# GENERAL ELECTRICAL NOTES

## I. GENERAL REQUIREMENTS:

1. ELECTRICAL CONTRACTOR IS TO FURNISH AND PAY FOR ALL LABOR, MATERIAL, EQUIPMENT, PERMITS & FEES REQUIRED FOR THE COMPLETE INSTALLATION OF ALL SYSTEMS IN THIS SECTION OF WORK.
2. ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH NEC AND ALL OTHER APPLICABLE CODES. EC IS TO COORDINATE W/ G.C. IN REGARDS TO PROJECT TIMELINE, WORK HOURS, AS WELL AS ANY BONDING OR INSURANCE REQUIREMENTS.
3. ALL ELECTRICAL & LIGHTING EQUIPMENT SHALL BE PROVIDED COMPLETE WITH ALL ACCESSORIES, HANGERS, SUPPORTS, CONTROLS, ETC FOR A FULLY FUNCTIONING SYSTEM REGARDLESS OF PRESENCE ON PLANS.
4. ALL EQUIPMENT, MATERIALS AND INSTALLATION SHALL BE GUARANTEED TO BE FREE OF DEFECTS FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE OF WORK OR IN ACCORDANCE WITH THE MANUFACTURER'S STANDARD GUARANTEE, IF LONGER. EXISTING EQUIPMENT IS EXCLUDED FROM WARRANTY REQUIREMENT.
5. THESE DRAWINGS ARE DIAGRAMMATIC AND SHOW GENERAL LOCATION AND ARRANGEMENT OF ALL MATERIALS AND EQUIPMENT. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS BUILDING CONSTRUCTION AND ALL OTHER WORK WILL PERMIT.
6. DO NOT SCALE DRAWINGS FOR MEASUREMENT.
7. INFORMATION GIVEN IN SCHEDULES INCLUDES BOTH DESCRIPTION OF PRODUCT AND MANUFACTURER'S MODEL #. IF CONFLICT IS PRESENT BETWEEN DESCRIPTION AND MODEL #, EQUIPMENT DESCRIPTION SHALL TAKE PRECEDENT. IN CASE OF CONFLICT BETWEEN THE PLANS AND NOTES/SPECIFICATIONS OR CONFLICT BETWEEN INFORMATION PRESENTED ON THE PLANS OR IN THE NOTES/SPECIFICATIONS, THEN THE MOST RESTRICTIVE SHALL TAKE PRECEDENT.
8. BEFORE BID EC IS RESPONSIBLE FOR CLARIFYING W/ G.C. ANY CONFUSION IN REGARDS TO RESPONSIBILITY OF WORK TO BE PERFORMED OR MATERIALS TO BE PROVIDED. THE SUBMITTAL OF THE BID BY THE CONTRACTOR WILL BE HELD AS PROOF THAT THE CONTRACTOR UNDERSTANDS THOROUGHLY AND COMPLETELY THE SCOPE OF THE WORK INVOLVED, AND HAS INCLUDED ON THE BID ALL THE NECESSARY ITEMS TO CARRY OUT THIS SECTION OF WORK.
9. AS SOON AS POSSIBLE (AND NOT MORE THAN 30 DAYS) AFTER CONTRACT IS SIGNED, THE EC SHALL PROVIDE SUBMITTALS OF EQUIPMENT HE/SHE INTENDS TO PURCHASE FOR REVIEW AND COMMENT BY THE ENGINEER. ENGINEER IS TO APPROVE SUBMITTALS BEFORE EQUIPMENT IS ORDERED.
10. ALL QUESTIONS MUST BE SUBMITTED IN RFI FORMAT TO THE ARCHITECT AND MUST BE ADDRESSED BY THE APPROPRIATE DESIGNER OF RECORD PRIOR TO BECOMING A PROPOSED CHANGE ORDER.
11. E.C. IS TO REVIEW COMPLETE DRAWING SET. E.C. IS RESPONSIBLE FOR WORK EXPLICITLY SHOWN AND WORK IMPLIED. UNLESS OTHERWISE NOTED FINAL ELECTRICAL CONNECTION TO ALL EQUIPMENT, FURNITURE (I.E. CUBICLES, WORKSTATIONS, ETC) IS THE RESPONSIBILITY OF THE E.C..

