LIGHTING FIXTURE SCHEDULE

SYMBOL	LABEL	DESCRIPTION	LAMPS NO.	TYPE	WATT	LUMENS	VOLTAGE	MOUNTING	NOTES
	A	4" SQUARE LED DOWNLIGHT WITH 93+ CRI, SMOOTH STYLE, AND WHITE FINISH. DMF LIGHTING DRD2 SERIES	–	LED 4000K	13	1,000	UNV	CEILING RECESSED	1 8
EM		SAME AS ABOVE EXCEPT WITH EMERGENCY DRIVER AND REMOTE TEST SWITCH.							
	B	2" WIDE LINEAR LED COVE LIGHT WITH 80+ CRI, 350mA CURRENT, 55° (SIDE) BEAM, WHITE FINISH, AND LENS. COORDINATE MOUNTING CHANNELS WITH ARCHITECT PRIOR TO ORDERING. ORGANIC LIGHTING SYSTEMS LINILED POWER SERIES	–	LED 4000K	1.3/FT	127/FT	24	COVE SURFACE	1 5 6
	C	4" SQUARE LED DOWNLIGHT WITH 93+ CRI, SMOOTH STYLE, AND WHITE FINISH. DMF LIGHTING DRD2 SERIES	–	LED 4000K	13	1,000	UNV	CEILING RECESSED	1
EM		SAME AS ABOVE EXCEPT WITH EMERGENCY DRIVER AND REMOTE TEST SWITCH.							
	D	4" SQUARE LED DOWNLIGHT WITH 93+ CRI, SMOOTH STYLE, AND WHITE FINISH. DMF LIGHTING DRD2 SERIES	–	LED 4000K	13	1,000	UNV	CEILING RECESSED	1
EM		SAME AS ABOVE EXCEPT WITH EMERGENCY DRIVER AND REMOTE TEST SWITCH.							
	D1	4" SQUARE LED DOWNLIGHT WITH 93+ CRI, SMOOTH STYLE, AND WHITE FINISH. DMF LIGHTING DRD2 SERIES	–	LED 4000K	11	750	UNV	CEILING RECESSED	1
	F	8" LED MODULAR ACCENT LIGHT WITH 83 CRI, NARROW BEAM (26°), BLACK INTERIOR, AND MATTE WHITE FINISH. SPECTRUM LIGHTING RCC816 SERIES	2	LED 4000K	22	2,000	UNV	CEILING RECESSED	1
	G	12'x8' FLAT PANEL FIXTURE WITH WHITE FINISH AND BACKLIT LED LATTICE WITH 120° BEAM ANGLE. LED ARRAY: BITRO+AXIONNOVA LIGHTING L2G SERIES.	–	LED 4000K	2.4W/ SQ. FT	235/SQ. FT	12	CEILING RECESSED	1 4
	H	8" MODULAR CONTINUOUS SLOT ACCENT LIGHT WITH 83 CRI, NARROW BEAM (26°), BLACK INTERIOR, AND WHITE FINISH. SPECTRUM LIGHTING RC896 SERIES	6	LED 4000K	22	2,000	UNV	CEILING RECESSED	1
	L6	6"X5' LINEAR LED FIXTURE WITH 80 CRI, FLUSH SHIELDING, AND WHITE FINISH. AXIS LIGHTING B6RLED SERIES	–	LED 4000K	33	3,750	UNV	CEILING RECESSED	1
EM		SAME AS ABOVE EXCEPT WITH INTEGRAL EMERGENCY BATTERY PACK.							
	L6a	6"X5' LINEAR LED FIXTURE WITH 80 CRI, FLUSH SHIELDING, AND WHITE FINISH. AXIS LIGHTING B6RLED SERIES	–	LED 4000K	21.5	2,500	UNV	CEILING RECESSED	1
EM		SAME AS ABOVE EXCEPT WITH INTEGRAL EMERGENCY BATTERY PACK.							
	M	4" WIDE LINEAR PERIMETER LED FIXTURE WITH 80 CRI, REGRESSED 3" SHIELDING, AND WHITE FINISH. AXIS LIGHTING BMPRLED SERIES	–	LED 4000K	3.6/FT	400/FT	UNV	CEILING RECESSED	1 5 7
	N	4" SQUARE LED DOWNLIGHT WITH 93+ CRI, SMOOTH STYLE, AND WHITE FINISH. DMF LIGHTING DRD2 SERIES	–	LED 4000K	13	1,000	UNV	CEILING RECESSED	1
EM		SAME AS ABOVE EXCEPT WITH EMERGENCY DRIVER AND REMOTE TEST SWITCH.							
	Q	2'x2' LED ARCHITECTURAL FIXTURE WITH MEDIUM DISTRIBUTION, 90 CRI, 0–10V CONTROL, AND WHITE FINISH. GE LAB22 SERIES	–	LED 4000K	30	3,300	UNV	CEILING RECESSED	1
		SAME AS ABOVE EXCEPT WITH EMERGENCY LIGHT.							
	Q1	2'x2' LED ARCHITECTURAL FIXTURE WITH MEDIUM DISTRIBUTION, 90 CRI, 0–10V CONTROL, AND WHITE FINISH. GE LAB22 SERIES	–	LED 4000K	20	2,000	UNV	CEILING RECESSED	1
		SAME AS ABOVE EXCEPT WITH EMERGENCY LIGHT.							
	Q2	2'x2' LED TROFFER WITH MEDIUM DISTRIBUTION, 80 CRI, AND WHITE FINISH. GE LBR22 SERIES	–	LED 4000K	27	3,300	UNV	CEILING RECESSED	1
		SAME AS ABOVE EXCEPT WITH EMERGENCY LIGHT.							
	Q3	2'x2' LED TROFFER WITH MEDIUM DISTRIBUTION, 80 CRI, AND WHITE FINISH. GE LBR22 SERIES	–	LED 4000K	17	2,000	UNV	CEILING RECESSED	1
		SAME AS ABOVE EXCEPT WITH EMERGENCY LIGHT.							
	Q4	2'x4' LED TROFFER WITH MEDIUM DISTRIBUTION, 80 CRI, AND WHITE FINISH. GE LBR24 SERIES	–	LED 4000K	37	4,800	UNV	CEILING RECESSED	1
	Q5	2'x4' LED TROFFER WITH MEDIUM DISTRIBUTION, 80 CRI, AND WHITE FINISH. GE LBR24 SERIES	–	LED 4000K	23	3,000	UNV	CEILING RECESSED	1
		SAME AS ABOVE EXCEPT WITH EMERGENCY LIGHT.							
	R	4" SQUARE LED DOWNLIGHT WITH 93+ CRI, SMOOTH STYLE, AND WHITE FINISH. DMF LIGHTING DRD2 SERIES	–	LED 4000K	13	1,000	UNV	CEILING RECESSED	1
EM		SAME AS ABOVE EXCEPT WITH EMERGENCY DRIVER AND REMOTE TEST SWITCH.							
	S	LINEAR LED FIXTURE WITH 80 CRI, FLUSH SHIELDING, WHITE FINISH, AND TELESCOPIC SECTIONS. AXIS LIGHTING BBPRLED SERIES	–	LED 4000K	3.6/FT	400/FT	UNV	CEILING RECESSED	1 5
	V	SINGLE CIRCUIT TRACK SYSTEM WITH WHITE FINISH AND LED TRACK HEADS WITH WHITE FINISH AND FLOOD OPTICS (35°). DMF LIGHTING LT2 SERIES	–	LED 4000K	16	900	120	CEILING RECESSED	
	EP1	LED VAPORTIGHT FIXTURE WITH FROSTED GLASS DIFFUSER AND WIRE GUARD. LITHONIA OLVT SERIES	–	LED 4000K	15	600	[illegible]	WALL SURFACE	
	LC1	LED TAPE LIGHT WITH WHITE FINISH. RIBBONLYTE RBHI SERIES	–	LED 3500K	1.5/FT	204/FT	24	[illegible] SURFACE	5 [illegible]
	LE1	10"x2' LED VOLUMETRIC FIXTURE WITH WHITE FINISH. LITHONIA STL2 SERIES	–	LED 4000K	20	2,000	UNV	WALL SURFACE	
	LF1	4' LED LINEAR STRIP FIXTURE WITH SYMMETRIC REFLECTOR, NO DIFFUSER, 80 CRI, AND WHITE FINISH. LITHONIA ZL1N SERIES	–	LED 4000K	[illegible]	5,000	UNV	CEILING SUSPENDED	1 [illegible]
EM		SAME AS ABOVE EXCEPT WITH 10 WATT EMERGENCY BATTERY PACK.							
	EX1	EDGE–LIT EXIT LIGHT FIXTURE WITH RED LETTERING, ALUMINUM HOUSING, 90 MINUTE NI–CAD BATTERY BACKUP, AND SELF TEST DIAGNOSTICS. FARENHEIT – SERIES	–	[illegible]	–	–	[illegible]	CEILING/WALL SURFACE	
	EX2	EXIT LIGHT FIXTURE WITH RED LETTERING, WHITE THERMOPLASTIC HOUSING AND 90 MINUTE NI–CAD BATTERY BACKUP AND SELF TEST DIA. FARENHEIT – SERIES	–	LED	–	–	[illegible]	CEILING/WALL SURFACE	
	EM1	15"X7" 12V CONCEAL EMERGENCY LIGHT WITH 50W CAPACITY AND SELF DIAGNOSTICS. DUAL LITE CL SERIES	2	HALOGEN	20	–	UNV	CEILING RECESSED	
	EM5	11"Wx3"Dx7"H LED, ALUMINUM NORMAL / EMERGENCY FIXTURE WITH ACRYLIC LENS, WET LOCATION RATING, AND 90 MINUTE BATTERY BACKUP. DUAL LITE PGN SERIES	–	LED	17	445	UNV	WALL SURFACE @ 8'-0"	3

