## Traffic Backups Present

Watch for Slow Traffic

1. This plan is used in conjunction with applicable 2-lane freeway single left lane closure traffic control plan (with PCMs in advance of lane closure taper removed).

2. See Smart Work Zone System (SWZS) Special Provision or RFP for details.

3. Modifications to PCMs messages shall be accepted by the Engineer.

4. Adjust sizes/components to avoid conflicts with sequential arrow signs or other traffic control devices/narrow shoulders and ramps.

5. Locate PCMs per standard specification 1-10.3(3)C. PCMs may be placed on barrier/guardrail or within closure, transverse traffic drums optional.


7. In lieu of travel time readers, alternative methods (such as using traffic sensors/speed data) is acceptable when accurate within 5+/-.1 minutes.

8. Locate side fire traffic sensor prior to any open ramps.

9. If traffic queues reach 8 miles place additional PCMs at 9.5 miles. Repeater to remain 3/5 mile in advance of queue. Non-compliance unusual characters acceptable. Transverse traffic safety drums optional. Remove PCMs when dissipating queues are less than 6 miles.

10. Modify message traffic backup present / match for slow traffic.

### Traffic Condition

- **None**
- **(Blank)**
- **< 0.9**
- **0.91 TO 1.9**
- **1.91 TO 2.9**
- **2.91 TO 4.9**
- **4.41 TO 5.9**
- **5.91 TO 7.4**
- **7.41+**

### Trigger

- **SLOW** or **STOPPED**

### Traffic Sensors

- **PCMS 1**
- **PCMS 2**
- **PCMS 3**
- **PCMS 4**
- **PCMS 5**
- **PCMS 6**
- **PCMS 7**
- **PCMS 8**

### Traffic Control Plan

- **Not to Scale**

### Queue Location

<table>
<thead>
<tr>
<th>Queue Location (miles)</th>
<th>Traffic Sensors</th>
<th>PCMS 8</th>
<th>PCMS 7</th>
<th>PCMS 6</th>
<th>PCMS 5</th>
<th>PCMS 4</th>
<th>PCMS 3</th>
<th>PCMS 2</th>
<th>PCMS 1</th>
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<tr>
<td>None</td>
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<tr>
<td>&lt; 0.9</td>
<td>FF FF FF FF FF SL</td>
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<td>(Blank)</td>
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<tr>
<td>0.91 TO 1.9</td>
<td>FF FF FF FF FF SL</td>
<td>(Blank)</td>
<td>(Blank)</td>
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<tr>
<td>1.91 TO 2.9</td>
<td>FF FF FF FF FF SL</td>
<td>(Blank)</td>
<td>(Blank)</td>
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<tr>
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<tr>
<td>4.41 TO 5.9</td>
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<td>(Blank)</td>
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<td>5.91 TO 7.4</td>
<td>FF FF FF FF FF SL</td>
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<td>7.41+</td>
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### Notes

1. **One Plan** is used in conjunction with applicable 2-lane freeway single left lane closure traffic control plan (with PCMs in advance of lane closure taper removed).

2. See Smart Work Zone System (SWZS) Special Provision or RFP for details.

3. Modifications to PCMs messages shall be accepted by the Engineer.

4. Adjust sizes/components to avoid conflicts with sequential arrow signs or other traffic control devices/narrow shoulders and ramps.

5. Locate PCMs per standard specification 1-10.3(3)C. PCMs may be placed on barrier/guardrail or within closure, transverse traffic drums optional.


7. In lieu of travel time readers, alternative methods (such as using traffic sensors/speed data) is acceptable when accurate within 5+/-.1 minutes.

8. Locate side fire traffic sensor prior to any open ramps.

9. If traffic queues reach 8 miles place additional PCMs at 9.5 miles. Repeater to remain 3/5 mile in advance of queue. Non-compliance unusual characters acceptable. Transverse traffic safety drums optional. Remove PCMs when dissipating queues are less than 6 miles.

10. Modify message traffic backup present / match for slow traffic.
1. This plan is used in conjunction with applicable 2-lane freeway single left lane closure traffic control plan (with PCMs in advance of lane closure taper removed).

2. See SMART WORK ZONE SYSTEM (SWZS) SPECIAL PROVISION OR RFP for details.

3. Modifications to PCMs messages shall be accepted by the engineer.

4. Adjust sizes components to avoid conflicts with sequential arrow signs or other traffic control devices.

5. Locate PCMs per standard specification 1-10.3(3)C. PCMs may be placed on barrier/guardrail or within closure, transverse traffic drums optional.

6. Mixtures PCMs (5 wide, 12" characters) allowed for PCMs.

7. In lieu of travel time readers, alternative methods (such as using traffic sensors speed data) is acceptable when accurate within 5-10 minutes.

