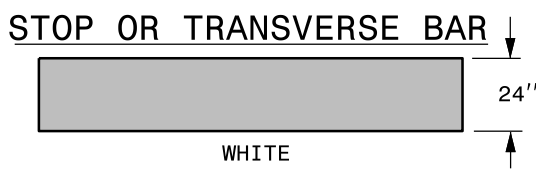
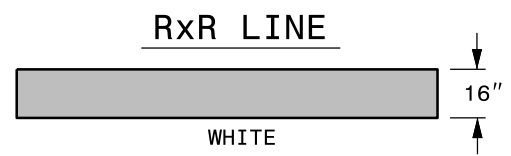
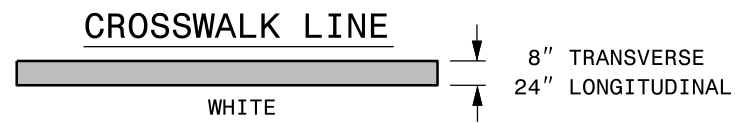
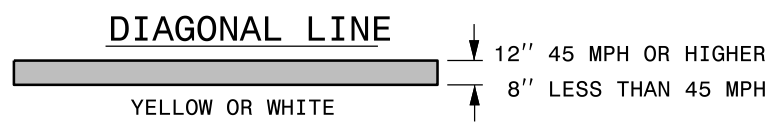
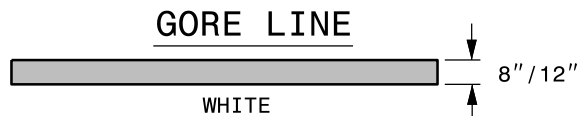
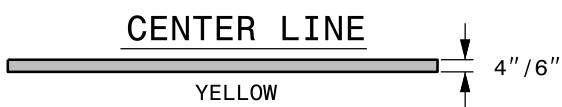
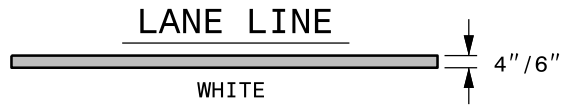
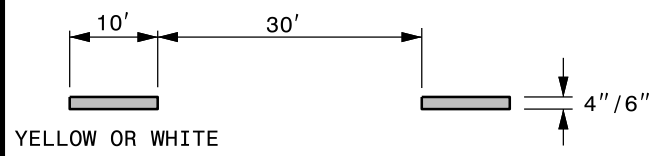


CONTINUOUS LINES



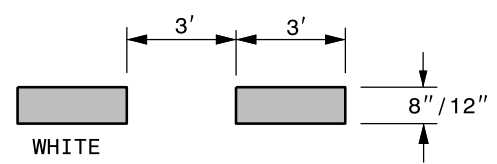
10'-30'/SP SKIP LINE

UNLESS OTHERWISE SHOWN, USE 10'-30'/SP SKIPS FOR SKIP LANE LINES AND SKIP CENTER LINES.



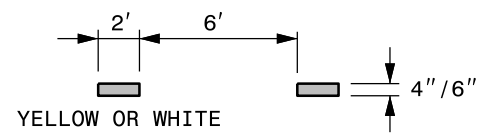
3'-3'/SP MINI-SKIP LINE

UNLESS OTHERWISE SHOWN, USE 3'-3'/SP MINI-SKIPS FOR THE WHITE EDGE LINE EXTENSIONS AT ROUNDABOUTS.



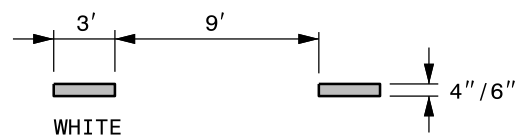
2'-6'/SP MINI-SKIP LINE

UNLESS OTHERWISE SHOWN, USE 2'-6'/SP MINI-SKIPS FOR LANE LINE EXTENSIONS THROUGH INTERSECTIONS, EDGE LINE EXTENSIONS THROUGH INTERSECTIONS AND BICYCLE LANE EXTENSIONS.



3'-9'/SP MINI-SKIP LINE

UNLESS OTHERWISE SHOWN, USE 3'-9'/SP MINI-SKIPS FOR MINI-SKIP LANE LINES, LINE EXTENSIONS THROUGH TAPERS, AND MINI-SKIPS USED FOR BICYCLE LANE LINES.



GENERAL NOTES:

- 1- USE 6" LANE, EDGE, AND CENTER LINES ON ALL FULL CONTROL OF ACCESS FACILITIES AND OTHER ROUTES AS DIRECTED BY THE ENGINEER.
- 2- LANE LINES INDICATED AS "WIDE" ON THE ROADWAY STANDARD DRAWINGS SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.
- 3- GORE LINES SHALL BE TWICE THE WIDTH OF THE NORMAL LINE.

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

1-24

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
 LINE TYPES AND OFFSETS

EDGE LINE OFFSET DETAIL

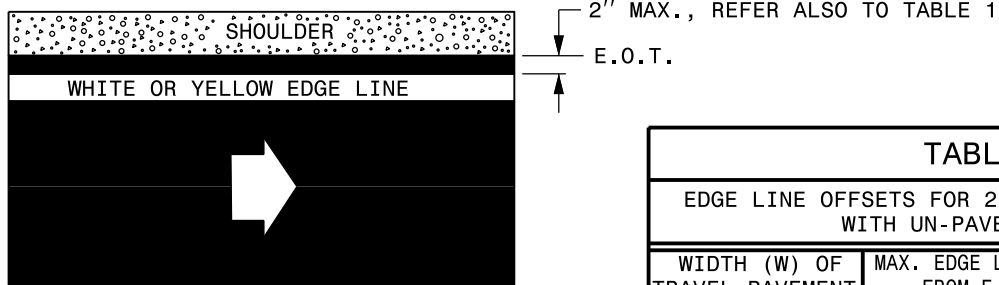
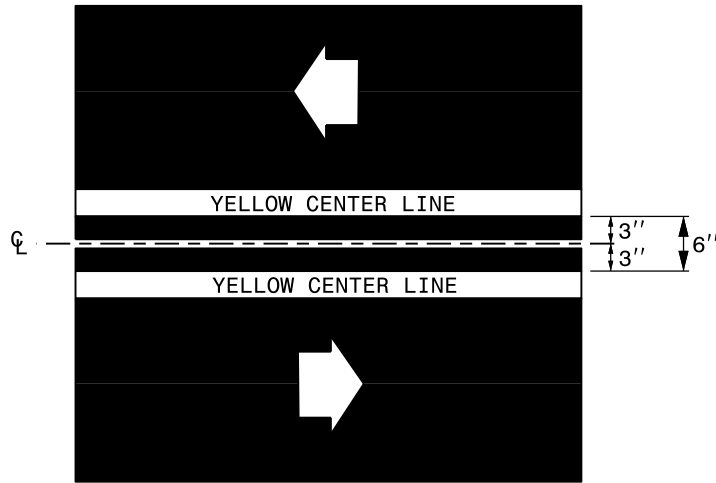


TABLE 1		
EDGE LINE OFFSETS FOR 2-LANE, 2-WAY ROADWAYS WITH UN-PAVED SHOULDERS		
WIDTH (W) OF TRAVEL PAVEMENT	MAX. EDGE LINE OFFSET FROM E.O.T.	MINIMUM LANE WIDTH (W)
16' - 18'	2"	8' - 9'
19'	4"	9'
20'	6"	9.5'
21'	8"	10'
22'	10"	10'
23'	10"	10.5'
24'	1'	11'
26'	2'	11'
28'	2'	12'
30'	3'	12'
32'	4'	12'

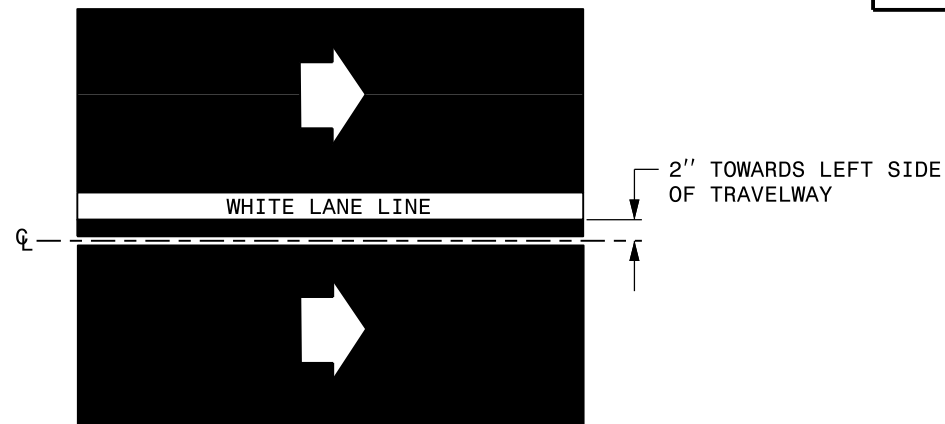
CENTER LINE OFFSET DETAIL



LEGEND

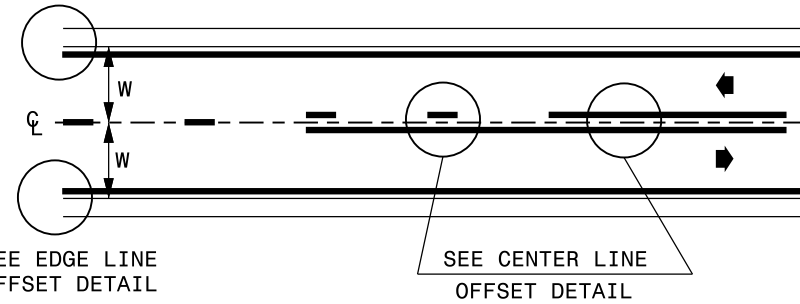
- W = WIDTH OF TRAVEL LANE
- E.O.T. = EDGE OF TRAVEL
- ◄ DIRECTION OF TRAFFIC FLOW
- DIRECTION OF TRAFFIC FLOW

LANE LINE OFFSET DETAIL



SEE EDGE LINE OFFSET DETAIL

TWO-WAY UNDIVIDED ROADWAY

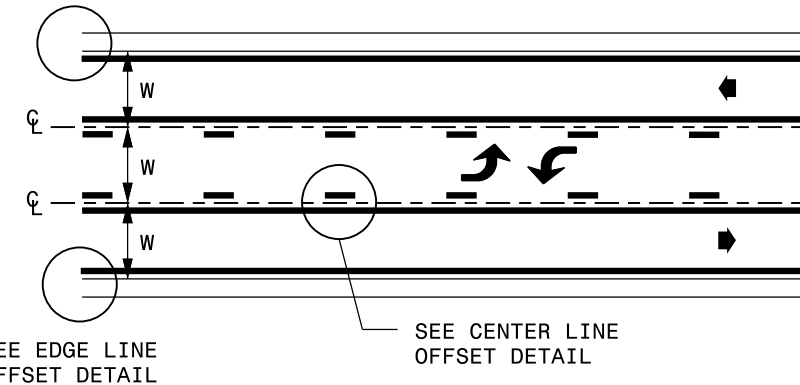


SEE EDGE LINE OFFSET DETAIL

SEE CENTER LINE OFFSET DETAIL

SEE EDGE LINE OFFSET DETAIL

TWO-WAY UNDIVIDED ROADWAY WITH TWO-WAY LEFT TURN LANE

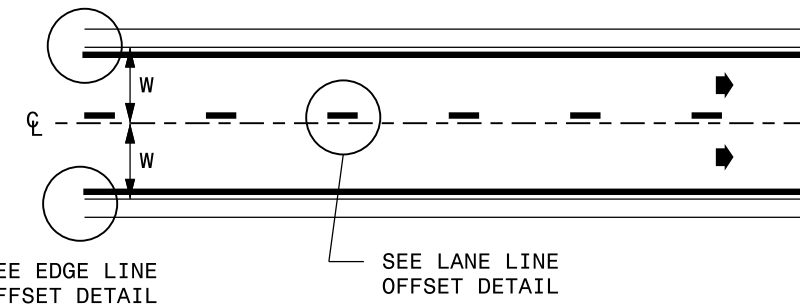


SEE EDGE LINE OFFSET DETAIL

SEE CENTER LINE OFFSET DETAIL

SEE EDGE LINE OFFSET DETAIL

MULTI-LANE ROADWAY



SEE EDGE LINE OFFSET DETAIL

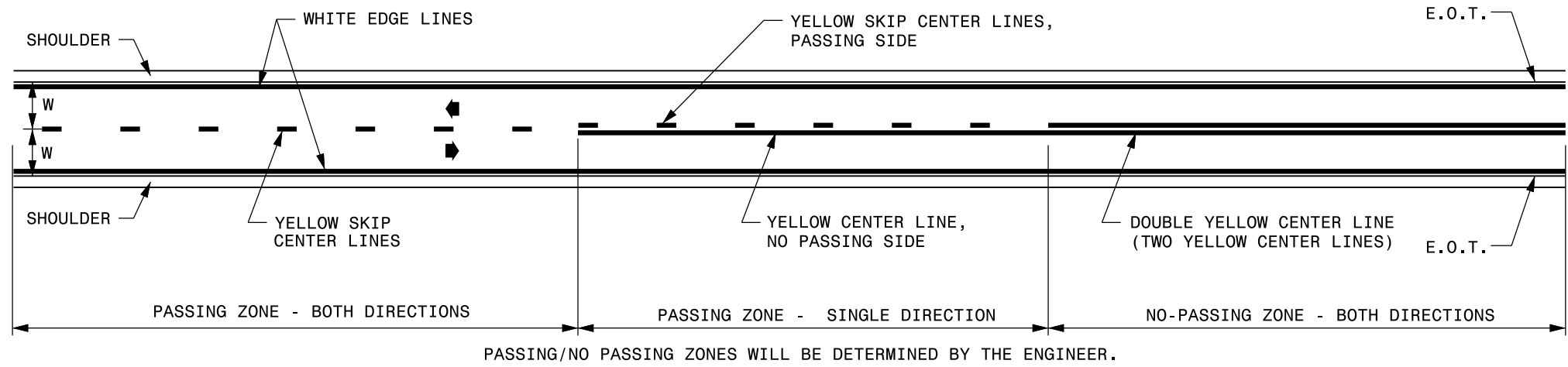
SEE LANE LINE OFFSET DETAIL

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

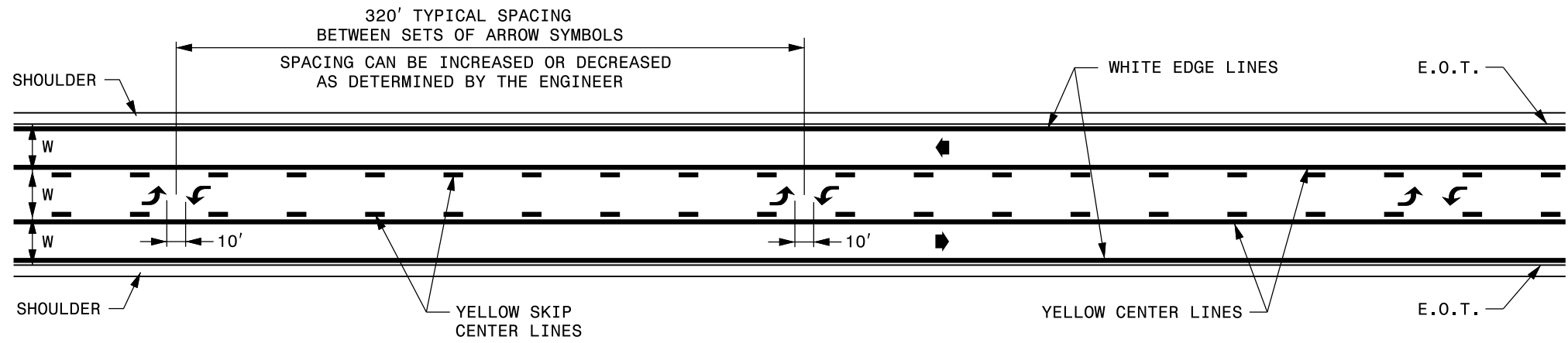
1-24

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
 LINE TYPES AND OFFSETS

TWO-LANE, TWO-WAY ROADWAY



TWO-LANE, TWO-WAY ROADWAY WITH TWO-WAY LEFT TURN LANE



GENERAL NOTES:

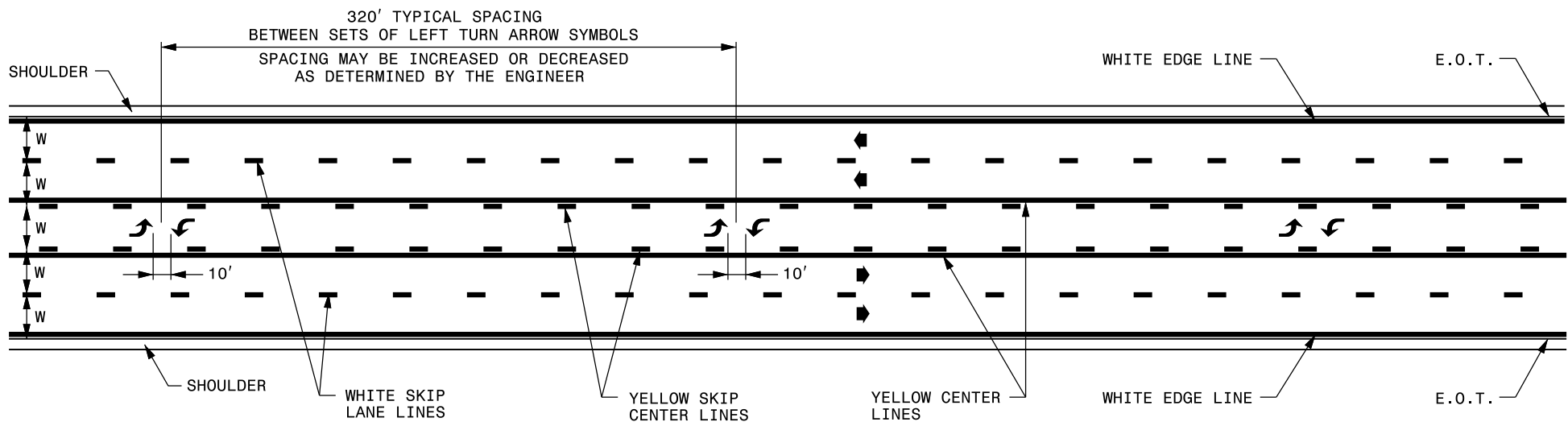
- 1- EDGE LINES ARE NOT REQUIRED ALONG CURB AND GUTTER LOCATIONS.
- 2- CONTINUE EDGE LINES THROUGH MINOR DRIVEWAYS. DO NOT CONTINUE EDGE LINES AT INTERSECTIONS AND MAJOR DRIVEWAYS, SEE ROADWAY STANDARD DRAWING 1205.05 FOR ADDITIONAL GUIDANCE.
- 3- REFER TO ROADWAY STANDARD DRAWINGS 1205.01 AND 1205.08 FOR ADDITIONAL PAVEMENT MARKING GUIDANCE.

LEGEND	
W	= WIDTH OF TRAVEL LANE
E.O.T.	= EDGE OF TRAVEL
	DIRECTION OF TRAFFIC FLOW
	PAVEMENT MARKING SYMBOLS

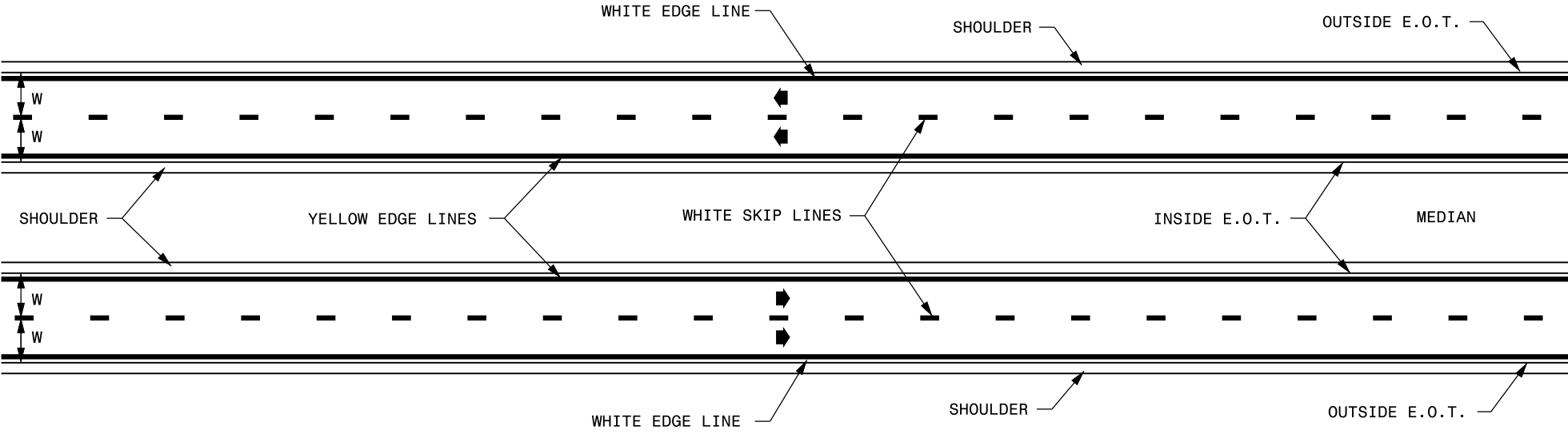
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-24
ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
TWO-LANE AND MULTI-LANE ROADWAYS

UNDIVIDED MULTI-LANE ROADWAY WITH TWO-WAY LEFT TURN LANE



DIVIDED FOUR-LANE ROADWAY



GENERAL NOTES:

- 1- EDGE LINES ARE NOT REQUIRED ALONG CURB AND GUTTER LOCATIONS.
- 2- CONTINUE EDGE LINES THROUGH MINOR DRIVEWAYS. DO NOT CONTINUE EDGE LINES AT INTERSECTIONS AND MAJOR DRIVEWAYS, SEE ROADWAY STANDARD DRAWING 1205.05 FOR ADDITIONAL GUIDANCE.
- 3- REFER TO ROADWAY STANDARD DRAWINGS 1205.01 AND 1205.08 FOR ADDITIONAL PAVEMENT MARKING GUIDANCE.

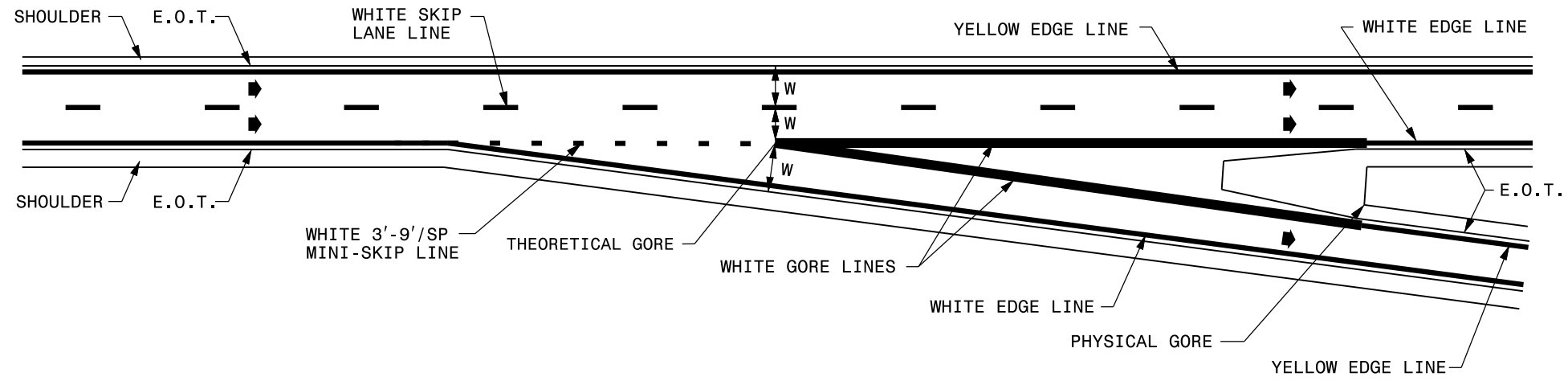
LEGEND	
W	= WIDTH OF TRAVEL LANE
E.O.T.	= EDGE OF TRAVEL
➡	DIRECTION OF TRAFFIC FLOW
↩	PAVEMENT MARKING SYMBOLS

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

1-24

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
 TWO-LANE AND MULTI-LANE ROADWAYS

TAPERED DECELERATION LANE



GENERAL NOTES:

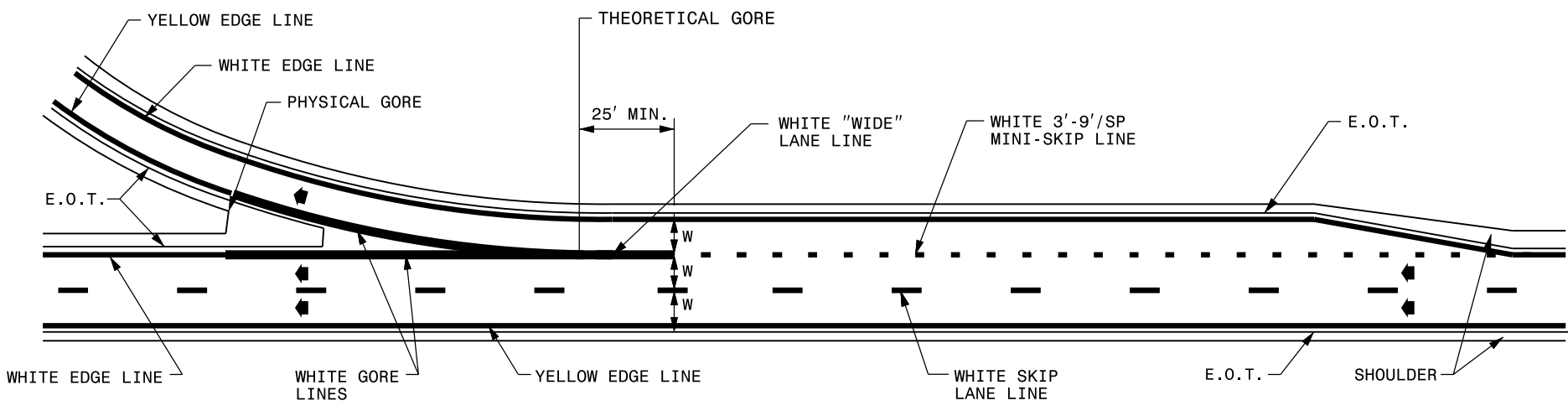
- 1- LINE WIDTH ON ENTRANCE AND EXIT RAMP SHALL MATCH THE LINE WIDTH ON THE MAINLINE.
- 2- GORE LINE MARKINGS TERMINATE AT THE PHYSICAL GORE.
- 3- GORE LINES SHALL BE TWICE THE WIDTH OF THE NORMAL LINE.
- 4- REFER TO ROADWAY STANDARD DRAWING 1205.01 FOR ADDITIONAL PAVEMENT MARKING GUIDANCE.

LEGEND	
W	= WIDTH OF TRAVEL LANE
E.O.T.	= EDGE OF TRAVEL
◄	DIRECTION OF TRAFFIC FLOW
▶	TRAFFIC FLOW

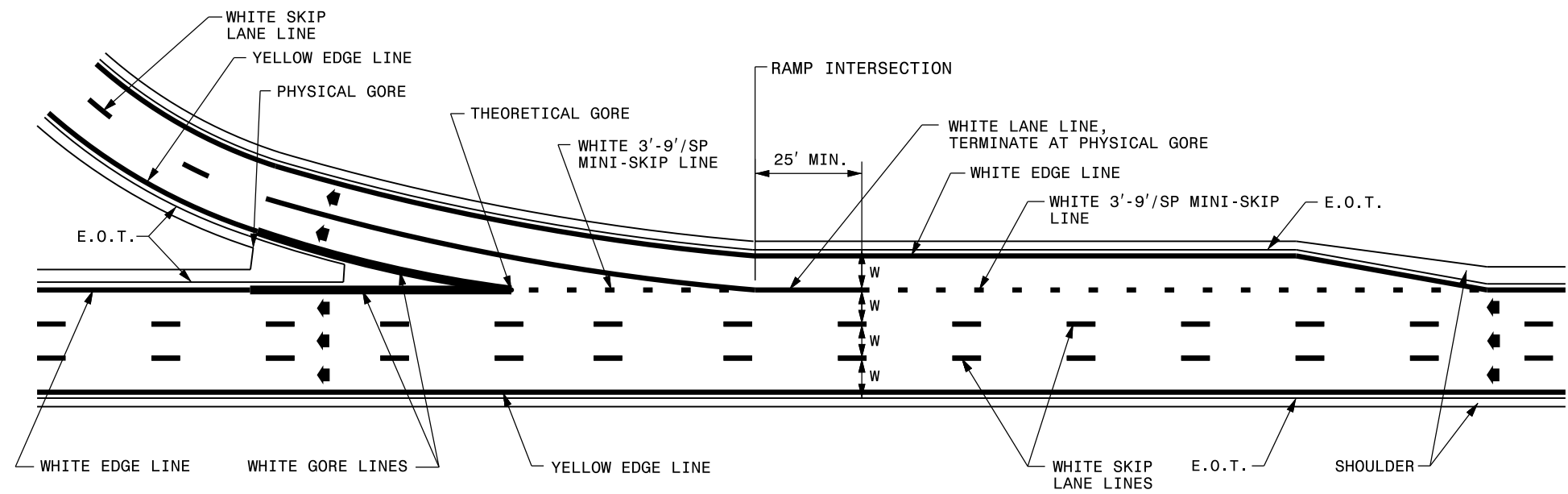
ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
 EXIT AND ENTRANCE RAMP

1-24
 STATE OF
 NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

PARALLEL DECELERATION LANE



PARALLEL DECELERATION LANE AT A MULTI-LANE EXIT



GENERAL NOTES:

- 1- LINE WIDTH ON ENTRANCE AND EXIT RAMP SHALL MATCH THE LINE WIDTH ON THE MAINLINE.
- 2- GORE LINE MARKINGS TERMINATE AT THE PHYSICAL GORE.
- 3- LANE LINES INDICATED AS "WIDE" SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.
- 4- GORE LINES SHALL BE TWICE THE WIDTH OF THE NORMAL LINE.
- 5- REFER TO ROADWAY STANDARD DRAWING 1205.01 FOR ADDITIONAL PAVEMENT MARKING GUIDANCE.

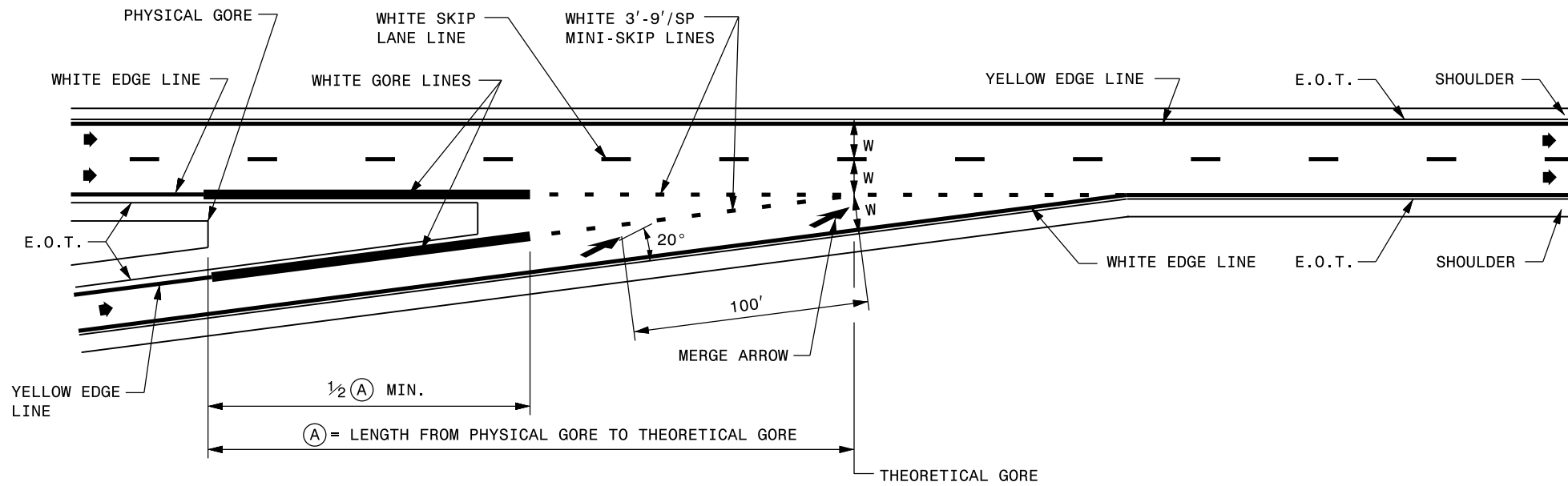
LEGEND	
W	= WIDTH OF TRAVEL LANE
E.O.T.	= EDGE OF TRAVEL
◀	DIRECTION OF TRAFFIC FLOW
▶	DIRECTION OF TRAFFIC FLOW

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

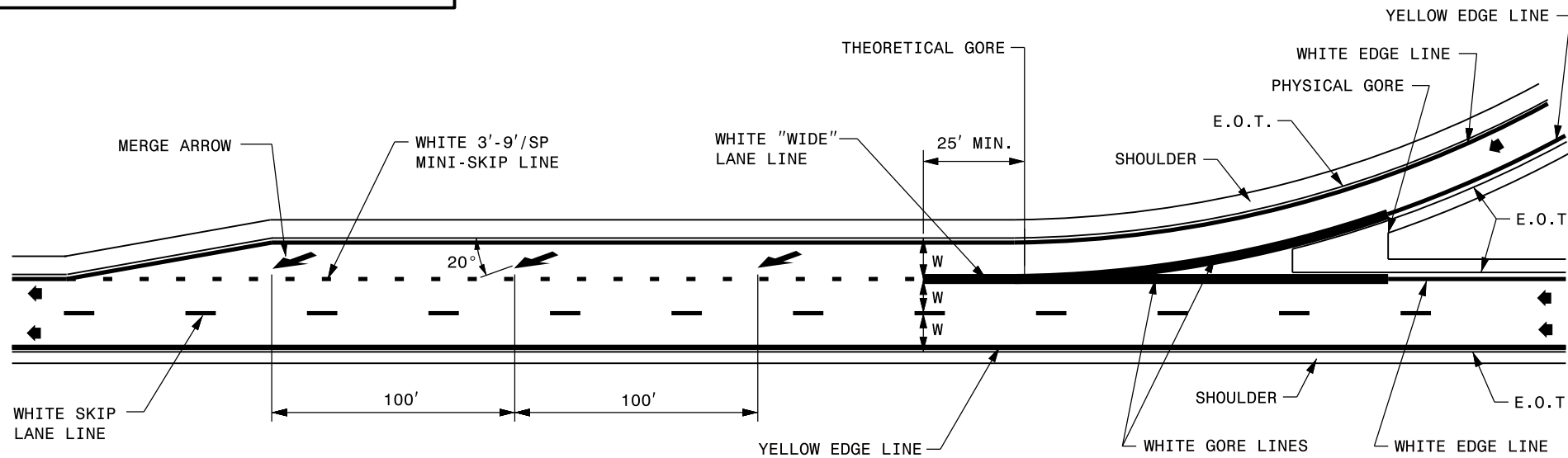
1-24

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
 EXIT AND ENTRANCE RAMP

TAPERED ACCELERATION LANE



PARALLEL ACCELERATION LANE



GENERAL NOTES:

- 1- LINE WIDTH ON ENTRANCE AND EXIT RAMP SHALL MATCH THE LINE WIDTH ON THE MAINLINE.
- 2- GORE LINE MARKINGS TERMINATE AT THE PHYSICAL GORE.
- 3- LANE LINES INDICATED AS "WIDE" SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.
- 4- GORE LINES SHALL BE TWICE THE WIDTH OF THE NORMAL LINE.
- 5- REFER TO ROADWAY STANDARD DRAWINGS 1205.01 AND 1205.08 FOR ADDITIONAL PAVEMENT MARKING GUIDANCE.

LEGEND

- W = WIDTH OF TRAVEL LANE
- E.O.T. = EDGE OF TRAVEL
- ◄ DIRECTION OF TRAFFIC FLOW
- ▬ PAVEMENT MARKING SYMBOLS

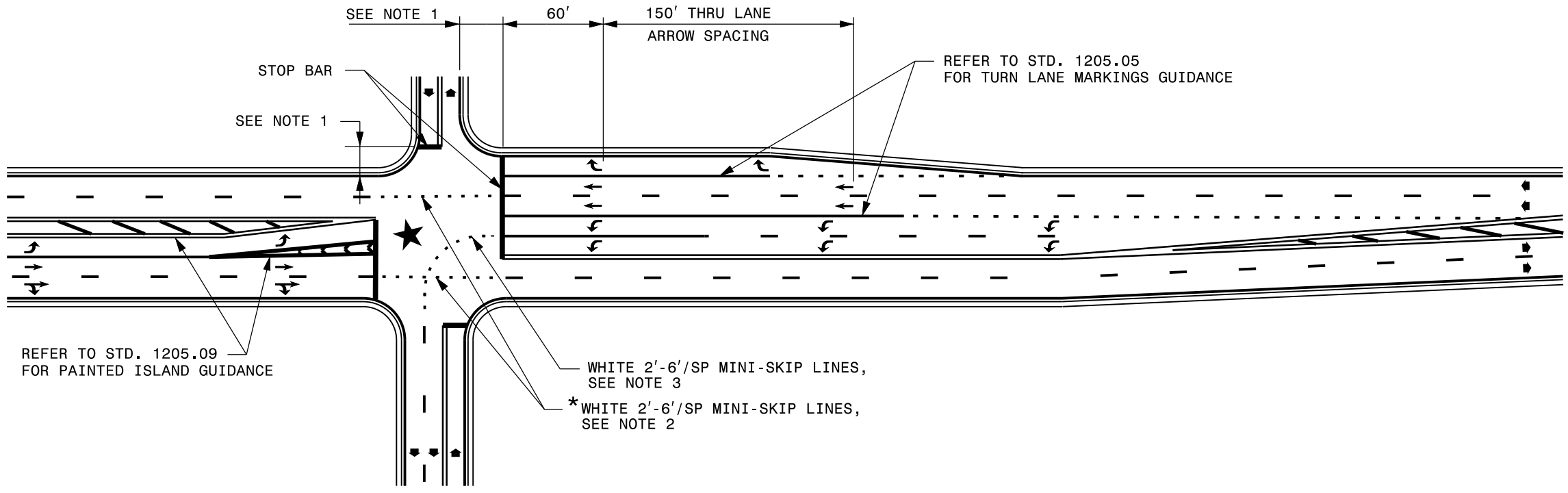
ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
 EXIT AND ENTRANCE RAMP

STATE OF
 NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

1-24

SHEET 3 OF 3

1205.03



GENERAL NOTES:

- 1- REFER TO THE PAVEMENT MARKING PLAN FOR STOP BAR LOCATIONS FOR SIGNALIZED INTERSECTIONS. IF A PAVEMENT MARKING PLAN IS NOT PROVIDED, CONTACT THE SIGNAL DESIGN SECTION FOR THE STOP BAR LOCATIONS OR AS DIRECTED BY THE ENGINEER.
- 2- MINI-SKIP LANE LINE EXTENSIONS SHOULD BE USED AT INTERSECTIONS THAT HAVE REDUCED VISIBILITY CONDITIONS SUCH AS OFFSET, SKEWED, OR CURVED ROADWAYS.
- 3- MINI-SKIP LANE LINE EXTENSIONS SHALL BE USED WHERE MULTIPLE TURN LANES ARE USED.
- 4- REFER TO ROADWAY STANDARD DRAWINGS 1205.01, 1205.02, 1205.05, 1205.08 AND 1205.09 FOR ADDITIONAL PAVEMENT MARKING GUIDANCE.

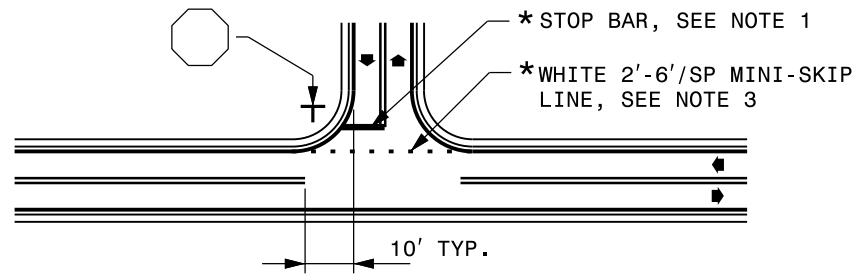
LEGEND	
	DIRECTION OF TRAFFIC FLOW
	PAVEMENT MARKING SYMBOLS
*	OPTIONAL

1-24

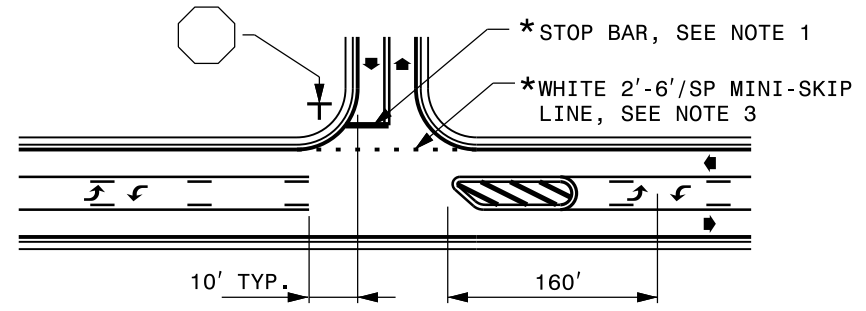
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
INTERSECTIONS

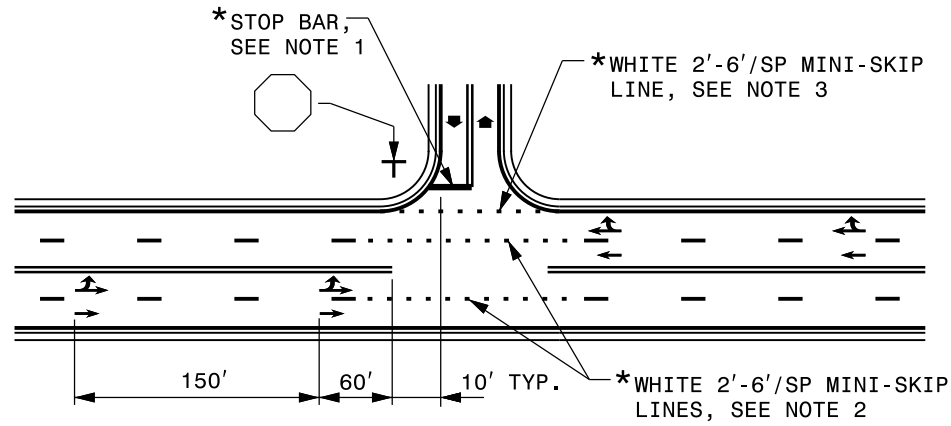
TWO-LANE, TWO-WAY ROADWAY



TWO-LANE, TWO-WAY ROADWAY WITH TWO-WAY LEFT TURN LANE

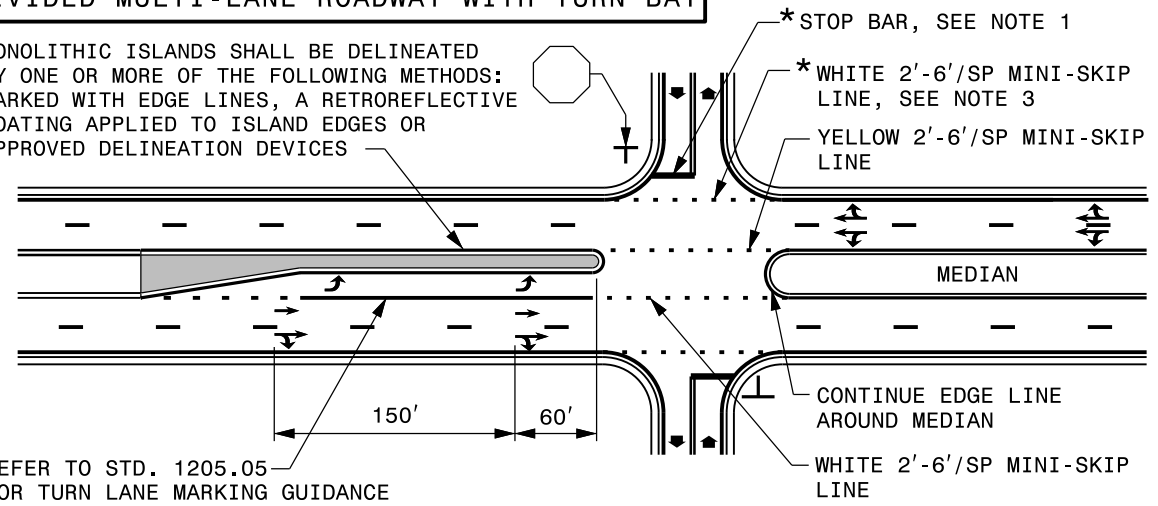


UNDIVIDED MULTI-LANE ROADWAY

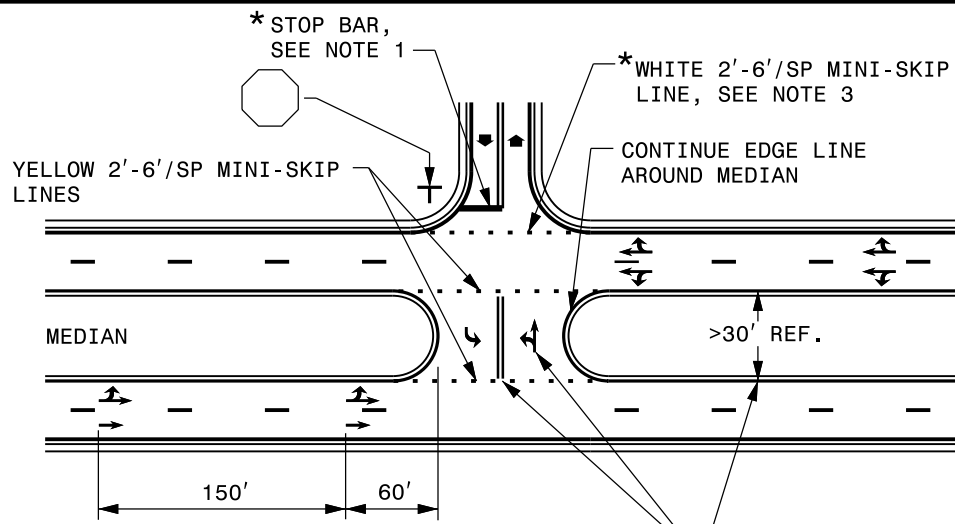


DIVIDED MULTI-LANE ROADWAY WITH TURN BAY

MONOLITHIC ISLANDS SHALL BE DELINEATED BY ONE OR MORE OF THE FOLLOWING METHODS: MARKED WITH EDGE LINES, A RETROREFLECTIVE COATING APPLIED TO ISLAND EDGES OR APPROVED DELINEATION DEVICES



DIVIDED MULTI-LANE ROADWAY WITH WIDE MEDIAN CROSSOVER



USE DOUBLE YELLOW CENTER LINE AND ARROW SYMBOLS IN MEDIAN CROSSOVER WHEN WIDTH OF MEDIAN EXCEEDS 30 FT, OTHERWISE THEY ARE NOT REQUIRED.

