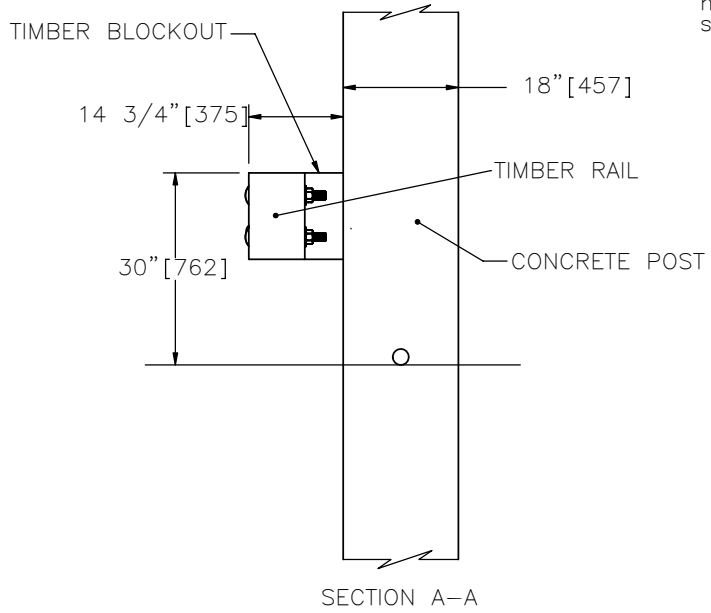


NOTE: (1) Concrete reinforcement and noise wall hardware have been omitted in the system views



TIMBER GUARDRAIL SYSTEM FOR ATTACHMENT TO NOISE WALL



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INTENDED USE

Timber Guardrail System for Attachment to a Noise Wall should be used in locations where a maximum dynamic deflection of 3 5/8" [92] or less is acceptable and where a working width of 44 5/8" [1133] is provided. Timber Guardrail System for Attachment to a Noise Wall should be anchored and terminated using a suitable guardrail end treatment or placing the system end outside of the clear zone. The Timber Guardrail System for Attachment to a Noise Wall is TL-3 NCHRP 350 accepted.

COMPONENTS

MAIN RAIL SECTION

Unit Length = 192" [4877]

DESIGNATOR	COMPONENT	SYSTEM	NUMBER
-	Concrete post		2
-	Timber rail		1
-	Timber blackout		2
FBB08	Post bolts and nuts		4
FBB09	Splice bolts and nuts		8
FWC30a	Flat washer		8
-	Splice plate		1

END RAIL SECTION

Unit Length = 192" [4877]

DESIGNATOR	COMPONENT	SYSTEM	NUMBER
-	Concrete post		2
-	Timber rail end section		1
-	Timber blackout		2
FBB08	Post bolts and nuts		4
FBB09	Splice bolts and nuts		8
FCA01	Cable anchor		1
FWC30a	Flat washer		8
-	Splice plate		1
-	Cable anchor assembly		1

ACCEPTANCE

FHWA Acceptance Letter B-135, May 26, 2005.

REFERENCES

Polivka, K.A., Rohde, J.R., Faller, R.K., Holloway, J.C., Sicking, D.L., *Design and Evaluation of Minnesota's Timber Rub-Rail for Noise Barriers*, Final Report to the Minnesota Department of Transportation, Transportation Research Report No. TRP-03-156-05, Midwest Roadside Safety Facility, University of Nebraska-Lincoln, March 8, 2005.

Minnesota Department of Transportation, *Glue Laminated Rubrail (Concrete Posts)*, Standard Sheet No. 5-297.678 (Sheet Nos. 1-3), July 25, 2006.

CONTACT INFORMATION

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(402) 472-0965
Email: mwrfsf@unl.edu
Website: <http://mwrfsf.unl.edu/>



