
ORIGINATION FORM

Proposed Revisions to a Standard Plans Index
(Please provide all information — Incomplete forms will be returned)

Contact Information:

Date: May 26, 2020
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Standard Plans:

Index Number: 102-615
Sheet Number (s): 1
Index Title: Multilane, Work in Intersection

Summary of the changes:

Sheet 1: Revised Detail; Deleted 'Distance Between Signs', and 'Table II Taper Length -Merge' Tables (Moved to 102-600); Deleted Duration Notes and Conditions; Revised 'General Notes'; Changed Index Title.
Sheet 2: Added Index 102-616 Sheets 1 and 2 as Sheet 2; Revised Detail; Deleted 'Distance Between Signs', 'Table I Device Spacing', and 'Table II Taper Length -Merge' Tables (Moved to 102-600); Revised Notes; Changed Index Title.
Sheet 3: Added Index 102-616 Sheet 3 as Sheet 3; Revised Details; Deleted 'Distance Between Signs', 'Table I Device Spacing', and 'Table II Taper Length -Merge' Tables (Moved to 102-600); Revised Notes; Changed Index Title.
Sheet 4: Added Index 102-617 as Sheet 4; Revised Detail and Notes; Deleted 'Distance Between Signs', 'Table I Device Spacing', and 'Table II Taper Length -Merge' Tables (Moved to 102-600); Deleted Duration Notes and Conditions; Changed Index Title.
Sheet 5: Added Index 102-618 as Sheet 5; Revised Details and Notes; Deleted 'Table II Taper Length -Merge' Table (Moved to 102-600) and Conditions; Changed Index Title.

Commentary / Background:

Other Affected Offices / Documents: (Provide name of person contacted)

- | Yes | No | |
|--------------------------|--------------------------|-----------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Other Standard Plans – |
| <input type="checkbox"/> | <input type="checkbox"/> | FDOT Design Manual – |
| <input type="checkbox"/> | <input type="checkbox"/> | Basis of Estimates Manual – |
| <input type="checkbox"/> | <input type="checkbox"/> | Standard Specifications – |
| <input type="checkbox"/> | <input type="checkbox"/> | Approved Product List – |
| <input type="checkbox"/> | <input type="checkbox"/> | Construction – |
| <input type="checkbox"/> | <input type="checkbox"/> | Maintenance – |

Origination Package Includes:

(Email or hand deliver package to Rick Jenkins)

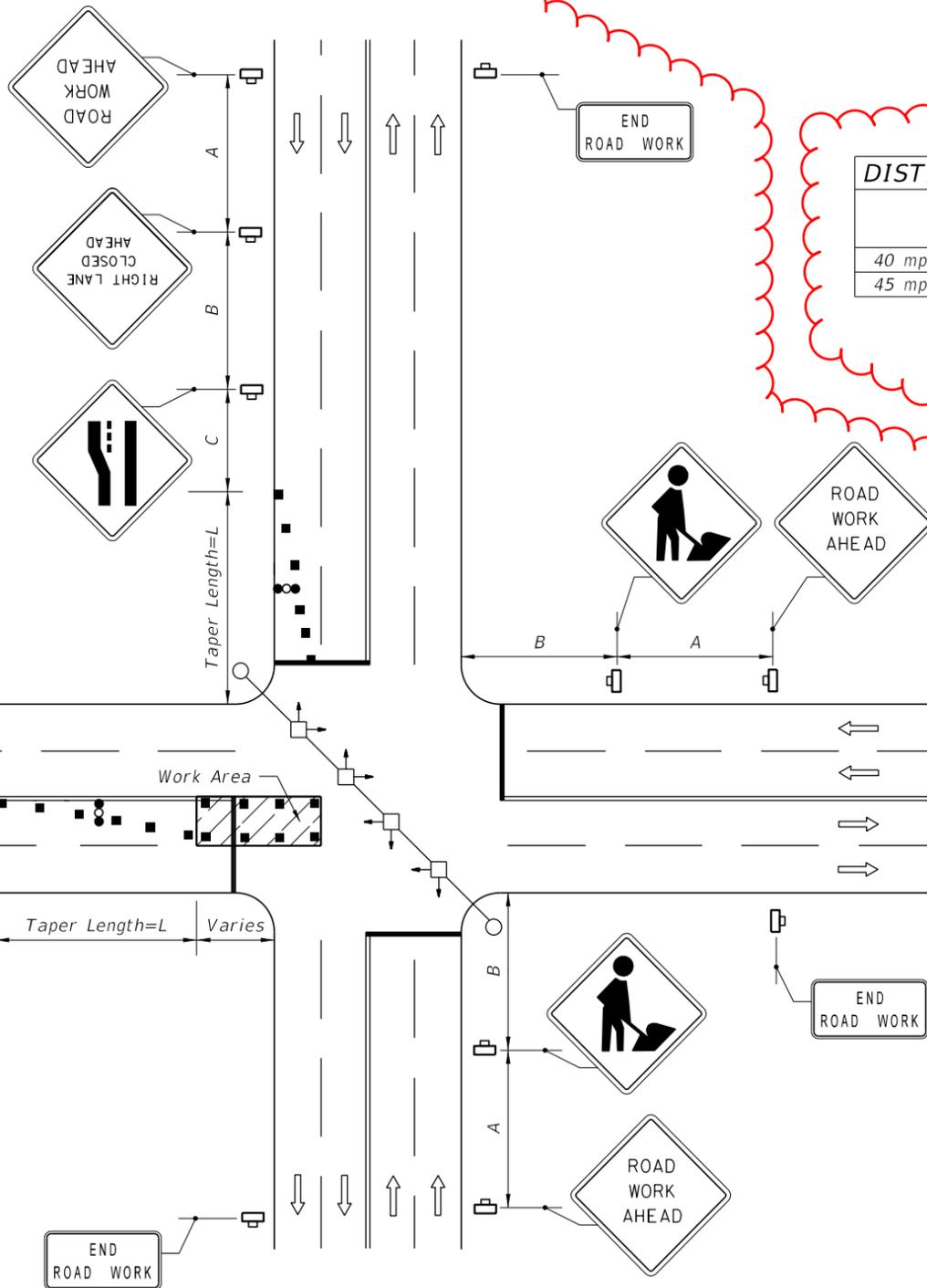
- | Yes | N/A | |
|-------------------------------------|--------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Redline Mark-ups |
| <input type="checkbox"/> | <input type="checkbox"/> | Proposed Standard Plan Instruction (SPI) |
| <input type="checkbox"/> | <input type="checkbox"/> | Revised SPI |
| <input type="checkbox"/> | <input type="checkbox"/> | Other Support Documents |

Implementation:

- | | |
|-------------------------------------|----------------------------------|
| <input type="checkbox"/> | Design Bulletin (Interim) |
| <input type="checkbox"/> | DCE Memo |
| <input type="checkbox"/> | Program Mgmt. Bulletin |
| <input checked="" type="checkbox"/> | FY-Standard Plans (Next Release) |

Contact the Roadway Design Office for assistance in completing this form

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DISTANCE BETWEEN SIGNS

Speed	Spacing (ft.)		
	A	B	C
40 mph or less	200	200	200
45 mph	350	350	350

**Table II
Taper Length - Merge
(12' Lateral Transition)**

Speed (mph)	L (ft.)	Notes (Merge)
25	125	$L = \frac{WS^2}{60}$
30	180	
35	245	
40	320	$L=WS$
45	540	

For lateral transitions other than 12', use formula for L shown in the notes column. Where:
 L = Length of taper in feet
 W = Width of lateral transition in feet
 S = Posted speed limit (mph)

DELETED - CONSOLIDATED AND MOVED TO 102-600

GENERAL NOTES

1. The WORKERS legend sign may be substituted for the symbol sign.
2. When vehicles in a parking zone block the line of sight to TCZ signs, the signs shall be post mounted and located in accordance with Index 700-101.
3. If the work space extends across a crosswalk, the crosswalk should be closed using the information in Index 102-660.
4. Dual signs are required for divided roadways.
5. Maximum spacing between barricades, vertical panels, cones, tubular markers and drums shall not be greater than 25'.
6. Temporary signal phasing modifications are to be approved by the District Traffic Operations Engineer prior to the beginning of work.
7. For general TCZ requirements and additional information, refer to Index 102-600.

UPDATED NOTES

UPDATED DETAIL

DURATION NOTES

1. Signs and arrow board may be omitted if all of the following conditions are met:
 - a. Work operations are 60 minutes or less.
 - b. Speed is 45 mph or less.
 - c. No sight obstructions to vehicles approaching the work area for a distance equal to twice the taper length.
 - d. Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.
 - e. Volume and complexity of the roadway has been considered.

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCR OACH ON THE PAVEMENT REQUIRING THE CLOSURE OF AT LEAST ONE MEDIAN TRAFFIC LANE.

