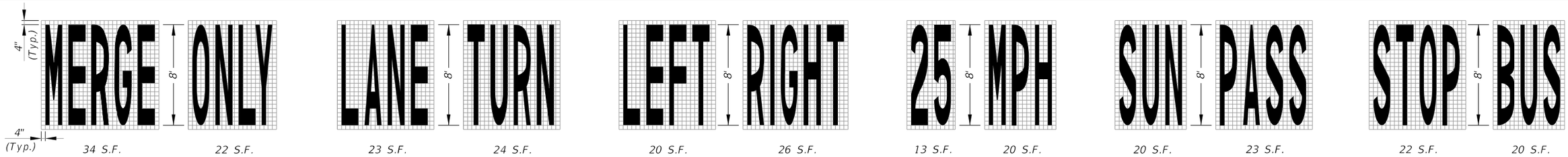
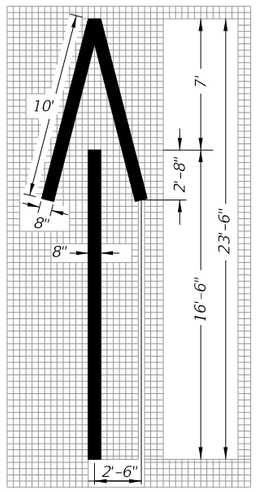
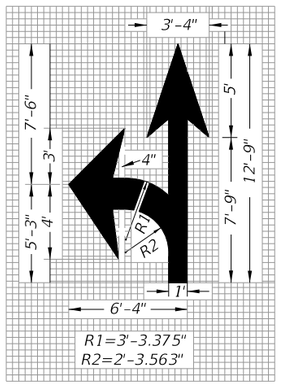




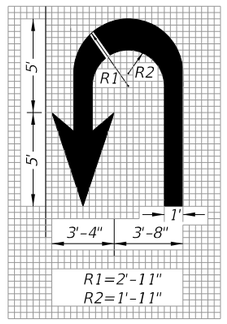
Wrong-Way Arrow

24 S.F.



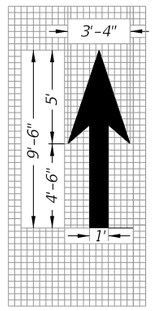
Turn and Through Lane-Use Arrow

29 S.F.



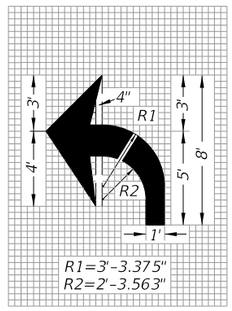
U Turn Lane-Use Arrow

27 S.F.



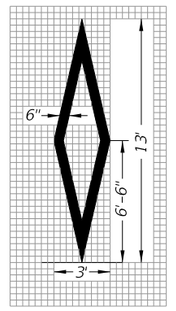
Through Lane-Use Arrow

12 S.F.



Turn Lane-Use Arrow (Left Turn Shown – Right Turn Similar by Opposite Hand)

17 S.F.



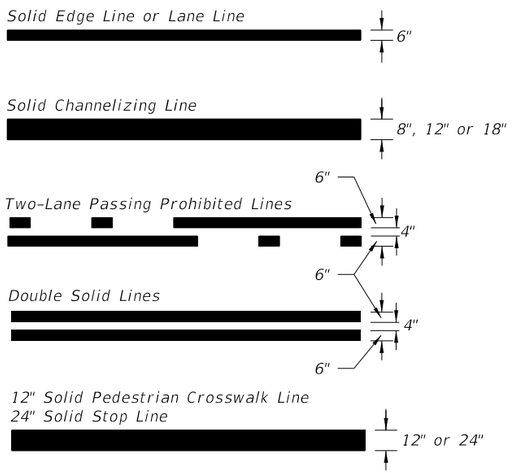
Preferential Lane Symbol

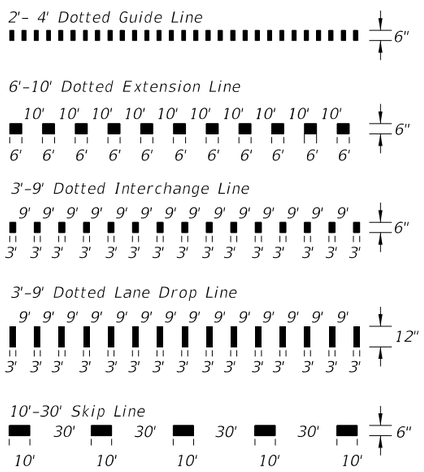
11 S.F.

PAVEMENT ARROW AND MESSAGE DETAILS NOTE: When arrow and pavement message are used together, the arrow shall be located down stream of the pavement message and shall be separated from the pavement message by a distance of 25' (Base of the arrow to the base of the message). Stop message shall be placed 25' back of stop line.

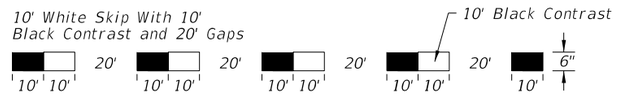
DIMENSIONS ARE WITHIN 1" ±

PAVEMENT ARROW AND MESSAGE DETAILS

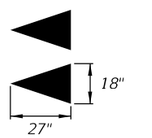




TYPES OF PAVEMENT MARKING LINES



CONTRAST MARKINGS



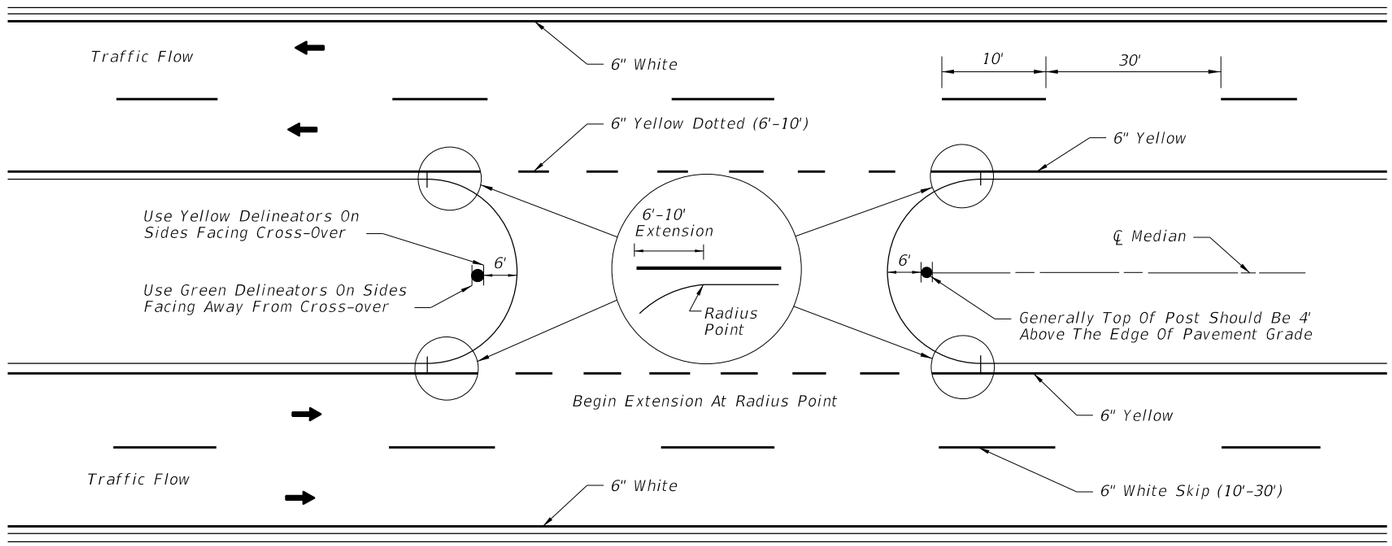
Yield Lines consist of five – 18" X 27" white triangles which face traffic. Equally space triangles within travel lane. Add one additional triangle using same spacing when a bike lane is present.

