

NESTED MGS W-BEAM TO THRIE BEAM TRANSITION WITH CURB



STG04a-b

SHEET NO.

DATE:

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12/5/2016

INTENDED USE

Nested Midwest Guardrail System (MGS) W-beam to Thrie Beam Transition with Curb is intended to be used when the MGS is placed adjacent to a stiffened thrie beam approach guardrail transition to a stiff bridge rail with a 4" [102] curb. The Nested MGS W-beam to Thrie Beam Transition with Curb without the optional post upstream of the Asymmetrical W-beam to Thrie Beam Transition (RWT02) should be used in locations where a maximum dynamic deflection of 32.5" [826] or less is acceptable and where a working width of 40.8" [1,306] is provided. Nested MGS W-beam to Thrie Beam Transition with Curb with the optional post upstream of the Asymmetrical W-beam to Thrie Beam Transition (RWT02) may be used in locations where safety benefits of reduced vehicle pocketing and snag and system dynamic deflections of 27" [686] or less is desired. The Nested MGS W-beam to Thrie Beam Transition with Curb may be used with or without soil backfill and should be installed with a minimum of 24" [610] of level or gently-sloped fill placed behind the posts.

The Nested MGS W-beam to Thrie Beam Transition with Curb should be used with the following guidelines:

1. A minimum barrier length installed upstream of the nested W-beam (RWM04a) should be the total system length of an acceptable Test Level (TL-3) guardrail end terminal. The guardrail end terminal's interior end (stroke length) should not intrude into the nested W-beam (RWM04a).
2. A minimum barrier length of 412.5" [10,478] should be installed beyond the upstream end of the nested W-beam (RWM04a), which includes standard MGS, a crashworthy guardrail end terminal, and an acceptable anchorage system.
3. For flared guardrail applications, a minimum barrier length of 150" [3810] should be used between the upstream end of the nested W-beam (RWM04a) and the start of the flared section (i.e., bend between flare and tangent sections).

The Nested MGS W-beam to Thrie Beam Transition with Curb has been crash tested under TL-3 conditions of the Manual for Assessing Safety Hardware (MASH) and deemed crash-worthy according to the MASH safety performance criteria.

COMPONENTS

Unit Length=325 13/16" [8275]

DESIGNATOR	COMPONENT	QUANTITY	SYSTEM
----	Stiffened Thrie Beam Bridge Rail System	1	a-b
RWM04a	4-Space W-Beam Guardrail	2	a-b
PDB18	6x12x19" [152x305x483] SYP Blockout	6	a
RTM10a	12'-6" [3810] Thrie Beam, Quarter Post Spacing	2	a-b
RTM09a	6'-3" [1905] Thrie Beam, Quarter Post Spacing	1	a-b
PWE06	W6x8.5 72" [1829] Posts	9	a
PDB10a	6x12x14.25" [152x305x362] SYP Blockout	3	a
RWT02	Asymmetrical W to Thrie Beam Transition	1	a-b
FBB06	14" [356] Guardrail Bolt and Recessed Nut	14	a
FBB07	21" [356] Guardrail Bolt and Recessed Nut	14	b
----	16D Double Headed Nail	4	a-b
FBB01	1.5" [38] Guardrail Bolt and Recessed Nut	40	a-b
PDB11	6x12x14.5" [152x305x368] SYP Blockout	3	b
PDB21	6x12x19" [152x305x483] SYP Blockout	6	b
PDE02	6x8" [152x203] 72" [1829] Wood Post	9	b

ELIGIBILITY

FHWA eligibility will be pursued.

