

**NOTE:**

1. NOT ALL ABBREVIATIONS SHOWN WILL BE USED ON THIS PROJECT.

**SHEET NAMING CONVENTION**

**E-001A**

2 DIGIT DISCIPLINE DESIGNATOR (IF ONLY ONE LETTER IS USED, THE SECOND LETTER IS REPLACED WITH A DASH "-" AS A PLACEHOLDER)\*

1 DIGIT AREA DESIGNATOR (AREA DESIGNATOR ONLY USED WHEN PLANS ARE SUBDIVIDED INTO AREAS.)

- 1 DIGIT SHEET TYPE DESIGNATOR
- 0 - GENERAL
- 1 - PLANS
- 2 - ELEVATIONS
- 3 - SECTIONS
- 4 - ENLARGED PLANS
- 5 - DETAILS
- 6 - SCHEDULES AND DIAGRAMS
- 7 - VARIES
- 8 - VARIES
- 9 - 3D VIEWS (ISO, PERSPECTIVES)

2 DIGIT SEQUENTIAL # (01-99) (FIRST DIGIT INDICATES PLAN TYPE, SECOND DIGIT INDICATES FLOOR)

**WIRE SIZE FOR ALL 120V, 20A CIRCUITS, UIO:**

FOR ALL ONE-WAY CIRCUITS OF LENGTH OF LESS THAN 75 FT, PROVIDE 2#12 & 1#12G, 3/4"C.

FOR ALL ONE-WAY CIRCUITS OF LENGTH OF LESS THAN 125 FT AND GREATER THAN OR EQUAL TO 75 FT, PROVIDE 2#10 & 1#10G, 3/4"C.

FOR ALL ONE-WAY CIRCUITS OF LENGTH OF LESS THAN 190 FT AND GREATER THAN OR EQUAL TO 125 FT, PROVIDE 2#8 & 1#8G, 3/4"C.

FOR ALL ONE-WAY CIRCUITS OF LENGTH OF LESS THAN 300 FT AND GREATER THAN OR EQUAL TO 190 FT, PROVIDE 2#6 & 1#6G, 3/4"C.

