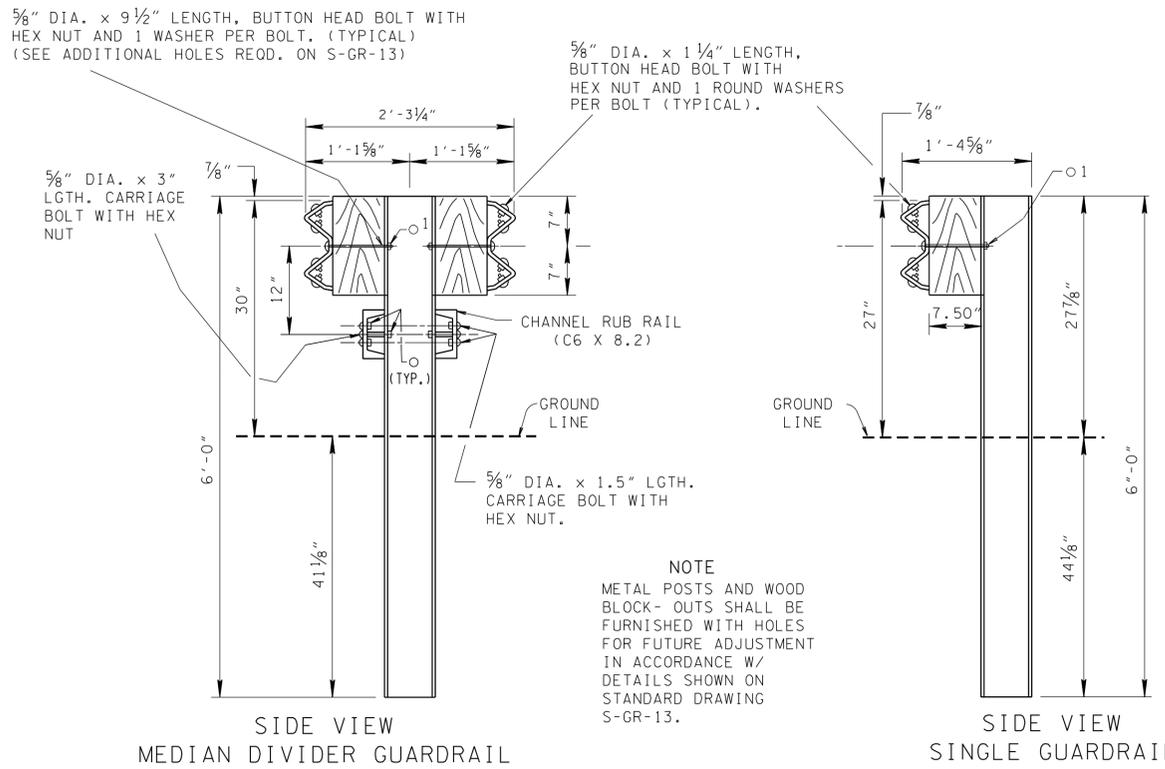


SIDE VIEW
MEDIAN DIVIDER GUARDRAIL
 (W-BEAM/RUB RAIL ALT.)

FRONT VIEW
MEDIAN DIVIDER GUARDRAIL
 (SHOWING BOLT HOLES FOR W-BEAM RAIL)

NOTE
 WOOD POSTS AND WOOD BLOCK-OUTS SHALL BE FURNISHED WITH HOLES FOR FUTURE ADJUSTMENT IN ACCORDANCE W/ DETAILS SHOWN ON STANDARD DRAWING S-GR-13.



SIDE VIEW
MEDIAN DIVIDER GUARDRAIL

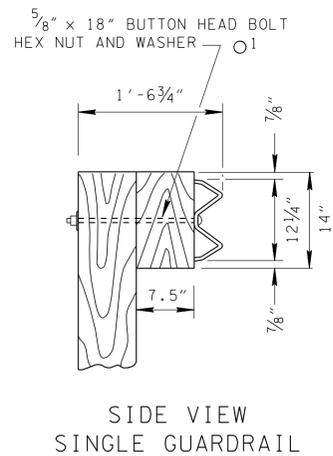
SIDE VIEW
SINGLE GUARDRAIL

NOTE
 METAL POSTS AND WOOD BLOCK-OUTS SHALL BE FURNISHED WITH HOLES FOR FUTURE ADJUSTMENT IN ACCORDANCE W/ DETAILS SHOWN ON STANDARD DRAWING S-GR-13.

