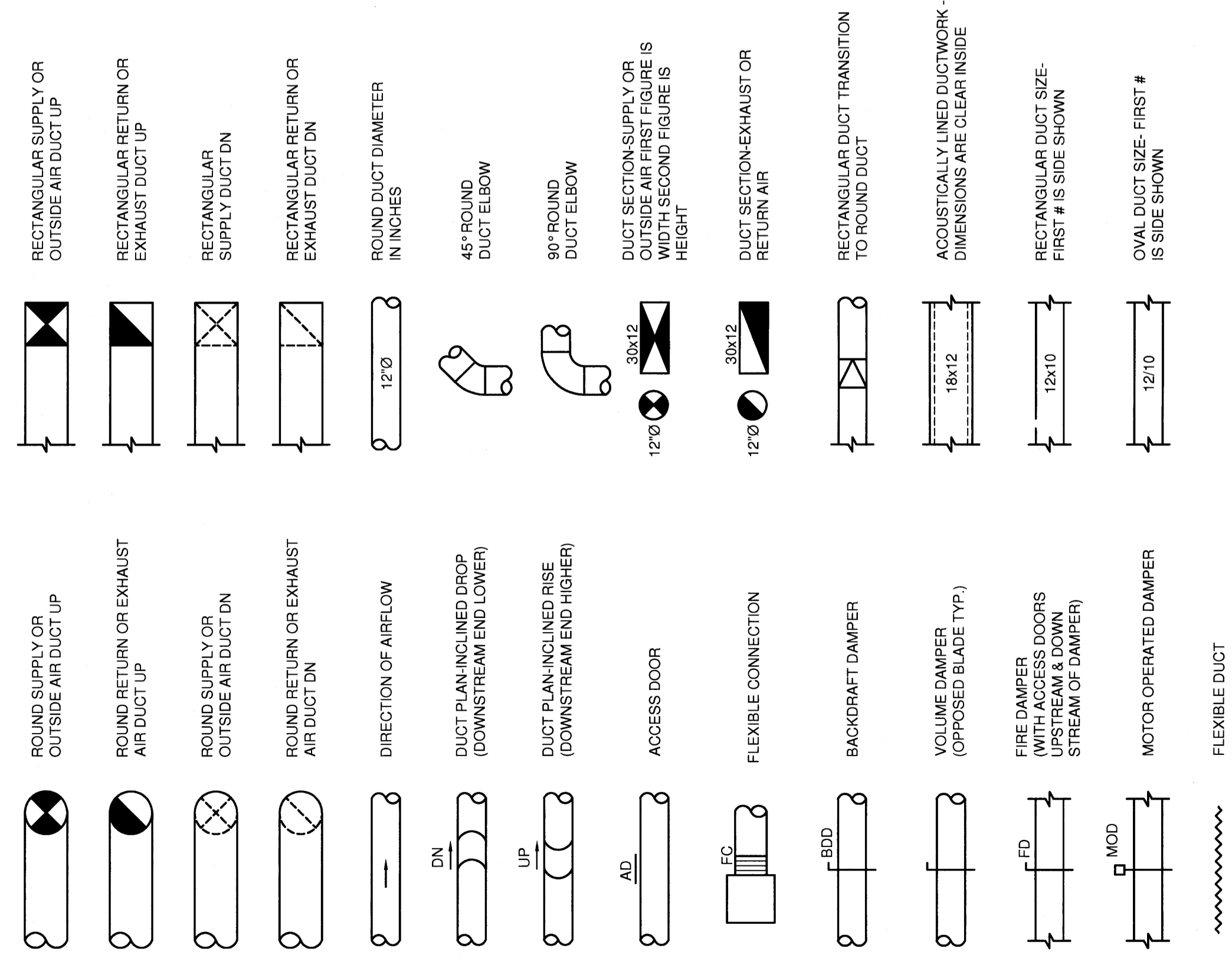
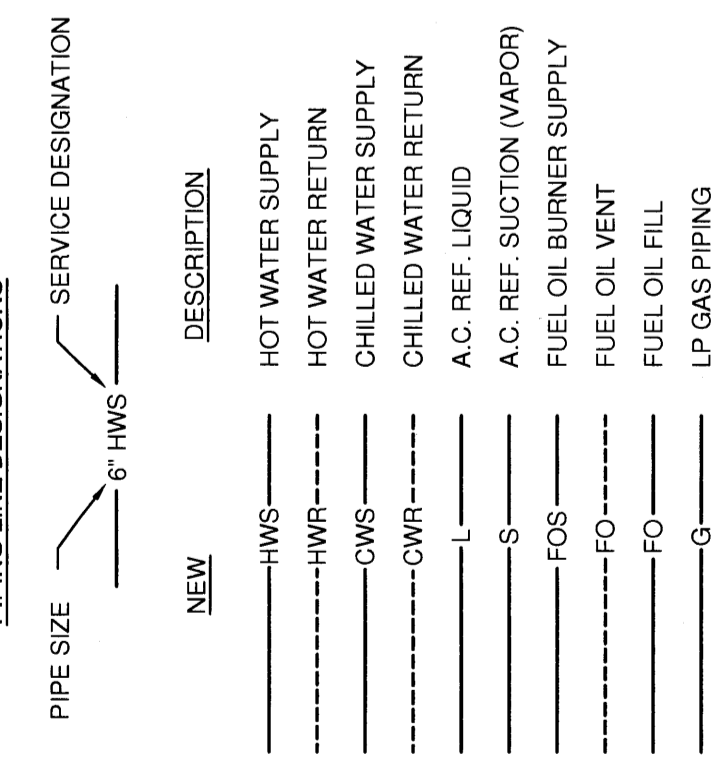


