A1 SIZE – 594mm x 841mm

EQUIPMENT IDENTIFICATION

EQUIPMENT FUNCTIONAL DESIGNATION
PROCESS AREA
EQUIPMENT NUMBER

P–M651

NOTE: PREVIOUS/ EXISTING EQUIPMENT IDENTIFIERS ARE SHOWN IN PARENTHESES.

PROCESS LINE DESIGNATION

NOMINAL LINE SIZE
FLUID COMMODITY CODE
PIPE SPECIFICATION CODE (NEW PIPING)

600–RAS–CS01

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		

PIPE SPECIFICATION CODES

AL01	ALUMINUM ALLOY
BA01	ALUMINUM BRONZE
CI01	CAST IRON SOIL PIPE
CS01	CARBON STEEL – ABRASIVE SERVICE
CS02	CARBON STEEL – GENERAL SERVICE
CS21	CARBON STEEL – HYDRONIC SERVICE
CU01	COPPER – GENERAL (WATER) SERVICE
CU02	COPPER – REFRIGERATION SERVICE
DI01	CEMENT MORTAR LINED DUCTILE IRON
DI02	GLASS LINED DUCTILE IRON
GS01	GALVANIZED CARBON STEEL
KB01	CONCRETE PRESSURE PIPE
KB02	REINFORCED CONCRETE PIPE (ATSM C76 CLASS IV RCP)
PA01	ABS (ACRYLONITRILE–BUTADIENE STYRENE)
PD01	HDPE (HIGH DENSITY POLYETHYLENE)
PP01	PP POLYPROPYLENE – GENERAL SERVICE
PP02	PP POLYPROPYLENE – POTABLE WATER
PV01	PVC (PLANT PIPING)
PV02	PVC (YARD PIPING)
PV03	CPVC
PV04	PVDF (IN PVC CONTAINMENT PIPE)
SS01	STAINLESS STEEL – GENERAL SERVICE
SS02	STAINLESS STEEL – SPECIAL SERVICE
SS03	STAINLESS STEEL – PROCESS AIR SERVICE

DUCT SPECIFICATION CODES

AL61	ALUMINUM DUCTWORK
FP61	FIBREGLASS REINFORCED PLASTIC (FRP) DUCTWORK
GS61	GALVANIZED STEEL DUCTWORK
SS64	STAINLESS STEEL DUCTWORK – TYPE 304
SS66	STAINLESS STEEL DUCTWORK – TYPE 316

FUNCTIONAL DESIGNATIONS

IDENTIFIER	DEFINITION	NOTES
ACU	AIR CONDITIONING UNIT	
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	
CYC	CYCLONE	
EDU	EDUCTOR	
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 MU 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	
SG	SLIDE GATE	
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
WG	WEIR GATE	
WGB	WASTE GATE BURNER	

