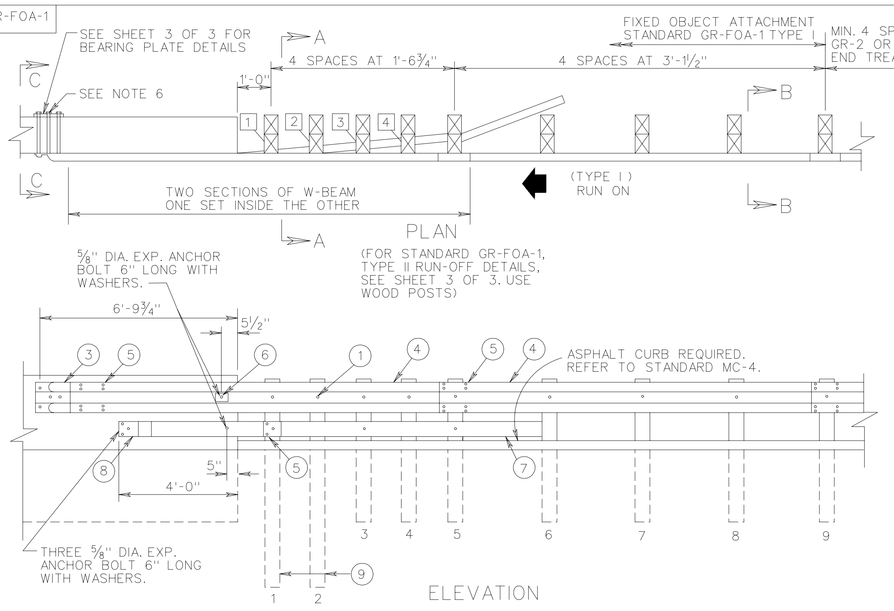
$TIME$STAMP$

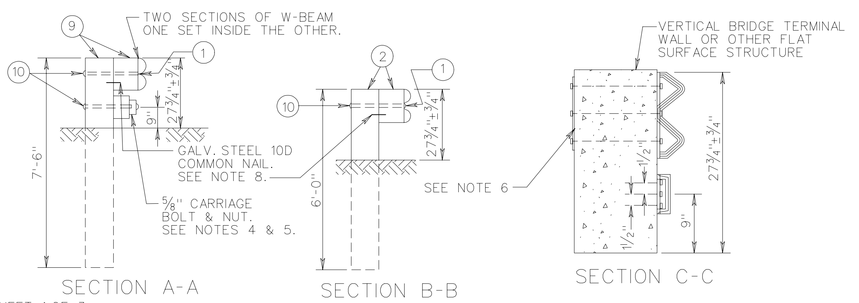
GR-FOA-1



NOTES:

1. FIXED OBJECTS MAY CONSIST OF BRIDGE RAILS, ABUTMENTS, PIERS, RETAINING WALLS, OR OTHER FLAT SURFACED STRUCTURES WITH VERTICAL FACE.
2. BRIDGE RAIL ENDS AND BRIDGE PARAPETS MUST BE OF ADEQUATE STRENGHT TO ACCEPT FULL IMPACT LOADING.
3. GUARDRAIL COMPONENTS SHALL BE IN ACCORDANCE WITH VDOT ROAD AND BRIDGE STANDARDS.
4. POSTS 1, 2, 3, 4, AND 5 REQUIRE AN ADDITIONAL HOLE TO ATTACH BLOCKS AND/OR RUBRAIL RUBRAIL IS NOT BOLTED TO POSTS 2 ANS 4.
5. BOTTOM WOOD BLOCKS LOCATED ON POSTS 1 THROUGH 4 ARE CENTER DRILLED AND SECURED WITH ⅝" CARRIAGE BOLTS. (LENGTH AS REQUIRED).
6. APPROPRIATE LENGTH ⅞" DIAMETER ASTM A325 HEX BOLTS WITH WASHERS MUST BE USED WITH THRU DRILLED HOLES WITH A ⅝" BEARING PLATE ON THE BACK SIDE OF THE BRIDGE PARAPET OR TERMINAL WALL.
7. DRIVE NAIL WITHIN 2" OF THE TOP OR BOTTOM OF THE BLOCKOUT AFTER ⅞" X 18 BOLT IS INSTALLED.
8. SEE SHEET 3 OF 3 FOR RUBRAIL BLOCKOUT DETAILS.

