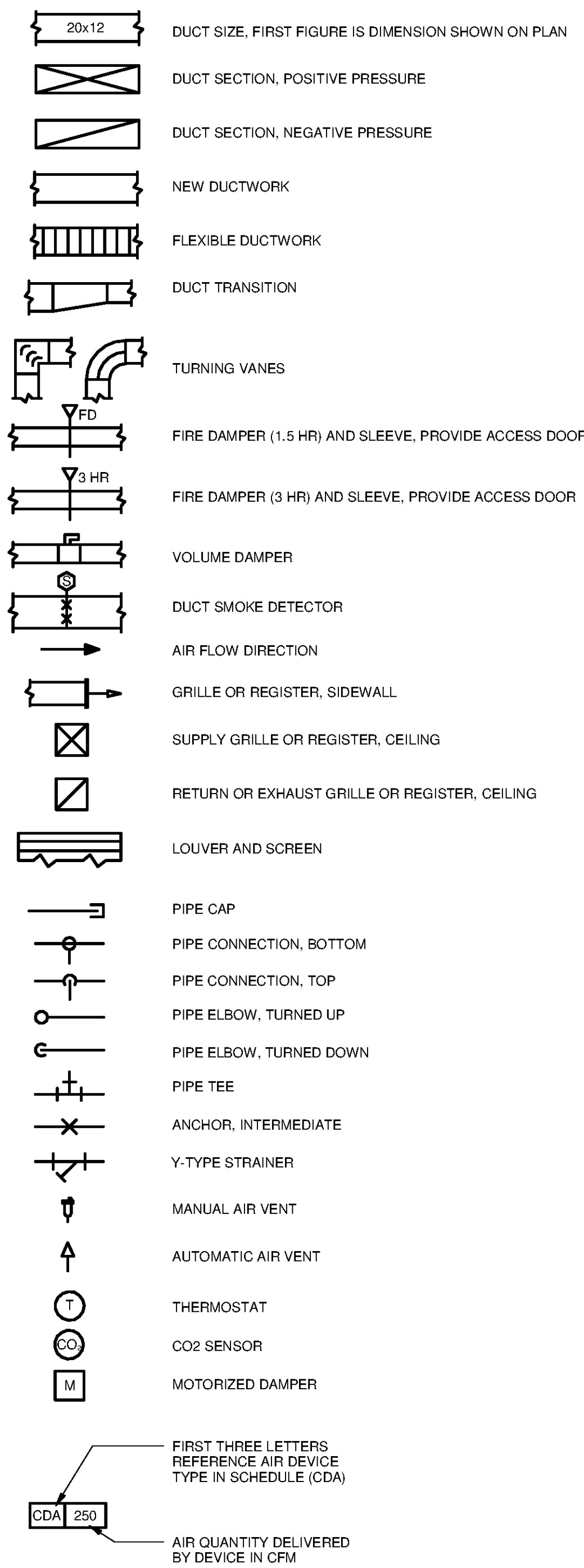


### MECHANICAL LEGEND



**NOTES:**  
 1. ALL DUCT TAPS SHALL BE PER SMACNA STANDARDS LATEST EDITION.  
 2. THIS LEGEND IS FOR REFERENCE ONLY  
 3. ALL SYMBOLS WHICH APPEAR WITHIN THE LEGEND MAY NOT APPLY TO THIS PROJECT.

### MECHANICAL ABBREVIATIONS

SYMBOL	DESCRIPTION
AAV	AUTOMATIC AIR VENT
ABS	ABSOLUTE
AC	AFTERCOOLER CIRCUIT
AD	ACCESS DOOR
ADJ	ADJUSTABLE
AFG	ABOVE FINISHED GRADE
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
BHP	BREAK HORSEPOWER
BOD	BOTTOM OF DUCT
CAP	CAPACITY
CH	CANOPY HOOD
CP-1	CONTROL PANEL WITH DESIGNATION
CONC	CONCRETE
COND	CONDENSATE
CONN	CONNECTION
CONT	CONTINUATION
CU	CONDENSING UNIT
D	DRAIN
DB	DRY BULB
DH	DEHUMIDIFIER
DIA	DIAMETER
DN	DOWN
DWG	DRAWING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
EMCS	ENERGY MANAGEMENT AND CONTROL SYSTEM
ENT	ENTERING
ERV	ENERGY RECOVERY VENTILATOR
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EUH	ELECTRIC UNIT HEATER
EXH	EXHAUST
F	FAHRENHEIT
FA	FREE AREA
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FFE	FINISHED FLOOR ELEVATION
FLEX	FLEXIBLE
FFM	FEET PER MINUTE
GAL	GALLONS
GH	GRAVITY HOOD
GPM	GALLONS PER MINUTE
HD	HEAD
HP	HORSEPOWER
HT	HEIGHT
IN	INCH
JW	JACKET WATER
LAT	LEAVING AIR TEMPERATURE
MAX	MAXIMUM
MIN	MINIMUM
MTNG	MOUNTING
L	LOUVER
LP	LOUVERED PENTHOUSE
MAU	MAKE-UP AIR UNIT
NTS	NOT TO SCALE
NG	NATURAL GAS
OA	OUTDOOR AIR
PD	PRESSURE DROP
PRV	PRESSURE REDUCING VALVE
RA	RETURN AIR
REFRIG	REFRIGERANT
RH	RADIANT HEATER
RH	RELATIVE HUMIDITY (%)
RL	REFRIGERANT LIQUID LINE
RS	REFRIGERANT SUCTION LINE
SA	SUPPLY AIR
SB	SECURITY BARS
SF	SUPPLY FAN
SP	STATIC PRESSURE
SPEC	SPECIFICATION
SQ FT	SQUARE FEET
STD	STANDARD
TA	TRANSFER AIR
TEMP	TEMPERATURE
TSTAT	THERMOSTAT
TYP	TYPICAL
UH	UNIT HEATER
V	VOLTS
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE
VRF	VARIABLE REFRIGERANT FLOW
VS	VENT SILENCER
W	WATT
W	WITH
WB	WET BULB
WG	WATER GAUGE
WPD	WATER PRESSURE DROP
Ø	DIAMETER

