

SECTION 02750 – TRAFFIC STRIPING AND PAVEMENT MARKINGS

PART 1 – GENERAL

1.1 WORK OF THIS SECTION

- A. Traffic striping and pavement markings shall conform to Section 84 Traffic Stripes and Pavement Markings of the California Department of Transportation (Caltrans) Standard Specifications, latest edition, the most current edition of Standard Specifications for Public Works Construction (SSPWC or Greenbook) Section 214 Traffic Striping, Curb and Pavement Markings, and Pavement Markers, and to these Special Provisions.
- B. Thermoplastic pavement markings shall conform to SSPWC Section 214-5.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01300 – Record Drawings and Submittals
- B. Section 01570 – Traffic Regulations

PART 2 – MATERIALS

2.1 GENERAL

- A. Manufacturer's warranties, guaranties, and instruction sheets for materials used in the work shall be submitted to the AGENCY in accordance with the standard specifications.
- B. Except where noted, all traffic striping and markings shall be rapid dry water borne paint per Caltrans Specification PTWB-01R2.
- C. All new and existing Legends, Limit Lines, Crosswalks, Arrows, and Lane Line Extensions shall be Thermoplastic, and shall conform to SSPWC Section 214-5 Thermoplastic Material for Traffic Striping and Markings.

PART 3 – EXECUTION

3.1 LAYOUT ALIGNMENT AND SPOTTING

- A. The CONTRACTOR shall replace all striping in kind, unless otherwise directed in these Specifications or as directed by the Engineer. Raised Pavement Markers shall be installed in kind.
- B. If any existing legends, limit lines, crosswalks, arrows, or lane line extensions are partially removed, marked, or otherwise damaged, the CONTRACTOR shall refresh and/or restripe the entire legend, limit line, crosswalk, arrow, or lane line extension to its original, or better, condition.

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- C. The AGENCY will provide control points to reinstall new striping and Raised Pavement Markers.
- D. The CONTRACTOR shall submit a detailed field layout of new striping according to the control points provided by the AGENCY.
- E. No detailed field layout of traffic striping shall be performed by the CONTRACTOR before establishment of the necessary control points. The CONTRACTOR shall establish all traffic striping between these points by string line or another method of providing striping that will vary less than 1/2 inch in 50 feet from the specified alignment. Straight stripes deviating more than 1/2 inch in 50 feet shall be obliterated by grinding, and the markings corrected.

3.2 APPLICATION OF PAINT

- A. The CONTRACTOR'S attention is directed to Caltrans Standard Specification Section 84 for application and application equipment for all material used for traffic striping and pavement markers.
- B. Seven days shall elapse between the application of a bituminous seal coat and the permanent traffic striping and markings. All new striping shall have two (2) coats of paint. The first coat of paint shall be done immediately upon approval of striping layout by the Engineer. The second coat shall be applied seven (7) days after the first coat is applied. The paint shall not bleed, curl or discolor when applied to bituminous surfaces. If bleeding or discoloring occurs, the unsatisfactory areas shall be given an additional 3rd coat of paint. Payment shall be initiated for the individual bid items when the second coat of paint is applied. No additional payment shall be made if a 3rd coat of paint is required due to bleeding or discoloring.
- C. All new and existing Legends, Limit Lines, Crosswalks, Arrows, and Lane Line Extensions shall be Thermoplastic, and shall conform to SSPWC Section 214-5 Thermoplastic Material for Traffic Striping and Markings.
- D. All thermoplastic pavement markings and striping shall be applied only after 7 calendar days after completing the paving portion of the project.
- E. The AGENCY shall approve the striping layout prior to installation by the CONTRACTOR. All striping and pavement markings are subject to removal and replacement, at the CONTRACTOR'S expense, to the satisfaction of the AGENCY if the layout is not approved prior to installation.

