

---

# DMS-4400

## Flexible Delineator and Object Marker Posts (Embedded and Surface-Mount Types)



*Effective Date: April 2017*

---

### 1. DESCRIPTION

This Specification governs the material, composition, quality, sampling, and testing of flexible delineator and object marker posts, both embedded and surface-mount types, and describes the qualification procedures and the Material Producer List (MPL).

---

### 2. UNITS OF MEASUREMENTS

The values given in parentheses (if provided) are not standard and may not be exact mathematical conversions. Use each system of units separately. Combining values from the two systems may result in nonconformance with the standard.

---

### 3. MATERIAL PRODUCER LIST

The Materials and Pavements Section of the Construction Division (CST/M&P) maintains the Material Producer List (MPL) of all materials conforming to the requirements of this Specification. Materials appearing on the MPL, entitled "[Flexible Delineator and Object Marker Posts](#)," require no further sampling and testing before use, unless deemed necessary by the Project Engineer or CST/M&P.

---

### 4. BIDDERS' AND SUPPLIERS' REQUIREMENTS

The Department will only purchase or allow on projects those products listed by producer and product code or designation shown on the MPL.

Use of pre-qualified product does not relieve the Contractor of the responsibility to provide product that meets this Specification. The Department may inspect or test material at any time and reject any material that does not meet the specifications.

---

### 5. PRE-QUALIFICATION PROCEDURE

5.1. **Pre-Qualification Request.** Submit a request for evaluation under DMS-4400 to [DMS\\_Prequal@txdot.gov](mailto:DMS_Prequal@txdot.gov).

Include the following information in the request:

- company name;
- physical and mailing addresses;
- contact person, phone number, and email address;
- identification as one of the following types:
  - embedded—post designed to be either driven into the ground or affixed to a foundation set in concrete, or
  - surface-mount—post designed to be attached to a base that is mounted to the roadway surface; and
- a test report that includes a certification by a licensed professional engineer that the posts have been impact tested, with the following requirements.

- Test a minimum of eight posts.
- The posts must survive 10 hits (hit from the same direction each time) by a passenger car, at a speed between 50 and 55 mph. (“Survive” is defined as remaining in place and not having a list in any direction from vertical of more than 20°.) For this test, install and orient the posts as recommended by the manufacturer for typical roadway applications
- In addition, after 5 hits, the delineator or object marker must be certified to meet minimum reflectivity requirements specified in accordance with DMS-8600.
- Submit photographs showing both the posts impacted and the impact vehicle after 5 and 10 hits.
- National Transportation Product Evaluation Program test results will also be accepted.

The Department may require a demonstration of the manual installation of a post 6-1/2 ft. in length, using the recommended manual driver. The supplier or its representative will perform the demonstration at a location specified by the Department. Any problems noted during installation must be addressed before pre-qualified status is granted.

- 5.2. **Pre-Qualification Sample.** Submit a minimum of 10 flexible posts, including anchors and special mounting hardware for ground or surface mount, to the Texas Department of Transportation, CST/M&P (CP51), 9500 North Lake Creek Parkway, Austin, TX 78717.

Submit all materials for pre-qualification at no cost to the Department.

- 5.3. **Evaluation.** CST/M&P will notify prospective bidders and suppliers after completion of material evaluation.

- 5.3.1. **Qualification.** If approved for Department use, CST/M&P will add the material to the MPL.

Report changes in the composition or in the manufacturing process of any material to CST/M&P. Significant changes reported by the producer, as determined by the Director of CST/M&P, may require a re-evaluation of performance. The Department may conduct additional tests to identify changes in the material. Detected changes in composition or in the manufacturing process not reported by the manufacturer may be cause for removal of that material from the MPL.

- 5.3.2. **Failure.** Producers not qualified under this Specification may not furnish materials for use on Department projects.

Producers failing to qualify may submit a request for re-evaluation after 12 months have elapsed from the date of the original request. CST/M&P may modify this time limit at its discretion. In the request for re-evaluation, document the cause of the issue and corrective action taken.

The Department normally bears the costs of sampling and testing; however, the producer will bear the costs associated with materials failing to conform to the requirements of this Specification. The Director of CST/M&P will assess this cost at the time of testing, and amounts due will be billed to the producer.

- 5.4. **Periodic Evaluation.** The Department reserves the right to conduct random sampling and testing of pre-qualified materials to verify performance and Specification compliance and to perform random audits of documentation. Department representatives may sample material from the manufacturing plant, the project site, or the warehouse.

Failure of materials to comply with the requirements of this Specification as a result of periodic evaluation may be cause for removal of those materials from the MPL. In case of variance, the Department’s tests will govern.

- 5.5. **Disqualification.** Causes for disqualification and removal from the MPL may include, but are not limited to:

- falsification of documentation,
- producer fails to report any change in material composition or manufacturing process to CST/M&P,

- material fails to meet the requirements of this Specification as a result of periodic evaluation, or
- producer has unpaid charges for failing samples.

CST/M&P will remove disqualified producers from the MPL and will not allow submission of material for re-qualification for up to **12 months**, at the discretion of the Department.

- 5.6. **Re-Qualification.** Once the disqualification period established by CST/M&P has elapsed, producers disqualified and removed from the MPL may begin the re-qualification process by submitting a request in accordance with Section 5.1, including additional documentation identifying the cause of the problem and corrective action taken. The re-qualification process will then follow all subsequent Sections of Article 5.

The Department normally bears the costs of sampling and testing; however, the disqualified producer will bear the costs associated with re-qualification. The Director of CST/M&P will assess this cost at the time of re-evaluation, and amounts due will be billed to the producer.

---

## 6. MATERIAL REQUIREMENTS

- 6.1. **General Requirements.** All posts must meet all requirements specified except where specific requirements are shown for a specific type.

Manufacture posts from any flexible material of a high-impact resistance quality and resistant to ultraviolet light, ozone, and hydrocarbons

- 6.2. **Design and Test Requirements.** The top of hollow or tubular posts must be permanently capped to prevent excessive amounts of rain or debris from entering. CST/M&P may allow small holes in the cap when justified by the manufacturer.

The surface texture to which the delineator is to be attached must be clean, smooth, and suitable for the adhesion of reflective sheeting without preparation.

The length of the post must be as specified on the plans or on the purchase order.

The infrared and x-ray spectra of material from posts furnished must match the spectra for the pre-qualified posts in accordance with Tex-888-B and Tex-896-B.

The specific gravity of material from posts furnished must not vary more than 0.12 from the specific gravity of the pre-qualified posts **when measured in accordance with Tex-891-B.**

The posts must show no significant change in color, flexibility, or integrity after 1,000-hr. exposure in accordance with ASTM G155 using Exposure Cycle 1 with a quartz inner filter glass and Type "S" Borosilicate outer filter glass.

Unless otherwise specified, the color of the posts must be opaque white meeting all Federal Highway Administration color requirements.

The posts must show no significant change in color, flexibility, or integrity after coating with herbicides, currently used by the Department, for 48 hr. then rinsed.

- 6.3. **Surface-Mount Post Base Requirements.** In addition to the above requirements, the base of surface-mount posts must meet the following requirements.

Manufacture the base from a rigid, high-impact resistant material resistant to ultraviolet light, ozone, and hydrocarbons.

CST/M&P must review and approve the dimensions of the base.

Use adhesives or attachment method recommended by the manufacturer to adhere the base to asphalt and concrete flat surfaces.

Allow for replacement of the post in 4 min. or less.

---

**7. ARCHIVED VERSIONS**

Archived versions are available.