

**ITEM 0125001**

**MAINTENANCE AND PROTECTION OF TRAFFIC**

**DESCRIPTION**

Unless other provisions are made on the plans or in the special provisions of the contract that differ from the general provisions herein, the Contractor shall keep the roadway under construction open to traffic for the full length of the project and shall provide a sufficient number of travel lanes and pedestrian passways in accordance with the attached figures to move that traffic ordinarily using the roadway. The travel lanes and pedestrian passways shall be drained and kept reasonably smooth and in suitable condition at all times in order to provide minimum interference to traffic consistent with the proper prosecution of the work.

Suitable ingress and egress shall be provided at all times where required, for all intersecting roads and for all abutting properties having legal access.

When a scheme for maintenance of traffic that may include detours is shown on the plans or described in the special provisions of the contract, this shall govern unless an alternate scheme acceptable to the Engineer is offered by the Contractor at no additional cost. If no scheme is shown on the plans or described in the special provisions of the contract, and the Contractor wishes to deviate from the provisions of maintaining traffic as described in this section, the Contractor may submit and the Engineer may approve a schedule showing a proposed sequence of operations and a compatible method of maintaining traffic.

The Contractor shall provide labor for maintaining and protecting all pedestrian and vehicular traffic movements for the entire length of this project at all times. This includes any work required outside of the normal daily work hours and/or on any holiday. No exceptions to this requirement are permitted except in cases of planned periods of time as approved by the engineer, in which the road must be closed to permit construction activities to be completed. In such cases, the Contractor will be required to have obtained all necessary permits and adequately prepared and placed suitable detour signage to redirect traffic in conformance with this specification and/or to the satisfaction of the engineer.

**REFERENCED ITEMS**

0107301, 0107401, 0107501, 0107601 and 0107701

**REQUIRED SUBMITTALS**

None

**MATERIALS**

The materials used for this work will conform to the material requirements of items 0107301, 0107401, 0107501, 0107601.

**CONSTRUCTION METHODS**

The Contractor shall furnish and erect signs legally closing the roadway to traffic, as shown on the plans or directed by the Engineer, prior to commencing any work on the project.

The Contractor shall furnish a sufficient number of signs, barricades, drums, traffic cones and delineators to forewarn traffic of the construction as shown on the traffic control plans contained within or as directed by the Engineer (There will not be any additional payment for the above items. The cost will be included as part of this item).

The Contractor shall also provide such safety measures, pavement markings, warning devices and signs as deemed necessary to safeguard and guide the traveling public through detours ordered by the Engineer, included in the approved scheme for maintenance of traffic, or as shown on the plans. The Contractor shall erect, maintain, move, adjust, clean, relocate and store these signs, barricades, drums, traffic cones and delineators when, where and as directed by the Engineer.

The use of unauthorized or un-approved signs, barricades, drums, traffic cones or delineators will not be permitted.

All signs in any one signing pattern shall be mounted the same height above the roadway. The Contractor shall keep all signs in proper position, clean and legible at all times. Care shall be taken so that weeds, shrubbery, construction materials or equipment, and soil are not allowed to obscure any sign, light, or barricade. Signs that do not apply to existing conditions shall be removed or adjusted so that the legend is not visible to approaching traffic.

The Contractor, when ordered by the Engineer, shall remove snow and take care of icy conditions on temporary, new and existing sidewalks on any part of the right-of-way within the limits of the project. Payment for the cost thereof, will be made as extra work.

Should the contractor fail to perform any of the work required under this section, the City may perform or arrange for others to perform such work. In such cases, the City will deduct from money due or to become due the Contractor all expenses connected therewith, which are found to be greater than the cost to the city had the

Contractor performed the specified work.

The Contractor shall maintain and protect traffic on bi-directional roadways as follows:

On those two-lane roadways less than 30 feet in width, the Contractor will be permitted a ALTERNATING one-way traffic operation on a travel path not less than 12 feet in width.

On those two-lane roadways 30 feet in width or more, the Contractor shall maintain and protect two-way traffic on a travel path not less than 22 feet in width.

On one directional roadway, the Contractor will be permitted to reduce the travel path to a minimum of 10 feet in width when one or two lanes presently exist on the roadway.

On one directional roadways, three lanes or greater, the Contractor shall provide two 10 feet lanes.

Existing traffic signal operation and systems shall be effectively maintained during the progress of the work. It is recognized that signal shutdown will be necessary during those periods when existing controllers and cabinets are removed, and new controllers and cabinets are installed on the existing foundations or poles. The Contractor shall minimize these periods of signal shutdown. Signal shutdown shall be restricted to the hours between 9:00 A.M. and 3:00 P.M., Mondays through Fridays or as directed by the engineer.

Signal shutdown shall not be permitted unless otherwise approved in advance by the Engineer. In all cases, the Contractor shall notify the Engineer and the City of Hartford Transportation Division (543-8660) at least two working days in advance of a planned signal shutdown. No more than one intersection shall be out of service at any one time unless the Engineer gives prior approval.

During the hours that a signal is shut down and inoperative, the Contractor shall be responsible for furnishing a uniformed police officer(s) to direct traffic at the intersection. The item 0107701 "Traffic Police Officer" shall be used to pay for traffic control only when the Contractor is actively working at the intersection.

### **Maintenance of Existing Signal Coordination**

The Contractor shall schedule work in such a manner that existing signal

coordination is maintained in each signal group. The Contractor shall be responsible for maintaining the existing signal coordination in each signal group until the acceptance of the project. Coordination shall be maintained through the utilization of existing interconnect, or the time-based coordination capabilities of the new controllers, or some combination. The Engineer shall provide the Contractor with the existing timing plan information (i.e, cycle, split offset, time of day, day of week schedule).

Brief periods of interruption in signal coordination, not to exceed a total of 48 hours for each existing signal will be permitted while relocating existing interconnect cable, and while installing new controllers and cabinets on existing foundations of poles. Non-coordinated operation shall not be permitted in two or more signals at any one time unless the Engineer gives prior approval.

**Allowable Adjustment of Signs and Devices Shown on Traffic Control Patterns**

The traffic control plans and patterns contained herein indicate the locations and spacing of signs and devices under ideal conditions. It is desirable to have signs and devices installed as shown thereon.

Adjustments to these standards signing plans and patterns shall be made only at the direction of the Engineer. The signing patterns are to be installed, as directed by the Engineer, to consider abutting properties, driveways, side roads and the vertical and horizontal curvature of the roadway.

If adjustments are made to these standard-signing patterns, the adjustments shall always be to improve the visibility of the signing and devices and to better control traffic.

The Engineer may require that the signing pattern be located significantly in advance of the construction work site, in order to provide better sight-line to the signing and safer traffic operations through the work zone.

The Engineer may order the spacing between signs and devices to be increased or decreased as conditions dictate.

Taper lengths may be reduced by the Engineer.

Any adjustments in the signing patterns installed for traffic control shall be done by the Contractor's forces and shall be at no extra cost to the City.

Additional signs or devices that may be required by the Engineer will be provided by the Contractor and shall be at no extra cost to the City.

Contractor shall maintain the proposed detour plans.

**METHOD OF MEASUREMENT**

This item will not be measured for payment.

