

GENERAL ELECTRICAL NOTES

NOTES

- ALL SYMBOLS ARE NOT NECESSARILY USED IN THIS PROJECT.
- IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS TO ESTABLISH A STANDARD OF QUALITY. THE ENGINEER RESERVES THE RIGHT TO ALLOW OTHER METHODS AND MATERIALS NOT REFLECTED HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE TO REQUEST THE ENGINEER WAIVE THE STANDARDS TO ALLOW ALTERNATE MEANS AND METHODS PRIOR TO BEGINNING THE PROJECT. CONTRACT DOCUMENT REVISIONS TO ACCOMMODATE INSTALLED CONDITIONS, WITHOUT PRIOR APPROVAL, WILL RESULT IN ADDITIONAL DESIGN CHARGES TO THE CONTRACTOR.
- ELECTRICAL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE NECA INSTALLATION STANDARDS TO THE SATISFACTION OF THE ARCHITECT AND ENGINEER.
- ALL WORK, MATERIALS AND EQUIPMENT SHALL CONFORM TO THE CURRENTLY ACCEPTED EDITION OF ALL APPLICABLE NATIONAL, STATE AND CITY CODES AND ORDINANCES.
- ALL ELECTRICAL SYSTEM COMPONENTS SHALL BE LISTED OR LABELED BY UL OR OTHER RECOGNIZED TESTING FACILITY AS ALLOWED BY AUTHORITY HAVING JURISDICTION.
- WHERE AN APPARENT DISCREPANCY EXISTS BETWEEN THE REQUIREMENTS OF THE GENERAL NOTES AND INFORMATION PORTRAYED IN THE ELECTRICAL DRAWINGS, THE CONTRACTOR SHALL INCLUDE IN HIS BID THE COST OF THE GREATER QUALITY OR QUANTITY.
- CONTRACTOR SHALL VISIT JOB SITE PRIOR TO BID AND VERIFY EXISTING CONDITIONS. CONTRACTOR SHALL INCLUDE IN BASE BID ALL COSTS REQUIRED FOR PERMITS AND INSPECTIONS.
- CONTRACTOR SHALL VERIFY, WITH OWNER'S REPRESENTATIVE PRIOR TO SUBMITTING BID, ALLOWABLE WORKING HOURS, EMPLOYEE PARKING AREAS, MATERIAL DELIVERY, STORAGE REQUIREMENTS, DEMOLITION AND REMOVAL OF CONSTRUCTION DEBRIS, AS WELL AS DAILY CLEAN UP REQUIREMENTS. INCLUDE ALL COSTS IN BID FOR DUST BARRIERS, DUMPSTERS, ETC. AS REQUIRED FOR THE DURATION OF THE PROJECT. PERFORM ALL WORK AS DIRECTED BY OWNER'S REPRESENTATIVE AND ARCHITECT.
- ALL ELECTRICAL SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. IF TESTS SHOW THAT WORK IS DEFECTIVE, CONTRACTOR SHALL MAKE ALL NECESSARY CORRECTIONS AT NO ADDITIONAL COST TO OWNER.
- CONTRACTOR SHALL GUARANTEE ALL WORK AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP WHICH MAY OCCUR UNDER NORMAL USE FOR A PERIOD OF ONE YEAR AFTER OWNER'S ACCEPTANCE. ALL DEFECTS SHALL BE PROMPTLY CORRECTED BY CONTRACTOR WITHOUT ADDITIONAL CHARGE TO OWNER.
- PROVIDE AS-BUILT DRAWINGS TO ARCHITECT. DRAWINGS SHALL INCLUDE ACCURATE CONDUIT AND DEVICE LOCATIONS DIMENSIONED FROM PERMANENT LANDMARKS SUCH AS BUILDING WALLS.
