

38" TWO-TUBE RAIL TRANSITION (EXTENDED CURB) (1)

GENERAL NOTES:

MGS GUARDRAIL SHALL BE TANGENTIAL WITH BRIDGE APPROACH TRANSITION FOR 12'-6" BEYOND THE TWO NESTED W-BEAM STIFFNESS TRANSITION AND 25'-0" BEYOND THRIE BEAM TRANSITION SECTION.

AT THE CONTRACTORS OPTION, A SINGLE 18'-9" PIECE OF THRIE BEAM MAY BE SUBSTITUTED FOR ONE OF THE 12'-6" PANELS AND THE 6'-3" SECTION AS SHOWN.

FOR PROTECTIVE COATING AND MATERIAL REQUIREMENTS, SEE SEC 1040 OF THE STANDARD SPECIFICATIONS.

RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.

USE 5/8" BUTTON-HEAD OVAL SHOULDER BOLTS WITH HEX NUTS AT ALL SLOTS (THICKNESS OF HEX NUTS = 3/8" MIN.).

THE CONNECTION PLATE AND ANGLE SHALL BE FABRICATED FROM ASTM A709 GRADE 50 STEEL AND GALVANIZED.

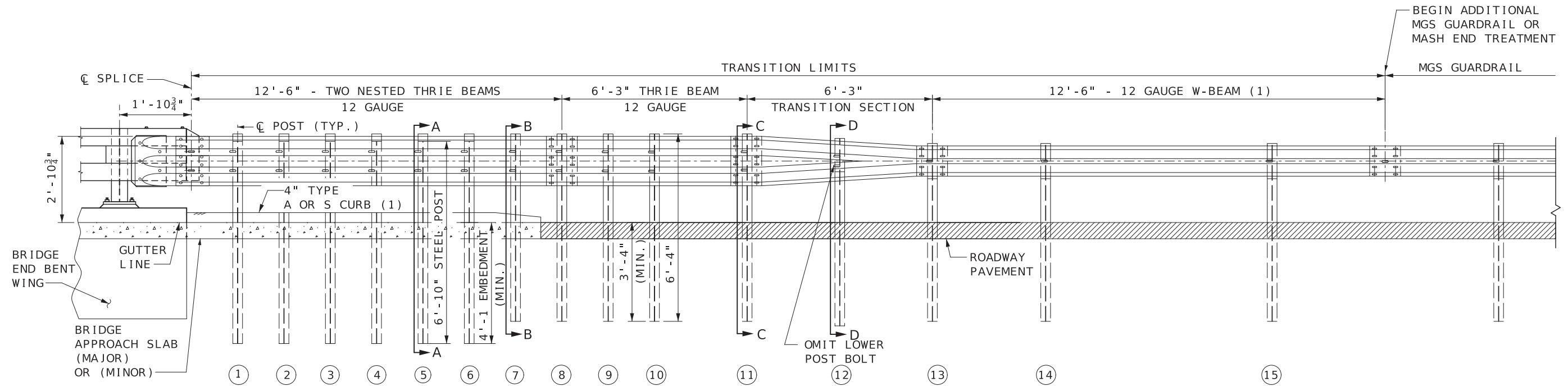
ALL LAP SPLICES, INCLUDING END SHOES, SHALL BE MADE IN THE DIRECTION OF TRAFFIC.

THE COST OF FURNISHING, FABRICATING AND INSTALLING BRIDGE APPROACH TRANSITION (EXTENDED CURB), COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH.

