


ELECTRIC LEGEND		ELECTRIC LEGEND		ELECTRIC LEGEND	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
LIGHTING AND LIGHTING CONTROLS		MISCELLANEOUS		WIRE / CABLE / RACEWAY	
	LUMINAIRE (REFER TO THE LUMINAIRE SCHEDULE). NOTE THAT OTHER SHAPES MAY ALSO BE USED TO REPRESENT LUMINAIRES.		LOW VOLTAGE THERMOSTAT (LEFT) AND TEMPERATURE SENSOR (RIGHT)		BRANCH CIRCUIT HOME RUN WITH PANEL NAME AND CIRCUIT NUMBER(S)
	SHADED LUMINAIRES REMOTE THOSE CONNECTED TO EMERGENCY OR STANDBY POWER AS APPLICABLE (UNSWITCHED LUMINAIRES ARE EGRESS LIGHTS AND/OR NIGHT LIGHTS THAT OPERATE 24/7)		LINE VOLTAGE THERMOSTAT (LEFT) AND REVERSE ACTING THERMOSTAT (RIGHT)		CABLING / RACEWAY INSTALLED CONCEALED IN WALLS OR ABOVE CEILING
	TRACK LIGHTING (IN LENGTH SHOWN AND WITH NUMBER OF LUMINAIRE HEADS AS INDICATED PROVIDE ALL REQUIRED ACCESSORIES (FITTINGS, END CAPS, POWER FEEDS, ETC.)		HUMIDITY STAT (LEFT) AND HUMIDITY SENSOR (RIGHT)		CABLING / RACEWAY INSTALLED BELOW FLOOR OR GRADE
	CEILING FAN		PRESSURE STAT (LEFT) AND PRESSURE SENSOR (RIGHT)		CABLE TRAY
	SINGLE / DOUBLE SIDED EXIT SIGN CONNECT AHEAD OF SWITCHING & CONFIGURE ARROWS TO INDICATE DIRECTION OF EGRESS TRAVEL		ANSI, MANUAL PULL STATION (REFER TO SPECIFICATION 20568.01 FOR REQUIRED WORK)		FEEDER DUCT / BUS DUCT
	EMERGENCY LIGHTING UNIT WITH 90-MINUTE BATTERY BACKUP AND ASSOCIATED REMOTE HEADS WHERE APPLICABLE. CONNECT TO LOCAL LIGHTING CIRCUIT AHEAD OF SWITCHING		INDICATES DIRECT CONNECTION TO EQUIPMENT		JUNCTION BOX ABOVE ACCESSIBLE CEILING JUNCTION BOX AT OVERHEAD STRUCTURE IN AREAS WITH NO CEILING
	OUTDOOR AREA SITE LIGHTING STANDARD NUMBER OF LUMINAIRE HEADS AS INDICATED ON DRAWINGS.		MOTOR RATED TOGGLE SWITCH. MANUAL STARTER WITH PILOT LIGHT, AND MANUAL STARTER WITH PILOT LIGHT WITH EXTERNAL RELAY FOR CONTROL, OR MONITORING RESPECTIVELY. ALL MAY BE KEYS "K"		FLUSH MOUNTED JUNCTION BOX OR PULL BOX AS APPLICABLE FOR APPLICATION
	a = LUMINAIRE TYPE, NL = NIGHT LIGHT (UNSWITCHED), s = SWITCHING DESIGNATION, EL = EGRESS LUMINAIRE (ILLUMINATED PATH OF EGRESS, UNSWITCHED UNLESS OTHERWISE NOTED)		HEAVY DUTY DISCONNECT SWITCH (NON-FUSED) (LEFT) HEAVY DUTY DISCONNECT SWITCH (FUSED) (RIGHT)		FLUSH MOUNTED PULL BOX
