NOTES:

1) CONTROLS SHOWN ARE FOR PEDESTRIAN TRAFFIC ONLY.

2) A 50 IN. PEDESTRIAN PATH WIDTH SHOULD BE MAINTAINED (48 IN. IS THE MINIMUM THAT SHALL BE MAINTAINED WITH APPROVAL OF THE ENGINEER). GRAVEL IS NOT AN ACCESSIBLE SURFACE.

3) CONTACT AND COORDINATE WITH IMPACTED SCHOOL DISTRICTS, FIRE DEPARTMENTS, AND TRANSIT AGENCIES PRIOR TO IMPLEMENTING ANY CLOSURES.

4) SEE STANDARD DRAWING PC.K1.3 FOR TEMPORARY PEDESTRIAN RAMP DETAILS.

5) ADA PEDESTRIAN FACILITIES MUST BE MAINTAINED, SEE THE CURRENT EDITION OF THE WSDOT STANDARD SPECIFICATIONS. SECTION 1-10.

6) TEMPORARY PEDESTRIAN PUSH BUTTONS SHALL BE PLACED ON THE DIVERTED PATH WHEN EXISTING BUTTONS ARE NOT ACCESSIBLE TO PEDESTRIANS.

7) MAINTAIN MINIMUM 11-FOOT VEHICULAR Lanes AT ALL TIMES, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

8) THE SIGNS SHOWN ON THIS SHEET ARE IN ADDITION TO ANY CLASS A SIGNS NECESSARY FOR DELINEATION OF THE WORK ZONE (THAT ARE TO REMAIN FOR THE DURATION OF THE PROJECT).

9) PEDESTRIANS MAY BE ESCORTED THROUGH THE WORK ZONE BY FLAGGERS OR OTHER MEANS PROVIDED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. WHEN THE CONTRACTOR IS NOT ON SITE, PEDESTRIAN ACCESS MUST BE PROVIDED.

10) SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.

11) AUDIBLE WARNING DEVICE, WHEN USED, SHALL BE BATTERY POWERED, WEATHER RESISTANT, ABLE TO BE PROGRAMMED WITH A USB, INCLUDE A LOCATOR TONE AND PUSH BUTTON TO ACCESS THE RECORDED MESSAGE, ABLE TO BE SECURED IN THE FIELD TO A FIXED OBJECT, COORDINATE AUDIBLE MESSAGE WITH PIERCE COUNTY TRAFFIC ENGINEERING.

12) PEDESTRIAN CHANNELIZING DEVICES SHALL MEET PROWAG CRITERIA, INCLUDING:

- BE DETECTABLE TO USERS OF LONG CANES AND THOSE WITH LOW VISION;
- WHEN EXPOSED TO VEHICULAR TRAFFIC, SHALL BE CRASHWORTHY AND SHALL HAVE RETROREFLECTIVE SHEETING APPROPRIATE FOR NIGHTTIME USE.

