ELECTRICAL SYMBOLS LIST

LIGHTING SYMBOLS

- 2'x4'/2'x2' RECESSED FLUORESCENT CEILING MOUNTED FIXTURE
  'A' = FIXTURE TYPE
  'a' = CONTROLLED BY SWITCH 'a'
- SIMILAR TO ABOVE, EXCEPT WIRED TO LIFE SAFETY CIRCUIT
  'A' = FIXTURE TYPE
- SIMILAR TO ABOVE, EXCEPT WIRED CRITICAL POWER CIRCUIT
  'A' = FIXTURE TYPE
- WALL MOUNTED FLUORESCENT LIGHT FIXTURE
  'A' = FIXTURE TYPE
  'a' = CONTROLLED BY SWITCH 'a'
- FLUORESCENT STRIP FIXTURE-TYPE AS NOTED
  'A' = FIXTURE TYPE
  'a' = CONTROLLED BY SWITCH 'a'
  EM = EMERGENCY BACKUP
- UNDERCABINET LIGHT FIXTURE
  'A' = FIXTURE TYPE
- RECESSED CEILING MOUNTED FIXTURE
  'A' = FIXTURE TYPE
  'a' = CONTROLLED BY SWITCH 'a'
- SIMILAR TO ABOVE, EXCEPT WIRED TO LIFE SAFETY CIRCUIT
  'A' = FIXTURE TYPE
- WALL MOUNTED LIGHT FIXTURE
  'A' = FIXTURE TYPE
  'a' = CONTROLLED BY SWITCH 'a'
- SIMILAR TO ABOVE, EXCEPT WIRED TO LIFE SAFETY CIRCUIT
  'A' = FIXTURE TYPE
- ACCENT LIGHT OR WALL WASHER
  'A' = FIXTURE TYPE
  'a' = CONTROLLED BY SWITCH 'a'
- SIMILAR TO ABOVE, EXCEPT WIRED TO LIFE SAFETY CIRCUIT
  'A' = FIXTURE TYPE
- CEILING MOUNTED EXIT LIGHT; TYPE 'A' - DIRECTIONAL ARROWS WHERE INDICATED - SHADED AREAS INDICATE ILLUMINATED FACE/FACES
- WALL MOUNTED EXIT LIGHT; TYPE 'A' - DIRECTIONAL ARROWS WHERE INDICATED - SHADED AREAS INDICATE ILLUMINATED FACE/FACES

