

LEGEND

- Ⓢ NON-FUSED SAFETY SWITCH
E - INSTALLED ON EMERGENCY CIRCUIT
NEMA ENCLOSURE
AMPERE RATING
- Ⓢ FUSED SAFETY SWITCH, TOP NUMBER INDICATES SWITCH AMPERE RATING, LOWER NUMBER INDICATES FUSE RATING
NEMA ENCLOSURE
- Ⓢ DUPLEX RECEPTACLE, NEMA 5-20R
IG - ISOLATED GROUND
S - SWITCHED RECEPTACLE
- Ⓢ GFCI DUPLEX RECEPTACLE, NEMA 5-20R
WEATHER PROOF
- Ⓢ POWER RECEPTACLE, 240 VOLT NEMA CONFIGURATION AS NOTED
- PANELBOARD, NORMAL POWER
- Ⓢ JUNCTION BOX
- Ⓢ MANUAL MOTOR STARTER, TOGGLE OPERATED, SINGLE PHASE, 1/2 OR 3 POLE AS REQUIRED - OVERLOAD PROTECTION
- Ⓢ 2x4 LIGHT FIXTURE
- Ⓢ 1x4 LIGHT FIXTURE
- Ⓢ WALL MOUNTED FIXTURES
- Ⓢ CEILING MOUNTED LIGHT FIXTURE
- Ⓢ EXIT SIGN, WALL MOUNTED
- Ⓢ DUAL HEAD EMERGENCY LIGHT BATTERY PACK
- Ⓢ REMOTE EMERGENCY LIGHTING HEAD
- Ⓢ HOME RUN
- Ⓢ SINGLE POLE TOGGLE SWITCH INDICATES CONTROLLED FIXTURE
- Ⓢ 3-WAY TOGGLE SWITCH
- Ⓢ TELEPHONE SERVICE ENTRANCE CABINET
- Ⓢ TELEPHONE SYSTEM WALL JACK
- Ⓢ FIRE ALARM CONTROL PANEL
- Ⓢ FIRE ALARM MANUAL PULL STATION
- Ⓢ FIRE ALARM HORN/STROBE NOTIFICATION APPLIANCE (GENERAL EVACUATION)
INDICATES CANDELA INTENSITY
INDICATES STROBE COLOR
A - AMBER
C - CLEAR
B - BLUE
R - RED
- Ⓢ SMOKE DETECTOR, CEILING MOUNTED
A - AUXILIARY CONTACT
AS - AIR SAMPLING
P - PHOTOELECTRIC SMOKE
E - WIRED FOR ELEVATOR RECALL
BT - BEAM TRANSMITTER
BR - BEAM RECEIVER
- Ⓢ GAS DETECTOR
CO - CARBON MONOXIDE
CO2 - CARBON DIOXIDE
NO2 - NITROGEN DIOXIDE
- Ⓢ HEAT DETECTOR
INDICATES TEMPERATURE SETTING (IN FAHRENHEIT)
F - FIXED TEMPERATURE
R - DETECTOR HEAT/RATE OF RISE
R/C - DETECTOR/HEAT RATE COMPENSATION
R/T - DETECTOR/HEAT COMBINATION
E - INTERFACE TO ELEVATOR

