

	<b>I/O List</b>		Document Code	508042-0000-48EL-0002
			Revision	00
Client City of Winnipeg				
Project Montcalm Wastewater Pumping Station				
Package / Area CP-L1 Control Panel				
Prepared By	Name	Signature	Date	
	B. Cleven		2012-02-23	
Checked By	Name	Signature	Date	
	C. Reimer		2012-02-23	
Approved By	Name	Signature	Date	
	C. Reimer		2012-02-23	
Notes / Comments			Seal	
			Original Sealed By: C. J. Reimer SNC-Lavalin Inc. Member #21968 2012/02/23 Rev. 00	

Revisions					
Rev	Description	Date	By	Checked	Approved
00	Issued for Tender	2012-02-09	B. Cleven	C. Reimer	C. Reimer

## Discrete Inputs

Module Address	Module Point	DNP3 Address	Tag	Description	0 State	1 State	P&ID Dwg
	1	1	L501-HS-4M	P-L1 Manual Mode	Not Manual	Manual	1-0164L-P0002
	2	2	L501-HS-4A	P-L1 Auto Mode	Not Auto	Auto	1-0164L-P0002
	3	3	L501-UL	P-L1 Ready	Not Ready	Ready	1-0164L-P0002
	4	4	L501-HS-5	P-L1 Bypass Mode	SS Mode	Bypass Mode	1-0164L-P0002
	5	5	L501-MM	P-L1 Running	Stopped	Running	1-0164L-P0002
	6	6	L501-UA	P-L1 SS Fault	Normal	Fault	1-0164L-P0002
	7	7	L501-IA	P-L1 Bypass Overload Alarm	Normal	Overload	1-0164L-P0002
	8	8	L502-HS-4M	P-L2 Manual Mode	Not Manual	Manual	1-0164L-P0002
	9	9	L502-HS-4A	P-L2 Auto Mode	Not Auto	Auto	1-0164L-P0002
	10	10	L502-UL	P-L2 Ready	Not Ready	Ready	1-0164L-P0002
	11	11	L502-HS-5	P-L2 Bypass Mode	VFD Mode	Bypass Mode	1-0164L-P0002
	12	12	L502-MM	P-L2 Running	Stopped	Running	1-0164L-P0002
	13	13	L502-UA	P-L2 VFD Fault	Normal	Fault	1-0164L-P0002
	14	14	L502-IA	P-L2 Bypass Overload Alarm	Normal	Overload	1-0164L-P0002
	15	15	L552-FQ	North Forcemain Flow Totalizer Pulse	-	Pulse	1-0164L-P0004
	16	16	L557-FQ	South Forcemain Flow Totalizer Pulse	-	Pulse	1-0164L-P0004
	17	17	L500-LSH	Wet Well High Level	High Level	Normal	1-0164L-P0001
	18	18	L524-PSL	Instrument Air Pressure Switch Low	Alarm	Normal	1-0164L-P0001
	19	19	L527-ESL	600 VAC Power Failure	Alarm	Normal	1-0164L-P0007
	20	20	L530-LSH	Communitor Chamber Flood Switch	Alarm	Normal	1-0164L-P0007
	21	21	L533-LSH	Pump Room Flood Switch	Alarm	Normal	1-0164L-P0007
	22	22	L570-LSHH	Flow Meter Chamber Flood Switch	Alarm	Normal	1-0164L-P0004
	23	23	L538-XA	TVSS Status	Alarm	Normal	1-0164L-P0007
	24	24	L544-ESL	120 VAC Power Failure	Alarm	Normal	1-0164L-P0007
	25	25	L600-YL	Station Occupied	Unoccupied	Occupied	1-0164L-P0005
	26	26	L603-HS-1M	AHU-L1 in Manual	Not Manual	Manual	1-0164L-P0005
	27	27	L603-HS-1A	AHU-L1 in Auto	Not Auto	Auto	1-0164L-P0005
	28	28	L603-MM	AHU-L1 Running	Stopped	Running	1-0164L-P0005
	29	29	L603-TAL	AHU-L1 Temp Low Limit Alarm	Normal	Alarm	1-0164L-P0005
	30	30	L603-BF	AHU-L1 Burner Failure	Normal	Alarm	1-0164L-P0005
	31	31					
	32	32	L509-YL	RTU Control Mode	Backup	RTU	1-0164L-P0001

