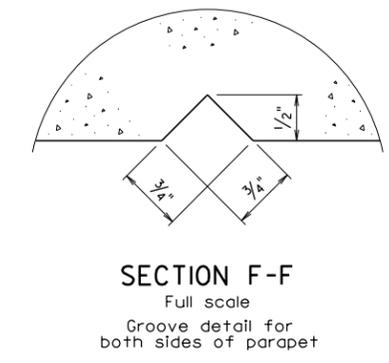
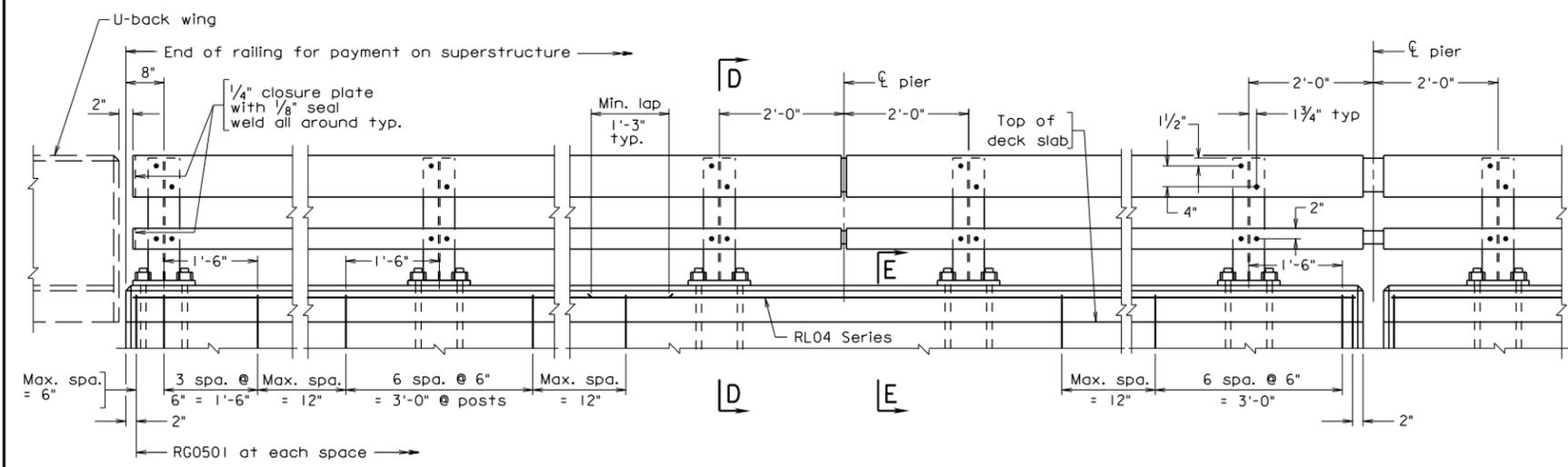
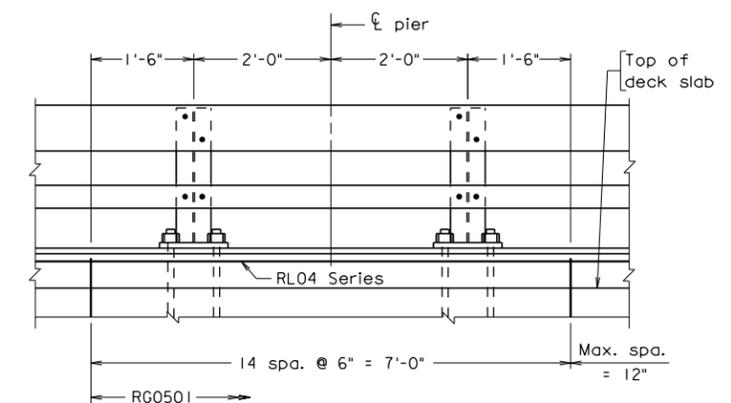


STATE	FEDERAL AID	STATE	SHEET
ROUTE	PROJECT	ROUTE	NO.
VA.			



For notes and miscellaneous details, see sheet ...

