

**LIGHTING**

- 2x4 FLUORESCENT FIXTURE ASSOCIATED CONTROL DEVICE FIXTURE TYPE (SEE LIGHT FIXTURE SCHEDULE)
- 1x4 FLUORESCENT FIXTURE
- 2x2 FLUORESCENT FIXTURE
- FIXTURE WIRED TO UNSWITCHED NORMAL CIRCUIT
- FIXTURE WIRED TO UNSWITCHED EMERGENCY CIRCUIT
- FIXTURE WIRED TO SWITCHED EMERGENCY CIRCUIT
- DOWN LIGHT
- FLUORESCENT STRIP
- WALL MOUNTED FIXTURES
- TRACK LIGHTING
- POLE MOUNTED SITE LIGHTING FIXTURE FIXTURE TYPE (SEE LIGHT FIXTURE SCHEDULE)
- FLOOD LIGHT
- WALL WASH LIGHT FIXTURE
- EXIT SIGN, CEILING MOUNTED ARROW INDICATES EGRESS DIRECTION SHADING INDICATES SIGN FACE
- EXIT SIGN, WALL MOUNTED SHADING INDICATES SIGN FACE
- DUAL HEAD EMERGENCY LIGHT BATTERY PACK TD - TIME DELAY RESET
- REMOTE EMERGENCY LIGHTING HEAD
- WALL PACK
- 3-WAY TOGGLE SWITCH
- SINGLE POLE TOGGLE SWITCH INDICATES CONTROLLED FIXTURE
- 4-WAY TOGGLE SWITCH
- DUAL LEVEL SWITCHING
- DIMMER SWITCH, INCANDESCENT OR FLUORESCENT AS REQUIRED.
- TOGGLE SWITCH WITH PILOT LIGHT
- TIMER SWITCH, SPRING WOUND
- SINGLE POLE DOUBLE THROW TOGGLE SWITCH, CENTER POSITION OFF
- WEATHER PROOF
- EXPLOSION PROOF
- OCCUPANCY SENSOR SWITCH
- UNSWITCHED CONTINUATION OF BRANCH CIRCUIT
- HOME RUN
- OCCUPANCY SENSOR INDICATES CONTROLLED FIXTURE INDICATES AIMING DIRECTION
- OCCUPANCY SENSOR RELAY
- DAYLIGHT SENSOR LIGHTS CONTROLLED BY SENSOR

**COMMUNICATION & DATA SYSTEMS**

- TELEPHONE SYSTEM WALL JACK W-INDICATES WALL MOUNTED AT 60" AFF P-INDICATES PAYPHONE (2)-INDICATES 2 OUTLETS, SINGLE BOX
- DATA SYSTEM OUTLET
- COMBINATION VOICE/DATA SYSTEM OUTLET
- UNDERFLOOR TELEPHONE SYSTEM OUTLET
- UNDERFLOOR DATA SYSTEM OUTLET
- UNDERFLOOR VOICE & DATA OUTLET
- CABLE TELEVISION SYSTEM OUTLET, MOUNT 18" AFF UNLESS OTHERWISE NOTED
- CLOSED CIRCUIT TELEVISION OUTLET, MOUNT 18" AFF UNLESS OTHERWISE NOTED
- PAGING SYSTEM CONTROL PANEL AND PAGING AMPLIFIER
- PAGING SYSTEM SPEAKER, CEILING MOUNTED
- PAGING SYSTEM SPEAKER, WALL MOUNT AT 7'-6" AFF 1. FLUSH, 2. SURFACE, 3. HORN, 4. DUAL HORN
- VOLUME CONTROL
- INTERCOM SYSTEM HAND KEY
- CLOCK SPEAKER
- INTERCOM SYSTEM HAND SET
- WALL MOUNTED CLOCK
- CEILING MOUNTED DATA SYSTEM OUTLET

