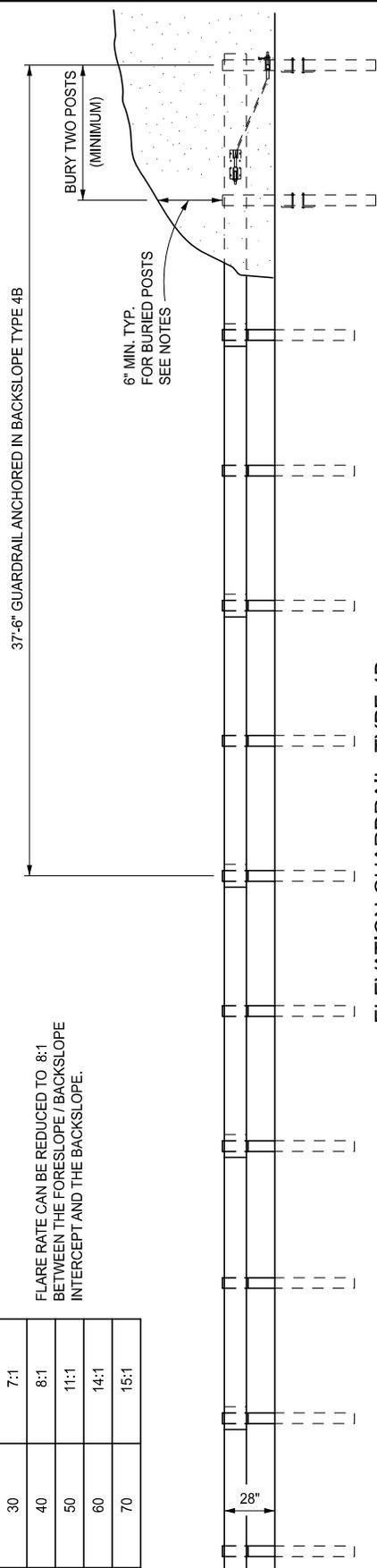
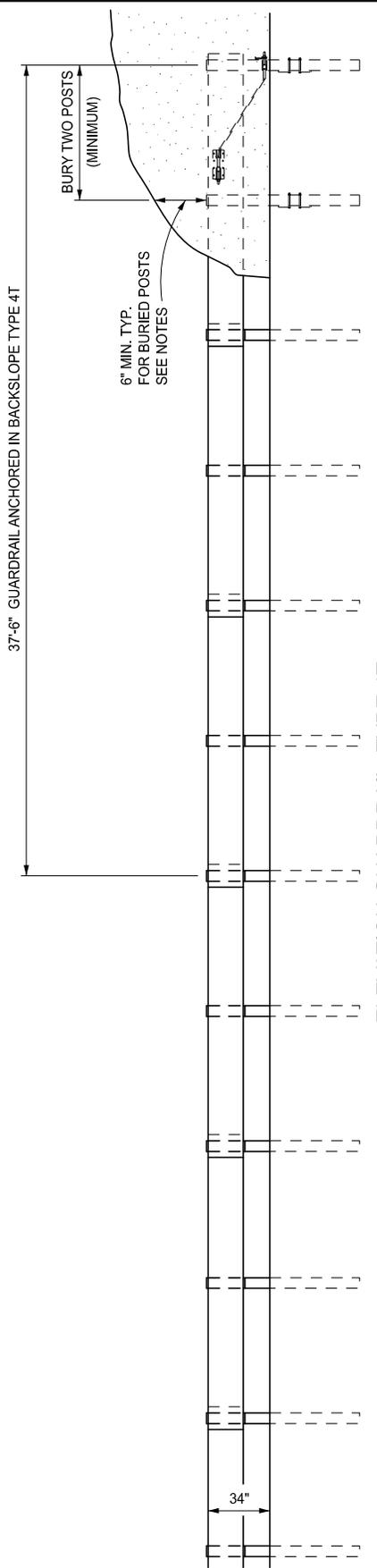


PLAN VIEW



ELEVATION GUARDRAIL, TYPE 4B



ELEVATION GUARDRAIL, TYPE 4T

FLARE RATES		FLARE
DESIGN SPEED (mph)		
30		7:1
40		8:1
50		11:1
60		14:1
70		15:1

FLARE RATE CAN BE REDUCED TO 8:1 BETWEEN THE FORESLOPE / BACKSLOPE INTERCEPT AND THE BACKSLOPE.

APPROVED BY: \_\_\_\_\_  
DIRECTOR, BUREAU OF FIELD SERVICES

APPROVED BY: \_\_\_\_\_  
DIRECTOR, BUREAU OF DEVELOPMENT



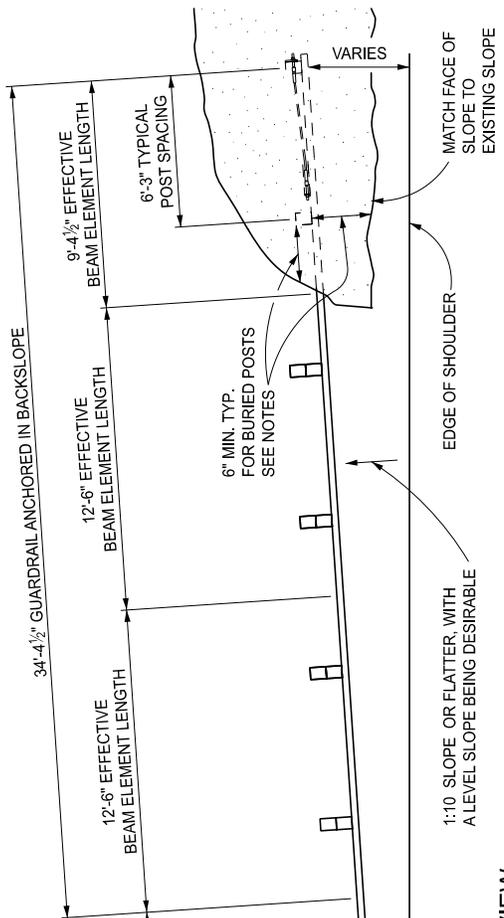
DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

