PAC SWITCH, MEDIUM VOLTAGE, 3-POLE, 3-WAY, 2-WAYS SWITCHED
	MEDIUM VOLTAGE VAC PAC, 3-POLE, 4-WAY SWITCH
	MEDIUM VOLTAGE OIL INSULATED, 3-POLE, TWO POSITION SWITCH
	MEDIUM VOLTAGE, AIR INSULATED, 3-POLE SWITCH

GENERAL NOTES:

1. ALL CONTACTS ARE SHOWN IN THE DE-ENERGIZED (SHELF POSITION).
2. ABBREVIATIONS OTHER THAN SHOWN PER ANSI/ASME Y1.1.
3. NEW EQUIPMENT SHALL BE DRAWN IN BOLD LINES. EXISTING EQUIPMENT SHALL BE DRAWN IN LIGHT LINES.
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.
5. STANDARD POS AVIATION ABBREVIATIONS AND SYMBOLS ARE SHOWN ON THE PRECEEDING DRAWINGS AND COLUMNS. PROJECT SPECIFIC ABBREVIATIONS AND SYMBOLS ARE SHOWN BELOW.

PROJECT SPECIFIC ABBREVIATIONS AND SYMBOLS

<div style="text-align: center; font-size: 2em;">*CONSULTANT'S LOGO</div>	PROJECT ENGR./ARCH:		R E V I S I O N S											PROJECT MANAGER:	SEA-TAC INTERNATIONAL AIRPORT PROJECT: F&I STANDARD DETAILS SHEET TITLE: ELECTRICAL DIAGRAM AND SYMBOLS LEGEND	WORK PROJECT NO.
	DESIGNER:		NO.	DATE	BY	DESCRIPTION	APP'D	NO.	DATE	BY	DESCRIPTION	APP'D	PROJECT ENGINEER:	CONSULTANT'S NO.		
	DRAWN BY:		1	03/01/19	KDM	2019 F&I STANDARD DETAILS							DESIGN ENGINEER:			
	SCALE:												DRAFTER:			
	AS NOTED												SCALE:			
	DATE:												DATE:			
	CHECKED BY:												CHECKED/APPROVED BY:			
CHECKED/APPROVED BY:														PORT OF SEATTLE NO. G04		