ABBREVIATIONS

A	AMPERE
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERES INTERRUPTING CAPACITY
AL	ALUMINUM
ASYM	ASYMMETRICAL
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
C	CONDUIT
CAB	CABINET
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CT	CURRENT TRANSFORMER
CU	COPPER
DC	DIRECT CURRENT
DISC	DISCONNECT
EG	EQUIPMENT GROUND
EH	ELECTRICALLY HELD
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EO	ELECTRICALLY OPERATED
EPR	ETHYLENE PROPYLENE RUBBER
EQUIP	EQUIPMENT
EX	EXTERIOR
FA	FIRE ALARM
FC	FOOT–CANDLE
FDR	FEEDER
FLUOR	FLUORESCENT
FS	FLOW SWITCH (FA SYSTEM)
FVNR	FULL VOLTAGE NON REVERSING
FVR	FULL VOLTAGE REVERSING
GEN	GENERATOR
GF	GROUND FAULT
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
H	HAND HOLE
HOA	HAND–OFF–AUTOMATIC
HP	HORSE POWER
HPS	HIGH PRESSURE SODIUM
HV	HIGH VOLTAGE
HZ	HERTZ
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
INCAND	INCANDESCENT
JB	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLT
KVA	KILO VOLT–AMPERE
KW	KILOWATT
KWH	KILOWATT HOUR
LPS	LOW PRESSURE SODIUM
LTG	LIGHTING
LSW	LIGHT SWITCH
LV	LOW VOLTAGE
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTION
MH	METAL HALIDE
EMH	ELECTRICAL MANHOLE
MLO	MAIN LUGS ONLY
MO	MECHANICALLY OPERATED
MOD	MOTOR OPERATED DAMPER
MTS	MANUAL TRANSFER SWITCH
MV	MERCURY VAPOR
MVA	MEGAVOLT–AMPERE
NC	NORMALLY CLOSED
NO	NORMALLY OPENED
OH	OVERHEAD
OL	OVER LOAD
OOA	ON–OFF–AUTOMATIC
OSY	OUTSIDE STEM & YOKE VALVE (FA SYSTEM)
P	POLE
PB	PUSH BUTTON
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
PRI	PRIMARY
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
RGSC	RIGID GALVANIZED STEEL CONDUIT
RVSS	REDUCED VOLTAGE SOLID STATE
RSC	RIGID STEEL CONDUIT
RVAT	REDUCED VOLTAGE AUTO TRANSFORMER
S	SIGNAL
SEC	SECONDARY
SHLD	SHIELDED CABLE
SW	SWITCH
SWBD	SWITCHBOARD
SYM	SYMMETRICAL
T	TELEPHONE
TR	TRANSFORMER
TBD	TO BE DETERMINED
TD	TELEDIALER
TDR	TIME DELAY RELAY
TEL	TELEPHONE
TM	TELEMETRY
UG	UNDERGROUND
UT	UTILITY
V	VOLT
VA	VOLT–AMPERE
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
WH	WATT HOUR
WP	WEATHERPROOF
XFMR	TRANSFORMER
XLP	CROSS LINKED POLYETHYLENE
XP	EXPLOSION PROOF