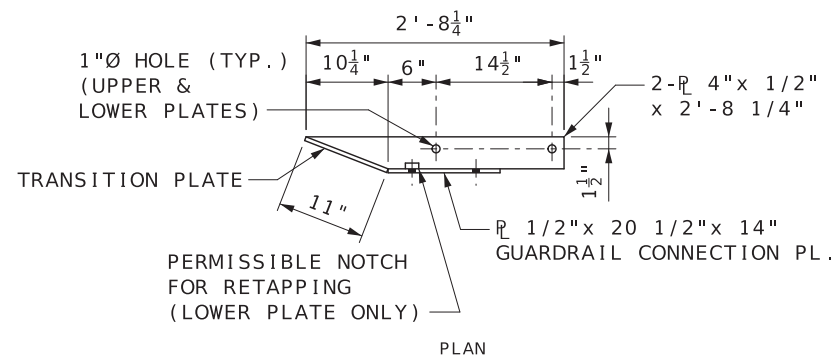
THE CONTRACTOR MAY, AT THEIR OPTION, FURNISH EQUIVALENT SECTIONS FABRICATED FROM MATERIAL MEETING AND IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A769 GRADE 36 OR 40. THE SECTIONS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH REQUIREMENTS OF AASHTO M 111.

- (1) WHERE CURB EXTENDS UPSTREAM OF POST NO. (11) FOR DRAINAGE PURPOSES, A STIFFNESS TRANSITION CONSISTING OF AN EXTRA 12'-6" BEAM OF 12 GAUGE W-BEAM MUST BE NESTED PRIOR TO THE TRANSITION SECTION (UPSTREAM OF POST NO. (13)). THE CURB SHALL BE EXTENDED TO THE END OF THE 12'-6" 12 GAUGE W-BEAM STIFFNESS TRANSITION SEE STD. PLAN 609.40 FOR DETAILS. WHEN CURBS DO NOT EXTEND UPSTREAM OF POST NO. (11), PAY FOR A TWO-TUBE RAIL TRANSITION (REGULAR CURB/NO CURB). FOR DETAILS OF TWO-TUBE RAIL TRANSITION (REGULAR CURB/NO CURB), SEE SHEET 2 OF 3.
- (2) THE ADDITIONAL REQUIRED MGS GUARDRAIL IS INCLUDED IN THE TOTAL LENGTH OF NEED AND SHALL BE PAID FOR AS A GUARDRAIL PAY ITEM.

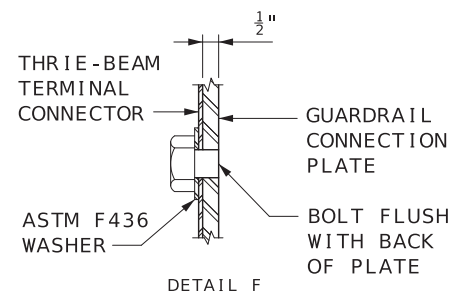
	MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION <small>105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)</small>
	MIDWEST GUARDRAIL SYSTEM (MGS) 38-INCH TWO-TUBE RAIL TRANSITIONS
DATE EFFECTIVE: 4/1/2024 DATE PREPARED: 1/9/2024	606.61
SHEET NO. 1 OF 3	



38" TWO-TUBE RAIL TRANSITION (WITH REGULAR LENGTH CURB OR NO CURB) (1)



PLAN

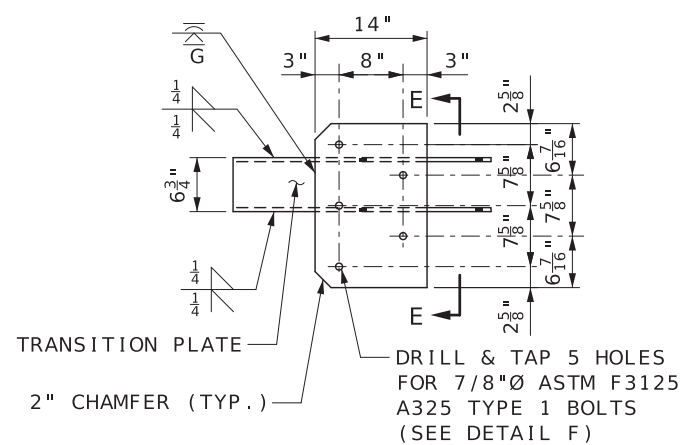


DETAIL F

GENERAL NOTES:
SEE SHEET 1 FOR ADDITIONAL NOTES NOT INCLUDED ON THIS SHEET.

