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
DC	DIRECT CURRENT
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
LTS	LIGHTS
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MECH	MECHANICAL
MH	MOUNTING HEIGHT
MC	MICROPHONE
MW	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
PB	PULLBOX
PH,	PHASE
PIR	PASSIVE INFRARED
PNL	PANELBOARD
P/O	PART OF
PV	PHOTOVOLTAIC
PVC	POLY-VINYL CHLORIDE
REC	RECEPTACLE
RECEPT	
REF	REFRIGERATOR
RF	RETURN FAN
RGS	RIGID GALVANIZED STEEL
RM	ROOM
RMC	RIGID METAL CONDUIT
RTU	ROOFTOP UNIT
REF	REFRIGERATOR
SF	SUPPLY FAN
ST	SHUNT TRIP
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 OF PROPERLY
(ER)	RELOCATED ITEM AT NEW LOCATION
(RL)	REMOVE AND RELOCATE

A1	ABBREVIATIONS

W
E — TELEPHONE WALL OUTLET, 44" AFF UNO

TELEPHONE OUTLET FOR ELEVATOR CONNECTION

TELEPHONE OUTLET, 18" AFF UNO

TEL/DATA OUTLET, 18" AFF UNO

DATA OUTLET, 18" AFF UNO

WA — WIRELESS ACCESS POINT CEILING MOUNTED

WA — WIRELESS ACCESS POINT WALL MOUNTED

TECHNOLOGY GENERAL NOTES

1. DIVISION 26 SHALL PROVIDE BOXES AND CONDUITS WITH PULL STRINGS AS INDICATED. CABLING AND TERMINATIONS SHALL BE BY OWNER.
2. FOR EACH TECHNOLOGY OUTLET, PROVIDE A 2-GANG BOX WITH 1-GANG ADAPTER. PROVIDE A 1" CONDUIT FROM EACH OUTLET BOX TO 6" ABOVE THE NEAREST ACCESSIBLE CEILING THAT IS CONTIGUOUS TO A J-HOOK OR CABLE TRAY PATHWAY.

F3	TECHNOLOGY

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, WIRED TO FACP

S — SMOKE DETECTOR, WIRED TO FACP

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

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

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

CO S SS — SINGLE/MULTI-STATION SMOKE/CARBON MONOXIDE DETECTOR WITH AUDIBLE/VISIBLE INDICATING APPLIANCE, CEILING MOUNTED

SS CO S — SINGLE/MULTI-STATION SMOKE/CARBON MONOXIDE DETECTOR WITH AUDIBLE INDICATING APPLIANCE, WALL MOUNTED

H — HEAT DETECTOR, WIRED TO FACP

H E — HEAT DETECTOR, "E" INDICATES CONNECTION FOR ELEVATOR RECALL, WIRED TO FACP

D — DUCT SMOKE DETECTOR, WIRED TO FACP

GD — GAS DETECTOR, WIRED TO FACP

G — GAS VALVE, WIRED TO FACP

F — FLAME DETECTOR, WIRED TO FACP

RTS 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, WALL MOUNTED CANDELA AS NOTED ON PLANS, WIRED TO FACP

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

F — STROBE ONLY INDICATING APPLIANCE, WALL MOUNTED, CANDELA AS NOTED ON PLANS, WIRED TO FACP

F — STROBE ONLY INDICATING APPLIANCE, CEILING MOUNTED, CANDELA AS NOTED ON PLANS, WIRED TO FACP

R F — STROBE ONLY INDICATING APPLIANCE, CEILING MOUNTED, CANDELA AS NOTED ON PLANS, 120V, CONNECT TO OPERATE UPON ACTIVATION OF ROOM SMOKE DETECTOR

R F — STROBE ONLY INDICATING APPLIANCE, WALL MOUNTED, CANDELA AS NOTED ON PLANS, 120V, CONNECT TO OPERATE UPON ACTIVATION OF ROOM SMOKE DETECTOR

