

ABBREVIATIONS

ALM	ALARM	NC	NORMALLY CLOSED
A/M	AUTO/MANUAL	NO	NORMALLY OPEN
BRG	BEARING	O/A	OUTSIDE AIR
C/H	COMPUTER/HAND	O/C	OPEN/CLOSED
CHOM	COMP./HAND/OFF/MAINT.	ODE	OPPOSITE DRIVE END
CHOMET	COMP./HAND/OFF/MAINT./ENGINE/TEST	OPN	OPEN
C/L	COMPUTER/LOCAL	O/S/C	OPEN/STOP/CLOSE
COH	COMPUTER/OFF/HAND	PDV	PUMP DISCHARGE VALVE
CP	CONTROL PANEL	PF	POWER FACTOR
CURR	CURRENT	PLC	PROGRAMMABLE LOGIC CONTROLLER
DEC	DECREASE	PSD	PLANT SHUTDOWN
DE	DRIVE END	PV	PROCESS VARIABLE
DOR	DOOR	PWR	POWER
E/A	EXHAUST AIR	RSP	REMOTE SET POINT
ES	ELECTRICAL SUPPLY	RST	RESET
E/S	EMERGENCY STOP	RTD	RESISTANCE TEMPERATURE DETECTOR
ESD	EMERGENCY SHUTDOWN	SOL	SOLENOID
FC	FAIL CLOSE	SP	SAMPLE POINT OR SET POINT (DEPENDING ON APPLICATION)
FI	FAIL INDETERMINATE	STN	STATION
FLK	FAIL LAST	SPD	SPEED
FOP	FAIL OPEN	STDBY	STANDBY
F/R	FORWARD OR REVERSE	STP	STOP
G	GAS	STR	START
HI	HIGH	STS	STATUS
HP	HORSE POWER	SW	SWITCH
HVAC	HEATING/VENTILATION/AIR CONDITIONING	T	TRAP
I/P	CURRENT TO PRESSURE TRANSDUCER	TST	TEST
I/P	INPUT	TYP	TYPICAL
INC	INCREASE	UPS	UNINTERRUPTIBLE POWER SUPPLY
LCP	LOCAL CONTROL PANEL	V	VOLTAGE
LO	LOW	VAC	VACUUM
L/O/S	LOCAL/OFF/STOP	VIB	VIBRATION
L/R	LOCAL/REMOTE	VLV	VALVE
MCC	MOTOR CONTROL CENTRE	WS	WATER SUPPLY
MCP	MAIN CONTROL PANEL	WDG	WINDING
MLD	MEGALITERS PER DAY	86	EQUIPMENT LOCKOUT RELAY

PROCESS LINE TYPE CODES

AS	AIR SUPPLY
CL2	CHLORINE
CWS	COLD WATER SUPPLY
CWR	COLD WATER RETURN
GWD	GLAND WATER DRAIN
IA	INSTRUMENT AIR
NG	NATURAL GAS
PD	PROCESS DRAIN
SA	SAMPLE
WT	WATER

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		

INSTRUMENT LINE SYMBOLS

	INSTRUMENT SUPPLY OR CONNECTION TO PROCESS
	PNEUMATIC SIGNAL
	ELECTRIC SIGNAL
	HYDRAULIC SIGNAL
	CAPILLARY TUBE
	ELECTROMAGNETIC OR SONIC SIGNAL GUIDED
	ELECTROMAGNETIC OR SONIC SIGNAL UNGUIDED
	ELECTRIC BINARY (ON/OFF) SIGNAL (OPTIONAL)
	PNEUMATIC BINARY SIGNAL (OPTIONAL)
	DATA / SERIAL LINK (OPTIONAL)

DRAWING NUMBER	REFERENCE DRAWINGS
----------------	--------------------

B.M. ELEV.	FIELD BOOK #	SNC-LAVALIN INC. 148 Nature Park Way Winnipeg, MB, Canada R3P 0X7 204-786-8080	ENGINEER'S SEAL	THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT MACLEAN PUMPING STATION PROCESS & INSTRUMENTATION DIAGRAMS LEGEND & DETAILS	
POSTED TO LBIS			DESIGNED BY		EXISTING
		DRAWN BY	CJR	APPROVED BY	CJR
		HOR. SCALE	NTS	RELEASED FOR CONSTRUCTION	
		VERTICAL	NTS	DATE	
01	REVISED DRAWING NUMBER	2008/02/13	AEQ		
00	ISSUED FOR CITY USE	2007/08/28	Y.M		
NO.	REVISIONS	DATE	BY	FILENAME: 1-0630M-A001-003-01.dwg	

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0630M-A001	003	01	A1