SIGNALIZED

SYMBOLS

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Stop Bar
- Advance Warning Arrow Board
- Lane Identification + Direction of Traffic

11/01/20

2021-22

MULTILANE ROADWAY, INTERSECTION WORK

LAST REVISION 11/01/17	DESCRIPTION:	FDOT FY 2020-21 STANDARD PLANS	MULTILANE, WORK IN INTERSECTION	INDEX 102-615	SHEET 1 of 1
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ADDED "RIGHT LANE CLOSED" DETAILS

REVISED NOTES

REVISED NOTE

GENERAL NOTES

1. Work operations shall be confined to either one lane, or lane combinations as follows:
 - a. Outside travel lane;
 - b. Outside auxiliary lane;
 - c. Outside travel lane and adjoining auxiliary lane;
 - d. Inside travel lane Δ ;
 - e. Inside auxiliary lane Δ ;
 - f. Inside travel lane and adjoining auxiliary lane Δ

If the work area is confined to an auxiliary lane the work area shall be barricaded and the RIGHT (LEFT) LANE CLOSED AHEAD signs replaced by ROAD WORK AHEAD signs, and the merge symbol signs eliminated.

DELETED - CONSOLIDATED AND MOVED TO SHEET 1

2. When vehicles in a parking zone block the line of sight to TCZ signs, the signs shall be post mounted and located in accordance with Index 700-101
3. If the work space extends across a crosswalk, the crosswalk should be closed using the information in Index 102-660.
4. Signs are required on the median side for divided highways.
5. The two channelizing devices directly in front and directly at the end of the work area may be omitted provided vehicles in the work area have high-intensity rotating, flashing, oscillating, or strobe lights operating.
6. For general TCZ requirements and additional information, refer to Index 102-600.

DURATION NOTES

1. For work operations up to approximately 15 minutes, signs, channelizing devices, and arrow board may be omitted if all of the following conditions are met:
 - a. Speed limit is 45 mph or less.
 - b. No sight obstructions to vehicles approaching the work area for a distance equal to twice the taper length.
 - c. Volume and complexity of the roadway has been considered.
 - d. The closed lane is occupied by a class 5 or larger, medium duty truck(s) with a minimum gross weight vehicle rating (GWVR) of 16,001 lb with high-intensity, rotating, flashing, oscillating, or strobe lights mounted above the cab height and operating.
2. 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 102-600)
-  Lane Identification + Direction of Traffic

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2021-22

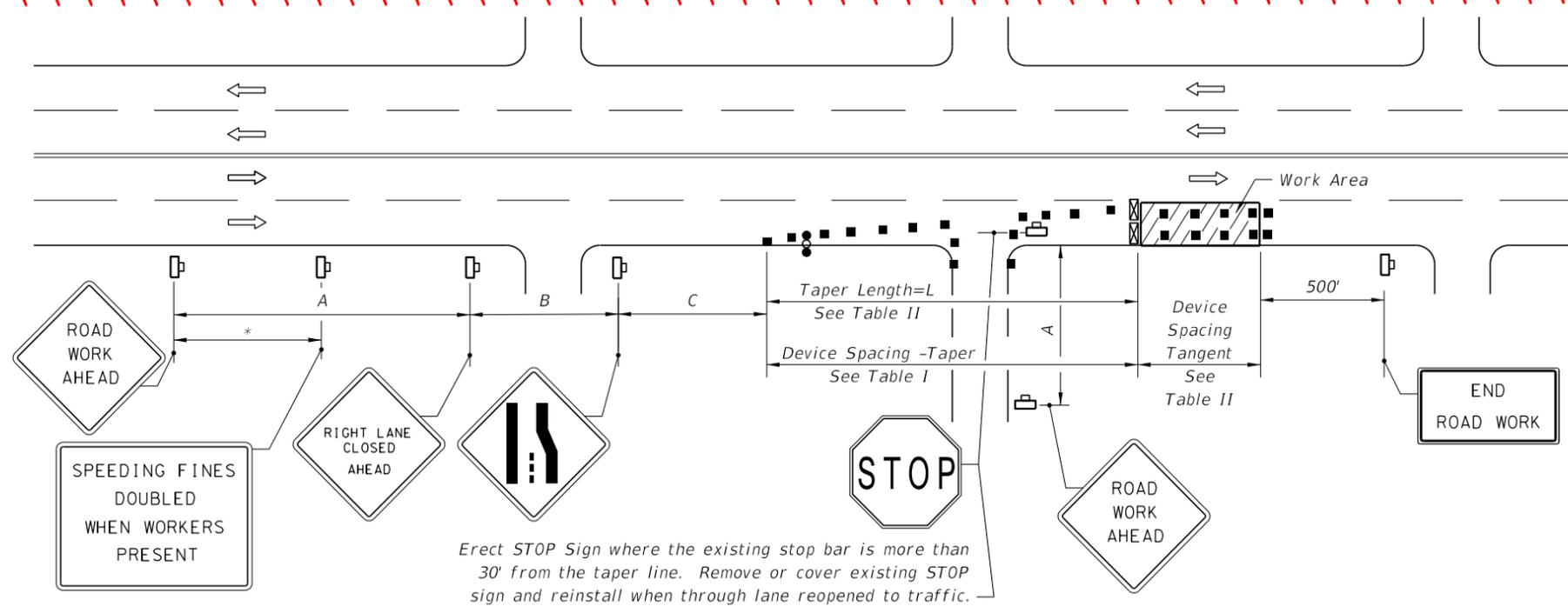
MULTILANE ROADWAY, INTERSECTION WORK

615

2

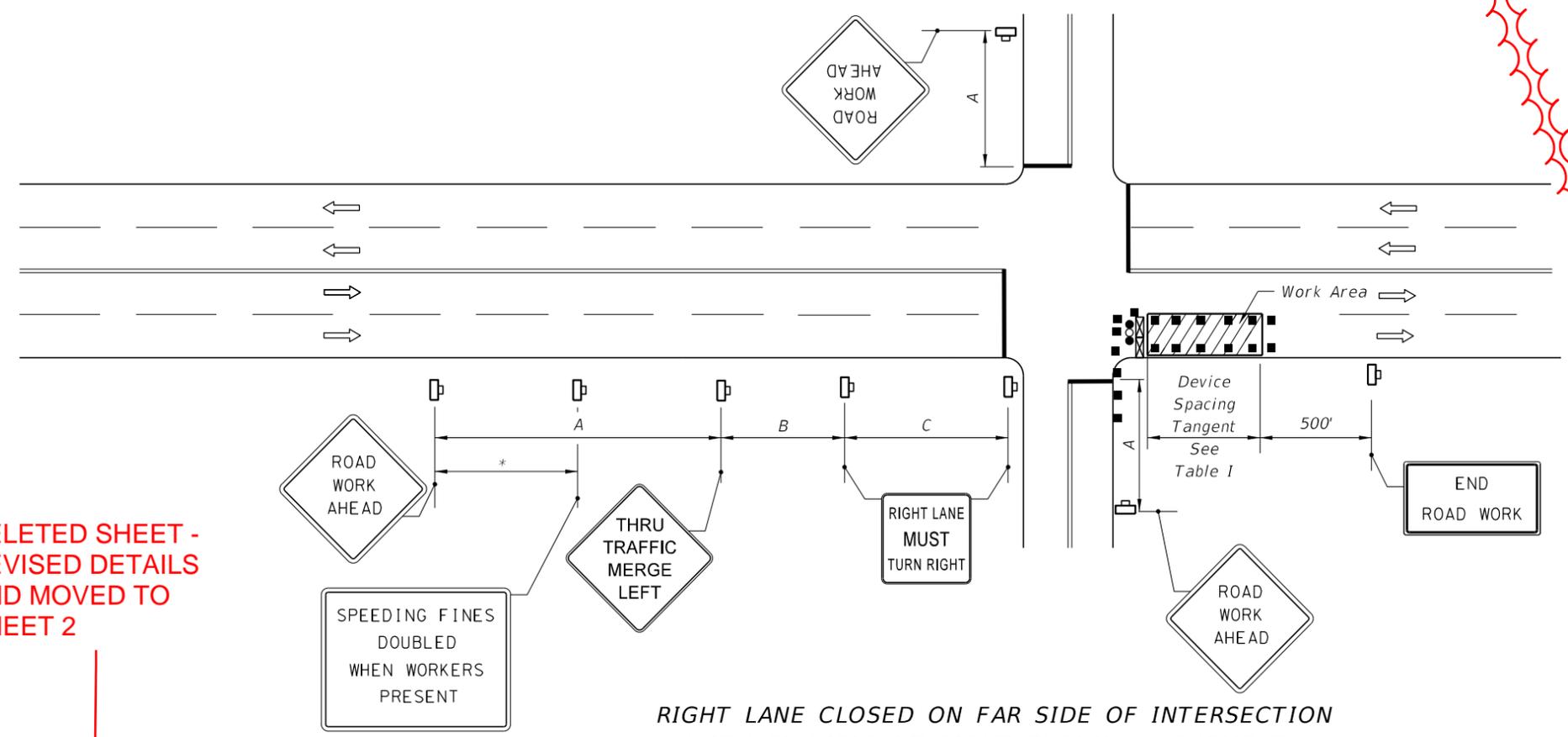
LAST REVISION 11/01/17	REVISION	DESCRIPTION:	 FY 2020-21 STANDARD PLANS	MULTILANE, WORK NEAR INTERSECTION MEDIAN OR OUTSIDE LANE	INDEX 102-616	SHEET 1 of 3
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5



Erect STOP Sign where the existing stop bar is more than 30' from the taper line. Remove or cover existing STOP sign and reinstall when through lane reopened to traffic.

