

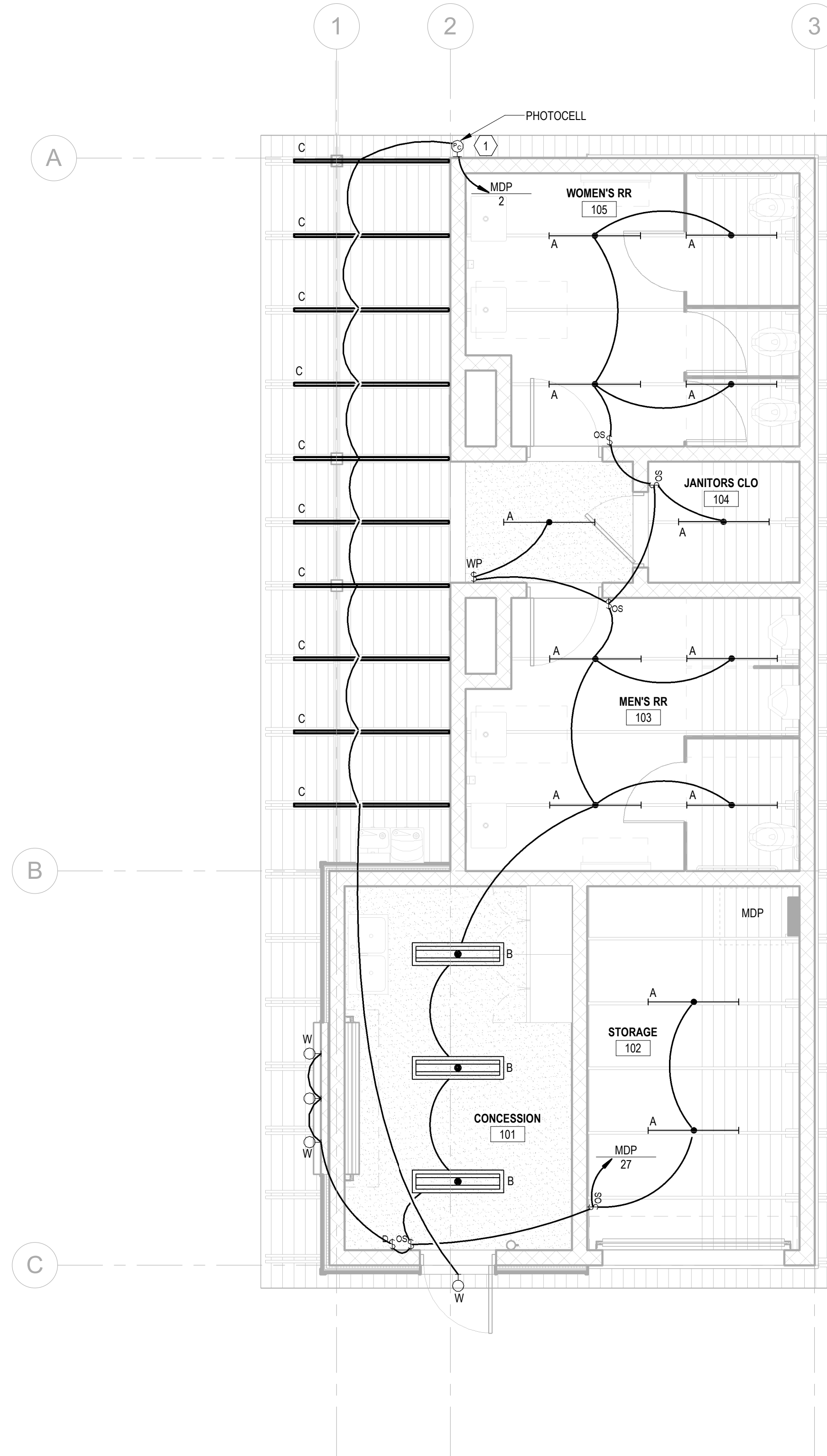
| ELECTRICAL ABBREVIATIONS LIST | | |
|-------------------------------|---|--|
| 1P | 1 POLE (2P, 3P, 4P, ETC.) | |
| A | AMPERE | |
| AC | ABOVE COUNTER | |
| ACLG | ABOVE CEILING | |
| AD | AUTOMATIC DOOR OPENER | |
| ADF | AMP FRAME | |
| AF | ABOVE FINISHED FLOOR | |
| AFG | ABOVE FINISHED GRADE | |
| AFI | ARC FAULT CIRCUIT INTERRUPTER | |
| AHU | AIR HANDLING UNIT | |
| AL | ALUMINUM | |
| ALT | ALTERNATE | |
| AMP | AMPERE | |
| AMPL | AMPLIFIER | |
| ANUN | ANNUNCIATOR | |
| APPROX | APPROXIMATELY | |
| AQ-STAT | AQUASTAT | |
| ARCH | ARCHITECT, ARCHITECTURAL | |
| AS | AMP SWITCH | |
| AT | AMP TRIP | |
| ATS | AUTOMATIC TRANSFER SWITCH | |
| AUTO | AUTOMATIC | |
| AUX | AUXILIARY | |
| AV | AUDIO VISUAL | |
| AWG | AMERICAN WIRE GAUGE | |
| BATT | BATTERY | |
| BD | BOARD | |
| BLDG | BUILDING | |
| BMS | BUILDING MANAGEMENT SYSTEM | |
| C | CONDUIT | |
| CAB | CABINET | |
| CAT | CATALOG | |
| CATV | CABLE TELEVISION | |
| CB | CIRCUIT BREAKER | |
| CCTV | CLOSED CIRCUIT TELEVISION | |
| CKT | CIRCUIT | |
| CLG | CEILING | |
| COMB | COMBINATION | |
| CMPR | COMPRESSOR | |
| CONN | CONNECTION | |
| CONST | CONSTRUCTION | |
| CONT | CONTINUATION OR CONTINUOUS | |
| CONTR | CONTRACTOR | |
| CONV | CONVECTOR | |
| CP | CIRCULATING PUMP | |
| CR | CATHODE-RAY TUBE | |
| CT | CURRENT TRANSFORMER | |
| CTR | CENTER | |
| CU | COPPER | |
| DCP | DOMESTIC WATER CIRCULATING PUMP | |
| DEPT | DEPARTMENT | |
| DET | DETAIL | |
| DIA | DIAMETER | |
| DISC | DISCONNECT | |
| DIST | DISTRIBUTION | |
| DN | DOWN | |
| DPR | DAMPER | |
| DS | SAFETY DISCONNECT SWITCH | |
| DT | DOUBLE THROW | |
| DWG | DRAWING | |
| EC | ELECTRICAL CONTRACTOR | |
| ELEC | ELECTRIC | |
| ELEV | ELEVATOR | |
| ELU | EMERGENCY LIGHTING UNIT | |
| EM | EMERGENCY | |
| EMS | EMERGENCY MANAGEMENT SYSTEM | |
| EMT | ELECTRICAL METALLIC TUBING | |
| EQIP | ELECTRIC PNEUMATIC EQUIPMENT | |
| EW | ELECTRIC WATER COOLER | |
| EXIST | EXISTING | |
| EXH | EXHAUST | |
| EXP | EXPLOSION PROOF | |
| FA | FIRE ALARM | |
| FABP | FIRE ALARM BOOSTER POWER SUPPLY PANEL | |
| FACP | FIRE ALARM CONTROL PANEL | |
| FCU | FAN COIL UNIT | |
| FIXT | FIXTURE | |
| FLR | FLOOR | |
| FLUOR | FLUORESCENT | |
| FU | FUSE | |
| FUSD | FUSED SAFETY DISCONNECT SWITCH | |
| GA | GAUGE | |
| GAL | GALLON | |
| GALV | GALVANIZED | |
| GC | GENERAL CONTRACTOR | |
| GEN | GENERATOR | |
| GFI | GROUND FAULT CIRCUIT INTERRUPTER | |
| GFP | GROUND FAULT PROTECTOR | |
| GND | GROUND | |
| GRS | GALVANIZED RIGID STEEL (CONDUIT) | |
| GYP BD | GYPSPUM BOARD | |
| HOA | HANDS-OFF-AUTOMATIC SWITCH | |
| HORIZ | HORIZONTAL | |
| HP | HORSEPOWER | |
| HPF | HIGH POWER FACTOR | |
| HT | HEIGHT | |
| HTG | HEATING | |
| HTR | HEATER | |
| HV | HIGH VOLTAGE | |
| HVAC | HEATING, VENTILATING AND AIR CONDITIONING | |
| IC | INTERRUPTING CAPACITY | |
| IG | ISOLATED GROUND | |
| IMC | INTERMEDIATE METAL CONDUIT | |
| INCAND | INCANDESCENT | |
| IN | INCH | |
| IW | INTERLOCK WITH | |
| J-BOX | JUNCTION BOX | |
| KV | KILOVOLT | |
| KVA | KILOVOLT-AMPERE | |
| KVAR | KILOVOLT-AMPERE REACTIVE | |
| KW | KILOWATT | |
| KWH | KILOWATT HOUR | |
| LOC | LOCATE OR LOCATION | |
| LT | LIGHT | |
| LTG | LIGHTING | |
| LTNG | LIGHTNING | |
| LV | LOW VOLTAGE | |
| MAX | MAXIMUM | |
| MAG.S | MAGNETIC STARTER | |
| MC | MOMENTARY CONTACT MECHANICAL CONTRACTOR | |
| MCB | MAIN CIRCUIT BREAKER | |
| MCC | MOTOR CONTROL CENTER | |
| MDC | MAIN DISTRIBUTION CENTER | |
| MDP | MAIN DISTRIBUTION PANEL | |
| MFR | MANUFACTURER | |
| MFS | MAIN FUSED DISCONNECT SW | |
| MH | MANHOLE | |
| MIC | MICROPHONE | |
| MIN | MINIMUM | |
| MISC | MISCELLANEOUS | |
| MLO | MAIN LUGS ONLY | |
| MMS | MANUAL MOTOR STARTER | |
| MOA | MULTIOUTLET ASSEMBLY | |
| MSP | MOTOR STARTER PANELBOARD | |
| MSDB | MAIN SWITCHBOARD | |
| MT | MOUNT | |
| MT.C | EMPTY CONDUIT | |
| MTS | MANUAL TRANSFER SWITCH | |
| MTR | MOTOR, MOTORIZED | |
| N.C. | NORMALLY CLOSED | |
| NEC | NATIONAL ELECTRICAL CODE | |
| NEMA | NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION | |
| NFDS | NON-FUSED SAFETY DISCONNECT SWITCH | |
| NIC | NOT IN CONTRACT | |
| NL | NIGHT LIGHT | |
| N.O. | NORMALLY OPEN | |
| NPF | NORMAL POWER FACTOR | |
| NPS | NOT TO SCALE | |
| OH | OVERHEAD | |
| OH | OVERLOADS | |
| PA | PUBLIC ADDRESS | |
| PB | PULL BOX OR PUSHBUTTON | |
| PE | PNEUMATIC ELECTRIC | |
| PEB | PEDESTAL | |
| PF | POWER FACTOR | |
| PH | PHASE | |
| PIV | POST INDICATING VALVE | |
| PNL | PANEL | |
| PP | POWER POLE | |
| PR | PAIR | |
| PRI | PRIMARY | |
| PROJ | PROJECTION | |
| PRV | POWER ROOF VENTILATOR | |
| PT | POTENTIAL TRANSFORMER | |
| PVC | POLYVINYL CHLORIDE (CONDUIT) | |
| PWR | POWER | |
| QUAN | QUANTITY | |
| RCP | RECEPTACLE REQUIRED | |
| REQD | REQUIRED | |
| RM | ROOM | |
| RSC | RIGID STEEL CONDUIT | |
| RTU | ROOF TOP UNIT | |
| SC | SURFACE CONDUIT | |
| SEC | SECONDARY | |
| SHT | SHEET | |
| SM | SIMILAR | |
| SS | SOLID NEUTRAL | |
| SPK | SPEAKER | |
| SP | SPARE | |
| SR | SURFACE RACEWAY | |
| SS | STAINLESS STEEL | |
| SSW | SELECTOR SWITCH | |
| SIS | STOP/START PUSHBUTTONS | |
| STA | STATION | |
| STD | STANDARD | |
| SURF | SURFACE MOUNTED | |
| SW | SWITCH | |
| SWBD | SWITCHBOARD | |
| SYM | SYMMETRICAL | |
| SYS | SYSTEM | |
| TEL | TELEPHONE | |
| TEL.DATA | TELEPHONE/DATA | |
| TERM | TERMINAL | |
| TL | TWIST LOCK | |
| TR | TAMPER RESISTANT | |
| T-STAT | THERMOSTAT | |
| TTC | TELEPHONE TERMINAL CABINET | |
| TV | TELEVISION | |
| TYTC | TELEVISION TERMINAL CABINET | |
| TYP | TYPICAL | |
| UC | UNDER COUNTER | |
| UE | UNDERGROUND ELECTRICAL | |
| UG | UNDERGROUND | |
| UH | UNIT HEATER | |
| UT | UNDERGROUND TELEPHONE | |
| UTIL | UTILITY | |
| UV | ULTRAVIOLET | |
| V | VOLT | |
| VA | VOLT-AMPERES | |
| VDT | VIDEO DISPLAY TERMINAL | |
| VERT | VERTICAL | |
| VFD | VARIABLE FREQUENCY DRIVE | |
| VOL | VOLUME | |
| W | WATT | |
| W | WITH | |
| WG | WIRE GUARD | |
| WH | WATER HEATER | |
| W/O | WITHOUT | |
| WP | WEATHERPROOF | |
| XMR | TRANSFORMER | |
| XFR | TRANSFER | |
| ANGLE | ANGLE | |
| AT | AT | |
| Δ | DELTA | |
| FEET | FEET | |
| " | INCHES | |
| # | NUMBER | |
| Ø | PHASE | |
| C | CENTRAL LINE | |
| P | PLATE | |

