

STANDARD ENGINEERING SYMBOLS

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CONFORMED SET

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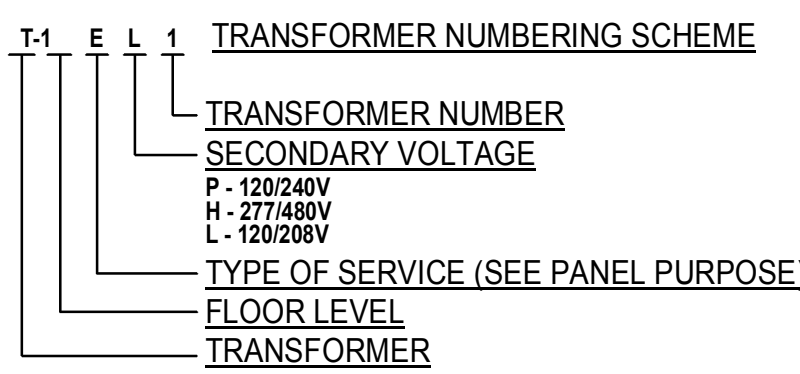
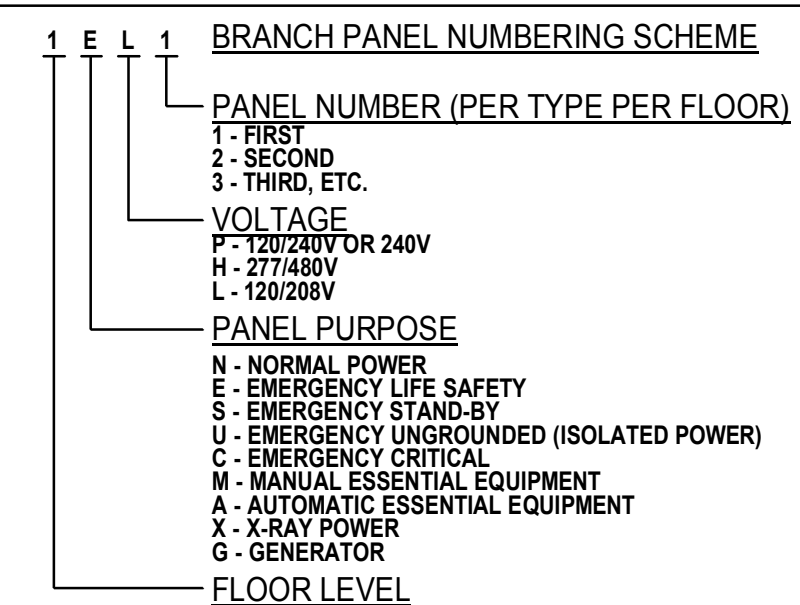
Drawing Title:

**STANDARD MECHANICAL
AND ELECTRICAL
SYMBOLS SHEET**

Project No.: 04561.01 Checked by:

ME0002

ELECTRICAL



ABBREVIATIONS FOR ELECTRICAL EQUIPMENT

MOUNTING

ELECTRICAL EQUIPMENT SHALL BE MOUNTED AT HEIGHTS INDICATED IN SPECIFICATIONS. SYMBOL, SCHEDULES, HEIGHTS MARKED AT OUTLETS, AND AS FOLLOWS: HEIGHTS ARE TO CENTERLINES OF DEVICES.

WIRING DEVICE SUBSCRIPTS

C	COUNTER OUTLET - BOTTOM OF OUTLET BOX TO OCCUR 1" ABOVE HIGHEST ELEMENT OF COUNTER (I.E. BACKSPASH, OR COUNTER TOP IF NO BACKSPASH).
CR	CASEWORK RECESSED OUTLET - MOUNT BOX IN CASEWORK VERTICAL SURFACE. BOTTOM OF BOX 1" ABOVE WORKING SURFACE. PROVIDE JUNCTION BOX AND INTERCONNECTION BOXES WITH FLEXIBLE CONDUIT.
E	DEVICE ON EMERGENCY CIRCUIT
EQ	EQUIPMENT OUTLET - FINAL TERMINATION METHOD AND EXACT LOCATION TO BE DETERMINED FROM EQUIPMENT MANUFACTURER'S SHOP DRAWINGS.
EX	EXISTING DEVICE TO REMAIN
S	SURFACE MOUNTED DEVICE