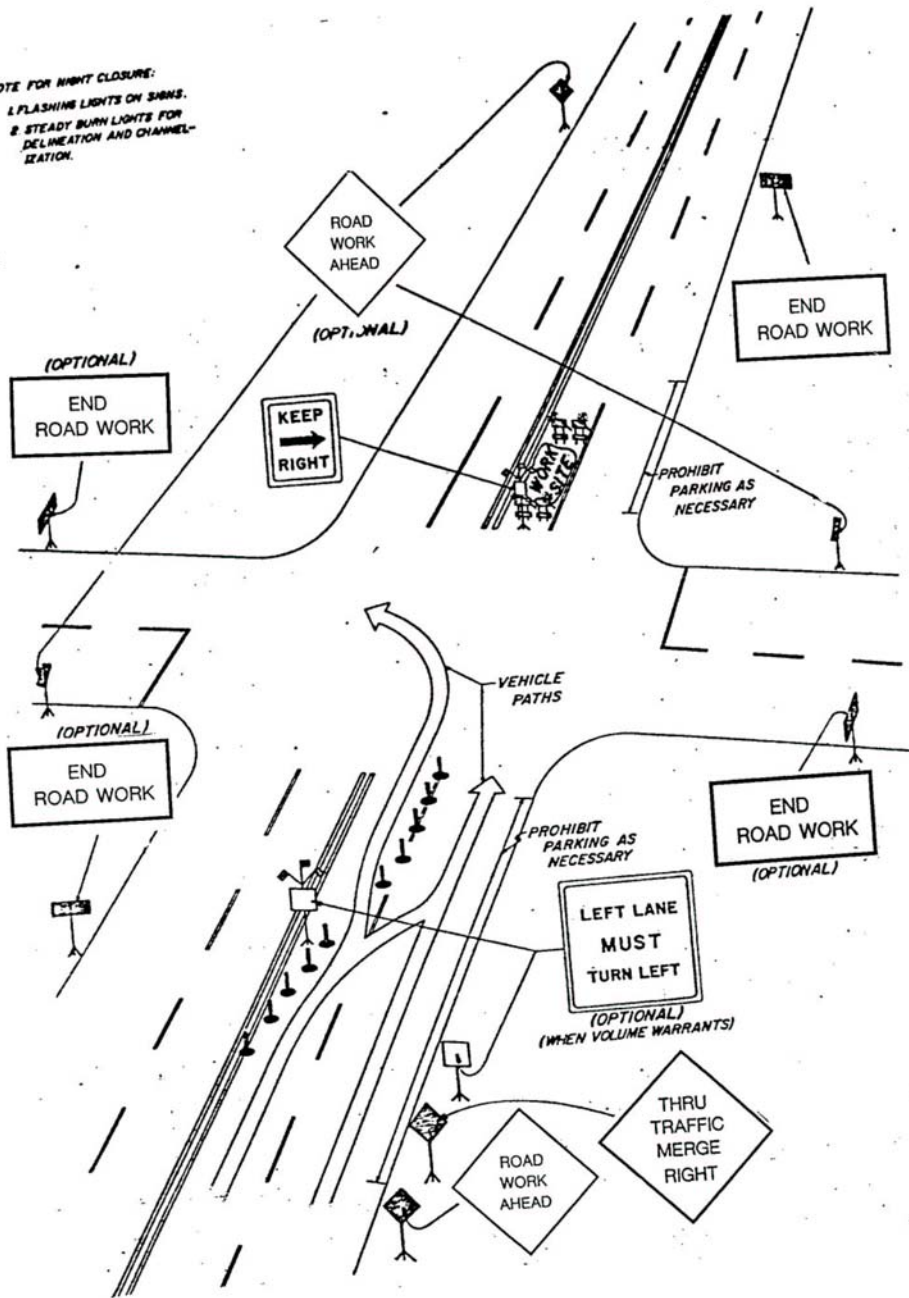
**BASIS OF PAYMENT**

When the item of "MAINTENANCE AND PROTECTION OF TRAFFIC" appears in the contract, this work will be paid for at the contract lump sum price for " MAINTENANCE AND PROTECTION OF TRAFFIC ". This price shall include all costs for labor, equipment and services involved in the erection, maintenance, moving, adjusting, cleaning, relocating and storing of signs, barricades, drums, traffic cones and delineators furnished by the Contractor as well as all costs of labor and equipment involved in the maintenance of traffic lanes and detours, except for pavement markings, ordered or included in the approved scheme for maintenance of traffic.

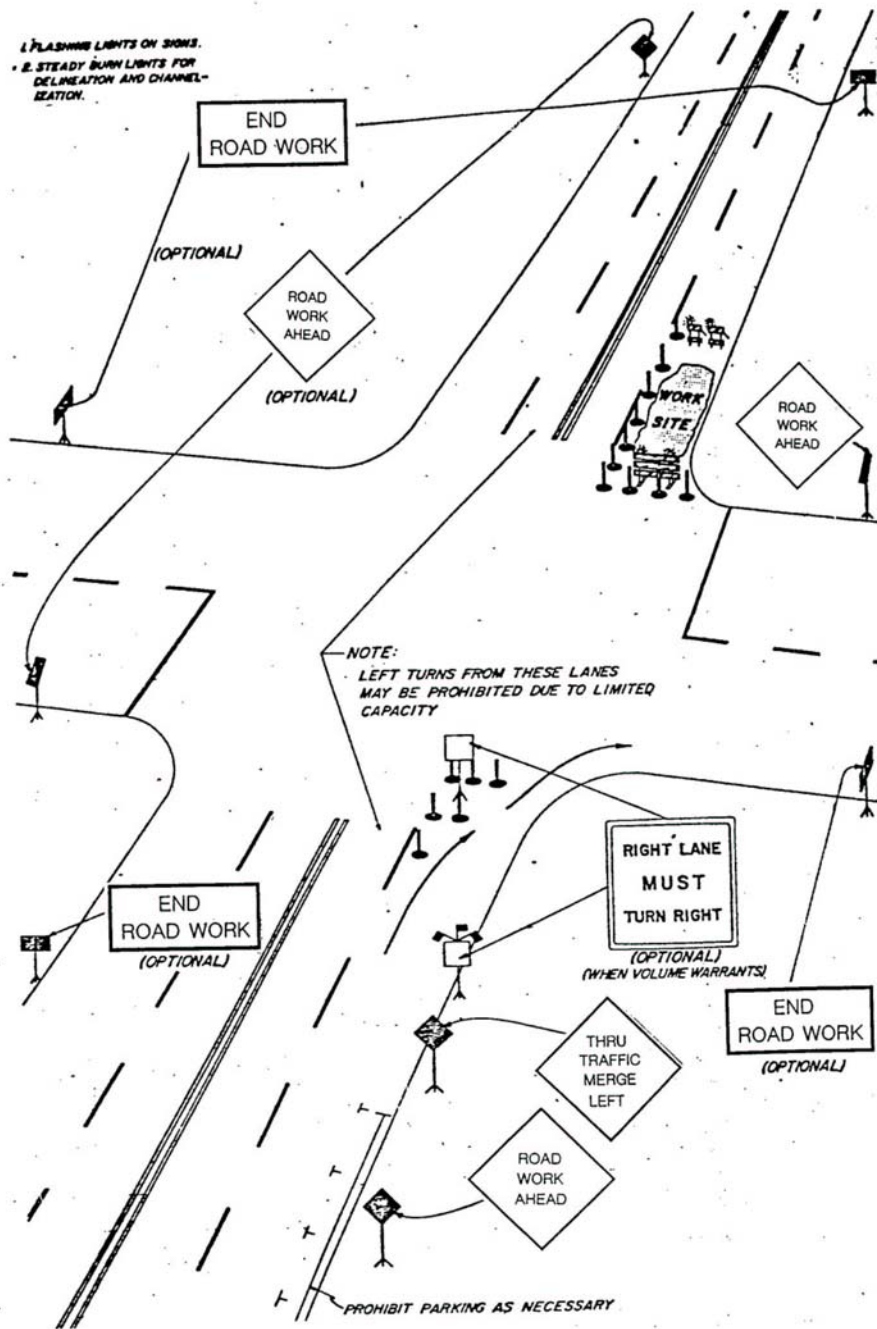
" MAINTENANCE AND PROTECTION OF TRAFFIC " shall include the cost of signs, barricades, drums, traffic cones, delineators, etc. Any temporary time-based coordination units shall remain the property of the Contractor and shall be paid for under this item.