YIELD LINES

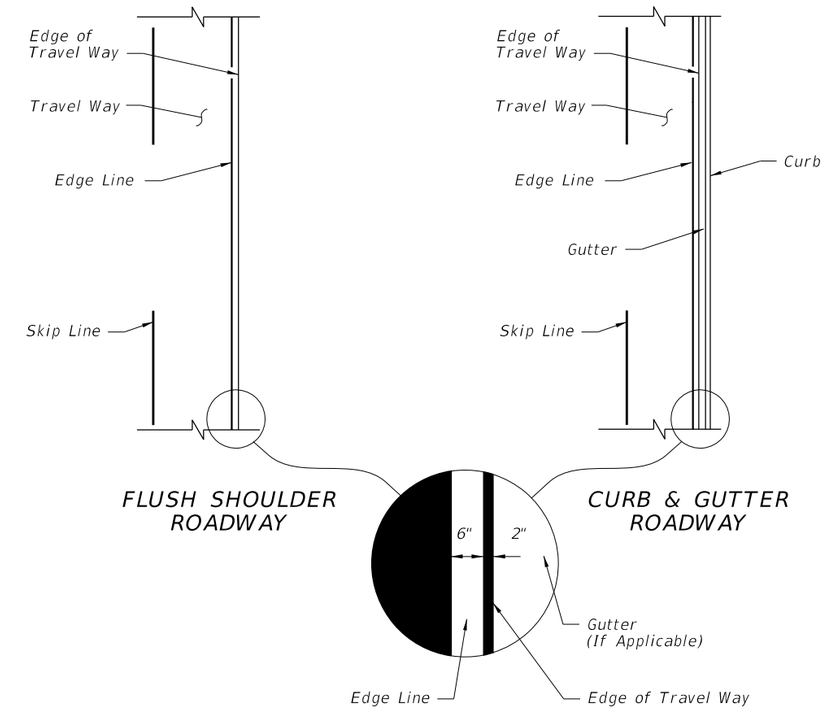
6/25/2015 2:04:32 PM

LAST REVISION	REVISION	DESCRIPTION:		INDEX NO.	SHEET NO.
01/21/15			2016 DESIGN STANDARDS	17346	1 of 14

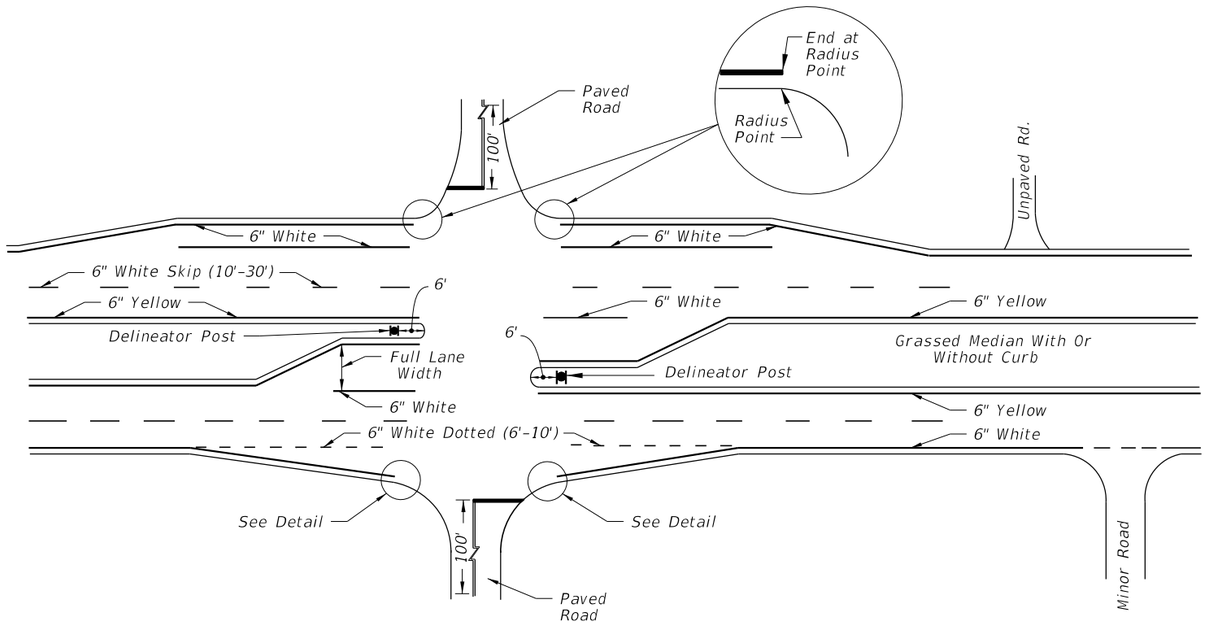
SPECIAL MARKING AREAS



PAVEMENT MARKINGS AND DELINEATORS FOR MEDIAN CROSS-OVER



PLACEMENT OF EDGE LINES

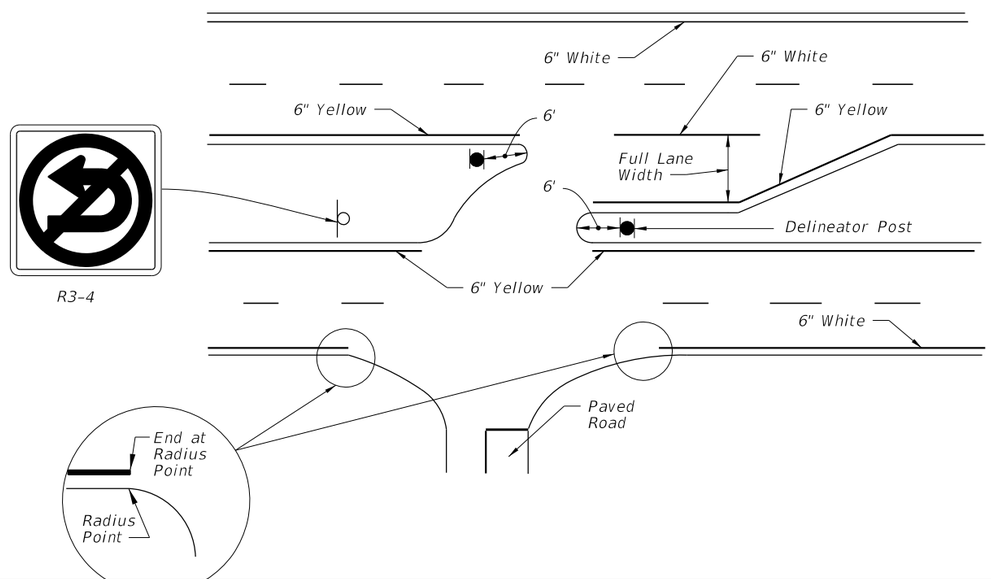


PAVEMENT MARKINGS FOR INTERSECTIONS WITH MAJOR AND MINOR ROADS

PLACEMENT OF EDGE LINES

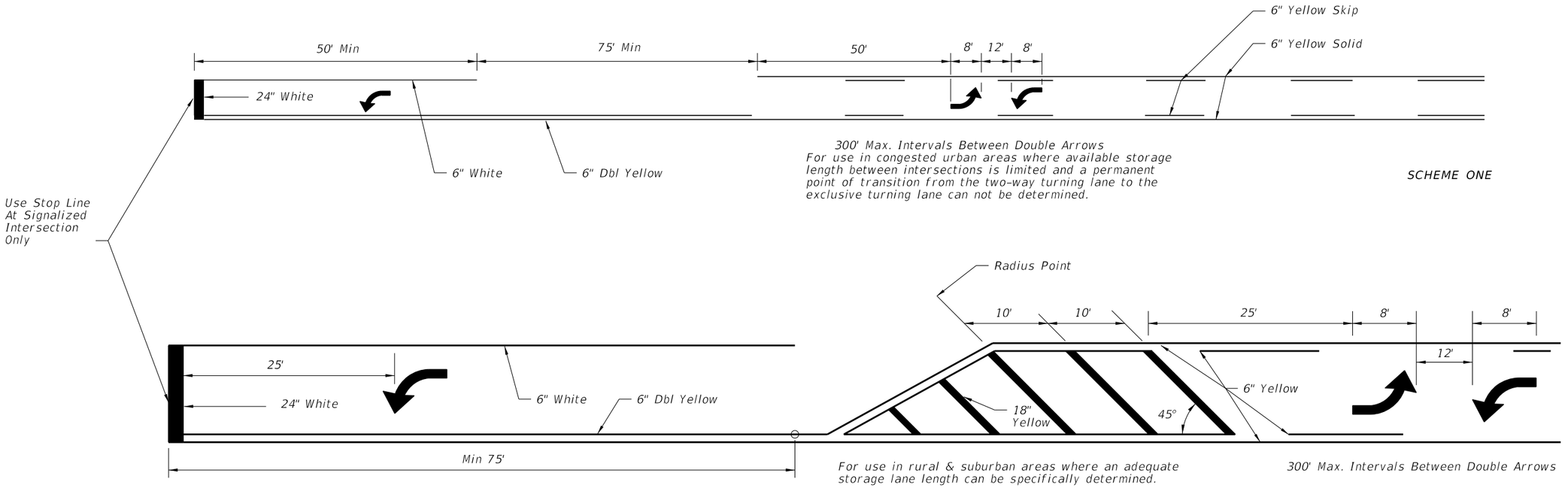
NOTE:

Markings applied to median noses shall be yellow in color.



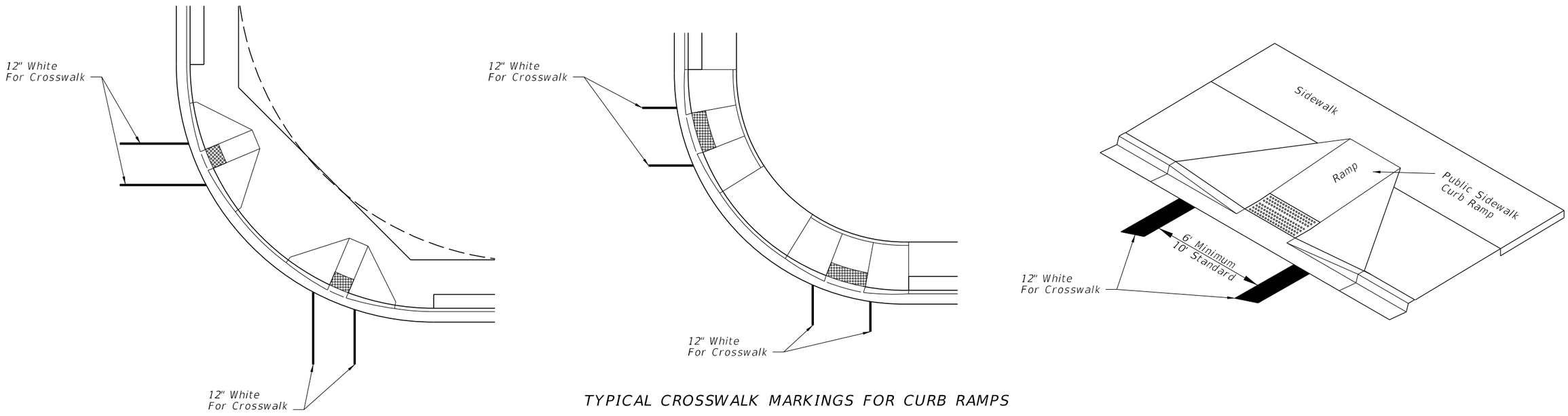
6/25/2015 2:04:33 PM

LAST REVISION	REVISION	DESCRIPTION:			INDEX NO.	SHEET NO.
01/21/15			FDOT 2016 DESIGN STANDARDS	SPECIAL MARKING AREAS	17346	2 of 14



(WITH SINGLE LANE LEFT TURN CHANNELIZATION)

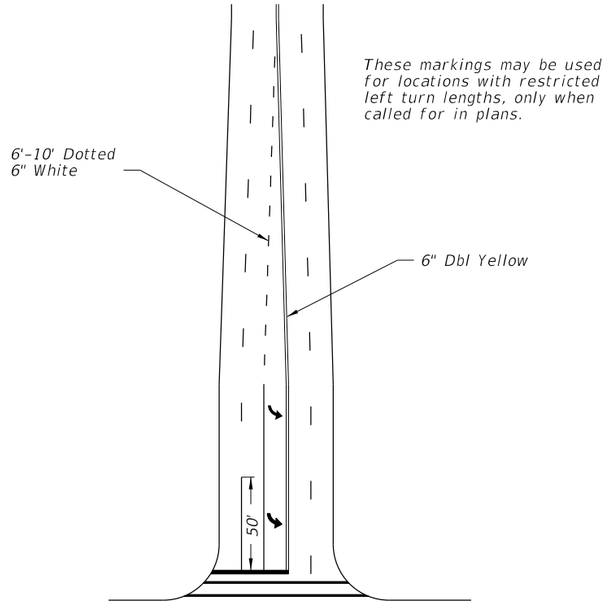
TWO WAY LEFT TURN LANE



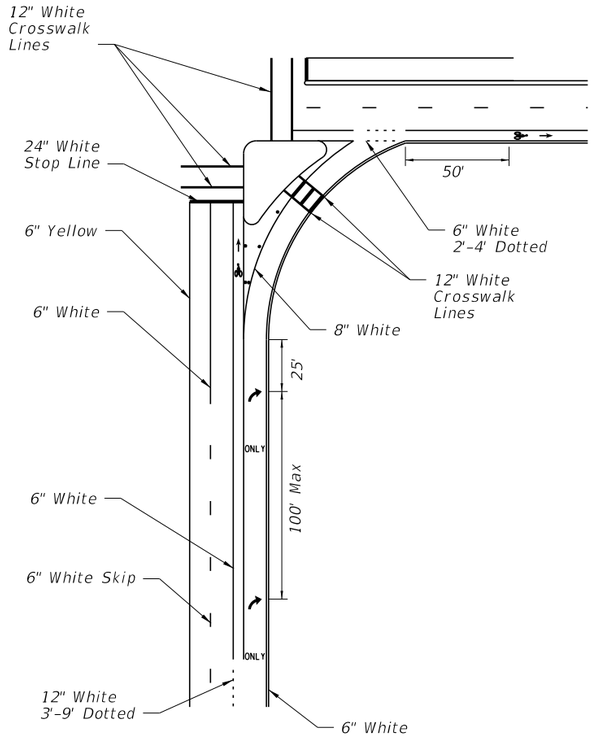
TYPICAL CROSSWALK MARKINGS FOR CURB RAMPS

6/25/2015 2:04:33 PM

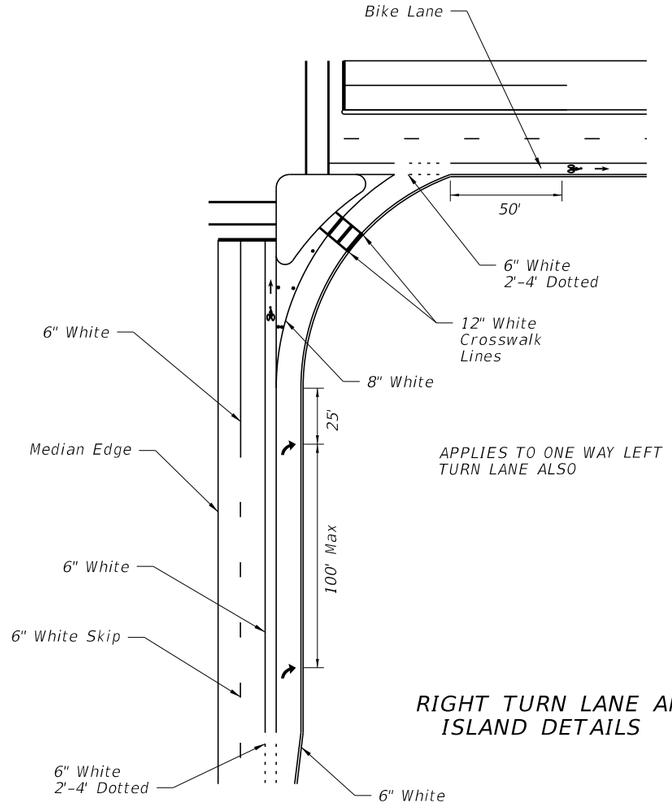
LAST REVISION	REVISION	DESCRIPTION:			INDEX NO.	SHEET NO.
07/01/15			2016 DESIGN STANDARDS	SPECIAL MARKING AREAS	17346	3 of 14