	LIGHTING SWITCH KEYS: 2 = 2-POLE, 3 = 3-WAY, 4 = 4-WAY, D=DIAMETER, K=KEYED, T = TIMER SWITCH, M = MOMENTARY-CONTACT, P = SWITCH W/PILOT LIGHT		ENCLOSED CIRCUIT BREAKER		MANHOLE
	CEILING MOUNTED OCCUPANCY SENSOR, DUAL TECHNOLOGY UNLESS OTHERWISE NOTED BY TYPE. TYPE "IR" = INFRARED, TYPE "US" = ULTRASONIC.		COMBINATION DISCONNECT SWITCH AND MAGNETIC STARTER W/ PILOT LIGHT, AUXILIARY CONTACTS AND P.V.O. SWITCH		UTILITY POLE
	WALL MOUNTED OCCUPANCY SENSOR, INFRARED TECHNOLOGY UNLESS OTHERWISE NOTED BY TYPE. TYPE "IR"=INFRARED, TYPE "US"=ULTRASONIC, "V"=VACANCY SENSOR, "F" = CONTROLLED CIRCUITS.		VARIABLE FREQUENCY DRIVE / VARIABLE SPEED DRIVE		SINGLE-SERVICE SURFACE RACEWAY (ONE COMPARTMENT - POWER)
	PHOTOCELL / LIGHT SENSOR / PHOTO SENSOR		LINE VOLTAGE MOTOR OPERATED DAMPER		MULTI-SERVICE SURFACE RACEWAY (TWO COMPARTMENT - POWER AND TECHNOLOGY)
	LIGHTING CONTROL PANEL		EMERGENCY POWER-OFF (EPO) PUSHBUTTON STATION WITH DESCRIPTIVE ENGRAVED PLATE AND MEANS TO PREVENT ACCIDENTAL ACTIVATION		SURFACE RACEWAY WITH INTEGRAL RECEPTACLES ("PLUGSTRIP")
	LIGHTING CONTROL, DIGITAL SWITCH OR CONTROL INTERFACE. "KEY" DENOTES SWITCH DESIGNATION DETAILED ON DRAWINGS.		CONTROL STATION WITH DESCRIPTIVE ENGRAVED PLATE		SERVICE POLE - POWER AND TECHNOLOGY WHERE APPLICABLE
	LIGHTING CONTROL SYSTEM: CEILING MOUNTED INFRARED RECEIVER/SENSOR		TIME CLOCK FOR PROGRAMMABLE TIME-OF-DAY AND EXTENDED CONTROL		CONDUIT UP OR DOWN
	AUTOMATIC LOAD CONTROL, RELAY DEVICE		ENCLOSED RELAY	ABBREVIATIONS	
	EMERGENCY LIGHTING TRANSFER SWITCH DEVICE - 20A BRANCH CIRCUIT RATED		CONTRACTOR	42"	DISTANCE ABOVE FINISHED FLOOR / GRADE / PAVEMENT
RECEPTACLES AND MISCELLANEOUS OUTLETS			HAND DRYER	AF	AMP FRAME OF FUSED SWITCH OR CIRCUIT BREAKER
	SINGLE ("SMPLX"), DUPLEX AND DOUBLE DUPLEX ("QUAD") RECEPTACLE RESPECTIVELY		PLYWOOD EQUIPMENT BOARD	AFCI	ARC-FAULT CIRCUIT INTERRUPTER
	RECEPTACLES ON EMERGENCY OR STANDBY POWER CIRCUIT DIAMOND OUTLINE MAY BE APPLIED TO ANY SPECIALTY RECEPTACLE SYMBOL		ELECTRICAL SWITCHBOARD OR SWITCHGEAR (DIMENSIONS MAY VARY)	BT	AMP-Trip OF FUSED SWITCH OR CIRCUIT BREAKER
	GFI / GPO RECEPTACLES		ELECTRICAL PANEL/BOARD OR DISTRIBUTION BOARD (DIMENSIONS MAY VARY / FLUSH OR SURFACE MOUNTED AS INDICATED)	ATS	AUTOMATIC TRANSFER SWITCH
