

WORK ZONE PAVEMENT MARKINGS

GENERAL

The Contractor shall be responsible for maintaining work zone and existing pavement markings on all roadways open to traffic within the project limits unless otherwise stated in the plans. Color, patterns, and dimensions shall be in conformance with the Texas Manual on Uniform Traffic Control Devices (TMUTCD). Additional supplemental pavement marking details may be found in the plans or specifications.

Work zone pavement markings shall consist of guidemarks, short term markings and/or standard pavement markings. Unless otherwise shown in the plans, materials used for work zone pavement markings shall be thermoplastic, raised pavement markers, prefabricated pavement marking material, temporary flexible-reflective roadway marker tabs or other materials approved by the Engineer. Thermoplastic shall not be used for removable markings.

All roadways to be opened to traffic shall be marked with short term markings or standard markings as shown in the plans, at the end of each day's operation. Unless otherwise shown in the plans or approved in writing by the Engineer, all concrete surfaces shall have standard markings in place prior to opening to traffic.

Standard pavement markings shall be installed in accordance with the Texas Manual on Uniform Traffic Control Devices (TMUTCD) and as shown on the plans. When short term markings are required on the plans, short term markings shall conform with the TMUTCD, the plans and details as shown on the Standard WZSTPM.

All asphaltic surfaces which are to be opened to traffic shall be marked with guidemarks immediately following placement and final rolling of any course. Guidemarks shall consist of a single temporary flexible-reflective roadway marker tab or a single temporary construction raised pavement marker at 40 foot spacing.

Guidemarks shall be placed in proper alignment with the final location of future pavement markings. Any guidemarks not in alignment with pavement markings shall be removed by the Contractor at the Contractor's expense. Guidemarks shall not be used to simulate edgelines.

When inclement weather prohibits the application of short term markings or standard markings as called for on the plans, upon approval of the Engineer, guidemarks may be considered as temporary short term markings for asphaltic surfaces. The placement of pavement markings as shown on the plans may be delayed until such time that weather permits application of pavement markings.

When standard pavement markings are not in place and the roadway is opened to traffic, DO NOT PASS signs shall be erected to mark the beginning of the sections where passing is prohibited and PASS WITH CARE signs shall be erected to mark the beginning of the sections where passing is permitted.

RAISED PAVEMENT MARKERS

Raised pavement markers are to be placed according to the patterns on BC(8). Raised pavement markers used as standard pavement markings or to supplement removable markings shall meet the requirements of Item "RAISED PAVEMENT MARKERS".

Unless otherwise shown on the plans, raised pavement markers will not be allowed for words, symbols, and shapes, diagonal or transverse lines.

PREFABRICATED PAVEMENT MARKINGS

Removable prefabricated pavement markings shall be a material of manufacture and product code or designation shown on the list of approved materials covered by the Department Materials Specification D-9-8241.

Non-removable prefabricated pavement markings (foil back) shall be a material of manufacture and product code or designation shown on the list of approved materials covered by the Specification TxDOT 550-74-01.

The lists of approved prefabricated work zone pavement marking materials may be obtained from TxDOT General Services Division.

MAINTENANCE

The Contractor will be responsible for maintaining work zone pavement markings within the project limits. Work Zone Pavement Markings shall be inspected in accordance with the frequency and reporting requirements of work zone traffic control device inspections. The markings should provide a visible reference for a minimum distance of 300 feet during normal daylight hours and 165 feet when illuminated by automobile low-beam headlights at night, unless sight distance is restricted by roadway geometrics. Markings failing to meet this criteria shall be replaced as required by the Engineer.

REMOVAL OF PAVEMENT MARKINGS

Removal of pavement markings includes centerline, channelizing lines, lane lines, edge lines, words, arrows, symbols and raised pavement markers.

Pavement markings that are no longer applicable and which may create confusion or direct a motorist toward or into the closed portion of the roadway, shall be removed or obliterated before the roadway is open to traffic. The above shall not apply to detours of a short duration of a few hours, where flaggers and/or sufficient channelizing devices are used in lieu of markings to outline the detour route and the detour is not to be maintained during nighttime.

Pavement markings shall be removed to the fullest extent possible, so as not to leave a discernible marking, by any method that does not materially damage the surface or texture of the pavement. The removal of pavement markings may require resurfacing or seal coating portions of the roadway, normally full lane widths. Subject to the approval of the Engineer, any method that proves to be successful on a particular type pavement may be used. Blast cleaning may be used but will not be required unless specifically shown in the plans. Over-painting of the markings SHALL NOT BE permitted. Removal of raised pavement markers shall be as directed by the Engineer.

Removal of existing pavement markings and markers will be paid for directly in accordance with the Item "ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS" unless otherwise stated elsewhere in the plans.

