



PAYSON-SMITH HALL  
CHEMISTRY LAB  
RENOVATION

96 Falmouth Street, Portland, ME,  
04101

NO. DESCRIPTION DATE

~ CENTERLINE 48" AFF, UNO ~

- S<sub>1</sub> LIGHT SWITCH, 20A, 125/277V, LETTER INDICATES SWITCHING
- S<sub>3</sub> THREE-WAY LIGHT SWITCH
- S<sub>4</sub> FOUR-WAY LIGHT SWITCH
- S<sub>2</sub> TWO-POLE SWITCH
- S<sub>K</sub> KEY OPERATED SWITCH
- S<sub>M</sub> MOTOR RATED SWITCH
- S<sub>P</sub> SINGLE POLE SWITCH WITH RED PILOT LIGHT - RED LIGHT SHALL GLOW WHEN CIRCUIT IS ENERGIZED
- S<sub>3</sub> MULTI-GANGED SWITCHES, GANG UNDER ONE PLATE, LETTER INDICATES SWITCHING
- S<sub>OS</sub> OCCUPANCY SENSOR SWITCH, WALL MOUNTED
- S<sub>OS2</sub> 2-BUTTON OCCUPANCY SENSOR SWITCH
- S<sub>OS</sub> OCCUPANCY SENSOR, CEILING MOUNTED
- S<sub>OS</sub> OCCUPANCY SENSOR, WALL MOUNTED
- S<sub>D</sub> DIMMER SWITCH, COORDINATE DIMMING TECHNOLOGY WITH DIMMED LOAD IN EACH AREA
- S<sub>L</sub> LOW VOLTAGE SWITCH, MOMENTARY CONTACT
- S<sub>L2</sub> 2-BUTTON LOW VOLTAGE SWITCH
- S<sub>L4</sub> 4-BUTTON LOW VOLTAGE SWITCH
- S<sub>L2</sub> LOW VOLTAGE DIMMER SWITCH
- S<sub>H</sub> HANDICAP SWITCHES FOR HOOD LIGHT AND FAN
- S<sub>T</sub> TIMER SWITCH, 60 MINUTES
- L<sub>TC</sub> LIGHTING TIME CLOCK
- L<sub>CC</sub> LIGHTING CONTACTOR
- L<sub>CP</sub> LIGHTING CONTROL PANEL
- PC PHOTOCELL

CONTENT:  
ELECTRICAL LEGENDS, ABBREVIATIONS  
AND GENERAL NOTES

DRAWN BY: DLL  
PROJECT NO: 2014-019  
DATE: 01/09/2015  
REVISED:  
SCALE: AS NOTED

E0.0

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

SHADE	MOTORIZED SHADE FURNISHED BY DIVISION 12, WIRED BY DIVISION 26.
SHADE	SHADE CONTROLLER FURNISHED BY DIVISION 12, WIRED BY DIVISION 26, LOCATE ABOVE CEILING
SHADES	MOTORIZED SHADE CONTROL SWITCH FURNISHED BY DIVISION 12, WIRED BY DIVISION 26, LOCATE ABOVE CEILING

D4	MISCELLANEOUS
	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
	REMOTE BALLAST, ALLOW 9" IN ALL DIRECTIONS BETWEEN BALLASTS
	NOTE TYPICAL FOR ALL LUMINAIRES:
	INDICATES LIGHT FIXTURE TYPE ON LUMINAIRE SCHEDULE
	LOWER CASE LETTER INDICATES SWITCHING
	NUMBER INDICATES CIRCUITING

G4	LUMINAIRES
	PAGING SPEAKER
	MUSIC SPEAKER
	VOLUME CONTROL
	TELEPHONE WALL OUTLET, 44" AFF UNO
	TELEPHONE OUTLET FOR ELEVATOR CONNECTION
	TELEPHONE OUTLET, 18" AFF UNO
	TELEDATA OUTLET, 18" AFF UNO, # INDICATES QUANTITY OF PORTS WHERE GREATER THAN 1
	WIRELESS ACCESS POINT CEILING MOUNTED ~ PROVIDE 1" CONDUIT CORRIDOR PATHWAY
	WIRELESS ACCESS POINT WALL MOUNTED

