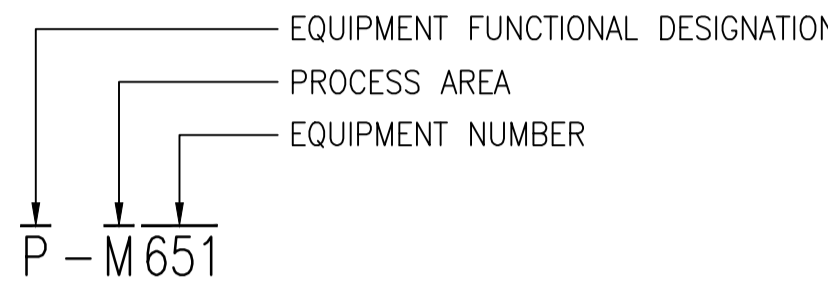
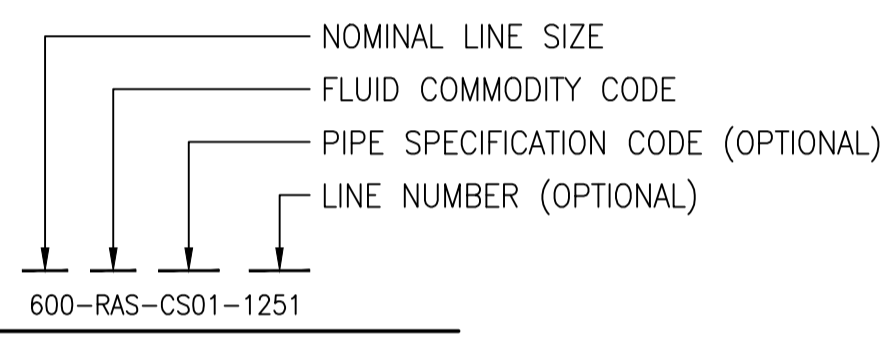


PROCESS AREA IDENTIFIERS	
IDENTIFIER	DEFINITION
A	GENERAL OR PROCESS AREA IS NOT APPLICABLE
B	SERVICE BUILDING, BOILERS, CHEMICAL STORAGE BUILDING
G	PUMP & SCREEN BUILDING, GRIT BUILDING, STANDBY GENERATOR BUILDING
M	ADMINISTRATION BUILDING & SEPTAGE FACILITY
P	PRIMARY CLARIFIERS
R	OXYGEN REACTORS
S	SECONDARY CLARIFIERS
U	UV DISINFECTION

**EQUIPMENT IDENTIFICATION**



**PROCESS LINE DESIGNATION**



**IMPERIAL PIPE SIZE CHART (METRIC EQUIVALENT)**

IN	MM	IN	MM
1/8	= 3	14	= 350
1/4	= 6	16	= 400
3/8	= 10	18	= 450
1/2	= 12	20	= 500
3/4	= 20	22	= 550
1	= 25	24	= 600
1 1/4	= 32	26	= 650
1 1/2	= 38	28	= 700
2	= 50	30	= 750
2 1/2	= 65	32	= 800
3	= 75	34	= 850
3 1/2	= 90	36	= 900
4	= 100	38	= 950
4 1/2	= 112	40	= 1000
5	= 125	42	= 1050
6	= 150	44	= 1100
7	= 175	46	= 1150
8	= 200	48	= 1200
9	= 225	50	= 1250
10	= 250	52	= 1300
11	= 275	54	= 1350
12	= 300		

EQUIPMENT FUNCTIONAL DESIGNATIONS MECHANICAL AND PROCESS EQUIPMENT		
IDENTIFIER	DEFINITION	NOTES
AD	AIR DRYER	
AF	AERATION FAN	
AG	AGITATOR	
AHU	AIR HANDLING UNIT	INCLUDES MAKE-UP AIR UNIT
B	BLOWER	
BD	BALANCE DAMPER	
BFP	BACK FLOW PREVENTOR	
BLR	BOILER	
BS	BAR SCREEN	
CAL	CALIBRATION COLUMN	
CC	COOLING COIL	
CDR	CONDENSOR	
CHLR	CHILLER	
CM	CLARIFIER MECHANISM	
CMP	COMPRESSOR	
CNV	CONVEYOR	INCLUDES SKIMMERS
CRN	CRANE	
CT	COOLING TOWER	
CU	CONDENSING UNIT	
CV	CHECK VALVE	
EF	EXHAUST FAN	
F	FAN - GENERAL	
FA	FLAME ARRESTOR	
FC	FAN COIL	
FD	FIRE DAMPER	UTILIZE SAME EQUIPMENT NUMBER AS AIR HANDLER
FDR	FEEDER	EXAMPLES SCREW FEEDER, CHLORINATOR, GLYCOL MAKE-UP UNIT
FEX	FIRE EXTINGUISHER	
FG	FLAP GATE	
FIL	FILTER	
GR	GRILLE - GENERAL	
GRD	GRILLE - DIFFUSER	
HTR	HEATER	GENERAL HEATERS, RADIANT HEATERS, ETC.
HC	HEATING COIL	
HCE	HEATING COIL, ELECTRIC	
HE	HEAT EXCHANGER	
HO	HOIST	
HOP	HOPPER	
HP	HEAT PUMP	
HRC	HEAT RECOVERY COIL	
HUM	HUMIDIFIER	
HV	HAND/MANUAL VALVE	
INJ	INJECTOR	
MXR	MIXER	
OD	OVERHEAD DOOR	
P	PUMP	
R	REACTOR (VARIOUS PROCESSES)	
S	SKID PACKAGE	
SA	SAMPLER	
SCBR	SCRUBBER	
SF	SUPPLY FAN	
SL	STOP LOGS	
SLG	SLUICE GATE	
STR	STRAINER	
TK	TANK	
TU	TERMINAL UNIT (HVAC)	INCLUDES CAV/VAV/DUAL DUCT BOXES
U	MISCELLANEOUS	E.G. WATER SOFTENER
UH	UNIT HEATER	
UVR	ULTRA-VIOLET (UV) REACTOR	
V	VESSEL, PRESSURE VESSEL	E.G. AIR RECEIVER, GLYCOL EXPANSION TANK
W	WEIR	
WGB	WASTE GATE BURNER	

