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Typical Traffic Control Stationary Operation on a Shoulder (Figure TTC-4.0) NOTES

Standard

1. For long-term stationary work (more than 3 days) on divided highways having a median wider than 8', sign assemblies on both sides of the roadway shall be required as shown (ROAD WORK AHEAD (W20-1), RIGHT SHOULDER CLOSED AHEAD (W21-5bR)), even though only one shoulder is being closed. For operations less than 3 days in duration, sign assemblies will only be required on the side where the shoulder is being closed and a RIGHT SHOULDER CLOSED AHEAD (W21-5bR) sign shall be added to that side.

ance

2. Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.

on:

- 3. The SHOULDER WORK (W21-5) sign on an intersecting roadway may be omitted where drivers emerging from that roadway will encounter another advance warning sign prior to this activity area.
- 4. For short duration operations of 1 hour or less, all signs and channelizing devices may be eliminated if a vehicle with activated high-intensity amber rotating, flashing, oscillating, or strobe lights is used.

Standard:

- 5. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, oscillating, or strobe lights. Vehicle hazard warning signals can be used to supplement high-intensity amber rotating, flashing, oscillating, or strobe lights.
- 6. Taper length (L) and channelizing device spacing shall be at the following:

Taper Length (L)					
Speed Limit	Lane Width (Feet)				
(mph)	9	10	11	12	
25	95	105	115	125	
30	135	150	165	180	
35	185	205	225	245	
40	240	270	295	320	
45	405	450	495	540	
50	450	500	550	600	
55	495	550	605	660	
60	540	600	660	720	
65	585	650	715	780	
70	630	700	770	840	

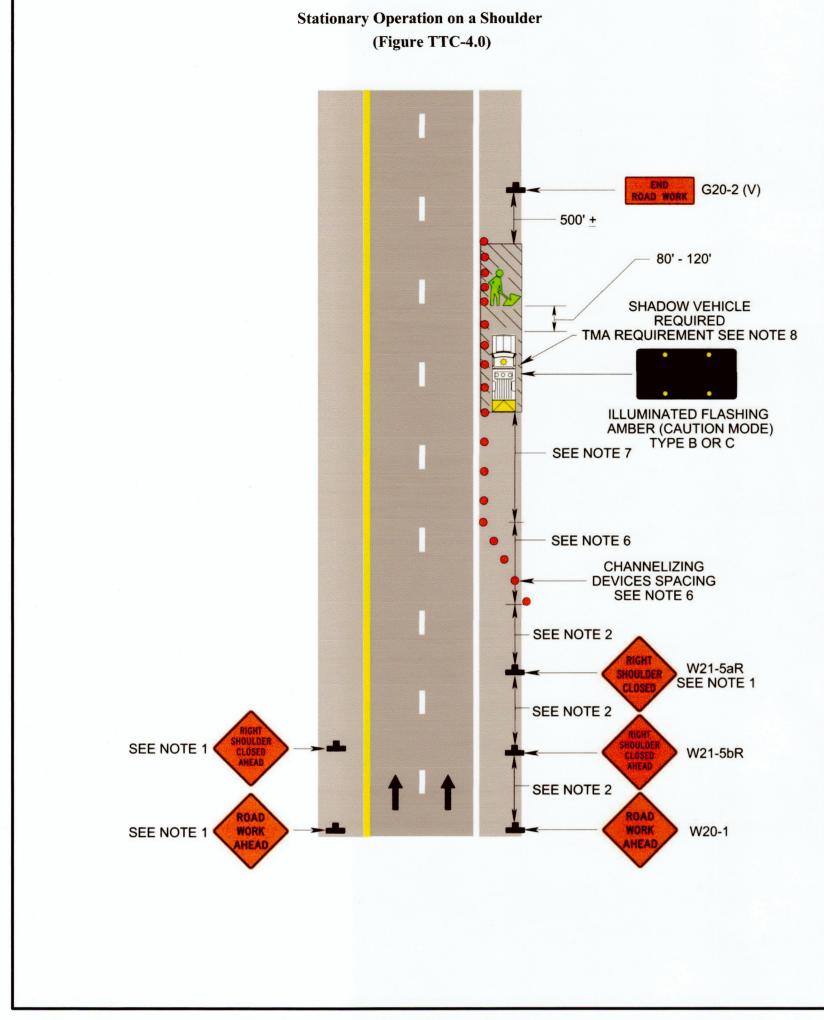
highways shall be 1000 feet.

Shoulder Taper = ½ L Minimum

Channelizing Device Spacing				
Lacation	Speed Limit (mph)			
Location	0 - 35	36 +		
Transition Spacing	20'	40'		
Travelway Spacing	40'	80'		
Construction Access*	80'	120'		
* Spacing may be incr but shall not exceed o				

On roadways with paved shoulders having a width of 8 feet or more, channelizing devices shall be used to close the shoulder in advance of the merging taper to direct vehicular traffic to remain within the traveled way.

- 7. The buffer space length shall be as shown in Table 6H-3 on Page 6H-5 for the posted speed limit.
 8. A shadow vehicle shall be used whenever a person is required to operate equipment mounted on or in the work vehicle such as buckets, augers, post drivers, etc. For work operations on the shoulder with a duration greater than 1 hour where workers are present, a shadow vehicle shall be used. A truck-mounted attenuator (TMA) shall be used on the shadow vehicle on Limited Access highways and multi-lane roadways with posted speed limit equal to or greater than 45 mph
- 9. When a side road intersects the highway within the temporary traffic control zone, additional traffic control devices shall be placed as needed.



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Typical Traffic Control Outside Lane Closure Operation on a Four-Lane Roadway (Figure TTC-16.0)

NOTES

Standard:

1. On divided highways having a median wider than 8', right and left sign assemblies shall be required.

Guidance

- 2. Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.
- 3. Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. For Limited Access highways a minimum of 1000' is desired.
- 4. All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement.