GENERAL NOTES:

- 1- PLACEMENT OF STOP BARS AT NON-SIGNALIZED INTERSECTIONS IS OPTIONAL AND USED WHERE IT IS IMPORTANT TO INDICATE THE POINT WHICH VEHICLES ARE REQUIRED TO STOP. PLACE STOP BARS NO LESS THAN 4 FEET AND NO MORE THAN 30 FEET FROM THE NEAREST EDGE OF THE INTERSECTING ROADWAY. USE 10 FEET AS THE TYPICAL SETBACK DISTANCE OR AS DIRECTED BY THE ENGINEER.
- 2- MINI-SKIP LANE LINE EXTENSIONS SHOULD BE USED AT INTERSECTIONS THAT HAVE REDUCED VISIBILITY CONDITIONS SUCH AS OFFSET, SKEWED, OR CURVED ROADWAYS.
- 3- MINI-SKIP EDGE LINE EXTENSIONS MAY BE PLACED THROUGH INTERSECTIONS AND MAJOR DRIVEWAYS.
- 4- REFER TO ROADWAY STANDARD DRAWINGS 1205.01, 1205.02, 1205.05, 1205.08 AND 1205.09 FOR ADDITIONAL PAVEMENT MARKING GUIDANCE.

LEGEND

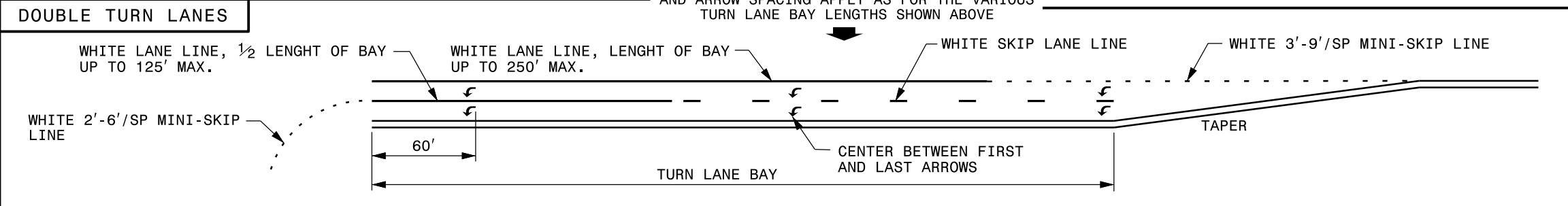
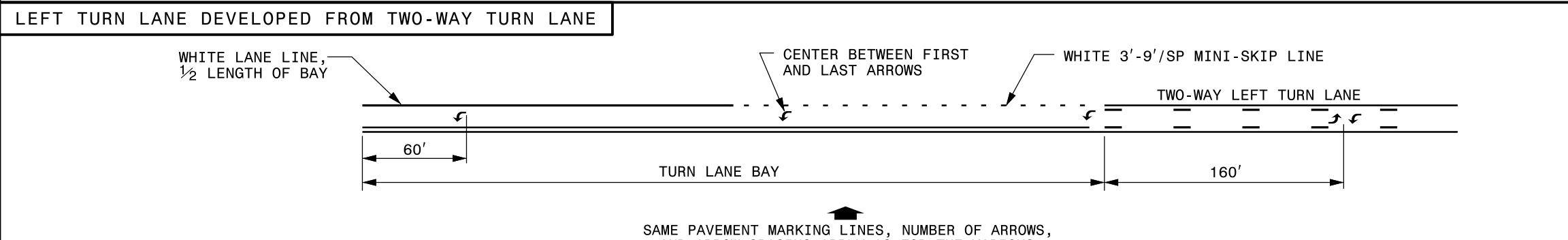
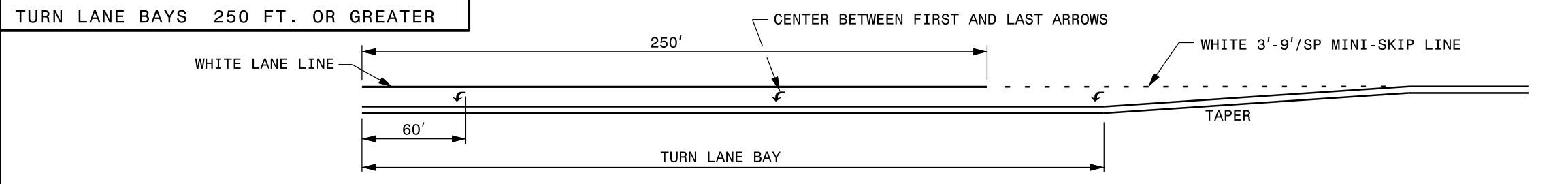
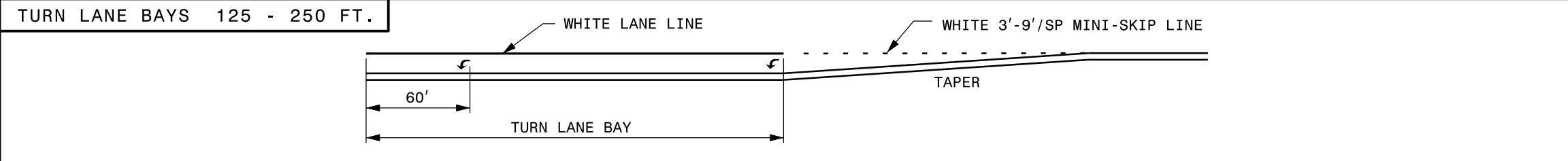
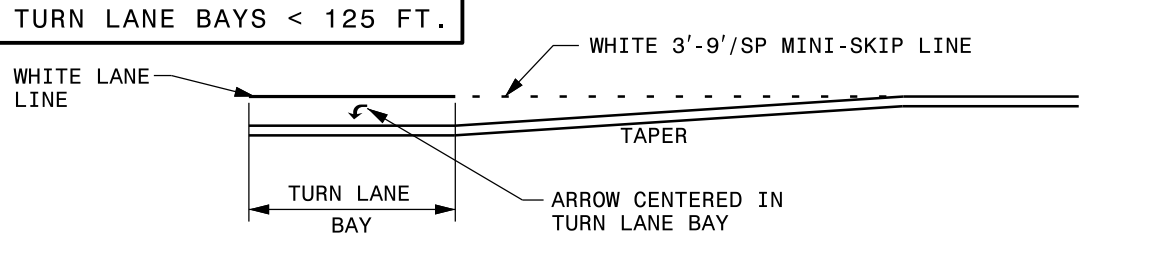
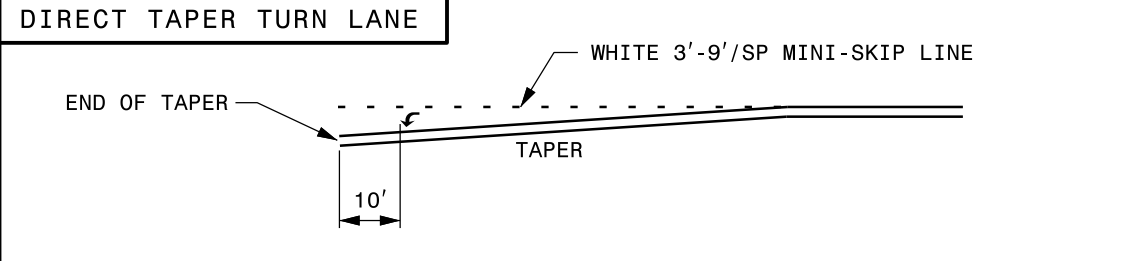
	STOP SIGN		STATIONARY SIGN
	DIRECTION OF TRAFFIC FLOW		PAVEMENT MARKING SYMBOLS
*	OPTIONAL		

1-24

ROADWAY STANDARD DRAWING FOR

PAVEMENT MARKINGS
 INTERSECTIONS

1-24

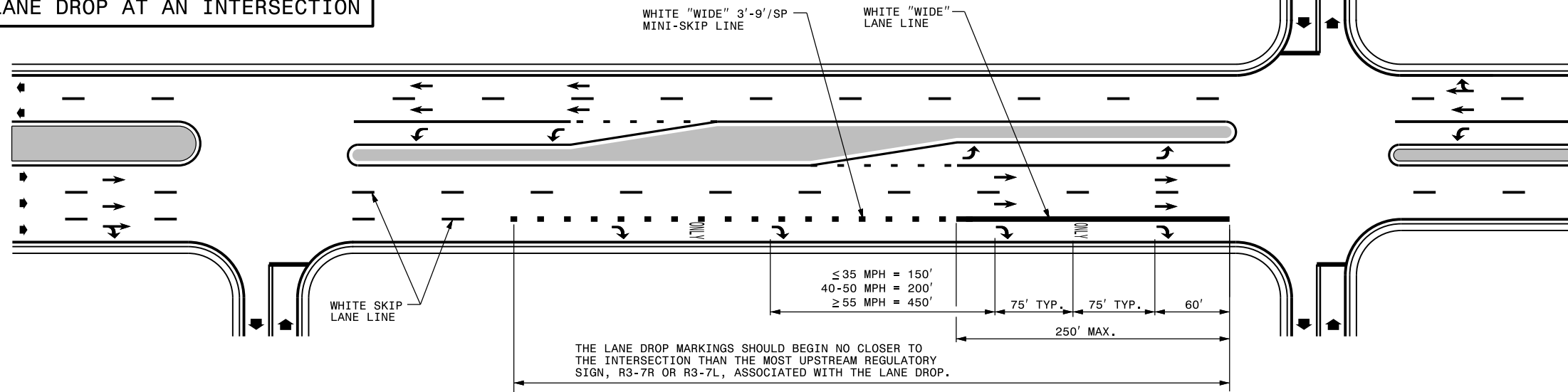


GENERAL NOTES:

- 1- USE THE GUIDANCE SHOWN ABOVE IN CONJUNCTION WITH THE INTERSECTION GUIDANCE SHOWN ON ROADWAY STANDARD DRAWING 1205.04.
- 2- THE NUMBER OF ARROWS SHOWN IS THE MINIMUM REQUIRED. USE ADDITIONAL ARROWS AS DIRECTED BY THE ENGINEER.

LEGEND	
	PAVEMENT MARKING SYMBOL

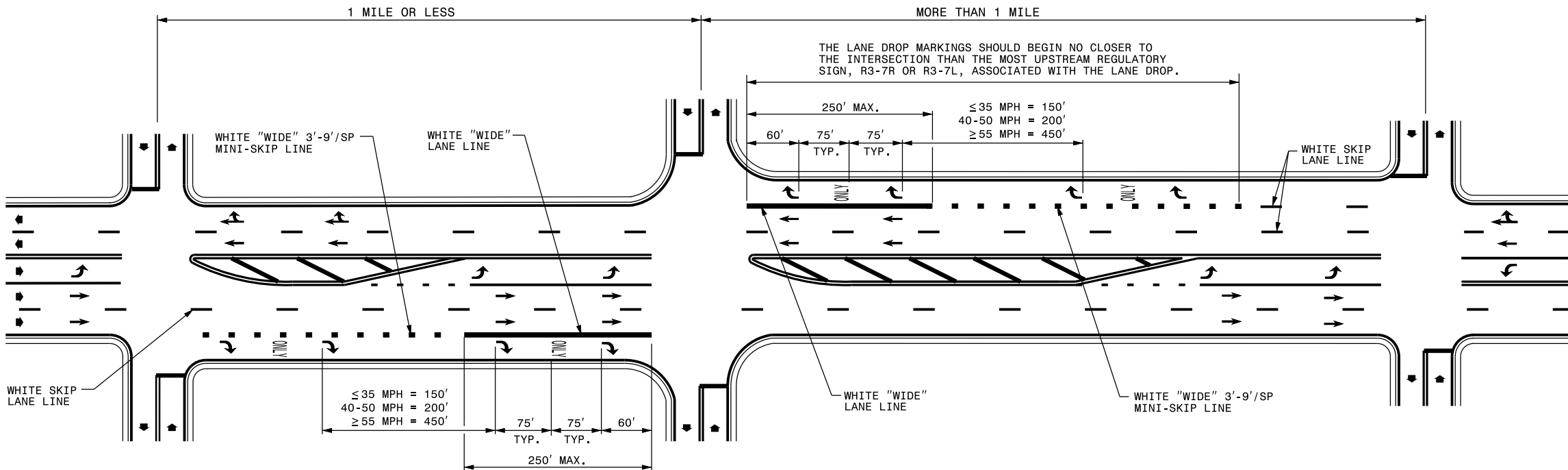
LANE DROP AT AN INTERSECTION



STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-24

LANE DROP AT AN INTERSECTION WITH AN AUXILIARY LANE



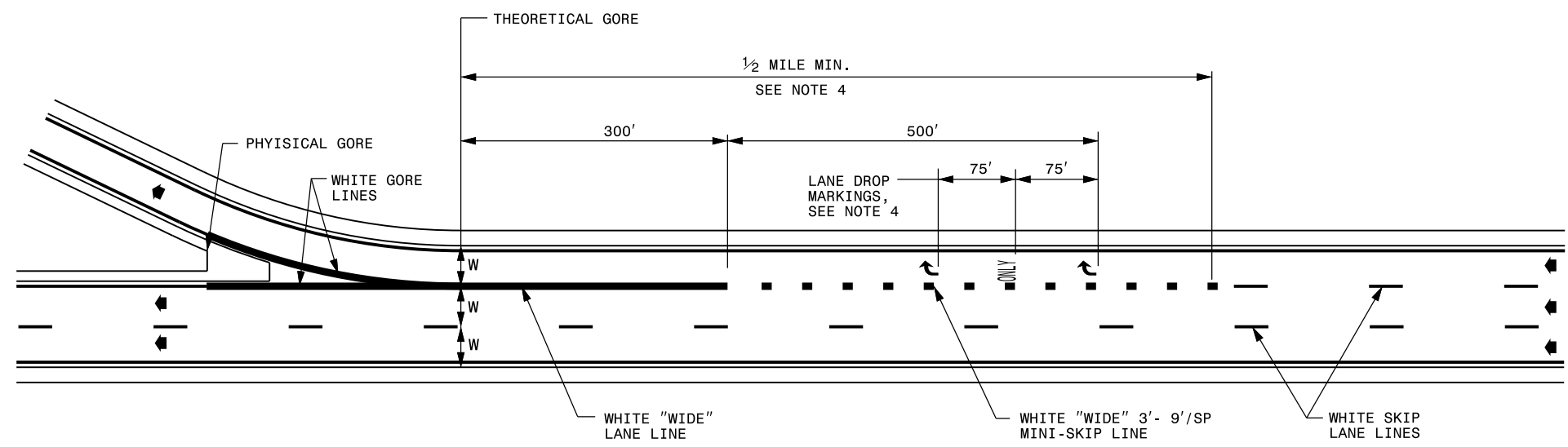
ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
LANE DROPS

GENERAL NOTES:

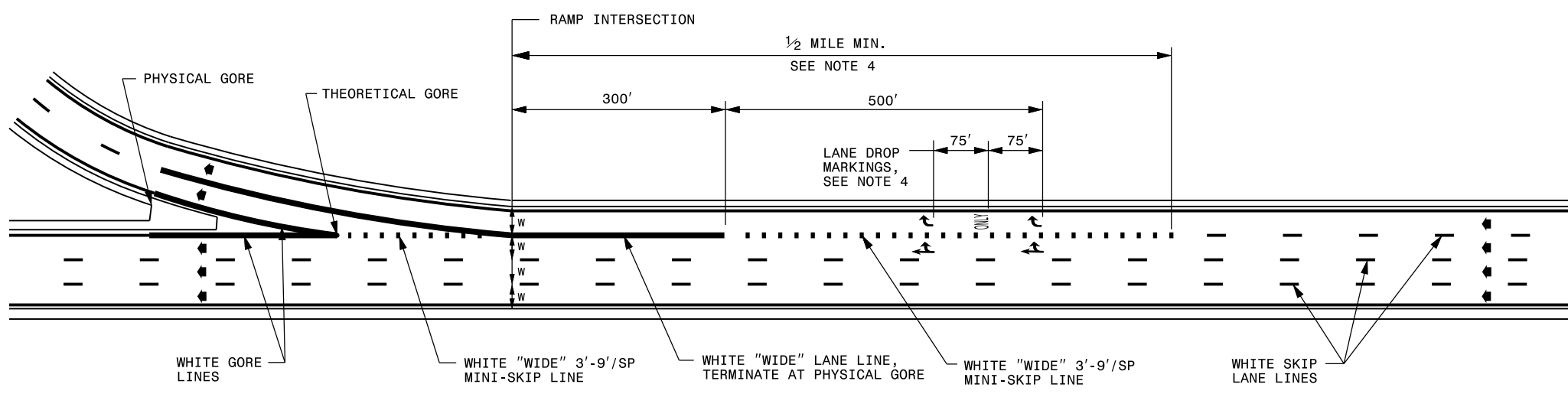
- 1- USE THE GUIDANCE SHOWN ON THE ABOVE DETAILS IN CONJUNCTION WITH INTERSECTION GUIDANCE SHOWN ON ROADWAY STANDARD DRAWING 1205.04.
- 2- LANE LINES INDICATED AS "WIDE" SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.

LEGEND	
W = WIDTH OF TRAVEL LANE	ONLY PAVEMENT MARKING SYMBOLS & CHARACTERS
➔ DIRECTION OF TRAFFIC FLOW	

LANE DROP AT A SINGLE LANE EXIT RAMP



LANE DROP AT A MULTI-LANE EXIT RAMP

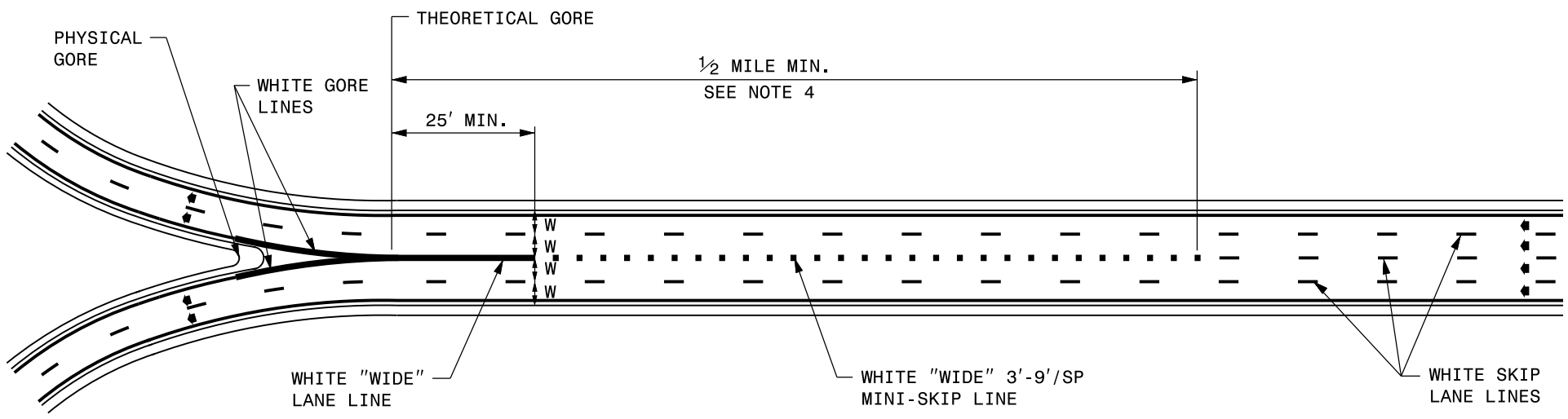


GENERAL NOTES:

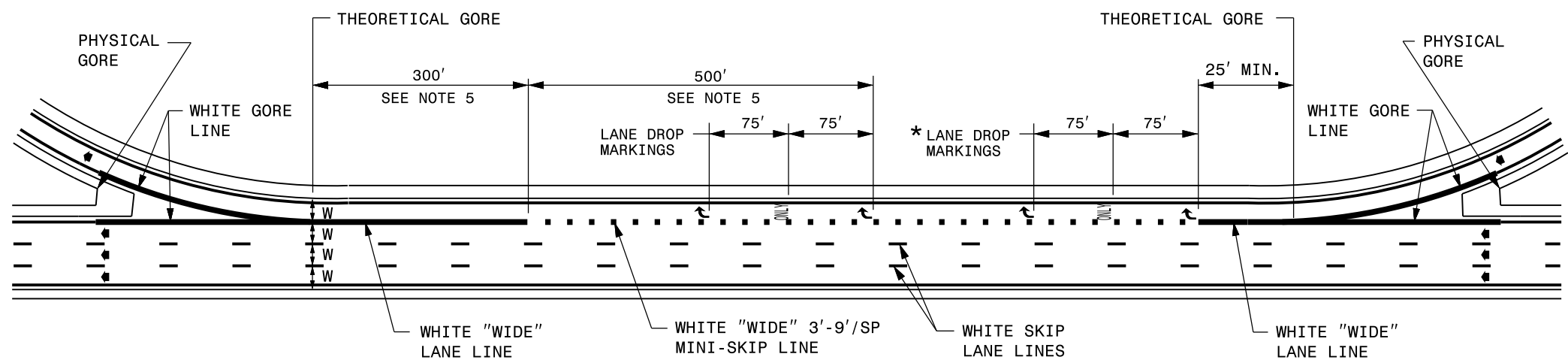
- 1- USE THE GUIDANCE SHOWN ON THE FOLLOWING DETAILS IN CONJUNCTION WITH THE RAMP GUIDANCE SHOWN ON ROADWAY STANDARD DRAWING 1205.03.
- 2- LANE LINES INDICATED AS "WIDE" SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.
- 3- GORE LINES SHALL BE TWICE THE WIDTH OF THE NORMAL LINE.
- 4- MINI-SKIPS MAY BE EXTENDED TO COINCIDE WITH THE LANE DROP ADVANCE ONE MILE GUIDE SIGN AS DIRECTED BY THE ENGINEER. IF MARKINGS ARE EXTENDED, ADDITIONAL LANE DROP MARKINGS MAY BE INSTALLED.

LEGEND	
W	= WIDTH OF TRAVEL LANE
◄	DIRECTION OF TRAFFIC FLOW
↶ ONLY	PAVEMENT MARKING SYMBOLS & CHARACTERS

ROUTE SPLIT WITH DEDICATED LANES



AUXILIARY LANE 2 MILES OR LESS IN LENGTH BETWEEN RAMPS



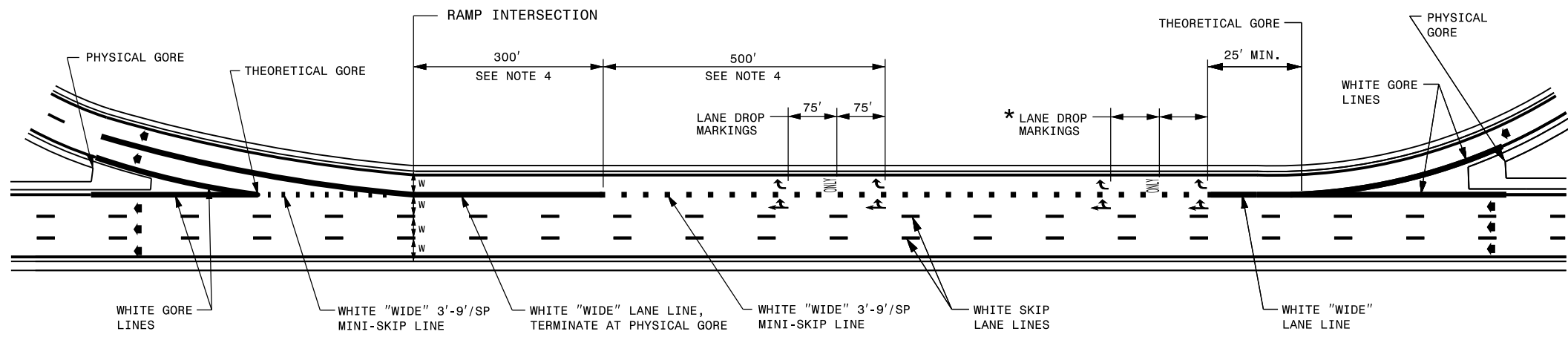
- GENERAL NOTES:**
- 1- USE THE GUIDANCE SHOWN ON THE FOLLOWING DETAILS IN CONJUNCTION WITH THE RAMP GUIDANCE SHOWN ON ROADWAY STANDARD DRAWING 1205.03.
 - 2- LANE LINES INDICATED AS "WIDE" SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.
 - 3- GORE LINES SHALL BE TWICE THE WIDTH OF THE NORMAL LINE.
 - 4- MINI-SKIPS MAY BE EXTENDED TO COINCIDE WITH THE ROUTE SPLIT ADVANCE ONE MILE GUIDE SIGN AS DIRECTED BY THE ENGINEER.
 - 5- LANE LENGTH AND LANE DROP MARKINGS PLACEMENT MAY BE ADJUSTED DEPENDING ON AUXILIARY LANE LENGTH.

LEGEND	
*	OPTIONAL
W	WIDTH OF TRAVEL LANE
◄	DIRECTION OF TRAFFIC FLOW
↻ ONLY	PAVEMENT MARKING SYMBOLS & CHARACTERS

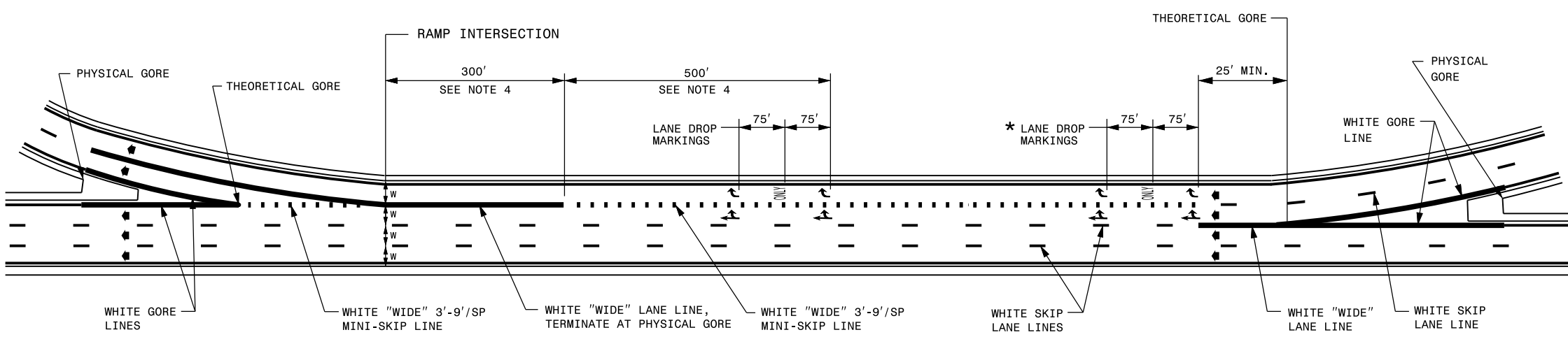
STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
 LANE DROPS

AUXILIARY LANE WITH MULTI-LANE EXIT RAMP, 2 MILES OR LESS BETWEEN RAMPS



AUXILIARY LANE WITH MULTI-LANE ENTRANCE RAMP AND EXIT RAMP, 2 MILES OR LESS BETWEEN RAMPS



GENERAL NOTES:

- 1- USE THE GUIDANCE SHOWN ON THE FOLLOWING DETAILS IN CONJUNCTION WITH THE RAMP GUIDANCE SHOWN ON ROADWAY STANDARD DRAWING 1205.03.
- 2- LANE LINES INDICATED AS "WIDE" SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.
- 3- GORE LINES SHALL BE TWICE THE WIDTH OF THE NORMAL LINE.
- 4- LANE LENGTH AND LANE DROP MARKINGS PLACEMENT MAY BE ADJUSTED DEPENDING ON AUXILIARY LANE LENGTH.

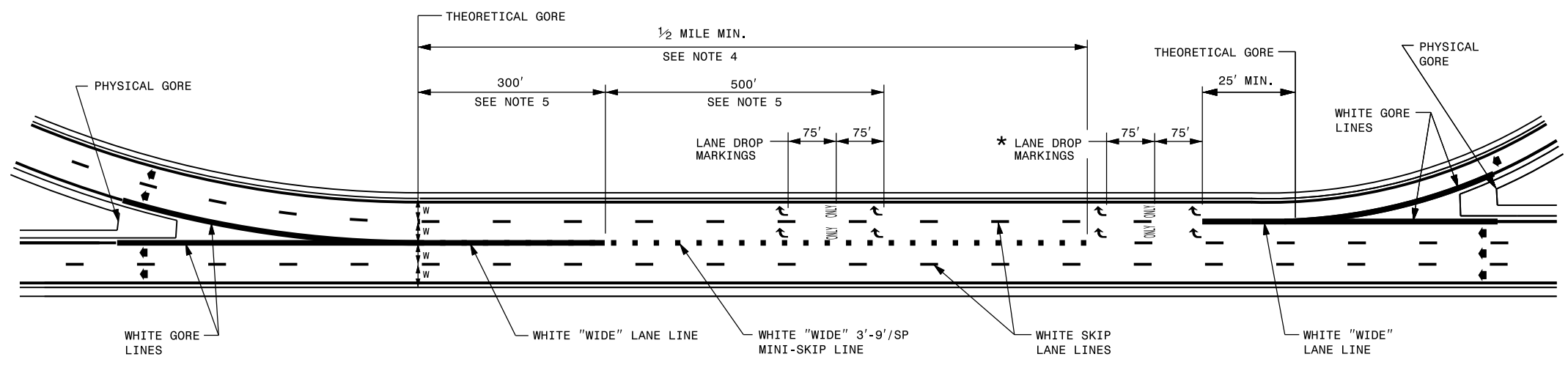
LEGEND	
*	OPTIONAL
W	= WIDTH OF TRAVEL LANE
◄	DIRECTION OF TRAFFIC FLOW
↶ ONLY	PAVEMENT MARKING SYMBOLS & CHARACTERS

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

1-24

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
 LANE DROPS

LANE DROP ADJACENT TO AUXILIARY LANE



STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-24

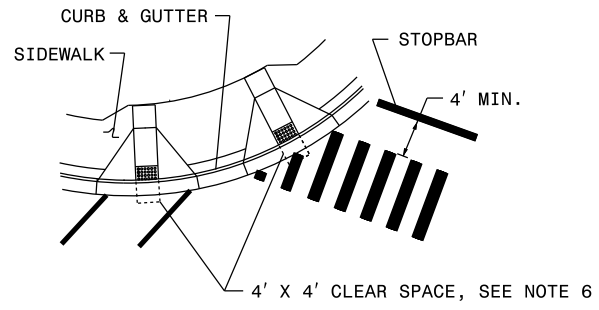
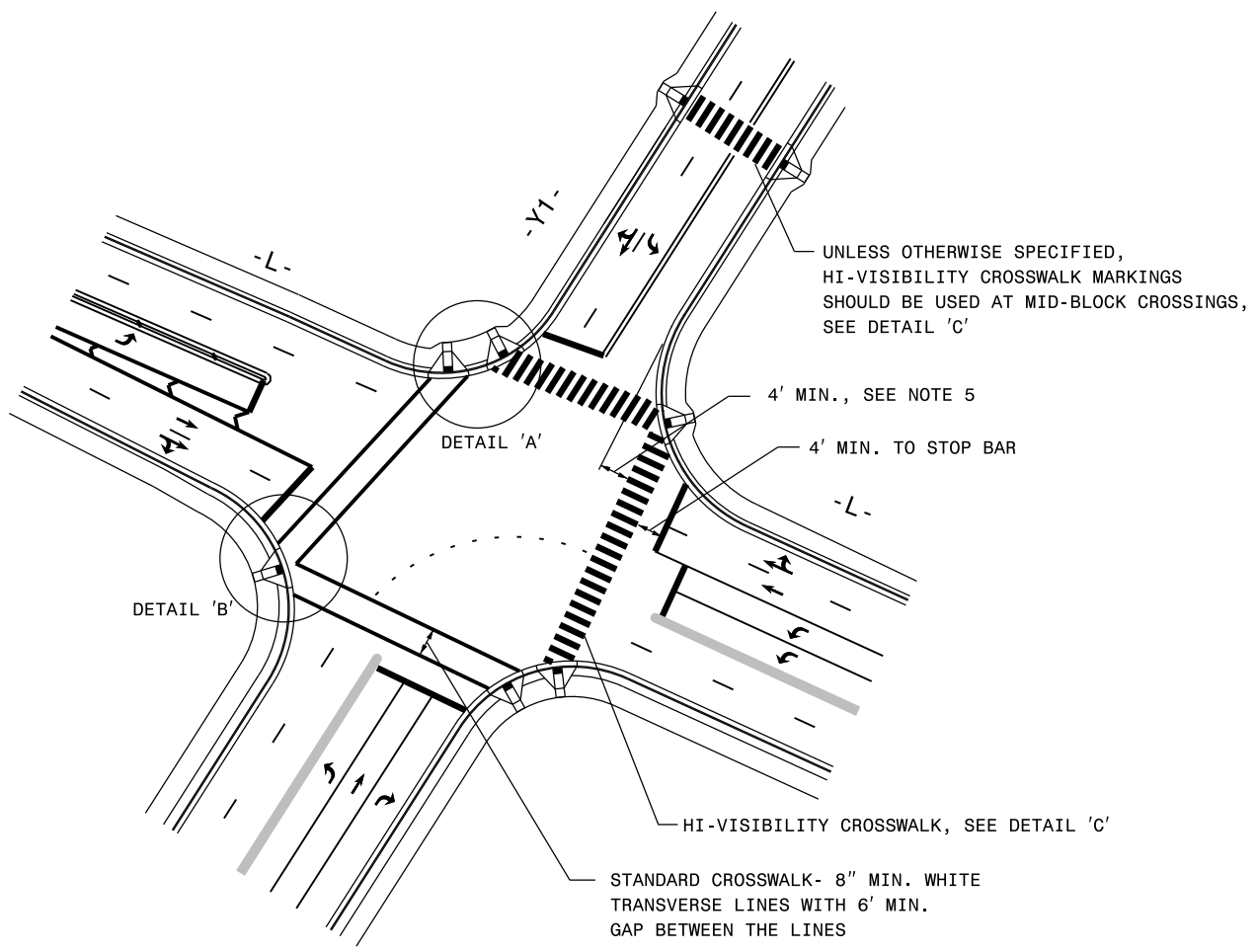
ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
LANE DROPS

GENERAL NOTES:

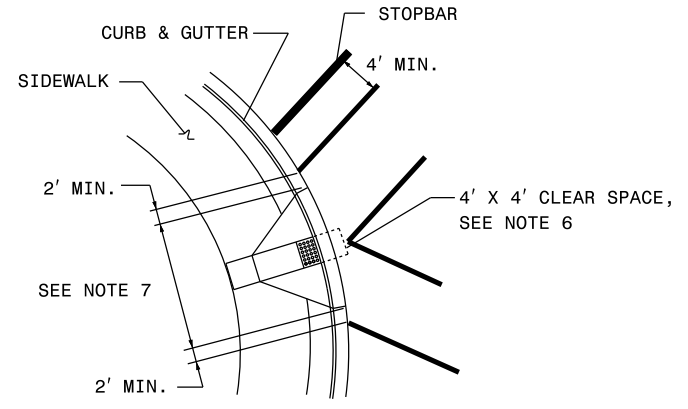
- 1- USE THE GUIDANCE SHOWN ON THE FOLLOWING DETAILS IN CONJUNCTION WITH THE RAMP GUIDANCE SHOWN ON ROADWAY STANDARD DRAWING 1205.03.
- 2- LANE LINES INDICATED AS "WIDE" SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.
- 3- GORE LINES SHALL BE TWICE THE WIDTH OF THE NORMAL LINE.
- 4- MINI-SKIPS MAY BE EXTENDED TO COINCIDE WITH THE LANE DROP ADVANCE ONE MILE GUIDE SIGN AS DIRECTED BY THE ENGINEER.
- 5- LANE LENGTH AND LANE DROP MARKINGS PLACEMENT MAY BE ADJUSTED DEPENDING ON AUXILIARY LANE LENGTH.

