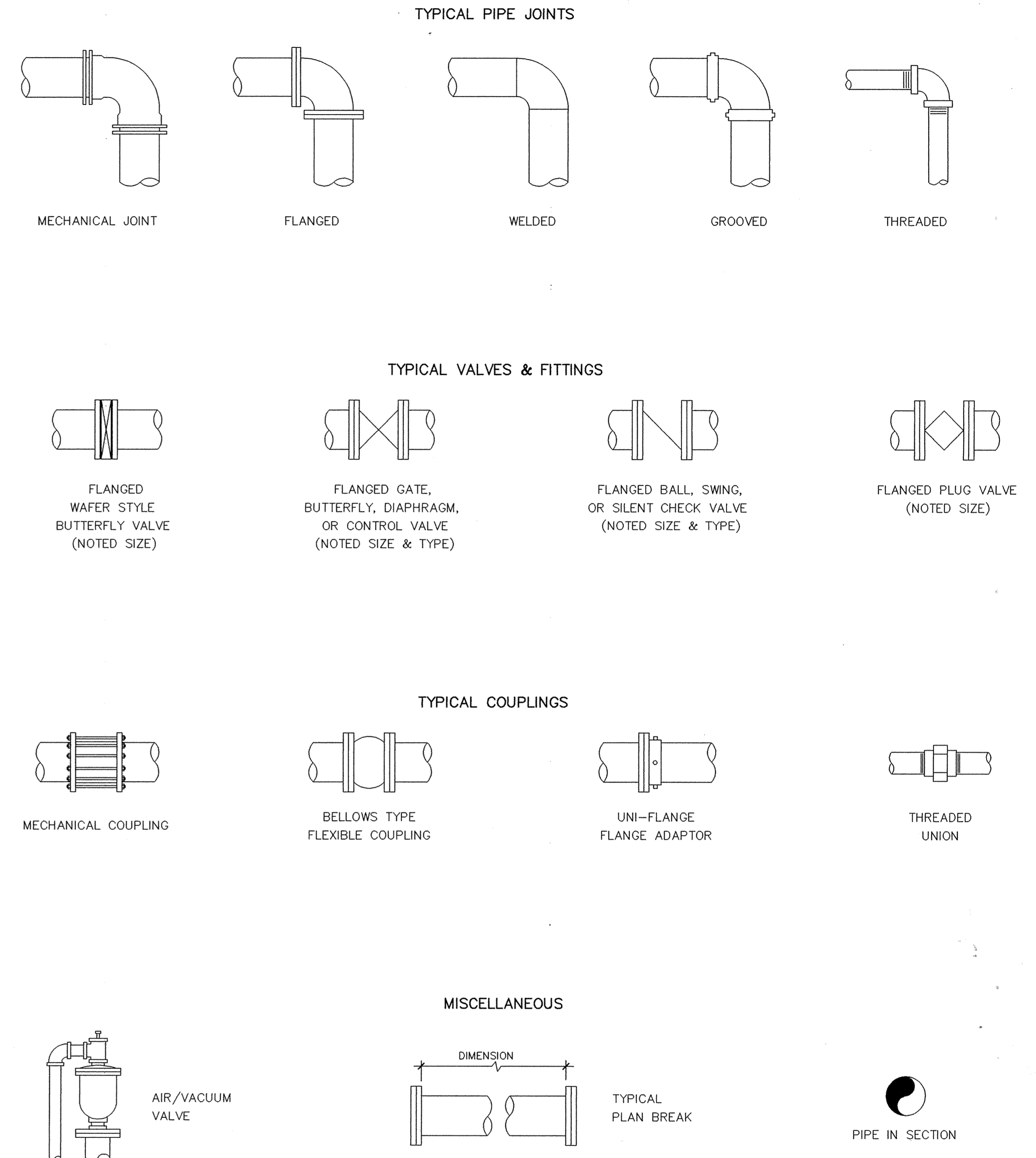
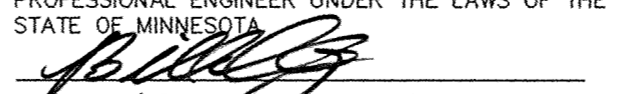