<b><u>PAY ITEM</u></b>	<b><u>DESCRIPTION</u></b>	<b><u>PAY UNIT</u></b>
0125001	Maintenance and Protection of Traffic	LS

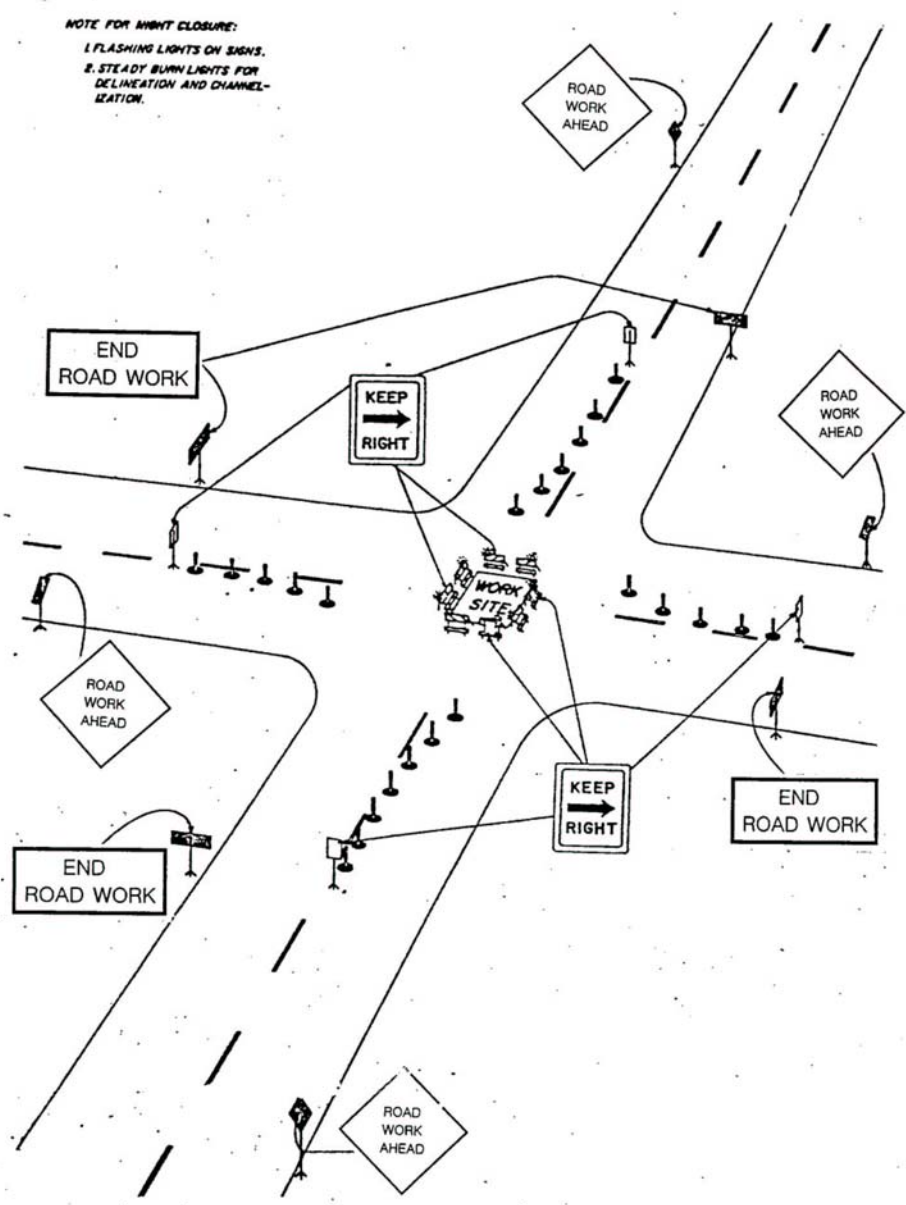
NOTE FOR NIGHT CLOSURE:  
1. FLASHING LIGHTS ON SIGNS.  
2. STEADY BURN LIGHTS FOR  
DELINEATION AND CHANNEL-  
IZATION.



