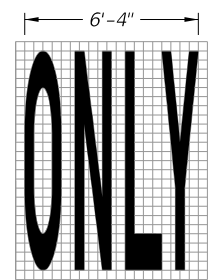
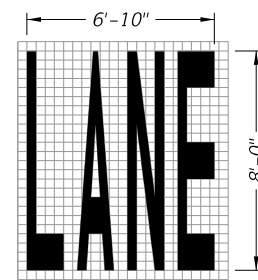


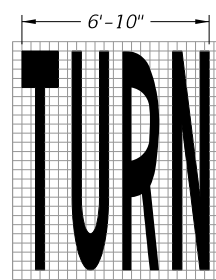
34 S.F.



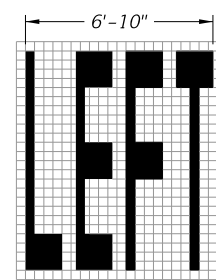
22 S.F.



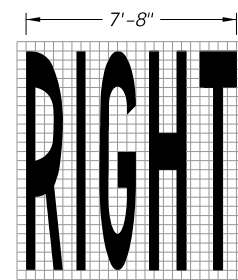
23 S.F.



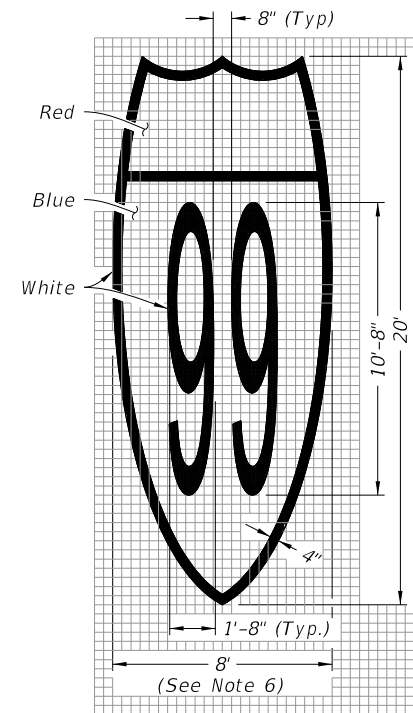
24 S.F.



20 S.F.

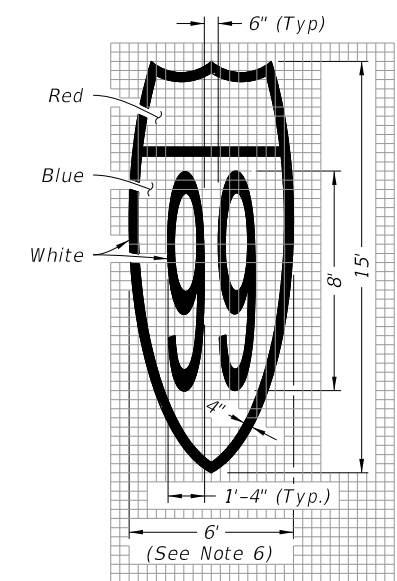


26 S.F.



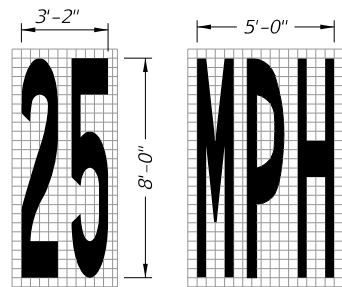
Route Shield for Limited Access Roadways (Interstate Route Shield Shown; U.S. and State Route Shield Similar)

128 S.F.

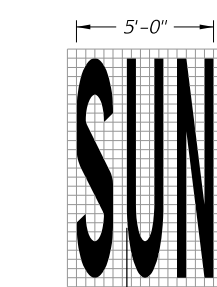


Route Shield for Arterials and Collectors (Interstate Route Shield Shown; U.S. and State Route Shield Similar)

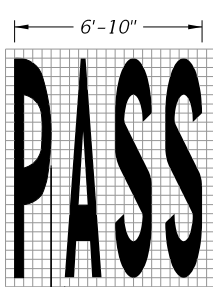
72 S.F.



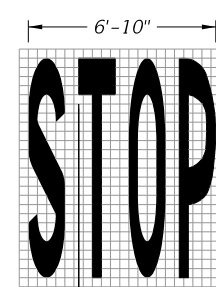
13 S.F.



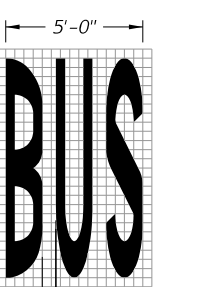
20 S.F.



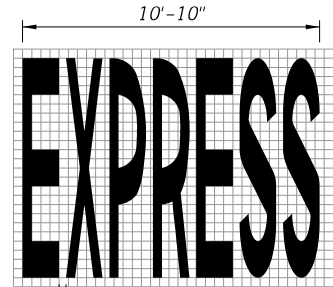
23 S.F.



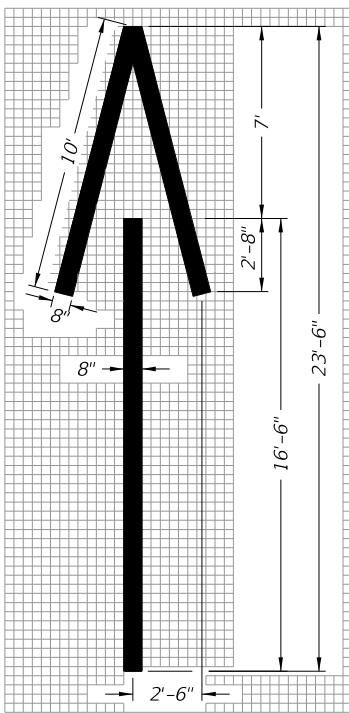
22 S.F.



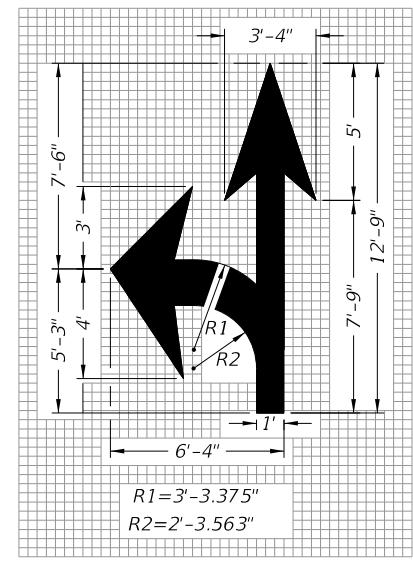
20 S.F.



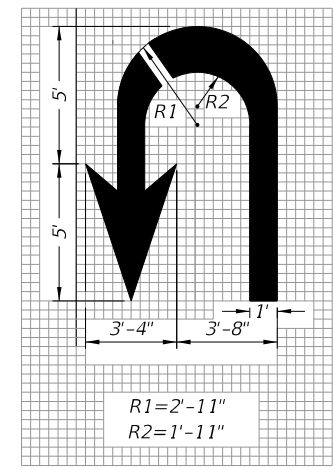
43 S.F.



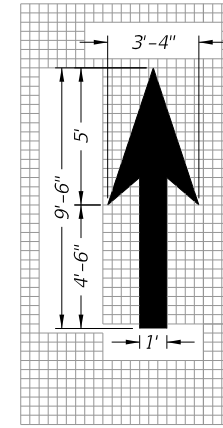
Wrong-Way Arrow  
24 S.F.



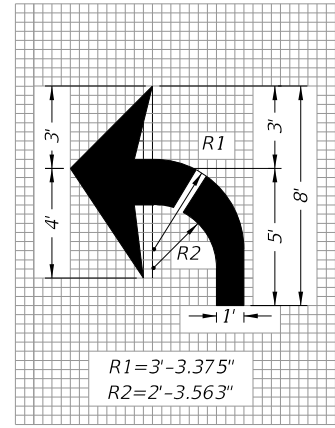
Turn and Through Lane-Use Arrow  
29 S.F.



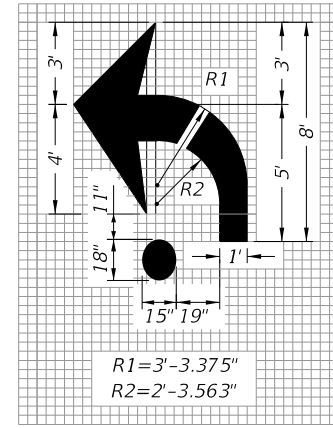
U Turn Lane-Use Arrow  
27 S.F.



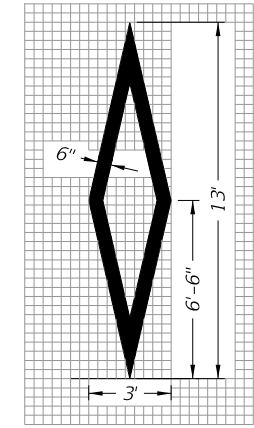
Through Lane-Use Arrow  
12 S.F.



Turn Lane-Use Arrow (Left Turn Shown - Right Turn Similar)  
17 S.F.



Roundabout Approach Arrow  
19 S.F.



Preferential Lane Symbol  
11 S.F.

**NOTES FOR PAVEMENT MESSAGES:**

1. When an arrow or another pavement message is used with a pavement message, maintain a minimum distance of "S" between items, measured from the base of each item. See the Pavement Message Spacing Table for "S" value.
2. Place all pavement messages 25' back from the stop line.
3. Dimensions are within 1" ±.
4. All grids are 4" x 4".
5. All pavement messages must be white except route shields.
6. Increase width of route shield for routes with three digits.