POWER SYMBOLS

- SINGLE POLE SWITCH
  2 = DOUBLE POLE
  3 = THREE-WAY
  4 = FOUR-WAY
  a = CONTROLLING OUTLET 'a'
  D = DOOR
  K = KEY OPERATED
  MO = MOMENTARY CONTACT
  T = TIME SWITCH
  P = PILOT LIGHT
- DISCONNECT SWITCH - TOGGLE TYPE
  MOTOR RATED, 20A, 1P, U.O.N.
- WALL DIMMER - TYPE "A"
  NUMBER INDICATES WATTAGE RATING
- OCCUPANCY SENSOR, CEILING MOUNTED (WATTSTOPPER #DT-300 / SENSOR SWITCH #CMR-PDT-P)
- OCCUPANCY SENSOR, WALL MOUNTED (WATTSTOPPER #DW-100 / SENSOR SWITCH #WSD-PDT-P)
  a,b = DUAL RELAY (WATT STOPPER #DW-200 / SENSOR SWITCH #WSD-PDT-2P-P)
- OCCUPANCY SENSOR, WALL MOUNTED PROVIDE WATTSTOPPER #DT-205
  H =OCCUPIED/UNOCCUPIED CONTROL OF HVAC SYSTEM WITHIN ROOM
- PHOTO CONTROL SWITCH
- TRANSFORMER
- 20A, 125V DUPLEX RECEPTACLE - FLUSH WALL MOUNTED
  XP = EXPLOSION PROOF
  CR = WIRED TO CRITICAL POWER SYSTEM
  PX = CONNECTION TO PYXIS MACHINE
  TV = CONNECTION TO TELEVISION
  MN = CONNECTION TO MONITOR
  REF = CONNECTION TO REFRIGERATOR
  UCR = CONNECTION TO UNDERCOUNTER REFRIGERATOR
  FZR = CONNECTION TO FREEZER
  A / B / C = INDICATES FEED FROM ISOLATION PANEL SERVING ROOM
- 20A, 125V QUADRUPLEX RECEPTACLE - FLUSH WALL MOUNTED
- 20A, 125V DUPLEX RECEPTACLE FLUSH WALL MOUNTED. GFI TYPE.
- SINGLE RECEPTACLE - FLUSH WALL MOUNTED
  WC = WATER COOLER
  XR = X-RAY
- SPECIAL PURPOSE RECEPTACLE - FLUSH WALL MOUNTED
  A = INDICATES TYPE
- PREWIRED SURFACE METAL RACEWAY - LETTERS INDICATES TYPE PROVIDE SPECIAL PURPOSE RECEPTACLES & DATA OUTLETS WHERE INDICATED
  AL1 = WIREMOLD MODEL #ALA3800 WITH RECEPTACLES 24" O.C.
  AL2 = WIREMOLD MODEL #ALA4800 WITH RECEPTACLES 24" O.C.
  GFI = PROVIDED WITH GFI TYPE RECEPTACLES
- FLUSH FLOOR MOUNTED MULTI-SERVICE FIRE RATED POKE-THRU WITH (4) 20A-125V RECEPTACLES AND (4) PROVISIONS FOR TEL/DATA DEVICES. HUBBELL #S1PTAVFIT WITH #S1SP FACE PLATE (FINISH BY ARCHITECT) OR APPROVED EQUAL
- PEDESTAL MOUNTED 20A, 125V DUPLEX RECEPTACLE
- PEDESTAL MOUNTED 20A, 125V QUADRUPLEX RECEPTACLE
- PEDESTAL MOUNTED JUNCTION BOX OR POKE-THRU FOR ELECTRIFIED FURNITURE POWER FEED.
- PEDESTAL MOUNTED SPECIAL PURPOSE RECEPTACLE
  LETTER INDICATES TYPE
- HOMERUN-NUMERAL WHERE USED INDICATES CIRCUIT NUMBER FOR REFERENCE ONLY.
  2#12+1#12G-3/4"C FOR ONE CKT. HOMERUN, U.O.N.
  4#12+1#12G-3/4"C FOR TWO CKT. HOMERUN, U.O.N.
  6#12+1#12G-3/4"C FOR THREE CKT. HOMERUN, U.O.N.
- HOMERUN - NUMERAL WHERE USED INDICATES CIRCUIT NUMBER FOR REFERENCE ONLY

- MOTOR CONTROLLER
- COMBINATION MOTOR CONTROLLER AND DISCONNECT SWITCH
  SWITCH AMPS/# OF POLES, VOLTAGE RATING AS REQUIRED
- UNFUSED DISCONNECT SWITCH
  SWITCH AMPS/# OF POLES, VOLTAGE RATING AS REQUIRED
- FUSED DISCONNECT SWITCH; SWITCH AMPS/FUSE AMPS/ # OF POLES, VOLTAGE RATING AS REQUIRED
- ENCLOSED CIRCUIT BREAKER
  TRIP AMPS/# OF POLES, VOLTAGE RATING AS REQUIRED
- SURFACE MOUNTED LIGHTING PANELBOARD
- FLUSH MOUNTED LIGHTING PANELBOARD
- SURFACE MOUNTED POWER PANELBOARD
- FLUSH MOUNTED POWER PANELBOARD
- SURFACE MOUNTED POWER DISTRIBUTION PANELBOARD
- CEILING MOUNTED JUNCTION BOX WITH FINAL EQUIPMENT CONNECTION
- FLUSH WALL MOUNTED JUNCTION BOX WITH FINAL EQUIPMENT CONNECTION
- FLUSH FLOOR MOUNTED JUNCTION BOX
- CONNECTION TO AUTOMATIC DOOR
- CONNECTION TO SURGICAL LIGHT
- CONNECTION TO FIRE/SMOKE DAMPER
- CONNECTION TO SCRUB SINK
- CONNECTION TO AUTOMATIC TEMPERATURE CONTROL
- PULLBOX
- POWER POLE
- EXISTING CONDUIT TO BE REMOVED
- EXISTING CONDUIT/EQUIPMENT TO REMAIN
- NEW CONCEALED CONDUIT
- NEW EXPOSED CONDUIT
- NEW UNDERGROUND/IN SLAB CONDUIT
- CONDUIT TURNING UP
- CONDUIT TURNING DOWN
- CONDUIT STUB-UP WITH FLEXIBLE EQUIPMENT CONNECTION
- FLEXIBLE EQUIPMENT CONNECTION
- CAPPED CONDUIT

