PCMS 1
PCMS 2

SLOW TRAFFIC AHEAD
LEFT REDUCED LANE SPEED CLOSED
2.0 SEC 2.0 SEC
2.0 SEC 2.0 SEC

FIELD LOCATE AT LEAST 1000' IN ADVANCE OF PCMS 2.
RELOCATE AS NEEDED IN ADVANCE OF QUEUE.

PCMS MAY BE TRUCK DEPENDENT SO THE DISTANCE SPACING VALUES ARE OPTIONAL.
REMOVE WHEN QUEUE NO LONGER PRESENT.

= APPROXIMATE DISTANCE TO NEAREST MILE
LOCATE PCMS PER MORTGAGEMENT 1-8 JUNE.

SECTIONS

NOTE:
1. DISTANCE BETWEEN LANE CLOSURE TAPER AND ALL OPEN RAMPS SHALL BE 500' MINIMUM.
2. IF FEASIBLE AVOID PLACING LANE CLOSURE TAPER WITHIN LIMITS OF HORIZONTAL CURVES.
3. AS ORDERED BY THE ENGINEER ADDITIONAL SPEED RADAR DISPLAY SIGNS MAY BE USED 500' PRIOR TO EACH WORK CREW WITHIN WORK AREA.
4. PLACE TRANSVERSELY ACROSS CLOSURE AT A 45° ANGLE WITH 5' SPACEING AT STRATEGIC LOCATIONS OR EVERY 1000' +/-.
5. ALL SPEED LIMIT SIGNS CONDUCTING WITH WORK ZONE SPEED LIMIT SHALL BE CENTERED PER STANDARD SPECIFICATIONS 8-21.3(3).
6. REOPENING TAPER OPTIONAL TO ALLOW FOR CONSTRUCTION VEHICLES TO ACCELERATE STRAIGHT OUT OF WORK AREA INTO THE LEFT LANE.
7. OPTIONAL PERMANENT SPEED LIMIT SIGNS ARE WITHIN 1900' OF THE REOPENING TAPER.
8. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
9. THE TRAFFIC CONTROL PLAN IS APPLICABLE TO SHORT-TERM AND INTERMEDIATE TERM DURATION LANE CLOSURES OF 3 DAYS OR LESS.

NOTE:
PCMS1
PORTABLE CHANGEABLE MESSAGE SIGN
TRANSPORTABLE ATTENUATOR
R2-1 (B/W)
50 MPH
60 MPH

LEGEND

TYPICAL TRAFFIC CONTROL PLANS

TAPER LENGTH = L/3
SHOULDER WIDTH = WIDTH

TC244, SHEET 2 AND 3.

SHEET
PAGE

NOTES:

FREEWAY (2 LINES): SINGLE LEFT LANE CLOSURE WITH NO LANE SHIFTS
(60 MPH TO 50 MPH VARIABLE WORK ZONE SPEED LIMIT REDUCTION)
NOT TO SCALE

WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION

TYPICAL TRAFFIC CONTROL PLANS
NOTES:
1. FOR LEGEND, TABLES, AND ADDITIONAL NOTES: SEE TC244, SHEET 1.
2. ACTUAL NUMBER OF LANES MAY VARY.

OPEN RIGHT EXIT-RAMP DETAIL
NOT TO SCALE

CLOSED RIGHT EXIT-RAMP DETAIL
RIGHT EXIT-RAMPS ARE TO REMAIN OPEN WITH THIS LEFT LANE CLOSURE CONFIGURATION

OPEN RIGHT ON-RAMP DETAIL
NOT TO SCALE

CLOSED RIGHT ON-RAMP DETAIL
NOT TO SCALE

Notes:
- Left lane closure configuration
- Right exit ramps are to remain open

Freeway (2+ lanes): Single left lane closure with no lane shifts
(60 MPH to 50 MPH variable work zone speed limit reduction)

1. For legend, tables, and additional notes: See TC244, Sheet 1.
2. Actual number of lanes may vary.
NOTES:
1. FOR LEGEND, TABLES, AND ADDITIONAL NOTES: SEE TC244, SHEET 1.
2. ACTUAL NUMBER OF LANES MAY VARY.
3. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.