RIGHT LANE CLOSED ON FAR SIDE OF MINOR SIDE STREET



RIGHT LANE CLOSED ON FAR SIDE OF INTERSECTION WITH SIGNIFICANT RIGHT TURNING MOVEMENTS

DELETED SHEET - REVISED DETAILS AND MOVED TO SHEET 2

1. The normal procedure is to close on the near side of the intersection any lane that is not carried through the intersection. However, when this results in the closure of a right lane having significant right turning movements, then the right lane may be restricted to right turns only as shown in this detail. 2021-22

2. For intersection approaches reduced to a single lane, left turning movements may be prohibited to maintain capacity for through vehicular traffic.

Speed	Spacing (ft.)		
	A	B	C
40 mph or less	200	200	200
45 mph	350	350	350

* 500' beyond the ROAD WORK AHEAD sign or midway between signs whichever is less.

Speed (mph)	Max. Distance Between Devices (ft.)			
	Cones or Tubular Markers		Type I or Type II Barricades or Vertical Panels or Drums	
	Taper	Tangent	Taper	Tangent
25	25	50	25	50
30 to 45	25	50	30	50

Speed (mph)	L (ft)	Notes (Merge)
25	125	$L = \frac{WS^2}{60}$
30	180	
35	245	
40	320	L=WS
45	540	

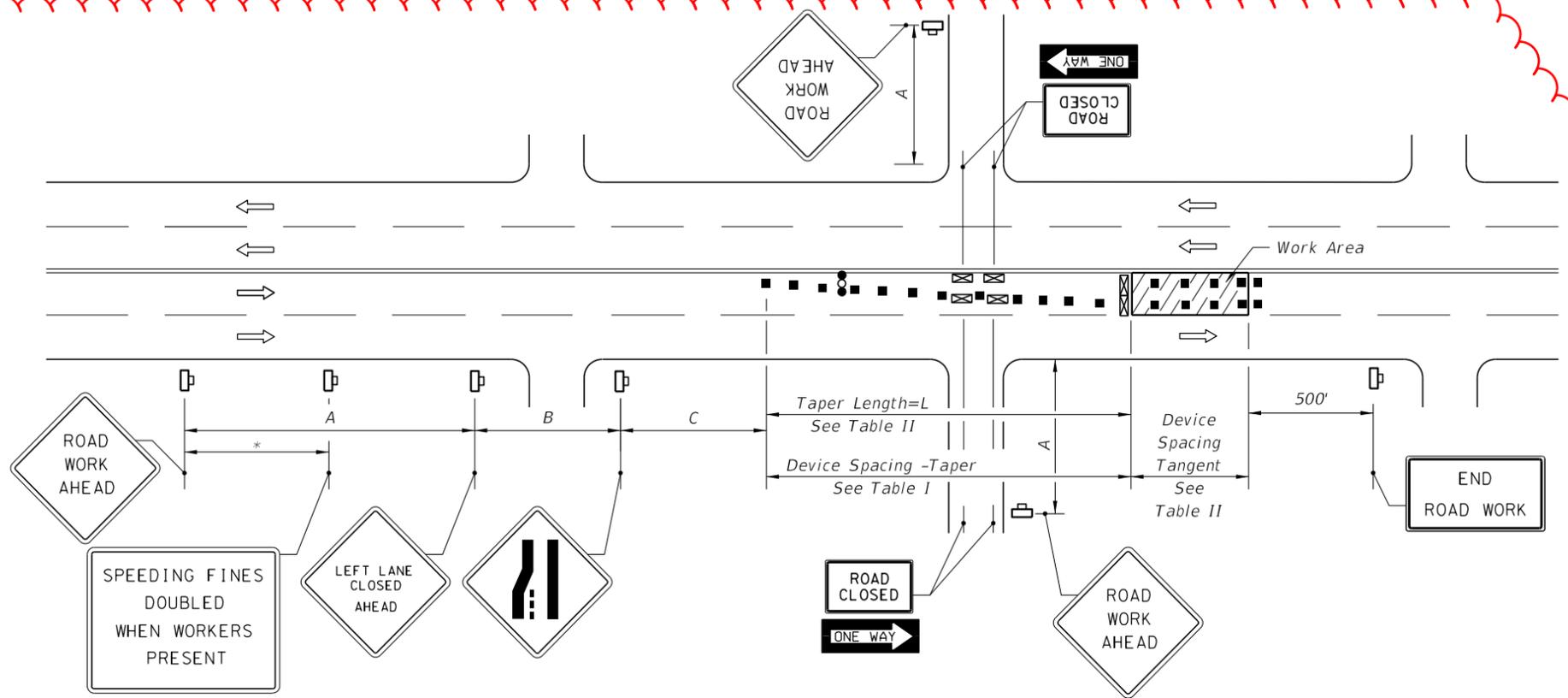
For lateral transitions other than 12', use formula for L shown in the notes column. Where:
 L = Length of taper in feet
 W = Width of lateral transition in feet
 S = Posted speed limit (mph)

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DISTANCE BETWEEN SIGNS

Speed	Spacing (ft.)		
	A	B	C
40 mph or less	200	200	200
45 mph	350	350	350

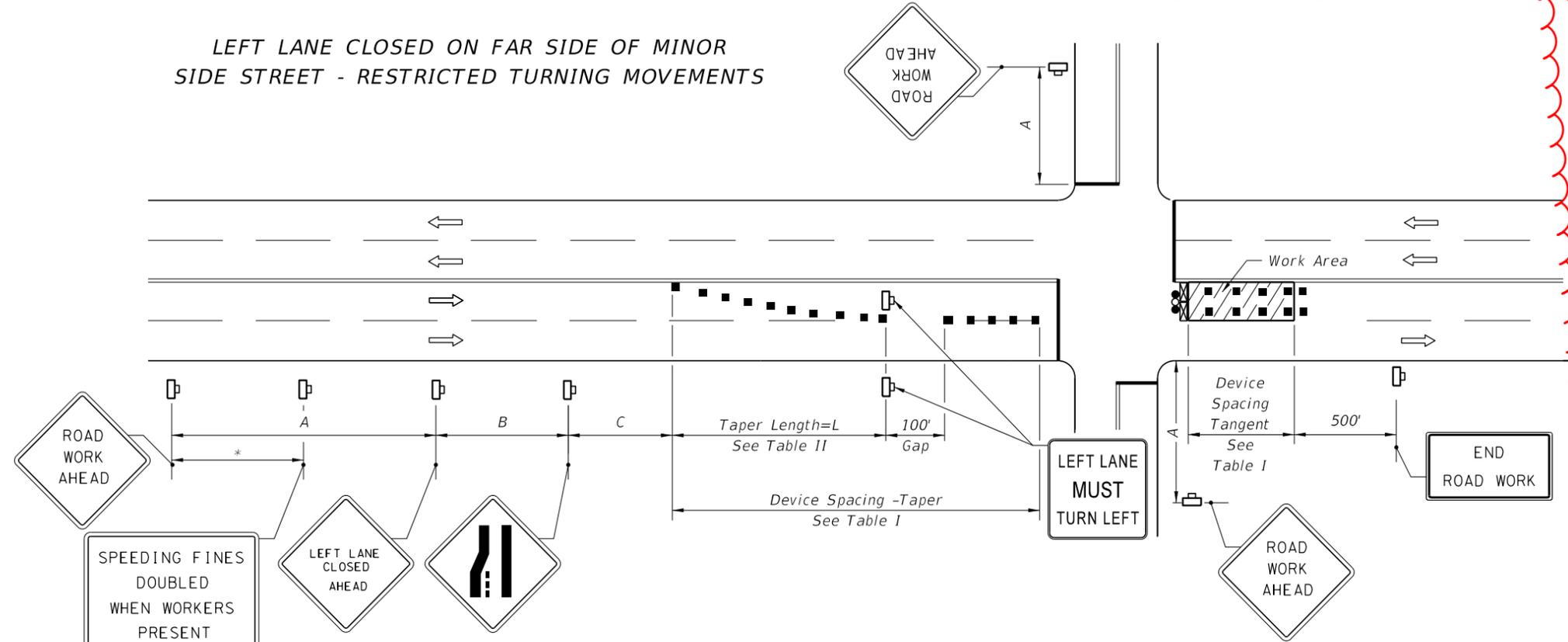
* 500' beyond the ROAD WORK AHEAD sign or midway between signs whichever is less.

