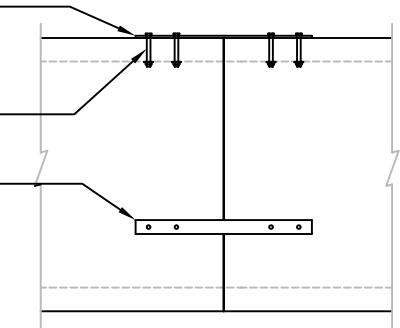


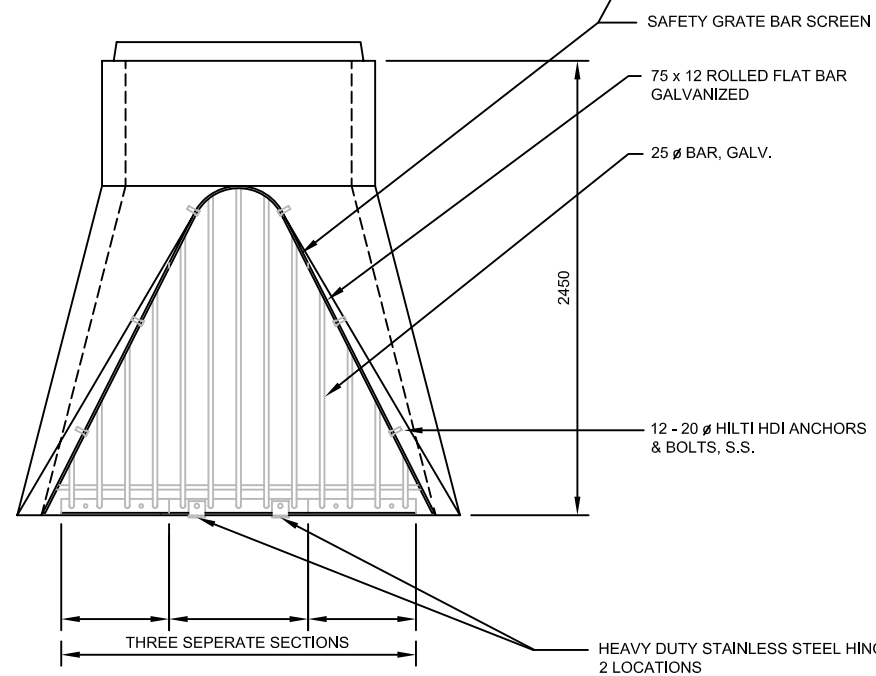
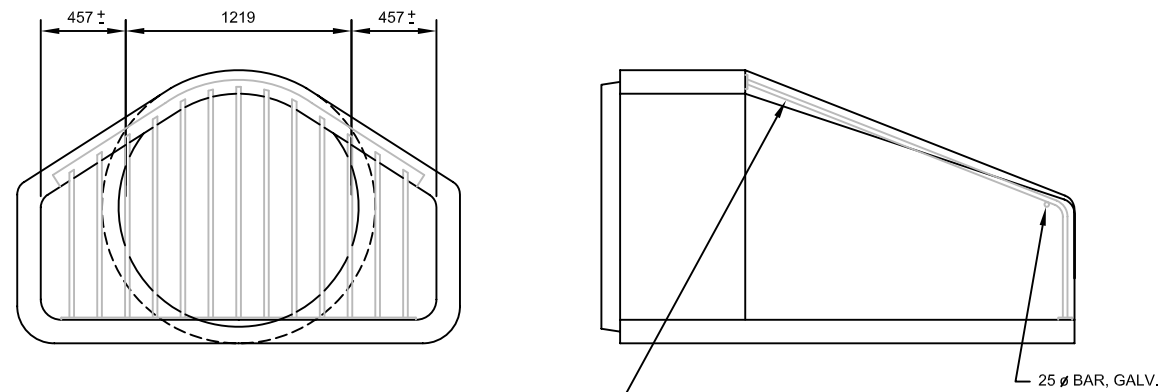
1 PRECAST STRAIGHT WALL PIPE
N.T.S.

INSTALL 3 RESTRAINT BARS.
1 AT TOP, 2 AT LOWER 1/3 POINTS.
FOR LAST 3 SECTIONS OF PIPE
INCLUDING CONNECTION FLARED END
(8 LOCATIONS).

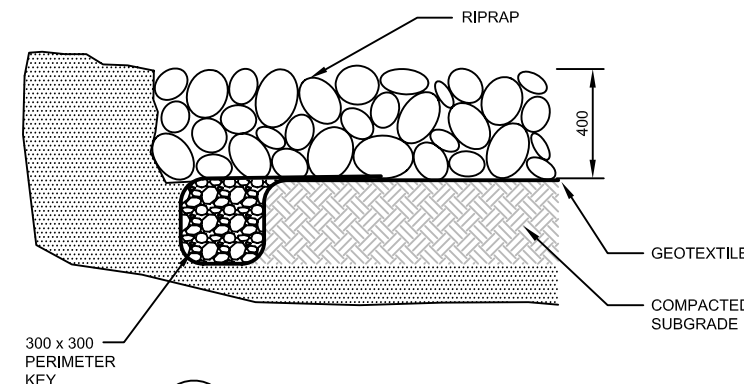
20 # THRU BOLTS, WASHERS & NUTS, S.S.
75 x 12 x 950 LONG FLAT BAR, GALV.