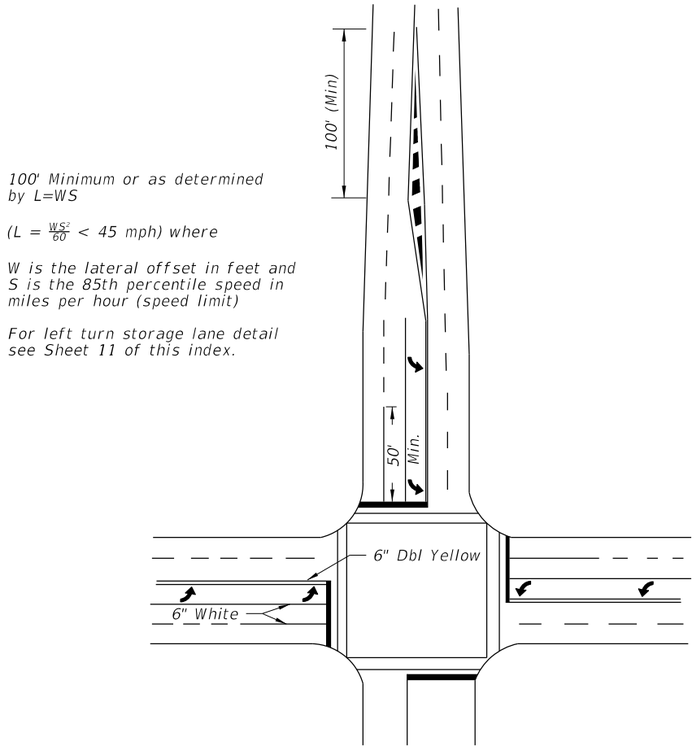
RESTRICTED LEFT TURN MARKING



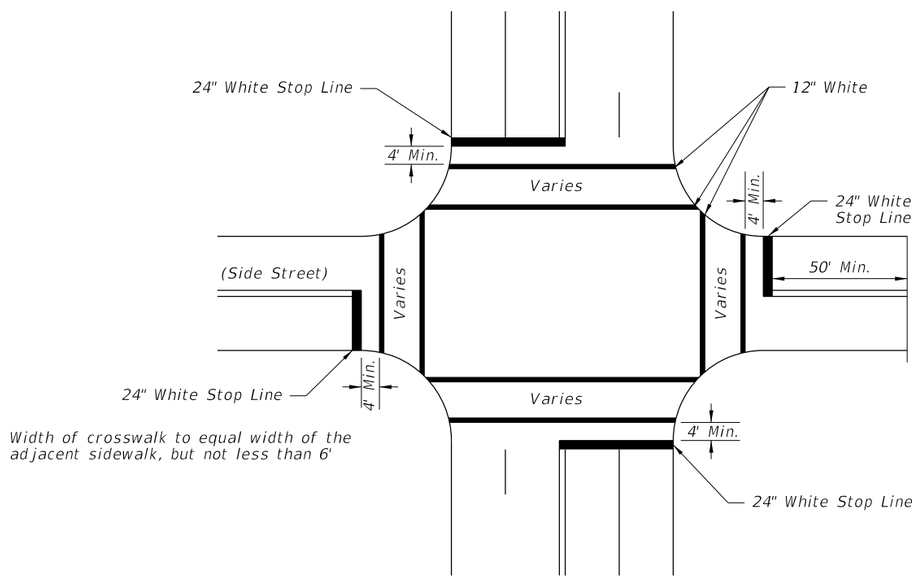
RIGHT TURN LANE DROP AND ISLAND DETAILS
LEFT TURN LANE DROP IS MIRROR IMAGE



RIGHT TURN LANE AND ISLAND DETAILS



TYPICAL INTERSECTION 2 THRU LANES
PLUS LEFT TURN LANE, WITH CROSSWALK



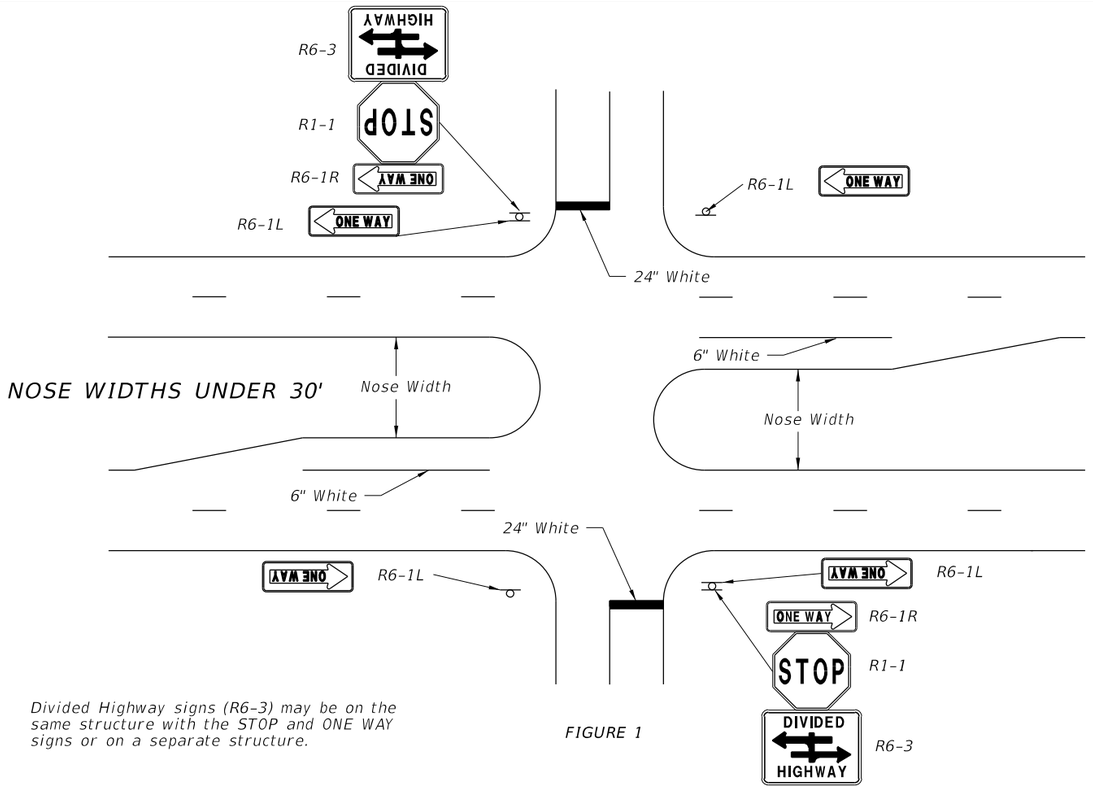
NOTES:

1. When public sidewalk curb ramps are present, refer Index No. 17344 and Index No. 304 for crosswalk widths.
2. Double yellow longitudinal center lines on all roadway approaches shall be extended back 100' for projects involving intersection improvements only.
3. When specified, "stop" message shall be placed 25' back of stop lines.

STOP BARS, CROSSWALKS AND DOUBLE CENTER LINE DETAILS

6/25/2015 2:04:34 PM

LAST REVISION	REVISION	DESCRIPTION:	2016 DESIGN STANDARDS	SPECIAL MARKING AREAS	INDEX NO.	SHEET NO.
07/01/15					17346	4 of 14



Divided Highway signs (R6–3) may be on the same structure with the STOP and ONE WAY signs or on a separate structure.

FIGURE 1

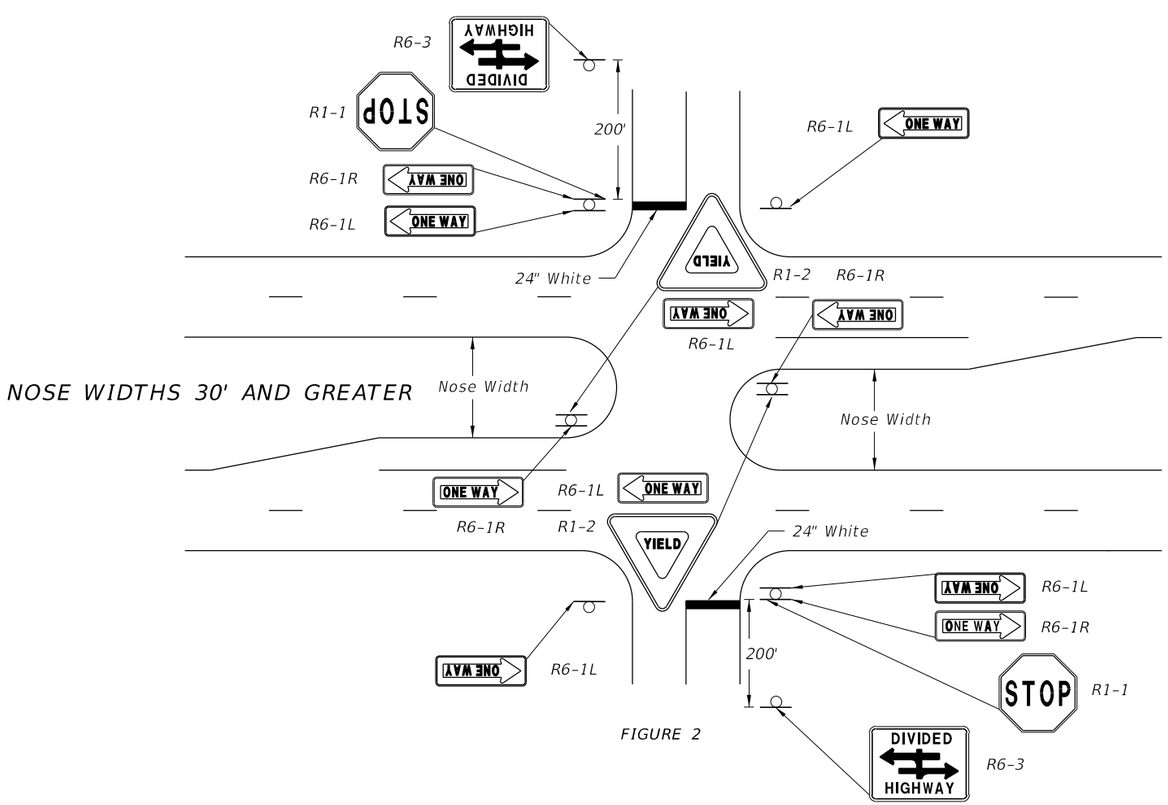
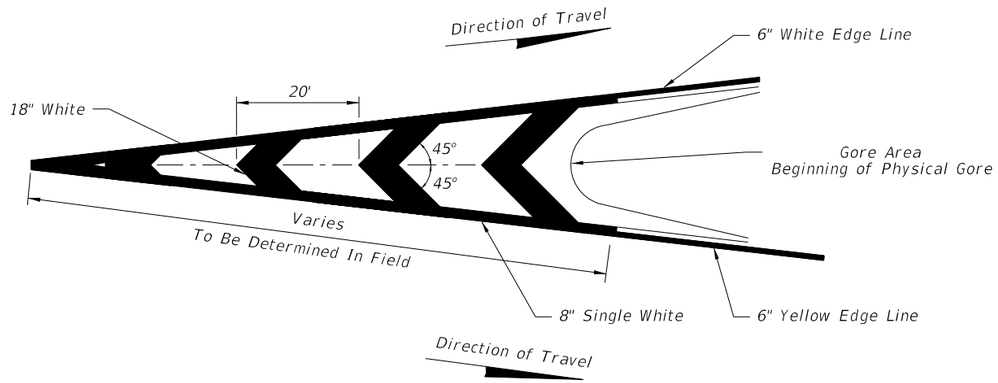