SPECIAL DETAIL FOR  
GUARDRAIL ANCHORED IN BACKSLOPE  
TYPES 4B, 4T, & 4MGS-8

(SPECIAL DETAIL)	12/06/2022
FHWA APPROVAL	PLAN DATE

**SPECIAL DETAIL 24**

SHEET  
1 OF 8

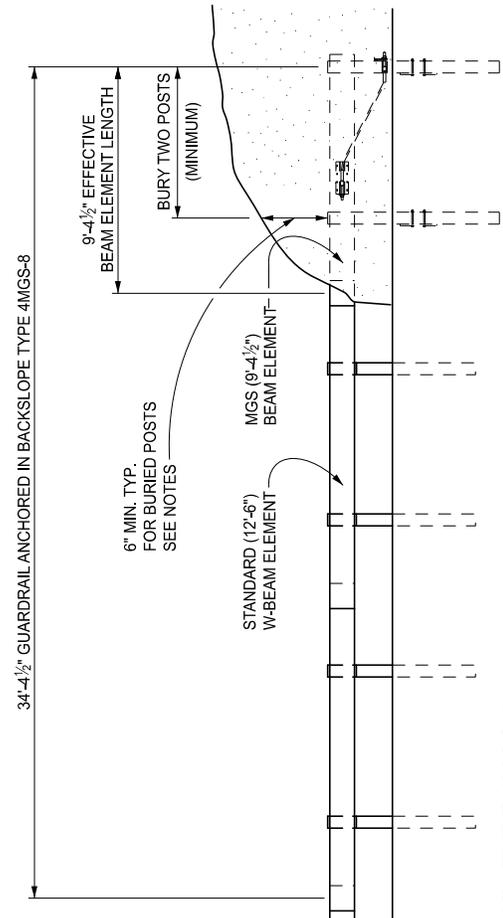


PLAN VIEW



FLARE RATE CAN BE REDUCED TO 8:1 BETWEEN THE FORESLOPE / BACKSLOPE INTERCEPT AND THE BACKSLOPE.

