

Document Code	A-0102-EDTS-G001	Professional Seal		
Revision	01			
Client	City of Winnipeg			
Project	South End Water Pollution Control Centre – Upgrading / Expansion Project			
Location	100 Ed Spencer Drive			
Description	600 V MCC-G750, MCC-G760, MCC-G770, MCC-G780 Breakers & MCC-G710, MCC-G720, MCC-G730, MCC-G740 feeder breakers			
<b>Rev</b>	<b>Date</b>	<b>By</b>	<b>Checked</b>	<b>Approved</b>
00	2017/04/05	VE/DEB	DEB	ER
<b>01</b>	<b>2017/06/06</b>	<b>VE</b>	<b>DEB</b>	<b>DEB</b>

<b>Circuit Breaker</b>	ID: <b>MCC-G750.MCB</b>		
	Single Line Diagram: 1-0102-ESLD-G004		Three Line Diagram: N.A
	Manufacturer: Square D	Model: Powerpact RK	Cat #: ----
	Frame Size: 2500 A	Trip Rating: 2000 A	Interrupting Rating: 65 kA
	LTPU: <b>0.9 (1800 A)</b>	LTD: 1	
	STPU: 3 (6000 A)	STD: 0.1 (I <sup>2</sup> t Out)	
	INST: 15 (30000 A)		
	Notes: Ground Fault System uses a separate Bender G.F protection System.		

- All other settings and system programming to be determined by the Contractor / Equipment Vendor.

<b>Circuit Breaker</b>	ID: <b>CB-G102 (Raw Sewage Pump G102)</b>		
	Single Line Diagram: 1-0102-ESLD-G004		Three Line Diagram: N.A
	Manufacturer: Square D	Model: Powerpact PK	Cat #: ----
	Frame Size: 1200 A	Sensor Rating: 800 A	Interrupting Rating: 50 kA
	LTPU: 1 (800 A)	LTD: 2	
	STPU: 4 (3200 A)	STD: 0 (I <sup>2</sup> t Out)	
	INST: 10 (8000 A)		
	Notes: Ground Fault System uses a separate Bender G.F protection System.		

- All other settings and system programming to be determined by the Contractor / Equipment Vendor.

<b>Circuit Breaker</b>	ID: <b>CB-G750-2 (Feeds HF-G750)</b>		
	Single Line Diagram: 1-0102-ESLD-G004		Three Line Diagram: N.A
	Manufacturer: Square D	Model: Powerpact LL	Cat #: -----
	Frame Size: 600 A	Sensor Rating: 600 A	Interrupting Rating: 50 kA
	Ir (Long Time): 400 A	tr (Time Delay): 0.5	
	I <sub>sd</sub> (Short Time): 5.5 (2200 A)	t <sub>sd</sub> (Short Time Delay): 0.0 (I <sup>2</sup> t Out)	
	I <sub>i</sub> (Inst.): 1.5 (900 A)		
	Notes: Ground Fault System uses a separate Bender G.F protection System.		

- All other settings and system programming to be determined by the Contractor / Equipment Vendor.

<b>Circuit Breaker</b>	ID: <b>CB-G770</b>		
	Single Line Diagram: 1-0102-ESLD-G004		Three Line Diagram: N.A
	Manufacturer: Square D	Model: Powerpact LL	Cat #: -----
	Frame Size: 400 A	Trip Rating: 400 A	Interrupting Rating: 50 kA
	Ir (Long Time): 350 A	tr (Time Delay): 4	
	I <sub>sd</sub> (Short Time): 7 (2450 A)	t <sub>sd</sub> (Short Time Delay): 0.0 (I <sup>2</sup> t Out)	
	I <sub>i</sub> (Inst.): 5 (2000 A)		
	Notes: Ground Fault System uses a separate Bender G.F protection System.		

- All other settings and system programming to be determined by the Contractor / Equipment Vendor.

<b>Circuit Breaker</b>	ID: <b>CB-G750-T</b>		
	Single Line Diagram: 1-0102-ESLD-G004		Three Line Diagram: N.A
	Manufacturer: Square D	Model: Powerpact RK	Cat #: -----
	Frame Size: 2500 A	Trip Rating: 2000 A	Interrupting Rating: 65 kA
	LTPU: 0.7 (1400 A)	LTD: 0.5	
	STPU: 2.5 (3500 A)	STD: 0 (I <sup>2</sup> t Out)	
	INST: 12 (16800 A)		
	Notes: Ground Fault System uses a separate Bender G.F protection System.		

- All other settings and system programming to be determined by the Contractor / Equipment Vendor.

<b>Circuit Breaker</b>	ID: <b>MCC-G760.MCB</b>		
	Single Line Diagram: 1-0102-ESLD-G005		Three Line Diagram: N.A
	Manufacturer: Square D	Model: Powerpact RK	Cat #: -----
	Frame Size: 2500 A	Trip Rating: 2000 A	Interrupting Rating: 65 kA
	LTPU: <b>0.9 (1800 A)</b>	LTD: 1	
	STPU: 3 (6000 A)	STD: 0.1 (I <sup>2</sup> t Out)	
	INST: 15 (30000 A)		
	Notes: Ground Fault System uses a separate Bender G.F protection System.		

- All other settings and system programming to be determined by the Contractor / Equipment Vendor.

<b>Circuit Breaker</b>	ID: <b>CB-G103 (Raw Sewage Pump G103)</b>		
	Single Line Diagram: 1-0102-ESLD-G005		Three Line Diagram: N.A
	Manufacturer: Square D	Model: Powerpact PK	Cat #: -----
	Frame Size: 1200 A	Sensor Rating: 600 A	Interrupting Rating: 50 kA
	LTPU: 1 (800 A)	LTD: 1	
	STPU: 4 (2400 A)	STD: 0.1 (I <sup>2</sup> t Out)	
	INST: 4 (2400 A)		
	Notes: Ground Fault System uses a separate Bender G.F protection System.		