**POWER**

- NON-FUSED SAFETY SWITCH AMPERE RATING
- NEMA ENCLOSURE RATING
- FUSED SAFETY SWITCH, TOP NUMBER INDICATES SWITCH AMPERE RATING, LOWER NUMBER INDICATES FUSE RATING
- NEMA ENCLOSURE
- MAGNETIC MOTOR STARTER, FVNR UNLESS INDICATED OTHERWISE NEMA ENCLOSURE RATING
- NEMA SIZE (TYPICAL)
- COMBINATION CIRCUIT BREAKER/MAGNETIC MOTOR STARTER FIRST NUMBER INDICATES CIRCUIT BREAKER AMPERE RATING SECOND NUMBER INDICATES NEMA STARTER SIZE
- COMBINATION FUSED DISCONNECT/MAGNETIC MOTOR STARTER NUMBERS INDICATE DISCONNECT AMPERE RATING/FUSE RATING/NEMA STARTER SIZE
- NON-FUSED DISCONNECT/MAGNETIC MOTOR STARTER FIRST NUMBER INDICATES CIRCUIT BREAKER AMPERE RATING SECOND NUMBER INDICATES NEMA STARTER SIZE
- MANUAL MOTOR STARTER, TOGGLE OPERATED, 1, 2 OR 3 POLE AS REQUIRED, OVERLOAD PROTECTION
- MANUAL MOTOR SWITCH, TOGGLE OPERATED, SINGLE PHASE, 1 OR 2 POLE AS REQUIRED (NO OVERLOAD PROTECTION)
- ENCLOSED CIRCUIT BREAKER AMPERE RATING
- ELECTRIC MOTOR, NUMBER INDICATES HORSEPOWER RATING
- EXPLOSION PROOF MOTOR
- VARIABLE AIR VOLUME CONTROL ACTUATORS
- LOCAL SELECTOR SWITCH H/O/A - HAND/OFF/AUTO
- EMERGENCY OFF BREAK GLASS STATION
- PUSHBUTTON STATION
- JUNCTION BOX
- TRANSFORMER
- POWER POLE
- CONDUIT TURNING UP
- CONDUIT TURNING DOWN
- EY CONDUIT SEAL
- DUPLEX RECEPTACLE, NEMA 5-20R, INSTALLED ON EMERGENCY CIRCUIT (TYPICAL) GF1 DUPLEX RECEPTACLE, NEMA 5-20R
- HOSPITAL GRADE DUPLEX RECEPTACLE, NEMA 5-20R
- HOSPITAL GRADE GFCI DUPLEX RECEPTACLE, NEMA 5-20R
- HOSPITAL GRADE ISOLATED GROUND DUPLEX RECEPTACLE, NEMA 5-20R
- SINGLE RECEPTACLE, NEMA 5-20R
- DOUBLE DUPLEX (QUADRUPLEX) RECEPTACLE, NEMA 5-20R
- HOSPITAL GRADE DOUBLE DUPLEX RECEPTACLE NEMA 5-20R
- SWITCHED RECEPTACLE
- FLOOR OUTLET, DUPLEX RECEPTACLE, NEMA 5-20R
- POWER RECEPTACLE, 480 VOLT NEMA CONFIGURATION AS NOTED.
- POWER RECEPTACLE, 240 VOLT NEMA CONFIGURATION AS NOTED.
- PANELBOARD, NORMAL POWER
- PANELBOARD, EMERGENCY POWER
- MULTI OUTLET ASSEMBLY

**GROUNDING**

- GROUND ROD
- EXOTHERMIC WELD CONNECTION
- BOLTED CONNECTION
- BARE COPPER CONDUCTOR RUN EXPOSED
- BARE COPPER CONDUCTOR EMBEDDED IN CONCRETE OR BURIED