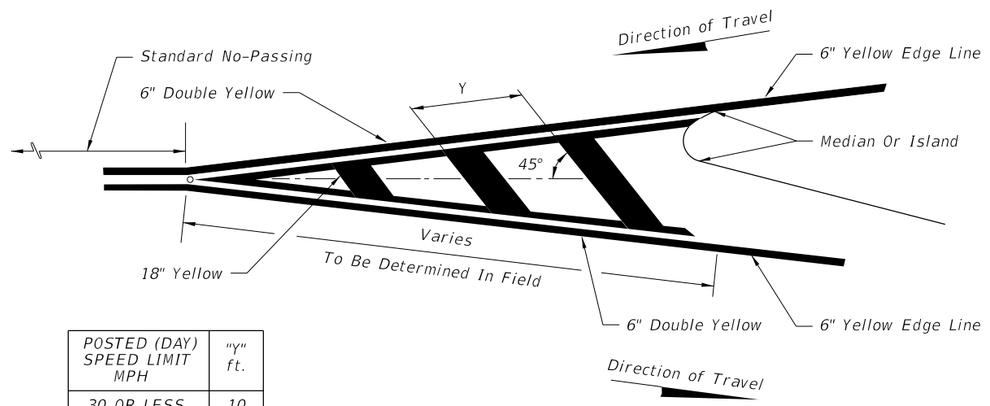
FIGURE 2

ONE-WAY SIGNS 0N DIVIDED HIGHWAY INTERSECTIONS



PAVEMENT MARKINGS FOR TRAFFIC CHANNELIZATION AT GORE

(TRAFFIC FLOWS IN SAME DIRECTION)



POSTED (DAY) SPEED LIMIT MPH	"Y" ft.
30 OR LESS	10
35	20
40	20
45	30
50 OR MORE	40

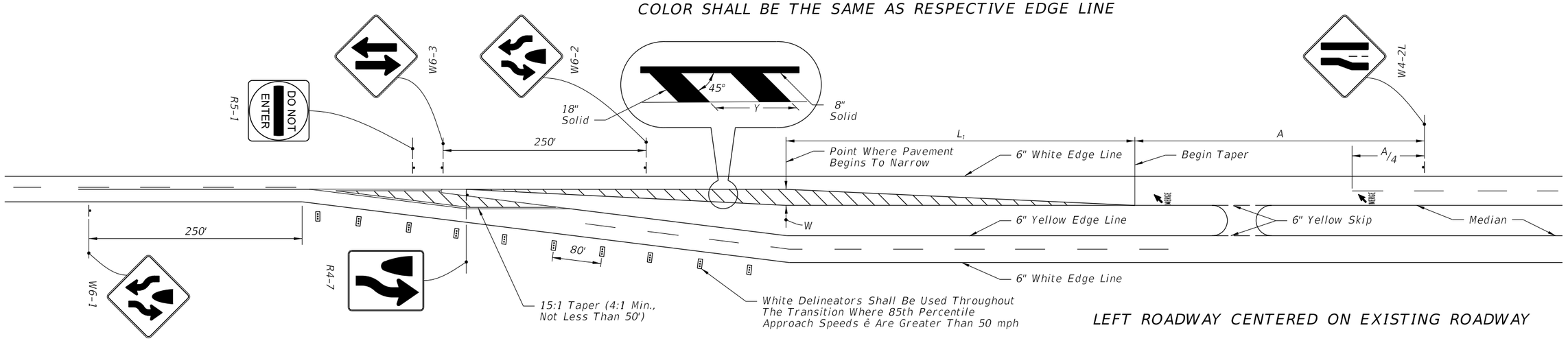
PAVEMENT MARKING FOR TRAFFIC SEPARATION

(TRAFFIC FLOWS IN OPPOSING DIRECTIONS)

6/25/2015 2:04:34 PM

LAST REVISION	REVISION	DESCRIPTION:			INDEX NO.	SHEET NO.
07/01/13			FDOT 2016 DESIGN STANDARDS	SPECIAL MARKING AREAS	17346	5 of 14

TYPICAL TRANSITION MARKING
COLOR SHALL BE THE SAME AS RESPECTIVE EDGE LINE

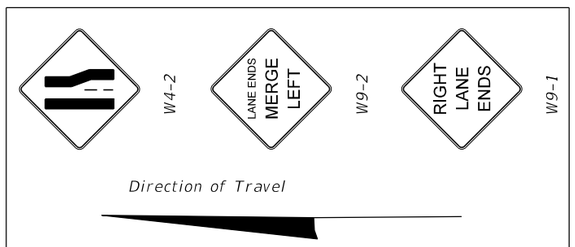


LEFT ROADWAY CENTERED ON EXISTING ROADWAY

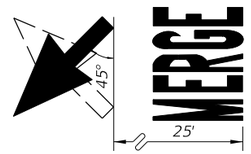
**W / *S	TRANSITION DISTANCE L_1 (FEET)						
MPH	8	9	10	11	12	13	14
30	120	135	150	165	180	195	210
35	165	185	205	225	245	265	285
40	215	240	270	295	320	350	375
45	360	405	450	495	540	585	630
50	400	450	500	550	600	650	700
55	440	495	550	605	660	715	770
60	480	540	600	660	720	780	840
65	520	585	650	715	780	845	910

SPEED* MPH	"A" (FT.)
55	950
50	850
45	750
40	650
30	450

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



NOTE:
W9-1 & W9-2 are supplemental to the W4-2 sign and may be deleted if space is not available. The W9-1 should be used if only one supplemental sign is installed.



PAVEMENT MARKING DETAIL

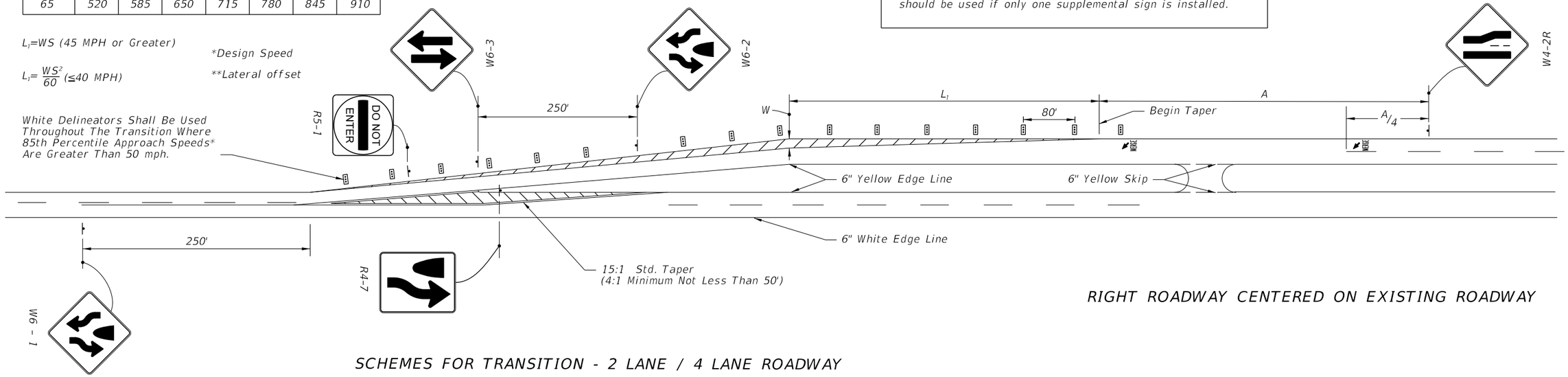
L_1=WS (45 MPH or Greater)

$L_1 = \frac{WS^2}{60}$ (≤40 MPH)

*Design Speed

**Lateral offset

White Delineators Shall Be Used Throughout The Transition Where 85th Percentile Approach Speeds* Are Greater Than 50 mph.

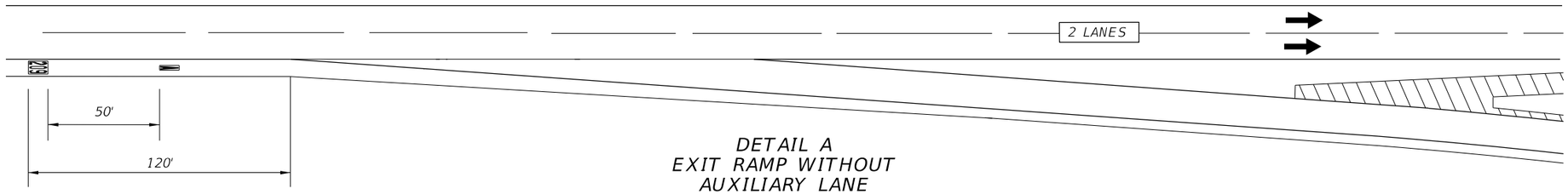


RIGHT ROADWAY CENTERED ON EXISTING ROADWAY

SCHEMES FOR TRANSITION - 2 LANE / 4 LANE ROADWAY

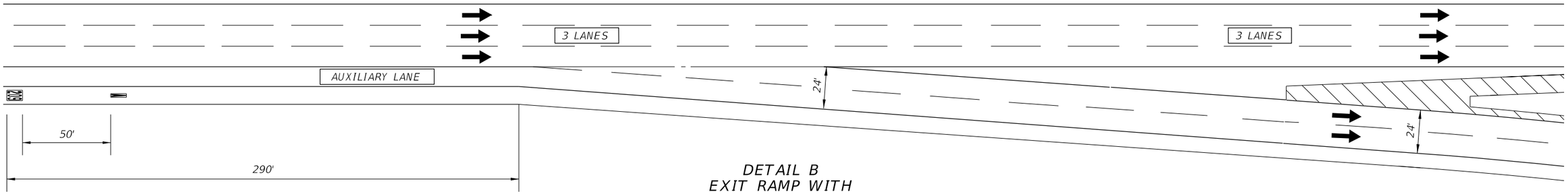
6/25/2015 2:04:35 PM

LAST REVISION	REVISION	DESCRIPTION:			INDEX NO.	SHEET NO.
07/01/09			FDOT 2016 DESIGN STANDARDS	SPECIAL MARKING AREAS	17346	6 of 14