MISCELLANEOUS ABBREVIATIONS

ADP	AUTOMATIC DATA PROCESSING	MC	MOTOR CONTROL PANEL
AFF	ABOVE FINISHED FLOOR	MH	MOUNTING HEIGHT
ATS	AUTOMATIC TRANSFER SWITCH	MTS	MANUAL TRANSFER SWITCH
CB	CIRCUIT BREAKER	NC	NORMALLY CLOSED
CC	CLOSED CIRCUIT	NO	NORMALLY OPEN
CCTV	CLOSED CIRCUIT TELEVISION	PE	PULL BOX
ED	ELECTRICALLY OPERATED	PWCP	PREWIRED CONTROL PANEL
EP	EXPLOSION PROOF	RS	ROUGH-IN ONLY
FC	FLEXIBLE CONDUIT	RT	RAINTIGHT (NEMA 3R)
FDP	FIELD DATA PANEL	ST	SWITCHBOARD
FLA	FULL LOAD AMPERES	SWD	SWITCH
FS	FUSIBLE SWITCH	TEL	TELEPHONE
GB	GROUND BUS	TS	TIMESWITCH
GR	GALVANIZED RIGID STEEL	TV	TELEVISION SYSTEM
HP	HORSEPOWER	UNG	UNDERGROUND
KW	KILOWATTS	VP	VAPORPROOF (NEMA 12)
MCA	MINIMUM CIRCUIT AMPERES	WT	WEATHERPROOF
MCB	MAIN CIRCUIT BREAKER	WT	WATERPROOF (NEMA 4)
MCC	MOTOR CONTROL CENTER	XFMR	TRANSFORMER

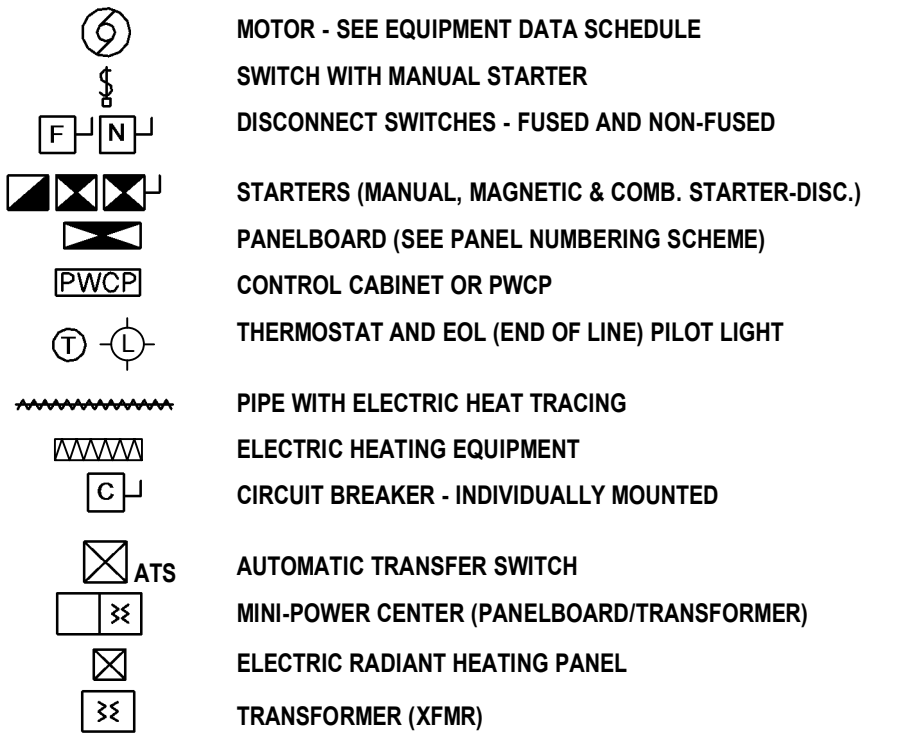
WIRING DEVICES

SWITCHES - SINGLE POLE, 2 POLE, 3 WAY, 4 WAY
LOWER CASE LETTER INDICATES SWITCH LEG (TYPICAL ALL SWITCHES)