TIMBER GUARDRAIL SYSTEM FOR ATTACHMENT TO NOISE WALL

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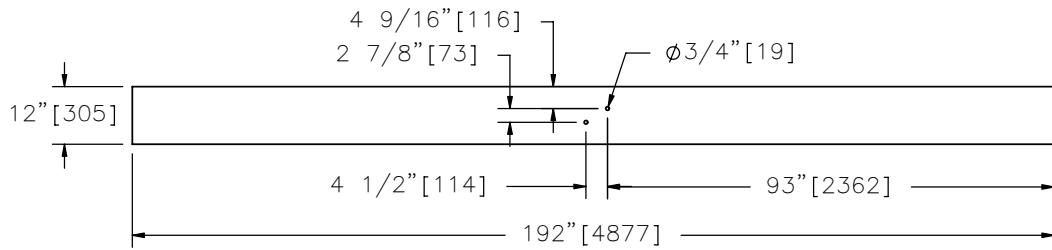
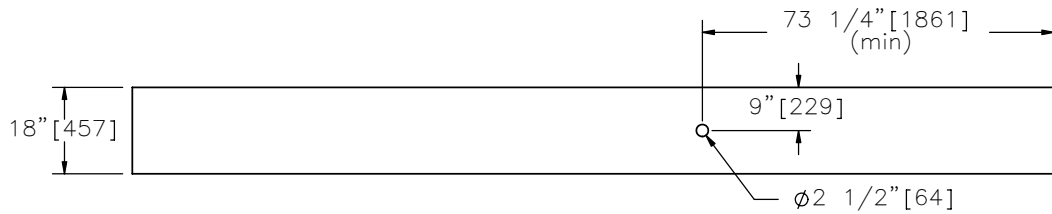
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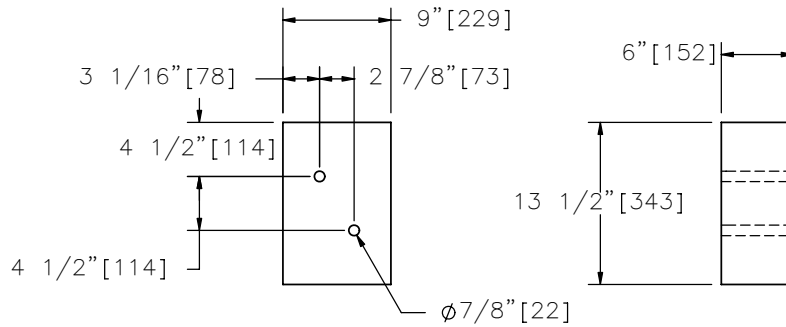
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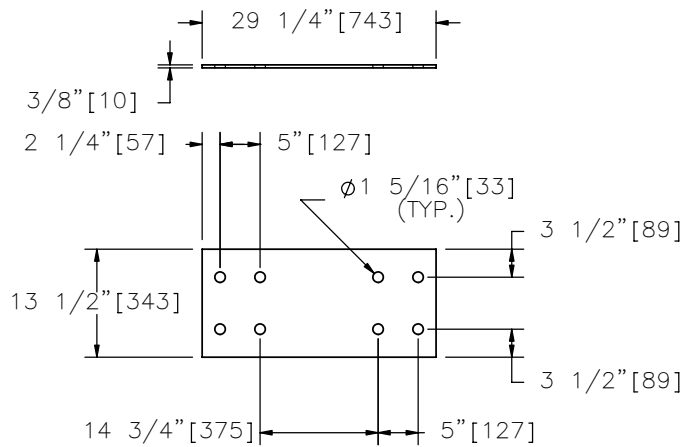




CONCRETE POST
(REINFORCEMENT NOT SHOWN)



TIMBER BLOCKOUT
GLULAM COMB. 48 (SOUTHERN PINE)
OR COMB. 2 (WESTERN SPECIES)