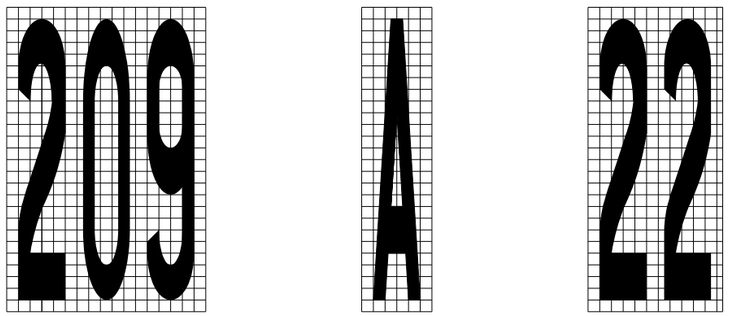


DETAIL A
EXIT RAMP WITHOUT
AUXILIARY LANE

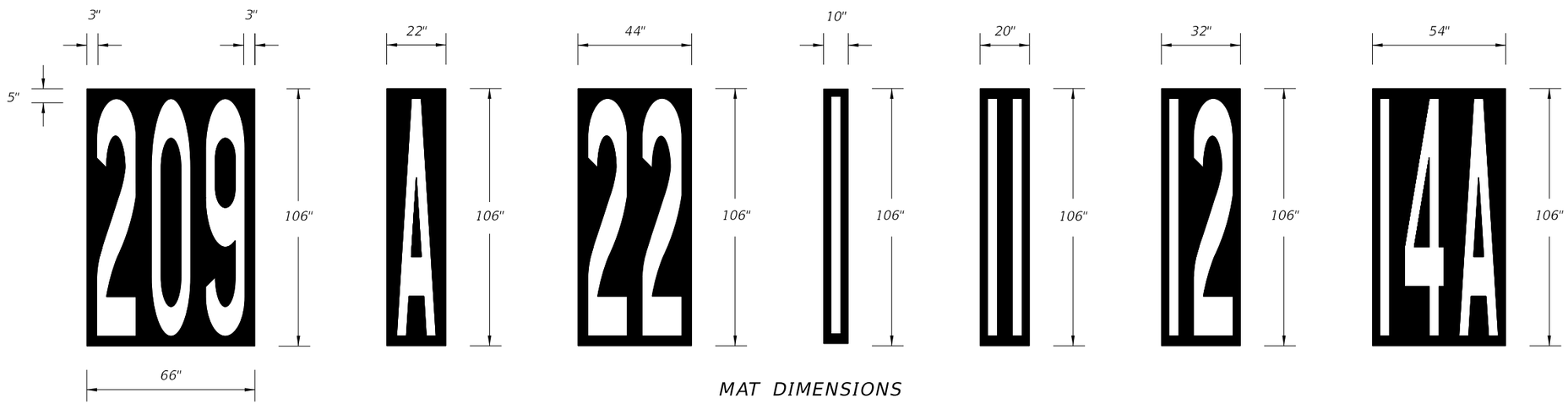
LAYOUT FOR 1, 2 AND 3 DIGIT NUMBERS AND LETTERS



DETAIL B
EXIT RAMP WITH
AUXILIARY LANE



MESSAGE SIZE AND SPACING
4" X 4" squares



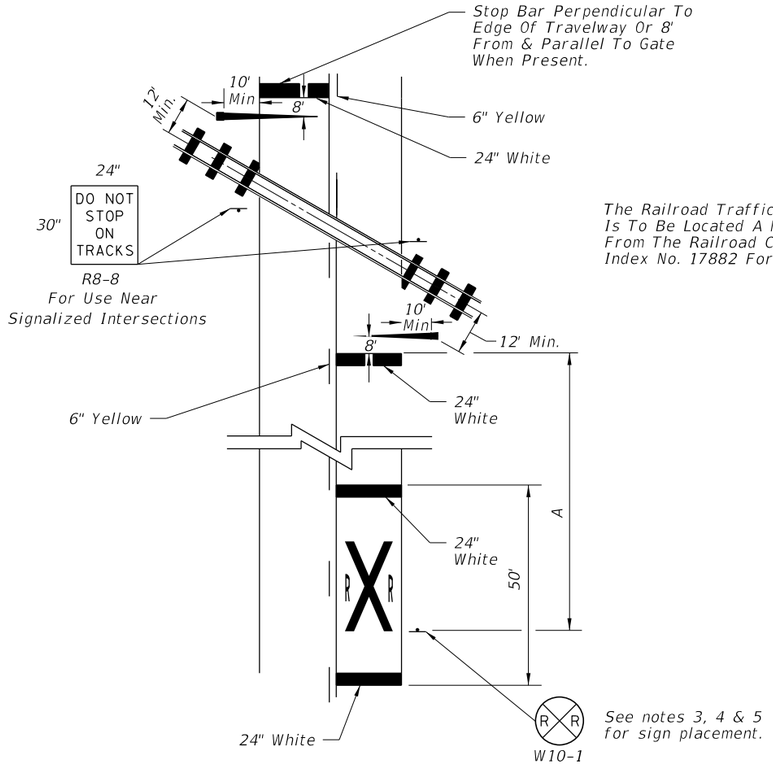
MAT DIMENSIONS

NOTES:

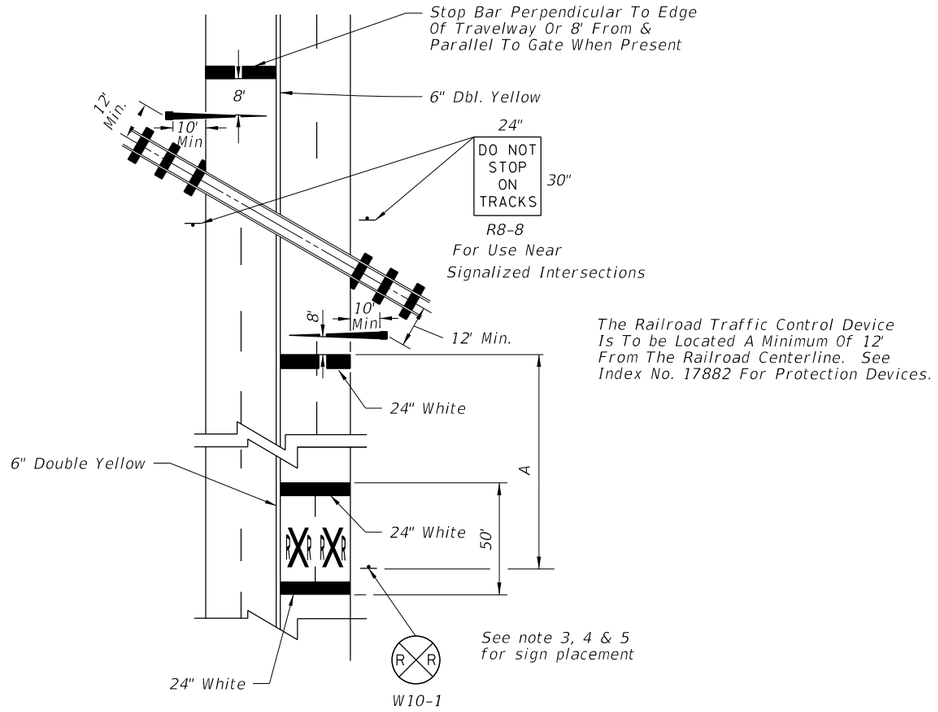
1. Messages shall meet requirements of Specification Section 971-6 and Section 711.
2. The thickness of the preformed message shall be 125 mils.
3. The message shall consist of white letters and numbers with black contrasting material. The black material shall meet the mat dimensions shown and have a minimum skid resistance value of 55 BPN.
4. The "EXIT NUMBER" position remains the same distance from the beginning of taper regardless of the number of lines of information.

6/25/2015 2:04:35 PM

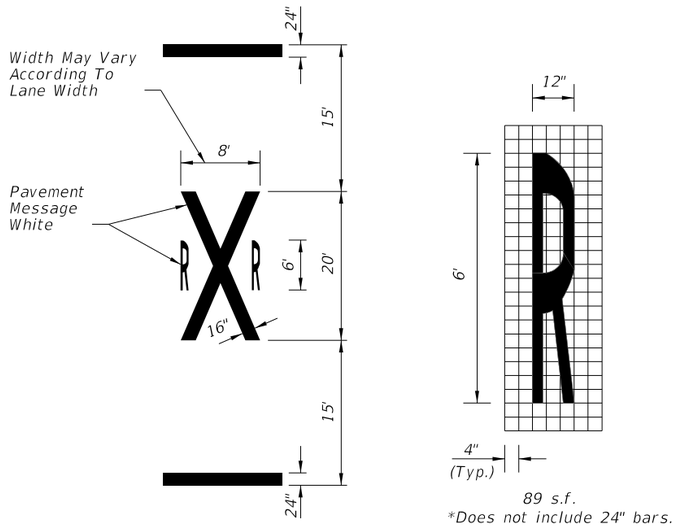
LAST REVISION	REVISION	DESCRIPTION:			INDEX NO.	SHEET NO.
07/01/10			FDOT 2016 DESIGN STANDARDS	SPECIAL MARKING AREAS	17346	7 of 14



RAILROAD CROSSING AT 2-LANE ROADWAY

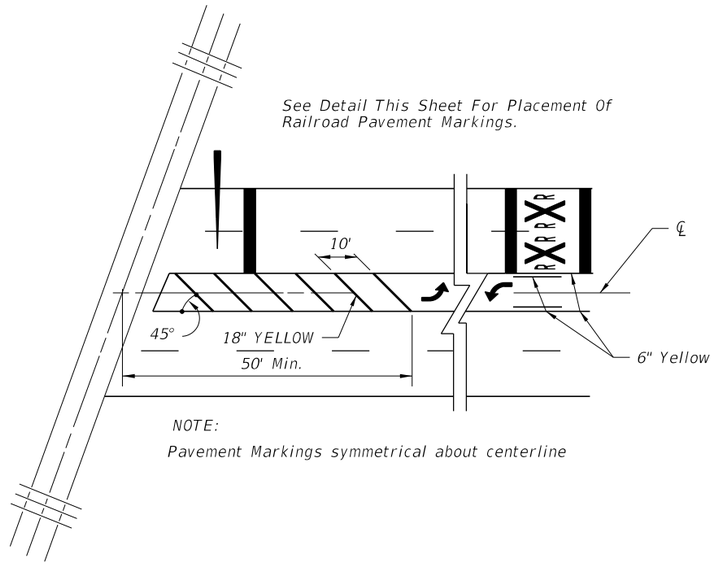


RAILROAD CROSSING AT 4-LANE ROADWAY



89 s.f.
*Does not include 24" bars.

TYPICAL PAVEMENT MARKINGS FOR R/R CROSSING



NOTE:
Pavement Markings symmetrical about centerline

PAVEMENT MARKINGS FOR TERMINATION OF TWO WAY LEFT TURN AT R/R CROSSINGS

NOTES:

1. When computing pavement messages, quantities do not include transverse lines.
2. When dynamic devices are not present or are to be installed, the crossbuck shall be located at the future location of the RR gate or signal and gate in accordance with Index No. 17882.
3. Placement of sign W10-1 in a residential or business district, where low speeds are prevalent. The W10-1 sign may be placed a minimum distance of 100' from the crossing. Where street intersections occur between the RR pavement message and the tracks an additional W10-1 sign & additional Pavement message should be used.
4. Recommended location for FTP-61-06 or FTP-62-06 sign, 100' urban & 300' rural in advance of the crossing.
5. A portion of the pavement marking symbol should be directly opposite the W10-1 sign.

SPEED MPH	" A " IN FT.
60	400
55	325
50	250
45	175
40	125
35	100
URBAN	85 MIN.