GENERAL NOTES:

- EMERGENCY FIXTURES INDICATED IN THIS SCHEDULE SHALL BE CAPABLE OF 90 MINUTE BATTERY BACKUP OPERATION.
- PROVIDE COMPATIBLE EMERGENCY BATTERY PACK WITHOUT LAMPS (DUAL LITE LM SERIES OR EQUAL) FOR ALL REMOTE HEAD TYPE EMERGENCY FIXTURES. INSTALL ON INTERIOR SIDE OF WALL AND LOCATE ABOVE ACCESSIBLE CEILING WHEN CEILINGS ARE PRESENT.
- COORDINATE EXACT LOCATION AND FINISH OPTIONS OF ALL EMERGENCY REMOTE TEST SWITCHES WITH ARCHITECT PRIOR TO ROUGH–IN AND CONNECT FOR OPERATION.
- CONTRACTOR IS RESPONSIBLE FOR SECURING ANY SUSPENDED LIGHT FIXTURE(S) WHICH SWAY OR MOVE DUE TO AIR PRODUCING MECHANICAL EQUIPMENT OR EXTERIOR WIND WITH RIGID SUPPORT(S).

NOTES:

1. VERIFY CEILING TYPES PRIOR TO ORDERING FIXTURES.
2. VERIFY EXACT MOUNTING HEIGHT WITH ARCHITECTURAL DRAWINGS.
3. MOUNT FIXTURE AT HEIGHT AS INDICATED (CENTER OF FIXTURE). COORDINATE WITH EQUIPMENT PRIOR TO ROUGH–IN.
4. PROVIDE FIXTURE(S) WITH ALPHA SINE POWER SUPPLY FOR EVERY 24 SQ. FT. OF FIXTURE.
5. COORDINATE EXACT LENGTHS PRIOR TO ORDERING TO ACHIEVE LENGTH AS INDICATED ON PLANS.
6. PROVIDE FIXTURE(S) WITH 24V POWER SUPPLY(IES) AS REQUIRED.
7. PROVIDE FIXTURE WITH TELESCOPIC SECTIONS AS REQUIRED IN ORDER TO ACHIEVE LENGTH AS INDICATED ON PLANS.
8. PROVIDE FIXTURE WITH WET LOCATION RATING IN ALL FIXTURES LOCATED IN EXTERIOR CANOPIES.

FIRE ALARM NOTES

PART 1 – NOTES

1. THE FIRE ALARM CONTRACTOR SHALL PROVIDE A COMPLETE FIRE ALARM SYSTEM FOR THIS BUILDING, IN ACCORDANCE WITH THE CURRENT EDITIONS OF NFPA 72 AND THE NATIONAL ELECTRICAL CODE.
2. THE FIRE ALARM CONTRACTOR SHALL PROVIDE A DETAILED SET OF SHOP DRAWINGS (INCLUDING DEVICE CUT SHEETS), A COMPLETE POINT TO POINT WIRING DIAGRAM, FLOOR PLAN DRAWINGS INDICATING ALL DEVICE LOCATIONS AND NUMBERS, COMPLETE BATTERY CALCULATIONS AND COMPLETE NOTIFICATION APPLIANCE CIRCUIT CALCULATIONS (FOR THE SYSTEM TO BE INSTALLED) TO THE BUILDING DEPARTMENT (AUTHORITY HAVING JURISDICTION) AT THE TIME OF APPLICATION FOR BUILDING PERMIT.
3. A GENERAL ALARM SHALL BE ANNUNCIATED UPON ACTIVATION OF ANY INITIATING DEVICE INCLUDING; PULL STATION(S), FLOW SWITCH OR DETECTION DEVICE(S).
4. A TROUBLE SIGNAL SHALL BE ANNUNCIATED UPON FAILURE OR REMOVAL OF ANY DETECTION OR MANUAL DEVICE.
5. A SUPERVISORY SIGNAL SHALL BE ANNUNCIATED UPON ACTIVATION OF ANY FIRE SPRINKLER SYSTEM TAMPER SWITCH.
6. ALL FIRE ALARM SYSTEM DEVICES INSTALLED FOR THIS SPECIFIC PROJECT SHALL BE UL CERTIFIED.
7. ALL FIRE ALARM INITIATING DEVICES SHALL BE ADDRESSABLE AND ALL FIRE ALARM CIRCUITS SHALL BE CLASS "B".
8. PROVIDE THE OWNER WITH A COMPLETE FIRE ALARM SYSTEM AND INSTALLATION MANUAL COVERING ALL SYSTEM EQUIPMENT INSTALLED FOR THIS PROJECT. KEEP AT THE MAIN FIRE ALARM CONTROL PANEL.
9. PROVIDE CERTIFICATE OF COMPLETION AT THE FINAL INSPECTION OF THE FIRE ALARM SYSTEM.
10. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITIONS OF NFPA 72 AND NATIONAL ELECTRICAL CODE.
11. WHEN REQUIRED BY INTERNATIONAL FIRE CODE OR BY LOCAL AMENDMENTS TO THIS CODE, EMERGENCY RADIO COVERAGE SHALL MEET THE REQUIREMENTS OF SECTION 510.1.1. THE BUILDING SHALL BE TESTED BY AN APPROVED RF ENGINEER AND A CERTIFICATION OF COVERAGE SHALL BE ISSUED.

