

ELECTRICAL SYMBOLS			
LIGHTING AND POWER			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SURFACE MOUNTED CEILING LUMINAIRE (# INDICATES LUMINAIRE NUMBER IN SCHEDULE)		SURFACE MOUNTED WALL LUMINAIRE (# INDICATES LUMINAIRE NUMBER IN SCHEDULE)
	RECESSED MOUNTED CEILING LUMINAIRE (# INDICATES LUMINAIRE NUMBER IN SCHEDULE)		RECESSED MOUNTED WALL LUMINAIRE (# INDICATES LUMINAIRE NUMBER IN SCHEDULE)
	PENDANT MOUNTED CEILING LUMINAIRE (# INDICATES LUMINAIRE NUMBER IN SCHEDULE)		LIGHTING TRACK (# INDICATES LUMINAIRE NUMBER IN SCHEDULE)
	IN GRADE/FLOOR LUMINAIRE (# INDICATES LUMINAIRE NUMBER IN SCHEDULE)		TRACK MOUNTED LUMINAIRE (# INDICATES LUMINAIRE NUMBER IN SCHEDULE)
	SHADING INDICATES LUMINAIRE ON EMERGENCY CIRCUIT OR WITH BATTERY BACKUP		CEILING FAN - NUMBER OF BLADES IN SCHEDULE (# INDICATES LUMINAIRE NUMBER IN SCHEDULE)
	LINES INDICATE ORIENTATION OF LUMINAIRE, WHERE INDICATED		THEATER SPOT LIGHT (# INDICATES LUMINAIRE NUMBER IN SCHEDULE)
	UNDERCABINET LIGHT (# INDICATES LUMINAIRE NUMBER IN SCHEDULE)		PRIMARY DAYLIGHT ZONE BOUNDARY
	ARROW INDICATES WALL WASH LUMINAIRE AIMING		SECONDARY DAYLIGHT ZONE BOUNDARY
			LIGHTING CONTROL ZONE BOUNDARY
	SINGLE POLE SWITCH		SIMPLEX RECEPTACLE
	LOW VOLTAGE SWITCH/CONTROL		DUPLEX RECEPTACLE "G" SUBSCRIPT INDICATES GFCL "T" SUBSCRIPT INDICATES TAMPER RESISTANT TYPE "U" SUBSCRIPT INDICATES COMBINATION USB CHARGING STATION
	DOUBLE POLE SWITCH		AUTOMATICALLY CONTROLLED DUPLEX RECEPTACLE
	3-WAY SWITCH		ISOLATED GROUND DUPLEX RECEPTACLE
	4-WAY SWITCH		HOSPITAL GRADE DUPLEX RECEPTACLE
	DOOR SWITCH		RED DUPLEX RECEPTACLE
	MOMENTARY CONTACT SWITCH		DUPLEX RECEPTACLE - SPLIT WIRED
	TIMER SWITCH		AUTOMATICALLY CONTROLLED DUPLEX RECEPTACLE - SPLIT WIRED
	SINGLE POLE MANUAL MOTOR STARTER WITH THERMAL OVERLOAD AND PILOT LIGHT		DRYER RECEPTACLE NEMA 14-30 (125/250V 30A)
	SWITCH AND FUSE		SPECIAL PURPOSE RECEPTACLE (NEMA CONFIGURATION AS NOTED)
	SWITCH AND FUSTAT		HORIZONTAL MOUNTED DUPLEX RECEPTACLE
	MANUAL DIMMER OR FAN SPEED CONTROL ("F" INDICATES FAN SPEED CONTROL)		RANGE RECEPTACLE NEMA 14-50 (125/250V 50A)
	CEILING MOUNTED OCCUPANCY SENSOR (# INDICATES FIXTURE NUMBER IN SCHEDULE)		WELDER RECEPTACLE NEMA 6-50 (250V 50A)
	WALL MOUNTED OCCUPANCY SENSOR/SWITCH (# INDICATES FIXTURE NUMBER IN SCHEDULE)		DOUBLE DUPLEX RECEPTACLE
	PUSH BUTTON STATION		(1) DUPLEX, (1) DUPLEX AUTOMATICALLY CONTROLLED
	PHOTOCELL CEILING MOUNTED		ISOLATED GROUND DOUBLE DUPLEX RECEPTACLE
	PHOTOCELL WALL MOUNTED		RED DOUBLE DUPLEX RECEPTACLE
	TIME SWITCH		RECEPTACLE IN AV BACKBOX
	RELAY		WALL CLOCK HANGER RECEPTACLE
	EMERGENCY LIGHTING RELAY		CEILING MOUNTED DUPLEX RECEPTACLE
	LIGHTING CONTACTOR		CEILING MOUNTED DOUBLE DUPLEX RECEPTACLE
	COMBINATION POWER/DATA FLOOR OUTLET ("F" INDICATES DEVICE TYPE IN SCHEDULE)		CEILING MOUNTED RED DUPLEX RECEPTACLE
	COMBINATION POWER/AV FLOOR OUTLET ("F" INDICATES DEVICE TYPE IN SCHEDULE)		CEILING MOUNTED SPECIAL PURPOSE RECEPTACLE
	COMBINATION POWER/DATA/AV FLOOR OUTLET ("F" INDICATES DEVICE TYPE IN SCHEDULE)		CEILING MOUNTED SIMPLEX RECEPTACLE
	COMBINATION POWER/DATA/AV TABLETOP OUTLET ("F" INDICATES DEVICE TYPE IN SCHEDULE)		POWER FLOOR OUTLET ("F" INDICATES DEVICE TYPE IN SCHEDULE)
	MULTI-OUTLET ASSEMBLY - LENGTH AS INDICATED		RECEPTACLE IN CEILING AV BACKBOX
	MECH EQUIPMENT WITH ELEC CONNECTION SEE MECHANICAL/ELECTRICAL COORDINATION SCHEDULE		
FIRE DETECTION AND ALARM			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	FIRE ALARM AUTOMATIC SMOKE DETECTOR		FIRE ALARM CONTROL MODULE
	FIRE ALARM AUTOMATIC SMOKE DETECTOR WITH SOUNDER BASE		FIRE ALARM MONITOR MODULE
	FIRE ALARM AUTOMATIC WALL SMOKE DETECTOR		FIRE SPRINKLER VALVE TAMPER SWITCH
	FIRE ALARM BEAM DETECTOR AND REFLECTOR		FIRE SPRINKLER FLOW SWITCH
	SAMPLING TUBE TYPE SMOKE DETECTOR		FIRE ALARM HORN AND LIGHT COMBINATION
	FIRE ALARM AUTOMATIC CEILING HEAT DETECTOR		FIRE ALARM HORN (C INDICATES CEILING)
	FIRE ALARM AUTOMATIC WALL HEAT DETECTOR		CEILING FIRE ALARM HORN AND LIGHT COMBINATION (# INDICATES CANDELA RATING WHERE INDICATED)
	CARBON MONOXIDE DETECTOR		CEILING FIRE ALARM SPEAKER AND LIGHT COMBINATION (# INDICATES CANDELA RATING WHERE INDICATED)
	CARBON MONOXIDE/SMOKE DETECTOR		WALL FIRE ALARM SPEAKER AND LIGHT COMBINATION (# INDICATES CANDELA RATING WHERE INDICATED)
	FIRE ALARM MANUAL STATION		CEILING FIRE ALARM SPEAKER