**NURSE CALL SYSTEM**

- NURSE CALL CALL LIGHT
- PATIENT CALL BUTTON
- NURSE CALL PULL CORD
- NURSE CALL MASTER STATION

**FIRE ALARM**

- FIRE ALARM CONTROL PANEL
- FIRE ALARM ANNUNCIATOR
- FIRE ALARM MASTER BOX
- FIRE ALARM MANUAL PULL STATION
- FIRE ALARM SPEAKER/STROBE UNIT
- FIRE ALARM AUDIBLE/VISIBLE NOTIFICATION APPLIANCE (GENERAL EVACUATION)
- FIRE ALARM AUDIBLE/VISIBLE NOTIFICATION APPLIANCE CLEAN ROOM NOTIFICATION (LOCAL)
- FIRE ALARM VISIBLE ONLY NOTIFICATION APPLIANCE CANDELA INTENSITY-15/75 UNLESS OTHERWISE NOTED CEILING MOUNTED
- PHOTOELECTRIC SMOKE DETECTOR, CEILING MOUNTED INDICATES AUXILIARY CONTACT.
- FIXED TEMPERATURE HEAT DETECTOR, CEILING MOUNTED.
- CLEAN ROOM SMOKE DETECTOR
- COMBINATION RATE-OF-RISE/FIXED TEMPERATURE HEAT DETECTOR, CEILING MOUNTED.
- DUCT SMOKE DETECTOR, PHOTOELECTRIC WITH AUXILIARY CONTACT.
- SPRINKLER SYSTEM FLOW SWITCH
- SPRINKLER SYSTEM TAMPER SWITCH
- FIRE ALARM SYSTEM MAGNETIC DOOR HOLDER
- INTERLOCK RELAY
- SMOKE DAMPER
- DUCT SMOKE DETECTOR REMOTE TEST INDICATOR
- KNOX BOX

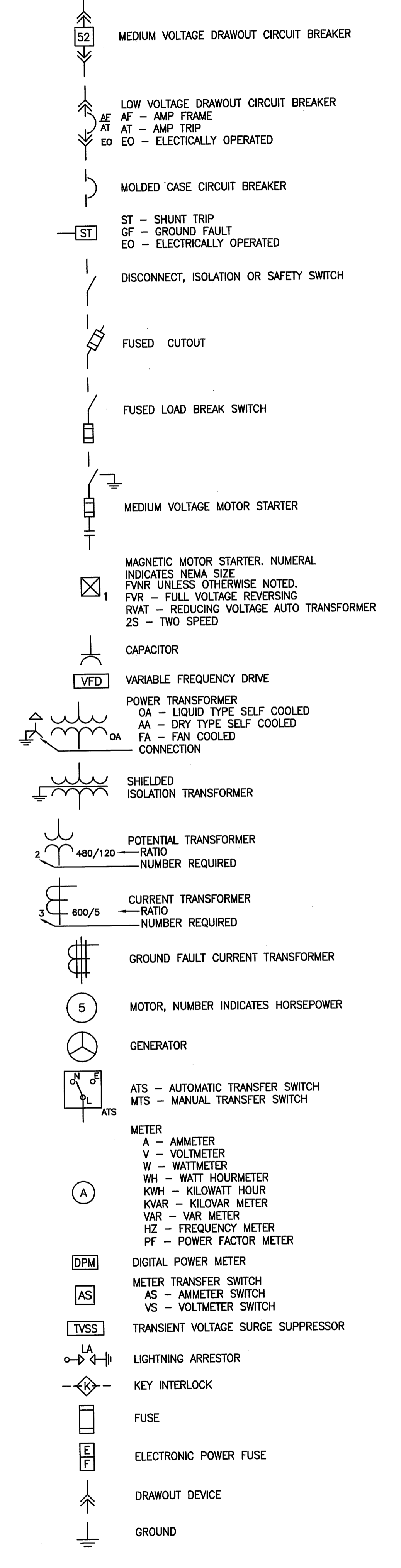
**SECURITY SYSTEMS**

- DUAL TECHNOLOGY VOLUMETRIC SENSOR
- LOCAL DOOR RELEASE BUTTON
- OFFICER CONTROLLED SHOWER WATER SUPPLY
- OFFICER CONTROLLED LIGHTING AND ELECTRICAL OUTLETS
- DOOR CONTACT
- CARD READER
- KEY PAD
- CLOSED CIRCUIT TELEVISION CAMERA
- ELECTRIC STRIKE
- MAG LOCK