LEGEND

- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- PEDESTRIAN CHANNELIZING DEVICES
- TEMPORARY PEDESTRIAN RAMP FOR SIDEWALKS
NOTES:
1) CONTROLS SHOWN ARE FOR PEDESTRIAN TRAFFIC ONLY.
2) A 60 IN. PEDESTRIAN PATH WIDTH SHOULD BE MAINTAINED (48 IN. IS THE MINIMUM THAT SHALL BE MAINTAINED WITH APPROVAL OF THE ENGINEER). GRAVEL IS NOT AN ACCESSIBLE SURFACE.
3) CONTACT AND COORDINATE WITH IMPACTED SCHOOL DISTRICTS, FIRE DEPARTMENTS, AND TRANSIT AGENCIES PRIOR TO IMPLEMENTING ANY CLOSURES.
4) SEE STANDARD DRAWING PC.K1.3 FOR TEMPORARY PEDESTRIAN RAMP DETAILS.
5) ADA PEDESTRIAN FACILITIES MUST BE MAINTAINED, SEE THE CURRENT EDITION OF THE WSDOT STANDARD SPECIFICATIONS. SECTION 1-10.
6) TEMPORARY PEDESTRIAN PUSH BUTTONS SHALL BE PLACED ON THE DIVERTED PATH WHEN EXISTING BUTTONS ARE NOT ACCESSIBLE TO PEDESTRIANS.
7) MAINTAIN MINIMUM 11-FOOT VEHICULAR LANE AT ALL TIMES, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
8) THE SIGNS SHOWN ON THIS SHEET ARE IN ADDITION TO ANY CLASS A SIGNS NECESSARY FOR DELINEATION OF THE WORK ZONE (THAT ARE TO REMAIN FOR THE DURATION OF THE PROJECT).
9) PEDESTRIANS MAY BE ESCORTED THROUGH THE WORK ZONE BY FLAGGERS OR OTHER MEANS PROVIDED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. WHEN THE CONTRACTOR IS NOT ON SITE, PEDESTRIAN ACCESS MUST BE PROVIDED.
10) SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.
11) AUDIBLE WARNING DEVICE, WHEN USED, SHALL BE BATTERY POWERED, WEATHER RESISTANT, ABLE TO BE PROGRAMMED WITH A USB, INCLUDE A LOCATOR TONE AND PUSH BUTTON TO ACCESS THE RECORDED MESSAGE, ABLE TO BE SECURED IN THE FIELD TO A FIXED OBJECT. COORDINATE AUDIBLE MESSAGE WITH PIERCE COUNTY TRAFFIC ENGINEERING.
12) PEDESTRIAN CHANNELIZING DEVICES SHALL MEET PROWAG CRITERIA, INCLUDING:
   - BE DETECTABLE TO USERS OF LONG CANES AND THOSE WITH LOW VISION;
   - WHEN EXPOSED TO VEHICULAR TRAFFIC, SHALL BE CRASHWORTHY AND SHALL HAVE RETROREFLECTIVE SHEETING APPROPRIATE FOR NIGHTTIME USE.

LEGEND

<table>
<thead>
<tr>
<th>Sign</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>✧ Permanent sign location/audible warning device</td>
<td></td>
</tr>
<tr>
<td>□ Channelizing devices</td>
<td></td>
</tr>
<tr>
<td>‡ Temporary channelizing devices</td>
<td></td>
</tr>
<tr>
<td>☑ Temporary pedestrian ramp for sidewalks</td>
<td></td>
</tr>
</tbody>
</table>

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COUNTY ENGINEER

INTERSECTION PEDESTRIAN TRAFFIC CONTROL
SHEET 2 OF 2

Office of the County Engineer

PC.K1.2
NOTES

1) THIS DESIGN ASSUMES OPTIMAL CONDITIONS AND A STANDARD CURB HEIGHT OF 6 INCHES. INSTALLED RAMPS SHALL BE NO STEEPER THAN 1:12:1, AND SHALL HAVE A CROSS-SLOPE OF 2% OR LESS. USE SHIMS OR GROUT AS REQUIRED TO ADJUST FOR EXISTING CONDITIONS AND TO PREVENT ROCKING. SHIMS SHALL BE NO HIGHER THAN 1 INCH, AND SHALL BE SECURED TO THE RAMP. FOR CURBS SHORTER THAN 6 INCHES, INSTALL A RAMP ON THE SIDEWALK, NO STEEPER THAN 1:12:1, MADE OF GROUT OR AS APPROVED BY THE ENGINEER. ADJUSTMENTS TO THE RAMP DIMENSIONS SHOWN MAY BE REQUIRED TO MATCH EXISTING CONDITIONS.

2) THE DETECTABLE WARNING PATERN SHALL BE INSTALLED ONLY WHEN THE INTENT IS TO GUIDE PEDESTRIANS DIRECTLY ACROSS THE ROADWAY (CROSSWALK). SEE WSDOT STANDARD PLAN F-45.10 AND STANDARD DRAWING PC-F8.4 FOR DETAILS.

