

MEP ABBREVIATIONS

ABV.	ABOVE
AC	ALTERNATING CURRENT
AC	AIR CONDITIONER
AFD	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AG	ABOVE GRADE AND GFI
AHAP	AS HIGH AS POSSIBLE
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
AMB.	AMBIENT TEMPERATURE (F. DEGREE)
AMP	AMPERE
APPROX.	APPROXIMATELY
ARCH.	ARCHITECTURAL
AVS	AVERAGE
B	BOILER
B.G.	BELOW GRADE
BMS	BUILDING MANAGEMENT SYSTEM
BRD	BAROMETRIC RELIEF DAMPER
BTU	BRITISH THERMAL UNIT
CD	CONSTRUCTION DOCUMENTS
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CHEM	CHEMICAL
CHP	CHILLED WATER PUMP
CKT.	CIRCUIT
CLD	CEILING
CMPR.	COMPRESSOR
CT	COOLING TOWER
CWP	CONDENSING WATER PUMP
CU	CONDENSING UNIT
DB	DRY BULB
DEFL	DEFLECTION
DEG. F	DEGREES FAHRENHEIT
DET.	DETAIL
DD	DESIGN DEVELOPMENT
DIA.	DIAMETER
DISC.	DISCONNECT SWITCH
DIM.	DIMENSION
EA	EXHAUST AIR
EDW	ENTERING DRY BULB
EF	EXHAUST FAN
ELEC.	ELECTRICAL
ELEV.	ELEVATION
EMCS	ENERGY MGMT. CONTROL SYSTEM
E.S.P.	EXTERNAL STATIC PRESS. (IN. W.G.)
EWB	ENTERING WET BULB
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
EXIST.	EXISTING
F/A	FREE AREA OPENING (SQ. FT.)
FAN	FAN COIL UNIT
FHP	FRACTIONAL HORSE POWER
FLR	FLOOR
FPI	COIL FINS PER INCH
FBM	FEET PER MINUTE
FPS	FEET PER SECOND
FT.	FOOT OR FEET
GFI	GROUND FAULT INTERRUPTER
GPM	GALLONS PER MINUTE
HD	HEAD
HOA	HANDS-OFF/AUTO. MOTOR STARTER
HP	HORSE POWER
HPU	HEAT PUMP UNIT
HR	HOURS
HT	HEIGHT
HTG.	HEATING
HTR	HEATER
HVAC	HEAT VENT AND AIR CONDITIONING
HWP	HOT WATER PUMP
HX	HEAT EXCHANGER
Hz	FREQUENCY (HERTZ)
ID	INSIDE DIAMETER OR DIMENSION
IN.	INCHES
KW	KILOWATT
KWH	KILOWATT HOUR
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MAX.	MAXIMUM
MCA	MINIMUM CURRENT AMPS
MCCP	MAX. OVER CURRENT PROTECTION
MFB	1000 BTU PER HOUR
MECH.	MECHANICAL
MFR.	MANUFACTURER
MNK	MINIMUM
MVD	MANUAL VOLUME DAMPER
N/A	NOT APPLICABLE
NC	NOISE CRITERIA
NIC	NOT IN CONSTRUCTION
NK	NECK DIMENSION
NO.	NUMBER
OA	OUTSIDE AIR
OAR	OWNERS AUTHORIZED REPRESENTATIVE
OBSD	OPPOSED BLADE DAMPER
OD	OUTSIDE DIAMETER
OFCI	OWNER FINISHED CONTRACTOR INSTALLED
ORIG	ORIGINAL
P.D.	PRESSURE DROP (FT)
PH	PHASE
PMB	POWERED MIXING BOX
PLBS.	PLUMBING
PNL	PANEL
PRESS	PRESSURE
RA	RETURN AIR
RAG	RETURN AIR GRILLE
RD	RADIUS
REF.	REFERENCE
RPM	REVOLUTIONS PER MINUTE
RTU	ROOF TOP UNIT
S/S	SINGLE SPEED MOTOR
S/S/S	START/STOP/STATUS
SA	SUPPLY AIR
SAG	SUPPLY AIR GRILLE
SDC	STAND ALONE DIGITAL CONTROLLER
SEER	SEASON ENERGY EFFICIENCY RATIO
SENS.	SENSIBLE
SP	STATIC PRESSURE
SQ	SQUARE
STR.	MOTOR STARTER
TEMP.	TEMPERATURE
T.S.P.	TOTAL STATIC PRESSURE (IN. W.G.)
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
V	VOLT
VAV	VARIABLE AIR VALVE
VEL	VELOCITY
W	WATT
W/	WITH
W/O	WITHOUT
W.G.	WATER GAUGE
WB	WET BULB
WP	WEATHERPROOF
WPD	WATER PRESSURE DROP
WPG	WEATHERPROOF GFI
WTNR.	TRANSFORMER