FLARE RATES	
DESIGN SPEED (mph)	FLARE
30	7:1
40	8:1
50	11:1
60	14:1
70	15:1



ELEVATION GUARDRAIL, TYPE 4MGS-8



DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

SPECIAL DETAIL FOR  
GUARDRAIL ANCHORED IN BACKSLOPE  
TYPES 4B, 4T, & 4MGS-8

(SPECIAL DETAIL)  
FHWA APPROVAL

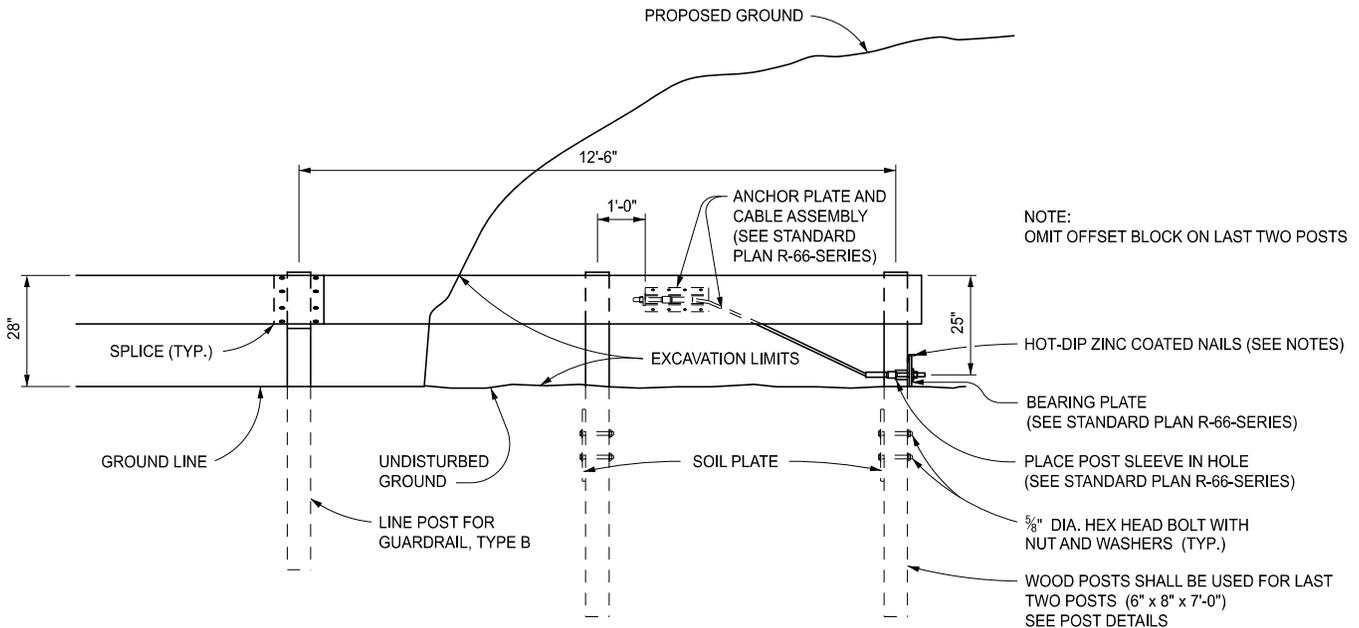
12/06/2022  
PLAN DATE

SPECIAL DETAIL 24

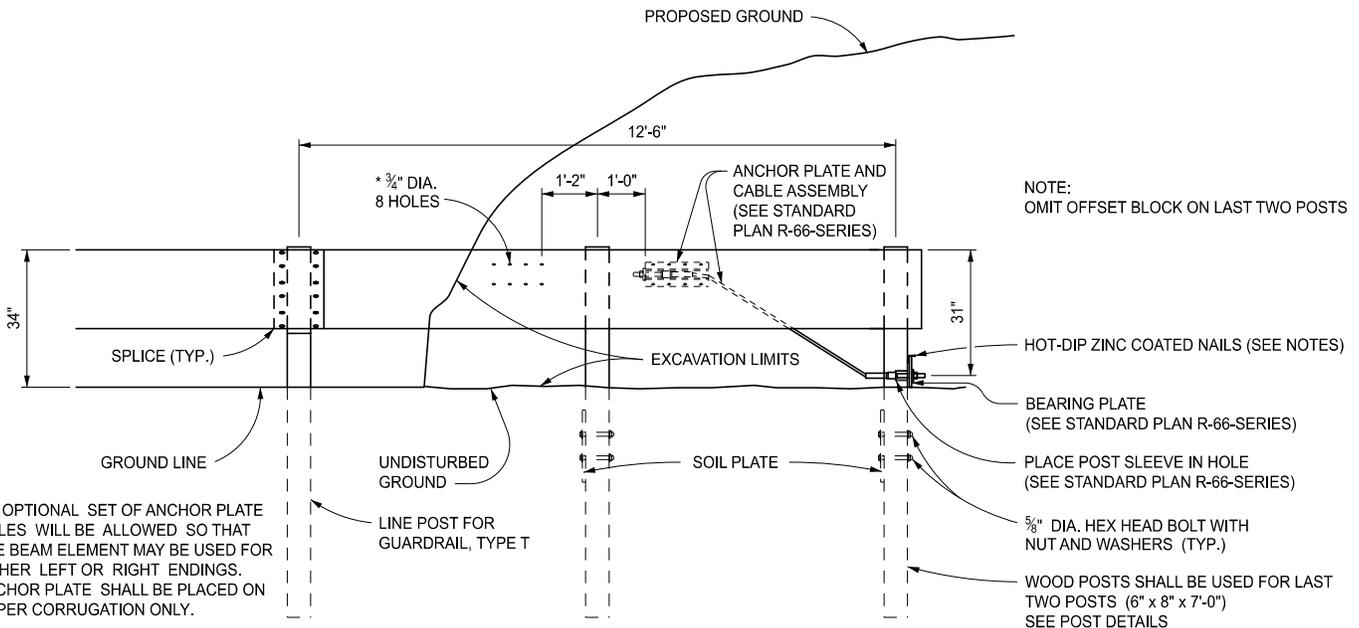
SHEET  
2 OF 8



PLAN VIEW

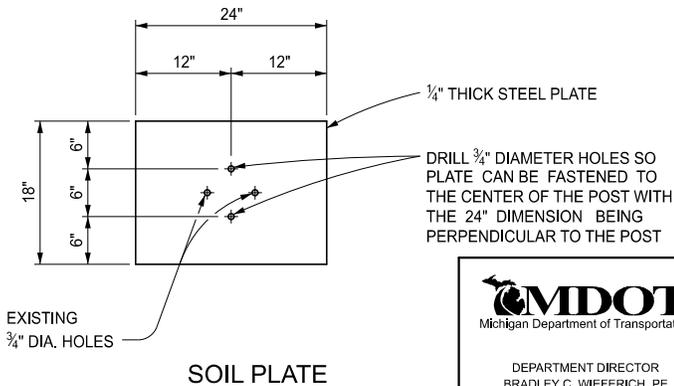


ELEVATION GUARDRAIL, TYPE 4B



\* AN OPTIONAL SET OF ANCHOR PLATE HOLES WILL BE ALLOWED SO THAT THE BEAM ELEMENT MAY BE USED FOR EITHER LEFT OR RIGHT ENDINGS. ANCHOR PLATE SHALL BE PLACED ON UPPER CORRUGATION ONLY.