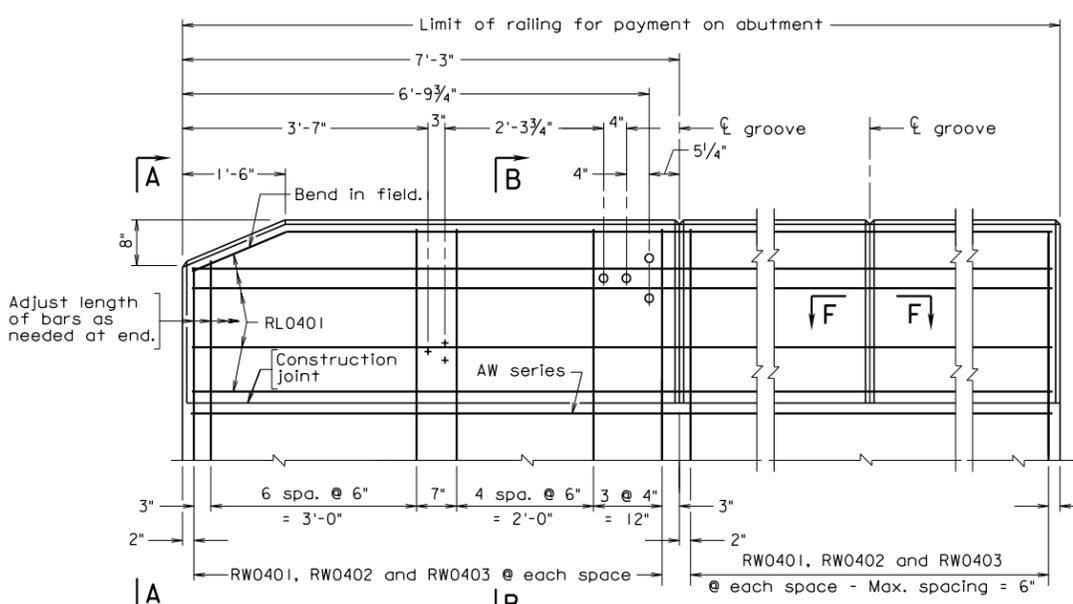


PIERS  
Continuous - without joint in slab

ABUTMENTS

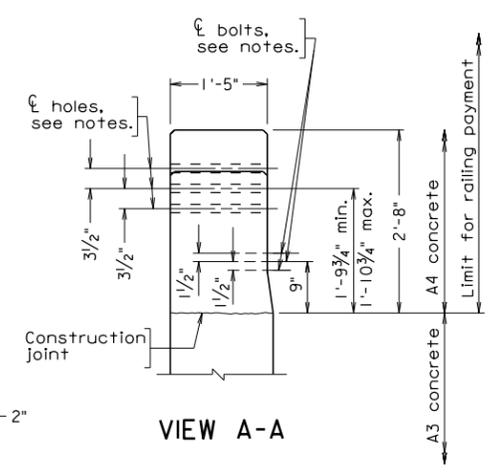
ELEVATION

PIERS  
with joint in slab

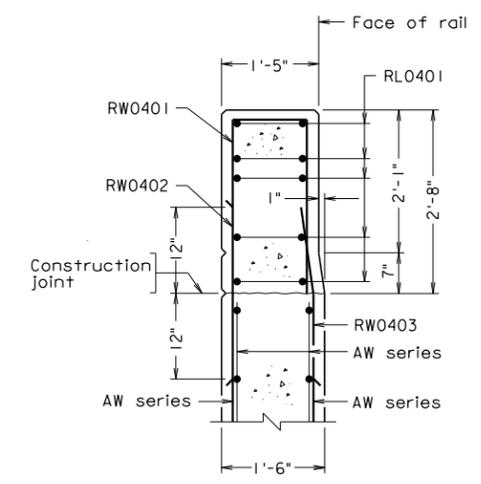


TERMINAL WALL

U-BACK WING



VIEW A-A

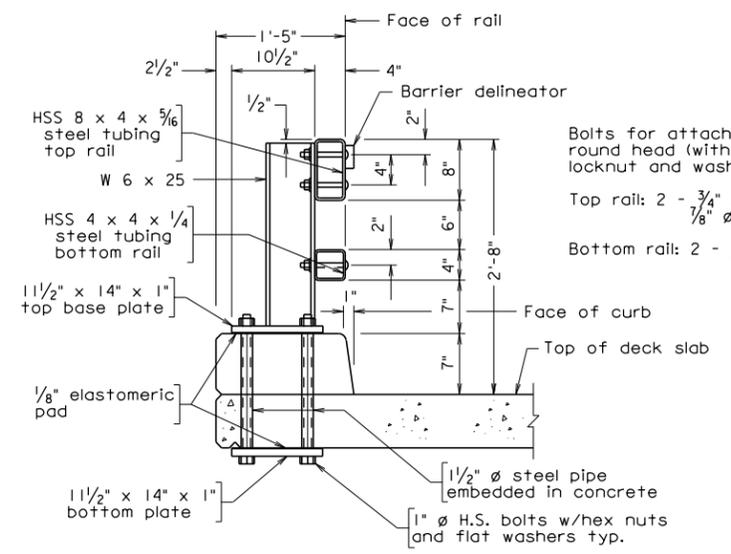


SECTION B-B

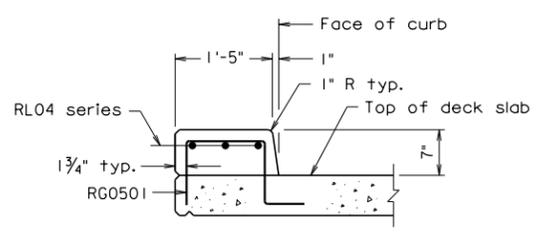
REINFORCING STEEL SCHEDULE

Mark	No.	Size	Pin $\phi$	Length	Location
RG0501		#5	$3\frac{3}{4}$ "		Curb
RW0401		#4	3"	6'-0"	Terminal wall and wing
RW0402		#4	—	2'-0"	Terminal wall and wing
RW0403		#4	3"	2'-0"	Terminal wall and wing
RL0401		#4	—		Terminal wall and wing
RL04		#4	—		Curb

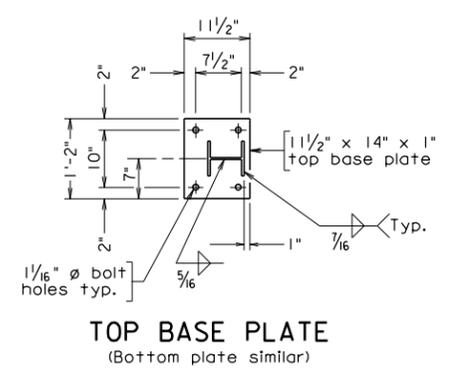
Dimensions in bending diagram are out-to-out of bars.



SECTION D-D  
Not to scale



SECTION E-E



TOP BASE PLATE  
(Bottom plate similar)

bir1.dgn

12-14-2012

BIR-1

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

Bolts for attaching rails to post are round head (with slot in head) with locknut and washer.

Top rail: 2 -  $\frac{3}{4}$ "  $\phi$  x 6" bolts with  $\frac{1}{8}$ "  $\phi$  holes in post and tubing

Bottom rail: 2 -  $\frac{1}{2}$ "  $\phi$  x 6" bolts with  $\frac{5}{8}$ "  $\phi$  holes in post and tubing

Scale:  $\frac{3}{4}$ " = 1'-0" unless otherwise shown.

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COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION STRUCTURE AND BRIDGE DIVISION					
ILLINOIS STEEL RAILING					
No.	Description	Date	Designed: S&B, DIV	Date	Plan No.
			Drawn: S&B, DIV		BIR-1
			Checked: S&B, DIV		
Revisions					Sheet No.

## ILLINOIS STEEL RAILING

### TERMINAL WALL ON ABUTMENT U-BACK WING

#### NOTES TO DESIGNER:

The Illinois steel railing has a height of 2'-8" and has been crash tested for TL-2 (TL = test level). The standard has a curb section. This rail is for use as a traffic barrier and shall not be used for sidewalk applications. The standard may be used when an open railing is required.