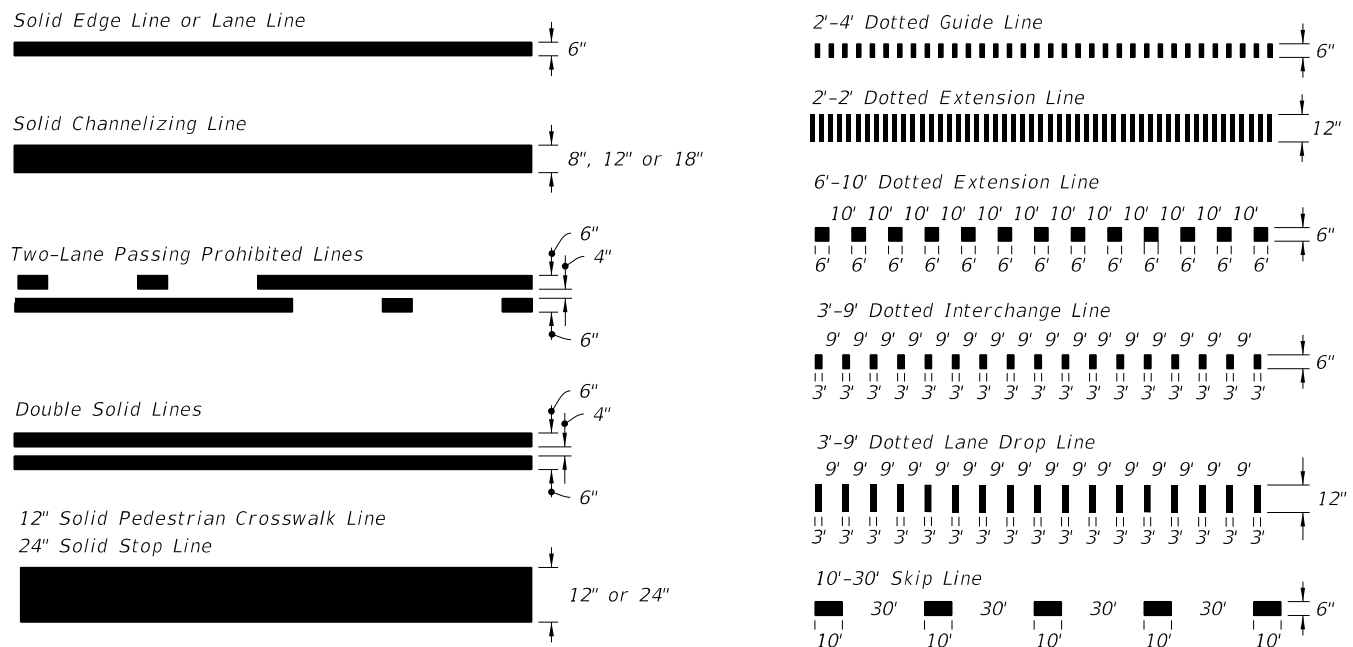
PAVEMENT MESSAGE SPACING TABLE	
Posted Speed (mph)	Distance "S" (feet)
≤ 25	40
30 - 35	56
40 - 45	72
≥ 50	88

**PAVEMENT MESSAGE AND ARROW DETAILS**

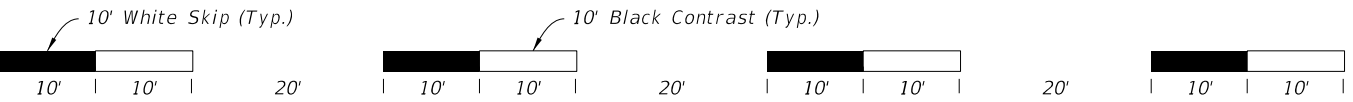
**GENERAL NOTE:**

1. See Index 509-070 for pavement markings at railroad crossings.

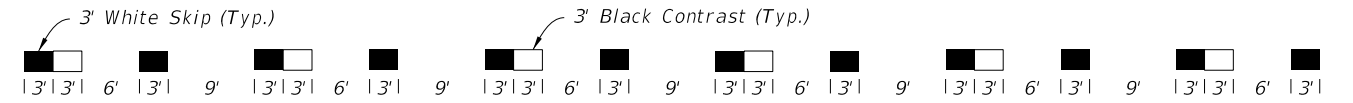
10/14/2019 2:46:29 PM



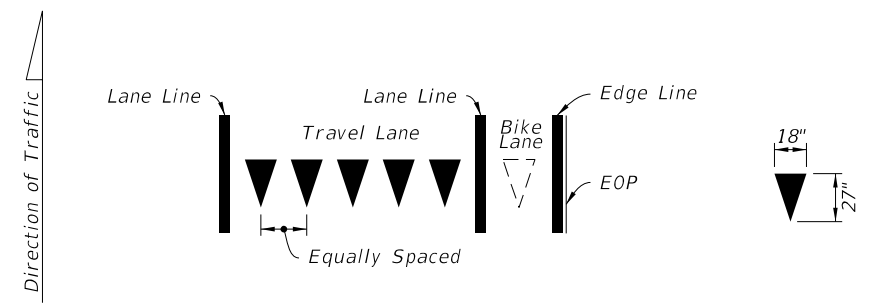
**PAVEMENT MARKING LINES**



**10'-30' SKIP LINE WITH SHADOW MARKINGS**



**DOTTED LINE WITH ALTERNATING SHADOW MARKINGS**  
 (3'-9' Dotted Line Shown, Other Dotted Lines Similar)

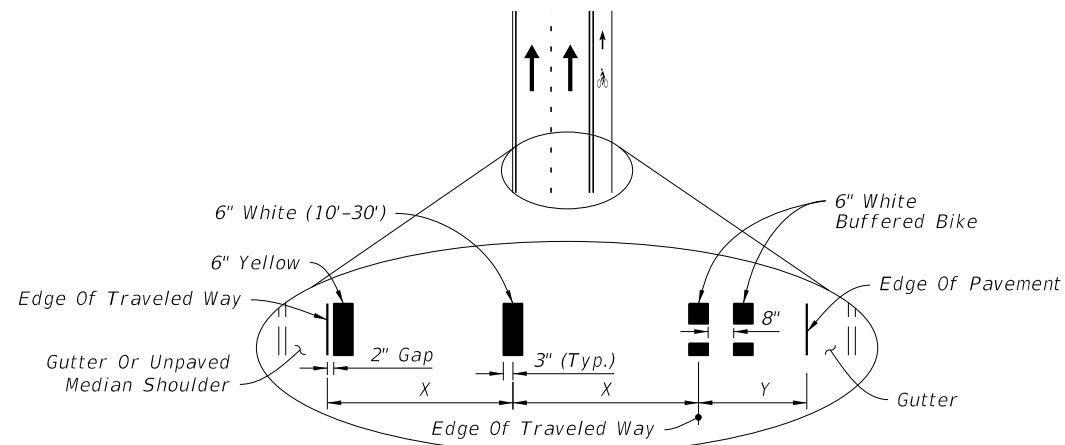


Yield Lines consist of five - 18" X 27" white triangles which face traffic. Equally space triangles within traffic lane. When a bike lane is present, add one additional triangle in the center of the bike lane.

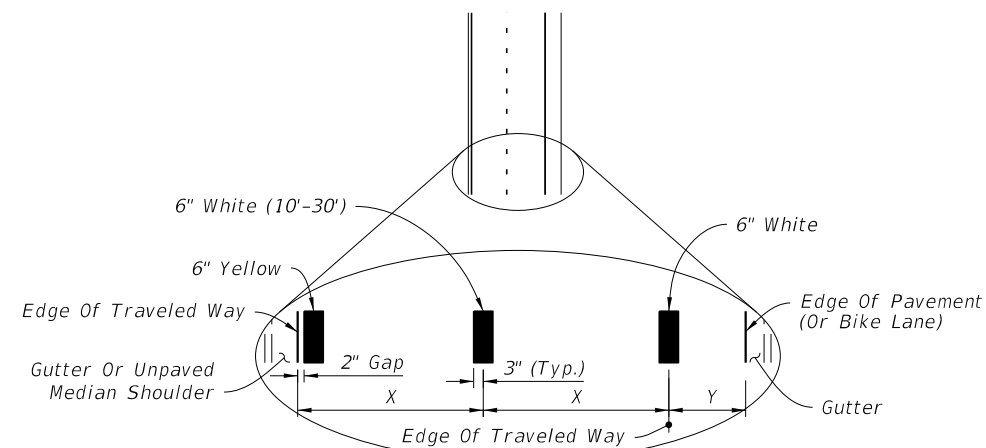
**YIELD LINES**

11/12/2019 11:17:47 AM

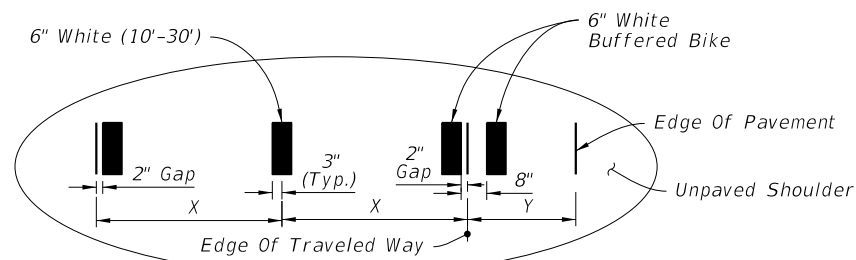
LAST REVISION <b>11/01/19</b>	REVISION	DESCRIPTION:		<b>FY 2020-21          STANDARD PLANS</b>	<b>PAVEMENT MARKINGS</b>	INDEX <b>711-001</b>	SHEET <b>2 of 13</b>
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**CURB AND GUTTER**

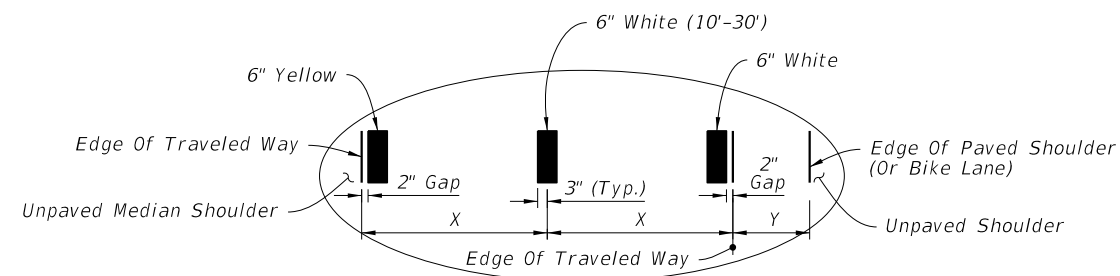


**CURB AND GUTTER**



**FLUSH SHOULDER**

X = LANE WIDTH (FT.)  
Y = BUFFERED BIKE LANE WIDTH (FT.)

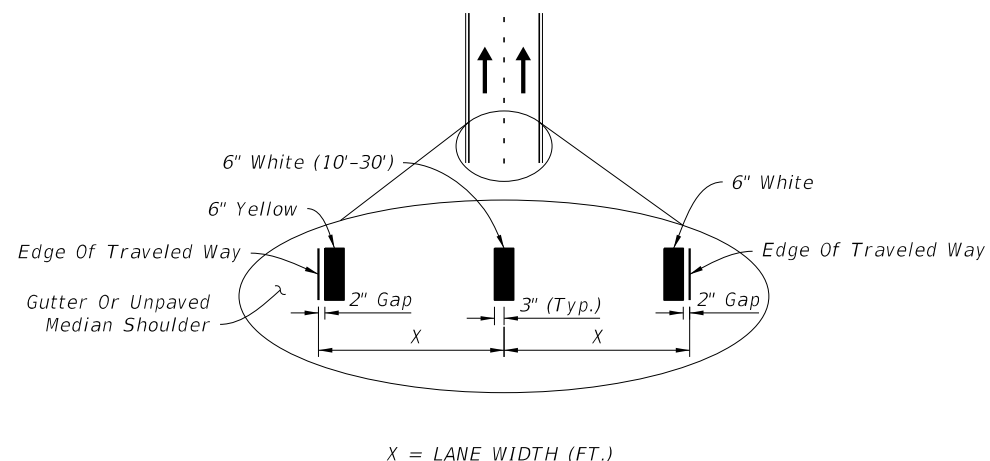


**FLUSH SHOULDER**

X = LANE WIDTH (FT.)  
Y = PAVED SHOULDER / BIKE LANE

=====**STRIPING FOR BUFFERED BIKE LANE**=====

=====**STRIPING WITH SHOULDER OR NON-BUFFERED BIKE LANE**=====



X = LANE WIDTH (FT.)


