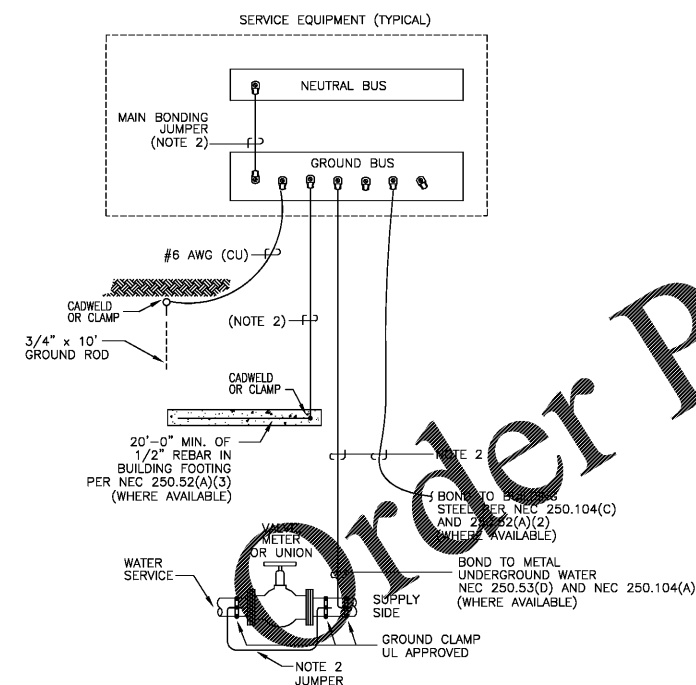


GENERAL SYMBOL LIST		
TYPE	DESCRIPTION	REMARKS
☉	EXTERIOR WALL LIGHT FIXTURE (LED)	SEE LIGHTING FIXTURE SCHEDULE
⊕	WALL MOUNTED LIGHT FIXTURE (LED)	SEE LIGHTING FIXTURE SCHEDULE
○	CANOPY LIGHT FIXTURE	SEE LIGHTING FIXTURE SCHEDULE
●	CANOPY LIGHT FIXTURE W/ EMERGENCY BATTERY BACKUP	SEE LIGHTING FIXTURE SCHEDULE
Ⓜ	JUNCTION/PULL BOX	
⊙	WALL LIGHT FIXTURE	SEE LIGHTING FIXTURE SCHEDULE
⊙	WALL FIXTURE W/ EMERGENCY LIGHT	SEE LIGHTING FIXTURE SCHEDULE
⊙	EXIT FIXTURE W/ EMERGENCY LIGHTS	SEE LIGHTING FIXTURE SCHEDULE
⊙	WALL EMERGENCY LIGHT FIXTURE	SEE LIGHTING FIXTURE SCHEDULE
S	SINGLE POLE SWITCH	46" AFF UON
S	THREE-WAY SWITCH	46" AFF UON
S	SINGLE POLE VACANCY SENSOR AND SWITCH (LEVITON OSS10 OR EQUAL)	46" AFF UON
S	SINGLE POLE OCCUPANCY SENSOR AND SWITCH (LEVITON ODS15-ID OR EQUAL)	46" AFF UON
⊙	OCCUPANCY SENSOR (SENSORSWITCH CM-PDT-9-R OR EQUAL)	CEILING MOUNTED
⊕	DUPLEX RECEPTACLE, NEMA 5-20R	18" AFF, UON
⊕	DUPLEX RECEPTACLE, NEMA 5-20R	46" AFF OR 6" ABOVE FINISHED COUNTER, UON
⊏	NON-FUSED DISCONNECT SWITCH	
⊏	FUSED DISCONNECT SWITCH	
UON	UNLESS OTHERWISE NOTED	
GFI	GROUND FAULT PROTECTED	
WP	WEATHERPROOF & GROUND FAULT PROTECTED	
NL	NIGHTLIGHT	
CU	COPPER	
AL	ALUMINUM	
—/—	BRANCH CIRCUIT RACEWAY/CABLE NO. OF #12 CONDUCTORS AS INDICATED (NOTE: ALL CONDUCTOR AND ANY HOMERUN OVER 75' SHALL #10 (MIN))	



GROUND DIAGRAM A

SCALE: NONE

NOTES:

- GROUNDING AND BONDING SHALL BE INSTALLED IN ACCORDANCE WITH NEC ARTICLE 250. GROUNDING AND BONDING COMPONENTS SHALL CONFORM WITH UL 467. AN INSULATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED WITH CIRCUIT CONDUCTORS FOR ALL FEEDER AND BRANCH CIRCUITS.
- GROUND ELECTRODE AND BONDING CONDUCTORS SHALL BE 2/0 CU.