PART 2 – EQUIPMENT

1. THE MAIN FIRE ALARM CONTROL PANEL SHALL BE A MICROPROCESSOR BASE SYSTEM WITH ADDRESSABLE, INTELLIGENT DETECTORS. ADDRESSABLE CONTROL RELAY AND MONITOR MODULES, VISIBLE AND AUDIBLE SYSTEM ANNUCIATORS AND OTHER SYSTEM CONTROLLED DEVICES AS REQUIRED.
2. THE FIRE ALARM SHALL BE CAPABLE OF FUTURE EXPANSION AS REQUIRED.
3. ALL FIRE ALARM NOTIFICATION APPLIANCES SHALL ACTIVATE UPON INITIATION OF THE GENERAL ALARM.
4. ALL FIRE ALARM AUDIBLE SIGNALS IN OPEN AREA SHALL HAVE A THREE PLUS TEMPORAL PATTERN.
5. ALL FIRE ALARM AUDIBLE SIGNALS SHALL HAVE A SOUND LEVEL OF AT LEAST 15 dba ABOVE THE AVERAGE AMBIENT SOUND LEVEL.
6. SLEEPING ROOMS FOR UNATTENDED OCCUPANTS SHALL REQUIRE LOW FREQUENCY SOUNDERS PER SECTION 18.4.5.3 OF NFPA 72.
7. MANUAL STATIONS TO BE INSTALLED AT 48" INCHES A.F.F.
8. MOUNT FIRE ALARM SYSTEM AUDIBLE/VISUAL SIGNALS (COMBINATION DEVICES) SUCH THAT THE ENTIRE STROBE LENS IS 80" A.F.F. OR 6" BELOW CEILING, WHICH EVER IS LOWER.
9. MOUNT FIRE ALARM SYSTEM STROBES SUCH THAT THE ENTIRE STROBE LENS IS 80" A.F.F. OR 6" BELOW CEILING, WHICH EVER IS LOWER.
10. SMOKE DETECTORS TO BE INSTALLED AS REQUIRED BY NFPA 72.
11. MOUNT FIRE ALARM MINI HORNS AT 80" A.F.F. OR 6" BELOW CEILING, WHICHEVER IS LOWER.
12. THE FIRE ALARM PANEL MUST HAVE AN EARTH GROUND CONNECTION AS REQUIRED BY THE SYSTEM MANUFACTURER, AND N.E.C. ARTICLE 760. MINIMUM WIRE SIZE IS #8 AWG FOR GROUND CONNECTION. (NOTE PANEL NEUTRAL OR CONDUIT GROUND IS NOT ACCEPTABLE).
13. HVAC DUCT SMOKE DETECTORS SHALL BE CONNECTED TO THE FIRE ALARM CONTROL PANEL AND SHALL INITIATE A SUPERVISORY SIGNAL ONLY.
14. ALARM SYSTEM SHALL BE PROVIDED WITH PRIMARY AND SECONDARY POWER SUPPLIES. PRIMARY POWER SUPPLY SHALL BE BY BUILDING LIGHTING AND POWER PANELS. SECONDARY POWER SUPPLY SHALL BE BY BATTERIES WITHIN FIRE ALARM ENCLOSURES AND SHALL BE ABLE TO OPERATE THE SYSTEM UNDER QUIESCENT LOADS FOR A MINIMUM OF 24 HOURS AND ALL ALARM NOTIFICATION APPLIANCES AND OTHER CONNECTED LOADS FOR 5 MINUTES.
15. REFER TO ARCHITECTURAL SHEET A155 FOR DEVICE COLOR FOR SPECIFIC LOCATIONS.

PART 3 – WIRING

16. ALL WIRING AND CONDUIT TO CONFORM TO NFPA 72 AND NEC ARTICLE 760. WIRING SHALL BE SOLID COPPER OR STRANDED COPPER WITH A MAX. OF 7 STRANDS FOR 16 GA AND 18 GA, STRANDED COPPER WITH A MAXIMUM OF 19 STRANDS FOR SIZES 14 AND LARGER PER NEC 760 AND NFPA 70.
17. COLOR CODING MAY NOT APPLY TO EXISTING SYSTEMS, LABEL EXISTING WIRING ACCORDINGLY.

PART 4 – FIRE PROTECTION

1. ALL FIRE STOP PENETRATIONS SHALL BE MADE WITH APPROVED (NEC) METALLIC CONDUIT AND SHALL BE SEALED WITH A U.L. APPROVED FIRE STOP MATERIAL.

LIGHTING CONTROL NOTES

1. LIGHTING CONTROL SYSTEM SHALL BE DIGITAL AND CONSIST OF ONE (1) MASTER LCP WITH INDIVIDUAL RELAYS, DIGITAL SWITCHES AND DIGITAL INTERFACE CARDS. ALL SYSTEM COMPONENTS SHALL CONNECT IN A "DAISY CHAIN" STYLE CONFIGURATION AND BE CONTROLLED VIA CATEGORY 5 PATCH CABLE WITH RJ45 CONNECTORS, PROVIDING REAL–TIME TWO–WAY COMMUNICATION WITH EACH SYSTEM COMPONENT. ALL CABLES SUPPLIED BY CONTRACTOR.

2. RELAY PANEL SHALL BE PRE–WIRED, PRE–ASSEMBLED, PREPROGRAMMED AND LISTED TO UL 916 (NORMAL) OR ETL LISTED TO UL924 (EMERGENCY). PANELS SHALL BE PROVIDED WITH DUAL VOLTAGE POWER SUPPLY AND 16 GAGE BARRIERS TO SEPARATE HIGH AND LOW VOLTAGE.

3. STANDARD RELAYS SHALL HAVE NORMALLY CLOSED (NC) CONTACTS RATED FOR 120/277V 20A TUNGSTEN, BALLAST OR HID. STANDARD RELAYS SHALL BE ZERO–CROSS TYPE. NO EXCEPTIONS. OPTIONAL 600V, 2–POLE RELAY, NO OR NC, AND 347 SINGLE POLE RELAY SHALL BE AVAILABLE.