6/25/2015 2:04:36 PM

LAST REVISION	REVISION	DESCRIPTION:				
10/09/14			FDOT 2016 DESIGN STANDARDS	SPECIAL MARKING AREAS	INDEX NO. 17346	SHEET NO. 8 of 14

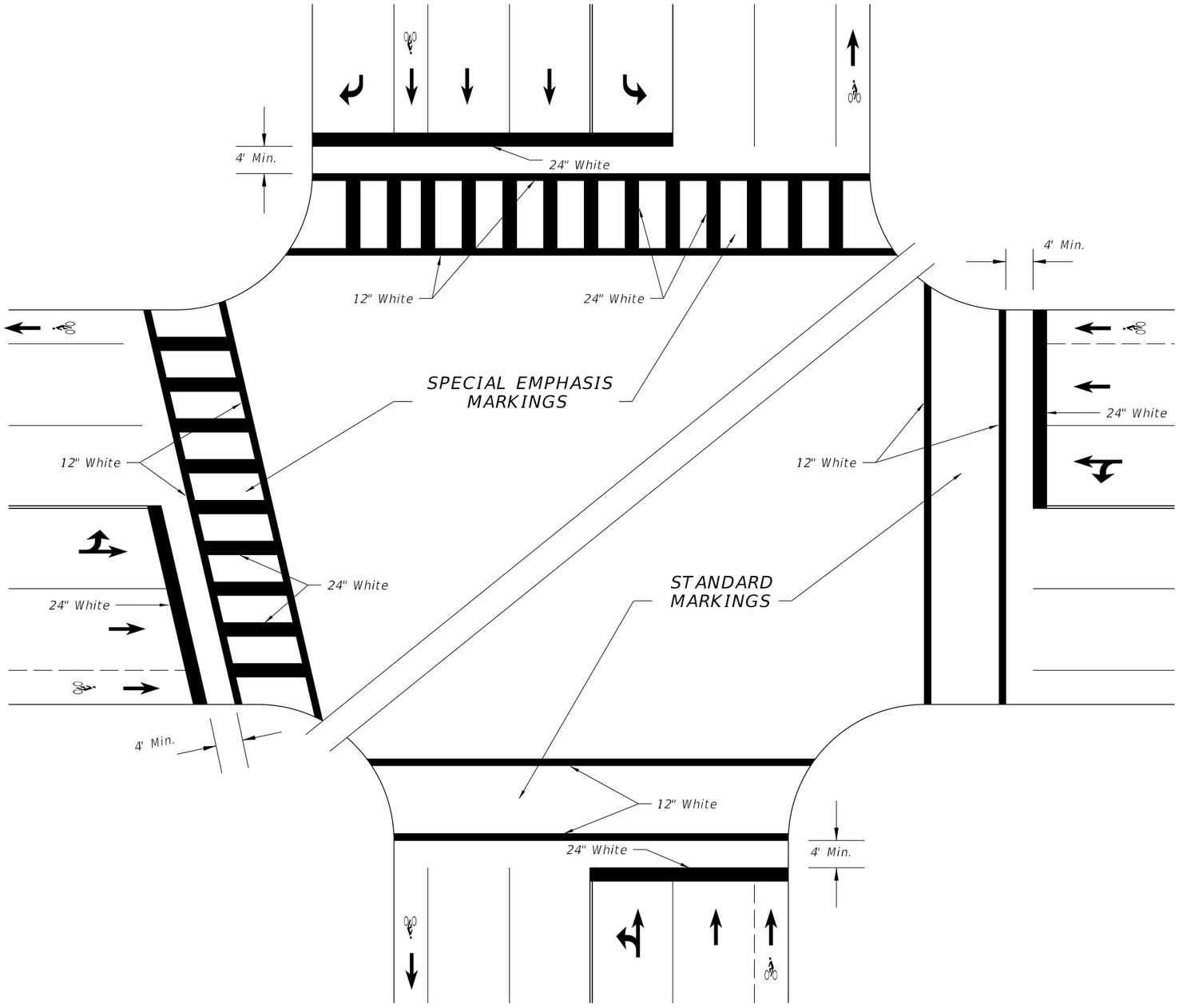
GENERAL NOTES

1. For traffic and pedestrian signal installation, refer to Index No. 17721 through 17890.
2. For public sidewalk curb ramps, refer to Index No. 304.
3. For pavement marking and sign installation, refer to Indexes 11200 through 17356.
4. Crosswalk minimum widths: Intersection Crosswalk 6'. Midblock Crosswalk 10'.
5. All crosswalk marking must be white.
6. Longitudinal markings in Special Emphasis Crosswalk must be 24" wide and spaced to avoid the wheel path of vehicles (see detail). Center the longitudinal markings at each lane line. Place additional longitudinal markings at the center of each lane (1/2W). The maximum spacing allowed between longitudinal markings is 60".

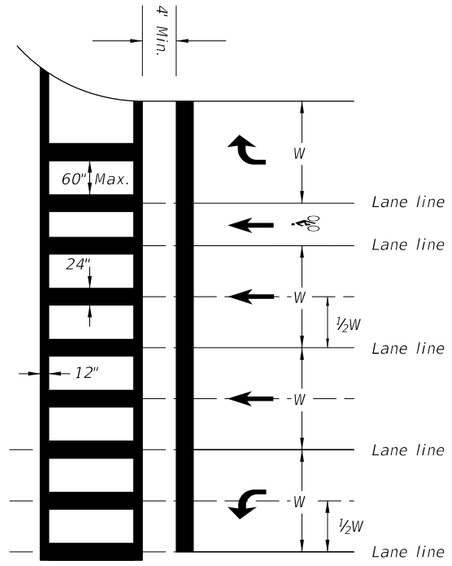
   When the Crosswalk is skewed to the lane lines, the longitudinal markings should be parallel to the lane lines.

   24" Longitudinal Bars in Special Emphasis Crosswalk must be preformed thermoplastic.

   12" Transverse lines in the Special Emphasis Crosswalk may be standard thermoplastic or preformed thermoplastic.



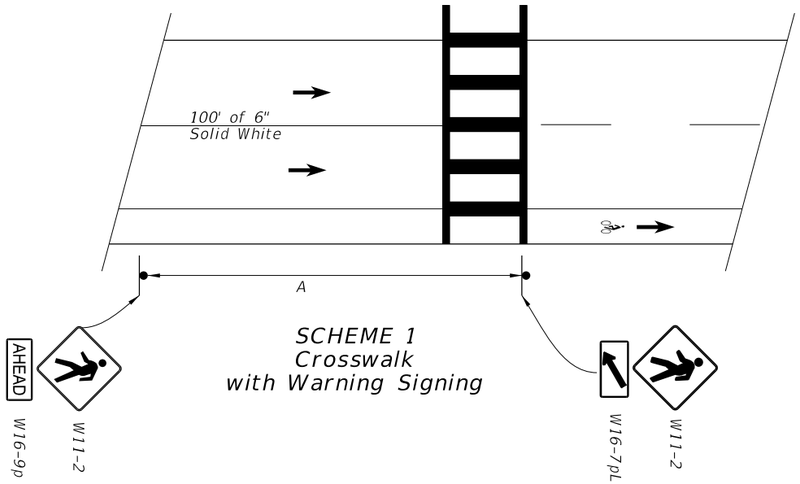
SPECIAL EMPHASIS AND STANDARD CROSSWALKS
SIGNALIZED OR STOP SIGN CONTROLLED INTERSECTION



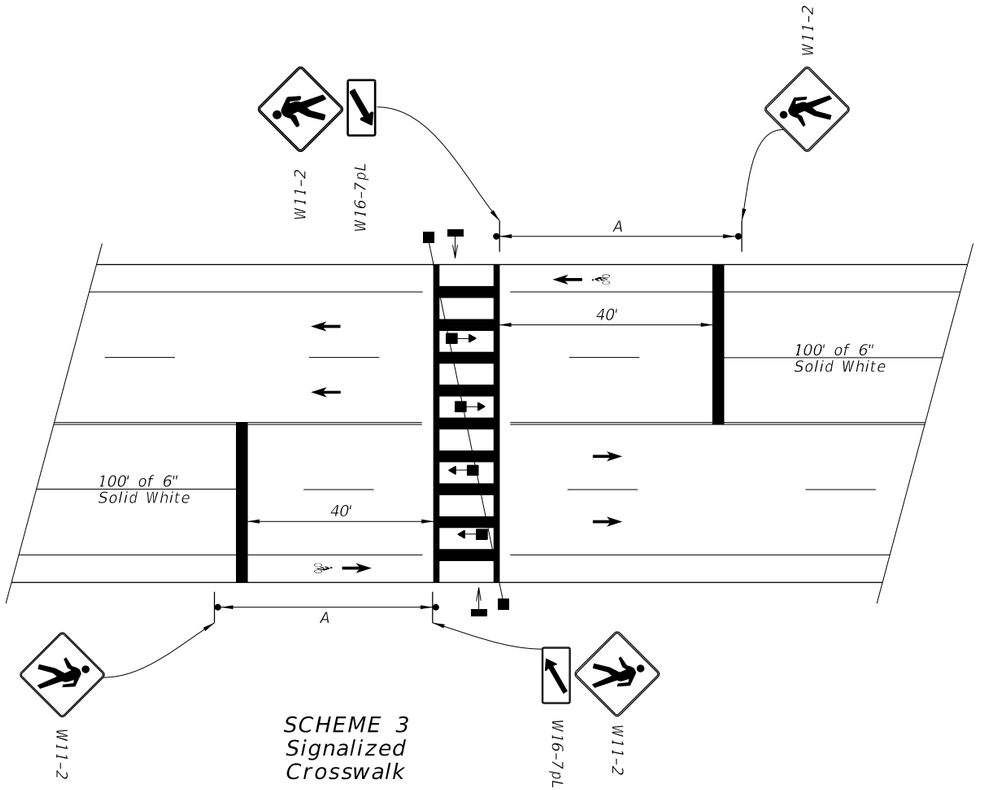
SPECIAL EMPHASIS
CROSSWALK MARKING
DETAIL

6/25/2015 2:04:36 PM

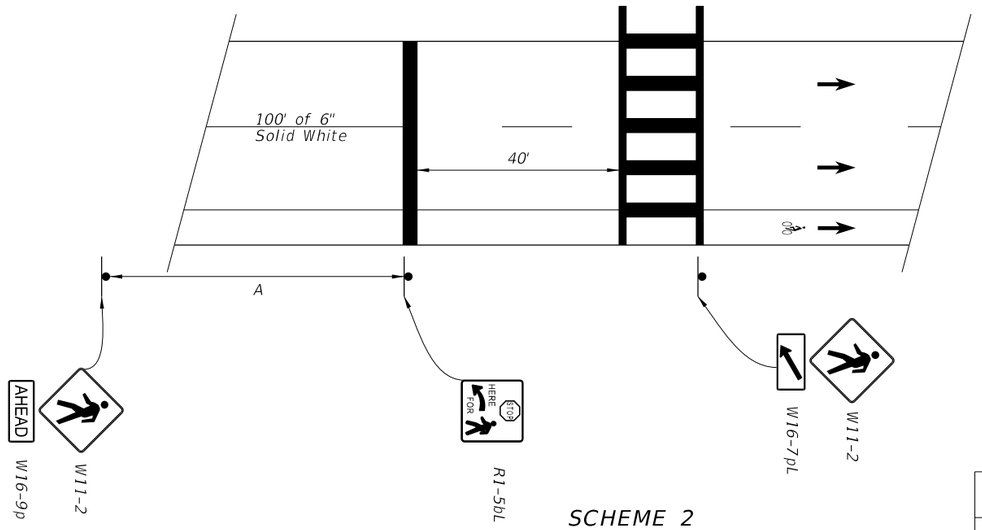
LAST REVISION	REVISION	DESCRIPTION:	FDOT 2016 DESIGN STANDARDS	SPECIAL MARKING AREAS	INDEX NO.	SHEET NO.
07/01/15					17346	9 of 14



SCHEME 1
Crosswalk
with Warning Signing



SCHEME 3
Signalized
Crosswalk



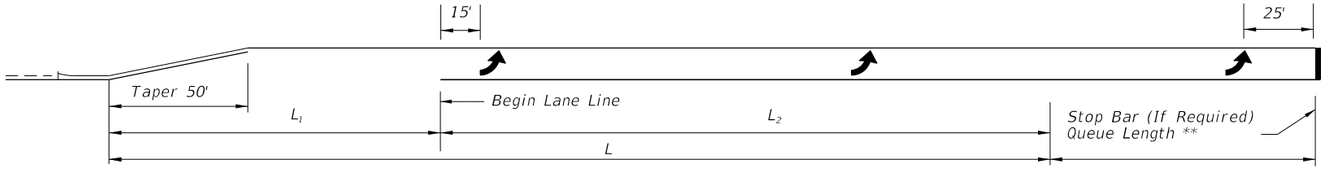
SCHEME 2
Crosswalk
with Stop Signing

APPROACH SPEED MPH	A-SUGGESTED DISTANCE (Ft.)
25 Or Less	200
26 To 35	250
36 To 45	300

1. Plans shall indicate which crosswalk scheme is to be used.
2. The details shown do not depict the signing and markings for multi-lane roadways with divided medians. For these applications, additional signs shall be installed on the median side. Minimum width of Mid-Block Crosswalks is 10'.
3. All mid-block crosswalks shall use special emphasis crosswalk markings.
4. Crosswalk marking shall be preformed marking materials.

