



100% CONSTRUCTION DOCUMENTS

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES

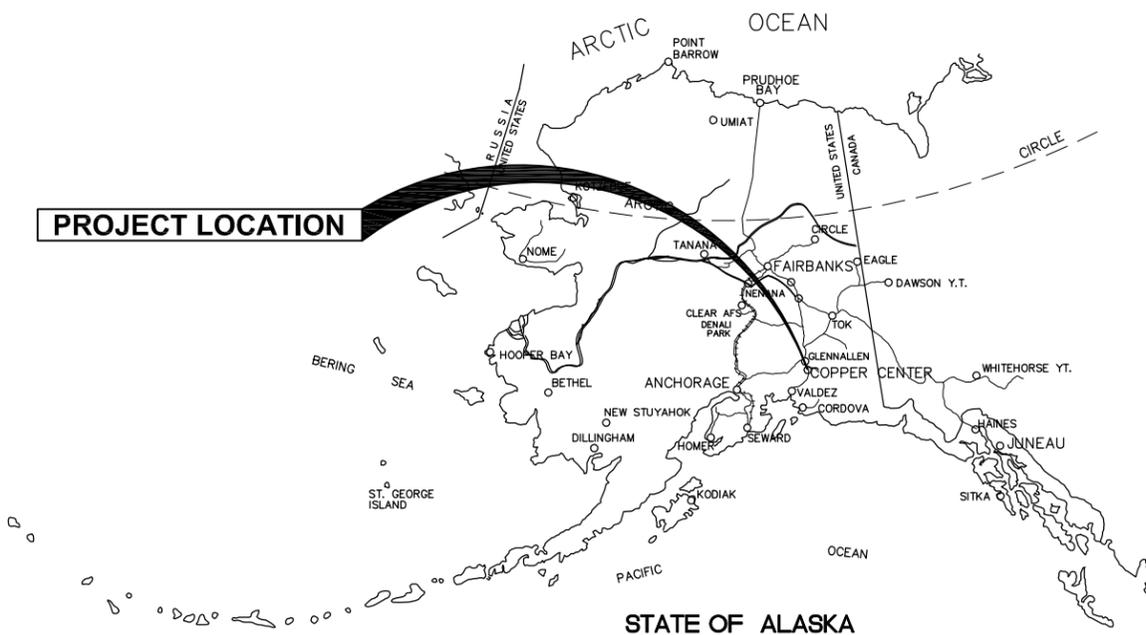
DNR FY15 SOUTHCENTRAL REGION PROGRAM

NEW WELL HOUSE - COPPER CENTER

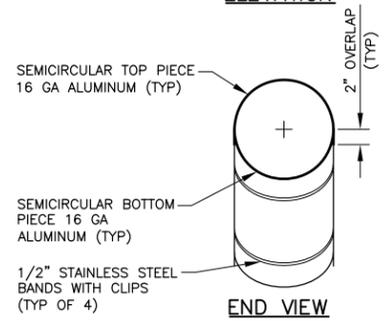
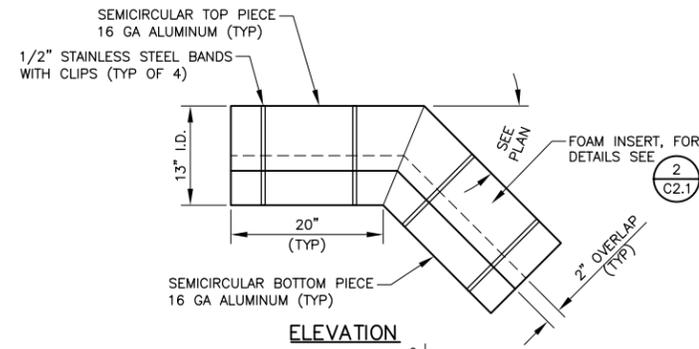
PO BOX 185, GLENNALLEN, ALASKA 99588