4. ALL INCANDESCENT LIGHTING CIRCUITS SHALL BE CONTROLLED BY A NC/SOFTSTART RELAY. NO EXCEPTIONS.

5. RELAY PANEL ELECTRONICS SHALL PROVIDE CURRENT VISUAL STATUS AND CONTROL OF EACH RELAY OR ZONE. ALL SYSTEM CONTROL ELECTRONICS SHALL STORE PROGRAMMING IN A NON–VOLATILE MEMORY AND PROVIDE 10 YEAR BATTERY BACK UP FOR TIME OF DAY.

6. LIGHTING CONTROL SYSTEM SHALL CONSIST OF MASTER LCP CONTROLLED BY A 32–CHANNEL DIGITAL TIME CLOCK (DTC) THAT CONTROLS AND PROGRAMS THE ENTIRE LIGHTING CONTROL SYSTEM. THE DTC SHALL SUPPLY ALL TIME FUNCTIONS AND ACCEPT OTHER INPUTS. THE DTC SHALL ACCEPT CONTROL LOCALLY USING BUILT IN BUTTON PROMPTS AND USE OF AN 8 LINE 21–LETTER DISPLAY, FROM A COMPUTER, MODEM, ETHERNET OR INTERNET. ALL COMMANDS SHALL BE IN PLAIN ENGLISH. HELP PAGES SHALL DISPLAY ON THE DTC SCREEN.

7. ALL SWITCHES SHALL COMMUNICATE VIA RS 485, CAT 5 PATCH CABLE WITH RJ45 CONNECTORS. CONTACT CLOSURE STYLE SWITCHES ARE NOT ACCEPTABLE. ANY SWITCH BUTTON FUNCTION SHALL BE ABLE TO BE CHANGED LOCALLY (AT THE DTC OR A PC) OR REMOTELY, VIA MODEM, ETHERNET OR INTERNET. REFER TO SINGLE LINE DIAGRAM FOR WIRING DETAILS. SWITCHES WHICH CANNOT BE PROGRAMMED REMOTELY SHALL NOT BE ACCEPTABLE.

8. PHOTOCELL, EXTERIOR (PCO), SHALL PROVIDE READOUT ON THE DTC SCREEN. PHOTOCELLS THAT REQUIRE THE USE OF SET SCREWS OR MANUAL ADJUSTMENTS AT THE PHOTOCELL CONTROL CARD SHALL NOT BE ACCEPTABLE.

9. LIGHTING CONTROL SYSTEM INTERFACES TO INCLUDE A DRY CONTACT INPUT INTERFACE, BMS INTERFACE AND ETHERNET/INTERNET INTERFACE. VERIFY AND INSTALL ONLY THOSE INTERFACES INDICATED ON THE PLANS.

10. STANDARD LIGHTING CONTROL SYSTEM SOFTWARE, PRE–INSTALLED INTO THE DTC, SHALL CONSIST OF AND USE STANDARD GRAPHICAL MANAGEMENT SOFTWARE (GMS) PAGES. GMS SOFTWARE SHALL PROVIDE VIA LOCAL OR REMOTE PC A VISUAL REPRESENTATION OF EACH DEVICE ON THE BUS, SHOW REAL TIME STATUS AND THE ABILITY TO CHANGE THE STATUS OF ANY INDIVIDUAL DEVICE, RELAY OR ZONE. OPTIONAL SOFTWARE THAT ACCEPTS JOB SPECIFIC GRAPHICS SHALL BE AVAILABLE. NO EXCEPTIONS.

11. START UP: EC SHALL CONTACT LC&D AT LEAST 7 DAYS BEFORE TURNOVER OF PROJECT. LC&D WILL REMOTELY DIAL INTO THE LIGHTING CONTROL SYSTEM, RUN DIAGNOSTICS AND CONFIRM SYSTEM PROGRAMMING. EC SHALL BE AVAILABLE AT THE TIME OF DIAL IN TO PERFORM ANY CORRECTIONS REQUIRED BY LC&D. EC IS RESPONSIBLE FOR COORDINATING WITH GC AND THE OWNER, THE INSTALLATION OF A DEDICATED TELEPHONE LINE OR A SHARED PHONE LINE WITH A/B SWITCH. PHONE JACK TO BE MOUNTED WITHIN 12" OF MASTER LCP. LABEL JACK WITH PHONE NUMBER. EC SHALL CONNECT PHONE LINE FROM JACK TO MASTER LCP. NO EXCEPTIONS.

12. TELEPHONE FACTORY DIAL–UP SUPPORT SHALL BE AVAILABLE AT NO ADDITIONAL COST TO THE EC OR OWNER BOTH DURING AND AFTER THE 3 YEAR WARRANTY PERIOD. FACTORY TO PREPROGRAM THE LIGHTING CONTROL SYSTEM PER PLANS AND APPROVED SUBMITTAL. THE LIGHTING CONTROL MANUFACTURER, AT NO ADDED COST, SHALL PROVIDE ADDITIONAL PROGRAMMING VIA MODEM AS REQUIRED BY THE EC OR OWNER FOR THE OPERATIONAL LIFE OF THE SYSTEM. MANUFACTURER WARRANTS THAT THE DTC SOFTWARE CAN BE UPGRADED AND MONITORED REMOTELY. NO EXCEPTIONS.

13. SHOP DRAWINGS: SUBMIT DIMENSIONED DRAWINGS OF LIGHTING CONTROL SYSTEM AND ACCESSORIES INCLUDING, BUT NOT NECESSARILY LIMITED TO, RELAY PANELS, SWITCHES, DTC, PHOTOCELLS AND OTHER INTERFACES. DRAWINGS SHALL INDICATE EXACT LOCATION AND PROGRAMMING OF EACH DEVICE. INDICATE ALL TIME SCHEDULES AND SWITCH BUTTON ENGRAVING.

ELECTRICAL NOTES

PART 1 – GENERAL

A. REQUIREMENTS OF REGULATORY AGENCIES AND STANDARDS

1. ALL EQUIPMENT, MATERIAL AND INSTALLATION SHALL MEET THE REQUIREMENTS OF ONE OR MORE THE FOLLOWING:
   a. NATIONAL ELECTRICAL CODE (NEC), NFPA–70 (2017)
   b. LIFE SAFETY CODE, NFPA–101 (2012)
   c. INTERNATIONAL BUILDING CODE, (2012) WITH GEORGIA AMENDMENTS (2014) (2015) (2017)
   d. INTERNATIONAL ENERGY CONSERVATION CODE (IECC), (2009), WITH GEORGIA SUPPLEMENTS AND AMENDMENTS (2011) (2012)
   e. OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA)
   f. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
   g. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
   h. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)
   i. ILLUMINATING ENGINEERING SOCIETY (IES)
   j. UNDERWRITERS LABORATORIES (UL)
   k. STANDARD FOR THE INSTALLATION, MAINTENANCE AND USE OF LOCAL PROTECTIVE SIGNALING SYSTEMS (NFPA–72)
   l. FEDERAL SPECIFICATION (FED. SPEC.)
   m. INSULATED POWER CABLE ENGINEERS ASSOCIATION (IPCEA)