| ELECTRICAL SYMBOL LEGEND | |
|--------------------------|---|
| | LIGHTING FIXTURES, TYPICAL, RECTANGULAR FILLED CIRCLES INDICATE RECESSED, OPEN CIRCLES INDICATE SURFACE DIAGONAL LINE INDICATES LENSED OUTER DOTS INDICATE SUSPENDED |
| | LIGHTING FIXTURES, TYPICAL, ROUND CENTER DOT INDICATES PENDANT DIAGONAL LINE INDICATES LENSED CHEVRON INDICATES WALL WASH |
| | WALL-MOUNTED FIXTURES, TYPICAL |
| | STRIP FIXTURE |
| | DIRECTIONAL LIGHT, TRACK, FLOOD |
| | LINEAR LIGHT, TAPE LIGHT |
| | EMERGENCY LIGHTING UNIT, CEILING-MOUNTED, INTEGRAL BATTERY |
| | EMERGENCY LIGHTING UNIT, CEILING-MOUNTED, REMOTE BATTERY |
| | EMERGENCY LIGHTING UNIT, WALL-MOUNTED, INTEGRAL BATTERY |
| | EMERGENCY LIGHTING UNIT, WALL-MOUNTED, REMOTE BATTERY |
| | EXIT LIGHT, CEILING-MOUNTED, SHADING AND ARROWS INDICATE FACES AND DIRECTION |
| | EXIT LIGHT, WALL-MOUNTED, SHADING AND ARROWS INDICATE FACES AND DIRECTION |
| | EXIT/ELU COMBO |
| | POLE/AREA LIGHTS |
| | POST-TOP AREA LIGHT |
| | BOLLARD LIGHT |
| | DIAGONAL HATCH INDICATES LIGHT ON A CRITICAL CIRCUIT |
| | SOLID HATCH INDICATES LIGHT ON AN EMERGENCY OR LIFE SAFETY CIRCUIT |
| | SINGLE POLE SWITCH |
| | 3-WAY SWITCH |
| | 4-WAY SWITCH |
| | KEYED SWITCH |
| | STATION |
| | DIMMER SWITCH |
| | OCCUPANCY SENSOR W/ MANUAL SWITCH |
| | TIMER SWITCH |
| | TIME DELAY SWITCH |
| | TIME CONTROL SWITCH |
| | FIRE ALARM PULL STATION |
| | FIRE ALARM BELL |
| | FIRE ALARM HORN W/STROBE |
| | FIRE ALARM SPEAKER W/STROBE |
| | FIRE ALARM BELL W/STROBE |
| | FIRE ALARM CHIME W/STROBE |
| | FIRE ALARM DOOR HOLDER |
| | FIRE ALARM DOOR CLOSER |
| | FIRE ALARM SHUT DOWN RELAY |
| | SPRINKLER FLOW SWITCH |
| | SPRINKLER VALVE TAMPER SWITCH |
| | THERMAL DETECTOR |
| | DUCT SMOKE DETECTOR |
| | CEILING SMOKE DETECTOR |
| | ANGLE |
| | DELTA |
| | FEET |
| | INCHES |
| | NUMBER |
| | PHASE |
| | CENTRAL LINE |
| | PLATE |

| ELECTRICAL SYMBOL NOTES | |
|-------------------------|---|
| | LIGHTING FIXTURE TAG DESCRIPTORS: TOP VALUE: FIXTURE TYPE ID. BOTTOM VALUE, NUMBER, CIRCUIT NUMBER, REFER TO DRAWINGS FOR PANEL. BOTTOM VALUE, LOWERCASE LETTER: SWITCH DESIGNATION. ABSENCE OF A SWITCH ID INDICATES FIXTURE IS CONTROLLED BY THE ONLY SWITCH IN THE SPACE. "X" IN PLACE OF THE SWITCH ID INDICATES NIGHT LIGHT, UNSWITCHED. |
| | EXIT LIGHTS. STEM INDICATES WALL MOUNTING. NO STEM INDICATES CEILING MOUNTING. SHADED AREA INDICATES ILLUMINATED FACE(S). ARROW INDICATES DIRECTIONAL ARROW ON ILLUMINATED FACE(S). THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER. EXAMPLE: THE WALL MOUNTED EXIT LIGHT TYPE "E1" WITH SINGLE FACE AND DIRECTIONAL ARROW IS CONNECTED TO CIRCUIT 1. |
| | DEVICES. THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER. THE SWITCH DESIGNATION IS INDICATED BY A LOWER CASE LETTER. EXAMPLE: SPLIT DUPLEX RECEPTACLE IS CONNECTED TO CIRCUIT 1 AND ONE RECEPTACLE OUTLET IS CONTROLLED BY SWITCH "D". |
| | THE CONTROL DEVICE DESIGNATION IS INDICATED BY A LOWER CASE LETTER. EXAMPLE: SINGLE POLE SWITCH "S" TO CONTROL LIGHTING FIXTURES INDICATED BY "D". |
| | WALL BOX DIMMER WITH SIZE AS INDICATED AT DEVICE. EXAMPLE: 600 WATT WALL BOX DIMMER TO CONTROL LIGHTING FIXTURES INDICATED BY "e". SEE SPECIFICATIONS FOR WALLTAG IF NOT INDICATED. |
| | SPECIAL CONNECTIONS. THE EQUIPMENT IS INDICATED BY A NUMBER IN A CIRCLE. SEE THE MOTOR AND EQUIPMENT SCHEDULE FOR THE LOAD DESCRIPTION AND TYPE OF CONNECTION. THE CIRCUIT DESIGNATION IS INDICATED BY NUMBER(S) ADJACENT TO THE SYMBOL. EXAMPLE: EQUIPMENT NO. ELEC-1; 1 PHASE CONNECTION TO CIRCUITS 2, 4. |
| | PANELBOARDS. PANELBOARD DOORS MAY BE SHOWN TO INDICATE OPENING SIDE OF RECESSED PANELBOARDS. SEE PANELBOARD IDENTIFICATION FOR DESIGNATION CODES. |
| | FLOOR CLEARANCE AREA |
| | MOTOR CONNECTIONS. THE MOTOR IS INDICATED BY A NUMBER WITHIN OR ADJACENT TO THE MOTOR SYMBOL. SEE THE MOTOR AND EQUIPMENT SCHEDULE FOR THE MOTOR DESCRIPTION AND ELECTRICAL REQUIREMENTS. |
| | TRANSFORMERS. THE TRANSFORMER TYPE IS INDICATED BY A NUMBER FOLLOWING THE UPPER CASE LETTER "T". SEE THE TRANSFORMER SCHEDULE OR THE SINGLE LINE DIAGRAM FOR THE TRANSFORMER DESCRIPTION AND REQUIREMENTS. EXAMPLE: TRANSFORMER TYPE "T1". |
| | CONDUIT IN CEILING, FLOOR OR WALL AS REQUIRED BY FIELD CONDITIONS |
| | CONDUIT IN FLOOR |
| | CONDUIT SHOWN WITHOUT SLASH MARKS SHALL CONTAIN 1 # 12 CONDUCTOR PER PHASE, NEUTRAL, AND GROUND IN 1/2" CONDUIT UNLESS SPECIFIC EQUIPMENT REQUIRES A DIFFERENT SIZE. |
| | CONDUIT SHOWN WITH SLASH MARKS SHALL CONTAIN 1 # 10 CONDUCTOR PER PHASE IN ELECTRICAL CODE SIZED MINIMUM CONDUIT UNLESS A CONDUCTOR AND CONDUIT SIZE IS SHOWN ADJACENT. |
| | HOME RUN TO BRANCH CIRCUIT PANELBOARD. THE PANELBOARD DESIGNATION IS SHOWN ADJACENT TO THE HOME RUN ARROW AS A NUMERATOR AND THE CIRCUIT DESIGNATION IS SHOWN AS THE DENOMINATOR. CIRCUIT BREAKER SIZES (AMPS/NUMBER OF POLES) ARE SHOWN IN THE PANELBOARD SCHEDULE WITH THE CORRESPONDING PANELBOARD AND CIRCUIT DESIGNATION. EXAMPLE: HOME RUN TO PANELBOARD P4N-102, CIRCUITS 1, 3, 5. |
| | GRAPHICAL REPRESENTATION OF PHASING, TYPICAL FOR ALL SYMBOLS. |
| | EXISTING TO REMAIN |
| | EXISTING TO BE REMOVED |
| | NEW |
| | AREA NOT IN CONTRACT |
| | REVISION NUMBER - SHOWN ON PLANS |
| | KEYED NOTE (SEE SCHEDULE) |
| | ROOM NAME AND NUMBER |