- DO NOT SCALE ELECTRICAL DRAWINGS. VERIFY EXACT LOCATION OF ALL DEVICES, JUNCTION BOXES, LIGHTING FIXTURES, ETC. WITH ARCHITECTURAL AND INTERIOR DESIGN DRAWINGS PRIOR TO INSTALLATION. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL MECHANICAL EQUIPMENT AND OTHER EQUIPMENT REQUIRING ELECTRICAL CONNECTION PRIOR TO ROUGH-IN. EVERY OUTLET HEIGHT SHALL BE VERIFIED ON EACH WALL WITH THE INTERIOR PLANNING AND DESIGN DRAWINGS. COORDINATE WITH CABINET SHOP DRAWINGS TO ENSURE PROPER HEIGHT AND LOCATION WITH RESPECT TO MILLWORK, EQUIPMENT, ETC.
- THESE DRAWINGS INDICATE THE FINISHED REQUIREMENTS FOR THE ELECTRICAL SYSTEMS, EQUIPMENT, LIGHTING FIXTURES, OUTLETS AND DEVICES. DUE TO STRUCTURAL CONDITIONS, MECHANICAL DUCT PIPING CONFLICTS, OR OTHER LEGITIMATE REASONS, THE CONTRACTOR MAY DESIRE TO INSTALL THE WORK INDICATED IN A MANNER DIFFERENT FROM THAT SHOWN. SUCH CHANGES SHALL BE PRESENTED TO THE OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO PROCEEDING. UPON APPROVAL, THE WORK SHALL BE PERFORMED AND THE AS-BUILT DRAWINGS SHALL BE REVISED TO ACCURATELY REFLECT THE WORK AS ACTUALLY INSTALLED.
- RACEWAY SYSTEMS ARE SHOWN DIAGRAMMATICALLY. ACTUAL LOCATION AND ROUTING OF ALL, SHALL BE DETERMINED BY CONTRACTOR TO SUIT FIELD CONDITIONS.
- PROVIDE DEDICATED NEUTRAL FOR EACH NEW CIRCUIT. HOME RUN CONDUCTORS MAY BE COMBINED INTO ONE CONDUIT. NO RACEWAY OR CABLE SHALL CONTAIN MORE THAN NINE (9) CURRENT CARRYING CONDUCTORS. WHERE MULTIPLE CONDUCTORS IN EXCESS OF THREE (3) ARE INDICATED ON THESE DRAWINGS, THEY HAVE BEEN DE-RATED AS REQUIRED BY NEC ARTICLE 310 REQUIREMENTS.
- WHERE ALLOWED, MC CABLE MAY BE INSTALLED PER NEC ARTICLE 330. WHERE MULTIPLE CABLES ARE ROUTED ADJACENT TO EACH OTHER (BUNDLED), A MINIMUM SEPARATION OF ONE (1) CABLE DIAMETER (LARGEST) SHALL BE REQUIRED.
- PLASTIC CABLE TIES SHALL NOT BE USED AS A MEANS OF SUPPORT FOR MC CABLE. USE ONLY APPROVED CABLE SUPPORTS PER CABLE MANUFACTURER'S INSTALLATION REQUIREMENTS.
- RACEWAYS SHALL BE INSTALLED CONCEALED (IN CMU OR OTHER WALL) WHENEVER POSSIBLE. RACEWAYS INSTALLED EXPOSED SHALL BE ROUTED OUT OF PUBLIC VIEW AS MUCH AS POSSIBLE. RACEWAYS SHALL BE RUN PARALLEL WITH, OR AT RIGHT ANGLE TO WALLS.
- PROVIDE APPROVED EXPANSION FITTINGS WHERE RACEWAYS CROSS BUILDING EXPANSION JOINTS. PROVIDE BONDING JUMPER(S) SIZED PER CODE WHERE REQUIRED. PROVIDE ALL FITTINGS REQUIRED FOR A COMPLETE INSTALLATION. REFER TO ARCHITECTURAL DRAWINGS FOR EXPANSION JOINT LOCATIONS(S).
- MINIMUM RACEWAY SIZE SHALL BE 1/2". MINIMUM HOMERUN SIZE SHALL BE 3/4". MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG U.N.O. TYPICAL. ALL POWER RELATED CONDUITS SHALL HAVE A CODE SIZE GROUND WIRE INSTALLED IN EACH RUN.
