

THE CITY OF WINNIPEG
THE PUBLIC WORKS DEPARTMENT

BID OPPORTUNITY NO. 538-2011
CITY OF WINNIPEG

2010 ACTIVE TRANSPORTATION
INFRASTRUCTURE STIMULUS PROGRAM

NAVIN DRAIN CROSSING: LAGIMODIERE MULTI-USE PATH

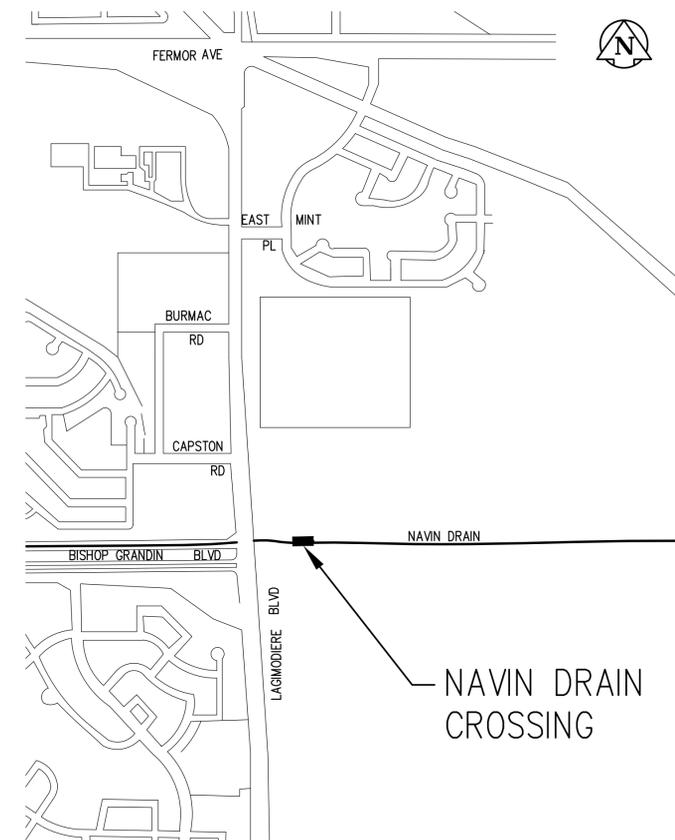


GENIVAR JOB NO. 09-150

C387-11-01 COVER PAGE
C387-11-02 NAVIN DRAIN CROSSING LOCATION AND SITE GRADING PLAN
C387-11-03 BOX-CULVERT PLANS
C387-11-04 BOX-CULVERT ELEVATIONS
C387-11-05 BOX-CULVERT SECTION
C387-11-06 BOX-CULVERT SECTION
C387-11-07 BOX-CULVERT SECTIONS AND DETAILS

ABBREVIATIONS LEGEND

CONC. - CONCRETE	MIN. - MINIMUM
REINF. - REINFORCING	LG. - LONG
EL. - ELEVATION	ALT. - ALTERNATE
FTG. - FOOTING	DWL. - DOWEL
COL. - COLUMN	BM. - BEAM
VERT. - VERTICAL	SP.S. - SPACES
HOR. - HORIZONTAL	GALV. - GALVANIZED
O/C - ON CENTER	TYP. - TYPICAL
U/S - UNDERSIDE	C/W - COMPLETE WITH
E.W. - EACH WAY	R/W - REINFORCE WITH
E.F. - EACH FACE	OPNG. - OPENING
I.F. - INSIDE FACE	EXIST. - EXISTING
O.F. - OUTSIDE FACE	T.U.L. - TOP UPPER LEVEL
T.O. - TOP OF	T.L.L. - TOP LOWER LEVEL
BOT. - BOTTOM	B.U.L. - BOTTOM UPPER LEVEL
LONG. - LONGITUDINAL	B.L.L. - BOTTOM LOWER LEVEL
TRANS. - TRANSVERSE	€ - CENTER LINE
T.S. - TEMPERATURE AND SHRINKAGE REINFORCING	T & B - TOP AND BOTTOM
S.S. - STAINLESS STEEL	LLV. - LONG LEG VERTICAL
U/N - UNLESS NOTED	LLH. - LONG LEG HORIZONTAL
MAX. - MAXIMUM	LL. - LIVE LOAD
E.S. - EACH SIDE	DL. - DEAD LOAD
H.K. - HOUSEKEEPING	TEMP. - TEMPERATURE
TYP. - TYPICAL	MID. - MIDDLE
CONT. - CONTINUOUS	GEOD. - GEODETIC
SIM. - SIMILAR	E.E. - EACH END
P.T. - PRESSURE TREATED	CSP. - CORRUGATED STEEL PIPE
T.J. - TIE JOISTS	
O.W.S.J. - OPEN WEB STEEL JOISTS	



