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SPECIFICATIONS
<p><u>GENERAL</u></p> <p>CONTRACTOR SHALL REFER TO ALL RELATED DOCUMENTS, ARCHITECTURAL, STRUCTURAL, CIVIL AND MEP DRAWINGS, AND FULLY UNDERSTAND THE SCOPE OF WORK AND CONDITION OF CONSTRUCTION.</p> <p>THE WORK UNDER THIS SPECIFICATIONS AND DRAWINGS SHALL INCLUDE ALL LABOR.</p> <p>ALL INSTALLATION OF DEVICES AND CONNECTION OF CONDUCTORS SHALL BE PERFORMED BY LICENSED AND SKILLED ELECTRICIAN OR JOURNEYMAN.</p> <p>ALL WORK SHALL BE COMPLETED TO THE SATISFACTION OF THE OWNER. IF ANY PORTION OF THE WORK IS FOUND UNSATISFACTORY BY THE OWNER, IT SHALL BE REMOVED AND REINSTALLED WITHOUT DELAY AT NO COST TO THE OWNER.</p> <p>THE WORK INCLUDES, BUT NOT LIMITED TO:</p> <p>THE COMPLETE ELECTRICAL DISTRIBUTION SYSTEM.</p> <p>ROUGH-IN AND FINAL CONNECTIONS TO ALL DEVICES REQUIRING ELECTRICAL POWER, INCLUDING OWNER PROVIDED EQUIPMENT.</p> <p>LIGHTING CONTROL</p> <p>LIGHTING FIXTURES</p> <p>EACH CONTRACTOR SHALL OBTAIN ALL PERMITS AND INSPECTIONS REQUIRED BY THE REGULATORY AUTHORITIES. ALL FEES RELATED TO OBTAINING PERMITS AND INSPECTION SHALL BE PAID FOR BY EACH CONTRACTOR IN HIS TRADE.</p> <p>ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH LOCAL, COUNTY, STATE, AND NATIONAL ELECTRICAL CODE 2023, SPECIFICATIONS, UTILITY COMPANY REQUIREMENTS AND ALL INDUSTRY STANDARDS.</p> <p>ANY DIFFERENCES IN ABOVE MENTIONED REQUIREMENTS, THE MOST STERN SHALL OVERRULE ALL OTHERS.</p> <p>IN ADDITION TO ABOVE MENTIONED CODES AND SPECIFICATIONS, THE FOLLOWING INDUSTRY STANDARDS SHALL BE COMPLIED IF THEY ARE MORE STRINGENT.</p> <p>IEEE IES IECC 2021 ASHRAE 90.1 NFPA NEMA UL ADA</p> <p>THE MANUFACTURER'S PUBLISHED DIRECTIONS SHALL BE FOLLOWED IN THE DELIVERY, STORAGE, PROTECTION, INSTALLATION AND WIRING OF ALL EQUIPMENT AND MATERIAL.</p> <p>THE DRAWINGS SHOW DIAGRAMMATICALLY THE LOCATIONS OF THE VARIOUS LINES, CONDUITS, FIXTURES, AND EQUIPMENT AND THE METHOD OF CONNECTING AND CONTROLLING THEM. IT IS NOT INTENDED TO SHOW EVERY CONNECTION IN DETAIL AND ALL FITTINGS REQUIRED FOR A COMPLETE SYSTEM. THE SYSTEMS SHALL INCLUDE BUT ARE NOT LIMITED TO THE ITEMS SHOWN ON THE DRAWINGS. EXACT LOCATIONS OF THESE ITEMS SHALL BE DETERMINED BY REFERENCE TO THE GENERAL PLANS AND MEASUREMENTS AT THE BUILDING AND IN COOPERATION WITH THE OTHER SUBCONTRACTORS, AND IN ALL CASES, SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER. THE OWNER RESERVES THE RIGHT TO MAKE ANY REASONABLE CHANGE IN THE LOCATION OF ANY PART OF THIS WORK WITHOUT ADDITIONAL COST TO THE OWNER.</p> <p>CONTRACTOR SHALL SEEK APPROVAL FROM THE OWNER FOR ANY CHANGES TO THE SPECIFICATIONS OR CONTRACT DOCUMENTS.</p> <p>ANY EXCEPTIONS, INCONSISTENCIES AND CONFLICTS IN CONTRACT DOCUMENTS, SPECIFICATIONS AND CONTRACT DOCUMENTS BY OTHER TRADE SHALL BE BROUGHT TO ATTENTION TO THE OWNER PRIOR TO BID.</p> <p>CONTRACTOR SHALL COORDINATE AND VERIFY THE WORK WITH EXISTING CONDITIONS AND THE WORK OF OTHER TRADE PRIOR TO ANY FABRICATIONS OR INSTALLATION. IF THE LAYOUT OF THE DEVICES ON DRAWINGS ARE IMPRACTICAL TO THE CONDITION IN FIELD, CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY PRIOR TO ANY FABRICATION OR INSTALLATION.