OPEN LEFT EXIT-RAMP DETAIL

CLOSED LEFT EXIT-RAMP DETAIL

FREEWAY (2+ LANES): SINGLE LEFT LANE CLOSURE WITH NO LANE SHIFTS
(60 MPH TO 50 MPH VARIABLE WORK ZONE SPEED LIMIT REDUCTION)

FILE NAME: TC244-1L Lane 60to50WZSL.dgn
DATE: 3/19/2019
TIME: 10:25:57 AM
DRAWN BY: F. LINTZ
CHECKED BY: S. HAAPALA
PLOTTER: LINTZF
PLANNED USE: WORK ZONE TCPs

Washington State Department of Transportation
TYPICAL TRAFFIC CONTROL PLANS
TC244

REGIONAL ADM.: F. LINTZ
REVISION: 3
DATE: 3/19/2019
FILE: Work Zone TCPs (OPTIONAL)
DESIGNER NOTES:
A. SEE WSDOT PROJECT DELIVERY MEMO 19-01 IN REGARDS TO FREEWAY WORK ZONE VARIABLE REGULATORY SPEED LIMIT AND ADVISORY SPEED IMPLEMENTATION. IN ADDITION, SEE WSDOT EXECUTIVE ORDER 19-02 THAT PROVIDES GUIDELINES REGARDING USE OF ADVISORY SPEEDS IN WORK ZONES, CONTACT WSDOT REGION TRAFFIC OFFICES FOR ADDITIONAL INFORMATION.
B. THESE TRAFFIC CONTROL PLANS ARE TYPICAL AND MAY BE MODIFIED FOR SITE SPECIFIC SITUATIONS AND/OR WSDOT REGION TRAFFIC PRACTICES. CONTACT WSDOT REGION TRAFFIC OFFICES FOR ANY MODIFICATIONS OF THE WORK ZONE VARIABLE REGULATORY SPEED LIMIT OR ADVISORY SPEED.
C. THE SIGN SIZES SHOWN ARE TYPICAL AND MEET MINIMUM SIZES REQUIRED PER MUTCD ON FREEWAYS FOR TEMPORARY TRAFFIC CONTROL.
D. IN REGARDS TO ADVANCED WARNING SIGN PLACING: PER MUTCD SECTION 6C.04 PARAGRAPH 06, TABLE 5-A, TABLE 5-A has been modified per WAC 468-95-300. ARE RECOMMENDED DISTANCES AND INTERVALS FOR GUIDANCE PURPOSES ONLY AND SHOULD BE ADJUSTED FOR FIELD CONDITIONS. REDUCING FIELD SPACING TO 1200' +/- IS ACCEPTABLE. A MINIMUM SPACING OF 1200' +/- SHOULD BE USED ON FREEWAY MAINLINES ONLY WHEN NECESSARY. ADVISORY SIGNS AND RADAR SPEED DISPLAY SIGNS CAN BE SPACED AT 600' +/-.
E. PER WAC 468-95-300, ALL SIGN SPACING MAY BE ADJUSTED TO ACADUIMATE INTERCHANGE RAMP SPACING, ON-RAMP SPACING IS TYPICALLY 200' +/-, EVEN IN SUBURBAN AND RURAL AREAS, BUT CAN BE REDUCED AS NEEDED TO FIT.
F. WHEN POSITIONED BEHIND CHANNELIZATION DEVICES, TEMPORARY SIGNS SHOULD BE MOUNTED AT 5' MINIMUM.