	SURGE PROTECTIVE DEVICE RECEPTACLES		DRY TYPE TRANSFORMER - FLOOR MOUNTED ON CONCRETE PAD (LEFT), SUSPENDED FROM CEILING OR WALL (RIGHT)	BAS	BUILDING AUTOMATION SYSTEM
	ISOLATED GROUND RECEPTABLES		OIL FILLED TRANSFORMER	C.T.C.	WORK UNDER DIVISION 27 OR 28 AS APPLICABLE
	RECEPTACLES WITH USB OUTLETS		CONCRETE PILE, STEEL BOLLARD	CB	CIRCUIT BREAKER
	HALF SWITCHED RECEPTABLES		GROUND ROD - ROD ONLY (LEFT), WITH INSPECTION WELL (RIGHT)	C/H	COUNTER HEIGHT OR SPECIAL HEIGHT DEVICE
	FULL SWITCHED RECEPTABLES	SINGLE LINE DIAGRAM			
	REGRESSED ("CLOCK HANGERS") RECEPTACLES		ELECTRIC UTILITY COMPANY METER AND ASSOCIATED CURRENT TRANSFORMERS	E.C.	EMERGENCY
	CEILING MOUNTED RECEPTABLES		CUSTOMER ELECTRIC METER AND ASSOCIATED CURRENT TRANSFORMERS HO = HIGH DENSITY METERS (CABINET/BANK MOUNTED) TO TIGHTLY GROUP ALL METERS TOGETHER	E.C.E.	EMERGENCY POWER OFF
	FLOOR OUTLET - POWER AND /OR TECHNOLOGY		GROUNDING ELECTRODE PER NFPA 70E ARTICLE 250 MINIMUM	EMS	ENERGY MANAGEMENT SYSTEM
	SPECIAL PURPOSE RECEPTACLE		ENCLOSED CIRCUIT BREAKER	ER	EMERGENCY RELOCATION MAINTENANCE SWITCH
	POWER WHIP CONNECTION TO SYSTEM FURNITURE		HEAVY DUTY DISCONNECT SWITCH - NON-FUSED(LEFT), FUSED(RIGHT) SIZES MAY BE SHOWN ONLY IN SCHEDULE	ESP	EMERGENCY STANDBY RATING
	CEILING DUPLEX RECEPTACLE WITH ADJACENT REEL MOUNTED DROP CORD		ELECTRICAL PANEL/BOARD OR DISTRIBUTION BOARD	EWC	EXISTING TO REMAIN ELECTRIC WATER COOLER
	RECEPTACLE ATTRIBUTES F = MOUNT RECEPTACLE AT THIS HEIGHT ABOVE GRADE / FINISHED FLOOR C = INSTALL ABOVE COUNTER AND BACKSPASH H = INSTALL RECEPTACLE HORIZONTALLY L = IT PROVIDE ILLUMINATED FACE OR INDICATOR LIGHT TO INDICATE THERE IS POWER TO RECEPTACLE SW = SWITCH WIRE W = WEATHER PROOF WHILE IN USE COVER AND WEATHER RESISTANT RECEPTACLE		AUTOMATIC TRANSFER SWITCH	EX	EXISTING
			SURGE PROTECTIVE DEVICE	FBO	FURNISHED BY OTHERS - INSTALLED AND WIRED BY E.C.
				FBO	FURNISHED AND INSTALLED BY OTHERS - WIRED BY E.C.
				FP	RECEPTACLE TO BE USED FOR A FLAT PANEL DISPLAY - FURNISHED WITH EQUIPMENT BY OTHERS - INSTALLED AND WIRED BY E.C.
				PWE	FURNISHED WITH EQUIPMENT BY OTHERS - INSTALLED AND WIRED BY E.C.