=====**STRIPING WITH NO SHOULDER OR BIKE LANE**=====

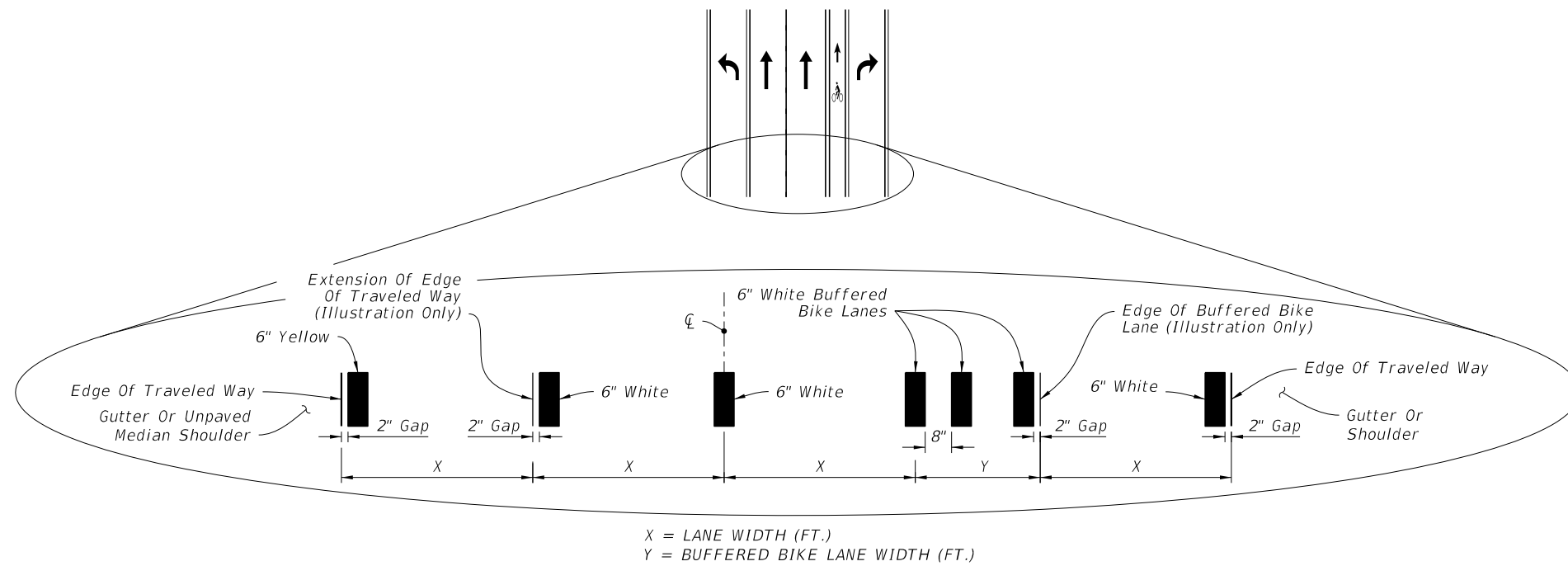
**NOTES:**

1. Lane widths (X) may not be same for each lane in the section.
2. For placement of RPMs, see Index 706-001.

10/14/2019 2:46:32 PM

**PLACEMENT OF LONGITUDINAL PAVEMENT MARKINGS**

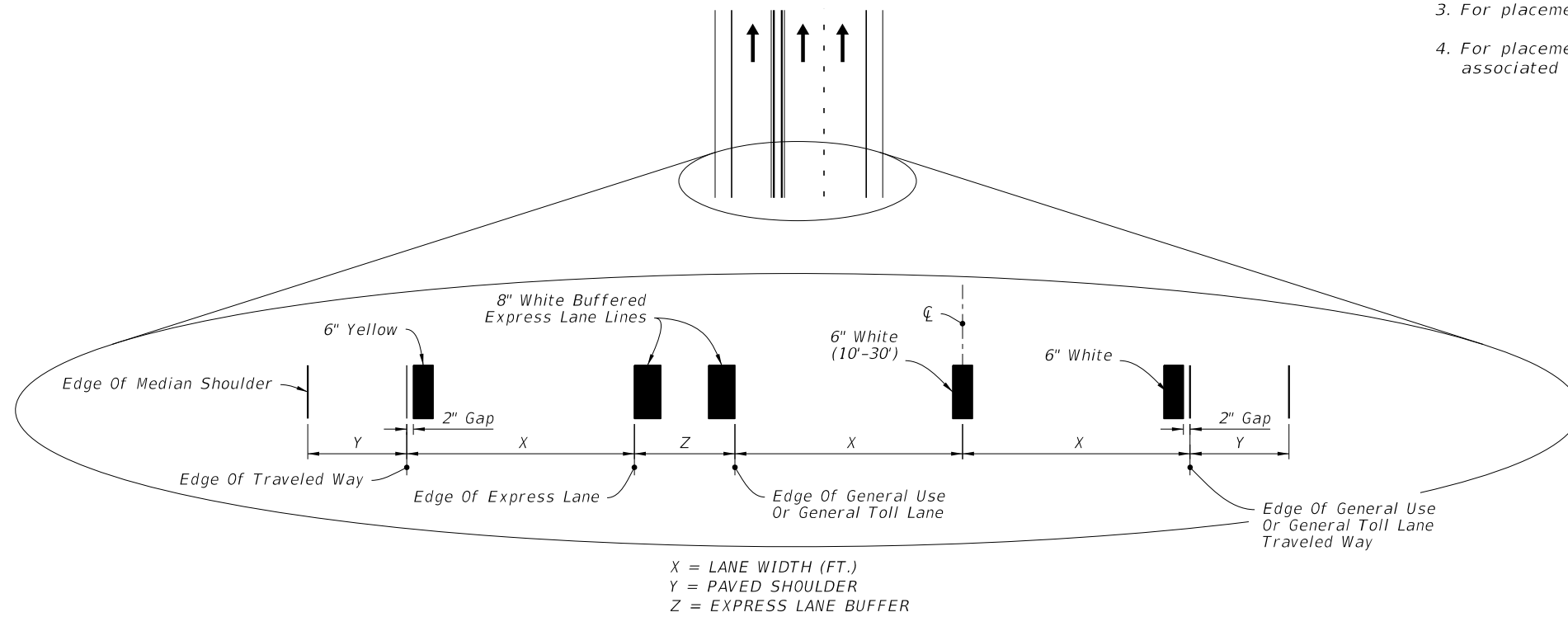
LAST REVISION 11/01/18	REVISION	DESCRIPTION:	 FY 2020-21 STANDARD PLANS	PAVEMENT MARKINGS	INDEX 711-001	SHEET 3 of 13
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**INTERSECTION APPROACH STRIPING WITH TURN LANES AND BUFFERED BIKE LANE KEY HOLE**

**NOTES:**

1. Lane widths (X) may not be same for each lane in the section.
3. For placement of RPMs, see Index 706-001.
4. For placement of Express Lane markers and associated RPMs, see the Plans.



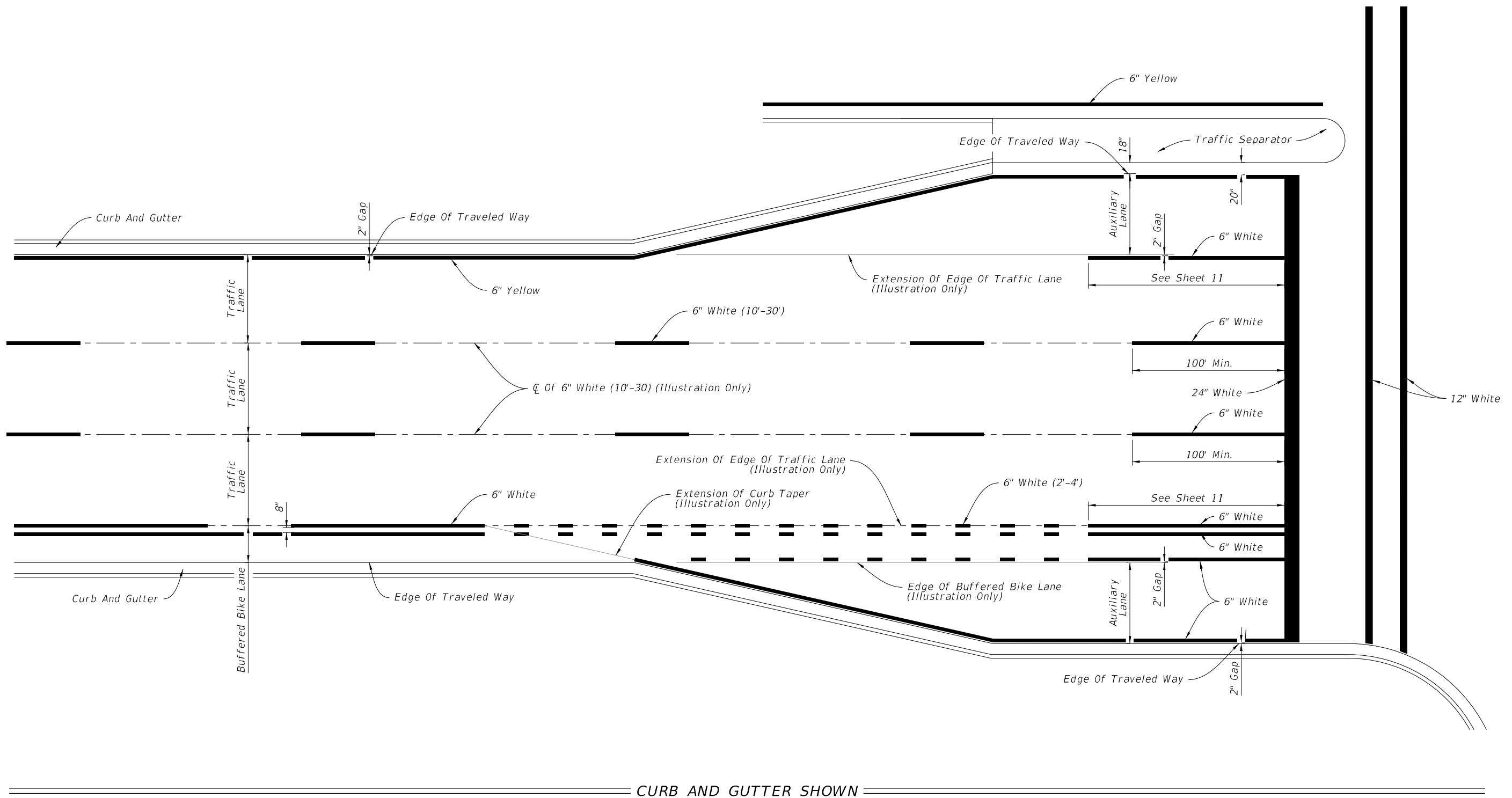
**BUFFERED EXPRESS LANE STRIPING**

**PLACEMENT OF LONGITUDINAL PAVEMENT MARKINGS**

10/14/2019 2:46:32 PM

LAST REVISION 11/01/18	REVISION	DESCRIPTION:	 <b>FY 2020-21 STANDARD PLANS</b>	<b>PAVEMENT MARKINGS</b>	INDEX 711-001	SHEET 4 of 13
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10/14/2019 2:46:40 PM

