SECTION 015526 TRAFFIC REGULATION

A. Description

This section describes procedures for traffic regulation and temporary steel plate bridging during construction in public streets.

B. Standard Specifications

Wherever reference is made to the State Specifications and Plans, such reference shall mean the State of California, Business, Transportation, and Housing Agency, Department of Transportation 2006 edition Standard Specifications and 2006 edition Standard Plans.

C. Submittals

The Contractor shall submit, not less than 14 working days prior to start of construction operations, a traffic control plan, prepared, signed, and sealed by a California licensed civil or traffic engineer to the City of Santa Maria for approval. No work shall begin involving or requiring alternate traffic control until a traffic control plan is approved by the City and an Encroachment Permit is issued.

D. General

1. Provide safe and continuous passage for pedestrian and vehicular traffic at all times.

2. Control traffic in conformance with the approved traffic control plans and specifications.

3. Furnish, construct, maintain, and remove detours, road closures, lights, signs, barricades, fences, K-rail, flares, solar-powered flashing arrow signs, miscellaneous traffic devices, flagmen, drainage facilities, paving, and such other items and services as are necessary to adequately safeguard the public from hazard and inconvenience. All such work shall comply with the ordinances, directives, and regulations of authorities with jurisdiction over the public roads in which the construction takes place and over which detoured traffic is routed by the Contractor. After devices have been installed, maintain and keep them in good repair and working order until no longer required. Replace such devices that are lost or damaged, to such an extent as to require replacement, regardless of the cause of such loss or damage.

4. Prior to the start of construction operations, notify the police and fire department in whose jurisdiction the project lies, giving the expected starting date, completion date, and the names and telephone numbers of two responsible persons who may be contacted at any hour in the event of a

condition requiring immediate emergency service to remove, install, relocate, and maintain warning devices. In the event these persons do not promptly respond or the authority deems it necessary to call out other forces to accomplish emergency service, the Contractor will be held responsible for the cost of such emergency service.

5. Provide a minimum of 48 hours' notice to the City of Santa Maria for any work which may affect signal loops, equipment, or devices. In the event that any underground utilities, traffic devices, pipes, or conduits are damaged and require emergency repair by the City of Santa Maria, all costs incurred by the City of Santa Maria in making such repairs, plus 15% for administration costs, shall be paid by the Contractor.

6. Post temporary "No Parking - Tow Away" signs 48 hours prior to work in areas where parking is normally permitted. The City of Santa Maria Police Department shall be notified 24 hours prior to the posting of any temporary parking restrictions along the pipeline route.

7. Coordinate the relocation of public bus and school bus routes, bus stops, and trash collection services with the agencies listed on the plans in advance of construction activity.

E. Traffic Control Devices and Signs

1. Traffic control devices and temporary striping shall conform to the California Manual of Uniform Traffic Control Devices (California MUTCD). Construction signs shall conform to the latest edition of the FHA publication “Standard Highway Signs” and the State of California Sign Specification Sheets.

2. The placement of construction signing, striping, barricades, and other traffic control devices used for handling traffic and public convenience shall conform to the California MUTCD, and City of Santa Maria Standards. In case of discrepancy, the City of Santa Maria Standards takes precedence over the California MUTCD.

3. Signs shall be illuminated or reflectorized when they are used during hours of darkness. Cones and portable delineators used for night lane closures shall have reflective sleeves. Equip barricades used in the diversion of traffic with flashers if in place during hours of darkness.

4. During the duration of a detour, cover existing signs not in accordance with the traffic control plan. Relocate existing signs that are in force to provide visibility from all relocated traffic lanes.

F. Temporary Steel Plate Bridging, With a Nonskid Surface

1. When backfilling operations of an excavation in the traveled way, whether transverse or longitudinal, cannot be properly completed within a workday, provide steel plate bridging with a nonskid surface and shoring to preserve unobstructed traffic flow. In such cases, the following conditions shall apply:

    a. Steel plates used for bridging shall extend a minimum of 12 inches beyond the edges of the trench.

    b. Install steel plate bridging to operate with minimum noise.

    c. Shore the trench to support the bridging and traffic loads.

    d. Use temporary paving with cold asphalt concrete to feather the edges of the plates if plate installation by Method 2 is used.

    e. Secure bridging against displacement by using adjustable cleats, shims, or other devices.

2. Install steel plate bridging and shoring using either Method 1 or 2:

    a. Method 1 (For Speeds More Than 45 mph): The pavement shall be cold planed to a depth equal to the thickness of the plate and to a width and length equal to the dimensions of the plate.

    b. Method 2 (For Speeds 45 mph or Less): Attach approach plate(s) and ending plate (if longitudinal placement) to the roadway by a minimum of two dowels predrilled into the corners of the plate and drilled 2 inches into the pavement. Butt subsequent plates to each other. Compact fine graded asphalt concrete to form ramps, maximum slope 8.5% with a minimum 12-inch taper to cover all edges of the steel plates. When steel plates are removed, backfill the dowel holes in the pavement with either graded fines of asphalt concrete mix or concrete slurry.

