NOTE

SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY AND DO NOT NECESSARILY INDICATE THEIR INCORPORATION INTO THE DESIGN

## ABBREVIATIONS

| | |
|---|---|
| A | AMPERE |
| AC | ALTERNATING CURRENT |
| AFF | ABOVE FINISHED FLOOR |
| AFG | ABOVE FINISHED GRADE |
| AHU | AIR HANDLING UNIT |
| AIC | AMPERES INTERRUPTING CAPACITY |
| ATS | AUTOMATIC TRANSFER SWITCH |
| AWG | AMERICAN WIRE GAUGE |
| BAS | BUILDING AUTOMATION SYSTEM |
| BKBD | BACKBOARD |
| C | CONDUIT |
| CAT | CATALOG, CATEGORY |
| CATV | CABLE TV |
| CB | CIRCUIT BREAKER |
| CCTV | CLOSED CIRCUIT TELEVISION |
| CM | CIRCULAR MILS |
| COMM | COMMUNICATIONS |
| CU | MECH CONDENSING UNIT |
| CU | COPPER |
| CUH | CABINET UNIT HEATER |
| DDC | DIGITAL DIRECT CONTROL |
| DN | DOWN |
| DW | DISHWASHER |
| DWG | DRAWING |
| EF | EXHAUST FAN |
| ELEV | ELEVATOR |
| EMT | ELECTRICAL METALLIC TUBING |
| EP | EXPLOSION PROOF |
| ERU | ENERGY RECOVERY UNIT |
| EWC | ELECTRIC WATER COOLER |
| FACP | FIRE ALARM CONTROL PANEL |
| FB | FLOOR BOX |
| FLA | FULL LOAD AMPS |
| FWE | FURNISHED WITH EQUIPMENT |
| G, GND | GROUND |
| GFCI | GROUND FAULT CIRCUIT INTERRUPTER |
| GFP | GROUND FAULT PROTECTION |
| HID | HIGH INTENSITY DISCHARGE |
| HOA | HAND-OFF-AUTO SELECTOR SWITCH |
| HP | HORSEPOWER |
| HVAC | HEATING, VENTILATION AND COOLING UNIT |
| IDS | INTRUSION DETECTION SYSTEM |
| IG | ISOLATED GROUND |
| IMC | INTERMEDIATE METAL CONDUIT |
| IR | INFRARED |
| K | KILO |
| KCMIL | KILO CIRCULAR MILS |
| KW | KILOWATT |
| KVA | KILO VOLT-AMPS |
| LAN | LOCAL AREA NETWORK |
| LC | LIGHTING CONTACTOR |
| LF | LINEAR FEET |
| LC | LOADCENTER |
| LCP | LIGHTING CONTROL PANEL |
| LED | LIGHT EMITTING DIODE |
| LTG | LIGHTING |
| MAX | MAXIMUM |
| MCB | MAIN CIRCUIT BREAKER |
| MECH | MECHANICAL |
| MH | MOUNTING HEIGHT |
| MICRO | MICROWAVE |
| MLO | MAIN LUG ONLY |
| MT | MOUNT |
| MTS | MANUAL TRANSFER SWITCH |
| MCP | MOTOR CONTROL PANEL |
| MH | METAL HALIDE |
| MDP | MAIN DISTRIBUTION PANEL |
| MIN | MINIMUM |
| N | NEUTRAL |
| NC | NORMALLY CLOSED |
| NEC | NATIONAL ELECTRICAL CODE |
| NEMA | NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION |
| NFPA | NATIONAL FIRE PROTECTION ASSOCIATION |
| NIC | NOT IN CONTRACT |
| NF | NON-FUSED |
| NO | NORMALLY OPEN |
| NO., # | NUMBER |
| NTS | NOT TO SCALE |
| OC | ON CENTER |
| OCC | OCCUPANCY |
| OH | OVERHEAD |
| P | POLE |
| PA | PUBLIC ADDRESS |
| PH, | PHASE |
| PIR | PASSIVE INFRARED |
| PNL | PANELBOARD |
| P/O | PART OF |
| PV | PHOTOVOLTAIC |
| PVC | POLY-VINYL CHLORIDE |
| REC, RECEPT | RECEPTACLE |
| REF | REFRIGERATOR |
| RF | RETURN FAN |
| RGS | RIGID GALVANIZED STEEL |
| RM | ROOM |
| RMC | RIGID METAL CONDUIT |
| RTU | ROOFTOP UNIT |
| REF | REFRIGERATOR |
| SF | SUPPLY FAN |
| SPDT | SINGLE POLE, DOUBLE THROW |
| SQ | SQUARE |
| TEL | TELEPHONE |
| TVSS | TRANSIENT VOLTAGE SURGE SUPPRESSOR |
| TYP | TYPICAL |
| UF | UNDER FLOOR |
| UG | UNDERGROUND |
| UH | UNIT HEATER |
| UL | UNDERWRITER'S LABORATORY |
| UNO | UNLESS NOTED OTHERWISE |
| UPS | UNINTERRUPTIBLE POWER SUPPLY |
| V | VOLTS |
| VFD | VARIABLE FREQUENCY DRIVE |
| W | WATT |
| WP | WEATHERPROOF |
| WG | WIREGUARD |
| XFMR | TRANSFORMER |
| (E) | EXISTING ITEM TO REMAIN |
| (R) | REMOVE ITEM AND DISPOSE PROPERLY |
| (ER) | RELOCATED ITEM AT NEW LOCATION |
| (RL) | REMOVE AND RELOCATE |