</p> <p>ELECTRICAL DEVICES ARE INDICATED ON DRAWINGS AT APPROXIMATE LOCATIONS. THE OWNER RESERVE THE RIGHT TO MAKE REASONABLE CHANGES IN LOCATIONS WITHOUT ADDITIONAL COSTS.</p> <p>THE LINES INDICATING BRANCH CIRCUITS DO NOT REPRESENT THE ROUTING OF ELECTRICAL CONDUITS. THEY INDICATE THE LAYOUT AND CONTROL OF CIRCUITS.</p> <p><u>PRODUCTS AND WORK</u></p> <p>MATERIALS FURNISHED SHALL BE NEW AND BY STANDARD MANUFACTURERS AND MUST CONFORM TO THE NATIONAL BOARD OF FIRE UNDERWRITERS REQUIREMENTS AND BEAR THE UNDERWRITER'S LABORATORIES' SEAL OF APPROVAL.</p> <p>LISTED MANUFACTURERS, MODELS, OR CATALOGUE NUMBERS IN PART OR ALL SHALL ENTAIL TO INCLUDE THE PUBLISHED MANUFACTURERS DESCRIPTION AND SPECIFICATION.</p> <p>CONTRACTOR SHALL NOT INTERPRET THAT THE LISTED MANUFACTURERS IN SPECIFICATIONS OR DRAWINGS TO EXCLUDE ALL OTHER MANUFACTURERS.</p> <p>CONTRACTOR SHALL MAKE CERTAIN THAT ALL EQUIPMENT FIT IN THE SPACE DESIGNATED AND DESIGNED FOR THE SURROUNDINGS IT OCCUPIES.</p> <p>COMPLETE CATALOGUE ILLUSTRATION AND DESCRIPTIONS OF ALL EQUIPMENT SHALL BE SUBMITTED TO THE OWNER PRIOR TO ORDERING ANY EQUIPMENT.</p> <p>ALL HORIZONTAL RUNS OF CONDUITS SHALL BE SUPPORTED BY MEANS OF APPROVED HANGER FROM THE STRUCTURAL CEILING.</p> <p>COORDINATE THE WORK UNDER THIS SECTION WITH ALL OTHER TRADES.</p> <p><u>CONDUITS AND RACEWAYS:</u></p> <p>MANUFACTURERS: SQUARE D, B-LINE, ALLIED TUBE & CONDUIT, HOFFMAN, CARLON ELECTRICAL, WIREMOLD.</p> <p>OUTDOORS EXPOSED: RIGID STEEL.</p> <p>OUTDOORS CONCEALED ABOVE GROUND: RIGID STEEL.</p> <p>OUTDOORS UNDERGROUND: TYPE EPC-40-PVC</p> <p>OUTDOORS CONNECTION TO VIBRATING EQUIPMENT (INCLUDING TRANSFORMERS AND MOTOR DRIVEN EQUIPMENT): LFMC.</p> <p>BOXES AND ENCLOSURES ABOVE GROUND: NEMA 3R UNLESS NOTED OTHERWISE ON PLANS.</p> <p>INDOORS EXPOSED NOT SUBJECT TO PHYSICAL DAMAGE: EMT. INDOORS EXPOSED NOT SUBJECT TO SEVERE PHYSICAL DAMAGE: EMT.</p> <p>INDOORS EXPOSED SUBJECT TO SEVERE PHYSICAL DAMAGE: RIGID STEEL CONDUIT.</p> <p>INDOORS CONCEALED IN CEILINGS AND INTERIOR WALLS AND PARTITIONS: EMT.</p> <p>INDOORS CONNECTION TO VIBRATING EQUIPMENT: FMC, EXCEPT USE LFMC IN DAMP OR WET LOCATIONS.</p> <p>INDOORS DAMP OR WET LOCATIONS: IMC.</p> <p>INDOORS LOW-VOLTAGE CABLES: EMT.</p> <p><u>CONDUCTORS:</u></p> <p>COPPER CONDUCTORS #10 AND SMALLER: LABELED PER UL 83, TYPE THHN/THWN, SOLID COPPER 600 VOLT INSULATION, UNIFORM COLOR CODED JACKET WITH JACKET DATA, METAL CLAD (TYPE MC) CABLE WHERE INSTALLED IN ACCORDANCE WITH NEC ARTICLE 330.</p> <p>COPPER CONDUCTORS #8 OR LARGER: LABELED PER UL 83, TYPE THHN/THWN, STRANDED COPPER, 600VOLT INSULATION, UNIFORM COLOR CODED JACKET WITH JACKET DATA.</p> <p>ACCEPTABLE MANUFACTURERS OF CONDUCTORS:</p> <p>PIRELLIE SOUTHWIRE AETNA REPUBLIC AFC ENCORE WIRE KERITE</p> <p>CONTRACTOR MAY USE ALUMINUM CONDUCTORS FOR #4 AWG OR LARGER IN THE PLACE OF COPPER CONDUCTORS. CONTRACTOR SHALL REFER TO NEC TABLE 310-16 FOR EQUIVALENT AMPACITY AND SHALL COMPENSATE FOR VOLTAGE DROP.</p> <p>CONTRACTOR SHALL MAKE ADEQUATE ADJUSTMENT TO CONDUIT SIZES INDICATED SHOULD ALTERNATIVE CONDUCTOR INSULATION OR MATERIAL BE UTILIZED.</p>