## II. DIVISION OF WORK:

1. ALL ROOF WORK INCLUDING PENETRATIONS, OPENINGS, FLASHING, CURB INSTALLS, ETC ARE TO BE PERFORMED BY ROOFING CONTRACTOR. E.C. RESPONSIBLE FOR PROVIDING ANY ROOF CURBS, EQUIPMENT RAILS, VENTS, ETC AND COMMUNICATING ALL REQ'S WITH G.C. & ROOFING CONTRACTOR.
2. ALL LOW VOLTAGE WIRING RELATED TO MECHANICAL EQUIPMENT AND SYSTEMS IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR (ANY LOW VOLTAGE FIRE ALARM WIRING TO BE BY E.C.). ALL HIGH VOLTAGE CONNECTIONS TO MECHANICAL EQUIPMENT, TO BE PROVIDED AND INSTALLED BY E.C. (SEE EQUIPMENT SCHEDULE FOR DISCONNECT RESPONSIBILITY).
3. G.C. TO BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANY ACCESS DOORS (WALL, FLOOR, CEILING) RELATED TO ELECTRICAL SYSTEM. E.C. RESPONSIBLE FOR COMMUNICATING TO G.C. SIZE AND LOCATION OF REQ'D ACCESS DOOR(S).
4. ELECTRICAL CONTRACTOR IS TO EMPLOY THE SERVICES OF THE G.C. FOR CUTTING AND PATCHING OF WALLS, FLOORS & CEILINGS RELATED TO THE INSTALLATION OF ELECTRICAL EQUIPMENT & SYSTEMS.
5. G.C. RESPONSIBLE FOR PAINTING OF ANY EXPOSED CONDUIT, WIRE, BOXES ETC. E.C. RESPONSIBLE FOR CLEANING AND PREPARING ITEMS FOR PAINT. COORDINATE W/ G.C.
6. G.C. TO BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANY ACCESS PLATFORMS, GUARD RAILS, LADDERS, CONCRETE PADS. E.C. TO COMMUNICATE REQ'S TO G.C.
7. E.C. TO COORDINATE W/ G.C. PRIOR TO BID REGARDING HIRING OF FIRE ALARM, DATA/TELE & SECURITY SUB-CONTRACTORS (IF APPLICABLE).