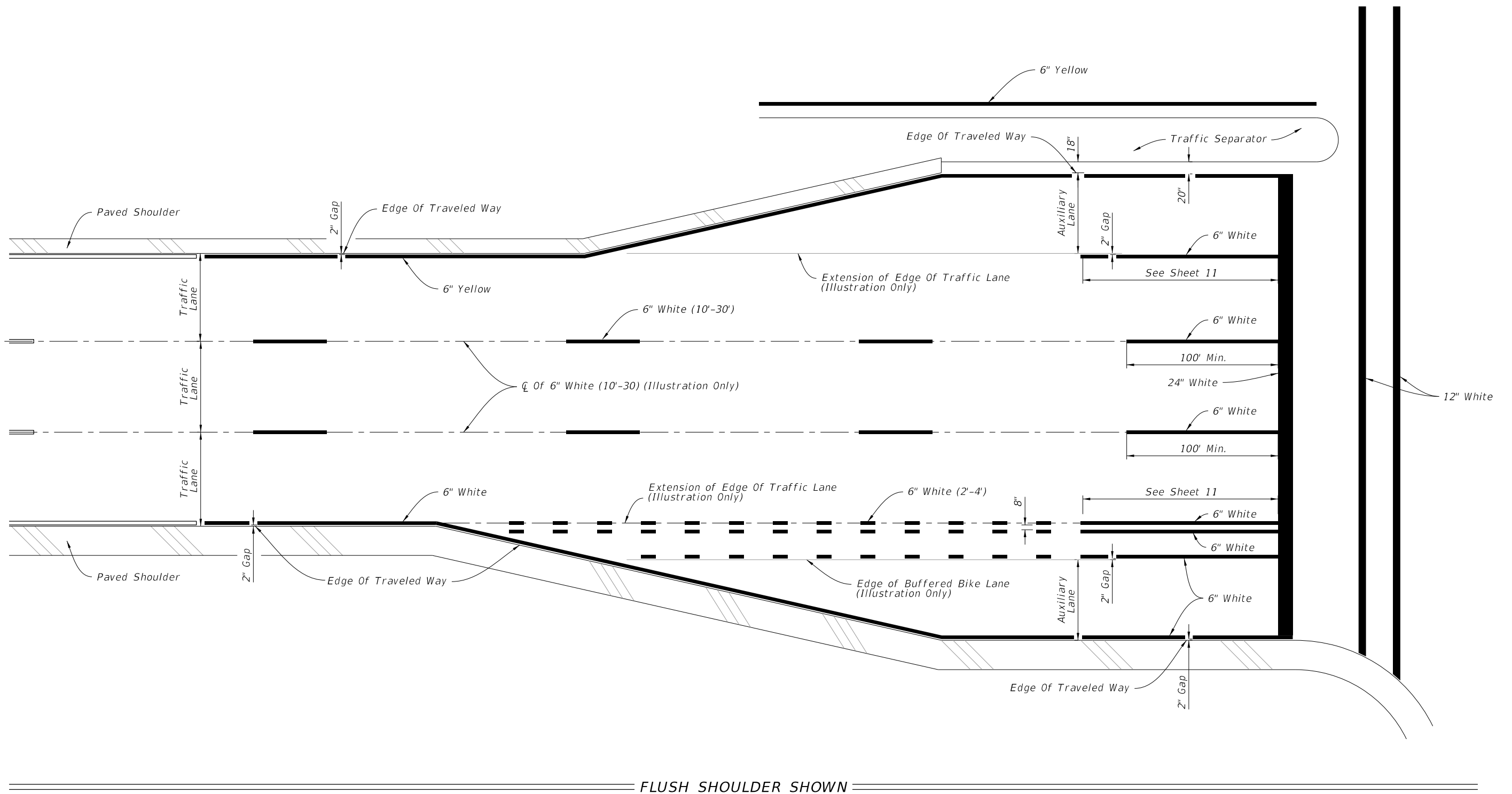


CURB AND GUTTER SHOWN

PLACEMENT OF LONGITUDINAL PAVEMENT MARKINGS

LAST REVISION 11/01/19	REVISION DESCRIPTION:	 FY 2020-21 STANDARD PLANS	PAVEMENT MARKINGS	INDEX 711-001	SHEET 5 of 13
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10/14/2019 2:46:41 PM



FLUSH SHOULDER SHOWN

PLACEMENT OF LONGITUDINAL PAVEMENT MARKINGS

LAST REVISION 11/01/19	DESCRIPTION:
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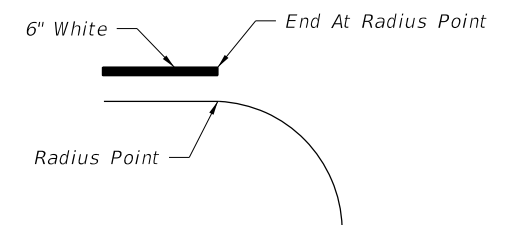
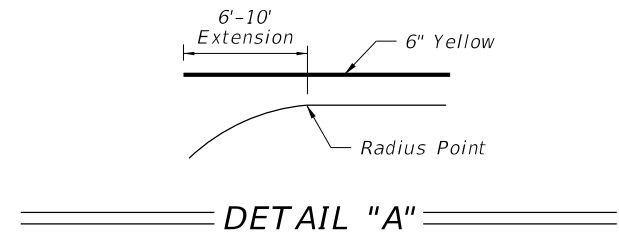
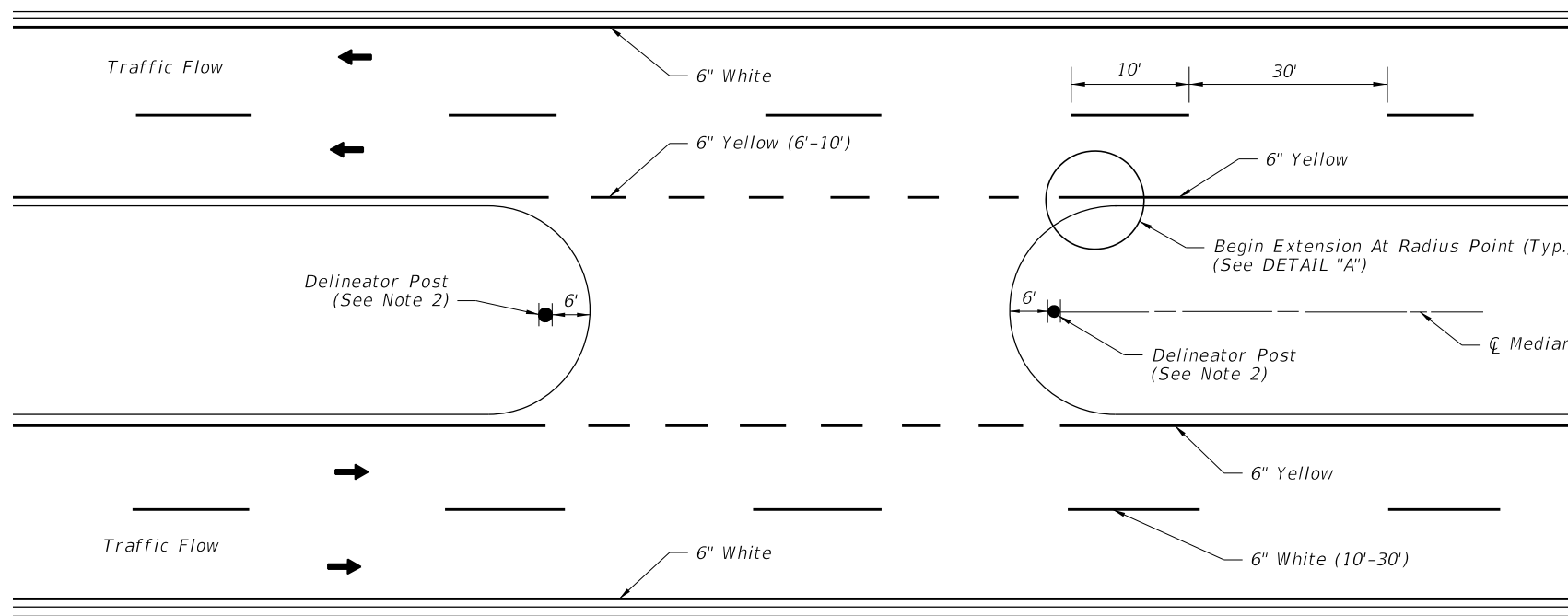