Standa

5. Taper Length (L) and Channelizing Device Spacing shall be:

Taper Length (L)				
Speed Limit	Lane Width (Feet)			
(mph)	9	10	11	12
25	95	105	115	125
30	135	150	165	180
35	185	205	225	245
40	240	270	295	320
45	405	450	495	540
50	450	500	550	600
55	495	550	605	660
60	540	600	660	720
65	585	650	715	780
70	630	700	770	840
Minimum tape		ns for Li		ccess

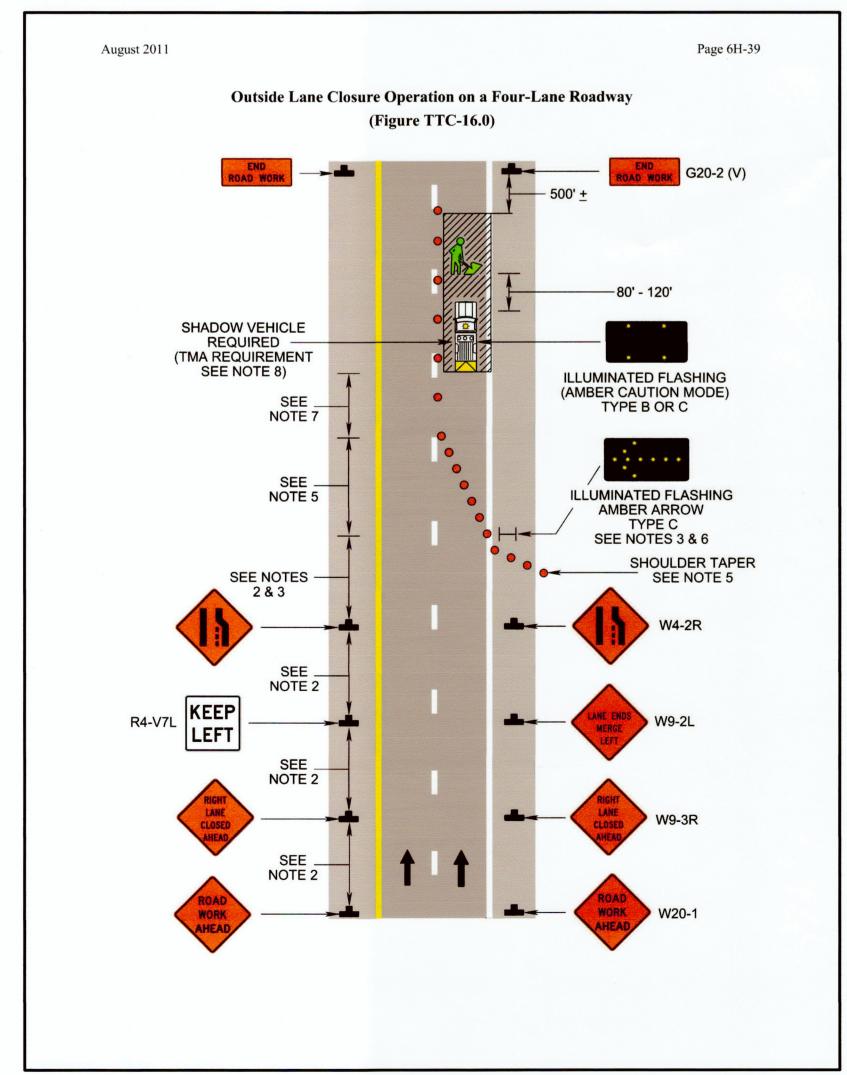
Shoulder Taper = 1/3 L Minimum

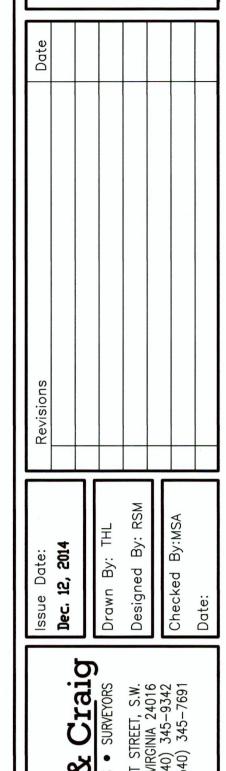
Location Speed Limit 0 - 35 Transition Spacing 20'	(mph) 36 +
0 - 35	36 +
Transition Spacing 20'	
Transition opacing 20	40'
Travelway Spacing 40'	80'
Construction Access* 80'	120'
* Spacing may be increased to this dis but shall not exceed one access per ½	

On roadways with paved shoulders having a width of 8 feet or more, channelizing devices shall be used to close the shoulder in advance of the merging taper to direct vehicular traffic to remain within the traveled way.

- 6. An arrow board shall be used when a lane is closed. When more than one lane is closed, a separate arrow board shall be used for each closed lane (see Figure TTC-18).
- separate arrow board shall be used for each closed lane (see Figure TTC-18).

 7. The buffer space length shall be shown in Table 6H-3 on Page 6H-5 for the posted speed limit.
- 8. A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one high intensity amber rotating, oscillating, or amber strobe light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truck-mounted attenuator shall be used.
- 9. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, oscillating, or strobe lights. Vehicle hazard warning signals can be used to supplement high-intensity amber rotating, flashing, oscillating, or strobe lights.
- 10. When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed as needed.





ANSPORATION
NAGEMENT PLAN
117 OF ROANOKE, VIRGINIA

Vertical Scale: N/A

Horizontal Scale: N/A

Sheet No :

T-8A

Commission Number:

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CONSTRUCTION