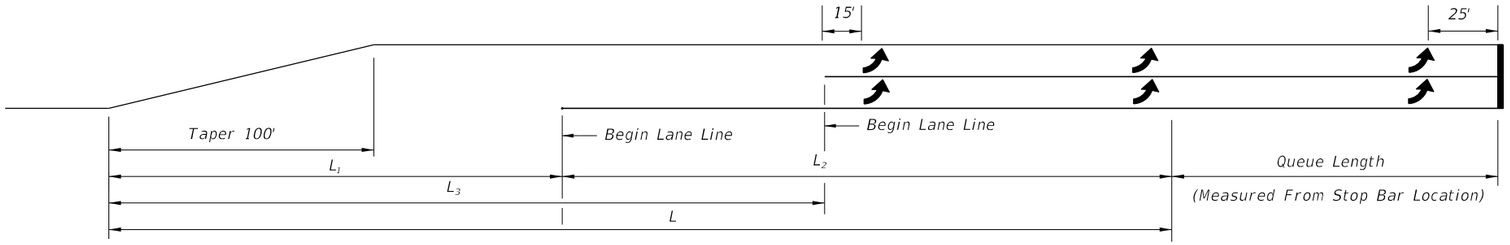
6/25/2015 2:04:37 PM

LAST REVISION	REVISION	DESCRIPTION:	FDOT 2016 DESIGN STANDARDS	SPECIAL MARKING AREAS	INDEX NO.	SHEET NO.
07/01/14					17346	10 of 14

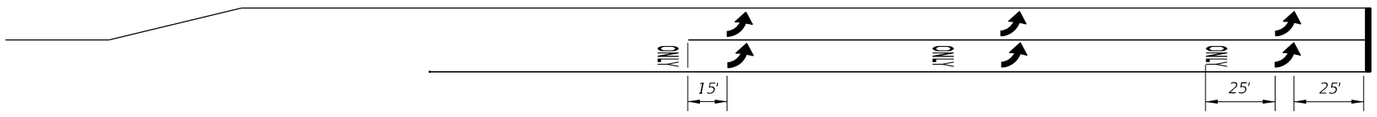


SINGLE LEFT TURNS

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

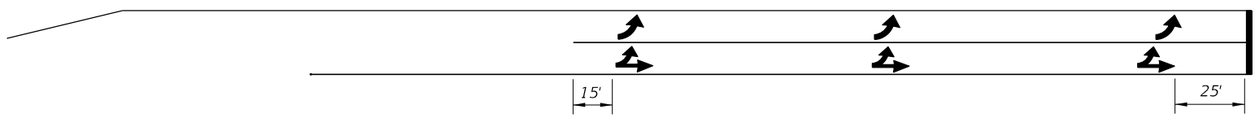


DOUBLE LEFT TURNS



The ONLY pavement message is required for turn lanes, where the thru lane becomes turn lane.

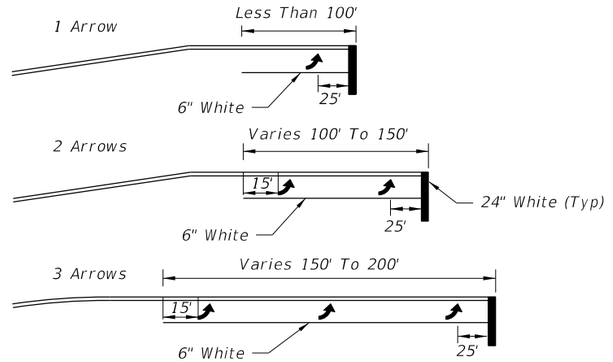
Through Lane Becomes Exclusive Left Turn



Through Lane Becomes Optional Left Turn

DOUBLE LEFT TURN MARKINGS

	TURN LANES ◦ CURBED AND UNCURBED MEDIANS						
		URBAN CONDITIONS			RURAL CONDITIONS		
Design Speed (mph)	Clearance Distance L_1	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
35	70'	75'	145'	110'	— —	— —	— —
40	80'	75'	155'	120'	— —	— —	— —
45	85'	100'	185'	135'	— —	— —	— —
50	105'	135'	240'	160'	185'	290'	160'
55	125'	— —	— —	— —	225'	350'	195'
60	145'	— —	— —	— —	260'	405'	230'
65	170'	— —	— —	— —	290'	460'	270'



Arrow should be evenly spaced between first and last arrow. Turn lanes longer than 200' add one arrow for each 100' additional length.

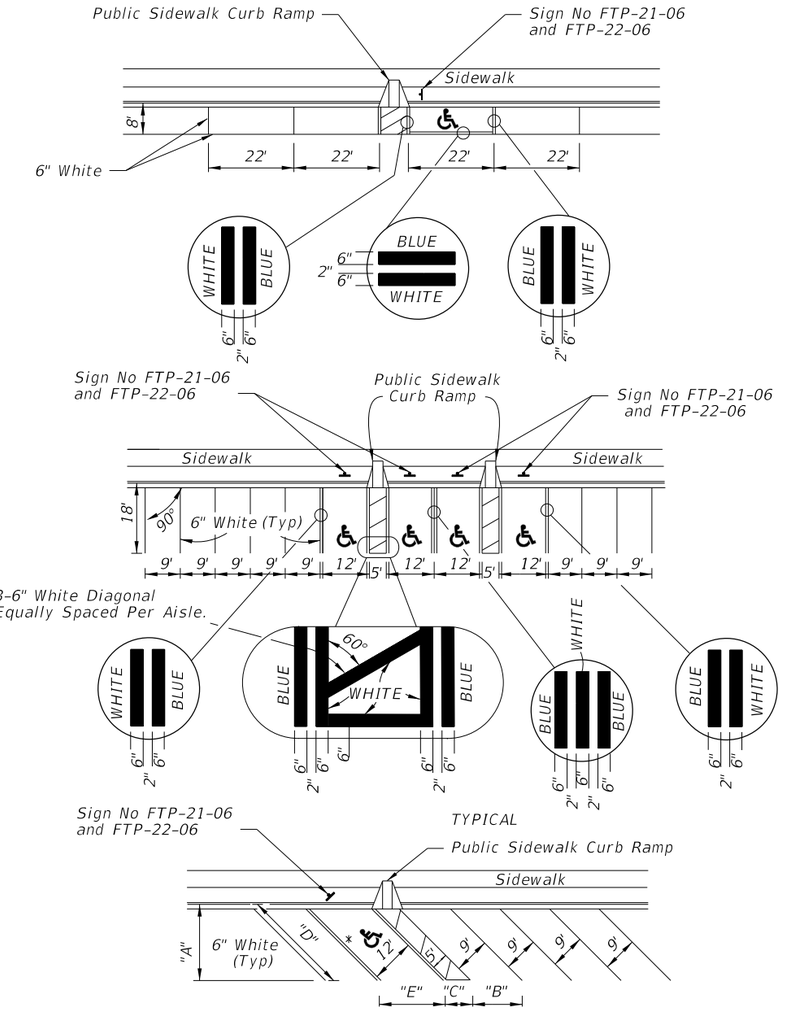
ARROW SPACING

NOTES:

1. The "Begin Lane Line" locations are based on the standard lengths shown in Design Standard 301. These locations must be adjusted on a case by case basis for turn lanes not meeting the standard lengths.
2. Yellow left turn edge marking may be used adjacent to raised curb or grass medians if lane use is not readily apparent to drivers approaching a left turn storage lane.
3. Refer to Design Standard Index 301 for Roadway Details.
4. This Index also applies to right turn lanes.

6/25/2015 2:04:37 PM

LAST REVISION	REVISION	DESCRIPTION:			INDEX NO.	SHEET NO.
11/12/14			FDOT 2016 DESIGN STANDARDS	SPECIAL MARKING AREAS	17346	11 of 14



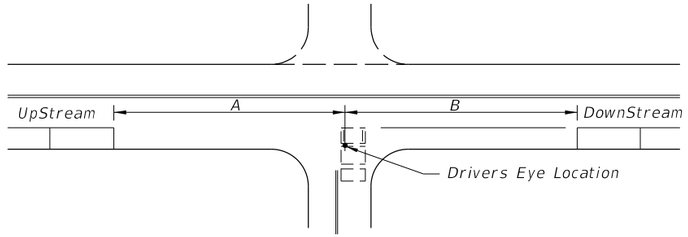
* FOR ACCESSIBLE MARKINGS – SEE ABOVE

∠ θ	"DIMENSIONS"				
	"A"	"B"	"C"	"D"	"E"
45°	19'-1"	12'-9"	7'-0"	27'-0"	17'-0"
60°	20'-1"	10'-5"	5'-9"	23'-2"	13'-10"

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. Blue pavement markings shall be tinted to match shade 15180 of Federal Standards 595a.
5. The FTP-22-06 panal shall be mounted below the FTP-21-06 sign.

PAVEMENT MARKING FOR PUBLIC SIDEWALK CURB RAMPS IN REST AREAS

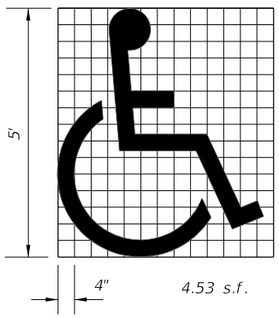


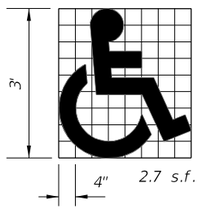
SPEED MPH	UP STREAM (A)	DOWN STREAM (B)	
		2 LANE	4 LANE
0-30	85'	60'	45'
35	100'	70'	50'

NOTES

1. Distances measured longitudinally along the street from driver location of entering vehicle to end of parking restriction.
2. Distances applicable to intersecting street, major driveways and other driveways to the extent practical.
3. For nonsignalized intersections, the values above shall be compared with the values for signalized intersections and the maximum restrictions implemented. These restrictions apply to both accessible and nonaccessible parking.

MINIMUM PARKING RESTRICTION FOR NONSIGNALIZED INTERSECTIONS





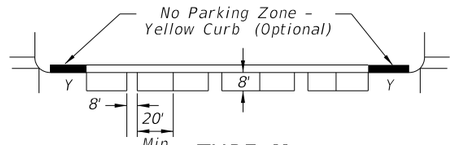
Use of pavement symbol in accessible parking spaces is optional, when used the symbol shall be 3' or 5' high and white in color.

