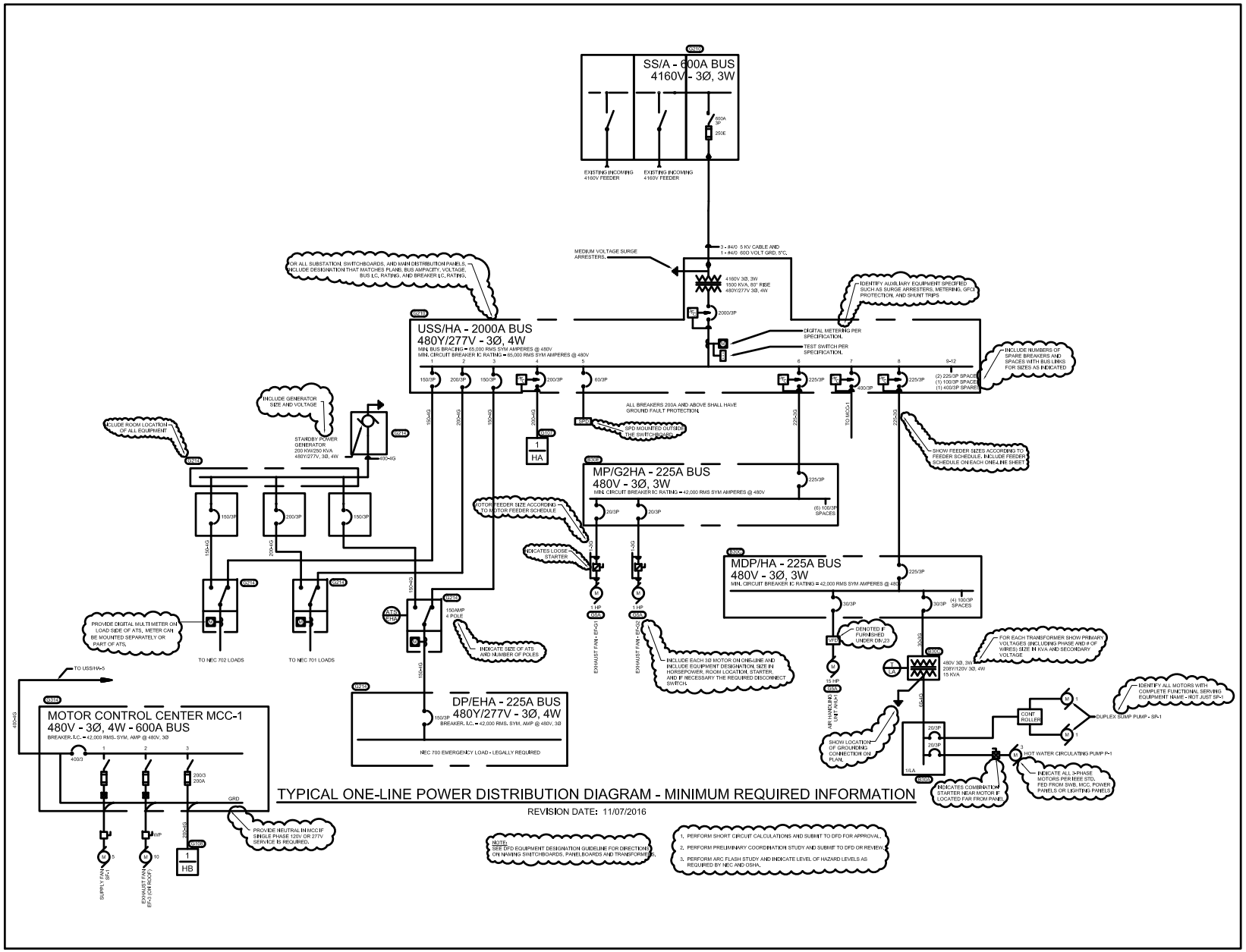
SS/A - 600A BUS
4160V - 3Ø, 3W
EXISTING INCOMING 4160V FEEDER
EXISTING INCOMING 4160V FEEDER
MEDIUM VOLTAGE SURGE ARRESTERS.
3 - #4/0 5 KV CABLE AND 1 - #4/0 .600 VOLT GRD. 5"C.
4160V 3Ø, 3W 1500 KVA, 80° RISE 480Y/277V 3Ø, 4W
2000/3P
DIGITAL METERING PER SPECIFICATION.
TEST SWITCH PER SPECIFICATION.
IDENTIFY AUXILIARY EQUIPMENT SPECIFIED SUCH AS SURGE ARRESTERS, METERING, GFCI PROTECTION, AND SHUNT TRIPS.
FOR ALL SUBSTATION, SWITCHBOARDS, AND MAIN DISTRIBUTION PANELS, INCLUDE DESIGNATION THAT MATCHES PLANS, BUS AMPACITY, VOLTAGE, BUS I.C. RATING, AND BREAKER I.C. RATING.