ELECTRICAL SYMBOLS					
SUBSCRIPTS					
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
EP	SUBSCRIPT "EP" APPLIED TO ANY SYMBOL INDICATES EXPLOSION PROOF. CLASS, GROUP AND DIVISION AS NOTED	K	SUBSCRIPT "K" ADDED TO ANY SYMBOL INDICATES KEY OPERATED	WP	SUBSCRIPT "WP" APPLIED TO ANY SYMBOL INDICATES WEATHERPROOF NEMA 3R OR EQUIVALENT
E	SUBSCRIPT "E" ADDED TO ANY SYMBOL INDICATES EXISTING	WG	SUBSCRIPT "WG" ADDED TO ANY SYMBOL INDICATES WIRE GUARD	P	SUBSCRIPT "P" ADDED TO ANY SYMBOL INDICATES PILOT LIGHT
PD	SUBSCRIPT "PD" ADDED TO ANY FLOOR OUTLET INDICATES EXISTING			NL	SUBSCRIPT "NL" ADDED TO ANY SYMBOL INDICATES AN UNSWITCHED LUMINAIRE OPERATING AS A NIGHT LIGHT
AC	SUBSCRIPT "AC" ADDED TO ANY SYMBOL INDICATES ABOVE COUNTER. LOCATE CENTER OF DEVICE "4" ABOVE COUNTER SURFACE OR WHERE PRESENT. "4" ABOVE BACKSPLASH. WHERE INDICATED ADJACENT TO LAVATORY WITHOUT COUNTER. LOCATE CENTER OF DEVICE "8" ABOVE RM OF LAVATORY.				