- CONTRACTOR SHALL PROVIDE PULL CORDS IN ALL EMPTY CONDUITS. WHERE MORE THAN ONE CONDUIT TERMINATES IN A JUNCTION BOX, THE CONTRACTOR SHALL IDENTIFY EACH CONDUIT AND JUNCTION BOX IN A MANNER ALLOWING IDENTIFICATION AFTER ALL WALL FINISHES HAVE BEEN APPLIED.
- CONTRACTOR SHALL PROVIDE ALL RACEWAY SYSTEMS INDICATED ON THE DRAWING PER NEC REQUIREMENTS AND GENERAL NOTES. ANY DEVIATION FROM THE WIRING METHODS INDICATED SHALL BE ALLOWED ONLY BY SPECIFIC WRITTEN APPROVAL FROM EITHER THE ARCHITECT, ENGINEER OR OWNER. CONTRACTOR'S BID SHALL INCLUDE ALL COSTS FOR RACEWAY MATERIALS AND INSTALLATION UNLESS SPECIFIC WRITTEN APPROVAL FOR AN ALTERNATE WIRING METHOD IS OBTAINED FROM EITHER THE ARCHITECT, ENGINEER OR OWNER AND SUBMITTED AS PART OF CONTRACTOR'S FORMAL PROPOSAL.
- CONTRACTOR SHALL BE RESPONSIBLE TO CORRECT SIZE AND INSTALLATION OF ALL OUTLET, PULL AND JUNCTION BOXES IN CONFORMANCE WITH NEC 314-16. ALL BOXES SHALL BE MINIMUM 4" SQUARE BY 1-1/2" DEEP OR AS INDICATED ON THE DRAWINGS. ALL BOXES SHALL BE REQUIRED WITH COVER PLATE TO SUIT THE INTENDED APPLICATION.
- REFER TO THE ARCHITECT'S REFLECTED CEILING PLAN(S) FOR EXACT LOCATION OF ALL CEILING MOUNTED LIGHTING FIXTURES. ARCHITECTURAL DRAWINGS SHALL GOVERN IN CASE OF CONFLICT WITH THESE DRAWINGS.
- PRIOR TO INSTALLATION, CONTRACTOR SHALL REVIEW THE COMPLETE SET OF CONSTRUCTION DOCUMENTS FOR CONFLICTS WITH OTHER TRADES. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL WORK WITH OTHER TRADES TO AVOID CONFLICT DURING INSTALLATION. CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS IN EQUIPMENT LOCATION AND ROUTING AS NECESSARY AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL BE RESPONSIBLE TO PROPERLY CUT AND PATCH EXISTING CONSTRUCTION AS REQUIRED TO INSTALL NEW ELECTRICAL WORK. ALL PATCHING SHALL BE OF THE SAME MATERIALS, WORKMANSHIP AND FINISH AS THE EXISTING WORK AND SHALL ACCURATELY MATCH ALL SURROUNDING WORK TO THE SATISFACTION OF THE ARCHITECT.

NOTES (CONTD.)

- ALL ELECTRICAL EQUIPMENT SHALL HAVE SUFFICIENT GUTTER SPACE AND LUGS TO ACCOMMODATE QUANTITY AND SIZE OF CONDUCTORS REQUIRED. CONTRACTORS SHALL PROVIDE EQUIPMENT WITH OVERSIZED ENCLOSURES WHERE REQUIRED.
- ALL NEW PANELBOARDS AND SWITCHBOARDS SHALL BE OF THE SAME MANUFACTURER AND HAVE LOCKING DOORS AND BE KEYPED THE SAME U.N.O.
- PROVIDE TYPE WRITTEN UPDATED PANEL DIRECTORY TO BE MOUNTED ON INSIDE OF ALL PANEL DOOR COVERS. DIRECTORY SHALL REFLECT ALL ADDITIONS OR MODIFICATIONS TO EXISTING PANELS AND SHALL REFLECT ACTUAL "AS-BUILT" CONDITIONS.