| ELECTRICAL SUMMARY | |
|---|--------------------------------|
| ELECTRICAL SYSTEM AND EQUIPMENT | |
| METHOD OF COMPLIANCE: | |
| ENERGY CODE: <input checked="" type="checkbox"/> PRESCRIPTIVE <input type="checkbox"/> PERFORMANCE | |
| ENERGY CODE: <input type="checkbox"/> PRESCRIPTIVE <input type="checkbox"/> PERFORMANCE | |
| LIGHTING SCHEDULE (EACH FIXTURE TYPE) | |
| LAMP TYPE REQUIRED IN FIXTURE | REFER TO FIXTURE SCHEDULE |
| NUMBER OF LAMPS IN EACH FIXTURE | REFER TO FIXTURE SCHEDULE |
| BALLAST TYPE IN FIXTURE | REFER TO FIXTURE SCHEDULE |
| NUMBER OF BALLAST IN FIXTURE | REFER TO FIXTURE SCHEDULE |
| TOTAL WATTAGE PER FIXTURE | REFER TO FIXTURE SCHEDULE |
| TOTAL INTERIOR WATTAGE SPECIFIED VERSUS ALLOWED: | 411W SPECIFIED VS 902W ALLOWED |
| TOTAL EXTERIOR WATTAGE SPECIFIED VERSUS ALLOWED: | --- SPECIFIED VS ---W ALLOWED |
| ADDITIONAL PRESCRIPTIVE COMPLIANCE | |
| <input type="checkbox"/> C406.2 MORE EFFICIENT HVAC PERFORMANCE | |
| <input checked="" type="checkbox"/> C406.3 REDUCED LIGHTING POWER DENSITY SYSTEM | |
| <input type="checkbox"/> C406.4 ENHANCED LIGHTING CONTROLS | |
| <input type="checkbox"/> C406.5 ON-SITE SUPPLY OF RENEWABLE ENERGY | |
| <input type="checkbox"/> C406.6 DEDICATED OUTDOOR AIR SYSTEM FOR CERTAIN HVAC EQUIPMENT | |
| <input type="checkbox"/> C406.7 HIGH-EFFICIENCY SERVICE WATER HEATING | |
| DESIGNER STATEMENT | |
| TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE THERMAL ENVELOPE REQUIREMENTS OF THE STATE OF NORTH CAROLINA 2018 ENERGY CODE | |
| SIGNED: | |
| NAME: CHRIS STROUPE, P.E. | |
| TITLE: ENGINEER | |

| GENERAL ELECTRICAL NOTES AND SPECIFICATIONS | |
|---|---|
| 1. | ALL WORK TO BE IN ACCORDANCE WITH FEDERAL, STATE, LOCAL AND THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC). |
| 2. | MINIMUM CONDUIT SIZE SHALL BE 3/4" U.N.O. |
| 3. | ALL FEEDERS AND BRANCH CIRCUITS (POWER, LIGHTING, SIGNAL, ETC.) SHALL HAVE GREEN INSULATED GROUND WIRE INSTALLED WITH CIRCUIT CONDUCTORS. DO NOT RELY SOLELY ON METAL RACEWAYS FOR EQUIPMENT GROUNDING. |
| 4. | SPlicing: 1) SOLID CONDUCTORS, #10 AWG & SMALLER, SHALL BE SPLICED BY TWISTING SECURELY AND USING IDEAL "WIRENUTS", 3M CO. "SCOTCHLOCK", OR THOMAS & BETTS CONNECTORS FOR BRANCH CIRCUIT SPLICES (#10 & #12) IN JUNCTION BOXES, OUTLET BOXES AND LIGHTING FIXTURES. "STA-KON" OR OTHER PERMANENT TYPE CRIMP CONNECTORS SHALL NOT BE USED FOR BRANCH CIRCUIT CONNECTIONS. 2) STRANDED CONDUCTORS, #8 AWG & LARGER, SHALL BE SPLICED BY APPROVED MECHANICAL CONNECTORS GUM RUBBER TAPE OR FRICTION TAPE. SOLDERLESS MECHANICAL CONNECTORS FOR SPLICES AND TAPS, PROVIDED WITH UL APPROVED INSULATING COVERS, MAY BE USED INSTEAD OF MECHANICAL CONNECTORS PLUS TAPE. CONDUCTORS, IN ALL CASES, SHALL BE CONTINUOUS FROM OUTLET TO OUTLET AND NO SPLICING SHALL BE MADE EXCEPT WITHIN OUTLET OR JUNCTION BOXES, TROUGHS AND GUTTERS. |
| 5. | FOR MECHANICAL PROJECTS, DISCONNECTS, MOTOR CONTROLLERS, MOTOR RATED AND MOTOR SENTINEL SWITCHES, ETC. FOR HVAC EQUIPMENT SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL PROVIDE POWER WIRING TO THE LINE SIDE ONLY. THE MECHANICAL CONTRACTOR SHALL PROVIDE WIRING FROM THE LOAD SIDE OF THE DISCONNECTS, CONTROLLERS, ETC. INTO THE EQUIPMENT. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONTROL WIRING TO THEIR EQUIPMENT. DISCONNECTS FOR OTHER EQUIPMENT SHALL BE FURNISHED, INSTALLED AND WIRED BY THE ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED. ALL DISCONNECTS SHALL BE RATED AS "HEAVY DUTY" AND FUSED OR NON-FUSED AS REQUIRED. |
| 6. | THE USE OF "LBS" SHALL BE LIMITED WHERE POSSIBLE. WHERE NECESSARY TO USE "LBS" IN SIZES ABOVE 2", MOGUL UNITS SHALL BE INSTALLED. |
| 7. | E.C. SHALL NOTIFY THE OFFICE OF THE LOCAL ELECTRICAL INSPECTOR TO SCHEDULE REQUIRED INSPECTIONS. |
| 8. | EMT MAY BE UTILIZED AS PERMITTED BY THE NEC, WITH THE FOLLOWING RESTRICTIONS. EMT SHALL NOT BE INSTALLED: (A) WHERE TUBING, COUPLINGS, ELBOWS AND FITTINGS WOULD BE IN DIRECT CONTACT WITH THE EARTH OR UNDERGROUND (IN BELOW SLAB-ON-GRADE OR IN EARTH). (B) ANY LOCATION OUTDOORS. (C) WHERE EXPOSED TO SEVERE CORROSIVE INFLUENCE AND/OR SEVERE PHYSICAL DAMAGE. EMT FITTINGS SHALL BE ALL PLATED STEEL HEXAGONAL THREADED COMPRESSION TYPE. NO POT METAL, SET SCREW, OR INDETERMINATE FITTINGS SHALL BE USED. MC CABLE MAY BE USED FOR FIXTURE WHIPS (6" OR LESS) WHEN PERMITTED BY THE NEC. |
| 9. | ALL CONDUCTORS SHALL BE COPPER. #10 AWG AND SMALLER SHALL BE SOLID. #8 AWG AND LARGER SHALL BE CLASS B STRANDED. MINIMUM WIRE SIZE SHALL BE #12. MAXIMUM WIRE SIZE SHALL BE 500CMIL. |
| 10. | ALL INSULATION SHALL BE DUAL-RATED TYPE THHN/THWN OR TYPE XHHW. |
| 11. | OUTLET BOXES FOR LIGHTING AND APPLIANCE CIRCUITS, WHERE CONCEALED, SHALL BE STAMPED STEEL, GALVANIZED OR CADMIUM PLATED. FOR EXPOSED WORK, TYPE "FS" OR "FD" CAST BOXES SHALL BE USED. STAINLESS STEEL, BEVELED TYPE 302 COVER PLATES SHALL BE USED FOR ALL INTERIOR FLUSH MOUNTED DEVICES. FOR EXPOSED WORK, DEVICE PLATES SHALL BE MATCHING, OF THE SAME MANUFACTURER AS THE BOX, AND MATCHING THE OUTLINE OF THE BOX. |
| 12. | COLOR CODING OF CONDUCTORS SHALL BE BLACK-RED-BLUE FOR PHASES A-B-C RESPECTIVELY ON SYSTEMS OF LESS THAN 150 VOLTS TO GROUND. NEUTRAL SHALL BE WHITE. USE BROWN-ORANGE-YELLOW FOR PHASES A-B-C RESPECTIVELY ON SYSTEMS OF MORE THAN 150 VOLTS, BUT LESS THAN 300 VOLTS TO GROUND. NEUTRAL SHALL BE NATURAL GRAY. GREEN SHALL BE USED FOR THE EQUIPMENT GROUNDING CONDUCTOR ON BOTH SYSTEMS. |
| 13. | RECEPTACLE DEVICES SHALL BE 20 AMP FEDERAL SPECIFICATION GRADE, NEMA GROUNDING TYPE. SWITCHES SHALL BE 20 AMP, 120/277 VOLT. ALL DEVICES, SWITCHES AND RECEPTACLES SHALL BE EQUIPPED WITH GREEN HEX HEAD GROUNDING SCREW. SWITCHES SHALL HAVE QUIET OPERATING MECHANISMS WITHOUT THE USE OF MERCURY. ALL RECEPTACLES SHALL BE PIG-TAILED WIRED SO THAT THE REMOVAL OF A DEVICE WILL NOT DISRUPT THE REMAINING CIRCUIT. SEE DETAIL ON DRAWINGS. TAMPER RESISTANT RECEPTACLES ARE REQUIRED AS PER NEC 408.12(1) THROUGH (7) IN ALL AREAS SPECIFIED IN NEC 210.52. |
| 14. | EXPOSED AND CONCEALED CONDUIT (EXCEPT IN SLAB) SHALL BE NEATLY INSTALLED PARALLEL TO, OR AT RIGHT ANGLES TO BEAMS, WALLS AND FLOORS OF THE BUILDING. ALL BENDS SHALL BE MADE WITH STANDARD CONDUIT ELBOWS OR CONDUIT BENT TO NOT LESS THAN THE SAME RADIUS THAN A STANDARD CONDUIT ELBOW. CONDUITS SHALL BE SUPPORTED PER NEC AND AT INTERVALS NOT GREATER THAN 10 FEET AND WITHIN 3 FEET OF ANY BEND, CABINET, OUTLET OR JUNCTION BOX. CONDUITS SHALL BE SUPPORTED BY APPROVED PIPE STRAPS OR CLAMPS, SECURED BY MEANS OF TOGGLE BOLTS ON HOLLOW MASONRY. EXPANSION SHIELDS AND MACHINE SCREWS OR STANDARD PRE-SET INSERTS ON CONCRETE OR SOLID MASONRY, MACHINE SCREWS OR BOLTS ON METAL SURFACES, AND WOOD SCREWS ON WOOD CONSTRUCTION. |
| 15. | SEAL AROUND ALL CONDUIT PENETRATIONS THROUGH WALLS, FLOORS AND CEILINGS. USE U.L. LISTED AND APPROVED FIRE RATED MATERIAL FOR SEALING AROUND PENETRATIONS THROUGH RATED WALLS, FLOORS AND CEILINGS. REFER TO PENETRATION DETAILS AND SPECIFICATIONS FOR MORE INFORMATION. |
| 16. | AT COMPLETION OF PROJECT, PROVIDE THE FOLLOWING: 1. INSTRUCT OWNER IN OPERATION OF ALL ELECTRICAL SYSTEMS. 2. ONE SET OF "AS-BUILT" DRAWINGS. 3. TURN OVER ALL OPERATION AND MAINTENANCE MANUALS FOR ELECTRICAL SYSTEMS AND EQUIPMENT TO THE ARCHITECT/ENGINEER FOR APPROVAL, PRIOR TO SUBMISSION TO THE OWNER. |
| 17. | SCHEDULE 40 PVC SHALL NOT BE USED EXPOSED OR CONCEALED IN GYPSUM WALLS, BUT MAY BE USED IN CMU WALLS. SCHEDULE 40 PVC MAY BE USED IN ELEVATED FLOOR SLABS AND FOUNDATION SLABS. MINIMUM CONCRETE COVER SHALL BE 3/4-INCH AT FINISHED OR FORMED SURFACE AND SHALL BE 3-INCHES AT CONCRETE SURFACE CAST AGAINST EARTH OR FOR SLABS PLACED ON-GRADE. GREATER AMOUNTS OF CONCRETE COVER SHALL BE USED IN AREAS SUBJECT TO DAMAGE. THE PLACEMENT OF CONDUIT IN THE FLOOR SLABS MUST BE THOROUGHLY COORDINATED WITH THE GENERAL CONTRACTOR SO AS NOT TO AFFECT THE STRUCTURAL INTEGRITY OF THE BUILDING. |
| 18. | UNDERGROUND RACEWAYS: |
| 18.1 | RACEWAYS RUN EXTERNAL TO BUILDING FOUNDATION WALLS, WITH THE EXCEPTION OF BRANCH CIRCUIT RACEWAYS, SHALL BE ENCASED WITH A MINIMUM OF THREE (3) INCHES OF CONCRETE ON ALL SIDES. |
| 18.2 | ENCASED RACEWAYS MUST HAVE A MINIMUM COVER OF TWENTY-FOUR (24) INCHES. |
| 18.3 | ENCASED RACEWAYS SHALL BE OF A TYPE APPROVED BY THE NEC AS "SUITABLE FOR CONCRETE ENCASEMENT." |
| 18.4 | BRANCH CIRCUIT RACEWAYS RUN UNDER |