B. SCOPE OF WORK

1. THE CONTRACTOR SHALL VISIT THE JOB SITE AND REVIEW CONSTRUCTION AND VENDOR DRAWINGS FOR ALL TRADES PRIOR TO BID TO BECOME FAMILIAR WITH THE PROJECT AND INTENT OF THE DRAWINGS.
2. THE CONTRACTOR SHALL OBTAIN A PERMIT FOR WORK TO BE COMPLETED AND INCLUDE COST FOR ALL PERMIT FEES, PERMITS, INSPECTIONS AND TESTING IN THE BID.
3. THE CONTRACTOR SHALL PROVIDE ALL NEW MATERIAL IN ACCORDANCE WITH THESE DOCUMENTS AND APPLICABLE SPECIFICATIONS.
4. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES BETWEEN THESE DOCUMENTS AND THOSE OF OTHER DISCIPLINES TO THE ARCHITECT/ENGINEER FOR WRITTEN DIRECTION/INSTRUCTIONS FOR CHANGES NECESSARY IN THE WORK.
5. THE CONTRACTOR SHALL NOT SCALE THE ELECTRICAL DRAWINGS, REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND ELEVATIONS.
6. THE CONTRACTOR IS EXPECTED TO PROVIDE ALL MATERIAL NECESSARY FOR A COMPLETE OPERATING SYSTEM. IT IS NOT THE INTENT OF THESE DOCUMENTS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION.
7. THE CONTRACTOR SHALL COORDINATE THE ELECTRICAL WORK WITH OTHER TRADES AND MAKE PROPER PROVISIONS IN RELATION TO THEIR WORK. ANY CHANGES REQUIRED DUE TO LACK OF COORDINATION, SHALL BE MADE AT THE CONTRACTORS' EXPENSE.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING OF THEIR WORK.
9. THE CONTRACTOR SHALL SUBMIT EQUIPMENT DATA AND SHOP DRAWINGS IN ELECTRONIC FORMAT AND AS DIRECTED BY GENERAL PROJECT REQUIREMENTS IN PROJECT MANUAL AS APPLICABLE. SUBMITTAL SHALL CONTAIN MATERIAL UTILIZED IN THE PROJECT FOR APPROVAL BY THE ARCHITECT/ENGINEER PRIOR TO BEGINNING ANY WORK OR ORDERING ANY MATERIAL. THE MATERIAL SHALL CONTAIN ALL ELECTRICAL EQUIPMENT INCLUDING SWITCH GEAR, PANELBOARDS, TRANSFORMERS, DISCONNECTS, SAFETY SWITCHES LIGHT FIXTURES, LIGHTING CONTROLS, WIRING DEVICES, COVER PLATES AND CONDUCTORS.
10. THE ELECTRICAL INSTALLATION SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER BY A LICENSED ELECTRICAL CONTRACTOR.
11. THE CONTRACTOR SHALL PROVIDE INSURANCE FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR DURATION OF THE PROJECT.
12. NO COMBUSTIBLE MATERIALS, IE: PVC CONDUIT, NON–PLENUM RATED CABLING, ETC., ARE ALLOWED ABOVE ANY CEILINGS.

C. TERMS

1. "PROVIDE", AS USED IN THE DOCUMENTS AND APPLICABLE SPECIFICATIONS MEANS TO FURNISH AND INSTALL COMPLETE.
2. "WIRING", AS USED IN THE DOCUMENTS MEANS CONDUIT AND WIRES WITHIN THE CONDUIT SYSTEM.
3. "CONCEALED", AS USED IN THE DOCUMENTS AND APPLICABLE SPECIFICATIONS MEANS EMBEDDED IN MASONRY OR OTHER CONSTRUCTION, BEHIND WALLS, INSIDE CABINETRY OR ABOVE SUSPENDED CEILINGS.
4. "NEMA 1", INDICATES THE ENCLOSURE SHALL BE LISTED FOR INDOOR USE ONLY.
5. "NEMA 3R", INDICATES THE ENCLOSURE SHALL BE LISTED FOR EXTERIOR USE.

D. WARRANTY

1. ALL MATERIAL AND WORK PERFORMED SHALL BE GUARANTEED FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE.
2. ANY CORRECTIONS FOR DEFECTIVE MATERIALS AND/OR INSTALLATION SHALL BE MADE AT THE CONTRACTORS EXPENSE DURING THE WARRANTY PERIOD.

PART 2 – PRODUCTS

A. DISTRIBUTION AND BRANCH CIRCUIT PANEL BOARDS

1. CURRENT CARRYING BUSES AND GROUND BARS SHALL BE COPPER.
2. ALL CIRCUIT BREAKERS SHALL BE BOLT ON TYPE, PLUG IN TYPE CIRCUIT BREAKERS ARE NOT ACCEPTABLE, UNLESS NOTED OTHERWISE.
3. ALL CIRCUIT BREAKERS USED FOR MECHANICAL EQUIPMENT SHALL BE "HACR" TYPE.
4. AIC RATINGS SHALL BE AS INDICATED ON THE BRANCH CIRCUIT PANEL SCHEDULES.
5. ALL PANEL BOARDS SHALL BE LABELED WITH PLASTIC LAMINATED IDENTIFICATION PLATES THAT ARE ENGRAVED WITH 1/4" LETTERING.
6. ALL PANEL BOARDS SHALL HAVE A TYPE WRITTEN SCHEDULE OF BRANCH CIRCUIT DESCRIPTIONS.
7. ALL EXISTING PANEL BOARDS UTILIZED FOR THIS SCOPE OF WORK SHALL HAVE AN UPDATED TYPE WRITTEN SCHEDULE OF BRANCH CIRCUIT DESCRIPTIONS.
8. ELECTRICAL EQUIPMENT THAT IS LIKELY TO REQUIRE EXAMINATION, MAINTENANCE ETC WHILE ENERGIZED, SHALL BE FIELD OR FACTORY MARKED TO WARN OF POTENTIAL ELECTRIC ARC FLASH HAZARDS PER NEC 110.16.

B. DISCONNECT SWITCHES AND MOTOR STARTERS

1. SWITCHES SHALL BE H.P. RATED, HEAVY DUTY TYPE.
2. QUICK–MAKE, QUICK–BREAK OPERATING MECHANISM.
3. STARTERS SHALL BE COMBINATION TYPE, FUSIBLE WITH BIMETAL OVERLOADS IN EACH PHASE.
4. STARTERS SHALL HAVE A "HAND–OFF–AUTO" (HOA) SWITCH UNLESS NOTED OTHERWISE.

C. CONDUCTORS

1. MINIMUM SIZE SHALL BE #12 AWG, EXCEPT FOR CONTROL/LOW VOLTAGE WIRING.
2. INSULATION TYPE SHALL BE THHN.
3. ALL CONDUCTORS SHALL BE COPPER, UNLESS NOTED OTHERWISE.