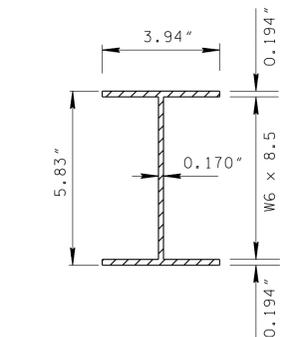
DETAILS FOR WOOD POSTS AND BLOCK-OUTS

DETAILS FOR STEEL POSTS AND WOOD BLOCK-OUTS

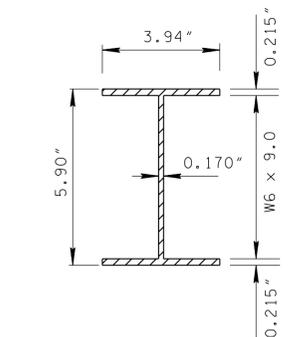
SIDE VIEW DIMENSIONS BASED ON W6 X 8.5, OTHER DETAILS APPLY TO W6 X 9.0 AND W6 X 15.0 POSTS AND BLOCK-OUTS.



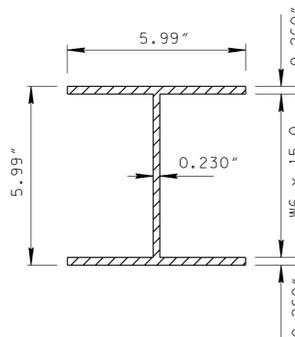
SIDE VIEW
SINGLE GUARDRAIL



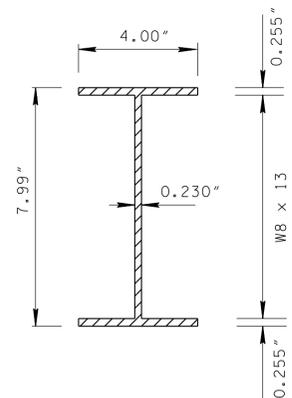
WELDED STEEL SHAPE



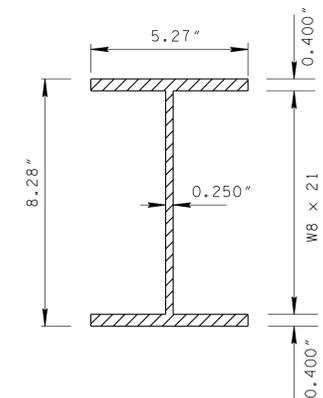
WELDED STEEL SHAPE



WELDED STEEL SHAPE



WELDED STEEL SHAPE



WELDED STEEL SHAPE

LEGEND FOR WASHER REQUIREMENTS

1 OR 2 ROUND WASHERS — o1o2

WOOD SPECIFICATIONS

- (S1) POSTS AND BLOCK-OUTS SHALL BE OF TIMBER WITH A STRESS GRADE OF 1200 P. S. 1. OR MORE, POSTS WILL HAVE NOMINAL SIZE OF 6" X 8". BLOCK-OUTS WILL HAVE NOMINAL SIZE OF 6" X 8" (TYPICAL SIZE 5.5" X 7.5"). TESTING SHALL BE IN ACCORDANCE WITH WEST COAST LUMBER INSPECTION BUREAU, SOUTHERN PINE INSPECTION BUREAU, OR OTHER APPROPRIATE TIMBER ASSOCIATIONS. TIMBER FOR POSTS SHALL BE ROUGH SAWN (UNPLANED) WITH NOMINAL DIMENSIONS INDICATED. TIMBER FOR BLOCK-OUTS SHALL BE S4S WITH THE TYPICAL DIMENSIONS INDICATED.
- (S2) ALL WOOD POSTS AND BLOCK-OUTS SHALL BE TREATED WITH TIMBER PRESERVATIVE AS REQUIRED BY SUBSECTION 911.02(A) OF THE TENNESSEE STANDARD SPECIFICATION.
- (S3) WOOD POSTS AND BLOCK-OUTS SHALL BE FURNISHED WITH HOLES FOR FUTURE RAIL ADJUSTMENT IN ACCORDANCE WITH DETAILS SHOWN ON STANDARD DRAWINGS S-GR-13.

