

Arrow Displays

Design Manual

Chapter 9

Traffic Control

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Arrow displays are special lighting devices used to warn and guide traffic. They are generally trailer-mounted and operate on a self-contained power source. An arrow display is used for advance warning when a lane is closed. It tells motorists that they should merge into the adjacent lane, as indicated by the direction of the arrow.

Since arrow displays are highly visible up to a mile away (1.5 kilometers), they are particularly effective under high-speed and high-density traffic conditions. At night, they are effective when other traffic control devices cannot provide adequate warning. During daylight hours, they provide advance warning of construction or maintenance activities that may be hidden from the motorist's view by high-volume traffic.

Arrow displays should be used for lane closures on multilane highways. When used for multiple lane closures, one arrow display may be used for each closed lane. The number of arrow displays must not exceed the number of lane closures. They should **NOT** be used under the following conditions:

- When the location of the work does not require any lanes to be closed,
- When all of the work is on or outside the shoulder and there is no interference which requires the adjacent traveled lane to be closed,
- On a normal two-lane, two-way roadway,
- When traffic is shifted out of its normal path and the number of traffic lanes remains the same.

Use of arrow displays under the above conditions will lead to the loss of credibility when they are used for lane closures.

Arrow displays should be located for optimum visibility. Care must be taken to avoid driver confusion in the vicinity of ramps, median crossovers, and sideroad intersections. In such cases, the arrow display should be placed on the shoulder near the beginning of the taper. Where the shoulders are too narrow or nonexistent, it should be placed in the closed lane behind the channelizing devices. Placement at the start of the taper is preferred to placement in the middle of the taper. Refer to Standard Road Plans RS-63 and RS-64 for the typical placement of arrow displays.

Arrow displays are capable of the following mode selections:

- Left or right flashing or sequential arrows,
- Left or right sequential chevrons,
- Double flashing arrows,
- Caution mode (4 or more lights arranged in a pattern which does not indicate direction).

In Iowa, left or right sequential chevrons are used for lane closures.