- LIGHTING NOTES**
- A. ACCESS AND WORKING SPACE SHALL BE PROVIDED AND MAINTAINED FOR ALL ELECTRICAL EQUIPMENT TO PERMIT READY AND SAFE OPERATION AND MAINTENANCE (NEC 110.26).
 - B. ALL CONDUIT AND WIRES AT OPEN CEILING ARE TO BE CONCEALED AND INSTALLED ALONG THE STRUCTURAL BEAMS IN A CLEAN WAY AND HIDDEN AS MUCH AS POSSIBLE. DO NOT INSTALL CABLES, RACEWAYS, AND BOXES IN THE SPACE BETWEEN THE METAL DECK AND THE ROOFING MATERIAL PER NEC 300.4(E). ROUTE CONDUITS PARALLEL OR PERPENDICULAR TO STRUCTURAL STEEL.
 - C. ALL PENETRATIONS THROUGH FIRE WALL MUST BE PROPERLY SEALED TO ENSURE EFFECTIVE FIRE RESISTANCE BY AN APPROVED CONTRACTOR. COORDINATE WITH G.C.
 - D. LIGHTING FIXTURE LOCATIONS SHOWN ARE SCHEMATIC. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS PRIOR TO ROUGH-IN.
 - E. ALL BRANCH CIRCUIT CONDUIT TO BE INSTALLED OVERHEAD.
 - F. EMERGENCY CIRCUIT WIRING TO HAVE CONTACTOR SWITCHED CONDUCTOR AND ALSO UNSWITCHED CONDUCTOR TO ALL EXIT AND EXTERIOR LIGHTS WHERE SHOWN.
 - G. CONFIRM LOCATION OF ALL DOOR SWINGS WITH ARCHITECTURAL PLANS PRIOR TO ROUGHING-IN SWITCHES.
 - H. REFER TO ARCHITECT'S REFLECTED CEILING PLANS FOR CEILING HEIGHTS, TYPES, FINISHES, ETC. IN EACH AREA. VERIFY FLANGE TYPES, TRIM KITS, STEM LENGTH, ETC. FOR ALL LIGHT FIXTURES PRIOR TO SUBMITTALS.
 - I. COORDINATE WITH LIGHTING VENDORS FOR NECESSARY MOUNTING HARDWARE AND ACCESSORIES PRIOR TO ROUGH-IN.
 - J. NOTIFY ENGINEER OF ANY DISCREPANCY PRIOR TO ROUGH-IN.
 - K. ALL CONDUIT IN EXPOSED CEILING AREAS SHALL BE RUN PARALLEL OR PERPENDICULAR WITH STRUCTURAL STEEL, TIGHT TO THE ROOF DECK OR TOP OF STEEL MEMBERS HIDDEN FROM VIEW (TYP.)
- KEYNOTES**
1. PROVIDE PHOTOCELL FOR EXTERIOR LIGHTS.

1
E1.0
ELECTRICAL LIGHTING PLAN
1/4" = 1'-0"

| TYPE | CONSTRUCTION | | | LIGHT SOURCE | | | ELECTRICAL | | | PRODUCT | | | NOTE | |
|------|----------------------------|-----------------------|--------------|--------------|-------------|--------|------------|---------------------------------|-------|---------|----------|---|-------------------------------|---|
| | DESCRIPTION | LENS/LOUVER | MOUNTING | LAMP | LUMENS DOWN | CCT | CRI | BALLAST/DRIVER | VOLT | WATTS | MFR | Model | | EQUIVALENT MFR |
| A | 4" VAPOR TIGHT STRIP LIGHT | FROSTED POLYCARBONATE | SURFACE | LED | 3000 lm | 4000 K | 80 | LED DRIVER | 120 V | 25 W | LITHONIA | CSVT L48 3000LM MVOLT 40K 80CRI | HUBBELL; H.E.WILLIAMS; COOPER | MOUNTING AS REQUIRED |
| B | 1x4 RECESSED FLAT PANEL | CURVED RIBBED | GRID | LED | 4000 lm | 4000 K | 80 | LED DRIVER | 120 V | 37 W | LITHONIA | EPANL 4000LM LP840 MVOLT SMKSH | HUBBELL; H.E.WILLIAMS; COOPER | MOUNTING AS REQUIRED |
| C | FLEXIBLE LED STRIP | SLIM CHANNEL | SURFACE | LED | 100 lm | 4000 K | 80 | LED DRIVER | 120 V | 31 W | JUNO | JFX 24V 100LM 6FT 9INCH 40 80CRI WL SLCH 24IN LEAD | -- | LUMENS PER FOOT. IP65 PROTECTION. PROVIDE COMPATIBLE BALLAST AND ACCESSORIES AS NEEDED. |
| W | DECORATIVE SCONCE | DECORATIVE | SURFACE WALL | LED | 1935 lm | 4000 K | 80 | LED DRIVER, 0-10V DIMMABLE, 10% | 277 V | 22 W | USLED | LINEAR STAR SKT1-37-1FT 5INCH-4000K-80CRI; SMT1-V; PSH1-1-A-O-W-4; OUTDOOR PROTECTION | -- | VERIFY COLOR AND FINISH WITH ARCHITECT. |

1. ALL LIGHT FIXTURES SHALL BE ENERGY EFFICIENCY DLC (DESIGN LIGHTS CONSORTIUM) CERTIFIED.
2. LIGHT FIXTURES SHALL BE EQUIPPED WITH UL LISTED AND APPROVED INTEGRALLY MOUNTED DISCONNECTS FOR BALLAST IN ACCORDANCE WITH ARTICLE 410.30 OF THE NATIONAL ELECTRICAL CODE (NEC). THE CONTRACTOR SHALL COORDINATE WITH THE DISTRIBUTOR AND MANUFACTURER TO VERIFY NEW LIGHTS MEET ALL REQUIREMENTS OF THE LATEST EDITION OF THE NEC.
3. ALL LAY-IN TYPE LED LIGHT FIXTURES SHALL BE SUPPORTED FROM THE STRUCTURE WITH TWO CEILING SYSTEM SUPPORT WIRES. WIRES SHALL BE ATTACHED AT DIAGONALLY OPPOSITE CORNERS OF THE LIGHT. IN ADDITION, EACH LIGHT SHALL BE ATTACHED TO THE CEILING GRID SYSTEM USING FOUR SCREWS (TWO AT EACH END). SCREWS SHALL NOT INTERFERE WITH THE DOOR OPERATION.
4. ALL LAMPS OF EACH CATEGORY SHALL BE OF THE SAME MANUFACTURER.
5. VERIFY FINISH OF LIGHT FIXTURE PRIOR TO ROUGH-IN.