LEFT LANE CLOSURE AT AN INTERSECTION  
FIGURE 1

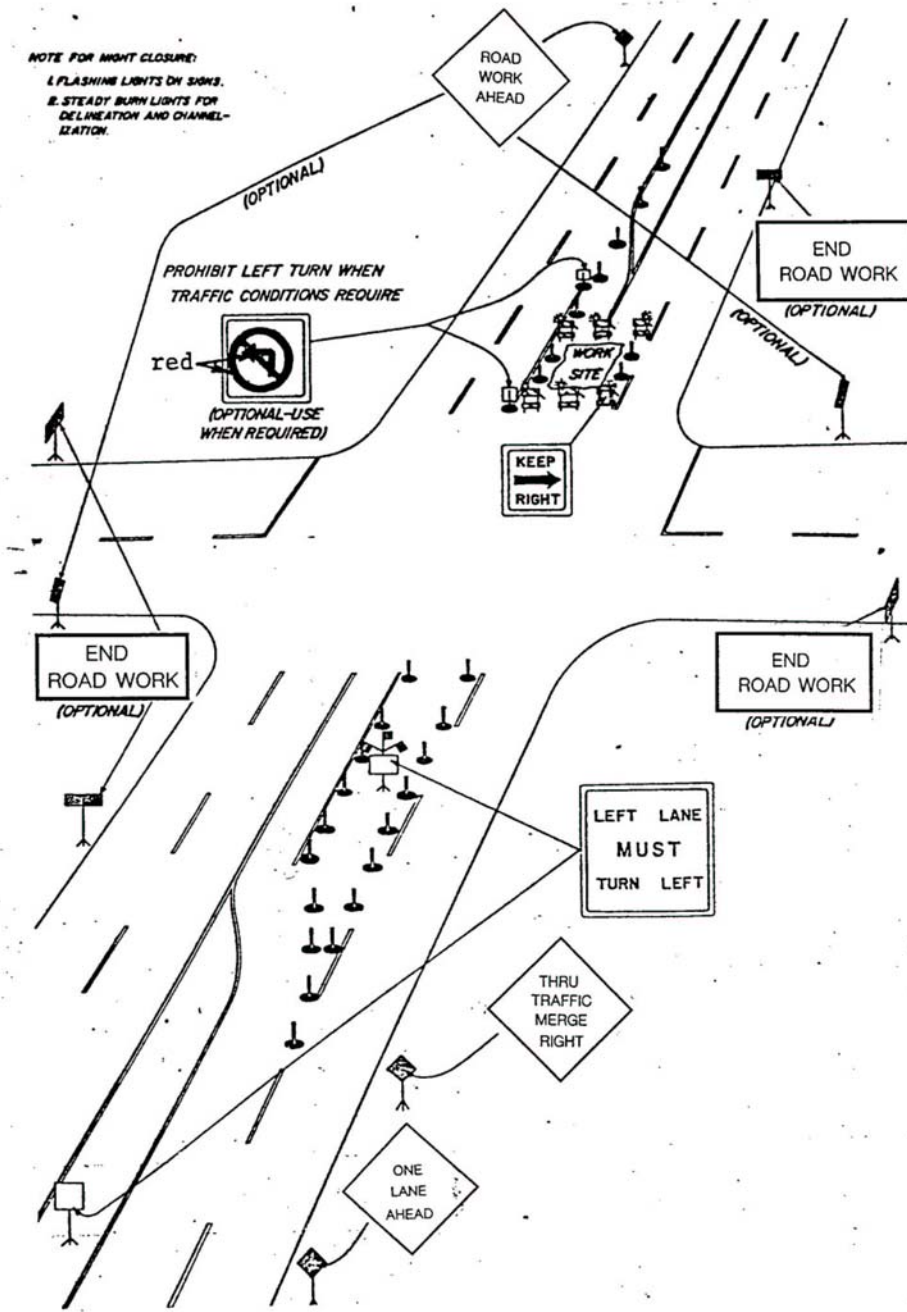


RIGHT LANE CLOSURE AT AN INTERSECTION  
FIGURE 2

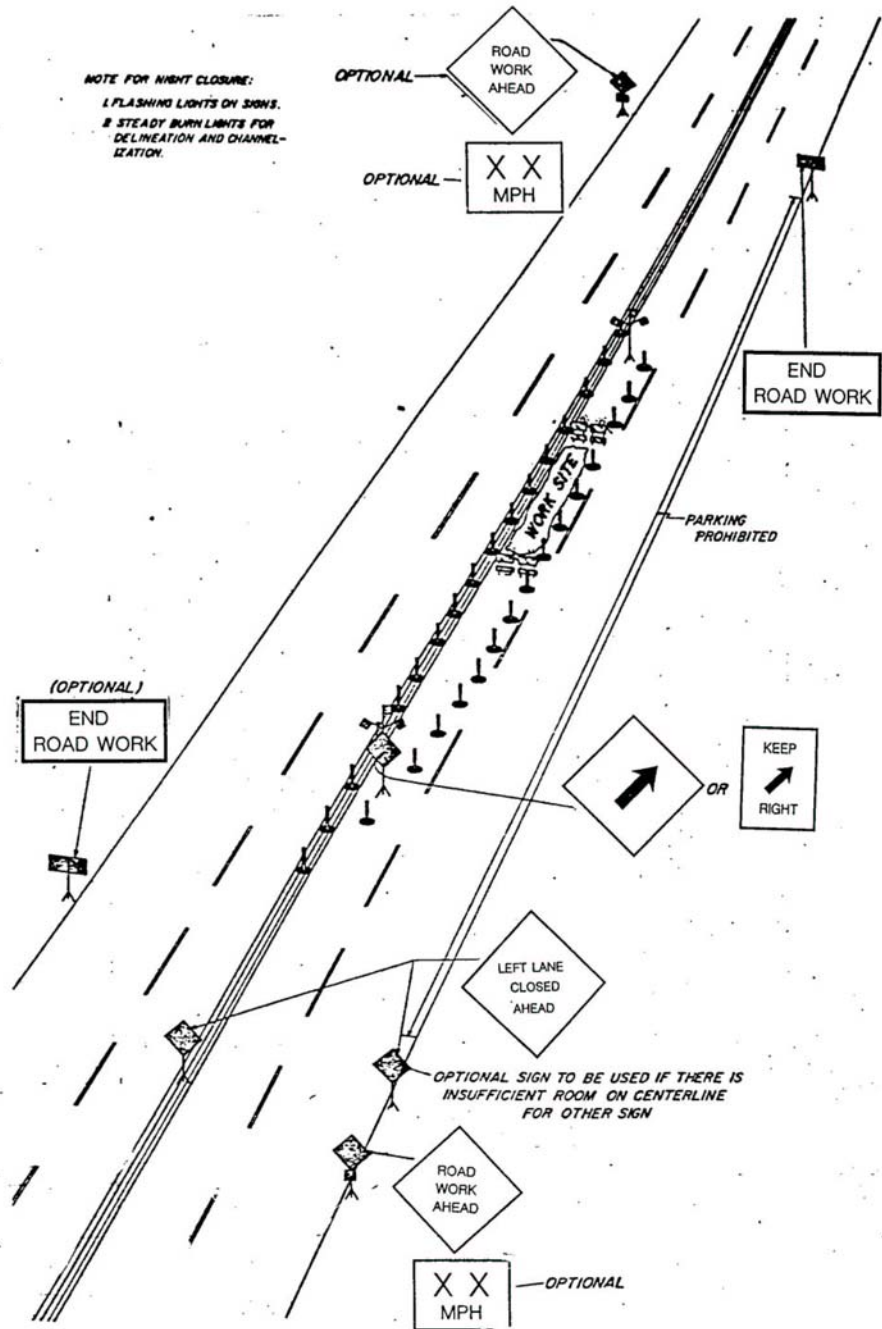


**LANE CLOSED IN CENTER OF AN INTERSECTION**  
**FIGURE 3**

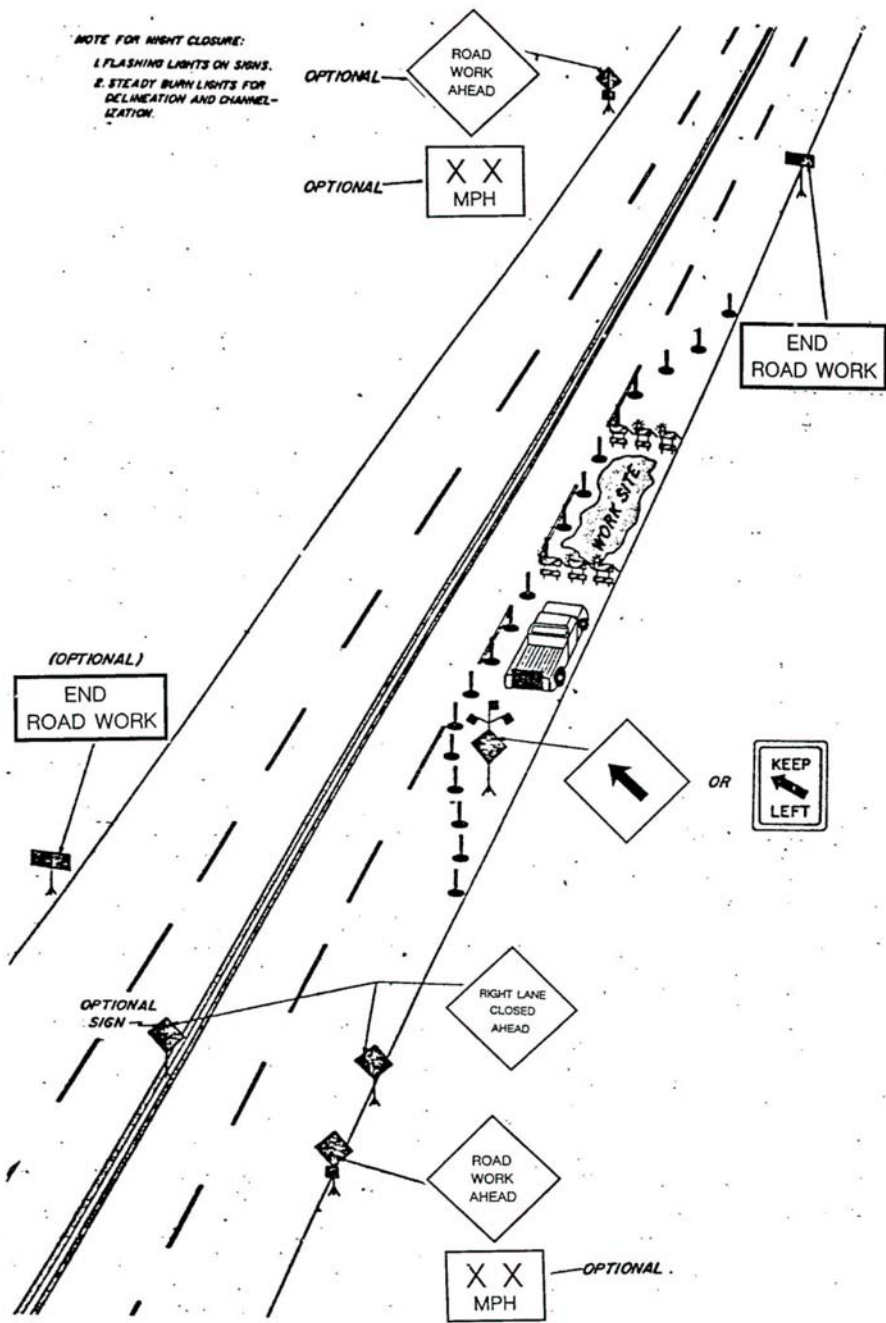




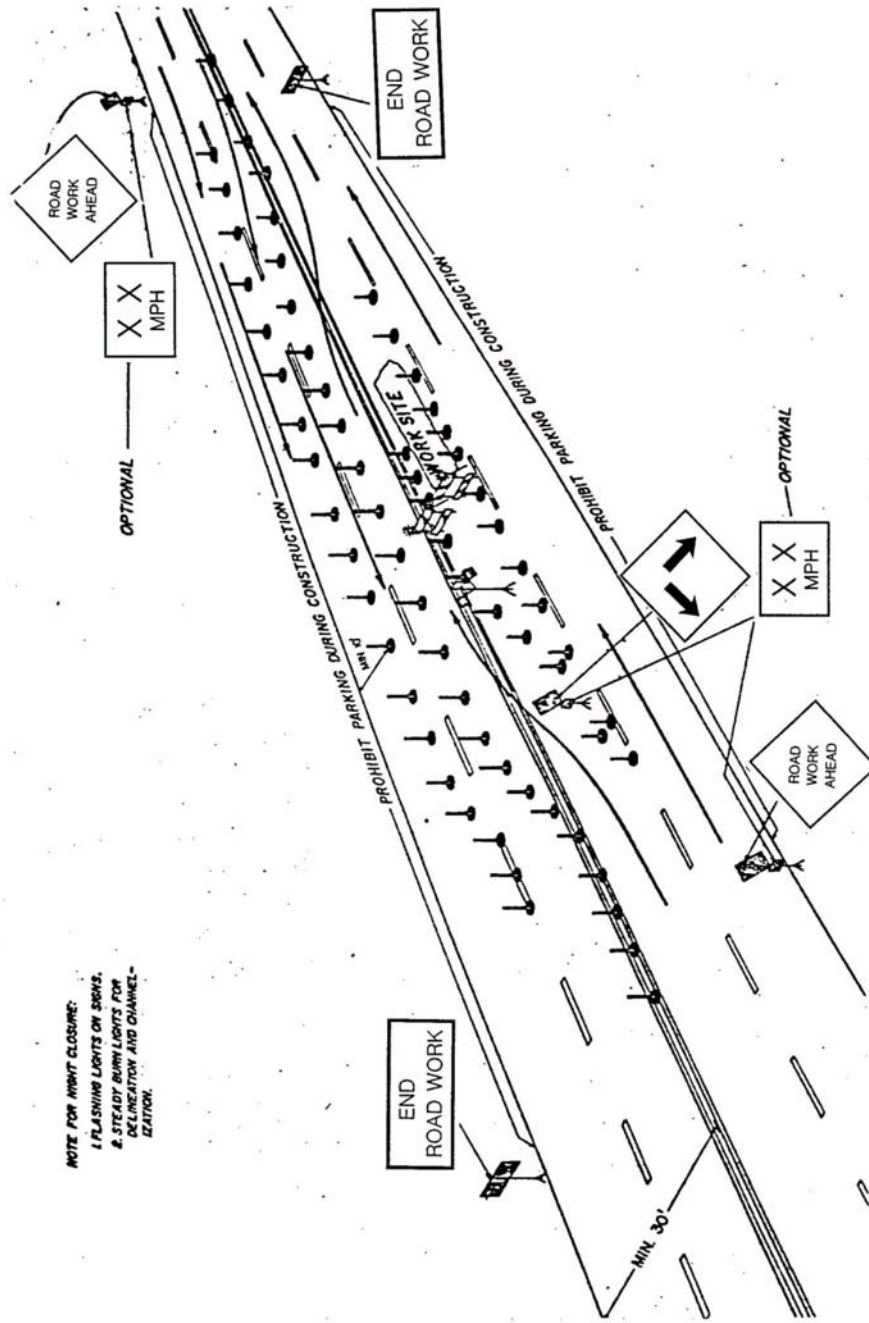
LANE CLOSURES AT AN INTERSECTION  
FIGURE 4



LEFT LANE CLOSURE MID-BLOCK (LOW VOLUME)  
FIGURE 5

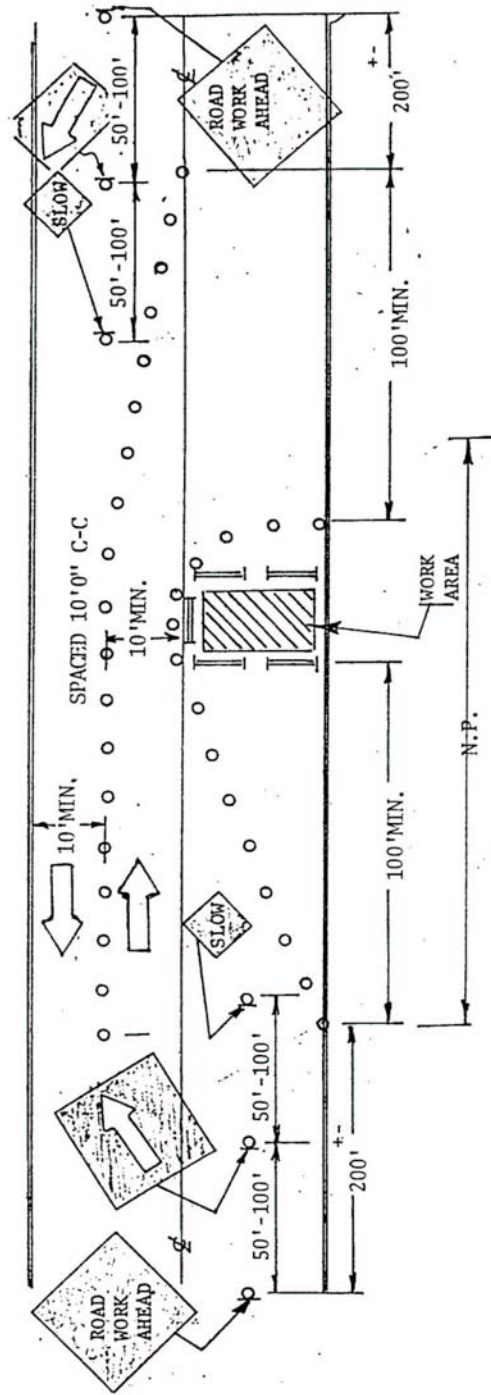


RIGHT LANE CLOSURE MID-BLOCK  