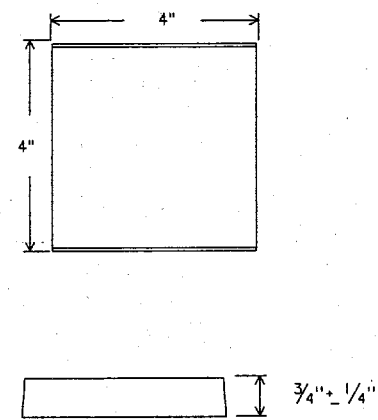
SPECIFICATION REFERENCE TABLE

MATERIALS AND TESTS DIVISION SPECIFICATIONS	
JIGGLE BAR TILE	D-9-4100
PAVEMENT MARKERS (REFLECTORIZED)	D-9-4200
TRAFFIC BUTTONS	D-9-4300
EPOXY	D-9-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	D-9-6130
PREFABRICATED PAVEMENT MARKINGS - REMOVABLE	D-9-8241
TEMPORARY FLEXIBLE-REFLECTIVE ROADWAY MARKER TABS	D-9-8242

PREQUALIFICATION PROCEDURES MAY BE OBTAINED BY WRITING:

GENERAL SERVICES DIVISION
TEXAS DEPARTMENT OF TRANSPORTATION (TxDOT)
125 EAST 11th STREET
AUSTIN, TX 78701-2483

Temporary Construction Raised Pavement Markers used as Guidemarks:



The above temporary construction raised pavement marker is shown for illustration purposes only and not intended to specify any particular product.

Temporary construction raised pavement markers used as guidemarks shall be of design and manufacture approved by the Engineer.

All temporary construction raised pavement markers provided on a project shall be of the same manufacturer.

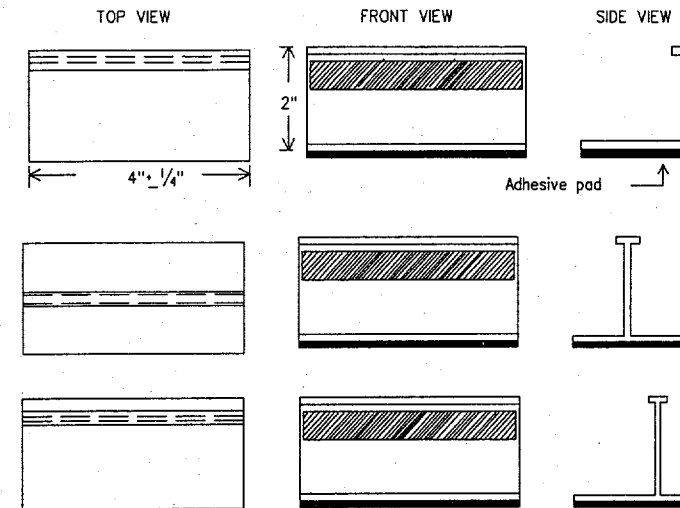
Adhesive for guidemarks shall be bituminous material hot applied or butyl rubber pad for all surfaces, or thermoplastic for concrete surfaces.

Guidemarks shall be designated as:

- YELLOW - (two amber reflective surfaces with yellow body).
- WHITE - (one silver reflective surface with white body).

Dimensions indicated on this sheet are typical and approximate. Variations in size and height may occur between markers or devices made by manufacturers, by as much as 1/4 inch, unless otherwise noted.

Temporary Flexible-Reflective Roadway Marker Tabs



Height of sheeting will be determined by notes under MAINTENANCE. (Usually more than 1/4 inch and less than 1 inch.)

STAPLES OR NAILS SHALL NOT BE USED TO SECURE TEMPORARY FLEXIBLE-REFLECTIVE ROADWAY MARKERS TABS TO THE PAVEMENT SURFACE

Temporary flexible-reflective roadway marker tabs used as guidemarks shall meet the requirements of Departmental Material Specification D-9-8242.

Tabs detailed on this sheet are to be inspected and accepted by the Engineer or designated representative. Sampling and testing is not normally required, however at the option of the Engineer, either "A" or "B" below may be imposed to assure quality before placement on the roadway.

- Select five (5) or more tabs at random from each lot or shipment and submit to the Construction Division, Materials and Tests section to determine specification compliance.
- Select five (5) tabs and submit to the following test. Affix five (5) tabs at 24 inch intervals on an asphaltic pavement in a straight line. Using a medium size passenger vehicle or pickup, run over the markers with front and rear wheels at a speed of 35 to 40 miles per hour, four times in each direction. No more than one (1) out of five reflective surfaces shall be lost or displaced as a result of this test.

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

BARRICADE AND CONSTRUCTION STANDARDS

PAVEMENT MARKINGS

BC(7)-98

REVISED	DATE	BY	REASON
2-94	1-97	2-98	

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LEVELS DISPLAYED	DATE
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