## III. MATERIALS:

1. ALL MATERIAL, DEVICES, APPLIANCES, AND EQUIPMENT SHALL BE NEW UNLESS OTHERWISE NOTED AND SHALL CONFORM TO THE STANDARDS OF THE UNDERWRITER'S LABORATORIES, INC., AND THE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION.
2. MECHANICAL CLOSETS IN SOME UNIT TYPES ARE RETURN PLENUMS. ALL MATERIALS INSTALLED IN RETURN PLENUM ARE TO BE PLENUM RATED.
3. PROVIDE HANGERS & SUPPORTS APPROVED FOR USE BY NEC.
4. ALL FIRE SEALANTS TO BE U.L. LISTED AND APPROVED FOR USE W/ APPROPRIATE U.L. PENETRATION DETAIL.
5. ELECTRICAL BOXES IN RATED WALLS MUST BE METAL OR LISTED FOR USE IN RATED WALLS. ONLY SINGLE AND DOUBLE GANG BOXES ARE TO BE USED IN RATED WALLS. LARGER BOXES ARE NOT ALLOWED AS THEY EXCEED THE 16 SQUARE INCH MAXIMUM BOX OPENING ALLOWED IN RATED WALLS PER NEC 300.21
6. CONDUCTORS SHALL BE COPPER RATED AT NOT LESS THAN 600 VOLTS.MINIMUM SIZE SHALL BE #12 AWG UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL WIRE #8 AWG AND LARGER SHALL BE STRANDED. ALL CONDUCTORS #10 AND SMALLER MAY BE SOLID OR STRANDED, UNLESS OTHERWISE NOTED. CONDUCTOR INSULATION SHALL BE TYPE THHN UNLESS OTHERWISE NOTED. ALL EXTERIOR CABLE OR OTHER WIRE EXPOSED TO SUNLIGHT SHALL BE RATED FOR EXTERIOR USE & SUNLIGHT RESISTANT.
7. ALL WIRING SHALL BE INSTALLED IN GALVANIZED RIGID CONDUIT, INTERMEDIATE METAL CONDUIT, OR EMT, EXCEPT AS ALLOWED BELOW. EMT SHALL NOT BE USED IN OR UNDER CONCRETE SLABS, OR IN MASONRY WALLS. USE SCHEDULE 40 PVC OUTDOORS WHERE NOT SUBJECT TO PHYSICAL DAMAGE OR BELOW FLOOR SLAB. PVC NOT TO BE USED IN PATIENT CARE AREAS. MINIMUM CONDUIT SIZE TO BE 1/2". TYPE MC AND AC CABLE MAY BE USED WHERE PERMISSIBLE BY NEC. FLEXIBLE CONDUIT SHALL BE USED FOR CONNECTIONS TO VIBRATING EQUIPMENT AND LUMINAIRES, BUT SHALL NOT EXCEED 6' IN LENGTH. NM & SER CABLE MAY BE USED IN CONSTRUCTION TYPES AND OCCUPANCIES ALLOWED BY NEC. NO NM OR SER CABLE MAY BE INSTALLED EXPOSED. ALL NM AND SER CABLE SHOULD BE PROTECTED FROM PHYSICAL DAMAGE AND INSTALLED IN ACCORDANCE WITH NEC 310.
8. METAL CONDUIT COUPLINGS TO BE COMPRESSION TYPE OR THREADED WHEN ACCESSIBLE TO BUILDING OCCUPANTS. METAL COUNDUIT COUPLINGS MAY BE SET-SCREW TYPE WHEN CONCEALED IN BUILDING STRUCTURE OR LOCATED MORE THAN 10' AFF. PLASTIC CONDUIT COUPLINGS TO BE SOCKET GLUED TYPE.
9. FUSES 0 - 600 AMPS SHALL BE UL CLASS "RK-1" LOW PEAK DUAL ELEMENT TIME DELAY WITH 200,000 AMPERE INTERRUPTING RATING AS MANUFACTURED BY BUSSMANN, UNLESS NOTED OTHERWISE.
10. ALL TERMINALS/LUGS SHALL BE 60/75° RATED. ALL TERMINALS, SPLICING CONNECTORS, LUGS, ETC SHALL BE IDENTIFIED FOR USE WITH THE MATERIAL (CU/AL) OF THE CONDUCTOR AND SHALL BE PROPERLY INSTALLED.
11. RECEPTACLES IN COMMERCIAL AREAS SHALL BE 20 AMP COMMERCIAL SPECIFICATION GRADE EQUAL TO HUBBELL SERIES. GROUND FAULT RECEPTACLES SHALL BE EQUAL TO COOPER VGF SERIES. IN RESIDENTIAL UNITS ALL RECEPTACLES ON 20 AMP CIRCUITS SHALL BE 20 AMP, ALL 15A/20A 120V RECEPTACLES IN RESIDENTIAL UNITS SHALL BE TAMPER PROOF, EQUAL TO COOPER TR SERIES. ALL RECEPTACLES IN PEDIATRIC CARE AREAS SHALL BE TAMPER RESISTANT TYPE EQUAL TO COOPER TR SERIES AS REQUIRED BY NEC 517.18(C).
12. LIGHTING SWITCHES IN COMMERCIAL AREAS SHALL BE 20 AMP COMMERCIAL SPECIFICATION GRADE EQUAL TO HUBBELL SERIES. LIGHT SWITCHES IN RESIDENTIAL UNITS SHALL BE 15 AMP.
13. ALL EXTERIOR FIXTURES AND DEVICES SHALL BE RATED FOR OPERATION AT 0° F AND SHALL BE DAMP OR WET LABELED AS REQUIRED.
14. ANY RECESSED LIGHT FIXTURES INSTALLED IN INSULATED CEILINGS OR WALLS ARE TO BE "IC RATED" AND "AIR TIGHT" MEETING THE REQUIREMENTS OF ASTME 283 AND 2020 FECC SEC. C402.5.8 FOR COMMERCIAL PROJECTS & R402.4.5 FOR RESIDENTIAL PROJECTS.
15. ANY MULTI-WIRE BRANCH CIRCUITS ARE TO PROVIDED WITH MULTI-POLE BREAKERS.
16. WIRING METHODS IN CORROSIVE ENVIRONMENT AREAS DESCRIBED IN NEC 680.14(A) SHALL BE LISTED AND IDENTIFIED FOR USE IN SUCH AREAS. RIGID METAL CONDUIT, INTERMEDIATE METAL CONDUIT, RIGID POLYVINYL CHLORIDE CONDUIT, AND REINFORCED THERMOSETTING RESIN CONDUIT SHALL BE CONSIDERED TO BE RESISTANT TO THE CORROSIVE ENVIRONMENTS SPECIFIED IN NEC 680.14(A).
17. ALL EXTERIOR EQUIPMENT, DEVICES AND MATERIALS SHALL BE INSTALLED, BRACED TO WITHSTAND A 160 MPH WIND.

## IV. COORDINATION:

1. THE ELECTRICAL CONTRACTOR SHALL COORDINATE CLOSELY WITH ALL OTHER TRADES TO AVOID CONFLICT AND ENSURE OTHER TRADES PROVIDE MEASURES TO ACCOMMODATE ELECTRICAL WORK (I.E. ACCESS DOORS, SLAB/WALL/ROOF OPENINGS, ETC).
2. E.C. TO COORDINATE ELEVATION OF WALL MOUNTED LIGHTS (INTERIOR & EXTERIOR) W/ ARCHITECT/ARCH PLANS.
3. E.C. TO COORDINATE W/ P.C. & M.C. REGARDING POWER AND FIRE ALARM CONNECTIONS TO MECHANICAL AND PLUMBING EQUIPMENT.
4. E.C. TO VERIFY ALL REQUIREMENTS AND COORDINATE EXACT LOCATION OF INCOMING ELECTRICAL SERVICE WITH LOCAL POWER COMPANY PRIOR TO PROJECT START-UP. NOTIFY ENGINEER OF ANY CHANGES AS MAY BE REQUIRED.
5. E.C. TO VERIFY DEVICE PLATE COLOR AND MATERIAL WITH ARCHITECT PRIOR TO PURCHASE.

