

CONDUIT AND CABLE SCHEDULE 3

FEEDER NO.	CONDUIT		FROM	TO	SERVICE	CONTAINS CABLES	INSULATION 600V	REMARKS
	SIZE [INCHES]	MATERIAL						
C042	3/4	PVC RGS	ZS-SDIFLA1 SOUTH DIFFERENTIAL LOCKED LIMIT SWITCH	ZS-SDIFULB1 SOUTH DIFFERENTIAL UNLOCKED LIMIT SWITCH	CB1021, 1022, GND	3 #12 AWG, 1 #12 AGW GND, 1-SP	RW90, XLPE	
C043	3/4	PVC RGS	ZS-SADEA1 SOUTH AUX. DRIVE ENGAGED LIMIT SWITCH	ZS-SADEB1 SOUTH AUX. DRIVE DISENGAGE LIMIT SWITCH	CB1021, 1024, GND	3 #12 AWG, 1 #12 AGW GND, 1-SP	RW90, XLPE	
C044	3/4	PVC RGS	NORTH TOWER I/O PANEL CP-4	NORTH TOWER DISTRIBUTION PANEL LP-3	LP3-1H, LP3-1N, LP3-2H, LP3-2N, GND	5 #10 AWG, 1 #10 GND 1-SP	RW90, XLPE	
C045	2	PVC RGS	NORTH TOWER I/O PANEL CP-4	NORTH TOWER MOTOR CONTROL CENTER	MCR-4H, CB1206, 1208, CB1209, 1211, CB1212, 1214, CB1217, 1219, 1316, 1317, 1318, 1319, 1517D, 1519D, 1521D, 1523D, 1525D, 1527D, 1530D, 1532D, CB1234, 1236, CB1935, 1935, 1935A, 1937, 1937A, 1300, 1301, CB1300, 1302, 1303, GND COMM. CHANNEL A COMM. CHANNEL B	40 #12 AWG, 1 #12 AWG GND, 7-SP COAXIAL	RW90, XLPE	
C046	2	PVC RGS	NORTH TOWER I/O PANEL CP-4	NORTH MOTOR RM GATE/LOCK CONTROL PB	CB1206, 1206, 1207, 1517, 1517D, 1519, 1519D, CB1209, 1209, 1210, 1521, 1521D, 1523, 1523D, CB1212, 1212, 1213, 1525, 1525D, 1527, 1527D, CB1217, 1217, 1218, 1530, 1530D, 1532, 1532D, GND	34 #12 AWG, 1 #12AWG GND, 6-SP	RW90, XLPE	
C047	2	PVC RGS	NORTH MOTOR RM GATE/LOCK CONTROL PB	NORTH TOWER GATE/LOCK CONTROL PB	CB1206, 1206, 1207, 1517, 1517D, 1519, 1519D, CB1209, 1209, 1210, 1521, 1521D, 1523, 1523D, CB1212, 1212, 1213, 1525, 1525D, 1527, 1527D, CB1217, 1217, 1218, 1530, 1530D, 1532, 1532D, CB1700, EA2-4N, 1713, 1715, 1715, 1717, 1701, 1702, 1703, 1701A, 1704, 1708, 1708A, 1709, 1710, 1711, GND	50 #12 AWG, 1 #12AWG GND, 6-SP	RW90, XLPE	
C048	1	PVC RGS	NORTH TOWER GATE/LOCK CONTROL PB	TRAFFIC GATE NORTHEAST TG-NE	CB1206, 1206, 1207, 1517, 1517D, 1519, 1519D, 1608, 1610, CB1700, EA2-4N, 1716, GND	14 #12 AWG, 1 #12 AWG GND, 2-SP	RW90, XLPE	
C049	1	PVC RGS	NORTH TOWER GATE/LOCK CONTROL PB	TRAFFIC GATE NORTHWEST TG-NW	CB1209, 1209, 1210, 1521, 1521D, 1523, 1523D, CB1700, EA2-4N, 1713, 1716, GND	13 #12 AWG, 1 #12 AWG GND, 2-SP	RW90, XLPE	
C050	1	PVC RGS	NORTH TOWER GATE/LOCK CONTROL PB	BARRIER GATE NORTHEAST BG-NE	CB1212, 1212, 1213, 1525, 1525D, 1527, 1527D, CB1700, EA2-4N, 1717, GND	12 #12 AWG, 1 #12 AWG GND, 2-SP	RW90, XLPE	