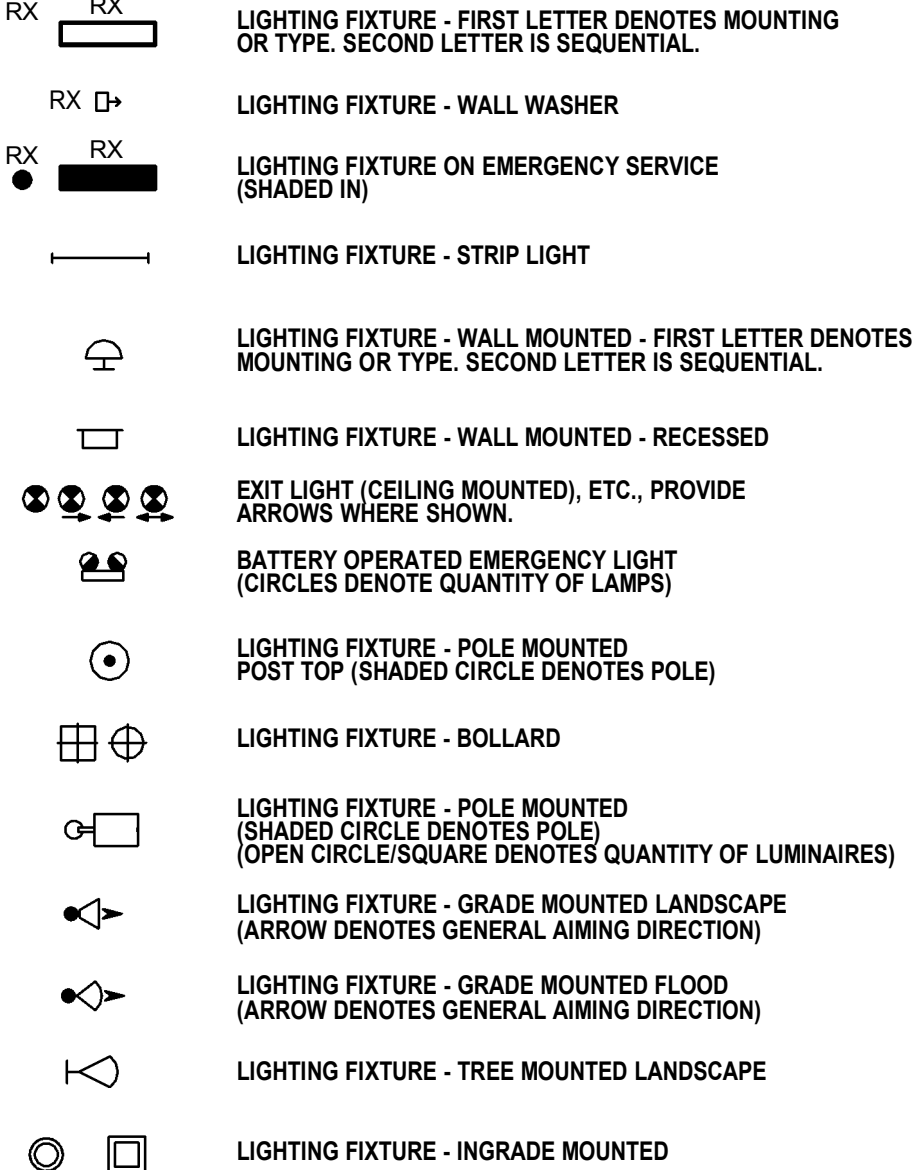
KEY SWITCHES - SINGLE POLE, 3 WAY, ETC.