- VERIFY DEVICE COLOR AND MOUNTING ORIENTATION (VERTICAL OR HORIZONTAL) WITH ARCHITECTURAL AND INTERIOR DESIGN DRAWINGS PRIOR TO ORDERING ANY EQUIPMENT AND PROVIDE DEVICES AS REQUIRED. UNLESS NOTED OTHERWISE, DEVICES AND DEVICE PLATES SHALL BE WHITE IN COLOR.
- WHERE MOTORS ARE INSTALLED IN SUSPENDED CEILINGS, CONTRACTOR SHALL PROVIDE DISCONNECT SWITCH IN SUSPENDED CEILING WITHIN REACH FROM ACCESS POINT.
- SIZING OF MOTOR-RELATED ELECTRICAL COMPONENTS, INCLUDING FEEDER AND/OR BRANCH CIRCUITS (WIRE AND CONDUIT) AND OVERCURRENT PROTECTION (BREAKER AND/OR FUSES) IS BASED ON RATINGS INDICATED IN THE CONTRACT DOCUMENTS AS WELL AS NEC APPROXIMATED LOADS FOR A GIVEN MOTOR HORSEPOWER, VOLTAGE AND PHASE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ACTUAL MOTOR AND APPLIANCE RATING AND LOADS. CONTRACTOR TO PROVIDE CORRECTLY SIZED MOTOR OVERLOAD ELECTRICAL COMPONENTS BASED ON NAMEPLATE RATING. REFLECT ALL CHANGES IN THE AS-BUILT DRAWINGS.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ARCHITECT FOR REVIEW OF THE FOLLOWING EQUIPMENT:
 - A. ELECTRICAL SWITCHGEAR: SWITCHBOARDS, WITH PANELS, MOTOR CONTROL CENTERS AND SAFETY DEVICES
 - B. OVERCURRENT DEVICES: CIRCUIT BREAKERS AND FUSES INCLUDING TIME/CURRENT TRIP CURVES
 - C. LIGHTING FIXTURES: INDOOR/OUTDOOR AS SPECIFIED, PHOTOMETRIC PERFORMANCE DATA AND LAMPS.
 - D. DEVICES: SWITCHES, RECEPTACLES, MOTOR CONTROLLERS AND DEVICE PLATES.
 - E. LIFE SAFETY/FIRE ALARM SYSTEM: CONTROL PANEL, ANNUNCIATOR PANEL, INITIATION AND NOTIFICATION DEVICES/APPLIANCES, SYSTEM WIRING REQUIREMENTS AND DIAGRAM, SYSTEM LOAD CALCS, STANDARD BATTERY CALCULATIONS, AND AUXILIARY POWER SUPPLY.
- ALL PENETRATIONS OF FIRE RESISTIVE FLOORS OR WALLS SHALL BE PROTECTED BY MATERIALS AND INSTALLATION DIAGRAMS THAT CONFORM TO UL LISTING FOR "THROUGH-PENETRATION FIRE STOP SYSTEMS".
- CONTRACTOR SHALL ENGAGE THE SERVICES FOR A STATE LICENSED FIRE ALARM MANUFACTURER/INSTALLER TO PREPARE ALL DESIGN DRAWINGS AND CALCULATIONS REQUIRED FOR SYSTEM APPROVAL BY THE AUTHORITY HAVING JURISDICTION. SUBMIT ALL PLANS AND PROVIDE ALL PERMITS REQUIRED FOR A COMPLETE AND OPERABLE APPROVED LIFE SAFETY SYSTEM.
- FIRE ALARM DEVICE WIRING SHALL BE MINIMUM #14 AWG COPPER OR PER SYSTEM MANUFACTURER REQUIREMENTS. PROVIDE MINIMUM 3/4" SEPARATE RACEWAY SYSTEM OR AS REQUIRED FOR LIFE SAFETY SYSTEM WIRING CONFIGURATION.