3) SCREWS SHALL BE USED TO SECURE THE RAMP SURFACE. SPACING SHALL BE IN ACCORDANCE WITH THE CURRENT BUILDING CODE.

4) USE A SLIP-RESISTANT SURFACE FOR THE RAMP SURFACE. SPACING SHALL BE IN ACCORDANCE WITH THE CURRENT BUILDING CODE.

5) ALL FASTENERS SHALL BE GALVANIZED.

6) DO NOT INSTALL A HAND RAILING IF USING THE EDGE BOARD OPTION.

TEMPORARY PEDESTRIAN RAMP WITH EDGE BOARD

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PC.K1.3
**SIGN SPACING = X (1)**

<table>
<thead>
<tr>
<th>TYPE OF ROADWAY</th>
<th>POSTED SPEED</th>
<th>SIGN SPACING (FT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RURAL ROADS AND URBAN ARTERIALS</td>
<td>45 MPH</td>
<td>500 ±</td>
</tr>
<tr>
<td>RURAL ROADS AND URBAN ARTERIALS</td>
<td>35 / 40 MPH</td>
<td>350 ±</td>
</tr>
<tr>
<td>RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL, AND BUSINESS DISTRICTS</td>
<td>25 / 30 MPH</td>
<td>200 ± (2)</td>
</tr>
</tbody>
</table>

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND DRIVeways.
(2) TWO SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

**MINIMUM SHOULDER TAPER LENGTH = L/3 (FT)**

<table>
<thead>
<tr>
<th>SHOULDER WIDTH (FT)</th>
<th>POSTED SPEED (MPH)</th>
<th>TAPER TANGENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>25 30 45 40 45</td>
<td>35 45</td>
</tr>
<tr>
<td>10</td>
<td>40 60 90 90 120</td>
<td>30 60</td>
</tr>
</tbody>
</table>

USE A 3 DEGREE TAPER FOR SHOULDERS LESS THAN 6 FT WIDE.

**CHANNELIZATION DEVICE SPACING (FT)**

<table>
<thead>
<tr>
<th>POSTED SPEED (MPH)</th>
<th>TAPER TANGENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 - 30</td>
<td>20 40</td>
</tr>
</tbody>
</table>

**BUFFER DATA (B, R)**

<table>
<thead>
<tr>
<th>LONGITUDINAL BUFFER SPACE = B</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPH</td>
</tr>
<tr>
<td>LENGTH (FT)</td>
</tr>
</tbody>
</table>

**BUFFER VEHICLE ROLL AHEAD DISTANCE = R**

TRANSPORTABLE ATTENUATOR:
MINIMUM HOST VEHICLE WEIGHT 15,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.

PROTECTIVE VEHICLE:
MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA.

NOTES:
1) NO ENCROACHMENT IN TRAVELED LANE. IF ENCROACHMENT IS NECESSARY, LANE SHALL BE CLOSED.
2) DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20 FEET ON CENTER.
3) ALL SIGNS ARE BLACK OR ORANGE.
4) NO FLAGGERS OR SPOTTERS.
5) IF USED, PLACE SIGN IN ADVANCE OF WORK ZONE IN ACCORDANCE WITH THE SIGN SPACING TABLE. SHIFT ALL OTHER SIGNS ACCORDINGLY.
6) MAINTAIN MINIMUM 11-FOOT LANES AT ALL TIMES.
7) SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.

---

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COUNTY ENGINEER

Office of the County Engineer

**SHOULDER CLOSURE**

PC.K3.1
### Sign Spacing = X (1)

<table>
<thead>
<tr>
<th>Type of Roadway</th>
<th>Posted Speed</th>
<th>Sign Spacing (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural Roads and Urban Arteriels</td>
<td>45 MPH</td>
<td>500 ±</td>
</tr>
<tr>
<td>Rural Roads, Urban Arteriels, Residential, and Business Districts</td>
<td>35 / 40 MPH</td>
<td>350 ±</td>
</tr>
<tr>
<td></td>
<td>25 / 30 MPH</td>
<td>200 ± (2)</td>
</tr>
</tbody>
</table>

(1) All spacing may be adjusted to accommodate intersections and driveways.
(2) This spacing may be reduced in urban areas to fit roadway conditions.