LEGEND	
*	OPTIONAL
W	WIDTH OF TRAVEL LANE
◀	DIRECTION OF TRAFFIC FLOW
▶	DIRECTION OF TRAFFIC FLOW
↶ ONLY	PAVEMENT MARKING SYMBOLS & CHARACTERS

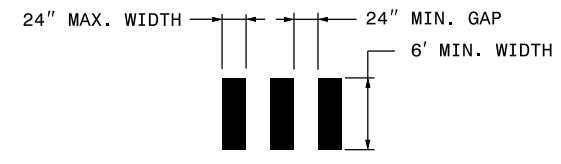
CROSSWALK PLACEMENT GUIDANCE



DETAIL 'A'- DUAL CURB RAMPS



DETAIL 'B'- SINGLE DIAGONAL CURB RAMP



DETAIL 'C'- HI-VISIBILITY CROSSWALK

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

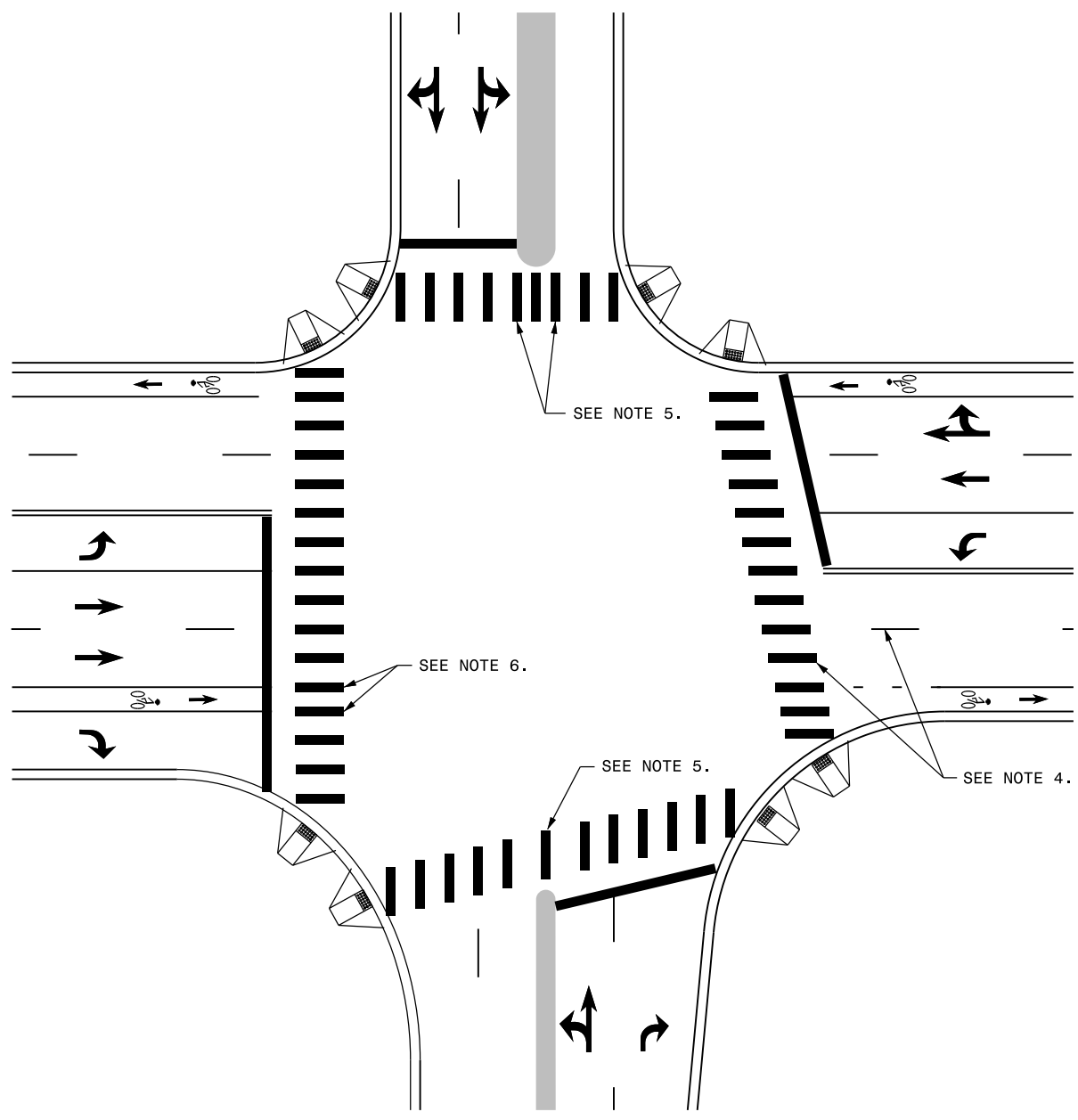
1-24

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
PEDESTRIAN CROSSWALKS

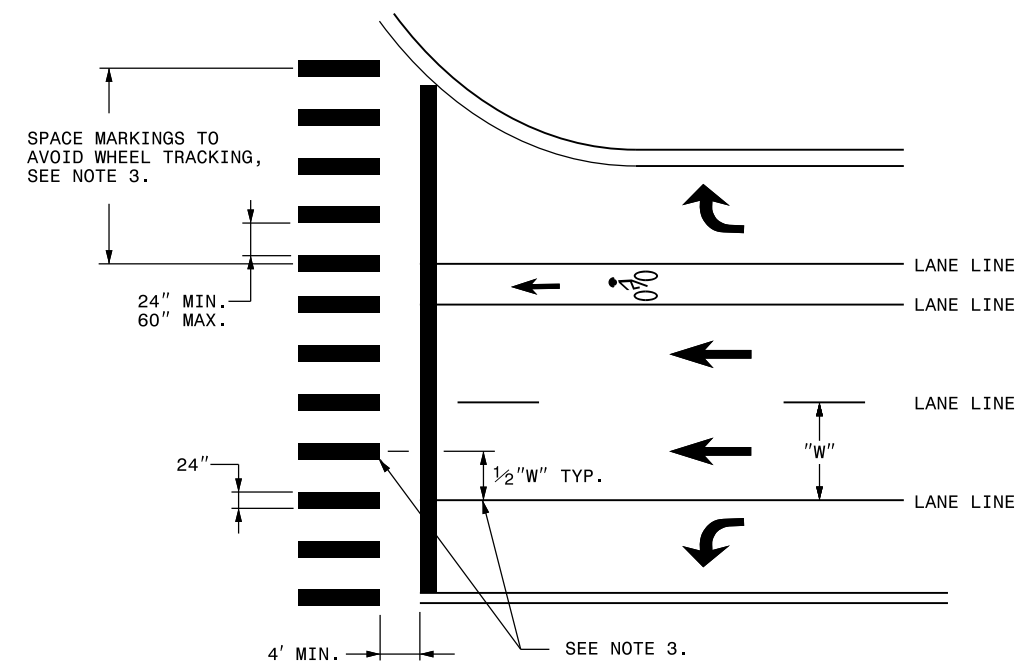
GENERAL NOTES:

- USE THE DETAILS ABOVE AND THE FOLLOWING NOTES FOR GUIDANCE IN PLACING CROSSWALK MARKINGS. REFER TO NCDOT ROADWAY STANDARD DRAWINGS, MUTCD AND ADA STANDARDS FOR ADDITIONAL GUIDANCE.
- THE LOCATION AND TYPE OF CROSSWALK MARKINGS SHOWN ON THE ABOVE DETAILS ARE FOR REFERENCE ONLY. LOCATE CROSSWALK MARKINGS AS SHOWN ON THE PROJECT DETAIL SHEETS OR AS DIRECTED BY THE ENGINEER. THE CROSSWALK MARKING TYPE, STANDARD OR HI-VISIBILITY, SHALL BE INSTALLED AS SPECIFIED ON THE PROJECT DETAIL SHEETS OR AS DIRECTED BY THE ENGINEER.
- THE STANDARD CROSSWALK IS TWO WHITE 8" MIN. TRANSVERSE LINES WITH A 6' MIN. GAP BETWEEN THE LINES. THE HI-VISIBILITY CROSSWALK IS WHITE 24" MAX. WIDE LONGITUDINAL LINES WITH 24" MIN. GAPS BETWEEN LINES, SEE DETAIL 'C'. HI-VISIBILITY CROSSWALKS SHOULD BE A MINIMUM OF 6' WIDE. CURB RAMPS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARES.
- STOP BARS SHOULD BE PLACED A 4' MIN. IN ADVANCE OF NEAREST CROSSWALK LINE.
- SET BACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL IS 4' MIN.
- BEYOND THE BOTTOM GRADE BREAK, A CLEAR SPACE OF 4' X 4' MIN. SHALL BE PROVIDED WITHIN THE MARKINGS.
- SINGLE DIAGONAL CURB RAMPS WITH FLARED SIDES SHALL HAVE A SEGMENT OF CURB 2' MIN. LONG LOCATED ON EACH SIDE OF THE CURB RAMP AND WITHIN THE MARKED CROSSING, SEE DETAIL 'B'.
- CURB RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE TO THE LATEST NCDOT ROADWAY STANDARD DRAWINGS. CURB RAMPS THROUGH MEDIAN ISLANDS, SINGLE RAMPS AT DUAL CROSSWALKS OR LIMITED R/W SITUATIONS, WILL BE HANDLED BY SPECIAL DETAILS. CONTACT THE CONTRACT STANDARDS AND DEVELOPMENT UNIT FOR DETAILS OR A SPECIAL DESIGN.

1-24



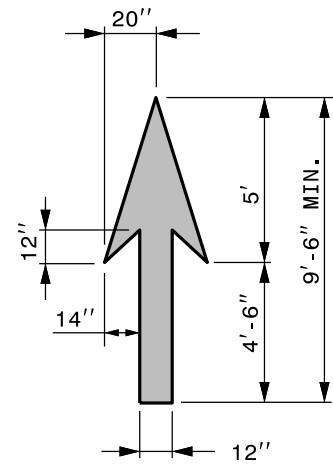
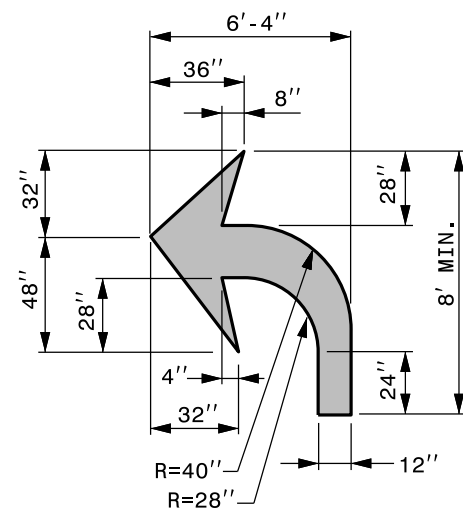
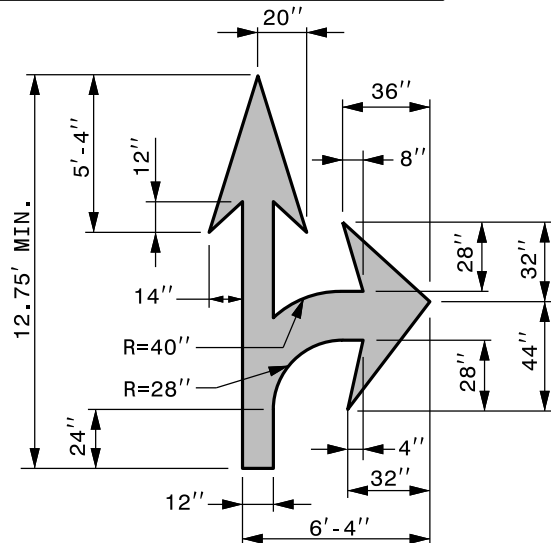
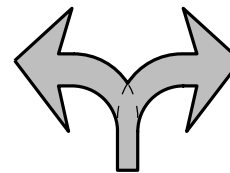
CROSSWALK INTERSECTION DETAIL



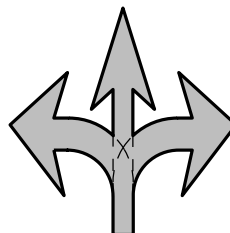
CROSSWALK MARKING DETAIL

GENERAL NOTES:

- 1- THE GUIDANCE IN THIS DETAIL IS TO BE USED WHEN NO-TRACK SPACING OF HI-VISIBILITY MARKINGS IS REQUESTED.
- 2- USE THE GUIDANCE SHOWN ON THE ABOVE DETAILS IN CONJUNCTION WITH PAVEMENT MARKING GUIDANCE SHOWN ON ROADWAY STANDARD DRAWINGS 1205.01 AND 1205.07.
- 3- PLACE MARKINGS TO AVOID WHEELPATH OF VEHICLES. MARKINGS TYPICALLY WILL BE LOCATED CENTERED AT THE LANE LINES AND EDGE LINES WITH ONE ADDITIONAL MARKING CENTERED IN THE MIDDLE OF THE LANE. AT WIDE LANE WIDTHS DUE TO TAPERS AND LARGE RADII, LOCATE MARKINGS AT BEST SPACING TO AVOID WHEEL TRACKING. THE SPACE BETWEEN MARKINGS SHALL NOT BE LESS THAN 24 INCHES OR GREATER THAN 60 INCHES.
- 4- WHERE THE CROSSWALK IS SKEWED TO THE LANE LINES, THE MARKINGS SHOULD BE PARALLEL TO THE LANE LINES.
- 5- PLACE MARKINGS ON BOTH EDGES OF THE NOSE OF A MEDIAN. FOR NARROW MEDIANS LESS THAN 4 FEET, A SINGLE MARKING MAY BE USED. FOR WIDE MEDIANS, INSTALL ADDITIONAL MARKINGS IN THE MEDIAN AREA. THE SPACE BETWEEN THE MARKINGS SHALL NOT TO BE LESS THAN 24 INCHES OR GREATER THAN 60 INCHES.
- 6- LOCATE MARKINGS CENTERED ON BICYCLE LANE LINES. MARKINGS SHALL NOT BE LOCATED IN THE CENTER OF THE BICYCLE PATH.

STRAIGHT ARROW**RIGHT OR LEFT TURN ARROW****COMBINATION STRAIGHT AND LEFT OR RIGHT TURN ARROW****COMBINATION LEFT AND RIGHT TURN ARROW**

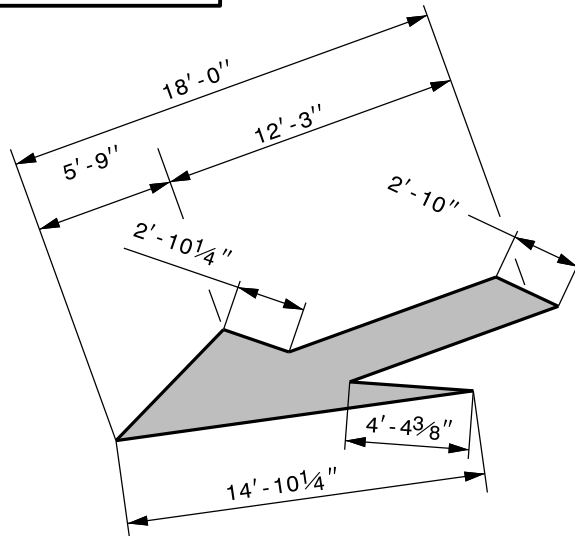
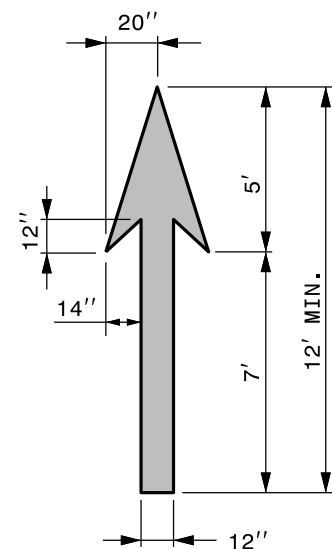
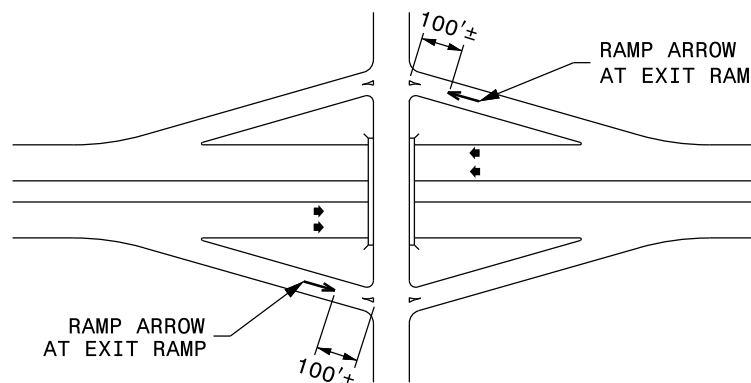
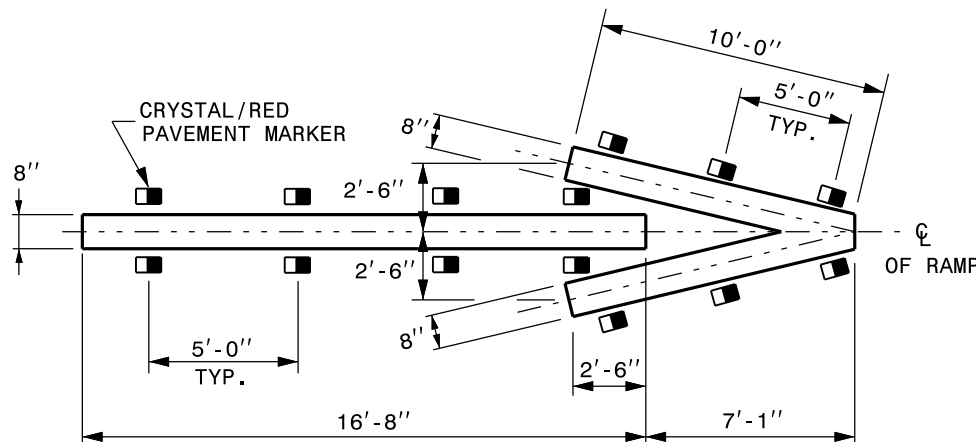
SAME DIMENSIONS APPLY AS FOR THE LEFT/RIGHT TURN ARROW

COMBINATION LEFT AND STRAIGHT AND RIGHT TURN ARROW

SAME DIMENSIONS APPLY AS FOR THE COMBINATION STRAIGHT AND LEFT/RIGHT TURN ARROW

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-24

MERGE ARROW**ELONGATED STRAIGHT ARROW****WRONG-WAY RAMP ARROW**

NOTE:

1- WHEN INSTALLING COLD APPLIED PLASTIC ON CONCRETE, IT IS RECOMMENDED TO USE COLD APPLIED PLASTIC WITH A BLACK CONTRASTING BOLDER.

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
SYMBOLS AND WORD MESSAGES

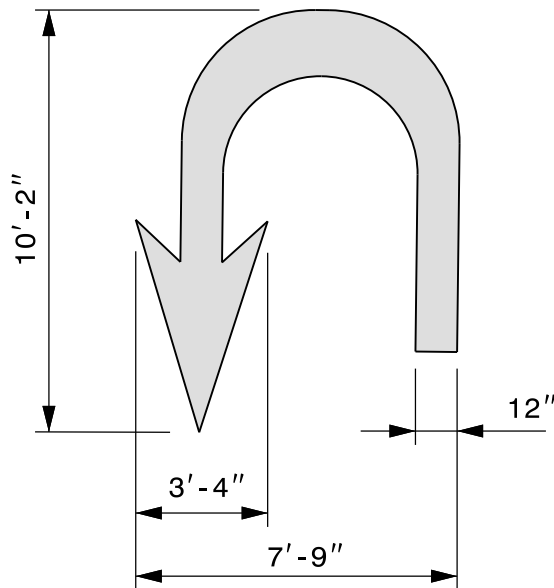
SHEET 1 OF 9

1205.08

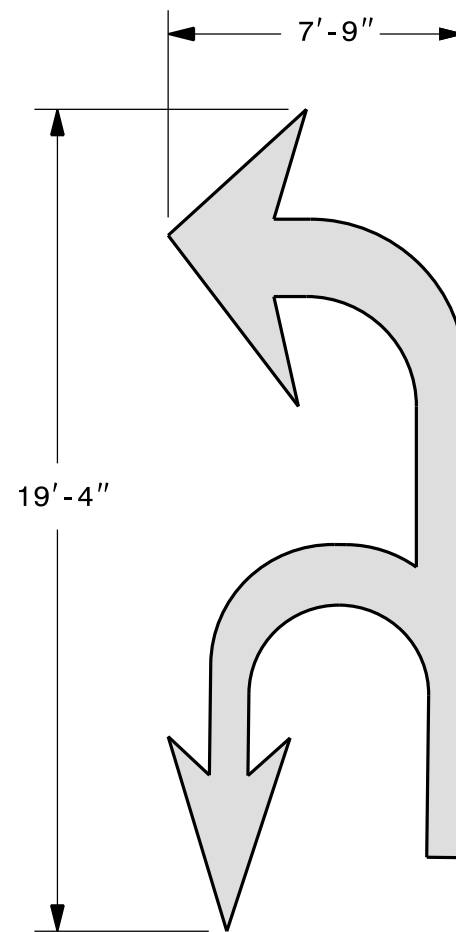
GENERAL NOTES:

- 1- USE THE COLOR WHITE FOR ALL PAVEMENT MARKING SYMBOLS.
- 2- DO NOT LOCATE PAVEMENT MARKING SYMBOLS AS TO ENCROACH INTO INTERSECTION AREAS.
- 3- DO NOT PLACE SYMBOLS ACROSS TRANSVERSE EXPANSION JOINTS ON PORTLAND CEMENT CONCRETE PAVEMENTS, UNLESS APPROVED BY THE ENGINEER.
- 4- CONFORM ALL SYMBOLS TO THE FHWA "STANDARD HIGHWAY SIGNS" MANUAL WHICH INCLUDES PAVEMENT MARKINGS AND STANDARD ALPHABETS (REFER TO SHEETS 6 THRU 9). DIMENSIONS CAN VARY AMONG MANUFACTURERS, THEREFORE SLIGHT VARIANCES ARE ACCEPTABLE. HOWEVER, ALL SYMBOLS ARE REQUIRED TO BE APPROVED BY THE DEPARTMENT.

U-TURN ARROW LEFT

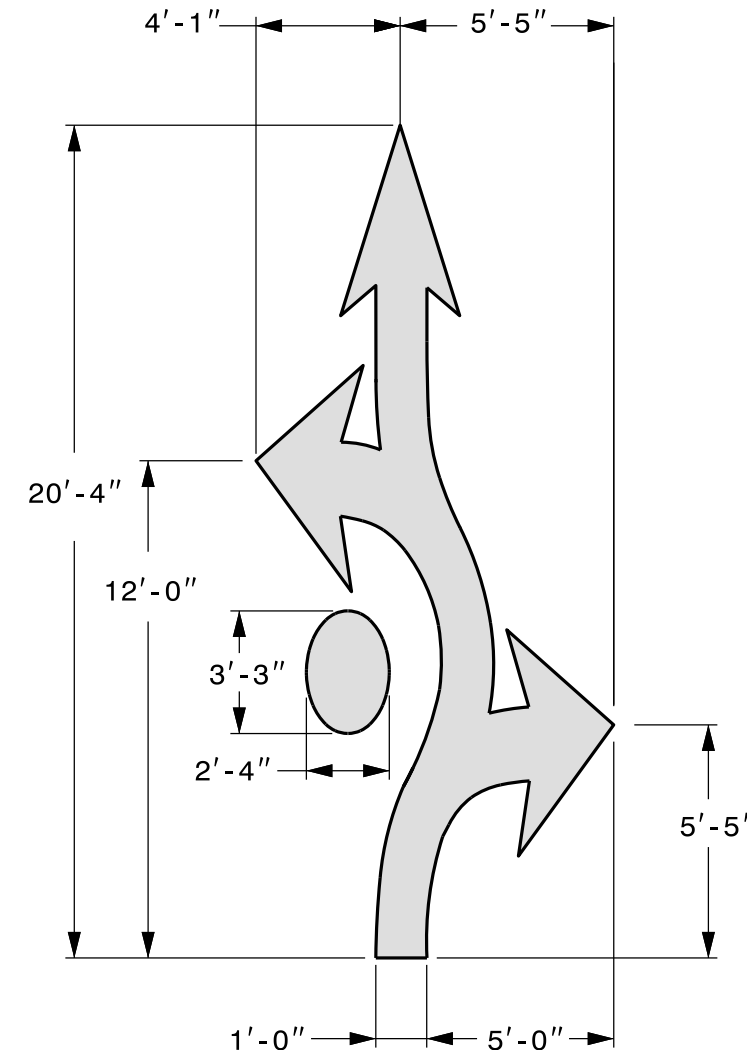


LEFT/U-TURN ARROW COMBINATION



ROUNDBABOUT FISH-HOOK ARROW TYPICAL

USE TYPICAL TO LAYOUT SYMBOL CONFIGURATION NEEDED



GENERAL NOTES:

- 1- USE THE COLOR WHITE FOR ALL PAVEMENT MARKING SYMBOLS.
- 2- DO NOT LOCATE PAVEMENT MARKING SYMBOLS AS TO ENCRANCH INTO INTERSECTION AREAS.
- 3- DO NOT PLACE SYMBOLS ACROSS TRANSVERSE EXPANSION JOINTS ON PORTLAND CEMENT CONCRETE PAVEMENTS, UNLESS APPROVED BY THE ENGINEER.
- 4- CONFORM ALL SYMBOLS TO THE FHWA "STANDARD HIGHWAY SIGNS" MANUAL WHICH INCLUDES PAVEMENT MARKINGS AND STANDARD ALPHABETS (REFER TO SHEETS 6 THRU 9). DIMENSIONS CAN VARY AMONG MANUFACTURERS, THEREFORE SLIGHT VARIANCES ARE ACCEPTABLE. HOWEVER, ALL SYMBOLS ARE REQUIRED TO BE APPROVED BY THE DEPARTMENT.

ENGLISH STANDARD DRAWING FOR

PAVEMENT MARKINGS

SYMBOLS AND WORD MESSAGES

1-24

STATE OF

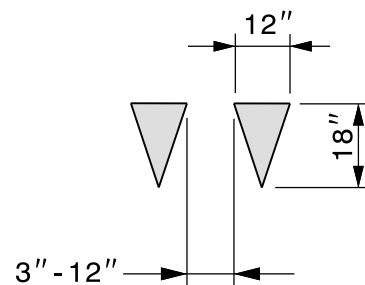
NORTH CAROLINA

DEPT. OF TRANSPORTATION

DIVISION OF HIGHWAYS

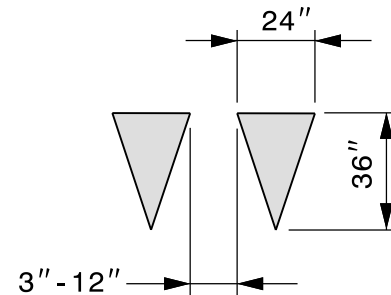
RALEIGH, N.C.

12" YIELD LINE



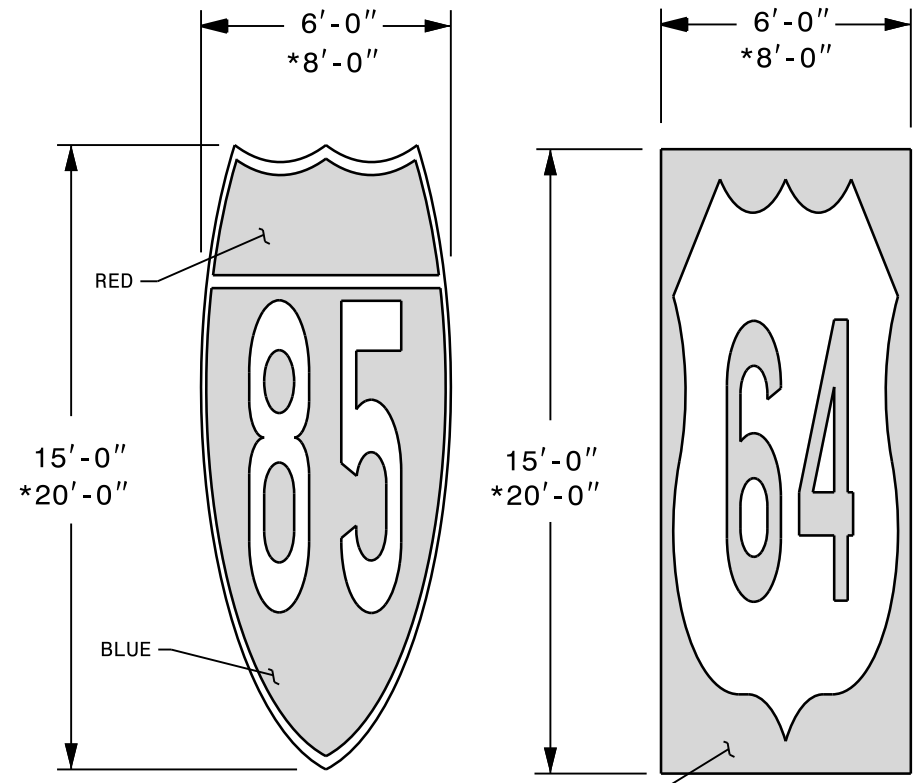
USE ON LANES UNDER 12'

24" YIELD LINE



USE ON LANES 12' AND ABOVE

* ALTERNATE SIZE



SEE NOTE 2

NOTES:

- 1- INTERSTATE SHIELD HAS A COLOR BACKGROUND AS INDICATED.
- 2- BLACK CONTRASTING BACKGROUND OPTIONAL. SHIELD WITHOUT BACKGROUND SHALL MAINTAIN DIMENSIONS SHOWN.

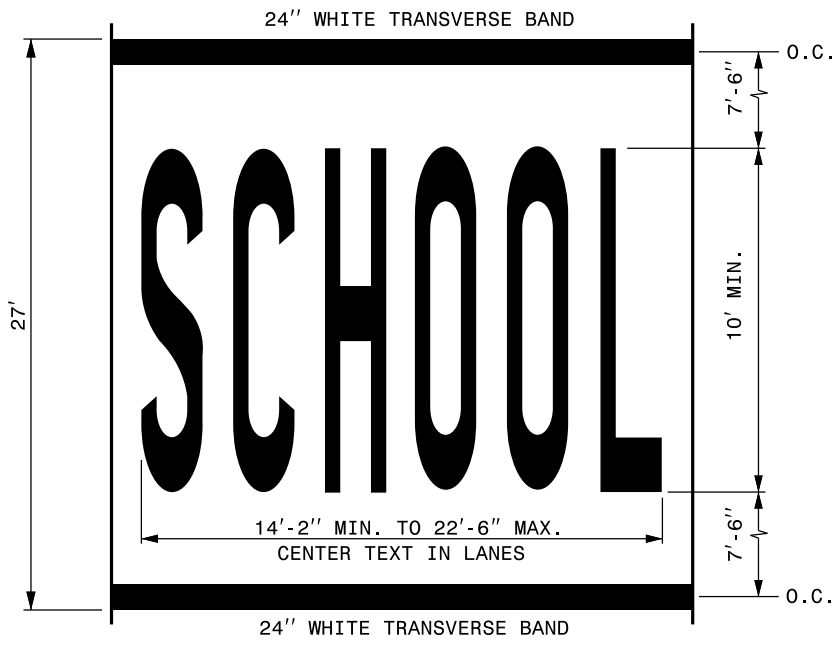
GENERAL NOTES:

- 1- USE THE COLOR WHITE FOR ALL PAVEMENT MARKING SYMBOLS.
- 2- DO NOT LOCATE PAVEMENT MARKING SYMBOLS AS TO ENCROACH INTO INTERSECTION AREAS.
- 3- DO NOT PLACE SYMBOLS ACROSS TRANSVERSE EXPANSION JOINTS ON PORTLAND CEMENT CONCRETE PAVEMENTS, UNLESS APPROVED BY THE ENGINEER.
- 4- CONFORM ALL SYMBOLS TO THE FHWA "STANDARD HIGHWAY SIGNS" MANUAL WHICH INCLUDES PAVEMENT MARKINGS AND STANDARD ALPHABETS (REFER TO SHEETS 6 THRU 9). DIMENSIONS CAN VARY AMONG MANUFACTURERS, THEREFORE SLIGHT VARIANCES ARE ACCEPTABLE. HOWEVER, ALL SYMBOLS ARE REQUIRED TO BE APPROVED BY THE DEPARTMENT.

1-24
 STATE OF
 NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
 SYMBOLS AND WORD MESSAGES

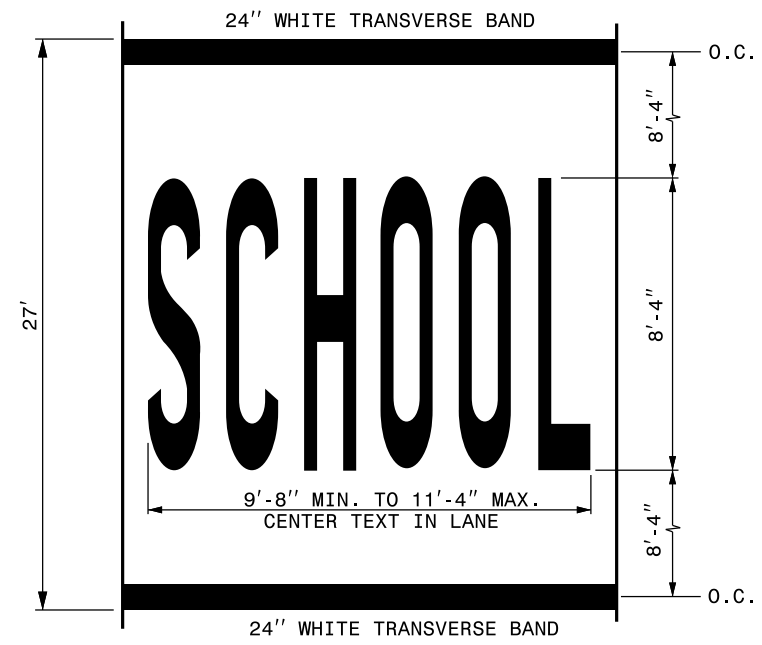
MULTI-LANE WIDTH "SCHOOL"



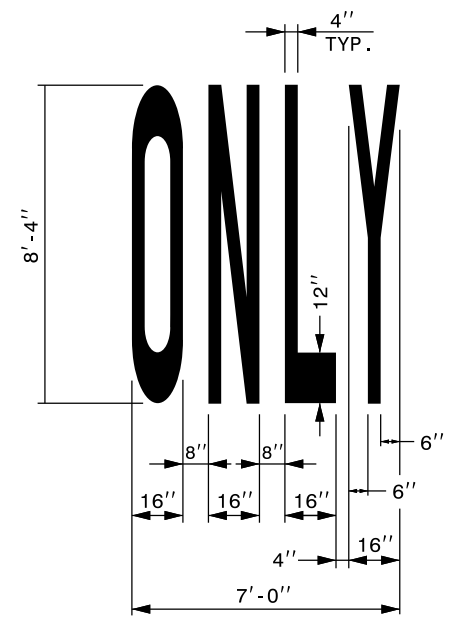
LETTER HEIGHT = 10' MIN.
 LETTER WIDTH = 20"
 SPACING = 10" MIN./30" MAX. (USE EQUAL SPACING BETWEEN LETTERS)

NOTE: THE TWO-LANE PAVEMENT MARKING DIMENSIONS OF "SCHOOL" SHOWN IN PART 7 OF THE MUTCD MAY ALSO BE USED.

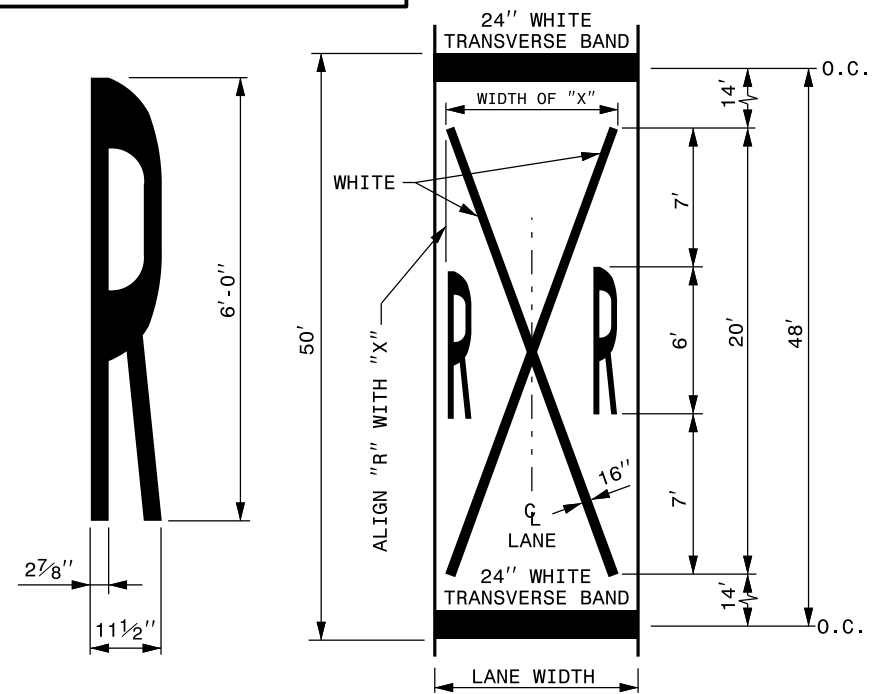
SINGLE LANE WIDTH "SCHOOL"



LETTER HEIGHT = 8'-4"
 LETTER WIDTH = 16"
 SPACING = 4" MIN./8" MAX. (USE EQUAL SPACING BETWEEN LETTERS)



RAILROAD RXR SYMBOL



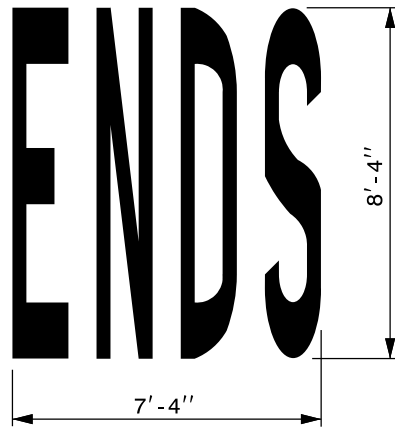
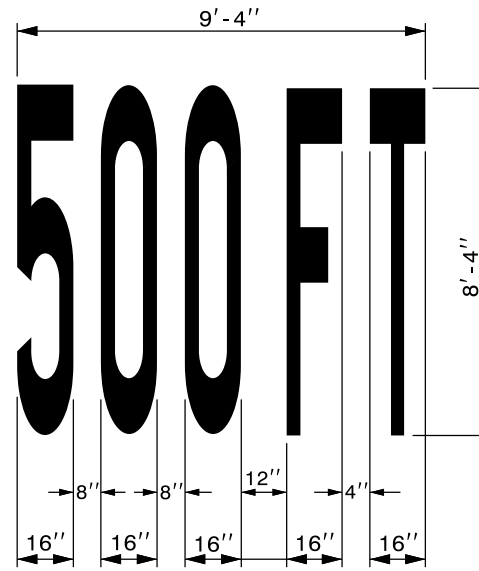
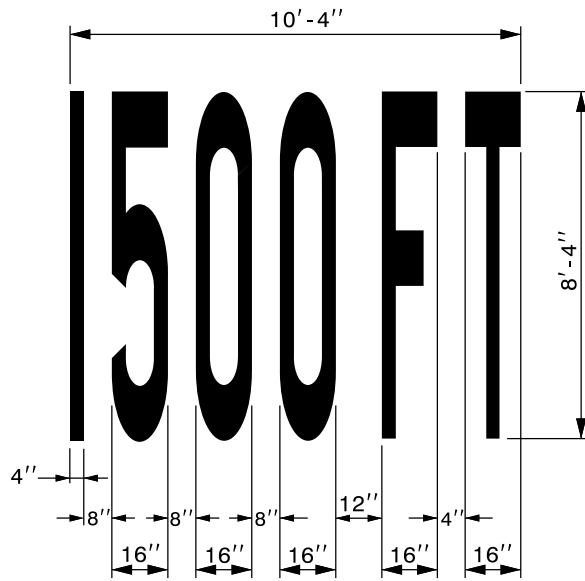
LANE WIDTH (FEET)	WIDTH OF "X" (FEET)
8' ≤ W ≤ 9'	7'
9' < W ≤ 12'	8'
W > 12'	10'

GENERAL NOTES:

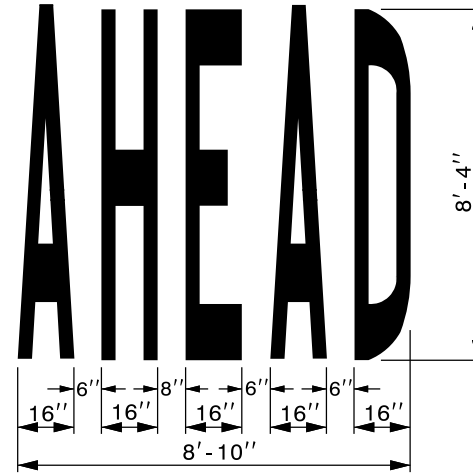
- 1- THE SCHOOL PAVEMENT MARKING CONSISTS OF SIX (6) CHARACTERS. THE TWO (2) 24" TRANSVERSE BANDS WILL BE PAID PER LINEAR FOOT AS A 24" PAVEMENT MARKING LINE. REFER TO ROADWAY STANDARD DRAWING 1205.10 FOR ADDITIONAL PAVEMENT MARKING GUIDANCE.
- 2- PAVEMENT MARKING IN ADVANCE OF A HIGHWAY-RAIL CROSSING SHALL CONSIST OF TWO (2) CHARACTERS AND TWO (2) 16" LINES (FORMING AN X) WHICH ARE PAID PER LINEAR FOOT AS A 16" PAVEMENT MARKING LINE. THE TWO (2) 24" TRANSVERSE BANDS WILL BE PAID PER LINEAR FOOT AS A 24" PAVEMENT MARKING LINE. REFER TO ROADWAY STANDARD DRAWING 1205.11 FOR ADDITIONAL PAVEMENT MARKING GUIDANCE.

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

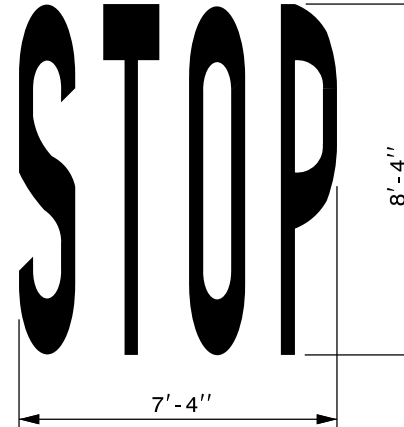
ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
 SYMBOLS AND WORD MESSAGES



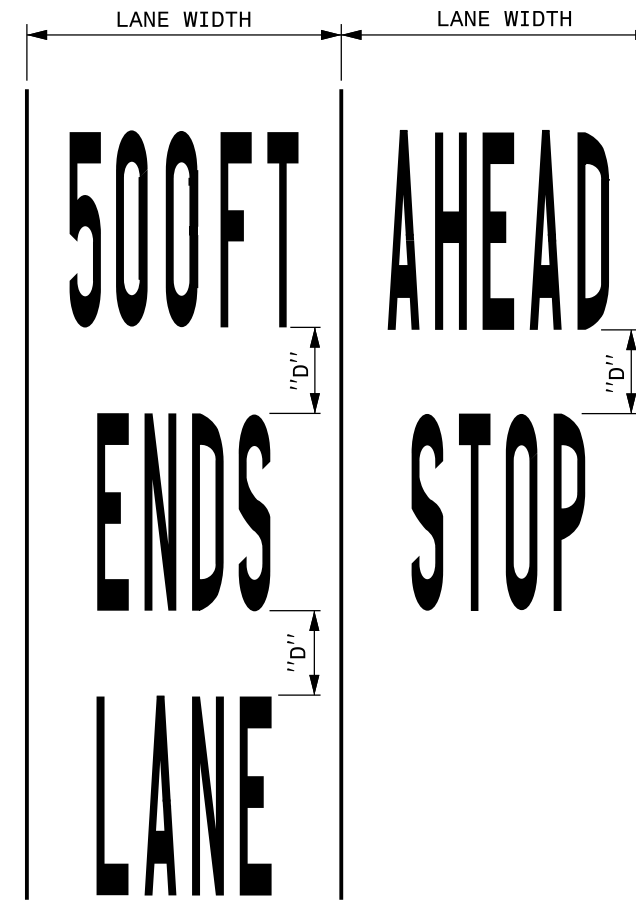
LETTER HEIGHT=8'-4"
LETTER WIDTH=16"
LETTER SPACING=8"



LETTER HEIGHT=8'-4"
LETTER WIDTH=16"
LETTER SPACING=8"



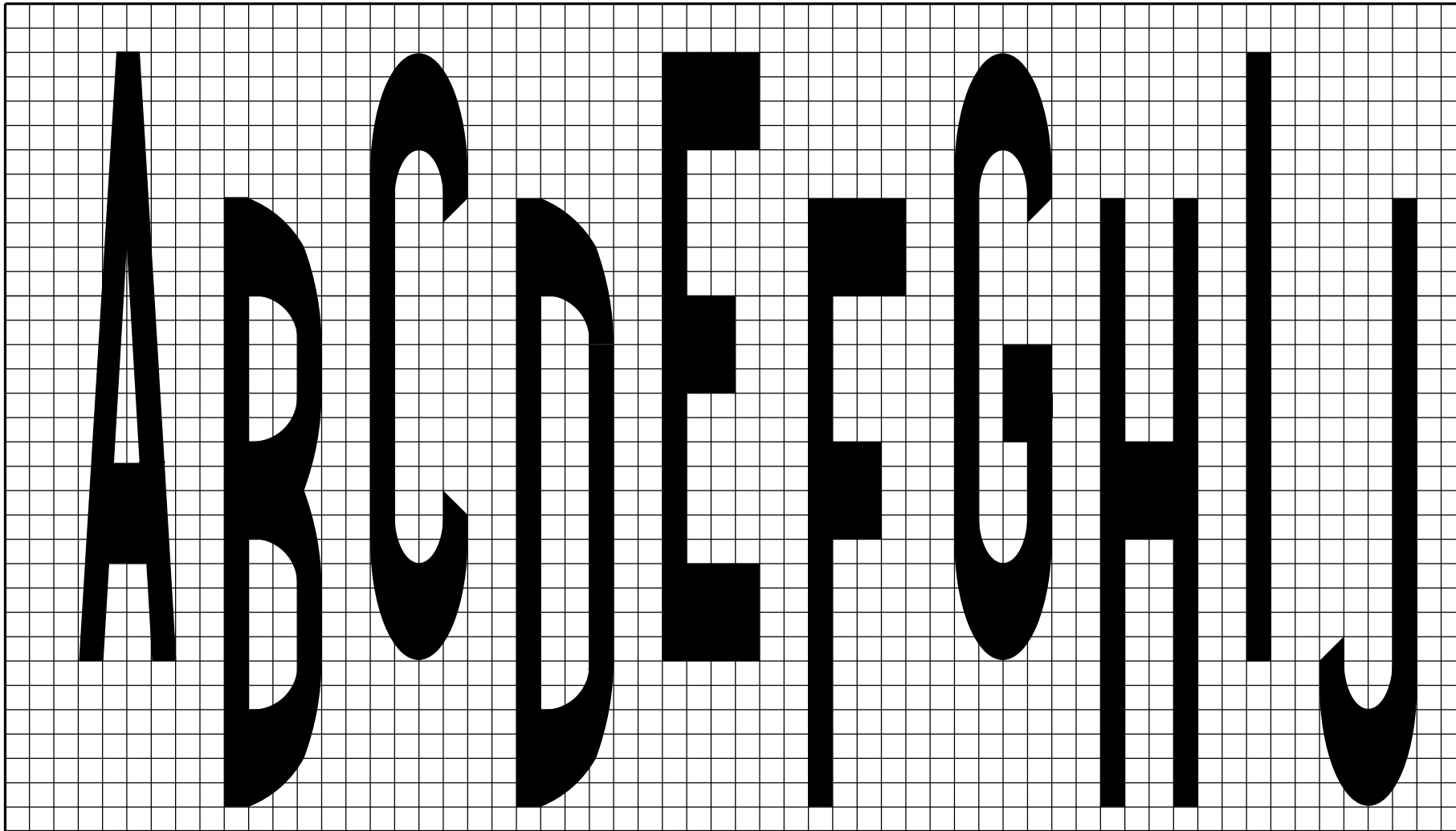
LETTER HEIGHT=8'-4"
LETTER WIDTH=16"
LETTER SPACING=8"



DIRECTION OF TRAVEL
WORDS ARE CENTERED IN TRAVEL LANE

SPEED LIMIT (MPH)	DISTANCE "D" BETWEEN WORD SYMBOLS
35 OR LESS	40'
40 - 50	60'
55 - 60	80'
65 OR GREATER	100'

DISTANCE "D" MAY BE ADJUSTED AS NECESSARY FOR OPTICAL SPACING



GENERAL NOTES:

- 1- STANDARD CHARACTERS ARE 25 GRID UNITS HIGH AND 4 UNITS WIDE (EXCEPT LETTER "I" AND THE NUMBER "1" WHICH ARE 1 UNIT WIDE).
- 2- VERTICAL STROKES ARE 1 UNIT WIDE, HORIZONTAL STROKES ARE 4 UNITS HIGH.
- 3- SPACE 1 UNIT (MIN.) BETWEEN CHARACTERS OR AS OTHERWISE SHOWN (OPTICAL SPACING MAY BE USED).
- 4- STANDARD CHARACTER HEIGHTS ARE 8'-4". EXCEPT FOR THE 6' RAILROAD 'R' SYMBOL AND THE TWO-LANE 10' SCHOOL SYMBOL.
- 5- FOR 8'-4" HIGH CHARACTERS, THE WIDTH IS 16" (USE 4" FOR EACH GRID SQUARE).
- 6- FOR 10' HIGH CHARACTERS, THE WIDTH IS 20" (USE 5" FOR EACH GRID SQUARE).
- 7- FOR 6' HIGH CHARACTERS, THE WIDTH IS 11½" (USE 2⅞" FOR EACH GRID SQUARE).