NEW BRIDGES - ATTACHMENTS
ONE WAY TRAFFIC - RUN-ON, 2-GR-FOA-1, TYPE I
- RUN-OFF, 2-GR-FOA-1, TYPE II
TWO WAY TRAFFIC - RUN-ON, 4-GR-FOA-1, TYPE I
EXISTING BRIDGE ATTACHMENTS AS SHOWN ON PLANS.



ITEM	MATERIAL/SPECIFICATIONS/NOTES
1	⅝" X 18" LONG. GUARDRAIL BOLT AND RECESSED NUT
2	STANDARD 6" x 8" WOOD POST AND BLOCK
3	STANDARD W-BEAM TERMINAL CONNECTOR
4	STANDARD W-BEAM RAIL
5	⅝" X 2" LONG GUARDRAIL BOLT & RECESSED NUT (SEE ST'D. GR-HDW)
6	RECTANGULAR PLATE WASHER (SEE ST'D. GR-HDW)
7	BENT PLATE RUBRAIL (SEE SHEET 3 OF 3)
8	C6 X 8.2 RUBRAIL (SEE SHEET 3 OF 3)
9	8" X 8" X 7'-6" LONG WOOD POST & 8" X 8" X 14" LONG TREATED PINE BLOCK OR RECYCLED MATERIAL
10	WASHER FOR ⅝" BOLT

SHEET 1 OF 3

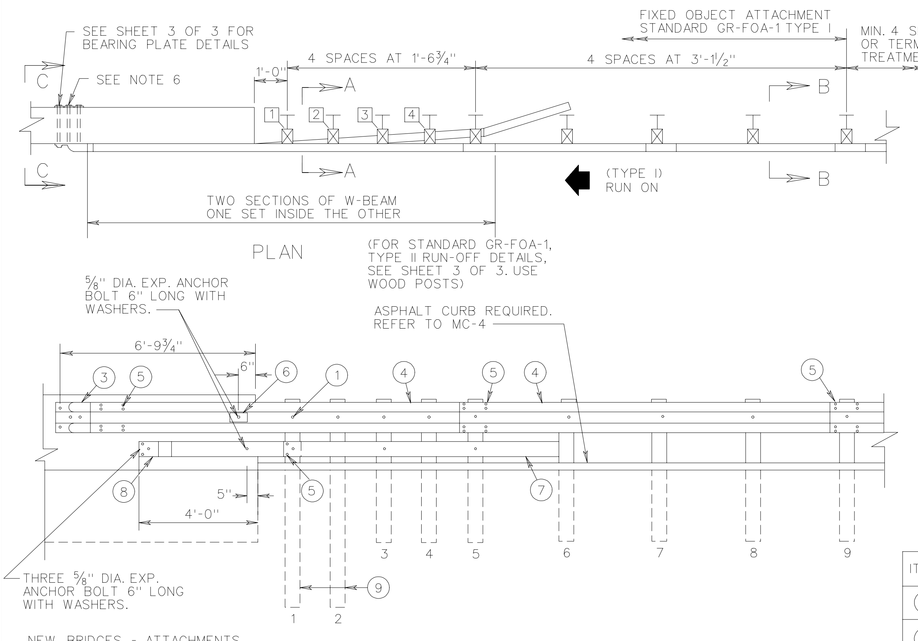
REV. 9/06

W-BEAM GUARDRAIL - FIXED OBJECT ATTACHMENT FOR USE BETWEEN VERTICAL FIXED OBJECTS AND GUARDRAIL (WOOD POSTS)

SPECIFICATION REFERENCE: 505

501.25 VIRGINIA DEPARTMENT OF TRANSPORTATION

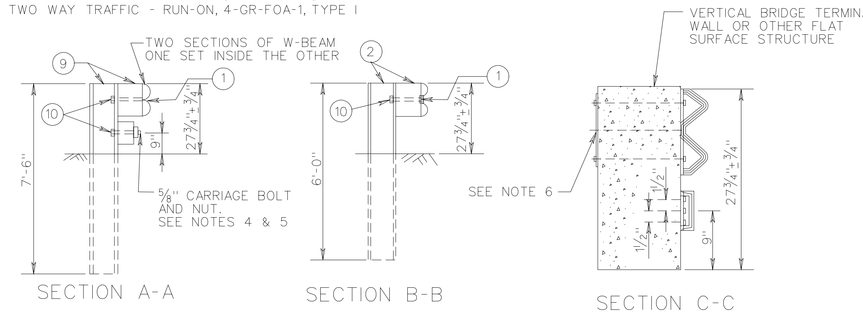
GR-FOA-1



NOTES:

