

**SUPERSEDED BY EB 21-057
EFFECTIVE 11/24/21**



*New York State
Department of
Transportation*
**ENGINEERING
INSTRUCTION**

EI
96-032

Title: **TYPE "A" SIGN POSTS**

Distribution:

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Approved:



P. J. Clark, Director, Design Division

6/10/96
Date

A number of flanged channel Type "A" Sign Posts manufactured by Marion Steel have recently failed on Department projects. These sign posts have been splitting down the middle, and sometimes the base posts have been damaged too. The cause of these premature failures has been traced to the spacer width between the base posts and sign posts, the procedure followed to install the splice bolts, and excessive torque applied to the splice bolts during installation. This combination caused distortion of the channel posts, resulting in cracking along the row of holes in the web. Complete failure of the post under wind loads often follows.

The remedy proposed by the manufacturer is to install the splice bolts in the opposite direction shown in the Materials Details, torque the nuts and spacers to a maximum of 20 ft-lbs (27 N•m), and use washers to supplement the threaded spacers on the 3 and 4#/ft. posts (4.46 and 5.95 kg/m posts). The attached shelf note provides the corrected installation details.

These posts are included in various pay items under \$645. The current Materials Details for Marion Steel Type A Sign Posts are provided in the following sheets issued by EB 95-046:

MD-MRB200A (6/15/95)	MD-MRB298M (6/15/95)
MD-MRB250A (6/15/95)	MD-MRB372M (6/15/95)
MD-MRB275A (6/15/95)	MD-MRB409M (6/15/95)
MD-MRB300A (6/15/95)	MD-MRB446M (6/15/95)
MD-MRB400A (6/15/95)	MD-MRB595M (6/15/95)

These Materials Details will be revised and reissued in the near future. In the meantime, the attached shelf note shall be used to modify the Materials Details. This shelf note will be inserted in all contracts beginning with the letting of August 15, 1996.

This same shelf note shall also be applicable to all contracts let before that date. The revised detail shall be used on all posts not yet installed. Marion Steel has agreed to supply the spacers and extra washers at no additional cost. Therefore, this change is to be made at no additional cost to the State.

In the near future, the manufacturer will supply single bar spacers instead of two separate square spacers for each post. These bar spacers will be color coded for the appropriate post weight: gold for the 3 and 4#/ft. posts (4.46 and 5.95 kg/m posts), and silver for the lighter posts. In addition, the splice bolts supplied by the manufacturer will be color coded red and have a proprietary head marking. This change shall be implemented on on-going contracts as the parts become available, following the manufacturer's installation instructions, and also at no additional cost to the State. This change will also be included on the forthcoming revised Materials Details.

A field check, by Construction staff, shall be conducted of all Marion Steel Type "A" Sign Posts that have already been installed on projects that have not yet been accepted. If any cracks are visible in the web of the sign posts near the bolts, the contractor shall be directed to replace those posts using the procedure denoted in the attached shelf note. If cracks are visible in the base posts, they shall also be replaced. This repair, if necessary, shall be at no additional cost to the State. Any costs associated with these corrections are to be worked out between the contractor and the manufacturer/supplier/installer. If visible cracks have not appeared prior to contract acceptance, no corrective action will be required.

Please contact Jim Bryden of the Construction Division (518) 455-1834, or Richard Stempel of the Design Quality Assurance Bureau (518) 457-5440 if you have any questions.

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TYPE "A" SIGN POSTS

The Marion Steel flanged channel post lap splice installation detail for Type "A" Sign Posts shall be modified as required herein. These details are shown on the following Materials Details sheets, dated 6/15/95 and issued by EB 95-046:

MD-MRB200A, MD-MRB250A, MD-MRB275A, MD-MRB300A, MD-MRB400A, MD-MRB298M, MD-MRB372M, MD-MRB409M, MD-MRB446M, MD-MRB595M,

- 1) The bolts shall be inserted through the upper first and fifth holes in the base post, with the flat washer and bolt head on the concave side of the base post. {The top of the base post has the first hole 1" (25 mm) from the end.}
- 2) If 3#/ft or 4#/ft posts (4.46 kg/m or 5.95 kg/m posts) are being used, two 5/16 inch (8 mm) flat washers shall be placed on each protruding bolt shank. Then one threaded square spacer shall be placed on each bolt shank against the washers, and torqued to a maximum of approximately 20 ft-lbs (27 N•m). The washers are not required on lighter posts, but the spacers shall be torqued the same.
- 3) After the sign post is placed over the protruding bolt shanks, the lockwasher and nut shall be installed on the convex side of the sign post and also torqued approximately 20 ft-lbs (27 N•m). If the bottom of the sign post is less than 3/4 inch (19 mm) from the edge of the lowest bolt hole, the second and sixth holes of the post shall be used instead of the first and fifth holes.
- 4) Marion Steel will soon supply color coded bar spacers as an alternative for the individual square spacers and additional washers required by this note. Gold colored bar spacers will be used with the 3 and 4#/ft. posts (4.46 and 5.95 kg/m posts), and the silver colored bar spacers will be used with the lighter posts. These bar spacers will be an acceptable alternate to the individual threaded spacers as soon as they become available from the manufacturer. Installation shall be according to manufacturer's written instructions.

The corrected installation details are shown below.