SPLICE PLATE

TIMBER GUARDRAIL SYSTEM FOR ATTACHMENT TO NOISE WALL



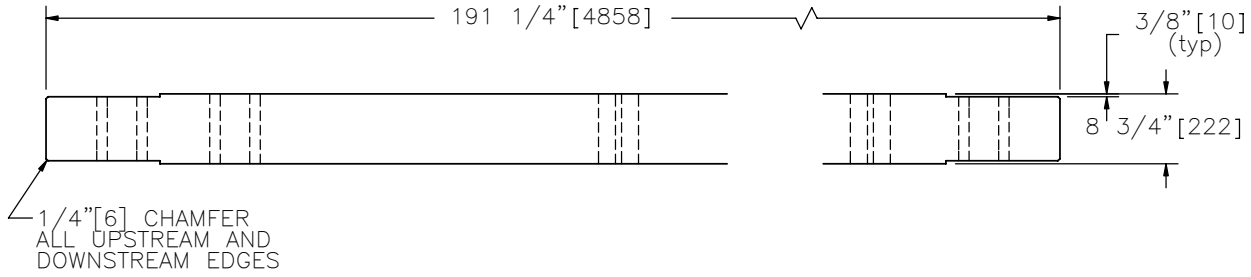
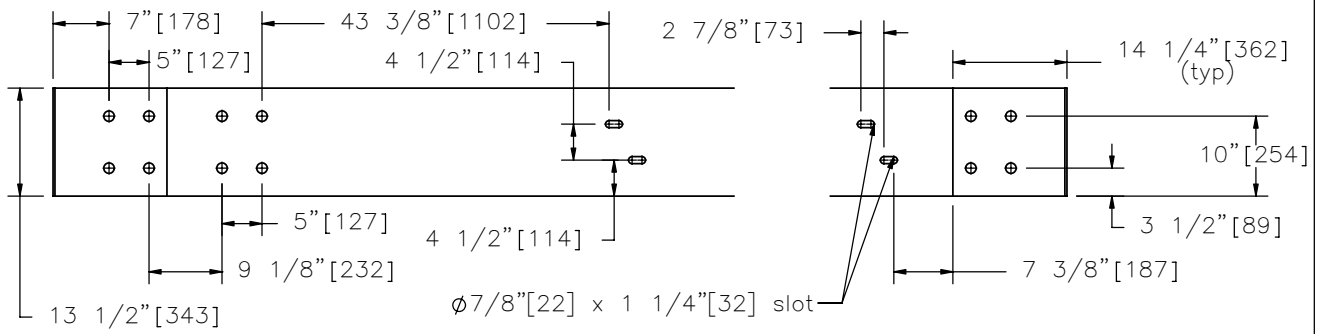
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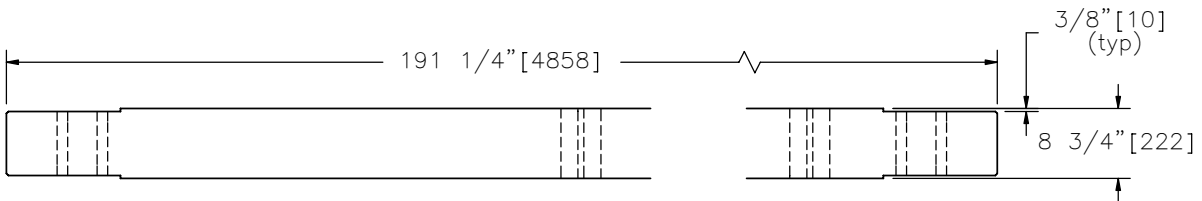
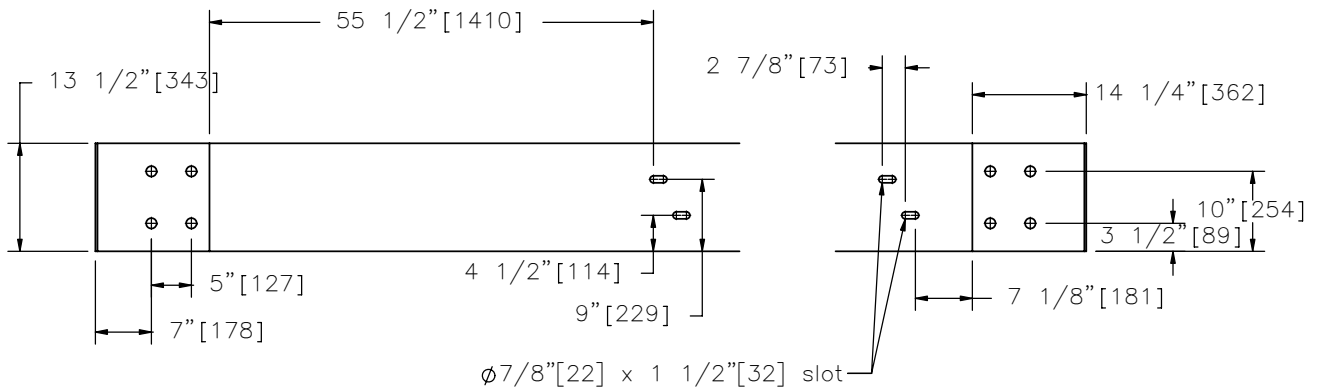
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RAIL SECTION WITH ANCHOR PLATE