FIGURE 6



NOTE FOR NIGHT CLOSURE:  
1. FLASHING LIGHTS ON SIGNS,  
& STEADY BURN LIGHTS FOR  
DELINEATION AND CHANNEL-  
IZATION.

LEFT LANE CLOSURE MID-BLOCK (HIGH VOLUME)  
FIGURE 7



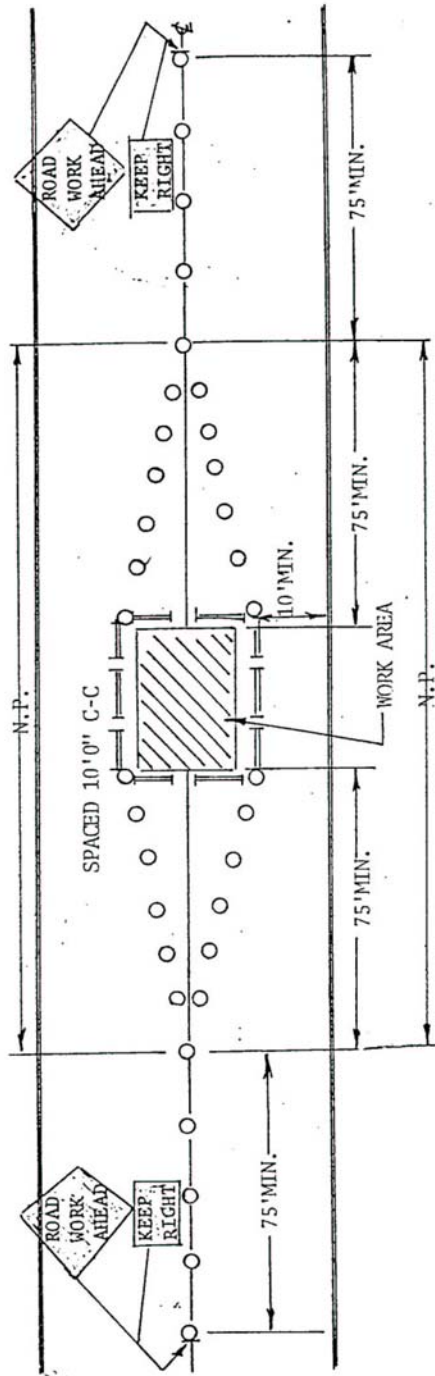
- TRAFFIC CONES
- SIGN WITH SIGN
- || BARRICADE (TYPE I or II)
- N.P. NO PARKING

Notes:

(1) Shaded Signs are to be reflectorized orange with black letters.

(2) All other signs can be reflectorized orange with black letters or reflectorized white with black letters.

