



- GENERAL NOTES:**
- 1. GROUNDING CONDUCTORS RUN ON BUILDING STEEL OR CONCRETE STRUCTURE SHALL BE SUPPORTED AT INTERVALS OF NOT MORE THAN 2'-6" HORIZONTALLY AND 4"-0" VERTICALLY.
  - 2. COPPER ALLOY GROUNDING FITTINGS.

- KEYED NOTES:**
- 1 3/4" COPPER CLAD GROUND ROD, 10 FOOT LONG INSTALLED IN UNDISTURB THE EARTH; 2-1/2. FEET BELOW FINISHED GRADE ON NEW CONSTRUCTION. MAXIMUM DISTANCE BETWEEN RODS SHALL BE 100'-0".
  - 2 GROUNDING ELECTRODE CONDUCTOR; SIZED PER NEC 250-28 AND NEC TABLE 250-66.
  - 3 BARE STRANDED 4/0 COPPER GROUND CONDUCTOR.
  - 4 12.47 KV, 3 PHASE, 3W, PRIMARY SERVICE FEEDER, WITH 1-4/0 COPPER BARE GND..
  - 5 GROUND ROD TO GRID CONNECTION. USE BURNDY HYGROUND TYPE YGHC-C OR YGHP-C CONNECTOR OR APPROVED EQUAL.
  - 6 CABLE TO CABLE GROUND GRID CONNECTION. USE BURNDY HYGRID CONNECTOR THE YGL-C OR APPROVED EQUAL.
  - 7 BARE STRANDED COPPER GROUND CONDUCTOR CONNECTING EQUIPMENT AND SWITCHBOARD GROUND BAR SEE NEC TABLE 250-122.
  - 8 CABLE TO BUILDING STEEL CONNECTION; BURNDY GROUND LINE CONNECTOR TYPE YGIB & HYLUG TERMINALS TYPE YGHA OR APPROVED EQUAL.
  - 9 NEUTRAL BUS, 100% PHASE BUS AMPACITY, IN MAIN SWITCHGEAR INSULATED FROM HOUSING.
  - 10 INTERCONNECTION BUS 1/4"x2" COPPER BAR; NEUTRAL BUS TO GROUND BUS CONNECTION.
  - 11 CABLE TO CONCRETE REBAR CONNECTION; BURNDY HYTAP CONNECTOR TYPE YGHC-C OR APPROVED EQUAL.
  - 12 AWG #6 COPPER, SOLID INSULATED GROUND CONDUCTOR.
  - 13 480/277 V, 4W (100% NEUTRAL), INSULATED SECONDARY BUS.
  - 14 FEEDER CONDUIT WITH, 3 PHASE, 3W, & GROUNDING CONDUCTOR.
  - 15 INSULATED BUSHING, GROUNDING TYPE, USED IN ALL CONDUIT TERMINATING AT EQUIPMENT AND NOT IN CONTACT WITH METAL ENCLOSURE. TIE ALL BUSHINGS WITH BARE GROUND CONDUCTOR AND ATTACH TO COPPER GROUND BUS.
  - 16 UNINSULATED 1/4"x2" COPPER GROUND BUS; BOND TO EACH SECTION OF EQUIPMENT AND INTERCONNECT TO FORM A CONTINUOUS GROUND BUS. SEE NEC 250-24 & 28.
  - 17 GROUNDING LUGS SUITABLY BONDED TO CABINET OR CABLE TRAY.
  - 18 COMBINATION CIRCUIT BREAKER AND STARTER IN MOTOR CONTROL CENTER (MOTOR CIRCUIT PROTECTOR).
  - 19 BRANCH CIRCUIT, 277 V, 1 PHASE, 2W, & GROUND WIRE.
  - 20 BARE NEUTRAL BAR INSULATED FROM CABINET.
  - 21 BRANCH CIRCUIT, 120 V, 1 PHASE, 2W, & GROUND WIRE.
  - 22 MAIN BOUNDING JUMPER; SIZED PER NEC 250-28.
  - 23 FLEXIBLE FEEDER CONDUIT - 3 PHASE, 3W, & GROUNDING CONDUCTOR.
  - 24 LOW VOLTAGE NEUTRAL GROUNDED TO ENCLOSURE, BOLTED CONNECTION.
  - 25 FLEXIBLE FEEDER CONDUIT, 3 PHASE, 4W, & GROUNDING CONDUCTOR.
  - 26 FEEDER CONDUIT, 3 PHASE, 4W & GROUND CONDUCTOR.
  - 27 CABLE TERMINAL TO GROUND BUS COPPER BAR CONNECTION. USE BURNDY HYLUG TERMINAL TYPE YGHA.
  - 28 BRANCH CIRCUIT CONDUIT WITH 3 PHASE FEEDER & GROUND WIRE.
  - 29 UNINSULATED 1/4"x1" COPPER GROUND BUS IN PANELS THAT CONTAIN 1 POLE, 2 POLE, OR 3 POLE BRANCH CIRCUITS.
  - 30 GROUNDING CONNECTOR FOR METALLIC CONDUITS OR STEEL PIPES. BURNDY TYPE GC-A GROUND CLAMPS OR APPROVED EQUAL.
  - 31 CABLE TRAY GROUND CLAMP, BURNDY TYPE GC-CT OR APPROVED EQUAL.
  - 32 GROUND CONDUCTOR, CONNECTION ALONG RACEWAY, RUN ON INTERVALS.
  - 33 CABLE DRAIN WIRE (BARE COPPER WIRE SHIELD) OR COPPER TAPE SHIELD. SHIELDS ARE BONDED VIA COLLAR CLAMP (BURNDY TYPE GC-A GROUND CLAMP OR APPROVED EQUAL)
  - 34 FLEXIBLE GROUND CONNECTION, BURNDY TYPE B FLEXIBLE COPPER BRAID OR APPROVED EQUAL