SPECIFICATIONS
<p><u>MOLDED CASE CIRCUIT BREAKER:</u></p> <p>INCLUDE SCHEDULE OF ALL FUSES, RATINGS, TIME COORDINATION DATA, MANUFACTURER'S STANDARD DATA AND TIME-CURRENT CURVES. ALL DATA SHALL BE BASED ON TEST OF STANDARD PRODUCTS.</p> <p>APPROVED MANUFACTURERS:</p> <p>GENERAL ELECTRIC CUTLER HAMMER SQUARE D SIEMENS</p> <p>THERMAL-MAGNETIC BOLT-IN TYPE CIRCUIT BREAKERS WITH QUICK-MAKE, QUICK-BREAK CONTACTS: TRIP-FREE OPERATION WITH OVER-THE-CENTER TOGGLE HANDLE OR NON-REMOVABLE MONOLITHIC TIE-HANDLE.</p> <p>MULTI-POLE BREAKERS SHALL HAVE INTERNAL COMMON TRIP AND COMMON RESET WITH A SINGLE TOGGLE HANDLE OR NON-REMOVABLE MONOLITHIC TIE-HANDLE.</p> <p>TRIP RATINGS SHALL BE MOLDED ON THE HANDLE OR FACE OF BREAKER.</p> <p>BREAKER TERMINALS SHALL BE RATED TO ACCOMMODATE A MINIMUM OF 75 DEGREE C. CONDUCTORS.</p> <p>BREAKER SHALL BE RATED FOR MOUNTING AND OPERATION IN ANY POSITION: SHALL ACCOMMODATE AND MATCH THE TYPE OF TERMINATIONS REQUIRED.</p> <p>SINGLE POLE BREAKERS RATED 15 AND 20 AMPERES SHALL BE UL LABELED AS "SWITCHING BREAKERS" AT THE APPLIED CIRCUIT VOLTAGE.</p> <p>MULTI-POLE BREAKERS RATED 100 AMPERES AND LARGER SHALL BE MOLDED CASE THERMAL-MAGNETIC BOLT-IN TYPE BREAKER WITH ADJUSTABLE INSTANTANEOUS TRIP.</p> <p>OVERCURRENT DEVICES RATED 1,000 AMPERES AND LARGER, SERVING LOADS GREATER THAN 150 VOLTS TO GROUND SHALL BE EQUIPPED WITH GROUND FAULT PROTECTION OF EQUIPMENT (GFP) AS REQUIRED BY NEC ARTICLES 210.13 AND 230.95.</p> <p><u>LIGHTING FIXTURE</u></p> <p>SUBMITTAL: SCHEDULE BY TYPE DESIGNATION ALL LIGHTING FIXTURES, EACH COMPLETE WITH DATA SHEET WITH COMPLETE PHYSICAL, ELECTRICAL AND LIGHTING CHARACTERISTICS, LAMP TYPE AND LAMP DATA.</p> <p>REFER TO THE "LIGHTING FIXTURE SCHEDULE" IN THE DRAWINGS FOR INDIVIDUAL FIXTURE DESCRIPTIONS AND MANUFACTURER TYPES.</p> <p>PROVIDE LAMPS FOR EACH FIXTURE OF QUANTITY, TYPE AND COLOR AS LISTED IN LIGHTING FIXTURE SCHEDULE. GE, SYLVANIA OR PHILIPS ARE ACCEPTABLE.</p> <p>EACH LIGHTING FIXTURE SHALL BE UL LABELED FOR PROPER OPERATION IN THE TYPE OF CEILING CONSTRUCTION AND FOR THE MOUNTING ARRANGEMENT ONWH WHICH IT IS INSTALLED.</p> <p>FIELD VERIFY ACTUAL CEILING SLOPE FOR FIXTURES INSTALLED IN SAME AND ACTUAL FIELD DIMENSIONS AND ANGLES OF CONSTRUCTION FOR ANY FIXTURE CONFORMING THE SHAPE AND LENGTH OF SAME, FOR COORDINATION OF FIXTURE CONSTRUCTION.</p> <p><u>PANELBOARD</u></p> <p>SUBMITTAL: INCLUDE SCHEDULE OF EACH PANELBOARD WITH ALL DEVICES AND COMPLETE WITH PHYSICAL AND ELECTRICAL DATA AND WITH RATINGS FOR EACH COMPONENT INCLUDING BREAKER/USE OVERLAY CURVES.</p> <p>LABELED PER UL #67 AND #50, CONFORM WITH NEMA #250 AND PB1, NFPA #70-384 AND 70-373.</p> <p>ALL JUNCTION BOXES SHALL BE LABELED WITH PANEL AND CIRCUIT DESIGNATION.</p> <p>PROVIDE TYPED CIRCUIT DIRECTORY WITH EACH CIRCUIT SERVING DEVICES AND AREA IT'S SERVING.</p> <p>APPROVED MANUFACTURERS:</p> <p>GENERAL ELECTRIC CUTLER HAMMER SQUARE D SIEMENS</p> <p><u>LIGHTING CONTROL</u></p> <p>TIME SWITCHES: SOLID STATE, PROGRAMMABLE, WITH ALPHANUMERIC DISPLAY; COMPLYING WITH UL 917, 20-A BALLAST LOAD, 120/240VAC.</p> <p>TWO ON-OFF SET POINTS ON A 24-HOUR SCHEDULE AND ANNUAL HOLIDAY SCHEDULE THAT OVERRIDES THE WEEKLY OPERATION ON HOLIDAYS.</p> <p>ALLOW CONNECTION OF A PHOTOELECTRIC RELAY AS SUBSTITUTE FOR ON-OFF FUNCTION OF A PROGRAM.</p> <p>BATTERY BACKUP FOR NOT LESS THAN SEVEN DAYS RESERVE TO MAINTAIN SCHEDULES AND TIME CLOCK.</p> <p>INDOOR OCCUPANCY SENSORS: WALL OR CEILING MOUNTED SOLID-STATE INDOOR OCCUPANCY SENSORS WITH A SEPARATE POWER PACK.</p> <p>ADJUSTABLE TIME-DELAY OVER A RANGE OF 1 TO 30 MINUTES.</p> <p>SENSOR OUTPUT: CONTACTS RATED TO OPERATE THE CONNECTED RELAY, COMPLYING WITH UL 773A. SENSOR IS POWERED FROM POWER PACK.</p> <p>POWER PACK: DRY CONTACTS RATED FOR 20-A BALLAST LOAD AT 120 OR 277 VAC. AUTOMATIC LIGHT-LEVEL SENSOR: ADJUSTABLE FROM 2 TO 200 FC (21.5 TO 2152 LUX); TURN LIGHTS OFF WHEN SELECTED LIGHTING LEVEL IS PRESENT.</p> <p>DUAL SENSOR TYPE: DETECT OCCUPANCY AREA USING PIR (PASSIVE INFRA-RED) AND ULTRASONIC DETECTION METHOD.</p> <p><u>GROUNDING AND BONDING</u></p> <p>ALL GROUNDING AND BONDING SHALL CONFORM TO NEC ARTICLE 250.</p> <p>COPPER WIRE OR CABLE INSULATED FOR 600V UNLESS REQUIRED BY APPLICABLE CODE OR AUTHORITIES HAVING JURISDICTION.</p> <p>INSTALL SOLID CONDUCTOR FOR #8 AWG AND SMALLER AND STRANDED CONDUCTORS FOR #6 OR LARGER.</p> <p>INSTALL INSULATED EQUIPMENT GROUNDING CONDUCTORS FOR ALL EQUIPMENT.</p> <p><u>LOW VOLTAGE TRANSFORMERS</u></p> <p>SUBMITTAL: PROVIDE PRODUCT DATA FOR EACH TRANSFORMER. INDICATE DIMENSIONS AND WEIGHTS.</p> <p>PROVIDE CERTIFICATION THAT TRANSFORMERS, ACCESSORIES, AND COMPONENTS WILL WITHSTAND SEISMIC FORCES.</p> <p>MANUFACTURERS: CUTLER-HAMMER, SIEMENS, GE AND SQUARE D.</p> <p>INSULATION CLASS: 220 DEG C, UL COMPONENT RECOGNIZED INSULATION SYSTEM WITH MAXIMUM OF 150 DEG C RISE ABOVE 40 DEG C AMBIENT TEMPERATURE.</p> <p>COMPLY WITH NEMA TP1, CLASS 1 EFFICIENCY LEVELS AND TESTED ACCORDING TO NEMA TP2.</p> <p>TESTING AND INSPECTION: PERFORM VISUAL AND MECHANICAL INSPECTION AND ELECTRICAL TEST STATED IN NETA ACCEPTANCE TESTING SPECIFICATION. CERTIFY COMPLIANCE WITH TEST PARAMETERS.</p> <p>PERFORM AN INFRARED SCAN OF TRANSFORMER CONNECTIONS TWO MONTHS AFTER SUBSTANTIAL COMPLETION, PLUS 2 FOLLOW UP SCANS. ONE AT 4 MONTHS AND THE OTHER AT 11 MONTHS. PROVIDE CERTIFIED REPORT.</p>