**Table I
Device Spacing**

Speed (mph)	Max. Distance Between Devices (ft.)			
	Cones or Tubular Markers		Type I or Type II Barricades or Vertical Panels or Drums	
	Taper	Tangent	Taper	Tangent
25	25	50	25	50
30 to 45	25	50	30	50

REVISED DETAILS

LEFT LANE CLOSED ON FAR SIDE OF MINOR SIDE STREET - RESTRICTED TURNING MOVEMENTS



LEFT LANE CLOSED ON FAR SIDE OF INTERSECTION TURNING MOVEMENTS ALLOWED

**Table II
Taper Length - Merge
(12' Lateral Transition)**

Speed (mph)	L (ft.)	Notes (Merge)
25	125	$L = \frac{WS^2}{60}$
30	180	
35	245	
40	320	
45	540	$L = WS$

For lateral transitions other than 12', use formula for L shown in the notes column. Where:
L = Length of taper in feet
W = Width of lateral transition in feet
S = Posted speed limit (mph)

1. The normal procedure is to close on the near side of the intersection any lane that is not carried through the intersection. However, when this results in the closure of a left lane having significant left turning movements, the left lane may be reopened as a turn bay for left turns only as show in this detail.

2021-22

MULTILANE ROADWAY, INTERSECTION WORK

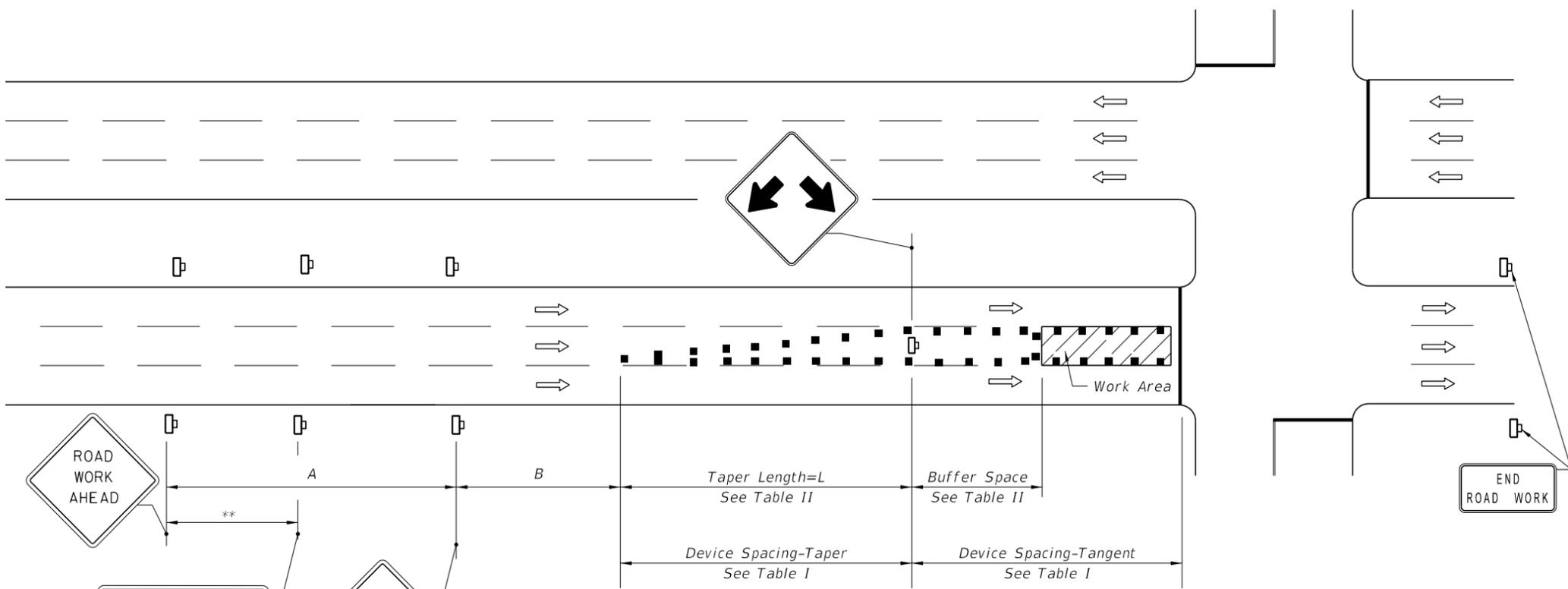
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LAST REVISION 11/01/17	DESCRIPTION:	FDOT FY 2020-21 STANDARD PLANS	MULTILANE, WORK NEAR INTERSECTION MEDIAN OR OUTSIDE LANE	INDEX 102-616	SHEET 3 of 5
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Speed	Spacing (ft.)	
	A	B
40 mph or less	200	200
45 mph	350	350

Speed (mph)	Max. Distance Between Devices (ft.)			
	Cones or Tubular Markers		Barricades or Vertical Type I or Type II Panels or Drums	
	Taper	Tangent	Taper	Tangent
25	25	50	25	50
30 to 45	25	50	30	50

Speed (mph)	Buffer Space (ft.)	Taper Length (12' Lateral Transition)	
		L (ft.)	Notes (Merge)
25	155	125	$L = \frac{WS^2}{60}$
30	200	180	
35	250	245	
40	305	320	$L = WS$
45	360	540	

** 500' beyond the ROAD WORK AHEAD sign or midway between signs whichever is less.

REVISED DETAIL

REVISED - CONSOLIDATED AND MOVED TO SHEET 1

~~GENERAL NOTES~~

1. Work operations shall be confined to one center travel lane, leaving the adjacent travel lanes open to traffic.
2. The merging taper shall direct vehicular traffic into either the right or left lane, but not both.
3. When vehicles in a parking zone block the line of sight to TCZ signs, the signs shall be post mounted and located in accordance with Index 700-101.
4. If the work space extends across a crosswalk, the crosswalk should be closed using the information in Index 102-660.
5. For general TCZ requirements and additional information, refer to Index 102-600.

~~DURATION NOTES~~

1. Signs and buffer space may be omitted if all of the following conditions are met:
 - a. Work operations are 60 minutes or less.
 - b. Speed limit is 45 mph or less.
 - c. No sight obstructions to vehicles approaching the work area for a distance equal to the buffer space and the taper length combined.
 - d. Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.
 - e. Volume and complexity of the roadway has been considered.

~~CONDITIONS~~

~~WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH ON THE PAVEMENT REQUIRING THE CLOSURE OF THE CENTER LANE NEAR AN INTERSECTION.~~

SYMBOLS

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Advance Warning Arrow Board
- Lane Identification + Direction of Traffic