- UPON COMPLETION OF THE INSTALLATION OF LIFE SAFETY SYSTEM WIRING AND DEVICES, A PERFORMANCE TEST OF THE ENTIRE LIFE SAFETY SHALL BE PERFORMED TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION.
- ALL EQUIPMENT ELECTRICAL TERMINATIONS TO UNDERGO A TORQUE TEST. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR MANUFACTURER'S RECOMMENDED TORQUE DOCUMENTATION AND TOOLS TO PERFORM TORQUE TEST.
- ALL UNDERGROUND SERVICE CONDUITS SHALL BE SEALED PER NEC ARTICLE 230-8.
- FLOOR MOUNTED ELECTRICAL EQUIPMENT SHALL BE MOUNTED ON A 4" HIGH CONCRETE PAD.
- COORDINATE ELECTRICAL REQUIREMENTS FOR ALL PLUMBING AND MECHANICAL EQUIPMENT WITH FINAL CONTRACTOR SELECTION. THE CONTRACTOR SHALL SIZE DISCONNECTS BASED UPON CIRCUIT BREAKER RATINGS AND PROVIDE FUSING AS REQUIRED PER EQUIPMENT MANUFACTURER RECOMMENDATIONS AND UL LISTING REQUIREMENTS.
- PROVIDE 10 AWG CONDUCTORS FOR 20 AMPERE, 120V BRANCH CIRCUITS LONGER THAN 75' AND 8 AWG CONDUCTORS FOR 20 AMPERE, 120V BRANCH CIRCUITS LONGER THAN 120'. PROVIDE 10 AWG CONDUCTORS FOR 20 AMPERE, 120V BRANCH CIRCUITS LONGER THAN 200' UNLESS OTHERWISE NOTED.

DRAWING INDEX

| DRAWING NO. | DESCRIPTION |
|-------------|--------------------------------|
| E001 | ELECTRICAL NOTES |
| E002 | ELECTRICAL SPECIFICATIONS |
| E101 | ELECTRICAL WIRING PLAN |
| E201 | ELECTRICAL POWER PLAN |
| E202 | ELECTRICAL COMMUNICATIONS PLAN |
| E301 | ELECTRICAL DETAILS |
| E302 | ELECTRICAL SINGLE LINE DIAGRAM |
| E303 | ELECTRICAL PANEL SCHEDULES |
| E401 | ELECTRICAL DETAILS |
| E402 | ELECTRICAL DETAILS |

ELECTRICAL LEGEND

| SYMBOL | DESCRIPTION |
|-----------------|--|
| LIGHTING | |
| | LINEAR FLUORESCENT FIXTURE |
| | SUSPENDED LINEAR FLUORESCENT FIXTURE |
| | FLUORESCENT WALL MOUNT FIXTURE |
| | LINEAR FLUORESCENT STRIP FIXTURE |
| | LIGHT FIXTURE - RECESSED OR SURFACE |
| | PENDANT FIXTURE |
| | WALL MOUNTED LIGHT FIXTURE |
| | WALL SCONCE |
| | WALL WASHER |
| | LETTER REFERS TO FIXTURE TYPE |
| | MONO-POINT LIGHT FIXTURE |
| | TRACK LIGHT FIXTURE |
| | PARKING LOT POLE MOUNTED LIGHT FIXTURE |
| | BOLLARD LIGHT FIXTURE |
| | EXIT SIGN - CEILING MOUNTED |
| | EXIT SIGN - WALL MOUNTED |
| | EXIT SIGN - WARROWS INDICATE DIRECTION |
| | EMERGENCY BATTERY UNIT WITH HEADS |
| | FIXTURE w/ EMERGENCY BATTERY OR GENERATOR |
| | SINGLE POLE SWITCH, 20A, 120/277V |
| | TWO POLE SWITCH, 20A, 120/277V |