MID-BLOCK 2-LANE CLOSURE  
FIGURE 8

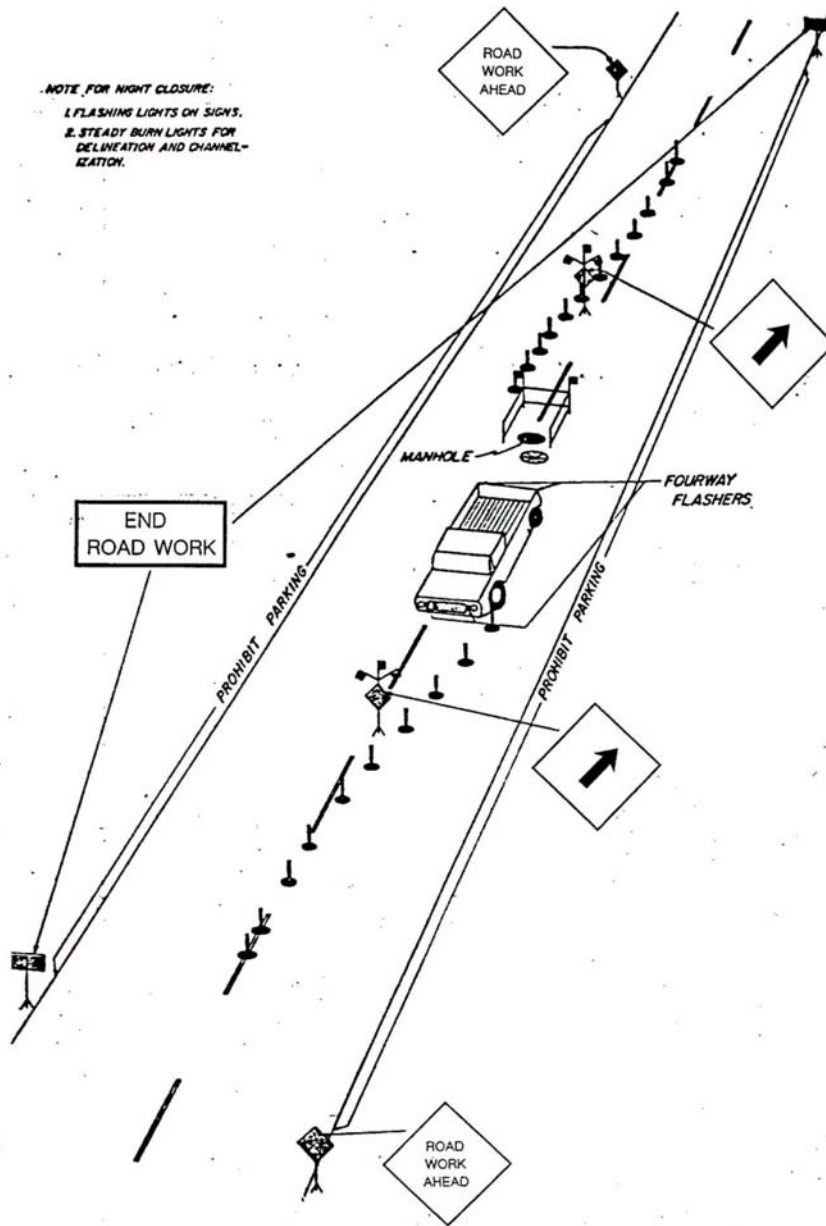


- TRAFFIC CONES
- ⊖ STANCHION WITH SIGN
- ⏏ BARRICADE (TYPE I or II)
- N.P. NO PARKING

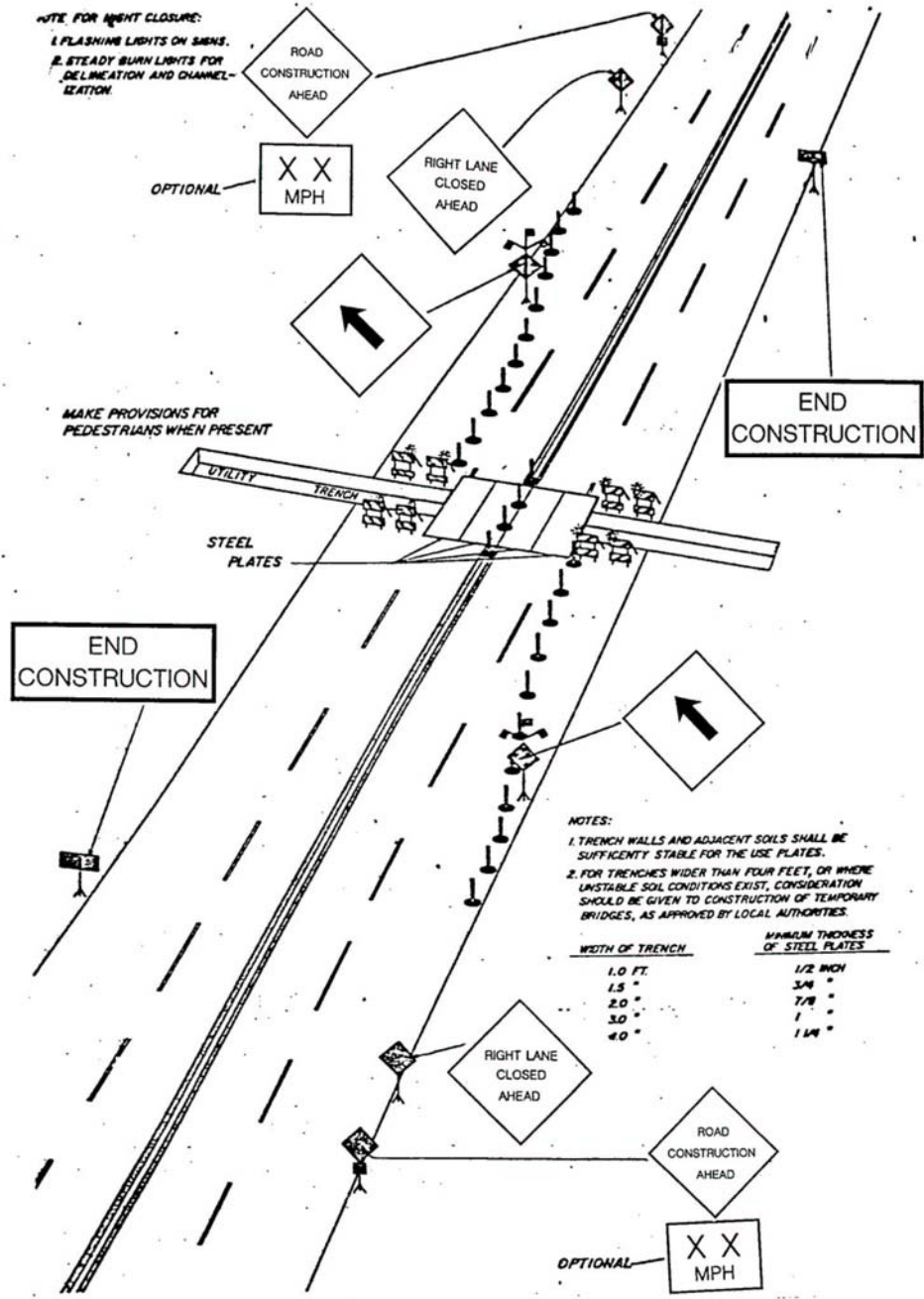
**Notes:**  
 (1) Shaded Signs are to be reflectorized orange with black letters.  
 (2) All other signs can be reflectorized orange with black letters or reflectorized white with black letters.