\$ K	\$ K ³	PILOT LIGHT SWITCH
\$ PL		MOMENTARY CONTACT SWITCH
\$ M		MOTION SENSOR SWITCH - CEILING MOUNTED
\$ X		A - 360° PIR
\$ X		B - 360° DUAL TECH
\$ X		C - 180° PIR
\$ X		D - 120° DUAL TECH
\$ PIR		WALL SWITCH SENSOR
\$ 1		SINGLE RECP. - 120V GROUNDING TYPE - STANDARD MH
\$ 1		DUPLEX RECP. - 120V GROUNDING TYPE - STANDARD MH
\$ 1		DUPLEX RECP. - 120V ISOLATED GROUNDING TYPE - STANDARD MH
\$ USB		DUPLEX RECEPTACLE WITH USB PORTS
\$ 1		WIRED THRU OF RECEPTACLE
\$ 1		DUPLEX RECP. - 120V GROUND FAULT TYPE - STANDARD MH
\$ 1		DUPLEX RECEPTACLE WITH ONE BOSS SWITCHED
\$ 1		DUPLEX RECP. - MH 42" TOILET; MH 48" UNFINISHED AREAS
\$ 1		DOUBLE DUPLEX RECP. - 120V GROUND, TYPE - STAND. MH
\$ 1		SPECIAL RECEPTACLE - SEE NOTE ON DRAWING
\$ 1		FLOOR BOX - WITH DEVICES INDICATED
\$ 1		R-RECESSED TYPE (WITH WIRE MANAGEMENT SLOT)
\$ 1		F-FLUSH TYPE
\$ 1		U-UNDERFLOOR TYPE (BELOW RAISED FLOOR)
\$ 1		FLOOR BOX - WITH SPECIAL RECEPTACLE
\$ 1		RI-ROUGH IN ONLY
\$ 1		POWER POLE
\$ 1		CHIME, BELL
\$ 1		BUZZER
\$ 1		GENERAL HORN - WALL MOUNTED DUAL, SINGLE
\$ 1		PUSHBUTTON (QTY. OF CIRCLES = QTY. OF BUTTONS)
\$ 1		EPO - EMERGENCY POWER OFF PULL STATION
\$ X		SWITCH - DIGITAL
\$ X		1CH - 1 BUTTON CHANNEL 1/1
\$ X		2CH - 2 BUTTONS (2 CHANNELS)
\$ X		3CH - 3 BUTTONS (3 CHANNELS)
\$ X		4CH - 4 BUTTONS (4 CHANNELS)
\$ X		6CH - 6 BUTTONS (6 CHANNELS)
\$ X		1RL - 3 BUTTONS 1 CHANNEL PLUS RAISE/LOWER
\$ X		2RL - 6 BUTTONS 2 CHANNELS PLUS RAISE/LOWER
\$ X		3PR - 6 BUTTONS (4 PRESETS PLUS RAISE/LOWER)
\$ X		6PR - 6 BUTTONS (6 PRESETS)
\$ DX		DIMMER SWITCH - MH 48"
\$ DX		X = NUMERICAL SUBSCRIPT IDENTIFYING DIMMER TYPE
\$ 1		CLOCK HANGER OUTLET, WITH SINGLE RECEPTACLE
\$ 1		MH 7'-6" AFF OR 12" BELOW CEILING
\$ 1		M - FOR FUTURE MANUALLY CORRECTED INDICATOR CLOCK
\$ 1		C - COMPLETE WITH MANUALLY CORRECTED INDICATOR CLOCK
\$ PM-30		SURFACE RACEWAY
\$ 1		PM - NUMBER INDICATES TYPE (SEE SPECIFICATIONS)
\$ 1		PHOTOCELL