November 20, 2015

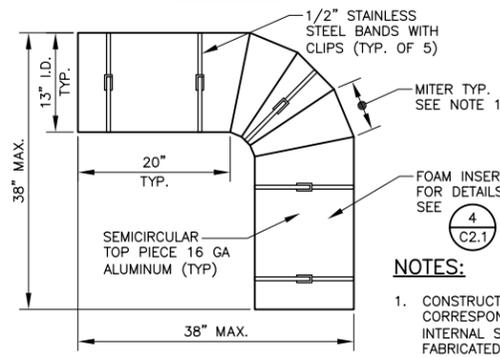
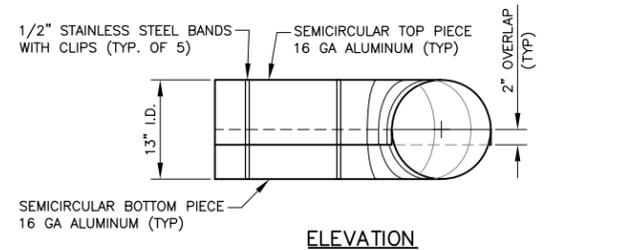
Stantec Project Number: 2046048600



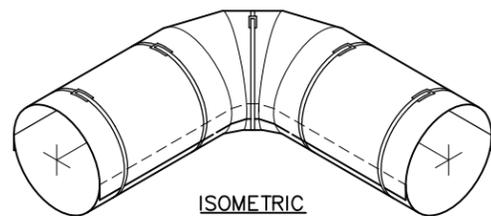
SHEET INDEX	
SHEET NUMBER	SHEET TITLE
G1.0	COVER SHEET
C1.0	WATER SERVICE PLAN
C2.0	WATER SERVICE DETAILS
C2.1	WATER SERVICE DETAILS
C2.2	WATER SERVICE DETAILS
A1.1	FLOOR PLAN, EXTERIOR ELEVATIONS & SECTIONS
A8.1	EXTERIOR DETAILS
M1.0	MECHANICAL LEGEND AND ABBREVIATIONS
M1.1	MECHANICAL SCHEDULES
M1.2	DEMOLITION AND NEW WORK AND ONE-LINE DIAGRAMS
M1.3	DETAILS
E1.0	ELECTRICAL SITE PLAN & LENDEN & ABBREVIATIONS
E2.0	WELL HOUSE PLAN & POWER ONE-LINE & LIGHT FIXTURE SCHEUDLE



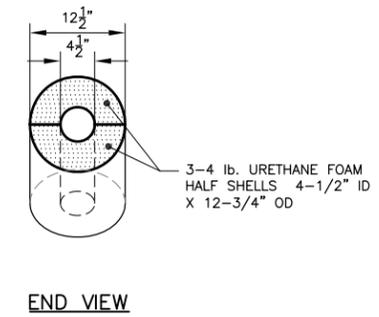
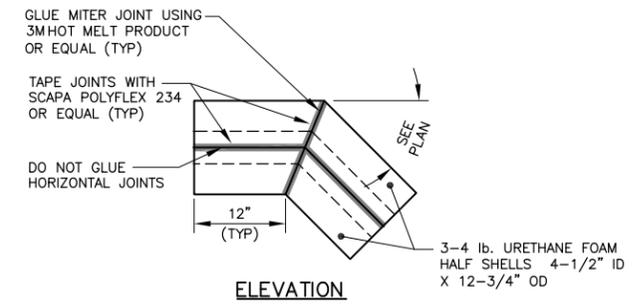
1
C2.1 **MOLDED FITTING SHROUD**
SCALE: N.T.S.