MAIN RAIL SECTION

TIMBER GUARDRAIL SYSTEM FOR ATTACHMENT TO NOISE WALL

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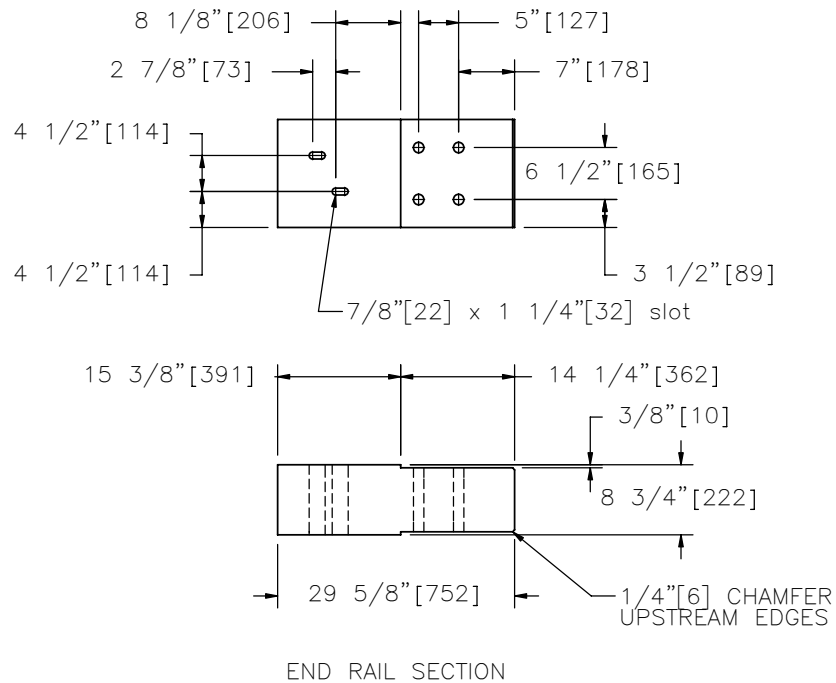
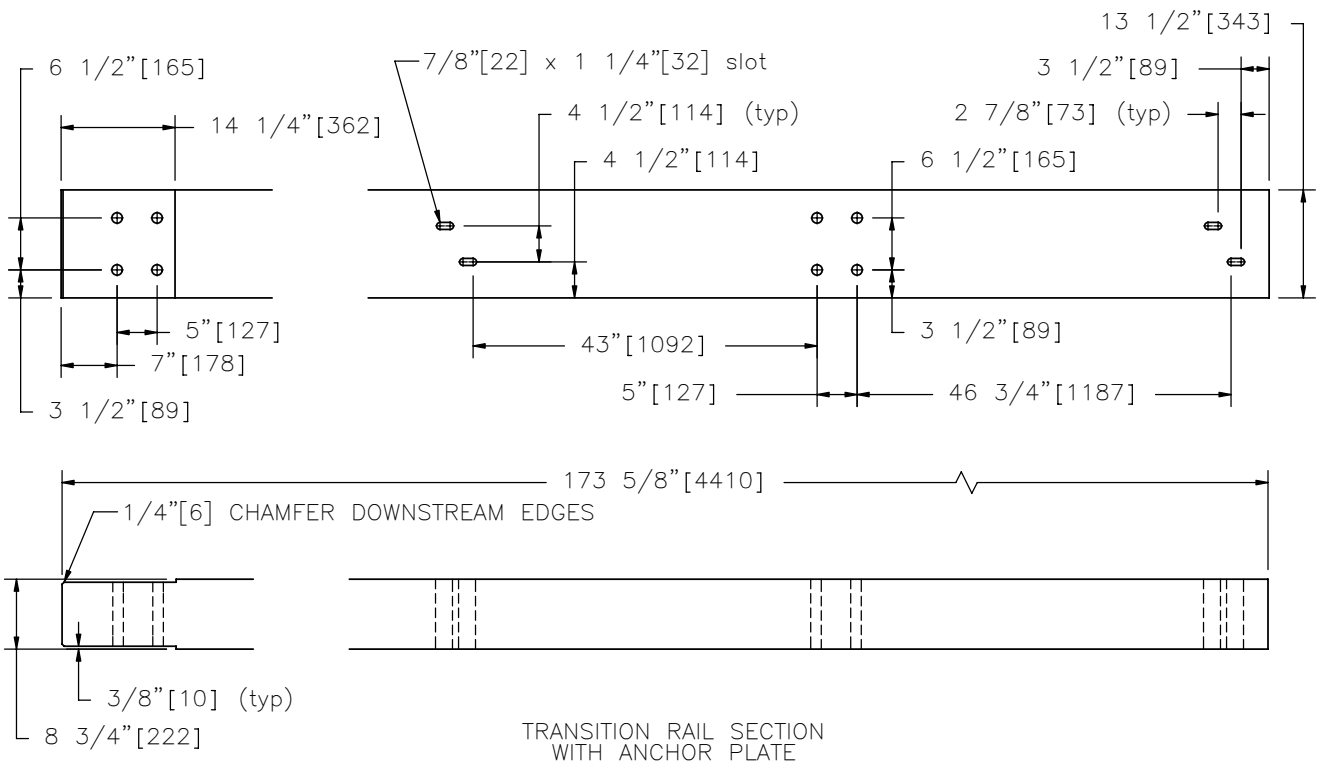
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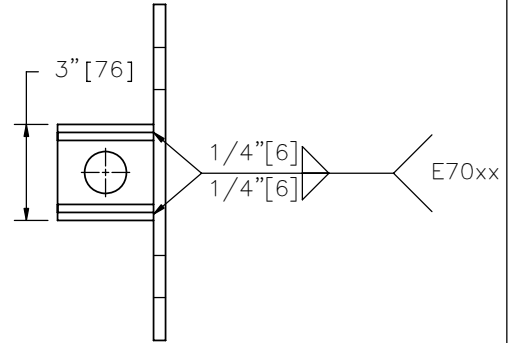
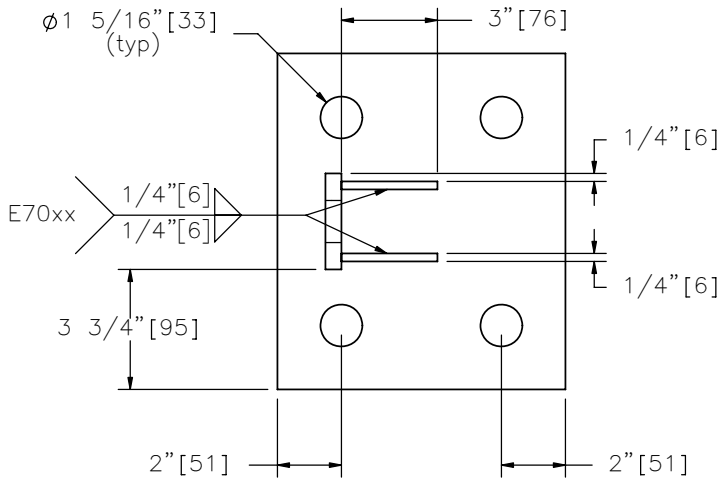
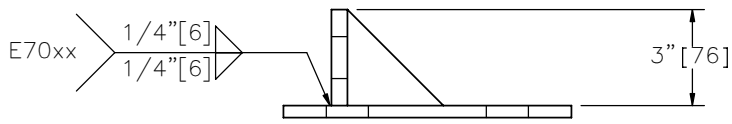