## V. EXECUTION:

1. E.C. TO FOLLOW MANUFACTURER'S INSTRUCTIONS WHEN INSTALLING ELECTRICAL EQUIPMENT. ENSURE REQUIRED MAINTENANCE ACCESS AND CLEARANCES ARE MAINTAINED. IF CONFLICT EXISTS BETWEEN THESE PLANS AND MFG INSTRUCTIONS CONTACT ENGINEER.
2. E.C. IS TO ENSURE THAT THEIR INSTALLATION OF NEW CONDUITS, PIPES, DUCTWORK, AND SIMILAR DOES NOT BLOCK ACCESS TO NEW OR EXISTING AREA EQUIPMENT AND THAT THE FORE MENTIONED DOES NOT INTERFERE WITH THE REQUIRED SERVICE CLEARANCE OF NEW OR EXISTING EQUIPMENT. COORDINATE WITH OTHER TRADE CONTRACTORS AND CONTACT ENGINEER IF UNCERTAINTY EXISTS REGARDING EQUIPMENT SERVICE CLEARANCE REQUIREMENTS.
3. A COMPLETE GROUNDING SYSTEM SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH ARTICLE 250 OF THE NEC, AND AS SHOWN ON THE DRAWINGS.
4. PROVIDE A PULLWIRE IN ALL EMPTY CONDUITS.
5. PROVIDE A TYPED DIRECTORY IN ALL PANELBOARDS CLEARLY DESCRIBING THE LOCATION OF AND TYPE OF LOAD BEING SERVED FOR ALL CIRCUITS. PROVIDE ENGRAVED PHENOLIC NAMEPLATES FOR ALL PANELBOARDS AND DISCONNECT SWITCHES, WHITE LETTERS ON BLACK BACKGROUND.
6. ALL PENETRATIONS THROUGH EXTERIOR WALLS & ROOF SHALL BE FLASHED & COUNTER-FLASHED IN A WATERPROOF MANNER.
7. SEAL ALL PENETRATIONS OF SMOKE PARTITIONS OR FIRE RATED WALLS, CEILING, FLOORS IN ACCORDANCE W/ APPROPRIATE U.L. PENETRATION DETAIL AND FLORIDA BUILDING CODE.
8. PENETRATIONS OF NON-RATED WALLS, PARTITIONS AND FLOOR OF COMBUSTIBLE CONSTRUCTION SHALL BE FIRESTOPPED WITH MATERIALS EQUIVALENT TO TWO INCHES OF WOOD. FIRESTOPPING SHALL COMPLY WITH ASTM E-814.
9. ANY NOTCHING, DRILLING, BORING OR OTHER ALTERATION TO BUILDING STRUCTURE SHALL BE PERFORMED IN A CODE APPROVED METHOD AND NOT THREATEN THE INTEGRITY OF THE BUILDING STRUCTURE.
10. SUPPORT ALL CONDUIT AND EQUIPMENT IN ACCORDANCE W/ NEC. ANY SUSPENDED MATERIALS SHALL BE DIRECTLY SUPPORTED BY THE BUILDING STRUCTURE. DO NOT ATTACH ANYTHING TO THE ROOF DECK.
11. PENETRATIONS OF ALL EXTERIOR WALLS, FLOORS AND CEILINGS SHALL BE SEALED IN AN AIR TIGHT MANNER AND IN ACCORDANCE W/ 2020 FECC C402.5.1.1 FOR COMMERCIAL PROJECTS & R402.4.1 FOR RESIDENTIAL PROJECTS.
12. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL ELECTRICAL EQUIPMENT FROM FOREIGN MATERIAL DURING CONSTRUCTION (PAINT, SPACKLE, ETC.). UPON COMPLETION OF WORK THE ELECTRICAL CONTRACTOR SHALL CLEAN, WASH, ETC ALL ITEMS AND EQUIPMENT WITHIN HIS SCOPE OF WORK AND LEAVE ALL ITEMS BRIGHT AND CLEAN.
13. UNLESS OTHERWISE INDICATED THE ELECTRICAL CONTRACTOR AT HIS/HER DISCRETION MAY COMBINE MULTIPLE CIRCUITS INTO A SINGLE CONDUIT AND DE-RATE WIRE. COMBINING AND DE-RATING IS TO BE DONE IN STRICT ACCORDANCE W/ NEC.