ELEVATION GUARDRAIL, TYPE 4T



SOIL PLATE

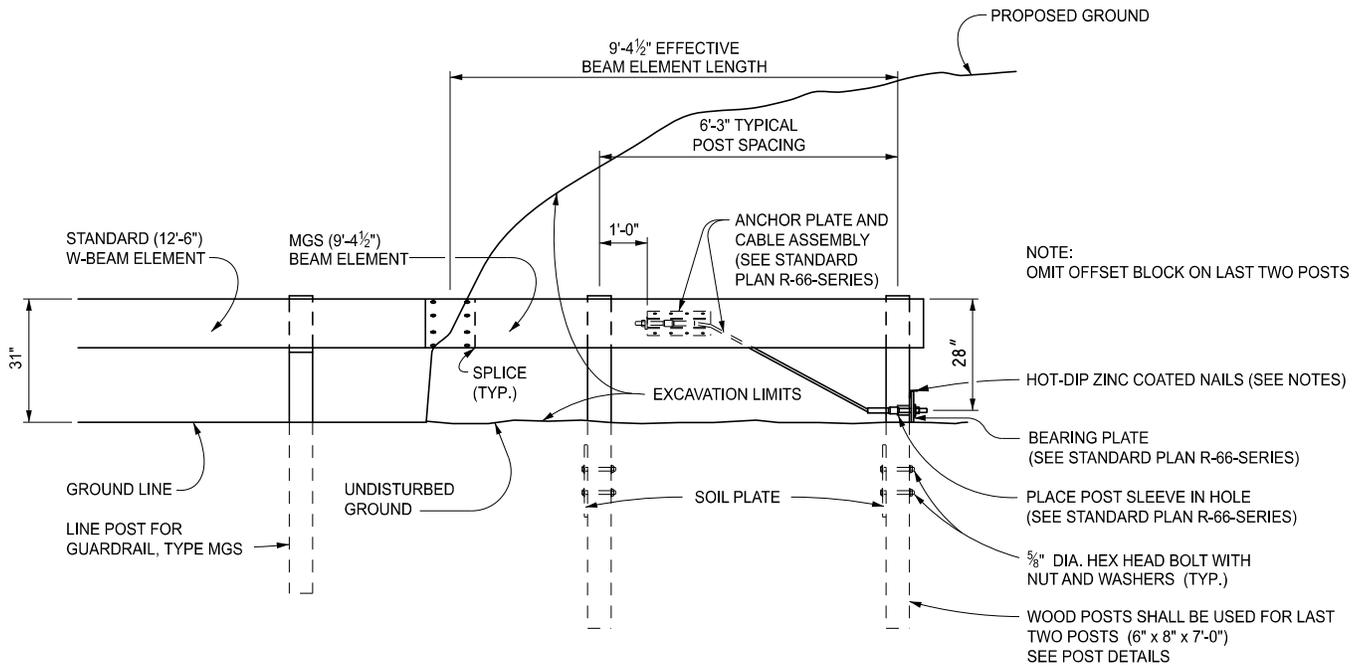
**MDOT**  
Michigan Department of Transportation

DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

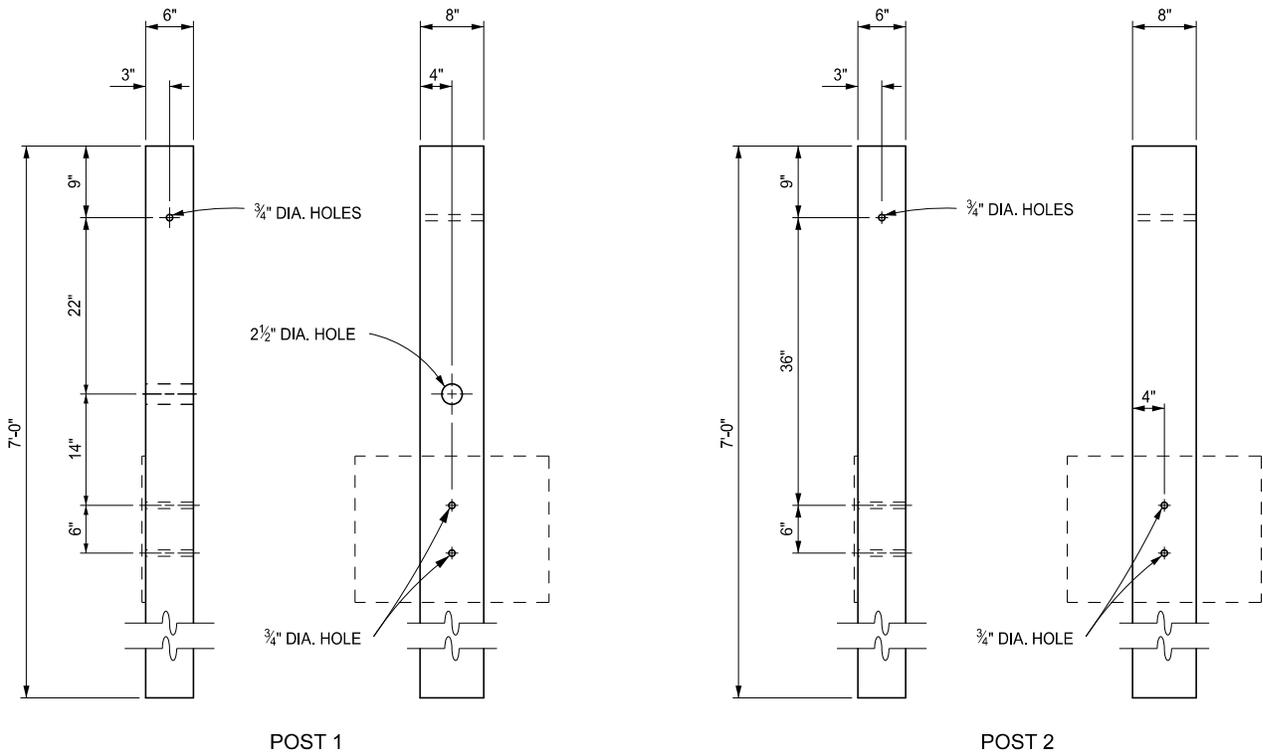
SPECIAL DETAIL FOR GUARDRAIL ANCHORED IN BACKSLOPE TYPES 4B, 4T, & 4MGS-8		
(SPECIAL DETAIL)	12/06/2022	<b>SPECIAL DETAIL 24</b>
FHWA APPROVAL	PLAN DATE	
		SHEET 3 OF 8