ELECTRICAL GENERAL NOTES
<p>THE DESIGN OF THIS SET OF DOCUMENT IS BASED ON NEC 2023.</p> <p>ELECTRICAL CONTRACTOR SHALL REFER TO ALL OTHER DESIGN DRAWINGS PRIOR TO BID AND RETAIN FULL UNDERSTANDING OF THE SCOPE OF WORK.</p> <p>FIXTURE TYPE INDICATED BY UPPER CASE CHARACTERS, SWITCHING AND GROUPING DESIGNATED BY LOWER CASE LETTER AND CIRCUIT BY NUMBER (WHERE APPLICABLE).</p> <p>REFER TO THE ARCHITECTURAL/INTERIORS REFLECTED CEILING PLANS FOR EXACT FIXTURE PLACEMENT AND DIMENSIONS.</p> <p>REFER TO THE ARCHITECTURAL/INTERIORS DOCUMENTS FOR ACTUAL DEVICE LOCATIONS AND DIMENSIONS.</p> <p>COORDINATE THE INSTALLATION OF ALL CEILING MOUNTED DEVICES (FIRE ALARM SYSTEM DEVICES AND SPEAKERS, SOUND SYSTEM SPEAKER, ETC.) TO BE SYMMETRICAL ABOUT LIGHT FIXTURES AND SPRINKLER HEADS. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN, TYPICAL.</p> <p>ALL MOUNTING OF EQUIPMENT IS AS SHOWN UNLESS OTHERWISE NOTED. COORDINATE WITH ARCHITECT THE COLOR/FINISHES OF ALL ELECTRICAL DEVICES, OUTLETS, COVERPLATES AND TRIM.</p> <p>EMERGENCY BATTERY PACKS AND EXIT SIGNS SHALL BE CONNECTED AHEAD OF ANY SWITCHING DEVICES.</p> <p>REFER TO MECHANICAL DRAWINGS FOR DUCT SMOKE DETECTOR LOCATIONS AND QUANTITIES OPERATION SHALL INCLUDE DUAL CONTACT BASE WITH LOCAL EQUIPMENT SHUTDOWN AND FIRE ALARM SIGNAL INITIATION.</p> <p>WHEN CONDUCTOR OR CONDUIT SIZE IS INDICATED FOR BRANCH CIRCUIT HOME RUN, THE CONDUCTOR AND CONDUIT SIZE INDICATED SHALL BE USED FOR THE COMPLETE CIRCUIT.</p> <p>REFER TO THE APPROPRIATE DRAWINGS FOR THE EXACT LOCATION AND REQUIREMENTS OF EQUIPMENT INSTALLED UNDER OTHER DIVISIONS OF THE DOCUMENTS, WHICH REQUIRE ELECTRICAL SERVICE.</p> <p>EQUIPMENT GROUNDING CONDUCTORS SHALL BE INSTALLED IN ALL RACEWAYS.</p> <p>WALL SWITCHES CONTROLLING CIRCUITS OF OPPOSITE PHASES SHALL NOT BE INSTALLED IN COMMON BOX UNLESS PERMANENT BARRIER IS PROVIDED.</p> <p>ALL HOME RUNS SHALL RUN PARALLEL TO STRUCTURE AS MUCH AS POSSIBLE WHERE CEILING IS EXPOSED.</p> <p>ALL RACEWAY AND EQUIPMENT SUPPORTS AND HANGERS SHALL BE FULLY COORDINATED WITH STRUCTURAL DRAWINGS TO INSURE LOCATION OF SAME OCCURS WITHIN FOUR (4) INCHES OF PANEL POINT ON BAR JOISTS.</p> <p>COORDINATE LOCATION OF ALL FLOOR MOUNTED MECHANICAL AND PLUMBING EQUIPMENT IN ORDER TO VERIFY POWER & CONTROL RACEWAY CONCEALED IN SLABS TERMINATED AT PROPER LOCATION.</p> <p>DISCONNECT SWITCHES, MOTOR STARTERS AND OTHER ELECTRICAL EQUIPMENT INSTALLED ABOVE ACCESSIBLE CEILINGS, AND REQUIRING ACCESS FOR MAINTENANCE, SHALL BE INSTALLED WITH BOTTOM OF DEVICE ONE (1) FOOT ABOVE CEILING TO PROVIDE READY ACCESSIBILITY.</p> <p>MECHANICAL, PLUMBING, FIRE PROTECTION AND OTHER EQUIPMENT ARE SHOWN ON FLOOR PLAN IN APPROXIMATE LOCATION. COORDINATE WITH M, P, FP AND CONTRACT DRAWINGS/SUBMITTALS FOR EXACT LOCATION OF EQUIPMENT.</p> <p>GENERAL DIAGRAMMATIC RACEWAY INTERCONNECTIONS OF EQUIPMENT, FIXTURES AND DEVICES ARE INDICATED ON FLOOR AND REFLECTED CEILING PLANS. REFER TO STRUCTURAL AND ARCHITECTURAL PLANS FOR ELEVATION CHANGES AND RACEWAY ROUTES.</p> <p>RACEWAY FOR EXTERIOR LIGHTING MAY BE INDICATED OUTSIDE OF BUILDING FOOTPRINT FOR CLARITY. ROUTE ALL EXTERIOR LIGHTING RACEWAY WITHIN BUILDING STRUCTURE.</p> <p>POWER AND COMMUNICATIONS DATA CONDUITS CAN CROSS AT 90°, BUT WHERE PARALLEL, SHALL BE A MINIMUM OF 8" APART.</p> <p>TELEVISION AND RADIO ANTENNAS CABLES SHALL HAVE SURGE PROTECTION. GROUND ALL MASTS.