

| STATE  | PROJECT NO. | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|-------------|------|-----------|--------------|
| KANSAS | 0           | 0    | 0         | 0            |

GENERAL NOTES

**GEOSYNTHETICS:** Use material that complies with KDOT Specification Section 1710 Class 2 subsurface drainage fabric on graded and compacted material shaped as shown. Allow for enough material so that the sides can be overlapped and that the ends fully separate the aggregate drain from the embankment soils. Place the perforated drain pipe and couple to non-perforated pipe as shown. Allow the non-perforated pipe to pass through a hole carefully cut in fabric. Place aggregate within fabric to just leave the top of the pipe visible. Verify the slope of the pipe, that it is not damaged or displaced and that the couplers are firmly coupled. Continue to backfill to the elevation and shape shown.

**AGGREGATE:** Use aggregates that complies with KDOT Specifications for SB-1 or SB-2.

**BASE COURSE REINFORCEMENT:** Use "Base Course Reinforcement" that complies with KDOT Specification Division 1700 or approved material. Place this material in uniform layers without gaps or sags per the manufacturer's recommendations.

**GEOFOAM:** Use "Geofoam" that complies with ASTM D6817 EPS 12. Acceptance according to Type "C" certification. Bond this material to the backwall protection using materials recommended by the manufacturer.

**PIPE:** Place perforated pipe within the limits and use non-perforated pipe outside the limits of the Abutment Aggregate Drain.

**ABUTMENT AGGREGATE DRAIN:** The Bridge Contractor shall excavate to the limits shown on the Bridge Excavation Sheet. Backfill, compact & grade the cohesive soil to the limits shown. Place the bridge backwall protection, geofoam, geotextile, perforated pipe, alternating layers of aggregate and base course reinforcement as shown. Place the outlet pipe, the CMP, and the backfill. Guidepost and coarse aggregate are subsidiary to this bid item. Guidepost and coarse aggregate are not required if the CMP empties onto Slope Protection. Separate as shown the entire Abutment Aggregate Drain with the geotextile.