### Minimum Shoulder Taper Length = L/3 (ft)

<table>
<thead>
<tr>
<th>Shoulder Width (ft)</th>
<th>Posted Speed (mph)</th>
<th>Taper Tangent</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>35 - 45</td>
<td>60</td>
</tr>
<tr>
<td>10</td>
<td>25 - 30</td>
<td>20 - 40</td>
</tr>
</tbody>
</table>

Use a 3-device taper for shoulders less than 8 feet wide.

### Channelization Device Spacing (ft)

<table>
<thead>
<tr>
<th>Posted Speed (mph)</th>
<th>Taper</th>
<th>Taper Tangent</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 - 45</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>25 - 30</td>
<td>20</td>
<td>40</td>
</tr>
</tbody>
</table>

### Buffer Data (B, R)

<table>
<thead>
<tr>
<th>Longitudinal Buffer Space (B)</th>
<th>MPH</th>
<th>25</th>
<th>30</th>
<th>35</th>
<th>40</th>
<th>45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length (ft)</td>
<td>155</td>
<td>200</td>
<td>250</td>
<td>305</td>
<td>360</td>
<td></td>
</tr>
</tbody>
</table>

Buffer Vehicle Roll Ahead Distance = R
Transportable Attenuator
Minimum Host Vehicle Weight 15,000 lbs. The maximum weight shall be in accordance with the manufacturer's recommendation. 100 feet max.

Protective Vehicle
May be a work vehicle strategically located to shield the work area.

### PCMS

<table>
<thead>
<tr>
<th><em>LANE</em></th>
<th>WATCH FOR SLOW TRAFFIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 LANE CLOSED AHEAD</td>
<td>2 SEC</td>
</tr>
</tbody>
</table>

Field locate 2 mile in advance of lane closure signing.

---

**Legend**

- ☮ TRAFFIC SAFETY DRUM
- ≧ TEMPORARY SIGN LOCATION
- ≫ SEQUENTIAL ARROW SIGN
- ![Transportable Attenuator](Note 9)
- ![Portable Changeable Message Sign](PCMS)

---

**Notes:**

1. No flags or spotters.
2. Extend taper at L/3 across shoulder.
3. Devices shall not encroach into the adjacent lane.
4. Use transverse devices in closed lane every 1000 feet (recommended).
5. Device spacing for the downstream taper shall be 20 feet, on center.
6. All signs are black on orange.
7. Maintain minimum 11-foot lanes at all times.
8. See special provisions for work hour restrictions.
9. Attenuator required where posted speed limit is 45 MPH. Otherwise, used at contractor's discretion and expense.
10. Lane closures require 72-hour public notice via PCMS. Otherwise, approved by the engineer. Coordinate PCMS message with Pierce County traffic engineering.

---

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---

**Brian D. Stacy, P.E.**

**County Engineer**

Office of the County Engineer

---

**Double-Lane Closure Multi-Lane Roadway**

---

**PC.K3.3**
**SIGN SPACING = X (1)**

<table>
<thead>
<tr>
<th>TYPE OF ROADWAY</th>
<th>POSTED SPEED</th>
<th>SIGN SPACING (FT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RURAL ROADS AND URBAN ARTERIALS</td>
<td>45 MPH</td>
<td>500 ±</td>
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<tr>
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<td>35 / 40 MPH</td>
<td>350 ±</td>
</tr>
<tr>
<td>RURAL ROADS, URBAN ARTERIALS,</td>
<td>25 / 30 MPH</td>
<td>200 ± (2)</td>
</tr>
<tr>
<td>RESIDENTIAL, AND BUSINESS DISTRICTS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND DRIVEWAYS. (2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