- All other settings and system programming to be determined by the Contractor / Equipment Vendor.

<b>Circuit Breaker</b>	ID: <b>CB-G760-2 (Feeds HF-G760)</b>		
	Single Line Diagram: 1-0102-ESLD-G005		Three Line Diagram: N.A
	Manufacturer: Square D	Model: Powerpact LL	Cat #: -----
	Frame Size: 600 A	Sensor Rating: 600 A	Interrupting Rating: 50 kA
	Ir (Long Time): 400 A	tr (Time Delay): 0.5	
	I <sub>sd</sub> (Short Time): 5.5 (2200 A)	tsd (Short Time Delay): 0.0 (I <sup>2</sup> t Out)	
	I <sub>i</sub> (Inst.): 1.5 (900 A)		
	Notes: Ground Fault System uses a separate Bender G.F protection System.		

- All other settings and system programming to be determined by the Contractor / Equipment Vendor.

<b>Circuit Breaker</b>	ID: <b>CB-G780</b>		
	Single Line Diagram: 1-0102-ESLD-G005		Three Line Diagram: N.A
	Manufacturer: Square D	Model: Powerpact LL	Cat #: -----
	Frame Size: 400 A	Trip Rating: 400 A	Interrupting Rating: 50 kA
	Ir (Long Time): 350 A	tr (Time Delay): 4	
	I <sub>sd</sub> (Short Time): 7 (2450 A)	tsd (Short Time Delay): 0.0 (I <sup>2</sup> t Out)	
	I <sub>i</sub> (Inst.): 5 (2000 A)		
	Notes: Ground Fault System uses a separate Bender G.F protection System.		

- All other settings and system programming to be determined by the Contractor / Equipment Vendor.

<b>Circuit Breaker</b>	ID: <b>CB-G760-T</b>		
	Single Line Diagram: 1-0102-ESLD-G005		Three Line Diagram: N.A
	Manufacturer: Square D	Model: Powerpact RK	Cat #: -----
	Frame Size: 2500 A	Sensor Rating: 2000 A	Interrupting Rating: 65 kA
	LTPU: 0.7 (1400 A)	LTD: 0.5	
	STPU: 2 (2800 A)	STD: 0 (I <sup>2</sup> t Out)	
	INST: 12 (16800 A)		
	Notes: Ground Fault System uses a separate Bender G.F protection System.		

- All other settings and system programming to be determined by the Contractor / Equipment Vendor.

<b>Circuit Breaker</b>	ID: <b>CB-G710</b>		
	Single Line Diagram: 1-0102-ESLD-S001		Three Line Diagram: N.A
	Manufacturer: Cutler Hammer	Model: DS-416	Cat #: -----
	Frame Size: 1600 A	Sensor Rating: 800 A	Interrupting Rating: 42 kA
	LTPU: 1.0 (800 A)	LTD: 12	
	STPU: 6 (4800 A)	STD: 0.18	
	INST: 12 (9600 A)		
	GFPU: D	GFD: 0.35 s	
	Notes: Existing breaker located in SGR-S701. Only STPU setting adjusted		

- All other settings and system programming to be determined by the Contractor / Equipment Vendor.

<b>Circuit Breaker</b>	ID: <b>CB-G720</b>		
	Single Line Diagram: 1-0102-ESLD-S001		Three Line Diagram: N.A
	Manufacturer: Cutler Hammer	Model: DS-416	Cat #: -----
	Frame Size: 1600 A	Sensor Rating: 800 A	Interrupting Rating: 42 kA
	LTPU: 1.0 (800 A)	LTD: 12	
	STPU: 6 (4800 A)	STD: 0.18	
	INST: 12 (9600 A)		
	GFPU: D	GFD: 0.35 s	
	Notes: Existing breaker located in SGR-S702. Only STPU setting adjusted		

- All other settings and system programming to be determined by the Contractor / Equipment Vendor.

<b>Circuit Breaker</b>	ID: <b>CB-G730</b>		
	Single Line Diagram: 1-0102-ESLD-S001		Three Line Diagram: N.A
	Manufacturer: Cutler Hammer	Model: DS-416	Cat #: -----
	Frame Size: 1600 A	Sensor Rating: 1600 A	Interrupting Rating: 85 kA
	LTPU: 1.0 (1600 A)	LTD: 12	
	STPU: 2 (3200 A)	STD: 0.1 (I <sup>2</sup> t In)	
	INST: M1(8) (12800 A)		
	GFPU: D	GFD: 0.2 s	
	Notes: New breaker located in SGR-S701.		

- All other settings and system programming to be determined by the Contractor / Equipment Vendor.

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		ID: MCC-G750 / MCC-G760 / MCC-G770 / MCC-G780 / CB-G710, CB-G720

<b>Circuit Breaker</b>	ID: <b>CB-G740</b>		
	Single Line Diagram: 1-0102-ESLD-S001		Three Line Diagram: N.A
	Manufacturer: Cutler Hammer	Model: DS-416	Cat #: -----
	Frame Size: 1600 A	Sensor Rating: 1600 A	Interrupting Rating: 85 kA
	LTPU: 1.0 (1600 A)	LTD: 12	
	STPU: 2 (3200 A)	STD: 0.1 (I <sup>2</sup> t In)	
	INST: M1(8) (12800 A)		
	GFPU: D	GFD: 0.2 s	
	Notes: New breaker located in SGR-S702.		

- All other settings and system programming to be determined by the Contractor / Equipment Vendor.