POWER SYMBOLS

- CIRCUIT BREAKER
- GROUND CONNECTION
- LP1–2 — HOME RUN TO PANEL (CKT. NO. AS SHOWN)
- TRANSFORMER
- CT — CURRENT TRANSFORMER
- PT — POTENTIAL TRANSFORMER
- 20 AMPERE, 120 VOLT DUPLEX RECEPTACLE, +18" AFF
- 20 AMPERE, 120 VOLT DOUBLE DUPLEX RECEPTACLE, +18" AFF
- 20 AMPERE, 120 VOLT SINGLE RECEPTACLE
- 20 AMPERE, 120 VOLT DUPLEX GFCI RECEPTACLE, +18" AFF
- H — 20 AMPERE, 120 VOLT DUPLEX HOSPITAL GRADE RECEPTACLE, +18" AFF
- H — 20 AMPERE, 120 VOLT DOUBLE DUPLEX HOSPITAL GRADE RECEPTACLE, +18" AFF
- H — 20 AMPERE, 120 VOLT DUPLEX HOSPITAL GRADE GFCI RECEPTACLE
- H — 20 AMPERE, 120 VOLT DOUBLE DUPLEX HOSPITAL GRADE GFCI RECEPTACLE
- XX — OTHER POWER RECEPTACLE NEMA DESIGNATION AS NOTED
- HP — MOTOR
- J — JUNCTION BOX
- P — POWER POLE CONNECTION TO MODULAR FURNITURE WHIP
- T — TRANSFORMER
- CB XX — CIRCUIT BREAKER SIZED AS NOTED
- ELECTRICAL PANEL
- BD — BUS DUCT AMPERE RATING AS NOTED
- FLOOR RECEPTACLE CONDUIT INSTALLED IN SLAB
- J 200/3 — UNFUSED SAFETY SWITCH, RATING AS NOTED (200/3: POLES / AMPERES)
- 3R F J XXAF XXAT — FUSED SAFETY SWITCH, RATING AS NOTED (XXAF: FRAMESIZE; XXAT: FUSE/TRIP; 3R: NEMA RATING)
- MAGNETIC MOTOR STARTER, RATING AS NOTED
- M — MANUAL TOGGLE OPERATED MOTOR STARTER
- M — SMOKE DAMPER TOGGLE
- ELECTRIC ACTUATED VALVE
- M — MOTOR CONTACTOR
- CONTACT NORMALLY OPEN
- CONTACT NORMALLY CLOSED
- SELECTOR SWITCH
- TEMPERATURE SWITCH
- R — PILOT LIGHT

FIRE ALARM SYMBOLS

- F — PULL STATION
- XX H — FIRE ALARM AUDIBLE/VISIBLE NOTIFICATION APPLIANCE (GENERAL EVACUATION)
- XX — STROBE UNIT XX= CANDELA
- 120V XX — NON–SYSTEM STROBE UNIT
- H — MINI HORN UNIT
- S — SMOKE DETECTOR
- H — FIXED TEMP HEAT DETECTOR (135F OR 200F)
- FACP — FIRE ALARM CONTROL PANEL
- ANN — ANNUNCIATOR
- MB — MASTER BOX
- D D — DIGITAL COMMUNICATOR
- S D — DUCT SMOKE DETECTOR
- T — REMOTE TEST STATION
- TS — SPRINKLER TAMPER SWITCH
- FS — SPRINKLER FLOW SWITCH
- PS — SPRINKLER PRESSURE SWITCH
- MM — MONITOR MODULE
- CM — CONTROL MODULE
- 120V S — NON–SYSTEM SMOKE DETECTOR (STR = DENOTES INTEGRAL STROBE FOR H/C UNITS)
- RED MASTER BOX LIGHT
- KB — KNOX BOX, FBO
- EXT — HOOD EXT SYSTEM
- DH — DOOR HOLDER
- FCPS — SIGNAL POWER EXTENDER

SYSTEMS SYMBOLS

- TELEPHONE SYSTEM WALL JACK
- COMBINATION VOICE/DATA SYSTEM OUTLET
- COMBINATION VOICE/DATA SYSTEM OUTLET IN FLOOR BOX. FURNISH 1" CONDUIT IN SLAB
- WAP — CEILING MOUNTED JACK FOR WIRELESS ACCESS POINT.
- TV — CATV JACK
- DS — SECURITY SYSTEM DOOR SWITCH
- EL — ELECTRIC DOOR LOCK SET
- KP — SECURITY SYSTEM CARD ACCESS PAD
- SP — INTERCOM SYSTEM SPEAKER
- INT — INTERCOM MASTER STATION
- CABLE TRAY
- PUSH BUTTON
- DB — DOOR BELL
- CR — CARD READER
- C X — CAMERA (4D = 4 CAMERA DOME)