C051	1	PVC RGS	NORTH TOWER GATE/LOCK CONTROL PB	PEDESTRIAN GATE NORTHWEST PG-NW	CB1217, 1217, 1218, 1530, 1530D, 1532, 1532D, GND	9 #12 AWG, 1 #12 AWG GND, 2-SP	RW90, XLPE	
C052	2	PVC RGS	SOUTH TOWER COMMUNICATIONS TERMINAL CABINETS	JB-37	1517, 1519, 1521, 1523, 1525, 1527, 1530, 1532, 1608, 1610, LP3-1H, MCR-4H, CB1700, EA2-4N, 1713, 1715, 1716, 1717, 1701, 1702, 1703, 1701A, 1704, 1708, 1708A, 1709, 1710, 1711, GND	32 #12 AWG, 1 #12 AWG GND, 4-SP	RW90, XLPE	
C053	1-1/2	PVC RGS	NORTH TOWER I/O PANEL CP-4	NORTH MOTOR RM BRAKE CONTROL PB	CB1227, 1222, 1223, 1224, CB1225, 1225, 1226, 1227, CB1228, 1228, 1229, 1230, CB1231, 1231, 1232, 1233, GND	20 #12AWG, 1 #12AWG GND, 4-SP	RW90, XLPE	
C054	3/4	PVC RGS	NORTH MOTOR RM BRAKE CONTROL PB	MOTOR BRAKE N1	CB1227, 1222, 1223, 1224, GND	5 #12 AWG, 1 #12 AWG GND, 1-SP	RW90, XLPE	
C055	3/4	PVC RGS	NORTH MOTOR RM BRAKE CONTROL PB	MACHINERY BREAK N2	CB1225, 1225, 1226, 1227, GND	5 #12 AWG, 1 #12 AWG GND, 1-SP	RW90, XLPE	
C056	3/4	PVC RGS	NORTH MOTOR RM BRAKE CONTROL PB	MACHINERY BREAK N3	CB1228, 1228, 1229, 1230, GND	5 #12 AWG, 1 #12 AWG GND, 1-SP	RW90, XLPE	
C057	3/4	PVC RGS	NORTH MOTOR RM BRAKE CONTROL PB	MOTOR BRAKE N4	CB1231, 1231, 1232, 1233, GND	5 #12 AWG, 1 #12 AWG GND, 1-SP	RW90, XLPE	
C058	1-1/2	PVC RGS	NORTH TOWER I/O PANEL CP-4	NORTH MOTOR RM GATE/LOCK CONTROL PB	CB1234, 1234, 1235, 1935, 1935A, 1937, 1937A, CB1234, 1237, 1608, 1610, CB1700, EA2-4N, 1713, 1715, 1716, 1717, 1701, 1702, 1703, 1701A, 1704, 1708, 1708A, 1709, 1710, 1711, GND	31#12AWG, 1 #12AWG GND, 4-SP	RW90, XLPE	
C059	1	PVC RGS	NORTH MOTOR RM GATE/LOCK CONTROL PB	NORTH TOWER GATE/LOCK CONTROL PB	CB1234, 1234, 1235, 1935, 1935A, 1937, 1937A, CB1234, 1237, 1608, 1610, GND	13 #12AWG, 1 #12AWG GND, 2-SP	RW90, XLPE	
C060	1	PVC RGS	NORTH TOWER GATE/LOCK CONTROL PB	ZS-SPLNE1 AND ZS-SPLNW1 NORTH SPAN LOCK LIMIT SWITCHES	CB1234, 1234, 1235, 1935, 1935A, 1937, 1937A, GND	9 #12 AWG, 1 #12 AWG GND, 2-SP	RW90, XLPE	
C061	3/4	PVC RGS	NORTH TOWER GATE/LOCK CONTROL PB	ZS-SPLNHC NORTH SPAN LOCK HAND CRANK LIMIT SWITCH	CB1234, 1237, GND	3 #12 AWG, 1 #12 AWG GND, 1-SP	RW90, XLPE	
C062	3/4	PVC RGS	NORTH TOWER I/O PANEL CP-4	ULTIMATE SKEW RESOLVER	MFG CABLE	MFG CABLE		
C063	1-1/2	PVC RGS	NORTH TOWER I/O PANEL CP-4	MOTOR DRIVE 3E-MA	CB1308, 1308, 1309, 1400, 1402, 2301A, 1404, GND COMM. CHANNEL A COMM. CHANNEL B	9 #12 AWG, 1 #12 AWG GND, 2-SP COAXIAL	RW90, XLPE	
					1432+, 1433-, SHLD, 1435+, 1436-, SHLD	16 TWISTED SHIELDED PAIR		