ROADWAY STANDARD DRAWING FOR

PAVEMENT MARKINGS

SYMBOLS AND WORD MESSAGES

1-24

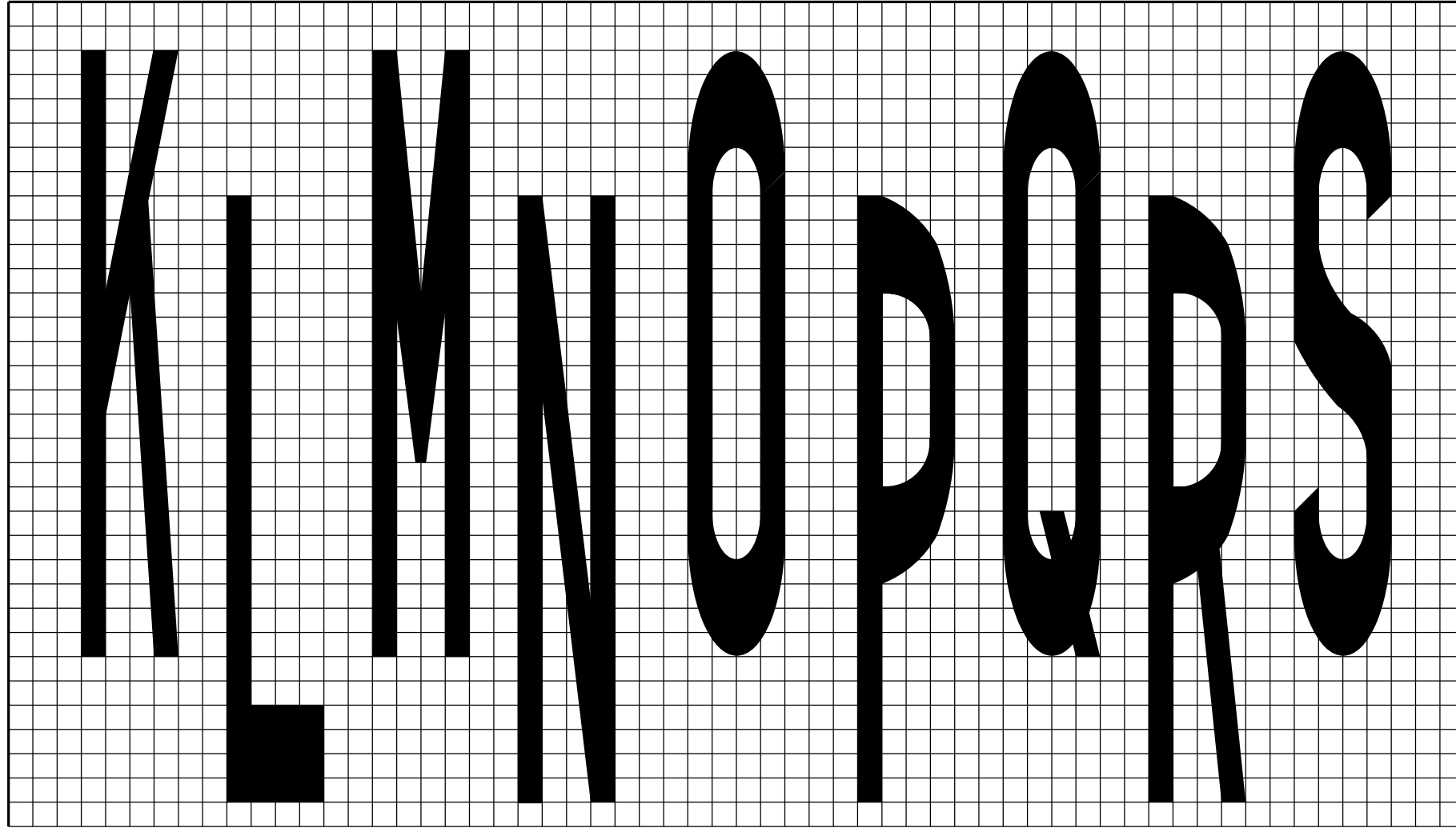
STATE OF

NORTH CAROLINA

DEPT. OF TRANSPORTATION

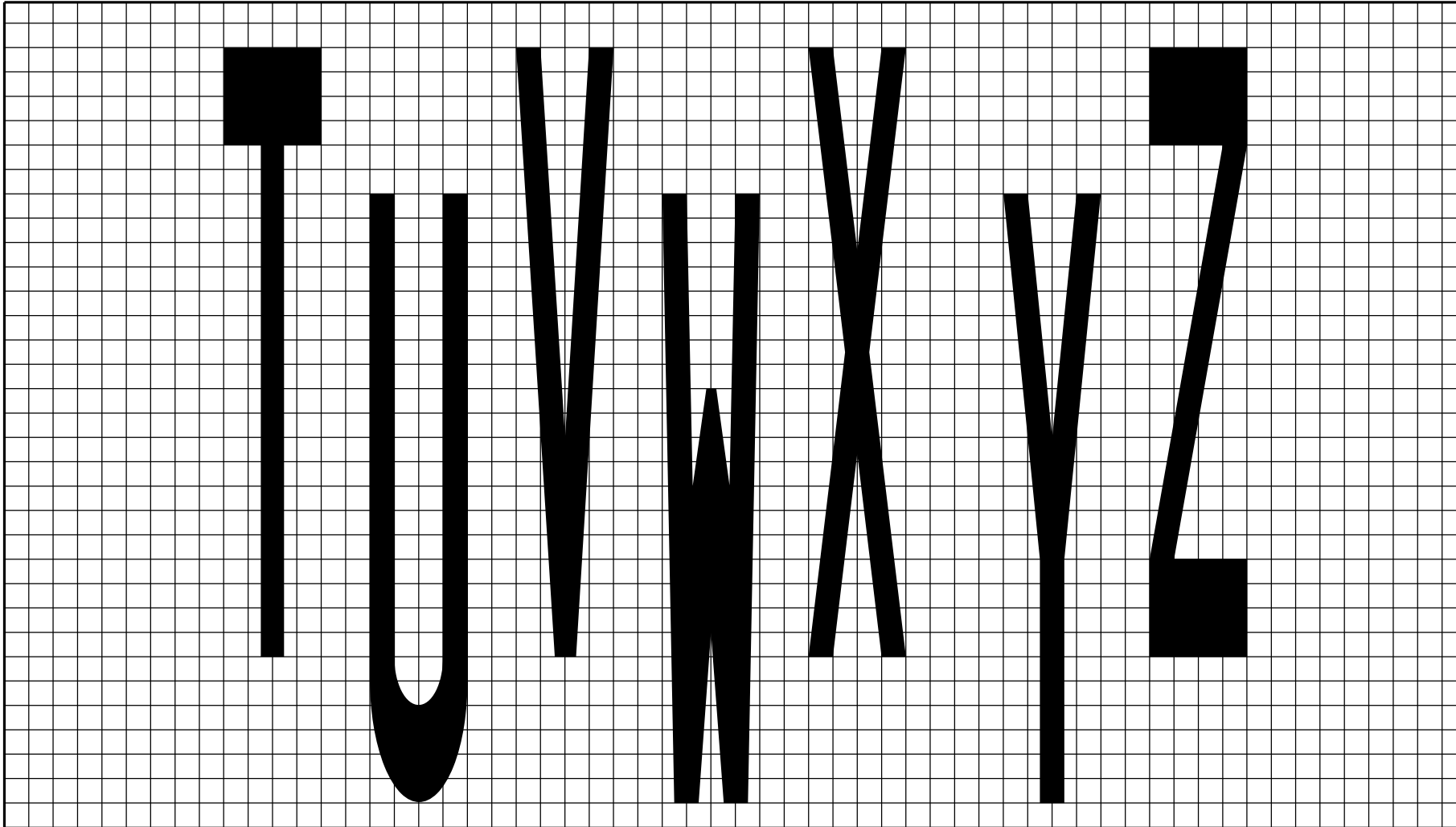
DIVISION OF HIGHWAYS

RALEIGH, N.C.



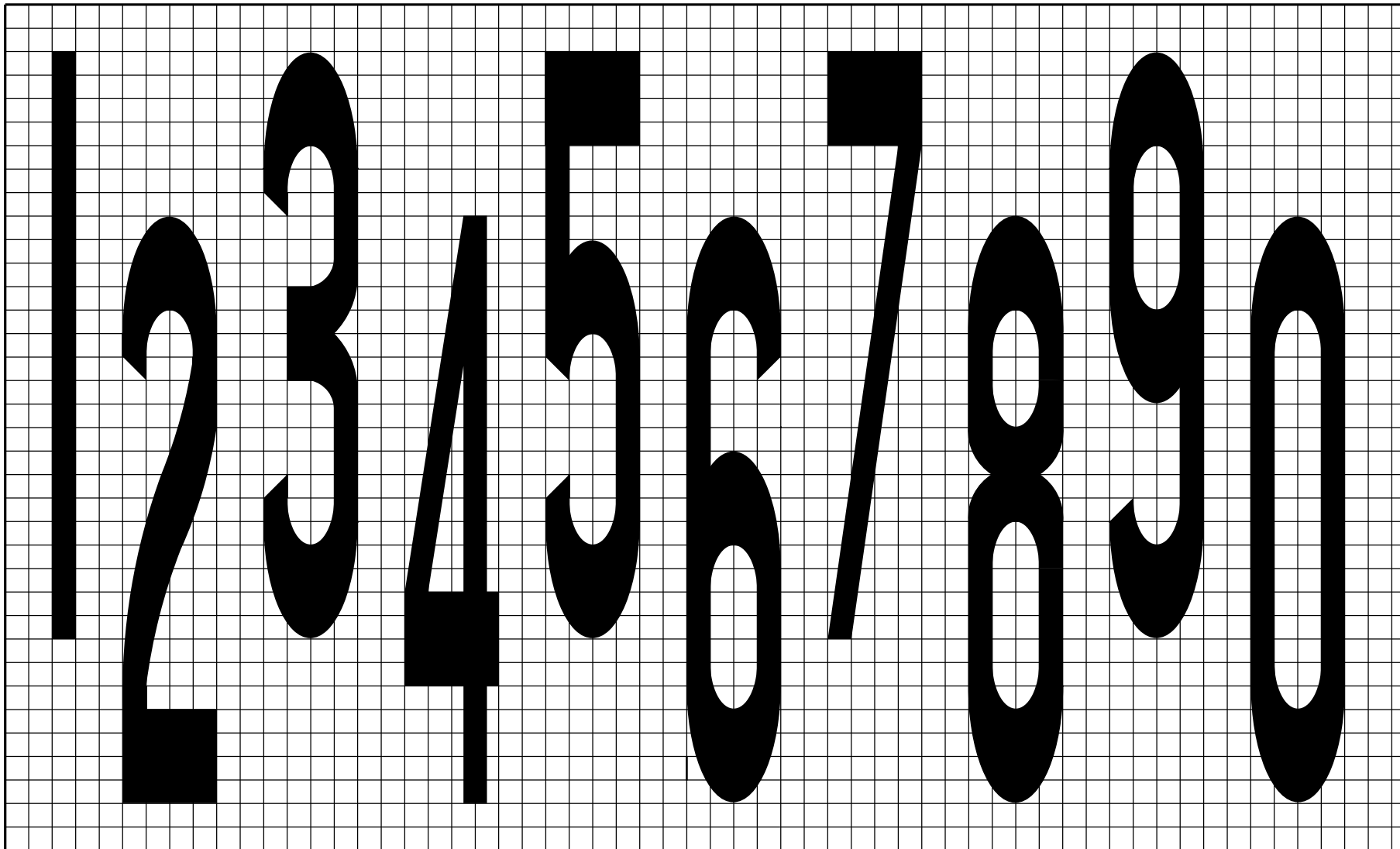
GENERAL NOTES:

- 1- STANDARD CHARACTERS ARE 25 GRID UNITS HIGH AND 4 UNITS WIDE (EXCEPT LETTER "I" AND THE NUMBER "1" WHICH ARE 1 UNIT WIDE).
- 2- VERTICAL STROKES ARE 1 UNIT WIDE, HORIZONTAL STROKES ARE 4 UNITS HIGH.
- 3- SPACE 1 UNIT (MIN.) BETWEEN CHARACTERS OR AS OTHERWISE SHOWN (OPTICAL SPACING MAY BE USED).
- 4- STANDARD CHARACTER HEIGHTS ARE 8'-4". EXCEPT FOR THE 6' RAILROAD 'R' SYMBOL AND THE TWO-LANE 10' SCHOOL SYMBOL.
- 5- FOR 8'-4" HIGH CHARACTERS, THE WIDTH IS 16" (USE 4" FOR EACH GRID SQUARE).
- 6- FOR 10' HIGH CHARACTERS, THE WIDTH IS 20" (USE 5" FOR EACH GRID SQUARE).
- 7- FOR 6' HIGH CHARACTERS, THE WIDTH IS 11½" (USE 2⅞" FOR EACH GRID SQUARE).



GENERAL NOTES:

- 1- STANDARD CHARACTERS ARE 25 GRID UNITS HIGH AND 4 UNITS WIDE (EXCEPT LETTER "I" AND THE NUMBER "1" WHICH ARE 1 UNIT WIDE).
- 2- VERTICAL STROKES ARE 1 UNIT WIDE, HORIZONTAL STROKES ARE 4 UNITS HIGH.
- 3- SPACE 1 UNIT (MIN.) BETWEEN CHARACTERS OR AS OTHERWISE SHOWN (OPTICAL SPACING MAY BE USED).
- 4- STANDARD CHARACTER HEIGHTS ARE 8'-4". EXCEPT FOR THE 6' RAILROAD 'R' SYMBOL AND THE TWO-LANE 10' SCHOOL SYMBOL.
- 5- FOR 8'-4" HIGH CHARACTERS, THE WIDTH IS 16" (USE 4" FOR EACH GRID SQUARE).
- 6- FOR 10' HIGH CHARACTERS, THE WIDTH IS 20" (USE 5" FOR EACH GRID SQUARE).
- 7- FOR 6' HIGH CHARACTERS, THE WIDTH IS 11½" (USE 2⅞" FOR EACH GRID SQUARE).



GENERAL NOTES:

- 1- STANDARD CHARACTERS ARE 25 GRID UNITS HIGH AND 4 UNITS WIDE (EXCEPT LETTER "I" AND THE NUMBER "1" WHICH ARE 1 UNIT WIDE).
- 2- VERTICAL STROKES ARE 1 UNIT WIDE, HORIZONTAL STROKES ARE 4 UNITS HIGH.
- 3- SPACE 1 UNIT (MIN.) BETWEEN CHARACTERS OR AS OTHERWISE SHOWN (OPTICAL SPACING MAY BE USED).
- 4- STANDARD CHARACTER HEIGHTS ARE 8'-4". EXCEPT FOR THE 6' RAILROAD 'R' SYMBOL AND THE TWO-LANE 10' SCHOOL SYMBOL.
- 5- FOR 8'-4" HIGH CHARACTERS, THE WIDTH IS 16" (USE 4" FOR EACH GRID SQUARE).
- 6- FOR 10' HIGH CHARACTERS, THE WIDTH IS 20" (USE 5" FOR EACH GRID SQUARE).
- 7- FOR 6' HIGH CHARACTERS, THE WIDTH IS 11½" (USE 2⅞" FOR EACH GRID SQUARE).

1-24

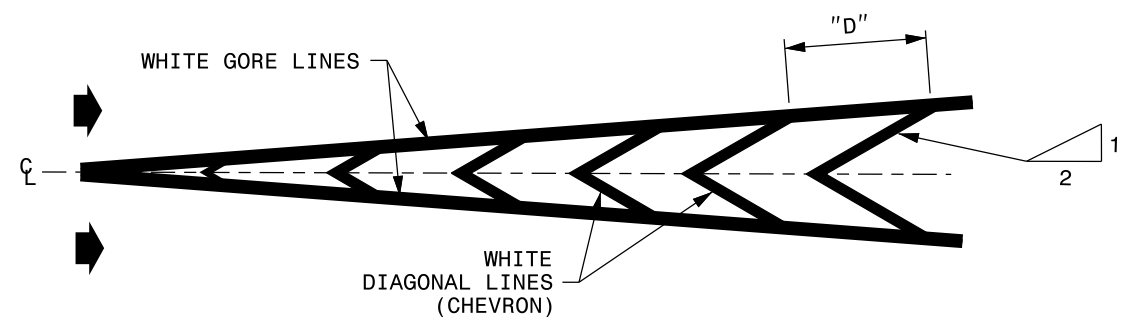
ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
SYMBOLS AND WORD MESSAGES

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

SHEET 9 OF 9

1205.08

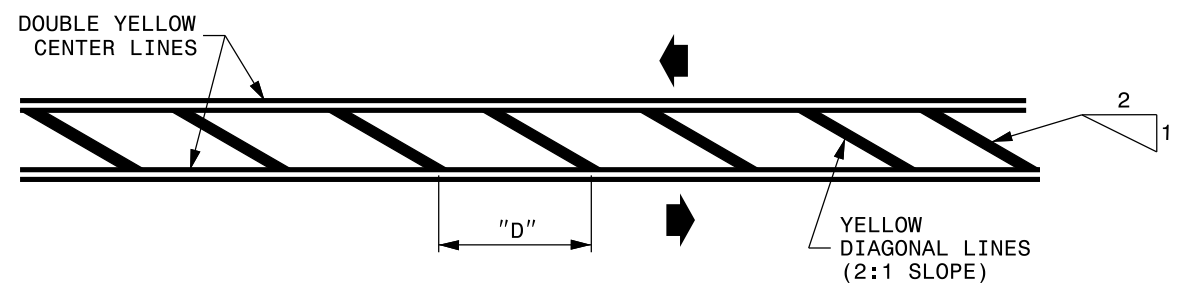
CHANNELIZING ISLAND SEPARATING TRAFFIC IN SAME DIRECTION



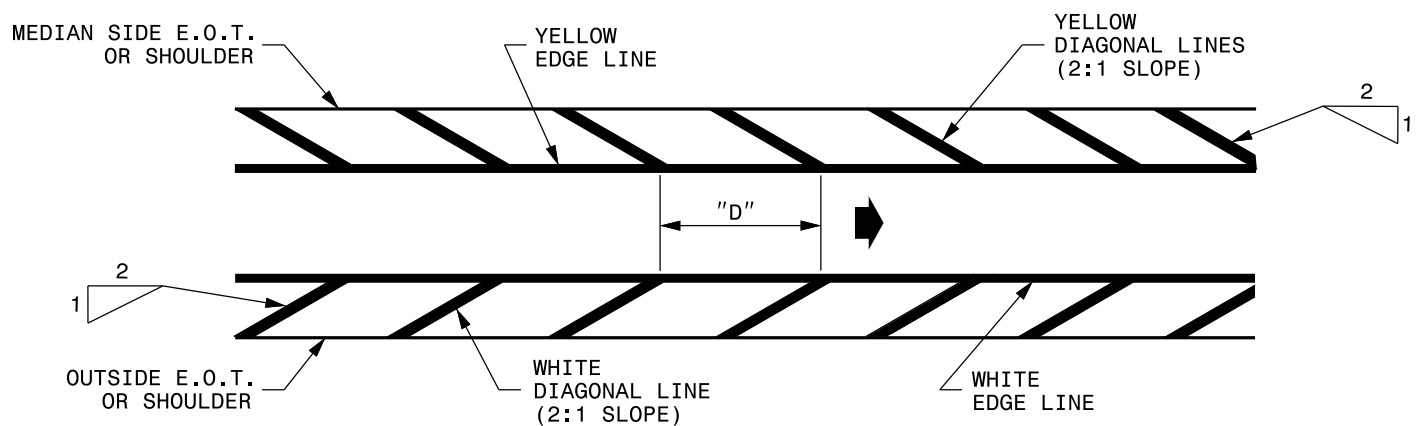
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-24

MEDIAN ISLAND SEPARATING TRAFFIC IN OPPOSING DIRECTIONS



EDGE OF PAVEMENT OR SHOULDER ISLAND



ROADWAY STANDARD DRAWING FOR

PAVEMENT MARKINGS
PAINTED ISLANDS

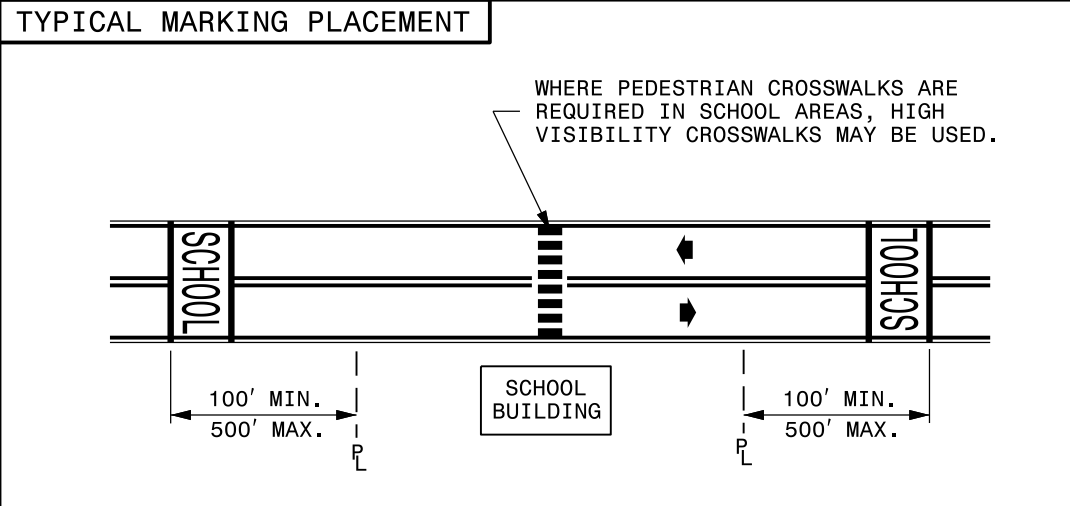
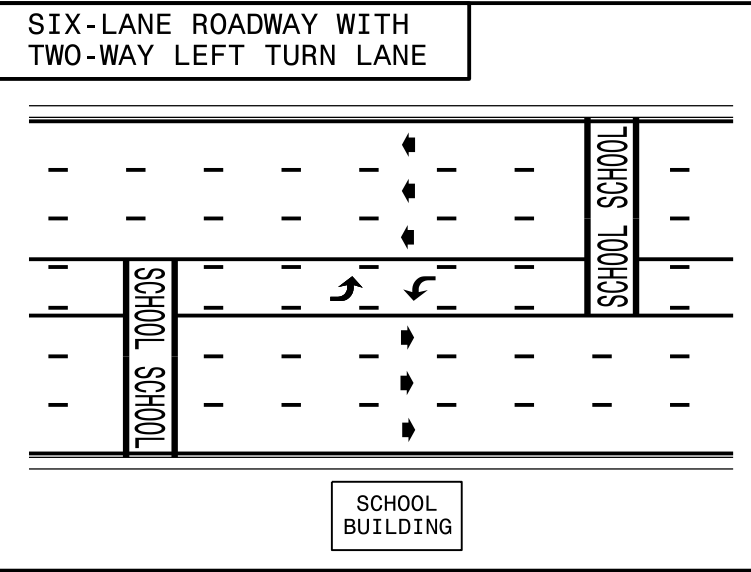
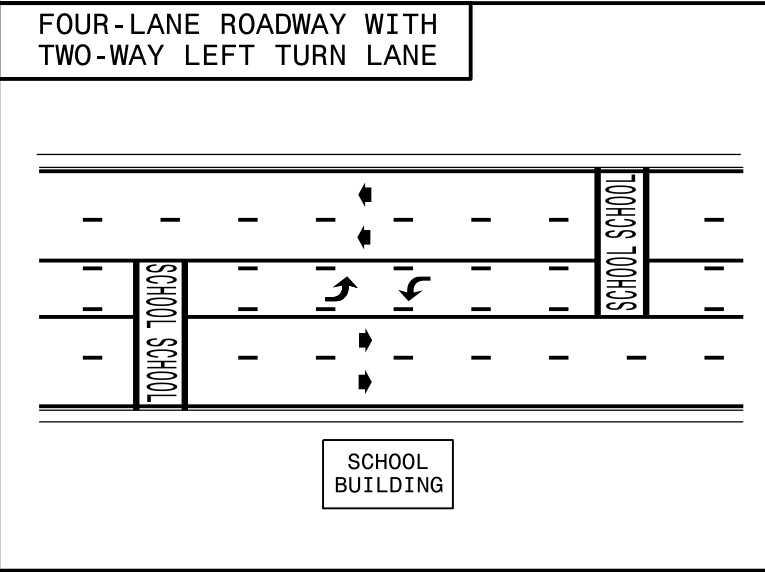
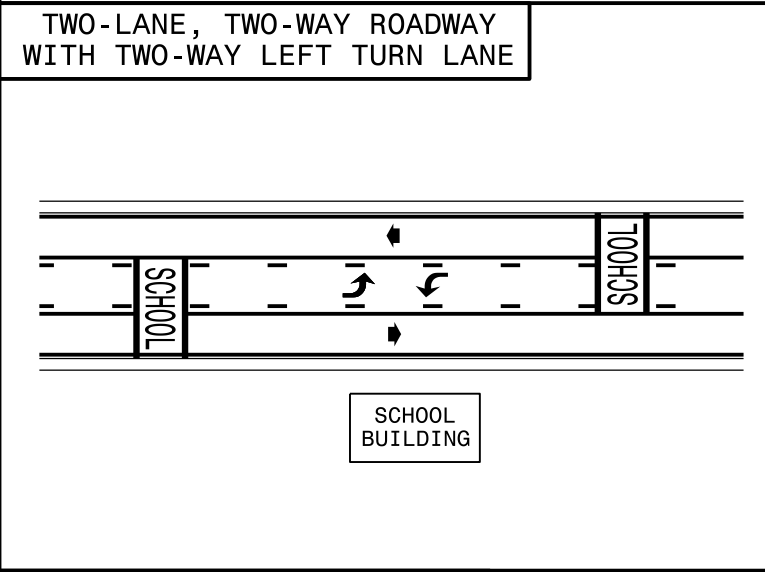
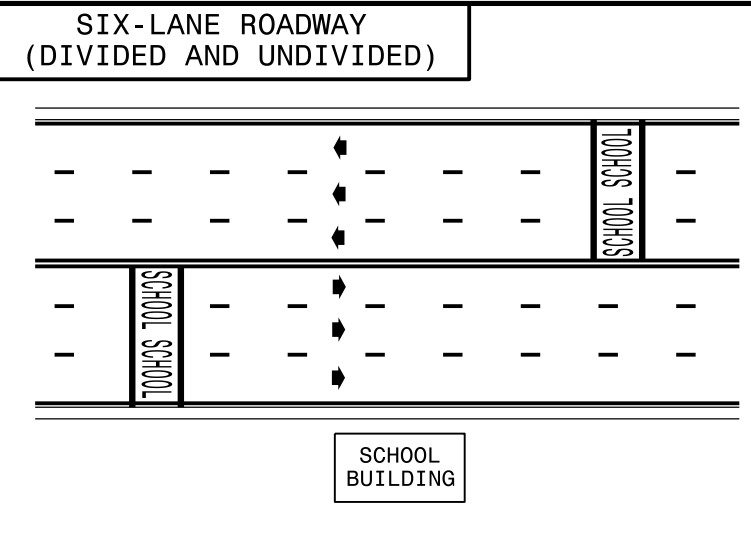
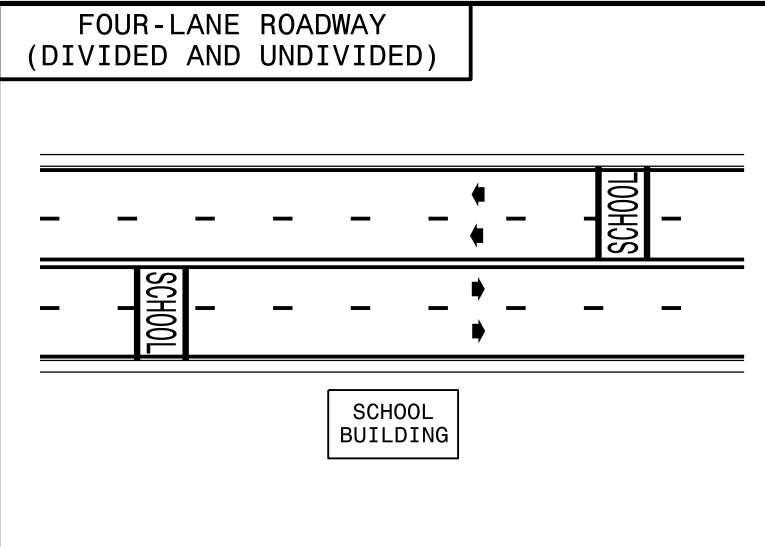
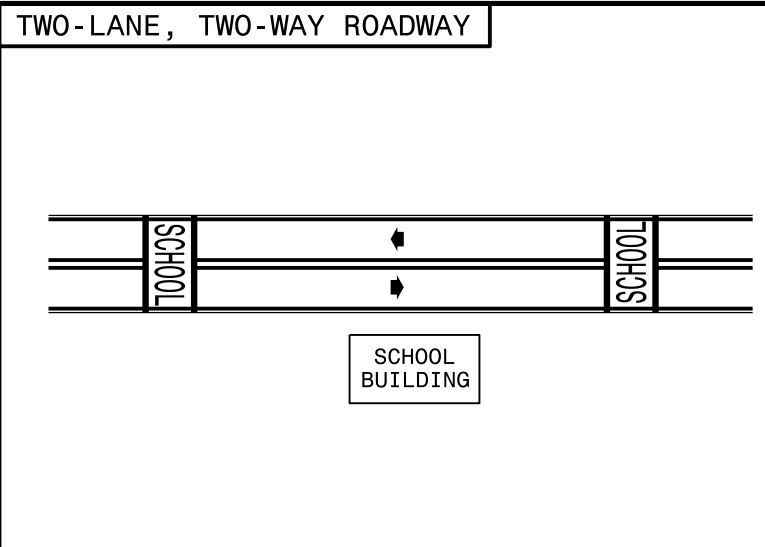
GENERAL NOTES:

- 1- "D" = SPACING OF DIAGONAL LINES (TYPICALLY EQUAL IN FEET TO THE POSTED SPEED LIMIT).
- 2- INCREASE SPACING OF DIAGONALS TO 200' OR MORE ON INTERSTATE ROADWAYS.
- 3- ADJUST SPACING OF DIAGONALS DEPENDING ON THE LENGTH OF THE ISLAND. SPACING MAY BE ADJUSTED AS DETERMINED BY THE ENGINEER.

LEGEND	
E.O.T.=	EDGE OF TRAVEL
➡	DIRECTION OF TRAFFIC FLOW
➤	TRAFFIC FLOW

1-24

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
SCHOOL AREAS



GENERAL NOTES:

- 1- SINGLE LANE WIDTH "SCHOOL" WORD MESSAGES CAN BE USED IN EACH APPROACH LANE.
- 2- EXTEND 24" WHITE TRANSVERSE LINES ACROSS ALL APPROACH LANES TO THE SCHOOL AREA. EXTEND 24" WHITE TRANSVERSE LINES ACROSS ENTIRE ROAD WHEN TWO-LANE WIDTH MESSAGES ARE USED ON TWO-LANE, TWO WAY ROADWAYS.
- 3- REFER TO ROADWAY STANDARD DRAWING 1205.08 FOR ADDITIONAL PAVEMENT MARKING GUIDANCE.

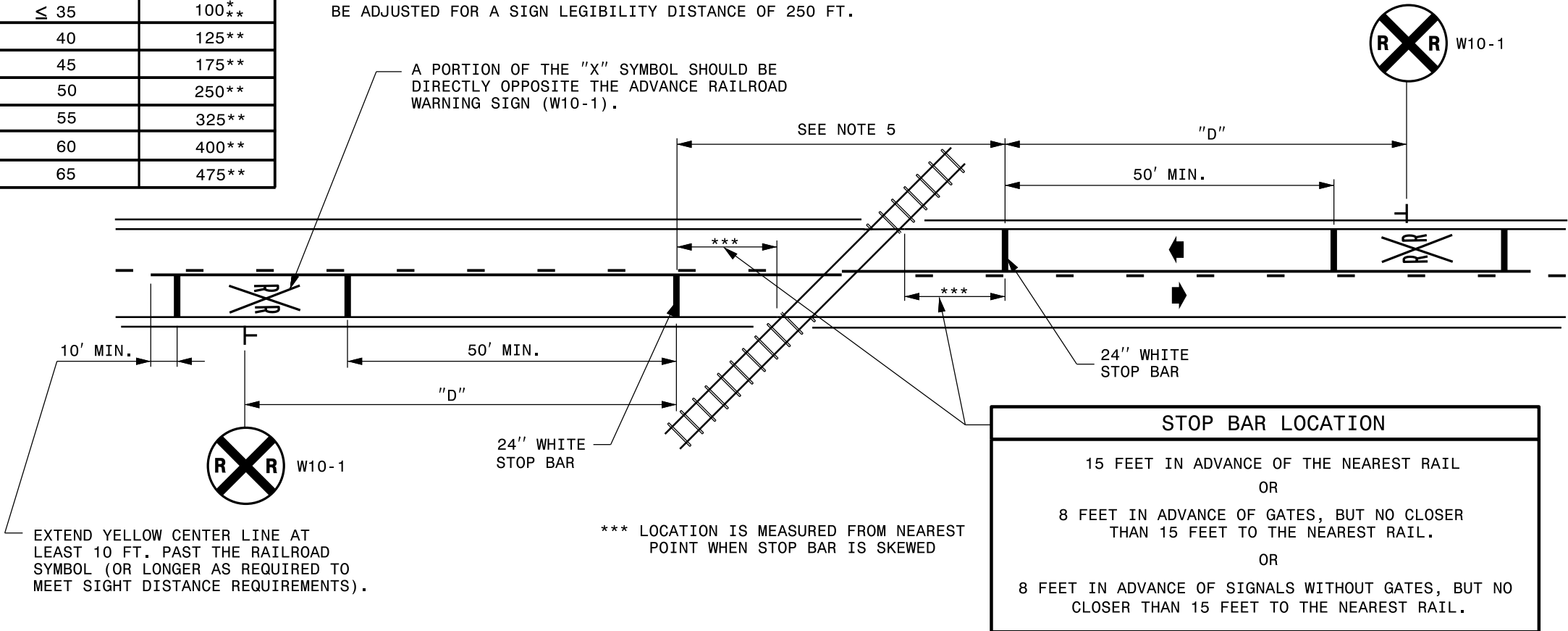
LEGEND	
P-L	PROPERTY LINE
◆	DIRECTION OF TRAFFIC FLOW
↩	PAVEMENT MARKING SYMBOLS & CHARACTERS
SCHOOL	SCHOOL

ADVANCE WARNING SIGN PLACEMENT DISTANCE	
POSTED OR 85 PERCENTILE SPEED (MPH)	"D" (FEET)
≤ 35	100**
40	125**
45	175**
50	250**
55	325**
60	400**
65	475**

* ADVANCE PAVEMENT MARKINGS SHALL NOT REQUIRED WHEN THE POSTED OR STATUTORY HIGHWAY SPEED IS LESS THAN 40 MPH OR IN URBAN AREAS IF AN ENGINEERING STUDY INDICATES THAT OTHER INSTALLED DEVICES PROVIDE SUITABLE WARNING AND CONTROL. REFER TO PART 8 OF THE MUTCD FOR ADDITIONAL GUIDANCE.

** THE PLACEMENT LOCATION IS DEPENDENT ON SITE CONDITIONS TO PROVIDE AN ADEQUATE ADVANCE WARNING FOR THE DRIVER. PLACEMENT MAY NEED TO BE ADJUSTED FOR A SIGN LEGIBILITY DISTANCE OF 250 FT.

A PORTION OF THE "X" SYMBOL SHOULD BE DIRECTLY OPPOSITE THE ADVANCE RAILROAD WARNING SIGN (W10-1).



STOP BAR LOCATION

15 FEET IN ADVANCE OF THE NEAREST RAIL
OR
8 FEET IN ADVANCE OF GATES, BUT NO CLOSER THAN 15 FEET TO THE NEAREST RAIL.
OR
8 FEET IN ADVANCE OF SIGNALS WITHOUT GATES, BUT NO CLOSER THAN 15 FEET TO THE NEAREST RAIL.

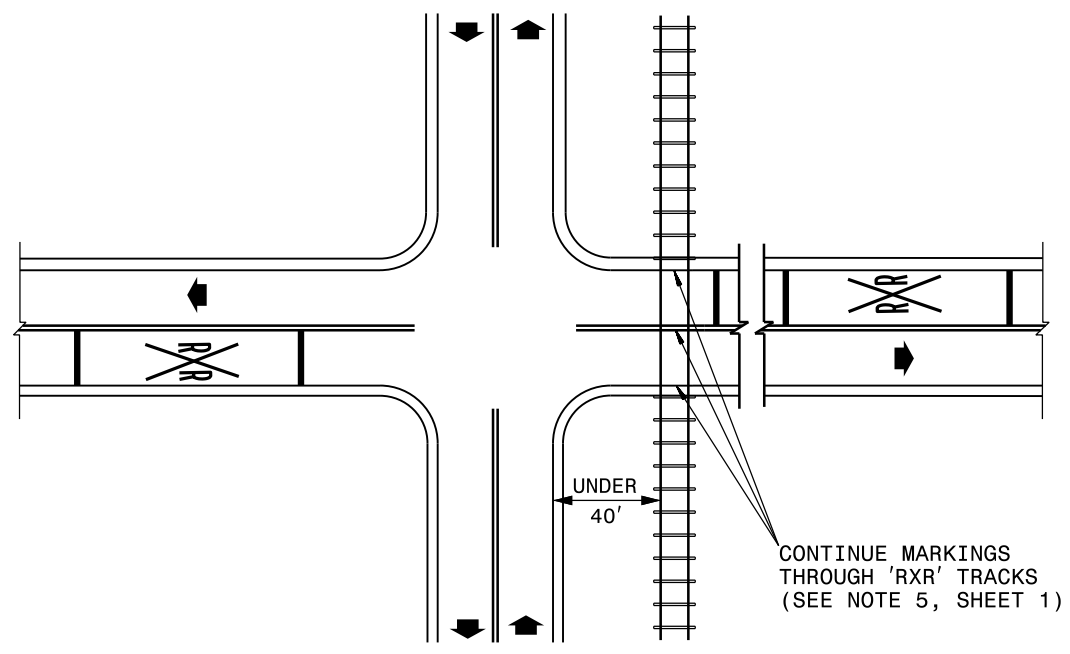
*** LOCATION IS MEASURED FROM NEAREST POINT WHEN STOP BAR IS SKEWED

GENERAL NOTES:

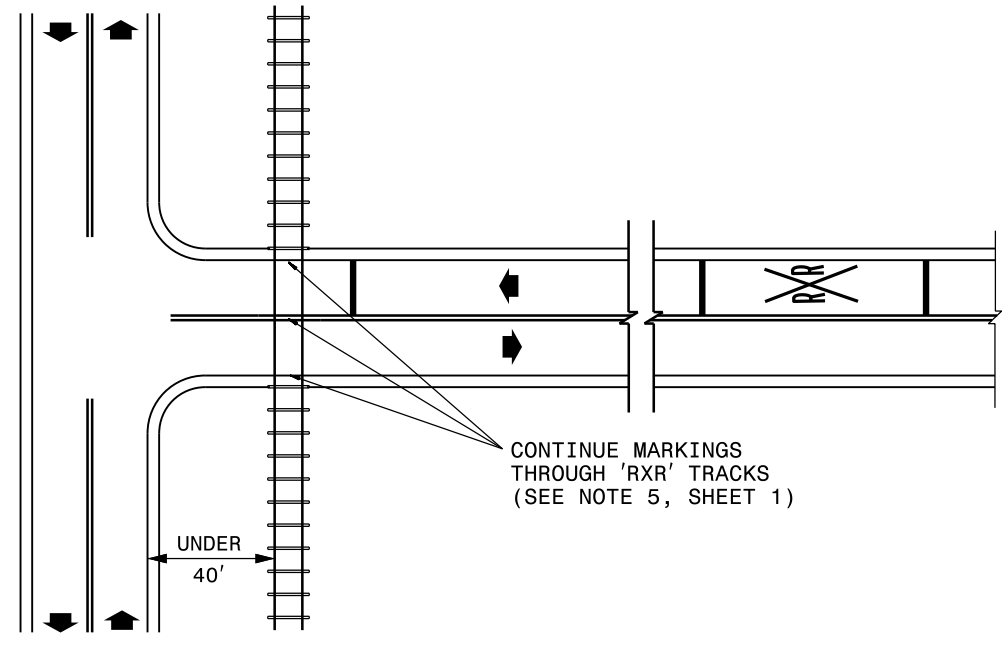
- 1- IDENTICAL MARKINGS SHALL BE PLACED IN EACH APPROACH LANE ON ALL PAVED APPROACHES TO GRADE CROSSINGS WHERE SIGNALS OR AUTOMATIC GATES ARE LOCATED, AND AT ALL OTHER GRADE CROSSINGS WHERE THE POSTED OR STATUTORY HIGHWAY SPEED IS 40 MPH OR GREATER.
- 2- EXTEND "RXR" SYMBOL MARKINGS 6 INCHES FROM THE EDGE OF PAVEMENT TO 8 INCHES FROM THE CENTER LINE OF THE ROADWAY OR POSITION THE MARKINGS TO ACCOMMODATE FUTURE PLACEMENT OF EDGE LINE AND CENTER LINE PAVEMENT MARKINGS WHERE CENTER LINES OR EDGE LINES DO NOT EXIST.
- 3- POSITION ALL TRANSVERSE BANDS AND STOP BARS PERPENDICULAR TO THE CENTERLINE OF THE ROADWAY.
- 4- CENTER THE "RXR" SYMBOL ACROSS THE ENTIRE ROADWAY FOR ROADWAYS THAT ARE LESS THAN 16 FEET IN WIDTH.
- 5- CENTER AND EDGELINE MARKINGS SHALL EXTEND FROM STOP BAR TO STOP BAR AS INDICATED ABOVE.
- 6- REFER TO ROADWAY STANDARD DRAWING 1205.08 FOR ADDITIONAL PAVEMENT MARKING GUIDANCE.
- 7- REFER TO "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" OR SIGNING PLANS FOR ADDITIONAL WARNING SIGNS.