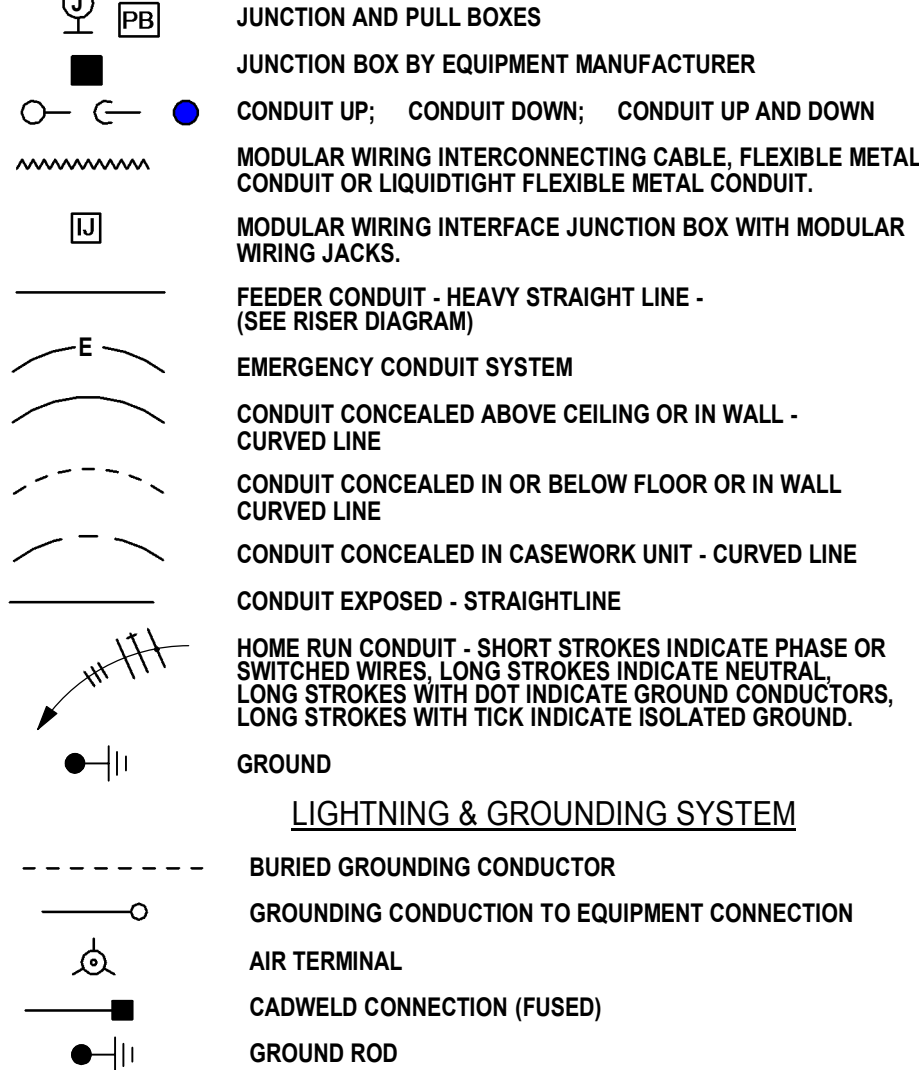
POWER EQUIPMENT



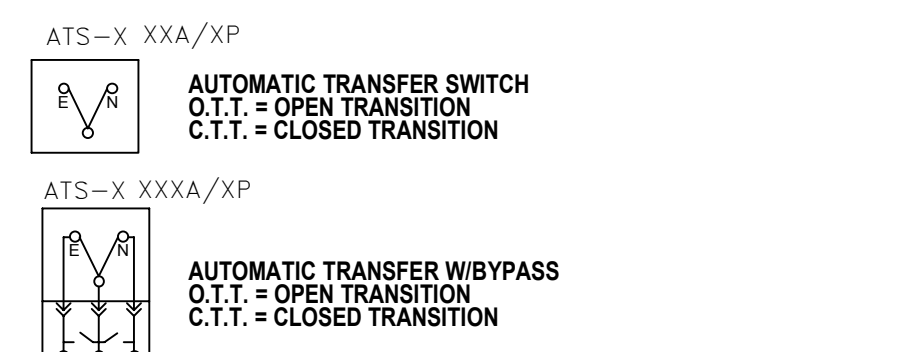
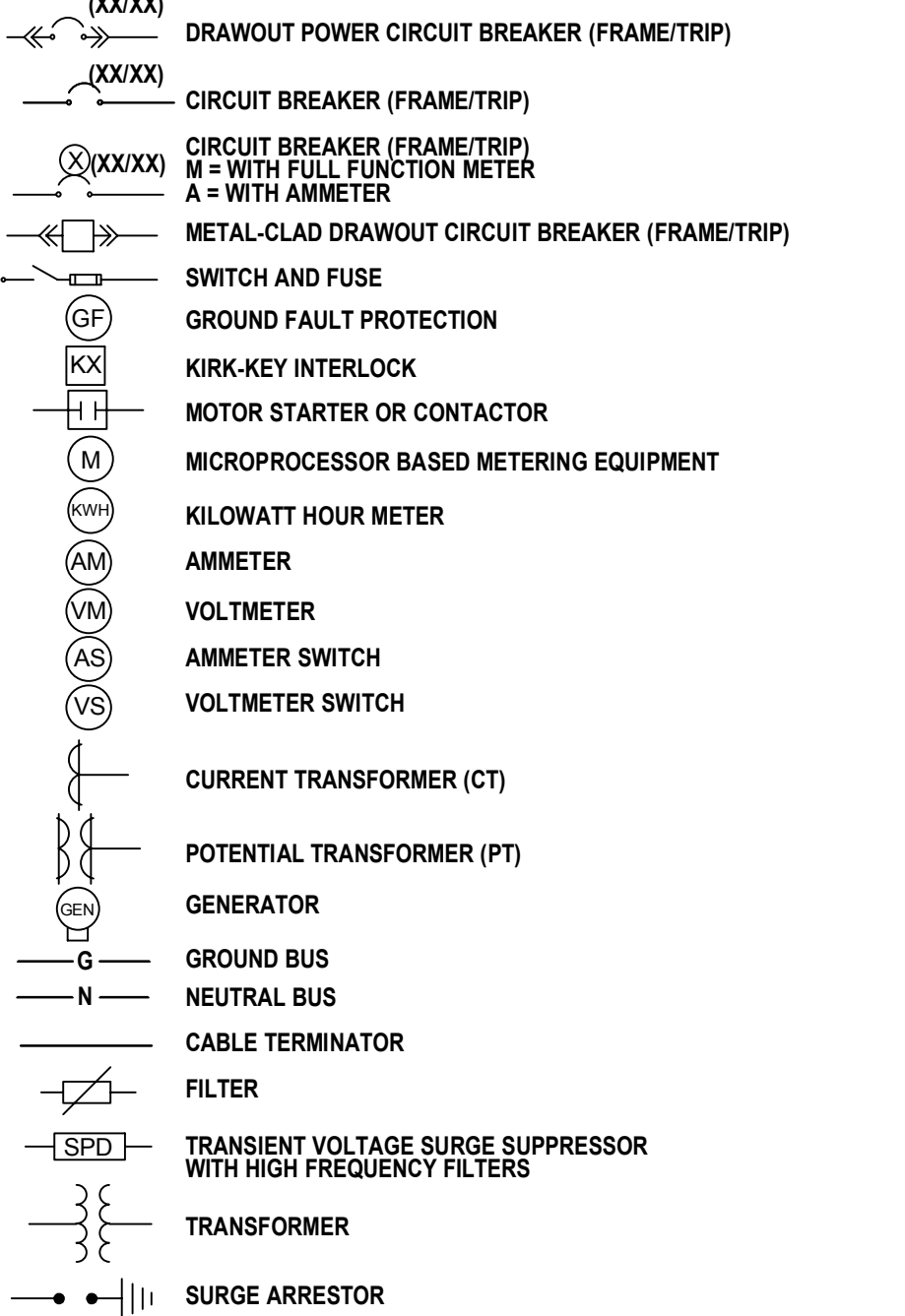
LIGHTING FIXTURES