---

**MINIMUM LANE CLOSURE TAPER LENGTH = L (FT)**

<table>
<thead>
<tr>
<th>LANE WIDTH (FT)</th>
<th>POSTED SPEED (MPH)</th>
<th>TAPER</th>
<th>TANGENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>25</td>
<td>30</td>
<td>40</td>
</tr>
<tr>
<td>11</td>
<td>115</td>
<td>165</td>
<td>225</td>
</tr>
<tr>
<td>12</td>
<td>125</td>
<td>180</td>
<td>245</td>
</tr>
</tbody>
</table>

**CHANNELIZATION DEVICE SPACING (FT)**

<table>
<thead>
<tr>
<th>POSTED SPEED (MPH)</th>
<th>TAPER</th>
<th>TANGENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 - 45</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>25 - 30</td>
<td>20</td>
<td>40</td>
</tr>
</tbody>
</table>

---

**BUFFER DATA (B, R)**

<table>
<thead>
<tr>
<th>LONGITUDINAL BUFFER SPACE = B</th>
</tr>
</thead>
<tbody>
<tr>
<td>LENGTH (FT)</td>
</tr>
<tr>
<td>155</td>
</tr>
<tr>
<td>200</td>
</tr>
<tr>
<td>250</td>
</tr>
<tr>
<td>305</td>
</tr>
<tr>
<td>360</td>
</tr>
</tbody>
</table>

**BUFFER VEHICLE ROLL AHEAD DISTANCE = R**

TRANSPORTABLE ATTENUATOR
MINIMUM HOST VEHICLE WEIGHT 15,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.

PROTECTIVE VEHICLE MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA.

---

**LEGEND**

- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- SEQUENTIAL ARROW SIGN
- PROTECTIVE VEHICLE (NOTE 6)
- PORTABLE CHANGEABLE MESSAGE SIGN

---

**NOTES:**

1) NO FLAGGERS OR SPOTTERS.
2) EXTEND DEVICE TAPER AT 1/3 ACROSS SHOULDER, 3 DEVICES MINIMUM.
3) ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.
4) MAINTAIN MINIMUM 11-FOOT LANES AT ALL TIMES.
5) SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.
6) PROTECTIVE VEHICLE REQUIRED WHERE POSTED SPEED LIMIT IS 45 MPH. OTHERWISE, USED AT CONTRACTOR'S DISCRETION AND EXPENSE.
7) LANE CLOSURES REQUIRE 72-HOUR PUBLIC NOTICE VIA PCMS, UNLESS OTHERWISE APPROVED BY THE ENGINEER. COORDINATE PCMS MESSAGE WITH PIERCE COUNTY TRAFFIC ENGINEERING.

---

**BRIAN D. STACY, P.E.**
COUNTY ENGINEER

---

**LEFT LANE AND TWO-WAY LEFT-TURN LANE CLOSURE FIVE-LANE ROADWAY**

---

**PCMS**
1 2
CENTER LANE CLOSURE
NO LEFT TURNS
2 SEC 2 SEC
FIELD LOCATE IN ADVANCE OF TEMPORARY SIGNS

---

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---

**NOT TO SCALE**
**SIGN SPACING = X (1)**

<table>
<thead>
<tr>
<th>TYPE OF ROADWAY</th>
<th>POSTED SPEED (MPH)</th>
<th>SIGN SPACING (FT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RURAL ROADS AND URBAN ARTERIALS</td>
<td>45</td>
<td>500</td>
</tr>
<tr>
<td>RURAL ROADS AND URBAN ARTERIALS</td>
<td>35 / 40</td>
<td>350</td>
</tr>
<tr>
<td>RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL, AND BUSINESS DISTRICTS</td>
<td>25 / 30</td>
<td>200 x (2)</td>
</tr>
</tbody>
</table>

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND DRIVEWAYS. (2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

