

MARK	MANUF.	CATALOG NUMBER	LAMP DATA		VOLTS	BALLAST DATA		INPUT WATTS	MOUNTING	DESCRIPTION
			NO.	TYPE		NO.	TYPE			
⊙	LITHONIA	LQM SW - R 120/277 EL N	-	LED	120	-	-	4	UNIVERSAL	THERMOPLASTIC LED EXIT SIGN WITH RED LETTERS AND WHITE HOUSING. PROVIDE 90 MINUTE BATTERY BACKUP.
⊙	LITHONIA	LHQ1 SW - R 120/277 EL N	-	LED	120	-	-	4	UNIVERSAL	THERMOPLASTIC COMBINATION EGRESS LIGHT AND LED EXIT SIGN WITH RED LETTERS AND WHITE HOUSING. PROVIDE 90 MINUTE BATTERY BACKUP.
⊙	LITHONIA	AFN DB EXT	2	6W	120	-	-	12	WALL	SURFACE MOUNTED EXTERIOR EMERGENCY LIGHT. MOUNT AT 96" AFF. CONNECT TO UNSWITCHED LEG OF EXTERIOR LIGHTING CIRCUIT.
⊙	LITHONIA	6ELM2P H1206	2	H1206	120	-	-	24	UNIVERSAL	SURFACE MOUNTED EMERGENCY LIGHT. PROVIDE WITH 90 MINUTE BATTERY BACKUP.
A	TAPLITE	INDI4832D	4	F59 T8 6500K	120	1	ELECTRONIC	145	CHAIN HUNG	96" HEAVY-DUTY INDUSTRIAL T8 FLUORESCENT LIGHTING FIXTURE. 10% UPLIGHT, WHITE ENAMEL REFLECTOR.
AE	TAPLITE	INDI4832DB3	4	F59 T8 6500K	120	1	ELECTRONIC	145	CHAIN HUNG	SAME AS ABOVE WITH 90 MINUTE BATTERY BACKUP.
B	TAPLITE	TVLEDI4	1	LED	120	1	ELECTRONIC	32	SURFACE	1/4" SURFACE COMMERCIAL FLUORESCENT LIGHTING FIXTURE WITH 0.125" THICK ACRYLIC LENS.
BE	TAPLITE	TVLEDI4	1	LED	120	1	ELECTRONIC	32	SURFACE	SAME AS ABOVE WITH 90 MINUTE BATTERY BACKUP.
C	KICHLER	9246AZ W/ 9536AZ LENS	2	13W CFL	120	2	INTEGRAL TO LAMP	30	WALL	UP/DOWN LIGHTING WALL SCONCE. UL LISTED FOR WET LOCATION. PROVIDE WITH 1 #9536AZ LENS EACH FIXTURE.
D	LITHONIA	9246AZ W/ 9536AZ LENS	2	LED	120	2	INTEGRAL TO LAMP	30	WALL	UP/DOWN LIGHTING WALL SCONCE. UL LISTED FOR WET LOCATION. PROVIDE WITH 1 #9536AZ LENS EACH FIXTURE.
E	LITHONIA	HS0-50M-MD-120-2DC12-LPI-DBBT	1	50W MH	120	1	ELECTRONIC	50	WALL	EXTERIOR WALL PACK WITH EMERGENCY 12V CIRCUIT AND (2) 35W EMERGENCY LAMPS. PROVIDE REMOTE 90M BATTERY PACK INSTALLED INSIDE. COLOR BY ARCHITECT.
F	LITHONIA	WS0LED-P3-40K-52-MVOLT-88W-DBBTXD	1	LED	MVOLT	1	LED DRIVER	40	WALL	EXTERIOR LED WALL PACK. COORDINATE MOUNTING HEIGHT WITH ARCHITECTURAL PLANS.