M — MINI HORN, WALL MOUNTED, WIRED TO FACP

M — MINI HORN, CEILING MOUNTED, WIRED TO FACP

F F — HORN/STROBE WITH PULL STATION DIRECTLY BELOW

MD — MAGNETIC DOOR HOLD OPEN DEVICE, WIRED TO FACP

T — TRANSFORMER

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

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

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

P — SPRINKLER SYSTEM PRE-ACTION VALVE, FURNISHED AND INSTALLED UNDER DIVISION 21, WIRED TO FACP UNDER DIVISION 26

K — KNOX BOX, MOUNT 60" AFF

SD — SMOKE DAMPER, WIRED TO FACP

FSD — FIRE AND SMOKE DAMPER, WIRED TO FACP HORN/STROBE, CANDELA AS NOTED ON PLANS, WIRED TO FACP

S — SPEAKER/STROBE, WALL MOUNTED, CANDELA AS NOTED ON PLANS, WIRED TO FACP

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

M — MASTER BOX

A3	FIRE ALARM

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 WORK OF DIVISION 26 AND OTHER DIVISIONS. WHERE ELECTRICAL ITEMS ARE REMOVED, REMOVE CONDUIT AND WIRING BACK TO 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 PROJECT REQUIREMENTS. SUCH CHANGES SHALL BE MADE WITHOUT EXTRA CHARGE.
5. ALL ELECTRICAL DEVICES, WHEN INSTALLED, SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. COVER PLATES SHALL BE INSTALLED AFTER FINISH MATERIALS HAVE BEEN APPLIED.
6. COORDINATE ALL WORK WITH OTHER DIVISIONS. VERIFY EXACT POWER REQUIREMENTS OF MECHANICAL EQUIPMENT WITH DIVISION 23. POWER WIRING FOR EQUIPMENT & CONTROL IS TO BE PERFORMED BY DIVISION 26. CONTROL WIRING BY DIVISION 23.

F5	GENERAL NOTES

SINGLE RECEPTACLES

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)#10G 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

20A, 250V, 2P, 3W, NEMA 6-20R

NOTE:

PROVIDE MATCHING CORD AND PLUG FOR SINGLE RECEPTACLES

FLOOR AND CEILING DEVICES

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

P — DUPLEX RECEPTACLE, PEDESTAL MOUNTED

P — SINGLE RECEPTACLE, 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

OVERHEAD RECEPTACLE DROP, DUPLEX

OVERHEAD RECEPTACLE DROP, DOUBLE DUPLEX

OVERHEAD RECEPTACLE DROP, GFCI

PT-1 — 4" POKE-THRU DEVICE, DUAL SERVICE FURNITURE FEED. BASIS OF DESIGN: WIREMOLD AFFATC

PT-2 — 6" POKE-THRU DEVICE, WITH (2) DUPLEX RECEPTACLES AND TEL/DATA AS INDICATED ON PLANS. BASIS OF DESIGN: LEGRAND 6AT SERIES.

F — MULTI-SERVICE FLUSH FLOOR BOX ~ WIREMOLD EFB45 SERIES OR APPROVED EQUAL. COVER SHALL BE FLUSH STYLE WITH FLOOR INSERT. COVER FINISH COLOR SHALL BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD FINISHES.

RECEPTACLES

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

DOUBLE DUPLEX RECEPTACLE

DUPLEX RECEPTACLE, HATCH INDICATES AFCI PROTECTION AND TAMPERPROOF

T — TAMPERPROOF DUPLEX RECEPTACLE

GFCI DUPLEX RECEPTACLE, MOUNT 44" AFF UNO

GFCI DOUBLE DUPLEX RECEPTACLE, MOUNT 44" AFF UNO

EWC — GFCI RECEPTACLE FOR ELECTRIC WATER COOLER - COORDINATE LOCATION WITH DIVISION 22.

