

Appendix 2-7

Typical Road and Culvert Designs



1. GRANULAR ROAD BASE TO BE COMPACTED TO 95% MODIFIED PROCTOR MAXIMUM DRY DENSITY.
2. ACCESS ROAD AREAS TO BE STRIPPED OF TOPSOIL WITHIN RIGHT OF WAY.
3. PRIOR TO GRANULAR PLACEMENT, SUBGRADE 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 GRANULAR SUB-BASE MATERIAL.
5. INSTEAD OF CROWN, ACCESS ROAD SURFACE MAY BE SLOPE Laterally in one direction (1.5% to 2.5%).
6. ENSURE ACCESS ROAD IS MOUNDED ABOVE EXISTING GRADE TO ALLOW POSITIVE DRAINAGE.
7. GRANULAR MATERIAL TO CONSIST OF WELL-GRADED 50mm MINUS SAND AND GRAVEL, MAXIMUM 10% FINES (LESS THAN 75 μ m SIEVE).
8. RIGHT OF WAY WIDTH: 20 m min.
9. FULL WIDTH RIGHT OF WAY TO BE CLEARED.
10. SIDESLOPES 3:1 UP TO 2 m OR 2:1 OVER 3 m.
11. BACKSLOPES 5:1, WITH A MAXIMUM OF 2:1, IS TO BE MAINTAINED UNTIL TOP OF BACKSLOPE REACHES THE EDGE OF THE RIGHT OF WAY.
12. DRAINAGE AND CULVERTS PER DESIGN.

CSP PIPE SIZE AS REQUIRED - MINIMUM COVER THICKNESS AS PER MANUFACTURER'S REQUIREMENTS

PIPE BEDDING AND COVER MATERIAL TO BE NATIVE MATERIAL COMPACTED TO 98% OF CONTROL, STRIP WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT. MINIMUM THICKNESS AS PER MANUFACTURER'S RECOMMENDATIONS. HEAVY COMPACTIVE EFFORT AGAINST THE CULVERT SHOULD BE AVOIDED.

C/L

150 mm of 25 mm CRUSHED GRANULAR MATERIAL AS ROAD SURFACE.

600mm MIN. 600mm MIN.

GEOTEXTILE ON SUBGRADE WHERE REQUIRED

UNDISTURBED SUBGRADE

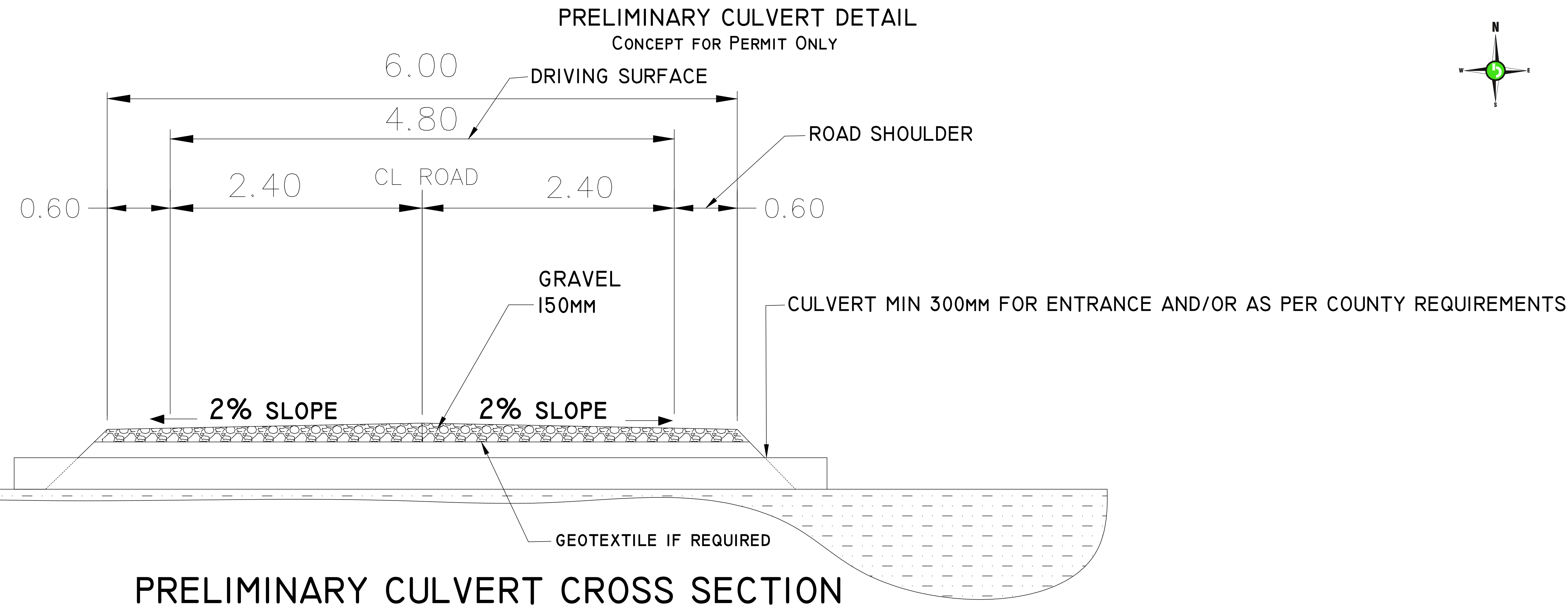
CULVERT NOTES:

1. CULVERT SLOPE TO MATCH EXISTING DITCH NOTED.
2. CULVERT TO BE EMBEDDED 10% OF PIPE DI. INVERT, UNLESS OTHERWISE NOTED.
3. CULVERTS TO BE AS FOLLOWS:
 - CORRUGATED STEEL PIPE (CSP). PIPE MA

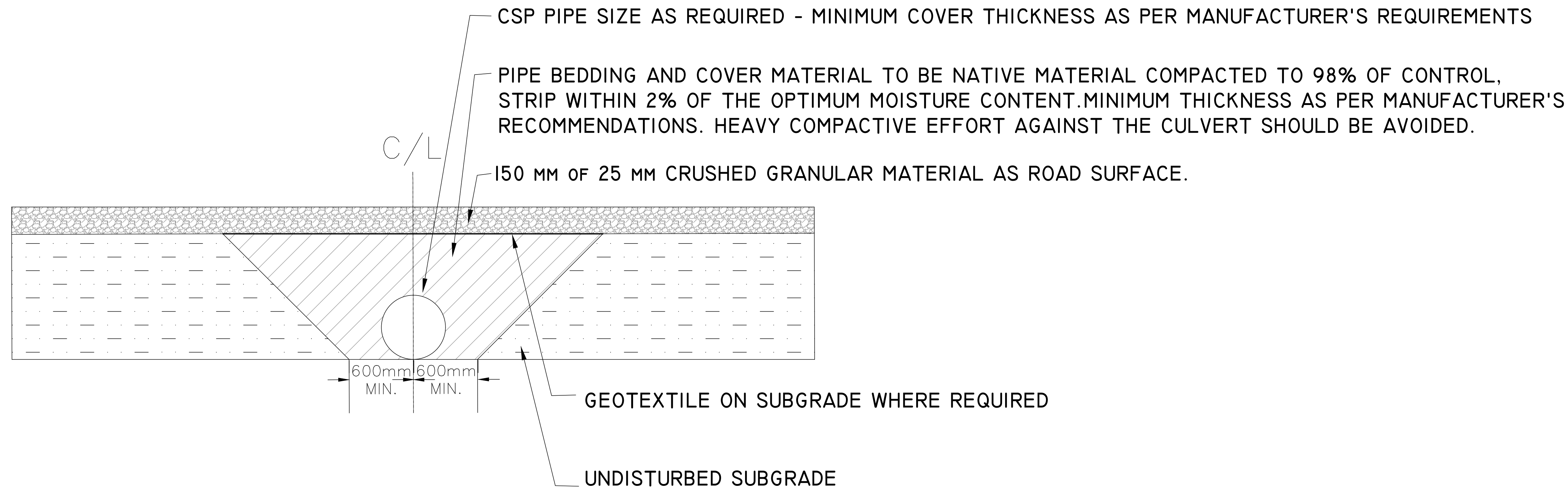
CULVERT NOTES:

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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.

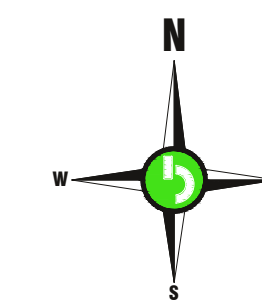
01	CONCEPT FOR PERMIT ONLY				2025-10-31	NS	AC	MC	
NO.	DESCRIPTION				DATE	DRW.	REV.	APP.	
CLIENT: 									
PROJECT/PROJECT: SEVEN STAR WIND PROJECT									
TITRE/TITLE: Detail B – Minimum Municipal Road cross section Concept for Permit Only									
REF /DWG #:					FORMAT:		ÉCHELLE/SCALE:		
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PLAN NO / PDF #:					PAGE/SHEET		REVISION		
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PRELIMINARY CULVERT CROSS SECTION