NOTES:  
 1. CATALOG NUMBERS AND MANUFACTURERS ARE TO INDICATE TYPE AND QUALITY OF FIXTURE DESIRED. SUBMIT CUTSHEETS OF THESE AND ALTERNATE MANUFACTURERS FOR ARCHITECT AND OWNER APPROVAL PRIOR TO PURCHASE OF ANY FIXTURES. INFORMATION ON ALTERNATE FIXTURES PROPOSED BY THE CONTRACTOR SHALL INCLUDE THE ADD/DEDUCT ASSOCIATED WITH ACCEPTANCE OF THAT FIXTURE (OR THE ALTERNATE PACKAGE AS A WHOLE).  
 2. MASTER SLAVE WIRING CONFIGURATIONS SHALL BE USED FOR MULTI-LAMP FLUORESCENT FIXTURES WHERE POSSIBLE. THE CONTRACTOR SHALL VERIFY THE QUANTITY AND TYPE OF BALLASTS REQUIRED TO PERMIT BI-LEVEL SWITCHING WHERE INDICATED. WHERE BI-LEVEL LIGHTING IS INDICATED INBOARD AND OUTBOARD LAMPS SHALL BE SWITCHED SEPARATELY.  
 3. EXIT AND EMERGENCY LIGHTING FIXTURES SHALL BE CIRCUITED TO AN UNSWITCHED LEG OF THE LOCAL LIGHTING CIRCUIT, UNLESS NOTED OTHERWISE.

**LIGHTING SYSTEMS**  
**ENERGY CONSERVATION CODE SECTION 404, 505 AND 506**

THIS PROJECT IS CLASSIFIED AS -  RESIDENTIAL AND COMPLIES WITH SECTION 404  COMMERCIAL (SEE BELOW)

**LIGHTING POWER DENSITY CALCULATION COMPLIANCE**

INTERIOR LIGHTING POWER DENSITY CALCULATION PER TABLE 505.5.2. SEE LIGHTING FIXTURE SCHEDULE FOR FIXTURE INFORMATION.

INTERIOR WATTAGE SPECIFIED VS. ALLOWED 1372 VS. 2002  
 ALLOWED: RETAIL 1609 SQ FT @ 1.41 W/SQ FT = 2269 WATTS ALLOWED  
 10% REDUCTION = 267 WATTS  
 TOTAL ALLOWED WATTS = 2002 WATTS ALLOWED

SPECIFIED:

FIXTURE	QUANTITY	WATTAGE	TOTAL WATTAGE
A	10	118	1180.0
B	3	64	192.0
			<b>1372.0 WATTS USED</b>

EXTERIOR LIGHTING POWER DENSITY CALCULATION PER TABLE 505.6.2. SEE LIGHTING FIXTURE SCHEDULE FOR FIXTURE INFORMATION.

TRADABLE EXTERIOR WATTAGE SPECIFIED VS. ALLOWED 610 VS. 1300  
 ALLOWED: PARKING: 10000 SQ FT @ 0.13 W/SQ FT = 1300 WATTS ALLOWED

SPECIFIED:

FIXTURE	QUANTITY	WATTAGE	TOTAL WATTAGE
CA/CB	11	30	330.0
E	1	50	50.0
			<b>380.0 WATTS USED</b>

NONTRADABLE EXTERIOR WATTAGE SPECIFIED VS. ALLOWED NA VS. NA

SECTION 506 COMPLIANCE -  N/A  506.2.1  506.2.2  506.2.3  506.2.4  506.2.5  506.2.6

**DESIGNER STATEMENT:**  
 TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE LIGHTING SYSTEMS REQUIREMENTS OF THE INTERNATIONAL ENERGY CONSERVATION CODE, SECTION 505 AND ANY LOCAL AMENDMENTS THEREOF.