LEGEND	
	DIRECTION OF TRAFFIC FLOW
	PAVEMENT MARKING SYMBOLS
	RAILROAD TRACKS
	STATIONARY SIGN

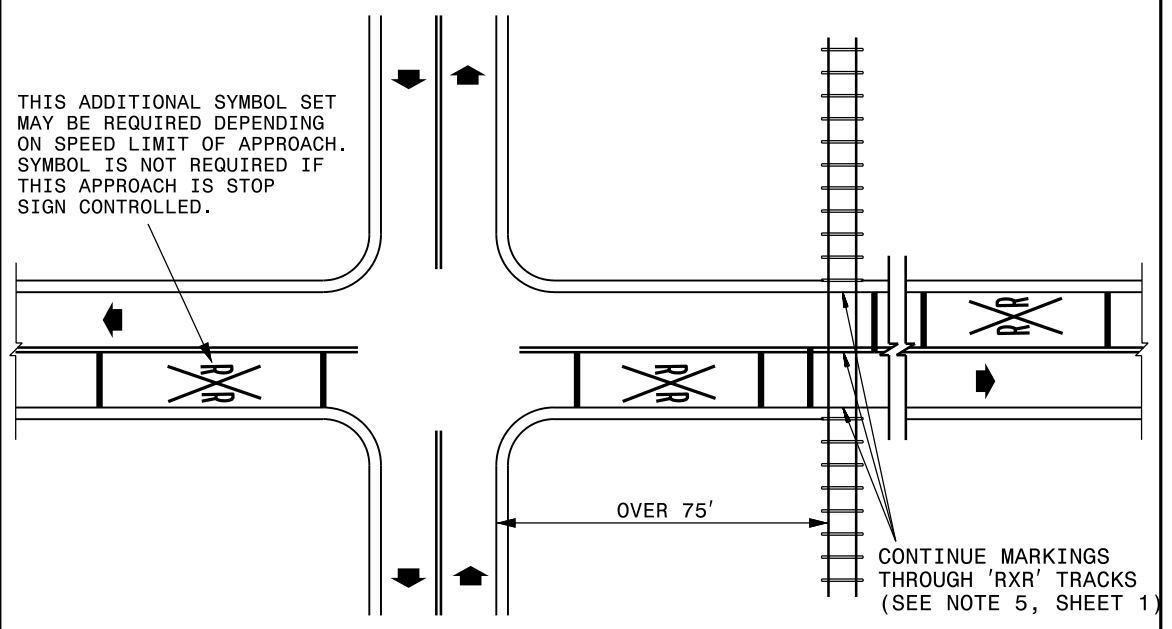
RAILROAD LESS THAN 40 FT. FROM INTERSECTION



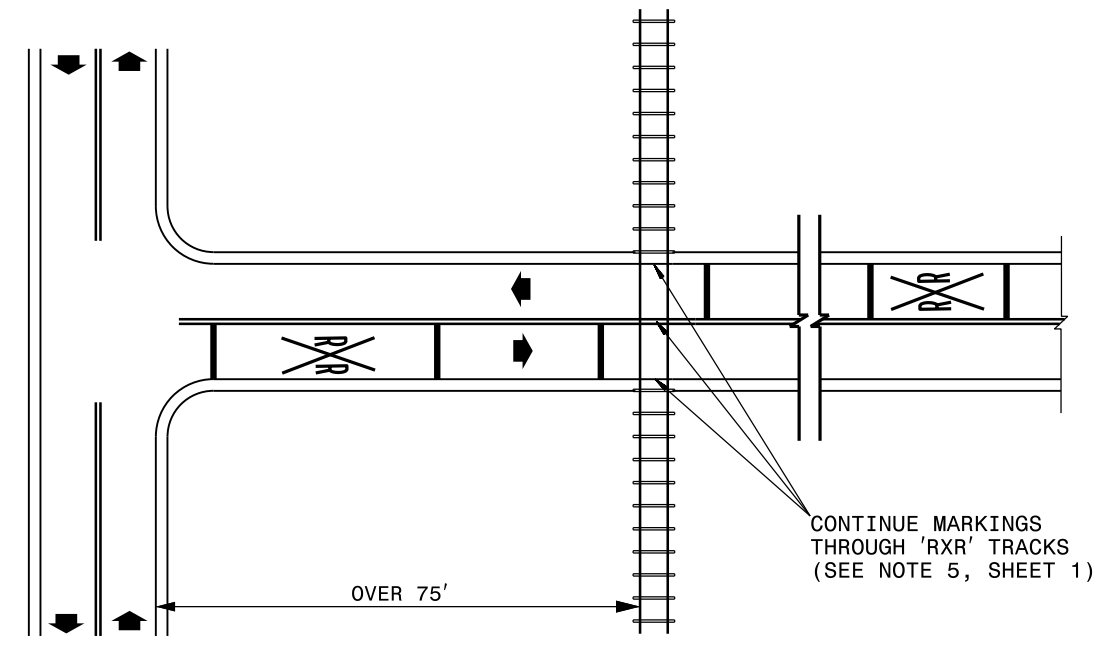
RAILROAD LESS THAN 40 FT. FROM INTERSECTION



RAILROAD MORE THAN 75 FT. FROM INTERSECTION



RAILROAD MORE THAN 75 FT. FROM INTERSECTION

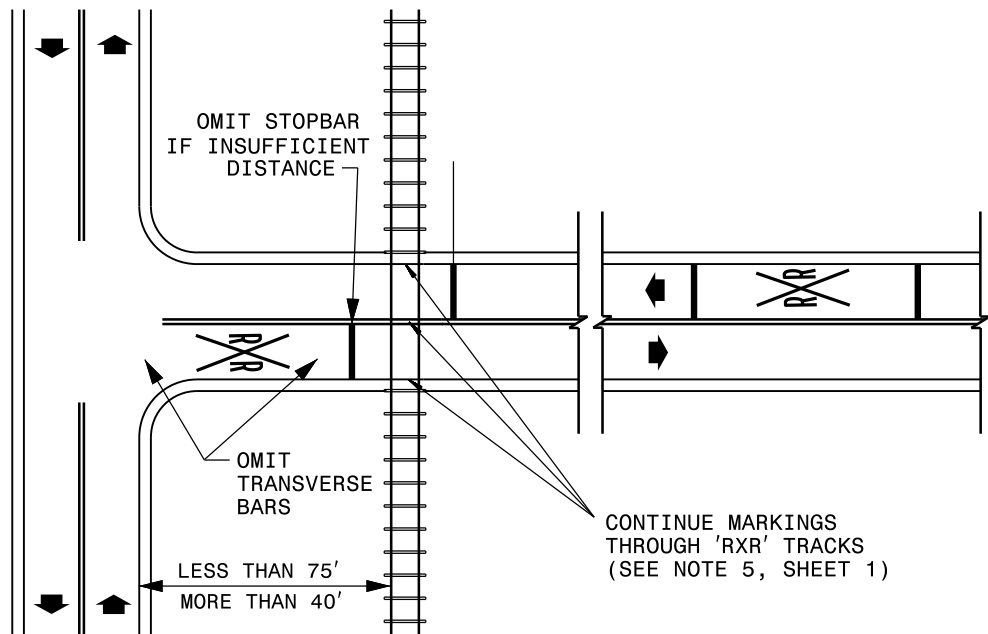


STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

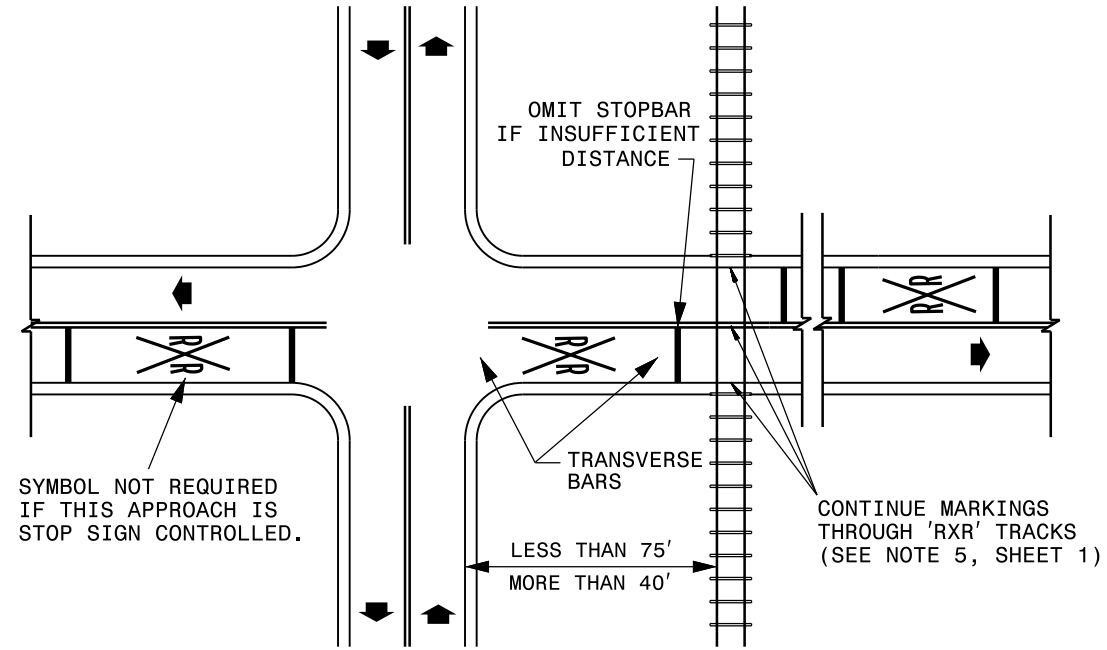
1-24

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
RAILROAD CROSSINGS

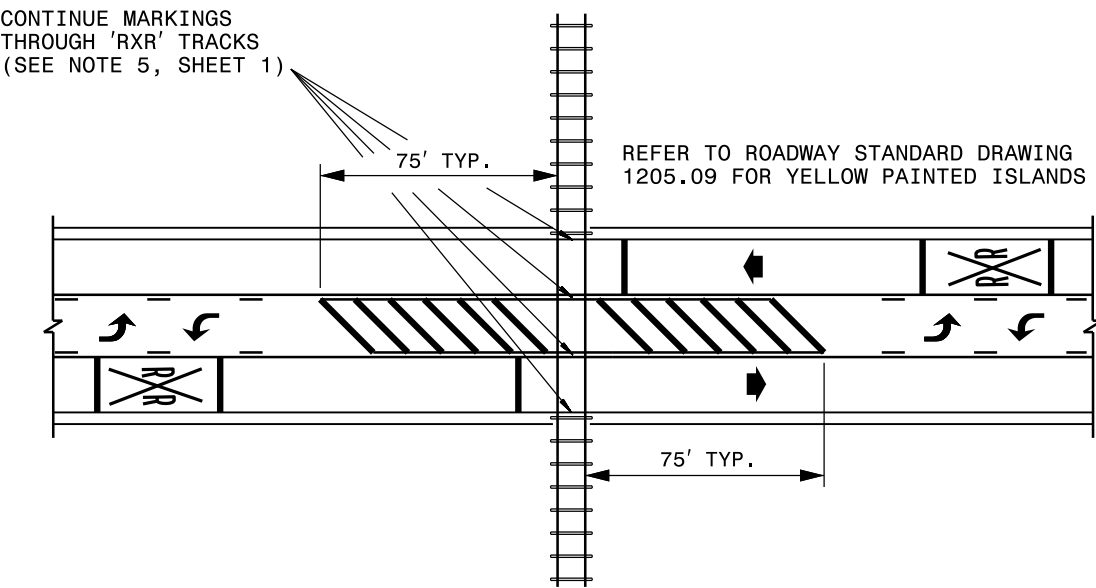
RAILROAD 40 TO 75 FT. FROM INTERSECTION



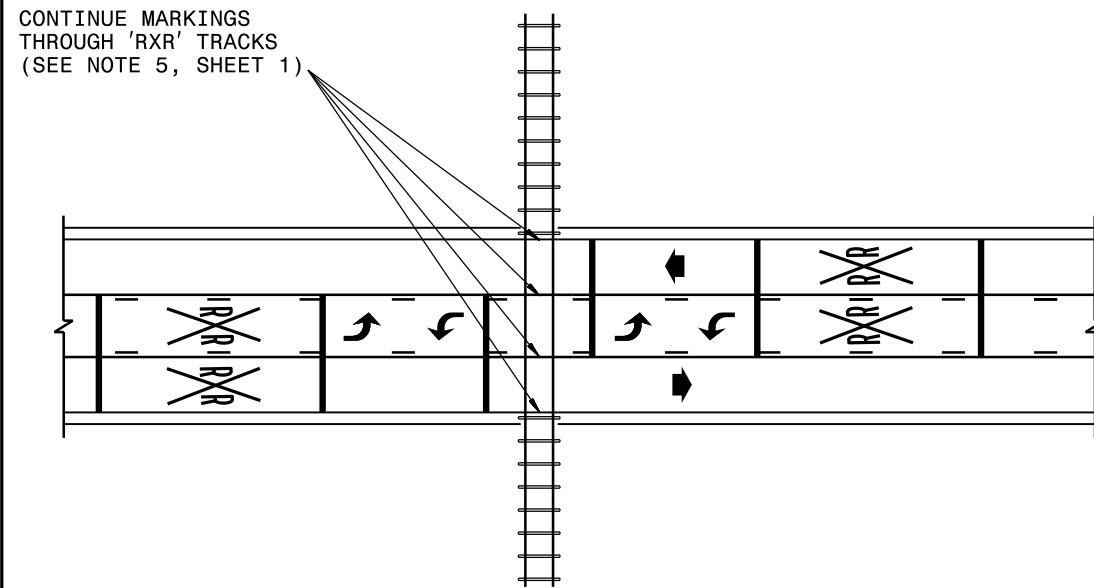
RAILROAD 40 TO 75 FT. FROM INTERSECTION



3-LANE SECTION
CENTER TURN-LANE DISCONTINUED ACROSS TRACKS



3-LANE SECTION
CENTER TURN-LANE CONTINUED ACROSS TRACKS



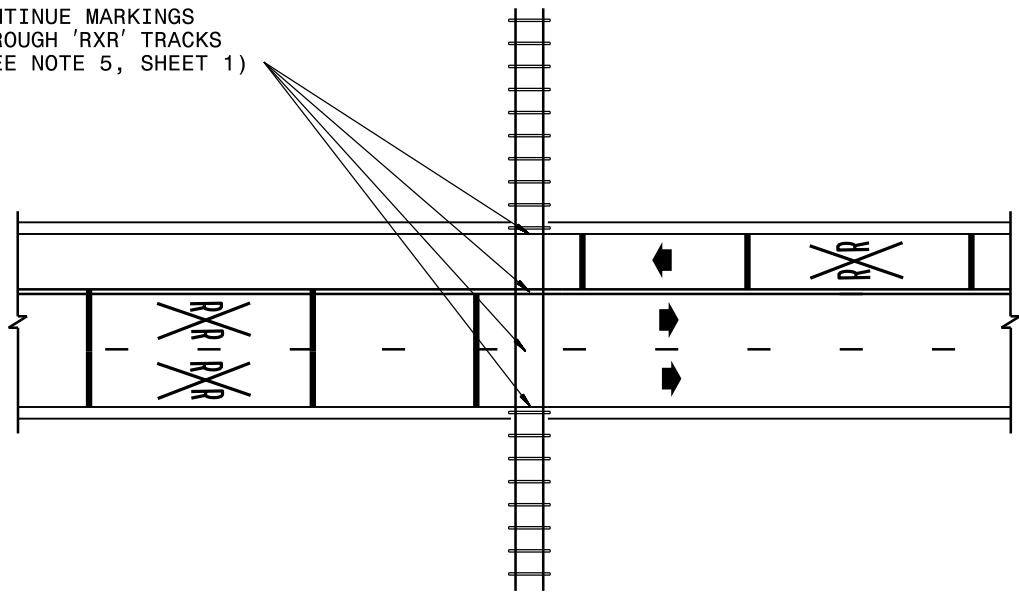
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-24

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
RAILROAD CROSSINGS

**3-LANE, 2-WAY SECTION
(NO CENTER TURN-LANE)**

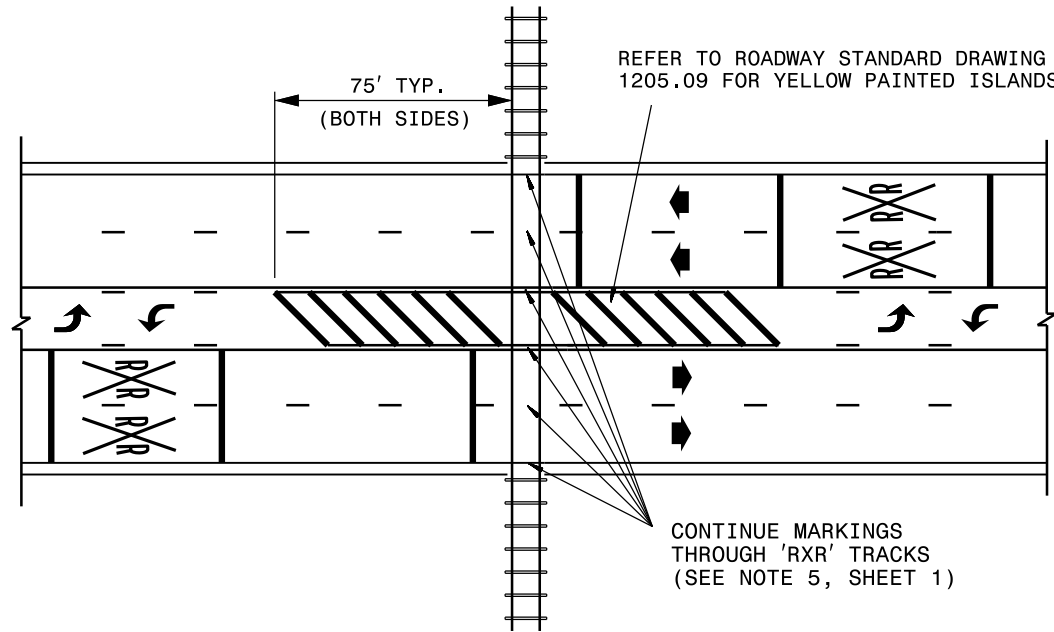
CONTINUE MARKINGS
THROUGH 'RXR' TRACKS
(SEE NOTE 5, SHEET 1)



**5-LANE SECTION
CENTER TURN-LANE DISCONTINUED ACROSS TRACKS**

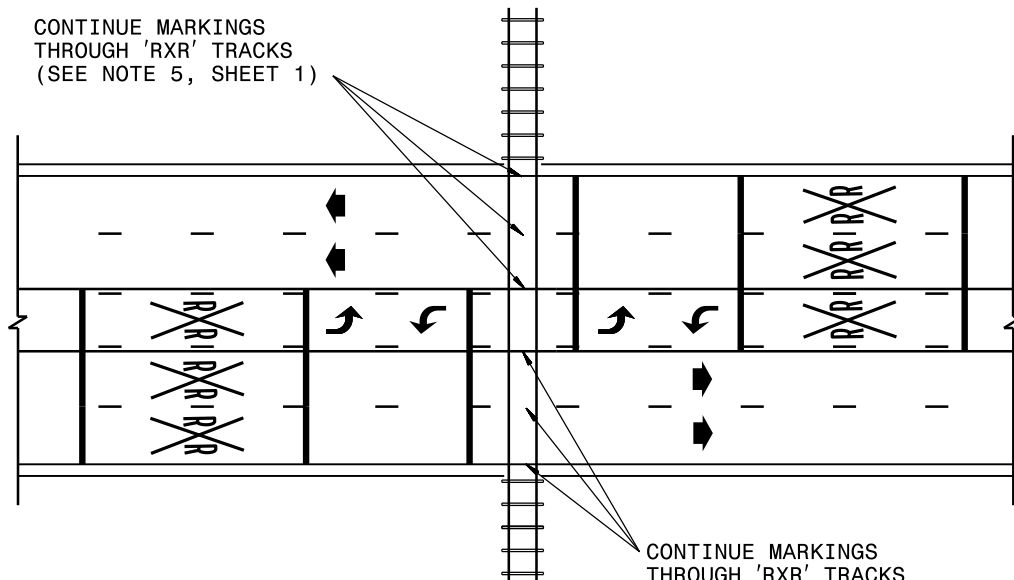
75' TYP.
(BOTH SIDES)

REFER TO ROADWAY STANDARD DRAWING
1205.09 FOR YELLOW PAINTED ISLANDS



**5-LANE SECTION
CENTER TURN-LANE CONTINUED ACROSS TRACKS**

CONTINUE MARKINGS
THROUGH 'RXR' TRACKS
(SEE NOTE 5, SHEET 1)

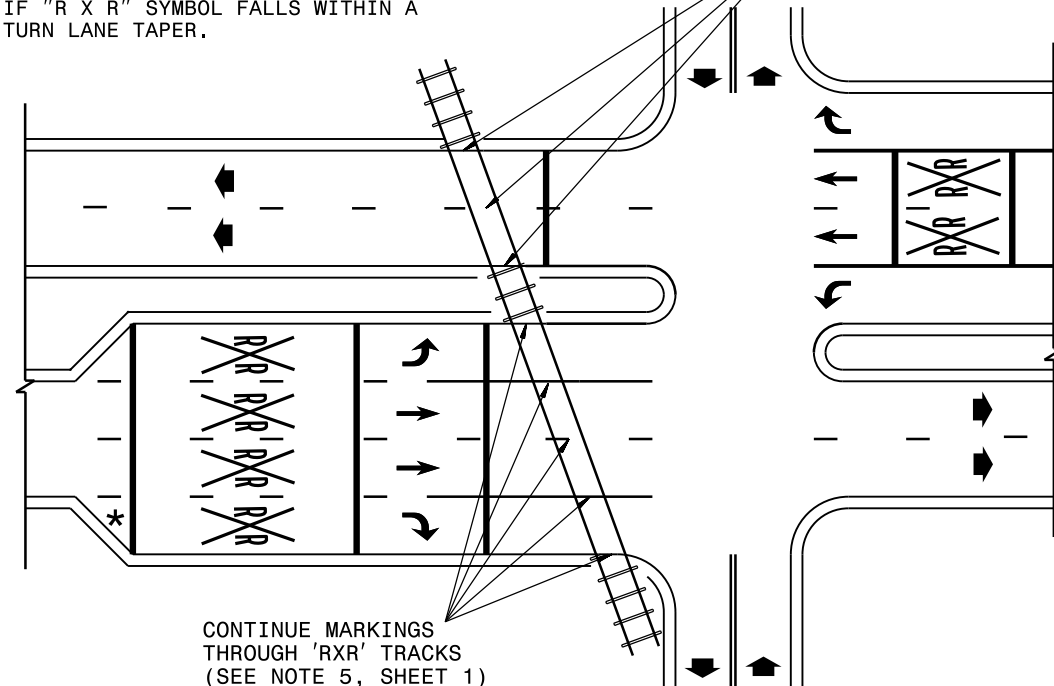


CONTINUE MARKINGS
THROUGH 'RXR' TRACKS
(SEE NOTE 5, SHEET 1)

TURN LANES AT RAILROAD CROSSING

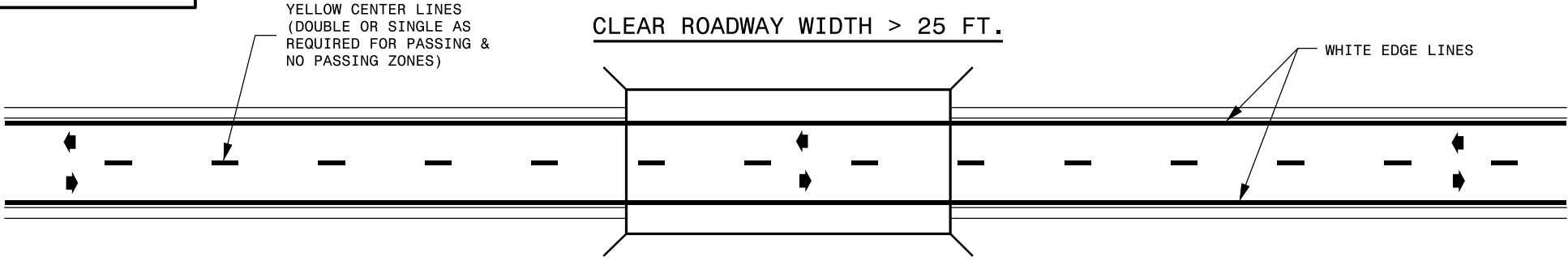
* OMIT THE SYMBOL SET IN THE TURN LANE
IF "R X R" SYMBOL FALLS WITHIN A
TURN LANE TAPER.

CONTINUE MARKINGS
THROUGH 'RXR' TRACKS
(SEE NOTE 5, SHEET 1)

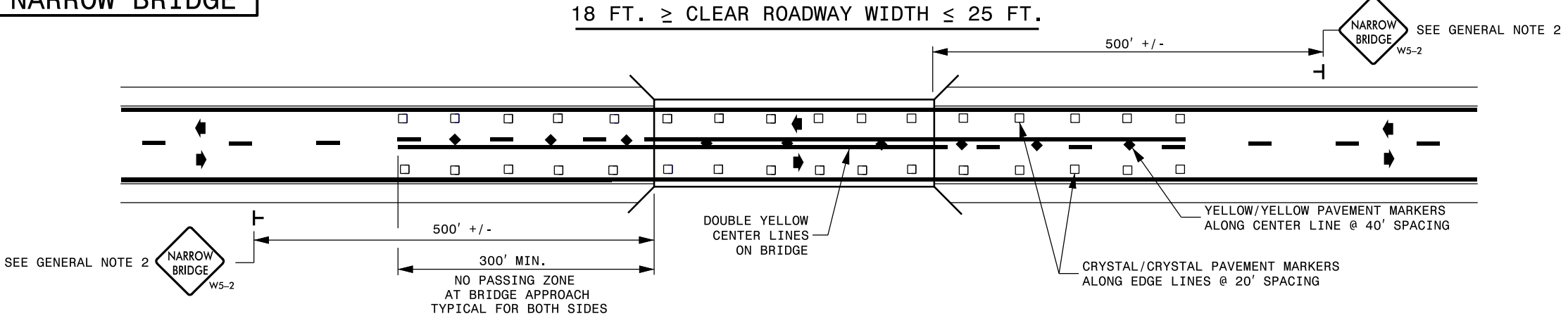


CONTINUE MARKINGS
THROUGH 'RXR' TRACKS
(SEE NOTE 5, SHEET 1)

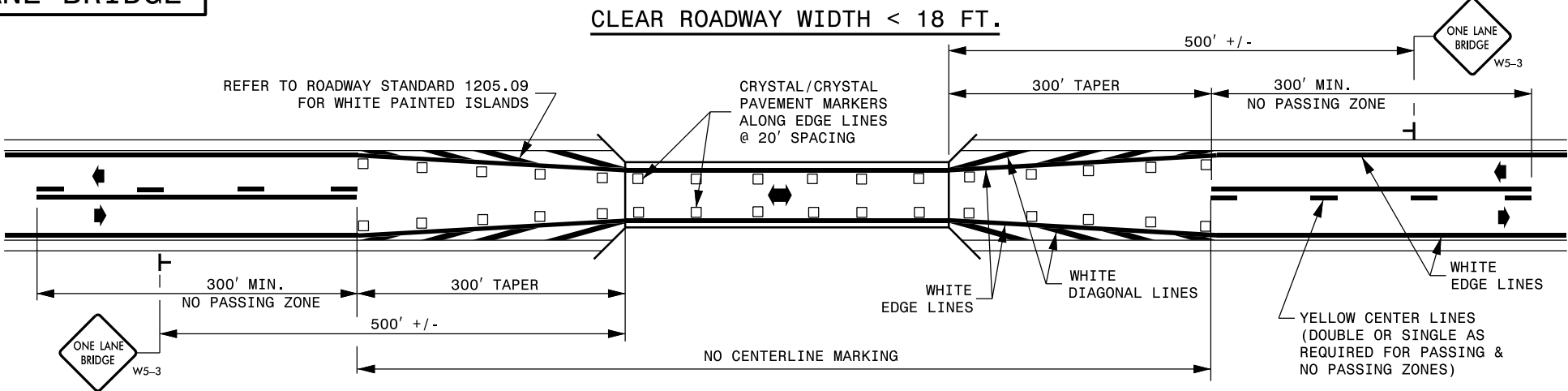
STANDARD BRIDGE



NARROW BRIDGE



ONE-LANE BRIDGE



GENERAL NOTES:

1- NO PASSING ZONES SHOWN ARE MINIMUMS. APPLY MINIMUM PASSING AND STOPPING SIGHT DISTANCES AS DETERMINED BY THE ENGINEER.

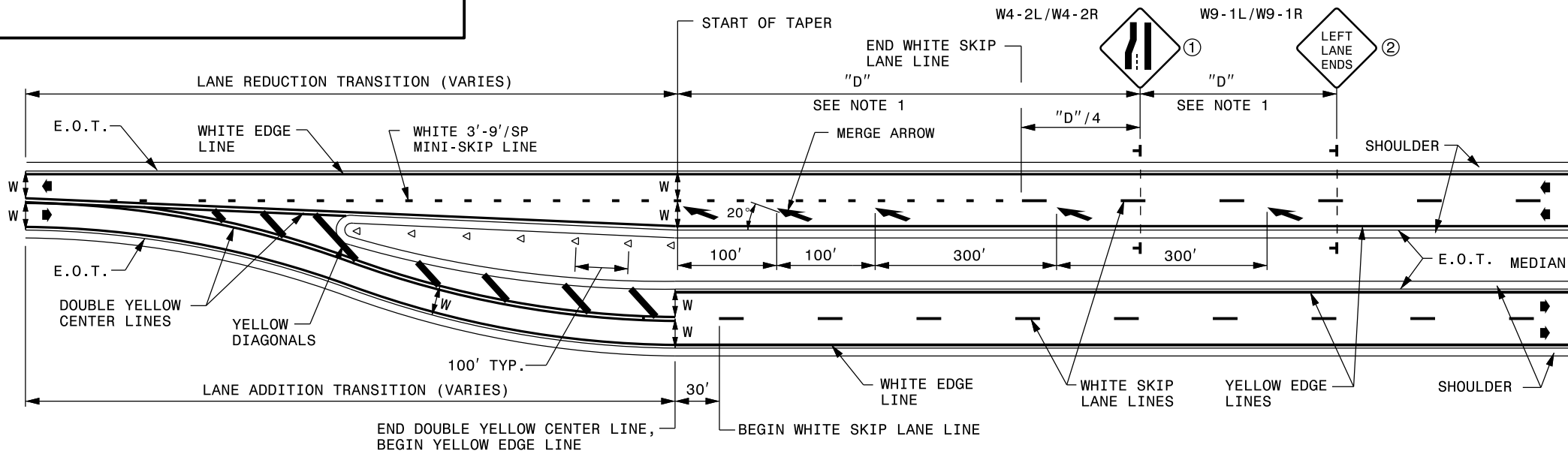
2- FOR BRIDGES WITH 18 TO 25 FEET CLEAR ROADWAY WIDTH, SIGNS SHOULD BE USED WHEN THE TRAVEL LANE WIDTH ON BOTH THE APPROACH AND BRIDGE ARE NOT NOMINALLY THE SAME. SEE TEPPL B21.

LEGEND	
➔	DIRECTION OF TRAFFIC FLOW
◆	YELLOW/YELLOW PAVEMENT MARKER
⊥	STATIONARY SIGN
□	CRYSTAL/CRYSTAL PAVEMENT MARKER

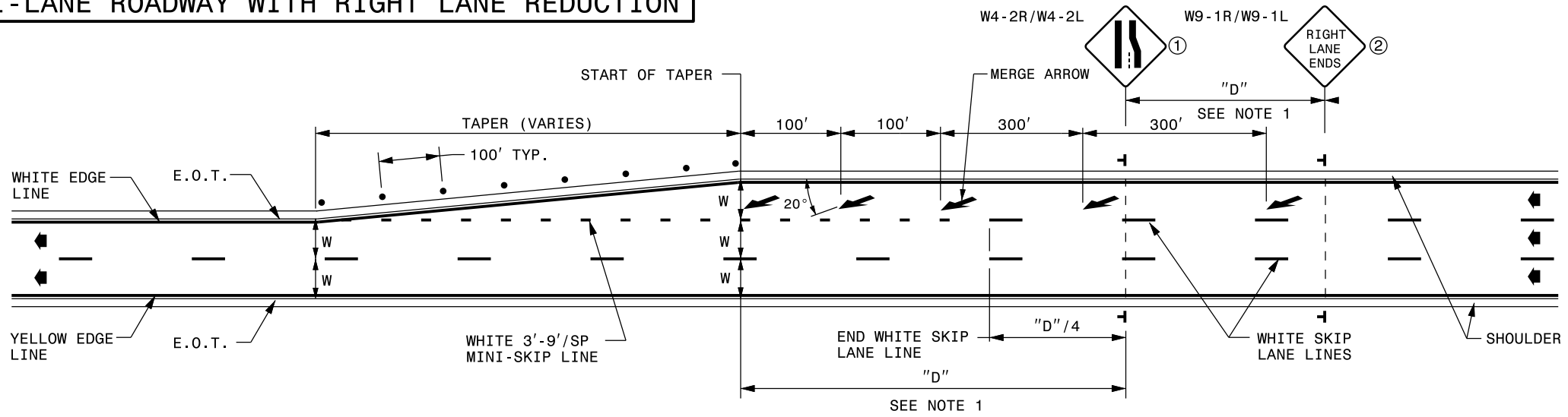
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-24

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
BRIDGES



MULTI-LANE ROADWAY WITH RIGHT LANE REDUCTION

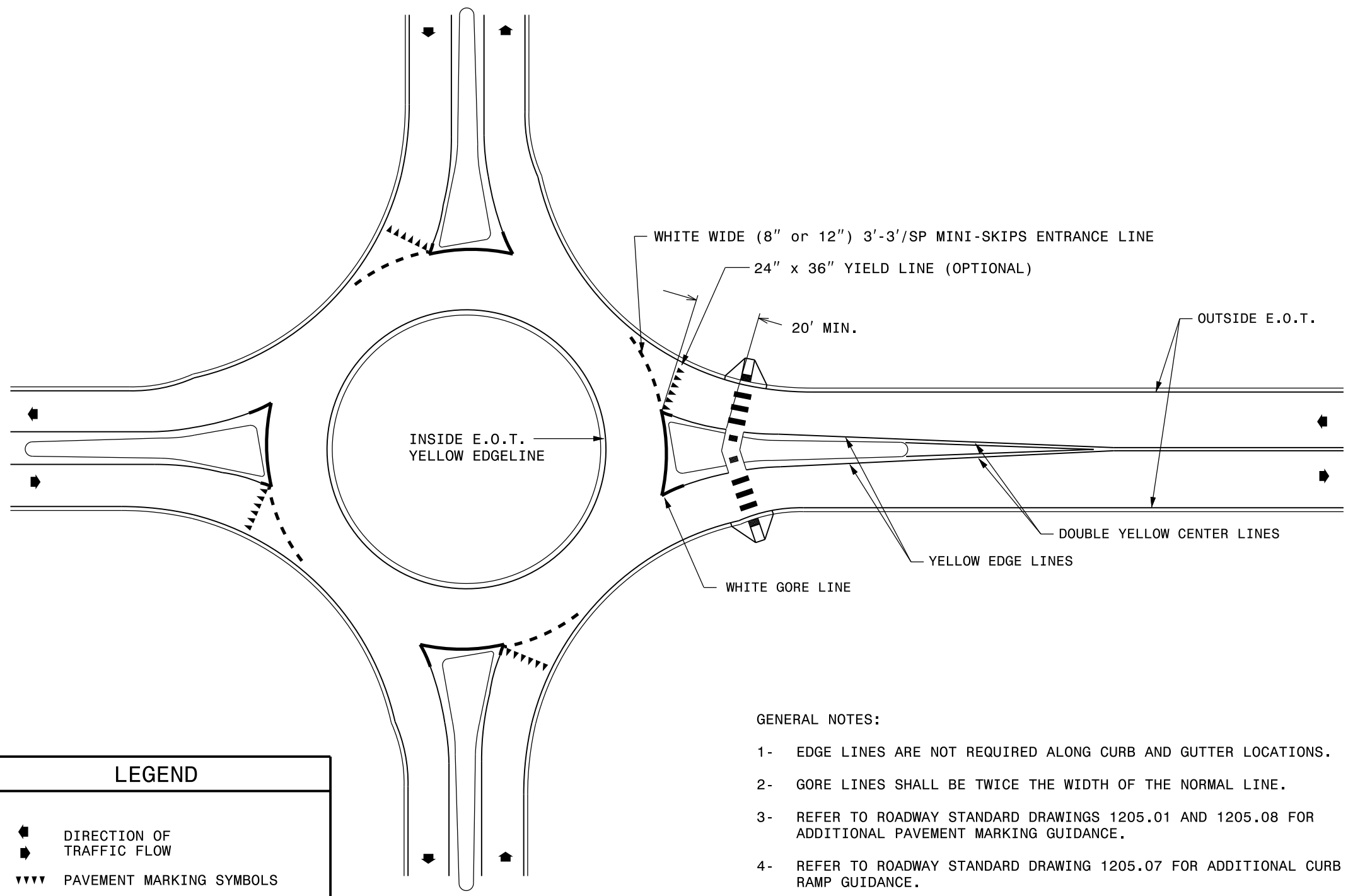


- GENERAL NOTES:
- 1- REFER TO SIGNING PLANS OR TABLE "A" FOR ADVANCE WARNING SIGN PLACEMENT DISTANCE.
 - 2- REFER TO ROADWAY STANDARD DRAWINGS 1205.01 AND 1205.08 FOR ADDITIONAL PAVEMENT MARKING GUIDANCE.

LEGEND	
W = WIDTH OF TRAVEL LANE	⊥ STATIONARY SIGN
➔ DIRECTION OF TRAFFIC FLOW	● CRYSTAL FLEXIBLE DELINEATOR
↘ PAVEMENT MARKING SYMBOLS	◁ YELLOW FLEXIBLE DELINEATOR

TABLE "A"	
ADVANCE WARNING SIGN PLACEMENT DISTANCE	
POSTED OR 85 PERCENTILE SPEED (MPH)	"D" (FEET)
35	565
40	670
45	775
50	885
55	990
60	1,100
65	1,200
70	1,250
75	1,350

DISTANCES SHOWN ARE FOR LEVEL ROADWAYS, MAKE CORRECTIONS FOR GRADES.



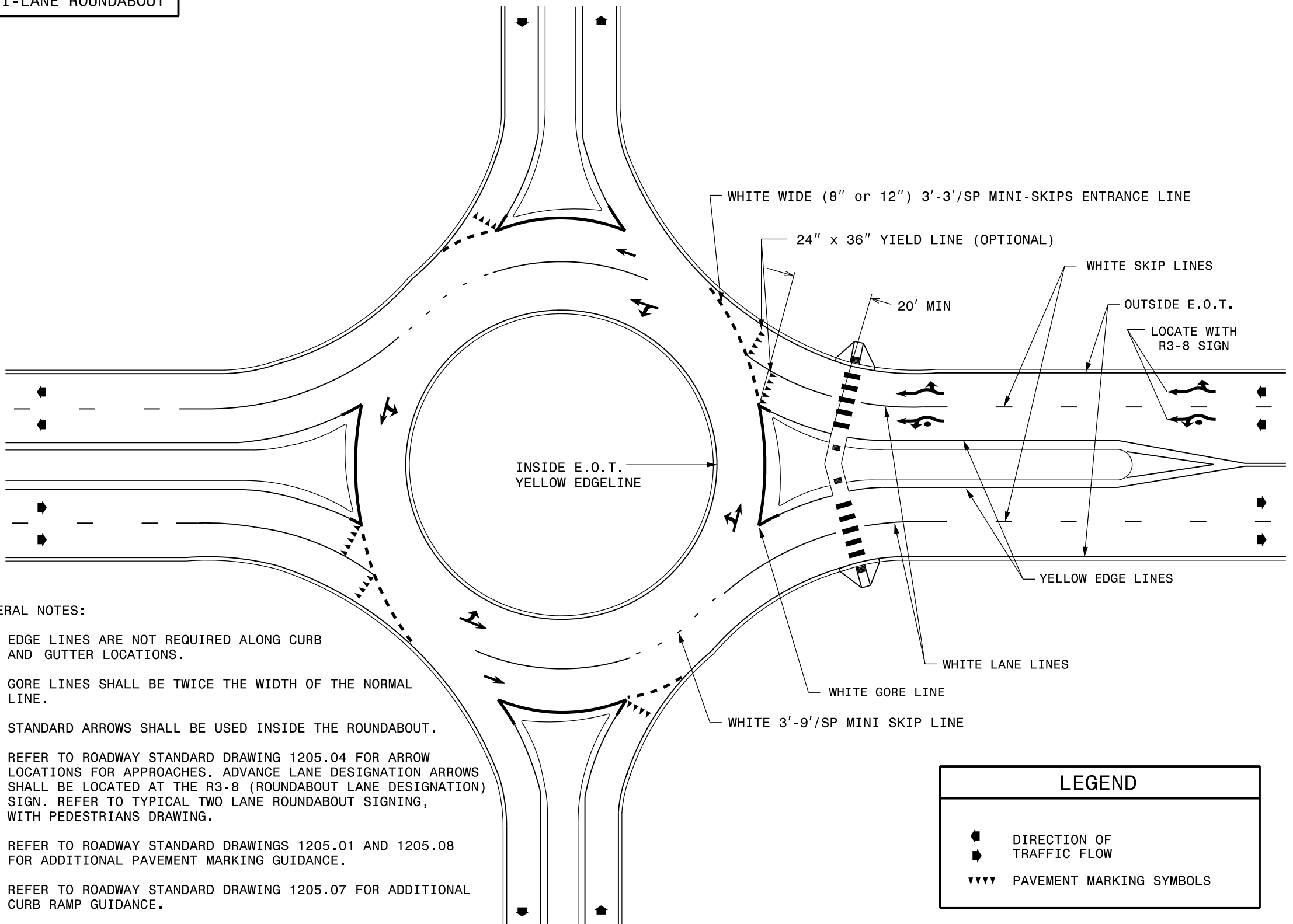
LEGEND	
◄	DIRECTION OF TRAFFIC FLOW
▶	DIRECTION OF TRAFFIC FLOW
▼▼▼	PAVEMENT MARKING SYMBOLS

- GENERAL NOTES:
- 1- EDGE LINES ARE NOT REQUIRED ALONG CURB AND GUTTER LOCATIONS.
 - 2- GORE LINES SHALL BE TWICE THE WIDTH OF THE NORMAL LINE.
 - 3- REFER TO ROADWAY STANDARD DRAWINGS 1205.01 AND 1205.08 FOR ADDITIONAL PAVEMENT MARKING GUIDANCE.
 - 4- REFER TO ROADWAY STANDARD DRAWING 1205.07 FOR ADDITIONAL CURB RAMP GUIDANCE.

