

**SECTION 32 17 23**  
**PAVEMENT MARKINGS**

**PART 1 – GENERAL**

**1.01 SECTION INCLUDES**

- A. Traffic line paint and thermoplastic material for traffic striping and marking.
- B. Application of traffic striping and control markings.
- C. Removal of Existing Markings.

**1.02 RELATED SECTIONS**

- A. Asphalt pavement is specified in Contract Specifications Section 32 12 16, Asphalt Paving.
- B. Concrete pavement is specified in Contract Specifications Section 32 13 13, Concrete Paving.
- C. Concrete curbs, gutters, and walks are specified in Contract Specifications Section 32 16 21, Concrete Curbs, Gutters, and Walks.
- D. All other painting is specified under BART Facility Standards, Standard Specifications, Division 9, Finishes.

**1.03 MEASUREMENT AND PAYMENT**

- A. Measurement: Pavement marking will be measured for payment by the lump sum method, acceptably performed and completed.
- B. Payment: Pavement marking will be paid for at the indicated Contract lump sum price, as indicated in the Bid Schedule of the Bid Form.

**1.04 REFERENCES**

- A. State of California, Department of Transportation (Caltrans), Standard Specifications, latest edition:
  - 1. Section 84 Markings
- B. State of California, Department of Transportation (Caltrans), California Manual on Uniform Traffic Control Devices (CA MUTCD), latest edition:
  - 1. Part 3 Markings

- C. California Air Resources Board (CARB):
  - 1. Latest regulations governing permissible content of Volatile Organic Compounds (VOC) in paints

**1.05 SUBMITTALS**

- A. General: Refer to Contract Specifications Section 01 33 00, Submittal Procedures, and Contract Specifications Section 01 33 23, Shop Drawings, Product Data, and Samples, for submittal requirements and procedures.
- B. Shop Drawings: Submit drawings and diagrams, indicating stripe width of roadway divider stripes and parking stalls, configuration and dimensions of directional arrows, style and size of letters for “compact car” designation, configuration and dimensions of international handicapped symbol, and any other traffic control markings on pavement, such as “in” and “out” or “enter” and “exit” designations as indicated.
- C. Certificate of Compliance: Submit evidence or affidavit that certifies that paint to be used complies with latest CARB/VOC regulations.

**PART 2 – PRODUCTS**

**2.01 MATERIALS**

- A. Paint and Thermoplastic Material: Provide paint and thermoplastic material conforming to the requirements of Section 84 of the Caltrans Standard Specifications, with colors as indicated on Standard Drawings Sheet CS20.
  - 1. Provide glass beads where indicated on Standard Drawings Sheet CS20 conforming to the requirements of Section 84 of the Caltrans Standard Specifications.
- B. Stall Numbers: Pre-cut thermoplastic numbers, 90 mil minimum thickness. Numbers shall be yellow, 12 inches high, Helvetica Light font.

**PART 3 – EXECUTION**

**3.01 APPLICATION**

- A. Surface receiving application of paint or thermoplastic shall be prepared by methods specified in Section 84 of the Caltrans Standard Specifications.
- B. Apply no paint or thermoplastic material until pavement has cured for at least three days or for the number of days as recommended by the manufacturer, whichever is longer. Ensure that pavement has cured sufficiently to carry application equipment without damage.

## PAVEMENT MARKINGS

- C. Provide traffic striping and control markings on pavement, parking stalls, and curbs in accordance with the layout, configurations, and dimensions indicated by Contract Drawings, approved Shop Drawings, and CA MUTCD.
- D. Application equipment and procedures shall conform to the applicable requirements of the Caltrans Standard Specifications. Keep paint thoroughly mixed throughout application.
- E. Traffic control markings and parking stalls shall be applied with the use of substantial cutout patterns and templates, or with striping equipment that applies straight, uniform width, sharp lines. Coverage shall be thorough and complete in accordance with the paint and thermoplastic manufacturer's instructions and recommendations and the Caltrans Standard Specifications.
  - 1. Provide three coats for painted striping and pavement markings. Application rate per coat shall match the two coat system specified in the Section 84 of the Caltrans Standard Specifications. The third coat shall match the application rate of the second coat.
  - 2. Apply thermoplastic material at a minimum thickness of 0.125 inch or at the manufacturer's recommended minimum thickness, whichever is greater.
- F. Traffic control markings and parking stalls shall be sharp and accurate, straight where required, without fuzziness at edges of lines.
- G. Accessible parking stalls shall include the International Symbol for Accessibility.
- H. At completion, the Contractor shall check the work thoroughly and shall touchup traffic control markings and parking stalls that are not distinct or thorough in coverage, or are not uniform in color.

### **3.02 TOLERANCES AND APPEARANCE**

- A. In addition to the tolerances and appearance requirements specified in the Caltrans Standard Specifications, edges shall be uniform with local variations not exceeding an eighth of an inch per foot and surfaces shall be smooth and uniform.
- B. Letter sizes and patterns shall be as indicated on the Contract Drawings with variations of not more than plus or minus 15 percent in dimension.

### **3.03 REMOVAL OF EXISTING MARKINGS**

- A. Removal of existing markings shall conform to methods specified in Section 84 of the Caltrans Standard Specification.

**END OF SECTION 32 17 23**