DUCTWORK STANDARDS



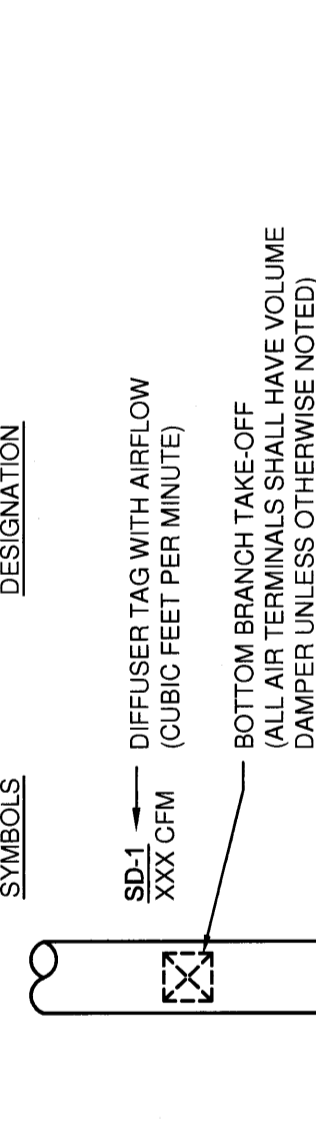
PIPING SERVICE LEGEND



GRILLE, REGISTERS, DIFFUSERS & AIRFLOW

ABBREVIATION	DESIGNATION	SYMBOL	DESIGNATION	SYMBOL
ER	EXHAUST REGISTER	EA	EXHAUST AIR	EA
RD	RETURN DIFFUSER	OA	OUTDOOR AIR	OA
RG	RETURN GRILLE	RA	RETURN AIR	RA
RR	RETURN REGISTER	RLA	RELIEF AIR	RLA
SD	SUPPLY DIFFUSER	SA	SUPPLY AIR	SA
LD	LINEAR SUPPLY DIFFUSER			
SD	SUPPLY DIFFUSER			
TD	TRANSFER DIFFUSER			
TG	TRANSFER GRILLE			
TR	TRANSFER REGISTER			
VD	VOLUME DAMPER			