14. DEVICES INCLUDING GFCI PROTECTION MUST HAVE THEIR TESTING MEANS READILY ACCESSIBLE. PROVIDE REMOTE TESTING MEANS OR GFCI BREAKER FOR GFCI RECEPTACLES AND SIMILAR DEVICES WHICH ARE NOT READILY ACCESSIBLE (I.E. BEHIND EQUIPMENT, AT CEILING, ETC). (NEC 210.8).
15. COORDINATE WITH THE CABLE TV AND TELEPHONE UTILITIES FOR SERVICE ENTRANCE AND CABLING REQUIREMENTS PRIOR TO ANY PURCHASING. INSTALLATION MUST COMPLY WITH THEIR RESPECTIVE REGULATIONS AND REQUIREMENTS.
16. ALL EXIT & EMERGENCY LIGHTS ARE TO BE CIRCUITED TO UN-SWITCHED LEG OF LOCAL NORMALLY ON LIGHTING CIRCUIT.
17. RECEPTACLE, LIGHT SWITCHES AND OTHER CONTROL DEVICES ARE TO BE INSTALLED IN ACCORDANCE W/ ANSI A117.1 AND ADA REQ'S CONCERNING HEIGHT AND ACCESSIBILITY. FHA REQ'S TO BE FOLLOWED FOR MULTI-FAMILY AND RESIDENTIAL PROJECTS.
18. E.C. IS TO CONFIRM EXACT ELECTRICAL NAMEPLATE DATA OF ALL PLUMBING, MECHANICAL AND ELECTRICAL EQUIPMENT INCLUDING, BUT NOT LIMITED TO, MCA, MOCP, VOLTAGE & PHASE BEFORE BEGINNING WORK.
19. CEILING MOUNTED ELECTRICAL FIXTURES SHALL BE A MINIMUM OF 80 INCHES ABOVE THE FINISHED FLOOR UNLESS ABOVE COUNTERTOPS OR SIMILAR FIXED OBSTRUCTIONS.
20. E.C. TO IDENTIFY AND PERMANENTLY MARK BOXES, ENCLOSURES, EXPOSED CABLE, AND RACEWAY SYSTEMS SERVING EMERGENCY SYSTEMS IN ACCORDANCE TO NEC 700.10. E.C. TO ALSO PROVIDE CLEARLY IDENTIFIED LABEL OF EMERGENCY BRANCH CIRCUIT AT PANEL (NEC 700.12(F)(2)(4)).
21. ALL WORK IN/THROUGH REQUIRED FIRE RATED WALLS, BARRIERS, AND PARTITIONS SHALL COMPLY WITH 2020 FBC/IBC SEC 714. OPENINGS FOR INSTALLATION OF BOXES THAT ARE GREATER THAN 16 SQUARE INCHES SHALL BE PROTECTED AS REQUIRED BY U.L. AND 2020 FBC/IBC SEC 714.
22. BACK-TO-BACK BOXES IN 1 OR 2 HOUR RATED WALLS WITHIN 24" OF EACH OTHER SHALL BE PROTECTED BY (1) OF THE FOLLOWING, OR EQUAL: METACAULK BOX GUARD (METAL BOXES ONLY), METACAULK COVER GUARD, OR METACAULK PUTTY PADS.
23. CEILING MOUNTED OCCUPANCY SENSORS ARE TO BE MOUNTED AT LEAST 6'-0" FROM DIFFUSERS, GRILLES, FANS, AND OTHER SIMILAR SOURCES OF VIBRATION. COORDINATE INSTALLATION LOCATIONS WITH M.C..
24. E.C. TO UPSIZE ANY WIRE RUNS EXCEEDING 65 OR 120 FEET DEPENDING ON LOAD. SEE VOLTAGE DROP SCHEDULE FOR 120V BRANCH CIRCUITS WITH LOADS UP TO 16A LOCATED ON THIS SHEET.
25. E.C. TO FOLLOW MAX DISTANCE APARTMENT FEEDER CHART LOCATED ON RISER SHEET FOR APARTMENT UNITS. E.C. TO COORDINATE MAXIMUM PANEL LUG SIZE AND MAXIMUM METER CENTER BREAKER LUG SIZE IF FEEDER IS UPSIZED.
26. BUILDING SYSTEMS TO BE COMMISSIONED IN ACCORDANCE WITH 2020 FECC SECTION C408. SEE NOTES SHEET E003.

