

TCS Job Aid

#1 - ADVANCED WARNING AREA

Advanced Warning Area Sign Spacing (Table 6C-1):

ROAD TYPE	A	B	C	TOTAL LENGTH ?
Urban LOW (35 mph or less)	100 ft	100 ft	100 ft	
Urban HIGH (40mph or more)	350 ft	350 ft	350 ft	
Rural	500 ft	500 ft	500 ft	
Expressway/Freeway	1,000 ft	1,500 ft	2,640 ft	

#2 - TRANSITION AREA (Taper Channelization) / TAPERS

To CALCULATE MERGING TAPER LENGTH: (Tables 6C-3&4): use EITHER high or low speed formula

L = Merging Taper Length (in feet); W = Lane Width (width of offset); S = Posted Speed (mph)

Merging Taper - High Speed Formula (45 mph or more): $L = W * S$

Merging Taper - Low Speed Formula (40 mph or less): $L = (W * S * S) / 60$

Shifting Taper = $L / 2$

Shoulder Taper = $L / 3$

1-lane, 2-way Traffic Taper (use with Flagger) = 50' min - 100' max

Termination or Downstream Taper = 50' min - 100' max

Multi-lane closures (2 lanes closed in transition area):

- ENTIRE transition area = $L + 2L + L$
- Tangent space between merging tapers = $2L$

#3 - ACTIVITY AREA (Tangent Channelization)

To CALCULATE ACTIVITY AREA = Work Space + Buffer Space

Use CHART to calculate Buffer Space =====>=====>=====>=====>

Flagger Station Chart (Table 6E-1)
Buffer Space Chart (Table 6C-2)

Speed (mph)	Distance (ft)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820

Need to figure these for both Transition & Activity Areas

➔ **DEVICE SPACING (maximum):**

- In Transition Area (Tapers): spacing is SPEED (in ft)
ex: 60 mph = 60 ft spacing in taper areas
- In Tangent Area: spacing is 2*Speed
ex: 60 mph = 120 ft spacing in tangent areas
- In 1-lane/2-way & Termination Tapers = 20' device spacing

➔ **NUMBER OF DEVICES (minimum):** (Total length of area / spacing)

- In Transition Area (Tapers): (Length of taper / Spacing) + 1
- In Tangent Area: (Tangent / Spacing)
- In 1-Lane/2-Way or Termination Area: 5 devices