ABBREVIATIONS

- AMP AMPERE
- AFF ABOVE FINISHED FLOOR
- AFG ABOVE FINISHED GRADE
- AHJ AUTHORITY HAVING JURISDICTION
- AIC AMPERE INTERRUPTING CAPACITY
- AWG AMERICAN WIRE GAUGE
- BFG BELOW FINISHED GRADE
- BLDG BUILDING
- BOS BOTTOM OF STEEL CONDUIT
- C CABLE TELEVISION
- CB CIRCUIT BREAKER
- CCTV CLOSED CIRCUIT TELEVISION
- CPT CONTROL POWER TRANSFORMER
- CT CURRENT TRANSFORMER
- CU COPPER
- DACT DIGITAL ALARM COMMUNICATOR TRANSMITTER
- DB DIRECT BURIED
- DISC DISCONNECT
- DN DOWN
- EMT ELECTRICAL METALLIC TUBING
- EWC ELECTRIC WATER COOLER
- EWH ELECTRIC WATER HEATER
- EOP EQUIPMENT
- EXIST EXISTING
- FAA FIRE ALARM ANNUNCIATOR
- FACP FIRE ALARM CONTROL PANEL
- FBO FURNISHED BY OTHERS
- FLR FLOOR
- FWE FURNISHED WITH EQUIPMENT
- FU FUSE
- G GROUND
- GEN GENERATOR
- GFCI GROUND FAULT CIRCUIT INTERRUPT
- CLC CEILING
- GND GROUND
- HP HORSEPOWER
- HTR HEATER
- IG ISOLATED GROUND
- IMC INTERMEDIATE METAL CONDUIT
- K KILO
- KCMIL THOUSAND CIRCULAR MILS
- KV KILOVOLT
- KVA KILOVOLT-AMPERE
- KVAR KILOVOLT-AMPERE REACTIVE
- KW KILOWATT
- KWH KILOWATT-HOUR
- LA LIGHTNING ARRESTER
- LTO LIGHTING
- MC METAL CLAD
- MCB MAIN CIRCUIT BREAKER
- MFR MANUFACTURER
- MI MINERAL INSULATED
- MLG MAIN LUG ONLY
- MNS MASS NOTIFICATION SYSTEM
- MTD MOUNTED
- MV MEDIUM VOLTAGE
- NC NORMALLY CLOSED
- NEC NATIONAL ELECTRICAL CODE
- NEG NEGATIVE
- NEUT NEUTRAL
- NOT IN CONTRACT NOT IN CONTRACT
- NO NORMALLY OPEN
- NTS NOT TO SCALE
- PF POWER FACTOR
- PH PHASE
- PVC POLYVINYL CHLORIDE
- RM ROOM
- RSC RIGID STEEL CONDUIT
- RTD RESISTANCE TEMPERATURE DETECTOR
- SN SOLID NEUTRAL
- SPD SURGE PROTECTIVE DEVICE
- STP SHIELDED TWISTED PAIR
- SIT SHIELDED TWISTED TRIPLET
- SWBD SWITCHBOARD
- SWG SWITCHGEAR
- TOS TOP OF STEEL
- TANSF TRANSFORMER
- V VOLT
- VA VOLT-AMPERE
- VAR VOLT-AMPERE REACTIVE
- WM WATT METER
- WP WEATHER PROOF
- XFMR TRANSFORMER
- XP EXPLOSION PROOF