SYMBOLS INDICATED HERE AND NOT USED IN THE CONTRACT DOCUMENTS DO NOT APPLY TO THIS PROJECT. ADDITIONAL SYMBOLS AND ABBREVIATIONS MAY BE INDICATED IN THE CONTRACT DOCUMENTS.

ABBREVIATIONS			
A	AMP	ELEC	ELECTRICAL
AC	ALTERNATING CURRENT	EMD	ESTIMATED MAXIMUM DEMAND
AFF	ABOVE FINISHED FLOOR	EMI	ELECTROMAGNETIC INTERFERENCE
AHJ	AUTHORITY HAVING JURISDICTION	EPO	EMERGENCY POWER OFF
APPROX	APPROXIMATELY	EQUIP	EQUIPMENT
ATS	AUTOMATIC TRANSFER SWITCH	EXTBNG	EXTINGUISHER
AUX	AUXILIARY	FA	FIRE ALARM
AV	AUDIOVISUAL	FAA	FIRE ALARM ANNUNCIATOR PANEL
AVG	AVERAGE	FACP	FIRE ALARM CONTROL PANEL
AWG	AMERICAN WIRE GAUGE	FB	FLOOR BOX
BMCS	BUILDING MANAGEMENT CONTROL SYSTEMS	FL	FLOOR
BLDG	BUILDING	FLA	FULL LOAD AMPS
C	CONDUIT	FT	FEET
CATV	CABLE TELEVISION	FSAE	FIRE SERVICE ACCESS ELEVATOR
CB	CIRCUIT BREAKER	GALV	GALVANIZED
CCTV	CLOSED CIRCUIT TELEVISION	GC	GENERAL CONTRACTOR
CKT	CIRCUIT	GEN	GENERATOR
CL	CENTER LINE	GFCI	GROUND FAULT CIRCUIT INTERRUPTER
CLG	CEILING	GND	GROUND
CRAC	COMPUTER RM AIR CONDITIONER	HP	HORSEPOWER
DA	DIAMETER	HZ	HERTZ
DISC	DISCONNECT	INTERCOM	INTERCOM
DIST	DISTRIBUTION	JB	JUNCTION BOX
DN	DOWN	KCMIL	THOUSAND CIRCULAR MILS
DWG	DRAWING	KV	KILOVOLT
EC	ELECTRICAL CONTRACTOR	KVA	KILOVOLT AMPERE
EGB	ELECTRICAL GROUND BAR	KW	KILOWATT
		ITG	LIGHTING
		MATV	MASTER ANTENNA TELEVISION
		MAX	MAXIMUM
		MCB	MAIN CIRCUIT BREAKER
		MECH	MECHANICAL
		MCB	MAIN GROUND BAR
		MIN	MINIMUM
		MISC	MISCELLANEOUS
		MLO	MAIN LUGS ONLY
		MTD	MOUNTED
		MTG	MOUNTING
		N1	NEMA 1 ENCLOSURE
		N3R	NEMA 3R ENCLOSURE
		N4X	NEMA 4X ENCLOSURE
		NC	NORMALLY CLOSED
		NIC	NOT IN CONTRACT
		NO	NORMALLY OPEN
		NTS	NOT TO SCALE
		OC	ON CENTER
		OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
		PB	PULL BOX
		PBB	PRIMARY BONDING BUSBAR
		PDU	POWER DISTRIBUTION UNIT
		PERP	PERPENDICULAR
		PV	POST INDICATOR VALVE
		PWL	PANEL
		PWR	POWER
		REQD	REQUIRED
		RM	ROOM
		SBB	SECONDARY BONDING BUSBAR
		SCHD	SCHEDULE
		SM	SIMILAR
		SPD	SURGE PROTECTIVE DEVICE
		SPECS	SPECIFICATIONS
		SS	STAINLESS STEEL
		STD	STANDARD
		SW	SWITCH
		SWBR	SWITCHBOARD
		SWGR	SWITCHGEAR
		TELECOM	TELECOMMUNICATIONS
		TEMP	TEMPERATURE
		TTB	TELEPHONE TERMINAL BOARD
		TV	TELEVISION
		TYP	TYPICAL
		UG	UNDERGROUND
		UNO	UNLESS NOTED OTHERWISE
		UPS	UNINTERRUPTIBLE POWER SUPPLY
		VA	VOLT-AMPS
		W	WATT
		XFMR	TRANSFORMER