GENERAL NOTES

- (A) MATERIALS AND SPECIFICATIONS NOT SHOWN IN THESE "S-GR" SERIES OF DRAWINGS SHALL BE IN ACCORDANCE WITH STANDARD PROVISIONS REGARDING SECTION 705.
- (B) THE CONTRACTOR MAY HAVE OPTIONAL CHOICE OF EITHER THE STEEL W6 X 8.5 OR W6 X 9.0 HOT ROLLED OR WELDED STEEL SHAPE, OR THE WOOD POSTS WITH THEIR COMPANION BLOCK-OUTS AS SHOWN ABOVE, WITHIN THE FOLLOWING STIPULATIONS:
 - (1) THE MIXING OF ANY OF THE ABOVE POSTS TYPES ON A GIVEN PROJECT WILL BE AVOIDED IF POSSIBLE.
 - (2) SHOULD IT BECOME NECESSARY TO CHANGE THE TYPE OF POSTS ON A GIVEN PROJECT, THE POSTS SHALL NOT BE MIXED ON ANY GIVEN RUN OF GUARDRAIL. (EXCEPTION, WOOD POSTS ON GUARDRAIL TERMINALS).
- (C) ON EXISTING STRUCTURES NOT HAVING A VERTICAL FACE FOR THE ATTACHMENT OF TWO RAIL ELEMENTS, USE OF THE W6 X 15.0 POSTS IS REQUIRED ON THE SEMI-RIGID TO RIGID BARRIER TRANSITION DETAILS, SEE STANDARD DRAWINGS S-GR-16 AND OF THE STEEL POST AND WILL BE THE SAME SIZE AND DIMENSION AS THOSE SHOWN ON STANDARD DRAWING S-GR-13.
- (D) METAL POSTS AND ALL BLOCK-OUTS SHALL BE FURNISHED WITH HOLES FOR FUTURE RAIL ADJUSTMENT IN ACCORDANCE WITH DETAILS SHOWN ON STANDARD DRAWINGS S-GR-13 AND S-GR-13A.
- (E) W6 X 9.0 OR W6 X 8.5 POST SHALL BE USED FOR INSTALLATIONS ON BRIDGES AS SHOWN ON STANDARD DRAWING S-GR-22.
- (F) WELDED STEEL POSTS MAY BE USED AS ALTERNATES TO THE HOT ROLLED STEEL SHAPE. THEY MUST CONFORM TO ASTM A-769 AND BE GALVANIZED ACCORDING TO ASTM A-123.

- REV. 9-15-82: CHANGED S-GR-2 TO S-GR-13. CONCRETE POST DELETED.
- REV. 7-1-84: CORRECTED DIMENSIONS AND NOTES. ADDED EXTRA THRIE-BEAM DETAIL FOR CLARIFICATION.
- REV. 9-5-87: REPLACED W6 X 16 OR W6 X 15.5 WITH W6 X 15. ELIMINATED WELDED PLATE. ELIMINATED USE OF WOOD POST IN TRANSITION FROM SEMI-RIGID TO RIGID RAIL.
- REV. 11-4-87: CHANGED POST SIZE FOR USE ON BRIDGES.
- REV. 7-29-93: REDREW AND REORGANIZED SHEET. CORRECTED DIMENSIONS FOR WELDED STEEL SHAPE W6 X 8.5 AND W6 X 9.0. ADDED DIMENSIONS FOR WELDED STEEL SHAPE W6 X 15.0. ELIMINATED USE OF "C" SHAPE POST. CORRECTED DIMENSIONS FOR WOOD POST BLOCK-OUT. CHANGED ALL STEEL POSTS AND BLOCK-OUTS SIDE VIEW DIMENSIONS TO CONCUR WITH DIMENSIONS OF W6 X 8.5 SHAPE.
- REV. 7-29-95: CHANGED HEIGHT OF WOOD BLOCK-OUT FROM 15" TO 14". IN DETAILS CORRECTED VARIOUS MOUNTING HEIGHTS.
- REV. 5-27-96: CHANGED DIMENSIONS FOR FRONT VIEW OF WOODEN MEDIAN DIVIDER GUARDRAIL.
- REV. 6-10-96: CHANGED LENGTH OF 5/8" BUTTON HEAD BOLT FROM 25" TO 18" IN SIDE VIEW SINGLE GUARDRAIL DETAIL.
- REV. 7-29-96: ADDED DIMENSION TO SIDE VIEW FOR SINGLE GUARDRAIL.
- REV. 7-29-98: DELETED DETAILS FOR MEDIAN DIVIDER GUARDRAIL USING THRIE-RAIL. CHANGED STEEL BLOCK-OUT TO WOOD BLOCK-OUT IN ALL DETAILS AND NOTES.
- REV. 9-5-98: GENERAL REVISION THROUGHOUT DRAWING. CHANGED DRAWING NO. FROM S-GR-13 TO S-GR-12.
- REV. 6-3-99: CHANGED NUMBER OF WASHERS WHERE BLOCK-OUT ATTACHES TO POST FROM 2 TO 1.
- REV. 9-11-02: ADDED GENERAL NOTE (S) AND WELDED STEEL SHAPES FOR W8X13 AND W8X21 GUARDRAIL POSTS.
- REV. 5-27-03: CHANGED GENERAL NOTE (S) AND MOVED GENERAL NOTE (S) TO STANDARD DRAWINGS S-GR-13 AND S-GR-13A.

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**W-BEAM BARRIER
 POST DETAILS AND
 SPECIFICATIONS**