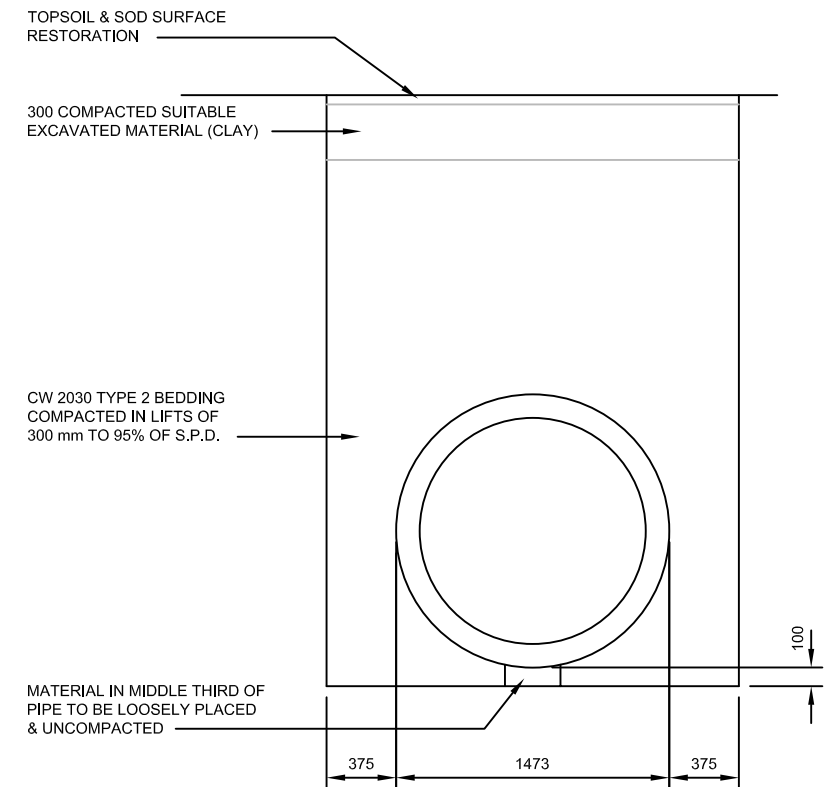
3 JOINT RESTRAINT BARS
N.T.S.



2 PRECAST FLARED END
SHOWN WITH SPIGOT END



4 RIPRAP KEY
N.T.S.



5 BEDDING & BACKFILL FOR PIPE LAID IN OPEN CUT
N.T.S.

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

LOCATION APPROVED UNDERGROUND STRUCTURES		B.M. ELEV.	DESIGNED BY:	D.N.B.
SUPR. U/G STRUCTURES	DATE		DRAWN BY:	M.R.T.
			CHECKED BY:	D.N.B.
			APPROVED BY:	D.N.B.
			AUTHORIZED BY:	
			ORIGINAL SIGNED BY:	D.N. BURMEY
1	ISSUED FOR ADDENDUM	18/09/11	DATE	M.T.
0	ISSUED FOR TENDER	02/09/11	DATE	M.T.
NO.	REVISION	DATE	BY	D.N. BURMEY BRIDGE MAINTENANCE ENGINEER

LOCATION APPROVED UNDERGROUND STRUCTURES		B.M. ELEV.	DESIGNED BY:	D.N.B.
SUPR. U/G STRUCTURES	DATE		DRAWN BY:	M.R.T.
			CHECKED BY:	D.N.B.
			APPROVED BY:	D.N.B.
			AUTHORIZED BY:	
			ORIGINAL SIGNED BY:	D.N. BURMEY
1	ISSUED FOR ADDENDUM	18/09/11	DATE	M.T.
0	ISSUED FOR TENDER	02/09/11	DATE	M.T.
NO.	REVISION	DATE	BY	D.N. BURMEY BRIDGE MAINTENANCE ENGINEER

ENGINEER'S SEAL
PROVINCE OF MANITOBA
ORIGINAL SIGNED BY
D.N. BURMEY
2011/09/16
REGISTERED PROFESSIONAL ENGINEER

CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

Winnipeg

PORTAGE AVENUE AT TRURO CREEK
CULVERT TWINNING

SECTIONS & DETAILS

SHEET 3 OF 3
HORIZONTAL: N.T.S.
VERTICAL: N.T.S.
CITY DRAWING NUMBER:
C307-11-03

BID OPPORTUNITY NO.:
40-2011