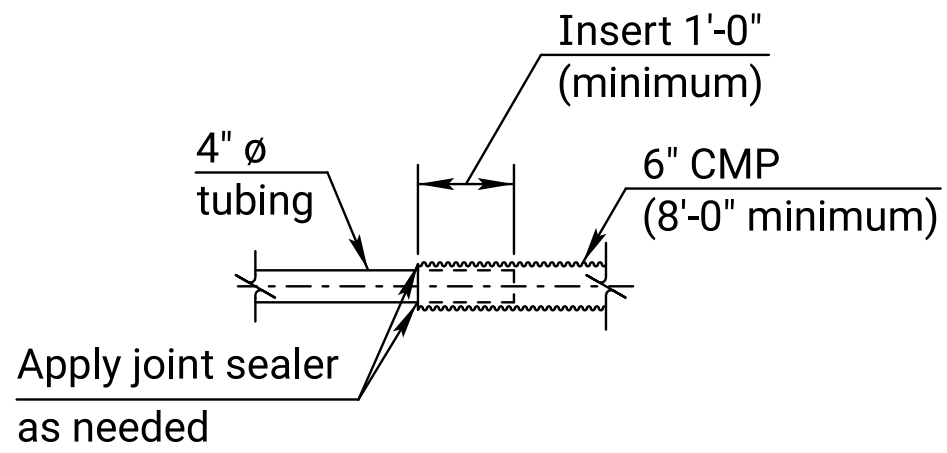
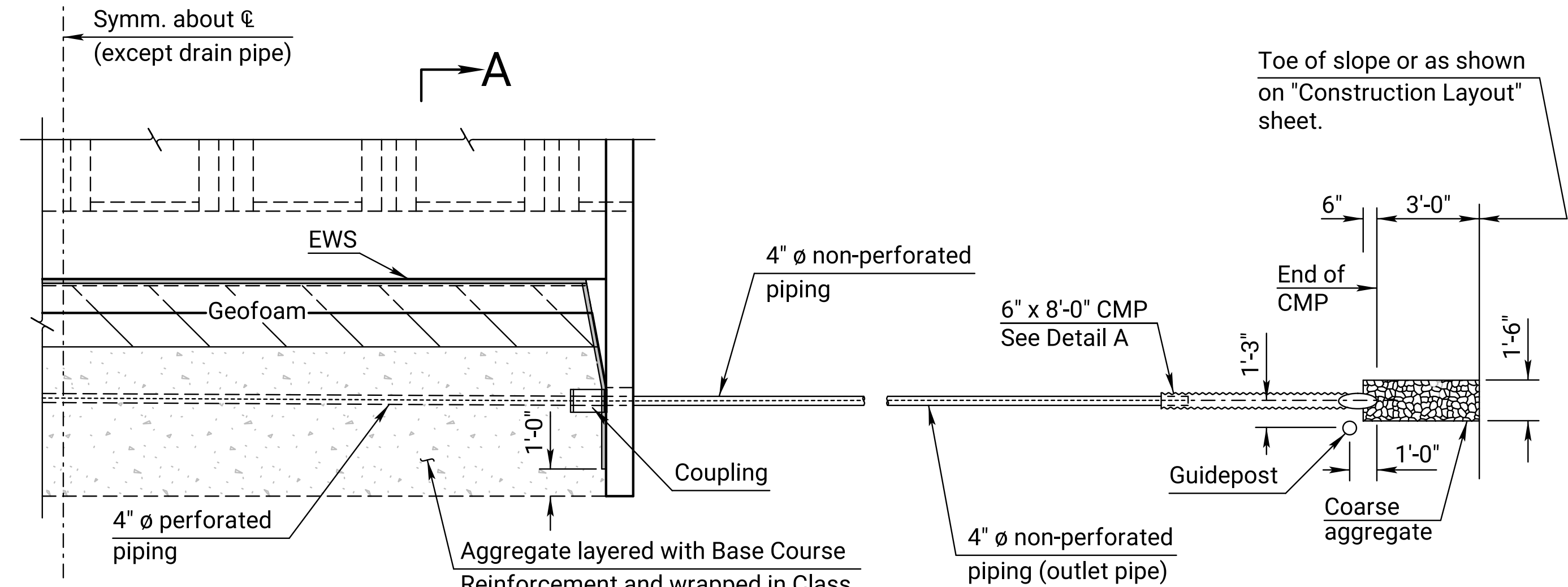
**BRIDGE BACKWALL PROTECTION SYSTEM:** Apply a non coal-tar Bridge Backwall Protection System to the approach side of the abutments and the wings in accordance with KDOT Specifications and the manufacturer's recommendations. Cover the abutments and wings to the limits shown on the details. Repair any damage done at no charge to the state.

Compact the abutment backfill. See the KDOT Specifications.