PLAN VIEW



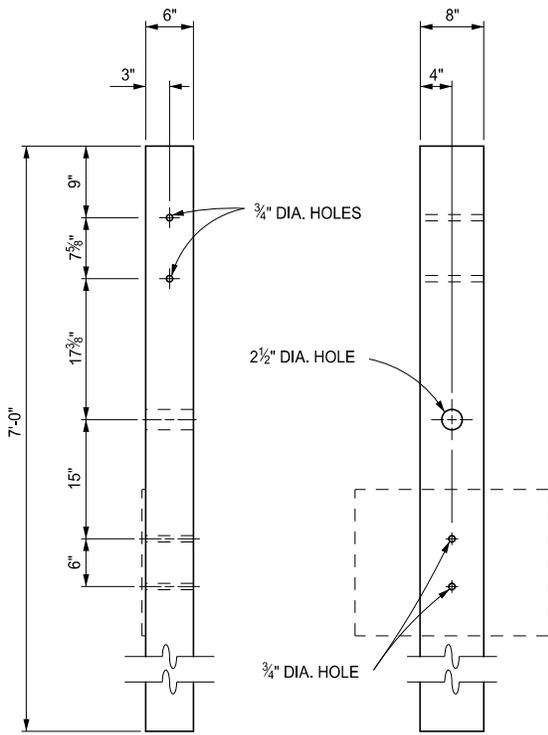
ELEVATION GUARDRAIL, TYPE 4MGS-8



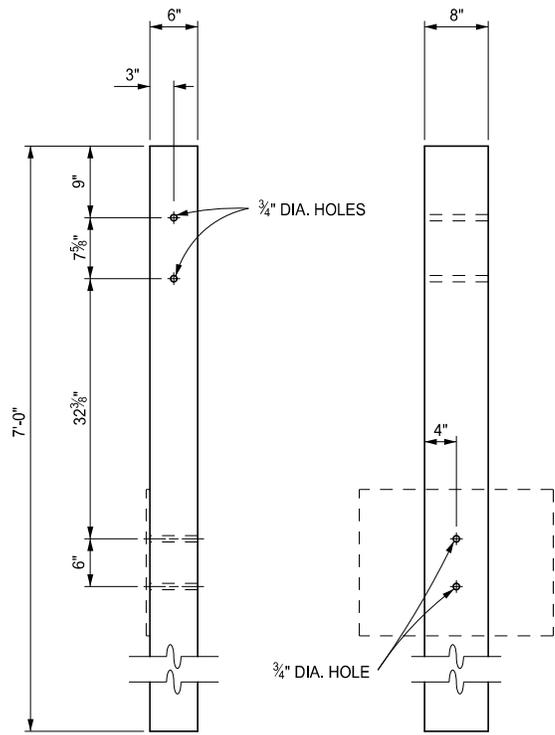
WOOD POST DETAILS

GUARDRAIL ANCHORED IN BACKSLOPE TYPE 4MGS-8

<p>MDOT Michigan Department of Transportation</p> <p>DEPARTMENT DIRECTOR BRADLEY C. WIEFERICH, PE</p>	<p>SPECIAL DETAIL FOR GUARDRAIL ANCHORED IN BACKSLOPE TYPES 4B, 4T, &amp; 4MGS-8</p>		<p><b>SPECIAL DETAIL 24</b></p>	<p>SHEET 4 OF 8</p>
	<p>(SPECIAL DETAIL) FHWA APPROVAL</p>	<p>12/06/2022 PLAN DATE</p>		



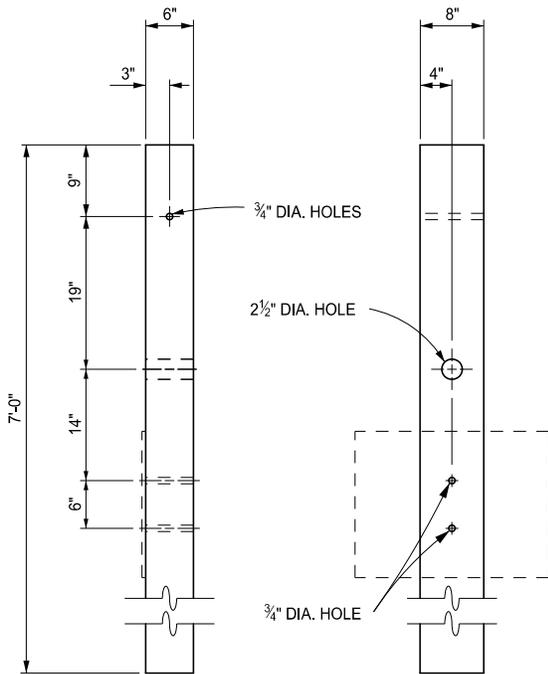
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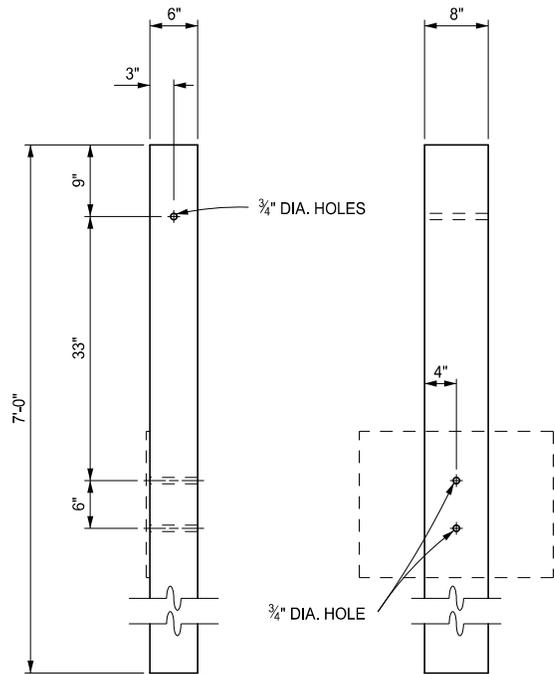
POST 2