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2021-22

MULTILANE ROADWAY, INTERSECTION WORK

615

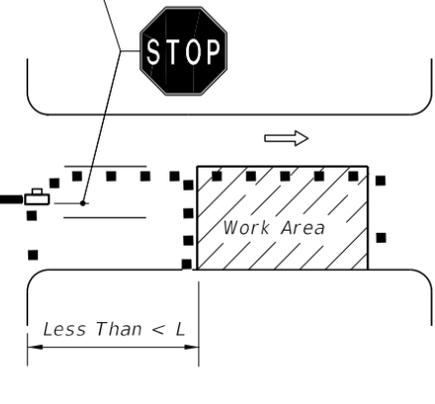
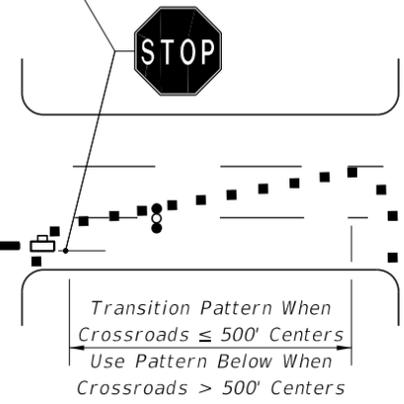
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LAST REVISION 11/01/17	DESCRIPTION:	FDOT FY 2020-21 STANDARD PLANS	MULTILANE, WORK IN INTERSECTION CENTER LANE	INDEX 102-617	SHEET 1 of 1
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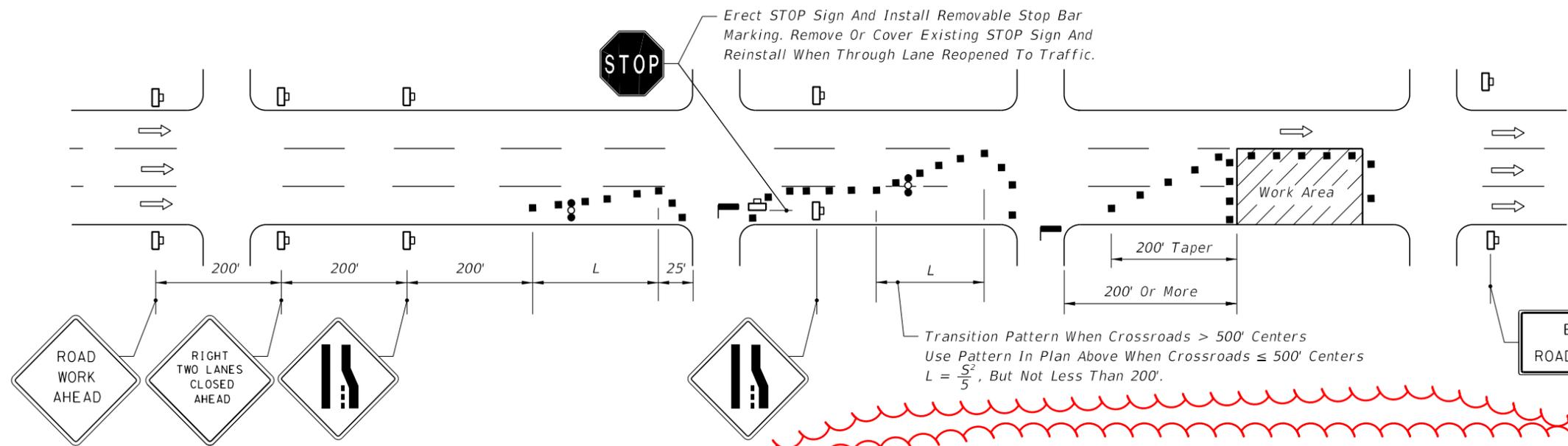
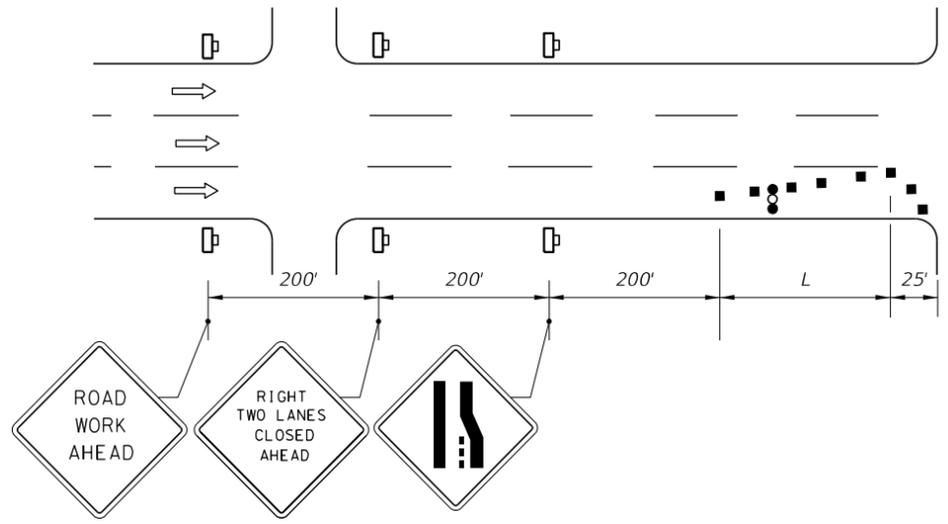
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Erect STOP Sign And Install Removable Stop Bar Marking. Remove Or Cover Existing STOP Sign And Reinstall When Through Lane Reopened To Traffic.

Erect STOP Sign And Install Removable Stop Bar Marking. Remove Or Cover Existing STOP Sign And Reinstall When Through Lane Reopened To Traffic.



CONDITIONS
WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH ON THE PAVEMENT REQUIRING THE CLOSURE OF EITHER THE OUTSIDE AND CENTER TRAVEL LANES OR THE MEDIAN AND CENTER TRAVEL LANES, WITH OR WITHOUT CLOSURE OF ADJOINING AUXILIARY LANES, FOR WORK AREA LESS THAN 200' FROM INTERSECTION, FOR A PERIOD OF MORE THAN 60 MINUTES.



CONDITIONS
WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH ON THE PAVEMENT REQUIRING THE CLOSURE OF EITHER THE OUTSIDE AND CENTER TRAVEL LANES OR THE MEDIAN AND CENTER TRAVEL LANES, WITH OR WITHOUT CLOSURE OF ADJOINING AUXILIARY LANES, FOR WORK AREA 200' OR MORE FROM INTERSECTION, FOR A PERIOD OF MORE THAN 60 MINUTES.

REVISED DETAILS

Table II
Taper Length - Merge
(12' Lateral Transition)

Speed (mph)	L (ft.)	Notes (Merge)
25	125	$L = \frac{WS^2}{60}$
30	180	
35	245	
40	320	$L = WS$
45	540	

For lateral transitions other than 12', use formula for L shown in the notes column. Where:
L = Length of taper in feet
W = Width of lateral transition in feet
S = Posted speed limit (mph)

GENERAL NOTES

1. If the work space extends across a crosswalk, the crosswalk should be closed using the information in Index 102-660.
2. Signs are required on the median side for divided highways.
3. The two channelizing devices directly in front and directly at the end of the work area may be omitted provided vehicles in the work area have high-intensity rotating, flashing, oscillating, or strobe lights operating.
4. Within the lateral transitions, the maximum spacing between cones and tubular markers shall be 25'. Maximum spacing between Type I or Type II barricades or vertical panels or drums shall be based on the speed limit as follows: 15' up to 25 MPH; 30' for 30-40 MPH; 50' for 45 MPH.

Spacing for devices parallel to the travel lanes shall be 25' centers for cones or tubular markers and 50' centers for Type I or Type II barricades or vertical panels or drums for 250', thereafter, cones or tubular markers at 50' centers and Type I or Type II barricades or vertical panels or drums at 100' centers.
5. For general TCZ requirements and additional information, refer to Index 102-600.

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DELETED - CONSOLIDATED AND MOVED TO 102-600

- SYMBOLS**
- Work Area
 - Channelizing Device (See Index 102-600)
 - Work Zone Sign
 - Advance Warning Arrow Board
 - Stop Bar
 - Lane Identification + Direction of Traffic

11/01/20

2021-22

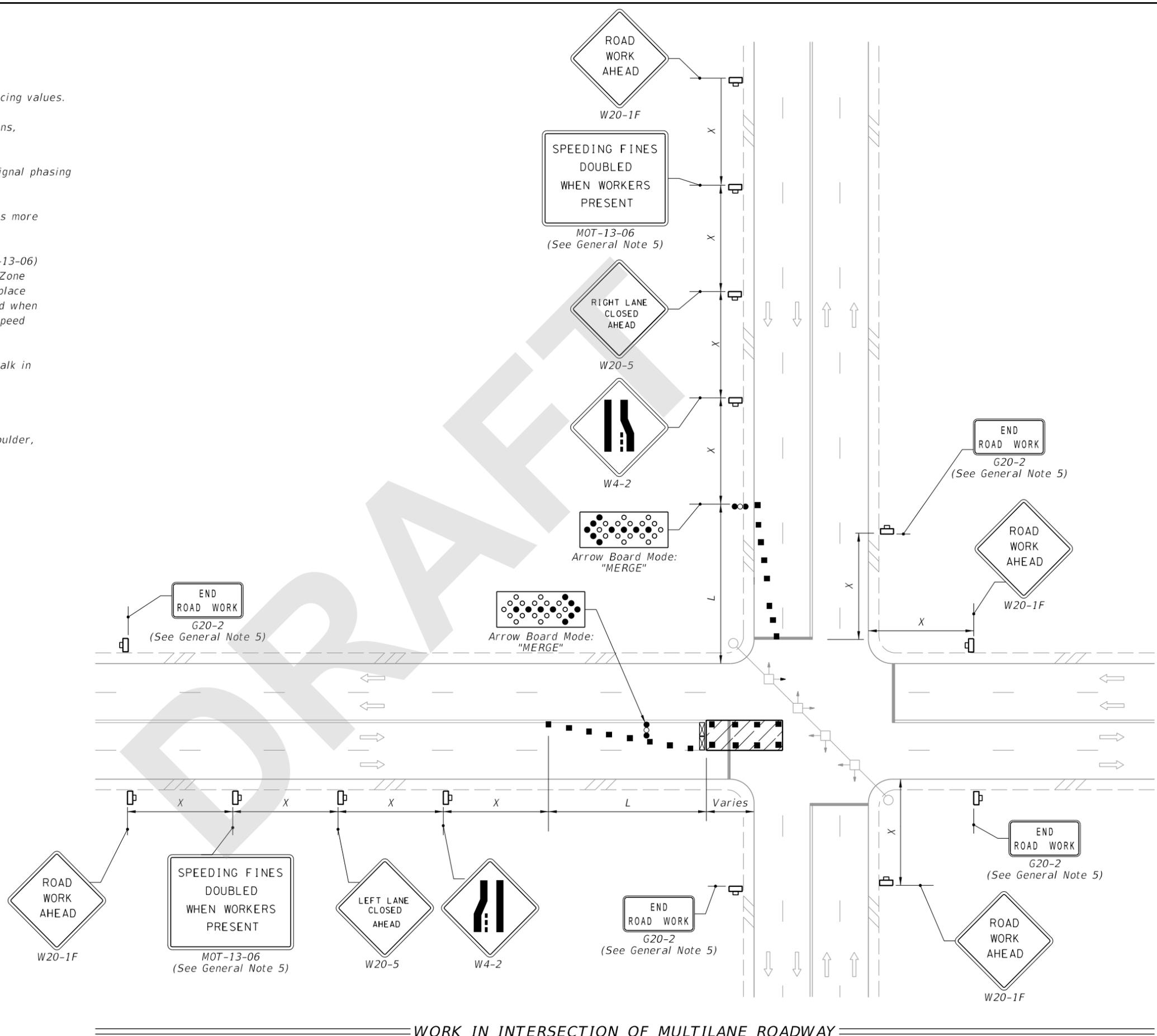
MULTILANE ROADWAY, INTERSECTION WORK

LAST REVISION 11/01/17	DESCRIPTION:	FDOT	FY 2020-21 STANDARD PLANS	MULTILANE, WORK IN INTERSECTION TWO LANES CLOSED - 45 MPH OR LESS	615	INDEX 102-618	SHEET 1 of 1
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GENERAL NOTES:

1. L = Taper Length
 B = Buffer Length
 X = Work Zone Sign Distance
 See Index 102-600 for " L ", " B ", " X ", and channelizing device spacing values.
2. If vehicles in a parking zone block the line of sight to TCZ signs, locate and post mount signs in accordance with Index 700-101.
3. District Traffic Operations Engineer must approve temporary signal phasing modifications prior to beginning of work.
4. Use temporary "STOP" sign (R1-1) where the existing stop bar is more than 30' from the taper, remove or cover existing sign.
5. The "Speeding Fines Doubled When Workers Present" sign (MOT-13-06) and "End Road Work" Sign (G20-2), along with associated Work Zone Sign Distances, may be omitted when the work zone will be in place for 24 hours or less. Additionally, arrow boards may be omitted when the work zone will be in place for 60 minutes or less and the speed limit is 45 mph or less.
6. If the work area extends across a crosswalk, close the crosswalk in accordance with Index 102-660."
7. Dual signs are required for divided roadways.
8. If the work encroaches on a marked bicycle lane or rideable shoulder, close the lane or shoulder in accordance with the Plans.



SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Type III Barricade
- Arrow Board
- Work Zone Sign
- Stop Bar
- Lane Identification and Direction of Traffic

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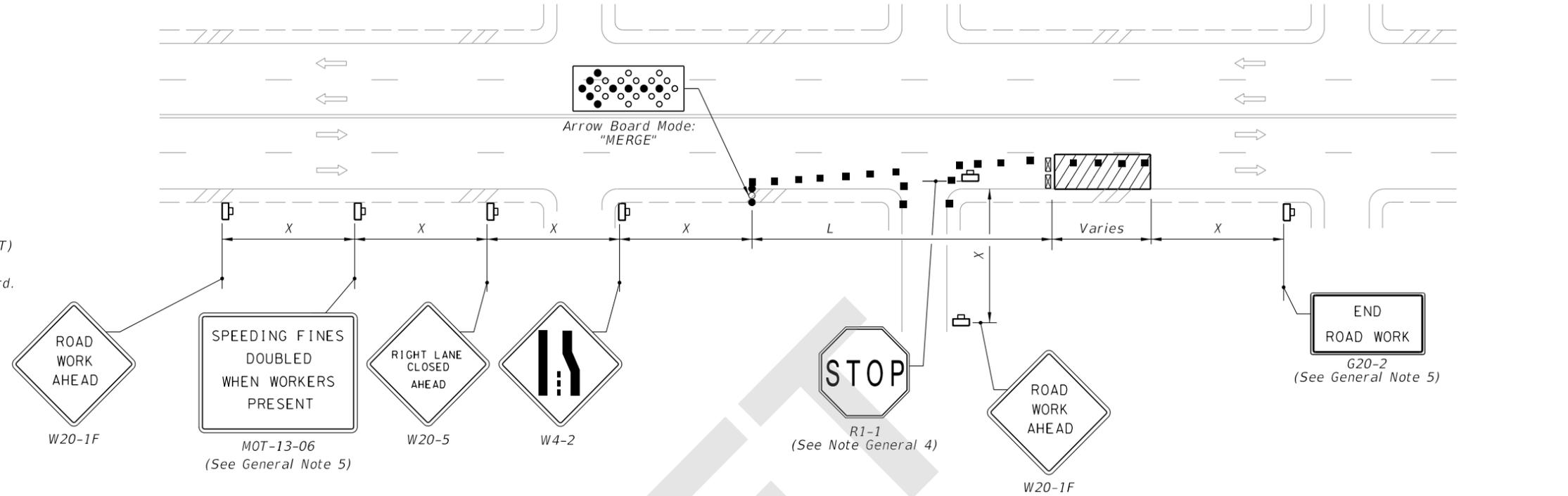
LAST REVISION 11/01/20	REVISION	DESCRIPTION:	 FY 2021-22 STANDARD PLANS	MULTILANE ROADWAY, INTERSECTION WORK	INDEX 102-615	SHEET 1 of 5
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NOTE:

Confine work operations to the following lane or lane combinations:

- a. Outside travel lane
- b. Outside auxiliary lane
- c. Outside travel lane and adjoining auxiliary lane
- d. Inside travel lane
- e. Inside auxiliary lane
- f. Inside travel lane and adjoining auxiliary lane

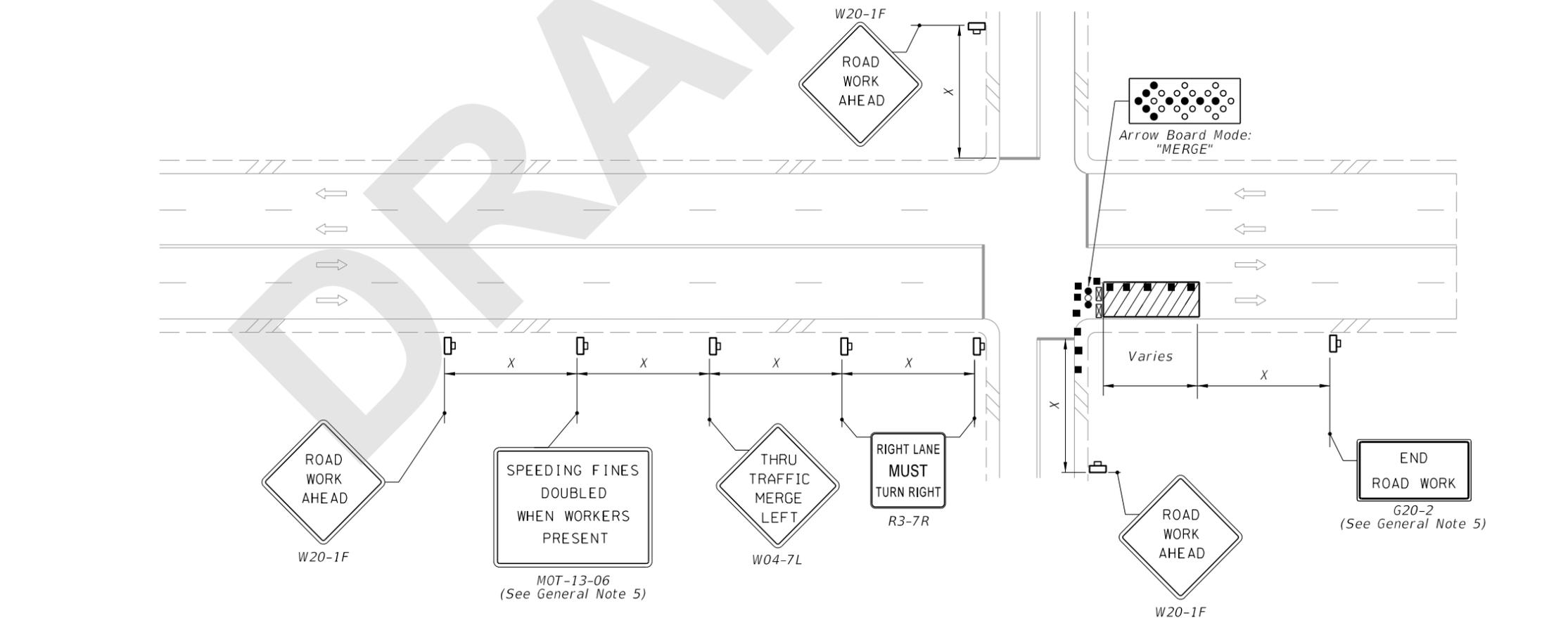
If the work area is confined to an auxiliary lane, the work area must be barricaded. Replace the RIGHT (LEFT) LANE CLOSED AHEAD signs with ROAD WORK AHEAD signs, and omit the merge symbol signs and arrow board.



SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Type III Barricade
- Arrow Board
- Work Zone Sign
- Stop Bar
- Lane Identification and Direction of Traffic

RIGHT LANE CLOSED ON FAR SIDE OF MINOR SIDE STREET



RIGHT LANE CLOSED ON FAR SIDE OF INTERSECTION WITH SIGNIFICANT RIGHT TURNING MOVEMENTS

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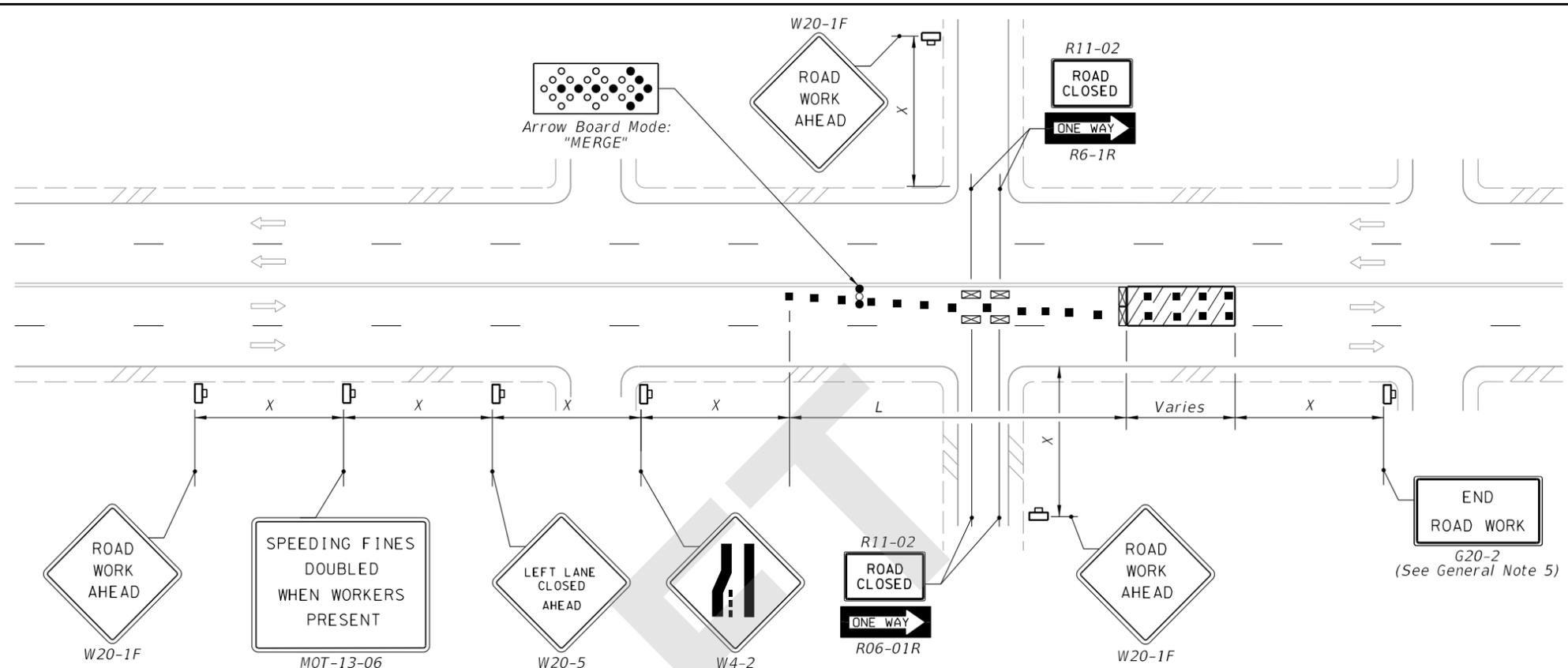
NOTE:

1. Confine work operations to the following lane or lane combinations:

- a. Outside travel lane
- b. Outside auxiliary lane
- c. Outside travel lane and adjoining auxiliary lane
- d. Inside travel lane
- e. Inside auxiliary lane
- f. Inside travel lane and adjoining auxiliary lane

If the work area is confined to an auxiliary lane, the work area must be barricaded. Replace the RIGHT (LEFT) LANE CLOSED AHEAD signs with ROAD WORK AHEAD signs, and omit the merge symbol signs and arrow board.

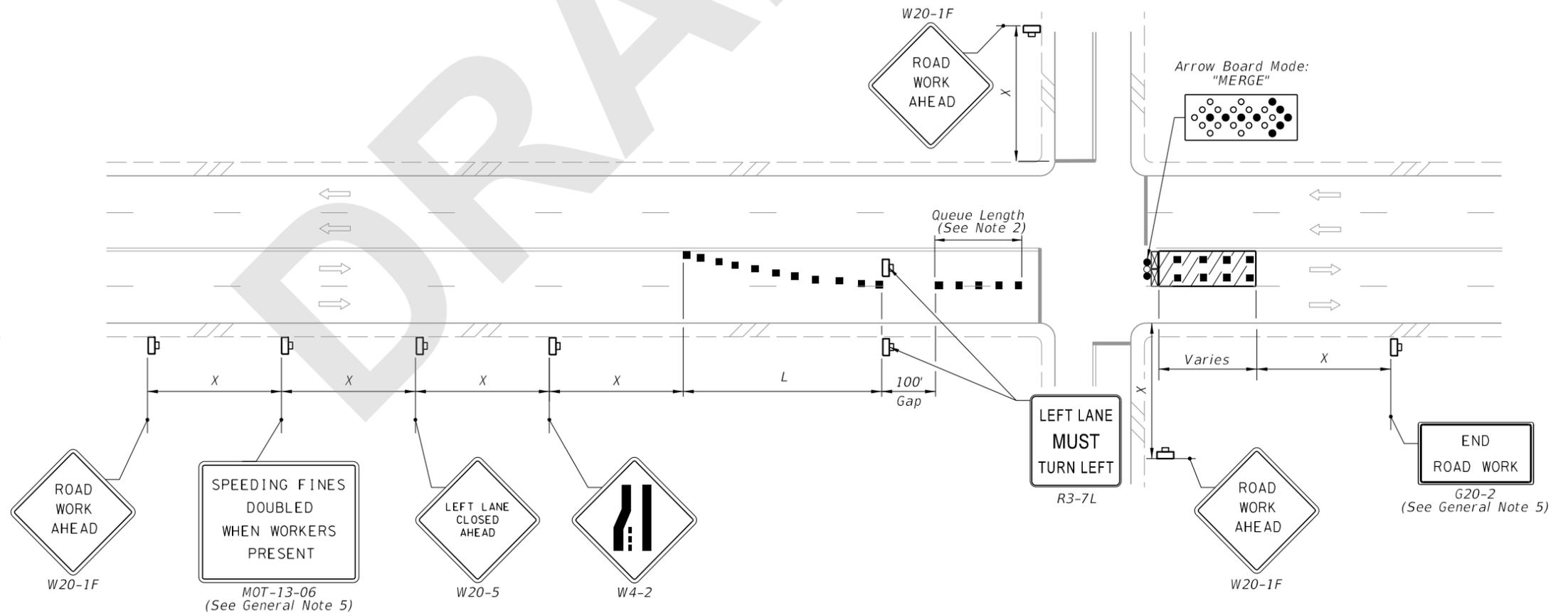
2. Provide sufficient Queue Length so that left-turning vehicles do not block through lanes.



LEFT LANE CLOSED ON FAR SIDE OF MINOR SIDE STREET - RESTRICTED TURNING MOVEMENTS

SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Type III Barricade
- Arrow Board
- Work Zone Sign
- Stop Bar
- Lane Identification and Direction of Traffic