D. WIRING DEVICES (GENERAL PURPOSE)/FACEPLATE

1. RECEPTACLES SHALL MEET ALL PROVISIONS OF NEC 406. PROVIDE GROUND FAULT (GFCI), ARC–FAULT, (AFCI), TAMPER–RESISTANT AND WEATHER–RESISTANT WHERE REQUIRED BY CODE.
2. PAINTED WALL LOCATIONS, PROVIDE WHITE DEVICE WITH SMOOTH, WHITE NYLON FACEPLATE, UNLESS DIRECTED OTHERWISE.
3. WOOD STAINED AND TILED LOCATIONS, PROVIDE BLACK DEVICE WITH BRUSHED STAINLESS STEEL FACEPLATE, UNLESS DIRECTED OTHERWISE.
4. FOR EXTERIOR WALL LOCATIONS, PROVIDE ARLINGTON DB SERIES OR EQUIVALENT WITH RECESS STEEL BOX AND WEATHERPROOF IN–USE, LOW PROFILE CLEAR COVER, WHITE TRIM.

E. JUNCTION BOXES

1. INTERIOR LOCATIONS SHALL BE PRESSED STEEL.
2. EXTERIOR LOCATIONS SHALL BE HEAVY DUTY CAST ALUMINUM WITH THREADED HUBS.

F. CONDUIT

1. EMT SHALL BE GALVANIZED STEEL.
2. PVC SHALL BE SCHEDULE 40 WHERE NOT SUBJECT TO PHYSICAL DAMAGE.
3. PVC SHALL BE SCHEDULE 80 WHERE EXPOSED TO PHYSICAL DAMAGE.
4. MC CABLE IS ACCEPTABLE WITH LIGHTWEIGHT ALUMINUM INTERLOCKED ARMOR AND INTERNAL REDUNDANT GROUND.

PART 3 – EXECUTION

A. COLOR CODING FOR CONDUCTORS SHALL BE THE FOLLOWING:

1. 480/277 VOLT, THREE PHASE, FOUR WIRE SYSTEM: A PHASE–BROWN, B PHASE–PURPLE, C PHASE–YELLOW, GROUNDED (NEUTRAL)–GREY AND GROUNDING–GREEN.
2. 208/120 VOLT, THREE PHASE, FOUR WIRE SYSTEM: A PHASE–BLACK, B PHASE–RED, C PHASE–BLUE, GROUNDED (NEUTRAL)–WHITE AND GROUNDING–GREEN.
3. CONDUCTORS FOR SERVICES AND BRANCH CIRCUITS #6 AND LARGER SHALL BE IDENTIFIED CONSISTENTLY BY: COLOR CODING, MARKING TAPE OR OTHER APPROVED MEANS.

B. WIRING METHODS

1. CONDUCTORS SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING (EMT) UNLESS NOTED OTHERWISE. CONNECTORS AND FITTINGS SHALL BE STEEL SET SCREW OR COMPRESSION TYPE.
2. PVC, AS INDICATED IN PART 2–PRODUCTS (F) SHALL BE INSTALLED BELOW SLAB, UNDERGROUND AND EXPOSED WHERE LISTED FOR SUCH USE.
3. MC CABLE, AS INDICATED IN PART 2–PRODUCTS (F) IS ACCEPTABLE FOR USE WITH GENERAL BRANCH CIRCUITS, RATED 20 AMPERES OR LESS, CONCEALED IN WALLS AND ABOVE SUSPENDED CEILINGS, AND AS APPROVED BY THE AUTHORITY HAVING JURISDICTION. IT IS NOT INTENDED TO USE MC CABLE EXPOSED.
4. INSTALLATIONS WITHIN HAZARDOUS (CLASSIFIED) LOCATIONS SHALL MEET ALL REQUIREMENTS FOR THE LOCATION PER NEC 500. PENETRATIONS INTO CLASSIFIED LOCATIONS SHALL BE PROVIDED WITH SEALS AND ALL RACEWAYS WITHIN CLASSIFIED LOCATIONS SHALL BE RIGID STEEL. ALL ELECTRICAL EQUIPMENT INSTALLED IN CLASSIFIED AREAS SHALL BE LISTED FOR USE WITHIN THE LOCATION.
5. ALL CONDUITS SHALL BE INSTALLED WITHIN WALL SYSTEM. NO EXPOSED VISIBLE CONDUITS SHALL BE ALLOWED. FOR CONCRETE MASONRY UNIT WALLS (CMU) THE CONDUIT SHALL BE INSTALLED WITHIN VERTICAL CELLS OF BLOCKS AND FOR PRE–ENGINEERED METAL BUILDING WALLS (PEMB) THE CONDUIT SHALL BE INSTALLED BEHIND WALL PANEL.

C. MISCELLANEOUS

1. LAY–IN TYPE LIGHTING FIXTURES SHALL BE SECURED ON ALL FOUR SIDES TO SUSPENDED CEILING.
2. CONDUCTORS FOR BRANCH CIRCUITS SHALL BE INCREASED FROM SIZES INDICATED IN THE PANEL SCHEDULES TO PREVENT VOLTAGE DROP EXCEEDING 3% AT THE FARTHEST DEVICE. LOADS FOR DETERMINING CONDUCTOR SIZE SHALL BE BASED ON ACTUAL CONNECTED LOAD OR 80% OF CIRCUIT BREAKER SIZE, WHICH EVER IS GREATER. CONTACT ENGINEER OF RECORD FOR ALL CIRCUIT RUNS IN EXCESS OF 100 FT. FOR CALCULATION OF WIRE SIZE. FOR BID PURPOSES, INCREASE WIRE SIZE BY ONE FOR CIRCUIT RUNS BETWEEN 100 FT. AND 200 FT. AND TWO WIRE SIZES FOR CIRCUIT RUNS GREATER THAN 200 FT.
3. SHOP DRAWING AND SUBMITTAL REVIEW OF EQUIPMENT OR PRODUCTS OTHER THAN SPECIFIED MAY BE AT THE EXPENSE OF THE CONTRACTOR.