LOCAL ROAD - CENTER LANE CLOSURE  
 FIGURE 9



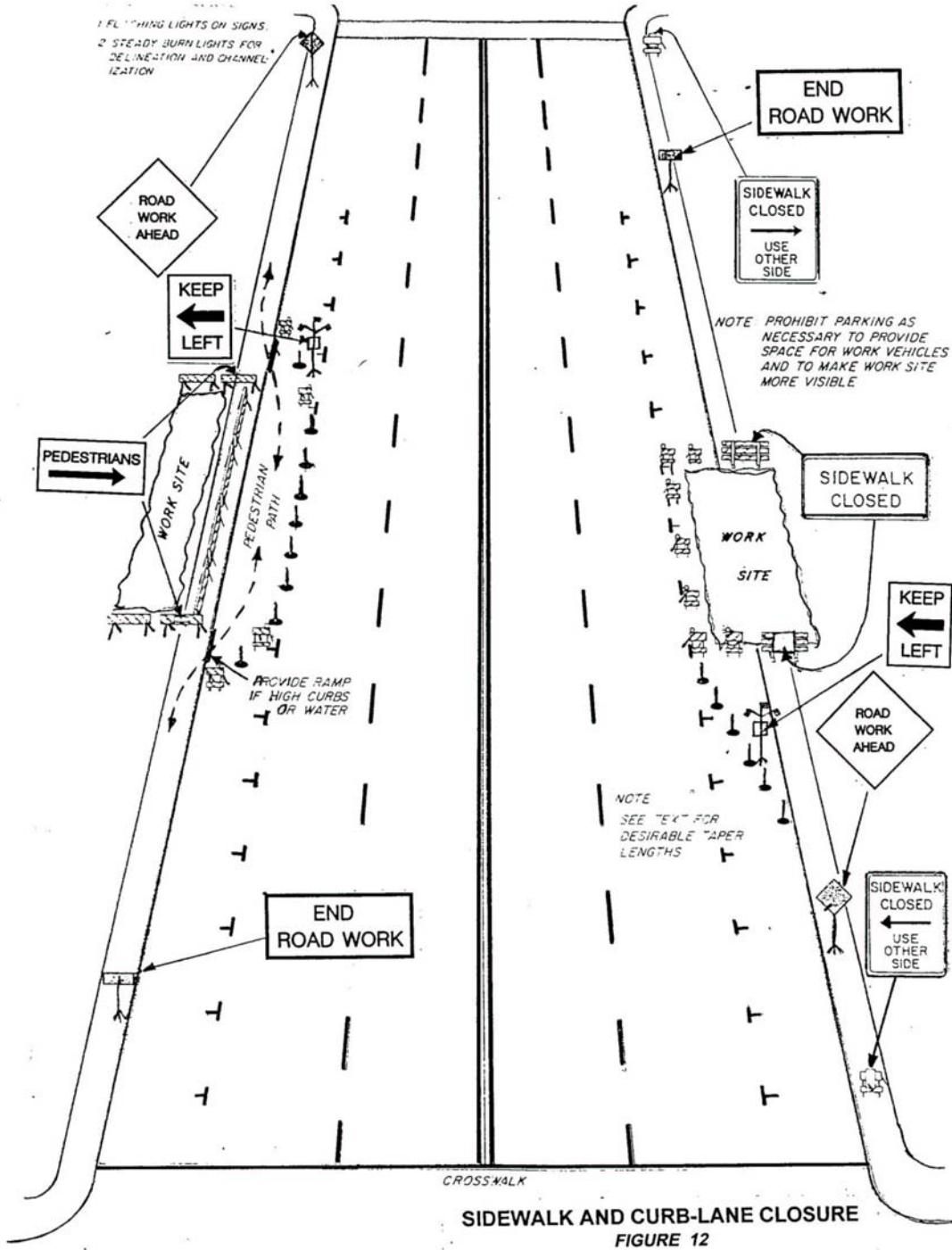


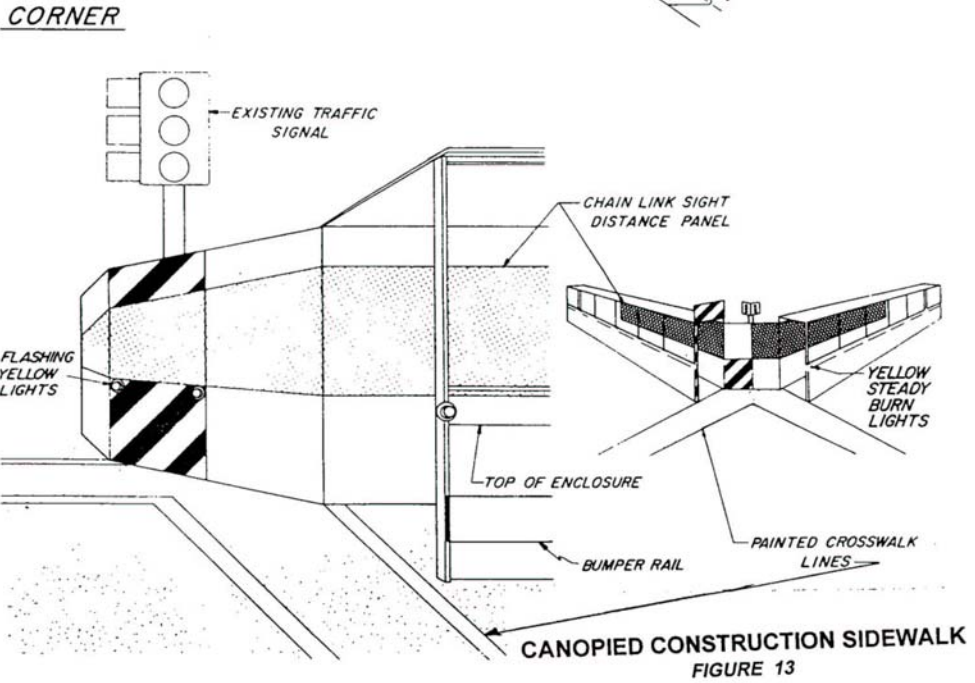
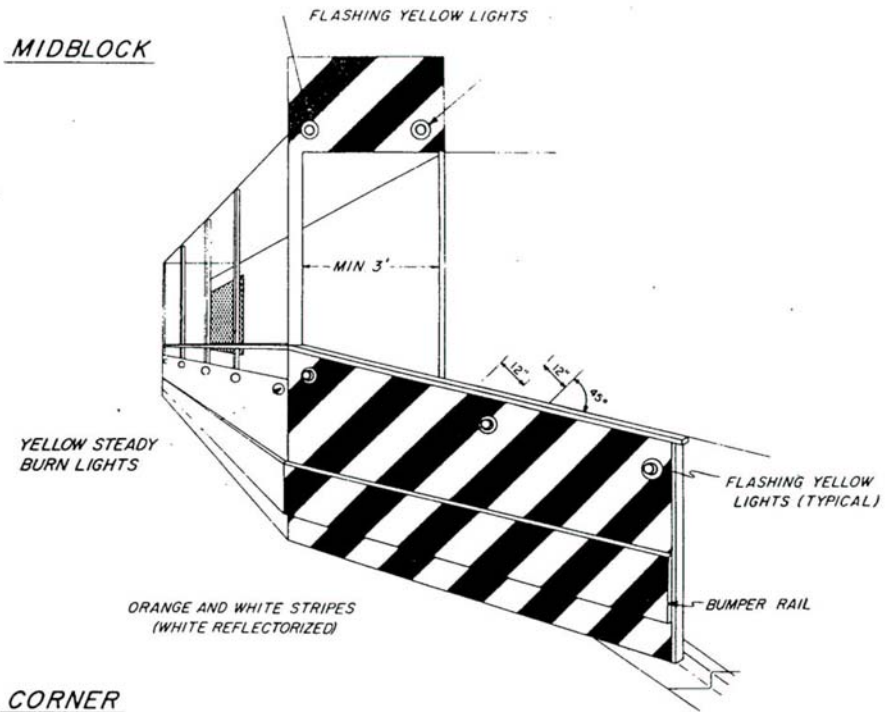
CLOSURE AT CENTER OF TWO-LANE ROAD  
FIGURE 10