- EQUIPMENT TAGS:**
- A COLUMN OR WALL MOUNTED CONTROLLER BOX.
  - B SUBSTATION SCHEMATIC LAYOUT.
  - C SWITCHGEAR TIE BREAKER (NO - NORMALLY OPEN).
  - D SWITCHGEAR MAIN CIRCUIT BREAKER.
  - E MOTOR CONTROL CENTER, 480 V, 3 PHASE, 3W (TYPICAL).
  - F DISTRIBUTION SWITCHBOARD, 480/277 V, 3 PHASE, 4W, 60HZ.
  - G DRY TYPE TRANSFORMER - 300 KVA, 480 V - 208/120 V, 3 PHASE, 4W, 60HZ.
  - H SURGE ARRESTER
  - I PANELBOARD - 208/120 V, 3 PHASE, 4W
  - J SWITCHGEAR PRIMARY MAIN DISCONNECT SWITCH, LOADBREAK RATED, FUSE TYPE.
  - K MV TRANSFORMER, 12.47 KV DELTA - 480/277 V, WYE GROUNDED, 60HZ.
  - L ENCLOSED CIRCUIT BREAKER PROTECTOR - DISTRIBUTION TRANSFORMER PRIMARY.
  - M CABLE TRAY
  - N PRIMARY FEEDER CONDUIT, GRC (SEE KEYED NOTE 38)

CALL 48 HOURS  
BEFORE YOU DIG  
1-800-424-5555

*CONSULTANT'S LOGO	PROJECT ENGR./ARCH:	R E V I S I O N S										PROJECT MANAGER:	Port of Seattle SEA-TAC INTERNATIONAL AIRPORT PROJECT: F&I STANDARD DETAILS SHEET TITLE: ELECTRICAL GROUNDING SYSTEM DIAGRAM (TYPICAL)	WORK PROJECT NO.
	DESIGNER:	NO.	DATE	BY	DESCRIPTION	APP'D	NO.	DATE	BY	DESCRIPTION	APP'D	PROJECT ENGINEER:		CONSULTANT'S NO.
	DRAWN BY:	1	03/01/2019	KDM	2019 FBI STANDARD DETAILS							DESIGN ENGINEER:		
	SCALE:	2	03/01/2020	KDM	2020 FBI STANDARD DETAILS	E						DRAFTER:		
	DATE:											SCALE:		
	CHECKED BY:											DATE:		PORT OF SEATTLE NO.
	CHECKED/APPROVED BY:											CHECKED/APPROVED BY:		260526-03