# PROCESS ABBREVIATIONS

ADDM	Addendum	GALV	Galvanized	QTY	Quantity
ADDL	Additional	GV	Gate Valve	QUAD	Quadrant
ALT	Alternate	GA	Gauge	R	Radius
ALUM	Aluminum	GAL	Gallon	RED	Reducer
ASTM	American Society for Testing & Materials	GPH	Gallon Per Hour	REF	Reference
AWA	American Waterworks Association	GPM	Gallon Per Minute	REINF	Reinforcing/Reinforcement
AB	Anchor Bolt	GPS	Gallon Per Second	RCP	Reinforced Concrete Pipe
ANCH	Anchorage	GR	Grade	RTRP	Reinforced Thermosetting Resin Pipe
L	Angle	GRGT	Grating	REQ'D	Required
APPROX	Approximate(ly)	GT	Grout	REQMT	Requirement
ARCH	Architectural	HS	Headed Studs	REV	Revise/Revision
⊙	At	HDR	Header	RPM	Revolutions Per Minute
AVG	Average	HVAC	Heating, Ventilating and Air Conditioning	RPS	Revolutions Per Second
AZ	Azimuth	HVY	Heavy	RO	Rough Opening
B/B	Back to Back	HGT	Height	SCH	Schedule
BAL	Balance	HEX	Hexagonal	SECT	Section
B PL	Base Plate	HDPE	High Density Polyethylene	SHIT	Sheet
BSMT	Basement	HP	Horsepower	SIM	Similar
BM	Beam or Bench Mark	HWL	High Water Level	SVI	Sludge Volume Index
BRG	Bearing	HOK	Hook/Hooked	SG	Sluice Gate
BRG PL	Bearing Plate	HRZ	Horizontal	SP	Space/Spacing
BTWN	Between	HD GALV	Hot Dipped Galvanized	SPEC	Specification
BOD	Biochemical Oxygen Demand	IN	Inch	SQ	Square
BITUM	Bituminous	INCH	Include	SQ FT	Square Feet
BF	Blind Flange	INFO	Information	STAG	Staggered
BLK	Block	ID	Inside Diameter	SS	Stainless Steel (preceded by type 304, 316, etc.)
BLKG	Blocking	INSUL	Insulation	STD	Standard
BS	Both Sides	INT	Interior	SCFM	Standard Cubic Feet per Minute
BOT	Bottom	INV	Invert	STA	Station
BFE	Bottom of Footing Elevation	JT	Joint	STL	Steel
BPE	Bottom of Plate Elevation	JST	Joist	STL JST	Steel Joist
BRCG	Bracing	KV	Knife Valve	STRUCT	Structure/Structural
BRKT	Bracket	KO	Knockout	SYMM	Symmetrical
BHP	Brake Horsepower	LAM	Laminate/Lamination	TAN	Tangent
BRK	Brick	LG	Long/Length	TEMP	Temporary/Temperature
BTU	British Thermal Unit	LWGT	Light Weight	TEF	Teflon
BLDG	Building	LIN	Lineal/Linear	THK	Thickness
BV	Butterfly Valve	I	Liter	THRD	Threaded
X	By	LL	Live Load	T&B	Top & Bottom
CPTY	Capacity	LD BRG	Load Bearing	TBE	Top of Beam Elevation
CIP	Cast Iron Pipe	LOC	Location	TCE	Top of Concrete Elevation
CTR	Center	LONGIT	Longitudinal	TDE	Top of Deck Elevation
C	Centerline	LR	Long Radius	TFE	Top of Footing Elevation
C/C	Center to Center	LP	Low Point	TGE	Top of Grout Elevation
cm	Centimeter	MH	Manhole	TPE	Top of Pier Elevation
CF	Cubic Feet	MFR	Manufacturer	TPLE	Top of Plank Elevation
CFH	Cubic Feet per Hour	MK	Mark	TSE	Top of Slab Elevation
CFM	Cubic Feet per Minute	MAS	Masonry	TSS	Total Suspended Solids
CFS	Cubic Feet per Second	MO	Masonry Opening	TRANSV	Transverse
C	Channel	MATL	Material	TYP	Typical
CV	Check Valve	MAX	Maximum	UNEXCAV	Unexcavated
COD	Chemical Oxygen Demand	MECH	Mechanical	UON	Unless Otherwise Noted