## LIGHT SWITCHES

HATCHING INDICATES FIXTURE WITH ONE LAMP ON EMERGENCY BATTERY/BALLAST

BP# — EMER BATTERY UNIT WITH NO HEADS, MT 7'-6"AFF BP# INDICATES BATTERY UNIT DESIGNATION, CONNECT TO UNSWITCHED PORTION OF AREA LIGHTING

BP# — EMER BATTERY UNIT WITH INTEGRAL HEADS, MT 7'-6" AFF BP# INDICATES BATTERY UNIT DESIGNATION, CONNECT TO UNSWITCHED PORTION OF AREA LIGHTING

BP# — SINGLE REMOTE EMERGENCY LIGHT HEAD, MOUNT 7'-6" AFF, BP# INDICATES BATTERY UNIT CONNECTED TO

BP# — DOUBLE REMOTE EMERGENCY LIGHT HEAD, MOUNT 7'-6" AFF, BP# INDICATES BATTERY UNIT CONNECTED TO

BP# — DOUBLE REMOTE EMERGENCY LIGHT HEAD, CEILING MOUNTED, BP# INDICATES BATTERY UNIT CONNECTED TO

BP# — EXIT SIGN, AC/DC, CEILING MOUNTED, SHADING INDICATES FACE(S), ARROWHEAD INDICATES CHEVRON(S) REQUIRED, BP# INDICATES BATTERY UNIT CONNECTED TO

BP# — EXIT SIGN, AC/DC, WALL MOUNTED, SHADING INDICATES FACE(S), MOUNT AT 7'-6" AFF OR OVER DOOR, BP# INDICATES BATTERY UNIT CONNECTED TO

EXIT SIGN WITH BATTERY, CEILING MOUNTED, SHADING INDICATES FACE(S), ARROWHEAD INDICATES CHEVRON(S) REQUIRED, CONNECT TO UNSWITCHED PORTION OF AREA LIGHTING

EXIT SIGN WITH BATTERY, WALL MOUNTED, SHADING INDICATES FACE(S), MOUNT AT 7'-6" AFF OR OVER DOOR, CONNECT TO UNSWITCHED PORTION OF AREA LIGHTING

## EMERGENCY LIGHTING

LIGHT FIXTURE, RECESSED TROFFER, TYPICAL

RECESSED DOWNLIGHT

RECESSED WALL WASHER DOWNLIGHT

WALL MOUNTED LIGHT FIXTURE

CEILING SURFACE MOUNTED LIGHT FIXTURE

PENDANT MOUNTED LIGHT FIXTURE

LINEAR LIGHT FIXTURE, CEILING SURFACE MOUNTED

LINEAR LIGHT FIXTURE, PENDANT MOUNTED

LINEAR LIGHT FIXTURE, WALL MOUNTED

RB — REMOTE BALLAST, ALLOW 9" IN ALL DIRECTIONS BETWEEN BALLASTS

NOTE TYPICAL FOR ALL LUMINAIRES:

F1 a #
- F1 — INDICATES LIGHT FIXTURE TYPE ON LUMINAIRE SCHEDULE
- a — LOWER CASE LETTER INDICATES SWITCHING
- # — NUMBER INDICATES CIRCUITING

## LIGHTING

F — DUPLEX RECEPTACLE, 20A, 125V, 2P, 3W, NEMA 5-20R, MOUNT IN FLUSH FLOOR BOX

F — DOUBLE DUPLEX RECEPTACLE, 20A, 125V, 2P, 3W, NEMA 5-20R, MOUNT IN FLUSH FLOOR BOX

F J — JUNCTION BOX, MOUNT IN FLUSH FLOOR BOX

F — DATA OUTLET, FLUSH MOUNTED IN FLOOR BOX

F E — EMPTY FLUSH FLOOR BOX

P — DUPLEX RECEPTACLE, PEDESTAL MOUNTED

P — SINGLE RECEPTACLE, PEDESTAL MOUNTED

P J — JUNCTION BOX, PEDESTAL MOUNTED

C — DUPLEX RECEPTACLE, FLUSH MOUNTED IN CEILING

C — DOUBLE DUPLEX RECEPTACLE, FLUSH MOUNTED IN CEILING

C — DUPLEX GFCI RECEPTACLE, FLUSH MOUNTED IN CEILING

C — DOUBLE DUPLEX GFCI RECEPTACLE, FLUSH MOUNTED IN CEILING

C J — JUNCTION BOX, FLUSH MOUNTED IN CEILING

OVERHEAD RECEPTACLE DROP, DUPLEX

OVERHEAD RECEPTACLE DROP, DOUBLE DUPLEX

OVERHEAD RECEPTACLE DROP, GFCI

D — OVERHEAD DATA DROP, SEE MATRIX FOR TYPE

PT — POKE-THROUGH DEVICE WITH (1) DUPLEX RECEPTACLE AND (2) DATA OUTLETS

## FLOOR AND CEILING DEVICES

CLOCK HANGER RECEPTACLE ~ NEMA 5-20R

DUPLEX RECEPTACLE ~ 20A, 125V, 2P, 3W, NEMA 5-20R

DOUBLE DUPLEX RECEPTACLE

GFCI DUPLEX RECEPTACLE, MOUNT 44" AFF UNO

GFCI DOUBLE DUPLEX RECEPTACLE, MOUNT 44" AFF UNO

WP — GFCI RECEPTACLE WITH WEATHERPROOF COVER

WP — GFCI RECEPTACLE IN WP ENCLOSURE ON ROOF

WIREMOLD 4000 SERIES OR EQUAL WITH DIVIDER, OUTLETS SPACED AS INDICATED ON DRAWINGS

NOTES:

1. MOUNT RECEPTACLES WITH CENTERLINE 18"AFF UNO
2. MOUNT EXTERIOR RECEPTACLES WITH CENTERLINE 24"AFG UNO

## RECEPTACLES

1. BRANCH CIRCUIT WIRING NOT SHOWN. WIRE AND CONNECT ELECTRICAL ITEMS TO CIRCUITS INDICATED.
2. DISCONNECT, REMOVE, RELOCATE, AND RECONNECT ELECTRICAL CONDUIT, WIRING, DEVICES, BOXES, FIXTURES, EQUIPMENT, ETC. AS INDICATED AND AS REQUIRED TO FACILITATE THE WORK OF THIS PROJECT. WHERE ELECTRICAL ITEMS ARE REMOVED, REMOVE CONDUIT AND WIRING BACK TO SOURCE, UNLESS DIRECTED OTHERWISE BY OWNER. TAG SPARE CONDUITS AND CONDUCTORS TO IDENTIFY SOURCE.
3. DO NOT SCALE THE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT DIMENSIONS.
4. THE LOCATION OF EQUIPMENT, OUTLETS, ETC. AS GIVEN ON THE DRAWINGS, IS APPROXIMATE. IT SHALL BE UNDERSTOOD THAT THESE LOCATIONS ARE SUBJECT TO MODIFICATION AS MAY BE FOUND NECESSARY OR DESIRABLE AT THE TIME OF INSTALLATION IN ORDER TO MEET STRUCTURAL/ ARCHITECTURAL REQUIREMENTS. SUCH CHANGES SHALL BE MADE WITHOUT EXTRA CHARGE.
5. ELECTRICAL DEVICES, WHEN INSTALLED, SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. COVER PLATES SHALL BE INSTALLED AFTER FINISH MATERIALS HAVE BEEN APPLIED.
6. COORDINATE WORK WITH OTHER DIVISIONS. VERIFY EXACT POWER REQUIREMENTS OF MECHANICAL EQUIPMENT WITH DIVISION 23. POWER WIRING FOR EQUIPMENT & CONTROL SHALL BE PERFORMED BY DIVISION 26. CONTROL WIRING BY DIVISION 23.