</p> <p>PROVIDE SURGE PROTECTION FOR ELECTRICAL AND TELEPHONE SERVICES.</p> <p>PROVIDE SPD FOR FIRE ALARM CONTROL PANEL.</p> <p>FIELD COORDINATE MECHANICAL AND PLUMBING EQUIPMENT ELECTRICAL CHARACTERISTICS WITH DIV.15 CONTRACTOR PRIOR TO ROUGH-IN. ADJUST ELECTRICAL CONNECTIONS IF NECESSARY TO MATCH ACTUAL EQUIPMENT IN FIELD. FOR EXAMPLE, COORDINATE THE NAMEPLATE OVERCURRENT PROTECTION DEVICE RATING OF MECHANICAL EQUIPMENT AMONG MECHANICAL AND ELECTRICAL SUBCONTRACTORS. ADJUST CIRCUIT BREAKER TO MATCH NAMEPLATE RATING OF EQUIPMENT AT NO ADDITIONAL COST.</p> <p>FIELD COORDINATE MECHANICAL AND PLUMBING EQUIPMENT REQUIREMENTS FOR ANY SUPPLEMENTAL POWER REQUIREMENTS, INCLUDING BUT NOT LIMITED TO CONTROL CIRCUITS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BRING ALL EQUIPMENT TO ITS INTENDED OPERATIONAL STATUS.</p> <p>REFER TO FIRE PROTECTION DRAWINGS FOR LOCATIONS OF FLOW AND TAMPER SWITCHES. WALL OR CEILING MOUNTED SOLID-STATE INDOOR OCCUPANCY SENSORS WITH A SEPARATE POWER PACK.</p> <p>EACH PENETRATION OF A FIRE RESISTANT RATED ASSEMBLY BY A PIPE, TUBE WIRE OR CONDUIT SHALL BE PROTECTED BY A THROUGH PENETRATION FIRE STOP SYSTEM THAT HAS BEEN TESTED ACCORDING TO ASTM E 814 OR E 199.</p> <p>ELECTRIC RECEPTACLES, SWITCHES, OUTLETS, ETC. SHALL NOT BE INSTALLED BACK TO BACK ON FIRE RESISTANCE RATED WALLS. THEY SHALL BE AT LEAST 24-INCHES APART.</p> <p>LIGHT SWITCHES AND ELECTRICAL OUTLETS, LOCATED IN ROOMS ACCESSIBLE TO THE DISABLED SHALL BE LOCATED NO HIGHER THAN 48 INCHES AND NO LOWER THAN 15 INCHES ABOVE THE FINISHED FLOOR SURFACE. IF THE REACH OR THE CONTROL IS OVER AN OBSTRUCTION, THE MINIMUM HEIGHT SHALL BE REACHED TO 44 INCHES FOR A FORWARD APPROACH OR 46 INCHES FOR A SIDE APPROACH.</p> <p>REFER TO LOW VOLTAGE CONSULTANT'S DRAWINGS FOR VOICE, DATA AND CATV OUTLET LOCATIONS. REFER TO LV CONSULTANT'S DRAWINGS FOR ANY ADDITIONAL INFORMATION.</p> <p>CONNECT ALL EXIT SIGNS TO NEAREST UNSWITCHED PORTION OF THE LIGHTING CIRCUIT IN THE AREA.</p> <p>ELECTRICAL BOXES INSTALLED IN FIRE RATED WALLS SHALL MAINTAIN THE INTEGRITY OF THE RATED WALL.</p> <p>SUPPORT ALL VERTICAL RACEWAY PER NEC TABLE 300.19(A).</p> <p>MAKE ELECTRICAL CONNECTIONS TO ELECTRIC WATER COOLERS FROM GFCI PROTECTED OUTLET IN WALL BEHIND COOLER HOUSING. THE OUTLET AND CORD SHALL NOT BE VISIBLE FROM PUBLIC VIEW.</p> <p>COORDINATE WITH CUTSHEETS OF ALL EQUIPMENT TO BE INSTALLED AND PROVIDE ADDITIONAL CIRCUITS FOR CONTROLS IF REQUIRED BY MANUFACTURER.</p> <p>FINAL COLOR, FINISH AND OTHER AESTHETIC PORTIONS OF ALL DEVICES SHALL BE COORDINATED WITH ARCHITECT OR OWNER'S REPRESENTATIVE. THIS SET OF DRAWINGS DOES NOT SUPERCEDE ARCHITECTURAL OR INTERIOR DOCUMENTS.</p> <p>ALL EXPOSED HORIZONTAL RUNS OF CONDUITS SHALL BE EITHER PARALLEL OR PERPENDICULAR TO EXTERIOR WALLS.</p> <p>PROVIDE PLENUM RATED CABLES IF THE CABLES ARE EXPOSED AND ROUTED THROUGH PLENUM.</p> <p>FOR ALL FUSES 1,200A OR HIGHER, PROVIDE ARC ENERGY REDUCTION PER NEC 240.67.</p> <p>WHERE HIGHEST TRIP SETTING IN INSTALLED OVERCURRENT DEVICE IS 1,200A OR HIGHER, CONTRACTOR TO PROVIDE DOCUMENTATION OF CIRCUIT BREAKER(S) LOCATION AND PROVIDE AT LEAST ONE METHOD TO REDUCE CLEARING TIME VIA ENERGY-REDUCING MAINTENANCE SWITCH, INSTANTANEOUS TRIP SETTING, OR OTHER APPROVED METHOD AS LISTED PER NEC 240.87(B).</p>