**MINIMUM LANE CLOSURE TAPER LENGTH = L (FT)**

<table>
<thead>
<tr>
<th>LANE WIDTH (FT)</th>
<th>POSTED SPEED (MPH)</th>
<th>TAPER</th>
<th>TANGENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>25</td>
<td>30</td>
<td>35-45</td>
</tr>
<tr>
<td>20</td>
<td>105</td>
<td>150</td>
<td>205-270</td>
</tr>
<tr>
<td>11</td>
<td>115</td>
<td>165</td>
<td>225-285</td>
</tr>
<tr>
<td>12</td>
<td>125</td>
<td>180</td>
<td>245-320</td>
</tr>
</tbody>
</table>

**CHANNELIZATION DEVICE SPACING (FT)**

<table>
<thead>
<tr>
<th>POSTED SPEED (MPH)</th>
<th>TAPER</th>
<th>TANGENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>35-45</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>25-30</td>
<td>20</td>
<td>40</td>
</tr>
</tbody>
</table>

**BUFFER DATA (B, R)**

<table>
<thead>
<tr>
<th>LONGITUDINAL BUFFER SPACE = B</th>
</tr>
</thead>
<tbody>
<tr>
<td>LENGTH (FT)</td>
</tr>
<tr>
<td>155</td>
</tr>
<tr>
<td>200</td>
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<tr>
<td>250</td>
</tr>
<tr>
<td>305</td>
</tr>
<tr>
<td>360</td>
</tr>
</tbody>
</table>

**BUFFER VEHICLE ROLL AHEAD DISTANCE = R**

TRANSPORTABLE ATTENUATOR
MINIMUM HOST VEHICLE WEIGHT 15,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURER’S RECOMMENDATION.

PROTECTIVE VEHICLE
MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA.

30 FEET MIN. 100 FEET MAX.

PORTABLE CHANGEABLE MESSAGE SIGN

---

**PCMS #1**

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEFT LANE CLOSURE</td>
<td>1 MILE AHEAD</td>
</tr>
<tr>
<td>2 SEC 2 SEC FIELD LOCATE IN ADVANCE OF TEMPORARY SIGNS</td>
<td></td>
</tr>
</tbody>
</table>

**PCMS #2**

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>LANE SHIFTS AT LEFT</td>
<td>1 MILE AHEAD</td>
</tr>
<tr>
<td>2 SEC 2 SEC FIELD LOCATE IN ADVANCE OF TEMPORARY SIGNS</td>
<td></td>
</tr>
</tbody>
</table>

---

**LEGEND**

- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- TRANSPORTABLE ATTENUATOR (NOTE 7)
- PORTABLE CHANGEABLE MESSAGE SIGN

---

**NOT TO SCALE**

NOTES:

1) NO FLAGGERS OR SPOTTERS.
2) FOR SPEED LIMITS OF 30 MPH OR LESS, USE W1-3 SIGN INSTEAD OF W1-4 SIGN.
3) EXTEND DEVICE TAPER AT L/3 ACROSS SHOULDER, 3 DEVICES MINIMUM.
4) ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.
5) MAINTAIN MINIMUM 11-FOOT LANE AT ALL TIMES.
6) SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.
7) ATTENUATOR REQUIRED WHERE POSTED SPEED LIMIT IS 45 MPH. OTHERWISE, USED AT CONTRACTOR'S DISCRETION AND EXPENSE.
8) LANE CLOSURES REQUIRE 72-HOUR PUBLIC NOTICE VIA PCMS, UNLESS OTHERWISE APPROVED BY THE ENGINEER. COORDINATE PCMS MESSAGE WITH PIERCE COUNTY TRAFFIC ENGINEERING.

