

SECTION 01430**TRAFFIC CONTROL SIGNS THROUGH CONSTRUCTION AREAS FOR
MAINTENANCE OF TRAFFIC****01430.01 GENERAL****A. Description**

1. This work shall consist of furnishing and placing signs to control traffic, vehicular and pedestrian, through all construction areas on County and/or State Highways in accordance with the Traffic Control Plan (TCP), as directed by the Engineer, and/or as specified in the Contract Documents.
2. All traffic control signs used on construction, maintenance, and public utility operations under the jurisdiction of the County and/or State Highway Administration shall be in accordance with this section and the latest edition of the Manual on Uniform Traffic Control Devices.
3. Traffic control signs shall be installed at the beginning of construction operations and shall be properly maintained and/or operated during the time such conditions exist. They shall remain in place only as long as they are needed and shall be immediately removed thereafter. Where operations are performed in stages, only those devices that apply to existing traffic patterns shall be displayed. All other devices shall be removed, covered with opaque material, or turned so as not to be readable by oncoming traffic. Sign supports shall be constructed and erected in a workmanlike manner.
4. Signs for the purpose of controlling traffic shall not be obscured by weeds, trees, shrubbery, construction equipment, materials or spoil, personal vehicles, etc.
5. All traffic control signs (rigid or flexible) used at night shall be reflectorized to show the same shape and color as in daylight conditions. The sign background shall be the color/colors specified in the Manual on Uniform Traffic Control Devices.

B. Related Work Included Elsewhere

Traffic control plan; Section 01411.

C. Quality Assurance

The Engineer will inspect all materials before and/or after installation to ensure compliance with the Contract Documents.

D. Submittals

Certificates of compliance shall be submitted as specified in the "General Provisions" for sign materials stating that the materials meet the applicable requirements and/or standards specified herein.

01430.02 MATERIALS

A. Materials Furnished by the County

The County will not furnish any traffic control signs for the maintenance of traffic.

B. Contractor's Options

Not applicable.

C. Detailed Material Requirements

1. Reflective sheeting shall have either a wood or aluminum backing.
 - a. All wood sign panel backing shall be of 5/8 inch high density overlay exterior plywood. All aluminum sign panel backing shall have a minimum thickness of 0.10 inch. The chromate protective coating for flat sheet blanks shall meet the requirements of ASTM B 449, Class II, and shall be at least standard aluminum designation 3003 alloy.
 - b. Blanks shall be free of buckles, warps, dents, burrs, oil, and foreign contaminants prior to application of reflective sheeting.
2. Reflective Sheeting
 - a. The reflective sheeting shall be the encapsulated lens type meeting the latest requirements of Federal Highway Administration, Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects.
 - b. The color specified shall be matched visually and be within the color tolerance limits shown on the appropriate Highway Color Tolerance Charts issued by the Federal Highway Administration and utilizing the instructions thereon. Certification as to conformance with this requirement will be accepted by the Engineer.

c. Minimum reflective intensity values for encapsulated lens sheeting:

Observation Angle (°)	Entrance Angle (°)	Silver-White	Yellow	Red	Orange	Green	Blue
0.2	-4	250	170	45	100	45	20.0
0.2	+30	150	100	25	60	25	11.0
0.5	-4	95	62	15	30	15	7.5
0.5	+30	65	45	10	25	10	5.0

3. Signposts shall be 4 inch x 4-inch lumber.

01430.03 EXECUTION

A. General

All traffic control signs used on construction or maintenance work in both rural and urban areas shall be in accordance with the applicable sections of the Manual on Uniform Traffic Control Devices. Since it is not practical for the Manual on Uniform Traffic Control Devices to prescribe detailed standards of application for all the situations that may conceivably arise, the standards presented are for the most common situations. It is emphasized that they are for normal situations and that additional protection must be provided when special complexities and hazards prevail. Less protection may be warranted under special conditions as well. The variety of conditions encountered makes the establishment of inflexible arrangements totally impractical. Nothing in this specification shall be interpreted as precluding the application of engineering judgment. In all questions of interpretations, the judgment of the Engineer will be final.

B. Ground Mounted Signs

The placement of the signs shall be in accordance with the detailed dimensions shown in Manual on Uniform Traffic Control Devices or as shown on the approved TCP.

Signposts length shall be sufficient so that the buried portion will adequately and firmly support the sign.

The Contractor is responsible for mounting and maintaining signs in their proper location. This includes any necessary cleaning so that the signs are legible at all times.

C. Sign Replacement

Signs that become faded or illegible shall be replaced. Signs that are not new may be used, provided their reflective intensity at a divergence angle of 0.2 degrees and incidence angle of minus 4 degrees meets at least 60% of the values of Table 01430.02.

Signs damaged by traffic shall be replaced.

The acceptability of the signs shall be measured by means of a calibrated, one foot square test standard that meets 60% of the reflective requirements at a divergence angle of 0.2 degrees and incidence angle of minus 4 degrees from Section 01430.02, Paragraph C.2.c.

The calibrated sheeting shall be attached by temporary means to the sign in question and viewed at night from the portion of roadway that is being maintained through the construction area. The intent is to view the sign as the motorist sees it. If the sign has less intensity than the standard, it shall be rejected by the Engineer and replaced at the Contractor's expense.

01430.04 METHOD OF MEASUREMENT

All temporary traffic signs will be measured on the basis of the surface area of signs satisfactorily installed and/or replaced.

01430.05 BASIS OF PAYMENT

A. Traffic Control Signs

1. Payment for temporary traffic signs will be made at the price bid per square foot of sign furnished and installed. The price bid shall include the manufacture, erection, relocation, maintenance, replacement due to normal wear, removal of all signs, and labor, equipment, and incidentals necessary for the satisfactory use of the signs.
2. Payment for signs damaged by traffic will be made at the price bid per square foot for temporary traffic signs, and this price and payment will constitute full compensation for the manufacture and erection of the replacement signs.
3. Any relocation, maintenance, replacement, and/or removal due to normal wear and all labor, equipment, and incidentals will not be paid for but will be considered incidental to the original item for temporary traffic signs.
4. There will be no payment for any replacement of sign backing(s) or post(s). The replacement of sign backing(s) and post(s) are incidental to the item of temporary traffic signs.

B. Ownership of Removed Materials

Temporary traffic signs and all associated hardware, fittings, posts, brackets, and incidentals, when satisfactorily removed from the Project site, shall become the property of the Contractor.