LEGEND		
SYMBOLS	DESCRIPTION	TYPICAL MOUNTING-HEIGHT UNLESS NOTED OTHERWISE
	DUPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R	18" AFF
	DUPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R	42" AFF OR 6" ABOVE COUNTER TOP
	QUADRAPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R	18" AFF
	QUADRAPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R	42" AFF OR 6" ABOVE COUNTER TOP
	DUPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R	FLUSH WITH FINISHED FLOOR
	DUPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R	IN CEILING
	SPECIAL RECEPTACLE, CONFIGURATION AND ELECTRICAL CHARACTERISTIC AS NOTED ON DWG PER NEC.	18" AFF
	JUNCTION BOX FLUSH IN WALL WITH COVER. SIZE PER NEC.	18" AFF
	JUNCTION BOX FLUSH IN CEILING WITH COVER. SIZE PER NEC.	IN CEILING
	JUNCTION BOX FLUSH IN FINISHED FLOOR WITH COVER. SIZE PER NEC.	FLUSH WITH FINISHED FLOOR
	SWITCH	42" AFF
	SWITCH - 3 WAY	42" AFF
	SWITCH - WALL MTD, INTEGRAL OCCUPANCY SENSOR	42" AFF
	SWITCH - WALL MTD, LOW VOLTAGE, PILOT LIGHT	42" AFF
	SWITCH - WALL MTD, DIMMING	42" AFF
	SWITCH - CEILING MOUNTED OCCUPANCY SENSOR	IN CEILING
	TV OUTLET	18" AFF
	TELEPHONE OUTLET	18" AFF
	TELEPHONE OUTLET, SUBSCRIPT: F - FIREMAN'S PHONE, H - HOUSE PHONE, P - PAY PHONE	42" AFF OR 6" ABOVE COUNTER TOP
	TELEPHONE / DATA COMBINATION OUTLET	18" AFF
	TELEPHONE / DATA COMBINATION OUTLET	FLUSH WITH FINISHED FLOOR
	TELEPHONE / DATA COMBINATION OUTLET	42" AFF OR 6" ABOVE COUNTER TOP
	DATA OUTLET	18" AFF
	DATA OUTLET	42" AFF OR 6" ABOVE COUNTER TOP
	DISCONNECT SWITCH. SUBSCRIPT: AMP / # OF POLES / ENCLOSURE	AS INDICATED ON DWG
	FUSED DISCONNECT SWITCH. SUBSCRIPT: AMP / # OF POLES / ENCLOSURE / FUSE	AS INDICATED ON DWG
	ELECTRICAL PANELBOARD. REFER TO PANELBOARD SCHEDULE.	SURFACE MOUNTED ON WALL
	EQUIPMENT AS NOTED ON DRAWING.	SURFACE MOUNTED ON WALL
	MOTOR	
	HOME RUN WITH WIRE TICKS. XX - PANEL DESIGNATION, # - CIRCUIT DESIGNATION. WIRE TICKS - (1) NEUTRAL , (3) HOT III & (1) GROUND •	
	SMOKE DETECTOR. CEILING / WALL MOUNTED	
	HEAT DETECTOR. CEILING/WALL MOUNTED	
	FIRE ALARM NOTIFICATION DEVICE. AUDIO AND VISUAL.	80" AFF
	FIRE ALARM NOTIFICATION DEVICE. AUDIO.	80" AFF
	FIRE ALARM NOTIFICATION DEVICE. VISUAL.	80" AFF
	FIRE ALARM INITIATION DEVICE. PULL STATION.	42" AFF