1. FIXED OBJECTS MAY CONSIST OF BRIDGE RAILS, ABUTMENTS, PIERS, RETAINING WALLS, OR OTHER FLAT SURFACED STRUCTURES WITH VERTICAL FACE.
2. BRIDGE RAIL ENDS AND BRIDGE PARAPETS MUST BE OF ADEQUATE STRENGHT TO ACCEPT FULL IMPACT LOADING.
3. GUARDRAIL COMPONENTS SHALL BE IN ACCORDANCE WITH VDOT ROAD AND BRIDGE STANDARDS.
4. POSTS 1, 2, 3, 4, AND 5 REQUIRE AN ADDITIONAL HOLE TO ATTACH BLOCKS AND/OR RUBRAIL RUBRAIL IS NOT BOLTED TO POSTS 2 AND 4.
5. BOTTOM WOOD BLOCKS LOCATED ON POSTS 1 THROUGH 4 ARE CENTER DRILLED AND SECURED WITH ⅝" CARRIAGE BOLTS. (LENGTH AS REQUIRED).
6. APROPRIATE LENGTH ⅞" DIAMETER ASTM A325 HEX BOLTS WITH WASHERS MUST BE USED WITH THRU DRILLED HOLES WITH A ⅝" BEARING PLATE ON THE BACK SIDE OF THE BRIDGE PARAPET OR TERMINAL WALL.
7. SEE SHEET 3 OF 3 FOR RUBRAIL BLOCKOUT DETAILS.

NEW BRIDGES - ATTACHMENTS
ONE WAY TRAFFIC - RUN-ON, 2-GR-FOA-1, TYPE I
- RUN-OFF, 2-GR-FOA-1, TYPE II
TWO WAY TRAFFIC - RUN-ON, 4-GR-FOA-1, TYPE I



ITEM	MATERIAL/SPECIFICATIONS/NOTES
1	⅝" X 10" LONG HEX BOLT WITH NUT
2	ST'D. W6X8.5 OR W6X9 STEEL POST ST'D. 6X8X14" LG. TREATED PINE BLOCK OR RECYCLED MATERIAL
3	STANDARD W-BEAM TERMINAL CONNECTOR
4	STANDARD W-BEAM RAIL
5	⅝" X 2" LONG GUARDRAIL BOLT & RECESSED NUT (SEE STANDARD GR-HDW)
6	RECTANGULAR PLATE WASHER (SEE ST'D. GR-HDW)
7	BENT PLATE RUBRAIL (SEE SHEET 3 OF 3)
8	C6 X 8.2 RUBRAIL (SEE SHEET 3 OF 3)
9	W8 X 13 X 7'-6" LONG STEEL POST WITH STANDARD 6" X 8" X 14" LONG TREATED PINE BLOCK OR RECYCLED MATERIAL
10	WASHER FOR ⅝" BOLT

SHEET 2 OF 3

SPECIFICATION REFERENCE: 505

W-BEAM GUARDRAIL-FIXED OBJECT ATTACHMENT FOR USE BETWEEN VERTICAL FIXED OBJECTS AND GUARDRAIL (STEEL POSTS)

VIRGINIA DEPARTMENT OF TRANSPORTATION

REV. 9/06

501.26

SPECIAL DESIGN SECTION DRAWING NO. A-65-1 REV. 9/06

PLAN NO. | PROJECT | FILE NO. | SHEET NO.

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

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

SURVEYED BY - - - - - - - - - - - - -
SUPERVISED BY - - - - - - - - - - - -
DESIGNED BY - - - - - - - - - - - - -

DGN $DGNLEY$ $REF001 $LEV001 $REF002 $LEV002 $REF003 $LEV003 $REF004 $LEV004 $REF005 $LEV005 $REF006 $LEV006