

N:\Projects\2014\14009 - Portland Public Schools - Downtown Project\00 Drawing Files\Revit\2014\14009E.rvt 3/17/2014 9:10:48 AM

	A	AMPERE	MT	MOUNT
	AC	ALTERNATING CURRENT	MTS	MANUAL TRANSFER SWITCH
	AFF	ABOVE FINISHED FLOOR	MCP	MOTOR CONTROL PANEL
	AFG	ABOVE FINISHED GRADE	MH	METAL HALIDE
	AHU	AIR HANDLING UNIT	MDP	MAIN DISTRIBUTION PANEL
	AIC	AMPERES INTERRUPTING CAPACITY	MIN	MINIMUM
	ATS	AUTOMATIC TRANSFER SWITCH	N	NEUTRAL
	AWG	AMERICAN WIRE GAUGE	NC	NORMALLY CLOSED
	AWG	AMERICAN WIRE GAUGE	NEC	NATIONAL ELECTRICAL CODE
	BAS	BUILDING AUTOMATION SYSTEM	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
	BKBD	BACKBOARD	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
	C	CONDUIT	NIC	NOT IN CONTRACT
	CAT	CATALOG, CATEGORY	NF	NON-FUSED
	CATV	CABLE TV	NO	NORMALLY OPEN
	CB	CIRCUIT BREAKER	NO, #	NUMBER
	CCTV	CLOSED CIRCUIT TELEVISION	NTS	NOT TO SCALE
	CM	CIRCULAR MILS	OC	ON CENTER
	COMM	COMMUNICATIONS	OCC	OCCUPANCY
	CU	MECH CONDENSING UNIT	OH	OVERHEAD
	CU	COPPER	P	POLE
	CUH	CABINET UNIT HEATER	PA	PUBLIC ADDRESS
	DDC	DIGITAL DIRECT CONTROL	PH	PHASE
	DN	DOWN	PIR	PASSIVE INFRARED
	DW	DISHWASHER	PNL	PANELBOARD
	DWG	DRAWING	P/O	PART OF
	EF	EXHAUST FAN	PV	PHOTOVOLTAIC
	ELEV	ELEVATOR	PVC	POLY-VINYL CHLORIDE
	EMT	ELECTRICAL METALLIC TUBING	REC,	RECEPTACLE RECEPT
	EP	EXPLOSION PROOF	REF	REFRIGERATOR
	ERU	ENERGY RECOVERY UNIT	RF	RETURN FAN
	EWC	ELECTRIC WATER COOLER	RM	ROOM
	FACP	FIRE ALARM CONTROL PANEL	RMC	RIGID METAL CONDUIT
	FB	FLOOR BOX	RTU	ROOFTOP UNIT
	FLA	FULL LOAD AMPS	REF	REFRIGERATOR
	FWE	FURNISHED WITH EQUIPMENT	SF	SUPPLY FAN
	G, GND	GROUND	SPDT	SINGLE POLE, DOUBLE T HROW
	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	SQ	SQUARE
	GFP	GROUND FAULT PROTECTION	TEL	TELEPHONE
	HID	HIGH INTENSITY DISCHARGE	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
	HOA	HAND-OFF-AUTO SELECTOR SWITCH	TYP	TYPICAL
	HP	HORSEPOWER	UF	UNDER FLOOR
	HVAC	HEATING, VENTILATION AND COOLING UNIT	UG	UNDERGROUND
	IDS	INTRUSION DETECTION SYSTEM	UH	UNIT HEATER
	IG	ISOLATED GROUND	UL	UNDERWRITER'S LABORATORY
	IMC	INTERMEDIATE METAL CONDUIT	UNO	UNLESS NOTED OTHERWISE
	IR	INFRARED	UPS	UNINTERRUPTIBLE POWER SUPPLY
	K	KILO	V	VOLTS
	KCMIL	KILO CIRCULAR MILS	VFD	VARIABLE FREQUENCY DRIVE
	KW	KILOWATT	W	WATT
	KVA	KILO VOLT-AMPS	WG	WIREGUARD
	LAN	LOCAL AREA NETWORK	XFMR	TRANSFORMER
	LC	LIGHTING CONTACTOR	(E)	EXISTING ITEM TO REMAIN
	LF	LINEAR FEET	(R)	REMOVE ITEM AND DISPOSE OF PROPERLY
	LC	LOADCENTER	(ER)	RELOCATED ITEM AT NEW LOCATION
	LCP	LIGHTING CONTROL PANEL	(RL)	REMOVE AND RELOCATE
	LED	LIGHT EMITTING DIODE	(RP)	REPLACE
	LTG	LIGHTING		
	MAX	MAXIMUM		
	MCB	MAIN CIRCUIT BREAKER		
	MECH	MECHANICAL		
	MH	MOUNTING HEIGHT		
	MICRO	MICROWAVE		
	MLO	MAIN LUG ONLY		
	A1	ABBREVIATIONS		