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
 ROUNDABOUTS

1-24

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
ROUNDABOUTS

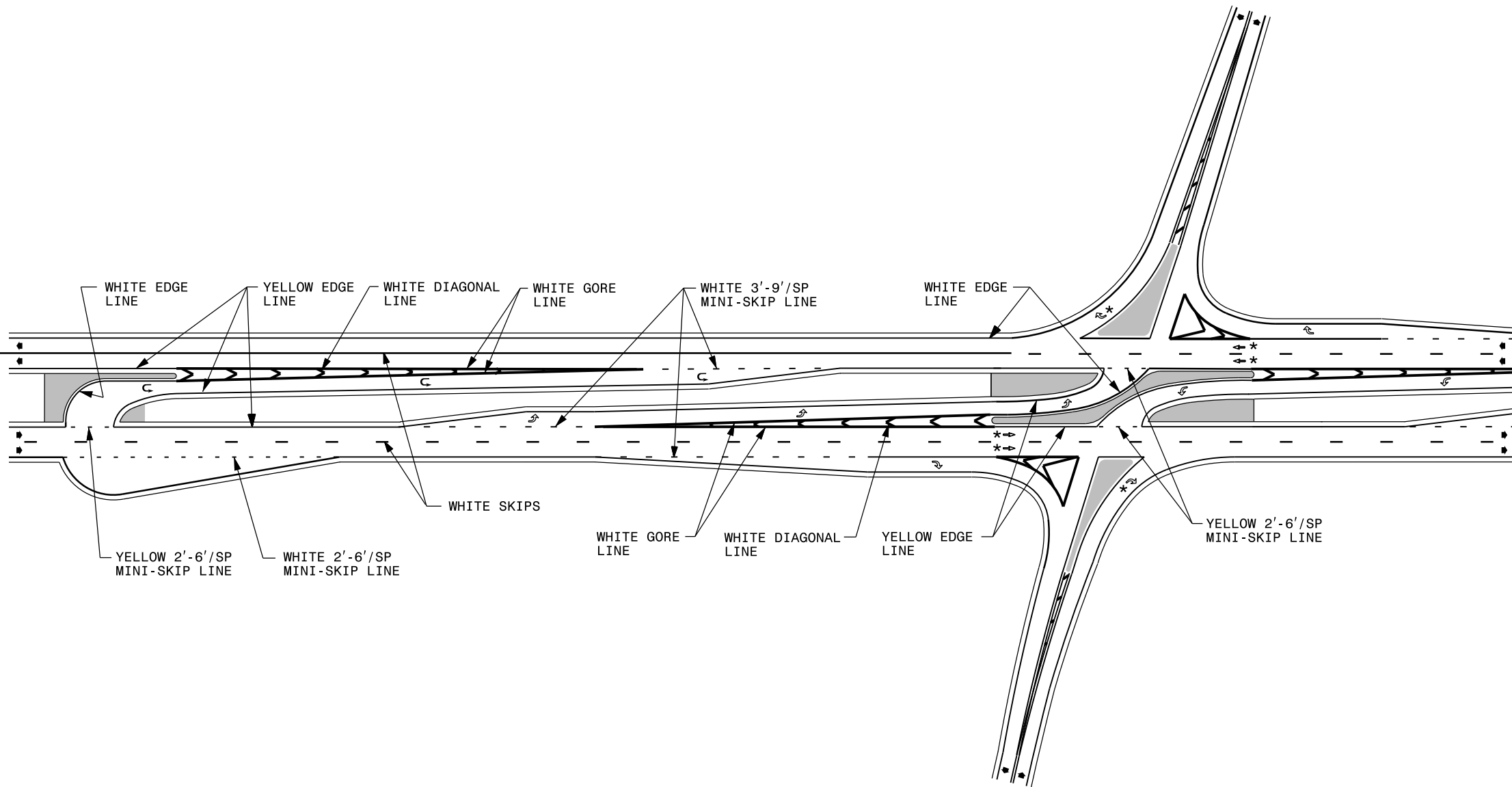


GENERAL NOTES:

- 1- EDGE LINES ARE NOT REQUIRED ALONG CURB AND GUTTER LOCATIONS.
- 2- GORE LINES SHALL BE TWICE THE WIDTH OF THE NORMAL LINE.
- 3- STANDARD ARROWS SHALL BE USED INSIDE THE ROUNDABOUT.
- 4- REFER TO ROADWAY STANDARD DRAWING 1205.04 FOR ARROW LOCATIONS FOR APPROACHES. ADVANCE LANE DESIGNATION ARROWS SHALL BE LOCATED AT THE R3-8 (ROUNDABOUT LANE DESIGNATION) SIGN. REFER TO TYPICAL TWO LANE ROUNDABOUT SIGNING, WITH PEDESTRIANS DRAWING.
- 5- REFER TO ROADWAY STANDARD DRAWINGS 1205.01 AND 1205.08 FOR ADDITIONAL PAVEMENT MARKING GUIDANCE.
- 6- REFER TO ROADWAY STANDARD DRAWING 1205.07 FOR ADDITIONAL CURB RAMP GUIDANCE.

LEGEND	
	DIRECTION OF TRAFFIC FLOW
	DIRECTION OF TRAFFIC FLOW
	PAVEMENT MARKING SYMBOLS

STANDARD REDUCED CONFLICT INTERSECTION



GENERAL NOTES:

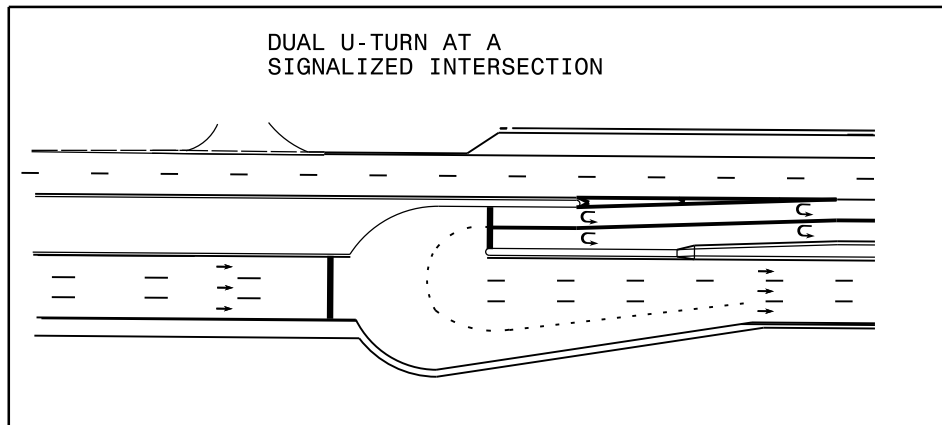
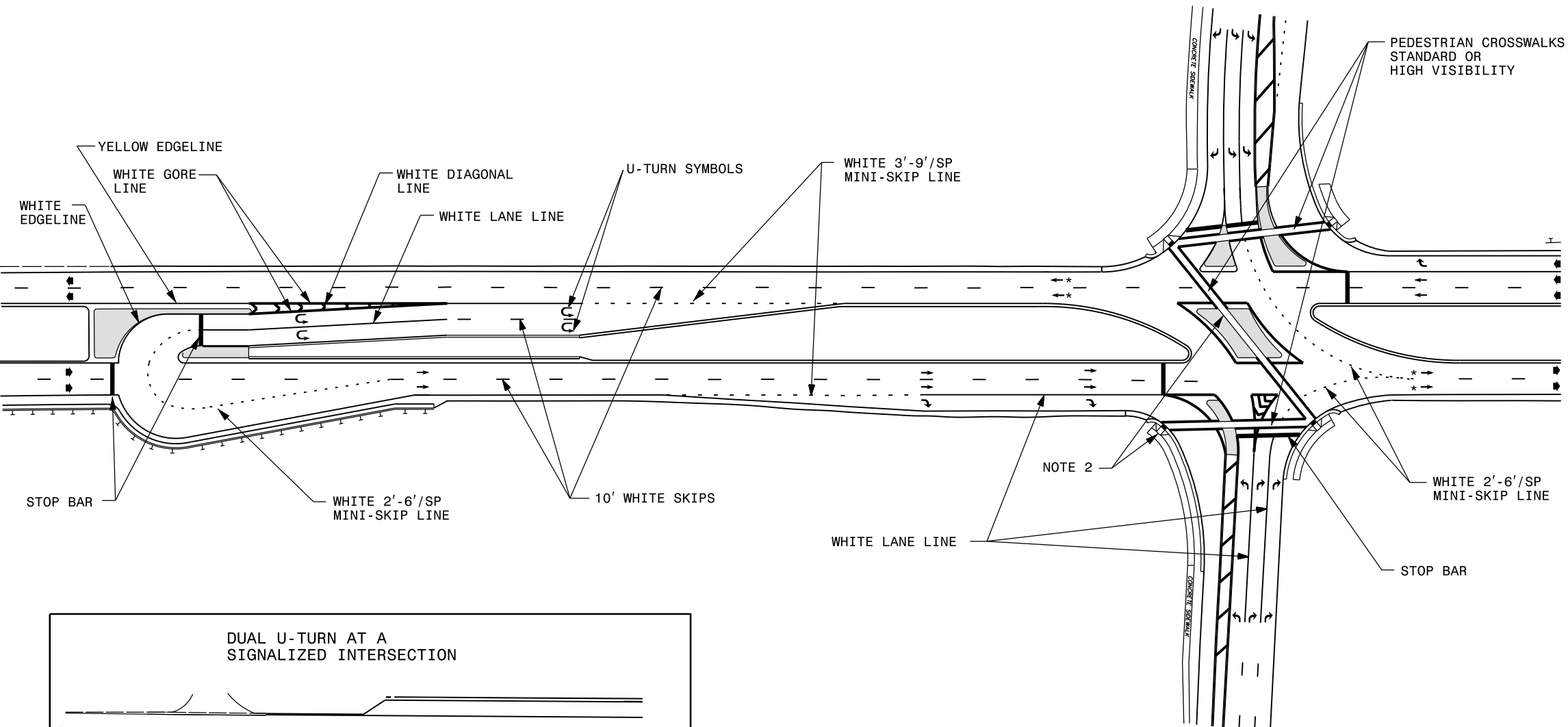
1- USE THE GUIDANCE SHOWN ABOVE IN CONJUNCTION WITH THE INTERSECTION GUIDANCE SHOWN ON ROADWAY STANDARD DRAWING 1205.04.

LEGEND	
	DIRECTION OF TRAFFIC FLOW
	PAVEMENT MARKING SYMBOLS
*	OPTIONAL

1-24
 STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
 REDUCED CONFLICT INTERSECTIONS

SIGNALIZED REDUCED CONFLICT INTERSECTIONS WITH LEFT-OUT AND DUAL U-TURN



GENERAL NOTES:

- 1- USE THE GUIDANCE SHOWN ABOVE IN CONJUNCTION WITH THE INTERSECTION GUIDANCE SHOWN ON ROADWAY STANDARD DRAWING 1205.04.
- 2- CURB RAMPS AND MEDIAN ISLANDS SHALL BE CONSTRUCTED USING THE PAVEMENT MARKING AND ROADWAY PLANS.

LEGEND	
	DIRECTION OF TRAFFIC FLOW
	PAVEMENT MARKING SYMBOLS
	CURB RAMPS WITH DETECTABLE WARNING DOMES
*	OPTIONAL

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
 REDUCED CONFLICT INTERSECTIONS

GENERAL NOTES:

- 1- USE THE NOTES AND DETAILS SHOWN ON THE FOLLOWING SHEETS IN CONJUNCTION WITH SIGNING AND PAVEMENT MARKING GUIDANCE SHOWN IN DIVISIONS 9 AND 12 OF THE NCDOT ROADWAY STANDARD DRAWINGS AND THE MUTCD.
- 2- THE SHARED LANE MARKING IS OPTIONAL AND MAY BE USED TO ALERT ROAD USERS OF THE PRESENCE OF BICYCLISTS, ENCOURAGE SAFE PASSING OF BICYCLISTS BY MOTORISTS, AND REDUCE THE INCIDENCE OF WRONG-WAY BICYCLING. SHARED LANE MARKING LIMITATIONS INCLUDE:
 - A- SHOULD NOT BE USED ON ROADWAYS WHERE THE SPEED LIMIT IS 40 MPH OR MORE.
 - B- SHALL NOT BE USED IN SHOULDERS, BICYCLE LANES, OR BICYCLE LANE EXTENSIONS, TRAVEL LANE SHARED WITH LIGHT RAIL TRANSIT, TRANSITION AREA TO AN EXCLUSIVE TURN LANE WHERE THE MOTOR VEHICLE MUST WEAVE ACROSS BICYCLE TRAFFIC IN BICYCLE LANES, TWO-STAGE TURN BOXES, BICYCLE BOXES, SHARED-USE PATHS, SHARED-USE PATH CROSSINGS, AND PHYSICALLY SEPARATED BIKEWAYS.
 - C- SHOULD NOT BE USED IN THE CIRCULATORY ROADWAY OF A MULTI-LANE ROUNDABOUT.
 - D- GREEN COLORED PAVEMENT SHALL NOT BE APPLIED AS A BACKGROUND.
- 3- BICYCLE LANES SHOULD BE DELINEATED FROM THE VEHICLE TRAVEL LANES WITH A 4" WIDE SOLID WHITE LINE. MARKINGS MAY BE INCREASED TO 6" WIDE IF EMPHASIS IS NEEDED TO DISTINGUISH BICYCLE LANES FROM OTHER LANE OR EDGE LINE MARKINGS.
- 4- BICYCLE LANE WIDTHS ARE TYPICALLY 5 TO 7 FEET OF PAVEMENT. THE GUTTER PAN ON AN URBAN STREET IS NOT TO BE CONSIDERED PART OF THE BICYCLE LANE. SEE NCDOT ROADWAY DESIGN MANUAL AND NCDOT COMPLETE STREETS RESOURCES FOR MORE GUIDANCE ON BICYCLE LANE DIMENSIONS.
- 5- BICYCLE LANE LINES CAN BE SOLID, MINI-SKIPS OR DISCONTINUED DEPENDENT ON THE LOCATION. MINI-SKIPS SHOULD BE USED AT LOCATIONS WHERE THERE ARE FREQUENT MOTORIST TURNING MOVEMENTS AND WHERE THERE IS MERGING BY BICYCLISTS AND MOTORISTS. REVIEW THE PLANS TO IDENTIFY CONFLICT AREAS. ALL BICYCLE LANE EXTENSION MINI-SKIP LINES SHALL BE 2'-6' SPACING PER ROADWAY STANDARD DRAWING 1205.01 AND MATCH THE WIDTH OF THE LINE IT IS EXTENDING. ENGINEERING JUDGEMENT SHOULD BE USED TO DECIDE WHAT MARKING TYPE TO BE USED, BUT GENERALLY, BICYCLE LANES SHOULD BE MARKED AS FOLLOWS:
 - A- AT DRIVEWAYS AND ALLEY ENTRANCES, BICYCLE LANES SHOULD REMAIN SOLID.
 - B- AT STREET OR COMMERCIAL ENTRANCES, BICYCLE LANES SHOULD BE MARKED WITH MINI-SKIPS.
 - C- AT INTERSECTIONS THAT DO NOT HAVE A DEDICATED RIGHT TURN LANE, MINI-SKIPS SHOULD BE USED AT THE APPROACH OF SIGNALIZED AND MINOR INTERSECTIONS AND AT THE APPROACH OF STREET AND COMMERCIAL ENTRANCES WITH HEAVY RIGHT TURN VOLUMES. MINI-SKIPS SHOULD BE PLACED 50-200 FEET IN ADVANCE OF THE INTERSECTION OR ENTRANCE.
 - D- BICYCLE MINI-SKIP LANE EXTENSION LINES MAY BE PLACED ACROSS INTERSECTIONS TO INDICATE LEFT TURN MOVEMENTS OR FOR GUIDANCE THROUGH LONG, SKEWED, OR CURVED INTERSECTIONS. DO NOT EXTEND THE LINES THROUGH MARKED CROSSWALKS.
 - E- MINI-SKIPS SHOULD BE USED AT THE END OF A BICYCLE LANE THAT MERGES THE BICYCLIST BACK INTO THE TRAVEL LANE.
 - F- MINI-SKIPS SHOULD BE USED AT BUS STOPS, BUS BAYS, AND BULB OUTS.
- 6- BICYCLE MARKINGS SHALL CONSIST OF A SYMBOL AND ARROW. DUE TO THE COMPLEXITY OF URBAN STREETS, USE BEST ENGINEERING JUDGEMENT IN THEIR PLACEMENT TO REMIND MOTORISTS OF THE PRESENCE OF BICYCLISTS. PLACE MARKINGS ALONG THE BICYCLE LANE AS FOLLOWS:
 - A- AT THE BEGINNING OF THE BICYCLE LANE.
 - B- IN URBAN AREAS, AT THE FAR SIDE OF ALL INTERSECTIONS AND MAJOR STREET ENTRANCES. IF THERE ARE MULTIPLE STREETS WITHIN THE BLOCK, PLACE BETWEEN GROUPS OF ENTRANCES. ADDITIONAL MARKINGS MAY BE PLACED AT THE INTERSECTION APPROACH (PRIOR TO A CROSSWALK). TRY NOT TO OVER PLACE IF THE APPROACH LENGTH IS SHORT.
 - C- IN SUBURBAN AND RURAL AREAS, PLACE AFTER MAJOR INTERSECTIONS. WHERE INTERSECTIONS ARE SPACED FAR APART, PLACE IN INTERVALS NOT TO EXCEED 1/4 MILE IN SUBURBAN AREAS AND 1/2 MILE IN RURAL AREAS.
 - D- BEFORE THE START OF THE TAPER OF A THROUGH BICYCLE LANE. IF IT IS A LONG TAPER OR LONG EXTENSION OF THE MINI-SKIPS, PLACE ANOTHER MARKING WHERE THE SOLID BICYCLE LANE LINE RESUMES TO REMIND MOTORISTS OF THE PRESENCE OF THE BICYCLE LANE.
 - E- ADDITIONAL MARKINGS SHOULD BE PLACED IN POCKET BICYCLE LANES LONGER THAN 250 FEET.
 - F- ADDITIONAL MARKINGS MAY BE PLACED AT HEAVY TRAFFIC CONFLICT AREAS TO REMIND MOTORIST OF POTENTIAL PRESENCE OF BICYCLISTS. EXAMPLES WOULD BE BEFORE A MERGE AREA OR ALONG A BICYCLE LANE ADJACENT TO ON-STREET PARKING. AVOID PLACING MARKINGS IN AREAS WHERE MOTORISTS WOULD TRACK THROUGH THE MARKINGS SUCH AS MERGE AREAS, DRIVEWAY ENTRANCES OR WITHIN THE TURNING RADIUS OF AN INTERSECTION.
- 7- BICYCLE SIGNING SUPPLEMENTS BICYCLE LANE MARKINGS. TYPICAL SIGNING FOR BICYCLE LANES IS AS FOLLOWS:
 - A- THE STANDARD "BIKE LANE" (R3-17) SIGN WITH "AHEAD" (R3-17AP) PLAQUE SHOULD BE PLACED IN ADVANCE OF THE START OF A BICYCLE LANE. THE "BIKE LANE" WITH THE "ENDS" (R3-17BP) PLAQUE SHOULD BE PLACED AT A SUFFICIENT DISTANCE TO GIVE WARNING THAT THE BICYCLE LANE IS ENDING. THE "BIKE LANE ENDS" SIGN ASSEMBLY SHOULD NOT BE USED WHERE A BICYCLE LANE IS DROPPED ON THE APPROACH TO AN INTERSECTION AND RESUMES IMMEDIATELY AFTER THE INTERSECTION OR FOR OTHER TEMPORARY INTERRUPTIONS.
 - B- USING ENGINEERING JUDGEMENT, "BIKE LANE" (R3-17) SIGNS MAY BE PLACED AT PERIODIC INTERVALS ALONG A BICYCLE LANE, ADJACENT TO A BICYCLE PAVEMENT MARKING.
 - C- WHERE THE BICYCLE LANE ENDS AND TRANSITIONS TO TYPICAL ROADWAY, THE "SHARE THE ROAD" (W11-1) SIGN AND OPTIONAL "SHARE THE ROAD" (W16-1P) PLAQUE MAY BE USED TO REMIND MOTORISTS THAT THE LANE MUST BE SHARED WITH BICYCLISTS.
- 8- BUFFER WIDTHS FOR BUFFERED BICYCLE LANES ARE TYPICALLY 2 TO 3 FEET WIDE. BUFFER MARKINGS ARE SPACED A MINIMUM OF TEN FEET APART AND TYPICALLY EQUAL IN FEET TO THE POSTED SPEED LIMIT. SEE ROADWAY STANDARD DRAWING 1205.16, SHEET 4 OF 8 FOR DETAIL ON MARKINGS AND PLACEMENT WITHIN BUFFER AREA. USE ENGINEERING JUDGEMENT FOR PLACEMENT OF BUFFER BETWEEN BICYCLE LANE AND HIGH TURNOVER PARKING AREAS AND HIGHER SPEED MOTOR VEHICLE TRAVEL LANES. SEE NCDOT ROADWAY DESIGN MANUAL AND NCDOT COMPLETE STREETS RESOURCES FOR MORE GUIDANCE ON BUFFER WIDTH DIMENSIONS.
- 9- GREEN COLORED PAVEMENT IS OPTIONAL FOR BICYCLE LANES, BICYCLE LANE EXTENSION LINES THROUGH INTERSECTIONS, EXTENSIONS THROUGH EXCLUSIVE MOTOR VEHICLE TURN LANES, BICYCLE BOXES, TWO-STAGE TURN BOXES, BICYCLE DETECTOR SYMBOLS, AND SEPARATED BICYCLE LANES. SEE ROADWAY STANDARD DRAWING 1205.16, SHEET 2 OF 8 FOR SYMBOLS & DETAILS GUIDANCE. USE ENGINEERING JUDGEMENT FOR PLACEMENT OF GREEN COLORED PAINT AT CONFLICT AREAS.

ROADWAY STANDARD DRAWING FOR

BICYCLE FACILITIES

GENERAL NOTES

1-24

STATE OF

NORTH CAROLINA

DEPT. OF TRANSPORTATION

DIVISION OF HIGHWAYS

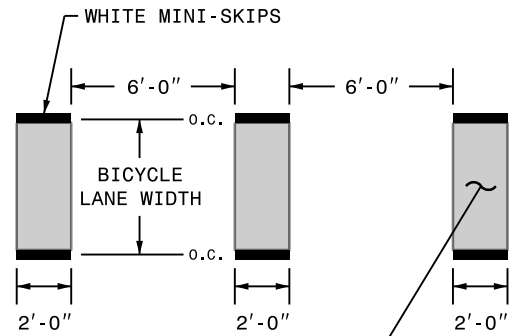
RALEIGH, N.C.

GENERAL NOTES:

- 1- USE THE COLOR WHITE FOR ALL PAVEMENT MARKING SYMBOLS.
- 2- DO NOT LOCATE PAVEMENT MARKING SYMBOLS WITHIN INTERSECTION AREAS.
- 3- DO NOT PLACE SYMBOLS ACROSS TRANSVERSE EXPANSION JOINTS ON PORTLAND CEMENT CONCRETE PAVEMENTS, UNLESS APPROVED BY THE ENGINEER.

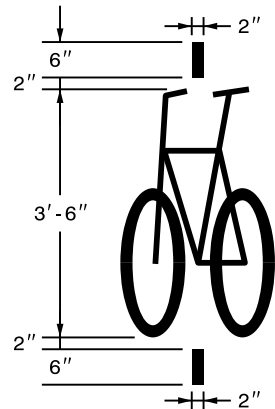
BICYCLE LANE EXTENSION MARKINGS

O.C. = "ON CENTER"



NOTE: GREEN COLORED PAVEMENT IS OPTIONAL AS ENHANCEMENT IN AREAS BETWEEN MINI-SKIP PAIRS AND SHALL MATCH THE MINI-SKIP PATTERN.

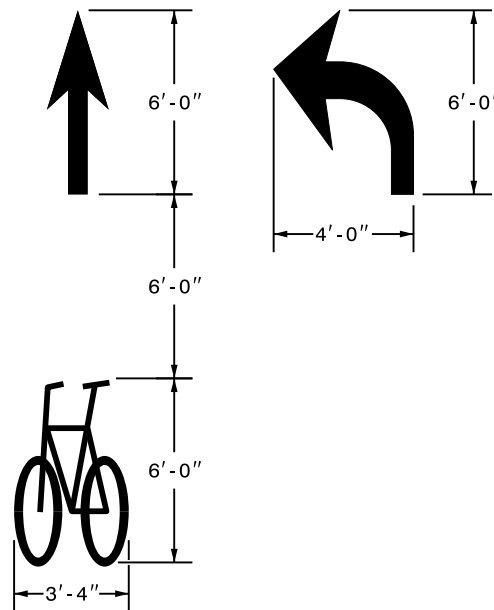
BICYCLE DETECTOR SYMBOL



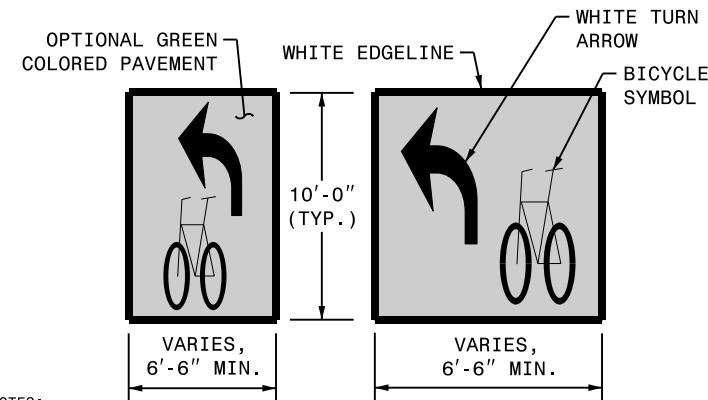
NOTES:

- 1- "WAIT HERE FOR GREEN" WORD MARKINGS ARE OPTIONAL AND MAY BE PLACED ON THE PAVEMENT IMMEDIATELY BELOW THE SYMBOL.
- 2- A R10-22 SIGN MAY BE INSTALLED TO SUPPLEMENT THE SYMBOL, AND IT SHOULD BE PLACED ROADSIDE ADJACENT TO THE SYMBOL.
- 3- GREEN COLORED PAVEMENT IS OPTIONAL AS A BACKGROUND ENHANCEMENT.

BICYCLE LANE SYMBOLS



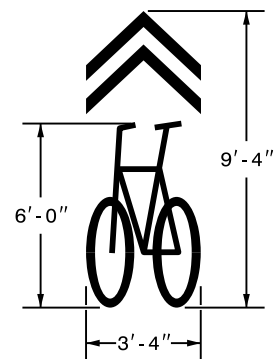
TWO-STAGE BICYCLE TURN BOX



NOTES:

- 1- THE BOX SHOULD BE POSITIONED TO AVOID CONFLICTS WITH CROSSWALKS AND MINIMIZE DEVIATION FOR CYCLISTS.
- 2- THE D11-20 SERIES SIGNS MAY BE USED WHEN USE OF THE BOX IS OPTIONAL; USE THE R9-23 SERIES SIGNS WHEN BOX USE IS REQUIRED.
- 3- TURNS ON RED SHALL BE PROHIBITED WHEN THE TURNING VEHICLE WOULD PASS THROUGH THE TWO-STAGE TURN BOX.
- 4- USE ENGINEERING JUDGMENT IN MODIFYING THE TWO-STAGE TURN BOX SIZE AND SCALING THE BICYCLE SYMBOL AND ARROW.
- 5- GREEN COLORED PAVEMENT WITHIN THE FULL LIMITS OF THE BOX IS OPTIONAL.

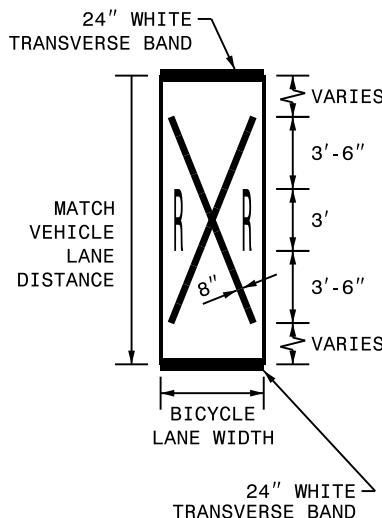
SHARED LANE SYMBOL



NOTES:

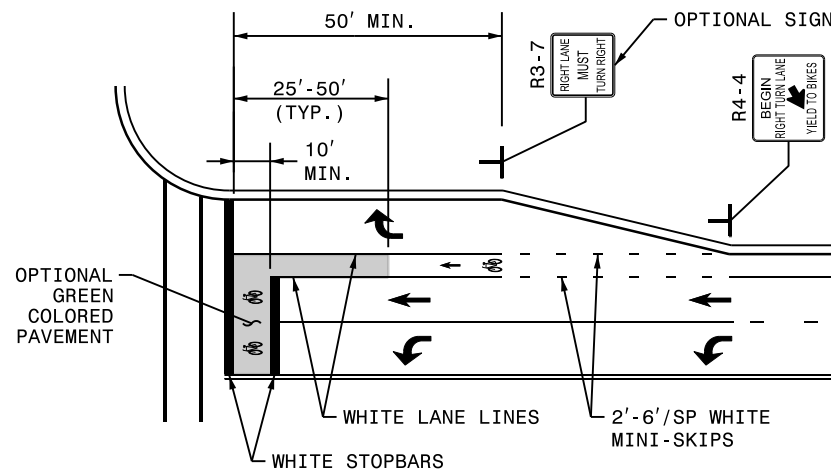
- 1- IF USED, THE SHARED LANE SYMBOL SHOULD BE SPACED AT INTERVALS NOT LESS THAN 50 FEET AND NOT GREATER THAN 250 FEET AT NON-INTERSECTION LOCATIONS.
- 2- THE FIRST SHARED LANE SYMBOL DOWNSTREAM FROM AN INTERSECTION SHOULD BE PLACED NO MORE THAN 50 FEET FROM THE INTERSECTION.

BICYCLE RXR SYMBOL



NOTE: REFER TO ROADWAY STANDARD DRAWING 1205.08 FOR MORE RAILROAD RXR SYMBOL GUIDANCE.

BICYCLE BOX

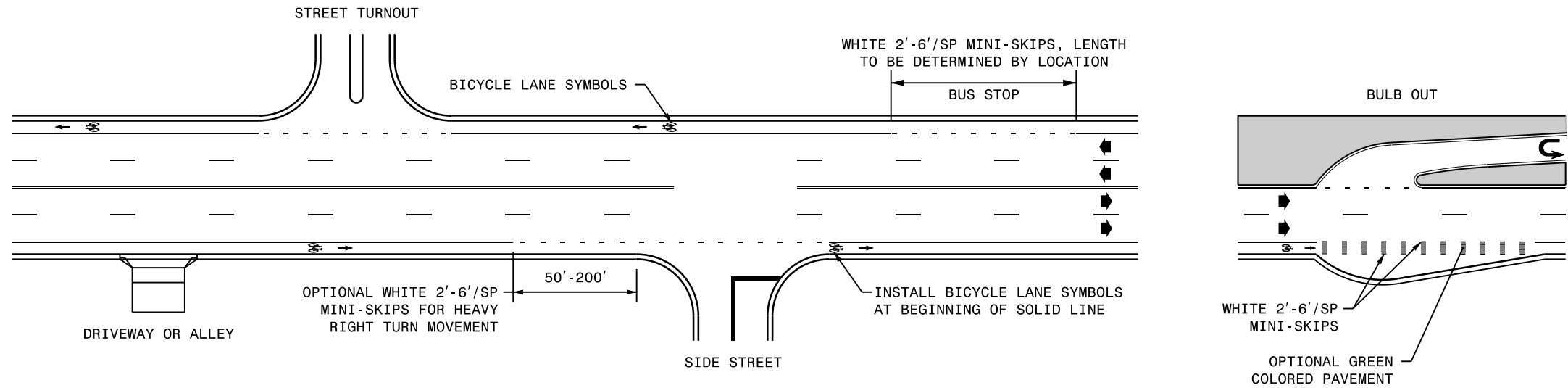


NOTES:

- 1- WHERE A BICYCLE BOX IS PROVIDED ACROSS MULTIPLE LANES OF AN APPROACH, COUNTDOWN PEDESTRIAN SIGNALS SHALL BE PROVIDED FOR THE CROSSWALK ACROSS THE APPROACH ON WHICH THE BICYCLE BOX IS LOCATED.
- 2- TURNS ON RED SHALL BE PROHIBITED FROM THE LANE IN WHICH A BICYCLE BOX IS LOCATED.
- 3- AT LEAST ONE BICYCLE SYMBOL MARKING SHALL BE USED IN THE BICYCLE BOX.

1-24

MISCELLANEOUS ENTRANCES



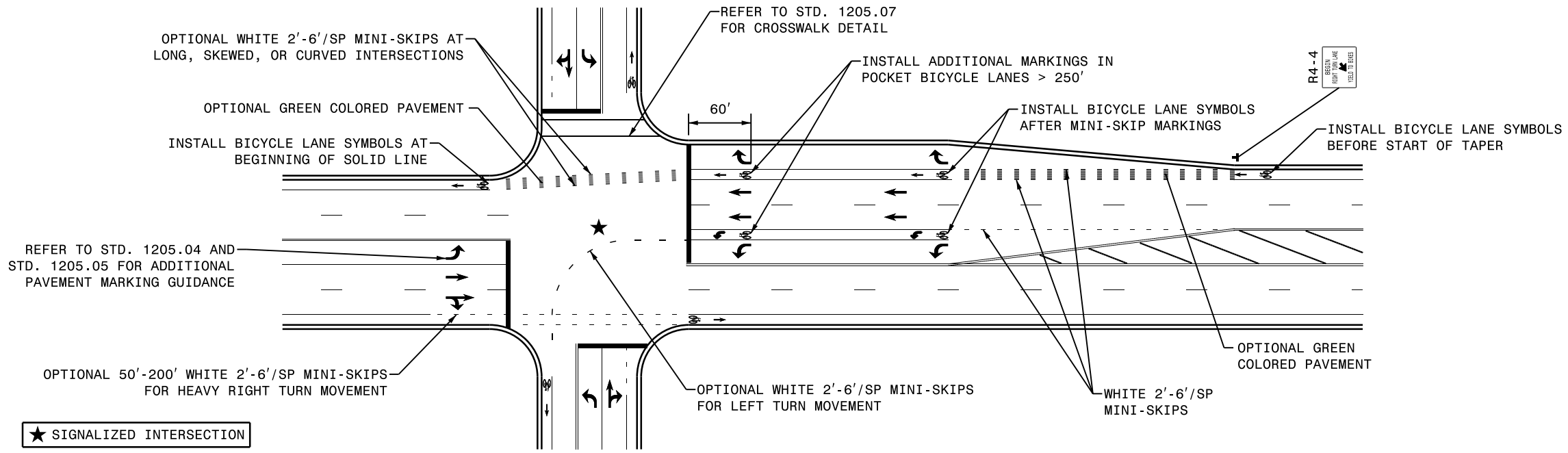
1-24

ROADWAY STANDARD DRAWING FOR

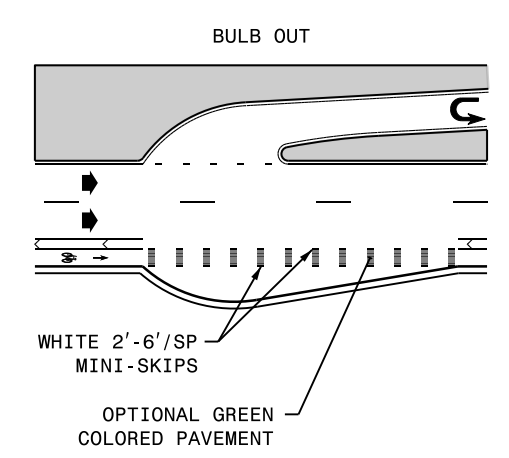
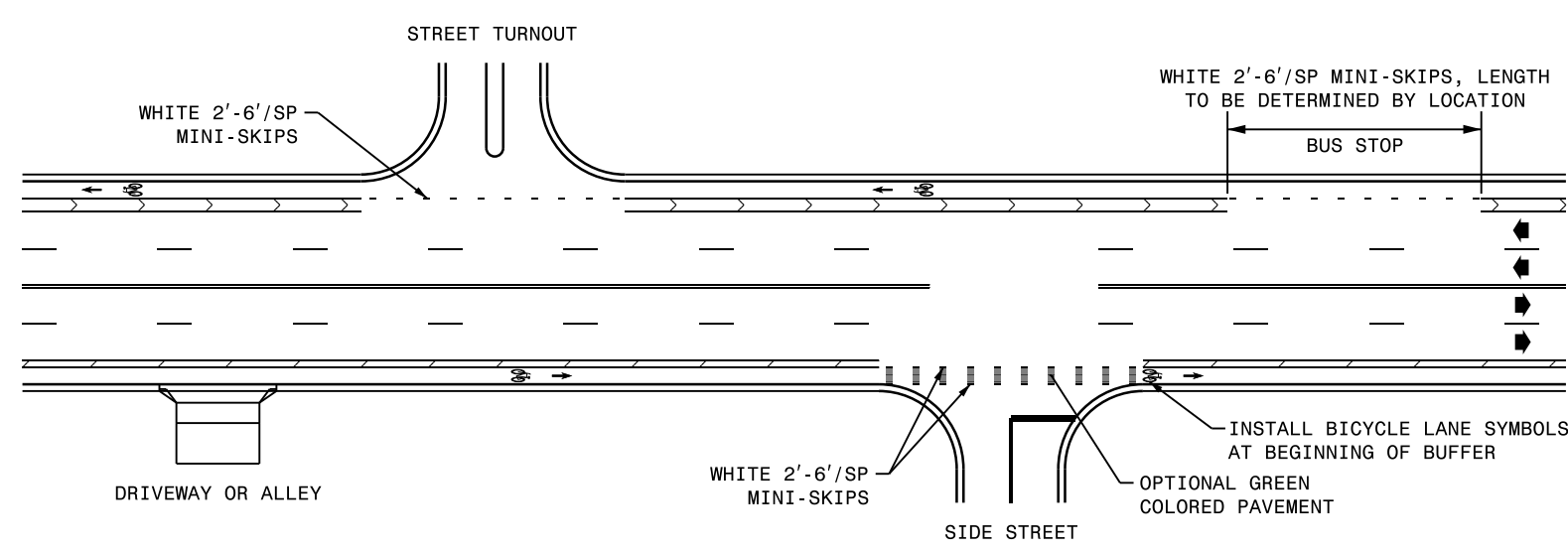
BICYCLE FACILITIES
STANDARD BICYCLE LANES

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

TYPICAL INTERSECTIONS



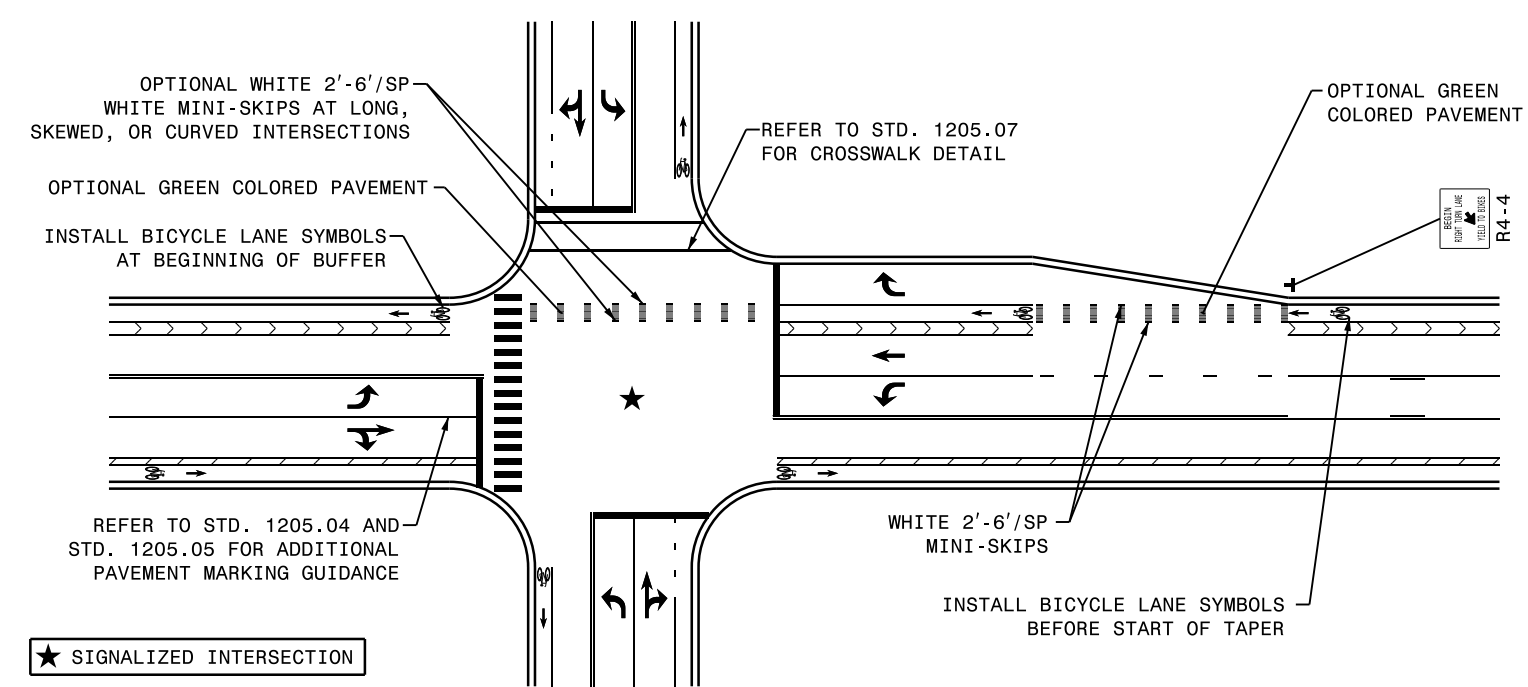
MISCELLANEOUS ENTRANCES



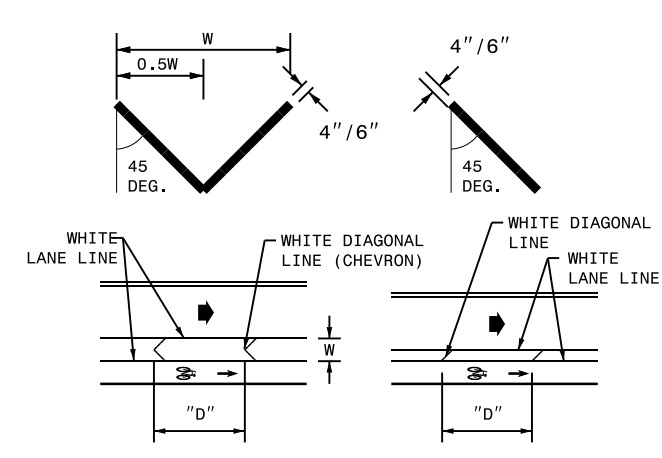
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-24

TYPICAL INTERSECTIONS

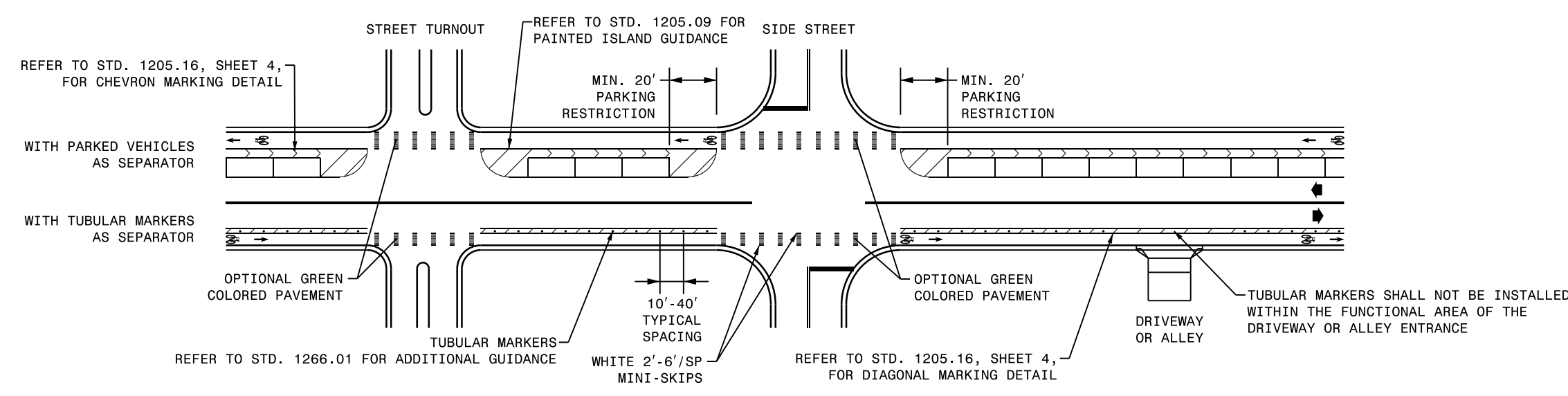


CHEVRON/DIAGONAL DETAIL

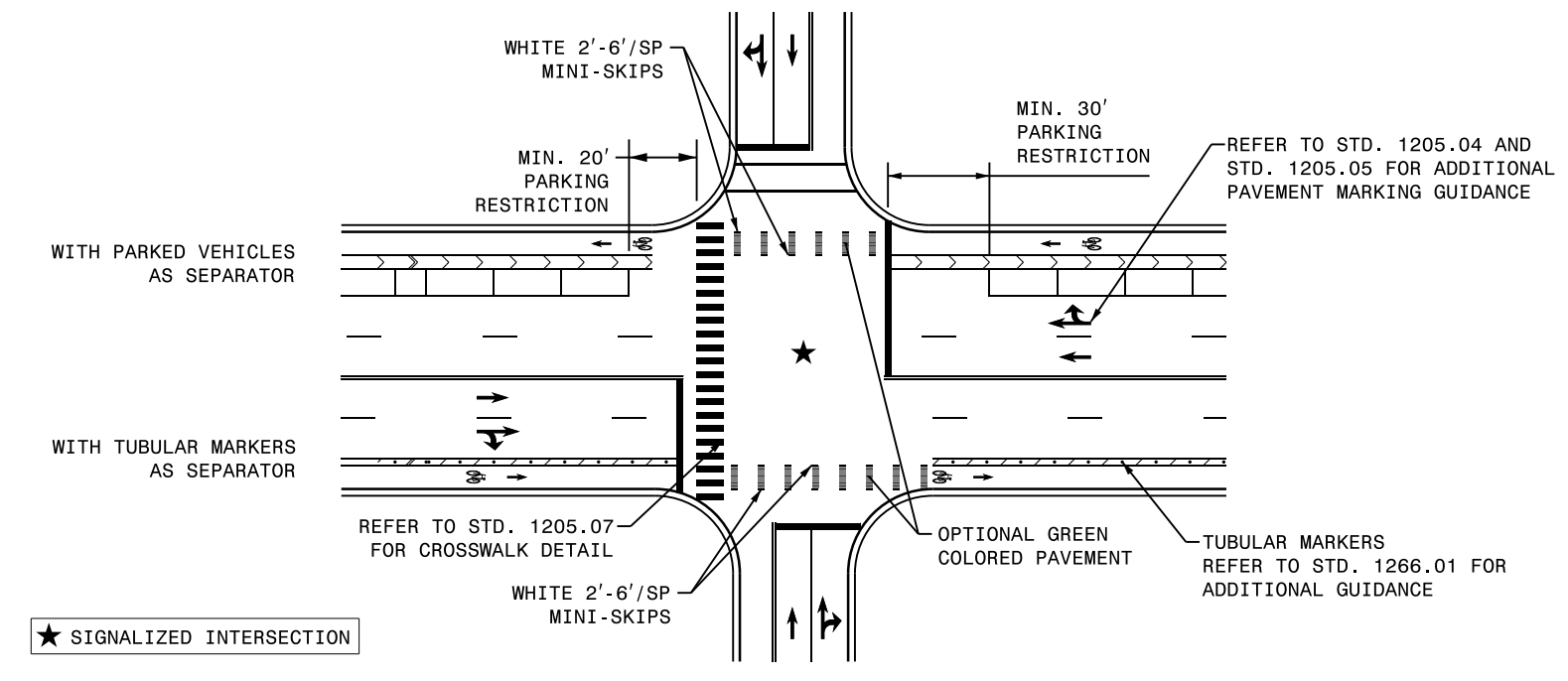


- GENERAL NOTES:
- 1- "D" = SPACING OF DIAGONAL MARKINGS OR CHEVRONS (MIN. 10 FEET, TYPICALLY EQUAL IN FEET TO THE POSTED SPEED LIMIT).
 - 2- THE MINIMUM BUFFER WIDTH SHALL BE 2 FEET.
 - 3- FOR A BUFFER SPACE GREATER THAN OR EQUAL TO 3 FEET, CHEVRONS SHALL BE USED WHEN MOTOR VEHICLE AND BICYCLE TRAFFIC ARE IN THE SAME DIRECTION.
 - 4- DIAGONAL MARKINGS ARE OPTIONAL FOR BUFFERS LESS THAN 3 FEET WIDE.
 - 5- IF USED, DIAGONAL MARKINGS SHALL SLANT AWAY FROM TRAFFIC IN THE ADJACENT MOTOR VEHICLE TRAVEL LANE.