# LIGHTING FIXTURE SCHEDULE

| MARK | MANUF. | CATALOG NUMBER | LAMP DATA NO. | LAMP DATA TYPE | VOLTS | BALLAST DATA NO. | BALLAST DATA TYPE | INPUT WATTS | MOUNTING | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|
| BL | - | - | - | LED | 120 | 1 | DRIVER | 15 | SURFACE | EXTERIOR RATED LED CEILING DOME LIGHT. SELECTED BY OTHERS. PROVIDED & INSTALLED BY E.C.. INCLUDE $100/FIXTURE MAT'L ALLOW IN BID. 3000K. 1000 LUMENS. |
| CA | DMF | DRD2 | - | LED | 120 | - | DRIVER | 12 | RECESSED | 4" ROUND LED DOWNLIGHT. 750 LUMENS. 93+CRI. 2700K. 0-10V DIM TO 10% SMOOTH STYLE. WHITE FINISH. IC RATED. DRDH NEW CONST. HOUSING. |
| CF | MINKA AIRE | F853-BN/MM | - | - | 120 | - | - | - | SURFACE | 60" CEILING FAN. BRUSHED NICKEL FINISH. |
| CN | REGINA ANDREW | GLASS FLOAT PENDANT 16-1029AM | 1 | - | 120 | - | - | 21 | SUSPENDED | DECORATIVE PENDANT. PROVIDE W/ 60W EQUIV A19 MED BASE LED BULBS. 2700K. DIMMABLE. ANTIQUE MERCURY FINISH. |
| CR | LITHONIA | 6BP | - | LED | 120 | 1 | DRIVER | 13 | RECESSED | 6" ROUND BAFFLE LED DOWNLIGHT. 900 LUMENS. 80 CRI. 3000K COLOR TEMP. FINISH BY ARCH. IC RATED. DAMP LOCATION. W /L7XLED T24 HOUSING. |
| CS | NUVO | 62 1145 | - | LED | 120 | - | DRIVER | 10 | WALL | DECORATIVE LED SCONCE. 2-LIGHT UP/DOWN. 700 LUMENS. 3000K COLOR TEMP. 90CRI. EXTERIOR RATED. BRONZE FINISH. |
| E2 | LITHONIA | VAP | - | LED | 120 | - | DRIVER | 40 | WALL | LINEAR LED FIXTURE W/ POLYCARB GASKETED LENS. ALUMINUM HOUSING. 6000 LUMENS. 3000K COLOR TEMP. |
| ED | LITHONIA | WSQ-LED-P4-SR4-30K-MVOLT | 1 | LED | MVOLT | 1 | LED DRIVER | 61 | WALL | LED WALL PACK. WET LOC. & COLD TEMP RATED. 5,991 LUMENS. 3000K TEMP. SR4 DISTRIBUTION. FULL CUT-OFF |
| GB | - | - | 1 | LED | 120 | - | DRIVER | 15 MAX | WALL | EXTERIOR RATED LED WALL SCONCE. SELECTED BY OTHERS. PROVIDED & INSTALLED BY E.C.. INCLUDE $125/FIXTURE MAT'L ALLOWANCE IN BID. 3000K. |
| PB | LITHONIA | 6BP | - | LED | 120 | 1 | DRIVER | 13 | RECESSED | 6" ROUND BAFFLE LED DOWNLIGHT. 900 LUMENS. 80 CRI. 3000K COLOR TEMP. FINISH BY ARCH. WET LOCATION. W /L7XLED T24 HOUSING. |
| PG | LITHONIA | WSQ-LED-P3-SR4-30K-MVOLT | 1 | LED | MVOLT | 1 | LED DRIVER | 40 | WALL 8.5' MOUNT HEIGHT | LED WALL PACK. WET LOC. & COLD TEMP RATED. 4,486 LUMENS. 3000K TEMP. SR4 DISTRIBUTION. FULL CUT-OFF |
| PH | KASON | 1810LX6000 | - | LED | 120-277 | 1 | DRIVER | 58 | SURFACE | 4' LED VAPOR PROOF GASKETED SURFACE MOUNT FIXTURE. -40°F AND WET LOCATION RATED. |
| UA | CRAFTMADE | C201BN/WHT | - | - | 120 | - | - | 100 | SURFACE | CEILING FAN W/ LIGHT KIT. PROVIDE W/ 100W EQUIV A19 MED BASE LED BULB. 3000K. |
| UB | - | - | - | LED | 120 | - | DRIVER | 15 MAX | SURFACE | 6" LED DOWNLIGHT. 3000K COLOR TEMP. 1000 LUMENS. PROVIDED & INSTALLED BY E.C.. INCLUDE $50/FIXTURE MAT'L ALLOWANCE IN BID. 3000K. |
| UC | SUNSET | F7630-53 | 3 | - | 120 | - | - | 18 | SURFACE | CEILING DOME LIGHT. PROVIDE W/ 100W EQUIV A19 MED BASE LED BULB. 3000K. |
| UD | MILLENNIUM LIGHTING | 1701-SN | 1 | - | 120 | - | - | 6 | SUSPENDED | DECORATIVE PENDANT LIGHT. PROVIDE W/ 100W EQUIV A19 MED BASE LED BULB. 3000K. DIMMABLE. |
| UF | - | - | 3 | - | 120 | - | - | 18 | WALL | DECORATIVE VANITY. SELECTED BY OTHERS. PROVIDED & INSTALLED BY E.C.. INCLUDE $75/FIXTURE MAT'L ALLOWANCE IN BID. 3000K. |
| UH | TOPAZ | SDL6 15 930 D | - | LED | 120 | - | DRIVER | 15 | SURFACE | 6" LED DOWNLIGHT. 3000K COLOR TEMP. 900 LUMENS. |
| UJ | CRAFTMADE | Z190-05 | 1 | - | 120 | - | - | 6 | WALL | EXTERIOR RATED WALL BRACKET LIGHT. PROVIDE W/ 60W EQUIV A19 MED BASE LED BULB. 3000K. |
| UK | CAMEO | 612WH | 1 | - | 120 | - | - | 6 | SURFACE | CEILING DOME LIGHT. PROVIDE W/ A19 MED BASE LED BULB. 3000K. |
| UP | MILLENNIUM LIGHTING | 793-SN | 3 | - | 120 | - | - | 18 | SUSPENDED | 3-LIGHT CHANDELIER. PROVIDE W/ 60W EQUIV A19 MED BASE LED BULBS. 3000K COLOR TEMP. DIMMABLE |
| Y | LITHONIA | ZL1N | - | LED | MVOLT | 1 | DRIVER | 30 | SURFACE | 4' LED STRIP. 3000 LUMENS. W/ FROSTED DIFFUSER. 3000K COLOR TEMP. COLD TEMP RATED. |
| Y2 | LITHONIA | ZL1N | - | LED | MVOLT | 1 | DRIVER | 59 | SURFACE | 4' LED STRIP. 7000 LUMENS. W/ FROSTED DIFFUSER. 3000K COLOR TEMP. COLD TEMP RATED. |
| Z | - | - | 1 | 13W LED | 120 | " | " | 13 | SURFACE | INCANDESCENT LAMP HOLDER W/ 100 W EQUIVALENT LED A19 BULB. PROVIDE "JELLY JAR" CONFIG. WHERE SUBJECT TO PHYSICAL DAMAGE. |