SINGLE LINE DIAGRAM SYMBOLS

- POWER TRANSFORMER
  VOLTAGES, WINDINGS AND SIZE AS INDICATED
- AUTOMATIC TRANSFER SWITCH
  ATS = AUTOMATIC TRANSFER
  MTS = MANUAL TRANSFER
  POLES AND RATING AS NOTED
- MOTOR
- GENERATOR
- GROUND CONNECTION
- DIGITAL MULTIMETER

FIRE ALARM SYSTEM

- CEILING MOUNTED SPACE SMOKE DETECTOR
  E = FOR ELEVATOR RECALL
- REMOTE SPACE SMOKE DETECTOR
  ALARM LIGHT - WALL MOUNTED
- DUCT SMOKE DETECTOR
- THERMAL DETECTOR RATE-OF-RISE
  F = FIXED TEMPERATURE
- SPRINKLER WATER FLOW SWITCH
- SPRINKLER TAMPER SWITCH
- SPRINKLER PRESSURE SWITCH
- MOTORIZED SMOKE DAMPER, FBO
- FIRE ALARM PULL STATION
- COMBINATION FIRE ALARM SPEAKER AND STROBE LIGHT UNIT - FLUSH WALL MOUNTED
- FIRE ALARM SPEAKER - FLUSH WALL MOUNTED
  C = CEILING MOUNTED
- COMBINATION FIRE ALARM HORN AND STROBE LIGHT UNIT - FLUSH WALL MOUNTED
- FIRE ALARM HORN - FLUSH WALL MOUNTED
  C = CEILING MOUNTED
- FIRE ALARM MONITOR MODULE
- FIRE ALARM CONTROL MODULE
- DOOR HOLDERS
- ELEVATOR RECALL TIE-IN POINT
- ELECTROMAGNETIC DOOR RELEASE
- FLUSH WALL MOUNTED STROBE LIGHT UNIT
- FIRE ALARM ANNUNCIATOR PANEL
- FIRE ALARM CONTROL PANEL

ELECTRICAL CONTRACTOR SHALL PREPARE A SEPERATE ITEMIZED COST ESTIMATE TO INSTALL AN EMPTY CONDUIT SYSTEM IN LEU OF NURSE CALL DEVICES SHOWN. THIS COST SHALL BE IDENTIFIED AS "ELECTRICAL DEDUCT ALTERNATE #1".

VOICE/DATA/P.A. SYMBOLS

- WALL MOUNTED PUBLIC ADDRESS SPEAKER
- CEILING MOUNTED PUBLIC ADDRESS SPEAKER
- VOICE & DATA OUTLET LOCATION WITH 3/4" CONDUIT TERMINATED IN A 90 DEG. BEND 6" INTO NEAREST ACCESSIBLE CEILING
- VOICE OUTLET LOCATION WITH 3/4" CONDUIT TERMINATED IN A 90 DEG. BEND 6" INTO NEAREST ACCESSIBLE CEILING
  W = WALL PHONE, MOUNTED 48" AFF
- DATA OUTLET LOCATION WITH 3/4" CONDUIT TERMINATED IN A 90 DEG. BEND 6" INTO NEAREST ACCESSIBLE CEILING
- TELEVISION OUTLET LOCATION WITH 3/4" CONDUIT TERMINATED IN A 90 DEG. BEND 6" INTO NEAREST ACCESSIBLE CEILING
- PEDESTAL MOUNTED VOICE OUTLET
- VOICE OUTLET - FLUSH FLOOR MOUNTED
- PEDESTAL MOUNTED DATA OUTLET
- DATA OUTLET - FLUSH FLOOR MOUNTED
- PEDESTAL MOUNTED DATA AND VOICE OUTLET
- DATA AND VOICE OUTLET - FLUSH FLOOR MOUNTED
- CARD READER LOCATION WITH 3/4" CONDUIT TERMINATED IN A 90 DEG. BEND 6" INTO NEAREST ACCESSIBLE CEILING.
- MONITOR OUTLET LOCATION WITH 3/4" CONDUIT TERMINATED IN A 90 DEG. BEND 6" INTO NEAREST ACCESSIBLE CEILING