ROADWAY STANDARD DRAWING FOR
BICYCLE FACILITIES
BUFFERED BICYCLE LANES

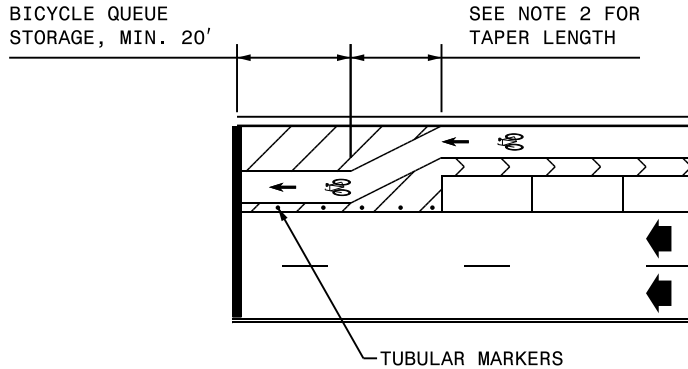


TYPICAL INTERSECTIONS

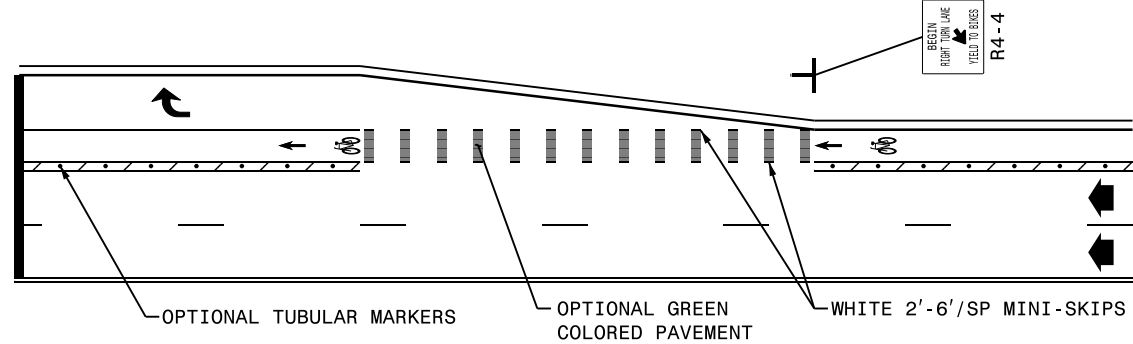


- GENERAL NOTES:
- ONE-WAY SEPARATED BICYCLE LANES SHALL HAVE A MINIMUM WIDTH OF 5 FEET.
 - WHERE TUBULAR MARKERS ARE USED AS THE PHYSICAL SEPARATION AND THE BUFFER WIDTH IS 2 FEET OR GREATER, THE BUFFER SHALL BE MARKED WITH CHEVRON OR ONE-DIRECTIONAL DIAGONAL MARKINGS. WHERE PARKED VEHICLES ARE USED AS THE PHYSICAL SEPARATION, THE MINIMUM BUFFER WIDTH BETWEEN THE PARKING LANE AND THE BICYCLE LANE SHALL BE 3 FEET.
 - TUBULAR MARKERS ARE NOT REQUIRED WHEN USING PARKED VEHICLES FOR SEPARATION BUT MAY BE USED TO DISCOURAGE VEHICLES FROM ENCROACHING UPON THE BUFFER SPACE.
 - PARKING SHOULD BE RESTRICTED AT LEAST 20 FEET FROM THE NEAREST CROSSWALK (MARKED OR UNMARKED). IN THE ABSENCE OF A CROSSWALK, PARKING SHOULD BE RESTRICTED AT LEAST 30 FEET FROM THE STOPBAR OR YIELD LINE (MARKED OR UNMARKED).

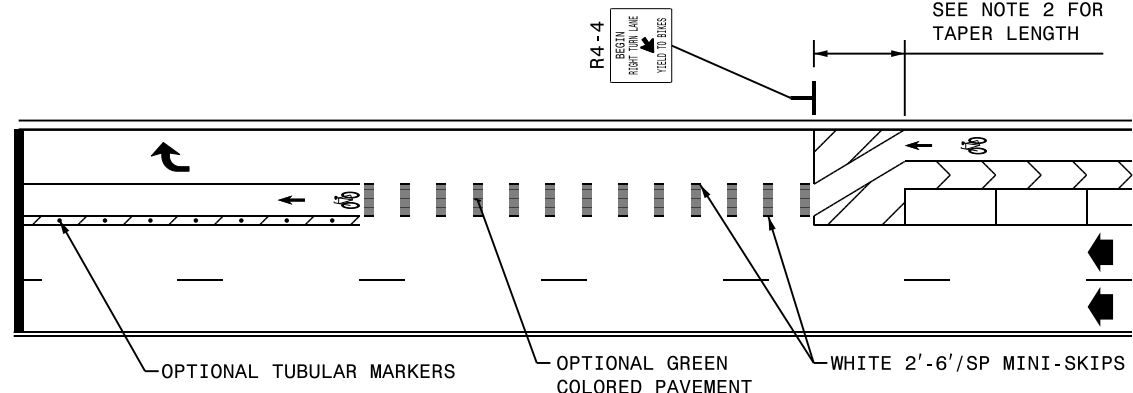
PARKED VEHICLES WITH BICYCLE LANE BEND-IN



TUBULAR MARKERS WITH RIGHT TURN LANE



PARKED VEHICLES WITH RIGHT TURN LANE

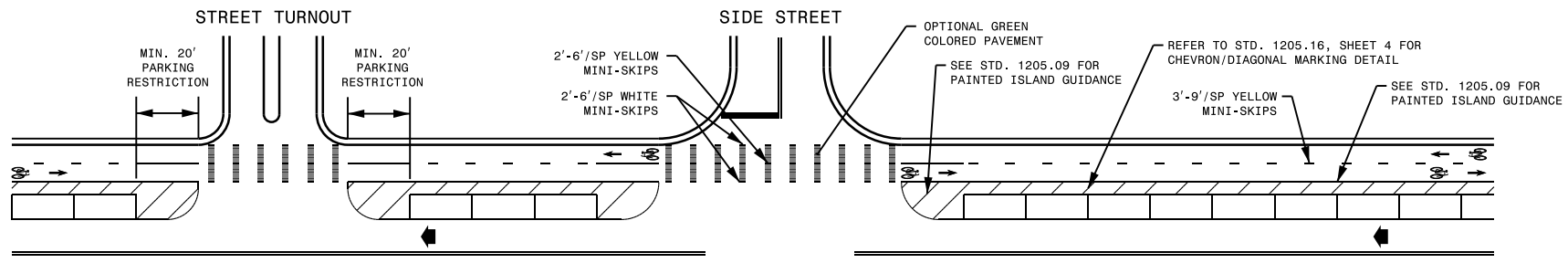


- GENERAL NOTES:**
- 1- REFER TO ROADWAY STANDARD DRAWINGS 1205.01, 1205.02, 1205.05, 1205.08, AND 1205.09 FOR ADDITIONAL PAVEMENT MARKING GUIDANCE.
 - 2- THE LENGTH OF THE BICYCLE LANE TRANSITION TAPER VARIES BY BICYCLE DESIGN SPEED. REFER TO THE LATEST VERSION OF THE AASHTO "GUIDE FOR DEVELOPMENT OF BICYCLE FACILITIES" FOR GUIDANCE.

1-24 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR **BICYCLE FACILITIES** ONE-WAY SEPARATED BICYCLE LANES INTERSECTION APPROACHES

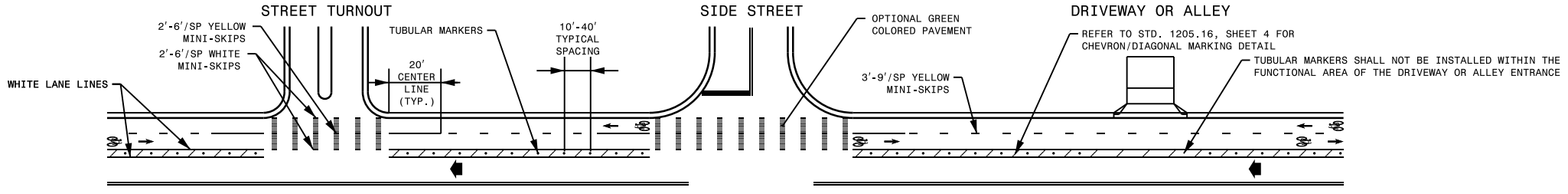
MISCELLANEOUS ENTRANCES - PARKED VEHICLES



STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

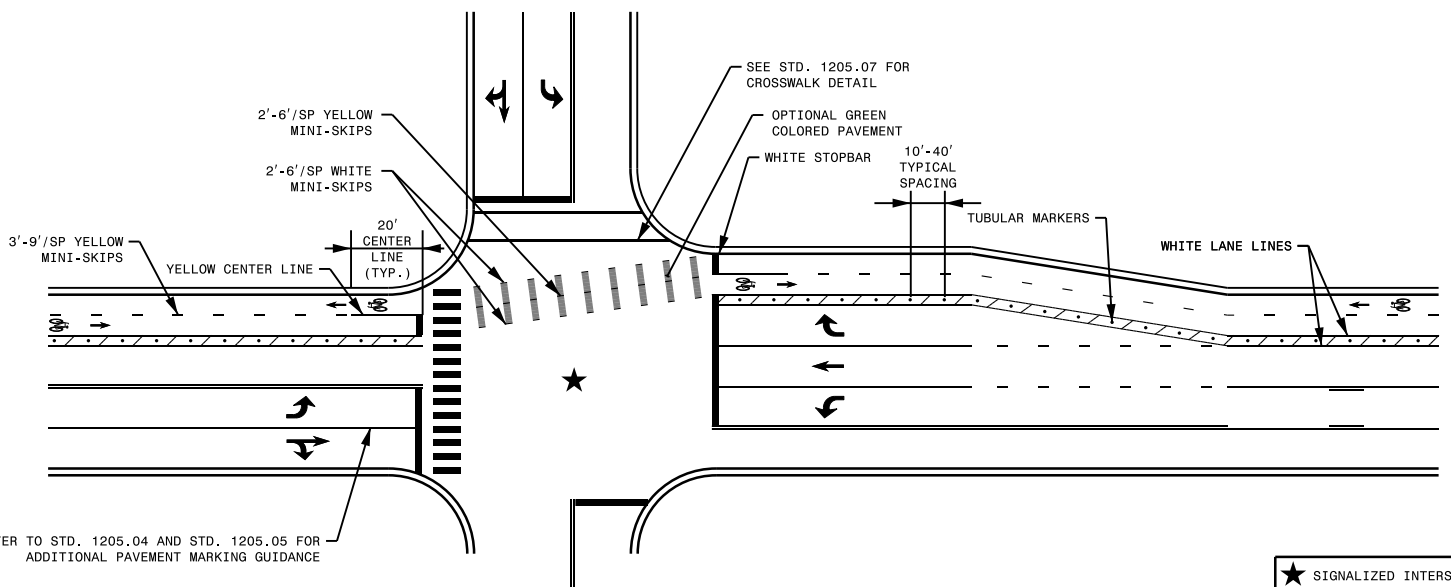
1-24

MISCELLANEOUS ENTRANCES - TUBULAR MARKERS



ROADWAY STANDARD DRAWING FOR
BICYCLE FACILITIES
TWO-WAY SEPARATED BICYCLE LANES

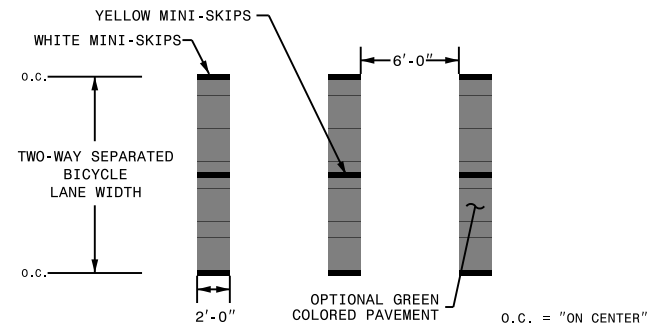
TYPICAL SIGNALIZED INTERSECTIONS



REFER TO STD. 1205.04 AND STD. 1205.05 FOR ADDITIONAL PAVEMENT MARKING GUIDANCE

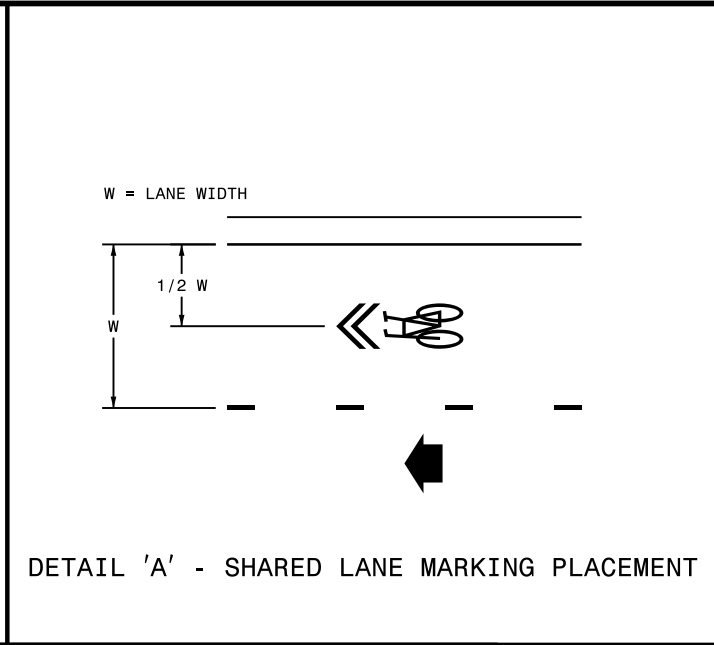
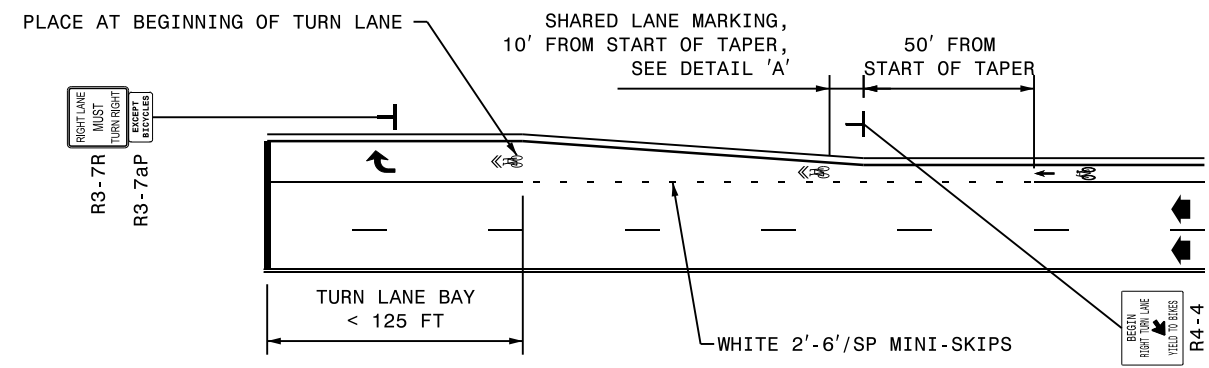
★ SIGNALIZED INTERSECTION

BICYCLE LANE EXTENSION MARKINGS



- GENERAL NOTES:
- 1- TURNS ON RED SHALL BE PROHIBITED AT SIGNALIZED INTERSECTIONS WHEN THE TURNING VEHICLE WOULD CROSS A TWO-WAY SEPARATED BICYCLE LANE FACILITIES.
 - 2- CONFLICTING VEHICULAR TRAFFIC SHALL BE PROHIBITED BY SIGNAL INDICATIONS TO CROSS THE BICYCLE LANE WHEN BICYCLE TRAFFIC IS ALLOWED TO PROCEED.
 - 3- WHERE TUBULAR MARKERS ARE USED AS THE PHYSICAL SEPARATION AND THE BUFFER WIDTH IS 2 FEET OR GREATER, THE BUFFER SHALL BE MARKED WITH CHEVRON OR ONE-DIRECTIONAL DIAGONAL MARKINGS. WHERE PARKED VEHICLES ARE USED AS THE PHYSICAL SEPARATION, THE MINIMUM BUFFER WIDTH BETWEEN THE PARKING LANE AND THE BICYCLE LANE SHALL BE 3 FEET.

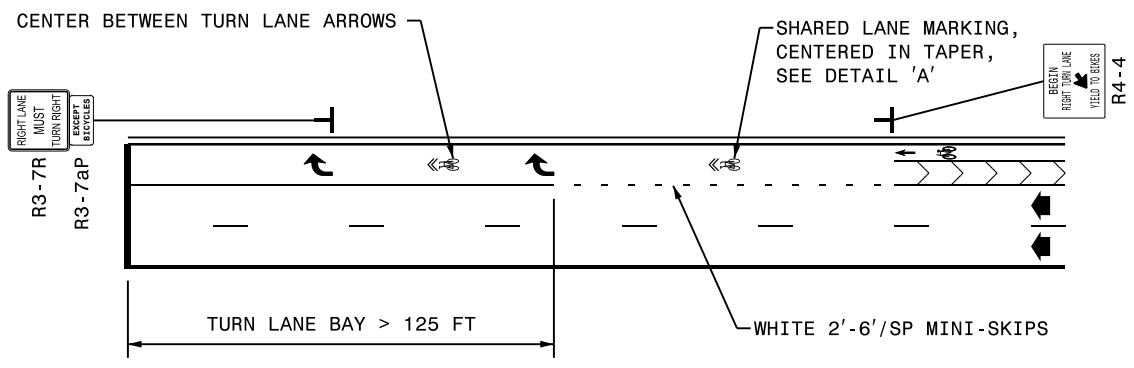
STANDARD BICYCLE LANE TO SHARED TURN LANE



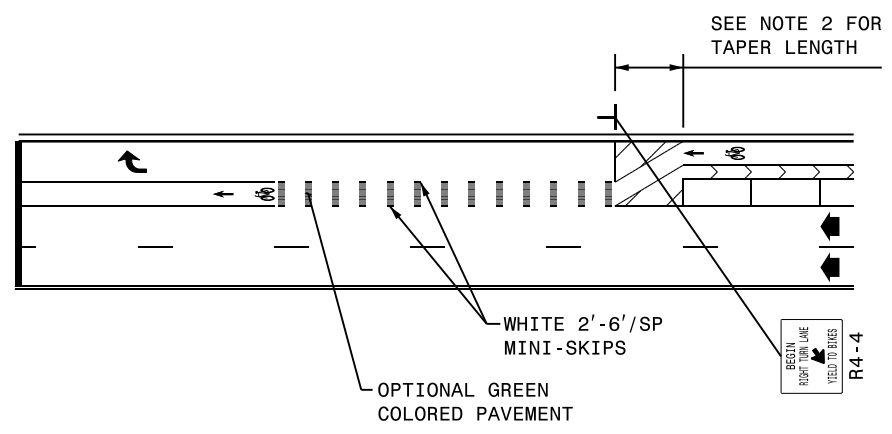
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-24

BUFFERED/SEPARATED BICYCLE LANE TO SHARED TURN LANE



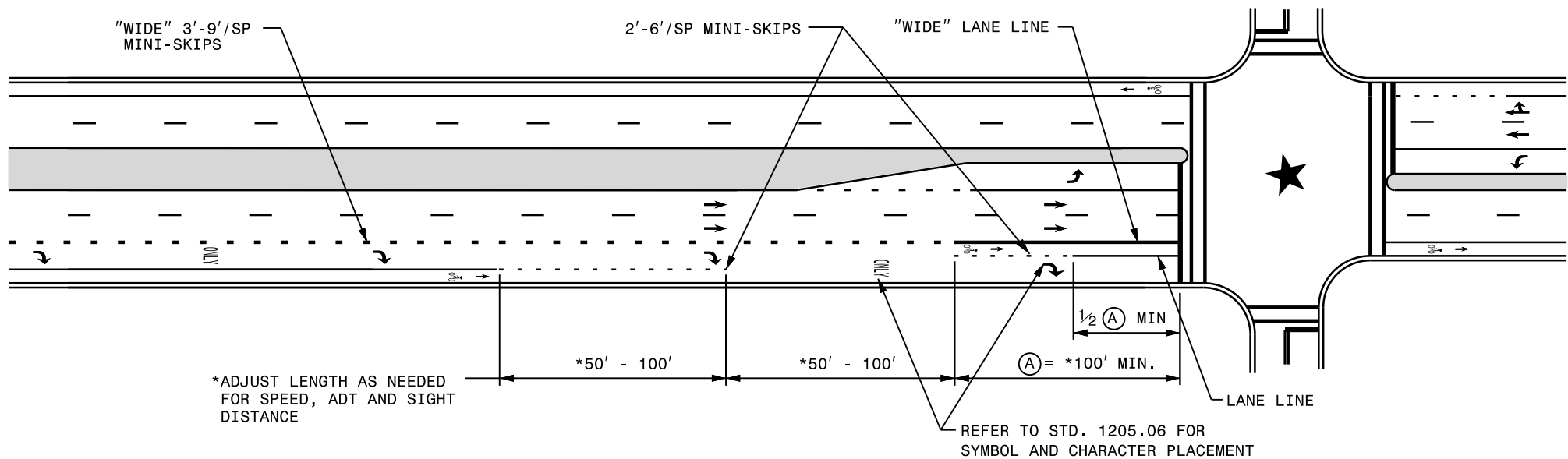
BUFFERED/SEPARATED BICYCLE LANE TO STANDARD BICYCLE LANE



ROADWAY STANDARD DRAWING FOR
BICYCLE FACILITIES
FACILITY TRANSITIONS

- GENERAL NOTES:
- 1- REFER TO ROADWAY STANDARD DRAWINGS 1205.01, 1205.02, 1205.05, 1205.08, AND 1205.09 FOR ADDITIONAL PAVEMENT MARKING GUIDANCE.
 - 2- THE LENGTH OF THE BICYCLE LANE TRANSITION TAPER VARIES BY BICYCLE DESIGN SPEED. REFER TO THE LATEST VERSION OF THE AASHTO "GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES" FOR GUIDANCE.

LANE DROP AT AN INTERSECTION



*ADJUST LENGTH AS NEEDED FOR SPEED, ADT AND SIGHT DISTANCE

REFER TO STD. 1205.06 FOR SYMBOL AND CHARACTER PLACEMENT

★ SIGNALIZED INTERSECTION

NOTES:

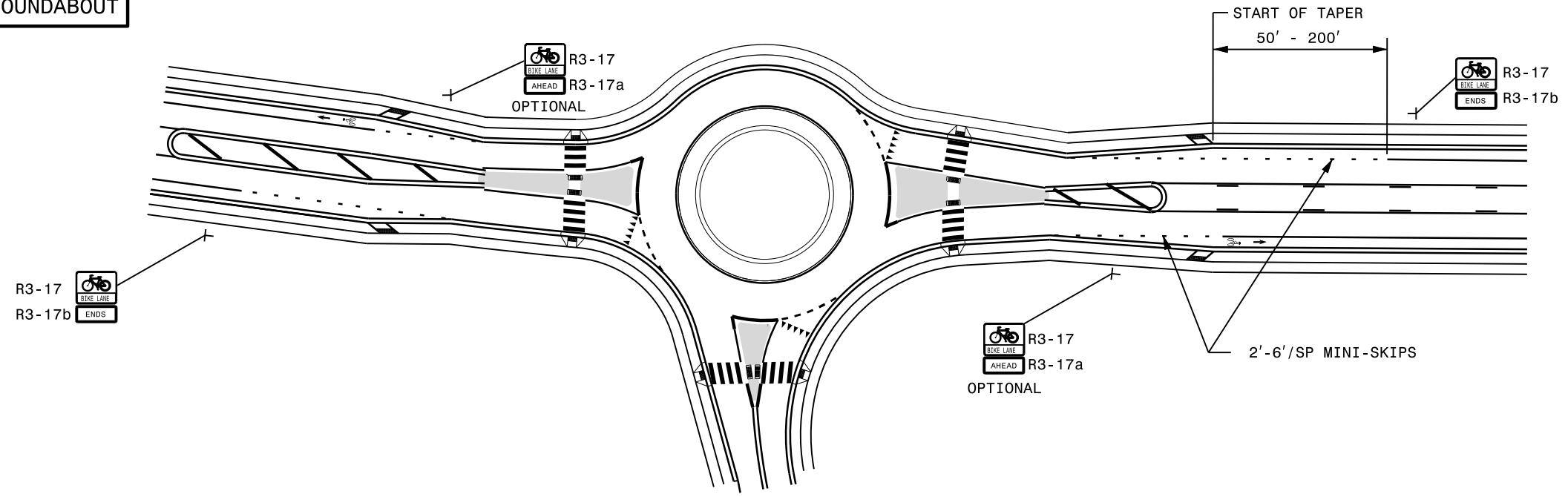
- 1- THE BIKE LANE SHOULD NOT BE STRIPED DIAGONALLY ACROSS THE TRAVEL LANE.
- 2- THE R4-4 SIGN "BEGIN RIGHT TURN LANE YIELD TO BIKE" SHOULD NOT BE USED.

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

1-24

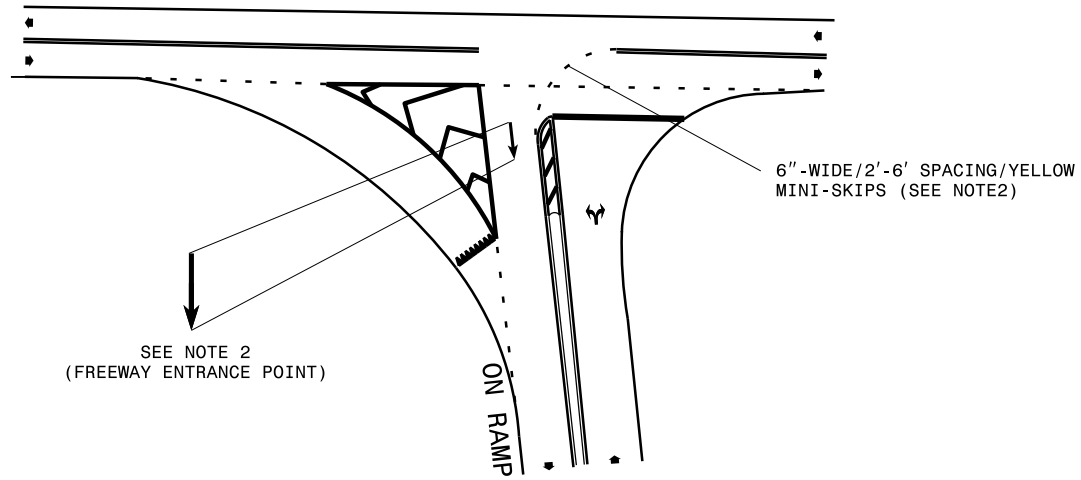
ROADWAY STANDARD DRAWING FOR
BIKE FACILITIES
 LANE DROPS AND ROUNDABOUTS

ROUNDABOUT



TWO-LANE, TWO-WAY

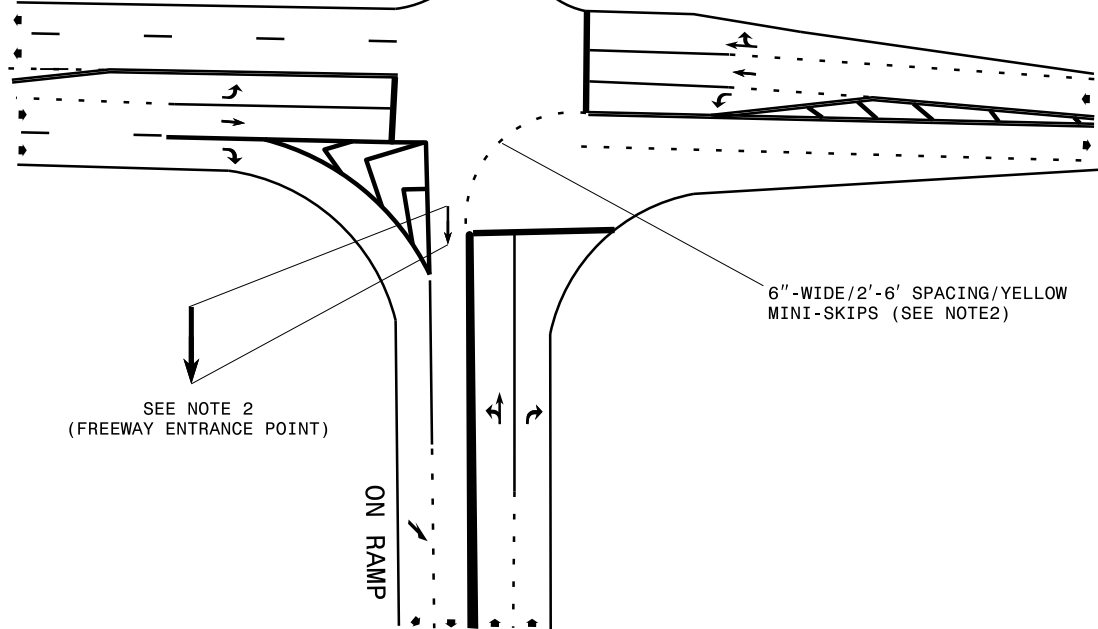
Y LINE



SEE NOTE 2
(FREEWAY ENTRANCE POINT)

SINGLE LEFT TO ENTRANCE RAMP

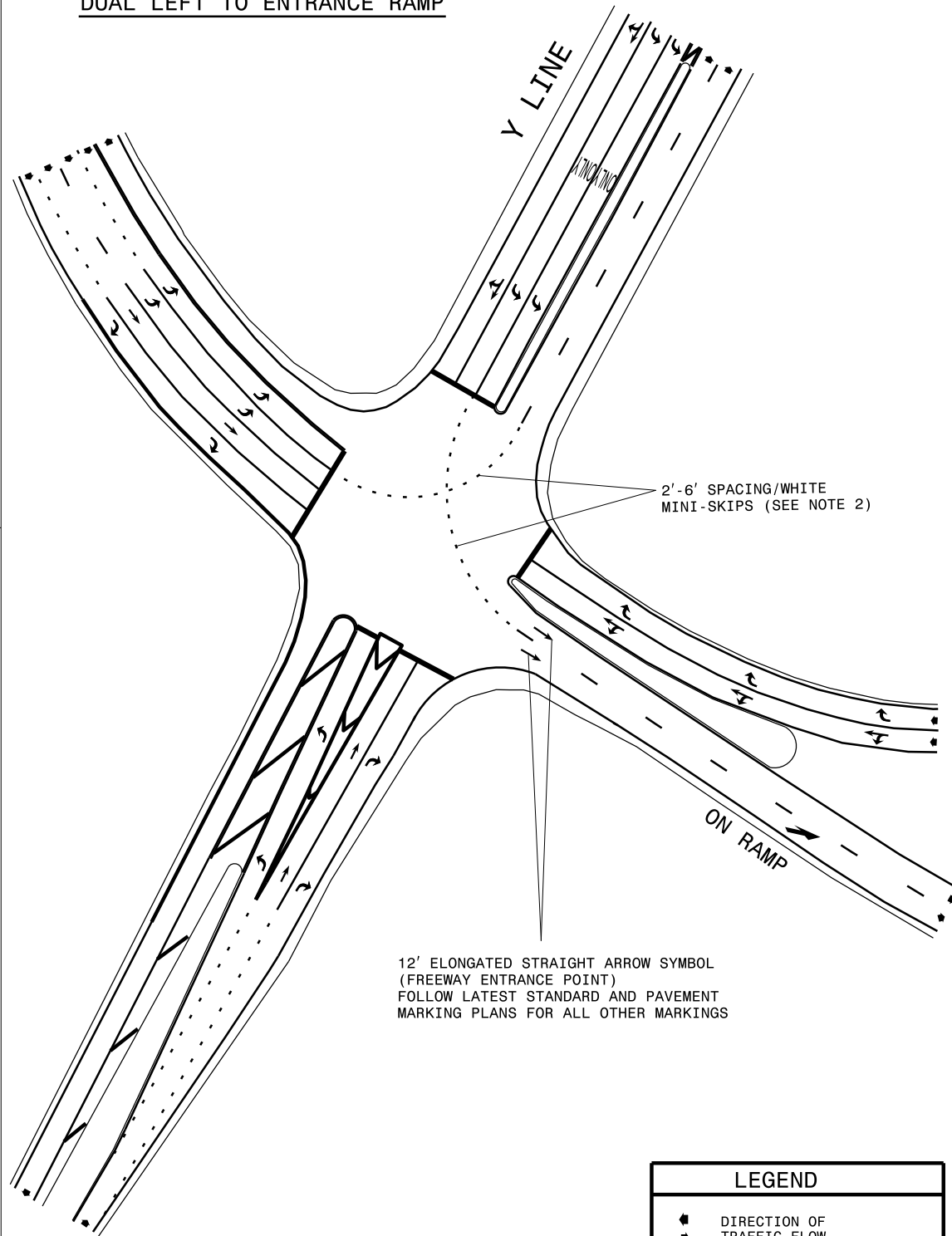
Y LINE



SEE NOTE 2
(FREEWAY ENTRANCE POINT)

DUAL LEFT TO ENTRANCE RAMP

Y LINE



2'-6" SPACING/WHITE
MINI-SKIPS (SEE NOTE 2)

12' ELONGATED STRAIGHT ARROW SYMBOL
(FREEWAY ENTRANCE POINT)
FOLLOW LATEST STANDARD AND PAVEMENT
MARKING PLANS FOR ALL OTHER MARKINGS

LEGEND	
	DIRECTION OF TRAFFIC FLOW
	PAVEMENT MARKING SYMBOLS

NOTES:

- REFER TO THE LATEST NCDOT ROADWAY STANDARD DRAWINGS AND THE PAVEMENT MARKING PLANS FOR ADDITIONAL PAVEMENT MARKING GUIDANCE.
- PROPOSED MINI-SKIPS AND ELONGATED STRAIGHT ARROW SYMBOL MATERIALS SHALL BE PER THE PAVEMENT MARKING PLAN OR AS DIRECTED BY THE ENGINEER. ELONGATED STRAIGHT ARROW SHALL BE APPROXIMATELY 12' LONG AND SHALL BE PAID AS A SYMBOL.

GENERAL NOTES:

- 1- MARKERS ARE GENERALLY NOT REQUIRED ALONG EDGE LINES EXCEPT IF DESIGNATED IN THE PLANS OR DIRECTED BY THE ENGINEER. WHEN THEY ARE REQUIRED, SPACE THEM ON 20 FT. CENTERS, AND OFFSET 2 INCHES FROM THE EDGE LINE ON THE TRAFFIC SIDE.
- 2- PLACE CRYSTAL/RED MARKERS AT INTERSECTIONS AND INTERCHANGES WHERE WRONG-WAY MOVEMENTS ARE POSSIBLE. POSITION THE RED SIDE OF THE MARKER TO FACE "WRONG-WAY" TRAFFIC. WHEN USED, PLACE CRYSTAL/RED MARKERS ALONG THE ENTIRE LENGTH OF THE PROJECT.
- 3- DO NOT PLACE PAVEMENT MARKERS CLOSER THAN 3 INCHES TO A PAVEMENT CONSTRUCTION JOINT (AS FEASIBLE), EXCEPT WHEN PLACED BETWEEN DOUBLE YELLOW CENTER LINES, AND ALONG YELLOW SKIP LINES ON TWO-LANE, TWO-WAY ROADWAYS WHERE PASSING IS ALLOWED IN BOTH DIRECTIONS.
- 4- DO NOT PLACE PAVEMENT MARKERS DIRECTLY ON PAVEMENT MARKING LINES.
- 5- PLACE PAVEMENT MARKERS USED IN CONJUNCTION WITH DOUBLE YELLOW CENTER LINES MID-WAY BETWEEN THE LINES. PROVIDE A GAP BETWEEN THE LINES AND THE MARKER TO REDUCE OVERSPRAYING THE MARKER DURING REPAINTING OPERATIONS.
- 6- MARKERS ARE NOT REQUIRED ALONG MINI-SKIP LINES IN TAPERS.