Standard BIR-3 (miscellaneous details) must be included in plans when using this standard.

Terminal wall is detailed on abutment U-back wing.

If an initial bituminous overlay is used on the bridge at the time of construction, vertical dimensions and dimensions for reinforcing steel need to be adjusted. The dimensions shown are established from the top of the roadway surface. Therefore, for example if a 1" overlay at the curb is set, the 7" curb dimension and the overall 2'-8" height of the rail would need to be adjusted to 8" and 2'-9" respectively. In addition, all height dimensions of bolt locations in relation to top of deck slab need to be adjusted by 1"

It is the Contractor's responsibility to determine the number of reinforcing bars required as well as any details or dimensions. Therefore, these items are to be left blank in the Reinforcing Steel Schedule.

AW series bars are included in abutment reinforcement.

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

##### VIEW A-A:

Modify vertical dimension 9" and the range (1'-9<sup>3</sup>/<sub>4</sub>" min. – 1'-10<sup>3</sup>/<sub>4</sub>" max.) for bolt locations as noted above if an initial overlay is used on bridge.

##### SECTION B-B:

Modify vertical dimension (7" break and 2'-8" railing height) as noted above if an initial overlay is used on bridge

##### SECTION D-D:

Modify vertical dimensions (7" curb and 2'-8" railing height) as noted above if an initial overlay is used on bridge.

**ILLINOIS STEEL RAILING**  
**TERMINAL WALL ON ABUTMENT U-BACK WING**

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

SECTION E-E:

Modify vertical dimension (7" curb) as noted above if an initial overlay is used on bridge.

REINFORCING STEEL SCHEDULE:

Modify bars if needed due to slab depth, cross slope, or initial overlay is used on bridge.

Complete length for rebar RG0501.