FY 2020-21  
STANDARD PLANS

PAVEMENT MARKINGS

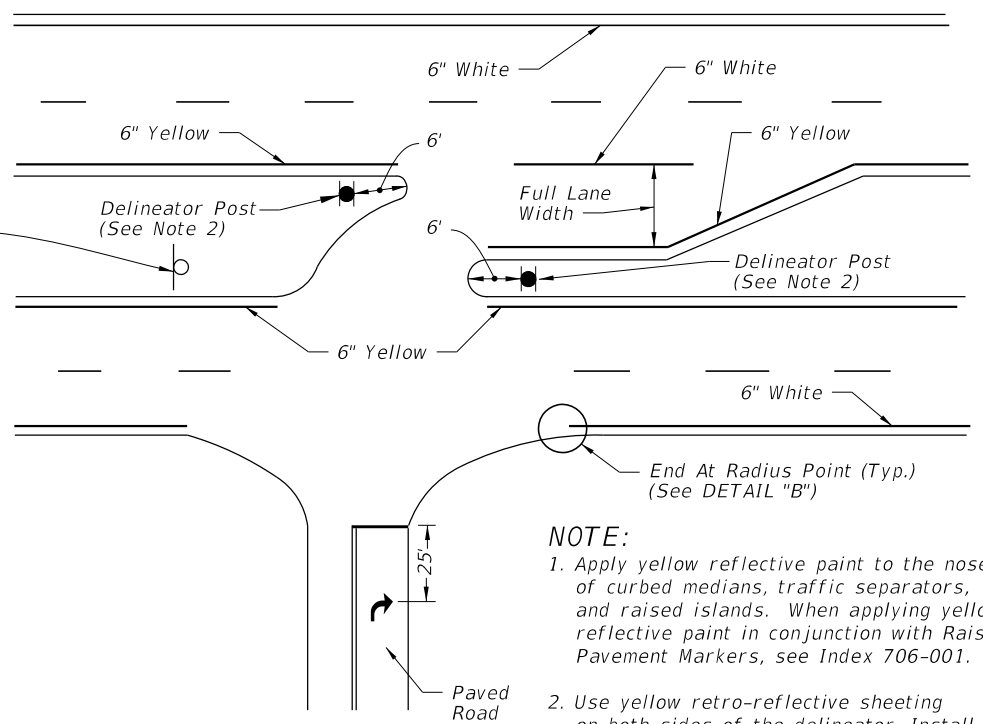
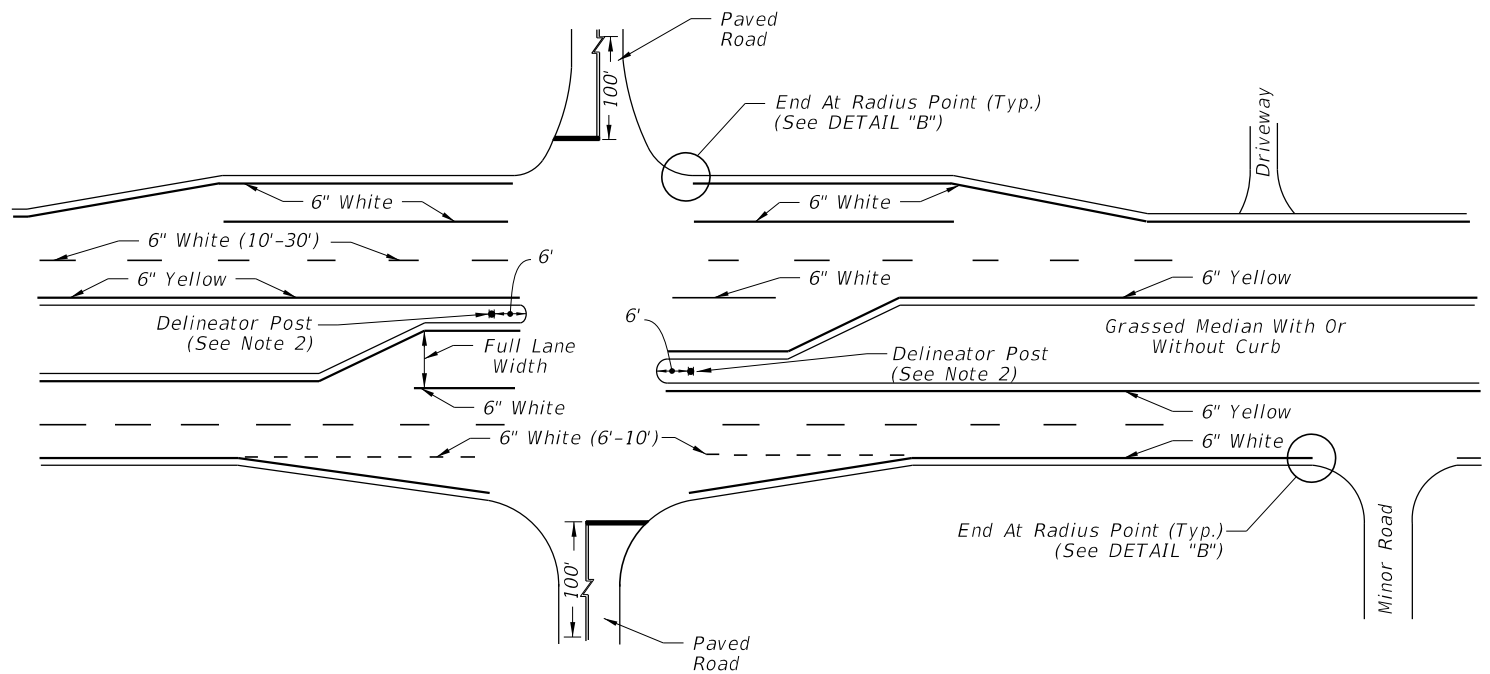
INDEX  
711-001

SHEET  
6 of 13



PAVEMENT MARKINGS AND DELINEATORS FOR MEDIAN CROSSOVER

DETAIL "B"

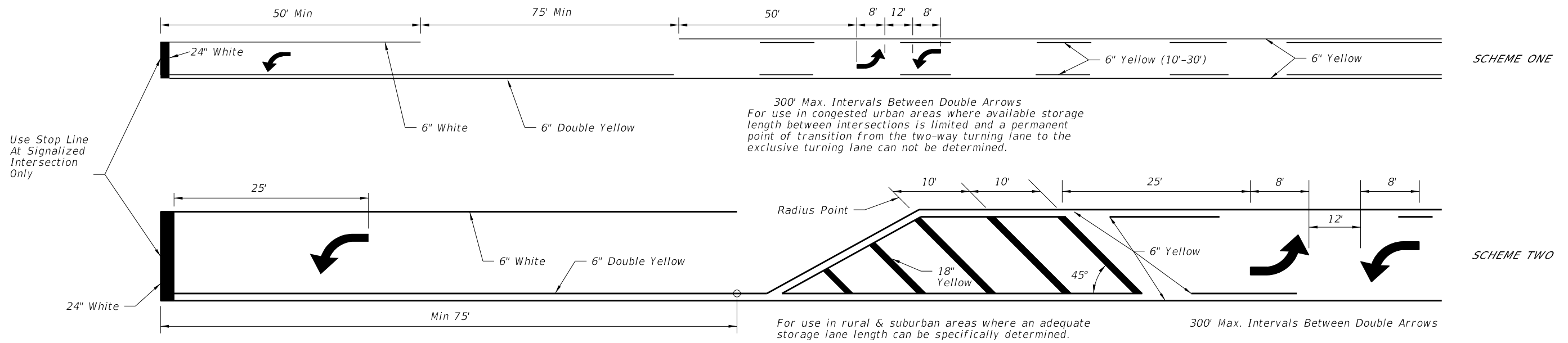


- NOTE:**
1. Apply yellow reflective paint to the noses of curbed medians, traffic separators, and raised islands. When applying yellow reflective paint in conjunction with Raised Pavement Markers, see Index 706-001.
  2. Use yellow retro-reflective sheeting on both sides of the delineator. Install the post so that the top is 4' above the grade at the edge of the pavement.
  3. Extend double yellow centerlines 100' back from intersection on all approaches or 50' for unmarked cross roads.

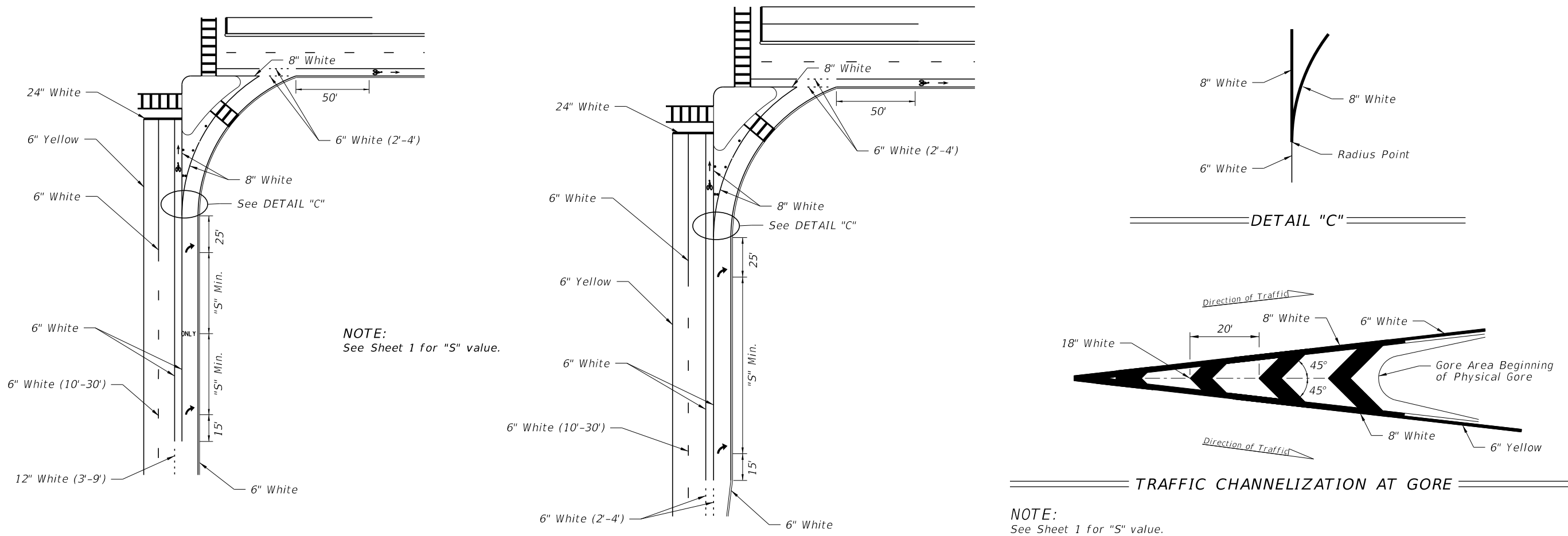
PAVEMENT MARKINGS FOR INTERSECTIONS WITH MAJOR AND MINOR ROADS

10/14/2019 2:46:41 PM

LAST REVISION 11/01/18	REVISION	DESCRIPTION:	 FY 2020-21 STANDARD PLANS	PAVEMENT MARKINGS	INDEX 711-001	SHEET 7 of 13
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**TWO WAY LEFT TURN LANE**  
 (With Single Lane Left Turn Channelization)



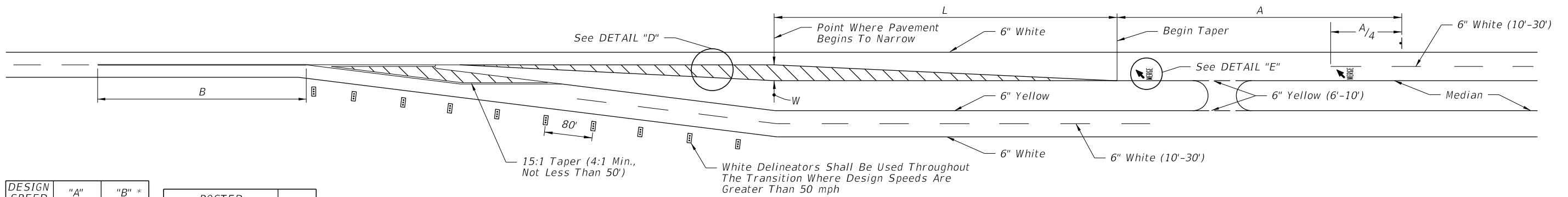
**RIGHT TURN LANE DROP AND ISLAND DETAILS**  
 LEFT TURN LANE DROP IS MIRROR IMAGE

**RIGHT TURN LANE AND ISLAND DETAILS**

10/14/2019 2:46:42 PM

LAST REVISION 11/01/19	DESCRIPTION:		FY 2020-21 STANDARD PLANS	PAVEMENT MARKINGS	INDEX	SHEET
					711-001	8 of 13





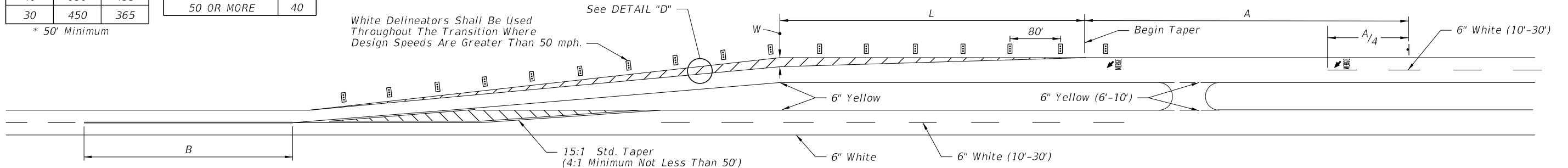
DESIGN SPEED (MPH)	"A" (FT.)	"B" * (FT.)
60	---	640
55	950	595
50	850	550
45	750	500
40	650	455
30	450	365