GENERAL NOTES

- INSTALL GREEN INSULATED GROUND WIRE WITH EACH LIGHTING, RECEPTACLE, AND EQUIPMENT BRANCH CIRCUIT.
- PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH BRANCH CIRCUIT REQUIRING A NEUTRAL, UNLESS OTHERWISE NOTED.
- CONCEAL CONDUITS INSTALLED IN AREAS WITH SUSPENDED CEILINGS.
- REPAIR OR REPLACE BUILDING ELEMENTS THAT ARE DAMAGED AS PART OF ELECTRICAL WORK.
- SPECIFICATIONS LIST ACCEPTABLE WIRING METHODS AND MATERIALS. OTHER WIRING METHODS AND MATERIALS NOT LISTED IN THE SPECIFICATIONS (SUCH AS MC CABLE, ETC.) ARE NOT ACCEPTABLE.
- SEAL PENETRATIONS IN FIRE RATED CONSTRUCTION TO MAINTAIN RATINGS.
- WIRING DEVICES CONNECTED TO THE EMERGENCY GENERATOR SHALL BE RED.
- LABELING FOR PANELBOARD DIRECTORIES SHALL USE ROOM NUMBERS ASSIGNED BY CONTRACTING OFFICER REPRESENTATIVE AND NOT ROOM NUMBERS LISTED ON DRAWINGS. LABELS ON PANELBOARD DIRECTORY SHALL INCLUDE A DESCRIPTION OF LOAD SUCH AS LIGHTS, RECEPTACLES, MECHANICAL UNIT LOCATIONS, ETC.
- REFER TO ARCHITECTURAL ELEVATIONS AND SECTIONS (AS APPLICABLE) FOR EXACT DEVICE LOCATIONS.
- COORDINATE PHASING REQUIREMENTS, BOUNDARIES, ETC., WITH ARCHITECTURAL DRAWINGS AND DETAILS.

POWER GENERAL NOTES:

- PROVIDE POWER CONNECTION TO CONTROL PANELS, TRANSFORMERS AND OTHER ITEMS FURNISHED BY MECHANICAL CONTRACTOR. COORDINATE LOCATIONS OF DEVICES REQUIRING POWER CONNECTIONS WITH MECHANICAL CONTRACTOR.