USS/HA - 2000A BUS
480Y/277V - 3Ø, 4W
MIN. BUS BRACING = 65,000 RMS SYM AMPERES @ 480V
MIN. CIRCUIT BREAKER IC RATING = 65,000 RMS SYM AMPERES @ 480V
150/3P
200/3P
150/3P
200/3P
60/3P
225/3P
400/3P
225/3P
(2) 225/3P SPACES
(1) 100/3P SPACE
(1) 400/3P SPARE
INCLUDE NUMBERS OF SPARE BREAKERS AND SPACES WITH BUS LINKS FOR SIZES AS INDICATED.
ALL BREAKERS 200A AND ABOVE SHALL HAVE GROUND FAULT PROTECTION.
SPD MOUNTED OUTSIDE THE SWITCHBOARD
TO MCC-1
SHOW FEEDER SIZES ACCORDING TO FEEDER SCHEDULE. INCLUDE FEEDER SCHEDULE ON EACH ONE-LINE SHEET.
INCLUDE GENERATOR SIZE AND VOLTAGE
STANDBY POWER GENERATOR 200 KW/250 KVA 480Y/277V, 3Ø, 4W
INCLUDE ROOM LOCATION OF ALL EQUIPMENT
MP/G2HA - 225A BUS
480V - 3Ø, 3W
MIN. CIRCUIT BREAKER IC RATING = 42,000 RMS SYM AMPERES @ 480V
225/3P
(6) 100/3P SPACES
MOTOR FEEDER SIZE ACCORDING TO MOTOR FEEDER SCHEDULE
INDICATES LOOSE STARTER.
20/3P
20/3P
MDP/HA - 225A BUS
480V - 3Ø, 3W
MIN. CIRCUIT BREAKER IC RATING = 42,000 RMS SYM AMPERES @ 480V
225/3P
30/3P
30/3P
(4) 100/3P SPACES
DENOTED IF FURNISHED UNDER DIV.23
FOR EACH TRANSFORMER SHOW PRIMARY VOLTAGES (INCLUDING PHASE AND # OF WIRES) SIZE IN KVA AND SECONDARY VOLTAGE
480V 3Ø, 3W 208Y/120V 3Ø, 4W 15 KVA
PROVIDE DIGITAL MULTI METER ON LOAD SIDE OF ATS. METER CAN BE MOUNTED SEPARATELY OR PART OF ATS.
TO NEC 702 LOADS
TO NEC 701 LOADS
ATS
150AMP 4 POLE
INDICATE SIZE OF ATS AND NUMBER OF POLES.
1 HP
EXHAUST FAN - EF-G1
1 HP
EXHAUST FAN - EF-G2
INCLUDE EACH 3Ø MOTOR ON ONE-LINE AND INCLUDE EQUIPMENT DESIGNATION, SIZE IN HORSEPOWER, ROOM LOCATION, STARTER, AND IF NECESSARY THE REQUIRED DISCONNECT SWITCH.
10 HP
AIR HANDLING UNIT AHU-1
SHOW LOCATION OF GROUNDING CONNECTION ON PLAN.
CONT. ROLLER
DUPLEX SUMP PUMP - SP-1
IDENTIFY ALL MOTORS WITH COMPLETE FUNCTIONAL SERVING EQUIPMENT NAME - NOT JUST SP-1
20/3P
20/3P
15A
HOT WATER CIRCULATING PUMP P-1
INDICATE ALL 3-PHASE MOTORS PER IEEE STD. FED FROM SWB, MCC, POWER PANELS OR LIGHTING PANELS
INDICATES COMBINATION STARTER NEAR MOTOR IF LOCATED FAR FROM PANEL
TO USS/HA-5
MOTOR CONTROL CENTER MCC-1
480V - 3Ø, 4W - 600A BUS
BREAKER I.C. = 42,000 RMS. SYM. AMP @ 480V, 3Ø
400/3
200/3
200A
GRD
PROVIDE NEUTRAL IN MCC IF SINGLE PHASE 120V OR 277V SERVICE IS REQUIRED.
SUPPLY FAN - SF-1
EXHAUST FAN - EF-1 (ROOF)
DP/EHA - 225A BUS
480Y/277V - 3Ø, 4W
BREAKER I.C. = 42,000 RMS. SYM. AMP @ 480V, 3Ø
150/3P
NEC 700 EMERGENCY LOAD - LEGALLY REQUIRED
TYPICAL ONE-LINE POWER DISTRIBUTION DIAGRAM - MINIMUM REQUIRED INFORMATION
REVISION DATE: 11/07/2016
NOTE: SEE DFD EQUIPMENT DESIGNATION GUIDELINE FOR DIRECTIONS ON NAMING SWITCHBOARDS, PANELBOARDS AND TRANSFORMERS, ETC.
1. PERFORM SHORT CIRCUIT CALCULATIONS AND SUBMIT TO DFD FOR APPROVAL.
2. PERFORM PRELIMINARY COORDINATION STUDY AND SUBMIT TO DFD OR REVIEW.
3. PERFORM ARC FLASH STUDY AND INDICATE LEVEL OF HAZARD LEVELS AS REQUIRED BY NEC AND OSHA.