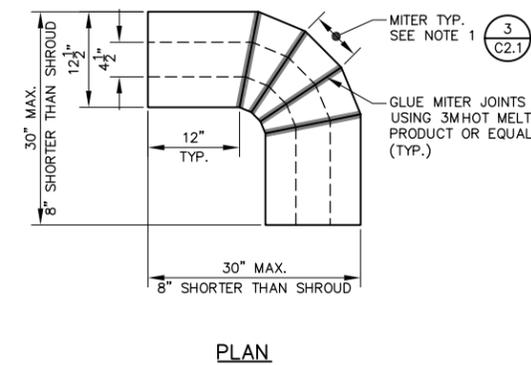
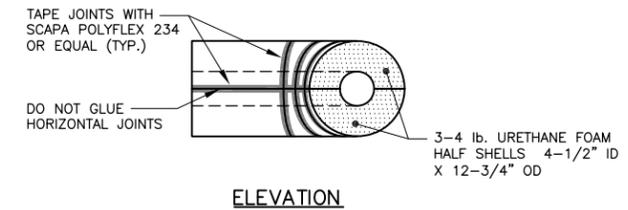
NOTES:
1. CONSTRUCT MITERS TO CORRESPOND WITH INTERNAL SWEEP / FABRICATED FITTINGS.



3
C2.1 **LONG SWEEP FITTING SHROUD**
SCALE: N.T.S.



2
C2.1 **MOLDED FITTING URETHANE FOAM INSERT**
SCALE: N.T.S.



4
C2.1 **LONG SWEEP FITTING URETHANE FOAM INSERT**
SCALE: N.T.S.

Revision	By	Appd.	Y/M/MD
			YY/MM/DD

Client/Project

Stantec
Permit-Seal



Project Number:
File Name:

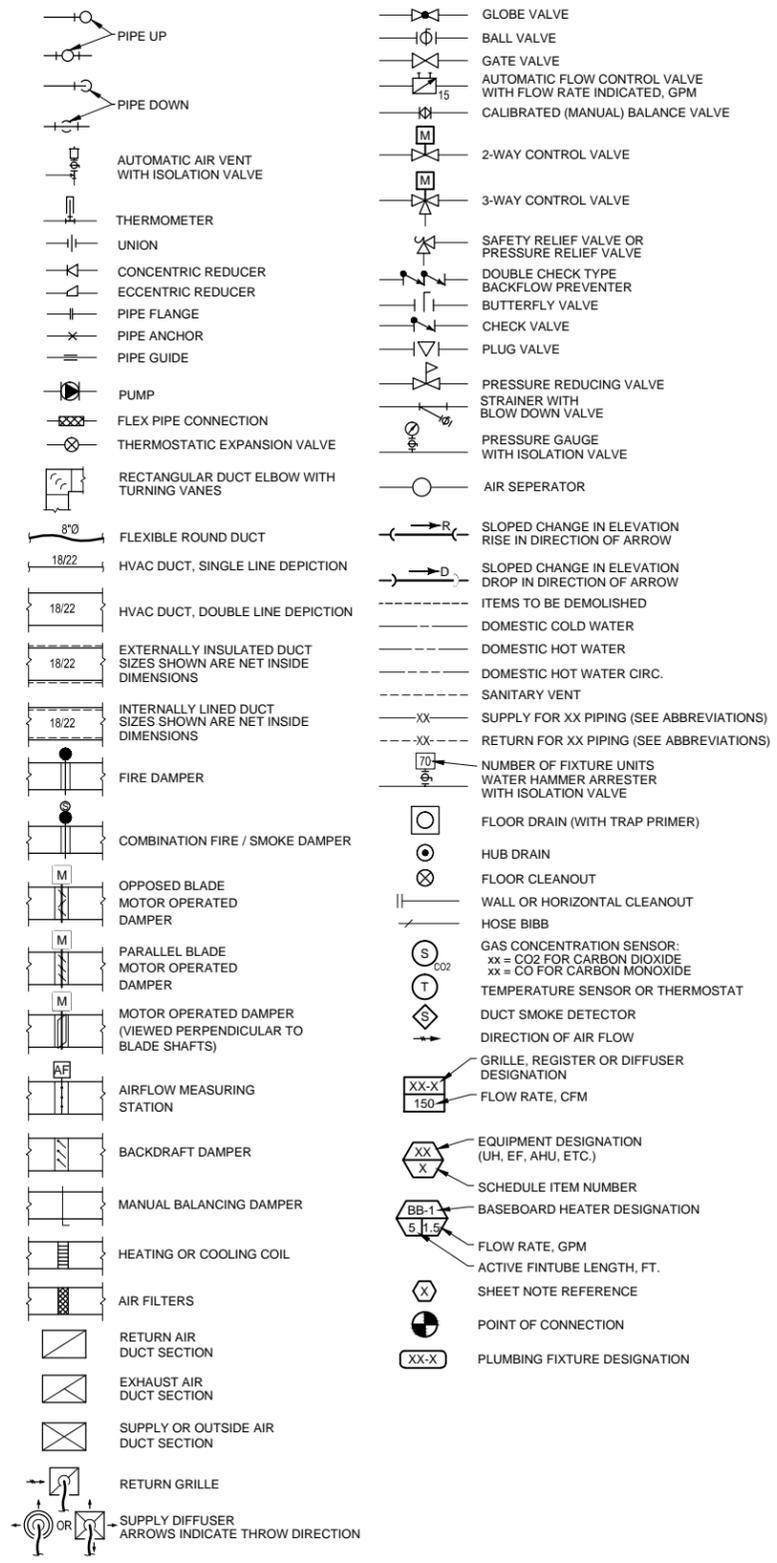
Dwn. Chkd. Dsgn. Y/M/MD

Drawing No. of

Revision Sheet

Sheet Title
WATER SERVICE DETAILS

MECHANICAL LEGEND



ALL SYMBOLS DO NOT NECESSARILY APPEAR ON DRAWINGS

MECHANICAL ABBREVIATIONS

GENERAL AND UNITS		EQUIPMENT	
A	AMPS (AMPERES)	ACU	AIR CONDITIONING UNIT
AD	ACCESS DOOR	ACCU	AIR-COOLED CONDITIONING UNIT
ADA	AMERICANS WITH DISABILITIES ACT	AHU	AIR-HANDLING UNIT
AF	AIR FOIL	AS	AIR SEPARATOR
AFB	ABOVE FINISHED FLOOR	BB	BASEBOARD
AFG	ABOVE FINISHED GRADE	BLR	BOILER
AFT	AVERAGE FLUID TEMPERATURE	CC	COOLING COIL
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	CH	CHILLER
AHAP	AS HIGH AS PRACTICABLE	CMPR	COMPRESSOR
AHJ	AUTHORITY HAVING JURISDICTION	CNV	CONVECTOR
AL	ALUMINUM	CR	CONDENSATE RECEIVER
ALT	ALTERNATE	CU	CONDENSING UNIT
AMB	AMBIENT	CUH	CABINET UNIT HEATER
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	CVL	CONTROL VALVE
APD	AIR PRESSURE DROP	DC	DRY COOLER
APPROX	APPROXIMATE	DF	DRINKING FOUNTAIN
AR	ACID RESISTANT	DS	DUCT SILENCER
ARCH	ARCHITECTURAL	DSN	DOWNSPOUT NOZZLE
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	DT	DAY TANK
ATM	ATMOSPHERE	DWT	DOMESTIC WATER TANK
AUTO	AUTOMATIC	EF	EXHAUST FAN
AVG	AVERAGE	EG	EXHAUST AIR GRILLE
AWG	AMERICAN WIRE GAUGE	ERV	ENERGY RECOVERY VENTILATOR
AWT	AVERAGE WATER TEMPERATURE	ET	EXPANSION TANK
BAS	BUILDING AUTOMATION SYSTEM	FD	FLOOR DRAIN, FIRE DAMPER
BHP	BRAKE HORSEPOWER	FDC	FIRE DEPARTMENT CONNECTION
BI	BACKWARD INCLINED	FOT	FUEL OIL TANK
BLDG	BUILDING	FRN	FURNACE
BNZ	BRONZE	FS	FLOOR SINK
BTU	BRITISH THERMAL UNIT	FSD	FIRE/SMOKE DAMPER
BTUH	BTU PER HOUR	GMT	GLYCOL MIX TANK
CAP	CAPACITY	GT	GREASE TRAP
CCW	COUNTER-CLOCKWISE	HB	HOSE BIBB
CFH	CUBIC FEET PER HOUR	HC	HEATING COIL
CFM	CUBIC FEET PER MINUTE	HRV	HEAT RECOVERY VENTILATOR
CI	CAST IRON	HTR	HEATER
CL	CENTER LINE	HWG	HOT WATER GENERATOR
CLG	CEILING	HX	HEAT EXCHANGER
CMU	CONCRETE MASONRY UNIT	KH	KITCHEN HOOD
COEF	COEFFICIENT	LAV	LAVATORY