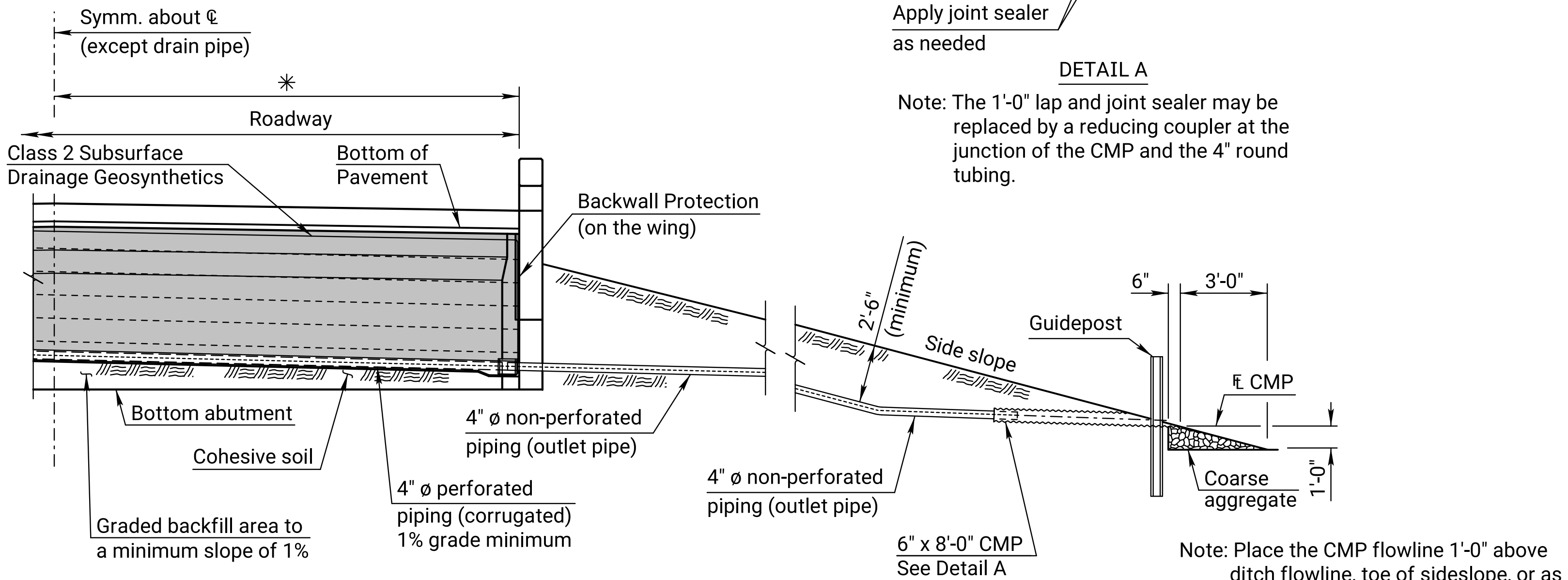
Perforated pipe and non-perforated outlet pipe shall be corrugated polyethylene tubing conforming to the KDOT Specifications.

Fit the CMP end section with ¼" galvanized mesh screen to prevent the entrance of rodents. Seal the joint between the outlet pipe and the end section with a joint sealer. Place Coarse aggregate at the outlet end as shown.

**COHESIVE SOILS:** Grade the bottom surface of the excavated area to drain as shown. Backfill this area with a cohesive type of soil. The soil will have a Unified Soil Classification of CL, CH, ML or MH according to ASTM D2487 Classification System with a minimum plasticity index of 13. Compact the material to Type A, MR-90 specifications. If the plasticity index cannot be met add and mix Bentonite, to the soil prior to placement and compaction so that the PI ≥ 13.



Note: The 1'-0" lap and joint sealer may be replaced by a reducing coupler at the junction of the CMP and the 4" round tubing.