8. Locate side fire traffic sensor prior to any open ramps.

9. If frontage road is used, a PCM shall be placed on the side of the frontage road.

10. If traffic queues reach 8 miles place additional PCMs at 0.5 miles.

NOTES:

9-MILE SMART WORK ZONE SYSTEM
FREEWAY (2 LANES): SINGLE LEFT LANE CLOSURE

NOT TO SCALE

LEGEND

TRAFFIC SAFETY DRUM

TRAFFIC SENSOR

PORTABLE TRAVEL TIME READER

SEQUENTIAL ARROW SIGN

PORTABLE CHANGEABLE MESSAGE SIGN

PAN-PTL-ZOOM CAMERA

SEE NOTE 7

TC171

Department of Transportation
Washington State

TC171_TypicalTrafficControlPlans.dwg
Department of Transportation

9 MILE FREEWAY SINGLE LEFT LANE CLOSURE TRAFFIC CONTROL PLAN (WITH PCMS IN ADVANCE OF LANE CLOSURE TAPER REMOVED).
DESIGNER NOTES:

REGION TRAFFIC OFFICES WILL DETERMINE IF SMART WORK ZONE SYSTEMS ARE NEEDED FOR EACH PROJECT USING WORK ZONE TRAFFIC ANALYSIS FOR MORE INFORMATION SEE TRAFFIC MANUAL SECTION 5-17.A "Work Zone Queueing Mitigation" AND SECTION 5-9 "Work Zone Traffic Analysis".

A. FOR DESIGN-BID-BUILD PROJECTS: INCLUDE 3 OF THE "SMART WORK ZONE SYSTEM" GENERAL SPECIAL PROVISIONS LISTED BELOW:
1-10.3(3) OPT1 FR1 Specifications
1-10.4(2) OPT5 GR1 Measurement (Traffic Control as Bid Items)
1-10.5(2) OPT3 GR1 Payment

B. FOR DESIGN-BUILD PROJECTS: EMAIL STATE WORK ZONE ENGINEERS (HQWORKZONE@WSDOT.WA.GOV) FOR RFP SPECIFICATIONS UNTIL THEY ARE INCLUDED IN THE STATE-WIDE RFP TEMPLATE (ESTIMATED 2023).

C. IF ACTUAL QUEUES REGULARLY EXCEED 9 MILES, THIS SMART WORK ZONE SYSTEM SHOULD BE MODIFIED. CONTACT STATE WORK ZONE ENGINEERS (HQWORKZONE@WSDOT.WA.GOV) FOR GUIDANCE.

D. TO MATCH THE GENERAL SPECIAL PROVISIONS, TRAFFIC SAFETY DRUMS SHOULD BE USED AS SHOWN IN THE TRAFFIC CONTROL PLAN. HOWEVER, THE GSP AND TYPICAL TRAFFIC CONTROL PLAN CAN BE MODIFIED TO REFLECT REGION'S STANDARD PRACTICE REGARDING CHANNELIZATION DEVICES.

E. EXCEPT FOR DESIGN-BUILD PROJECTS WHEN THE RFP REQUIRES THEM, PAN- TILT-ZOOM CAMERAS (PTZ CAMERAS) ARE OPTIONAL AND MAY BE DELETED OR RELOCATED TO DIFFERENT PCMS AS DESIRED. THE PTZ CAMERAS ARE INTENDED TO BE USED REMOTELY BY THE REGION TRAFFIC MANAGEMENT CENTER TO MONITOR INCIDENTS AND QUEUING IN REAL TIME.

F. THE SIDE-FIRE RADAR IS USED TO OBTAIN VOLUME AND SPEED DATA PER GSP/RFP REQUIREMENTS. THE TRAFFIC SENSORS ARE TYPICALLY DOPPLER RADAR AND USED TO CONTROL THE PCMS MESSAGE DISPLAYS.

MODIFYING SMART WORK ZONE SYSTEM TRAFFIC CONTROL PLANS

THESE TRAFFIC CONTROL PLANS ARE TYPICAL AND MAY BE MODIFIED FOR SITE SPECIFIC SITUATIONS AND/OR WSDOT REGION TRAFFIC PRACTICES. CONTACT STATE WORK ZONE ENGINEERS (HQWORKZONE@WSDOT.WA.GOV) FOR ADDITIONAL GUIDANCE IF NEEDED.

THESE SMART WORK ZONE SYSTEMS ARE VERY ADAPTABLE TO A VARIETY OF SITUATIONS, INCLUDING BEING USED ON MULTIPLE ROADWAYS CONCURRENTLY LEADING INTO A QUEUED WORK ZONE.

9-MILE SMART WORK ZONE SYSTEM

FREEWAY (2 LANES): SINGLE LEFT LANE CLOSURE

NOT TO SCALE