

SECTION 01424**ARROW PANEL FOR MAINTENANCE OF TRAFFIC****01424.01 GENERAL****A. Description**

At those locations where a traffic lane is to be closed for purpose of construction, an arrow panel meeting the specifications noted below shall be used. The arrow panel shall supplement standard signing as required by the Manual on Uniform Traffic Control Devices, the Traffic Control Plan (TCP), and/or the Contract Documents.

B. Related Work Included Elsewhere

Traffic Control Plan; Section 01411.

C. Quality Assurance

The Contractor will be required to furnish the arrow panel(s) on site 24 hours in advance of actual use to insure the unit(s) are functioning properly.

D. Submittals

None.

01424.02 MATERIALS**A. Materials Furnished by the County**

The County will not furnish any materials for arrow panel for maintenance of traffic.

B. Contractor's Options

Self-contained trailer unit(s) shall be used unless otherwise specified.

C. Detailed Material Requirements

1. The arrow panel(s) may be self-contained, vehicle mounted or portable and may be Bemis Target Arrow Signs, a Dietz Arrow Board, a Cassell-Early Warner III, or equal as approved by the Engineer.
2. All arrow panels shall have a dimmer switch capable of reducing the light intensity 50%. The use of this dimmer switch shall be mandatory during the night operations of the arrow panel unit(s). Arrow panels shall also meet the following requirements:

- a. Self-Contained Trailer Unit
 - 1) The arrow panel shall be 48 inches high by 96 inches wide (nominal).
 - 2) The arrow panel shall contain a minimum of 15 sealed beam lamps No. 4412 A-Par 46 or equal as approved by the Engineer, amber in color, in accordance with the Institute of Traffic Engineers (ITE) specifications and mounted on a flat black background.
 - 3) The arrow panel shall flash at a rate of 25 to 36 flashes per minute with a dwell time of 50% of the cycle.
 - 4) The arrow panel shall be arranged with a double pointed arrow configuration capable of displaying a left arrow, right arrow, double arrow, and a caution mode; sequential chevron display is also acceptable if all operational modes can be displayed.
- b. Vehicle Mounted Arrow Panel
 - 1) The arrow panel shall be 36 inches high by 64 inches wide (nominal).
 - 2) The arrow panel shall contain a minimum of 13 sealed beam lamps No. 4412 A-Par 46 or equal as approved by the Engineer, amber in color, in accordance with the ITE specifications and mounted on a flat black background.
 - 3) The arrow panel shall flash at a rate of 25 to 35 flashes per minute with a dwell time of 50% of the cycle.
 - 4) The arrow panel shall be arranged with double pointed arrow configuration capable of displaying a left arrow, right arrow, double arrow, and a caution mode; sequential chevron display is also acceptable if all operational modes can be displayed.
- c. Portable Arrow Panels
 - 1) The arrow panels shall be 24 inches high by 48 inches wide (minimum).
 - 2) The arrow panel shall contain a minimum of thirteen 4-inch diameter lenses, amber in color, illuminated by No. 1295 GE lamps or equal as approved by the Engineer, or sealed beam lamps No. 4415A, in accordance with the ITE specifications and mounted on a flat black background.
 - 3) The arrow panel shall flash at a rate of 50 flashes per minute with a dwell time of 50% of the cycle.

- 4) The arrow panel shall be arranged with a double pointed arrow configuration capable of displaying a left arrow, right arrow, double arrow, and a caution mode; sequential chevron display is also acceptable if all operational modes can be displayed.

01424.03 EXECUTION**A. General**

1. Arrow panel(s) for maintenance of traffic shall be used when necessary to temporarily occupy any part of the traveled width of roadway which will restrict traffic, either on the project site or on any other existing roadway. Arrow panels shall not be placed without the approval of the Engineer. Where the County's TCP indicates that arrow panel(s) will be used, any alternate plans to the TCP must also include panel board(s).
2. On two-lane, bi-directional highways, arrow panel(s) shall be used only in the caution mode unless indicated otherwise by the TCP or the Engineer.

B. Maintenance

The Contractor is responsible for maintenance of the units, including cleaning, so as to provide maximum protection for and visibility to the traveling public.

C. Request for Lane Usage

The Contractor shall make a request to the Engineer for such lane usage 24 hours in advance of the time a traffic lane is desired to be made available to him for the prosecution of the work. Prior to opening the closed lane to traffic, the Contractor shall clear the lane of all material, equipment, and debris and shall leave it in a condition satisfactory to the Engineer for the resumption of its use by the public.

01424.04 METHOD OF MEASUREMENT

Measurement for arrow panel(s) will be made on a per each basis for the actual number of operational unit(s) used and approved by the Engineer on the Project each day or part of a day in unit days. A unit day shall consist of any approved usage within a 24-hour (calendar day) period. If a unit(s) is used for part of a day, it will be measured as a unit day. Relocation and reuse on the Project of a unit(s) will not be measured. The time required to comply with Section 01424.01, Article C, will be measured.

01424.05 BASIS OF PAYMENT**A. Arrow Panels**

Payment for arrow panel will be made at the price bid per unit day. The price bid shall include furnishing all labor, materials, equipment, tools, and incidentals required to set up and operate at the site as required and at any relocated sites as required by the approved Traffic Control Plan (TCP) or as directed by the Engineer. No payment will be made for subsequent moves of the arrow panel(s) within a given 24-hour period. Each arrow panel will be paid for only once per unit day regardless of how many times it is moved or replaced.

B. Ownership of Removed Materials

All arrow panels when satisfactorily removed from the Project site, shall become the property of the Contractor.