D. GROUNDING

1. THE ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED PER THE LATEST EDITION OF THE NEC AND LOCAL CODES. ALL GROUNDING ELECTRODE CONDUCTORS SHALL BE COPPER

E. COORDINATION

1. THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL UTILITY COMPANY PRIOR TO STARTING WORK FOR METERING REQUIREMENTS, METERING LOCATION, TRANSFORMER CONDUIT REQUIREMENTS, LUG SIZE REQUIREMENTS AND EXACT SERVICE POINT CONNECTION. SERVICE SHUT DOWN SHALL BE COORDINATED WITH THE OWNER PRIOR TO SCHEDULING WITH UTILITY COMPANY. CONTRACTOR SHALL INSTALL CONDUITS FOR UTILITY PRIMARY FEEDER PER UTILITY GUIDELINES.
2. THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL TELEPHONE AND CABLE TV COMPANY PRIOR TO STARTING WORK FOR EXACT SERVICE POINT CONNECTION AND ANY REQUIREMENTS ANY ONE OF THE PROVIDERS MAY NEED.
3. THE CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL, PLUMBING AND VENDOR DOCUMENTS AND SUBMITTALS PRIOR TO PURCHASING ELECTRICAL EQUIPMENT. COORDINATE ALL CONTROL WIRING REQUIRED FOR ALL EQUIPMENT RELATED TO THE PROJECT. PROVIDE ELECTRICAL BREAKERS, DISCONNECTS AND CONDUCTORS AS REQUIRED PER MECHANICAL SUBMITTALS AND ACTUAL EQUIPMENT NAMEPLATE RATINGS.
4. THE CONTRACTOR SHALL LOCATE ALL RECEPTACLES, SWITCHES, BREAKERS AND DISCONNECTS ON OR ADJACENT TO EQUIPMENT SERVED. DEVICES SERVING EQUIPMENT IN FINISHED SPACES SHALL BE CONCEALED WITHIN EQUIPMENT ACCESSIBLE THROUGH EQUIPMENT ACCESS PANELS. I.E. DRINKING FOUNTAINS AND WALL MOUNTED AIR HANDLING UNITS.

F. RECORD DOCUMENTS

1. THE CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD SET OF ANY DEVIATIONS BETWEEN THE WORK AS DESIGNED ON THESE DOCUMENTS AND THAT OF WHICH IS ACTUALLY INSTALLED. THIS RECORD SET OF DRAWINGS SHALL BE KEPT WITH THE GENERAL CONTRACTOR AND REQUIRE APPROVAL FROM THE ARCHITECT/ ENGINEER.

ELECTRICAL SHEET INDEX

SHEET#	DESCRIPTION
E001	ELECTRICAL NOTES
E201	LIGHTING PLAN – FIRST LEVEL
E202	LIGHTING PLAN – SECOND FLOOR
E301	POWER PLAN – FIRST LEVEL
E302	POWER PLAN – SECOND FLOOR
E501	ELECTRICAL PANEL SCHEDULES