UNIVERSAL SYMBOL OF ACCESSIBILITY

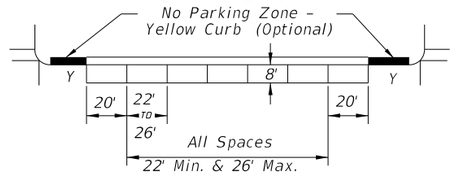
GENERAL NOTES (Signalized & Nonsignalized)

1. For entrances to a one-way street, the downstream restriction may be reduced to 20'.
2. Parking shall not be allowed within 20' of a crosswalk.
3. All parking lane markings shall be 6" white.
4. Parking lane lines shall be broken at driveways.
5. Refer to Chapter 316, Fla. Statutes, for laws governing parking spaces.
6. Where curb and gutter is used, the gutter pan width may be included as part of the minimum width of parking lane, but desirably the lane width should be in addition to that of the gutter pan.

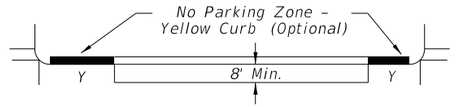
TYPE I



TYPE II



TYPE III



SPEED LIMIT MPH	SIGNALIZED INTERSECTIONS
0-30	30'
35	50'

DISTANCE FROM CURB RADIUS (Y)

PARKING RESTRICTION (FT.) FOR SIGNALIZED INTERSECTION

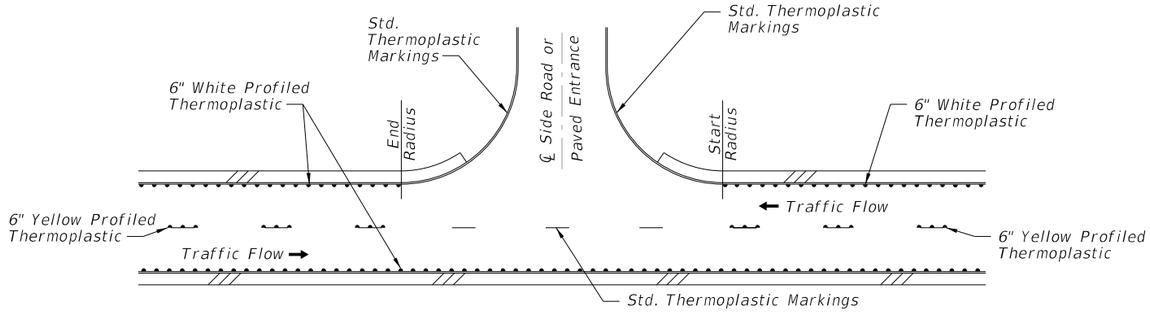
NOTES:

1. Parking restrictions measured from curb radius point.
2. Restrictions for accessible parking are the same as those applied to nonsignalized intersections.

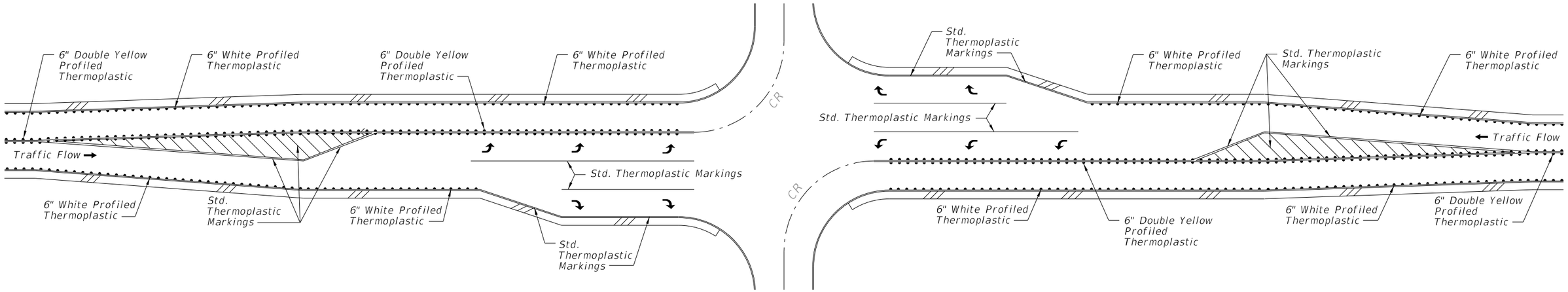
MINIMUM PARKING RESTRICTION FOR SIGNALIZED INTERSECTION

6/25/2015 2:04:38 PM

LAST REVISION	REVISION	DESCRIPTION:			INDEX NO.	SHEET NO.
07/01/15			FDOT 2016 DESIGN STANDARDS	SPECIAL MARKING AREAS	17346	12 of 14



TYPICAL RURAL INTERSECTION WITHOUT TURN LANES



TYPICAL RURAL INTERSECTION WITH TURN LANES

GENERAL NOTES:

1. Remove raised retroreflective pavement markers when in conflict with the installation of the centerline profiled thermoplastic pavement markings. The cost of removal is included in the cost of the profiled thermoplastic pavement marking.

2. Replacement of retroreflective pavement markers removed during the installation of the centerline profiled thermoplastic pavement markings will be paid for under Pay Item 706.

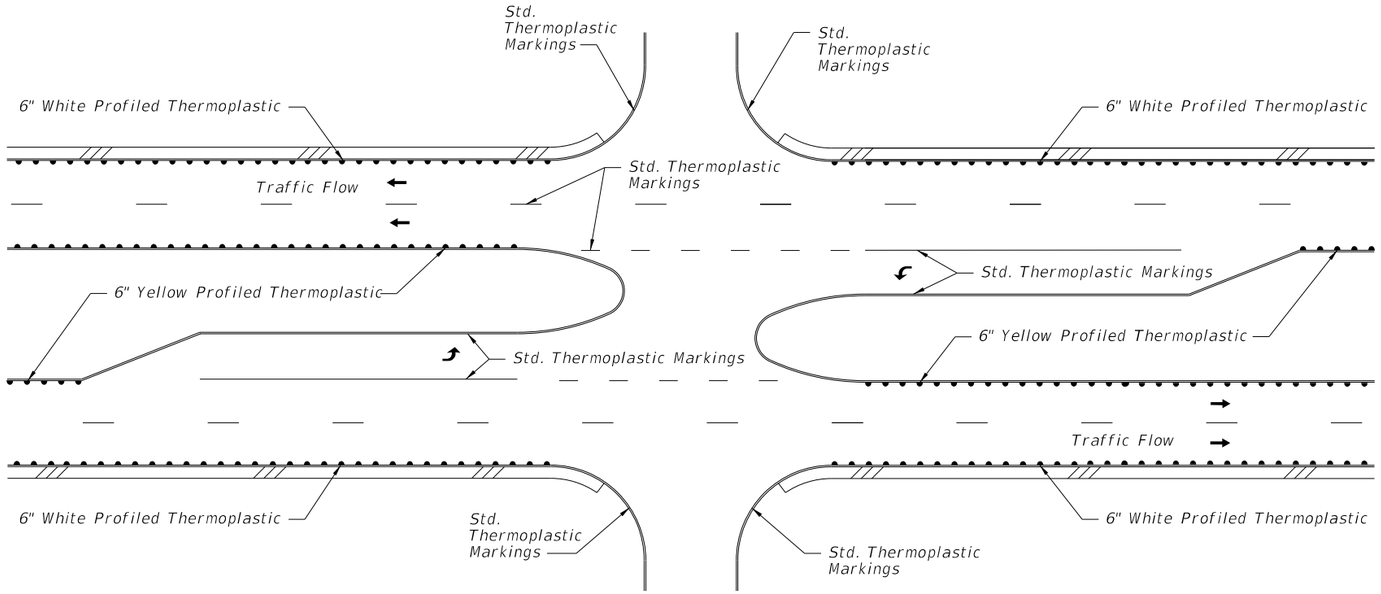
PROFILED THERMOPLASTIC MARKINGS
2 LANE CONCRETE ROADWAYS

6/25/2015 2:04:38 PM

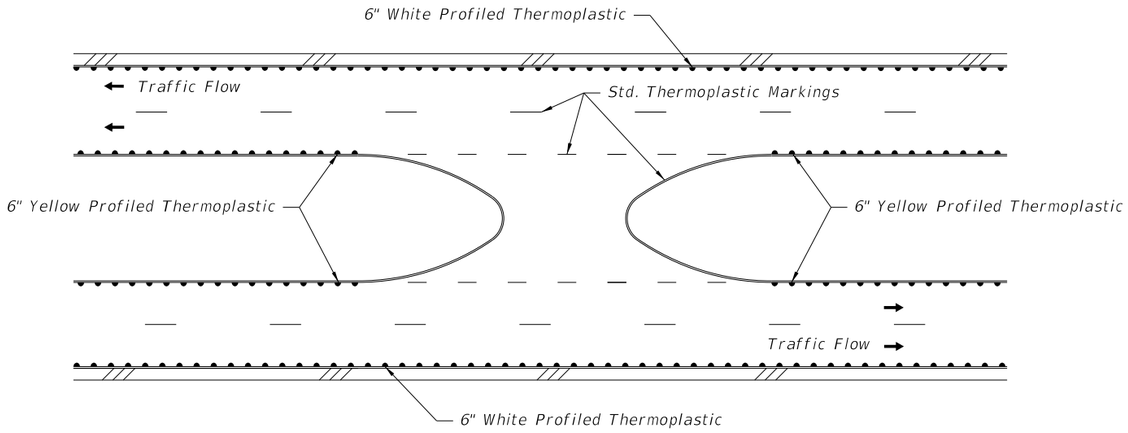
LAST REVISION	REVISION	DESCRIPTION:			INDEX NO.	SHEET NO.
01/21/15			FDOT 2016 DESIGN STANDARDS	SPECIAL MARKING AREAS	17346	13 of 14

REFERENCE:

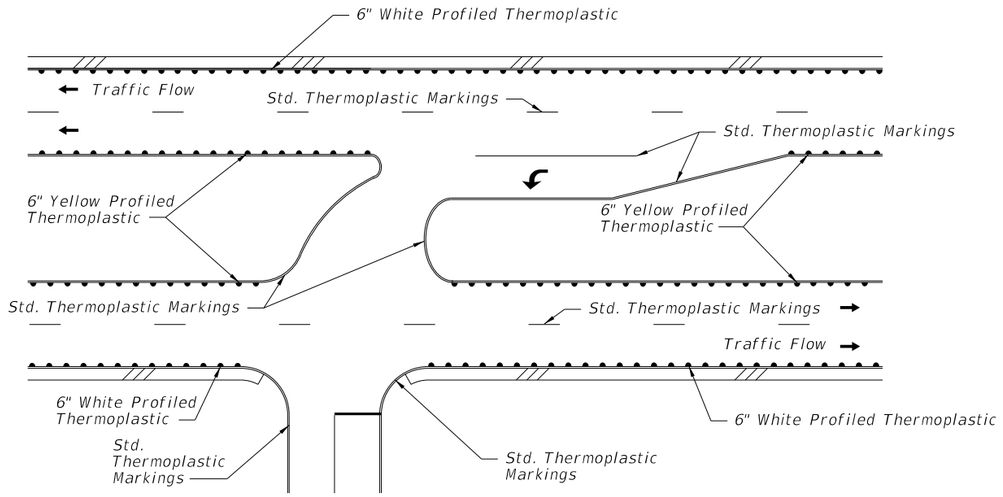
See Profiled Thermoplastic Markings General Notes on Sheet 13.



TYPICAL RURAL INTERSECTION



TYPICAL RURAL MEDIAN OPENING



TYPICAL RURAL DIRECTIONAL INTERSECTION

6/25/2015 2:04:39 PM

PROFILED THERMOPLASTIC MARKINGS
MULTI-LANE CONCRETE ROADWAYS

LAST REVISION	REVISION	DESCRIPTION:			INDEX NO.	SHEET NO.
01/21/15			FDOT 2016 DESIGN STANDARDS	SPECIAL MARKING AREAS	17346	14 of 14