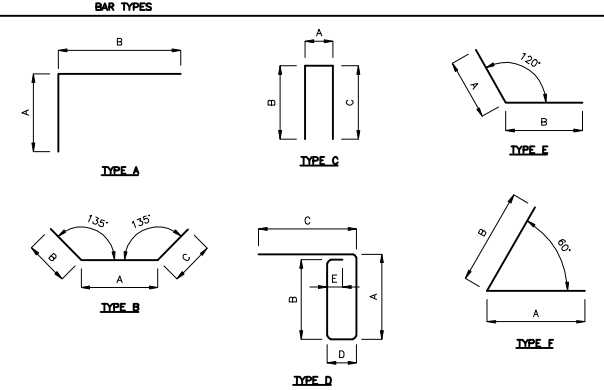


BILL OF REINFORCING STEEL

STRAIGHT BARS				CULVERT									
MARK	QTY.	LENGTH (mm)	MASS (kg)	MARK	QTY.	TYPE	A	B	C	D	E	LENGTH (mm)	MASS (kg)
1501	193	3520	1066.6	1001	147	C	220	600	600			1420	163.9
1502	90	12100	1709.7	1002	13	D	900	800	800	275	100	2175	29.3
1503	50	10000	785.0	1003	13	C	275	600	600			1475	15.1
1504	48	9100	685.8										
1505	58	10800	983.4	1509	100	B	960	600	600			2160	339.1
1506	40	11000	690.8	1510	22	E	600	600				1200	41.4
1507	6	6250	58.9	1511	22	F	600	600				1200	41.4
1508	10	7000	109.9	1514	26	A	600	800				1400	57.1
1512	10	1820	28.6	1516	95	B	1030	600	600			2230	332.6
1513	12	13000	244.9										
2001	188	3400	1505.3	2012	198	A	1850	1150				3000	1398.9
2002	1	3170	7.5	2013	186	A	2550	1150				3700	1620.7
2003	3	2825	20.0	2014	77	A	2370	600				2970	538.6
2004	1	2480	5.8	2512	152	A	2370	820				3190	1903.2
2005	3	2130	15.0										
2006	1	1785	4.2										
2007	3	1440	10.2										
2008	1	1090	2.6										
2009	3	745	5.3										
2010	220	3535	1831.5										
2011	74	2285	337.2										
2501	90	3400	1201.1										
2502	1	3170	12.4										
2503	1	2825	11.1										
2504	1	2480	9.7										
2505	1	2130	8.4										
2506	1	1785	7.0										
2507	1	1440	5.7										
2508	1	1090	4.3										
2509	1	745	2.9										
2510	146	2735	1567.3										
2511	8	6250	196.3										
				TOTAL MASS OF REINFORCING STEEL									
				19480.4 kg									



- NOTES:**
1. ALL DIMENSIONS GIVEN ARE OUT TO OUT, EXCEPT RADI. RADI ARE INSIDE DIMENSIONS.
 2. ALL REINFORCING STEEL SHALL BE DEFORMED STEEL UNLESS NOTED OTHERWISE.
 3. LIKE BARS SHALL BE BUNDLED, SECURELY TIED AND IDENTIFIED AS TO MARK AND SITE NO. BY APPROPRIATE MEANS. ALL OTHER ITEMS TO BE IDENTIFIED IN A SIMILAR FASHION.

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LOCATION APPROVED UNDERGROUND STRUCTURES		B.M. ELEV.	
SUPV. U/G STRUCTURES COMMITTEE	DATE		
NOTE: 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 WITH CONSTRUCTION.			
NO.	REVISIONS	DATE	BY
0	ISSUED FOR TENDER	11.01.06	K.S.A.
		DATE	09.12.11

Stantec Consulting Ltd.
 905 Waverley Street, Winnipeg, Manitoba
 Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY	K.S.A.	CHECKED BY	K.S.A.
DRAWN BY	J.M.B.	APPROVED BY	K.S.A.
SCALE:		RELEASED FOR CONSTRUCTION:	
		DATE	

ENGINEER'S SEAL

CONSULTANT DRAWING NO. **S-106**

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 ENGINEERING DIVISION

KENASTON BOULEVARD
 AT BISHOP GRANDIN BOULEVARD
 CONCRETE CULVERT EXTENSION
 REINFORCING BILL OF MATERIAL

SHEET	OF
12	13
CAD FILE DRAWING NUMBER	
048405-106-727.dwg	
CITY DRAWING NUMBER	
C375-II-12	