3. Maintain the steel plates, shoring, and asphalt concrete ramps.

4. The following table shows the required minimal thickness of steel plate bridging required for a given trench width:

| Trench Width (feet) | Minimum Plate Thickness (inches) |
|---|---|
| 1 | 1/2 |
| 1 1/2 | 3/4 |
| 2 | 7/8 |
| 3 | 1 |
| 4 | 1 1/4 |

5. For spans greater than 4 feet, prepare a structural design by a registered civil engineer and submit to the Owner's Representative for review.

6. Design steel plate bridging for HS20-44 truck loading per Caltrans Bridge Design Specifications Manual. Maintain on the steel plate a nonskid surface having a minimum coefficient of friction equivalent to 0.35 as determined by California Test Method No. 342. The Contractor may use standard steel plate with known coefficient of friction equal or exceeding 0.35.

7. Use a “Rough Road” sign (W8-8) with black lettering on an orange background in advanced of steel plate bridging. This is to be used along with any other required construction signing.

G. Vehicular Traffic Control

1. Accomplish construction in phases by detouring traffic from its normal patterns along the route in approximately 1/2-mile intervals between major cross streets to form the construction zone, starting at the southerly end and progressing northerly to the end of the project. Restore traffic to normal patterns in each phase before proceeding to the next phase.

2. Complete backfill, compaction, testing, to a point not to exceed 1,000 feet behind the working heading and the first lift of permanent paving to a point not to exceed 2,000 feet behind the working heading. Shoring members, beams, or other obstructions shall not be permitted within a 3-foot clearance between the edge of excavation and the edge of any traffic lane. At construction areas where an open trench exists and/or where traffic detour will be in existence during night hours, replace delineators with barricades or K-rail.

3. Accomplish construction in phases by detouring traffic from its normal patterns. Restore traffic to normal patterns in each phase before proceeding to the next phase.

4. Transition traffic lane transitions from permanent lanes to construction zone patterns in accordance with the requirements for the normal posted speed limit and as shown in the traffic control plan.

5. Unless otherwise shown in the drawings or allowed by the City within whose jurisdiction the work is being performed, limit construction activities to 7 a.m. to 5 p.m. Monday through Friday. Return roadways and sidewalks to unrestricted vehicle and pedestrian usage when construction is not underway.

6. During the peak traffic volume hours of the day, from 6:00 a.m. to 8:30 a.m. and 3:30 p.m. to 7:00 p.m. on weekdays only, limit construction activities within the construction zone to those which will not impact the free movement of vehicular traffic in its detoured pattern. Construction equipment or trucks shall not use or travel adjacent to traffic lanes during these time periods. Truck operations in and out of construction and staging areas shall be controlled by flagmen at all times.

H. Pedestrian Traffic Control

1. Maintain and delineate a minimum of one 4-foot-wide pedestrian walkway along each public street at all times during construction. Maintain existing pedestrian accesses at intersections at all times. When existing crosswalks are blocked by construction activity, install signs directing pedestrian traffic to the nearest alternative crosswalk.

2. Erect a fence or provide other means of securement to preclude unauthorized entry to any excavation during all nonworking hours on a 24-hour basis including weekends and holidays. Said fence shall be a minimum of 7 feet high around the entire excavation, consisting of a minimum 9-gauge chain-link type fence fabric and shall be sturdy enough to prohibit toppling by children or adults. There shall be no openings under the wire large enough for any child to crawl through. Lock any gates if no adult is in attendance. Place warning signs spaced on 50-foot centers on the outside of the fence with the statement "DEEP HOLE DANGER."

I. Access to Adjacent Properties

1. Maintain reasonable access from public streets to adjacent properties at all times during construction. Prior to restricting normal access from public streets to adjacent properties, notify each property owner or responsible person, informing him of the nature of the access restriction, the approximate duration of the restriction, and the best alternate access route for that particular property.

J. Permanent Traffic Control Devices

1. Existing permanent traffic control signs, barricades, and devices shall remain in effective operation unless a substitute operation is arranged for and approved as a portion of vehicular traffic control above.

2. Restriping of Streets: Permanent restriping shall be in accordance with the requirements of the agencies having jurisdiction. Place and remove temporary striping required for traffic control during construction by sandblasting. Temporary striping includes any striping required on any pavement replaced prior to the final surface course. Replace any damaged or obliterated raised pavement markers in accordance with the standards of the agency having jurisdiction.

END OF SECTION