

SECTION 28 - TRAFFIC STRIPES AND PAVEMENT MARKINGS

28-1 GENERAL

This Work shall consist of furnishing and applying thermoplastic or solvent borne paint traffic stripes (traffic lines) and pavement markings, including glass beads, and furnishing and placing raised pavement markers at the locations and in accordance with the details shown on the Plans or designated by the Engineer, and as specified in these Specifications. When the plans or specifications do not indicate which material shall be applied, thermoplastic shall be applied for all traffic stripes on arterial and collector streets, thermoplastic shall be applied for all pavement markings, paint or thermoplastic may be used for residential traffic stripes.

For the purposes of these Specifications, traffic stripes (traffic lines) are defined as longitudinal centerlines and lanelines which separate traffic lanes in the same or opposing direction of travel, and longitudinal edgelines which mark the edge of the traveled way or the edge of lanes. Pavement markings are defined as transverse markings which include, but are not limited to, word and symbol markings, limit lines (stoptines), crosswalk lines, shoulder markings, parking stall markings, and railroad grade crossing markings. Pavement markers are raised pavement markers, reflectorized or non-reflectorized, of the type and color shown on the Plans and/or set forth in the Specifications.

28-2 MATERIALS

Thermoplastic material and glass beads shall conform to Section 84 of the State Standard Specifications.

Paints shall be solvent-borne, designed for traffic use and shall conform to the latest revisions of the San Joaquin Valley Unified Air Pollution District, Control Architectural Coatings Rule 4601.

Raised pavement markers shall conform to Subsections 85-1.02 ~~%Type of Markers+~~, 85-1.03 ~~%Sampling, Tolerances and Packaging+~~, 85-1.035 ~~%Storage+~~, 85-1.04 ~~%Non Reflective Pavement Markers+~~, and 85-1.05 ~~%Reflective Pavement Markers+~~, of the State Standard Specifications. Adhesive for raised pavement markers shall conform to Subsection 95-2.04 ~~%Rapid Set Epoxy Adhesive for Pavement Markers+~~, of the State Standard Specifications, for rapid set epoxy, or Subsection 95-2.05 ~~%Standard Set Epoxy Adhesive for Pavement Markers+~~, of the State Standard Specifications, for standard set epoxy, as directed by the Engineer.

28-3 REMOVAL OF EXISTING MARKINGS

Where called for on the Plans and/or Specifications existing pavement striping, symbols, legend, and markings proposed for removal shall be removed by wet sandblasting or other approved methods which will cause the least possible damage to the pavement. Dry sandblasting may be used in selected areas only with the permission of the Engineer and with approval of the air pollution control authority having jurisdiction over

the area in which the Work will be performed. Alternate methods of removal required prior approval of the Engineer.

Where their removal is called for on the Plans and /or Specifications, raised markers shall be removed by an approved method that will result in the least possible damage to the pavement. Where raised pavement markers are to remain, the Contractor shall take special care to protect existing reflective pavement markers and shall, at his expense, replace all coated markers.

All existing striping, stenciling or raised pavement markers, whether shown for removal or not, that will be in conflict with the intent of any new striping diagram, will be removed. Removal shall be at the direction of the Engineer and no additional compensation will be allowed.

28-4 PLACEMENT OF THERMOPLASTIC TRAFFIC OR SOLVENT-BORNE PAINT STRIPES AND PAVEMENT MARKINGS

Preparation of surfaces and application of thermoplastic or solvent-borne paint material shall conform to all requirements of Subsection 84-2.04 ~~%Application+~~ of the State Standard Specifications, and these Specifications. Tolerances and appearance shall conform to the requirements of Subsection 84-1.03 ~~%Tolerances and Appearance+~~ of the State Standard Specifications.

Word markings, letters, numerals, legends and symbols shall be applied utilizing suitable approved equipment together with approved stencils and templates. All markings shall be standard, and shall be identical with those used by the City of Fresno.

When no previously applied figures, markings, or traffic striping are available to serve as a guide, suitable layouts, such as ~~%cat-tracking+~~ shall be spotted in advance of the permanent application. Written approval of temporary layout shall be obtained prior to permanent application.

Where necessary, the Engineer will furnish the necessary control points for all required pavement striping and markings. Alignment and layout of the Work by the Contractor shall conform to Subsection 84-1.02 ~~%Control of Alignment and Layout+~~ of the Standard Specifications. The Contractor shall provide an experienced technician to supervise the location, alignment, layout, dimensions, and application of the pavement striping and marking.

In areas of high traffic volume, the Contractor shall schedule Work to apply traffic lines and markings in off-peak traffic hours, or on weekends.

The Contractor shall mark or otherwise delineate the traffic lanes in the new roadway or portion of roadway, or detour before opening it to traffic.

All markings and striping shall be protected from injury and damage of any kind while the material is drying. All adjacent surfaces shall be protected from disfiguration by spatter, splashes, spillage, and dripping of material.

The Contractor shall use proper and sufficient directional signs, warning devices, barricades, pedestals, lights, traffic cones, flagpersons, or such other devices to protect the Work, Workers and the public.

28-5 PLACEMENT OF RAISED PAVEMENT MARKERS

Preparation of surfaces and placement of raised pavement markers shall conform to the requirements of Subsection of 85-1.06 ~~Placement~~, of the State Standard Specifications, and these Specifications.

The Contractor shall provide an experienced technician to supervise the application of the raised pavement markers.

In areas of high traffic volume, the Contractor shall schedule Work to apply traffic markers in offpeak traffic hours, or on weekends.

28-6 MEASUREMENT

Quantities of striping and marking pavement shall be measured on a lump sum basis, and shall also include any required removal of existing pavement striping or markings.

28-7 PAYMENT

The lump sum price bid for striping and marking pavement shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals and for doing all the Work involved therein as shown on the Plans, as set forth in the Specifications and as directed by the Engineer.

This Work will also include furnishing and installing raised pavement markers where called for and removing existing markings, where called for.