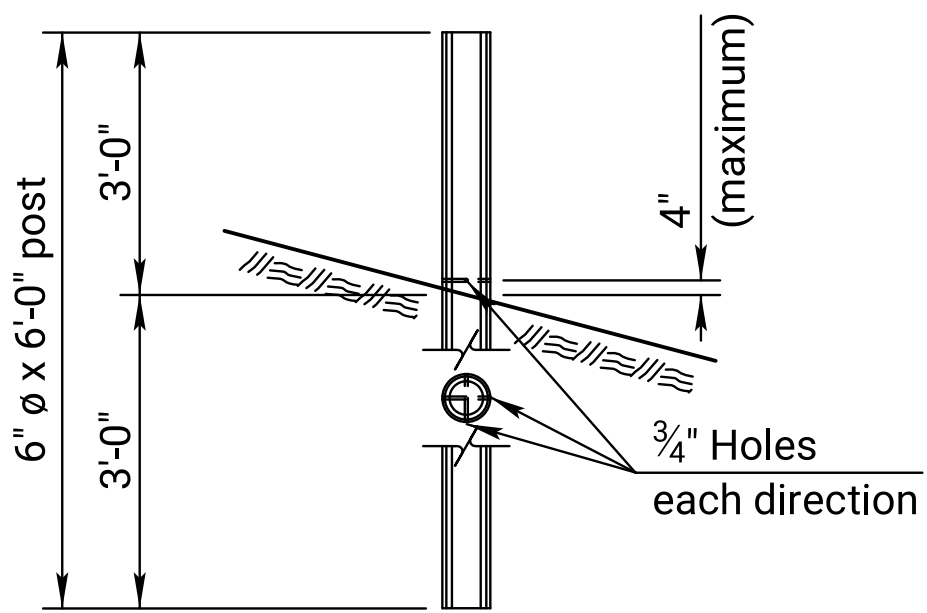


\* Limits of Bridge Backwall Protection System & Geofoam

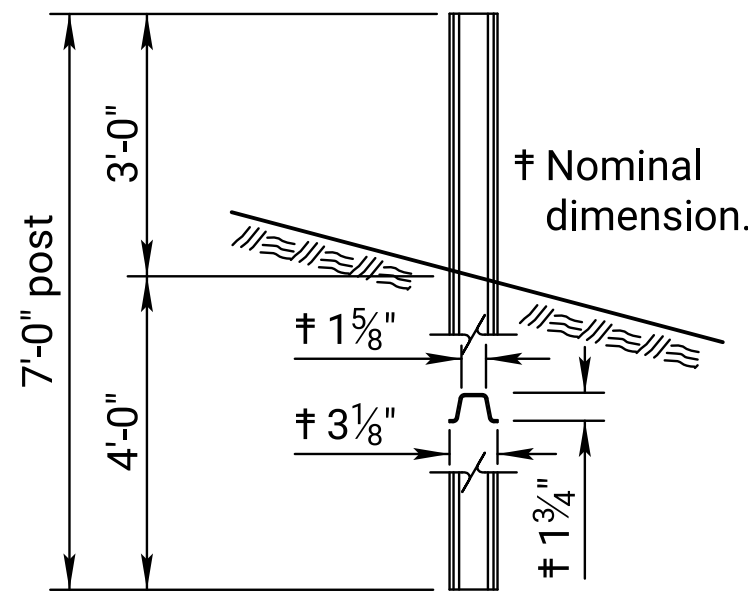
ELEVATION

**Notes:**  
Wood Guideposts: Apply a preservative treatment conforming to the KDOT Specifications to the posts. Use only one type of preservative treatment on a project. Apply two coats of aluminum paint to the top 18" of the posts. Apply one coat of International Orange paint to the top 12" of the posts. State forces will apply reflectorized material.

Metal Guideposts: Posts shall conform to the KDOT Specifications. Posts shall have a galvanized or baked enamel coating. Apply one coat of International Orange paint to the top 12" of the posts.