G. PER MUTCD 6H-33, USING PCMS FOR FREEWAY LANE CLOSURES IS NOT REQUIRED. PCMS 1 IS OPTIONAL, AND INTENDED ONLY TO BE USED WHEN WORK ZONE TRAFFIC QUEUES ARE EXPECTED TO EXTEND BEHIND THE WZ-1 SIGN. ADDITIONAL INFORMATION REGARDING ACTIVE QUEUE DETECTION TECHNOLOGY, CONTACT STEVE HAAALPA (HAAALPA@WSDOT.WA.GOV) OR FRED LINTZ (LINTZ@WSDOT.WA.GOV). PCMS 2 IS RECOMMENDED; FREEWAY LANE CLOSURES DO NOT REQUIRE A PCMS. PCMS 3 IS OPTIONAL TO HIGHLIGHT EXIT-RAMP CLOSURES.
H. THE RADAR SIGNAL DISPLAY SIGN (RDS) IS OPTIONAL FOR FREEWAY LANE CLOSURES NOT SHOWN ON THE SHOULDER CLOSURE TAPER TABLE. USE CHANNELIZATION DEVICES SPACING, BUFFER, AND ROLL AHEAD DISTANCES.
I. WHEN WITHIN THE REDUCED WORK ZONE SPEED LIMIT ZONE, THE DESIGN SPEED IS THE WORK ZONE SPEED LIMIT. THE SPEED LIMIT MAY BE MODIFIED (FOR SIGN SPACING, TAPERS, CHANNELIZATION DEVICES SPACING, BUFFER, AND ROLL AHEAD DISTANCES.
J. WARNING LIGHTS ON CHANNELIZATION DEVICES ARE OPTIONAL; CONTACT REGION TRAFFIC OFFICES FOR THEIR POLICY.
K. CHANNELIZATION DEVICES MAY BE MODIFIED FROM THOSE SHOWN ON THESE TYPICAL PLANS. PER MUTCD, THE MINIMUM REQUIRED DEVICE ON HIGH-SPEED ROADWAYS IS A 28' REFLECTIVE CONE.
L. VERTICAL PANEL CHANNELIZATION DEVICES SHALL NOT BE USED.
M. CHANNELIZATION DEVICE SPACING TABLE IS BASED ON WAC 468-95-101; HOWEVER, DEVICE SPACING MAY BE REDUCED.
N. TAPER LENGTHS ARE BASED ON MUTCD TABLES 6C-1 AND 6C-4. TAPER LENGTHS SHALL MEET OR EXCEED THIS SPECIFIED RATE WITHOUT EXCEPTION. THE TAPER DISTANCES PROVIDED ON THIS TYPICAL TRAFFIC CONTROL PLAN WERE BASED ON THE ASSUMPTION OF 15' LANES. BECAUSE SHOULDER WIDTHS VARY, A SHOULDER CLOSURE TAPER TABLE IS INCLUDED TO ADDRESS VARIOUS WIDTHS.
O. PER MUTCD FIGURE 6H-33, SEQUENTIAL ARROW BOARDS SHALL BE USED FOR ALL FREEWAY LANE CLOSURE TAPERS. EACH LANE CLOSURE SHALL HAVE A SEPARATE SEQUENTIAL ARROW BOARD. SEQUENTIAL ARROW BOARDS SHALL NOT BE USED FOR LANE SHIFTS, RAMPS, OR AT ON-RAMP MERGES.
P. PER MUTCD FIGURE 6H-33, LONITUAL BUFFER SPACES ARE OPTIONAL. THEIR USE IS RECOMMENDED WHEN NECESSARY, IF THE DESIGN BUFFER SPACE IS NOT AVAILABLE THE BUFFER SPACE SHOULD BE MODIFIED. THE BUFFER CAN EXCEED THE DESIGN BUFFER DISTANCE (THUS "MIN" IS USED).
Q. THE TRANSVERSE BUFFER (LATERALLY BETWEEN TRAVEL LANE AND WORK AREA) IS RECOMMENDED AS 2-Foot BUT MAY BE INCREASED AS DESIRED:

FREEWAY (2+ LANES): SINGLE LEFT LANE CLOSURE WITH NO LANE SHIFTS (60 MPH TO 50 MPH VARIABLE WORK ZONE SPEED LIMIT REDUCTION) NOT TO SCALE

R. PER MUTCD Figure 6H-33, TRANSPORTABLE ATTENUATORS ARE OPTIONAL BUT THEIR USE IS STRONGLY RECOMMENDED FOR FREEWAY LANE CLOSURES. TRANSPORTABLE ATTENUATORS SHOULD BE PLACED IN CLOSED LANE ADJACENT TO TRAFFIC PRIOR TO SEPARATE WORK AREAS, PARTICULARLY AFTER OPEN TEMPORARY EXIT-RAMPS AND OPEN TEMPORARY ON-RAMPS. EITHER PROTECTIVE VEHICLES OR TRANSPORTABLE ATTENUATORS CAN BE PLACED IN THE ADDITIONAL CLOSED LANES EXCEPT THE CLOSED LANE ADJACENT TO TRAFFIC.
S. PLACING CHANNELIZATION DEVICES TRANSVERSELY (AT 45° AND 5-FOOT SPACING) IS AN EFFECTIVE TECHNIQUE TO MOVE ERRANT DRIVERS BACK OUT OF CLOSED LANES AND SHOULDER.
T. PER MUTCD FIGURE 6H-33, THE REOPENING TAPER IS OPTIONAL.
U. A TAPERED TEMPORARY EXIT-RAMP IS TYPICALLY USED WITH A TYPICAL 20' TAPER RATE.
V. THE ON-RAMP SHIFT CAN OCCUR THROUGH THE PAVED GORE INSTEAD AT THE END OF THE GORE, PAVEMENT MARKINGS BUT VERIFY CROSS-SLOPE IS TRAVERSIBLE, PAVEMENT THICKNESS IS ADEQUATE, CATCH BASINS/BOXES ARE TRAFFIC BEARING TYPES.
W. A PARALLEL TEMPORARY ON-RAMP IS TYPICALLY USED BASED ON WSDOT DESIGN MANUAL EXHIBIT 13D.01B. THE ON-RAMP IS SHIFTED ACROSS EACH CLOSED LANES AT 1/2 PER CLOSED LANE SHOWN. THE SHOWN IS FOLLOWED BY A 20' ON-RAMP MERGE TAPER. IT IS IMPORTANT TO UNDERSTAND MUTCD FIGURE 6H-44 TYPICAL APPLICATION IS GUIDANCE PER MUTCD SECTION 6H.01.
X. TO DISCOURAGE WORK ZONE INTRUSIONS, DEVICE SPACING IS REDUCED BY HALF ACROSS CLOSED EXIT-RAMPS BETWEEN THE "EXIT CLOSED" SIGN AND THE END OF THE EXIT-RAMP'S PAVED GORE.
Y. ACTUAL WORK AREA LIMITS CAN BE MODIFIED.
Z. RAMP DETOUR SIGNAGE IS RECOMMENDED BY MUTCD 6C.09. IT IS RECOMMENDED TO USE ROUTE SPECIFIC DETOUR SIGNAGE FOR SIGNIFICANT RAMP CLOSURES.
AA. THE ROUTE SPECIFIC DETOUR ROUTE SIGN INCLUDES EITHER AN INTERSTATE SHIELD (FOR FREEWAY RAMPS), HIGHWAY SHIELDS (FOR STATE HIGHWAY RAMPS), OR ROADWAY DESCRIPTION. IF THE RAMP IS TO A SPECIFIC ROUTE DIRECTION, INCLUDE ITS DIRECTION. MAXIMIZE THE SHIELDS, TEXT SIZE, AND ARRANGES TO FIT ON THE 48X48" SIGN.
BB. THIS TRAFFIC CONTROL PLAN IS NOT APPLICABLE WHEN HOV-RESTRICTED LANES ARE PRESENT. FOR FREEWAYS WITH LEFT LANE HOV RESTRICTIONS, SEPARATE TYPICAL TRAFFIC CONTROL PLANS ARE RECOMMENDED. THE EXISTING LIMIT CAN BE MODIFIED (FOR SIGN SPACING, TAPERS, CHANNELIZATION DEVICES SPACING, BUFFER, AND ROLL AHEAD DISTANCES.
CC. THIS TRAFFIC CONTROL PLAN IS NOT APPLICABLE WHEN EXPRESS TOLL LANE(S) ARE PRESENT. FOR FREEWAYS WITH EXPRES TOLL LANE(S), CONTACT REGION TRAFFIC OFFICE WHEN DEVELOPING PLANS.

FILE_NAME: C:\Users\LintzF\Desktop\Work Zone TCPs\TC244\01\02\TC2440104.dgn
TIME: 10:25:55 AM
DATE: REDACTED
PLOTTED BY: LINTZ
DESIGNED BY: HAAALPA & LINTZ
ENTRIVED BY: LINTZ
CHECKED BY: S. HAAALPA
REVISION: 0
DATE: 0

DESIGNER GUIDANCE

Washington State
Department of Transportation