LIGHTING FIXTURE SCHEDULE						
TYPE	QTY	MFG	MODEL	LAMP	VOLT	COMMENTS
CC	4	HUBBELL	EVSDBE	LED	120	OR APPROVED EQUAL, DAMP RATING, W/ BATTERY BACKUP
G	4	LITHONIA	WPX1 LED P1 40K MVOLT E14WC DDBXD	LED	120	OR APPROVED EQUAL WET RATING, W/ BATTERY BACKUP
SC	9	PROGRESS LIGHT	P5675-20/30K P860045 (WET LENS)	LED (3000K)	120	OR APPROVED EQUAL, WET LOCATION
V	3	LITHONIA	FMVTRL 36IN MVOLT 30K 90CRI BN	LED	120	OR APPROVED EQUAL, WET RATED
XA	8	LITHONIA	ECC R M6	LED	120	OR APPROVED EQUAL W/ BATTERY BACKUP

NOTES:

- QUANTITIES LISTED ARE FOR REFERENCE ONLY. EC IS RESPONSIBLE FOR VERIFYING QUANTITIES PER PLAN.
- PART NUMBERS PROVIDED FOR REFERENCE ONLY. CONFIRM ALL FIXTURE PART NUMBERS WITH ARCHITECT PRIOR TO ORDERING ANY MATERIAL.
- COORDINATE MOUNTING HEIGHT OF ALL LIGHTS WITH THE OWNER AND GENERAL CONTRACTOR.

NOTES:

- IF NEEDED, FIRE ALARM AND DETECTION IS TO BE DESIGNED BY OTHERS.
- COORDINATE POWER AND COMMUNICATIONS SERVICES WITH THE SERVING UTILITY. CONFORM TO SERVICE UTILITY RULES AND REQUIREMENTS.
- THE CONTRACTOR SHALL VISIT THE JOB SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS. SUBMISSION OF A BID ASSUMES THE CONTRACTOR HAS REVIEWED OR ACCEPTS ALL FIELD CONDITIONS AND EXISTING CONDITIONS. NO ADDITIONAL COMPENSATIONS SHALL BE ALLOWED FOR LABOR OR MATERIAL BECAUSE OF IGNORANCE OF THESE CONDITIONS BEFORE OR AFTER BID SUBMISSION.
- COORDINATE ELECTRICAL CONNECTIONS WITH THE REQUIREMENTS OF EQUIPMENT FURNISHED BY OTHER TRADES.
- COORDINATE LOCATION OF ELECTRICAL MATERIALS AND EQUIPMENT WITH THE WORK OF OTHER TRADES.
- MAINTAIN CONTINUOUS GROUND TO ALL EQUIPMENT.
- APPLY AND PAY FOR ALL REQUIRED PERMITS, INSPECTIONS, ETC.
- GROUND ELECTRICAL SERVICE PER NEC 250-24 AND AS APPROVED BY LOCAL BUILDING AUTHORITY.
- ALL NEW CIRCUIT BREAKERS SHALL BE LISTED FOR SWD OR HVAC AS APPLICABLE.
- THE ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL MATERIALS, EQUIPMENT AND LABOR FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE OR FIRST BENEFICIAL USE BY THE OWNER, WHICHEVER COMES FIRST. THE ENTIRE SYSTEM SHALL BE FREE OF SHORTS AND GROUNDS. CORRECTIONS TO THE WIRING SYSTEM, DUE TO DEFECTIVE MATERIALS AND/OR WORKMANSHIP, WITHIN THE GUARANTEE PERIOD, SHALL BE MADE BY THE CONTRACTOR AT NO COST TO THE OWNER.
- DRAWING IS DIAGRAMMATICAL IN NATURE. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION OF FIXTURES.
- ALL LIGHT FIXTURES SHALL BE SECURELY SUPPORTED IN ACCORDANCE WITH NEC 410.30. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR FINISHING AND INSTALLING ALL NECESSARY EQUIPMENT SUCH AS CEILING TO PROPERLY SUPPORT BOX.
- THE CONTRACTOR SHALL REFER TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR ALL THE LIGHTING FIXTURES, RECEPTACLES, DEVICES AND EQUIPMENT. THE CONTRACTOR SHALL FINISH AND INSTALL ALL THE HARDWARE, PARTS, AND ACCESSORIES REQUIRED FOR THEIR PROPER INSTALLATION AND OPERATION (INCLUDING ALL THE PARTS, ACCESSORIES, AND SAFETY DEVICES BY CODE). THE CONTRACTOR SHALL ENSURE CURRENT OVERLOAD PROTECTION THAT IS SPECIFIED CONFORMS TO MANUFACTURER'S REQUIREMENTS.
- EC SHALL MAINTAIN WORKING CLEARANCE AROUND ALL ELECTRICAL EQUIPMENT IS MAINTAINED IN ACCORDANCE WITH NEC 110.26.
- CONDUCT THE EXIT SIGNS AND EMERGENCY LIGHTS TO THE NON-SWITCHED (HOT) LIGHTING CIRCUIT OF THE AREA BEING COVERED.
- FINAL LOCATION OF SWITCHES, OUTLETS DEVICES SHALL MEET ALL LOCAL CODE REQUIREMENTS (INCLUDING ALL HANDICAPPED CODE AND ADA REQUIREMENTS).
- RECEPTACLE SHALL BE GROUND FAULT PROTECTED (GFCI) IN ACCORDANCE WITH NEC 210.8.
- CEILING PENETRATIONS SHALL MEET THE REQUIREMENTS OF NEC AND IBC.
- USE FIRE RATED MATERIALS IN RATED WALLS. FIRE STOP PER IBC.
- MAINTAIN 24" (MIN) HORIZONTAL OFFSET BETWEEN ELECTRICAL BOXES ON OPPOSITE SIDES OF FIRE RATED WALLS.
- IECC 2015 SECTION C405.2 REQUIRES ALL LIGHTS BE EQUIPPED WITH AUTO-SHUTOFF CONTROLS, UNLESS DESIGNATED FOR SAFETY AND/OR SECURITY.
- COORDINATE WITH OWNER AND ARCHITECT FOR EXACT MOUNTING HEIGHT OF ENTRANCE SIGNAGE JUNCTION BOX.
- KITCHEN EQUIPMENT SHALL BE INTERLOCKED WITH HOOD FIRE SUPPRESSION PER NFPA 96 SECTION 10.4.
- KITCHEN APPLIANCES REQUIRE LOCAL DISCONNECT MEANS PER NEC 422 PART III. PERMANENTLY CONNECTED APPLIANCES SHALL CONFORM TO SECTION 422.31. CORD-AND-PLUG CONNECTED APPLIANCES ARE PERMITTED AS LONG AS THE PLUG IS ACCESSIBLE AND IN ACCORDANCE WITH NEC 422.33. IF ACCEPTED BY THE AUTHORITY HAVING JURISDICTION, UNIT SWITCH MAY BE USED AS DISCONNECT MEANS IF IN ACCORDANCE WITH 422.34.
- ALL CONDUITS AND JUNCTION BOXES WITH OR PASSING THROUGH THE WALK-IN COOLER OR FREEZER SHALL BE SEALED AND EQUIPMENT WITH EXPANSION JOINT IN ACCORDANCE WITH NEC 300.7.
- INSTALL 120V RECEPTACLE ABOVE SHOW WINDOWS IN ACCORDANCE WITH NEC 210.62.
- ANY RECEPTACLE ACCEPTABLE TO THE PUBLIC SHALL BE TAMPER-RESISTANT NEC 511.18(C).
- ELECTRICAL CONTRACTOR SHALL ENSURE THAT A 120V MAINTENANCE RECEPTACLE IS AVAILABLE WITHIN 25 FEET OF THE HVAC EQUIPMENT PER NEC 210.63.
- DEVICE HEIGHTS ARE TO THE BOTTOM OF THE DEVICE.
- UNLESS OTHERWISE NOTED, CABLE RUNS FOR ALL 20 AMP BRANCH CIRCUITS LONGER THAN 75 FEET SHALL BE AT LEAST 10 AWG.

SPECIFICATIONS

GENERAL - ALL WORK SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE (NFPA 70-2020) AND ALL APPLICABLE STATE AND LOCAL CODES. ALL MATERIALS SHALL BE NRTL LISTED/LABELLED AS APPROPRIATE BY ORGANIZATIONS SUCH AS UL. FINAL LOCATIONS FOR ROUGH-INS SHALL BE VERIFIED WITH THE ACTUAL EQUIPMENT BEING CONNECTED. AFTER COMPLETING INSTALLATION, REMOVE DIRT AND CONSTRUCTION DEBRIS FROM ALL ELECTRICAL WORK.