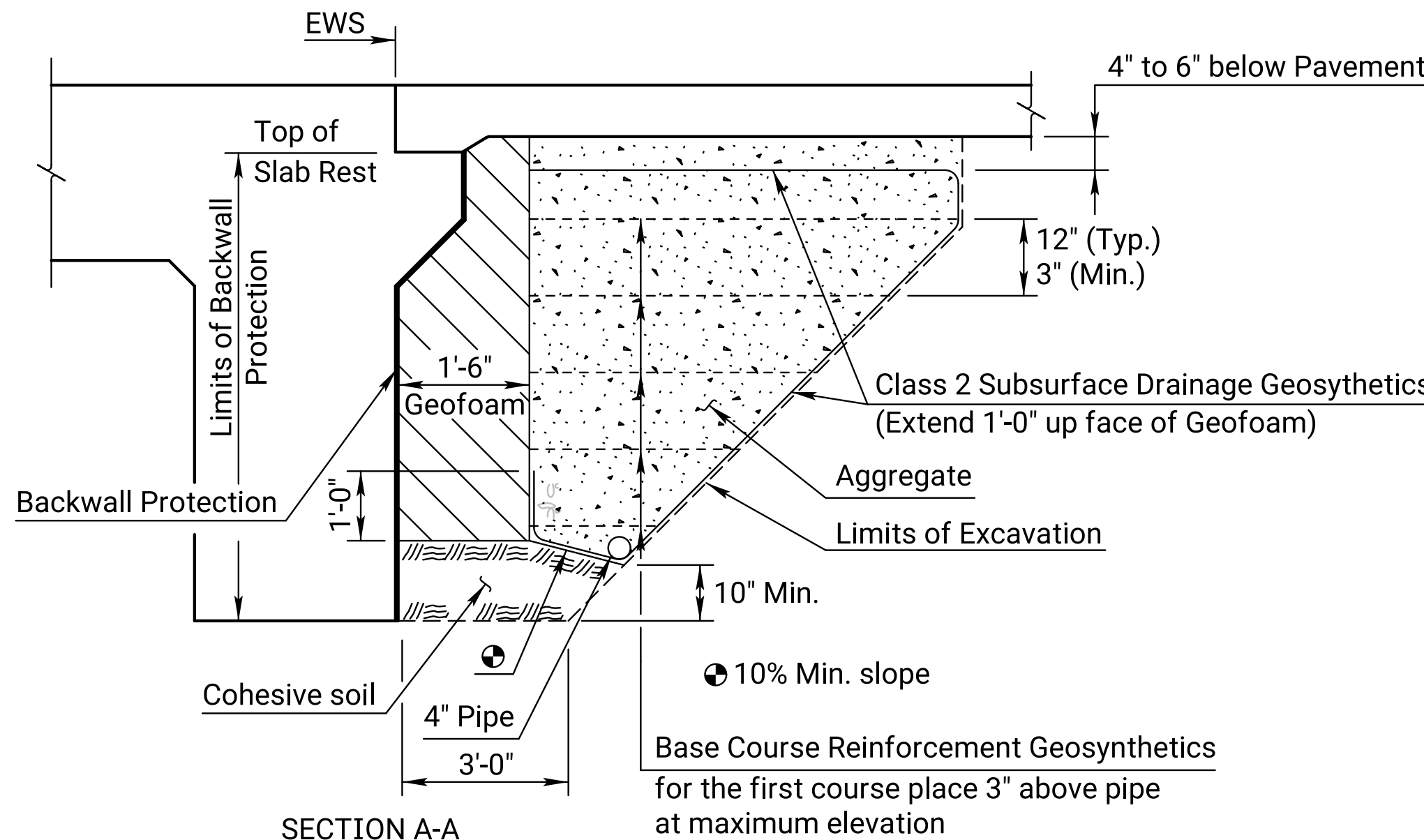


Wood Guidepost Option  
(6"  $\phi$  x 6'-0")



Metal Guidepost Option  
7'-0" at 3.0 lbs/ft  
flanged channel

GUIDEPOST



| SUMMARY OF QUANTITIES (2 Abutments)          |          |
|----------------------------------------------|----------|
| Abutment Aggregate Drain                     | Cu. Yds. |
| Bridge Backwall Protection System            | Sq. Yds. |
| Items subsidiary to Abutment Aggregate Drain |          |
| 4" $\phi$ Perforated Pipe                    | Lin. Ft. |
| 4" $\phi$ Outlet Pipe                        | Lin. Ft. |
| 6" $\phi$ CMP                                | Lin. Ft. |
| Guidepost                                    | Each     |
| Geosynthetics (Class 2 Subsurface Drainage)  | Sq. Yds. |
| Geosynthetics (Base Course Reinforcement)    | Sq. Yds. |
| Geofoam                                      | Cu. Yds. |

| 08  | 05-05-23 | Removed soil cap; Geofoam bottom flat | M.L.L. | M.A.H. |
|-----|----------|---------------------------------------|--------|--------|
| 07  | 12-11-18 | Corrected std. base file name         | M.L.L. | J.P.J. |
| 06  | 02-04-15 | Modified Per 2015 Specification       | J.P.J. | C.E.R. |
| NO. | DATE     | REVISIONS                             | BY     | APPD   |

| KANSAS DEPARTMENT OF TRANSPORTATION |            |           |          |            |
|-------------------------------------|------------|-----------|----------|------------|
| Br. No. 0-0- ()                     |            |           | Sta.     |            |
| ABUTMENT AGGREGATE DRAIN            |            |           | Co.      |            |
| Proj. 0                             |            |           | Co.      |            |
| DESIGNED                            | J.P.J.     | DETAILED  | J.P.J.   | QUANTITIES |
| DESIGN CK.                          | DETAIL CK. | QUAN. CK. | CADD     | M.L.L.     |
| CADD CK.                            |            |           | CADD CK. |            |