HVAC VALVE & FITTINGS SYMBOLS

	TEE
	TEE, UP
	TEE, DOWN
	SINGLE SWEEP TEE
	CROSS
	LATERAL
	45 DEGREE ELBOW
	90 DEGREE ELBOW
	90 DEGREE ELBOW UP
	90 DEGREE ELBOW DOWN
	CAP
	SINGLE W.F. LATERAL STUB
	DOUBLE W.F. LATERAL STUB
	SINGLE W.F. LAT. & TRAP
	DOUBLE W.F. LAT. & TRAP
	FLOOR DRAIN RISER W/TRAP
	FLOOR CLEAN OUT
	CLEAN OUT
	FLOOR DRAIN
	HUB DRAIN
	DOWN SPOUT
	FIRE HOSE CABINET
	VENT THRU ROOF
	OVERFLOW ROOF DRAIN
	ROOF DRAIN
	GAS PRESSURE REDUCING VALVE
	WATER PRESSURE REDUCING VALVE
	OS & Y VALVE
	GLOBE VALVE
	GATE VALVE
	BALANCING VALVE (WITH PETE'S PLUG EITHER SIDE)
	BUTTERFLY VALVE
	BALL VALVE
	SOLENOID VALVE
	PLUG VALVE
	CHECK VALVE
	PRESSURE RELIEF VALVE
	CONTROL, 2 WAY VALVE
	CONTROL, 3 WAY VALVE
	MOTORIZED ISOLATION VALVE (2-POSITION-24v)
	MOTORIZED CONTROL VALVE (MODULATING-24v)
	FLOOR CONTROL VALVE
	ANGLE GATE VALVE
	ANGLE GLOBE VALVE
	MANUALLY CALIBRATED BALANCING VALVE
	AUTOMATIC FLOW CONTROL VALVE
	STRAINER & BLOW OFF VALVE
	PRESSURE GAUGE & COCK
	UNION OR COMPANION FLANGES
	THERMOMETER
	PRESSURE & TEMPERATURE TAP (PETE'S PLUG)
	THERMOSTAT
	HUMIDISTAT
	FLOW METER
	ANCHOR (PIPE)
	EXPANSION JOINT
	PIPE GUIDE
	MANUAL AIR VENT
	AUTOMATIC AIR VENT
	HOSE END DRAIN
	HOSE BIBB
	THERMOMETER & WELL
	TEMPERATURE SENSOR
	FLOW SWITCH
	PRESSURE SENSOR
	COMPRESSED AIR TAP
	FLOAT AND THERM. TRAP
	BUCKET STEAM TRAP
	PIPE SIZE REDUCER (CONCENTRIC)
	PIPE SIZE REDUCER (ECCENTRIC)