WOOD POST DETAILS

GUARDRAIL ANCHORED IN BACKSLOPE TYPE 4T



POST 1



POST 2

WOOD POST DETAILS

GUARDRAIL ANCHORED IN BACKSLOPE TYPE 4B



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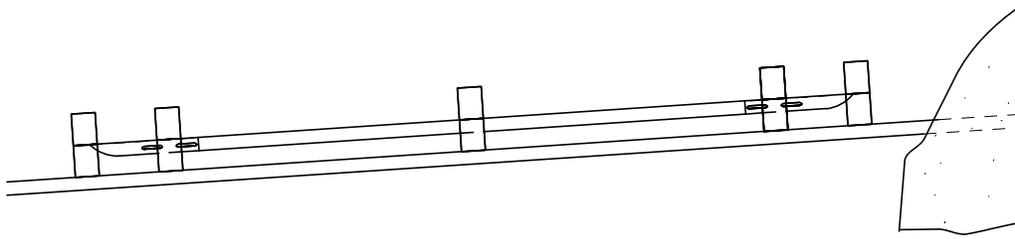
SPECIAL DETAIL FOR  
GUARDRAIL ANCHORED IN BACKSLOPE  
TYPES 4B, 4T, & 4MGS-8

(SPECIAL DETAIL)  
FHWA APPROVAL

12/06/2022  
PLAN DATE

SPECIAL DETAIL 24

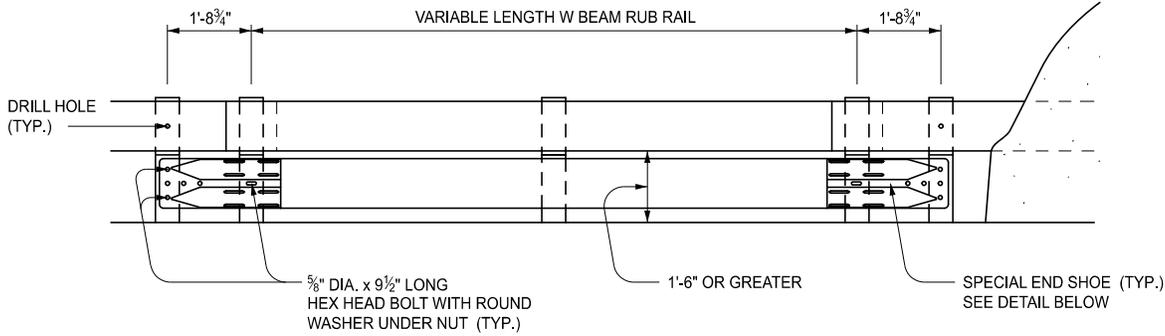
SHEET  
5 OF 8



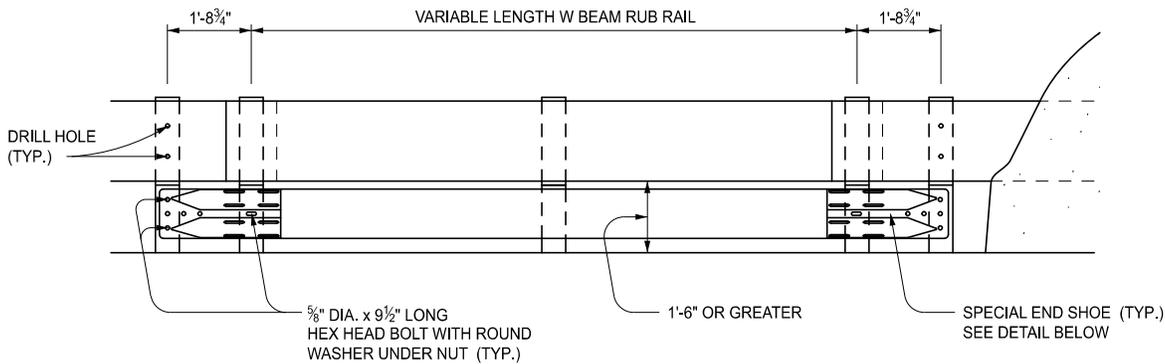
**PLAN VIEW**  
WITH RUB RAIL

**NOTE:**

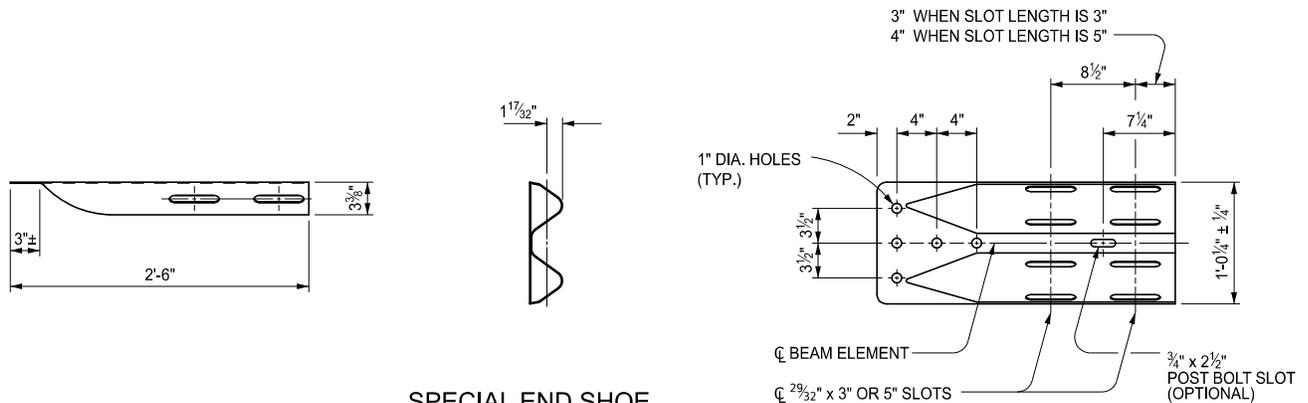
EXTRA POSTS, SPECIAL END SHOES, GUARDRAIL, HARDWARE AND ANY EXTRA WORK ARE INCLUDED IN THE BID ITEM GUARDRAIL ANCHORED IN BACKSLOPE TYPE 4B OR TYPE 4T.