LIGHTING FIXTURE SCHEDULE CONTINUED ON SHEET E0.02

NOTES:
1. UNLESS OTHERWISE NOTED COLOR & FINISH OF FIXTURE HOUSING, BAFFLE, OR SIMILAR EXPOSED ELEMENTS TO BE BY ARCHITECT.
2. EXIT AND EMERGENCY LIGHTING FIXTURES SHALL BE CIRCUITED TO AN UNSWITCHED LEG OF A NORMALLY ON LOCAL LIGHTING CIRCUIT (UNLESS NOTED OTHERWISE).INCLUDE 90 MINUTE BATTERY BACKUP & TESTING MEANS.
3. FIXTURES WIRED VIA EMERGENCY LIGHTING INVERTER WHERE "EMG-INV" IS SHOWN.
4. ALL LAMPS OF A SINGLE FIXTURE TYPE INSTALLED IN EACH AREA/ROOM/SPACE ARE TO BE OF SAME TEMPERATURE/COLOR.

# MOTION SENSOR LEGEND

| | |
|---|---|
| MS | WALL SWITCH DUAL TECH. (INFRARED AND ULTRASONIC) OCCUPANCY SENSOR EQUAL TO SENSOR SWITCH MODEL WSX PDT. 120/277V. TIME DELAYS 15 MINUTES FOR ON/OFF. LINE VOLTAGE. |
| MS | CORNER MOUNTED DUAL TECH. (INFRARED AND ULTRASONIC) OCCUPANCY SENSOR EQUAL TO SENSOR SWITCH MODEL WV PDT 16. TIME DELAYS 20 MINUTES FOR ON/OFF. LOW VOLTAGE. PROVIDE SENSOR SWITCH PP-20 POWER PACKS W/ RELAYS AS NEEDED FOR POWERING OF SENSORS AND CONTROL OF LIGHTING CIRCUITS. |
| MS | CEILING MOUNTED DUAL TECH. (INFRARED AND ULTRASONIC) OCCUPANCY SENSOR EQUAL TO SENSOR SWITCH MODEL CM PDT 10. TIME DELAYS 20 MINUTES FOR ON/OFF. LOW VOLTAGE. PROVIDE SENSOR SWITCH PP-20 POWER PACKS W/ RELAYS AS NEEDED FOR POWERING OF SENSORS AND CONTROL OF LIGHTING CIRCUITS. |

NOTE:
THE CONTRACTOR IS TO PROVIDE AND INSTALL ALL RELAYS, CONTROLS, SWITCHES, ETC FOR A FULLY FUNCTIONING SYSTEM REGARDLESS OF PRESENCE OR ABSENCE ON PLANS.

# VOLTAGE DROP SCHEDULE

| 120V BRANCH CIRCUITS UP TO 8 AMPS (1 KVA) | |
|---|---|
| RUN DISTANCE (FT) | WIRE SIZE (COPPER AWG) |
| 1' TO 120' | #12 |
| 121' TO 190' | #10 |
| 191' TO 300' | #8 |
| 301' TO 470' | #6 |
| 120V BRANCH CIRCUITS 9 AMPS TO 14 AMPS (1 - 1.7 KVA) | |
| RUN DISTANCE (FT) | WIRE SIZE (COPPER AWG) |
| 1' TO 65' | #12 |
| 66' TO 110' | #10 |
| 111' TO 170' | #8 |
| 171' TO 270' | #6 |

NOTE:
WIRE SIZES INDICATED IN GENERAL NOTES AND CONNECTIONS SCHEDULES ARE MINIMUM WIRE SIZES. CONTRACTOR SHALL UPSIZE WIRES BASED ON LOAD AND LENGTH OF RUN AS INDICATED IN SCHEDULE ABOVE.