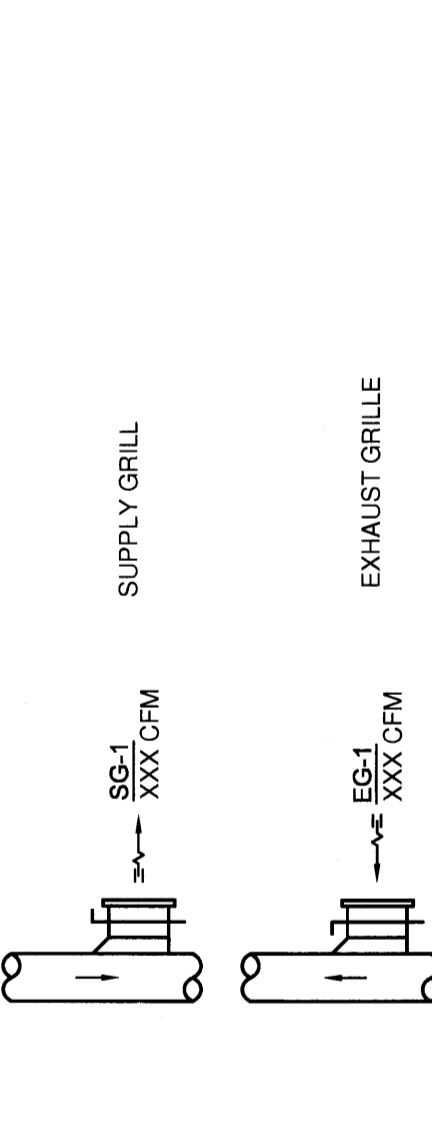
TYPICAL BOTTOM OF DUCT DIFFUSER DROP



TYPICAL CEILING DIFFUSER



TYPICAL REGISTER/GRILLE



EQUIPMENT TAG LEGEND

TAG	DESIGNATION
AHL-1	AIR HANDLING UNIT DESIGNATION
B-1	BOILER DESIGNATION
BB-1	BASEBOARD DESIGNATION
BR-1	CHILLER UNIT DESIGNATION
CBN-1	CABINET UNIT HEATER DESIGNATION
CON-1	CONNECTION UNIT DESIGNATION
EC-1	EXHAUST FAN DESIGNATION
EC-2	FAN COIL DESIGNATION
ETR-1	FINNED TUBE RADIATION DESIGNATION
HE-1	HEAT EXCHANGER DESIGNATION
HRL-1	HEAT RECOVERY UNIT DESIGNATION
HC-1	HEATING COIL DESIGNATION
MA-1	MAKE-UP AIR UNIT DESIGNATION
P-1	PUMP DESIGNATION
RF-1	RETURN FAN DESIGNATION
SH-1	SUPPLY FAN DESIGNATION
TS-1	TOE SPACE HEATER DESIGNATION
UH-1	UNIT HEATER DESIGNATION
UV-1	UNIT VENTILATOR DESIGNATION
VAV-1	VARIABLE AIR VOLUME BOX DESIGNATION
XT-1	EXPANSION TANK DESIGNATION
ZD-1	ZONE DAMPER DESIGNATION

HEATING AND VENTING SYMBOLS

NEW	DESCRIPTION
Symbol	BALANCING VALVE
Symbol	CONTROL VALVE
Symbol	TRIPLE DUTY VALVE
Symbol	SHUT-OFF VALVE
Symbol	BACKFLOW PREVENTER
Symbol	CHECK VALVE
Symbol	FLOW CONTROL VALVE
Symbol	STRAINER W/BRAN & FUSE COEN.
Symbol	CONTROL VALVE (3-WAY)
Symbol	PRESSURE RELIEF VALVE
Symbol	PRESSURE REDUCING VALVE (WATER)
Symbol	DIFFERENTIAL PRESSURE REGULATING VALVE
Symbol	FUEL OIL FUSIBLE SHUT-OFF
Symbol	FLOW SWITCH
Symbol	BASEBOARD RADIATION CONTROL GROUP
Symbol	THERMOSTAT - HEATING, COOLING
Symbol	DRAIN-OFF VALVE
Symbol	UNION
Symbol	INCREASES OR DECREASES CONCENTRIC
Symbol	INCREASES OR DECREASES ECCENTRIC
Symbol	DRIP LEG
Symbol	AUTOMATIC AIR VENT
Symbol	PIPE GUIDE
Symbol	PIPE ANCHOR
Symbol	DIRECTION OF FLOW
Symbol	PIPE CAP
Symbol	ELBOW UP OR RISE
Symbol	ELBOW DOWN OR DROP
Symbol	THERMOMETER
Symbol	PRESSURE GAUGE
Symbol	LOW WATER CUT-OFF
Symbol	THERMOSTAT - HEATING, COOLING
Symbol	TECHNICAL NOTE - APPLIES ONLY TO SHEET IN WHICH IT APPEARS.
Symbol	HVAC EQUIPMENT TAG IDENTIFICATION
Symbol	NEW CONNECTION TO EXISTING
Symbol	TEMPERATURE CONTROL PANEL
Symbol	STEAM TRAP
Symbol	DUCT SMOKE DETECTOR