\* 50' Minimum

POSTED SPEED LIMIT MPH	"y" (FT.)
30 OR LESS	10
35	20
40	20
45	30
50 OR MORE	40

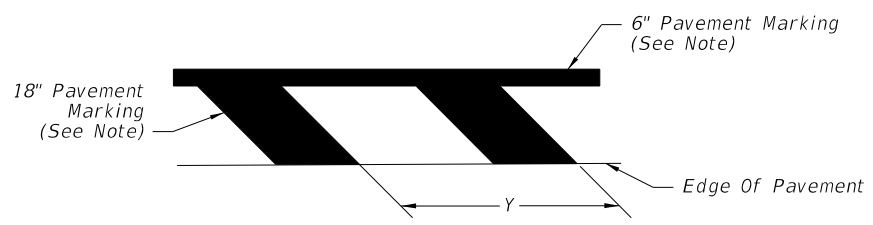
DESIGN SPEED 'S' (MPH)	Length 'L' (FT.)
40 or Less	$L = WS^2/60$
45 or Greater	$L = WS$

**LEFT ROADWAY CENTERED ON EXISTING ROADWAY**

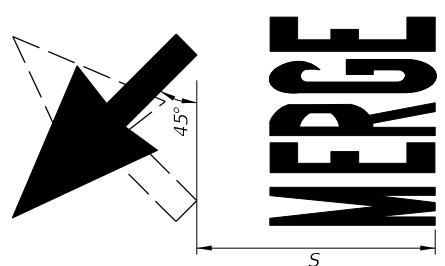


**RIGHT ROADWAY CENTERED ON EXISTING ROADWAY**

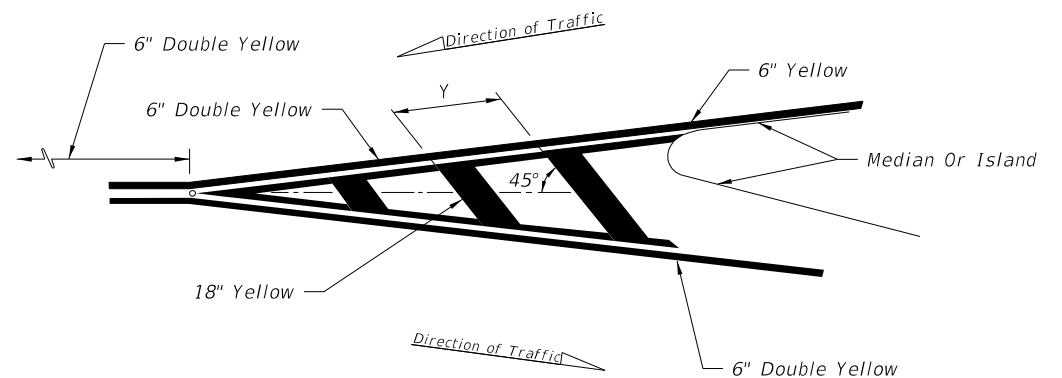
**SCHEMES FOR TRANSITION - 2 LANE / 4 LANE ROADWAY**



**NOTE:**  
Make pavement markings yellow for left roadway centered on existing roadway. Right roadway centered on existing roadway is similar with white pavement markings.