# ELECTRICAL SYMBOL LEGEND

| | |
|---|---|
| | CIRCUIT CONDUCTORS CONCEALED IN FLOOR, WALL OR CEILING. |
| | ARROWHEAD INDICATES HOMERUN TO PANEL NOTED. |
| | INDICATES HOT LEG OF CIRCUIT TO BE CARRIED OVER TO NEXT DEVICE. SEE PLANS FOR CONTROL SCHEME. |
| J | JUNCTION BOX CEILING MOUNTED. |
| J | JUNCTION BOX FLOOR MOUNTED. |
| J | JUNCTION BOX WALL MOUNTED AT HEIGHT INDICATED ON DRAWINGS. |
| S | SINGLE POLE SWITCH, 20A, 120/277 VOLT, 48" A.F.F. TO CENTER.<br>"3" INDICATES 3-WAY SWITCH.<br>"4" INDICATES 4-WAY SWITCH.<br>"D" INDICATES DIMMER SWITCH OF TYPE TO SUIT LOAD.<br>"M" INDICATES 120V, 20A MOTOR RATED TOGGLE SWITCH.<br>"DP" INDICATES DOUBLE POLE |
| SS | INDICATES FLUORESCENT FIXTURES DUAL SWITCHED, INBOARD/OUTBOARD SWITCHED SEPARATELY. |
| | SINGLE RECEPTACLE, 20 AMP, 120 VOLT, 18" A.F.F. TO CENTER. |
| | DUPLEX RECEPTACLE, 20 AMP (15 AMP RESIDENTIAL, UON), 120 VOLT, 18" A.F.F. TO CENTER.<br>"GFI" INDICATES GROUND FAULT CIRCUIT INTERRUPTER TYPE.<br>"WP" INDICATES WEATHERPROOF.<br>"EWC" INDICATES RECEPTACLE INSIDE ENCLOSURE OF ELECTRIC WATER COOLER PROVIDE GFI BREAKER FOR CIRCUIT.<br>"ASW" INDICATES ABOVE SHOW WINDOW, PER NEC SHOW WINDOW REQ'S. |
| | QUADRUPLEX RECEPTACLE, AS ABOVE, 18" A.F.F. |
| | DUPLEX RECEPTACLE, AS ABOVE, SPLIT WIRED, TOP HALF SWITCHED, 18" A.F.F. |
| | DUPLEX RECEPTACLE, AS ABOVE, MOUNTED 6" ABOVE COUNTER TOP OR 4" ABOVE BACKSPLASH, AS APPROPRIATE, OR AT HEIGHT INDICATED. |
| | DUPLEX RECEPTACLE, AS ABOVE, MOUNTED 6" ABOVE COUNTER TOP OR 4" ABOVE BACKSPLASH, AS APPROPRIATE, OR AT HEIGHT INDICATED, WITH GFI PROTECTION. |
| | RECESSED FLUSH FLOOR DUPLEX RECEPTACLE WITH BRASS COVERPLATE. COORDINATE EXACT FINISH WITH ARCHITECT AND OWNER. |
| | 208V RECEPTACLE, SEE PLANS FOR NEMA CONFIGURATION. |
| | TELEPHONE/DATA OUTLET, 18" A.F.F. TO CENTER OR ALIGN MOUNTING HEIGHT WITH ADJACENT DEVICE, UNLESS OTHERWISE NOTED. COORDINATE EXACT DEVICE TYPE AND REQUIRED FACEPLATE W/ OWNER/TENANT. |
| 30/3/FPN | HEAVY DUTY FUSIBLE/NON-FUSIBLE DISCONNECT SWITCH, NUMBERS INDICATE FRAME SIZE, NUMBER OF POLES AND FUSING. PROVIDE NEMA 1 ENCLOSURE INSIDE. PROVIDE NEMA 3 ENCLOSURE FOR ALL SWITCHES LOCATED OUTSIDE.<br>"FPN" INDICATES FUSE PER EQUIPMENT NAMEPLATE<br>"NF" INDICATES NON-FUSED.<br>"MS" INDICATES MOTOR STARTER OF TYPE TO SUIT LOAD. |
| | 208Y/120V PANEL, SURFACE OR RECESS MOUNTED, SEE SCHEDULE FOR DETAILS. |
| | 480Y/277V PANEL, SURFACE OR RECESS MOUNTED, SEE SCHEDULE FOR DETAILS. |
| EF | FAN, PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR, WIRED BY ELECTRICAL CONTRACTOR. PROVIDE DISCONNECTING MEANS AS REQUIRED. |
| | RECESSED MOUNTED 2x4 FL