**ELEVATION GUARDRAIL, TYPE 4B**  
WITH RUB RAIL



**ELEVATION GUARDRAIL, TYPE 4T**  
WITH RUB RAIL



**SPECIAL END SHOE**  
(3" OR 5" SLOT LENGTHS)



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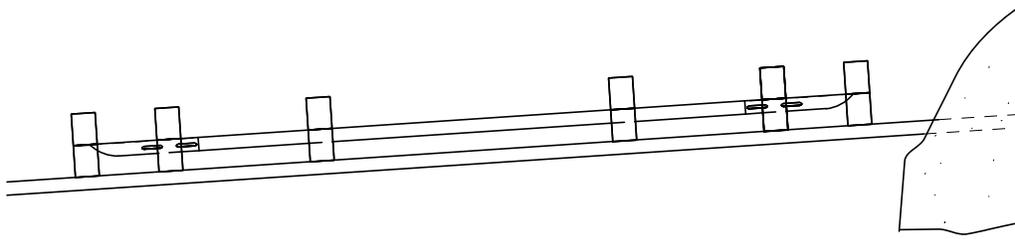
SPECIAL DETAIL FOR  
**GUARDRAIL ANCHORED IN BACKSLOPE**  
TYPES 4B, 4T, & 4MGS-8

(SPECIAL DETAIL)  
FHWA APPROVAL

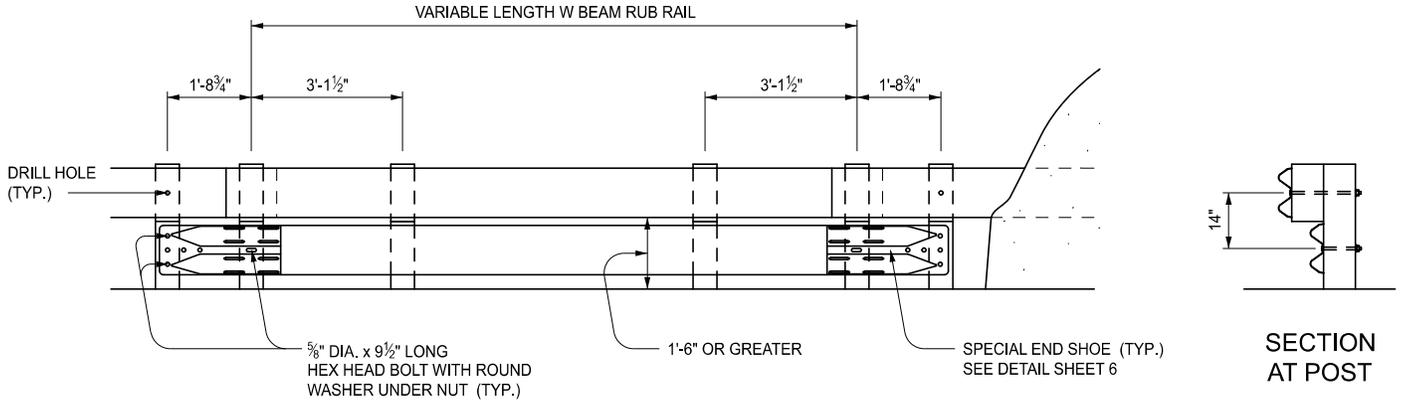
12/06/2022  
PLAN DATE

**SPECIAL DETAIL 24**

SHEET  
6 OF 8



PLAN VIEW GUARDRAIL, TYPE 4MGS-8  
WITH RUB RAIL



ELEVATION GUARDRAIL, TYPE 4MGS-8  
WITH RUB RAIL

NOTE:

EXTRA POSTS, SPECIAL END SHOES, GUARDRAIL, HARDWARE AND ANY EXTRA WORK ARE INCLUDED IN THE BID ITEM GUARDRAIL ANCHORED IN BACKSLOPE TYPE 4MGS-8



DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

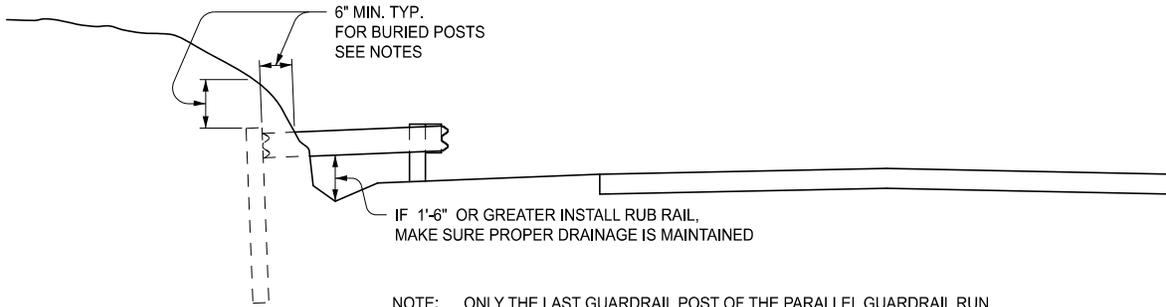
SPECIAL DETAIL FOR  
GUARDRAIL ANCHORED IN BACKSLOPE  
TYPES 4B, 4T, & 4MGS-8

(SPECIAL DETAIL)  
FHWA APPROVAL

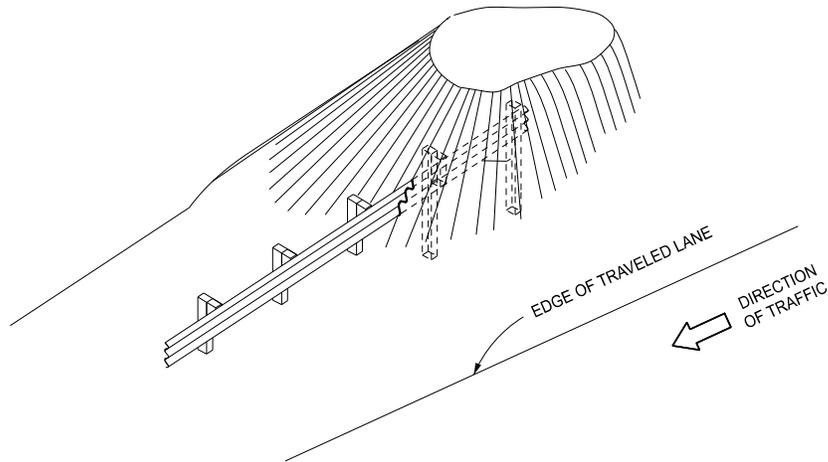
12/06/2022  
PLAN DATE

SPECIAL DETAIL 24

SHEET  
7 OF 8



NOTE: ONLY THE LAST GUARDRAIL POST OF THE PARALLEL GUARDRAIL RUN AND THE LAST BURIED GUARDRAIL POST ARE SHOWN.  
(OTHER POSTS ALONG THE FLARED GUARDRAIL RUN ARE NOT SHOWN)



### BURIED ENDING SKETCHES

**NOTES:**

ALL POSTS, OFFSET BLOCKS, BEAM ELEMENTS, AND HARDWARE (INCLUDING BOLTS, NUTS, AND WASHERS) SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR CONSTRUCTION AND TO STANDARD PLAN R-60-SERIES, WHERE APPLICABLE, EXCEPT AS SPECIFIED ON THIS PLAN.

ALL 1:10 SLOPES SHALL BE GRADED TO CLASS A SLOPE TOLERANCES.

AFTER THE CABLE ASSEMBLY HAS BEEN TIGHTENED, A SECOND NUT SHALL BE INSTALLED SO THAT THE CABLE WILL NOT LOOSEN.

TWO HOT-DIP ZINC COATED NAILS SHALL BE DRIVEN INTO THE WOOD POST AT THE TOP OF THE BEARING PLATE TO KEEP THE BEARING PLATE FROM ROTATING.

WHEN ADDITIONAL POST BOLT SLOTS ARE REQUIRED, THEY SHALL BE DRILLED OR PUNCHED AND REGALVANIZED. BURNING WILL NOT BE ALLOWED.

TERMINAL SHALL BE SET A MINIMUM 6" INTO THE BACKSLOPE AND HAVE 6" OF COVER ON ALL SIDES TO LESSEN THE POSSIBILITY IT WILL BE EXPOSED BY EROSION AND SNAG AN IMPACTING VEHICLE.

THE GUARDRAIL SHALL REMAIN AT A CONSTANT HEIGHT RELATIVE TO THE LOCAL GRADE. A W BEAM RUB RAIL WILL BE REQUIRED IF THE OPENING UNDER THE PRIMARY RAIL IS 1'-6" OR MORE. SEE DETAILS.



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SPECIAL DETAIL FOR  
GUARDRAIL ANCHORED IN BACKSLOPE  
TYPES 4B, 4T, & 4MGS-8

(SPECIAL DETAIL)  
FHWA APPROVAL

12/06/2022  
PLAN DATE

**SPECIAL DETAIL 24**

SHEET  
8 OF 8