

## **Section 6: CONSTRUCTION ZONE STANDARDS**

Contractor is responsible for maintaining a safe work area after working hours.

### **6.1 Maintaining Traffic**

#### **6.1.1 Tow-Away Lanes**

Contractor shall be responsible for keeping “Tow-Away No Stopping” traffic lanes clear during the effective hours posted.

#### **6.1.2 Metal Plating**

Any temporary metal plating and metal bridging shall be coated with a non-skid and rust inhibitive product. Examples of non-skid metal plating are surfaces with waffle- patterns or right angle undulations. Plating shall be installed with no edges or corners sticking up and with no bouncing or shifting. Plates shall be secured against shifting by tack welding, or fasteners. Any non-skid product shall have a friction factor of 0.35 or greater as measured by the California Department of Transportation Test 342. Refer to section 2.4.53 of the San Francisco Public Works Code for further requirements.

#### **6.1.3 Transitioning (Ramping)**

Whenever the grade difference between the existing pavement and the excavated area is greater than  $\frac{3}{4}$  inch, Contractor shall provide longitudinal and transverse transitions prior to opening the lanes to traffic. The maximum slope on these transitions shall be 1:18. Transitions shall be installed with hot asphalt concrete. This section applies to newly constructed roadway base, manholes, metal plating, bridging, etc.

#### **6.1.4 Cyclone Fences**

Bases of temporary cyclone fences shall not extend over any adjacent traffic, bicycle lane, or pedestrian path of travel.

#### **6.1.5 Placement of Message and Arrow Boards**

Refer to Caltrans Changeable Message Signs (CMS) Guidelines found at <https://dot.ca.gov/-/media/dot-media/programs/traffic-operations/documents/mobility/cms-guidelines-april-2021.pdf>

Whenever a CMS is not being used, it shall be turned off, placed or stored outside of the clear recovery zone or behind a protective barrier. A clear recovery zones is an unobstructed, traversable roadside area that allows a driver to stop safely, or regain control of a vehicle that has left the roadway. On conventional highways

with curbs, typically in urban conditions, a minimum horizontal clearance of 1 foot 6 inches should be provided between an obstruction and the edge of travel way (traffic lane).

Clear Recovery Area

[https://safety.fhwa.dot.gov/roadway\\_dept/countermeasures/safe\\_recovery/clear\\_zones/](https://safety.fhwa.dot.gov/roadway_dept/countermeasures/safe_recovery/clear_zones/)

Clearances (Topic 309)

<https://dot.ca.gov/-/media/dot-media/programs/design/documents/chp0300-a11y.pdf>

## 6.2 Pavement Markings

### 6.2.1 Temporary Pavement Markings

Temporary markers and/or markings shall be installed by the Contractor for any existing crosswalk line, limit line, arrow, and other legend or traffic lane line removed or damaged by the work activity prior to the end of the work shift and before opening the lanes for traffic.

Temporary pavement markers shall be any of the following types and markers shall be installed in accordance with the following criteria:

- PEXCO, Davidson Traffic Control Products: Model TOM Temporary Overlay Marker with retroreflective sheeting; Model TRPM Chip Seal Markers
- Apex: Model 932 Chip Seal/Overlay Markers
- Hi-Way Safety Inc.: Model Chip Seal Markers with retroreflective sheeting

Temporary pavement markings shall be any of the following types and markings shall be installed in accordance with the following criteria:

- Swarco: Visa-Line
- Brite-Line: Series 100

**Table 4:** Requirements for Placing Temporary Pavement Markings

| Existing Striping      | Temporary Striping                                      |
|------------------------|---|
| 12-inch crosswalk line | 3 – 4 inch white stripes appearing as 1– 12 inch stripe |
| 8-inch solid line      | 1 – 4 inch white solid stripe                           |
| 4-inch broken white    | 1 – 4 inch white stripe (typically 7' long, 17' gaps*)  |
| 4-inch broken yellow   | 1 – 4 inch yellow stripe (typically 7' long, 17' gaps*) |

|               |  |
|---------------|--|
| Double yellow | 2 – 4 inch yellow solid stripes 3 inches apart |
|---------------|--|

\* Consult Chapter 3 of the California MUTCD for further details. The dimensions for broken lines apply for streets with posted speed limits of 35 MPH or less. For speed limits of 40 MPH or more, the dimensions are for 12' long stripes with 36' gaps.

### **6.2.2 Permanent Pavement Marking Restoration**

The Contractor shall deliver one set of the excavation plans to the San Francisco Municipal Transportation Agency at 1 South Van Ness Avenue, 7th Floor, at the same time application is made for the Excavation permit from SFPW-BSM. The SFMTA shall send an estimate of the cost of restoring permanent pavement markings to the Contractor. The Contractor shall send a check for the estimated cost to the SFMTA

within 15 working days. The Contractor shall email confirmation to [trafficpermits@sfmta.com](mailto:trafficpermits@sfmta.com) when the paving has been accepted by the SFPW-BSM Inspector. The SFMTA Paint Shop will install the permanent pavement markings.

### **6.2.3 Muni Markings**

The Contractor is responsible for taking inventory of all Muni markings in the work area before doing any work. Markings include yellow "Coach Stop" bars painted on the pavement, yellow "pole stop" bands painted on the sign poles or utility poles, and yellow "breaker marking" dots painted on the pavement. If any Muni marking is damaged or paved over, the Contractor shall immediately email [constructionrequest@sfmta.com](mailto:constructionrequest@sfmta.com) so that SFMTA's Paint Shop will restore the markings. If any pole containing a yellow "pole stop" band is removed from its location, the Contractor shall not install that same pole at a different location without first deleting the yellow band. If any pole containing a yellow "pole stop" band is replaced with a new pole, the Contractor shall notify Muni Service Planning immediately after the new pole is installed.