**ELECTRICAL GENERAL NOTES:**

1. THE WORK SHALL CONFORM WITH ALL REQUIREMENTS OF:
  - A. NFPA 70-2017 (NATIONAL ELECTRICAL CODE)
  - B. ANSI C2-2017 (NATIONAL ELECTRICAL SAFETY CODE)
  - C. APPLICABLE LOCAL CODES AND FEDERAL AND STATE LAWS.
2. MINIMUM RACEWAY SIZE SHALL BE 3/4". INCREASE RACEWAY SIZE AS REQUIRED TO LIMIT RACEWAY FILL RATIO TO LESS THAN 40% FULL.
3. CONTRACTOR SHALL CAREFULLY COORDINATE WORK WITH OTHER TRADES THROUGH THE GENERAL CONTRACTOR AND SHALL BE RESPONSIBLE FOR SECURING SPACE REQUIREMENTS FOR ELECTRICAL EQUIPMENT CLEARANCE FOR RECESSED LIGHTING FIXTURES AND CORRECT ROUGH-IN LOCATIONS OF ELECTRICAL CONNECTIONS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING CATALOG NUMBERS ON THESE DRAWINGS TO MATCH WITH MATERIAL DESCRIPTIONS INDICATED.
5. VERIFY EXACT HEIGHT OF EACH COUNTERTOP AND BACKSPLASH ON ARCHITECTURAL DETAILS AND/OR CASE WORK SHOP DRAWINGS AND ADJUST SPECIFIED MOUNTING HEIGHT OF WALL OUTLETS TO LOCATE BOTTOM OF OUTLET BOX 4" ABOVE TOP OF BACKSPLASH. IF NO BACKSPLASH IS USED, LOCATE BOTTOM OF OUTLET BOX 6" ABOVE COUNTERTOP.
6. VERIFY DOOR SWINGS WITH ARCHITECTURAL DRAWINGS BEFORE ROUGHING IN WALL SWITCHES. SWITCHES IN THE SAME LOCATION SHALL BE GANGED TOGETHER IN ONE COMMON BACKBOX AND SHALL HAVE ONE COMMON FACE PLATE.
7. ALL FEEDERS AND BRANCH CIRCUITS SHALL INCLUDE A GREEN INSULATED GROUND CONDUCTOR, SIZE PER NATIONAL ELECTRICAL CODE, OR AS SHOWN, CONNECTED TO EACH DEVICE AND OUTLET BOX ON THE CIRCUIT AND TO THE PANELBOARD GROUND BUS. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH BRANCH CIRCUIT. MULTIPLE BRANCH CIRCUITS IN ONE RACEWAY REQUIRE ONLY ONE GROUND CONDUCTOR.
8. VERIFY LUMINAIRE, CEILING MOUNTED OCCUPANCY SENSOR LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS AND DIMENSIONS PRIOR TO INSTALLATION. VERIFY EXACT LOCATIONS OF MOTORS AND EQUIPMENT BEFORE ROUGHING-IN.
9. REFER TO ONE-LINE DIAGRAMS, SCHEDULES AND RISER DIAGRAMS FOR CONDUCTOR AND CONDUIT SIZES NOT SHOWN ON PLANS.
10. PROVIDE IS AN INCLUSIVE TERM USED TO DESCRIBE ASPECTS OF THE WORK TO BE ACCOMPLISHED, AND IS HEREBY DEFINED TO REQUIRE TO STORE, FURNISH, INSTALL, MOUNT, CONNECT, CONTROL AND POWER EQUIPMENT INDICATED, AS WELL AS ALL APPURTENANCES REQUIRED TO MAKE ELECTRICAL SYSTEMS OPERATE AS INDICATED WITHIN THESE DRAWINGS AND SPECIFICATIONS AND TO FULFILL THE SCOPE OF WORK.
11. ALL CONDUCTORS SHALL BE COPPER.
12. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS BEFORE PROCUREMENT OF ANY MATERIALS AND DEVELOPMENT OF ANY SHOP DRAWINGS OR SUBMITTALS.
13. PROVIDE LABELS ON ALL RECEPTACLES, WALL MOUNTED LIGHT SWITCHES/OCCUPANCY SENSORS AND JUNCTION BOXES INDICATING THE SOURCE PANEL & CIRCUIT(S). TEXT SHALL BE BLACK, 1/8" IN HEIGHT PRINTED ON A CLEAR LABEL. HANDWRITTEN LABELS ARE NOT PERMITTED EXCEPT FOR JUNCTION BOXES LOCATED ABOVE FINISHED CEILING WHICH CAN BE HANDWRITTEN WITH AN INDELIBLE MARKER.
14. ALL EQUIPMENT PADS FOR INTERIOR ELECTRICAL EQUIPMENT SHALL EXTEND 2' BEYOND THE FOOTPRINT OF THE EQUIPMENT.
15. EMT SHALL COMPLY WITH ANSI C80.3 AND UL 797. PROVIDE THE FOLLOWING COLORS FOR EACH SYSTEM, FACTORY PAINTED:
  - FIRE ALARM - RED