CONSULTANT ENGINEERING SERVICE, INC.
PLUMBING • MECHANICAL • ELECTRICAL

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NORTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
SEAL
15886
07/10/23
PHILIP STROUB

NEIL'S CREEK PARK COMFORT STATION
BLACK RIVER TOWNSHIP, TOWN OF ANGLIER
HARNETT COUNTY, NC

DATE
07/10/2023

SHEET TITLE
ELECTRICAL LIGHTING PLAN

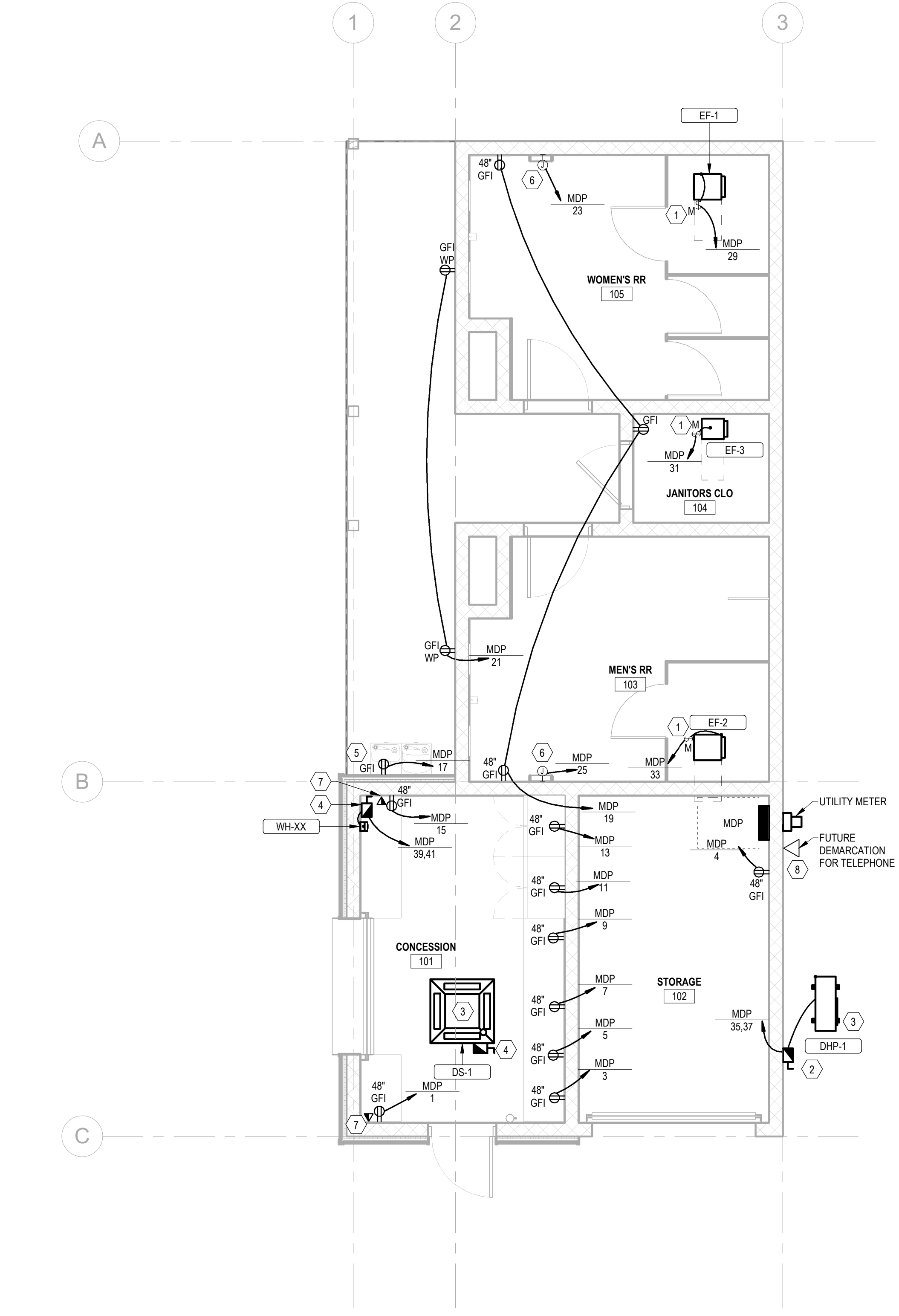
DESIGNED BY
RE/HGE

PROJECT NO.
4343

APPROVED BY
CRS

SHEET NUMBER
E1.0

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- KEYNOTES**
- 1 INSTALL 20 AMP SINGLE POLE MOTOR RATED SWITCH WITH ENCLOSURE.
 - 2 INSTALL 30 AMP, 2P, 2W, 250VOLT, NGR, HEAVY DUTY, FUSE DISCONNECT. FUSES PER EQUIPMENT NAMEPLATE.
 - 3 THE OUTDOOR UNIT FEEDS THE INDOOR UNIT. MC TO PROVIDE FUSED DISCONNECT FOR OUTDOOR UNIT AND DISCONNECT FOR INDOOR UNIT. EC SHALL PROVIDE CONDUCTORS IN CONDUIT AND MAKE CONNECTIONS FOR BOTH INDOOR AND OUTDOOR UNITS. FOR CLARITY, CIRCUIT NUMBERS ARE SHOWN WITH THE OUTDOOR UNIT.
 - 4 INSTALL 30 AMP, 2P, 2W, 250VOLT, N1, HEAVY DUTY, FUSE DISCONNECT. FUSES PER EQUIPMENT NAMEPLATE.
 - 5 PROVIDE GFCI RECEPTACLE FOR EWC. COORDINATE LOCATION WITH P.C. GFCI RECEPTACLE SHOULD NOT BE INSIDE OF EWC. WILL NEED TO HAVE ACCESS. GFCI BREAKER IS ACCEPTABLE IF A DUPLEX RECEPTACLE IS LOCATED INSIDE OF EWC.
 - 6 HAND DRYER. PROVIDE JUNCTION BOX, COVER, AND 3/4" CONDUIT TO ABOVE ACCESSIBLE CEILING FOR FUTURE HAND DRYER. COORDINATE FINAL LOCATION WITH OWNER AND GC PRIOR TO ROUGH-IN. VERIFY HEIGHT.
 - 7 PROVIDE (1) 3/4" CONDUIT FOR FUTURE POS USE. STUB UP AND CAP. COORDINATE EXACT ROUTING AND STUB-UP LOCATIONS ON EACH END WITH OWNER PRIOR TO ROUGH-IN.
 - 8 PROVIDE (1) 2" SPARE TELECOMMUNICATION ENTRANCE CONDUIT. PROVIDE WATERPROOF CAP AT BOTH ENDS FOR FUTURE USE.

1 ELECTRICAL POWER PLAN
 E1.1 1/4" = 1'-0"

NEIL'S CREEK PARK COMFORT STATION
BLACK RIVER TOWNSHIP, TOWN OF ANGLIER
HARNETT COUNTY, NC

DATE
 07/10/2023

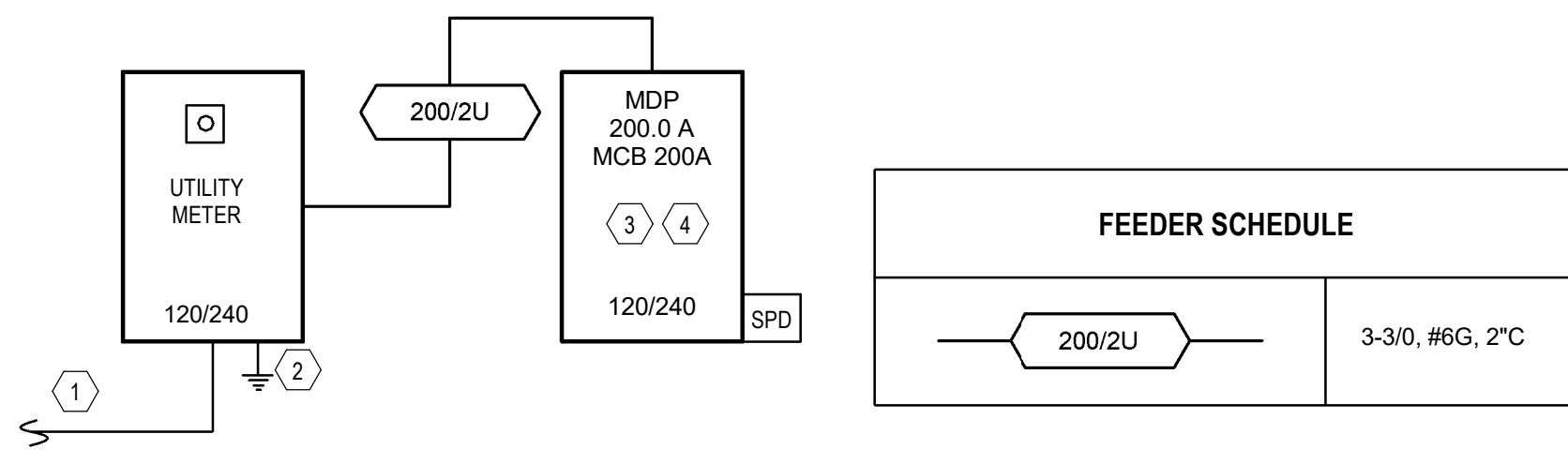
CES LICENSE NO. F-028

| SHEET TITLE | | PROJECT NO. | |
|-----------------------|-------------|-------------|----------|
| ELECTRICAL POWER PLAN | | 4343 | |
| DESIGNED BY | APPROVED BY | REVISION | REVISION |
| REH/GE | CRS | | |
| | | | |
| | | | |