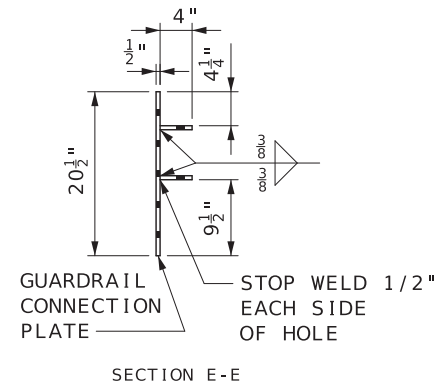
THE COST OF FURNISHING, FABRICATING AND INSTALLING BRIDGE APPROACH TRANSITION (REGULAR/NO CURB), COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH.

(1) WHERE CURB EXTENDS UPSTREAM OF POST NO. (11) FOR DRAINAGE PURPOSES, A STIFFNESS TRANSITION CONSISTING OF AN EXTRA 12'-6" BEAM OF 12 GAUGE W-BEAM MUST BE NESTED PRIOR TO THE TRANSITION SECTION (UPSTREAM OF POST NO. (13)). THE CURB SHALL BE EXTENDED TO THE END OF THE 12'-6" 12 GAUGE W-BEAM STIFFNESS TRANSITION SEE STD. PLAN 609.40 FOR DETAILS. IF CURB EXTENDS BEYOND POST NO. (11), PAY FOR A TWO-TUBE RAIL TRANSITION (EXTENDED CURB). FOR DETAILS OF TWO-TUBE RAIL TRANSITION (EXTENDED CURB), SEE SHEET 1 OF 3.

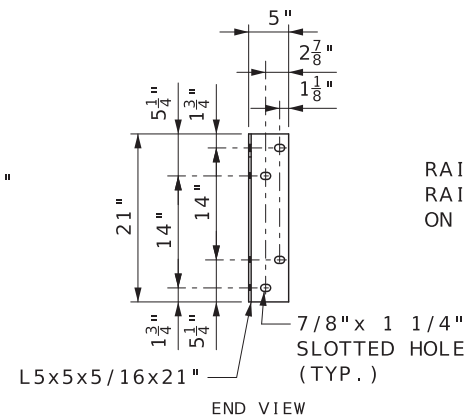


ELEVATION

GUARDRAIL CONNECTION PLATE

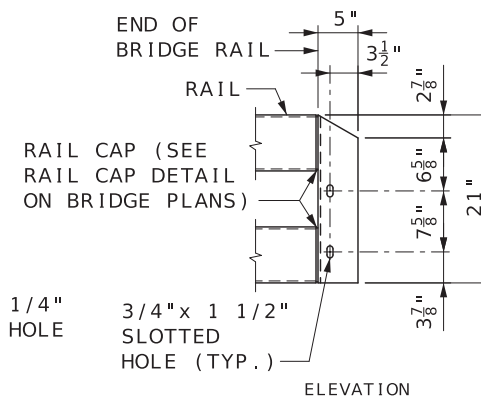


SECTION E-E



END VIEW

CONNECTION ANGLE



ELEVATION

MoDOT MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

STATE OF MISSOURI
KENNETH L. VOSS
NUMBER PE-2002016747
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