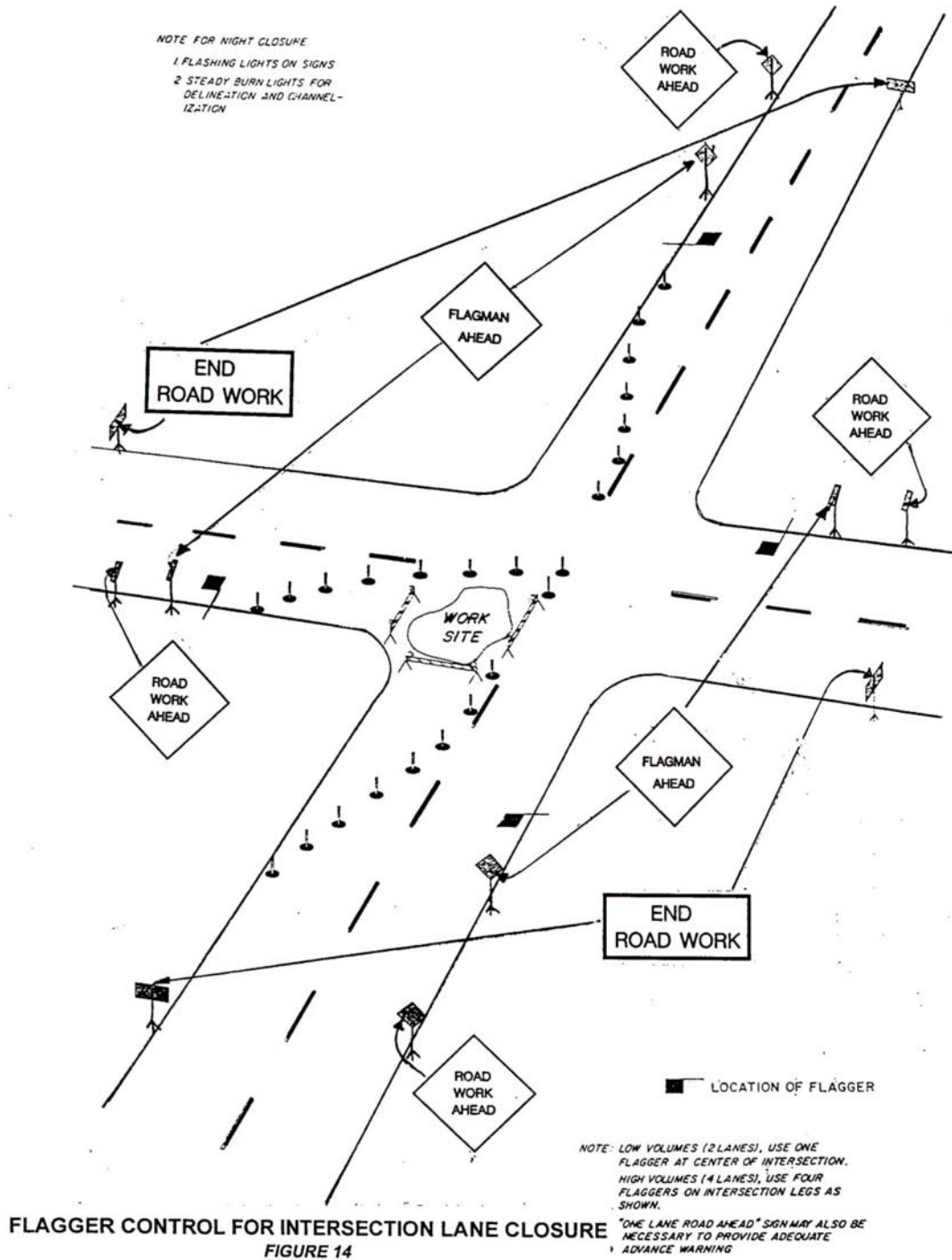


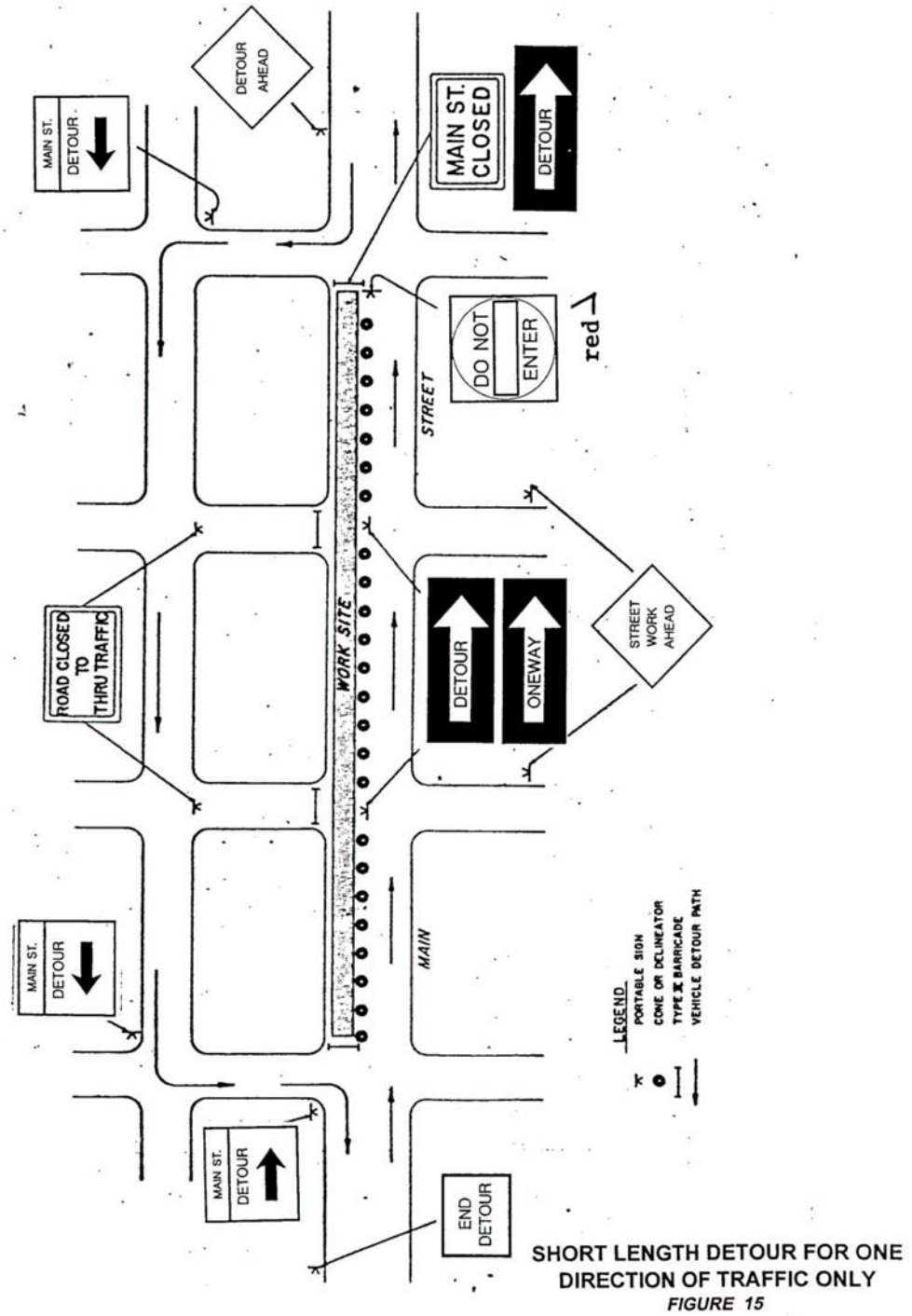
LANE CLOSURES FOR UTILITY TRENCH WITH PLATING  
 FIGURE 11

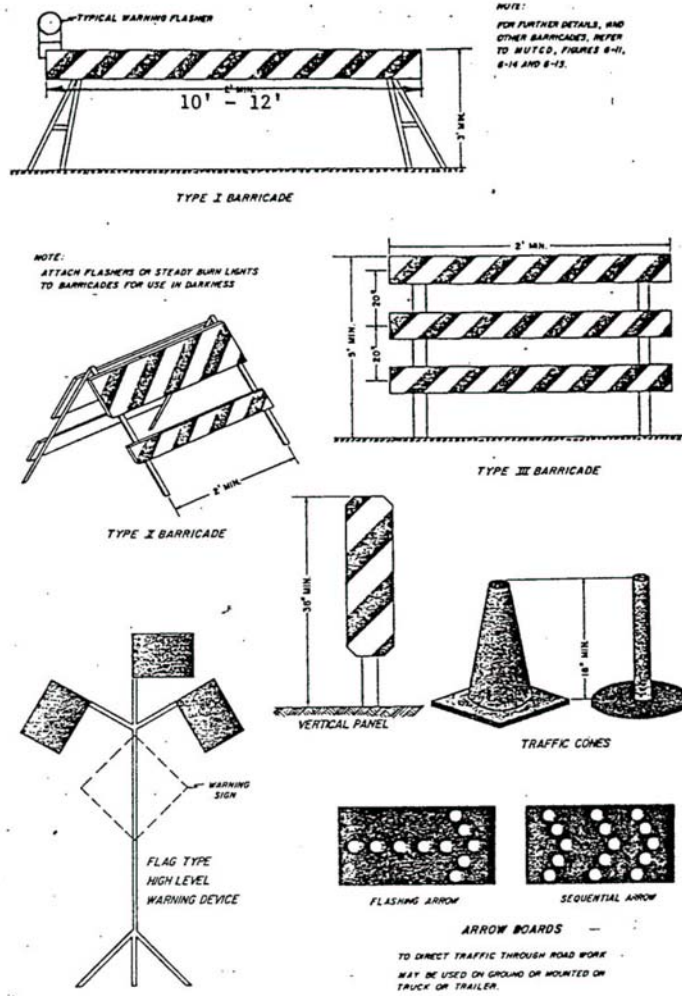












- Notes:**
- (1) All striping shall be reflectorized orange and white
  - (2) Contractor's name shall be on all barricades.

**BARRICADES AND DEVICES**  
**FIGURE 16**