| | THREE-WAY SWITCH, 20A, 120/277V |
| | FOUR-WAY SWITCH, 20A, 120/277V |
| | DIMMER SWITCH, MIN. 2000W, 120/277V |
| | HP RATED MOTOR SWITCH WITH THERMAL OVERLOAD PROTECTION |
| | LOWER CASE LETTER DENOTES FIXTURE TO BE CONTROLLED |
| | KEY SWITCH, 20A, 120/277V |
| | PUSH BUTTON CONTROL |
| | OCCUPANCY SENSOR - CEILING |
| | OCCUPANCY SENSOR - WALL MOUNTED |
| | OCCUPANCY SENSOR - WALL MOUNTED |
| | LIGHTING CONTACTOR |
| | PANELBOARD - SURFACE MOUNT |
| | PANELBOARD - FLUSH MOUNT |
| | SWITCHBOARD OR DISTRIBUTION BOARD |
| | METER SERVICE PEDESTAL |
| | NON-FUSED DISCONNECT SWITCH |
| | FUSED DISCONNECT SWITCH |
| | MOTOR CONTROLLER OR STARTER |
| | COMBINATION CONTROLLER/DISCONNECT SWITCH |
| | VENDOR FURNISHED COMBINATION CONTROLLER/DISCONNECT SWITCH |
| POWER | |
| | SINGLE RECEPTACLE, NEMA 5-20R, 20A, 125V |
| | DUPLEX RECEPTACLE, NEMA 5-20R, 20A, 125V |
| | GFCI DUPLEX RECEPTACLE, NEMA 5-20R, 20A, 125V |
| | DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R, 20A, 125V |
| | DUPLEX RECEPTACLE / HALF-SWITCHED |
| | DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER - VERIFY MOUNTING HEIGHT |
| | GFCI RECEPTACLE, ABOVE COUNTER |
| | SPECIAL PURPOSE OUTLET (TYPE AS NOTED) |
| | CLOCK OUTLET NEMA 5-20R, 20A, 125V w/ RECESSED COVER PLATE AT +90°, U.N.O. |
| | DUPLEX RECEPTACLE NEMA 5-20R, 20A, 125V - FLUSH MOUNT CEILING |
| | FLOOR OUTLET w/ DEVICE AS INDICATED |
| | COMBINATION FLOOR OUTLET w/ DEVICES AS INDICATED |
| | JUNCTION BOX |
| | JUNCTION BOX - WALL MOUNT |
| | JUNCTION BOX - FLUSH FLOOR MOUNT |
| | MULTI-OUTLET SURFACE RACEWAY w/ NEMA 5-20R, 20A, 125V AT 12" ON CENTER, U.N.O. |
| | PULLBOX - EXTERIOR OR INTERIOR AS INDICATED |
| | TELEPHONE TERMINAL CABINET AT +72" TO TOP |
| | TELEPHONE BACKBOARD |
| | PANELBOARD - SURFACE MOUNT |
| | PANELBOARD - FLUSH MOUNT |
| | SWITCHBOARD OR DISTRIBUTION BOARD |
| | METER SERVICE PEDESTAL |
| | NON-FUSED DISCONNECT SWITCH |
| | FUSED DISCONNECT SWITCH |
| | MOTOR CONTROLLER OR STARTER |
| | COMBINATION CONTROLLER/DISCONNECT SWITCH |
| | VENDOR FURNISHED COMBINATION CONTROLLER/DISCONNECT SWITCH |

| SYMBOL | DESCRIPTION |
|--|---|
| SIGNAL | |
| | THERMOSTAT OUTLET AT +54" (HVAC UNIT DESIGNATION) |
| | ENCLOSED CIRCUIT BREAKER |
| | RELAY |
| | TIME SWITCH |
| | CONTACTOR |
| | TRANSFORMER |
| | AUTOMATIC TRANSFER SWITCH |
| | TELEPHONE OUTLET AT +18" |
| | DATA OUTLET AT +18" |