PRELIMINARY CULVERT DETAIL

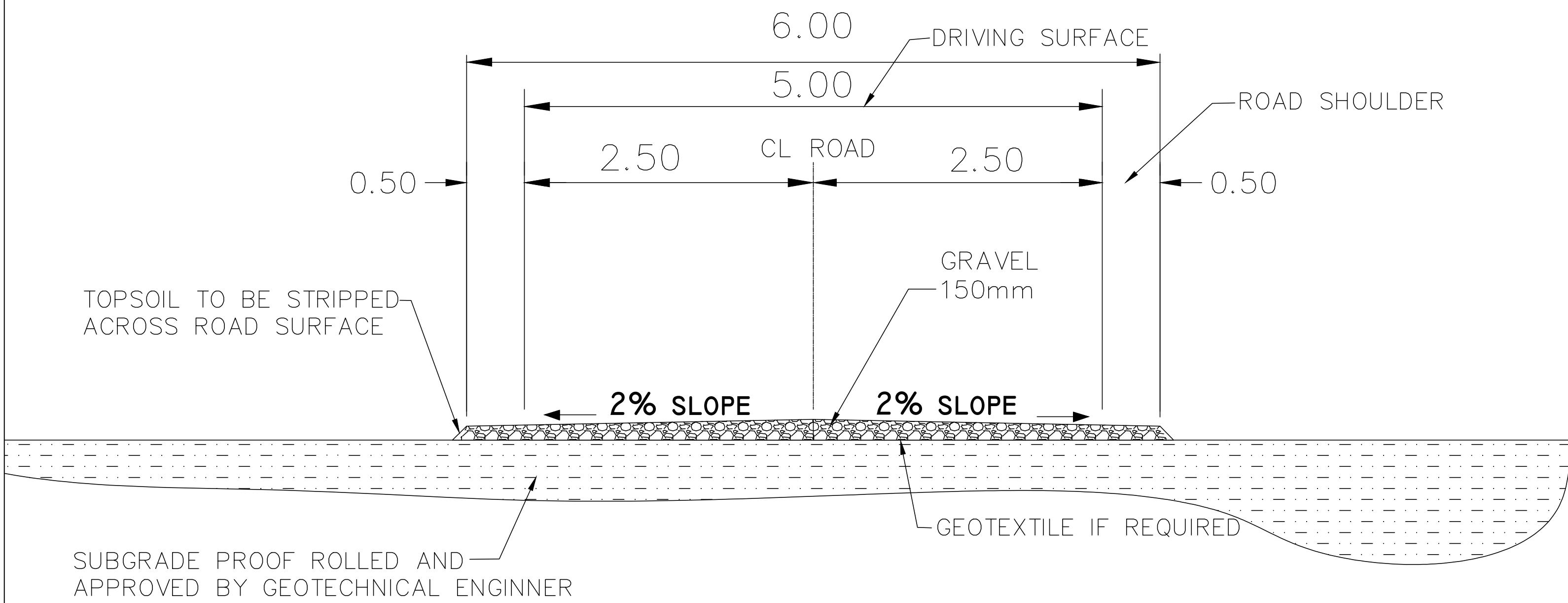
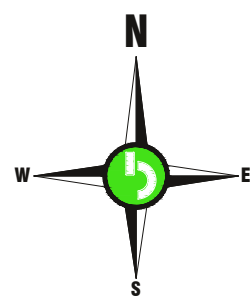


LEGEND

Point of vertical intersection	△
Existing edge of road	---
New edge of road	---
Slope	---
CL road	---
Culvert	---
Crane Pad	---
Temporary Widening/Road	---
Swing blade area	---
Collector	---
Wetland class 1-2	---
Wetland class 3+	---
Wetland Setback	---
Dugout / Ephemeral-WaterBody	---
Native Pasture	---
Stripping	---
Working Area	---
Temporary ROW	---
Permanent ROW	---
Pipeline	---
Telecom	---
WaterLine (co-op)	---
Fence	---
Powerline Aerial	---
Electric pole	---
GRAVEL	---
In-situ Soil	---