FLUID COMMODITY CODES

IDENTIFIER	DEFINITION	IDENTIFIER	DEFINITION
ALP	AIR, LOW PRESSURE	MET	METHANOL
BLS	BALLASTED SLUDGE	ML	MIXED LIQUOR
CA	COMPRESSED AIR	MP	MIXED POLYMER
CDR	CONDENSER WATER RETURN	N2	NITROGEN GAS
CDS	CONDENSER WATER SUPPLY	N2L	NITROGEN LIQUID
CE	CENTRATE	NPH	NON–POTABLE HOT WATER
CG	CALIBRATION GAS	NPT	NON–POTABLE TEMPERED WATER
CHR	CHILLED WATER RETURN	NG	NATURAL GAS
CHS	CHILLED WATER SUPPLY	NPW	NON–POTABLE WATER
CL2	CHLORINE	OA	OUTDOOR AIR
CO2	CARBON DIOXIDE	O2	OXYGEN GAS
CON	CONDENSATE	PD	PROCESS DRAIN
CS	COMBINED SEWER	PE	PRIMARY EFFLUENT
CWR	COOLING WATER RETURN	PO	PROCESS OVERFLOW
CWS	COOLING WATER SUPPLY	PS	PRIMARY SLUDGE
D	DRAIN (NON–PROCESS)	PV	PROCESS VENT
DFR	DIESEL FUEL RETURN	PW	POTABLE WATER
DFS	DIESEL FUEL SUPPLY	R	REFRIGERANT
DHR	DOMESTIC HOT WATER RETURN	RA	RETURN AIR
DG	DIGESTER GAS	RAS	RETURN ACTIVATED SLUDGE
DGH	DIGESTER GAS, HIGH PRESSURE	RS	RAW SEWAGE
DHW	DOMESTIC HOT WATER	RW	RAIN/ROOF WATER
DL	DECANT LIQUOR	SA	SUPPLY AIR
DP	DRY POLYMER	SAM	SAMPLE
DS	DIGESTER SLUDGE	SBS	SODIUM BISULPHITE
EA	EXHAUST AIR	SC	SCUM
ES	ELECTRIC SUPPLY	SCB	SODIUM CARBONATE (SODA ASH)
FC	FERRIC CHLORIDE	SCS	SCREENINGS
FE	FINAL EFFLUENT	SE	SECONDARY EFFLUENT
FOA	FOUL AIR	SEA	SERVICE AIR
FPW	FIRE PROTECTION WATER	SHC	SODIUM HYPOCHLORITE
FSF	FERMENTED SLUDGE FILTRATE	SHD	SODIUM HYDROXIDE
FSL	FERMENTER SLUDGE	SLC	SLUDGE CAKE
FSU	FERMENTER SUPERNATANT	SND	SAND (SOLID)
FSW	FLUSHING WATER	SNS	SAND SLURRY
GE	GRIT EFFLUENT	SPD	SUMP PUMP DISCHARGE
GR	GLYCOL RETURN	SRS	STORM RELIEF SEWER
GRS	GRIT SLURRY	STS	SOUTHEND THICKENED SLUDGE
GRT	GRIT (SOLIDS)	SUB	DAF SUBNATANT
GS	GLYCOL SUPPLY	TBS	THICKENED BOTTOM SLUDGE
HCO	HYDRAULIC OIL	TCE	TREATED CENTRATE
HFW	HOT FLUSHING WATER	TDW	TEMPERED DOMESTIC WATER
HRS	HIGH RATE CLARIFIER SLUDGE	TFS	THICKENED FERMENTED SLUDGE
HWR	HOT WATER RETURN	TO	THERMAL OXIDIZER
HWS	HOT WATER SUPPLY	TS	THIN SLUDGE
H2	HYDROGEN	TWAS	THICKENED WASTE ACTIVATED SLUDGE
IAS	INSTRUMENT AIR SUPPLY	VAC	VACUUM
LCP	LIQUID CONCENTRATED POLYMER	VTA	VENT TO ATMOSPHERE
LDS	LAND DRAINAGE SEWER	W	WATER
LGO	LUBRICATING OIL	WA	WASTE AIR
LOX	LIQUID OXYGEN	WAS	WASTE ACTIVATED SLUDGE
LPS	LOW PRESSURE STEAM	WSF	WASTE ACTIVATED SLUDGE FILTRATE
MA	MIXED AIR	WWS	WASTEWATER SEWER

GENERAL NOTE:

1. THIS IS A STANDARD LEGEND SHEET. THEREFORE, NOT ALL OF THE INFORMATION SHOWN MAY BE USED ON THIS PROJECT.

APEGM Certificate of Authorization
SNC-Lavalin Inc.
No. 4489

NO.	REVISIONS	DATE	DESIGN	CHECK
00	ISSUED FOR CONSTRUCTION – 976–2016	2017/04/05	G.G.	J.C.

CH2MHILL. KGS GROUP SNC·LAVALIN

DESIGNED BY: G. GERMAN
CHECKED BY: M. MONTGOMERY
DRAWN BY: G. GERMAN
APPROVED BY: H.T. FREIHAMMER
SCALE: NTS
ISSUED FOR CONSTRUCTION BY: J. SHUMKA
DATE: 2017/04/05
DATE: 2017/04/05
CONSULTANT NO.: 474248

ENGINEER'S SEAL
PROVINCE OF MANITOBA – F. J. ABSI – Member 36875 – REGISTERED PROFESSIONAL ENGINEER
April 5, 2017
F. J. Absi

Winnipeg
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

INSTRUMENTATION & CONTROLS
SEWPCC UPGRADING/EXPANSION PROJECT
PROCESS AND INSTRUMENTATION
LEGEND AND GENERAL NOTES (3)

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1–0102–PPID–A001	003	00	A1

PLOT DATE: 2017\03\30
FILE NAME:

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