---

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---

**LEFT SHIFT THREE-LANE ROADWAY**

---

**PC.K3.6**
SIGN SPACING = X (1)

<table>
<thead>
<tr>
<th>TYPE OF ROADWAY</th>
<th>POSTED SPEED</th>
<th>SIGN SPACING (FT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RURAL ROADS AND URBAN ARTERIARIES</td>
<td>45 MPH</td>
<td>500 ±</td>
</tr>
<tr>
<td>RURAL ROADS AND URBAN ARTERIARIES</td>
<td>35 / 40 MPH</td>
<td>350 ±</td>
</tr>
<tr>
<td>RURAL ROADS, URBAN ARTERIARIES,</td>
<td>25 / 30 MPH</td>
<td>200 ± (2)</td>
</tr>
<tr>
<td>RESIDENTIAL, AND BUSINESS DISTRICTS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) ALL SPACINGS MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

BUFFER DATA (B, R)

<table>
<thead>
<tr>
<th>MILE (FT)</th>
<th>25</th>
<th>30</th>
<th>35</th>
<th>40</th>
<th>45</th>
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<tbody>
<tr>
<td>LENGTH (FT)</td>
<td>155</td>
<td>200</td>
<td>250</td>
<td>305</td>
<td>360</td>
</tr>
</tbody>
</table>

BUFFER VEHICLE ROLL AHEAD DISTANCE = R

TRANSPORTABLE ATTENUATOR
MINIMUM MOST VEHICLE WEIGHT 16,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURER’S RECOMMENDATION.

PROTECTIVE VEHICLE
MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA.

NO SPECIFIED DISTANCE REQUIRED

50 TO 100 FT.
6-DEVICE MIN.

50 TO 300 FT.

MINIMUM LANE CLOSURE

TAPER LENGTH = L (FT)

<table>
<thead>
<tr>
<th>LANE WIDTH (FT)</th>
<th>POSTED SPEED (MPH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>105 150 205 270 450</td>
</tr>
<tr>
<td>11</td>
<td>115 165 225 295 495</td>
</tr>
<tr>
<td>12</td>
<td>125 180 245 320 450</td>
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</tbody>
</table>

NOT TO SCALE

LEGEND

| FLAGGING STATION | TEMPORARY SIGN LOCATION | CHANNELIZING DEVICES | PROTECTIVE VEHICLE (NOTE 7) |

| W20-1            | 48 IN. x 48 IN.          | W20-4                | 48 IN. x 48 IN.          |
| W20-7A           | 48 IN. x 48 IN. (OPTIONAL IF 40 MPH OR LESS) |

50 TO 100 FT.
6-DEVICE MIN.

50 TO 300 FT.

50 TO 100 FT.
6-DEVICE MIN.

50 TO 100 FT.
6-DEVICE MIN.

50 TO 300 FT.

NOTES:
1) ALL SIGNS ARE BLACK ON ORANGE.
2) EXTEND DEVICE TAPER AT L/3 ACROSS SHOULDER, 3 DEVICES MINIMUM.
3) IF A SIGNAL IS PRESENT, IT SHALL BE SET TO “RED FLASH MODE” DURING FLAGGING OPERATIONS.
4) NIGHT WORK REQUIRES ADDITIONAL ROADWAY LIGHTING AT FLAGGING STATIONS. SEE THE STANDARD SPECIFICATIONS FOR ADDITIONAL DETAILS.
5) MAINTAIN MINIMUM 11-FOOT LANES AT ALL TIMES.
6) SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.
7) PROTECTIVE VEHICLE REQUIRED WHERE POSTED SPEED LIMIT IS 45 MPH. OTHERWISE, USED AT CONTRACTOR’S DISCRETION AND EXPENSE.
8) LANE CLOSURES REQUIRE 72-HOUR PUBLIC NOTICE VIA PCMS, UNLESS OTHERWISE APPROVED BY THE ENGINEER. COORDINATE PCMS MESSAGE WITH PIERCE COUNTY TRAFFIC ENGINEERING.

