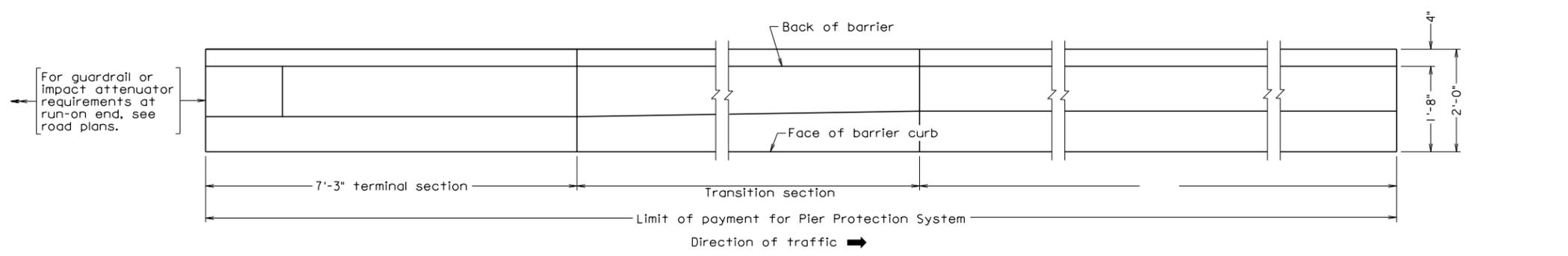
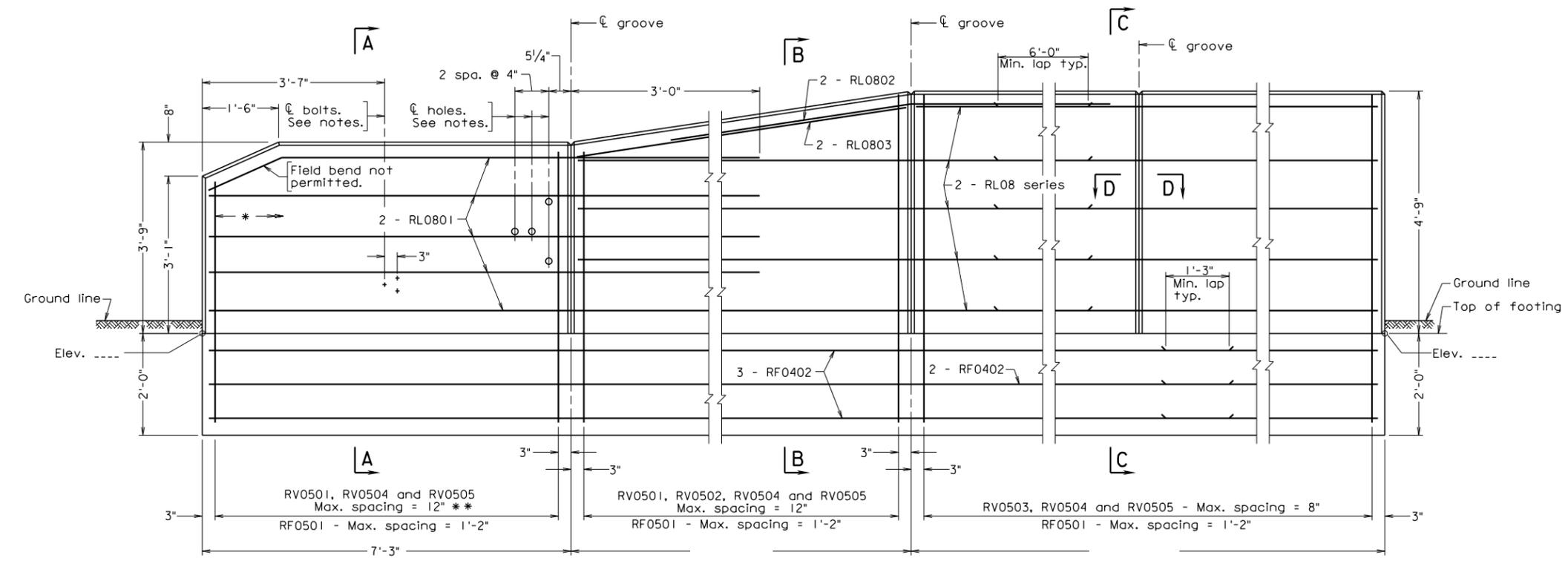


STATE	FEDERAL AID		STATE		SHEET
ROUTE	PROJECT		ROUTE	PROJECT	NO.
VA.					



PLAN



ELEVATION

* Adjust length of bars as needed at end.
 ** Adjust spacing to clear bolts and holes.

Notes:

Rounded edges with 1" radius may be used in lieu of bevels along top of parapet.

Spacing of grooves to be approximately 8"-0". Spacing of transverse construction joints for crack control to be at approximately 24'-0" to coincide with ℓ of groove. Transverse construction joint through barrier and footing shall be at the same location.

Barrier delineator size, color and spacing to be in accordance with the Specifications. Cost of delineator to be included in price bid for Pier Protection System. Reflective surface of barrier delineator, in all instances, to be facing oncoming traffic.

All reinforcing steel shall be ASTM A615, Grade 60.

All concrete shall be Class A4.