HEALTHCARE SYMBOLS (BASE BID)

- NURSE CALL MASTER STATION, RAULAND-BORG #R4K4020
  S = SLAVE STATION
- NURSE CALL STATIENT STATION, RAULAND-BORG #R4K12A WITH #GENI PILOW SPEAKER
  SA = COMBINED PATIENT STATION AND STAFF ASSIST RAULAND-BORG #R4K14SA
- NURSE CALL PATIENT STATION (2 BED), RAULAND-BORG #R4K23VA
- NURSE CALL EMERGENCY STATION, RAULAND-BORG #R4KPB11
- NURSE CALL LAVATORY STATION, RAULAND-BORG #R4KPC10
  S = GASKETED SHOWER STATION
- NURSE CALL DUTY STATION, RAULAND-BORG #R4KDY
- NURSE CALL STAFF ASSIST STATION, RAULAND-BORG #R4KPB11
- NURSE CALL CODE BLUE STATION, RAULAND-BORG #R4KCB12
  SA = COMBINATION CODE BLUE & STAFF ASSIST, RAULAND-BORG #R4KPB22
- NURSE CALL EQUIPMENT CABINET-SURFACE MOUNTED
  F = FLUSH WALL MOUNTED
- NURSE CALL CORRIDOR LAMP, WALL MOUNTED, RAULAND-BORG #CLA244
  CLG = CEILING MOUNTED
- NURSE CALL ZONE LAMP, WALL MOUNTED, NUMBER OF LAMP SECTIONS EQUAL TO NUMBER OF COLORS IN ASSOCIATED CORRIDOR LAMPS.
- NURSE CALL ZONE LAMP, CEILING MOUNTED, NUMBER OF LAMP SECTIONS EQUAL TO NUMBER OF COLORS IN ASSOCIATED CORRIDOR LAMPS.
- PHYSIOLOGICAL MONITORING - COMBINATION POWER/SIGNAL 2 GANG PARTITIONED WALLBOX WITH A DUPLEX RECEPTACLE AND 3/4"C (1.5"C AT NURSE'S STATION) TERMINATED IN A 90° BEND 6" INTO ACCESSIBLE CEILING
  FM = FETAL MONITOR
- NURSE CALL 35 PIN CONNECTOR.
- NURSE CALL LIGHTING RELAY (COORDINATE ALL REQUIREMENTS WITH LIGHTING MANUFACTURER AND NURSE CALL VENDOR)
- NURSE CALLTELEVISION RELAY (COORDINATE ALL REQUIREMENTS WITH TELEVISION MANUFACTURER AND NURSE CALL VENDOR)
- NURSE CALL SPEAKER, RAULAND-BORG #ACC1403 WITH ACC1101 BACK BOX AND #ACC1104 SUPPORT
- LINE ISOLATION MONITOR
  A/B = ROOM PANEL BEING MONITORED
- ISOLATED X-RAY OUTLET AND ALARM INDICATOR 50A-3P OUTLET, COORDINATE NEMA CONFIGURATION WITH USERS AND EQUIPMENT REQUIREMENTS. SQUARE D #XR1A1
- POWER MODULE WITH (4) 20A HOSPITAL GRADE RECEPTACLES- SQUARE D #RM1204NI
- POWER MODULE WITH (4) 20A HOSPITAL GRADE RECEPTACLES- SQUARE D #RMDR1204NI

MISCELLANEOUS SYMBOLS

- PUSH PLATE (FURNISHED BY OTHERS, WIRED BY ELECTRICAL CONTRACTOR)
- INTENSITY CONTROL (FURNISHED BY OTHERS, WIRED BY ELECTRICAL CONTRACTOR)
- EMERGENCY POWER OFF BUTTON
- SHUNT TRIP DEVICE FOR ENCLOSED CIRCUIT BREAKER
- EQUIPMENT DESIGNATION. REFER TO EQUIPMENT VENDOR DRAWINGS FOR ADDITIONAL INFORMATION.