GENERAL NOTES

1. ALL GENERAL NOTES, SYMBOL LISTS AND DETAILS ARE TO BE CONSIDERED AS APPLICABLE TO ALL ELECTRICAL DRAWINGS FOR THIS PROJECT. SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY AND DO NOT INDICATE THEIR INCORPORATION IN THE DESIGN.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH NFPA-70, NATIONAL ELECTRICAL CODE (NEC) 2017.
3. ALL FIRE ALARM WORK SHALL BE PERFORMED IN ACCORDANCE WITH NFPA-72 AND THE CITY OF PORTLAND FIRE DEPARTMENT RULES AND REGULATIONS.
4. FIRE ALARM SHALL BE TESTED PRIOR TO START OF WORK TO ENSURE PROPER OPERATION. TEST FIRE ALARM AFTER COMPLETION OF WORK ENSURE PROPER OPERATION OF COMPLETE SYSTEM.
5. REMOVE ALL ELECTRICAL EQUIPMENT COMPLETELY WHERE INDICATED. REMOVE ALL CIRCUIT CONDUCTORS, SWITCHES, LIGHTING FIXTURES AND MISCELLANEOUS APPLIANCES BACK TO ENERGIZING SOURCE OR JUNCTION BOX WHERE MULTIPLE EQUIPMENT IS POWERED.
6. ALL CONDUCTOR MATERIAL, INCLUDING WIRING, PANELBOARD BUSES, TRANSFORMER WINDINGS, AND GROUNDING SHALL BE COPPER. ALUMINUM CONDUCTORS SHALL NOT BE ALLOWED.
7. UNLESS OTHERWISE NOTED, WIRING SHALL BE #12 AWG CONDUCTORS AND #12 GND. HOME RUNS FED FROM 20A-1P CIRCUITS IN EXCESS OF 100 FEET SHALL BE #10 AWG.
8. ALL INTERIOR DISTRIBUTION AND BRANCH WIRING SHALL BE 600V, COPPER WITH THHN/THWN INSULATION. ALL EXTERIOR DISTRIBUTION AND BRANCH WIRING SHALL BE 600V, COPPER WITH XHHW INSULATION.
9. ALL INTERIOR CONDUIT SHALL BE TYPE EMT. FLEXIBLE METAL CONDUIT SHALL BE USED ONLY INSIDE EXISTING WALLS AND CEILING AS NEEDED. ALL EXTERIOR CONDUIT SHALL BE TYPE SCHEDULE 40 PVC. ALL CONDUIT SHALL BE MINIMUM SIZE 3/4".
10. LIGHTING TOGGLE SWITCHES SHALL BE COMMERCIAL SPECIFICATION GRADE 277/120 VOLT, SIDE WIRED AND PROVIDED WITH GROUNDING SCREW, LEVITON, PASS AND SEYMOUR OR APPROVED EQUAL. COORDINATE COLOR WITH OWNER.
11. CONVENIENCE RECEPTACLES SHALL BE COMMERCIAL SPECIFICATION GRADE GROUNDING TYPE NEMA 5-20R, SIDE WIRED. LEVITON, PASS AND SEYMOUR OR APPROVED EQUAL.
12. ALL EQUIPMENT DISCONNECTS AND MANUAL MOTOR STARTERS ARE PROVIDED BY ELECTRICAL CONTRACTOR UNLESS NOTED AS FURNISHED WITH EQUIPMENT (FWE). MOUNT ALL DISCONNECTS AND MOTOR STARTERS IN AN ACCESSIBLE LOCATION WITHIN SIGHT OF THE LOAD SERVED.
13. UNLESS OTHERWISE NOTED CONVENIENCE RECEPTACLES SHALL BE MOUNTED 18-INCHES AFF AND LIGHTING TOGGLE SWITCHES 48-INCHES AFF.
14. ALL PENETRATIONS THROUGH FLOORS, RATED WALLS AND PARTITIONS SHALL BE SEALED WITH UL APPROVED FIRE SEALANT MATERIAL TO MAINTAIN THE RATING OF SEPARATION.
15. EQUIPMENT CONNECTIONS ARE SHOWN FOR BASIS-OF-DESIGN PRODUCTS. CONTRACTOR SHALL COORDINATE ALL EQUIPMENT CONNECTIONS - INCLUDING DISCONNECTING MEANS, OVERCURRENT PROTECTION, AND WIRE SIZING - WITH SELECTED MANUFACTURER'S RECOMMENDED INSTRUCTIONS.
16. CONTRACTOR SHALL PROVIDE ALL MOUNTING HARDWARE NECESSARY FOR A COMPLETE INSTALLATION. MOUNT EQUIPMENT AND ROUTE CONDUIT SO AS NOT TO INTERFERE WITH OPERATIONS SUCH AS OVERHEAD DOORS, DOOR SWINGS, ETC.
17. MANUFACTURERS NAME AND MODEL NUMBERS ARE USED THROUGHOUT THE PROJECT FOR DESCRIPTIVE PURPOSES ONLY AND ARE INTENDED TO INDICATE THE STANDARD OF MATERIAL OR ARTICLES REQUIRED. DESIGN IS PREDICATED AROUND LISTED MANUFACTURERS AS NOTED ON SCHEDULES AND NOTES AND IS NOT INTENDED TO LIMIT THE CONTRACTOR TO ONE MANUFACTURER.
18. CARBON MONOXIDE DETECTORS SHALL ACTIVATE A TEMPORAL 4 EVACUATION ALARM SIGNAL DISTINCT FROM A GENERAL FIRE ALARM SIGNAL. FACP SHALL TRANSMIT SIGNAL TO PORTLAND FIRE DEPARTMENT.
19. EFFICIENCY MAINE:
 - 19.1. CONTRACTOR SHALL ASSIST OWNER (PORTLAND HOUSING AUTHORITY) IN APPLYING FOR EFFICIENCY MAINE REBATES FOR NEW LED LIGHT FIXTURES.
 - 19.2. NEW FIXTURES SHALL BE ELIGIBLE FOR EFFICIENCY MAINE INCENTIVES.
 - 19.3. INSTALLER SHALL BE A QUALIFIED PARTNER OF EFFICIENCY MAINE.

LINE TYPES

- EXISTING
- NEW
- DEMOLITION
- MATCHLINE
- PART PLAN OUTLINE



PORTLAND HOUSING AUTHORITY PORTLAND, MAINE	
PHA RIVERTON HEAD START BUILDING 14, UNITS 102 AND 104	
ELECTRICAL LEGEND, NOTES, ABBREVIATIONS	
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