### MECHANICAL GENERAL NOTES:

1. THESE DRAWINGS ARE SCHEMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL POSSIBLE CONDITIONS. IT IS INTENDED THAT A COMPLETE SYSTEM BE PROVIDED WITH ALL NECESSARY EQUIPMENT, APPURTENANCES, AND CONTROLS, COMPLETELY COORDINATED WITH ALL DISCIPLINES. ALL PARAMETERS GIVEN IN THESE DOCUMENTS SHALL BE STRICTLY CONFORMED WITH. ANY ITEMS AND LABOR REQUIRED FOR A COMPLETE SYSTEM IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS, AND THESE CONTRACT DOCUMENTS SHALL BE FURNISHED WITHOUT OCCURRING ANY ADDITIONAL COST TO THE OWNER. CAREFULLY REVIEW ALL CONTRACT DOCUMENTS AND THE DESIGN OF OTHER TRADES BEFORE PREPARING SHOP DRAWINGS.
2. BOTTOM OF DUCTWORK SHALL BE MOUNTED BETWEEN 12-24 INCHES OF CEILINGS EXCEPT TO AVOID INTERFERENCES WITH OTHER CONSTRUCTION.
3. COORDINATE EQUIPMENT AND PIPING WITH ALL OTHER DISCIPLINES AND TRADES. MAKE ALL OFFSETS AND TRANSITIONS TO COORDINATE WITH OTHER TRADES WITHOUT ANY ADDITIONAL EXPENSE TO THE OWNER.
4. COORDINATE THE EXACT LOCATION AND SIZE OF ALL ROOF, WALL, AND SLAB PENETRATIONS WITH THE ARCHITECTURAL DRAWINGS.
5. MAINTAIN PIPING A MINIMUM OF 8'-0" A.F.F IN ALL MECHANICAL ROOMS. ALL PIPING SHALL BE LOCATED AS HIGH AS POSSIBLE.
6. MOUNT THERMOSTATS WHERE INDICATED ON PLANS, 4'-0" A.F.F. UNLESS NOTED OTHERWISE.
7. COORDINATE WITH ELECTRICAL CONTRACTOR TO VERIFY CONTROL VOLTAGES WITH EQUIPMENT AND PROVIDE ACCORDINGLY.

### DUCTWORK NOTES:

1. ALL DUCTWORK IS SHOWN AS FREE AREA INSIDE DIMENSIONS.
2. USE 45 DEG. TAPS FOR ROUND TO ROUND TAKE OFF'S PROVIDE VOLUME DAMPER AT EACH TAKE OFF.
3. DO NOT CONSTRUCT OR INSTALL TAPS OUT OF REDUCERS, TEES AND/OR ELBOWS.
4. ALLOW FOR FIELD MEASURED OFFSETS OR TRANSITIONS, ELBOWS ETC.
5. SUPPORT ALL FLEXIBLE DUCTWORK AS SHOWN IN SMACNA FIGURE 3-9, 1985, BUT NOT LESS THAN 6.0' CENTERS.
6. DO NOT USE FLEX DUCT IN EXPOSED AREAS. FLEX DUCT SHALL BE USED TO CONNECT ALL DIFFUSERS TO SUPPLY DUCT. MAXIMUM FLEX DUCT LENGTH TO DIFFUSERS SHALL NOT EXCEED FIVE FEET. MAXIMUM FLEX DUCT LENGTH AT ANY OTHER CONNECTION SHALL NOT EXCEED TWO FEET. FLEX DUCT SHALL NOT BE USED FOR ELBOWS.
7. GRILLES, REGISTERS AND DIFFUSERS CONNECTED BY FLEXIBLE DUCT SHALL BE SUPPORTED INDEPENDENTLY OF THE FLEXIBLE DUCT.
8. RECTANGULAR ELBOWS SHALL BE RADIUS FITTINGS WITH CENTERLINE RADIUS EQUAL TO 1.5 TIMES THE DUCT WIDTH WHERE SPACE PERMITS. OTHERWISE, RECTANGULAR DUCTS SHALL BE 90 DEG. ELLS WITH DOUBLE THICKNESS TURNING VANES. NO OTHERS WILL BE ALLOWED.
9. COORDINATE FINAL LOCATION OF ALL REGISTERS, GRILLES, DIFFUSERS ETC. WITH ARCHITECTURAL DRAWINGS AND LIGHTING PLANS.

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BID SET  
  
 DONALD S. BOYER  
 ENGINEER  
 No. 16553  
 PROFESSIONAL  
 12/24/2014

MARK	DATE	DESCRIPTION	BY

HUNTSVILLE UTILITIES  
 SOUTHEAST WATER TREATMENT PLANT  
**HVAC ABBREVIATIONS,  
 LEGEND AND GENERAL  
 NOTES**

Project No.: 200-11740-10003  
 Designed By: SBR  
 Drawn By: SBR  
 Checked By: DSB

M-0001