TP TAMPER PROOF DUPLEX RECEPTACLE

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

⌀ DOUBLE DUPLEX RECEPTACLE

⌀ DUPLEX RECEPTACLE CONNECTED TO XXX

⌀ 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

— MULTI-OUTLET STRIP, PROVIDE OUTLETS 24" OC UNO, MOUNT 44" AFF UNO

NOTES:

- MOUNT RECEPTACLES WITH CENTERLINE 18" AFF UNO
- MOUNT EXTERIOR RECEPTACLES WITH CENTERLINE 24" AFG UNO

F3 SINGLE RECEPTACLES

F5 RECEPTACLES

□ 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

RE REMOTE BALLAST, ALLOW 9" IN ALL DIRECTIONS BETWEEN BALLASTS

NOTE TYPICAL FOR ALL LUMINAIRES:

□ INDICATES LIGHT FIXTURE TYPE ON LUMINAIRE SCHEDULE

a LOWER CASE LETTER INDICATES SWITCHING

NUMBER INDICATES CIRCUITING

D3 LUMINAIRES

⌀ 20A, 125V, 2P, 3W, NEMA 5-20R

⌀ 20A, 125V, 2P, 3W, NEMA L5-20R (TWISTLOCK)

⌀ 30A DRYER RECEPTACLE - 250V, 2P, 3W, GROUNDING, NEMA 14-30R, (3)#10+(1)#10G TO 30A, 2P CIRCUIT BREAKER

⌀ 30A, 250V, 2P, 3W, NEMA 6-30R

⌀ 50A RANGE RECEPTACLE - 250V, 2P, 3W, NEMA 14-50R, (3)#8+(1)#10 TO 40A, 2P CIRCUIT BREAKER

NOTE:

PROVIDE MATCHING CORD AND PLUG FOR SINGLE RECEPTACLES

F3 SINGLE RECEPTACLES

D5 EMERGENCY LIGHTING

☑ 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. NUMBER INDICATES CIRCUITING

BP# EMER BATTERY UNIT WITH INTEGRAL HEADS, MT 7'-6" AFF. BP# INDICATES BATTERY UNIT DESIGNATION. NUMBER INDICATES CIRCUITING

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), ARROWHEAD INDICATES CHEVRON(S) REQUIRED, BP# INDICATES BATTERY UNIT CONNECTED TO

EXIT SIGN WITH BATTERY, CEILING MOUNTED, SHADING INDICATES FACE(S), ARROWHEAD INDICATES CHEVRON(S) REQUIRED, NUMBER INDICATES CIRCUIT NUMBER, TYPICAL

EXIT SIGN WITH BATTERY, WALL MOUNTED, SHADING INDICATES FACE(S), MOUNT AT 7'-6" AFF OR OVER DOOR, NUMBER INDICATES CIRCUIT NUMBER, TYPICAL

NOTE

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

- BRANCH CIRCUIT WIRING NOT SHOWN. WIRE AND CONNECT ELECTRICAL ITEMS TO CIRCUITS INDICATED.
- DISCONNECT, REMOVE, RELOCATE, AND RECONNECT ELECTRICAL CONDUIT, WIRING, DEVICES, 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.
- DO NOT SCALE THE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT DIMENSIONS.
- 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.
- ELECTRICAL DEVICES, WHEN INSTALLED, SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. COVER PLATES SHALL BE INSTALLED AFTER FINISH MATERIALS HAVE BEEN APPLIED.
- 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.