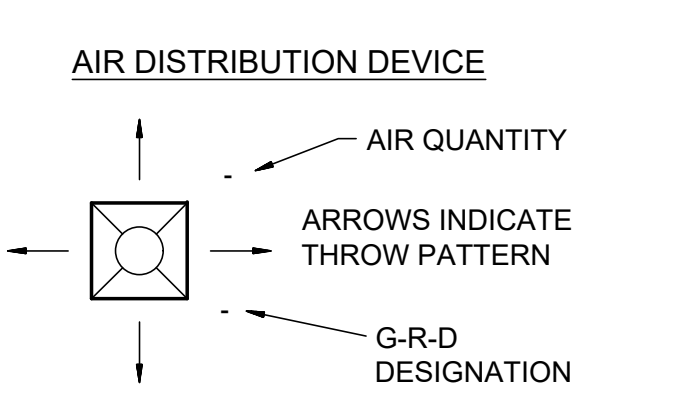
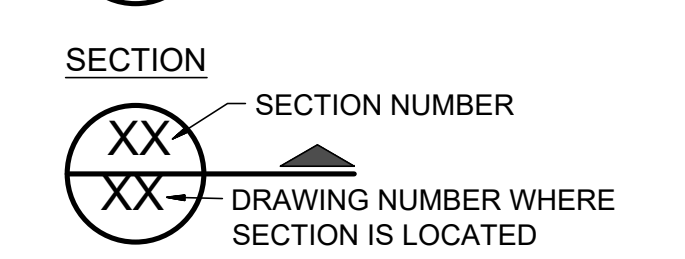
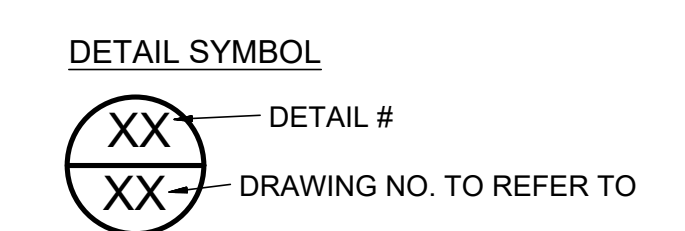
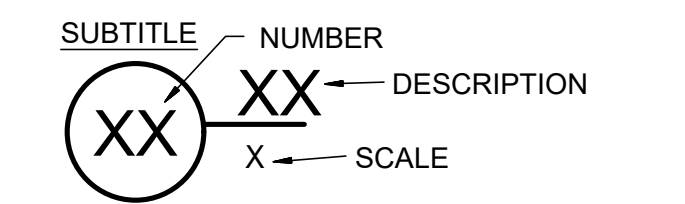
ALL SYMBOLS ON THIS LIST ARE NOT NECESSARILY USED ON THIS JOB.

GENERAL PROJECT NOTES:

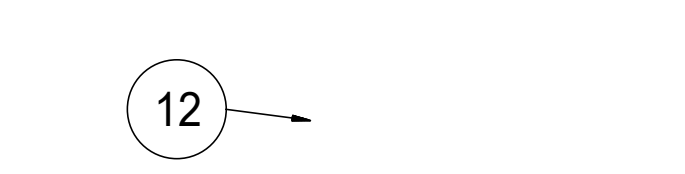
- PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE MECHANICAL SYSTEM AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY ALL NATIONAL, STATE AND LOCAL CODES.
- CONTRACT DRAWINGS FOR MECHANICAL WORK ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY. IT IS THE CONTRACTORS RESPONSIBILITY FOR INSTALLING ALL MATERIALS PER SMACNA STANDARDS AND THE MANUFACTURER'S STANDARDS.
- ALL EXISTING SYSTEM INFORMATION AND/OR LOCATIONS ARE PROVIDED BY THE OWNER OR BY A 3RD PARTY. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL MEP SERVICES ARE LOCATED AS DESIGNED BEFORE BIDDING THE PROJECT. IN OCCURRENCES WHERE EXISTING DOES NOT MATCH DESIGNED, IT IS THE CONTRACTORS RESPONSIBILITY TO NOTIFY THE OWNER, ARCHITECT, & ENGINEER BEFORE PROCEEDING. IF ANY DISCREPANCIES ARE NOT IDENTIFIED AT BIDDING, THE COST SHALL BE ASSORBED BY THE CONTRACTOR AND NOT PASSED ONTO THE OWNER OR ENGINEER OF RECORD.
- COORDINATE CONSTRUCTION OF ALL MECHANICAL WORK WITH ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL WORK, ETC., SHOWN ON THE OTHER CONTRACT DRAWINGS.
- WHEN TWO OR MORE ITEMS OF THE SAME TYPE OF EQUIPMENT ARE REQUIRED, THE PRODUCT OF ONE MANUFACTURE SHALL BE USED.
- ALL MISCELLANEOUS STEEL REQUIRED TO ENSURE PROPER INSTALLATION AND AS SHOWN IN DETAILS FOR PIPING SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR.
- LOCATION AND SIZES OF ALL FLOOR, AND WALL, OPENINGS SHALL BE COORDINATED WITH ALL OTHER TRADES.
- ALL DEMOLITION ACTIVITIES SHALL BE PERFORMED SO AS TO PROVIDE MINIMAL DISRUPTION TO THE NEIGHBORING TENANTS.
- ALL SAW CUTTING SHALL BE PERFORMED AFTER HOURS SO THAT OPERATION DOES NOT DISTURB NEIGHBORING TENANTS. THERE SHALL BE NO GAS POWERED EQUIPMENT IN TENANT AREAS.