01	Concept for Permit	2025-10-16	NS	AC	MC
NO.	DESCRIPTION	DATE	DRW.	REV.	APP.
CLIENT:					
PROJET/PROJECT:		SEVEN STAR WIND PROJECT			
TITRE/TITLE:		PRELIMINARY CULVERT DETAIL Concept for Permit Only			
REF /DWG#:	FORMAT:	ÉCHELLE/SCALE:			
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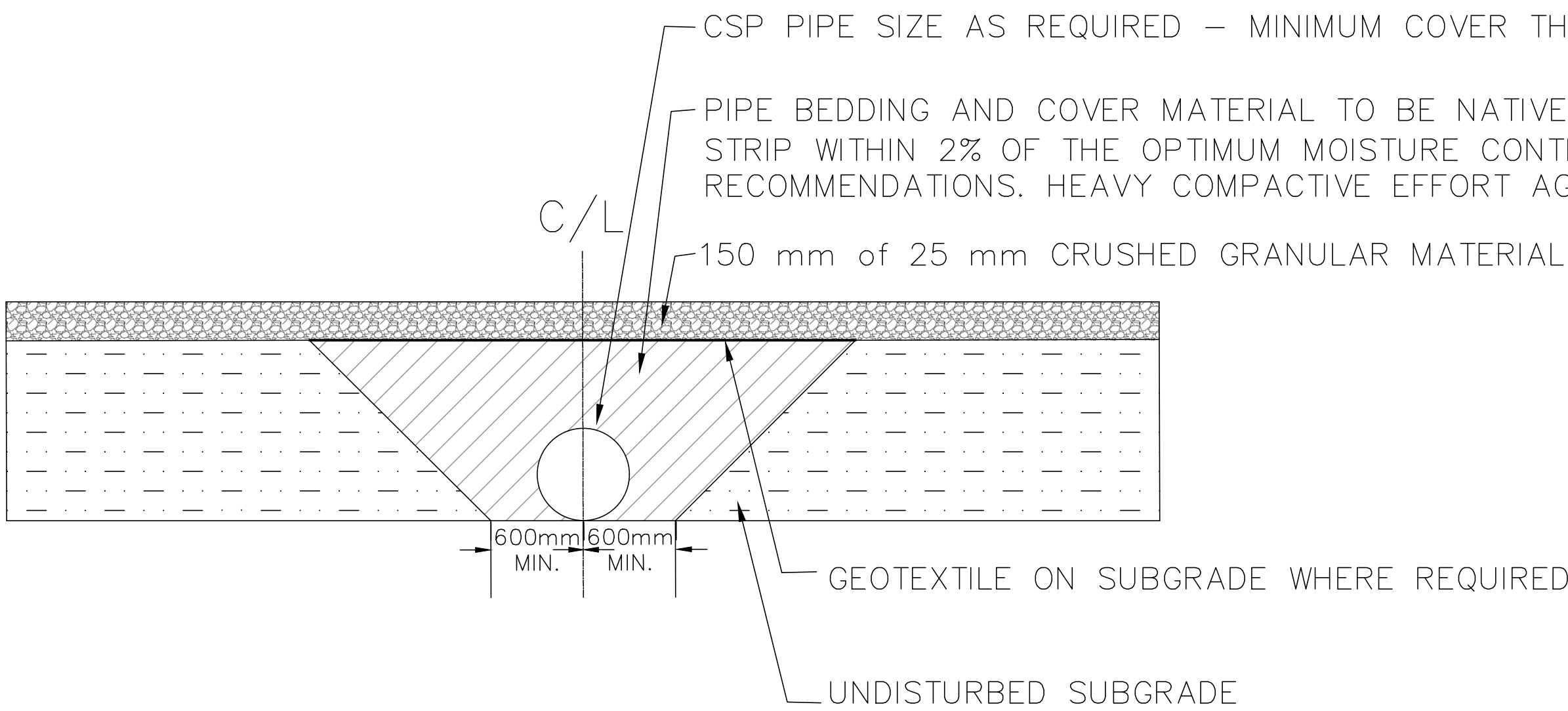
Detail A – Standard TSA compliant road minimum
Concept for permit only



TYPICAL ACCESS ROAD DETAIL

ACCESS ROAD NOTES:

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6. ENSURE ACCESS ROAD IS MOUNDED ABOVE EXISTING GRADE TO ALLOW POSITIVE DRAINAGE.
7. GRANULAR MATERIAL TO CONSIST OF WELL-GRADED 50mm MINUS SAND AND GRAVEL,MAXIMUM 10% FINES (LESS THAN 75 µm SIEVE).



TYPICAL CULVERT DETAIL

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NO.	DESCRIPTION	DATE	DRW.	REV.	APP.
CLIENT:		 			
PROJECT/PROJECT:					
SEVEN STAR WIND PROJECT					
TITLE/TITLE:					
Detail A – Standard TSA compliant road minimum Concept for Permit Only					
REF /DWG#:		FORMAT:	ÉCHELLE/SCALE:		
*****		A1	NTS		
PLAN NO / PDF #:		PAGE/SHEET	REVISION		
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