A5 GENERAL NOTES

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

◇ SMOKE DETECTOR

◇ SMOKE DETECTOR, "E" INDICATES CONNECTION FOR ELEVATOR RECALL

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

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

◇ HEAT DETECTOR

◇ 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

30 > [E] HORN/STROBE, CANDELA AS NOTED ON PLANS

15 [E]- STROBE ONLY INDICATING APPLIANCE, CANDELA AS NOTED ON PLANS

R [E]- STROBE, 15 CANDELA, 120V, CONNECT TO OPERATE UPON ACTIVATION OF ROOM SMOKE DETECTOR

30 > [E]- SPEAKER/STROBE, CANDELA AS NOTED ON PLANS

> [M] MINI HORN

30 > [E]- [F] HORN/STROBE WITH PULL STATION DIRECTLY BELOW

◇ MAGNETIC DOOR HOLD OPEN DEVICE

T TRANSFORMER

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

◇ SPRINKLER SYSTEM TAMPER SWITCH, PROVIDED UNDER DIVISION 23, WIRED UNDER DIVISION 26

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

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

[E]- KNOX BOX, MOUNT 60" AFF

[S] SMOKE DAMPER

D7 FIRE ALARM SYSTEM

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

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

[E] JUNCTION BOX, MOUNT IN FLUSH FLOOR BOX

[E] EMPTY FLUSH FLOOR BOX

[E] DUPLEX RECEPTACLE, PEDESTAL MOUNTED

[E] SINGLE RECEPTACLE, PEDESTAL MOUNTED

[E] JUNCTION BOX, PEDESTAL MOUNTED

[E] DUPLEX RECEPTACLE, FLUSH MOUNTED IN CEILING

[E] DOUBLE DUPLEX RECEPTACLE, FLUSH MOUNTED IN CEILING

[E] DUPLEX GFCI RECEPTACLE, FLUSH MOUNTED IN CEILING

[E] DOUBLE DUPLEX GFCI RECEPTACLE, FLUSH MOUNTED IN CEILING

[E] DATA OUTLET, FLUSH MOUNTED IN CEILING, SEE SCHEDULE FOR TYPE

[E] JUNCTION BOX, FLUSH MOUNTED IN CEILING

[E] OVERHEAD RECEPTACLE DROP, DUPLEX

[E] OVERHEAD RECEPTACLE DROP, DOUBLE DUPLEX

[E] OVERHEAD RECEPTACLE DROP, GFCI

[E] OVERHEAD DATA DROP

[E] (TJL) CEILING MOUNTED ALARM CONNECTION, TWISTLOCK RECEPTACLE, 15A, 125V, 2 WIRE, NEMA L1-15R. MOUNT ON ON SURFACE MOUNTED WEATHERPROOF BOX AND COVER. PROVIDE CONDUIT AND PULL STRING TO FROM RECEPTACLE TO EXISTING CONTROLS MAIN PANEL AS DIRECTED BY OWNER. LOW VOLTAGE WIRING FROM PRESSURE SWITCH TO CONTROL PANEL PROVIDED BY DIVISION 23.

[E] (TJL) CEILING MOUNTED TWISTLOCK RECEPTACLE, 15A, 125V, 3 WIRE, NEMA L5-15R

A7 FLOOR AND CEILING DEVICES

— PANELBOARD, SURFACE MOUNTED

— PANELBOARD, FLUSH MOUNTED

☑ FUSED DISCONNECT SWITCH

☑ NON-FUSED DISCONNECT SWITCH

☑ MOTOR STARTER

☑ COMBINATION MOTOR STARTER/FUSED DISCONNECT

☑ PUMP, MECHANICAL EQUIPMENT

○ MOTOR OR FAN

[E] METER AND CABINET

○ JUNCTION BOX - CEILING MOUNTED

○ JUNCTION BOX - WALL MOUNTED

○ JUNCTION BOX FOR CLOCK POWER

○ JUNCTION BOX MOUNTED AT 32" FOR HAND DRYER

[#] TRANSFORMER - NUMBER INDICATES DESIGNATION. SEE TRANSFORMER SCHEDULE

[VFD] VARIABLE FREQUENCY DRIVE

[TVSS] TRANSIENT VOLTAGE SURGE SUPPRESSOR

⊖ 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 COMPUTER AND 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

⊖ MOTORIZED DOOR OPERATOR AND PUSH PADDLE - FURNISHED BY DIVISION 08, WIRED BY DIVISION 26

☑ DOORBELL PUSHBUTTON

☑ DOORBELL CHIME

☑ SYSTEMS FURNITURE WHIP

☑ PATIENT GROUNDING MODULE

D9 POWER DISTRIBUTION

- CENTERLINE 48" AFF, UNO -

\$s LIGHT SWITCH, 20A, 125/277V, LETTER INDICATES SWITCHING

\$s THREE-WAY LIGHT SWITCH

\$s FOUR-WAY LIGHT SWITCH

\$s 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

\$s MULTI-GANGED SWITCHES, GANG UNDER ONE PLATE, LETTER INDICATES SWITCHING

\$os OCCUPANCY SENSOR SWITCH, WALL MOUNTED

\$os2 2-BUTTON OCCUPANCY SENSOR SWITCH

(CS) OCCUPANCY SENSOR, CEILING MOUNTED

(CS) OCCUPANCY SENSOR, WALL MOUNTED

\$o INCANDESCENT DIMMER SWITCH

A9 LIGHT SWITCHES

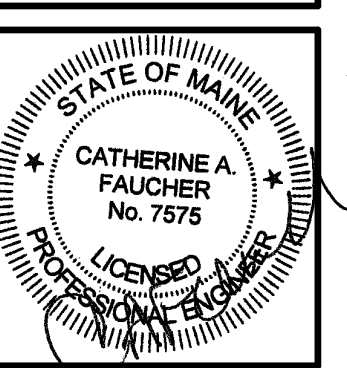


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TITLE
ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL NOTES

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