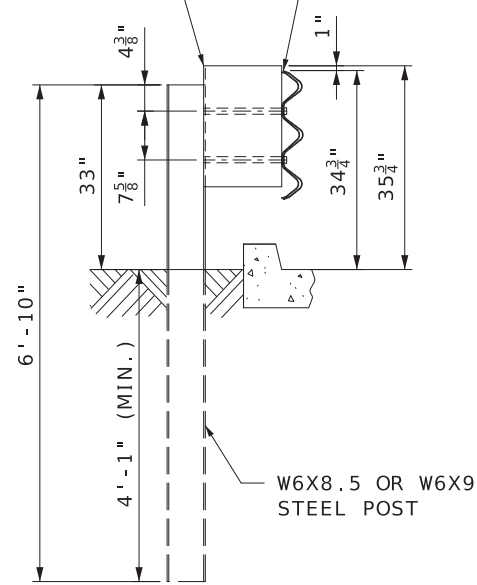
MIDWEST GUARDRAIL SYSTEM (MGS)
38-INCH TWO-TUBE RAIL TRANSITIONS

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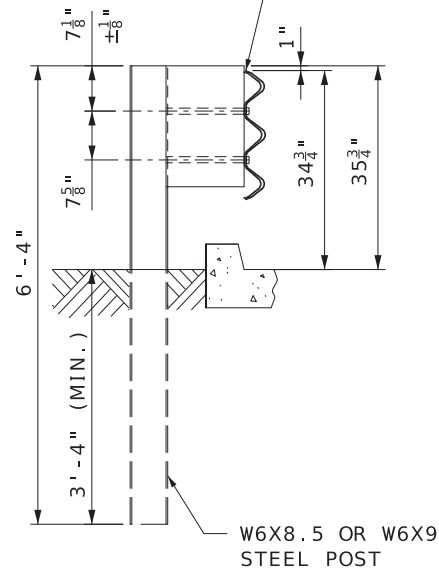
SHEET NO.
2 OF 3

