1. THE SMART WORK ZONE SYSTEM USED IN CONJUNCTION WITH
FREEWAY (3 LANES): SMART WORK ZONE SYSTEM FOR SINGLE LEFT LANE CLOSURE
A 1-LANE FREEWAY SINGLE LEFT LANE CLOSURE TRAFFIC
(QUEUES UP TO 3 MILES)
CONTROL PLAN DELETES ANY PCMS SHOWN PRIOR TO LANE
CLOSED TAPER SHOWN ON THAT PLAN
2. SYSTEM TO BE OPERATED AND CONTROLLED BY A SMART
WORK ZONE SYSTEM ENGINEER IN COLLABORATION WITH THE TRAFFIC CONTROL SUPERVISOR
3. PLACE SYSTEM COMPONENTS AND PROGRAM ALL PCMS
MESSAGES AS SHOWN UNLESS MODIFICATIONS ARE ACCEPTED BY THE ENGINEER
4. TRAVERSE DRUMS NOT REQUIRED PRIOR TO SMART WORK
ZONE SYSTEM COMPONENTS WHEN PLACED BEHIND BARRIERS
5. PCMS 4 AND TRAFFIC SENSOR A ARE NOT REQUIRED FOR
CLOSING A CLOSED LANE.
6. LOCATE PCMS PER WSDOT STANDARD SPECIFICATION 1-10.3(3)C
7. ALL COMPONENTS MAY NOT BE REQUIRED DURING
ACTUAL TRAFFIC QUEUES. MODIFICATIONS TO BE ACCEPTED BY ENGINEER
8. QUEUE LENGTH IS CALCULATED FROM THE BEGINNING OF THE
FIRST LANE CLOSURE TAPER
9. IN THE EVENT OF A SYSTEM FAILURE SEE SPECIAL PROVISIONS
"SMART WORK ZONE SYSTEM FAILURE PROTOCOL"

NOTES:
- FF: Portable Changeable Message Sign
- PCMS 1-5: Portable Changeable Message Signs
- FF: Slow or stopped traffic
- FF: 35 mph Free Flow
- FF: FF: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF 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1. THIS SMART WORK ZONE SYSTEM IS USED IN CONJUNCTION WITH A SLIDE TAPER FROM A LEFT LANE CLOSURE TRAFFIC CONTROL PLAN DETERMINED BY ANY PCMS SHOWN PRIOR TO LANE CLOSURE TAPERS SHOWN ON THIS PLAN.

2. SYSTEM TO BE OPERATED AND CONTROLLED BY A SMART WORK ZONE SYSTEM TECHNICIAN INDEPENDENTLY BUT IN COLLABORATION WITH THE TRAFFIC CONTROL SUPERVISOR.

3. PLACE SYSTEM COMPONENTS AND PROGRAM ALL PCMS MESSAGES AS SHOWN UNLESS MODIFICATIONS ARE ACCEPTED BY THE ENGINEER.

4. TRAFFIC DRUMS NOT REQUIRED PRIOR TO SMART WORK ZONE SYSTEM COMPONENTS WHEN PLACED BEHIND BARRIER, BEHIND GROUND LINES WITHIN A CLOSED LANE.

5. LOCATE PCMS PER WSDOT STANDARD SPECIFICATION 1-10.3(3C).

6. ALL COMPONENTS MAY NOT BE NEEDED DEPENDING ON ACTUAL TRAFFIC QUEUES. MODIFICATIONS TO BE ACCEPTED BY ENGINEER.

7. QUEUE LENGTH IS CALCULATED FROM THE BEGINNING OF THE SECOND LANE CLOSURE TAPER.

8. IN THE EVENT OF A SYSTEM FAILURE SEE SPECIAL PROVISIONS "SMART WORK ZONE SYSTEM FAILURE PROTOCOL".

NOTE:

1. Queue length measured from here (see Note 7).

LEGEND

- Temporary sign location
- Traffic safety drum
- Traffic sensor
- Portable travel time reader
- Sequential arrow sign
- PCMS portable changeable message sign

FREEWAY (3 LANES): SMART WORK ZONE SYSTEM FOR DOUBLE LEFT LANE CLOSURE

Queues Up to 3 Miles

NOT TO SCALE
**DESIGNER NOTES:**

A. INCLUDE THE "SMART WORK ZONE SYSTEM" GENERAL SPECIAL PROVISION THAT IS NOW AVAILABLE IN THE CONTRACT SPECIAL PROVISIONS.

