

TAPER, BUFFER ZONE & SIGN SPACING CHART

ROAD TYPE	POSTED SPEED MPH (S)	MINIMUM TAPER LENGTH (L) FT	LENGTH OF BUFFER (BZ) FT	MINIMUM SIGN SPACING (SS) FT				ONE LANE TWO-WAY FLAGGING TAPER LENGTH FT
				A	B	C	D	
CONVENTIONAL	30 AND LOWER	180	200	100	100	100	100	50
	35	245	250	350	350	350	175	
	40	320	305					
	45	540	360					
	50	600	425					
FREEWAY/ EXPRESSWAY	55	660	495	500	500	500	250	100
	60	720	570					
	65	780	645					
	70	840	730	1000	1640	2640	500	
	75	900	820					
80	960	910						

1- TAPER LENGTH FORMULAS

SPEED	FORMULA
FOR SPEEDS OF 40 MPH AND LESS	$L = \frac{WS}{80}$
FOR SPEEDS OF 45 MPH AND GREATER	$L = WS$

L = TAPER LENGTH IN FEET
W = WIDTH OF OFFSET IN FEET
S = SPEED IN MPH

$\frac{1}{2}$ L = FOR SHOULDER CLOSURE TAPER
 $\frac{1}{2}$ L = FOR LANE SHIFT TAPER

2- CHANNELIZING DEVICES

A) MERGING AND SHIFTING TAPERS: USE A MINIMUM OF 1 DEVICE PER FT OF LANE CLOSURE WIDTH, PLUS 1 ADDITIONAL DEVICE TO START.

B) SHOULDER, ONE-LANE TWO-WAY, AND DOWNSTREAM TAPERS: USE A MINIMUM OF 1 DEVICE PER 3 FT OF WIDTH (OR PORTION THEREOF), PLUS 1 ADDITIONAL DEVICE TO START.

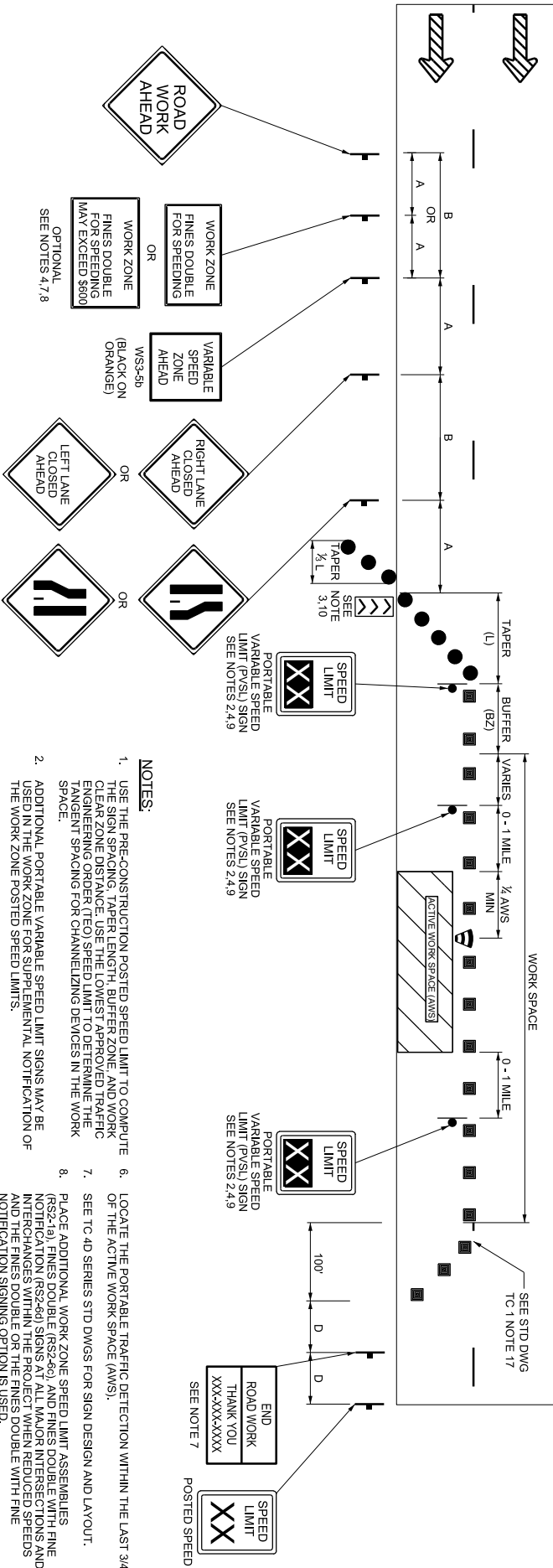
C) ON TANGENT: $S \times 2 =$ SPACING UP TO 120 FT MAXIMUM.