	HATCHING INDICATES FIXTURE WITH ONE LAMP ON EMERGENCY BATTERY/BALLAST
	EMER BATTERY UNIT WITH NO HEADS, MT 7'-6" AFF. BP# INDICATES BATTERY UNIT DESIGNATION. CONNECT TO UNSWITCHED PORTION OF AREA LIGHTING BRANCH CIRCUIT, UNO.
	EMER BATTERY UNIT WITH INTEGRAL HEADS, MT 7'-6" AFF. BP# INDICATES BATTERY UNIT DESIGNATION. CONNECT TO UNSWITCHED PORTION OF AREA LIGHTING BRANCH CIRCUIT, UNO.
	SINGLE REMOTE EMERGENCY LIGHT HEAD, MOUNT 7'-6" AFF. BP# INDICATES BATTERY UNIT CONNECTED TO
	DOUBLE REMOTE EMERGENCY LIGHT HEAD, MOUNT 7'-6" AFF. BP# INDICATES BATTERY UNIT CONNECTED TO
	DOUBLE REMOTE EMERGENCY LIGHT HEAD MOUNTED ON CEILING, BP# INDICATES BATTERY UNIT CONNECTED TO
	EXIT SIGN, CEILING MOUNTED, SHADING INDICATES FACE(S), ARROWHEAD INDICATES CHEVRON(S) REQUIRED. CONNECT TO UNSWITCHED PORTION OF AREA LIGHTING BRANCH CIRCUIT, UNO.
	EXIT SIGN, WALL MOUNTED, SHADING INDICATES FACE(S) MOUNT AT 7'-6" AFF OR OVER DOOR. CONNECT TO UNSWITCHED PORTION OF AREA LIGHTING BRANCH CIRCUIT, UNO.

G6	EMERGENCY LIGHTING
	NOTE
	SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY AND DO NOT NECESSARILY INDICATE THEIR INCORPORATION INTO THE DESIGN
	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.

G9	FIRE ALARM SYSTEM
	FIRE ALARM CONTROL PANEL, MOUNT WITH TOP OF PANEL NOT MORE THAN 72" AFF
	FIRE ALARM ANNUNCIATOR, MOUNT WITH TOP OF PANEL NOT MORE THAN 72" AFF
	SMOKE DETECTOR
	SMOKE DETECTOR, "E" INDICATES CONNECTION FOR ELEVATOR RECALL
	SINGLE STATION SMOKE DETECTOR WITH AUDIBLE INDICATING APPLIANCE, WALL MOUNTED
	SINGLE STATION SMOKE DETECTOR WITH AUDIBLE/VISUAL INDICATING APPLIANCE
	HEAT DETECTOR
	DUCT SMOKE DETECTOR
	REMOTE TEST INDICATOR FOR DUCT SMOKES, MOUNT ON CEILING BENEATH UNIT, OR WALL MOUNT WHERE INDICATED ON PLANS
	MANUAL PULL STATION, MOUNT 48" AFF
	HORN/STROBE, CANDELA AS NOTED ON PLANS
	STROBE ONLY INDICATING APPLIANCE, CANDELA AS NOTED ON PLANS
	STROBE, 15 CANDELA, 120V, CONNECT TO OPERATE UPON ACTIVATION OF ROOM SMOKE DETECTOR
	SPEAKER/STROBE, CANDELA AS NOTED ON PLANS
	MINI HORN
	HORN/STROBE WITH PULL STATION DIRECTLY BELOW
	MAGNETIC DOOR HOLD OPEN DEVICE
	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
	KNOX BOX, MOUNT 60" AFF
	SMOKE DAMPER

	20A, 125V, 2P, 3W, NEMA 5-20R
	20A, 125V, 2P, 3W, NEMA L5-20R (TWISTLOCK)
	30A DRYER RECEPTACLE - 125/250V, 3P, 4W, GROUNDING, NEMA 14-30R, (3#10)+(1#10) TO 30A, 2P CIRCUIT BREAKER
	30A, 250V, 2P, 3W, NEMA 6-30R
	50A RANGE RECEPTACLE - 125/250V, 3P, 4W, GROUNDING, NEMA 14-50R, (3#6)+(1#10) TO 50A, 2P CIRCUIT BREAKER
	NOTE: PROVIDE MATCHING CORD AND PLUG FOR SINGLE RECEPTACLES

B9	SINGLE RECEPTACLES
	FIRE ALARM CONTROL PANEL, MOUNT WITH TOP OF PANEL NOT MORE THAN 72" AFF
	FIRE ALARM ANNUNCIATOR, MOUNT WITH TOP OF PANEL NOT MORE THAN 72" AFF
	SMOKE DETECTOR
	SMOKE DETECTOR, "E" INDICATES CONNECTION FOR ELEVATOR RECALL
	SINGLE STATION SMOKE DETECTOR WITH AUDIBLE INDICATING APPLIANCE, WALL MOUNTED
	SINGLE STATION SMOKE DETECTOR WITH AUDIBLE/VISUAL INDICATING APPLIANCE
	HEAT DETECTOR
	DUCT SMOKE DETECTOR
	REMOTE TEST INDICATOR FOR DUCT SMOKES, MOUNT ON CEILING BENEATH UNIT, OR WALL MOUNT WHERE INDICATED ON PLANS
	MANUAL PULL STATION, MOUNT 48" AFF
	HORN/STROBE, CANDELA AS NOTED ON PLANS
	STROBE ONLY INDICATING APPLIANCE, CANDELA AS NOTED ON PLANS
	STROBE, 15 CANDELA, 120V, CONNECT TO OPERATE UPON ACTIVATION OF ROOM SMOKE DETECTOR
	SPEAKER/STROBE, CANDELA AS NOTED ON PLANS
	MINI HORN
	HORN/STROBE WITH PULL STATION DIRECTLY BELOW
	MAGNETIC DOOR HOLD OPEN DEVICE
	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
	KNOX BOX, MOUNT 60" AFF
	SMOKE DAMPER