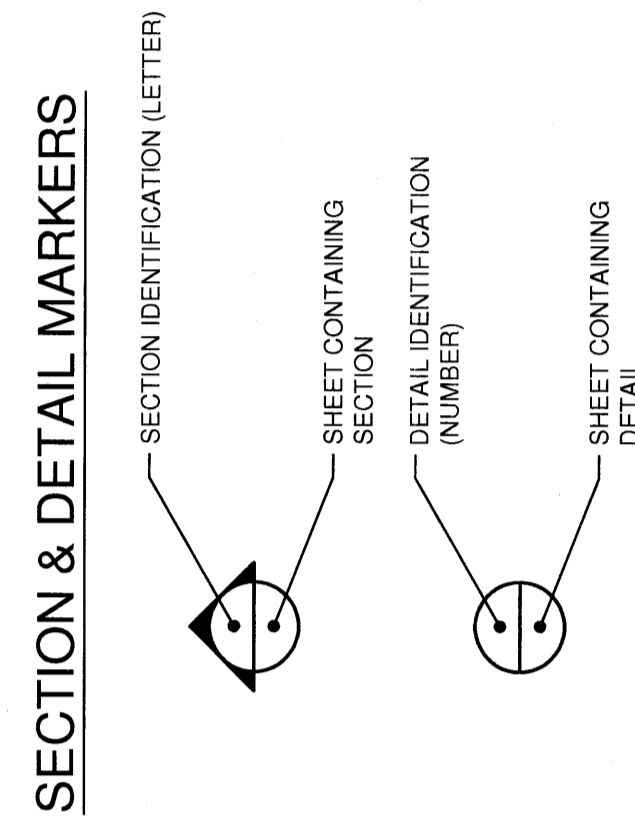
MISCELLANEOUS ABBREVIATIONS

ABBREVIATION	DESIGNATION
A	ANCHOR
AD	ACCESS DOOR
AF	ABOVE FINISHED FLOOR
APD	AIR PRESSURE DROP
AWT	AVERAGE WATER TEMPERATURE
BD	BACKDRAFT DAMPER
BDD	BOTTOM OF STEEL
BOS	BRITISH THERMAL UNITS
BTU	BRICK VENT
BV	COOLING CONDENSATE DRAINAGE
CD	CUBIC FEET PER MINUTE
CFM	DRY BULB
D	ENTERING AIR TEMP.
DB	ECCENTRIC
EAT	ELEVATION
ECC	ENTERING WATER TEMPERATURE
EL	FRESH AIR
EWT	FLEXIBLE CONNECTION
FA	FIRE DAMPER
FC	FULL LOAD AMPS
FD	GALLONS PER MINUTE
FLA	HORSEPOWER
GPM	HEATING, VENTILATING & AIR CONDITIONING
HP	HOT WATER BASEBOARD
HP	HERTZ
HVAC	LEAVING AIR TEMP.
HMBB	LINEAL FEET
HZ	LOCKED ROTOR AMPS
LAT	LEAVING WATER TEMPERATURE
LF	MAXIMUM
LFA	MINIMUM
LWC	LOW WATER CUT-OFF
LWT	LEAVING WATER TEMPERATURE
MAX	MINIMUM
MBH	MINIMUM
MD	MOTOR OPERATED DAMPER
MCD	MANUAL VENT
MIN	NORMALLY CLOSED
MN	OUTSIDE AIR
MOC	OIL SAFETY VALVE
MY	PRESSURE DROP
N.C.	RUN IN COVER
CA	STATIC PRESSURE
OSV	REVOLUTIONS PER MINUTE
PD	TOP OF STEEL
PRM	TURNING VANES
RIC	TYPICAL
PPM	VENT
SP	VOLUME DAMPER
TOS	WET BULB
TV	ZONE DAMPER
TV	EXISTING TO REMAIN
TY	EXISTING RELOCATED
V	NEW TO REF. EXISTING IN EXISTING LOCATION
VD	EXISTING TO BE REMOVED
W	REMOVE & RELOCATE EXISTING
WI	
WB	
ZD	
E	
ER	
NR	
R	
RR	