ELECTRICAL ABBREVIATIONS

*	SPECIAL MOUNTING HEIGHT. COORDINATE LOCATION WITH ARCHITECTURAL ELEVATIONS
1P	SINGLE POLE
2P	TWO POLE
3P	THREE POLE
A	AMPERE
AC	ABOVE COUNTER
ACB	AIR CIRCUIT BREAKER
AFF	ABOVE FINISHED FLOOR
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
ALM	ALARM
AMM	AMMETER
AQST	AQUASTAT
ARF	ABOVE RAISED FLOOR
ASYM	ASYMMETRICAL
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAUGE
BG	BREAK GLASS SWITCH
BIL	BASIC IMPULSE LEVEL
BLDG	BUILDING
C	CONDUIT
CAB	CABINET
CAT	CATALOG
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CL	CENTER LINE
CLG	CEILING
CLOS	CLOSET
CO	CONDUIT ONLY
COMM	COMMUNICATION
CONN	CONNECTED
CONT	CONTINUATION
CT	CURRENT TRANSFORMER
CTL	CONTROL
CU	COPPER
CUH	CABINET UNIT HEATER
DB	DECIBEL
DE	DOUBLE ENDED SUBSTATION
DEG	DEGREE
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DISC	DISCONNECT
DIV	DIVISION
DN	DOWN
DP	DISTRIBUTION PANEL BOARD
DT	DUST TIGHT
DWG	DRAWING
°C	DEGREE CELSIUS
°F	DEGREE FAHRENHEIT
(E)	EXISTING TO REMAIN
(ER)	EXISTING TO BE REMOVED
(ERR)	EXISTING TO BE REMOVED AND RELOCATED
E.C.	EMPTY CONDUIT
EA	EACH
EC	ELECTRICAL CONTRACTOR
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMER,EM	EMERGENCY
EQUIP	EQUIPMENT
ERC	ELECTRIC REHEAT COIL
EWC	ELECTRIC WATER COOLER
EXIST,EX	EXISTING
EXT	EXTERIOR
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FAP	FIRE ALARM ANNUNCIATOR PANEL
FBO	FURNISHED BY OTHER DIVISION OF WORK
FCU	FAN COIL UNIT
FDR	FEEDER
FDS	FUSED DISCONNECT SWITCH
FIXT	FIXTURE
FL	FL
FLA	FULL LOAD AMPERES
FLEX	FLEXIBLE
FLUOR	FLUORESCENT
FM	FLOOR MACHINE
FRZ	FREEZER
FSP	FAN SHUTDOWN PANE;
FT	FEET OR FOOT
G	GROUND
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
HC	HUNG CEILING
HH	HAND HOLE
HID	HIGH INTENSITY DISCHARGE
HN	HALF NEUTRAL
HP	HORSE POWER
HV	HIGH VOLTAGE
HZ	HERTZ
IC	INTERRUPTING CAPACITY
ID	INSIDE DIAMETER
IG	ISOLATED GROUND
INCAND	INCANDESCENT
INST	INSTRUMENT
IPC	ISOLATED POWER CENTER
IPX	ISOLATED POWER CENTER X-RAY
JB	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATT
KWH	KILOWATT HOUR
LCP	LOCAL CONTROL PANEL
LIM	LINE ISOLATION MONITOR
LTG	LIGHTING
MAP	MECHANICAL ALARM PANEL
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPERES
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MER	MECHANICAL EQUIPMENT ROOM
MFS	MAIN FUSED SWITCH
MH	MANHOLE
MIC	MICROPHONE
MIN	MINIMUM
MLO	MAIN LUG ONLY
MOPD,MOCP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
MUFS	MAIN UNFUSED SWITCH
N	NEUTRAL
NIC	NOT IN CONTRACT
NO	NORMALLY CLOSED
NO	NORMALLY OPEN
NP	NETWORK PROTECTOR
NTS	NOT TO SCALE
OC	ON CENTER
OCB	OIL CIRCUIT BREAKER
OD	OUTSIDE DIAMETER
P	POLE
PA	PUBLIC ADDRESS
PAP	PLUMBING ALARM PANEL
PB	PULL BOX
PBS	PUSH BUTTON SWITCH
PHC	PIPE HEATING CABLE
PNL	PANEL
PR	PRINTER
PS	PRESSURE SWITCH
PT	POTENTIAL TRANSFORMER
PWR	POWER
ø	PHASE
(RE)	RELOCATED EXISTING
(RRO)	EXISTING TO BE REMOVED AND RETURN TO OWNER
RCS	REMOTE CONTROL SWITCH
RDCP	REMOTE DATA COLLECTION PANEL
RECEPT,REC	RECEPTACLE
REF	REFRIGERATOR
REQ	REQUIRED
RFL	RAISED FLOOR
RG	ROOM GROUND POINT
RM	ROOM
RO	RACEWAY ONLY
RP	REFERENCE GROUND POINT
SAP	SPRINKLER ALARM PANEL
SBST	SUBSTATION
SCHED,SCH	SCHEDULE
SD	SMOKE DETECTOR
SDP	SMOKE DETECTION PANEL
SE	SINGLE ENDED SUBSTATION
SECT	SECTION
SIG	SIGNAL
SN	SOLID NEUTRAL
SP	SINGLE POLE
SPEC	SPECIFICATION
SPKLR	SPRINKLER
SPKR	SPEAKER
SV	SOLENOID VALVE
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYM	SYMMETRICAL
SYS	SYSTEMS
TB	TROUBLE BELL
TBD	TO BE DETERMINED
TEL	TELEPHONE
TEMP	TEMPERATURE
THERM	THERMOSTAT
TLBD	TERMINAL BOARD
TP	TAMPER PROOF
TRANSF,XFMR	TRANSFORMER
TS	TAMPER SWITCH
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL
UFD	UNDERFLOOR DUCT
UH	UNIT HEATER
UNF	UNFUSED
UON	UNLESS OTHERWISE NOTED
V	VOLT OR VOLTAGE
VA	VOLT AMPERE
VP	VAPORPROOF
WFD	VARIABLE FREQUENCY DRIVE
WM	VOLTMETER
W	WATT
WFS	WATERFLOW SWITCH
WHM	WATT HOUR METER
WP	WEATHERPROOF
WT	WATERTIGHT
XP	EXPLOSION PROOF