G9	FIRE ALARM SYSTEM
	DUPLEX RECEPTACLE, 20A, 125V, 2P, 3W, NEMA 5-20R, MOUNT IN FLUSH FLOOR BOX
	DOUBLE DUPLEX RECEPTACLE, 20A, 125V, 2P, 3W, NEMA 5-20R, MOUNT IN FLUSH FLOOR BOX
	JUNCTION BOX, MOUNT IN FLUSH FLOOR BOX
	EMPTY FLUSH FLOOR BOX
	DUPLEX RECEPTACLE, PEDESTAL MOUNTED
	SINGLE RECEPTACLE, PEDESTAL MOUNTED
	JUNCTION BOX, PEDESTAL MOUNTED
	DUPLEX RECEPTACLE, FLUSH MOUNTED IN CEILING
	DOUBLE DUPLEX RECEPTACLE, FLUSH MOUNTED IN CEILING
	DUPLEX GFCI RECEPTACLE, FLUSH MOUNTED IN CEILING
	DOUBLE DUPLEX GFCI RECEPTACLE, FLUSH MOUNTED IN CEILING
	DATA OUTLET, FLUSH MOUNTED IN CEILING, SEE SCHEDULE FOR TYPE
	JUNCTION BOX, FLUSH MOUNTED IN CEILING
	OVERHEAD RECEPTACLE DROP, DUPLEX
	OVERHEAD RECEPTACLE DROP, DOUBLE DUPLEX
	OVERHEAD RECEPTACLE DROP, GFCI
	OVERHEAD DATA DROP

	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
	GFCI RECEPTACLE WITH WEATHERPROOF COVER
	GFCI RECEPTACLE IN WP ENCLOSURE ON ROOF
	MULTI-OUTLET STRIP, PROVIDE OUTLETS 24" OC UNO, MOUNT 44" AFF UNO
	NOTES: 1. MOUNT RECEPTACLES WITH CENTERLINE 18" AFF UNO 2. MOUNT EXTERIOR RECEPTACLES WITH CENTERLINE 24" AFF UNO

B12	RECEPTACLES
	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
	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
	VARIABLE FREQUENCY DRIVE
	TRANSIENT VOLTAGE SURGE SUPPRESSOR
	UTILITY CONTROLLER FURNISHED BY DIVISION 23, WIRED TO GAS SOLENOID VALVE BY DIVISION 23, CONTROL POWER CIRCUIT AND WIRING TO MULTI-POLE CONTACTOR BY DIVISION 26
	CONDUIT TURNING UP
	CONDUIT TURNING DOWN
	WIRING UNDERGROUND OR UNDERSLAB
	HOMERUN - (2#12)+(1#12) UNO (EXCEPT LIGHTING CIRCUITS: 1#12)+(1#10)+(1#12) 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
	10-POLE ELECTRICALLY HELD MULTI-POLE CONTACTOR IN NEMA 1 ENCLOSURE. MOUNT ABOVE ACCESSIBLE CEILING.

G12	POWER DISTRIBUTION
	~ CENTERLINE 48" AFF, UNO ~
	LIGHT SWITCH, 20A, 125/277V, LETTER INDICATES SWITCHING
	THREE-WAY LIGHT SWITCH
	FOUR-WAY LIGHT SWITCH
	TWO-POLE SWITCH
	KEY OPERATED SWITCH
	MOTOR RATED SWITCH
	SINGLE POLE SWITCH WITH RED PILOT LIGHT - RED LIGHT SHALL GLOW WHEN CIRCUIT IS ENERGIZED
	MULTI-GANGED SWITCHES, GANG UNDER ONE PLATE, LETTER INDICATES SWITCHING
	OCCUPANCY SENSOR SWITCH, WALL MOUNTED
	2-BUTTON OCCUPANCY SENSOR SWITCH
	OCCUPANCY SENSOR, CEILING MOUNTED
	OCCUPANCY SENSOR, WALL MOUNTED
	DIMMER SWITCH, COORDINATE DIMMING TECHNOLOGY WITH DIMMED LOAD IN EACH AREA
	LOW VOLTAGE SWITCH, MOMENTARY CONTACT
	2-BUTTON LOW VOLTAGE SWITCH
	4-BUTTON LOW VOLTAGE SWITCH
	LOW VOLTAGE DIMMER SWITCH
	HANDICAP SWITCHES FOR HOOD LIGHT AND FAN
	TIMER SWITCH, 60 MINUTES
	LIGHTING TIME CLOCK
	LIGHTING CONTACTOR
	LIGHTING CONTROL PANEL
	PHOTOCELL