FLUID COMMODITY CODES			
IDENTIFIER	DEFINITION	IDENTIFIER	DEFINITION
ALP	AIR, LOW PRESSURE	IAS	HYDROGEN
CA	COMPRESSED AIR	LCP	LIQUID CONCENTRATED POLYMER
CDR	CONDENSER WATER RETURN	LDS	LAND DRAINAGE SEWER
CDS	CONDENSER WATER SUPPLY	LGO	LUBRICATING OIL
CE	CENTRATE	LOX	LIQUID OXYGEN
CG	CALIBRATION GAS	LPS	LOW PRESSURE STEAM
CHR	CHILLED WATER RETURN	MET	METHANOL
CHS	CHILLED WATER SUPPLY	ML	MIXED LIQUOR
CL2	CHLORINE	MP	MIXED POLYMER
CO2	CARBON DIOXIDE	N2	NITROGEN
CON	CONDENSATE	NG	NATURAL GAS
CS	COMBINED SEWER	O2	OXYGEN
CWR	COOLING WATER RETURN	PD	PROCESS DRAIN
CWS	COOLING WATER SUPPLY	PE	PRIMARY EFFLUENT
D	DRAIN	PO	PROCESS OVERFLOW
DCW	DOMESTIC COLD WATER	PS	PRIMARY SLUDGE
DG	DIGESTER GAS	PV	PROCESS VENT
DGH	DIGESTER GAS, HIGH PRESSURE	PW	POTABLE WATER
DHW	DOMESTIC HOT WATER	R	REFRIGERANT
DL	DECANT LIQUOR	RAS	RETURN ACTIVATED SLUDGE
DP	DRY POLYMER	RS	RAW SEWAGE
DS	DIGESTER SLUDGE	SC	SCUM
ES	ELECTRICAL SUPPLY	SE	SECONDARY EFFLUENT
FC	FERRIC CHLORIDE	SEA	SERVICE AIR
FE	FINAL EFFLUENT	SLC	SLUDGE CAKE
FOA	FOUL AIR	SUB	DAF SUBNATANT
FSL	FERMENTER SLUDGE	SW	SEAL WATER
FSU	FERMENTER SUPERNATANT	TBS	THICKENED BOTTOM SLUDGE
FSW	FLUSHING WATER	TCE	TREATED CENTRATE
GE	GRIT EFFLUENT	TO	THERMAL OXIDIZER
GR	GLYCOL RETURN	TS	THIN SLUDGE
GS	GLYCOL SUPPLY	TWAS	THICKENED WASTE ACTIVATED SLUDGE
HCO	HYDRAULIC OIL	VAC	VACUUM
HFW	HOT FLUSHING WATER	VTA	VENT TO ATMOSPHERE
HWR	HOT WATER RETURN	W	WATER
HWS	HOT WATER SUPPLY	WA	WASTE AIR
H2	HYDROGEN	WAS	WASTE ACTIVATED SLUDGE



00	ISSUED FOR TENDER	2013/10/30	CJR	BJC
NO.	REVISIONS	DATE	DESIGN	CHECK

		SNC-LAVALIN INC. 148 Nature Park Way Winnipeg, MB, Canada R3P 0X7 204-786-8080	
DESIGNED BY:	C. REIMER	CHECKED BY:	B. CLEVEN
DRAWN BY:	M.J. PERSSON	APPROVED BY:	C. REIMER
SCALE:	NTS	RELEASED FOR CONSTRUCTION BY:	
DATE:	2013/08/07	DATE:	
CONSULTANT NO.:			

ENGINEER'S SEAL

**PRELIMINARY**

**NOT TO BE USED FOR CONSTRUCTION**

**THE CITY OF WINNIPEG**  
WATER AND WASTE DEPARTMENT

DEMONSTRATION SYSTEM

PROCESS AND INSTRUMENTATION DIAGRAM  
LEGEND AND DETAILS

CITY DRAWING NUMBER: SK-P0001

SHEET: 003 REV: 00 SIZE: A1