0	0	33	L503-HS-4M	P-L3 Manual Mode	Not Manual	Manual	1-0164L-P0003
0	1	34	L503-HS-4A	P-L3 Auto Mode	Not Auto	Auto	1-0164L-P0003
0	2	35	L503-UL	P-L3 Ready	Not Ready	Ready	1-0164L-P0003
0	3	36	L503-HS-5	P-L3 Bypass Mode	VFD Mode	Bypass Mode	1-0164L-P0003
0	4	37	L503-MM	P-L3 Running	Stopped	Running	1-0164L-P0003
0	5	38	L503-UA	P-L3 VFD Fault	Normal	Fault	1-0164L-P0003
0	6	39	L503-IA	P-L3 Bypass Overload Alarm	Normal	Overload	1-0164L-P0003
0	7	40	L504-HS-4M	P-L4 Manual Mode	Not Manual	Manual	1-0164L-P0003
0	8	41	L504-HS-4A	P-L4 Auto Mode	Not Auto	Auto	1-0164L-P0003
0	9	42	L504-UL	P-L4 Ready	Not Ready	Ready	1-0164L-P0003
0	10	43	L504-HS-5	P-L4 Bypass Mode	SS Mode	Bypass Mode	1-0164L-P0003
0	11	44	L504-MM	P-L4 Running	Stopped	Running	1-0164L-P0003
0	12	45	L504-UA	P-L4 SS Fault	Normal	Fault	1-0164L-P0003
0	13	46	L504-IA	P-L4 Bypass Overload Alarm	Normal	Overload	1-0164L-P0003
0	14	47	L603-PDS-1	AHU-L1 Summer Air Filter Dirty	Alarm	Normal	1-0164L-P0005
0	15	48	L603-PDS-2	AHU-L1 Winter Air Filter Dirty	Alarm	Normal	1-0164L-P0005
0	16	49	L570-HS-1	SP-L14 Auto	Not Auto	Auto	1-0164L-P0004
0	17	50	L570-UL	SP-L14 Ready	Not Ready	Ready	1-0164L-P0004
0	18	51	L570-MM	SP-L14 Running	Stopped	Running	1-0164L-P0004
0	19	52	L570-IA	SP-L14 Overload	Normal	Overload	1-0164L-P0004
0	20	53	L546-XA-A	PS01-A 24VDC Power Supply Fail	Alarm	Normal	1-0164L-P0007
0	21	54	L546-XA-B	PS01-B 24VDC Power Supply Fail	Alarm	Normal	1-0164L-P0007
0	22	55	L543-JAL	UPS01 Battery Low	Alarm	Normal	1-0164L-P0007
0	23	56	L543-XA	UPS01 Battery Fault	Alarm	Normal	1-0164L-P0007
0	24	57	L605-HS-1	SF-L2 in Auto	Not Auto	Auto	1-0164L-P0005
0	25	58	L605-MM	SF-L2 Running	Stopped	Running	1-0164L-P0005
0	26	59					
0	27	60					
0	28	61					
0	29	62					
0	30	63					
0	31	64					

## Discrete Outputs

Module Address	Module Point	DNP3 Address	Tag	Description	0 State	1 State	P&ID Dwg
	1	1	L501-MN	P-L1 Run Command	Stop	Run	1-0164L-P0002
	2	2	L502-MN	P-L2 Run Command	Stop	Run	1-0164L-P0002
	3	3	L503-MN	P-L3 Run Command	Stop	Run	1-0164L-P0003
	4	4	L504-MN	P-L4 Run Command	Stop	Run	1-0164L-P0003
	5	5	L605-MN	SF-L2 Run Command	Stop	Run	1-0164L-P0005
	6	6	L603-BY	AHU-L1 Burner Enable	Disable	Enable	1-0164L-P0005
	7	7	L509-YN	RTU Status OK	Fail	OK	1-0164L-P0001
	8	8					
	9	9					
	10	10					
	11	11					
	12	12					
	13	13					
	14	14					
	15	15					
	16	16					

## Analog Inputs

Module Address	Module Point	DNP3 Address	Tag	Description	Type	EU Range	P&ID Dwg
	1	1	L500-LT-A	Wet Well Level (Submersible)	4-20 mA	0 - 6 m	1-0164L-P0001
	2	2	L613-TT	Electrical Room Temperature	4-20 mA	0 - 50°C	1-0164L-P0006
	3	3	L604-TT	Mechanical Room Temperature	4-20 mA	0 - 50°C	1-0164L-P0005
	4	4	L602-TT	AHU-L1 Supply Air Temperature	4-20 mA	-40 - 60 °C	1-0164L-P0005
	5	5					
	6	6	L501-IT	P-L1 Motor Current	4-20 mA	0 - 150 A	1-0164L-P0002
	7	7	L502-ST	P-L2 Speed	4-20 mA	0 - 100%	1-0164L-P0002
	8	8	L502-IT	P-L2 Motor Current	4-20 mA	0 - 150 A	1-0164L-P0002
	9	9	L552-FT	North Forcemain Flow Meter	4-20 mA	0 - 1000 l/s	1-0164L-P0004
	10	10	L557-FT	South Forcemain Flow Meter	4-20 mA	0 - 1000 l/s	1-0164L-P0004
	11	11					
	12	12					
0	0	13	L500-LT-B	Wet Well Level (Bubbler)	4-20 mA	0 - 6 m	1-0164L-P0001
0	1	14	L503-ST	P-L3 Speed	4-20 mA	0 - 100%	1-0164L-P0003
0	2	15	L503-IT	P-L3 Motor Current	4-20 mA	0 - 150 A	1-0164L-P0003
0	3	16	L504-IT	P-L4 Motor Current	4-20 mA	0 - 150 A	1-0164L-P0003
0	4	17	L601-ZT-1	Ventilation Intake Air Damper Position	4-20 mA	0-100%	1-0164L-P0005
0	5	18	L601-ZT-2	Ventilation Return Air Damper Position	4-20 mA	0-100%	1-0164L-P0005
0	6	19	L601-ZT-3	Ventilation Exhaust Air Damper Position	4-20 mA	0-100%	1-0164L-P0005
0	7	20					

## Analog Outputs

Module Address	Module Point	DNP3 Address	Tag	Description	Type	EU Range	P&ID Dwg
	1	1	L502-SC	P-L2 Speed Command	4-20 mA	0 - 100%	1-0164L-P0002
	2	2	L601-FC	L601-FC Outdoor Air Ratio Control	4-20 mA	0 - 100%	1-0164L-P0005
	3	3	L603-TC	AHU-L1 Discharge Temperature Setpoint	4-20 mA	0 - 100%	1-0164L-P0005
	4	4					
0	0	5	L503-SC	P-L3 Speed Command	4-20 mA	0 - 100%	1-0164L-P0003
0	1	6					
0	2	7					
0	3	8					