DEMOLITION NOTES:

- THE PARK SHALL HAVE FIRST SALVAGE RIGHTS TO ALL FIXTURES, DEVICES AND EQUIPMENT REMOVED. COORDINATE WITH CONTRACTING OFFICER OR CONTRACTING OFFICER REPRESENTATIVE PRIOR TO DEMOLITION.
- UNLESS NOTED OTHERWISE, ABANDON CONCEALED CONDUITS IN WALLS WHICH ARE NOT REMOVED. WHERE AN EXISTING RACEWAY TO BE REMOVED IS STUBBED FROM A CONCRETE FLOOR OR WALL, CHISEL 2 INCHES BELOW SURFACE OF FLOOR, CUT CONDUIT, AND GROUT FLOOR TO MATCH ADJACENT SURFACE. PROVIDE BLANK PLATES FOR ABANDONED BOXES.
- REPAIR OR REPLACE BUILDING ELEMENTS WHICH ARE DAMAGED AS PART OF DEMOLITION WORK.
- DEMOLITION DRAWINGS INDICATE FIXTURES, DEVICES AND MAJOR PIECES OF EQUIPMENT WHICH ARE TO BE REMOVED OR RECONNECTED. REMOVE INDICATED ITEMS AND ASSOCIATED ITEMS NOT INDICATED BUT WHICH MUST BE REMOVED TO ACCOMMODATE REMODELING. THE ITEMS INDICATED SPECIFICALLY ON THE DRAWINGS TO BE REMOVED ARE ONLY TO INDICATE IN GENERAL TO THE CONTRACTOR THE AMOUNT OF DEMOLITION WORK REQUIRED. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- DISCONNECT MECHANICAL EQUIPMENT BEING REMOVED BY MECHANICAL CONTRACTOR. COORDINATE EQUIPMENT REMOVAL LOCATIONS WITH MECHANICAL DRAWINGS.
- COORDINATE AND SCHEDULE ELECTRICAL OUTAGES WITH THE CONTRACTING OFFICER OR CONTRACTING OFFICER REPRESENTATIVE.
- COORDINATE DEMOLITION WITH THE WORK OF OTHER TRADES. PROVIDE TEMPORARY POWER AS REQUIRED TO ALLOW THE WORK OF OTHER TRADES TO PROCEED OR AS REQUIRED TO ALLOW THE OWNER TO OCCUPY THE SPACE.
- REMOVE DEMOLISHED ITEMS FROM PROJECT SITE. PROPERLY DISPOSE OF ITEMS INCLUDING LAMPS AND BALLASTS.

© COPYRIGHT 2024 A/E 20239955
 Permission to reproduce all or part of this drawing is hereby granted solely for the limited purpose of construction of this project or archiving. Unauthorized copying, disclosure or construction use without written permission of Alvine Engineering is prohibited by copyright law.
 NOTE:
 DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS and clearances from ARCHITECTURAL, STRUCTURAL, SHOP and other appropriate drawing or at site. lay out and coordinate all work prior to installation to provide clearances required for operation, maintenance, and codes and verify non-interference with other work. DO NOT FABRICATE PRIOR TO VERIFICATION OF CLEARANCE FOR ALL TRADES. READ SPECIFICATIONS.

FINAL CONSTRUCTION DOCUMENTS

A/E FIRM PRIME: KENNETH HAHN ARCHITECTS, INC. OMAHA, NE. SUBCONTRACTOR: ALVINE ENGINEERING OMAHA, NE.	DESIGNED: RCF DRAWN BY: JAS TECH. REVIEW: GAN DATE: 2/15/2024	SUB SHEET NO. EO-0	TITLE OF SHEET ELECTRICAL SYMBOLS AND ABBREVIATIONS BUCKSTAFF BATHHOUSE HVAC HOT SPRINGS NATIONAL PARK HOT SPRINGS, AK	DRAWING NO. XXX/XXXX PMIS NO. 177425 SHEET 36 OF 60
-------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------	------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------