DESIGN SPECIFICATIONS:

- D-1. This structure is designed in accordance with and shall be constructed in compliance with the following Codes and Specifications:
 - Canadian Highway Bridge Design Code CSA S6-06
- D-2. Principal applied design loads are indicated on appropriate plans.
- D-3. All foundation elements are designed as per recommendations made by GENIVAR in their report dated August 2010.
- D-4. Highway Live loading = CL625

GENERAL NOTES:

- 1) Design live loads should not be exceeded at any time during construction.
- 2) Do not scale the drawings.
- 3) Verify all dimensions, elevations, slopes, details, conditions, etc. shown on the structural drawings; with the latest consultant drawings and the site, prior to construction or prefabrication of any bridge component.
- 4) Discrepancies or ambiguities on the drawings and/or the site, which affect the box-culvert structure, shall be reported to the Design Engineer.
- 5) Where an overlap or a duplication occurs on the drawings, the more effective solution shall be considered correct, unless approved otherwise by the Design Engineer.
- 6) Modifications, alterations or substitutions must be authorized in writing by the Design Engineer prior to implementation.
- 7) The General Contractor shall locate all existing site services prior to start of construction.
- 8) Location of the construction joints is the responsibility of the General Contractor, but approval must be obtained from the Design Engineer before proceeding.
- 9) The contractor shall be responsible for the design and installation of all necessary shoring, bracing and formwork. Formwork for new construction shall be bridged over existing services. Procedure must be approved by the Design Engineer.
- 10) The General Contractor shall notify the Design Engineer at least 48 hours prior to all concrete pours and/or installation of interior sheathing, to allow for site inspections.

FOUNDATIONS:

- 1) Raft slab has been designed for an allowable bearing capacity of 71.8 kpa, as suggested in the soil report prepared by GENIVAR dated September 2010. The Geotechnical Engineer is to verify bearing capacity prior to pour.
- 2) Soil logs are provided for information only. Examine prevailing conditions at site prior to submitting bid. no extras shall be granted should actual site conditions differ from those indicated.
- 3) Prepare subgrade as follows:
 - Within the proposed structure area and at least 1.2m beyond the structure perimeter, remove all heterogeneous fill, organic material, peat moss, softened soil and ponded water to expose the underlying clay layer. Depth of site stripping is expected to be 600mm below existing grade. any additional fill should comprise of either the same material (20mm) or subbase material (50mm down granular fill). Since the anticipated floor is granular fill, the depth of site stripping should cover the entire structure.
 - Call for subgrade inspection. The exposed subgrade should be compacted with vibratory roller equivalent to 95% Standard Proctor density. If the exposed subgrade can not be compacted due to saturation, the need for permanent subdrains placed underneath the subgrade should be enforced to attain the required compaction.
 - Once the subgrade is approved, place 300mm of 50 to 75mm granular fill (c-base or subbase) followed by 300 mm thickness of 20mm down granular fill (A-base or base course material) across the entire width of the structure area and 1.2m beyond. Both of the subbase and base course material should be placed and uniformly compacted with a heavy vibratory roller to at least 98% Standard Proctor density (ASTM D698)
- 4) Do not cast raft slab and piers on frozen soil.



GENIVAR

10 PRAIRIE WAY, WINNIPEG, MANITOBA R2J 3J8
 PH: (204)-477-6650 FAX: (204)-474-2864