SIGNED: \_\_\_\_\_  
 NAME: RICK MORRISON  
 TITLE: ELECTRICAL ENGINEER

- GENERAL ELECTRICAL NOTES**
- ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AND ALL LOCAL AND STATE CODES.
  - ALL MATERIAL, DEVICES, APPLIANCES, AND EQUIPMENT SHALL BE NEW AND SHALL CONFORM TO THE STANDARDS OF THE UNDERWRITER'S LABORATORIES, INC., AND THE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION.
  - ALL ELECTRICAL PERMITS AND INSPECTION FEES SHALL BE OBTAINED AND PAID FOR BY THE ELECTRICAL CONTRACTOR. DRAWINGS ARE DIAGRAMMATIC ONLY AND INDICATE ONLY THE GENERAL ARRANGEMENT. SEE ARCHITECTURAL DRAWINGS FOR EXACT DIMENSIONS.
  - ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR ONE YEAR EFFECTIVE THE DAY THE PROJECT IS ACCEPTED BY THE OWNER.
  - ELECTRICAL CONTRACTOR SHALL MAKE ALL ELECTRICAL POWER CONNECTIONS TO HVAC, PLUMBING AND OTHER EQUIPMENT AS REQUIRED.
  - A COMPLETE GROUNDING SYSTEM SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH ARTICLE 250 OF THE NEC, AND AS SHOWN ON THE DRAWINGS.
  - ALL CUTTING AND PATCHING OF WALLS AND FLOORS FOR ELECTRICAL EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
  - 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 SHALL BE SOLID, UNLESS OTHERWISE NOTED. BRANCH CIRCUIT CONDUCTORS SHALL BE TYPE THHN OR THWN AS REQ'D.
  - ALL WIRING SHALL BE INSTALLED IN GALVANIZED RIGID CONDUIT, INTERMEDIATE METAL CONDUIT, OR EMT. 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. MINIMUM CONDUIT SIZE TO BE 1/2". TYPE MC AND AC CABLE MAY BE USED WHERE PERMISSIBLE BY NEC.
  - PROVIDE CONDUIT SEALS AS REQUIRED WHERE PENETRATING NEC CLASSIFIED AREAS
  - PROVIDE A PULLWIRE IN ALL EMPTY CONDUITS.
  - 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.
  - FUSES 0 - 600 AMPS SHALL BE UL CLASS 'RK-1' LOW PEAK DURATION ELEMENT TYPE DELAY WITH 200,000 AMPERE INTERRUPTING RATING AS MANUFACTURED BY BUSHMANN, UNLESS NOTED OTHERWISE.
  - ALL TERMINALS/LUGS SHALL BE 60/75° RATED. ALL TERMINALS, SPLICING CONNECTORS, LUGS, ETC SHALL BE IDENTIFIED AND USE WITH THE MATERIAL (CU/AL) OF THE CONDUCTOR AND SHALL BE PROPERLY INSTALLED.
  - 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.
  - E.C. TO VERIFY SERVICE PLATE SIZE AND MATERIAL WITH ARCHITECT PRIOR TO PURCHASE. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL ELECTRICAL EQUIPMENT FROM FOREIGN MATERIAL DURING CONSTRUCTION (PAINT, SPACKLE, ETC.).
  - WHERE A HOME RUN IS SHOWN THE CIRCUIT SHALL BE INSTALLED IN A DEDICATED CONDUIT AND NOT COMBINE WITH OTHER CIRCUITS. WHERE A CIRCUIT HOMERUN IS NOT SHOWN THE CONTRACTOR SHALL COMBINE CIRCUITS AS FOLLOWS: A MAXIMUM OF THREE 20 AMP BRANCH CIRCUITS MAY BE COMBINED IN A COMMON HOMERUN WITH SEPARATE NEUTRALS FOR A MAXIMUM TOTAL OF SIX CURRENT CARRYING CONDUCTORS. ALL BRANCH CIRCUITS LARGER THAN 20A SHALL BE SEPARATELY HOMERUN TO THE PANEL.
  - COORDINATE WITH THE CABLE TV AND TELEPHONE UTILITIES AS REQUIRED FOR SERVICE ENTRANCE REQUIREMENTS. INSTALLATION MUST COMPLY WITH THEIR RESPECTIVE REGULATIONS AND REQUIREMENTS.
  - RECEPTACLES SHALL BE SPECIFICATION GRADE EQUAL TO HUBBELL 5300 SERIES, GROUND FAULT RECEPTACLES SHALL BE HUBBELL GF-5362. LIGHTING SWITCHES SHALL BE SPECIFICATION GRADE EQUAL TO HUBBELL 1200 SERIES.
  - ALL EXTERIOR FIXTURES AND DEVICES SHALL BE RATED FOR OPERATION AT 0° F AND SHALL BE DAMP OR WET LABELED AS REQUIRED.
  - THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL ELECTRICAL EQUIPMENT, DEVICES, ETC. IN ACCORDANCE WITH LOCAL SEISMIC CODE REQUIREMENTS. PROVIDE SEISMIC RESTRAINTS, ACCESSORIES AND INSTALLATION DETAIL AS REQUIRED.
  - ELECTRICAL CONTRACTOR TO COORDINATE THE EXACT MCA/MOCP REQUIREMENTS OF ALL EQUIPMENT WITH ALL OTHER TRADES PRIOR TO PRICING, ORDERING, OR INSTALLING ANY ELECTRICAL GEAR. THIS SHALL INCLUDE BUT NOT LIMITED TO ALL HVAC, PLUMBING, KITCHEN, OWNER PROVIDED EQUIPMENT, ETC.