ELECTRICAL SYMBOLS

- 20 AMP DUPLEX RECEPTACLE (NEMA 5–20R) MOUNTED AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS NOTED OTHERWISE.
- 20 AMP QUADRUPLEX RECEPTACLE (NEMA 5–20R) MOUNTED AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS NOTED OTHERWISE.
- 20 AMP DUPLEX RECEPTACLE (NEMA 5–20R) MOUNTED ABOVE COUNTER. REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT LOCATION AND MOUNTING HEIGHT.
- 20 AMP DUPLEX RECEPTACLE (NEMA 5–20R), RECESSED FLOOR MOUNTED. PROVIDE SQUARE BRUSHED NICKEL FINISH COVER PLATE WITH RECESS DEVICE, FLIP TOP COVER WITH NON–RECESS DEVICE WILL NOT BE ACCEPTED. FLOOR BOX SHALL BE LISTED FOR PROPOSED LOCATION AS REQUIRED.
- 20 AMP QUADRUPLEX RECEPTACLE (NEMA 5–20R), RECESSED FLOOR MOUNTED. PROVIDE SQUARE BRUSHED NICKEL FINISH COVER PLATE WITH RECESS DEVICES. FLIP TOP COVER WITH NON–RECESS DEVICES WILL NOT BE ACCEPTED. FLOOR BOX SHALL BE LISTED FOR PROPOSED LOCATION AS REQUIRED.
- 20 AMP DUPLEX RECEPTACLE (NEMA 5–20R) AND COMMUNICATIONS DUAL SERVICE FLOOR BOX, RECESSED FLOOR MOUNTED. PROVIDE 1" CONDUIT SLEEVE WITH PULL STRING, STUB INTO ACCESSIBLE CEILING SPACE. PROVIDE SQUARE BRUSHED NICKEL FINISH COVER PLATE WITH RECESS DEVICES, FLIP TOP COVER WITH NON–RECESS DEVICES WILL NOT BE ACCEPTED. FLOOR BOX SHALL BE LISTED FOR PROPOSED LOCATION AS REQUIRED.
- 20 AMP QUADRUPLEX RECEPTACLE (NEMA 5–20R) AND COMMUNICATIONS DUAL SERVICE FLOOR BOX, RECESSED FLOOR MOUNTED. PROVIDE 1" CONDUIT SLEEVE WITH PULL STRING, STUB INTO ACCESSIBLE CEILING SPACE. PROVIDE SQUARE BRUSHED NICKEL FINISH COVER PLATE WITH RECESS DEVICES, FLIP TOP COVER WITH NON–RECESS DEVICES WILL NOT BE ACCEPTED. FLOOR BOX SHALL BE LISTED FOR PROPOSED LOCATION AS REQUIRED.
- NEMA — SPECIAL PURPOSE POWER DEVICE. COORDINATE EXACT NEMA NUMBER DEVICE WITH EQUIPMENT PLUG UNLESS NOTED OTHERWISE.
- COMMUNICATIONS OUTLET. PROVIDE 1" CONDUIT SLEEVE WITH PULL STRING, STUB INTO ACCESSIBLE CEILING SPACE. MOUNT AT 18" A.F.F. TO CENTER OF OUTLET UNLESS NOTED OTHERWISE.
- COMMUNICATIONS OUTLET. PROVIDE 1" CONDUIT SLEEVE WITH PULL STRING, STUB INTO ACCESSIBLE CEILING SPACE. MOUNTED ABOVE COUNTER TOP, REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT LOCATION.
- RECEPTACLE AND COMMUNICATIONS OUTLET. PROVIDE (2) 1" CONDUIT SLEEVES WITH PULL STRING, STUB INTO ACCESSIBLE CEILING SPACE. COORDINATE MOUNTING HEIGHT OF BOX WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH IN. PROVIDE THREE GANG, RECESSED MOUNTED STEEL BOX WITH VOLTAGE DIVIDER AND OPTIONAL COVER PLATE. ARLINGTON TVBS507 OR EQUIVALENT.
- GFI — GROUND FAULT CIRCUIT INTERRUPTER VIA RECEPTACLE
- USB — RECEPTACLE WITH INTEGRATED UNIVERSAL SERIAL BUS PORT
- TELEVISION OUTLET. PROVIDE 1" CONDUIT SLEEVE WITH PULL STRING, STUB INTO ACCESSIBLE CEILING SPACE. MOUNT AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS NOTED OTHERWISE.
- JUNCTION BOX
- SINGLE GANG JUNCTION BOX, FOR POWER CONNECTION TO MODULAR SYSTEMS FURNITURE, RECESSED WALL MOUNTED. INSTALL IN EXACT MANNER AS DIRECTED BY FURNITURE SUPPLIER. PROVIDE BRUSHED NICKEL FINISH COVER PLATE.
- DOUBLE GANG JUNCTION BOX, FOR COMMUNICATION CONNECTION TO MODULAR SYSTEMS FURNITURE, RECESSED WALL MOUNTED. INSTALL IN EXACT MANNER AND LOCATION AS DIRECTED BY FURNITURE SUPPLIER. PROVIDE 2–1" CONDUIT SLEEVES WITH PULL STRING. STUB CONDUITS INTO ACCESSIBLE CEILING SPACE. PROVIDE BRUSHED NICKEL FINISH COVER PLATE.
- PROPOSED ROUTING OF LOW VOLTAGE WIRING FOR DIAGRAMMATIC PURPOSES ONLY.
- \$ — SINGLE POLE, 20 AMP, SWITCH. MOUNT 42" A.F.F. TO CENTERLINE OF SWITCH UNLESS NOTED OTHERWISE.
- \$D — PUSH ON / OFF ROTATING DIMMER SWITCH FOR CONTROL OF EXTERIOR COVE LIGHTING. ORGANIC LIGHTING SYSTEMS PRODUCT CODE 011455
- \$OR — LIGHTING CONTROL OVERRIDE SWITCH FOR MANUAL CONTROL OF ASSIGNED RELAY PANEL ZONES. MATCH SWITCH WITH RELAY PANEL SYSTEM PROVIDED. REFER TO OVERRIDE SWITCH SCHEDULE IN LIGHTING PLANS FOR ASSIGNED ZONES.
- \$M — SINGLE POLE, 20 AMP, MOTION ONLY SWITCH. MOUNT 42" A.F.F. TO CENTERLINE OF SWITCH UNLESS OTHERWISE NOTED. SENSOR SWITCH "WSD" SERIES.
- \$MS — SINGLE/DOUBLE POLE, 20 AMP MOTION/SOUND SWITCH, PASSIVE (PIR) AND ULTRASONIC (US) DUAL TECHNOLOGY. MOUNT 42" A.F.F. TO CENTERLINE OF SWITCH UNLESS NOTED OTHERWISE. SENSOR SWITCH "WSD–PDT" SERIES.
- M — LINE VOLTAGE MOTION SENSOR, PASSIVE (PIR) SENSORSWITCH "CMR" SERIES.
- MS — LINE VOLTAGE, MOTION/SOUND SENSOR, PASSIVE (PIR) AND ULTRASONIC (US) DUAL TECHNOLOGY. SENSORSWITCH "CMR–PDT" SERIES.
- MS LV — LOW VOLTAGE MOTION/SOUND SENSOR, PASSIVE (PIR) AND ULTRASONIC (US) DUAL TECHNOLOGY. SENSORSWITCH "CM–PDT" SERIES.
- PP — SELF CONTAINED, PLENUM RATED, DUAL CIRCUIT POWER PACK WITH 20 AMP RATING. SENSORSWITCH "PP" SERIES.
- CL1 — CURRENT LIMITER, 120W DMF LIGHTING TCL1–EF SERIES
- ELECTRICAL PANELBOARD, SURFACE MOUNTED
- ELECTRICAL PANELBOARD, RECESSED MOUNTED
- FUSIBLE DISCONNECT SWITCH A = POLES, B= FRAME SIZE, C= FUSE RATING
- GROUNDING ELECTRODE AND CONDUCTOR SYSTEM
- TRANSFORMER
- TELEPHONE WOOD BACKBOARD
- EF — EXHAUST FAN. REFER TO MECHANICAL DRAWINGS FOR SPECIFICATIONS.
- THERMOSTAT LOCATION. REFER TO MECHANICAL DRAWINGS FOR MOUNTING HEIGHT AND SPECIFICATIONS. PROVIDE JUNCTION BOX IN WALL BEHIND THERMOSTAT WITH 1" CONDUIT SLEEVE WITH PULL STRING, STUB INTO ACCESSIBLE CEILING SPACE. CONDUIT AND BOXES SHALL BE CONCEALED / RECESSED IN CONCRETE BLOCK (CMU) WALLS.
- MD — MOTORIZED DAMPER (ELECTRICAL POWER REQUIRED). REFER TO MECHANICAL DRAWINGS FOR REQUIREMENTS AND SPECIFICATIONS.
- FSD — FIRE SMOKE DAMPER (ELECTRICAL POWER REQUIRED). REFER TO MECHANICAL DRAWINGS FOR REQUIREMENTS AND SPECIFICATIONS.
- COP — CARBON MONOXIDE CONTROL PANEL (ELECTRICAL POWER REQUIRED). REFER TO MECHANICAL DRAWINGS FOR REQUIREMENTS AND SPECIFICATIONS.
- GARAGE DOOR CONTROL SWITCH, PROVIDE CONNECTIONS ACCORDING TO MANUFACTURER RECOMMENDATIONS
- GARAGE DOOR MOTION SENSOR, PROVIDE CONNECTIONS ACCORDING TO MANUFACTURER RECOMMENDATIONS
- NL — NIGHT LIGHT FIXTURE, WIRE FIXTURE AHEAD OF LOCAL SWITCHING, CONTACTORS AND RELAYS
- (TIE) — USED FOR CLARITY PURPOSES AS FOLLOWS:
  – TO CONNECT GROUPS OF MULTIPLE DEVICES/LIGHT FIXTURES IN DIFFERENT LOCATIONS TOGETHER ON THE SAME BRANCH CIRCUIT AS INDICATED.
  – TO INDICATE BRANCH CIRCUIT USED IN DIFFERENT LOCATIONS, FOLLOW KEYNOTES AS INDICATED.
- FCP — FIRE ALARM CONTROL PANEL

GENERAL FLOOR BOX NOTE:
REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS AND FINAL LOCATIONS PRIOR TO ROUGH IN

YSM DESIGN
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RELEASED FOR CONSTRUCTION

Signed & Sealed: 08/30/18

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Rev	Date	Comments
	08/30/18	Permit/Bid Set

BID SET

Every Contractor or Subcontractor, by submitting a bid for this project declares that they have reviewed all aspects of this project and have included all work required to provide a complete project that meets all building codes.

If questions or discrepancies are found between trades, these should be submitted by the bidding General Contractor as a Request For Information before bids are due. These clarifications will be issued to all Bidders in Addenda. No consideration will be given after the bid date for issues that could clearly have been answered during the Bidding Period.

Information to all Bidders:
For more information about this bid, including: a list of the most current documents, Instructions to Bidders, Responsibility Chart, answers to RFI, etc., go to project website. Note this address will be provided to bidders with invitation to bid.

It is the responsibility of ALL Bidders to become familiar with this site and the additional information that is contained there. If you do not have access to the internet you MUST contact your General Contractor for this information. No Change Orders will be accepted for not reviewing this information.

No consideration will be given for Change Order Requests based on any of the following:
1. Items requiring clarification but not clearly indicated as an exception on the initial bid.
2. Items requiring clarification but not submitted to Architect as a request for information during bidding.
3. Items deemed to be industry standard for a particular system or assembly.
4. Items that can reasonably be inferred from contract documents.

PRO BUILDING SYSTEMS
DESIGN BUILD CONTRACTORS

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Project Number: 18020
Drawn By: GD
Checked By: DF
Approved By: SM

Sheet Title:

ELECTRICAL NOTES

Sheet Number:

E001