ABBREVIATIONS			
AC	6" ABOVE COUNTER SPACE OR 42" AFF	IG	ISOLATED GROUND
AF	AMP FUSE	ISC	SHORT CIRCUIT CURRENT
AFF	ABOVE FINISHED FLOOR	LTG	LIGHTING
AL	ALUMINUM	MTD	MOUNTED
BFC	BELOW FINISHED CEILING	N	NEUTRAL
BKR	BREAKER	NL	NIGHT LIGHT
CND	CONDUIT	NEC	NATIONAL ELECTRICAL CODE
CONN	CONNECTED OR CONNECTION	PNL	PANEL
CTB	CABLE TV TERMINAL BACKBOARD	RECTP	RECEPTACLE
CU	COPPER	SPD	SURGE PROTECTIVE DEVICE
DN	DOWN	TEL	TELEPHONE
EC	EMPTY CONDUIT	TTB	TELEPHONE TERMINAL BOARD
ELEC	ELECTRICAL	TV	TELEVISION
FACP	FIRE ALARM CONTROL PANEL	TYP	TYPICAL
FAA	FIRE ALARM ANNUNCIATOR PANEL	XFMR	TRANSFORMER
G OR GRND	GROUND	UG	UNDERGROUND
GFCI OR GF	GROUND FAULT CIRCUIT INTERRUPTER	WP	WEATHERPROOF



