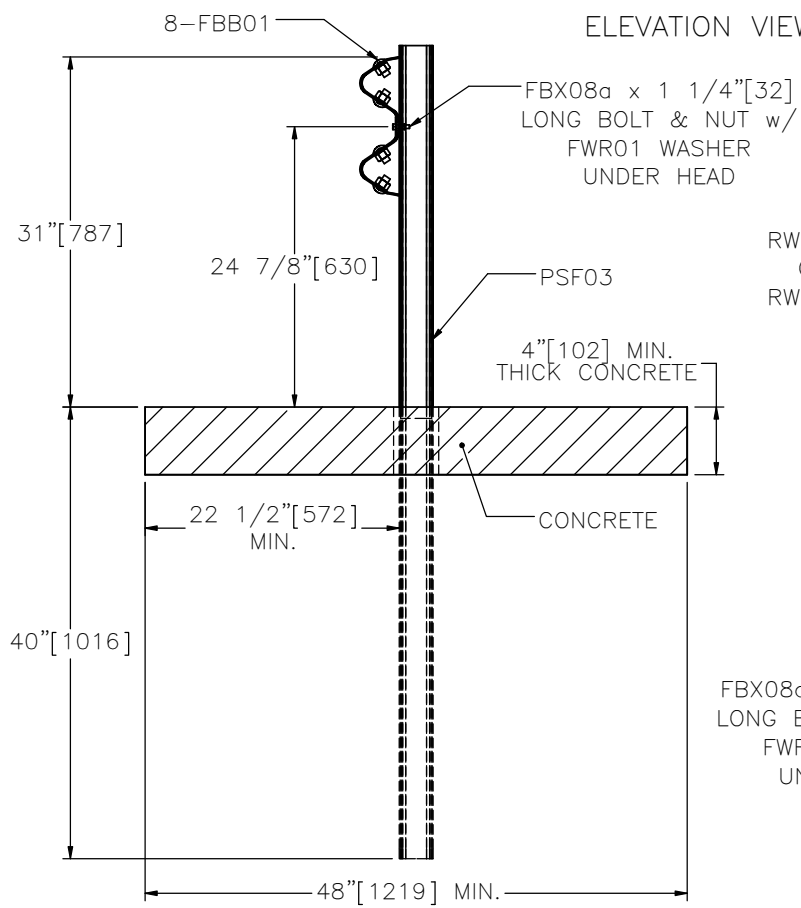
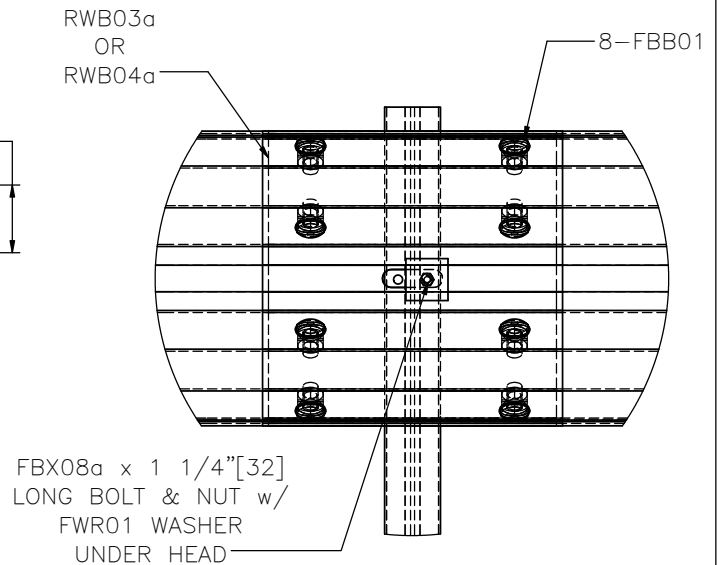


ELEVATION VIEW



SECTION A-A



DETAIL B

WEAK-POST W-BEAM GUARDRAIL IN CONCRETE MOW STRIP



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INTENDED USE

The weak-post W-beam guardrail in concrete mow strip is a non-proprietary system and should be used in locations where a maximum dynamic deflection of 42.3" [1074] or less is acceptable and where a working width of 47.3" [1201] is provided. The concrete mow strip should have a minimum width of 48" [1219], a minimum thickness of 4" [102], and a minimum compressive strength of 4,000 psi [28 MPa]. The weak post and standoff (PSF03) should be installed in either 4" [102] square leave-outs or 4" [102] diameter cored holes placed along the center of the concrete mow strip surface. Reinforcement of the concrete mow strip is recommended to prevent cracking and deterioration. The weak-post W-beam guardrail in concrete mow strip is compatible with the MGS such that an approach stiffness transition would not be required between the two barriers. A 75" [1905] spacing is recommended between the last weak post and standoff (PSF03) and first MGS guardrail post (PWE06) of the adjacent MGS installation which may be blocked (SGR20) or non-blocked (SGR41). Guardrail sections measuring 300" [7620] long can be used in lieu of the 150" [3810] long sections. The weak-post W-beam guardrail in concrete mow strip has been crash tested under Test Level 3 (TL-3) conditions and deemed crash-worthy according to the Manual for Assessing Safety Hardware (MASH) performance criteria.

In order to prevent interference of system performance, the weak-post W-beam guardrail in concrete mow strip should not be constructed too close to the guardrail terminal or end anchorage. The following implementation guidelines should be considered in addition to the length-of-need requirements:

1. A minimum length of 12'6" [3810] of standard MGS (SGR20) between the first weak post and standoff (PSF03) and the interior end of an acceptable TL-3 guardrail end terminal.
2. A minimum barrier length of 50' [15240] before the first weak post and standoff (PSF03), which includes standard MGS (SGR20) and a crashworthy guardrail end terminal or downstream end anchorage.
3. For flared guardrail applications, a minimum length of 25' [7620] between the first weak post and standoff (PSF03) and the start of the flared section (i.e. bend between flared and tangent sections).

COMPONENTS

Unit Length = 150" [3810]

DESIGNATOR	COMPONENTS	NUMBER
FBB01	Guardrail splice bolt and nut	8
FBX08a	Guardrail post bolt 1 1/4" [32] long and nut	4
FWR01	Square guardrail washer	4
PSF03	Weak post and standoff	4
RWB03a	W-beam back-up plate	4
Or RWB04a	W-beam back-up plate	4
RWM04a	W-beam rail	1
---	Concrete mow strip	-

WEAK-POST W-BEAM GUARDRAIL IN CONCRETE MOW STRIP



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ELIGIBILITY

FHWA eligibility will be pursued.

REFERENCES

Rosenbaugh, S.K., Faller, R.K., Lechtenberg, K.A., and Holloway, J.C., *Development and Evaluation of Weak-Post W-Beam Guardrail in Mow Strips*, Final Report to Midwest States Pooled Fund Program and Mid-America Transportation Center, Transportation Research Report No. TRP-03-322-15, Project No. TPF-5(193) Supplement #57, Midwest Roadside Safety Facility, University of Nebraska-Lincoln, October 1, 2015.

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