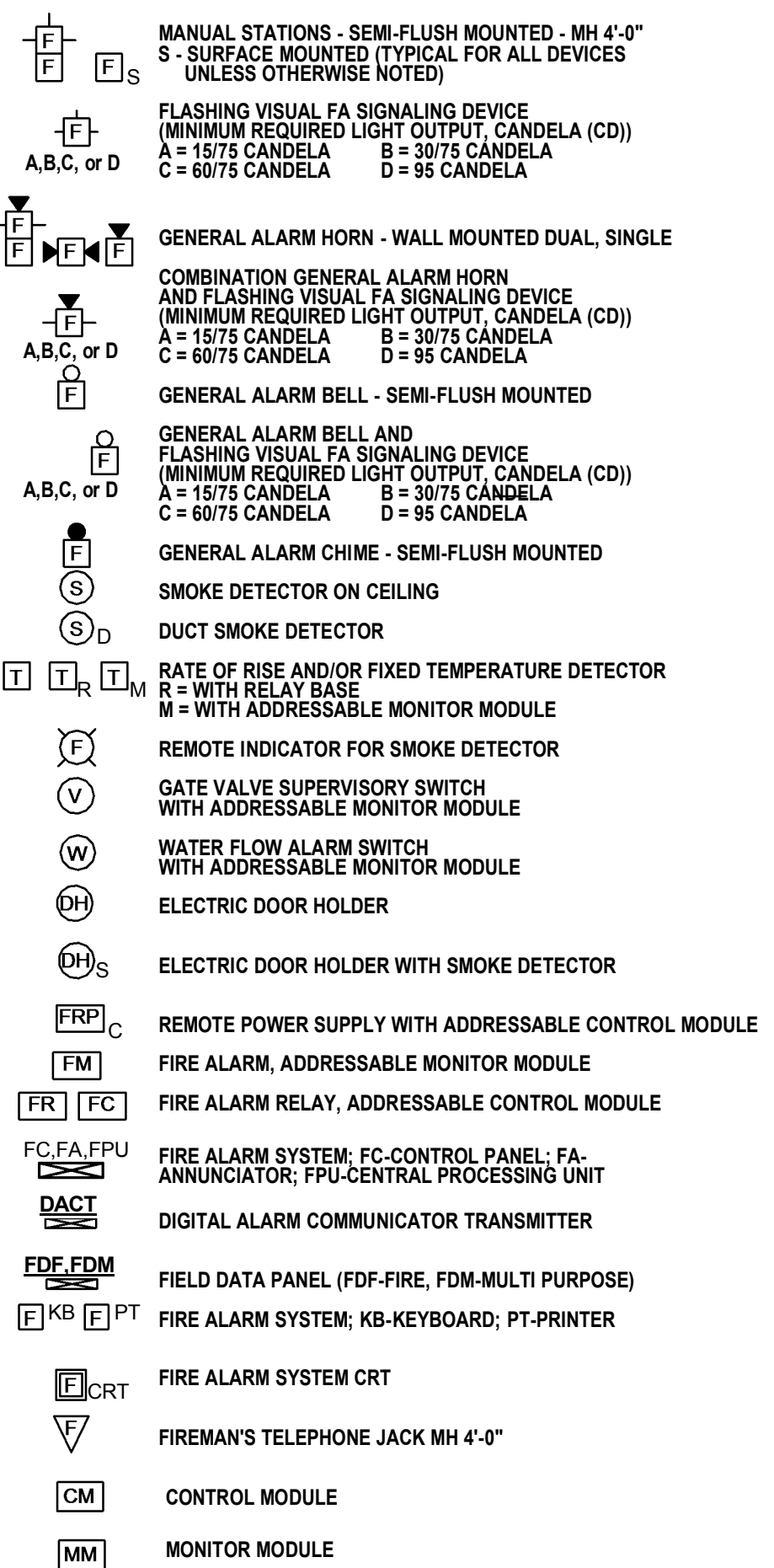
WIRING



ONE-LINE DIAGRAM



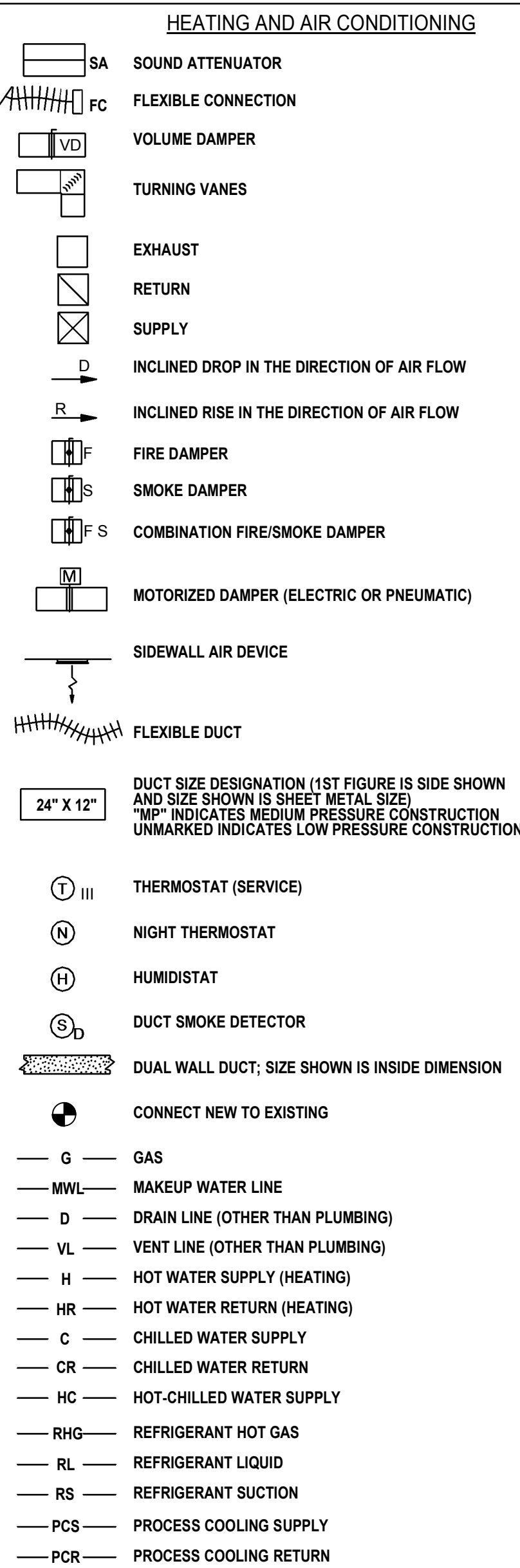
FIRE ALARM SYSTEM DEVICES



