

Speed (mph)	TA (ft.)		Notes
	8' Slope	12' Slope	
25	25	35	L = WS
30	40	50	
35	55	68	L = WS
40	72	90	
45	120	150	L = WS
50	123	167	
55	147	183	L = WS
60	160	200	
65	173	217	L = WS
70	187	236	

Speed (mph)	Max. Distance Between Devices (ft.)			
	Cones or Tubular Markers	Taper	Tangent	Taper-Tangent
25	25	50	25	50
30 to 45	75	50	50	50
50 to 70	75	50	50	100

Speed	Spacing (ft.)
40 mph or less	200
45 mph	250
50 mph or greater	300

- GENERAL NOTES**
- When a high volume of work vehicles are covering and leaving the Work Area at speeds slower than 10 MPH below the posted speed, place an 800-5-88 sign on the ROAD WORK AHEAD sign location and shift the ROAD WORK AHEAD sign upstream 500 ft.
  - This TCZ plan also applies to work performed in the median more than 2' but less than 15' from the edge of travelway.
  - When work is being performed on a multilane undivided roadway the signs normally located in the median (as shown) shall be omitted.
  - WORKERS signs to be removed or fully covered when work is being performed.
  - SHOULDER WORK sign may be used as an alternate to the WORKER symbol sign.
  - When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed in accordance with other applicable TTC indexes.
  - For general TTC requirements and additional information, refer to Index No. 600.

- DURATION NOTES**
- Signs and channelizing devices may be omitted if all of the following conditions are met:
    - Work operations are 90 minutes or less.
    - Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.

**CONDITIONS**

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCLOSED THE AREA CLOSER THAN 15' BUT NOT CLOSER THAN 2' TO THE EDGE OF TRAVEL WAY.

LAST REVISION: 01/01/16	DESCRIPTION: DESIGN STANDARDS	FY 2016-17	MULTILANE, WORK ON SHOULDER	INDEX NO. 612	SHEET NO. 1 of 1
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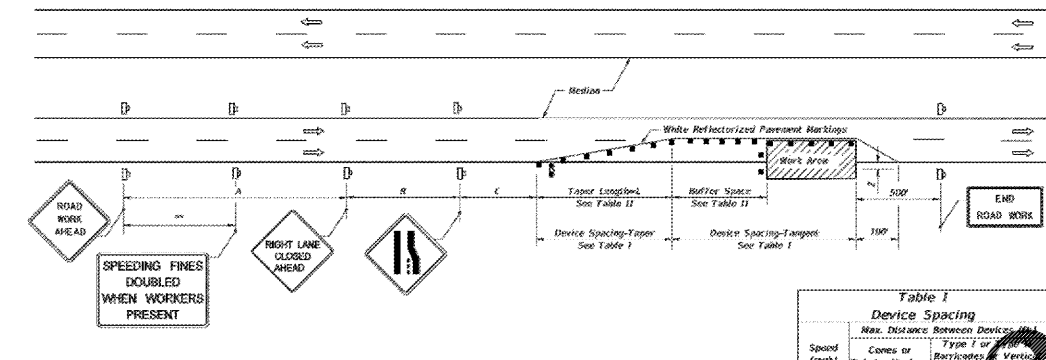


- GENERAL NOTES**
- Work operations shall be confined to either one lane, or lane combinations as follows:
    - Outside travel lane;
    - Inside travel lane;
    - Outside travel lane and adjoining auxiliary lane;
    - Inside travel lane;
    - Inside auxiliary lane;
    - Inside travel lane and adjoining auxiliary lane;
    - See Index 3.
  - When vehicles in a parking area block the line of sight in TCZ signs, the signs shall be post assumed and located in accordance with Index No. 12302.
  - If the work space extends across a crosswalk, the crosswalk shall be closed using the information in Index No. 600.
  - Signs are required on the median side for divided highways.
  - The two channelizing devices directly in front of the work area at the end of the work area may be omitted provided they are replaced with high-intensity, rotating, flashing, oscillating, or strobe lights operating.
  - For general TTC requirements and additional information, refer to Index No. 600.