| | COMBINATION TELE/COMPUTER OUTLET AT +18" |
| | TELEPHONE OUTLET ABOVE COUNTER |
| | TELE/DATA OUTLET ABOVE COUNTER |
| | DATA OUTLET ABOVE COUNTER |
| | FLUSH FLOOR BOX WITH COMBINATION TELE/DATA OUTLET |
| | TELEVISION OUTLET |
| | TELEVISION CAMERA (CCTV) |
| | FIRE ALARM HORN/STROBE |
| | CARD READER |
| | FLOW SWITCH |
| | TAMPER SWITCH |
| | SMOKE DETECTOR |
| | FIRE SMOKE DAMPER |
| | CARBON MONOXIDE DETECTOR (SPECIFY BY MECHANICAL ENGINEER) |
| | DUCT MOUNTED SMOKE DETECTOR |
| | HEAT DETECTOR |
| | SPEAKER, CEILING OR WALL MOUNTED |
| | DOOR HOLD OPEN |
| NOTES: TELEPHONE AND DATA OUTLETS PROVIDE ONE (1) 3/4" C/O RISER UP WALL WITH PULL STRING TO ACCESSIBLE CEILING SPACE. | |
| SINGLE LINE | |
| | CIRCUIT BREAKER |
| | SERVICE CABLE TERMINATION |
| | FUSE |
| | FUSED DISCONNECT SWITCH |
| | SWITCH |
| | SURGE SUPPRESSOR |
| | CURRENT TRANSFORMER |
| | POTENTIAL TRANSFORMER |
| | GROUNDING ELECTRODE |
| | POWER METER |
| | MOTOR |
| | GENERATOR |
| | SHUNT TRIP |
| | GROUND FAULT INTERRUPT |
| | TRANSFER SWITCH |
| | CONTACT (NORMALLY OPEN) |
| | CONTACT (NORMALLY CLOSED) |
| | TIME SWITCH |
| | CONTROL SWITCH |
| | PUSH BUTTON |
| WIRING | |
| | CONDUIT ROUTED UNDERFLOOR / UNDERGROUND |
| | RACEWAY w/ #12 CONDUCTORS UNO |
| | RACEWAY TURNED DOWN |
| | RACEWAY TURNED UP |
| | HOMERUN TO PANELBOARD 1/2" W/ #12 CONDUCTORS UNO |
| | CONDUIT CAP-OFF |
| MISCELLANEOUS | |
| | EQUIPMENT TAG |
| | DIAGRAM TAG |
| | REVISION SYMBOL |
| | KEYNOTE SYMBOL |
| | SCHEDULED EQUIPMENT |
| | FEEDER SCHEDULE |

STANDARD ABBREVIATIONS

| | |
|------------|---|
| A | AMPERE |
| AFF | ABOVE FINISHED FLOOR |
| AF | ARC FAULT, AMP FUSE |
| AFG | ABOVE FINISHED GRADE |
| AIC | AMPERE INTERRUPTING CAPACITY |
| AL | ALUMINUM |
| ARCHL | ARCHITECTURAL |
| AS | AMP SWITCH |
| AWG | AMERICAN WIRE GAUGE |
| BC | BARE COPPER |
| BLDG | BUILDING |
| C | CONDUIT |
| CAB | CABINET |
| CAT | CATALOG/CATEGORY |
| C/B | CIRCUIT BREAKER |
| CKT | CIRCUIT |
| CLG | CEILING |
| CO, EC | CONDUIT ONLY |
| COMM | COMMUNICATION |
| CU | COPPER |
| DEMO | DEMOLITION/DEMOLISH |
| DISC. | DISCONNECT |
| DN | DOWN |
| DWG | DRAWING |
| EACH | EACH |
| ELECT. | ELECTRICAL |
| ELEV | ELEVATOR |
| EM | EMERGENCY |
| EMT | ELECTRICAL METALLIC TUBING |
| EQUIP | EQUIPMENT |
| (E), EXIST | EXISTING |
| FBO | FURNISHED BY OTHERS |
| FF | FINISH FLOOR |
| FIXT | FIXTURE |