CONC	CONCRETE	LVR	LOUVER
COND	CONDENSER	MAU	MAKEUP AIR UNIT
CONN	CONNECTION	MS	MOP SINK
CONT	CONTINUATION	MTR	METER
COP	COEFFICIENT OF PERFORMANCE	NFWD	NON-FREEZE WALL HYDRANT
CTR	CENTER	ORD	OVERFLOW ROOF DRAIN
CU	COPPER	OWS	OIL/WATER SEPARATOR
CU FT	CUBIC FEET	PHC	PREHEAT COIL
CU IN	CUBIC INCH	PMP	PUMP
CV	VALVE FLOW COEFFICIENT	PT	PRESSURE TANK
CW	CLOCKWISE	RAF	RETURN AIR FAN
DB	DECIBEL	RG	RETURN AIR GRILLE
DBT	DRY-BULB TEMPERATURE	RP	ROOF DRAIN
DDC	DIRECT DIGITAL CONTROL	RD	ROOF DRAIN
DEG	DEGREE	RFZ	RADIANT FLOOR ZONE
DEG C	DEGREES CENTIGRADE	RFH	ROOF HOOD
DEG F	DEGREES FAHRENHEIT	RHC	REHEAT COIL
DEMO	DEMOLITION	RTU	ROOFTOP UNIT
DI	DUCTILE IRON	SD	SUPPLY AIR DIFFUSER
DIA OR Ø	DIAMETER	SAF	SUPPLY AIR FAN
DIFF	DIFFERENCE	SHWR	SHOWER
DN	DOWN	SLP	SEWAGE LIFT PUMP
DOM	DOMESTIC	SNK	SINK
DTL	DETAIL	SMZ	SNOW MELT ZONE
DWDI	DOUBLE WIDTH DOUBLE INLET	ST	STEAM TRAP
DWG	DRAWING	TG	TRANSFER AIR GRILLE
DX	DIRECT EXPANSION	TP	TRAP PRIMER
(E)	EXISTING	UR	URINAL
EA	EACH		
EAT	ENTERING AIR TEMPERATURE		
EER	ENERGY EFFICIENCY RATIO		
EFF	EFFICIENCY		
EFT	ENTERING FLUID TEMPERATURE		
EG	ETHYLENE GLYCOL		
EGT	ENTERING GLYCOL TEMPERATURE		
ELEC	ELECTRICAL		
ELEV	ELEVATION		
ENT	ENTERING		
EQIV FT	EQUIVALENT FEET		
ESP	EXTERNAL STATIC PRESSURE		
ETR	EXISTING TO REMAIN		
EVAP	EVAPORATOR		
EWT	ENTERING WATER TEMPERATURE		
EXH	EXHAUST		
FA	FACE AREA OR FREE AREA		
FC	FORWARD CURVED		
FF	FINISHED FLOOR		
FLA	FULL LOAD AMPS		
FLEX	FLEXIBLE		
FLR	FLOOR		
FO	FUEL OIL		
FP	FREEZING POINT		
FPD	FLUID PRESSURE DROP		
FPF	FINS PER FOOT		
FPI	FINS PER INCH		
FPM	FEET PER MINUTE		
FPS	FEET PER SECOND		
FT	FOOT OR FEET		
FVEL	FACE VELOCITY		
GAL	GALLONS		
GALV	GALVANIZED		
GPD	GALLONS PER DAY		
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE		
GR	GRAINS		
HD	HEAD		
HDPE	HIGH DENSITY POLYETHYLENE		
HORIZ	HORIZONTAL		
HP	HORSEPOWER		
HR	HOUR(S)		
HT	HEIGHT		
HTG	HEATING		
HVAC	HEATING, VENTILATING & AIR-CONDITIONING		