- DURATION NOTES**
- For work operations up to 90 minutes, signs, channelizing devices, and arrow boards may be omitted if all of the following conditions are met:
    - Speed limit is 45 mph or less.
    - No sight obstructions within the work area for a distance equal to the taper length.
    - Volume and complexity of the roadway has been considered.
    - The closed lane is occupied by a class 5 or larger, medium duty truck with a minimum gross vehicle weight rating (GVWR) of 16,000 lb with high-intensity, rotating, flashing, oscillating, or strobe lights operating above the cab height and operating.
  - For work operations up to 60 minutes, the arrow board may be omitted if conditions a, b, and c in DURATION NOTE 1 are met, and vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.

- SYMBOLS**
- Work Area
  - Work Zone Sign
  - Advance Warning Arrow Board
  - Type III Barricade
  - Channelizing Device (See Index No. 600)
  - Lane Identification + Direction of Traffic

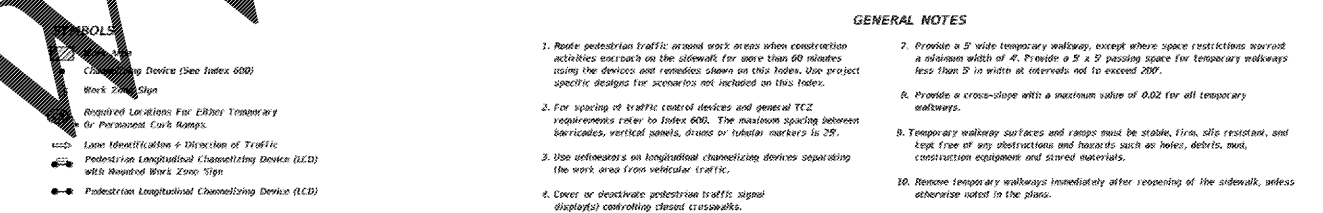
LAST REVISION: 07/01/15	DESCRIPTION: DESIGN STANDARDS	FY 2016-17	MULTILANE, WORK NEAR INTERSECTION MEDIAN OR OUTSIDE LANE	INDEX NO. 616	SHEET NO. 1 of 3
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Speed	Spacing (ft.)
40 mph or less	200
45 mph	250
50 mph	300
55 mph or greater	350

- GENERAL NOTES**
- Work operations shall be confined to one traffic lane, leaving the adjacent lane open to traffic.
  - On undivided highways the median signs as shown are to be omitted.
  - When work is performed in the median lane on divided highways, the channelizing device plan is inverted and left lane closed and two one signs substituted for the right lane closed and one one sign.
  - The same applies to undivided highways with the following exceptions:
    - Work shall be confined to one traffic lane.
    - Additional barricades, cones, or drums shall be placed along the centerline during the taper and across the trailing end of the work area.
  - When work on undivided highways occurs across the centerline so as to encroach upon the median lane the tapered plan is applied in the approach of both roadways.
  - Signs and traffic control devices are to be modified to accommodate STOPPAGE details (Index 2 of 2) when work is being performed and the highway is closed to traffic.
  - The two channelizing devices directly in front of the work area may be omitted provided they are replaced with high-intensity, rotating, flashing, oscillating, or strobe lights operating.
  - When paved shoulders having a width of 8 ft. or more are closed, channelizing devices shall be used to close the shoulder in the taper to prevent shoulder traffic from straying into the travel way. See Index No. 600 for shoulder taper formulas.
  - When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed in accordance with other applicable TTC indexes.
  - For general TTC requirements and additional information, refer to Index No. 600.