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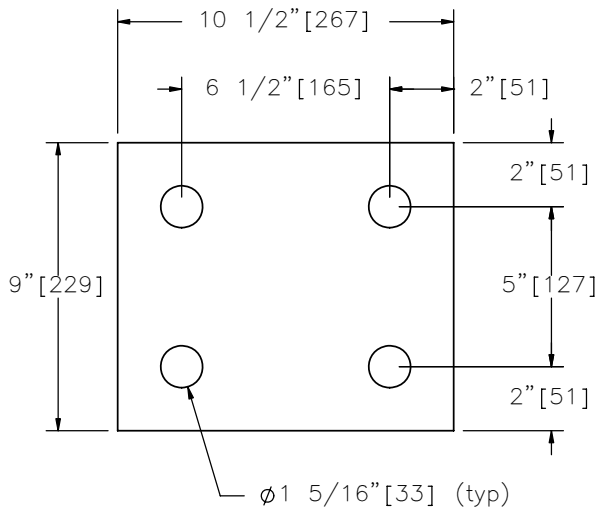
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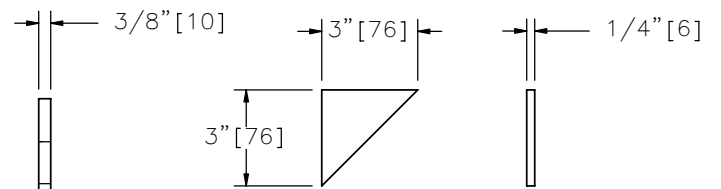
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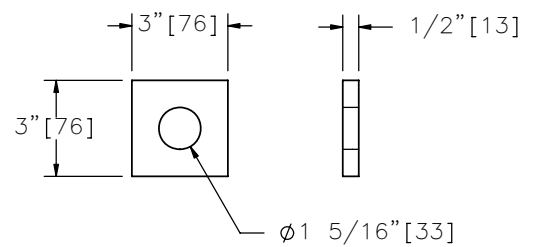
ANCHOR PLATE ASSEMBLY



ANCHOR BASE PLATE



ANCHOR SUPPORT



ANCHOR KEEPER PLATE

TIMBER GUARDRAIL SYSTEM FOR ATTACHMENT TO NOISE WALL



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