SET BLOCK
2 3/4" ABOVE
STEEL POST



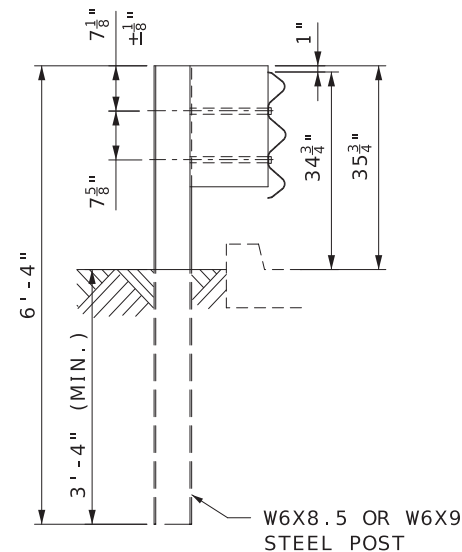
SECTION A-A

TWO NESTED 12 GAUGE
THRIE BEAM



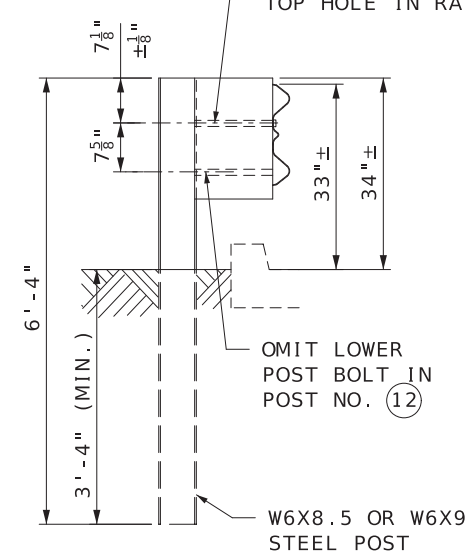
SECTION B-B

TWO NESTED 12 GAUGE
THRIE BEAM

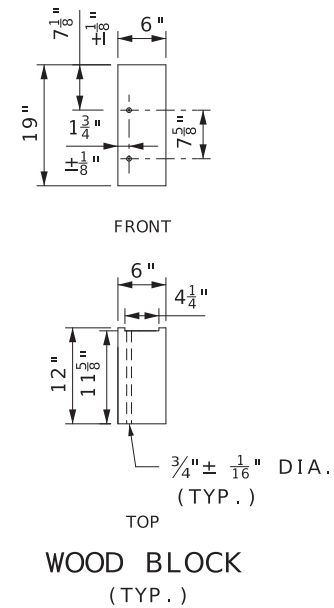


SECTION C-C

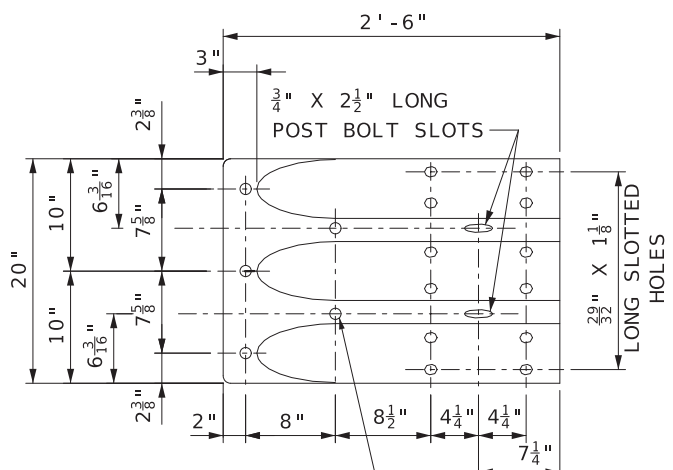
ALIGN TOP HOLE
IN POST WITH
TOP HOLE IN RAIL



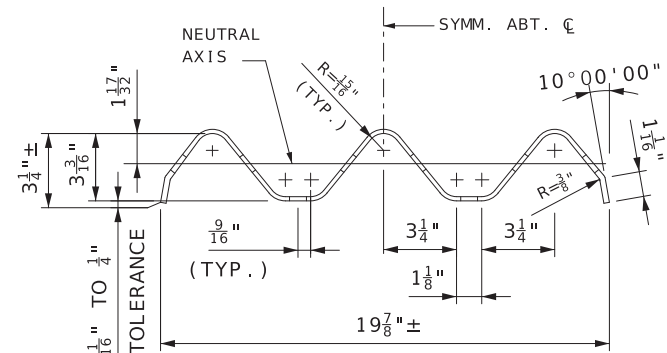
SECTION D-D



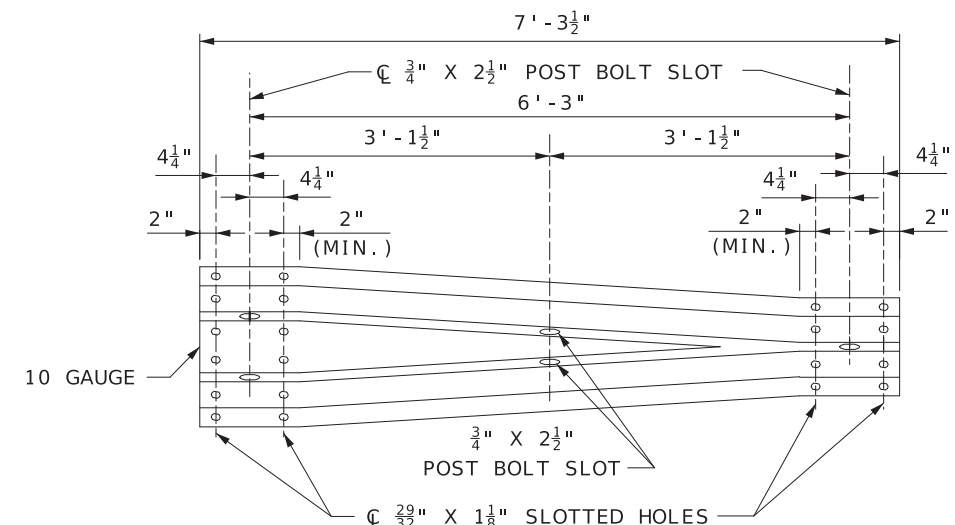
WOOD BLOCK
(TYP.)