## GENERAL NOTES

TELECOMMUNICATIONS OUTLET MOUNTED IN 4000 SERIES WIREMOLD ~ PROVIDE 1-GANG MOUNTING FRAME WITH BLANK COVER AND PULL STRING TO ABOVE CEILING

## TECHNOLOGY

~ CENTERLINE 48" AFF, UNO ~

$4 — LIGHT SWITCH, 20A,125/277V, LETTER INDICATES SWITCHING

$ — THREE-WAY LIGHT SWITCH

$4 — FOUR-WAY LIGHT SWITCH

$2 — TWO-POLE SWITCH

$K — KEY OPERATED SWITCH

$M — MOTOR RATED SWITCH

$P — SINGLE POLE SWITCH WITH RED PILOT LIGHT ~ RED LIGHT SHALL GLOW WHEN CIRCUIT IS ENERGIZED

$a $b — MULTI-GANGED SWITCHES, GANG UNDER ONE PLATE, LETTER INDICATES SWITCHING

$OS — OCCUPANCY SENSOR SWITCH, WALL MOUNTED

$OS2 — 2-BUTTON OCCUPANCY SENSOR SWITCH

OS — OCCUPANCY SENSOR, CEILING MOUNTED

OS — OCCUPANCY SENSOR, WALL MOUNTED

$D — DIMMER SWITCH, COORDINATE DIMMING TECHNOLOGY WITH DIMMED LOAD IN EACH AREA

$LV — LOW VOLTAGE SWITCH, MOMENTARY CONTACT

$LV2 — 2-BUTTON LOW VOLTAGE SWITCH

$LV4 — 4-BUTTON LOW VOLTAGE SWITCH

$LVD — LOW VOLTAGE DIMMER SWITCH

$HC $SL — HANDICAP SWITCHES FOR HOOD LIGHT AND FAN

$T — TIMER SWITCH, 60 MINUTES

LTC — LIGHTING TIME CLOCK

LC — LIGHTING CONTACTOR

LCP — LIGHTING CONTROL PANEL

PC — PHOTOCELL

## LIGHT SWITCHES

PANELBOARD, SURFACE MOUNTED

PANELBOARD, FLUSH MOUNTED

FUSED DISCONNECT SWITCH

NON-FUSED DISCONNECT SWITCH

MOTOR STARTER

COMBINATION MOTOR STARTER/FUSED DISCONNECT

MOTOR OR FAN

M — METER AND CABINET

J — JUNCTION BOX ~ CEILING MOUNTED

J — JUNCTION BOX ~ WALL MOUNTED

C — JUNCTION BOX FOR CLOCK POWER

H — JUNCTION BOX MOUNTED AT 32" FOR HAND DRYER

T# — TRANSFORMER ~ NUMBER INDICATES DESIGNATION SEE TRANSFORMER SCHEDULE

VFD — VARIABLE FREQUENCY DRIVE

TVSS — TRANSIENT VOLTAGE SURGE SUPPRESSOR

E — EMERGENCY SHUTOFF SWITCH ~ WALL MOUNTED 48" TO CENTERLINE ~ PROVIDE TAMPER-PROOF COVER

CONDUIT TURNING UP

CONDUIT TURNING DOWN

WIRING UNDERGROUND OR UNDERSLAB

HOMERUN ~ (2)#12+(1)#12G UNO (EXCEPT LIGHTING CIRCUITS: (1)#12+(1)#10N+(1)#12G UNO)