				GD	GARABAGE DISPOSAL
				GRF / GFCI	GROUND FAULT EQUIPMENT PROTECTION
				GRD	GROUND FAULT CIRCUIT INTERRUPTER DEVICE
				H.C.	WORK UNDER DIVISION 23
				H.O.A.	HAND - OFF - AUTO SWITCH
				IG	ISOLATED GROUND
				INC	SHORT CIRCUIT CURRENT

	BOX WITH 1-GANG RING AND (1) 1" CONDUIT TO ABOVE ACCESSIBLE CEILING UNLESS NOTED OTHERWISE
	CEILING COMMUNICATION OUTLET - VOICE, DATA, DATA/VOICE RESPECTIVELY LEFT TO RIGHT - PROVIDE 4"x4" BOX WITH 1-GANG RING AND (1) 1" CONDUIT TO ABOVE ACCESSIBLE CEILING UNLESS NOTED OTHERWISE
WAP	"WAP" = WIRELESS ACCESS POINT
	RF TELEVISION DATA/RF OUTLET - PROVIDE 4"x4" BOX WITH 1-GANG RING AND (1) 1" CONDUIT TO ABOVE ACCESSIBLE CEILING UNLESS NOTED OTHERWISE

ENERGY MANAGEMENT SYSTEM (EMS) LEGEND			
(APPLIES ONLY FOR EMS DRAWING SHEETS)			
SYMBOL	DESCRIPTION	NOTE	CABLE/CONDUCTORS
DT	DEFROST CONDUIT	<p>PROVIDE OUTLET BOX AT CASE. PROVIDE WIRING FROM CASE TO RESPECTIVE DANFOSS "RC" PANEL SEE DEFROST WIRING SCHEDULE FOR CABLE WIRING IN "1" CONDUIT FOR WALK-IN COOLERS/FREEZERS AND ALL OTHER APPLICATIONS. FOR REFRIGERATED CASES PROVIDE WIRING FROM CASE TO RESPECTIVE SINGLE PHASE OR THREE PHASE CONNECTION POINT PER RISD-13 (WHERE APPLICABLE), OR DIRECTLY TO PROTOCOL UNIT. SEE DEFROST WIRING SCHEDULE FOR DEFROST CIRCUIT PHASE. IN ADDITION, PROVIDE "1" CONDUIT FOR KLION UNITS. KLION UNITS TO BE WIRED IN SERIES PER REFRIGERATION CIRCUIT WITH A SINGLE HOME RUN TO "RC" PER CIRCUIT.</p>	<p>SEE DEFROST WIRING SCHEDULE ON EMS SHEET.</p> <p>REFER TO SPECIFICATION 26.05.19 FOR CABLEING REQUIREMENTS AND ADDITIONAL INFORMATION.</p>
SS	SUCTION STOP SOLENOID	<p>PROVIDE OUTLET BOX AT CASE. PROVIDE CABLE IN "1" CONDUIT FROM SOLENOID TO RESPECTIVE "RC" CONTROL PANEL. SOLENOID SHALL BE FURNISHED &amp; INSTALLED BY REFRIGERATION CONTRACTOR.</p>	
TS	TEMPERATURE SENSOR (REFRIGERATION)	<p>PROVIDE OUTLET BOX AT CASE. PROVIDE CABLE FROM SENSOR TO RESPECTIVE "RC" CONTROL PANEL. PROVIDE "1" CONDUIT TO JOIST SPACE OR ABOVE CEILING. THEN FURNISH JOIST SPACE. CABLE IN JOIST SPACE TO BE FREE-WIRED.</p>	<p>REFER TO SPECIFICATION 26.05.19 FOR CABLEING REQUIREMENTS AND ADDITIONAL INFORMATION. REFER TO SPECIFICATION 26.05.19 FOR FREE-WIRED REQUIREMENTS.</p>
<p>IN THE NOTES STATED ABOVE, PROVIDE SHALL MEAN FURNISH AND INSTALL.</p>			
<p>PROVIDE AND WIRE ALL ADDITIONAL CONTACTORS, RELAYS AND ADDITIONAL ENCLOSURES NECESSARY FOR A FULLY WORKING DEFROST SYSTEM.</p>			

## GENERAL ELECTRICAL PROJECT NOTES

- A. ALL JUNCTION BOXES CONDUIT, WIRE, INSTALLATIONS, TERMINATIONS, ETC. AS NECESSARY FOR COMPLETE OR PERMANENT INSTALLATION OF KROGER-FURNISHED MATERIALS.