| EX | FLEXIBLE METALLIC CONDUIT (STEEL) |
| FLUOR | FLUORESCENT |
| FOR | FEET FOR FOOT |
| GF | GROUND FAULT ALARM |
| GFI | GROUND FAULT CIRCUIT INTERRUPTER |
| GND | GROUND |
| HP | HORSEPOWER |
| HVAC | HEATING, VENTILATING & AIR CONDITIONING |
| IBC | INTERNATIONAL BUILDING CODE |
| IMC | INTERMEDIATE METAL CONDUIT |
| IN | INCHES |
| IRC | INTERNATIONAL RESIDENTIAL CODE |
| ISC | SHORT CIRCUIT AMPERES |
| JB, J-BOX | JUNCTION BOX |
| KCMIL, MCM | THOUSAND CIRCULAR MILS |
| KVA | KILOVOLT AMPERE |
| KW | KILOWATT |
| LTG | LIGHTING |
| MAX | MAXIMUM |
| MCB | MAIN CIRCUIT BREAKER |
| MECH. | MECHANICAL |
| MIN | MINIMUM |
| MLO | MAIN LUGS ONLY |
| MTD | MOUNTED |
| NC | NORMALLY CLOSED |
| NEC | NATIONAL ELECTRICAL CODE |
| NECA | NATIONAL ELECTRICAL CONTRACTOR'S ASSOCIATION |
| NEMA | NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION |
| NEUT | NEUTRAL |
| NFC | NATIONAL FIRE CODE |
| NF | NON-FUSIBLE |
| NIC | NOT IN CONTRACT |
| NL | NIGHT LIGHT |
| NO | NORMALLY OPEN |
| NVPCO | NEVADA POWER COMPANY |
| NTS | NOT TO SCALE |
| OCIP | OVERCURRENT PROTECTION |
| P | POLE |
| PH | PHASE |
| PNL | PANEL |
| PV | PV PHOTOVOLTAIC |
| PVC | POLYVINYL CHLORIDE |
| PWR | POWER |
| QTY | QUANTITY |
| RECEP | RECEPTACLE |
| REQ'D | REQUIRED |
| RSC | RIGID STEEL CONDUIT |
| SCHED | SCHEDULE |
| SECT | SECTION |
| SP | SINGLE POLE |
| SN | SOLID NEUTRAL |
| SPEC | SPECIFICATION |
| SW | SWITCH |
| SWBD | SWITCHBOARD |
| SWGR | SWITCH GEAR |
| SYS | SYSTEM |
| TEMP | TEMPORARY |
| TELE | TELEPHONE |
| T-STAT | THERMOSTAT |
| TTB | TELEPHONE TERMINAL BACKBOARD |
| TTC | TELEPHONE TERMINAL CABINET |
| TYP. | TYPICAL |
| UBC | UNIFORM BUILDING CODE |
| UL | UNDERWRITERS LABORATORY |
| U.N.O. | UNLESS NOTED OTHERWISE |
| V | VOLT OR VOLTAGE |
| VA | VOLT AMPERE |
| VD | VOLTAGE DROP |
| VP | VAPOR PROOF |
| W | WATT, WIRE |
| WCR | WITHSTAND CURRENT RATING |
| WP | UL LISTED WEATHERPROOF, NEMA 3R |
| XFMR | TRANSFORMER |
| (E) | EXISTING TO REMAIN |
| (R) | REMOVE |

| SYMBOL | DESCRIPTION |
|-------------------------|--|
| | CONDUIT ROUTED UNDERFLOOR / UNDERGROUND |
| | RACEWAY w/ #12 CONDUCTORS UNO |
| | RACEWAY TURNED DOWN |
| | RACEWAY TURNED UP |
| | HOMERUN TO PANELBOARD 1/2" W/ #12 CONDUCTORS UNO |
| | CONDUIT CAP-OFF |
| APPLICABLE CODES | |
| | 2012 INTERNATIONAL BUILDING CODE WITH GEORGIA AMENDMENTS (2014)(20 |