D) LENGTH OF BUFFER ZONE (BZ) IS THE DISTANCE FROM END OF LANE CLOSURE TAPER TO WORK SPACE, OR ANY OBSTRUCTION PRIOR TO WORK SPACE.

TRAFFIC CONTROL DEVICE LEGEND

- PORTABLE VARIABLE SPEED LIMIT SIGN WITH DETECTOR
- SIGN
- CHANNELIZING DEVICE (SEE STD DWG TC 2A)
- DRUMS OR DIRECTIONAL INDICATOR BARRICADE (SEE STD DWG TC 2A)
- ARROW BOARD
- DIRECTION OF TRAFFIC
- PORTABLE TRAFFIC DETECTION (SEE NOTE 6)

SEE STD DWG TC 4C FOR PROJECT LIMIT SIGNING



NOTES:

- USE THE PRE-CONSTRUCTION POSTED SPEED LIMIT TO COMPUTE THE SIGN SPACING. TAPER LENGTH, BUFFER ZONE, AND WORK CLEAR ZONE DISTANCE. USE THE LOWEST APPROVED TRAFFIC ENGINEERING ORDER (TEO) SPEED LIMIT TO DETERMINE THE TANGENT SPACING FOR CHANNELIZING DEVICES IN THE WORK SPACE.
- ADDITIONAL PORTABLE VARIABLE SPEED LIMIT SIGNS MAY BE USED IN THE WORK ZONE FOR SUPPLEMENTAL NOTIFICATION OF THE WORK ZONE POSTED SPEED LIMITS.
- PLACE ARROW BOARD ON SHOULDER WHEN AVAILABLE. PLACE ARROW BOARD IN FIRST 1/3 OF THE CLOSED LANE WHEN NO ADEQUATE SHOULDER IS AVAILABLE.
- FINES DOUBLE (RS2-60) AND FINES DOUBLE WITH FINE NOTIFICATION (RS2-60) SIGNS MAY BE USED INTERCHANGEABLY.
- USE IDENTICAL LEGEND SUPPLEMENTAL LEFT SIDE SIGNING FOR HIGH-SPEED DIVIDED HIGHWAYS.
- LOCATE THE PORTABLE TRAFFIC DETECTION WITHIN THE LAST 3/4 OF THE ACTIVE WORK SPACE (AWS).
- SEE TC 4D SERIES STD DWGS FOR SIGN DESIGN AND LAYOUT.
- PLACE ADDITIONAL WORK ZONE SPEED LIMIT ASSEMBLIES (RS2-1a), FINES DOUBLE (RS2-60), AND FINES DOUBLE WITH FINE NOTIFICATION (RS2-60) SIGNS AT ALL MAJOR INTERSECTIONS AND INTERCHANGES WITHIN THE PROJECT WHEN REDUCED SPEEDS OR FINES DOUBLE WITH FINE NOTIFICATION SIGNING OPTION IS USED.
- REDUCED SPEEDS WILL NOT BE ALLOWED WITHOUT THE APPROPRIATE APPROVAL. SEE STD DWG TC 1, NOTE 12. SPEED LIMIT MUST REMAIN WITHIN THE APPROVED TRAFFIC ENGINEERING ORDER (TEO) LIMITS.
- USE SHOULDER TAPER WHEN ARROW BOARD IS PLACED ON SHOULDER.

PORTABLE VARIABLE SPEED LIMIT (PVSL) WORK ZONE SIGNING