**LINE TYPES**

- EXISTING
- NEW
- DEMOLITION

**ONE LINE DIAGRAM**



**ABBREVIATIONS**

- |                                   |   |   |
|-----------------------------------|---|---|
| AAMP AMPERE                       | AMPERE  | LA LIGHTING ARRESTER LIGHTING           |
| AFF ABOVE FINISHED FLOOR          | AFG ABOVE FINISHED GRADE                          | MC METAL CLAD                           |
| AHJ AUTHORITY HAVING JURISDICTION | AIC AMPERE INTERRUPTING CAPACITY                  | MCB MAIN CIRCUIT BREAKER                |
| AWG AMERICAN WIRE GAUGE           | BFG BELOW FINISHED GRADE                          | MFR MANUFACTURER                        |
| BOS BOTTOM OF STEEL               | C CONDUIT, CONDUCTOR                              | MI MINERAL INSULATED                    |
| CATV CABLE TELEVISION             | CB CIRCUIT BREAKER                                | MLO MOUNTED                             |
| CB CIRCUIT BREAKER                | CCTV CLOSED CIRCUIT TELEVISION                    | MV MEDIUM VOLTAGE                       |
| CPT CONTROL POWER TRANSFORMER     | CU CURRENT TRANSFORMER                            | NC NORMALLY CLOSED                      |
| CT COPPER                         | DACT DIGITAL ALARM COMMUNICATOR TRANSMITTER       | NEC NATIONAL ELECTRICAL CODE            |
| DB DIRECT BURIED                  | DISC DISCONNECT                                   | NEG NEGATIVE                            |
| DN DOWN                           | DN DOWN   | NEUT NEUTRAL                            |
| EMT ELECTRICAL METALLIC TUBING    | EWC ELECTRIC WATER COOLER                         | NIC NOT IN CONTRACT                     |
| FAA FIRE ALARM ANNUNCIATOR        | FACP FIRE ALARM CONTROL PANEL FURNISHED BY OTHERS | NO NORMALLY OPEN                        |
| FBO FUSE                          | FWE FURNISHED WITH EQUIPMENT                      | NTS NOT TO SCALE                        |
| FU FUSE                           | GEN GENERATOR                                     | PF POWER FACTOR                         |
| GFCI GROUND FAULT CIRCUIT BREAKER | GND GROUND  | PH PHASE                                |
| HP HORSEPOWER                     | HTR HEATER  | PVC POLYVINYL CHLORIDE                  |
| HTR HEATER                        | IG ISOLATED GROUND                                | RGS RIGID STEEL CONDUIT                 |
| IG ISOLATED GROUND                | IMC INTERMEDIATE METAL CONDUIT                    | RSC RIGID STEEL CONDUIT                 |
| K KILO                            | KCMIL THOUSAND CIRCULAR MILS                      | RTD RESISTANCE TEMPERATURE DETECTOR     |
| KV KILOVOLT                       | KVA KILOVOLT-AMPERE                               | SN SOLID NEUTRAL                        |
| KVAR KILOVOLT-AMPERE REACTIVE     | KWH KILOWATT-HOUR                                 | STP SHIELDED TWISTED PAIR               |
|                                   |   | STT SHIELDED TWISTED TRIPLET            |
|                                   |   | SWBD SWITCHBOARD                        |
|                                   |   | SWGR SWITCHGEAR                         |
|                                   |   | TOS TOP OF STEEL                        |
|                                   |   | TRANSF TRANSFORMER                      |
|                                   |   | TVSS TRANSIENT VOLTAGE SURGE SUPPRESSOR |
|                                   |   | V VOLT                                  |
|                                   |   | VA VOLT-AMPERE                          |
|                                   |   | VAR VOLT-AMPERE REACTIVE                |
|                                   |   | WM WATT METER                           |
|                                   |   | WP WEATHER PROOF                        |
|                                   |   | XFMR TRANSFORMER                        |
|                                   |   | XP EXPLOSION PROOF                      |

