



- KEYNOTES:**
- 1 PROVIDE NEW 200A, 3 $\phi$ , 4W, WP PADMOUNTED CSTE. CONFIRM EXACT LOCATION WITH UTILITY PRIOR TO ROUGH-IN.
  - 2 PROVIDE GROUND VIA #3/0 AWG COPPER. ELECTRODE SHALL CONSIST OF THREE 3m x 19mm  $\phi$  COPPER CLAD GROUND RODS INTERCONNECTED BY #3/0 AWG BARE COPPER CONDUCTOR BY THERMIT PROCESS. KEEP RODS SEPARATED BY 3 METERS. COORDINATE LOCATION. BOND REBAR OF CONTROL PANEL PAD TO GROUND ELECTRODE.
  - 3 PROVIDE PHASE LOSS PROTECTION. WIRE AND CONNECT OUTPUT STATUS TO RTU CONTROLLER FOR ALARMS MONITORING.
  - 4 PROVIDE TVSS/SPD C/W CIRCUIT BREAKER. WIRING SHALL BE AS SHORT AS PRACTICABLE. MAXIMUM LENGTH IS 350mm. TVSS SHALL BE 120KA PER PHASE.

PANEL "AA" SCHEDULE												
LOAD DESCR.	LOAD Watt	BKR SIZE	CCT			BKR SIZE	LOAD Watt	LOAD DESCR.				
			NO	PH	NO				SIZE			
SLUICE GATE ACTUATOR	30A	1	A	2	20A	3750	TRANSFORMER TX-A					
8.75HP AC-01		3	B	4	2P	3750	7.5kVA					
GATE CHAMBER		5	C	6	15A	500	P&C PANEL					
30HP SP-01		7	A	8	30A	30	TVSS (SPD)					
30HP SP-01		9	B	10	30	30						
PUMP CHAMBER		11	C	12	3P	30						
SPARE		13	A	14	15A		SPARE					
SPARE		15	B	16								
SPARE		17	C	18	3P							

  

DESIGNATION	"AA"	MAIN BKR	100
VOLT	347/600	MAINS	200
PHASE	3	Connected Load in kW, A	
WIRE	4	Demand Load in kW, A	
I.C (kA)	25	LOCATION	P&C PANEL
NOTES: Panel to be CSA 1		MOUNTING	surface
NOTES: Fed from 200A CSTE		NOTES: service entrance type panel	

PANEL "A" SCHEDULE												
LOAD DESCR.	WIRE AWG	LOAD Watt	BKR SIZE	CCT			BKR SIZE	LOAD Watt	WIRE AWG	LOAD DESCR.		
				NO	PH	NO					SIZE	
LTG - PUMP CHAMBER	2C#12+G	77	15	1	A	2	15	500	2C#12+G	UPS - P&C PANEL		
LTG - GATE CHAMBER	2C#12+G	77	15	3	B	4	15	500	2C#12+G	RTU PLC INPUT/ OUTPUT		
LTG - P&C PANEL	2C#12+G	35	15	5	A	6	15			SPARE		
SPARE			15	7	B	8	15			SPARE		
SPARE			15	9	A	10	30A		2C#10+G	TVSS (SPD)		
SPARE			15	11	B	12	2P					

  

DESIGNATION	'A'	MLO	MAIN BKR
VOLT	120/240		100
PHASE	1		Connected Load in kW, A
WIRE	3		Demand Load in kW, A
I.C (kA)	10		LOCATION
NOTES: Panel to be CSA 1			surface
NOTES: Fed from Panel AA via Tx. A			NOTES:

ELECTRICAL LEGEND	
SYMBOL	DISCRPTION
	SWITCH
	CIRCUIT BREAKER
	FUSE AS SHOWN
	TRANSFORMER
	FUSED SWITCH
	E-STOP PB
	PUMP MOTOR
	FLOAT SWITCH
	LEAK SEAL
	JUNCTION BOX
	START - STOP PUSH BUTTONS
	REMOTE - OFF LOCAL SWITCH
	OPEN-STOP-CLOSE SWITCH
	ELAPSED TIME METER
	TRANSIENT VOLTAGE SURGE SUPPRESSOR (SURGE PROTECTION DEVICE)

EQUIPMENT SCHEDULE														
ITEM	DESCRIPTION	LOCATION	AMPS	VOLTS	$\phi$	BREAKER	CONDUCTOR	CIRCUIT	DIS.	UNIT SUPPLIED & INSTALLED BY	MOTOR STARTER SUPPLIED BY	CONTROL	CONTROL WIRED AND CONNECTED BY	NOTE
SP-01	SUBMERSIBLE PUMP	CHAMBER	32.0	600	3	60A-3P	3C#4 AWG, Cu, RW90 IN 53mm $\phi$ C	AA-7,9,11	100A	MECH'L	ELECTRICAL	FNVR	ELEC.	
AC-01	SLUICE GATE ACTUATOR	PUMP GATE	10.4	600	3	30A-3P	3C#10 AWG, Cu, RW90 IN 53mm $\phi$ C	AA-1,3,5	30A	MECH'L	N/A	BUILT-IN	ELEC.	
RTU-1	CONTROL PANEL	WEATHER ENCLOSURE		120	1	15A-1P	2C#12AWG, Cu, RW90 IN 21mm $\phi$ C	A-4		ELEC.	N/A		ELEC.	

1 SINGLE LINE DIAGRAM  
E4 SCALE: N.T.S.

LUMINAIRE SCHEDULE							
TYPE	MANUFACTURER	CATALOG No.	DESCRIPTION	VOLTS	LAMP	WATTS	COLOR TEMP.
A	COOPER	701 EV LED SERIES	EXPLSIONPROOF LED LUMINAIRE. WALL MOUNTED TYPE, 36 WATTS LED. COPPER-FREE ALUMINUM WITH CORRO-FREE EPOXY POWDER COAT. GASKETTED.	120	LED	36	3500K

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NOTE: These design documents are prepared solely for the use by the party with whom the design professional has entered into a contract and there are no representations of any kind made by the design professional to any party with whom the design professional has not entered into a contract.

**METRIC**  
WHOLE NUMBERS INDICATE MILLIMETRES  
DECIMALIZED NUMBERS INDICATE METRES

**APEGM**  
Certificate of Authorization  
WSP Canada Inc.  
No. 5750 Date: SEP. 07, 2016

**WSP | MMM GROUP**

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DESIGNED BY	DG	CHECKED BY	HP
DRAWN BY	DG	APPROVED BY	HP

HOR. SCALE: AS NOTED  
VERTICAL: AS NOTED

RELEASSED FOR CONSTRUCTION

DATE: 2016/09/07

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

**Winnipeg**

OUTFALL GATE CHAMBER UPGRADES  
RUBY STREET  
SRS OUTFALL GATE CHAMBER

ELECTRICAL SINGLE LINE DIAGRAM, PANEL SCHEDULE.

CONSULTANT DRAWING NUMBER: 5516047 - E04  
SHEET 16 OF 34  
CITY DRAWING NUMBER: LD-7937

ENGINEER'S SEAL  
PROVINCE OF MANITOBA  
09/07/2016  
H.N. PROCYSHYN  
MEMBER 4055

BID OPPORTUNITY: 789-2016  
PLOT DATE: 2016/09/07