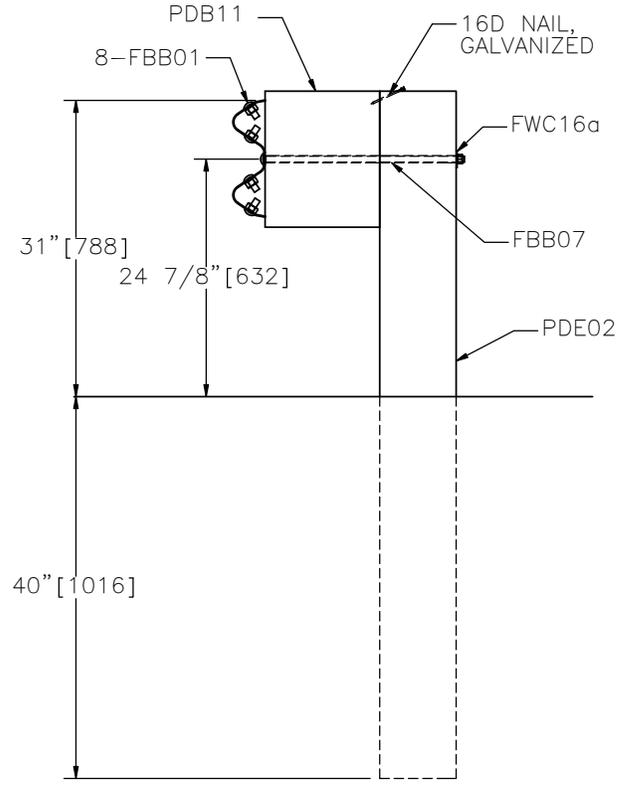


SGR21a
Section A-A



SGR21b

MIDWEST GUARDRAIL SYSTEM WITH 1/2 POST SPACING



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INTENDED USE

Midwest Guardrail System (MGS) with 1/2 post spacing should be used in locations where a maximum dynamic deflection of 28" [705] or less is acceptable and where a working width of 44" [1120] is provided. MGS should be anchored and terminated using a suitable guardrail end treatment that is approved with a 31" [787] top mounting height. MGS can be used with wide-flange steel posts (PWE06) or timber posts (PDE02). Guardrail sections measuring 300" [7620] long can be used in lieu of the 150" [3860] long sections. This system is TL-3 NCHRP 350 accepted, and is acceptable according to the update to NCHRP 350.

COMPONENTS

Unit Length = 150" [3810]

DESIGNATOR	COMPONENT	SYSTEM	NUMBER
FBB01	Guardrail splice bolts and nuts	a-b	8
FBB06	Guardrail post bolts and nuts	a	4
FBB07	Guardrail post bolts and nuts	b	4
FWC16a	Round washer	b	4
PDB10	MGS timber blockout	a	4
PDB11	MGS timber blockout	b	4
PDE02	Timber guardrail post	b	4
PWE06	Wide-flange guardrail post	a	4
RWM04a	W-beam rail	a-b	1
-----	16D nail, galvanized	a-b	4

ACCEPTANCE

FHWA Acceptance Letter B-133, March 1, 2005.

Acceptance according to the update to NCHRP 350 will be pursued.

REFERENCES

Polivka, K.A., Faller, R.K., Sicking, D.L., Reid, J.D., Rohde, J.R., Holloway, J.C., Bielenberg, R.W., and Kuipers, B.D., Development of the Midwest Guardrail System (MGS) for Standard and Reduced Post Spacing and in Combination with Curbs, Final Report to the Midwest State's Regional Pooled Fund Program, Transportation Research Report No. TRP-03-139-04, Project No. SPR-3(017)-Years 10, and 12-13, Project Code: RFPF-00-02, 02-01, and 03-05, Midwest Roadside Safety Facility, University of Nebraska-Lincoln, September 1, 2004.

Faller, R.K., Polivka, K.A., Kuipers, B.D., Bielenberg, B.W., Reid, J.D., Rohde, J.R., and Sicking, D.L., *Midwest Guardrail System for Standard and Special Applications*, Paper No. 04-4778, Transportation Research Record No. 1890, Transportation Research Board, National Research Council Washington, D.C., January 2004, pp. 19-33.

Sicking, D.L., Reid, J.D. and Rohde, J.R., *Development of the Guardrail System*, Transportation Research Record No. 1797, Transportation Research Board, National Research Council, Washington, D.C., November 2002, pp. 44-52.

Polivka, K.A., Faller, R.K., Sicking, D.L., Rohde, J.R., Bielenberg, R.W., and Reid, J.D., *Performance Evaluation of the Midwest Guardrail System - Update to NCHRP 350 Test No. 3-11 (2214MG-1)*, Final Report to the National Cooperative Highway Research Program (NCHRP), MwRSF Research Report No. TRP-03-170-06, Midwest Roadside Safety Facility, Lincoln, Nebraska, October 10, 2006.

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Polivka, K.A., Faller, R.K., Sicking, D.L., Rohde, J.R., Bielenberg, R.W., and Reid, J.D., *Performance Evaluation of the Midwest Guardrail System - Update to NCHRP 350 Test No. 3-11 With 28" CG Height (2214MG-2)*, Final Report to the National Cooperative Highway Research Program (NCHRP), MwRSF Research Report No. TRP-03-171-06, Midwest Roadside Safety Facility, Lincoln, Nebraska, October 11, 2006.

Polivka, K.A., Faller, R.K., Sicking, D.L., Rohde, J.R., Bielenberg, R.W., and Reid, J.D., *Performance Evaluation of the Midwest Guardrail System - Update to NCHRP 350 Test No. 3-10 (2214MG-3)*, Final Report to the National Cooperative Highway Research Program (NCHRP), MwRSF Research Report No. TRP-03-171-06, Midwest Roadside Safety Facility, Lincoln, Nebraska, October 11, 2006.

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