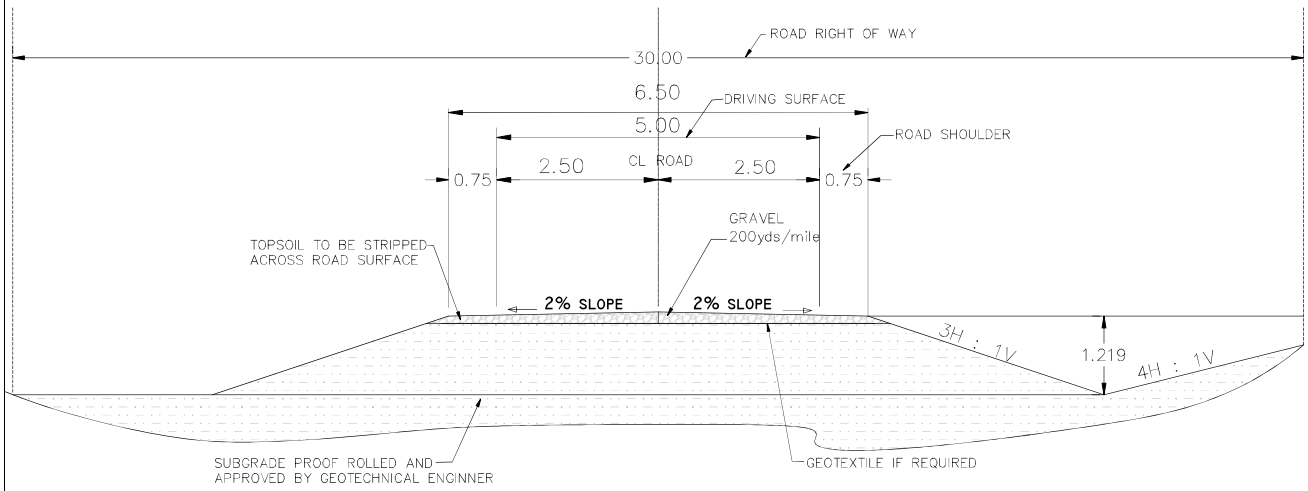
Appendix 2-4

Typical Road Design

Detail B – Minimum Municipal Road cross section

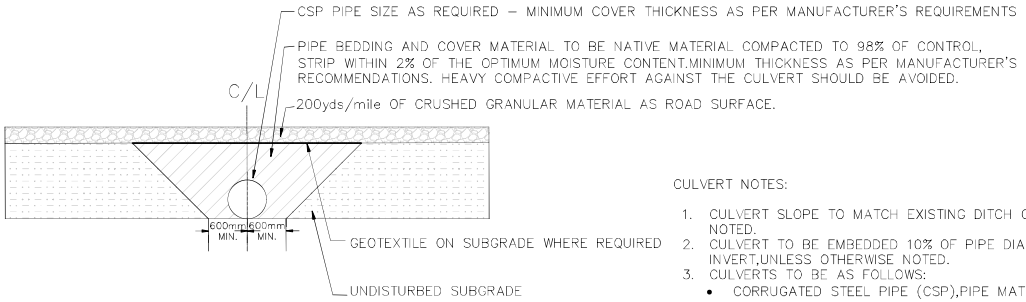
Concept for permit only



TYPICAL MUNICIPAL ROAD DETAIL

ACCESS ROAD NOTES:

1. NATIVE CLAY ROAD BASE TO BE COMPACTED TO 95% MODIFIED PROCTOR MAXIMUM DRY DENSITY.
2. MUNICIPAL ROAD AREAS TO BE STRIPPED OF TOPSOIL WITHIN RIGHT OF WAY.
3. PRIOR TO GRANULAR PLACEMENT,NATIVE SUBGRADE MATERIAL HAS TO BE PROOF ROLLED AND APPROVED BY GEOTECHNICAL ENGINEER.PROOF ROLL TO BE CARRIED OUT WITH HEAVY EQUIPMENT (ROLLER COMPACTOR,FULLY LOADED TANDEM AXLE DUMP TRUCK).
4. WET/UNSTABLE AREAS MUST BE REMOVED AND REPLACED WITH ADDITIONAL NATIVE SUB–BASE MATERIAL.
5. INSTEAD OF CROWN,ACCESS ROAD SURFACE MAY BE SLOPE LATERALLY IN ONE DIRECTION (1.5% TO 2.5%).
6. GRANULAR MATERIAL TO CONSIST OF WELL–GRADED 25mm MINUS SAND AND GRAVEL,MAXIMUM 10% FINES (LESS THAN 75 µm SIEVE).
7. RIGHT OF WAY WIDTH: 30m min.
8. FULL WIDTH RIGHT OF WAY TO BE CLEARED AS REQUIRED FOR ROAD CONSTRUCTION
9. SIDESLOPES 3:1 UP TO 2 m OR 2:1 OVER 3 m.
10. BACKSLOPES 4:1, WITH A MAXIMUM OF 2:1, IS TO BE MAINTAINED UNTIL TOP OF BACKSLOPE REACHES THE EDGE OF THE RIGHT OF WAY.
11. DRAINAGE AND CULVERTS PER DESIGN AND MUNICIPALITY GUIDELINES.



TYPICAL CULVERT DETAIL

CULVERT NOTES:

1. CULVERT SLOPE TO MATCH EXISTING DITCH GRADE UNLESS OTHERWISE NOTED.
2. CULVERT TO BE EMBEDDED 10% OF PIPE DIAMETER BELOW DITCH EXISTING INVERT,UNLESS OTHERWISE NOTED.
3. CULVERTS TO BE AS FOLLOWS:
   - CORRUGATED STEEL PIPE (CSP),PIPE MATERIAL TO BE GALVANIZED STEEL AND HAVE A 68mm x 13 mm CORRUGATION (SPECIFICATIONS AS PER CSA G401–14)
   - 1.6mm METAL THICKNESS (300mm DIA. TO 900mm DIA.)
   - 2.0 mm METAL THICKNESS (1000mm DIA. TO 1200mm DIA.)
4. PIPE BED TO BE COMPACTED AND SHAPED TO RECEIVE BOTTOM OF PIPE.
5. REQUIREMENTS FOR RIP–RAP PLACEMENT AT CULVERT ENDS SHALL BE DETERMINED IN THE FIELD DURING CONSTRUCTION.
6. IF NATIVE SOIL DOES NOT HAVE SUITABLE PROPERTIES FOR COMPACTION AROUND THE PIPE,20mm MINUS PIT RUN SAND AND GRAVEL SHALL BE USED INSTEAD.

No.	Description	Date	Drw.	Rev.	App.
01	CONCEPT FOR PERMIT ONLY	2026–03–06	NS	AC	VC

CLIENT: ENBRIDGE / Borea Construction

PROJET/PROJECT: SEVEN STAR ENERGY PROJECT

TITRE/TITLE: Detail B – Minimum Municipal Road cross section Concept for Permit Only

Ref /DWG#:	Format:	Echelle/Scale:
.....	A1	NTS

Plan no / PDF #:	Page/Sheet	Revision
.....	1 / 1	01