COMMUNICATIONS ROUGH-IN

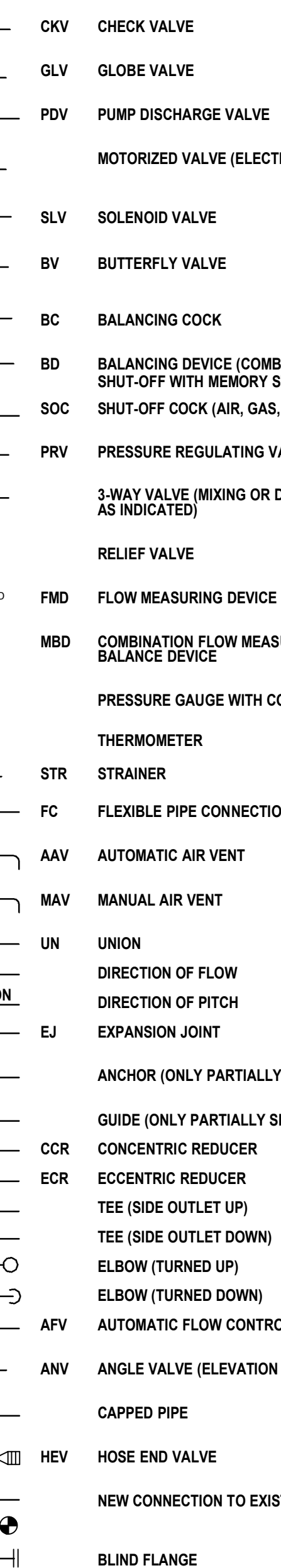
TELECOMMUNICATIONS ROUGH-IN: REFER TO TECHNOLOGY DRAWINGS FOR ROUGH-IN INFORMATION

