

A1 SIZE (594 mm x 841 mm)
 Plotted: December 8, 2017 at 12:15:53 PM | Last saved by: Patresenc
 File: P:\2017\17M-00806-00 - Truro Creek Culvert Replacements\17M-00806-00 Truro Creek Culvert Replacements\MM Drawings\17M-00806-00 Truro Creek Culvert Replacements DD Winchester 21 to 23 bill of materials.dwg | Layout: 22 Bill of Reinforcing Steel (Sheet 2 of 3)

BILL OF REINFORCING STEEL
FOR BOX CULVERT (SUBSTRUCTURE)

MARK	TYPE	PIN DIAMETER	LENGTH	No.	MASS	BENDING DIAGRAM
C1520-13	BENT	95	1 930	2	6.06	
C1520-14	BENT	95	2 020	2	6.34	
C1520-15	BENT	95	2 110	2	6.63	
C1520-16	BENT	95	2 195	2	6.89	
C1520-17	BENT	95	2 285	2	7.17	
C1520-18	BENT	95	2 370	2	7.44	
C1520-19	BENT	95	2 460	2	7.72	
C1520-20	BENT	95	2 550	2	8.01	
C2001	BENT	120	5 630	74	981.14	
C2002	BENT	120	5 400	123	1 564.19	
C2003	BENT	120	5 400	147	1 869.40	
C2004	BENT	120	5 630	74	981.14	
C2005	BENT	120	1 985	246	1 149.97	

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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.

BILL OF REINFORCING STEEL
FOR BOX CULVERT (SUBSTRUCTURE)

MARK	TYPE	PIN DIAMETER	LENGTH	No.	MASS	BENDING DIAGRAM
C2006	BENT	120	1 950	246	1 129.69	
C2007	STR		9 255	12	261.55	
C2008	BENT	120	1 760	74	306.72	
C2009	BENT	120	2 680	8	50.49	
C2010-1	BENT	120	2 880	4	27.13	
C2010-2	BENT	120	3 310	4	31.18	
C2010-3	BENT	120	3 735	4	35.18	
C2010-4	BENT	120	4 160	4	39.19	
C2010-5	BENT	120	4 585	4	43.19	
C2010-6	BENT	120	5 010	4	47.19	
C2011	STR		14 775	2	69.59	
C2012	STR		15 255	14	502.96	
C2013	STR		6 590	15	232.79	
C2014-1	BENT	120	2 060	2	9.70	
C2014-2	BENT	120	2 790	2	13.14	
C2014-3	BENT	120	3 520	2	16.58	
C2014-4	BENT	120	4 245	2	19.99	

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BILL OF REINFORCING STEEL
FOR BOX CULVERT (SUBSTRUCTURE)

MARK	TYPE	PIN DIAMETER	LENGTH	No.	MASS	BENDING DIAGRAM
C2014-5	BENT	120	4 975	2	23.43	
C2014-6	BENT	120	5 705	2	26.87	
C2015	BENT	120	2 680	16	100.98	
C2016	STR		6 810	14	224.53	
C2017	BENT	120	1 150	6	16.25	
C2018-1	BENT	120	3 280	2	15.45	
C2018-2	BENT	120	3 725	2	17.54	
C2018-3	BENT	120	4 170	2	19.64	
C2019-1	BENT	120	2 235	2	10.53	
C2019-2	BENT	120	2 680	2	12.62	
C2019-3	BENT	120	3 125	2	14.72	
C2019-4	BENT	120	3 570	2	16.81	
C2020	BENT	120	4 740	10	111.63	
C2021	BENT	120	4 800	24	271.30	
C2022	BENT	120	1 115	126	330.85	

TOTAL MASS OF REINFORCING STEEL: 17 630.74 kg

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

LOCATIONS APPROVED UNDERGROUND STRUCTURES

SIGNED BY: _____ DATE: _____
 SUPV. U/G STRUCTURES

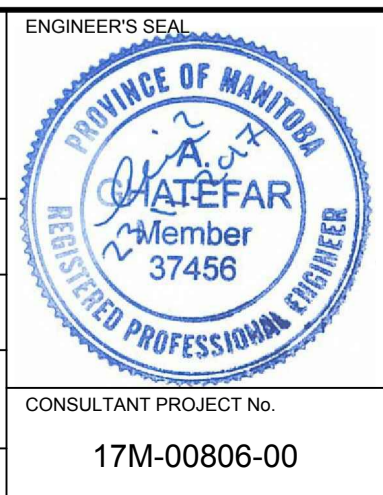
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT CONFIRMATION OF EXISTANCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING

G.B.M. = TOP NUT OF FIRST HYDRANT SOUTH OF INTERSECTION BETWEEN NESS AVENUE AND LINWOOD STREET	
ELEV. = 233.659	
1	ISSUED FOR ADDENDUM No. 2
0	ISSUED FOR TENDER
No.	REVISIONS

WSP

DESIGNED BY: AG
 DRAWN BY: CP
 CHECKED BY: MLW
 APPROVED BY: JL

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THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

Winnipeg

TRURO CREEK CULVERT REPLACEMENT AT WINCHESTER STREET

CONSULTANT PROJECT No. 17M-00806-00

CITY DRAWING NUMBER C322-17-22
 BID OPPORTUNITY NUMBER 1014-2017
 SHEET 22 OF 25
 REV 0

BILL OF REINFORCING STEEL (SHEET 2 OF 3)