LAST REVISION: 01/01/16	DESCRIPTION: DESIGN STANDARDS	FY 2016-17	MULTILANE, WORK WITHIN TRAVEL WAY MEDIAN OR OUTSIDE LANE	INDEX NO. 613	SHEET NO. 1 of 2
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- GENERAL NOTES**
- Route pedestrian traffic around work areas when construction activities encroach on the sidewalk for more than 60 minutes using the devices and remedies shown on this Index. Use project specific designs for scenarios not included on this Index.
  - For spacing of traffic control devices and general TTC requirements refer to Index 600. The minimum spacing between barricades, vertical panels, drums or tubular markers is 25'.
  - Use unfurlers on longitudinal channelizing devices separating the work area from vehicular traffic.
  - Cover or deactivate pedestrian traffic signal displays controlling closed crosswalks.
  - Post mounted signs located near or adjacent to a sidewalk must have a 2' minimum clearance from the bottom of sign to the surface of the sidewalk.
  - When construction activities involve sidewalks on both sides of the street, stage the construction so that one sidewalk is in service at all times. If this is not feasible and both sidewalks must be closed, as determined by the Engineer, provide a detour to guide pedestrians around the construction zone.
  - Provide a 5' wide temporary walkway, except where space restrictions warrant a minimum width of 4'. Provide a 2' x 2' passing space for temporary walkways less than 5' in width at intervals not to exceed 200'.
  - Provide a cross-slope with a maximum slope of 0.02 for all temporary walkways.
  - Temporary walkway surfaces and ramps must be stable, firm, slip resistant, and kept free of any obstructions and hazards such as holes, debris, mud, construction equipment and stored materials.
  - Remove temporary walkways immediately after reopening of the sidewalk, unless otherwise noted in the plans.
  - Meet the requirements of Index 304 for temporary curb ramps.
  - Place pedestrian longitudinal channelizing devices across the full width of the closed sidewalk. For temporary walkways, similar to the Sidewalk Diversion, place LED's to delineate both sides of the temporary walkway.

LAST REVISION: 07/01/15	DESCRIPTION: DESIGN STANDARDS	FY 2016-17	PEDESTRIAN CONTROL FOR CLOSURE OF SIDEWALKS	INDEX NO. 660	SHEET NO. 1 of 1
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Speed (mph)	Buffer Space (ft.)		Taper Length (ft.)	
	12'	15'	12'	15'
25	155	125	100	100
30	200	160	100	100
35	250	243	100	100
40	305	320	100	100
45	360	340	100	100
50	425	400	100	100
55	495	450	100	100
60	570	500	100	100
65	645	550	100	100
70	730	600	100	100

Speed (mph)	Max. Distance Between Devices (ft.)			
	Cones or Tubular Markers	Taper	Tangent	Taper-Tangent
25	25	50	25	50
30 to 45	75	50	50	50
50 to 70	75	50	50	100

When Buffer Space cannot be obtained due to space restrictions, the smallest amount of Buffer Space shall be used, but not less than 200 ft.

For Lane Transitions after 100 ft, use provisions for L shown in notes column. Where:

L = Length or Lanes in feet  
W = Width of lateral transition in feet  
S = Posted speed limit (mph)

- DURATION NOTES**
- Temporary walkways may be omitted for work operations less than 30 minutes.
  - For work operations up to approximately 15 minutes, signs, channelizing devices, arrow boards, and buffer space may be omitted if all of the following conditions are met:
    - Speed limit is 45 mph or less.
    - No sight obstructions to vehicles approaching the work area for a distance equal to the buffer space and the taper length combined.
    - Volume and complexity of the roadway has been considered.
    - The closed lane is occupied by a class 3 or larger, medium duty truck with a minimum gross weight vehicle rating (GVWR) of 16,000 lb with high-intensity, rotating, flashing, oscillating, or strobe lights mounted above the cab height and operating.
  - For work operations up to 60 minutes, arrow board and buffer space may be omitted if conditions a, b, and c in DURATION NOTE 2 are met, and vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.

**CONDITIONS**

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCLOSED ON THE LANE ADJACENT TO EITHER SHOULDER AND THE AREA 2' OUTSIDE THE EDGE OF TRAVEL WAY.

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MAINTENANCE OF TRAFFIC  
WAWA  
COUNTRYSIDE BLVD & U.S. HWY 19  
CLEARWATER, PINELLAS COUNTY  
FLORIDA

PLAN STATUS	02/10/17	FDOT ACCESS REVIEW
DATE	DESCRIPTION	
JM	JAM	JM
DESIGN	DRW	CHKD
SCALE	AS SHOWN	
JOB No.	010455-01-002	
DATE	03/28/2017	
FILE	C-10.0 MOT.DWG	