LIGHTING SYMBOLS

- X — LIGHT FIXTURE
- X — LIGHT FIXTURE W/ EMERGENCY BATTERY BALLAST
- X — WALL MOUNTED LIGHT FIXTURE
- X — PENDANT MOUNTED LIGHT FIXTURE
- X — STRIP/WRAP LIGHT FIXTURE
- X — EXTERIOR WALL–PACK
- X — ROUND RECESSED CEILING MOUNTED FIXTURE
- X — SURFACE MOUNTED FIXTURE
- X — WALL MOUNTED LIGHTING FIXTURE
- X — WALL SCONCE
- X — TRACK LIGHTING FIXTURE (TRACK MOUNTED FIXTURE TYPE MAY VARY)
- EMERGENCY LED EXIT SIGN
- COMBINATION EMERGENCY EXIT SIGN & LIGHTING FIXTURE WITH DUAL LAMPS HEADS BATTERY AND CHARGER
- EMERGENCY LIGHTING FIXTURE WITH DUAL LAMPS HEADS BATTERY AND CHARGER
- REMOTE EMERGENCY LIGHTING LAMP HEAD
- SP a — LIGHT SWITCH (a: P = PILOT LIGHT (WHERE NOTED); 3 = 3–WAY (WHERE NOTED); 4 = 4–WAY (WHERE NOTED))
- X — ULTRASONIC/INFRARED OCCUPANCY SENSOR (C = CEILING MOUNTED; W = WALL MOUNTED 48" AFF (TO TOP))
- TC — TIME CLOCK
- LC — LIGHTING CONTACTOR
- PC — PHOTOCELL

GENERAL NOTES

1. ALL WORK SHALL BE IN COMPLIANCE WITH NFPA–70, NATIONAL ELECTRICAL CODE.
2. ALL MOTOR SAFETY SWITCHES, DISCONNECTS AND MOTOR STARTERS ARE FURNISHED BY DIVISION 16000 UNLESS NOTED AS FURNISHED WITH EQUIPMENT (FWE).
3. UNLESS OTHERWISE NOTED, CONVENIENCE RECEPTACLES SHALL BE MOUNTED 18 INCHES AFF AND LIGHTING TOGGLE SWITCHES 48 INCHES AFF.
4. ALL PENETRATIONS THROUGH FLOORS, RATED WALLS AND PARTITIONS SHALL BE SEALED WITH A UL APPROVED FIRE SEALANT METERIAL TO MAINTAIN THE RATING OF THE SEPARATION.
5. LIGHTING TOGGLE SWITCHES SHALL BE COMMERCIAL SPECIFICATION GRADE, 120 VOLT, SIDE WIRED AS MANUFACTURED BY LEVITON, PASS & SEYMOUR, OR APPROVED EQUAL.
6. CONVENIENCE RECEPTACLES SHALL BE COMMERCIAL SPECIFICATION GRADE UNLESS SHOWN OTHERWISE, GROUNDING TYPE, NEMA 5–20R, SIDE WIRED, AS MANUFACTURED BY LEVITON, PASS & SEYMOUR, OR APPROVED EQUAL.
7. HOSPITAL GRADE RECEPTACLES SHALL BE FURNISHED AS SHOWN AS MANUFACTURED BY LEVITON, PASS & SEYMOUR OR APPROVED EQUAL.
8. DEVICE COVERPLATES SHALL BE THERMOPLASTIC NYLON TYPE WITH IVORY FINISH IN ALL FINISHED SPACES. MECHANICAL ROOMS, ELECTRICAL ROOM, AND UTILITY ROOMS SHALL BE FURNISHED WITH BRUSHED STAINLESS STEEL COVERPLATES.
9. UNLESS OTHERWISE NOTED ALL HOMERUNS FOR 15 OR 20A CIRCUITS SHALL BE 2#12AWG & #12 GND. HOMERUNS FED FROM 20A, 1P CIRCUITS IN EXCESS OF 100 FEET (FOR 120V CIRCUITS) OR 200 FEET (FOR 277V CIRCUITS) SHALL BE #10AWG. ALL WIRING SHALL BE COPPER.
10. CONDUIT SYSTEMS: EXPOSED INTERIOR CONDUITS SHALL BE EMT, 3/4" MINIMUM. PROPERLY SUPPORTED MC CABLE ASSEMBLIES MAY BE USED ABOVE CEILINGS AND IN WALLS. HOSPITAL GRADE WIRING FOR NEW EXAM ROOMS SHALL BE IN HCF TYPE MC CABLE ASSEMBLIES AS MANUFACTURED BY SOUTHWIRE OR APPROVED EQUAL, AND INSTALLED IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE 517.13 (A) AND 517.13 (B). FLEXIBLE LIQUIDTIGHT CONDUIT WHIPS SHALL BE USED FOR CONNECTION TO VIBRATING EQUIPMENT.

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REV	DESCRIPTION	DATE
	ISSUED FOR CONSTRUCTION	7-26-17

SEAL:

PROJECT NUMBER: 201708

DATE: 07/26/2017

ELECTRICAL GENERAL NOTES & LEGEND

E0.0
Unnamed