**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.  
 JUNCTION BOX CEILING MOUNTED.  
 JUNCTION BOX FLOOR MOUNTED.  
 JUNCTION BOX WALL MOUNTED AT HEIGHT INDICATED ON DRAWINGS.  
 SINGLE POLE SWITCH, 20A, 120/277 VOLT, 40" A.F.F. TO CENTER.  
 \*3" INDICATES 3-WAY SWITCH.  
 \*4" INDICATES 4-WAY SWITCH.  
 \*OS" INDICATES OCCUPANCY SENSOR.  
 \*M" INDICATES 120V, 20A MOTOR RATED TOGGLE SWITCH.  
 DUPLEX RECEPTACLE, 15 AMP 120 VOLT, 18" A.F.F. TO CENTER.  
 \*GF" INDICATES GROUND FAULT CIRCUIT INTERRUPTER TYPE.  
 \*WP" INDICATES WEATHERPROOF.  
 \*EW" INDICATES GF1 TYPE RECEPTACLE MOUNT IN ENCLOSURE OF ELECTRIC WATER COOLER.  
 QUADRUPLX RECEPTACLE, AS ABOVE, 18" A.F.F.  
 208V RECEPTACLE, SEE PLANS FOR NEMA CONFIGURATION.  
 TELEPHONE OUTLET, 18" A.F.F. TO CENTER, UNLESS OTHERWISE NOTED. PROVIDE 3/4" CONDUIT TO ACCESSIBLE CEILING.  
 DATA OUTLET, 18" A.F.F. TO CENTER, UNLESS OTHERWISE NOTED. PROVIDE 3/4" CONDUIT TO ACCESSIBLE CEILING.  
 TELEPHONE/DATA OUTLET, 18" A.F.F. TO CENTER, UNLESS OTHERWISE NOTED. PROVIDE 3/4" CONDUIT TO ACCESSIBLE CEILING.  
 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.  
 \*M" INDICATES FUSE PER EQUIPMENT NAMEPLATE  
 \*NF" INDICATES NON-FUSED.  
 208Y/120V PANEL, SURFACE OR RECESS MOUNTED, SEE SCHEDULE FOR DETAILS.  
 FAN, PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR, WIRED BY ELECTRICAL CONTRACTOR. PROVIDE DISCONNECTING MEANS AS REQUIRED.  
 WATER HEATER, PROVIDED AND INSTALLED BY PLUMBING CONTRACTOR, WIRED BY ELECTRICAL CONTRACTOR. PROVIDE DISCONNECTING MEANS AS REQUIRED.  
 SURFACE MOUNTED FLUORESCENT STRIP, SEE FIXTURE SCHEDULE FOR DETAILS.  
 WALL MOUNTED LIGHTING FIXTURE, SEE FIXTURE SCHEDULE FOR DETAILS.  
 SURFACE, RECESSED OR GROUND MOUNTED LIGHTING FIXTURE, SEE FIXTURE SCHEDULE FOR DETAILS.  
 ELECTRIC UTILITY METER LOCATION.  
 EXIT LIGHT, CEILING AND WALL MOUNTED RESPECTIVELY, SHADING INDICATES FACE. PROVIDE RED LETTERS WITH BLACK HOUSING AND EMERGENCY BATTERY PACK RATED FOR 90 MINUTE DURATION. WIRE TO HOT LEG OF LOCAL LIGHTING CIRCUIT.  
 EMERGENCY LIGHT, WALL MOUNTED WITH EMERGENCY BATTERY PACK RATED FOR 90 MINUTE DURATION. WIRE TO HOT LEG OF LOCAL LIGHTING CIRCUIT.  
 REMOTE MOUNTED LAMP HEAD, WALL MOUNTED WITH EMERGENCY BATTERY PACK RATED FOR 90 MINUTE DURATION. WIRE TO HOT LEG OF LOCAL LIGHTING CIRCUIT.

**ELECTRICAL ABBREVIATIONS**

18"	DIMENSION INDICATES HEIGHT ABOVE FINISHED FLOOR AT WHICH CENTER OF DEVICE IS TO BE MOUNTED.
AFF	ABOVE FINISHED FLOOR.
AFG	ABOVE FINISHED GRADE.
EC	ELECTRICAL CONTRACTOR.
FPN	FUSE PER EQUIPMENT NAMEPLATE REQUIREMENTS.
GC	GENERAL CONTRACTOR.
MC	MECHANICAL CONTRACTOR.
PC	PLUMBING CONTRACTOR.
WP	INDICATES DEVICE TO HAVE WEATHERPROOF COVER.
UN	UNLESS OTHERWISE NOTED.
FACP	FIRE ALARM CONTROL PANEL.

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