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COLORADO SPRINGS RECOVERY CENTER

ISSUED FOR:
Project Status

PROJ. NO: Project Number

DRAWN:

CHECKED:

DATE: Issue Date

DESIGN DEVELOPMENT

SHEET TITLE:
GENERAL

SCALE: 1/32" = 1'-0"
SHEET NUMBER

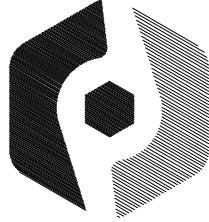
E0.01

C:\Users\Christian\Root Architecture Dropbox\03_Root Architecture Team Folder\25014_1855 Aopiazza_CSH\002_RevmCS_Holiday\Inn.re

5/21/2025 9:06:18 AM

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #2	+	0.6 fc	5.5 fc	0.0 fc	N/A	N/A
lower and right pkg	✕	1.5 fc	5.5 fc	0.4 fc	13.8:1	3.8:1
upper and left parking	✕	1.5 fc	2.4 fc	0.4 fc	6.0:1	3.8:1

Schedule										
Symbol	Label	QTY	Manufacturer	Catalog	Description	Filename	LLF	Total Output	Input Power	Polar Plot
	A	6	Lithonia Lighting	DSX1 LED P2 30K 70CRI BLC3	D-Series Size 1 Area Luminaire P2 Performance Package 3000K CCT 70 CRI Type 3 Extreme Backlight Control	DSX1_LED_P2_3 OK_70CRLBLC3 ies	0.9	6814	67.79	
	B	3	Lithonia Lighting	DSX1 LED P3 30K 70CRI T4M HS	D-Series Size 1 Area Luminaire P3 Performance Package 3000K CCT 70 CRI Type 4 Medium Houseside Shield	DSX1_LED_P3_3 OK_70CRLT4M_HS ies	0.9	11530	102.1727	
	C	1	Lithonia Lighting	DSX1 LED P3 30K 70CRI T1S	D-Series Size 1 Area Luminaire P3 Performance Package 3000K CCT 70 CRI Type 1 Short	DSX1_LED_P3_3 OK_70CRLT1S1 ies	0.9	14093	102.17	
	D	3	Lithonia Lighting	DSX1 LED P3 30K 70CRI T5LG	D-Series Size 1 Area Luminaire P3 Performance Package 3000K CCT 70 CRI Type 5 Low G Rating	DSX1_LED_P3_3 OK_70CRLT5LG ies	0.9	13830	102.17	
	E	3	Lithonia Lighting	DSX0 LED P2 30K 70CRI T5M	D-Series Size 0 Area Luminaire P2 Performance Package 3000K CCT 70 CRI Type 5 Medium	DSX0_LED_P2_3 OK_70CRLT5M1 ies	0.9	6192	45.14	



PROFICIENT
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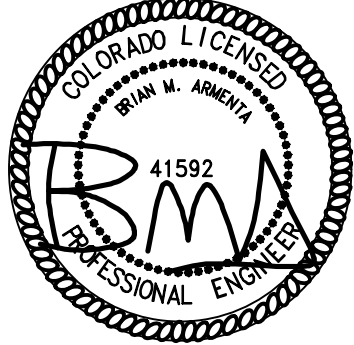


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DIGITAL SIGNATURE

COLORADO SPRINGS RECOVERY CENTER

1855 Aeroplaza Dr, Colorado Springs, CO 80916



COLORADO SPRINGS RECOVERY CENTER

ISSUED FOR:
Project Status

PROJ. NO: Project Number
DRAWN:
CHECKED:
DATE: Issue Date
DESIGN DEVELOPMENT

SHEET TITLE:
SITEPLAN

SCALE: 1/32" = 1'-0"
SHEET NUMBER

E1.00

① SITE PHOTOMETRIC
1" = 30'-0"