SINGLE-PHASE HOMERUN OR MULTIPLE HOMERUN UTILIZING THE SAME CONDUIT

3-PHASE HOMERUN OR MULTIPLE HOMERUN UTILIZING THE SAME CONDUIT

FLEXIBLE CONNECTION

GROUNDING SYSTEM

P — MOTORIZED DOOR OPERATOR AND PUSH PADDLE ~ FURNISHED BY DIVISION 08, WIRED BY DIVISION 26

D — DOORBELL PUSHBUTTON

C — DOORBELL CHIME

F — SYSTEMS FURNITURE WHIP

## POWER DISTRIBUTION

FACP — FIRE ALARM CONTROL PANEL, MOUNT WITH TOP OF PANEL NOT MORE THAN 72"AFF

FAA — FIRE ALARM ANNUNCIATOR, MOUNT WITH TOP OF PANEL NOT MORE THAN 72"AFF

S — SMOKE DETECTOR

S E — SMOKE DETECTOR, "E" INDICATES CONNECTION FOR ELEVATOR RECALL

SS S — SINGLE STATION SMOKE DETECTOR WITH AUDIBLE INDICATING APPLIANCE, WALL MOUNTED

AV S SS — SINGLE STATION SMOKE DETECTOR WITH AUDIBLE/VISUAL INDICATING APPLIANCE

H — HEAT DETECTOR

D — DUCT SMOKE DETECTOR

RTS — REMOTE TEST/INDICATOR FOR DUCT SMOKES, MOUNT ON CEILING BENEATH UNIT, OR WALL MOUNT WHERE INDICATED ON PLANS

F — MANUAL PULL STATION, MOUNT 48" AFF

F — HORN/STROBE, CANDELA AS NOTED ON PLANS

F — CEILING MOUNTED HORN/STROBE, CANDELA AS NOTED ON PLANS

15 F — STROBE ONLY INDICATING APPLIANCE, CANDELA AS NOTED ON PLANS

R F — STROBE, 15 CANDELA, 120V, CONNECT TO OPERATE UPON ACTIVATION OF ROOM SMOKE DETECTOR

S — SPEAKER/STROBE, CANDELA AS NOTED ON PLANS

S — CEILING MOUNTED SPEAKER/STROBE, CANDELA AS NOTED ON PLANS

M — MINI HORN

F F — HORN/STROBE WITH PULL STATION DIRECTLY BELOW

DH — MAGNETIC DOOR HOLD OPEN DEVICE

T — TRANSFORMER

F — SPRINKLER SYSTEM WATER FLOW SWITCH, PROVIDED UNDER DIVISION 23, WIRED UNDER DIVISION 26

T — SPRINKLER SYSTEM TAMPER SWITCH, PROVIDED UNDER DIVISION 23, WIRED UNDER DIVISION 26

C — SPRINKLER SYSTEM CHECK VALVE PRESSURE SWITCH, FURNISHED AND INSTALLED UNDER DIVISION 23, WIRED UNDER DIVISION 26

P — SPRINKLER SYSTEM EXCESS PRESSURE PUMP, FURNISHED AND INSTALLED UNDER DIVISION 23, WIRED UNDER DIVISION 26

K — KNOX BOX, MOUNT 60" AFF

SD — SMOKE DAMPER

## FIRE ALARM SYSTEM


LAVALLEE BRENSINGER ARCHITECTS
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305 Commercial Street, Portland, ME 04101
603.622.5450
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# Science Building Lab A203 Renovation

70 Falmouth Street
Portland, ME 04104

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| | ISSUED FOR PERMIT | 03/17/2016 |

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FOR ADDITIONAL INFORMATION, REFER TO PROJECT MANUAL.

CONTENT:
ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL NOTES

| | |
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| DRAWN BY: | GMC |
| PROJECT NO: | 15-005-00 |
| DATE: | 3/17/2016 |
| REVISED: | |
| SCALE: | 12" = 1'-0" |

E-000

Project Phase
BID DOCUMENTS


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