WP — GFCI RECEPTACLE WITH WEATHERPROOF COVER

WP — GFCI RECEPTACLE IN WP ENCLOSURE ON ROOF

MULTI-OUTLET STRIP, PROVIDE OUTLETS 24" OC UNO, MOUNT 48" AFF UNO

SURFACE RACEWAY WITH DIVIDER, MOUNT 44" AFF UNO. PROVIDE NEMA 5-20 RECEPTACLES AND TECHNOLOGY OUTLETS AS SHOWN ON PLAN

NOTES:

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

A5	RECEPTACLES

NOTE

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

PANELBOARD ~ SURFACE MOUNTED

PANELBOARD ~ FLUSH MOUNTED

FUSED DISCONNECT SWITCH

NON-FUSED DISCONNECT SWITCH

00 — MOTOR STARTER ~ NUMBER INDICATES NEMA SIZE

00 — COMBINATION MOTOR STARTER/FUSED DISCONNECT

MOTOR OR FAN

M — METER AND CABINET

J — JUNCTION BOX ~ CEILING MOUNTED

J — JUNCTION BOX ~ WALL MOUNTED

F J — JUNCTION BOX ~ FLUSH FLOOR MOUNTED

P J — JUNCTION BOX ~ PEDESTAL MOUNTED

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

S — SHUT-OFF SWITCH

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 — POWER POLE

PUSHBUTTON

C — DOORBELL CHIME

F — SYSTEMS FURNITURE WHIP, DUAL SERVICE, WALL MOUNTED

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

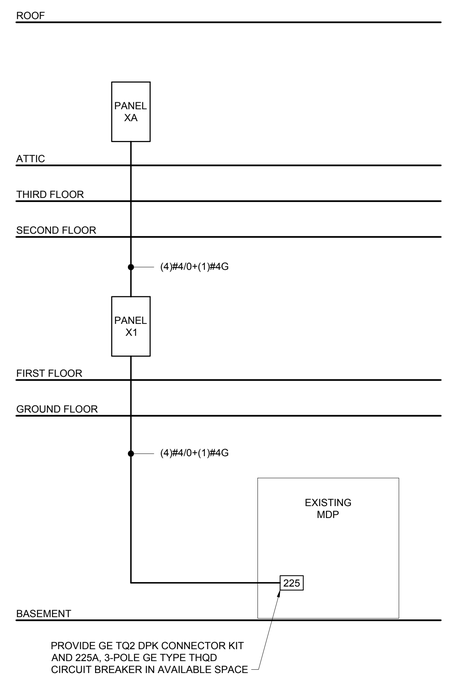
CB — ENCLOSED CIRCUIT BREAKER

ATS — AUTOMATIC TRANSFER SWITCH

H — HAND DRYER, COORDINATE HEIGHT WITH ARCHITECTURAL PLANS

SF — SYSTEMS FURNITURE FEED

A7	POWER DISTRIBUTION



PROVIDE GE TQ2 DPK CONNECTOR KIT AND 225A, 3-POLE GE TYPE THQD CIRCUIT BREAKER IN AVAILABLE SPACE

A9	POWER RISER DIAGRAM
NO SCALE	

160 Veranda Street
Portland, Maine 04103
T: 207.221.2260
F: 207.221.2266
Web: www.allied-eng.com

Allied Engineering
Structural Mechanical Electrical Commissioning

STATE OF MAINE
CATHERINE A. FAUCHER
No. 7575
REGISTERED PROFESSIONAL ENGINEER

REVISIONS

DESCRIPTION	DATE	BY	NUMBER

Date: DECEMBER 22, 2017
Drawn By: GMC
Checked By: SRM
Project Mgr: ASD
Project No: 17051
Cad File: 17051E.DWG
Graphic Scale: 0 1"

ELECTRICAL LEGENDS, ABBREVIATIONS, NOTES, AND RISER DIAGRAM

AIR CONDITIONING AND HEATING UPGRADES
CUMBERLAND COUNTY COURTHOUSE
142 FEDERAL STREET, PORTLAND, MAINE

E-000