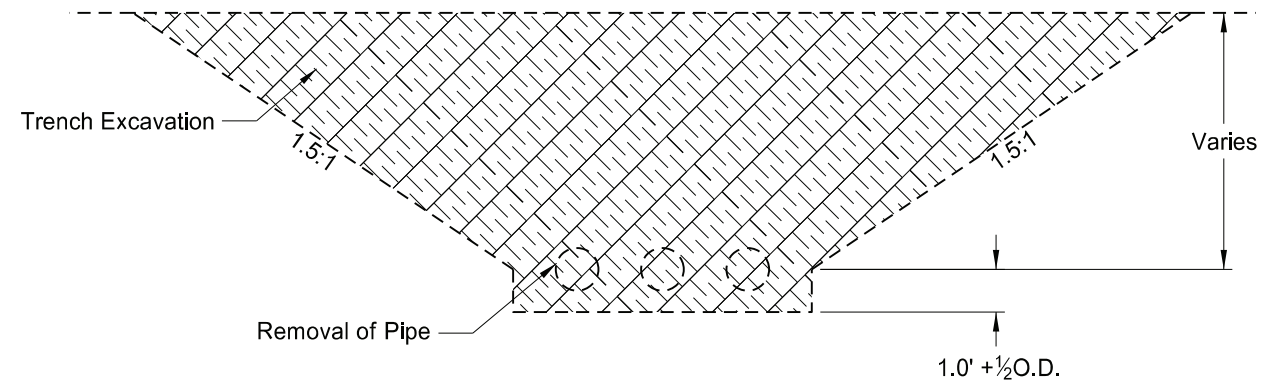
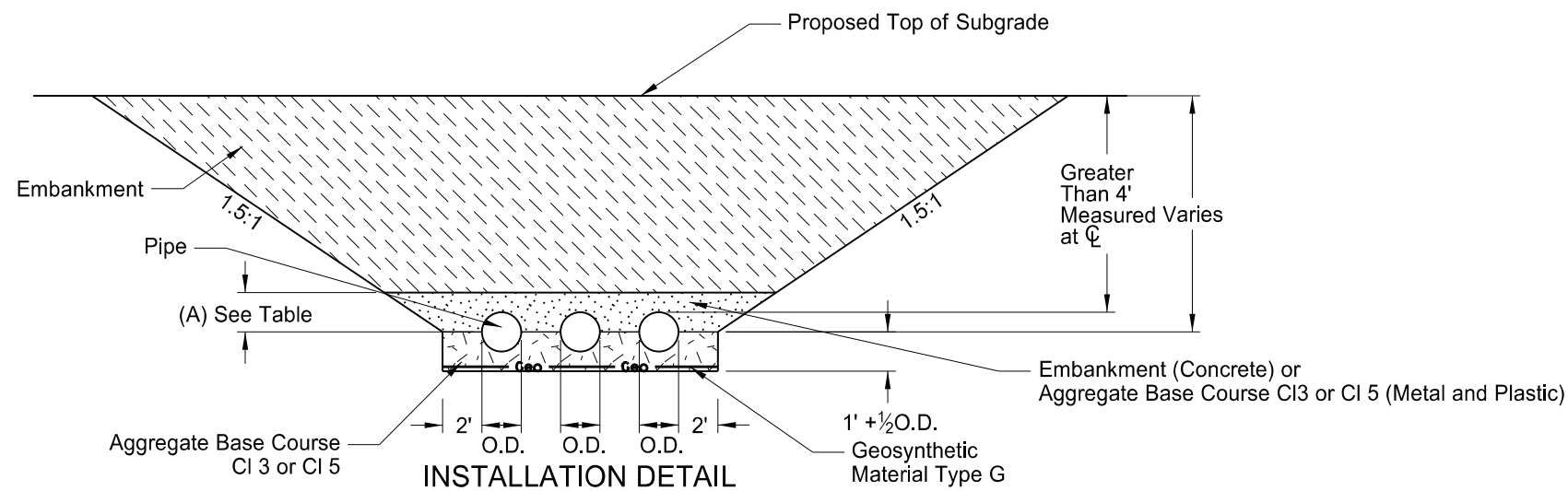


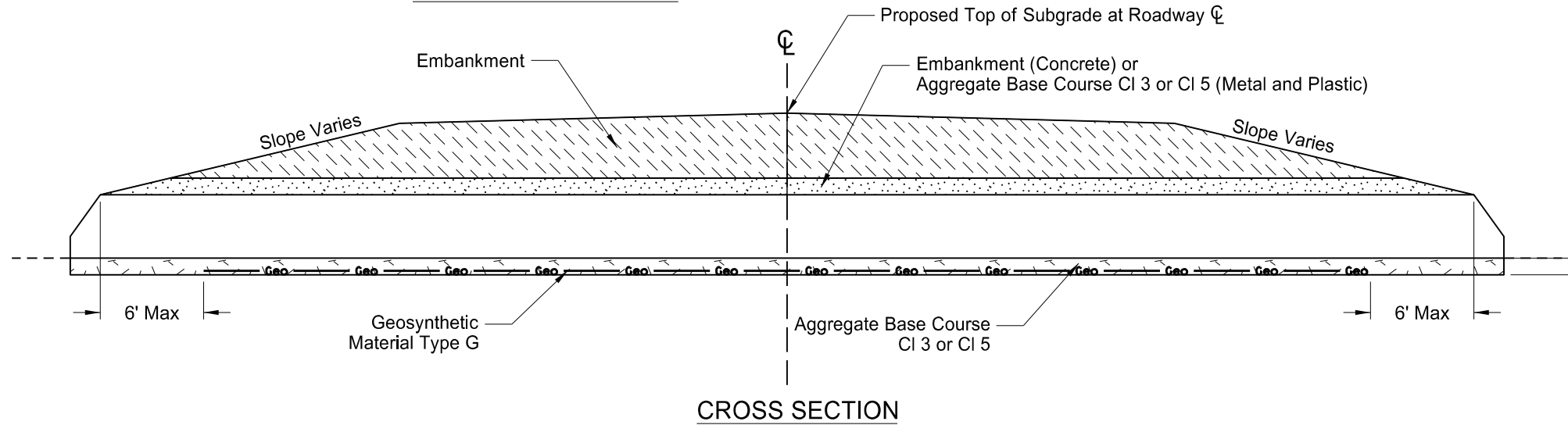
TRANSVERSE MAINLINE PIPE INSTALLATION DETAIL  
 MULTIPLE PIPES MORE THAN 4 FEET BELOW TOP OF SUBGRADE



EXCAVATION DETAIL



INSTALLATION DETAIL



CROSS SECTION

Pay Items

- 1) Pipe\*
- 2) Geosynthetic Material Type G
- 3) Removal of Pipe (if required)

\*Included in Pipe Pay Items

- 1) Pipe
- 2) Trench Excavation
- 3) Aggregate Base Course CI 3 or CI 5
- 4) Embankment

NOTES:

- 1) This drawing applies to new/replaced mainline and paved intersection roadways (including ramps). It does not include pipes in approaches.
- 2) Embankment may be either Borrow Excavation or Common Excavation - Type A.

Backfill Dimensions	
Pipe Materials	Dimension (A)
Concrete	0.5 O.D.
Metal and Plastic	0.5 O.D. + 1 Foot

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
2-4-14	
REVISIONS	
DATE	CHANGE
3-3-14	Spelling
1-21-14	Nomenclature
9-18-15	Title Rewording
12-10-15	Added Plastic Pipe
5-27-20	Replaced R1 Fabric with Geogrid Changed bedding depth and embankment requirements