HZ	FREQUENCY (HERTZ)		
IAW	IN ACCORDANCE WITH		
ID	DIAMETER, INSIDE		
IMP	IMPELLER		
IN HG	INCHES MERCURY		
IN WG	INCHES WATER GAUGE		
INSUL	INSULATION		
K	THERMAL CONDUCTIVITY		
KW	KILOWATT		
KWH	KILOWATT HOUR		
LAT	LEAVING AIR TEMPERATURE		
LB/HR	POUNDS PER HOUR		
LBS	POUNDS		
LF	LINEAL FEET		
LFT	LEAVING FLUID TEMPERATURE		
LGT	LEAVING GLYCOL TEMPERATURE		
LP	LOW PRESSURE		
LWT	LEAVING WATER TEMPERATURE		
MAT	MIXED AIR TEMPERATURE		
MAX	MAXIMUM		
MBH	THOUSAND BTU PER HOUR		
MCA	MINIMUM CIRCUIT AMPACITY		
MECH	MECHANICAL		
MERV	MINIMUM EFFICIENCY REPORTING VALUE		
MFR	MANUFACTURER		
MH	MANHOLE		
MIN	MINIMUM		
MOCOP	MAXIMUM OVERCURRENT PROTECTION		
MPH	MILES PER HOUR		
MTD	MOUNTED		
N	NO		
NA	NOT APPLICABLE		
NC	NOISE CRITERIA, OR NORMALLY CLOSED		
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION		
NIC	NOT IN CONTRACT		
NO	NORMALLY OPEN		
NTS	NOT TO SCALE		
OAT	OUTSIDE AIR TEMPERATURE		
OC	ON CENTERS		
OD	DIAMETER, OUTSIDE		
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED		
OFOI	OWNER FURNISHED, OWNER INSTALLED		
OZ	OUNCE		
PD	PRESSURE DROP		
PG	PROPYLENE GLYCOL		
PH	PHASE (ELECTRICAL)		
PLBG	PLUMBING		
PNL	PANEL		
POC	POINT OF CONNECTION		
PPH	POUNDS PER HOUR		
PPM	PARTS PER MILLION		
PRESS	PRESSURE		
PROP	PROPELLER		
PSI	POUNDS PER SQUARE INCH		
PSIA	POUNDS PER SQUARE INCH - ABSOLUTE		
PSID	POUNDS PER SQUARE INCH - DIFFERENTIAL		
PSIG	POUNDS PER SQUARE INCH - GAUGE		
QTY	QUANTITY		
RAD	RADIANT OR RADIATION		
RAT	RETURN AIR TEMPERATURE		
RCVR	RECEIVER		
RECIRC	RECIRCULATE		
RED	REDUCER		
REF	REFERENCE		
REFRIG	REFRIGERANT		
REV	REVOLUTIONS		
RH	RELATIVE HUMIDITY		
RM	ROOM		
RPM	REVOLUTIONS PER MINUTE		
S	SENSOR		
SAT	SUPPLY AIR TEMPERATURE		
SCFM	STANDARD CUBIC FEET PER MINUTE		
SCHD	SCHEDULE		
SF	SQUARE FEET		
SH	SENSIBLE HEAT		
SHG	SENSIBLE HEAT GAIN		
SHR	SENSIBLE HEAT RATIO		
SHT	SHEET		
SP	STATIC PRESSURE		
SPD	STATIC PRESSURE DROP		
SPEC	SPECIFICATION		