**NOTE:** See Sheet 1 for "S" value.

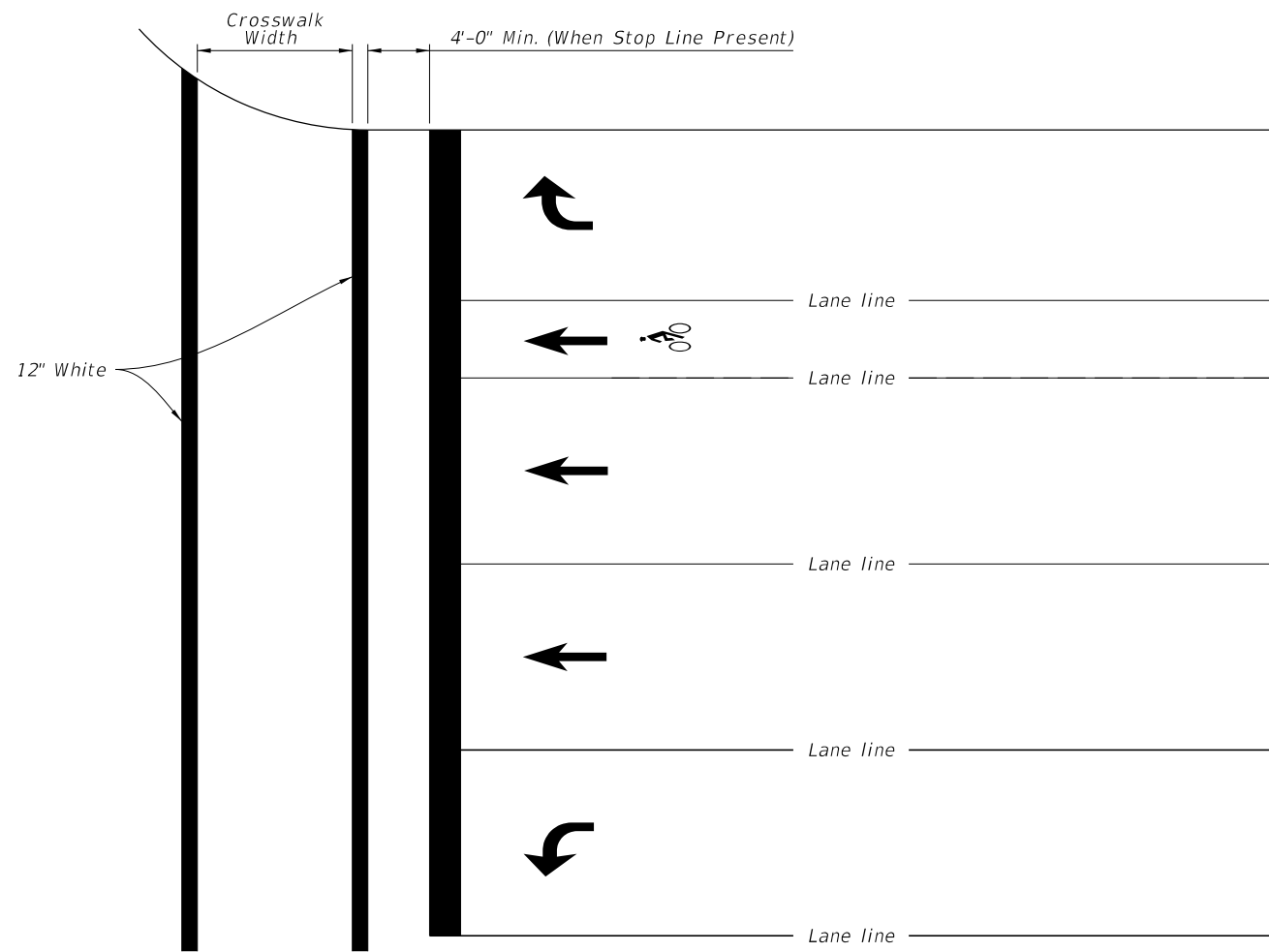


10/14/2019 2:46:42 PM

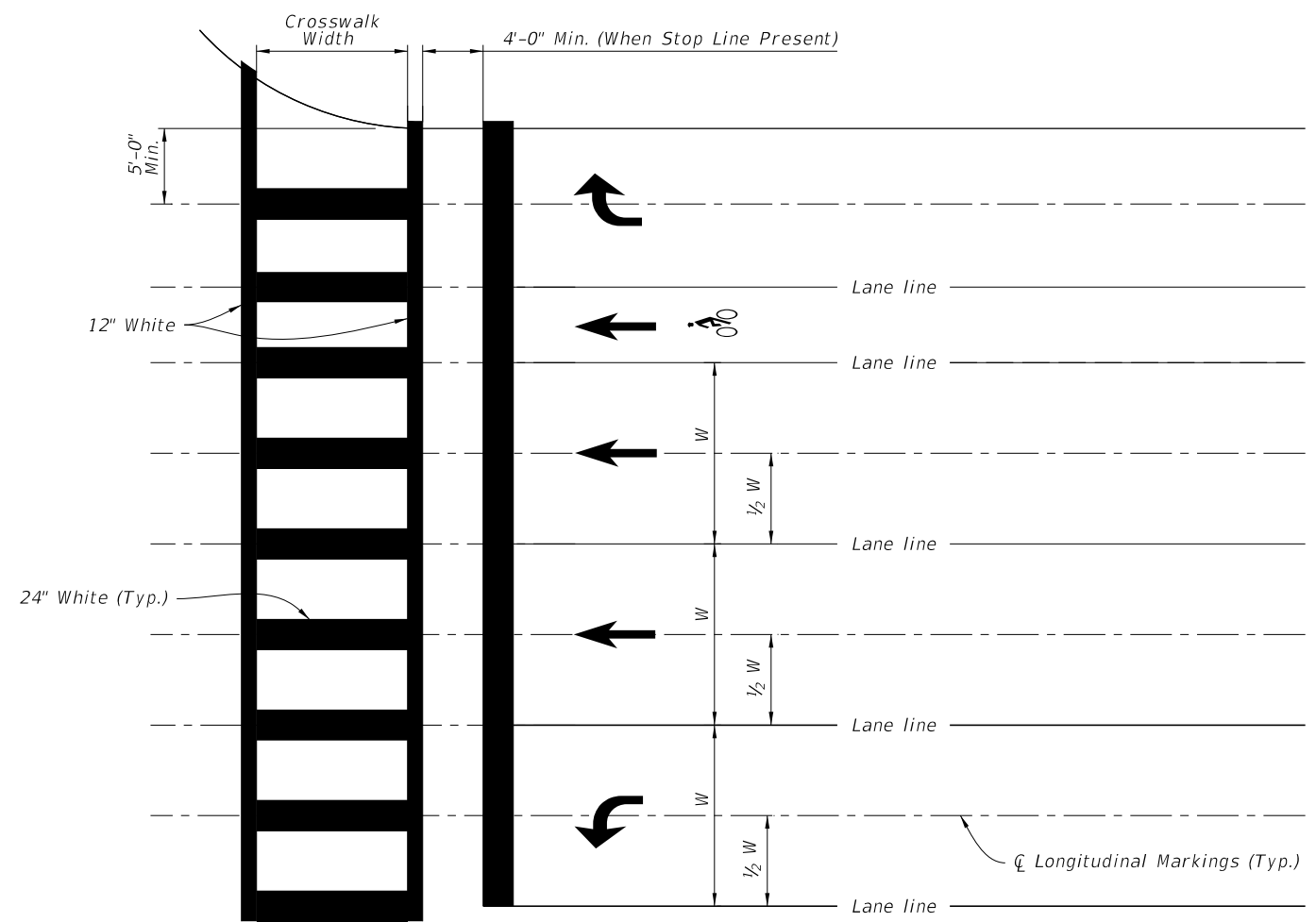
**DETAIL "D"**

**DETAIL "E"**

**MARKINGS FOR TRAFFIC SEPARATION**



STANDARD CROSSWALK DETAILS




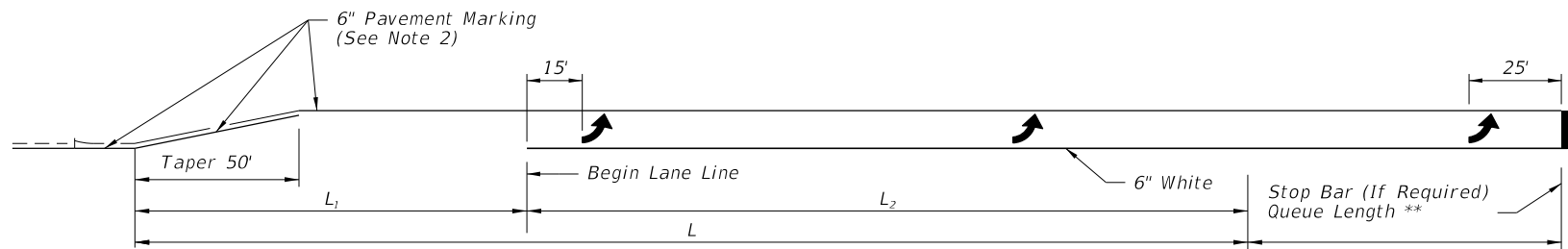
SPECIAL EMPHASIS CROSSWALK DETAILS

**NOTES:**

1. For crosswalk width, exceed width of the adjacent sidewalk, but do not make width less than 6' for intersection crosswalks and 10' for midblock crosswalks. Measure width from the inside of the transverse crosswalk markings.
2. When the Special Emphasis Crosswalk is not perpendicular to the lane lines, make the longitudinal markings parallel to the lane lines.
3. Refer to Index 522-002 when Curb Ramps are present.

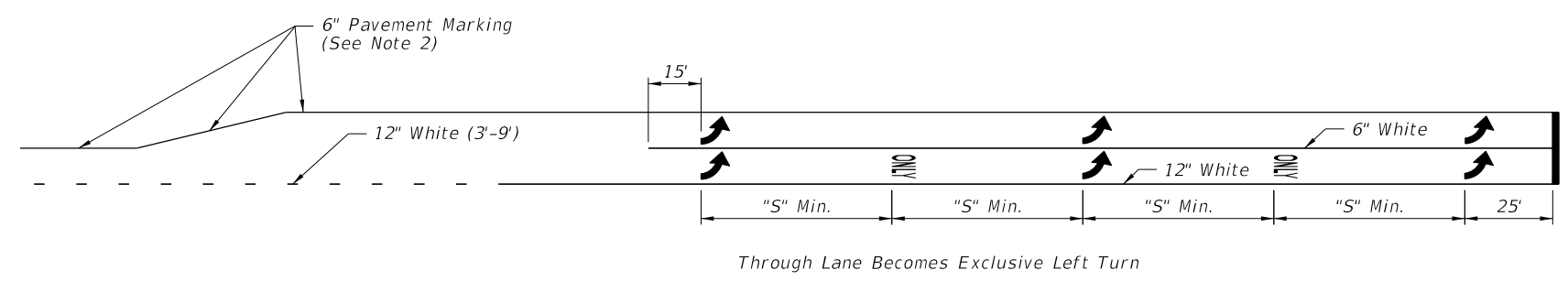
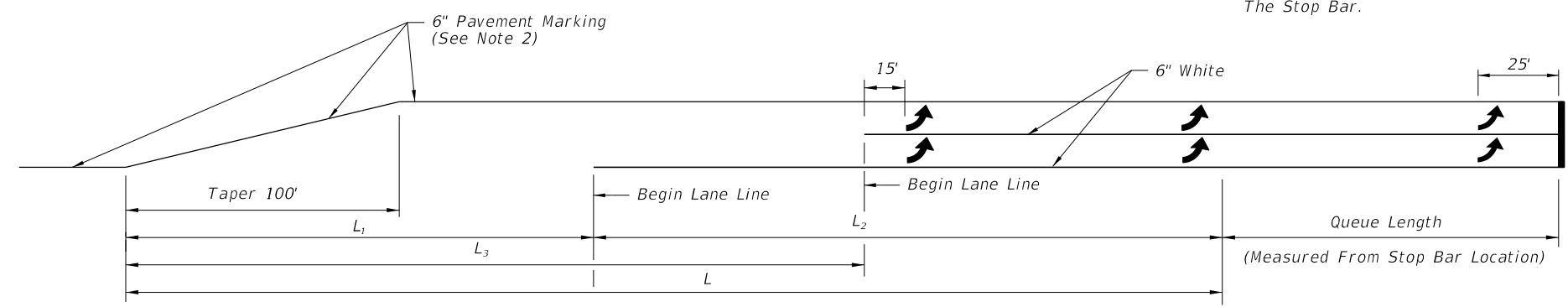
10/14/2019 2:46:43 PM

LAST REVISION 11/01/18	REVISION	DESCRIPTION:	 FY 2020-21 STANDARD PLANS	PAVEMENT MARKINGS	INDEX 711-001	SHEET 10 of 13
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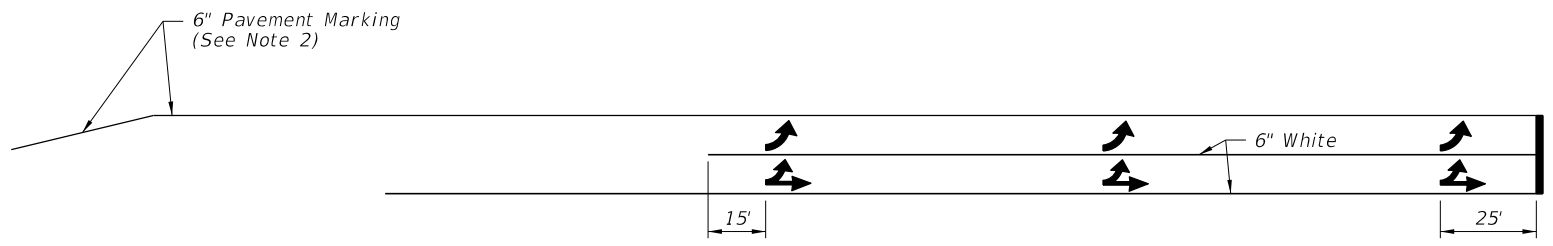


**SINGLE LEFT TURNS**

\*\* Queue Length Is Measured From The Median Nose Radial Point Or, When A Stop Bar Is Required, From The Stop Bar.



Through Lane Becomes Exclusive Left Turn

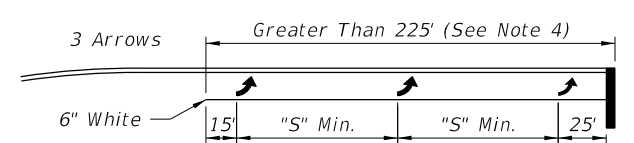
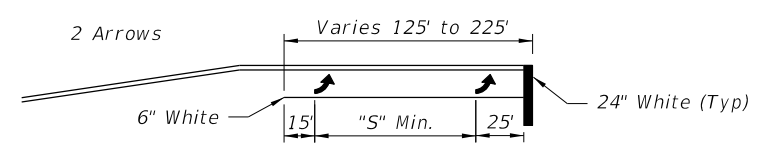
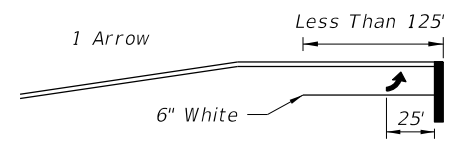


Through Lane Becomes Optional Left Turn

**DOUBLE LEFT TURNS**

TURN LANES - CURBED AND UNCURBED MEDIANS							
Posted Speed (mph)	Clearance Distance $L_1$	URBAN CONDITIONS			RURAL CONDITIONS		
		Brake To Stop Distance $L_2$	Total Decel. Distance $L$	Clearance Distance $L_3$	Brake To Stop Distance $L_2$	Total Decel. Distance $L$	Clearance Distance $L_3$
≤30	70'	75'	145'	110'	---	---	---
35	80'	75'	155'	120'	---	---	---
40	85'	100'	185'	135'	---	---	---
45	105'	135'	240'	160'	185'	290'	160'
50	125'	---	---	---	225'	350'	195'
55	145'	---	---	---	260'	405'	230'
≥60	170'	---	---	---	290'	460'	270'

NOTE: When installing lane lines for turn lanes, use the dimensions in the Plans, or use the above values for turn lanes not dimensioned in the Plans.