CONDUCTORS - CONDUCTOR INSULATION SHALL COMPLY WITH NEMA WC 5. CONDUCTORS #8 AWG AND LARGER SHALL BE CONCENTRIC STRANDED.

TYPE AND INSULATION (SERVICE): ALUMINUM, TYPE THWN-2, XHHW OR XHHW-2 TYPE AND INSULATION (FEEDER): COPPER OR ALUMINUM, TYPE THWN/THHN TYPE AND INSULATION (BRANCH): COPPER OR ALUMINUM, TYPE THWN/THHN

COLOR CODING (208/120V, 3ø): A- BLACK, B- RED, C- BLUE, NEU- WHITE

RACEWAYS - ALL CONDUIT SHALL BE ROUTED IN A PROFESSIONAL MANNER AND NOT TO INTERFERE WITH OTHER INSTALLATIONS.

CONDUIT BODIES AND FITTINGS FOR RIGID METAL CONDUIT SHALL BE CAST THREADED TYPE. CONDUIT FITTINGS FOR ELECTRICAL METALLIC TUBING SHALL BE COMPRESSION TYPE.

OUTDOORS EXPOSED: RIGID GALVANIZED STEEL CONFORMING TO ANSI C80.1 (UL-6)

OUTDOORS UNDERGROUND: RIGID NONMETALLIC CONDUIT (SCHEDULE 40 PVC, MIN) CONFORMING TO NEMA TC 2 (UL-651)

OUTDOORS CONNECTED TO VIBRATING OR MOTORIZED EQUIPMENT: LIQUIDTIGHT FLEXIBLE METAL CONDUIT CONFORMING TO ANSI/UL 360

INDOORS UNCEALED: ELECTRICAL METALLIC TUBING CONFORMING TO ANSI C80.3 (UL-79) OR TYPE MC/AC CABLE CONFORMING TO UL 4 FOR TYPE THWN/THHN WIRE

INDOORS EXPOSED: ELECTRICAL METALLIC TUBING CONFORMING TO ANSI C80.3 (UL-79)

INDOORS CONNECTED TO VIBRATING OR MOTORIZED EQUIPMENT: TYPE MC/AC CABLE CONFORMING TO UL 4 OR FLEXIBLE METALLIC CONDUIT CONFORMING TO UL 1

OUTLET BOXES - BOXES SHALL CONFORM TO NEMA OS 1. BOXES SHALL BE SHEET METAL TYPE WITH PLASTER RINGS IN DRY LOCATIONS. BOXES SHALL BE CAST METAL TYPE WITH GASKETED COVER IN DAMP OR WET LOCATIONS.

PULL AND JUNCTION BOXES - BOXES SHALL BE HOT-DIPPED GALVANIZED STEEL. BOX COVERS SHALL BE GASKETED TYPE WITH SCREWED OR BOLTED FASTENERS.

WIRING DEVICES - DEVICES SHALL CONFORM TO NEMA WD 1 AND WD 6. DEVICES SHALL BE COMMERCIAL SPECIFICATION GRADE OR BETTER. DEVICES SHALL BE OF THE GROUNDING TYPE. DEVICES SHALL BE MOUNTED FLUSH WITH THE LONG DIMENSION VERTICAL AND GROUNDING TERMINAL OF RECEPTACLES ON THE BOTTOM. SWITCHES SHALL BE QUIET TYPE RATED 20 AMPERES AT 120/277 VOLTS. RECEPTACLES SHALL BE NEMA 5-20R WEATHER RESISTANT UNLESS OTHERWISE SPECIFIED. GFCI BREAKERS SHALL BE USED INSTEAD OF GFCI RECEPTACLE AS INDICATED ON THE PANEL SCHEDULES. ELECTRICIAN TO LABEL ALL GFCI PROTECTED RECEPTACLES ACCORDINGLY. WEATHERPROOF COVERS SHALL BE PROVIDED IN DAMP OR WET LOCATIONS.

DEVICE COLOR: WHITE, UNLESS OTHERWISE INDICATED

DEVICE COVER: SMOOTH PLASTIC WITH COLOR TO MATCH DEVICE COLOR

DEVICE HEIGHT: REFER TO SYMBOLS LEGEND, UON. ALL DIMENSIONS ARE TO BOTTOM OF THE BOX.