SPKLR	SPRINKLER		
SQ	SQUARE		
SS	STAINLESS STEEL		
STD	STANDARD		
SWSI	SINGLE WIDTH SINGLE INLET		
TD	TEMPERATURE DROP/DIFFERENCE		
TEMP	TEMPERATURE		
THRU	THROUGH		
TSP	TOTAL STATIC PRESSURE		
TSTAT	THERMOSTAT		
TYP	TYPICAL		
UG	UNDERGROUND		
UNO	UNLESS NOTED OTHERWISE		
V	VOLTS OR VOLTAGE		
VAC	VOLTS (ALTERNATING CURRENT)		
VAV	VARIABLE AIR VOLUME		
VDC	VOLTS (DIRECT CURRENT)		
VEL	VELOCITY		
VERT	VERTICAL		
VFD	VARIABLE FREQUENCY DRIVE		
VOL	VOLUME		
VP	VELOCITY PRESSURE		
VSD	VARIABLE SPEED DRIVE		
W	WATT		
W/	WITH		
W/O	WITHOUT		
WB	WET BULB		
WBT	WET-BULB TEMPERATURE		
WG	WATER GAUGE		
WP	WEATHER-PROOF		
WPD	WATER PRESSURE DROP		
WT	WEIGHT		
Y	YES		
YD	YARD		
VAV	VARIABLE AIR VOLUME TERMINAL		
UH	UNIT HEATER		
WC	WATER CLOSET		
WH	WATER HEATER		
XJ	EXPANSION JOINT		
DUCTWORK			
BDD	BACKDRAFT DAMPER		
BOD	BOTTOM OF DUCT		
CA OR C/A	COMBUSTION AIR		
DD	DUCT SMOKE DETECTOR		
EA OR E/A	EXHAUST AIR		
FD	FIRE DAMPER		
FF	FLAT FILTER		
FOB	FLAT ON BOTTOM		
FOT	FLAT ON TOP		
FSD	FIRE/SMOKE DAMPER		
LA OR L/A	RELIEF AIR		
MA OR M/A	MIXED AIR OR MAKEUP AIR		
MOD	MOTOR-OPERATED DAMPER		
OA OR O/A	OUTSIDE AIR		
OBD	OPPOSED BLADE DAMPER		
RA OR R/A	RETURN AIR		
SA OR S/A	SUPPLY AIR		
SD	SMOKE DAMPER		
TA OR T/A	TRANSFER AIR		
TOD	TOP OF DUCT		
VD	VOLUME DAMPER		
PIPING			
A	COMPRESSED AIR		
AAV	AUTOMATIC AIR VENT		
ARV	ACID RESISTANT VENT		
ARW	ACID RESISTANT WASTE		
BOP	BOTTOM OF PIPE		
CGR	COOLING GLYCOL RETURN		
CGS	COOLING GLYCOL SUPPLY		
CHWR	CHILLED WATER RETURN		
CHWS	CHILLED WATER SUPPLY		
CO	CLEANOUT		
CR	CONDENSATE RETURN		
CW	COLD WATER		
CWC	COLD WATER CIRCULATION		
CWR	COOLING WATER RETURN		
CWS	COOLING WATER SUPPLY		
DIP	DUCTILE IRON PIPE		
F	FIRE SPRINKLER		
FCO	FLOOR CLEANOUT		
FD	FLOOR DRAIN, OR FIRE DAMPER		
FDC	FIRE DEPARTMENT CONNECTION		
FOR	FUEL OIL RETURN		
FOS	FUEL OIL SUPPLY		
G	NATURAL GAS		
HGR	HEATING GLYCOL RETURN		
HGS	HEATING GLYCOL SUPPLY		
HPS	HIGH PRESSURE STEAM		