DRAWING SYMBOLS

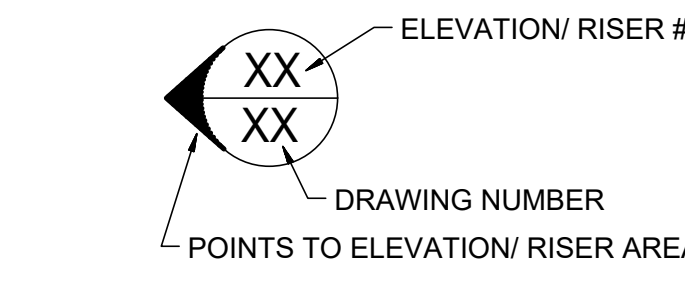
(ALL SYMBOLS MAY NOT APPEAR ON DRAWINGS)



NOTE BY SYMBOL



ELEVATION/ RISER DIAGRAM SYMBOL



PIPING DESIGNATIONS

(ALL DESIGNATIONS MAY NOT APPEAR ON DRAWINGS)

SYMBOL	DESCRIPTION
---	EXISTING PIPING
-X-X-	EXISTING PIPING TO BE REMOVED
---	UNDERFLOOR
+	CONNECT TO NEW OR EXISTING
+	DEMO TO THIS POINT
— CHWS —	CHILLED WATER SUPPLY
— CHWR —	CHILLED WATER RETURN
— CHWS(E) —	EXISTING CHILLED WATER SUPPLY
— CHWR(E) —	EXISTING CHILLED WATER RETURN

SCOPE OF WORK

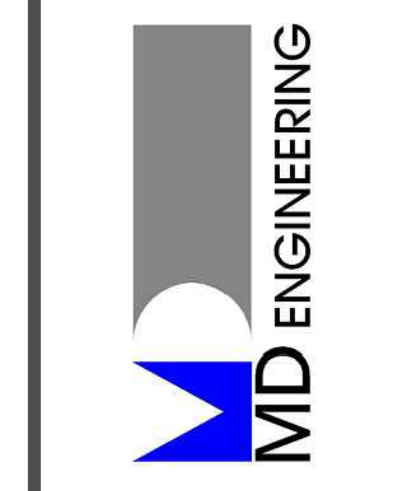
THE EXISTING 18-INCH BLACK STEEL UNDERGROUND CHILLED WATER PIPING WILL BE REPLACED WITH 18-INCH UNDERGROUND HOPE CHILLED WATER PIPING IN SAME LOCATION. BASE PLAN INCLUDES THE PIPING BEGINNING AT THE NEW VAULT AND EXTENDING TO THE UNDERSIDE OF THE BUILDING ENTRANCE. BLACK STEEL WILL CONNECT AT THE BUILDING ENTRANCE WHERE THE 18-INCH CHILLED WATER SUPPLY AND RETURN RISERS WILL HAVE 18-INCH BUTTERFLY VALVES ADDED FOR THE BUILDING ISOLATION. ALTERNATE 1 WILL INCLUDE ADDITIONAL DISTANCE FOR THE CHILLED WATER REPLACEMENT SCOPE OF WORK. THIS WORK INCLUDES THE UNDERGROUND PIPING FROM THE EXISTING VAULT 5 TO THE NEW VAULT.

THE NEW VAULT WILL HOUSE TWO 18-INCH ISOLATION VALVES TO SERVE THE FUTURE COURT HOUSE EXPANSION.

THE COURTHOUSE BUILDING WILL REQUIRE TEMPORARY COOLING FOR THE DURATION OF THE CHILLED WATER REPLACEMENT PROJECT. THE BUILDING WILL REQUIRE STAGING WORK FOR THE CONNECTION TO THE TEMPORARY CHILLER. WORK INCLUDES SETTING UP CHILLED WATER PIPING CONNECTIONS FOR A TEMPORARY CHILLER. INSTALLATION OF VALVES WILL REQUIRE CRYOGENIC FREEZING OF EXISTING CHILLED WATER LINES FOR THE INSTALLATION OF VALVES FOR BOTH THE RISERS AND ALSO THE TEMPORARY PIPING CONNECTIONS TO THE TEMPORARY CHILLER EXPANSION.

CONTRACTOR TO PROVIDE 500 TON AIR COOLED CHILLER WITH GENERATOR FOR TEMPORARY SERVICE DURING CONSTRUCTION.

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Revisions:	DATE	DESCRIPTION
	03/22/2024	CONSTRUCTION DOCUMENTS



LEGEND AND GENERAL NOTES - MECHANICAL

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M0.0