- B. ALL ELECTRICAL RESPONSIBILITIES FOR UNLABLED MATERIALS SHALL BE AS FOLLOWS:
  1. RECEIVE, UNLOAD, STORE AND PROTECT PROJECT SITE.
  2. INSPECT PRODUCTS UPON RECEIPT FOR SHORTAGES, DAMAGES OR DEFECTS AND NOTIFY SUPPLIER WITHIN 24 HOURS.
  3. NOTIFY SUPPLIER WITHIN 30 DAYS OF RECEIPT OF ANY HIDDEN DAMAGES FOR PRODUCTS RECEIVED.
- C. ALL ELECTRICAL WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND PROVIDE SWEET BOOKS, INSULATED THROTTLING FITTINGS (OR BUSHINGS) AND 300 DRAIN LINE (PULL STRING) IN ALL CONDUIT RUNS. ALL CONDUIT SHALL BE IDENTIFIED BY THE USE OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) JOISTS OF THE HIGH ROOF STRUCTURE, EVEN IF CONDUIT ORIGINATED IN AN AREA WITH A CEILING OR GROUND. ALL ELECTRICAL WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND PROVIDE SWEET BOOKS, INSULATED THROTTLING FITTINGS (OR BUSHINGS) AND 300 DRAIN LINE (PULL STRING) IN ALL CONDUIT RUNS. ALL ELECTRICAL WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND PROVIDE SWEET BOOKS, INSULATED THROTTLING FITTINGS (OR BUSHINGS) AND 300 DRAIN LINE (PULL STRING) IN ALL CONDUIT RUNS.
- D. ALL ELECTRICAL DEVICES, OUTLETS, JUNCTION BOXES, ETC. THAT ARE SHOWN ON A WALL SHALL BE LOCATED AT LEAST 12" ABOVE FINISH WALL SURFACE. ALL ELECTRICAL DEVICES, OUTLETS, JUNCTION BOXES, ETC. THAT ARE SHOWN ON A WALL SHALL BE LOCATED AT LEAST 12" ABOVE FINISH WALL SURFACE. ALL ELECTRICAL DEVICES, OUTLETS, JUNCTION BOXES, ETC. THAT ARE SHOWN ON A WALL SHALL BE LOCATED AT LEAST 12" ABOVE FINISH WALL SURFACE.
- E. ALL ELECTRICAL DEVICES, OUTLETS, JUNCTION BOXES, ETC. THAT ARE SHOWN ON A WALL SHALL BE LOCATED AT LEAST 12" ABOVE FINISH WALL SURFACE. ALL ELECTRICAL DEVICES, OUTLETS, JUNCTION BOXES, ETC. THAT ARE SHOWN ON A WALL SHALL BE LOCATED AT LEAST 12" ABOVE FINISH WALL SURFACE. ALL ELECTRICAL DEVICES, OUTLETS, JUNCTION BOXES, ETC. THAT ARE SHOWN ON A WALL SHALL BE LOCATED AT LEAST 12" ABOVE FINISH WALL SURFACE.
- F. PROVIDE 10 FEET OF FLEXIBLE CONDUIT FOR REFRIGERATED CASES SERVED FROM WALL JUNCTION BOXES.
- G. PROVIDE MINIMUM 1/2" (200) INCH BRANCH CIRCUIT WIRING.
- H. PROVIDE MINIMUM 1/2" (200) INCH BRANCH CIRCUIT WIRING.
- I. PROVIDE MINIMUM 1/2" (200) INCH BRANCH CIRCUIT WIRING.
- J. PROVIDE MINIMUM 1/2" (200) INCH BRANCH CIRCUIT WIRING.
- K. PROVIDE MINIMUM 1/2" (200) INCH BRANCH CIRCUIT WIRING.

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