

## INTENDED USE

Midwest Guardrail System (MGS) for use with a 6"[152] tall, AASHTO Type B curb should be used in locations where a maximum dynamic deflection of 40" [1024] or less is acceptable and where a working width of 57" [1453] is provided. The maximum distance that the midpoint of the front face of the curb can be placed in front of the front face of the guardrail is 6"[152]. In addition, the back face of the curb can be positioned such that it is adjacent to the front face of the guardrail post. 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 (PWEO6) or timber posts (PDEO2). 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 | $a$ | 2 |
| FBB07 | Guardrail post bolts and nuts | $b$ | 2 |
| FWC16a | Round washer | $b$ | 2 |
| PDB10 | MGS timber blockout | $a$ | 2 |
| PDB11 | MGS timber blockout | $b$ | 2 |
| PDE02 | Timber guardrail post | $b$ | 2 |
| PWE06 | Wide-flange guardrail post | $a$ | 2 |
| RWM04a | W-beam Rail | $a-b$ | 1 |
| ----- | $16 D$ nail, galvanized | $a-b$ | 2 |

## ACCPETANCE

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: RPFP-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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## REFERENCES

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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