**ELECTRICAL ABBREVIATIONS**

A OR AMP	AMPERE(S)	HWSP	HEATING WATER SUPPLY PUMP IN A PRIMARY- SECONDARY SYSTEM
ACC	AIR COOLED CHILLER	HWUH	HOT WATER UNIT HEATER
AC	ALTERNATING CURRENT	HZ	HERTZ
AC	AIR COMPRESSOR / AIR CURTAIN	IDS	INTRUSION DETECTION SYSTEM
AF	AMP FRAME	IMC	INTERMEDIATE METAL CONDUIT
AFF	ABOVE FINISHED FLOOR	IRH	INFRARED HEATER
AFG	ABOVE FINISHED GRADE	J OR JB	JUNCTION BOX
AHU	AIR HANDLING UNIT	K	KILO
AIC	AMPERE INTERRUPTING CAPACITY	KAIC	THOUSAND AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM	KCM OR KCMIL	THOUSAND OF CIRCULAR MILS
AM	AMMETER	KEF	KITCHEN EXHAUST FAN
ASYM	ASYMMETRICAL	KH	KITCHEN HOOD
AT	AMP TRIP	KV	KILOVOLT
ATS	AUTOMATIC TRANSFER SWITCH	KVA	KILOVOLT-AMPERES
AUTO	AUTOMATIC	KW	KILOWATT
AWG	AMERICAN WIRE GAUGE	KWHR	KILOWATT-HOUR
B	BOILER	L	LENGTH
BC	BRANCH CONTROLLER	LA	LIGHTNING ARRESTOR
BCW	BARE COPPER WIRE	LAN	LOCAL AREA NETWORK
BFF	BELOW FINISHED FLOOR	LAV	LAVATORY
BFG	BELOW FINISHED GRADE	LTG	LIGHTING
BLDG	BUILDING	MAU	MAKE-UP AIR UNIT
BS	BRANCH SELECTOR	MAX	MAXIMUM
C	CONDUIT	MC	MINIMUM CIRCUIT AMPACITY
CAT	CATEGORY	MCB or MB	MINOR CIRCUIT BREAKER
CB	CIRCUIT BREAKER	MCC	MOTOR CONTROL CENTER
CCT	CORRELATED COLOR TEMPERATURE	MGB	MAIN GROUND BAR
CCTV	CLOSED CIRCUIT TELEVISION	MH	MANHOLE or MOUNTING HEIGHT
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED	MIN	MINIMUM
CH	CHILLER	MLO	MAIN LUGS ONLY
CHWCP	CHILLED WATER CIRCULATING PUMP IN A PRIMARY- SECONDARY SYSTEM	MOC	MAXIMUM OVERCURRENT PROTECTION
CHWP	CHILLED WATER PUMP	MOD	MOTOR OPERATED DAMPER
CHWSP	CHILLED WATER SUPPLY PUMP IN A PRIMARY- SECONDARY SYSTEM	MT or MTD	MOUNT or MOUNTED
CKT	CIRCUIT	MRS	MOTOR RATED SWITCH
CMH	COMMUNICATING MANHOLE	N	NEUTRAL
CP	CONDENSATE PUMP	NEC	NATIONAL ELECTRICAL CODE
CPT	CONTROL POWER TRANSFORMER	NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
CRAC	COMPUTER ROOM AC UNIT	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CRF	COLOR RENDERING INDEX	NC	NORMALLY CLOSED
CT	CURRENT TRANSFORMER	NESC	NATIONAL ELECTRICAL SAFETY CODE
CT	COOLING TOWER	NO	NORMALLY OPEN
CU	COPPER OR CONDENSING UNIT	NTS	NOT TO SCALE
D	DUCTLESS SPLIT CONDENSING UNIT (POWERS CONDENSER WATER PUMP)	OFOI	OWNER FURNISHED OWNER INSTALLED
D	DEPTH	P	POLE(S) or PUMP
DH	DIRECT CURRENT	PA	PUBLIC ADDRESS
DH or DUH	DESTRATIFICATION FAN	PDU	POWER DISTRIBUTION UNIT
DHWCP	DUCT HEATERS	PF	POWER FACTOR
DISC	DISCONNECT SWITCH	PH	PHASE
DOAS	DEDICATED OUTSIDE AIR SYSTEM (UNIT)	PIU	VAV TERMINAL UNIT WITH PARALLEL OR SERIES FAN (PRIMARY INDUCTION UNIT)
