

**Section 12-3.39**

Use in projects where the posted speed limit is 55 MPH or greater, the closure charts have been modified to allow longer work windows and the work activities are likely to cause congestion and delay.

Include SSP 12-4.02C(10) "End of Queue Monitoring and Warning" and require end of queue monitoring and warning for at least the first 5 days of closures.

Consult with the District Traffic Manager and Construction Traffic Manager to determine the length of queue warning system. Specify a Type 1 system for an expected queue length of <3.5 miles. Specify a Type 2 system for an expected queue length of >3.5 miles, but <7 miles.

Bid Item 12107A TEMPORARY END OF QUEUE WARNING SYSTEM (Type 1) (DAY)

Bid Item 12108A TEMPORARY END OF QUEUE WARNING SYSTEM (Type 2) (DAY)

Replace section 12-3.39 with:

**12-3.39 TEMPORARY END OF QUEUE WARNING SYSTEM**

**12-3.39A General**

**12-3.39A(1) Summary**

**1**

Section 12-3.39 includes specifications for furnishing, maintaining and removing a temporary end of queue warning system.

**12-3.39A(2) Definitions**

**2**

Not Used.

**12-3.39A(3) Submittals**

**3**

Submit a weekly temporary end of queue warning system operation report. The report must include:

1. Date, time, message, county, route, direction, and post mile or station for each for each PCMS.
2. Date and time when the system is not operational
3. Date, time, location, and activity necessary to maintain system operational
4. The time and date for any system failures. Each failure entry must include:
  - 4.1 Description of the equipment that failed
  - 4.2 Cause of equipment malfunction
  - 4.3 Description of the work performed to correct the malfunction
  - 4.4 Time required to repair malfunction

**12-3.39A(4) Quality Assurance**

**4**

The system coordinator must be available at the project site within 2 hours.

**12-3.39B Materials**

**5**

The temporary end of queue warning system includes traffic sensors, a controller unit and PCMS.

**6**

The end of queue warning system must differentiate between periods of stopped traffic and periods with no traffic.

**7**

The temporary end of queue warning system must comply with Section 12-3.35 except, the system must display on the PCMS:

1. The messages shown, based on real time traffic speed data.
2. The default message ROAD WORK AHEAD when:
  - 2.1. The sensors do not detect a queue
  - 2.2. There is a power failure. The controller must restart automatically
  - 2.3. Communication is lost for more than 10 minutes
3. The message STOPPED TRAFFIC AHEAD when the speed drops below 5 MPH and the traffic sensors stop detecting.

**12-3.39C Construction**

**Use either paragraph 8 or 9 to specify when a temporary end of queue warning system is required. Edit the system type to require a Type 1 when the expected queue is less than 3 miles, and a Type 2 when the expected queue is more than 3 miles, but less than 7.5 miles.**

**8. Use to require the system in all closures. Delete when paragraph 9 is used.**

Provide a Type 1 temporary end of queue warning system per closure on a freeway, expressway or multilane conventional highway.

**9. Use when the system is not required in all closure locations. Insert the numbers of the closure charts that require the use of the system. Delete when paragraph 8 is used.**

Provide a Type 1 temporary end of queue warning system per closure at the locations shown on the following closure charts:

Lane Closure Chart No.

**10. Use to require end of queue monitoring and warning for the first 5 days of closures. Include SSP 12-3.39 “End of Queue Monitoring and Warning.” Edit number of days if necessary. Delete paragraph if not needed.**

Provide end of queue monitoring and warning for the first 5 closures days.

**11**

Place the traffic sensors and PCMS as shown.

**12**

Operate the temporary end of queue warning system only while work is in progress.

**13**

On entrance ramps within the maximum design queue, place a W3-4 sign downstream from the C23(CA) sign. Place a C23(CA) sign is on the ramp if one is not already in place.

**12-3.39D Payment**

**13**

If the temporary end of queue warning system malfunctions for a period of 4 hours or more, no payment will be made for the day.