CONDUIT AND CABLE SCHEDULE 3 (CONTINUED)

FEEDER NO.	CONDUIT		FROM	TO	SERVICE	CONTAINS CABLES	INSULATION 600V	REMARKS
	SIZE [INCHES]	MATERIAL						
C064	1-1/2	PVC RGS	NORTH TOWER I/O PANEL CP-4	MOTOR DRIVE 4W-SL	CB1312, 1312, 1313, GND COMM. CHANNEL A COMM. CHANNEL B 1451+, 1452-, SHLD, 1454+, 1455-, SHLD	4 #12 AWG, 1 #12 AWG GND, 1-SP COAXIAL 16 TWISTED SHIELDED PAIR	RW90, XLPE	
C065	1	PVC RGS	NORTH MOTOR RM GATE/LOCK CONTROL PB	NORTH MOTOR RM GATE/LOCK CONTROL PB	CB1310, 1310, CB2301, 2308, CB1310, 1311, GND	8 #12AWG, 1 #12AWG GND, 2-SP	RW90, XLPE	
C066	1	PVC RGS	NORTH MOTOR RM GATE/LOCK CONTROL PB	NORTH TOWER GATE/LOCK CONTROL PB	CB1310, 1310, CB2301, 2308, CB1310, 1311, GND	8 #12AWG, 1 #12AWG GND, 2-SP	RW90, XLPE	
C067	3/4	PVC RGS	NORTH TOWER GATE/LOCK CONTROL PB	ZS-NWFS NORTHWEST FULLY SEATED LIMIT SWITCH	CB1310, 1310, CB2301, 2308, GND	5 #12 AWG, 1 #12 AWG GND, 1-SP	RW90, XLPE	
C068	3/4	PVC RGS	NORTH TOWER GATE/LOCK CONTROL PB	ZS-NEFS NORTHEAST FULLY SEATED LIMIT SWITCH	CB1310, 1311, GND	3 #12 AWG, 1 #12 AWG GND, 1-SP	RW90, XLPE	
C069	3/4	PVC RGS	NORTH TOWER I/O PANEL CP-4	ZS-NDIFLA1 NORTH DIFFERENTIAL LOCKED LIMIT SWITCH	CB1320, 1320, 1321, GND	4 #12 AWG, 1 #12 AWG GND, 1-SP	RW90, XLPE	
C070	3/4	PVC RGS	NORTH TOWER I/O PANEL CP-4	ZS-NADEA1 NORTH AUX DRIVE ENGAGED LIMIT SWITCH	CB1320, 1322, 1323, GND	4 #12 AWG, 1 #12 AWG GND, 1-SP	RW90, XLPE	
C071	3/4	PVC RGS	NORTH TOWER I/O PANEL CP-4	NORTH AND SOUTH HEIGHT INDICATION METERS ON AUX DRIVE PANEL	1417+, 1418-, SHLD, 1420+, 1421-, SHLD	16 TWISTED SHIELDED PAIR		
C072								
C073								
C074	3/4	PVC RGS	ZS-NWFS NORTHWEST FULLY SEATED LIMIT SWITCH	ZS-NEFS NORTHEAST FULLY SEATED LIMIT SWITCH	CB1310, 1311, GND	3 #12 AWG, 1 #12 AWG GND, 1-SP	RW90, XLPE	
C075	3/4	PVC RGS	ZS-NDIFLA1 NORTH DIFFERENTIAL LOCKED LIMIST SWITCH	ZS-NDIFULB1 NORTH DIFFERENTIAL UNLOCKED LIMIT SWITCH	CB1320, 1321, GND	3 #12 AWG, 1 #12 AWG GND, 1-SP	RW90, XLPE	
C076	3/4	PVC RGS	ZS- NADEA1 NORTH AUX DRIVE ENGAGED LIMIT SWITCH	ZS-NADEB1 NORTH AUX. DRIVE DISENGAGED LIMIT SWITCH	CB1320, 1323, GND	3 #12 AWG, 1 #12 AWG GND, 1-SP	RW90, XLPE	
C077A			SOUTH TOWER COMMUNICATIONS TERMINAL CABINET	NORTH TOWER I/O PANEL CP-4	LP3-1H, MCR-4H 1517, 1519, 1521, 1523, 1525, 1527, 1530, 1532, 1701, 1701A, 1702, 1703, 1704, 1708, 1708A, 1709, 1711, 1713, 1714, 1715, 1716, 1717, CB1700, 1608, 1610, 1710, EA2-4N, CB1935, 1935, 1937, 2205, CB2301, 2304, GND, 24 SP	59 #12 AWG, 1 # 12 AWG GND, 24-SP	RW90	AERIAL CABLE
C077B			SOUTH TOWER COMMUNICATIONS TERMINAL CABINET	NORTH TOWER I/O PANEL CP-4	COMM. CHANNEL A COMM. CHANNEL B, SP 3/4" INTERDUCT MEDIA 100 BASEFX MULTIMODE FIBER - DOUBLE JACKET P.A. SYSTEM FIRE PROTECTION HEAT DETECTORS	3-COAXIAL RG-6 SYNCHLINK FIBER OPTIC CABLE 48 FIBER NETWORK 14 #14 AWG 8 #10 AWG		AERIAL CABLE
C077C			EXISTING CCTV CABINET - SOUTH SOUTH SYSTEM GROUND, NOTE 2	EXISTING CCTV CABINET - NORTH NORTH SYSTEM GROUND, NOTE 2	CCTV SYSTEM CAMERA POWER	2 #1/0 AWG, 1000 V 1 #6 AWG GND 1 #1/0 GND	XLPE RW90	AERIAL CABLE
C078A			SOUTH TOWER COMMUNICATIONS TERMINAL CABINET	NORTH TOWER I/O PANEL CP-4	LP3-1H, MCR-4H 1517, 1519, 1521, 1523, 1525, 1527, 1530, 1532, 1701, 1701A, 1702, 1703, 1704, 1708, 1708A, 1709, 1711, 1713, 1714, 1715, 1716, 1717, CB1700, 1608, 1610, 1710, EA2-4N, CB1935, 1935, 1937, 2205, CB2301, 2304, GND, 24 SP	59 #12 AWG, 1 # 12 AWG GND, 24-SP	RW90	AERIAL CABLE
C078B			SOUTH TOWER COMMUNICATIONS TERMINAL CABINET	NORTH TOWER I/O PANEL CP-4	COMM. CHANNEL A COMM. CHANNEL B, SP 3/4" INTERDUCT MEDIA 100 BASEFX MULTIMODE FIBER - DOUBLE JACKET P.A. SYSTEM FIRE PROTECTION HEAT DETECTORS	3-COAXIAL RG-6 SYNCHLINK FIBER OPTIC CABLE 48 FIBER NETWORK 14 #14 AWG 8 #10 AWG		AERIAL CABLE
C078C			EXISTING CCTV CABINET - SOUTH SOUTH SYSTEM GROUND, NOTE 2	EXISTING CCTV CABINET - NORTH NORTH SYSTEM GROUND, NOTE 2	CCTV SYSTEM CAMERA POWER	2 #1/0 AWG, 1000 V 1 #6 AWG GND 1 #1/0 GND	XLPE RW90	AERIAL CABLE
C079	3/4	PVC RGS	SOUTH MOTOR ROOM LOCK/GATE PB	SOUTH TOWER I/O PANEL CP-3	ZS-SNFS, ZS-SNFR, ZS-SFR	6 #12 AWG, 1#12 GND	RW90, XLPE	
C080	3/4	PVC RGS	SOUTH MOTOR ROOM LOCK/GATE PB	NEAR FULL SEATED LIMIT SWITCH	ZS-SNFS	2 #12 AWG, 1#12 GND	RW90, XLPE	