GENERAL NOTES

- ALL NEW SPACE THERMOSTATS SHALL BE MOUNTED 4'-0" ABOVE FINISHED FLOOR (AFF).
- EQUIPMENT, DUCTWORK AND PIPING LOCATIONS SHALL BE APPROXIMATE EXCEPT WHERE DIMENSIONED. EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR TO AVOID INTERFERENCES.
- FLEXIBLE CONNECTIONS SHALL BE PROVIDED FOR ALL UNITS AND DUCTWORK CONNECTIONS.
- PROVIDE ACCESS DOORS IN EQUIPMENT AND DUCTWORK FOR ACCESS TO DAMPERS, MOTORS, FILTERS, FANS AND ON BOTH SIDES OF HEATING COILS.
- PIPING SHALL BE RUN AS DIRECT AS POSSIBLE, PARALLEL TO A FORMING RIGHT ANGLE. SUPPORTED FROM THE STRUCTURE, FREE FROM POCKETS & BAGS & PITCHED TO LOW POINT DRAINS.
- LOCATE ALL VALVES FOR EASY ACCESS & SERVICE. LOCATE ALL VALVES SYSTEMS BELOW HORIZONTAL.
- ALL EXTERIOR WALL PENETRATIONS SHALL BE SEALED WEATHERTIGHT.
- ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- DUCTWORK SHALL BE COORDINATED TO PREVENT ANY INTERFERENCES W/ PLUMBING, PIPING, ELECTRICAL, STRUCTURAL, FIRE PROTECTION, ARCHITECTURAL AND OTHER WORK.
- ALL DUCT SIZES SHOWN ARE CLEAR INTERNAL DIMENSIONS.
- CONTRACTOR TO FIELD VERIFY ALL EXISTING INCLUDING LOCATIONS & ARRANGEMENTS OF SAME. COORDINATE NEW WORK WITH EXISTING CONDITIONS.

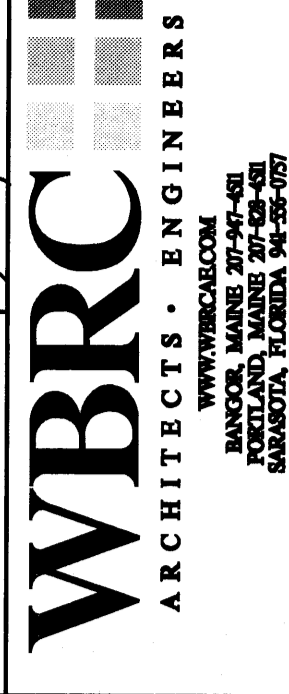
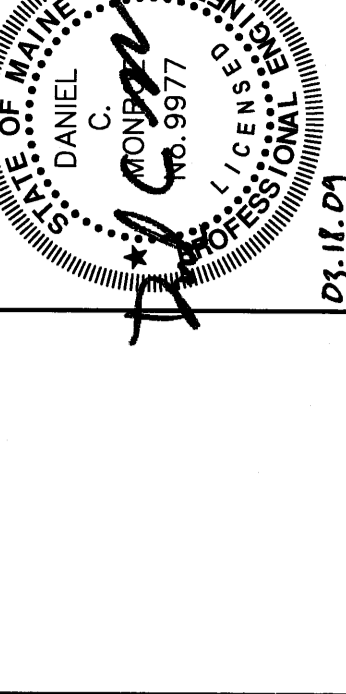
SECTION & DETAIL MARKERS



PERMIT APPLICATION

SUBMISSION 3-18-09

CURRENT ISSUE STATUS:



OCEAN AVENUE ELEMENTARY SCHOOL
PORTLAND, ME

MECHANICAL LEGEND

SHEET TITLE:	331610-M-001
PROJECT No.:	331610
SCALE:	N.T.S.
PROJECT MANAGER:	MEJ
DRAWN BY:	LAC
CHECKED BY:	DMON
SHEET No.:	M-001