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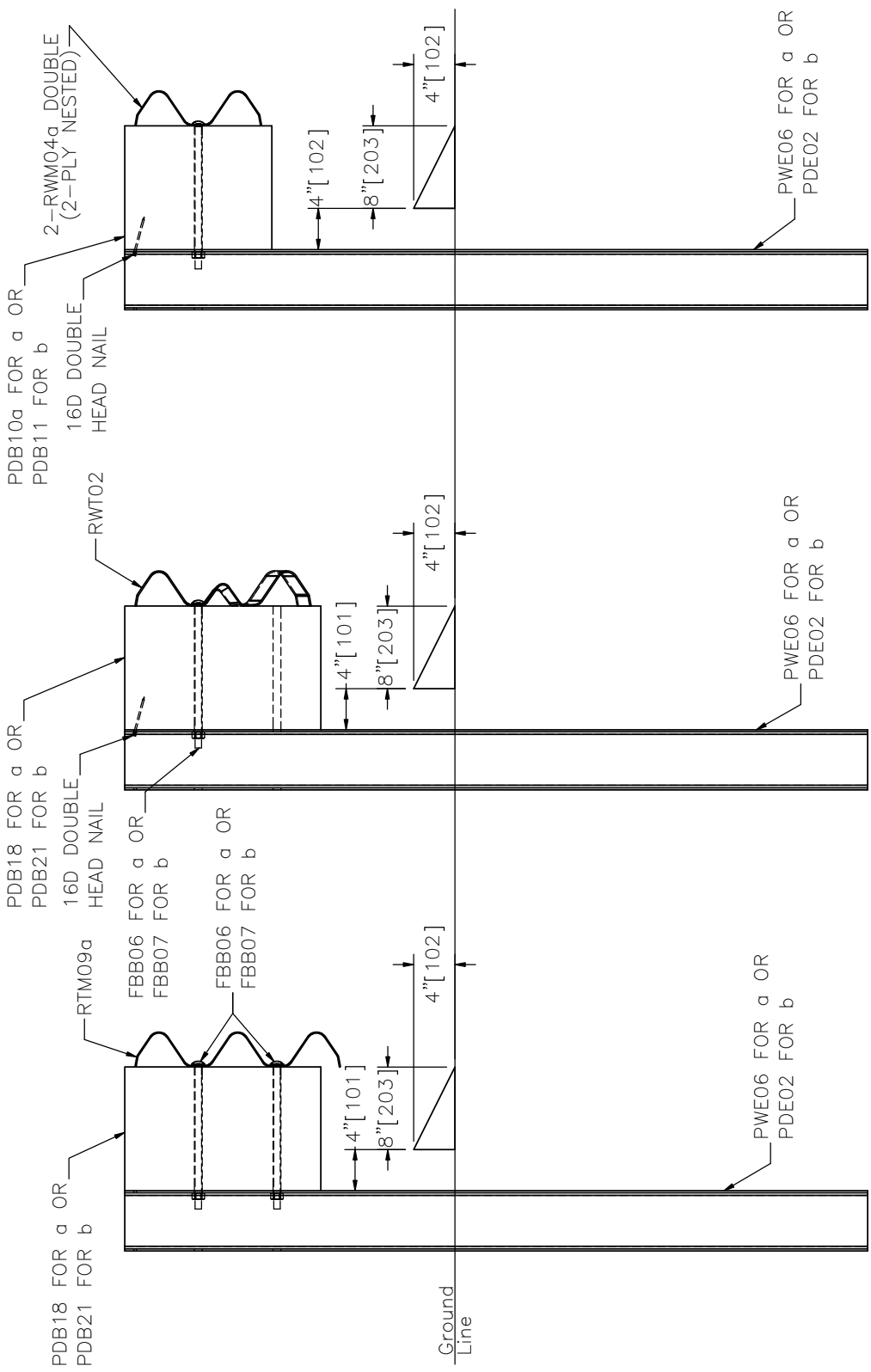
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REFERENCES

Winkelbauer, B.J., Putjenter, J.G., Rosenbaugh, S.K., Lechtenberg, K.A., Bielenberg, R.W., Faller, R.K., and Reid, J.D., *Dynamic Evaluation of MGS Stiffness Transition with Curb*, Final Report to Midwest States Pooled Fund, Transportation Research Report No. TRP-03-291-14, Project No. TPF-5(193) Supplement #58 and 63, Midwest Roadside Safety Facility, University of Nebraska-Lincoln, Lincoln, NE, June 30, 2014.

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