SHEET NUMBER
E1.1

SEAL
 15886
 07/10/23
 ENGINEER
 CHRISTOPHER R. STROPE, III

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1 ELECTRICAL RISER DIAGRAM
E2.0 NOT TO SCALE

- GENERAL NOTES**
- ALL CIRCUIT BREAKERS 100 AMP AND ABOVE SHALL BE 100% RATED, MICROLOGIC 5.2 OR ABOVE WITH LSI ADJUSTABLE ELECTRONIC TRIP. COORDINATE TRIP SETTINGS WITH SELECTIVE COORDINATION STUDY.
 - ALL APPLICABLE ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH SEISMIC REQUIREMENTS OF THE NORTH CAROLINA STATE BUILDING CODE.
 - SERIES RATING IS NOT ALLOWED. SHARED NEUTRALS ARE NOT ALLOWED.
 - THE ELECTRICAL CONTRACTOR SHALL PROVIDE AN ARC FLASH ANALYSIS AND SELECTIVE COORDINATION STUDY AND SHALL LABEL ALL APPLICABLE ELECTRICAL EQUIPMENT IN ACCORDANCE WITH NFPA 70E. STUDIES SHALL BE INCLUDED IN SUBMITTALS.
 - EC SHALL MEET WITH THE GENERAL CONTRACTOR, OWNER, AND OWNER'S LOW VOLTAGE CONTRACTOR(S) PRIOR TO ROUGH-IN.
 - ALL SPLICES 1/0 AND LARGER SHALL BE HYPRESS CRIMP.

- KEYNOTES**
- INCOMING SERVICE CONDUCTORS BY UTILITY COMPANY.
 - PROVIDE TWO 3/4 COPPER GROUND ROD.
 - SERVICE ENTRANCE RATED.
 - SURGE PROTECTIVE DEVICE: PROVIDE INNOVATIVE TECHNOLOGY PTE1603Y101, EQUALS BY CURRENT TECHNOLOGY OR LIEBERT. DEVICE SHALL BE 160KA PER PHASE WITH 10 MODE PROTECTION. SINE WAVE TRACKING IS REQUIRED FOR THIS UNIT. PROVIDE #10 CONDUCTORS AND CONNECT TO A 30A3P CIRCUIT BREAKER. CONDUCTOR LENGTHS SHALL BE AS SHORT AS POSSIBLE AND PER THE MANUFACTURER'S RECOMMENDATIONS. PROVIDE A WARRANTY WITH A MINIMUM OF 20 YEARS THAT INCLUDES LIGHTNING STRIKES.

Branch Panel: MDP

Location: STORAGE 102 Volts: 120/240 A.I.C. Rating: 22,000 AMPS SYMMETRICAL
Supply From: UTILITY Phases: 1 Mains Type: MCB
Mounting: Surface Wires: 3 Mains Rating: 200.0 A
Enclosure: NEMA 1

Notes:
SERVICE ENTRANCE RATED.

| CKT | Circuit Description | Trip | Poles | Wires & Conduits | A | B | Wires & Conduits | Poles | Trip | Circuit Description | CKT | |
|--------------------|-----------------------------|--------|-------|--------------------|---------|--------|--------------------|--------|--------|---------------------|-------|----|
| 1 | RCPT - RM101 | 20.0 A | 1 | 2#12, #12G, 3/4" C | 180 VA | 372 VA | 2#12, #12G, 3/4" C | 1 | 20.0 A | OUTDOOR LIGHTS | 2 | |
| 3 | RCPT - RM101 | 20.0 A | 1 | 2#12, #12G, 3/4" C | | | 180 VA | 180 VA | 20.0 A | RCPT - STORAGE 102 | 4 | |
| 5 | RCPT - RM101 | 20.0 A | 1 | 2#12, #12G, 3/4" C | 180 VA | 0 VA | | | 1 | 20.0 A | SPARE | 6 |
| 7 | RCPT - RM101 | 20.0 A | 1 | 2#12, #12G, 3/4" C | | | | | 1 | 20.0 A | SPARE | 8 |
| 9 | RCPT - RM101 | 20.0 A | 1 | 2#12, #12G, 3/4" C | 180 VA | 0 VA | | | 1 | 20.0 A | SPARE | 10 |
| 11 | RCPT - RM101 | 20.0 A | 1 | 2#12, #12G, 3/4" C | | | 720 VA | 0 VA | 1 | 20.0 A | SPARE | 12 |
| 13 | RCPT - RM101 | 20.0 A | 1 | 2#12, #12G, 3/4" C | 720 VA | 0 VA | | | 1 | 20.0 A | SPARE | 14 |
| 15 | RCPT - RM101 | 20.0 A | 1 | 2#12, #12G, 3/4" C | | | | | 1 | 20.0 A | SPARE | 16 |
| 17 | RCPT - EWS | 20.0 A | 1 | 2#12, #12G, 3/4" C | 750 VA | 0 VA | | | 1 | 20.0 A | SPARE | 18 |
| 19 | RCPT - RM102, 103, 104, 105 | 20.0 A | 1 | 2#12, #12G, 3/4" C | | | 540 VA | 0 VA | 1 | 20.0 A | SPARE | 20 |
| 21 | RCPT - OUTDOOR | 20.0 A | 1 | 2#12, #12G, 3/4" C | 360 VA | 0 VA | | | 1 | 20.0 A | SPARE | 22 |
| 23 | HAND DRYER - RM105 | 20.0 A | 1 | 2#12, #12G, 3/4" C | | | 1200 VA | -- | | | | 24 |
| 25 | HAND DRYER - RM105 | 20.0 A | 1 | 2#12, #12G, 3/4" C | 1200 VA | -- | | | | | | 26 |
| 27 | LIGHTS - ALL ROOMS | 20.0 A | 1 | 2#12, #12G, 3/4" C | | | 457 VA | -- | 3 | -- | SPACE | 28 |
| 29 | EF-1 | 20.0 A | 1 | 2#12, #12G, 3/4" C | 192 VA | -- | | | 1 | -- | SPACE | 30 |
| 31 | EF-3 | 20.0 A | 1 | 2#12, #12G, 3/4" C | | | 120 VA | -- | 1 | -- | SPACE | 32 |
| 33 | EF-2 | 20.0 A | 1 | 2#12, #12G, 3/4" C | 192 VA | -- | | | 1 | -- | SPACE | 34 |
| 35 | | | | | | | 864 VA | -- | 1 | -- | SPACE | 36 |
| 37 | DHP-1 | 20.0 A | 2 | 2#12, #12G, 3/4" C | 864 VA | 0 VA | | | | | | 38 |
| 39 | WH-XX | 30.0 A | 2 | 2#10, #10G, 3/4" C | | 0 VA | 2400 VA | | 3 | 30.0 A | SPD | 40 |
| 41 | | | | | 2400 VA | 0 VA | | | | | | 42 |
| Total Load: | | | | | 7590 VA | | 7021 VA | | | | | |
| Total Amps: | | | | | 63.3 A | | 58.5 A | | | | | |

Legend:

| Load Classification | Connected Load | Demand Factor | Estimated Demand | Panel Totals |
|---------------------------------------|----------------|---------------|------------------|------------------------------------|
| HVAC | 2232 VA | 100.00% | 2232 VA | |
| Other | 0 VA | 0.00% | 0 VA | |
| LITES | 820 VA | 125.00% | 1036 VA | Total Conn. Load: 14611 VA |
| Kitchen Equipment - Non-Dwelling Unit | 4800 VA | 100.00% | 4800 VA | Total Est. Demand: 14819 VA |
| L | 0 VA | 0.00% | 0 VA | Total Conn.: 60.9 A |
| RCPT | 4350 VA | 100.00% | 4350 VA | Total Est. Demand: 61.7 A |
| Power - General | 2400 VA | 100.00% | 2400 VA | |

Notes:



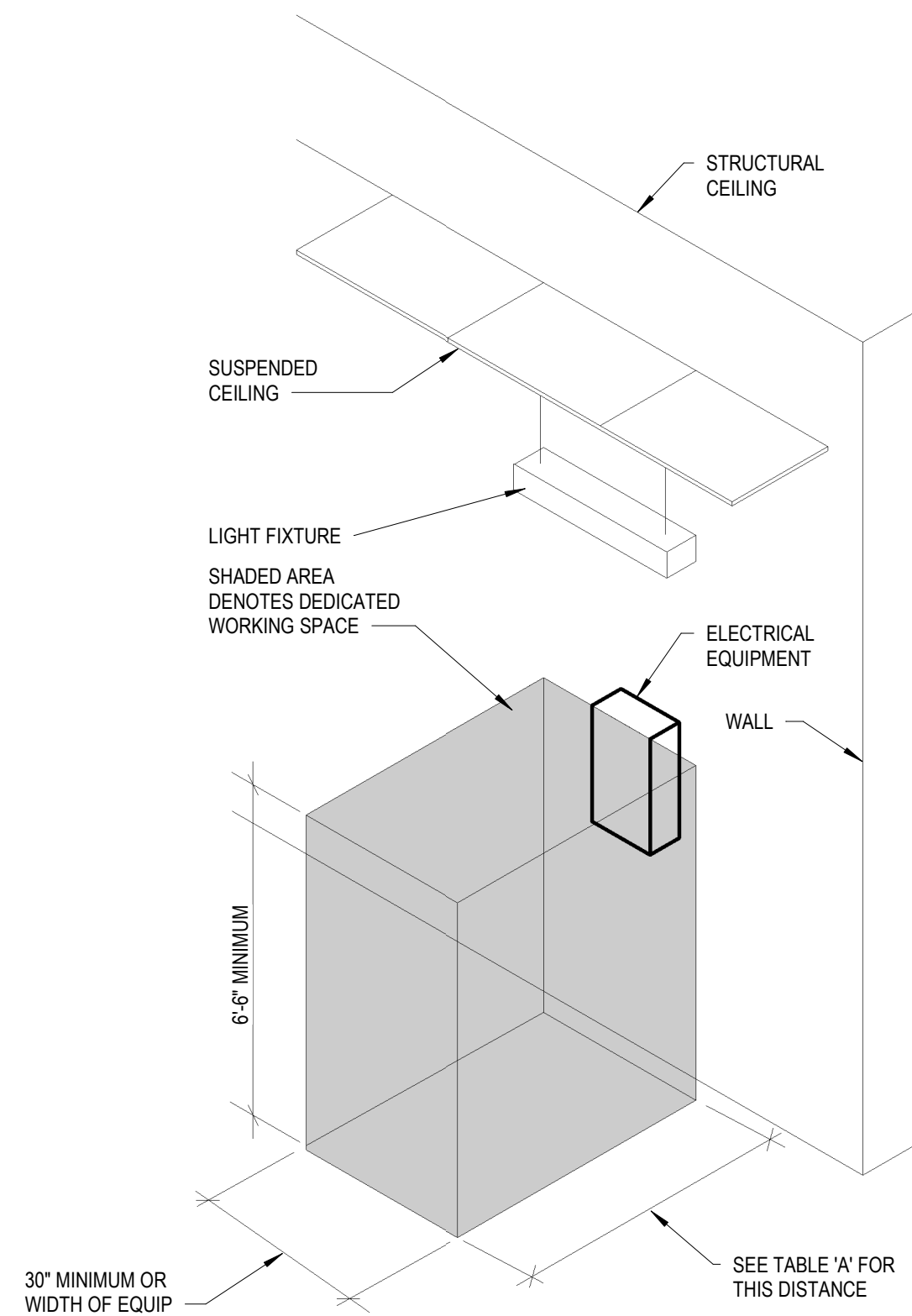
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| TABLE A - WORKING SPACE REQUIREMENTS | | | | |
|--------------------------------------|-----------|------------------------------|----|----|
| VOLTAGE TO GROUND (NOMINAL) | CONDITION | MIN. CLEAR DISTANCE (INCHES) | | |
| | | 1 | 2 | 3 |
| 0-150 VOLTS | | 36 | 36 | 36 |
| 151-600 VOLTS | | 36 | 42 | 48 |