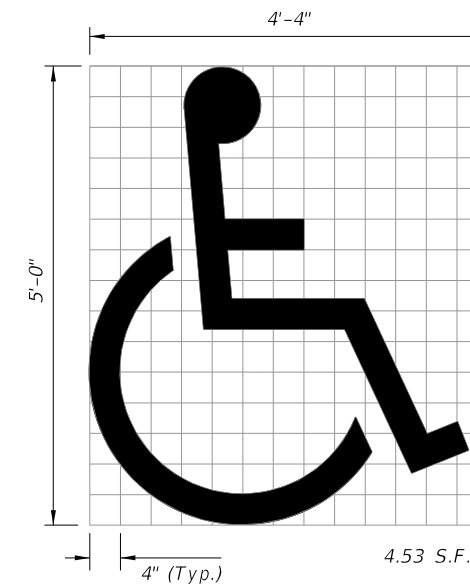
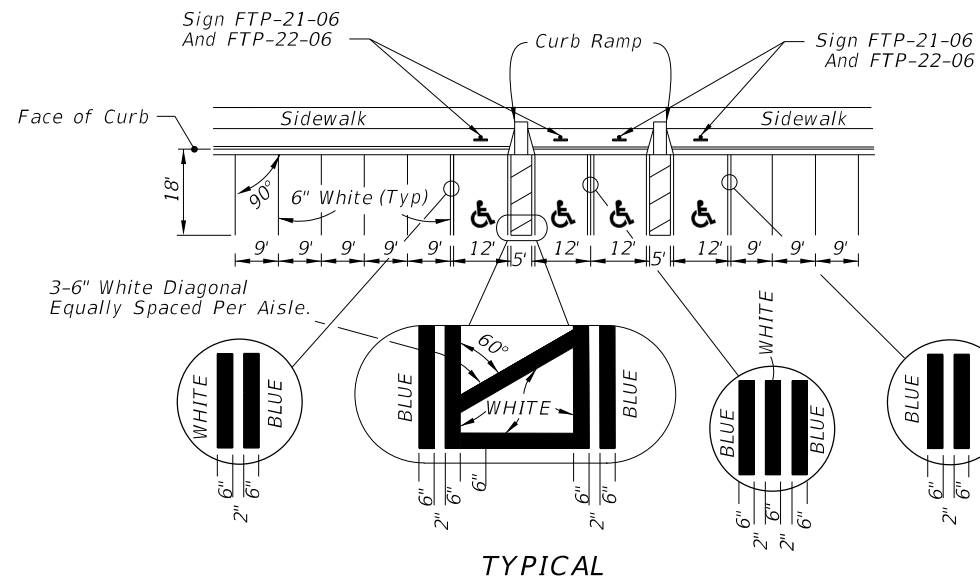
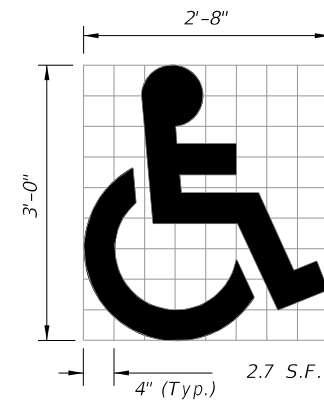
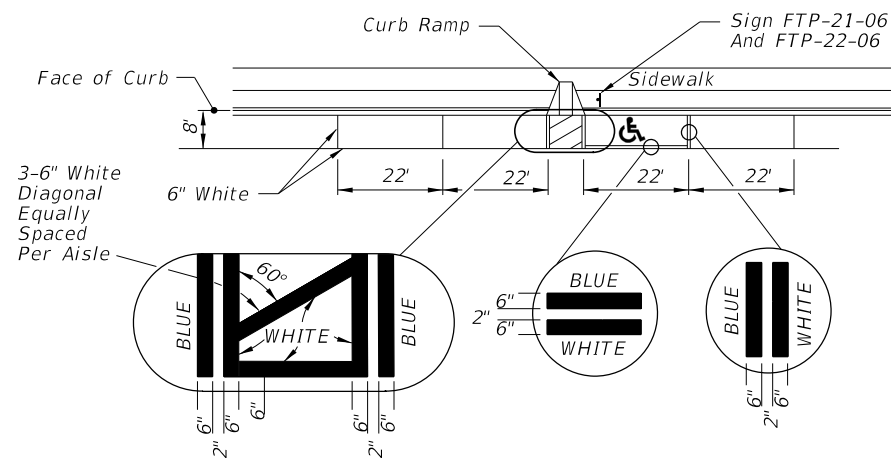
**ARROW SPACING**

**NOTES:**

1. This Index also applies to right turn lanes.
2. Make pavement marking yellow for left-turn lanes and white for right-turn lanes.
3. See Sheet 1 for "S" value.
4. Space arrows evenly between the first and last arrow with a minimum spacing of "S" between arrows.
5. For turn lanes greater than 225' in length, use a minimum of three arrows. Use additional arrows in accordance with the Plans or as directed by the Engineer. Space arrows evenly throughout the available length with a minimum spacing of "S" between arrows.

**TURN LANE MARKINGS**

12/18/2019 3:10:06 PM

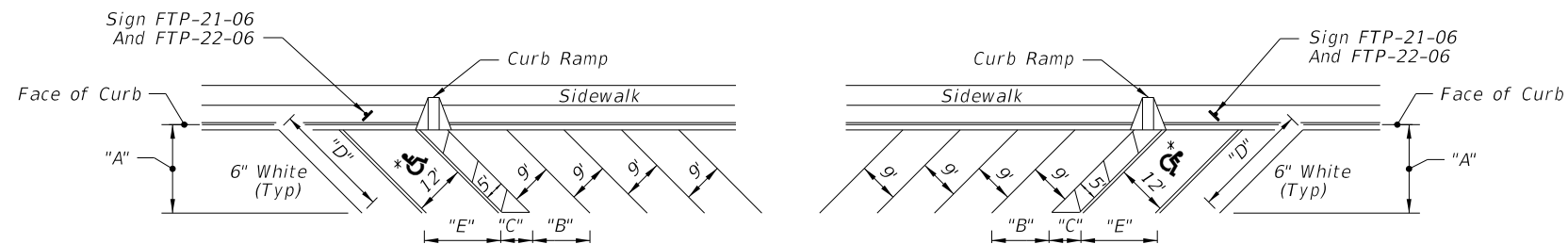


(See Note 6)

UNIVERSAL SYMBOL OF ACCESSIBILITY

NOTES:

1. Dimensions are to the centerline of markings.
2. An Access Aisle is required for each accessible space when angle parking is used.
3. Criteria for pavement markings only, not public sidewalk curb ramp locations. For ramp locations refer to plans.
4. Tint blue pavement markings to match color 15180 of Federal Standards 595a.
5. Mount FTP-22-06 sign below the FTP-21-06 sign.
6. Use of the pavement symbol in accessible parking spaces is optional. When pavement symbol is used, the symbol is either 3'-0" or 5'-0" high and white in color.



FORWARD-IN PARKING

REVERSE-IN PARKING

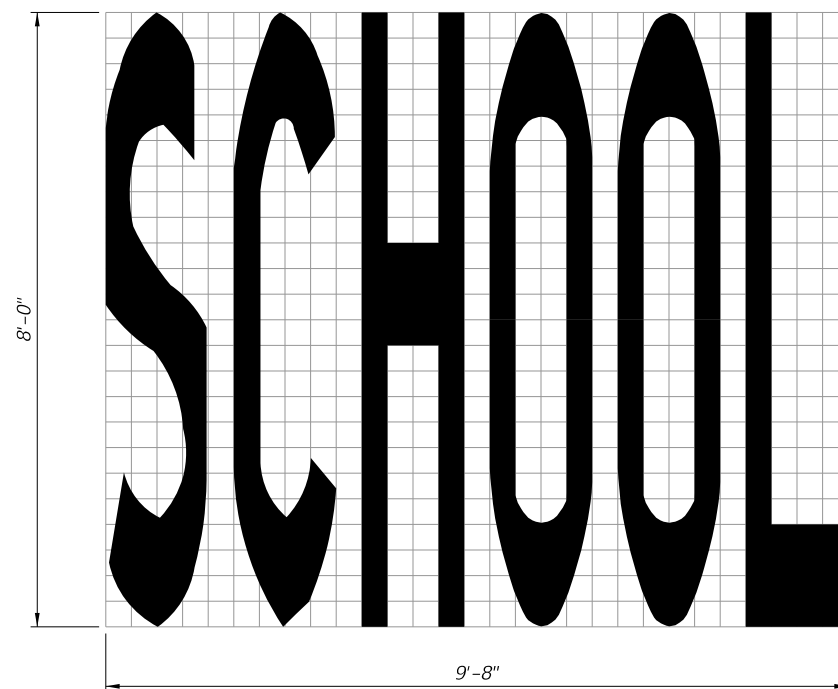
\* FOR ACCESSIBLE MARKINGS - SEE ABOVE

DIMENSIONS					
∠ θ	"A"	"B"	"C"	"D"	"E"
45°	17'-0"	12'-9"	7'-0"	24'-0"	17'-0"

PAVEMENT MARKING FOR PARKING

10/14/2019 2:46:44 PM

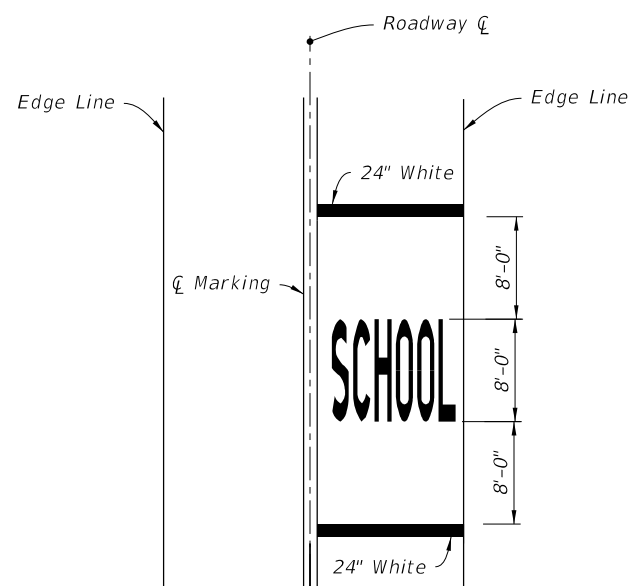
33 S.F.



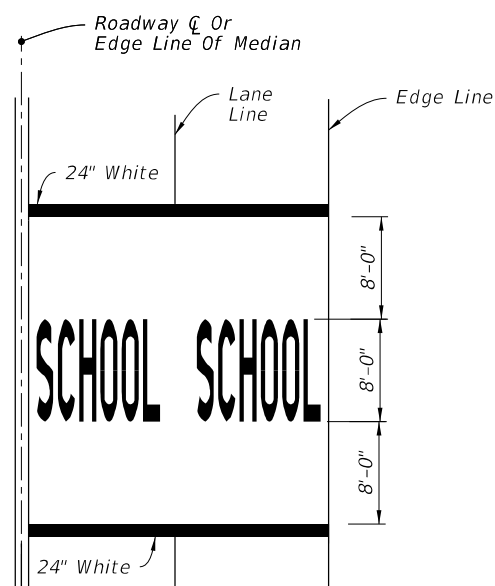
SCHOOL PAVEMENT MARKING

**NOTES:**

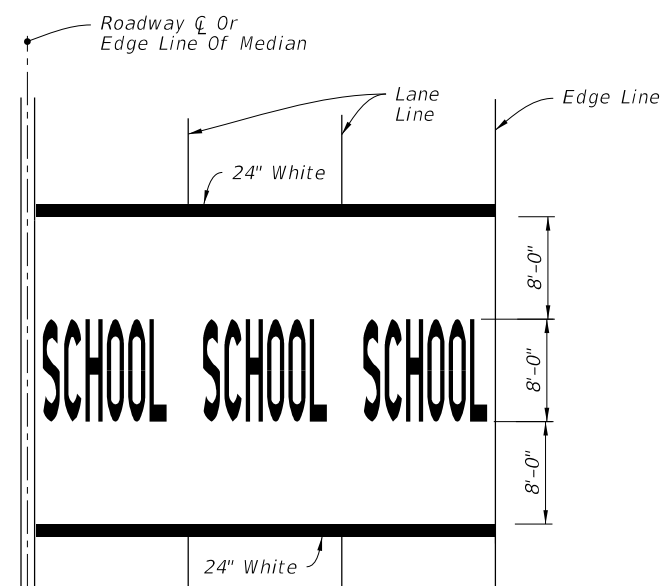
1. All grids are 4" x 4".
2. Pavement Marking Should Not Extend Into Opposing Lane.
3. Center School Pavement Marking in lane.



SINGLE-LANE APPROACH



TWO-LANE APPROACH



MULTI-LANE APPROACH  
(Three or More)

MARKINGS FOR SCHOOL ZONES

10/14/2019 2:46:45 PM

LAST REVISION 11/01/18	REVISION	DESCRIPTION:	 FY 2020-21 STANDARD PLANS	PAVEMENT MARKINGS	INDEX 711-001	SHEET 13 of 13
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