

Plotfile: November 24, 2017 at 12:59:07 PM | Last saved by: dte:cliff
 File: P:\2017\17M-00806-00 - Truro Creek Culvert Replacements\17M-00806-00 Linwood 16 Bill of Reinforcing Steel (Sheet 1 of 2)

**BILL OF REINFORCING STEEL
FOR BOX CULVERT (SUBSTRUCTURE)**

MARK	TYPE	PIN DIAMETER	LENGTH	No.	MASS	BENDING DIAGRAM
C1001	BENT	65	4 200	58	191.23	
C1002	BENT	65	1 030	202	163.33	
C1501	BENT	95	8 025	32	403.18	
C1502	BENT	95	12 345	32	620.21	
C1503	STR		7 660	68	817.78	
C1504	STR		11 980	68	1 278.98	
C1505	BENT	95	1 500	26	61.23	
C1506	BENT	95	1 880	186	549.00	
C1507	BENT	95	1 840	186	537.32	
C1508	STR		4 440	32	223.07	
C1509-1	STR		820	4	5.15	
C1509-2	STR		880	4	5.53	
C1509-3	STR		965	4	6.06	
C1509-4	STR		1 055	4	6.63	
C1509-5	STR		1 145	4	7.19	
C1509-6	STR		1 230	4	7.72	
C1509-7	STR		1 320	4	8.29	
C1509-8	STR		1 405	4	8.82	
C1509-9	STR		1 495	4	9.39	
C1509-10	STR		1 585	4	9.95	
C1509-11	STR		1 670	4	10.49	
C1509-12	STR		1 760	4	11.05	
C1509-13	STR		1 845	4	11.59	
C1509-14	STR		1 935	4	12.15	
C1509-15	STR		2 025	4	12.72	
C1509-16	STR		2 110	4	13.25	
C1509-17	STR		2 200	4	13.82	
C1509-18	STR		2 285	4	14.35	
C1509-19	STR		2 375	4	14.92	
C1509-20	STR		2 465	4	15.48	
C1510	BENT	95	5 550	8	69.71	

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**BILL OF REINFORCING STEEL
FOR BOX CULVERT (SUBSTRUCTURE)**

MARK	TYPE	PIN DIAMETER	LENGTH	No.	MASS	BENDING DIAGRAM
C1511	BENT	95	2 655	58	241.76	
C1512	BENT	95	2 060	58	187.58	
C1513	STR		2 500	56	219.80	
C1514	BENT	95	2 425	144	548.24	
C1515	BENT	95	4 525	32	227.34	
C1516-1	BENT	95	905	4	5.68	
C1516-2	BENT	95	965	4	6.06	
C1516-3	BENT	95	1 050	4	6.59	
C1516-4	BENT	95	1 140	4	7.16	
C1516-5	BENT	95	1 230	4	7.72	
C1516-6	BENT	95	1 315	4	8.26	
C1516-7	BENT	95	1 405	4	8.82	
C1516-8	BENT	95	1 490	4	9.36	

CONTINUED →

**BILL OF REINFORCING STEEL
FOR BOX CULVERT (SUBSTRUCTURE)**

MARK	TYPE	PIN DIAMETER	LENGTH	No.	MASS	BENDING DIAGRAM
C1516-9	BENT	95	1 580	4	9.92	
C1516-10	BENT	95	1 670	4	10.49	
C1516-11	BENT	95	1 755	4	11.02	
C1516-12	BENT	95	1 845	4	11.59	
C1516-13	BENT	95	1 930	4	12.12	
C1516-14	BENT	95	2 020	4	12.69	
C1516-15	BENT	95	2 110	4	13.25	
C1516-16	BENT	95	2 195	4	13.78	
C1516-17	BENT	95	2 285	4	14.35	
C1516-18	BENT	95	2 370	4	14.88	
C1516-19	BENT	95	2 460	4	15.45	
C1516-20	BENT	95	2 550	4	16.01	

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METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

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.



**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 EXISTENCE 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

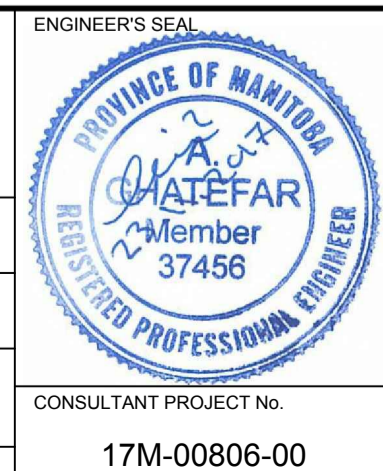
0	ISSUED FOR TENDER	17.11.23	JL
No.	REVISIONS	DATE	BY



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DESIGNED BY: AG
DRAWN BY: FD
HOR. SCALE: N.T.S.
VERTICAL: N.T.S.

CHECKED BY: MLW
APPROVED BY: JL
RELEASED FOR CONSTRUCTION



THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

TRURO CREEK CULVERT REPLACEMENT
AT LINWOOD STREET

CITY DRAWING NUMBER: C321-17-16
BID OPPORTUNITY NUMBER: 1014-2017
SHEET OF: 16 OF 19
REV 0

CONSULTANT PROJECT No.: 17M-00806-00

**BILL OF REINFORCING STEEL
(SHEET 1 OF 2)**