WHERE "CONDITIONS" ARE AS FOLLOWS:

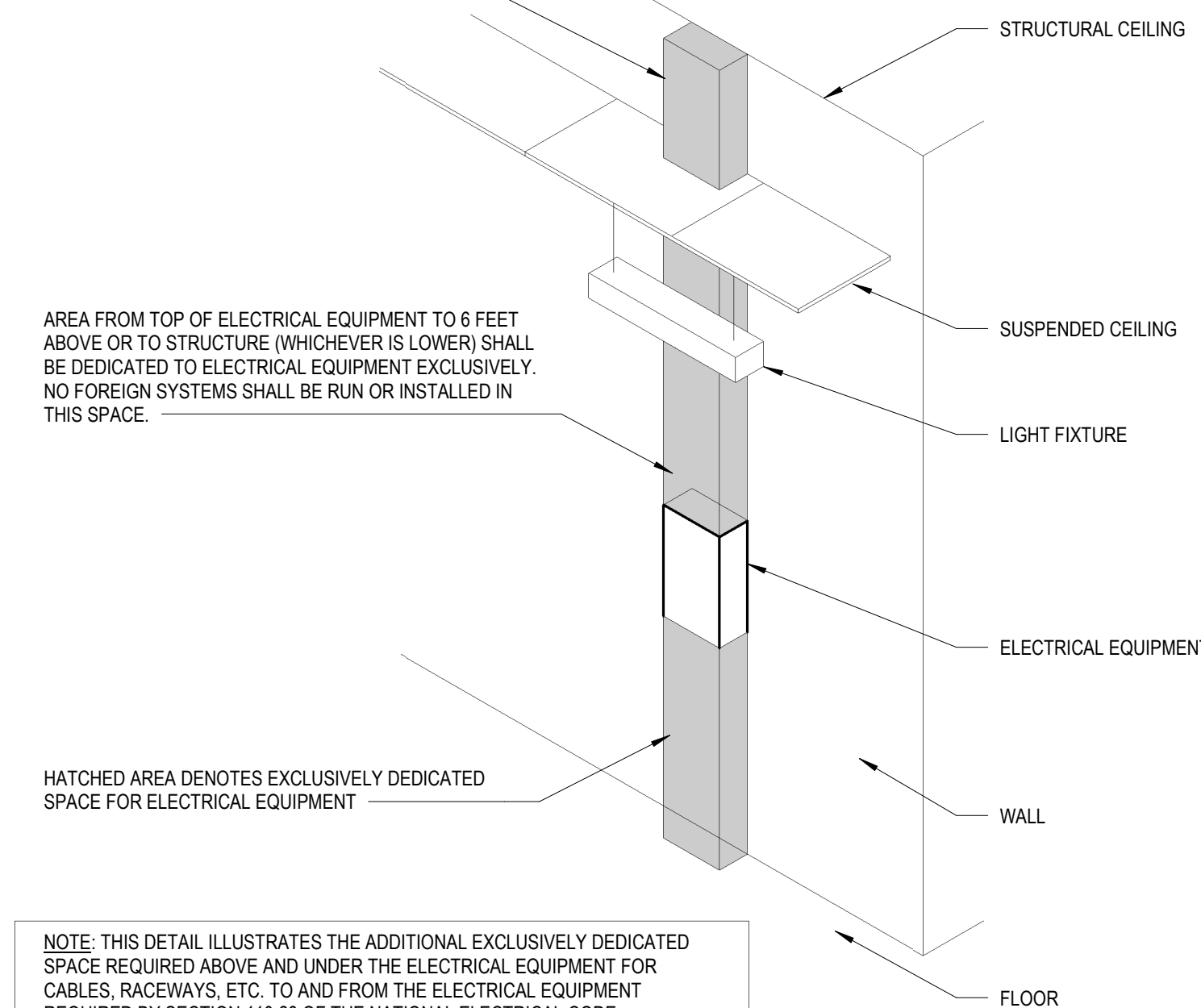
1. EXPOSED LIVE PARTS ON ONE SIDE AND NO LIVE OR GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE, OR EXPOSED LIVE PARTS ON BOTH SIDES EFFECTIVELY GUARDED BY SUITABLE WOOD OR OTHER INSULATING MATERIALS. INSULATED WIRE OR INSULATED BUS BARS OPERATING AT NOT OVER 300 VOLTS SHALL NOT BE CONSIDERED LIVE PARTS.
2. EXPOSED LIVE PARTS ON ONE SIDE AND GROUNDED PARTS ON THE OTHER SIDE.
3. EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORK SPACE (NOT GUARDED AS PROVIDED IN CONDITION 1) WITH THE OPERATOR BETWEEN.

NOTE: THIS FIGURE ILLUSTRATES THE WORKING SPACE IN FRONT OF THE ELECTRICAL EQUIPMENT REQUIRED BY SECTION 110-26 OF THE NATIONAL ELECTRICAL CODE.

