

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-721-5

CODE: (SP)

DATE: 07/13/2016

SUBJECT: Ground Mounted Sign Supports

Section 721, Materials for Signs, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-721.02--Ferrous Materials.

907-721.02.2--Structural Steel for Sign Supports.

907-721.02.2.1--Ground Mounted Sign Supports. Delete the third and fourth indented paragraph of Subsection 721.02.2.1 on page 746, add the following.

Standard round posts shall be welded and seamless steel pipe for posts per ASTM A 53, Type E or S, Grade B, or steel structural tubing per ASTM A 501.

U-Section and Square Tube posts for supplementary directional signs per Subsection 907-721.02.3 "Steel Posts for Small and Medium Supplementary Directional Signs" modified as shown on the plans.

Delete Subsection 721.02.3 on pages 746 and 747, and substitute the following.

907-721.02.3--Steel Posts for Small and Medium Supplementary Directional Signs. Steel posts for small size signs shall be U-section Posts. Steel posts for medium size signs shall be Square Tube posts.

The U-section posts, also referred to as "bendaway" posts, are normally U-section channels of such size and design that when hit by a moving vehicle will easily bend away from the vehicle without seriously damaging it. U-section posts shall be fabricated to acceptable shape and design to provide the Moment of Inertia and Section Modulus for the requirements of the designated post size shown on the plan details. The post shall meet the requirements of ASTM A 499, Grade 60, or a comparable new billet steel meeting the requirements of ASTM A 572, Grade 60.

Square tube posts will not easily bend away when hit by a moving vehicle. Unless otherwise noted on plan details, square tube posts will require a "breakaway" feature to be incorporated with the post. The material and design of the breakaway feature shall be shown by the plan details. Square tube posts shall be fabricated from standard beam shapes of the size, shape, and weight shown on the plans. The material shall conform to the requirements of ASTM A 53, Grade B, Schedule 40 or better with no pressure test required.

All materials furnished for use shall be new, unless otherwise specified by plan details or provisions of the contract.

907-721.02.3.1--Material. U-section posts shall be of high carbon rail steel ASTM A 499.

Standard square tube posts shall be of high carbon rail steel ASTM A1011, Grade 50 steel with average minimum yield strength after cold forming of 60,000 psi. Breakaway features constructed of steel shall have all elements galvanized, unless otherwise provided by the plan details.

907-721.02.3.2--Workmanship. All posts shall be straight with no bending, warping, splits, or breaks.

Square tube posts shall meet AASHTO M111. Square tube posts shall be corner welded, scarfed after welding, then zinc coated after scarfing. All surfaces of the square tube posts must be coated with a chromate conversion coating and a clear organic polymer topcoat. Both the interior and exterior surfaces of the square tube posts must be galvanized.

907-721.02.3.3--Cross Section. U-section posts shall be as shown on the plans. The bends in the cross-section of the post must be sharp and well defined, and the radius of the bend shall not be greater than $1\frac{3}{32}$ of an inch.

Square tube posts shall have a 2½-inch outer sleeve. When required, the inner sleeve shall be 2 $\frac{3}{16}$ -inch. The material shall be 10 gauge steel.

907-721.02.3.4--Weight. The weight of the U-section post per linear foot without ground plates shall be 2.0 pounds for 7-foot to 9-foot lengths, and 3.0 pounds for 11-foot to 14-foot lengths with a tolerance of three and one-half percent (3½%), or as shown on the plans.

The weight of the square tube posts per linear foot without ground plates or inner sleeve shall be a minimum of 4.0 pounds per foot for 10 gauge posts, or as shown on the plans. The weight of the inner sleeve for square tube posts per linear foot without ground plates shall be a minimum of 3.4 pounds per foot for 10 gauge posts, or as shown on the plans.

907-721.02.3.5--Punching. U-Section posts shall be punched on the center line of the web while hot. Posts of 7-foot to 14-foot lengths shall have $\frac{3}{8}$ -inch holes one inch apart on centers starting one inch from the top of the posts and extending the full length of the post.

Square posts shall be punched on the center line of each of the four sides while hot. Square Tube Posts of 8-foot to 20-foot lengths shall have $\frac{7}{16}$ -inch holes spaced one inch apart on centers starting one inch from the top of the posts and extending the full length of the post on each of the four sides of the post.

907-721.02.3.6--Blank.

907-721.02.3.7--Pointing. The posts shall not be pointed.

907-721.02.3.8--Caps. All standard post shapes whose design will have a tendency to collect water shall be provided with an approved type of tight fitting post cap fabricated of material compatible with that of the post.