**GENERAL NOTES:**

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH NFPA-70, NATIONAL ELECTRICAL CODE (NEC).
- ALL MOTOR SAFETY SWITCHES, DISCONNECTS AND MOTOR STARTERS ARE PROVIDED BY DIVISION 16000 UNLESS NOTED AS FURNISHED WITH EQUIPMENT (FWE).
- UNLESS OTHERWISE NOTED CONVENIENCE RECEPTACLES SHALL BE MOUNTED 18-INCHES AFF, LIGHTING TOGGLE SWITCHES 48-INCHES AFF, DATA SYSTEM OUTLETS 18-INCHES AFF, FIRE ALARM NOTIFICATION DEVICES 80-INCHES AFF OR 6-INCHES BELOW CEILING, WHICHEVER IS LOWER, AND FIRE ALARM MANUAL PULL STATIONS 48-INCHES TO TOP OF DEVICE.
- ALL PENETRATIONS THROUGH FLOORS, RATED WALLS AND PARTITIONS SHALL BE SEALED WITH UL APPROVED FIRE SEALANT MATERIAL TO MAINTAIN THE RATING OF SEPARATION.
- ALL ENCLOSURES, CONDUIT BODIES AND THEIR COVERS CONTAINING FIRE ALARM SYSTEM CONDUCTORS SHALL BE PAINTED RED.
- AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED WITH EVERY FEEDER AND BRANCH CIRCUIT.
- UNLESS OTHERWISE NOTED WIRING SHALL BE 2#12 AWG CONDUCTORS AND #12 GND. HOME RUNS FED FROM 20A-1P CIRCUITS IN EXCESS OF 100 FEET SHALL BE #10 AWG.
- FLEXIBLE CONNECTIONS TO MOTORS SHALL BE LIQUID TIGHT FLEXIBLE METAL CONDUIT, UNLESS OTHERWISE NOTED.
- LIGHTING TOGGLE SWITCHES SHALL BE COMMERCIAL SPECIFICATION GRADE 277/120 VOLT, SIDE WIRED AND PROVIDED WITH GROUNDING SCREW, LEVITON, PASS AND SEYMOUR OR APPROVED EQUAL, COORDINATE COLOR WITH ARCHITECT. SWITCHES FOR LIGHTS ON EMERGENCY POWER TO BE RED.
- CONVENIENCE RECEPTACLES SHALL BE HEAVY DUTY HOSPITAL GRADE GROUNDING TYPE NEMA 5-20R, SIDE WIRED, LEVITON, PASS AND SEYMOUR OR APPROVED EQUAL, COORDINATE COLOR WITH ARCHITECT. RECEPTACLES FED FROM EMERGENCY POWER TO BE RED.
- PROVIDE WALL PLATES FOR ALL WIRING DEVICES, NYLON SMOOTH TYPE IN FINISHED AREAS AND GALVANIZED IN UNFINISHED AREAS.
- ALL WIRING SHALL BE 600V, COPPER WITH THHN/THWN INSULATION.

**GENERAL NOTE**

1. ALL GENERAL NOTES, SYMBOL LISTS, AND DETAILS ARE TO BE CONSIDERED AS APPLICABLE TO ALL ELECTRICAL DRAWINGS FOR THIS PROJECT. SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY AND DO NOT INDICATE THEIR INCORPORATION IN THE DESIGN.

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**SMART**

STATE OF MAINE  
Daniel J. Roberts  
LICENSED PROFESSIONAL ENGINEER  
3/13/14

MAINE MEDICAL CENTER  
NUCLEAR MEDICINE RENOVATIONS  
PORTLAND, MAINE

ISSUED FOR CONSTRUCTION  
3-13-14

REV	DESCRIPTION	DATE
0	ISSUED FOR CONSTRUCTION	3-13-14

GRAPHIC SCALE:  
0" 1"

SCALE: NONE

PROJECT MANAGER: DJV  
JC/DRAWN BY: CDS  
A/E OF RECORD: DJV  
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SHEET TITLE:  
**LEGEND AND GENERAL NOTES**

SHEET No. **E-001**  
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