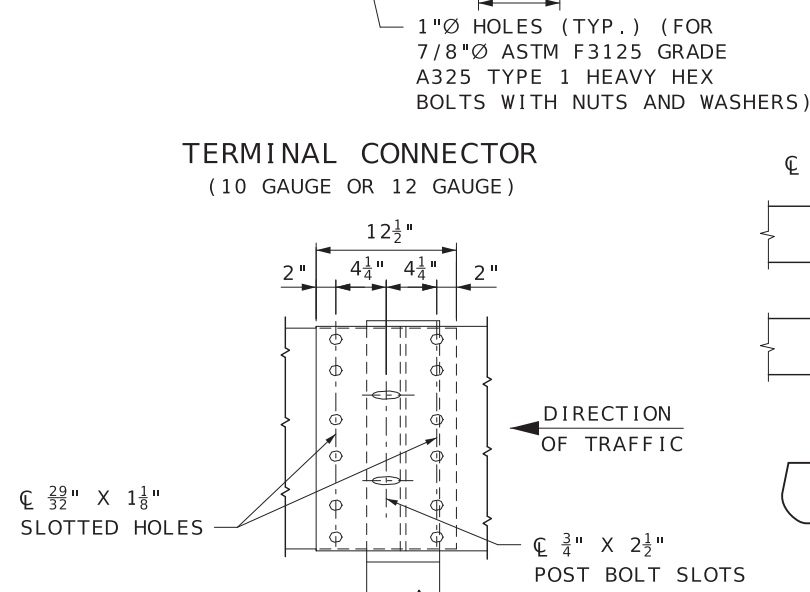
TERMINAL CONNECTOR
(10 GAUGE OR 12 GAUGE)



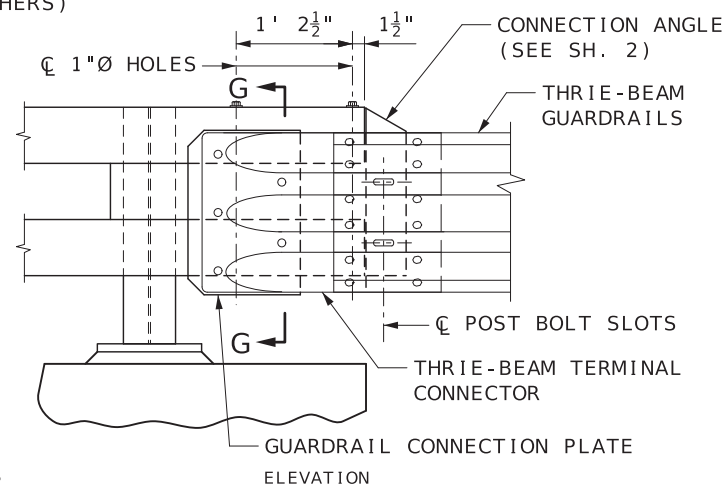
SECTION THROUGH THRIE BEAM RAIL



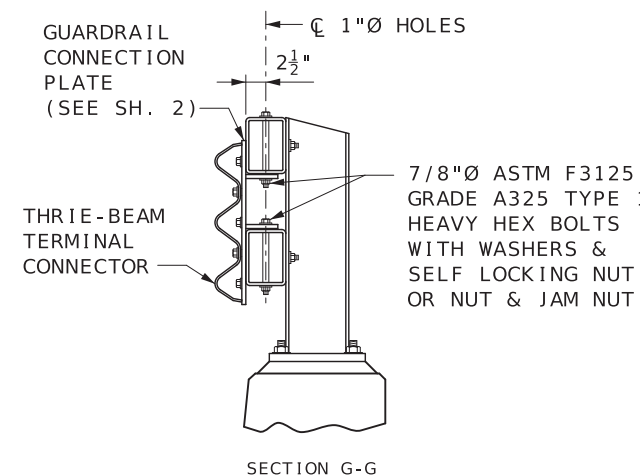
TRANSITION SECTION



THRIE BEAM RAIL SPLICE AT POST



TRANSITION CONNECTION



SECTION G-G

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
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JEFFERSON CITY, MO 65102
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**MIDWEST GUARDRAIL SYSTEM (MGS)
38-INCH TWO-TUBE RAIL TRANSITIONS**

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DATE EFFECTIVE:	4/1/2024	606.61	SHEET NO. 3 OF 3
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