DPST	DOUBLE POLE SINGLE THROW	PMT	PAD MOUNTED TRANSFORMER
DPDT	DOUBLE POLE DOUBLE THROW	PNL	PANEL OR PANELBOARD
DSCU	DUCTLESS SPLIT CONDENSING UNIT (POWERS THE DSS INDOOR UNIT)	PTAC	PACKAGED THRU-WALL AIR CONDITIONER
DSHP	DUCTLESS SPLIT HEAT PUMP (POWERS THE DSS INDOOR UNIT)	PVC	POLYVINYL CHLORIDE
DSS	DUCTLESS SPLIT SYSTEM (INDOOR UNIT)	RECEPT or RECP	RECEPTACLE
DWBP	DOMESTIC WATER BOOSTER PUMP	RF	RETURN FAN
DX	DIRECT EXPANSION (DX) COOLING COIL	RH	RADIANT HEATERS (ELECTRIC)
EC	EMPTY CONDUIT	RMC	RIGID METAL CONDUIT
EF	EXHAUST FAN	RMS	ROOT MEAN SQUARE
ELEC	ELECTRICAL	RTU	ROOF TOP UNIT
EMH	ELECTRICAL MANHOLE	RVNR	REDUCED VOLTAGE NON-REVERSING
EMT	ELECTRICAL METALLIC TUBING	SA	SURGE ARRESTOR
E or EMER	EMERGENCY	SCCR	SHORT CIRCUIT CURRENT RATING
EPA	EFFECTIVE PROJECTED AREA	SD	SMOKE DAMPER
EQUIP	EQUIPMENT	SF	SUPPLY FAN
ERV	ENERGY RECOVERY VENTILATOR	S/N	SOLID NEUTRAL
ERU	ENERGY RECOVERY UNIT	SP	SUMP PUMP
EXIST or EX	EXISTING	SPD	SURGE PROTECTIVE DEVICE
EUH	ELECTRIC UNIT HEATER	SPDT	SINGLE POLE DOUBLE THROW
EXP	EXPLOSION PROOF	SPEC	SPECIFICATIONS
EWC	ELECTRIC WATER COOLER	SPST	SINGLE POLE SINGLE THROW
EWH	ELECTRIC WATER HEATER	SWBD	SWITCHBOARD
F	FUSE	SWGR	SWITCHGEAR
FACP	FIRE ALARM CONTROL PANEL	TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
FCU	FAN COIL UNIT	TOL	THERMAL OVERLOAD
FLEX	FLEXIBLE	TP	TWISTED PAIR
FWE	FURNISHED WITH EQUIPMENT	TYP	TYPICAL
G OR GND	GROUND	U	URNAL
GFGI	GOVERNMENT FURNISHED GOVERNMENT INSTALLED	UH	UNIT HEATER
GFI	GROUND FAULT INTERRUPTER	UG	UNDERGROUND
GRS	GALVANIZED RIGID STEEL CONDUIT	UIO	UNLESS INDICATED OTHERWISE
GUH	GAS UNIT HEATER	UL	UNDERWRITERS LABORATORY
GWH	GAS WATER HEATER	UTP	UNSHIELDED TWISTED PAIR
H or HT	HEIGHT	V	VOLTS
HAC	HEATED AIR CURTAIN	VA	VOLT AMPERES
HOA	HAND-OFF AUTOMATIC	VAV	VAV TERMINAL UNIT
HP	HORSE POWER	VEF	VEHICLE EXHAUST FAN
HP	HEAT PUMP (OUTDOOR PORTION OF SPLIT SYSTEM HEAT PUMP, USE CU FOR STANDARD DX OUTDOOR UNIT)	VM	VOLTMETER
HT	HEAT TRACKING	VP	VACUUM PUMP
HVU	HEATING/VENTILATING UNIT	VRF	VARIABLE REFRIGERANT FLOW SYSTEM
HWCP	HEATING WATER CIRCULATING PUMP IN A PRIMARY- SECONDARY SYSTEM	W	WATTS or WIRE or WIDTH
HWP	HEATING WATER SUPPLY IN A PRIMARY-ONLY SYSTEM	WC	WATER CLOSET
HWRP	HOT WATER RECIRCULATION PUMP	WEF	WELDING EXHAUST FAN
		WH	WATER HEATER
		WHDM	WATTHOUR DEMAND METER
		WSHP	WATER SOURCE HEAT PUMP
		WP	WEATHERPROOF
		XFMR	TRANSFORMER
		Z	IMPEDANCE

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**ELECTRICAL GENERAL NOTES AND ABBREVIATIONS**

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