3.3 TEMPORARY PAVEMENT MARKERS (REMOVABLE TABS)

- A. CONTRACTOR shall install removable traffic tabs every 10 feet when any permanent striping is removed, destroyed or covered due to construction activities. Temporary removable traffic tabs shall be installed at locations where a stop bar or crosswalk is removed, destroyed or covered due to the construction activities. The CONTRACTOR shall maintain all tabs until permanent striping is installed and/or

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replaced. The CONTRACTOR shall remove all temporary traffic tabs, so as not to disturb or destroy the asphalt concrete or slurry seal, during the course of placing the permanent striping and legends.

- B. Temporary removable tabs shall be placed in accordance with the manufacturer's instructions. Temporary pavement markers shall be cemented to the surfacing with the adhesive recommended by the manufacturer, except epoxy adhesive shall not be used to place temporary pavement markers in areas where removal of the markers will be required.
- C. Pavement striping, legends and markers which conflict with any traffic pattern shall be removed by grinding as determined by the Engineer.
- D. Epoxy adhesives shall not be used in the placement of removable-type pavement tabs. Temporary pavement markers shall not be placed without the approval of the Engineer and approval of the CONTRACTOR's detailed layout plan.
- E. Temporary removable tabs shall be Temporary Overlay Markers (TOMs) supplied by Plexco LLC, Davidson Traffic Control Products, or Traffic Safety Supply Company, or equal.
- F. TOMs shall be installed prior to removing traffic control devices, including detours.

3.4 PREPARATION OF EXISTING SURFACES

- A. If it is determined that new striping conflicts with existing striping, the CONTRACTOR shall provide a wet grinding machine with sufficient capacity to completely remove all existing or temporary traffic striping or markings within the area as indicated by the Engineer, that conflict with the striping plan, or are contrary to the Traffic Manual, or that may be confusing to the public. The surface produced by grinding the existing or temporary traffic striping or markings on pavement shall not exceed variations from a uniform plane more than 1/8-inch in 10-feet when measured parallel to the centerline of the street or more than 1/4-inch in 10-feet when measured perpendicular to the centerline of the street. The use of any equipment that leaves ridges, indentations or other objectionable marks in the pavement shall be discontinued, and the CONTRACTOR shall furnish equipment capable of providing acceptable surface. This equipment shall meet all requirements of the air pollution district having jurisdiction. Removal of striping by high velocity water jet may be permitted when there is neither potential of the water and detritus from the high velocity water jetting to damage vehicles or private property nor to flow from the street into any storm drain or water course and when approved by the Engineer. All water from high velocity water jet striping removal shall be vacuumed from the pavement immediately after the water jetting and shall not be allowed to flow in the gutter, enter the storm drain system or to leave the pavement surface. Surface variation limitations for high velocity water jet striping removal shall be the same as for grinding.

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3.5 RAISED PAVEMENT MARKERS AND BLUE FIRE HYDRANT MARKERS

- A. Fire hydrant markers shall be placed in accordance with Oceanside Standard Drawing M-13.
- B. Types of Markers - Raised pavement markers provided under these specifications shall conform to Drawing Number A20A of the Caltrans Standard Plans, latest edition, and the Oceanside Traffic Department.
- C. Raised pavement markers shall be cemented to the pavement using adhesive of the type specified in SSPWC Section 214-7 Adhesives for Pavement Markers.
- D. Cleaning and Clearing - All roadway surfaces upon which raised pavement markers are applied shall be cleaned and cleared so as to provide a surface free of dirt, dust, and debris prior to the application of adhesive and pavement marker.
- E. New pavement markers shall not be placed until any required new traffic stripes are in place.
- F. The CONTRACTOR shall place and maintain temporary lane markers (Removable Tabs) to separate traffic lanes after new pavement has been placed until permanent striping can be placed on the pavement.
- G. The AGENCY shall approve the layout prior to installation by the CONTRACTOR. All raised pavement markers and blue fire hydrant markers are subject to removal and replacement, at the CONTRACTOR'S expense, to the satisfaction of the AGENCY, if the layout is not approved prior to installation.

****END OF SECTION****