GROUNDING - GROUNDING AND BONDING COMPONENTS SHALL CONFORM TO UL 467. AN INSULATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED WITH CIRCUIT CONDUCTORS FOR ALL FEEDER AND BRANCH CIRCUITS.

PANELBOARDS - PANELBOARDS SHALL CONFORM TO NEMA PB 1 AND SHALL BE UL RECOGNIZED IN ACCORDANCE WITH UL 67. PANELBOARDS SHALL BE PROVIDED WITH AN EQUIPMENT GROUND BUS AND SHALL BE BONDED TO THE PANEL BOX. PANELBOARDS EQUIPPED WITH SERVICE DISCONNECT(S) SHALL BE LISTED FOR USE AS SERVICE EQUIPMENT.

BREAKERS - CIRCUIT BREAKERS SHALL BE LISTED FOR SWD OR HVAC AS APPLICABLE. MULTIPOLE CIRCUIT BREAKERS SHALL HAVE A COMMON TRIP. TANDEM CIRCUIT BREAKERS SHALL NOT BE USED. FILLER PLATES SHALL BE INSTALLED IN ALL UNUSED SPACES. A TYPED OR COMPUTER GENERATED CIRCUIT DIRECTORY SHALL BE INSTALLED ON THE INSIDE OF PANELBOARD DOORS.

DISCONNECT SWITCHES - DISCONNECT SWITCHES SHALL BE FUSED OR NONFUSED AS INDICATED AND SHALL CONFORM TO NEMA KS 1 TYPE. HD. DISCONNECT SWITCHES SHALL BE HANDLE LOCKABLE AND INTERLOCKED WITH THE COVER IN THE CLOSED POSITION. ENCLOSURES SHALL BE NEMA TYPE 1 IN DRY LOCATIONS AND NEMA TYPE 3R IN DAMP OR WET LOCATIONS.

FUSES - FUSES SHALL BE CARTRIDGE TYPE AND SHALL CONFORM TO NEMA FU 1. FUSE VOLTAGE RATING SHALL BE CONSISTENT WITH CIRCUIT VOLTAGE. FUSES SHALL BE ARRANGED IN FUSIBLE EQUIPMENT SUCH THAT THE FUSE RATINGS ARE READABLE WITHOUT REMOVING THE FUSE.

MOTOR FEEDER AND BRANCH CIRCUITS: UL CLASS RK5, TIME DELAY TYPE. OTHER FEEDER AND BRANCH CIRCUITS: UL CLASS RK1, NON TIME DELAY.

INTERIOR LIGHTING - FIXTURE MOUNTING HARDWARE AND TRIM SHALL BE COORDINATED WITH THE CEILING SYSTEM. RECESSED FIXTURES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURAL SYSTEM.

EXIT SIGNS AND EMERGENCY LIGHTS - MUST HAVE BATTERY BACKUP, WHICH WILL ILLUMINATE FOR A MINIMUM OF 90 MINUTES AND COMPLY WITH NEC ARTICLE 700-12. EXIT SIGNS SHALL CONFORM TO UL 924, NFPA 101, IFC AND OSHA ILLUMINATIONS STANDARDS WITH A MAXIMUM OF 5 WATTS. OUTDOOR FIXTURES SHALL BE RATED FOR WET LOCATIONS.

ELECTRICAL IDENTIFICATION - ALL PANELBOARDS, CONTACTOR PANELS AND DISCONNECT SWITCHES SHALL BE IDENTIFIED WITH SELF-ADHESIVE TYPE LABELS. LETTERING SHALL BE 1/2 INCHES HIGH AND SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

ALL CONTACTORS, RELAYS AND TIMERS MUST BE LABELED WITH PRINTED LABELS AND SHALL SHOW PANEL AND CIRCUIT NUMBER.

ARC FLASH HAZARD LABELS - ELECTRICAL PANELS AND EQUIPMENT SHALL BE LABELED IN ACCORDANCE WITH NFPA 70E IDENTIFYING THE APPROPRIATE ARC FLASH HAZARDS AND PPE REQUIREMENTS.

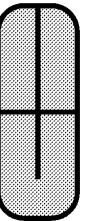


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9/23/24

SPECIFICATIONS AND NOTES

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CHECKED BY:

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SHEET NO:

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