B. IF EXPECTED QUEUES EXCEED 3 MILES, SEE MORE COMPLEX SYSTEM ON TC162.

C. THESE TRAFFIC CONTROL PLANS ARE TYPICAL AND MAY BE MODIFIED FOR SITE SPECIFIC SITUATIONS AND/OR WSDOT REGION TRAFFIC PRACTICES.

D. TO MATCH THE GENERAL SPECIAL PROVISIONS, TRAFFIC SAFETY DRUMS SHOULD BE USED AS SHOWN IN THE TRAFFIC CONTROL PLAN.

E. WARNING LIGHTS ON CHANNELIZATION DEVICES ARE OPTIONAL, CONTACT REGION TRAFFIC OFFICES FOR THEIR POLICY.

F. VERTICAL PANEL CHANNELIZATION DEVICES SHALL NOT BE USED.

**MODIFYING SMART WORK ZONE SYSTEM TRAFFIC CONTROL PLANS**

IF ACTUAL QUEUES ARE LESS THAN EXPECTED, THIS SMART WORK ZONE SYSTEM CAN BE SIMPLIFIED:

IF QUEUES ARE LESS THAN 2 MILES:

- DELETE PCMS 5
- DELETE TRAFFIC SENSOR D

IF QUEUES ARE LESS THAN 1 MILE:

- SIMPLY USE PCMS 1 & PCMS 2 MESSAGES AS SHOWN IN TYPICAL FREEWAY LANE CLOSURE TRAFFIC CONTROL PLANS (SEE BELOW).

**PCMS 1**

<table>
<thead>
<tr>
<th>SLOW TRAFFIC #</th>
<th>NEXT</th>
<th>AHEAD</th>
<th>MILES</th>
<th>2.0 SEC</th>
<th>2.0 SEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCMS 1</td>
<td>1</td>
<td>1</td>
<td>MILE</td>
<td>CLOSED</td>
<td>CLOSED</td>
</tr>
</tbody>
</table>

**PCMS 2**

<table>
<thead>
<tr>
<th>LEFT</th>
<th>1 MILE</th>
<th>LANE AHEAD</th>
<th>CLOSED</th>
<th>2.0 SEC</th>
<th>2.0 SEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCMS 2</td>
<td>1</td>
<td>1</td>
<td>MILE</td>
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**PCMS 2**

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<tbody>
<tr>
<td>PCMS 2</td>
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<td>1</td>
<td>MILE</td>
<td>CLOSED</td>
<td>CLOSED</td>
</tr>
</tbody>
</table>

FIELD LOCATE AT LEAST ½ MILE IN ADVANCE OF PCMS.

RELOCATE AS NEEDED TO REMAIN 1½ MILE IN ADVANCE OF QUEUE.

PCMS MAY BE TRUCK MOUNTED IF SO. THE THREE TRANSMISSIBLE DRUMS ARE OPTIONAL.

REMOVE WHEN QUEUE NO LONGER PRESENT.

- APPROXIMATE QUEUE LENGTHS ROUNDED UP TO NEAREST MILE

LOCATE DRUMS PER WSDOT STANDARD SPECIFICATION 1-10.10C.

**FREEWAY (3 LANES): SMART WORK ZONE SYSTEM FOR DOUBLE LEFT LANE CLOSURE**

(QUEUES UP TO 3 MILES)

NOT TO SCALE