Terminal sections are detailed to take guardrail attachment GR-FOA-2. Holes where shown, shall be formed with sleeves of 1/2" diameter nominal pipe. Bolts, where shown, shall be 5/8" diameter expansion bolts, 6" long to be drilled and installed when rub rail is attached.

For reinforcing steel schedule and details not shown, see sheet ...

The Contractor shall determine all dimensions and details necessary for installation.

Payment: Pier Protection System shall be paid for on a lump sum basis, wherein no measurement shall be made, and shall be paid for at the contract lump sum price, which price shall include within the pay limits shown, the parapet, footing, excavation for footing and backfilling as directed by the Engineer and all miscellaneous hardware as detailed on the plans. Such price shall be full compensation for furnishing all materials, labor, tools, equipment and incidentals necessary to complete the work.

BPPS-1
12-14-2012
bpps1.dgn

Sealed and Signed by:
 Julius F.J. Volgyi Jr.
 Lic. No. 010487
 On the date of
 December 14, 2012

A copy of the original sealed and signed standard drawing is on file in the Central Office.

VDOT S&B DIVISION
 RICHMOND, VA
 STRUCTURAL ENGINEER

LAYOUT OF BARRIER FOR PIER PROTECTION
 Scale: -----

Scale: 3/4" = 1'-0" unless otherwise shown. © 2012, Commonwealth of Virginia

COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION					
STRUCTURE AND BRIDGE DIVISION					
PIER PROTECTION SYSTEM					
No.	Description	Date	Designed: S&B, DIV	Date	Plan No.
			Drawn: S&B, DIV		BPPS-1
			Checked: S&B, DIV		
Revisions					

PIER PROTECTION SYSTEM

NOTES TO DESIGNER:

This standard also requires the inclusion of Standard BPPS-2 in the set of plans.

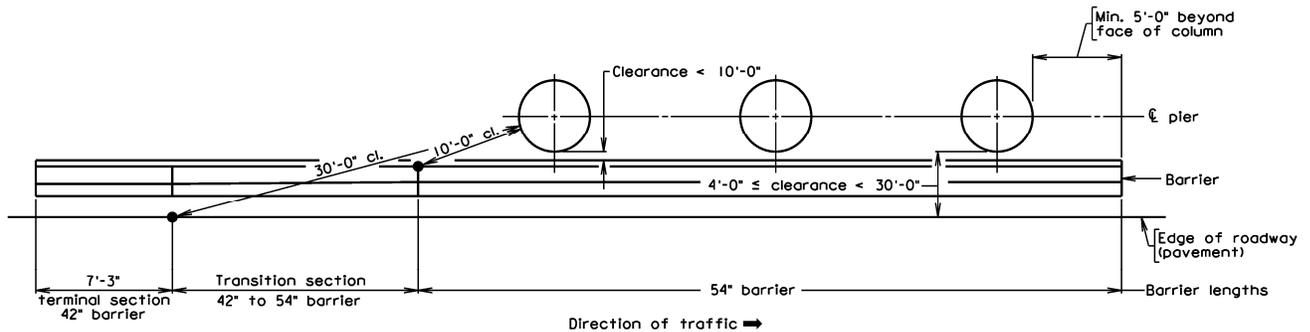
Standard is to be used for pier protection when the clearance between the pier column(s) or pier stem and the edge of roadway (pavement) is less than 30'-0", the pier is not designed for collision nor exempt and the clearance between the pier column(s) or pier stem and back of the barrier footing is less than 10'-0". Minimum clearance between pier column/stem and the edge of roadway (pavement) is 4'-0" where pier column/stem is directly against the barrier footing.

Designer shall coordinate with roadway designer for barrier termination at the run-on end (guardrail, impact attenuator, etc.). The terminal section is detailed to accommodate guardrail attachment GR-FOA-2.

Reference to barrier height is for portion above ground line. The standard indicates 3" of barrier below ground line to top of 2'-0" x 2'-0" footing.

Barrier height is 54" when clearance is less than 10'-0" and 42" when clearance is less than 30'-0". Barrier is transitioned (42" to 54" height) between 10'-0" and 30'-0" clearances. Minimum transition length shall be 10'-0".

Barrier shall extend a minimum of 5'-0" beyond the face of the pier column/stem.



See Manual of the Structure and Bridge Division, Volume V - Part 2, Chapter 15: Pier Details, for additional guidance and examples.

ADD THE FOLLOWING NOTES, DIMENSIONS, DETAILS, ETC. TO STANDARD:

PLAN:

Add required dimensions. If project is "bridge only" add sheet number for details at end of barrier (run-on side).

ADD THE FOLLOWING NOTES, DIMENSIONS, DETAILS, ETC. TO STANDARD (cont'd):

ELEVATION:

Add dimension for length of 42" to 54" barrier transition section and for length of 54" barrier section. Use 6" multiples for barrier length(s). Add elevations.

LAYOUT OF BARRIER FOR PIER PROTECTION:

Show plan view of pier column(s) or pier stem. Show tie point for intersection of CL pier and CL bridge such that the Contractor can lay out the footing for the Pier Protection System (location, orientation, etc.). The CL pier may not be parallel to the roadway. Show distance from face of barrier curb to CL pier. Show terminal section (42" high barrier), transition section (42" to 54" high barrier) and 54" high barrier section.