Pierce County
Public Works
Office of the County Engineer
Tacoma Mall Office Building
4301 South Pine Street, Suite 628
Tacoma, Washington 98409
An APWA Accredited Agency

BRIAN D. STACY, P.E.
COUNTY ENGINEER

ONE LANE, TWO-WAY TRAFFIC CONTROL WITH FLAGGERS

Office of the County Engineer

PC.K4.1
NOTES:
1) EXTEND DEVICE TAPER AT L/3 ACROSS SHOULDER, 3 DEVICES
   MINIMUM.
2) IF A SIGNAL IS PRESENT, IT SHALL BE SET TO "RED FLASH MODE"
   DURING FLAGGING OPERATIONS.
3) LAW ENFORCEMENT OFFICER(S) MAY BE USED INSTEAD OF FLAGGERS
   TO CONTROL INTERSECTION TRAFFIC.
4) FOR SPEED LIMIT OF 30 MPH OR LESS USE W1-3 SIGN INSTEAD OF
   W1-4 SIGN.
5) MAINTAIN A MINIMUM OF ONE ACCESS POINT FOR EACH BUSINESS
   WITHIN WORK AREA LIMITS.
6) ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.
7) MAINTAIN MINIMUM 11-FOOT LANES AT ALL TIMES.
8) SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.
9) PROTECTIVE VEHICLE REQUIRED WHERE POSTED SPEED LIMIT IS 45
   MPH. OTHERWISE, USED AT CONTRACTORS DISCRETION AND EXPENSE.
10) LANE CLOSURES REQUIRE 72-HOUR PUBLIC NOTICE VIA PCMS, UNLESS
    OTHERWISE APPROVED BY THE ENGINEER. COORDINATE PCMS
    MESSAGE WITH PIERCE COUNTY TRAFFIC ENGINEERING.

LEGEND
- FLAGGING STATION
- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- PROTECTIVE VEHICLE (SEE NOTE 9)
- OPTIONAL IF 40 MPH OR LESS

INTERSECTION LANE CLOSURE
THREE-LANE ROADWAY

Pierce County
Planning & Public Works
Office of the County Engineer

01/21/2021

INTERSECTION LANE CLOSURE
THREE-LANE ROADWAY

STANDARD DRAWING PC.K4.3

TYPE OF ROADWAY | POSTED SPEED | SIGN SPACING = X (1)
<table>
<thead>
<tr>
<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>RURAL ROADS AND URBAN ARTERIALS</td>
<td>45 MPH</td>
<td>500 ±</td>
</tr>
<tr>
<td>RURAL ROADS AND URBAN ARTERIALS</td>
<td>35 / 40 MPH</td>
<td>350 ±</td>
</tr>
</tbody>
</table>
| RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL, AND BUSINESS DISTRICTS | 25 / 30 MPH | 200 ± (2)

1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS
   AND DRIVEWAYS
2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY
   CONDITIONS

BUFFER DATA (B, R)

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<thead>
<tr>
<th>LONGITUDINAL BUFFER SPACE = B</th>
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<tbody>
<tr>
<td>MPH</td>
</tr>
<tr>
<td>LENGTH (FT)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BUFFER VEHICLE ROLL AHEAD DISTANCE = R</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRANSPORTABLE ATTENUATOR</td>
</tr>
<tr>
<td>MINIMUM HOST VEHICLE WEIGHT 15,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.</td>
</tr>
<tr>
<td>30 FEET MIN. TO 100 FEET MAX.</td>
</tr>
<tr>
<td>PROTECTIVE VEHICLE</td>
</tr>
<tr>
<td>MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA.</td>
</tr>
<tr>
<td>NO SPECIFIED DISTANCE REQUIRED</td>
</tr>
</tbody>
</table>

<p>| CHANNELIZATION DEVICE SPACING (FT) |</p>
<table>
<thead>
<tr>
<th>POSTED SPEED (MPH)</th>
<th>TAPER</th>
<th>TANGENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 - 45</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>25 - 30</td>
<td>20</td>
<td>40</td>
</tr>
</tbody>
</table>

<p>| MINIMUM LANE CLOSURE TAPER LENGTH = L (FT) |</p>
<table>
<thead>
<tr>
<th>LANE WIDTH (FT)</th>
<th>POSTED SPEED (MPH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>10</td>
<td>105</td>
</tr>
<tr>
<td>11</td>
<td>115</td>
</tr>
<tr>
<td>12</td>
<td>125</td>
</tr>
</tbody>
</table>

NOT TO SCALE