NOTES:
1. CONDUIT AND CABLE SCHEDULE AND SERVICE DESIGNATIONS ARE INTENDED AS A GUIDE FOR THE CONTRACTOR AND ARE NOT CONSIDERED TO BE COMPLETE. THE CONTRACTOR MUST COMPLETE THE SCHEDULE AND SUBMIT WITH THE SHOP DRAWINGS BASED ON CONTRACTOR SELECTED EQUIPMENT BRANDS AND MODELS AND FINAL CONFIGURATIONS.
2. BOND AERIAL 1/0 GROUND CONDUCTOR TO EXISTING NORTH AND SOUTH GROUNDING SYSTEM CONDUCTORS.



Public Works and Government Services Canada
Architectural and Engineering Services
Ontario Region

Travaux publics et Services gouvernementaux Canada
Services d'architecture et de génie
Région de l'Ontario

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Limitations: Electrical system design for the Burlington Canal Bridge in Burlington, Ontario for Public Works and Government Services Canada
Collaborator: Zvonko Trajkovic, P. Eng.
Expiry Date : July 31, 2013
Association of Professional Engineers of Ontario



243-07-08



07	FOR TENDER 2	2013-06-30
06	FOR TENDER	2013-06-04
05	FINAL DESIGN COMPLETION	2013-05-31
04	99% DESIGN COMPLETION	2013-05-31
03	90% DESIGN SUBMITTAL	2013-03-31
02	66% DESIGN SUBMITTAL	2013-02-14
01	33% DESIGN SUBMITTAL	2012-12-10
revision		date
Do not scale drawings. Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.		

A

B

C

Detail No.,
No. du détail
drawing no. — where detail required
dessin no. — où détail exigé
drawing no. — where detailed
dessin no. — où détaillé

project title
titre du projet

HAMILTON ONTARIO
BURLINGTON CANAL
VERTICAL LIFT BRIDGE
REPLACEMENT OF CONTROLS,
DRIVES AND OVERHEAD CABLES

drawing title
titre du dessin

CONDUIT AND CABLE SCH. 3

drawn by
dessiné par

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bid
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project manager
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A. Ghubril

project date
date du projet

2013-05-31

project no.
no. du projet

R.012641.001

drawing no.
dessiné no.

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