MECHANICAL

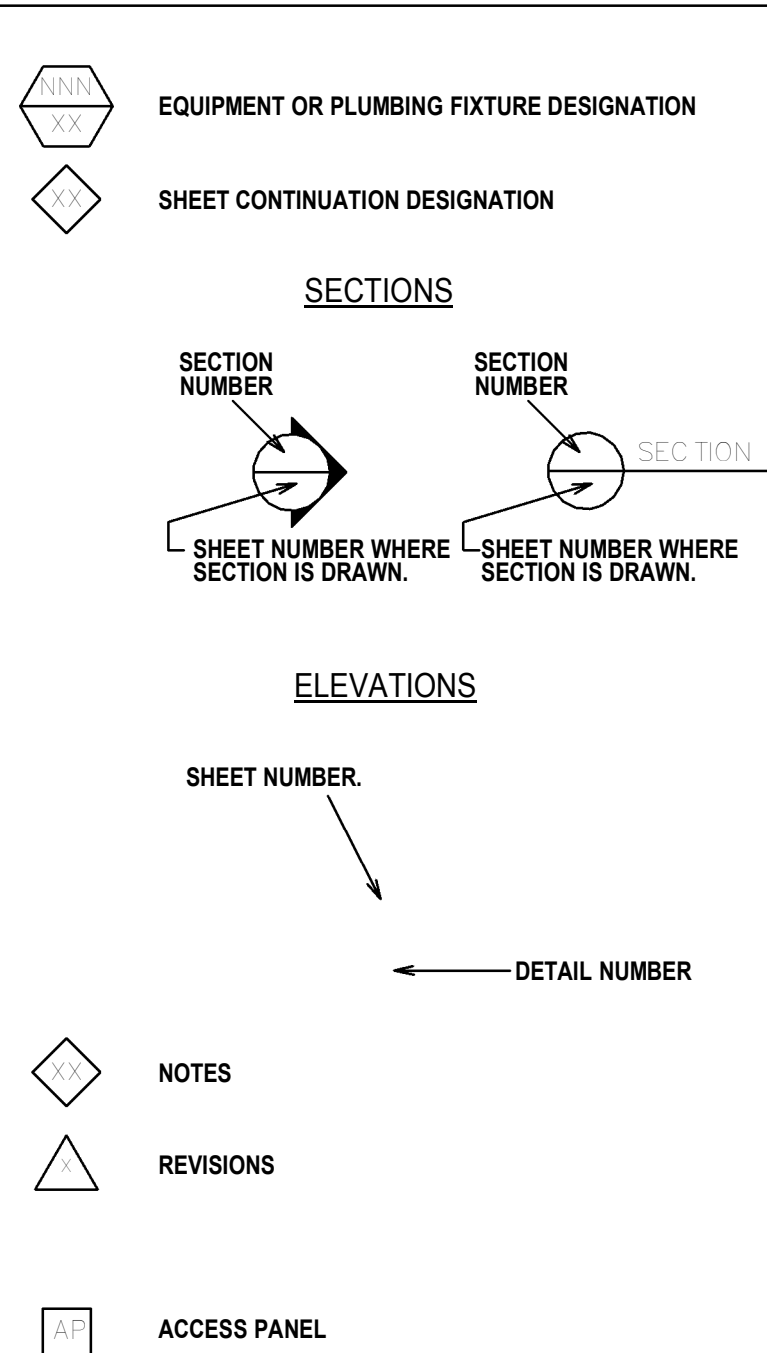


SYMBOL

PIPING SPECIALTIES



MISCELLANEOUS



MISCELLANEOUS ABBREVIATIONS

AS	AIR SEPARATOR	OA	OUTSIDE AIR
BDW	BACKDRAFT DAMPER/MOTORIZED	OFCD	OWNER FURNISHED, CONTRACTOR INSTALLED
CFD	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED	OFCD	OWNER FURNISHED, CONTRACTOR INSTALLED
EC	EXPANSION COMPENSATOR	PD	PUMP DISCHARGE
EL	ELEVATION	PT	PLUGGED TEE
FMD	FLOW MEASURING DEVICE	RA	RETURN AIR
GA	GAUGE	SV	SAFETY VALVE
GBO	GRAVITY BACKDRAFT DAMPER	TCP	TEMPERATURE CONTROL PNL
MPV	MOTORIZED VALVE	TPD	TRANSFER PUMP DISCHARGE
		VFM	VENTURI FLOW METER