LEFT LANE CLOSED ON FAR SIDE OF INTERSECTION TURNING MOVEMENTS ALLOWED

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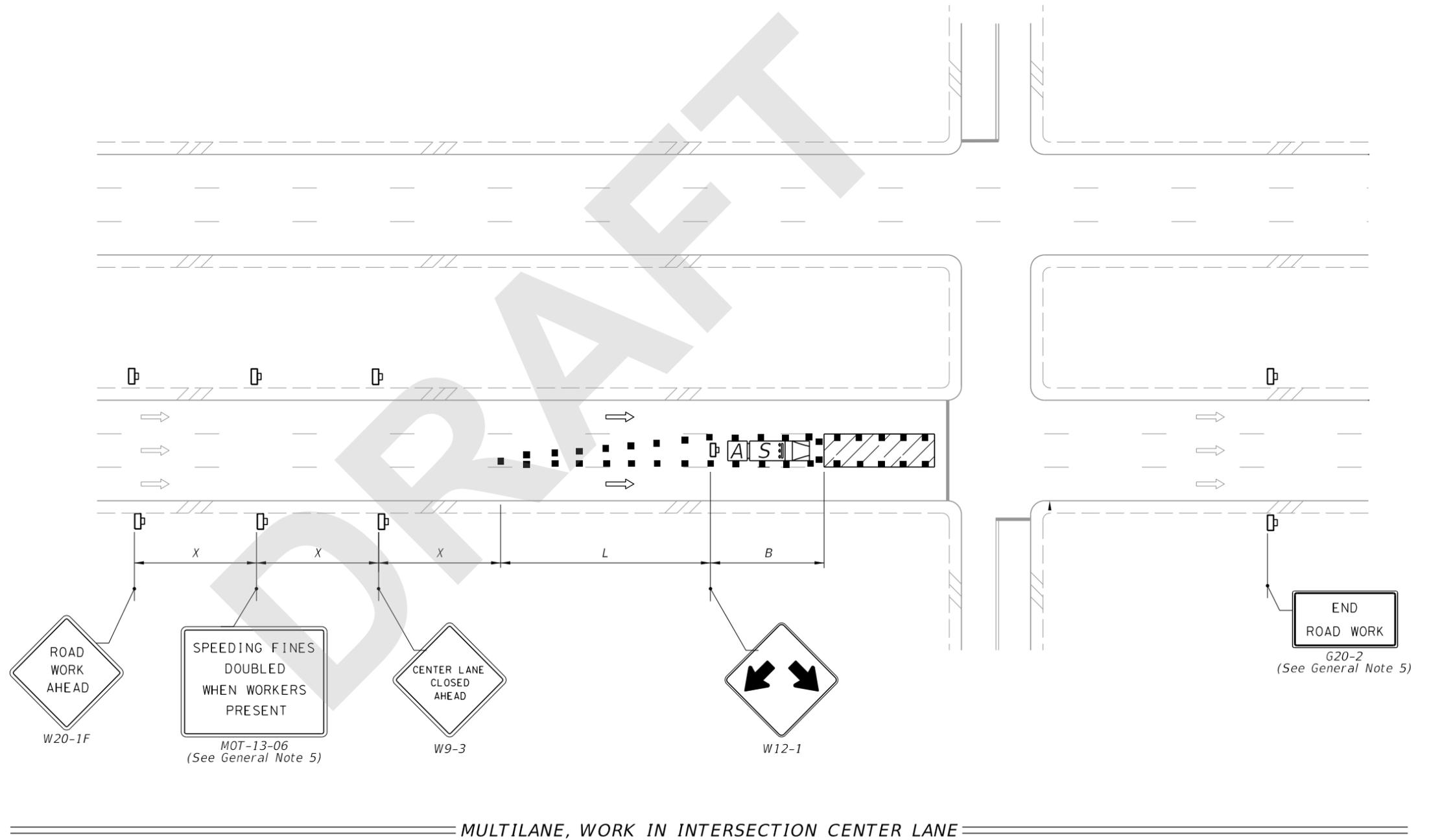
LAST REVISION 11/01/20	REVISION	DESCRIPTION:		FY 2021-22 STANDARD PLANS	MULTILANE ROADWAY, INTERSECTION WORK	INDEX 102-615	SHEET 3 of 5
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NOTE:

1. Confine work operations to one center travel lane and leave the adjacent travel lanes open to traffic.
2. Ensure that the merging taper only directs vehicular traffic into either the right or left lane.

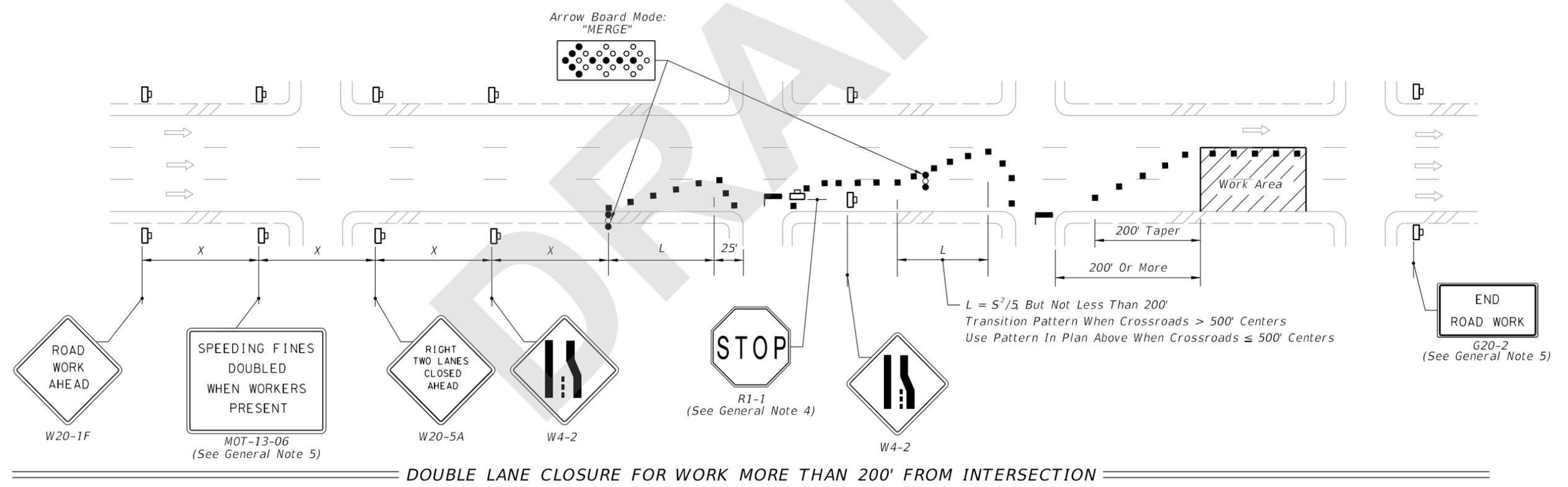
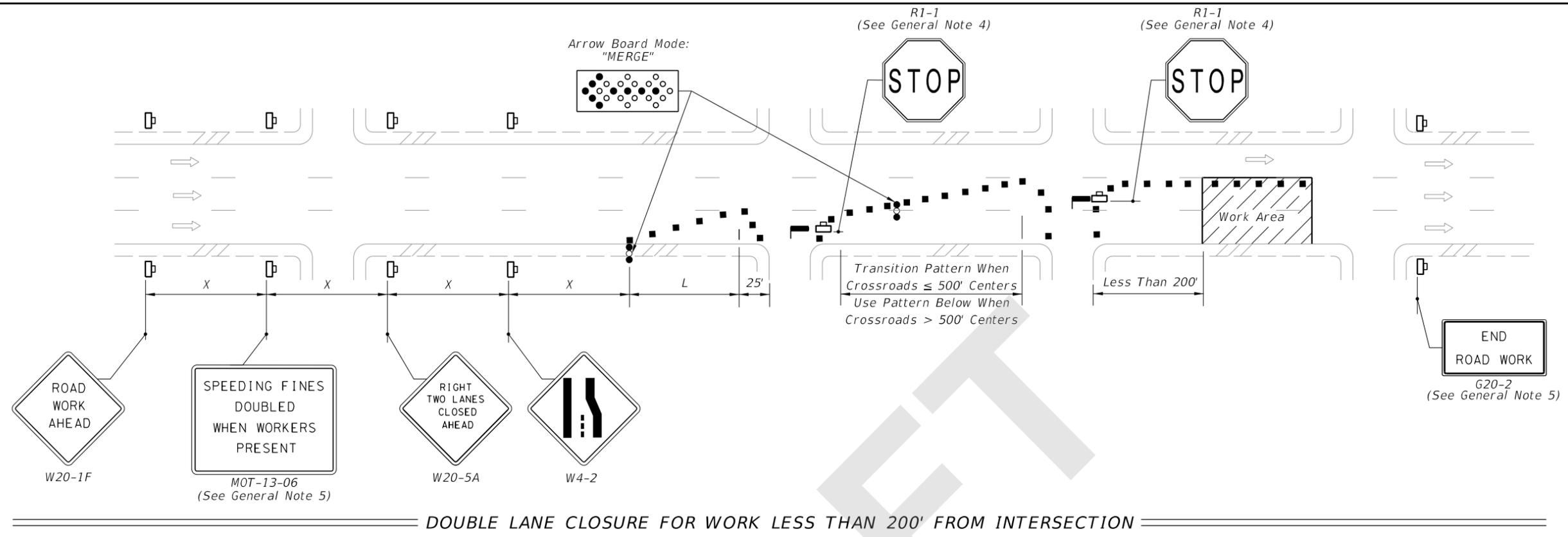
SYMBOLS:

-  Work Area
-  Channelizing Device (See Index 102-600)
-  Type III Barricade
-  Arrow Board
-  Work Zone Sign
-  Stop Bar
-  Lane Identification and Direction of Traffic
-  Truck/Trailer Mounted Attenuator (TMA)
-  Shadow (S) Vehicle With Warning Lights And Arrow Board



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- SYMBOLS:**
- Work Area
 - Channelizing Device (See Index 102-600)
 - Arrow Board
 - Work Zone Sign
 - Stop Bar
 - Lane Identification and Direction of Traffic

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