ELECTRICAL GENERAL NOTES

1. GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL ELECTRICAL DRAWINGS.
2. ALL WORK IS NEW UNLESS OTHERWISE NOTED.
3. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS. MAINTAIN HEADROOM AND SPACE CONDITIONS.
4. SECURE ALL SUPPORTS TO BUILDING STRUCTURE UTILIZING TOGGLE BOLTS (HOLLOW MASONRY), EXPANSION SHIELDS OR INSERTS (CONCRETE AND BRICK), MACHINE SCREWS (METAL), BEAM CLAMPS (FRAMEWORK), WOOD SCREWS (WOOD) OR PAN THRU STRAPS (METAL DECK). NAILS, RAWL PLUGS AND WOOD PLUGS ARE NOT PERMITTED. WHERE REQUIRED BY STRUCTURE, PROVIDE THRU BOLTS AND FISH PLATES. SUPPORT HORIZONTAL RUNS OF METALLIC RACEWAYS NOT MORE THAN 10 FT APART. SUPPORT RACEWAY RISERS AT EACH FLOOR LEVEL. RUN EXPOSED RACEWAYS PARALLEL WITH OR AT RIGHT ANGLES TO WALLS.
5. PASS RACEWAYS OVER WATER, STEAM OR OTHER PIPING WHEN PULL BOXES ARE NOT REQUIRED. NO RACEWAY WITHIN 3 INCHES OF STEAM OR HOT WATER PIPES OR APPLIANCES (EXCEPT PIPE CROSSINGS WHERE RACEWAY SHALL BE AT LEAST 1 INCH FROM PIPE COVERS).
6. CUT CONDUIT ENDS SQUARE. REAM SMOOTH. PAINT MALE THREAD OF FIELD THREADED RACEWAYS WITH GRAPHITE BASE PIPE COMPOUND. DRAW UP TIGHT WITH RACEWAY COUPLING.
7. HORIZONTAL OR CROSS RUNS IN PARTITIONS AND WALLS ARE NOT PERMITTED. DO NOT RUN CONDUIT IN PRECAST ROOF SLABS, IN 2 INCH SLABS OR IN TERRAZZO FLOOR FINISH.
8. LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS. RACEWAYS OVER 10 FT LONG IN WHICH WIRING IS NOT INSTALLED. FURNISH FISH WIRE.
9. SET BOXES SQUARE AND TRUE WITH BUILDING FINISH. ERECT WALL AND SWITCH OUTLETS IN ADVANCE OF FURRING AND FIREPROOFING. SECURE TO BUILDING STRUCTURE BY ADJUSTABLE STRAP IRONS.
10. VERIFY LOCATIONS OF OUTLETS AND SWITCHES IN FINISHED ROOMS WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISH. IN CENTERING OUTLETS AND LOCATING BOXES AND OUTLETS, ALLOW FOR OVERHEAD PIPES, DUCTS AND MECHANICAL EQUIPMENT, VARIATIONS IN FIREPROOFING AND PLASTERING, WINDOW AND DOOR TRIM, PANELING, HUNG CEILINGS AND THE LIKE. CORRECT ANY INACCURACY RESULTING FROM FAILURE TO DO SO WITHOUT EXPENSE TO OWNER.