CO	Clean Out	MJ	Mechanical Joint	VB	Vapor Barrier
CLR	Clear/Clearance	MED	Medium	VCP	Vitrified Clay Pipe
COL	Column	MTL	Metal	VERT	Vertical
COMP	Composite	m	Meter	VOL	Volume
CON	Concentric	MEZZ	Mezzanine	WS	Water Surface
CONC	Concrete	MID	Middle	WGT	Weight
CMU	Concrete Masonry Unit	ml	Milliliter	WWM	Welded Wire Mesh
CONN	Connection	mm	Millimeter	WF	Wide Flange
CONSTR	Construction	MGD	Million Gallons per Day	W	With
CONSTR JT	Construction Joint	MIN	Minimum	W/O	Without
CONT	Continuous	MISC	Miscellaneous	WP	Working Point
CONTR	Contractor	MOD	Module/Modular	YD	Yard
CJ	Control Joint	MTR	Mortar		
COORD	Coordinate	MTD	Mounted		
		MV	Mud Valve		
DEG	Degree	NBS	National Bureau of Standards		
DEMO	Demolition	NPS	National Pipe Size		
DET	Detail	NPT	National Pipe Thread		
DIAG	Diagonal	NS	Near Side		
DIA or Ø	Diameter	NOM	Nominal		
DIM	Dimension	N.C.	Normally Closed		
DO	Dissolved Oxygen	N.O.	Normally Open		
DIP	Ductile Iron Pipe	NA	Not Applicable		
DBL	Double	NIC	Not in Contract		
DT	Double Tee	NTS	Not to Scale		
DWL	Dowel	NO or #	Number		
DN	Down	OC	On Center		
DWG	Drain Waste and Vent	OPNG	Opening		
DRWG	Drawing	OPP	Opposite		
		O/O	Out to Out		
EA	Each	OD	Outside Diameter		
EE	Each End	OF	Outside Face		
EW	Each Way	OH	Overhead		
ECC	Eccentric	PNL	Panel		
ELEC	Electrical	PAR	Parallel		
EL	Elevation	PPB	Parts Per Billion		
EMB	Embedment	PPM	Parts Per Million		
ENGR	Engineer	PERP	Perpendicular		
EQ	Equal	PE	Plain End		
EQUIP	Equipment	PV	Plug Valve		
EX	Existing	PT	Point		
EXP	Expansion	PD	Positive Displacement		
EXP BT	Expansion Bolt	PL	Plate		
EXP JT	Expansion Joint	PREF	Preformed		
EXT	Exterior	PRV	Pressure Reducing Valve		
		LB	Pound/Pounds		
FAB	Fabricate(d)	PSF	Pounds per Square Foot		
F/F	Face to Face	PSIA	Pounds per Square Inch Absolute		
FS	Far Side	PSI	Pounds per Square Inch		
FT	Foot/Feet	PSIG	Pounds per Square Inch Gauge		
FPM	Feet Per Minute	P.T.	Pressure Treated		
FPS	Feet Per Second	PROC	Process		
FIN	Finish	PROJ	Projection		
FLG	Flange	PVC	Polyvinyl Chloride		
FLEX	Flexible				
FLR	Floor				
FM	Flow Meter				
FTG	Footing				
FDN	Foundation				
FRMG	Framing				
FRP	Fiber Reinforced Polyester				

# TYPICAL PROCESS SYMBOLS



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  DATE 11/8/95 REG. NO. 22610		1326 ENERGY PARK DRIVE ST. PAUL, MINNESOTA 55108 (612) 644-4389	DATE _____	DESCRIPTION _____	DESIGNED BC_GG CHECKED TAR DRAWN GG	CITY OF ELK RIVER WASTEWATER TREATMENT FACILITY UPGRADE PROCESS ABBREVIATIONS & SYMBOLS	<b>P1</b>
			REVISIONS _____	GRAPHIC SCALE 0 HORIZ. 4 0 VERT. 4	DATE OCT. 1995 SHEET 54 OF 112 SHEETS PROJECT NO. 230-151		

SHEET 54 OF 112 SHEETS  
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 WASTEWATER TREATMENT FACILITY UPGRADE  
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