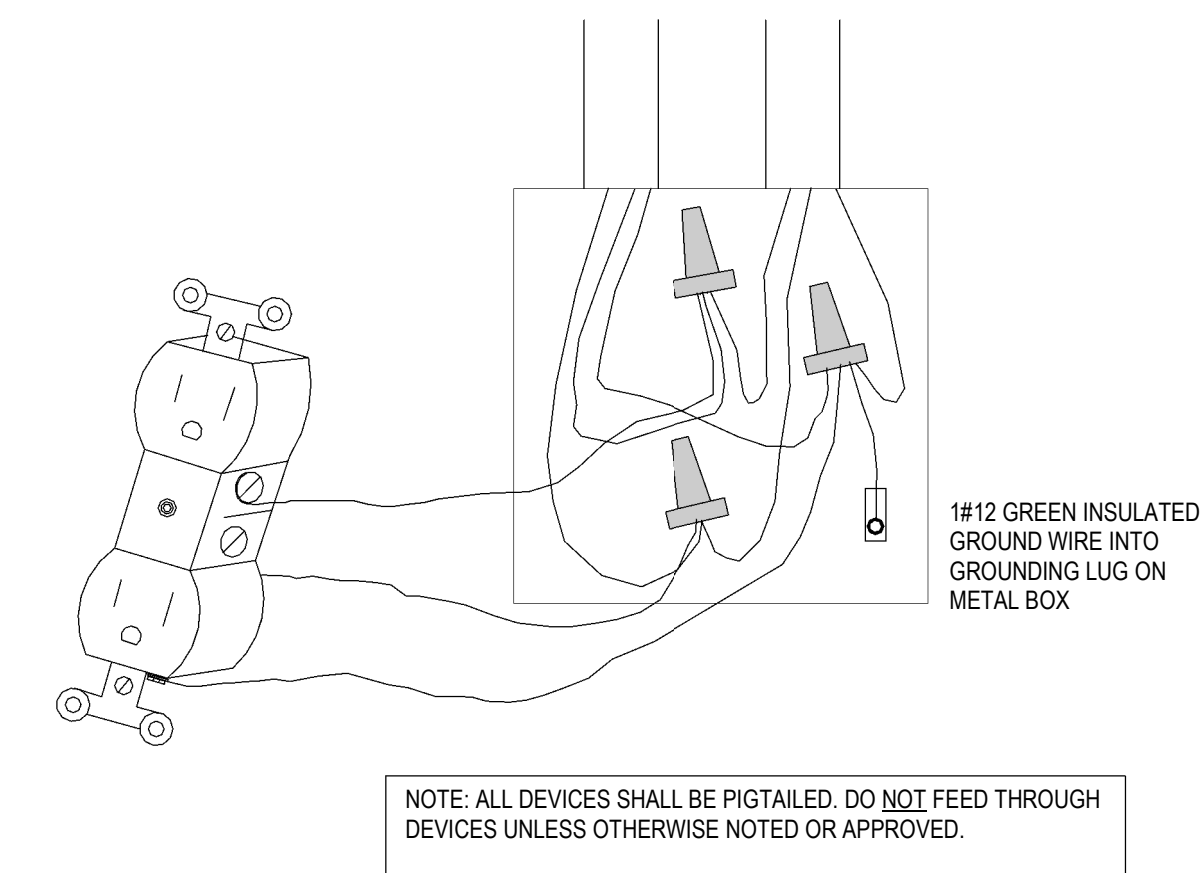


1 WORKING CLEARANCE FOR ELECTRICAL EQUIPMENT (NEC 110-26)
E2.1 NOT TO SCALE

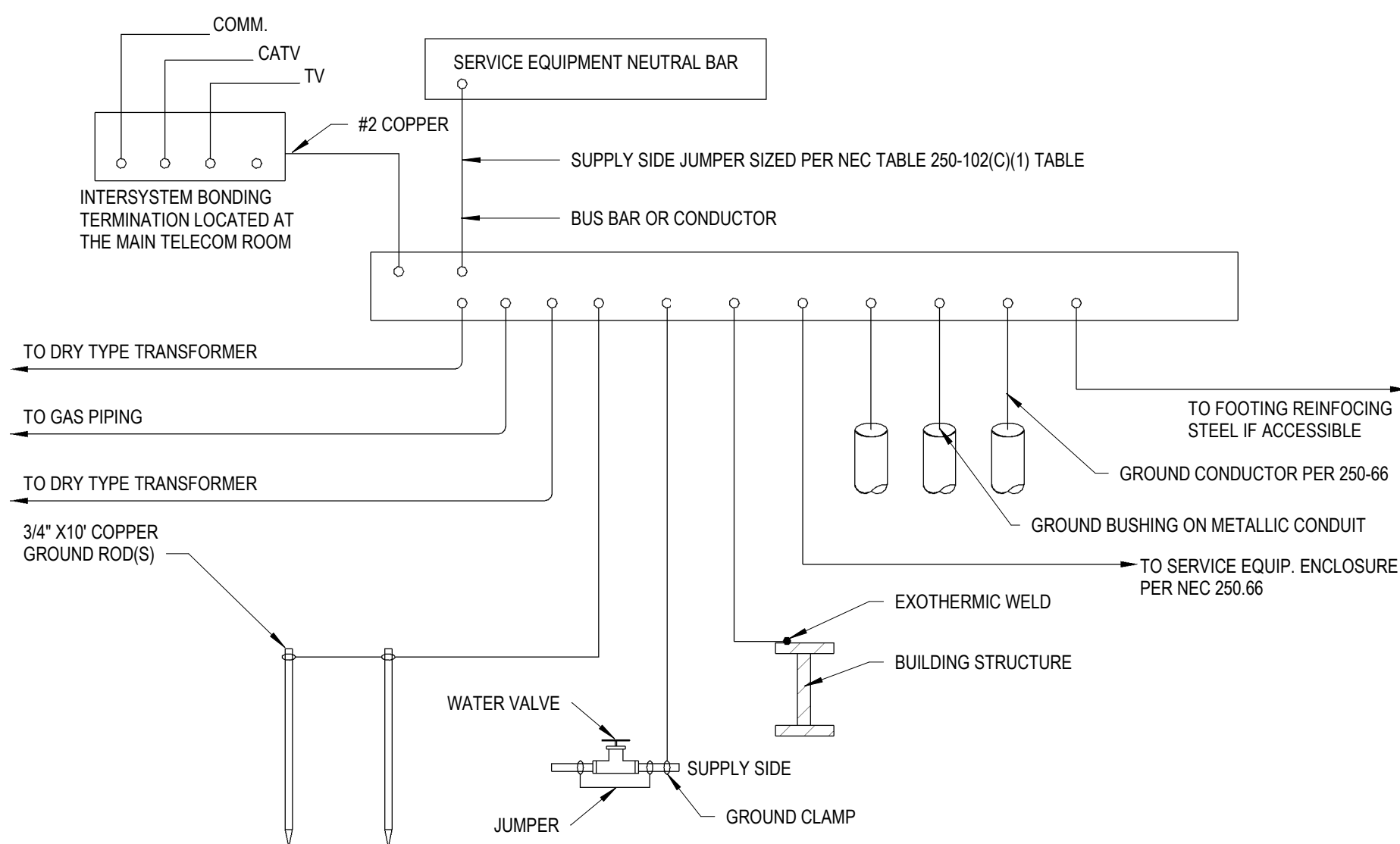
DEDICATED SPACE CONTINUES THROUGH SUSPENDED CEILING PER N.E.C. ARTICLE 110-26



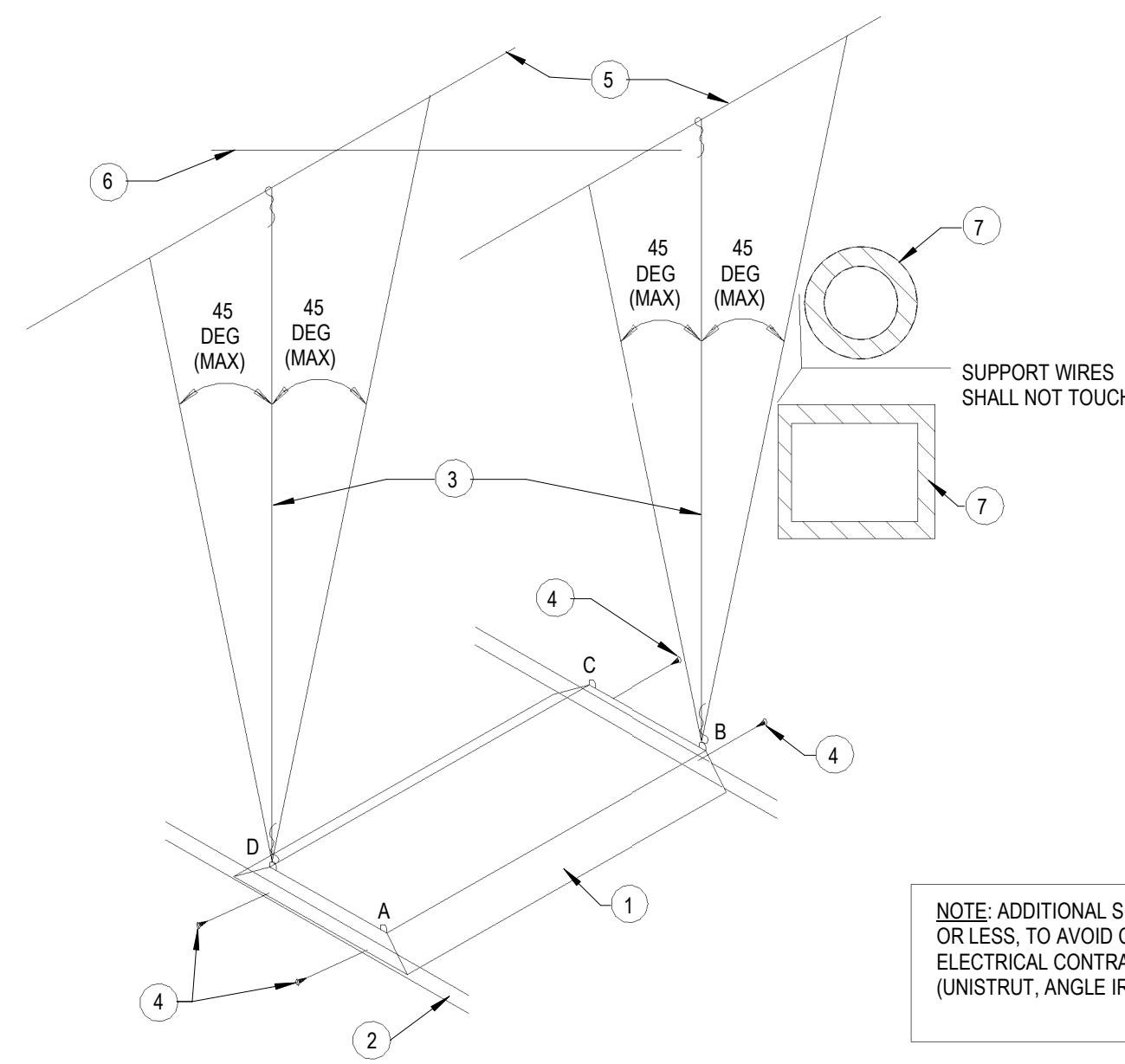
2 DEDICATED SPACE FOR ELECTRICAL EQUIPMENT (NEC 110-26)
E2.1 NOT TO SCALE



3 TYPICAL BOX RECEPTACLE CONNECTION
E2.1 NOT TO SCALE



4 SERVICE GROUNDING DETAIL
E2.1 NOT TO SCALE



KEYNOTES: #

1. LAY-IN LIGHT FIXTURE.
2. CEILING GRID.
3. SUPPORT WIRE. USE CEILING TYPE SUPPORT WIRE. ONE AT EACH OF TWO DIAGONALLY OPPOSITE CORNERS (EITHER 'A' & 'C' OR 'B' & 'D' - TWO REQUIRED PER LIGHT). WIRES SHALL BE SINGLE LENGTH (DO NOT SPLICE), INSTALLED AT NO MORE THAN 45 DEGREES FROM VERTICAL IN ANY DIRECTION. TAUT (NO SLACK), PAINTED A DIFFERENT COLOR (RED) THAN THE OTHER CEILING SUPPORT WIRES.
4. SHEET METAL SCREW (FOUR REQUIRED PER LIGHT). THE SCREWS SHALL BE INSTALLED CONCEALED FROM SIGHT IN SUCH A MANNER THAT THE LIGHT IS ADEQUATELY SECURED TO THE GRID AND THE SCREWS DO NOT INTERFERE WITH ANY DOOR TRIMS, FLANGES, LOUVERS, ETC. INSTALL SCREWS TIGHTLY SO NO GAPS APPEAR IN THE LIGHT FIXTURE FRAMING OR TRIM.
5. STRUCTURE (METAL OR WOOD TRUSS, METAL OR WOOD BAR JOIST, CONCRETE, ETC.).
6. BRIDGING BETWEEN STRUCTURAL MEMBERS (WHERE APPLICABLE). NOTE: SUPPORT WIRES ARE NOT PERMITTED TO ATTACH TO THE BRIDGING AT ANY LOCATION.
7. PIPING, HVAC DUCT, ETC. WITH OR WITHOUT INSULATION. NOTE: SUPPORT WIRES ARE NOT PERMITTED TO CONTACT ANY PIPING, HVAC DUCTS, INCLUDING INSULATION AT ANY POINT.

NOTE: ADDITIONAL SUPPORT MATERIALS MAY BE REQUIRED IN ORDER TO ACHIEVE AN ANGLE OF 45 DEGREES OR LESS, TO AVOID CONTACTING PIPING OR DUCTS, TO PREVENT FROM ATTACHING TO BRIDGING, ETC. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ADDITIONAL SUPPORT MATERIALS APPROVED FOR THE PURPOSE (UNISTRUT, ANGLE IRON, ETC.) AS REQUIRED TO INSTALL THE SUPPORT WIRES PER THIS DETAIL.

5 LAY-IN LIGHT FIXTURE SUPPORT
E2.1 NOT TO SCALE