11. LOCATIONS INDICATED FOR LOCAL WALL SWITCHES ARE SUBJECT TO MODIFICATIONS AT OR NEAR DOORS. COORDINATE WITH ARCHITECT AND INSTALL SWITCH ON SIDE OPPOSITE HINGE. VERIFY FINAL HINGE LOCATIONS IN FIELD PRIOR TO SWITCH OUTLET INSTALLATION.
12. COVERS OF JUNCTION AND PULLBOXES SHALL BE READILY ACCESSIBLE.
13. PROVIDE PULLBOXES WHERE INDICATED, WHERE REQUIRED BY CODE AND WHEREVER NECESSARY TO FACILITATE PULLING OF WIRE. COORDINATE PULLBOX LOCATIONS WITH OTHER TRADES.
14. EMPTY RACEWAY RUNS: PROVIDE PULLBOXES EVERY 100 FT AND AS INDICATED. COORDINATE LOCATIONS WITH OTHER TRADES.
15. JUNCTION AND PULLBOXES: LOCATE GENERALLY NOT EXPOSED IN FINISHED SPACES. WHERE NECESSARY, REROUTE RACEWAYS OR MAKE OTHER ARRANGEMENTS FOR CONCEALMENT.
16. SUPPORT PANEL, JUNCTION AND PULLBOXES INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON RACEWAYS.
17. ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.
18. CONNECT CONDUIT TO MOTOR CONDUIT TERMINAL BOXES WITH FLEXIBLE CONDUIT (MINIMUM 18 IN. LENGTH AND 50% SLACK). DO NOT TERMINATE IN OR FASTEN RACEWAYS TO MOTOR FOUNDATION.
19. PROVIDE 2#14 INDICATING PILOT LIGHT WIRES FROM PILOT LIGHT IN CONTROLLER TO LOAD SIDE OF DISCONNECT SWITCH. RUN WIRES IN BRANCH CIRCUIT CONDUIT AND INCREASE CONDUIT SIZE AS REQUIRED.
20. PULL NO THERMOPLASTIC WIRES AT TEMPERATURES LOWER THAN 32°F (0C). PROVIDE CABLE SUPPORTS FOR WIRE IN RISER CONDUITS AS REQUIRED BY CODE.
21. PROVIDE SEPARATE RACEWAYS FOR CONDUCTORS OF NORMAL AND EMERGENCY CIRCUITS. COMMON BOXES: PROVIDE BARRIERS BETWEEN EMERGENCY AND NORMAL WIRING.
22. HEIGHTS OF OUTLETS FROM FINISHED FLOOR TO CENTERLINE OF OUTLET:

RECEPTACLES AND TELEPHONES:	
GENERALLY	1'-6"
OVER WORK BENCHES	3'-6"
WALL SWITCHES	4'-0"
WALL FIXTURES	7'-0"
MOTOR CONTROLLERS	5'-0"
GONGS AND HORNS	7'-6"
FIRE ALARM STATIONS	4'-0"
CLOCKS	7'-6"
STROBE LIGHTS	6'-8" TO BOTTOM

    EXCEPTIONS: AT JUNCTION OF DIFFERENT WALL FINISH MATERIALS, ON MOLDING OR BREAK IN WALL SURFACE, IN VIOLATION OF CODE REQUIREMENTS, AS NOTED OR DIRECTED.

    CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND CONFIRMING ALL MOUNTING HEIGHTS WITH ARCHITECT AND ARCHITECTURAL DRAWINGS.
23. WIRE COLOR CODING: AS PER CODE. WHERE COLOR-CODED CABLE IS NOT AVAILABLE, CERTIFY IN WRITING AND REQUEST PERMISSION FOR OVERLAP COLOR TAPING OF CONDUCTORS (MINIMUM LENGTH 6"). IN ACCESSIBLE LOCATIONS. COLOR CODING, ONCE SELECTED, MUST BE USED CONSISTENTLY FOR THE ENTIRE PROJECT.
24. INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH MINIMUM INTERFERENCE TO EXISTING FACILITIES. TEMPORARY SHUTDOWNS: ONLY WITH WRITTEN CONSENT OF OWNER. MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES. ALARM AND EMERGENCY SYSTEMS ARE NOT TO BE INTERRUPTED.
25. FIRESTOPPING SHALL BE INSTALLED WHENEVER WIRING OR RACEWAYS CROSS FIRE RATED CONSTRUCTION.

ELECTRICAL DRAWING LIST

DRAWING No.	DRAWING TITLE
E00-01	ELECTRICAL COVER SHEET
E01-0B	ELECTRICAL BASEMENT LIGHTING DEMOLITION PLAN
E02-0B	ELECTRICAL BASEMENT POWER DEMOLITION PLAN
E03-0B	ELECTRICAL BASEMENT LIGHTING PLAN
E04-0B	ELECTRICAL BASEMENT POWER PLAN
E04-02	ELECTRICAL LEVEL 2 POWER PLAN
E05-0B	ELECTRICAL BASEMENT FIRE ALARM PLAN
E06-0B	ELECTRICAL BASEMENT NURSE CALL PLAN
E07-00	ELECTRICAL SCHEDULES AND RISER DIAGRAMS SHEET 1 OF 2
E07-01	ELECTRICAL SCHEDULES AND RISER DIAGRAMS SHEET 2 OF 2

DEMOLITION LEGEND:

(NOT ALL ABBREVIATIONS ARE NECESSARILY USED ON THIS PROJECT)

(E) EXISTING TO REMAIN
(ER) EXISTING TO BE REMOVED
(ERR) EXISTING TO BE REMOVED & RELOCATED
(RE) RELOCATED EXISTING
(RRO) EXISTING TO BE REMOVED AND RETURN TO OWNER

EXAMPLE:

(E) (ER) (ERR) (RE) (RRO)

PERKINS + WILL

225 Franklin St., Suite 1100
Boston, MA 02110
t 617.478.0300
f 617.478.0321
www.perkinswill.com

Maine Medical Center
MaineHealth

MEP ENGINEER
AKF GROUP, LLC
99 Bedford Street, 2nd Floor
Boston, MA 02111
t 617.737.1111
f 617.737.4311

STRUCTURAL ENGINEER
SIMPSON GUMPERTZ & HEGER
41 Seyon Street, Building 1, Suite 500
Waltham, MA 02453
t 781.907.9000
f 781.907.9009

Reviewed for Code Compliance
Portland Fire Prevention Division
Approved with Conditions
Date: 10/16/15

HYBRID OR & OR #6

22 Bramhall Street, Portland, Maine 04102

D C A B

STATE OF MAINE
MARK F. RATTENBURY
No. 9122
ELECTRICAL
REGISTERED PROFESSIONAL ENGINEER

Revisions

	ISSUED FOR PERMIT	08.21.2015
1	ADDENDUM 1	08.21.2015
	ISSUED FOR BID	07.31.2015
NO	ISSUE	DATE

Sheet Information

Date	JULY 31, 2015
Job #	B150155-000
Drawn	GN
Checked	MR
Approved	MR

Title

ELECTRICAL COVER SHEET

Sheet

E00-01

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