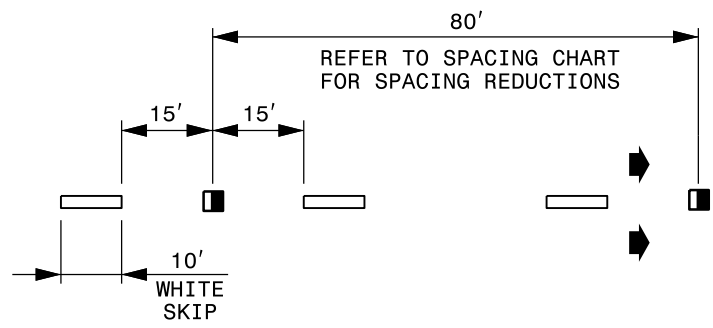
PAVEMENT MARKER SPACING CHART	
TYPE OF PAVEMENT MARKING	TYPICAL SPACING (FT)
SKIP LINES AND CENTER LINES ALONG THRU LANES- ALONG TANGENT SECTIONS AND HORIZONTAL CURVES LESS THAN 6° HORIZONTAL CURVES ≥ 6°	80 40
TURN LANES- MINI-SKIP LINES SKIP LINES SOLID LINES CENTER LINES	24 40 20 40
MINI-SKIP LINES AT LANE DROP APPROACHES	24
TWO-WAY RAMP CENTER LINES	40
GORE LINES	20
PAINTED ISLANDS- WHITE YELLOW	20 40
RAISED MEDIAN ISLANDS	40
WRONG WAY RAMP ARROW	5
TAPERS	40
NARROW BRIDGES- EDGE LINE CENTER LINE	20 40
ONE LANE BRIDGES- EDGE LINE	20
WORK ZONE APPLICATIONS	
2-LANE, 2-WAY ON-SITE DIVERSION	20 FT. FOR CENTER LINE
ALL OTHER DIVERSIONS	1/2 NORMAL SPACING

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

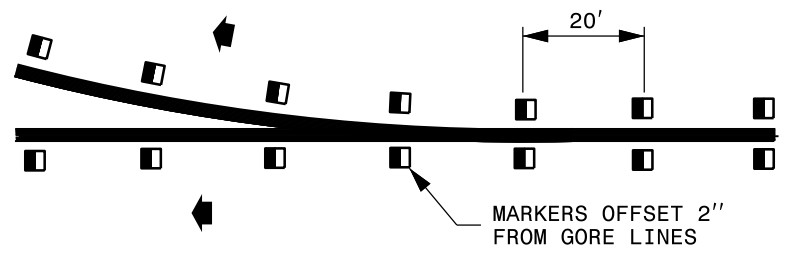
1-24

ROADWAY STANDARD DRAWING FOR
RAISED PAVEMENT MARKERS
 INSTALLATION SPACING

10'-30'/SP SKIP LINE



GORE LINES



STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

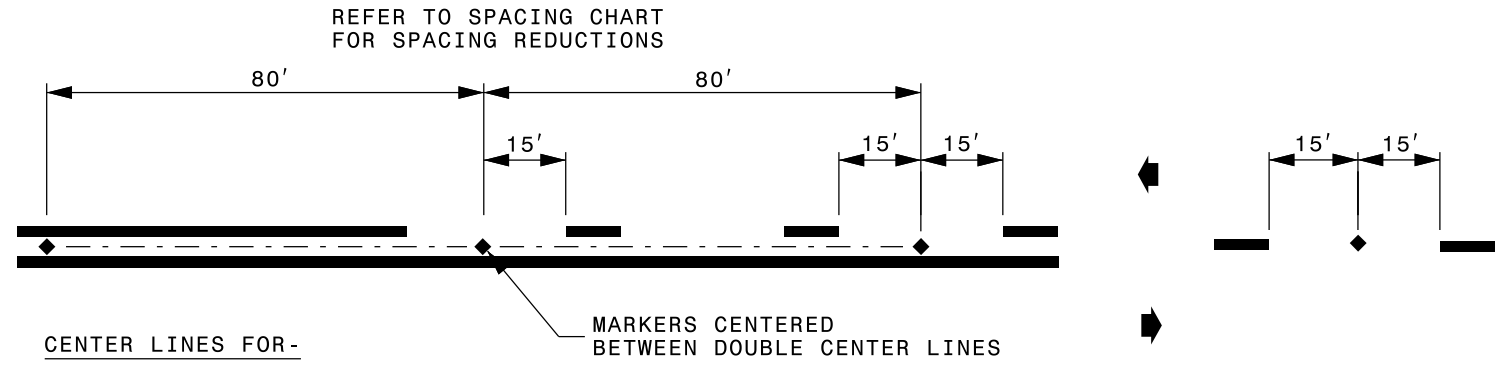
1-24

ROADWAY STANDARD DRAWING FOR
RAISED PAVEMENT MARKERS
INSTALLATION SPACING

SHEET 2 OF 3

1250.01

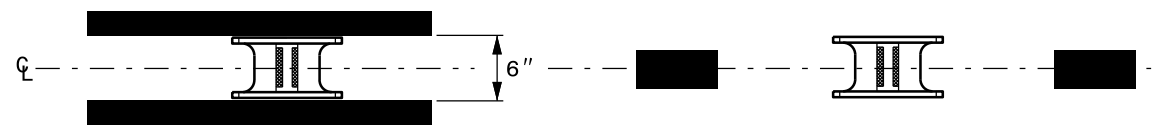
YELLOW CENTER LINES



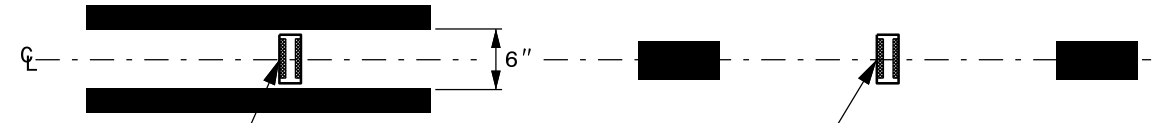
CENTER LINES FOR -
TWO-LANE, TWO-WAY ROADWAYS
UNDIVIDED ROADWAYS
TWO-WAY LEFT TURN LANES

DETAIL OF PAVEMENT MARKER PLACEMENT

SNOWPLOWABLE RAISED PAVEMENT MARKERS



RAISED REFLECTIVE PAVEMENT MARKERS



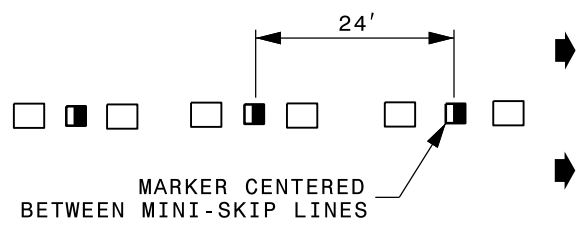
MARKERS CENTERED BETWEEN DOUBLE CENTER LINES

MARKERS CENTERED BETWEEN SKIP LINES

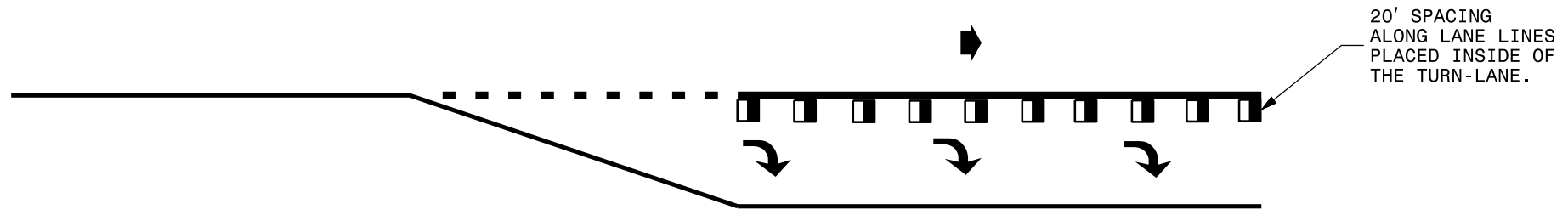
LEGEND

- CRYSTAL/RED PAVEMENT MARKER
- YELLOW/YELLOW PAVEMENT MARKER
- DIRECTION OF TRAFFIC FLOW

3'-9'/SP MINI-SKIP LINE



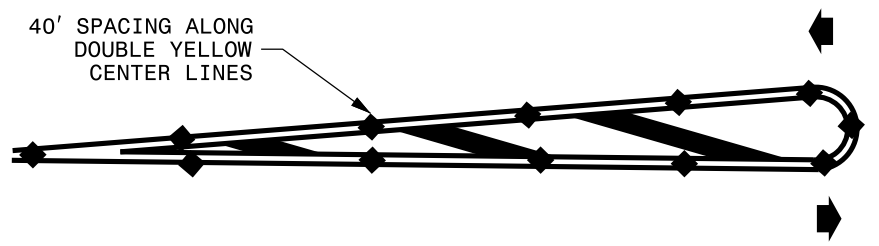
AUXILIARY TURN LANES



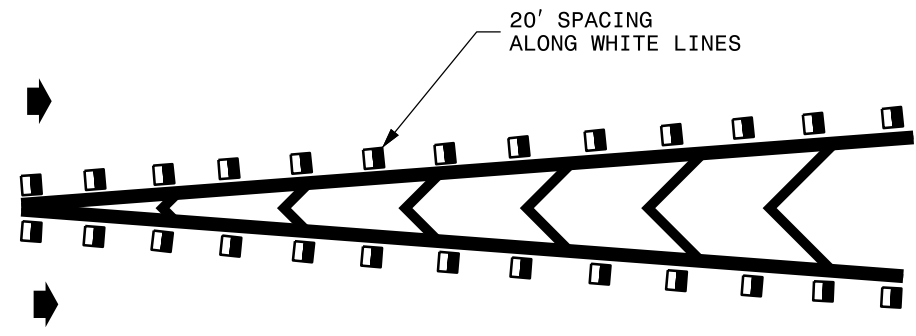
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-24

YELLOW PAINTED ISLANDS



WHITE PAINTED ISLANDS

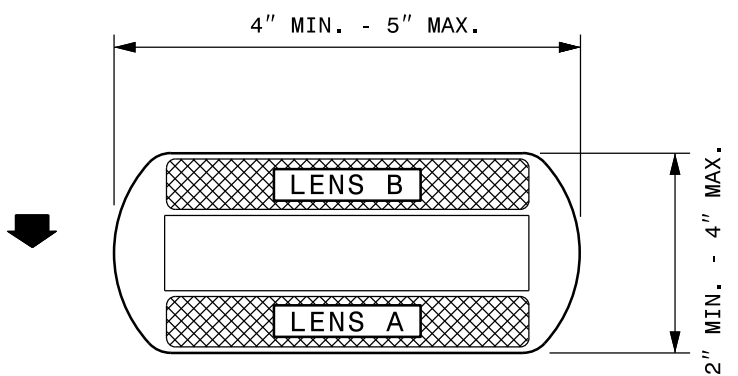


ROADWAY STANDARD DRAWING FOR
RAISED PAVEMENT MARKERS
INSTALLATION SPACING

LEGEND	
	DIRECTION OF TRAFFIC FLOW
	CRYSTAL/RED PAVEMENT MARKER
	YELLOW/YELLOW PAVEMENT MARKER
	PAVEMENT MARKING SYMBOL

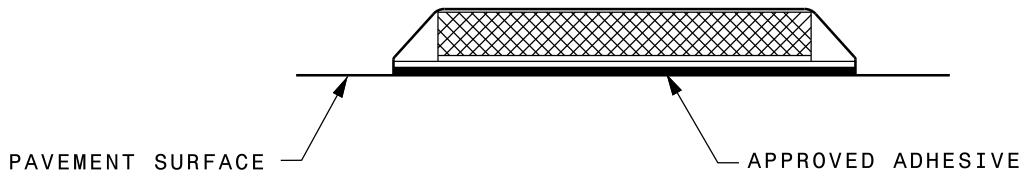
TYPICAL PAVEMENT MARKER

TOP VIEW

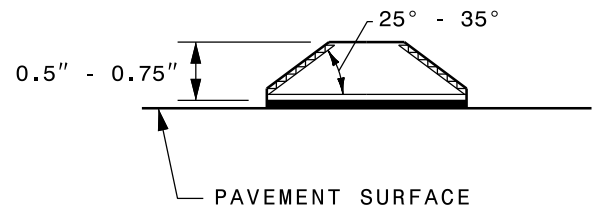


LENS A	LENS B
YELLOW CRYSTAL CRYSTAL	YELLOW RED CRYSTAL

FRONT VIEW



SIDE VIEW



GENERAL NOTES:

- 1- USE A MINIMUM OF 2 SQUARE INCHES FOR THE AREA OF EACH REFLECTIVE LENS.
- 2- FOR A COMPLETE LISTING OF PAVEMENT MARKERS AND ADHESIVES ACCEPTABLE FOR USE IN NORTH CAROLINA CONTACT THE NCDOT SIGNING AND DELINEATION UNIT.

LEGEND	
	DIRECTION OF TRAFFIC FLOW

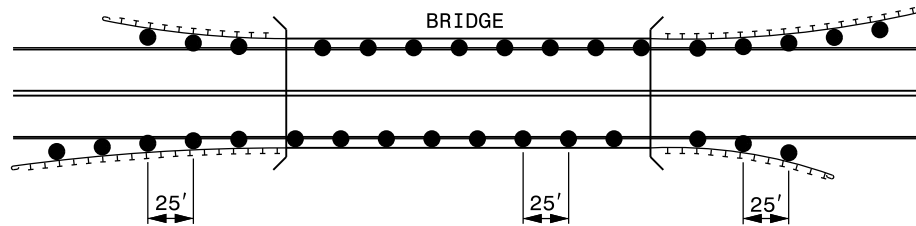
STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

1-24

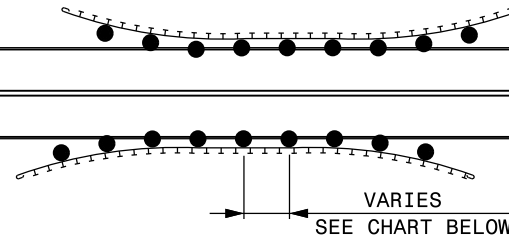
ROADWAY STANDARD DRAWING FOR
RAISED PAVEMENT MARKERS
 PERMANENT AND TEMPORARY

**UNDIVIDED ROADWAYS,
TWO-LANE AND MULTI-LANE**

**GUARDRAIL/BARRIER
AT BRIDGES**



**GUARDRAIL/BARRIER
ALONG ROADWAY**

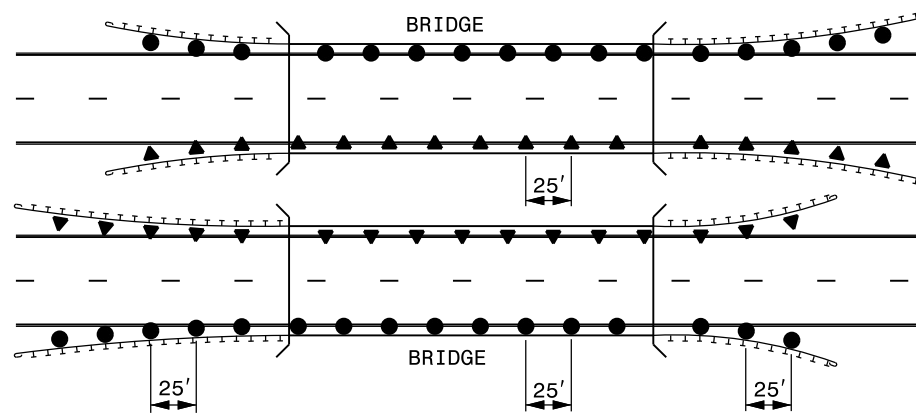


STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

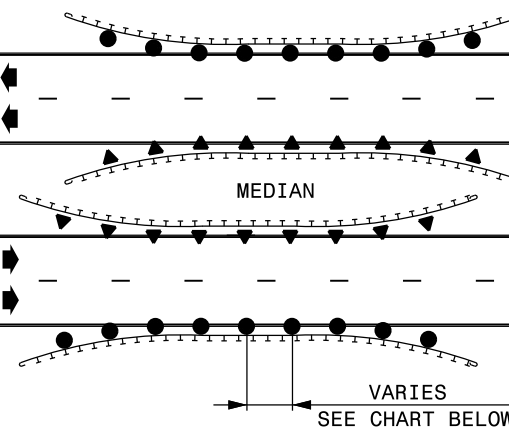
1-24

DIVIDED ROADWAYS

**GUARDRAIL/BARRIER
AT BRIDGES**



**GUARDRAIL/BARRIER
ALONG ROADWAY**



GENERAL NOTES:

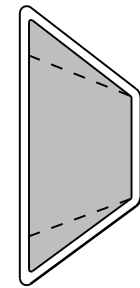
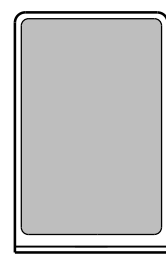
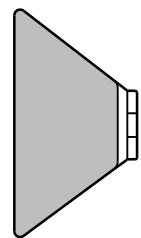
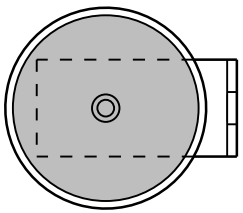
- 1- INSTALL DELINEATORS AT ALL LOCATIONS OF PERMANENT AND TEMPORARY GUARDRAILS, CONCRETE BARRIERS, AND BRIDGE RAILS.
- 2- INSTALL DELINEATORS PRIOR TO ALLOWING TRAFFIC TO PROCEED IN AN AREA WITH NEW BARRIER OR GUARDRAIL INSTALLATIONS (TEMPORARY AND PROPOSED).
- 3- CONFORM COLOR OF DELINEATORS TO THE COLOR OF THE ADJACENT EDGE LINES.
- 4- POSITION DELINEATORS SUCH THAT THE REFLECTIVE SHEETING IS PERPENDICULAR TO THE ROADWAY.
- 5- BEGIN DELINEATOR PLACEMENT 5 FEET FROM BARRIER APPROACH ENDS AND 25 FEET FROM GUARDRAIL APPROACH ENDS.
- 6- BARRIER DELINEATORS THAT FALL ON JOINTS OR MOVE CONNECTIONS (UP TO 12 INCHES), ON EITHER SIDE OF THE JOINT.
- 7- POSITION THE GUARDRAIL AND/OR BARRIER DELINEATORS TO ACHIEVE A UNIFORM HEIGHT WITH THE BARRIER DELINEATORS WHERE GUARDRAIL TIES TO CONCRETE BARRIER.

DELINEATOR SPACING REQUIREMENTS FOR PERMANENT AND CONSTRUCTION ZONE GUARDRAIL, BARRIER, AND BRIDGE RAIL	
SPACING (FT.)	RAIL LOCATIONS
100'	ROADWAY CURVATURE < 3° RAIL PARALLEL TO ROADWAY
50'	ROADWAY CURVATURE ≥ 3° RAIL PARALLEL TO ROADWAY
25'	TRANSITIONS, TAPERS, & SECTIONS LESS THAN 200' LONG
25'	BRIDGE RAILS AND RAILS AT BRIDGE APPROACHES

LEGEND	
DIRECTION OF TRAFFIC FLOW	YELLOW DELINEATOR
DIRECTION OF TRAFFIC FLOW	CRYSTAL DELINEATOR
GUARDRAIL OR BARRIER	

ROADWAY STANDARD DRAWING FOR
GUARDRAIL AND BARRIER DELINEATORS
INSTALLATION SPACING

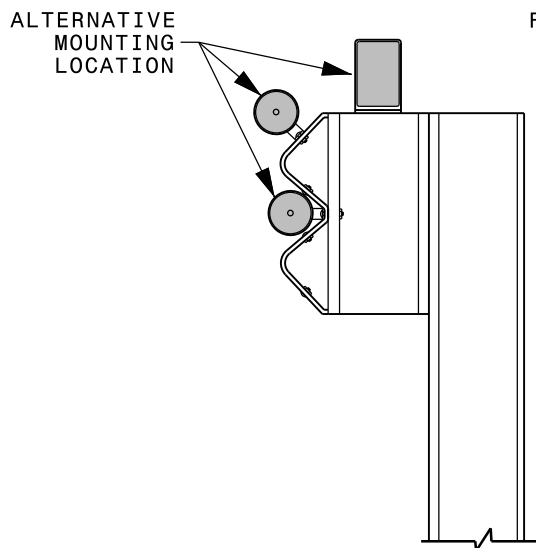
TYPICAL DELINEATORS



1-24

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

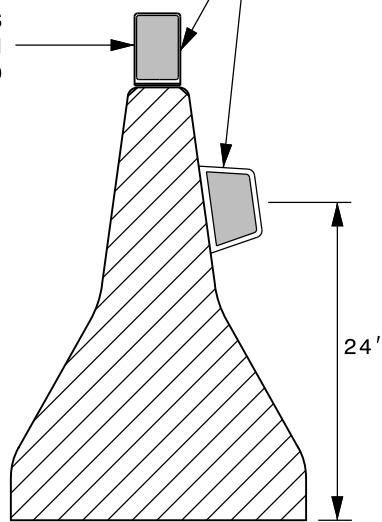
MOUNTING DETAILS



ALTERNATIVE MOUNTING LOCATION

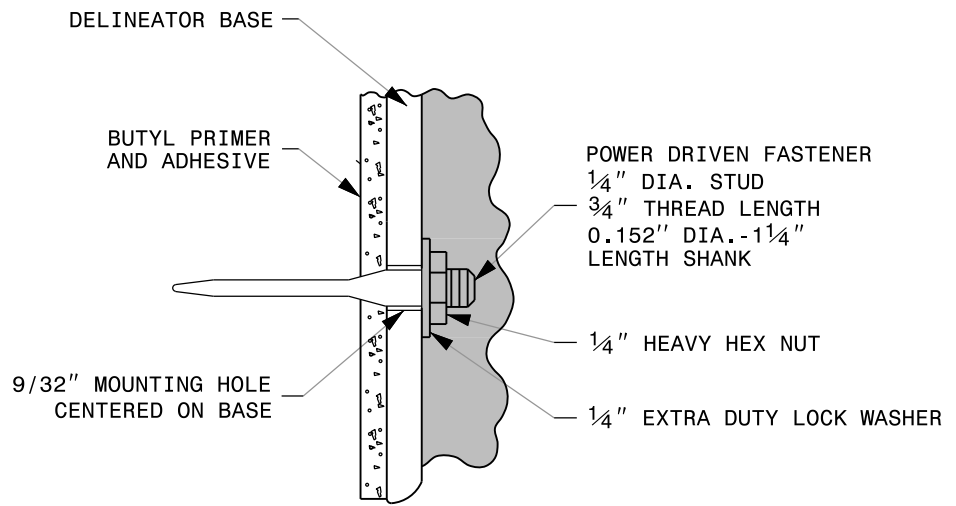
USE EITHER MOUNTING LOCATION FOR PERMANENT APPLICATIONS

FOR WORKZONE APPLICATIONS UNLESS A GLARE SCREEN IS UTILIZED



24"

TYPICAL POWER DRIVEN FASTENER INSTALLATION FOR BARRIER



9/32" MOUNTING HOLE CENTERED ON BASE

DELINEATOR BASE

BUTYL PRIMER AND ADHESIVE

POWER DRIVEN FASTENER
1/4" DIA. STUD
3/4" THREAD LENGTH
0.152" DIA. - 1 1/4" LENGTH SHANK

1/4" HEAVY HEX NUT

1/4" EXTRA DUTY LOCK WASHER

PAINT THE EXPOSED PORTIONS OF THE NUT, LOCK WASHER, AND POWER DRIVEN FASTENERS WITH ZINC-RICH PAINT TO MEET THE ENGINEER'S APPROVAL AFTER INSTALLATION OF THE ASSEMBLY.

GENERAL NOTES:

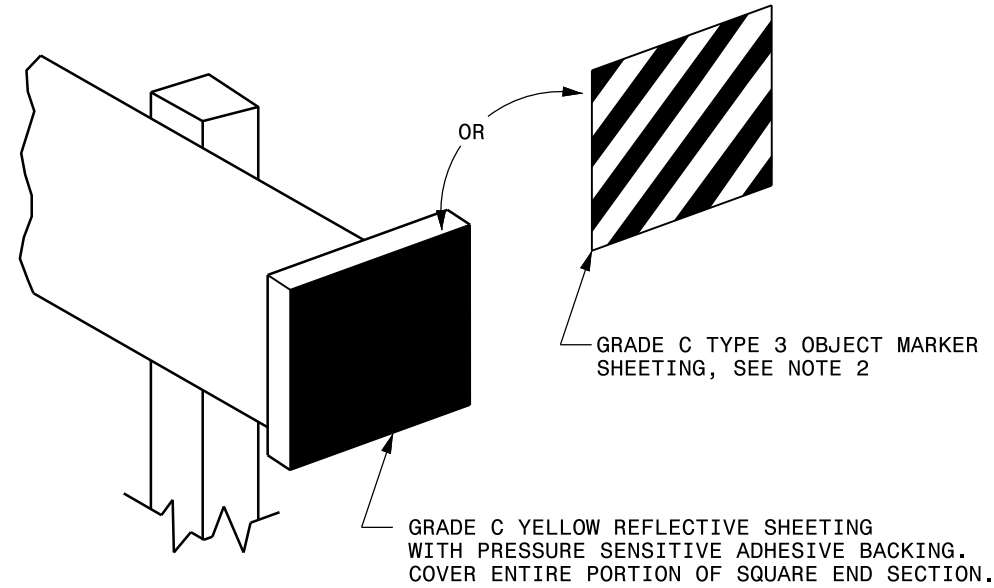
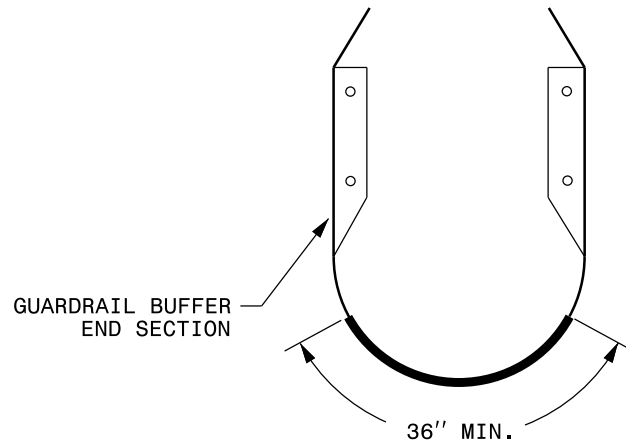
- 1- USE A MINIMUM 7 SQ. IN. REFLECTIVE AREA FOR SIDE MOUNTED DELINEATORS.
- 2- USE A MINIMUM 28 SQ. IN. REFLECTIVE AREA FOR TOP MOUNTED BARRIER DELINEATORS.
- 3- USE A MINIMUM 7 SQ. IN. REFLECTIVE AREA FOR TOP MOUNTED GUARDRAIL DELINEATORS.
- 4- USE ADHESIVE, CLIP ON GUARDRAIL POST, GUARDRAIL BOLTS, POWER DRIVEN FASTENERS, OR OTHER MOUNTING METHODS RECOMMENDED BY THE MANUFACTURER AS APPROVED BY THE ENGINEER.

ROADWAY STANDARD DRAWING FOR

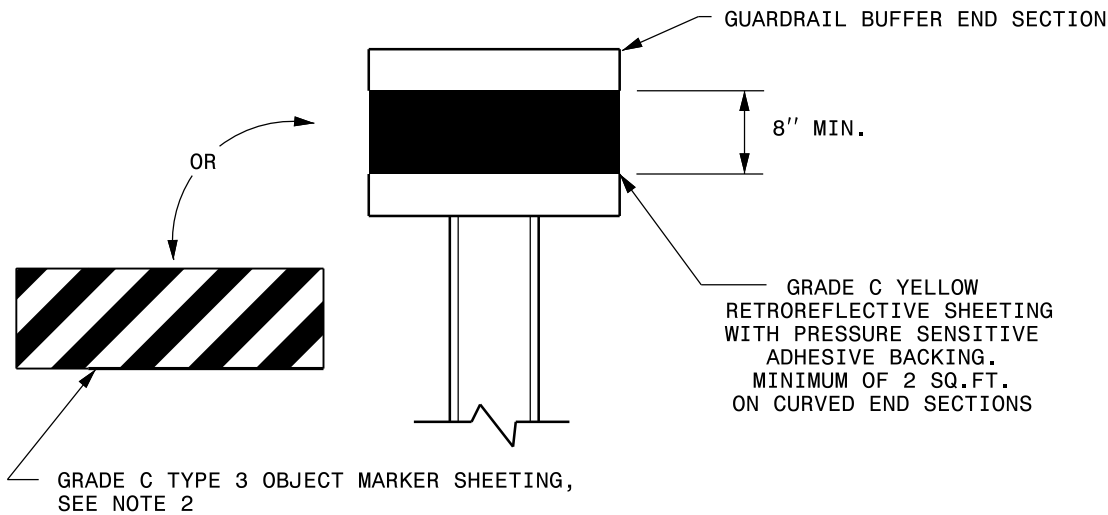
GUARDRAIL & BARRIER DELINEATORS

TYPES AND MOUNTING

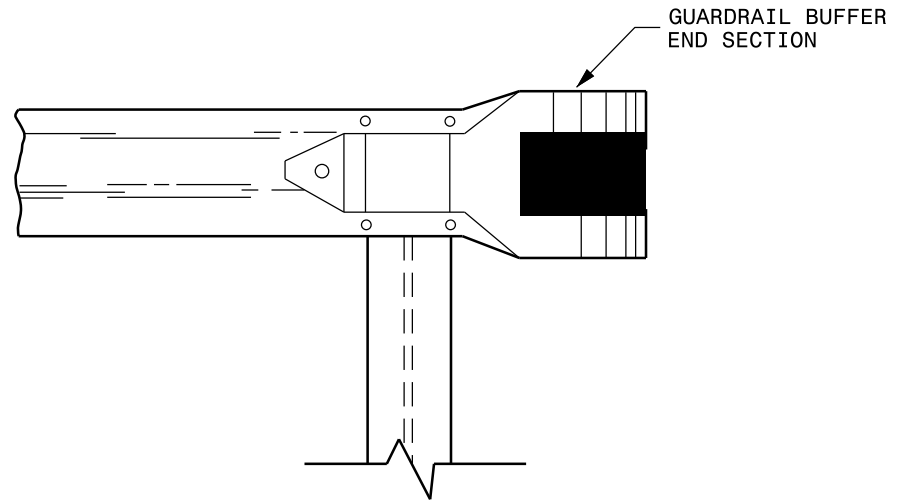
TOP VIEW



FRONT VIEW



SIDE VIEW



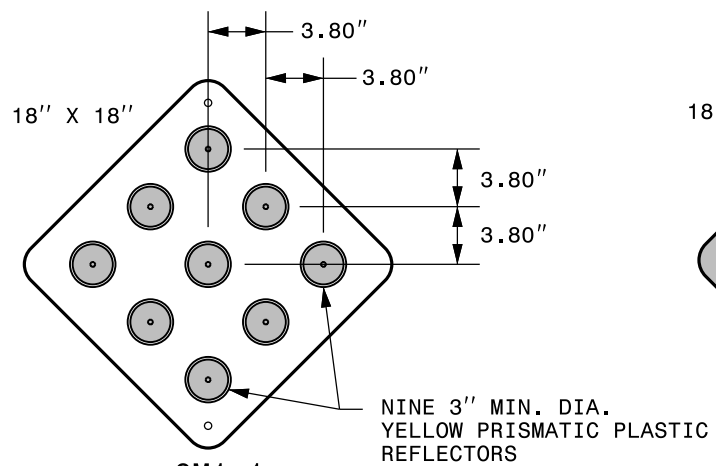
GENERAL NOTES:

- 1- GUARDRAIL END DELINEATION IS REQUIRED ON ALL APPROACH AND TRAILING.
- 2- TYPE 3 OBJECT MARKER SHEETING SHALL CONSIST OF ALTERNATING BLACK AND RETROREFLECTIVE YELLOW STRIPES SLOPING DOWN AT 45 DEGREES TOWARDS THE SIDE OF THE OBSTRUCTION ON WHICH TRAFFIC IS TO PASS.

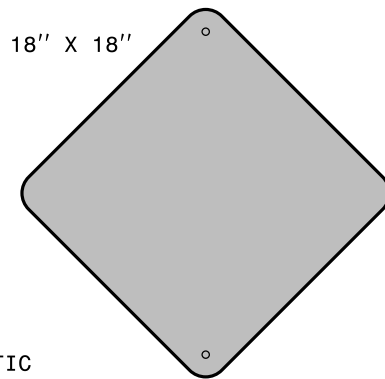
1-24

TYPE 1 OBJECT MARKERS

ALTERNATES 1 & 2



ALTERNATE 3



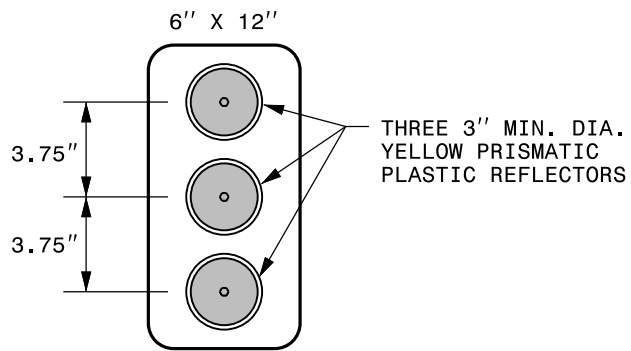
OM1-1
REFLECTORS ON YELLOW BACKGROUND
OM1-2
REFLECTORS ON BLACK BACKGROUND

OM1-3
GRADE C YELLOW
RETROREFLECTIVE SHEETING

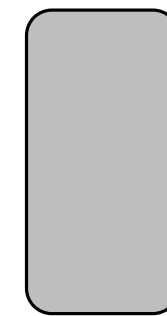
NOTES:
1- MATERIAL- .125" ALUMINUM PANEL.

TYPE 2 OBJECT MARKERS

ALTERNATE 1



ALTERNATE 2

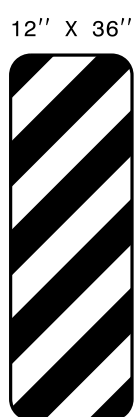


OM2-1
REFLECTORS ON GRADE C WHITE
RETROREFLECTIVE SHEETING

OM2-2
GRADE C YELLOW
RETROREFLECTIVE SHEETING

NOTES:
1- MATERIAL- .125" ALUMINUM PANEL.

TYPE 3 OBJECT MARKERS



OM3-L

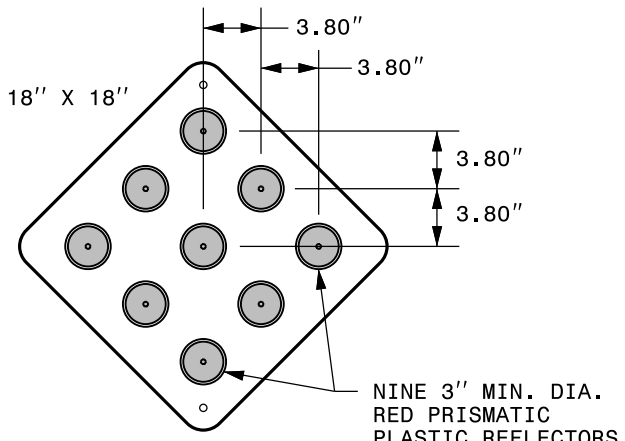
OM3-C

OM3-R

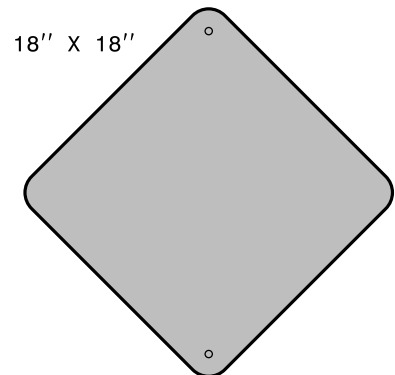
NOTES:
1- GRADE C YELLOW RETROREFLECTIVE SHEETING WITH ALTERNATING BLACK AND YELLOW STRIPES.
2- STRIPES SLOPE DOWNWARD AT 45 DEGREES TOWARD THE SIDE OF THE OBSTRUCTION WHICH TRAFFIC IS TO PASS.
3- MATERIAL-.125" ALUMINUM PANEL.

TYPE 4 OBJECT MARKERS (END OF ROAD)

ALTERNATES 1 & 2



ALTERNATE 3



OM4-1
REFLECTORS ON RED BACKGROUND
OM4-2
REFLECTORS ON BLACK BACKGROUND

OM4-3
GRADE C RED
RETROREFLECTIVE SHEETING

NOTES:
1- MATERIAL- .125" ALUMINUM PANEL.

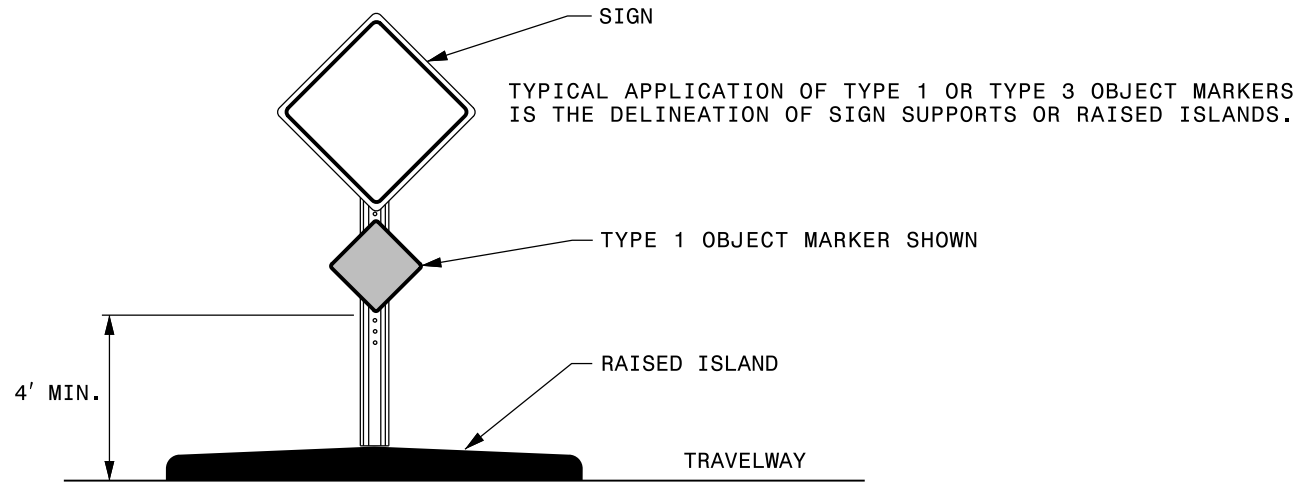
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-24

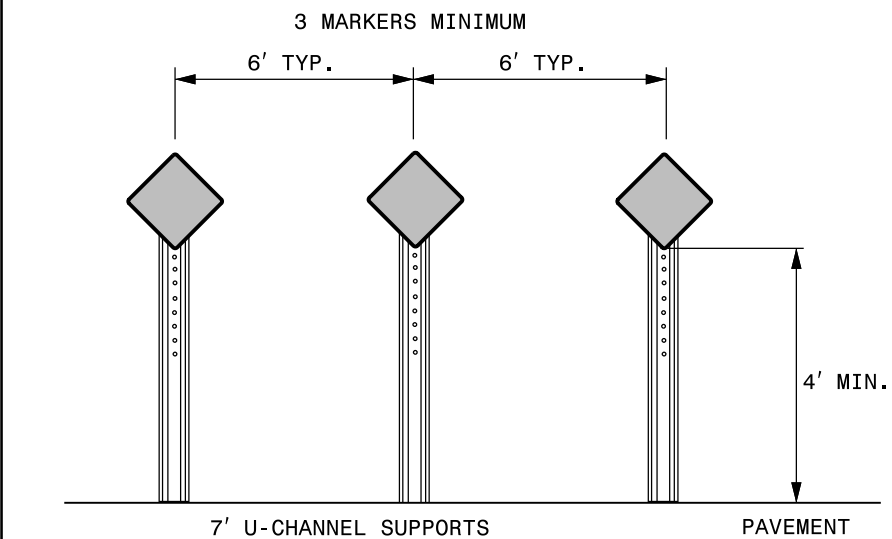
ROADWAY STANDARD DRAWING FOR

OBJECT MARKERS
TYPES

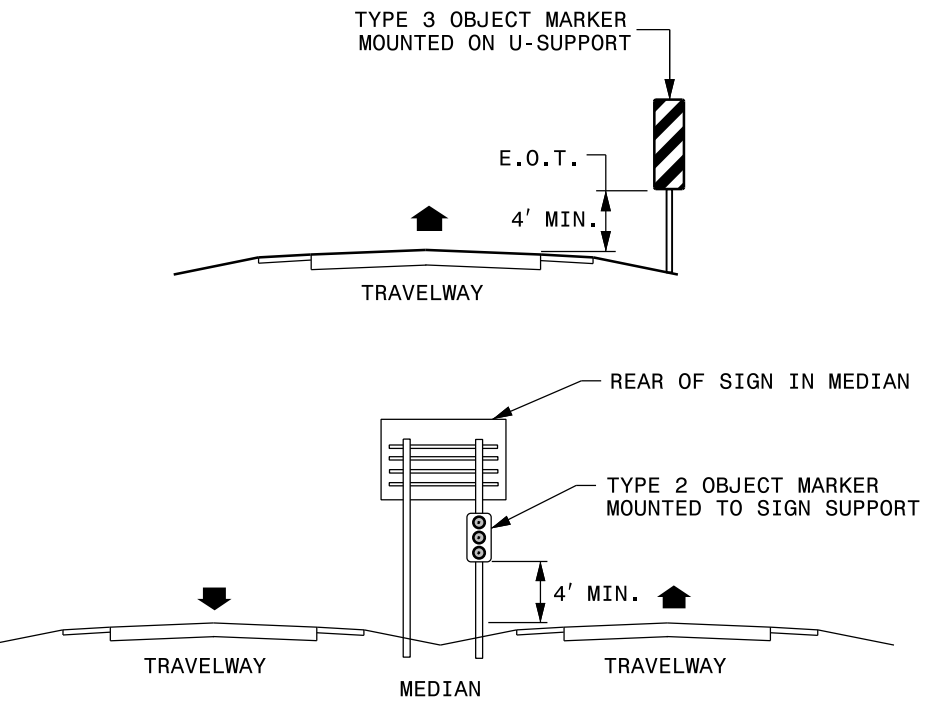
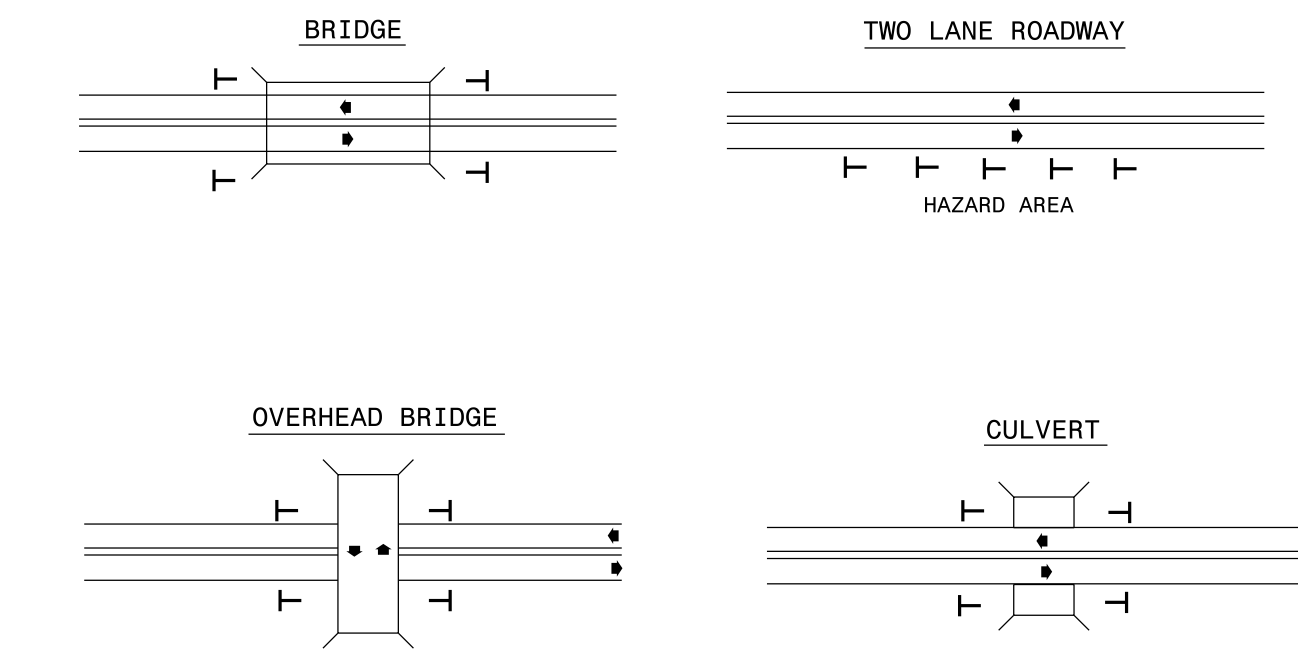
TYPE 1 OR TYPE 3 MARKERS FOR OBSTRUCTIONS WITHIN THE ROADWAY



TYPE 4 MARKERS FOR END OF ROADWAY



TYPE 2 OR TYPE 3 MARKERS FOR OBSTRUCTIONS ADJACENT TO THE ROADWAY



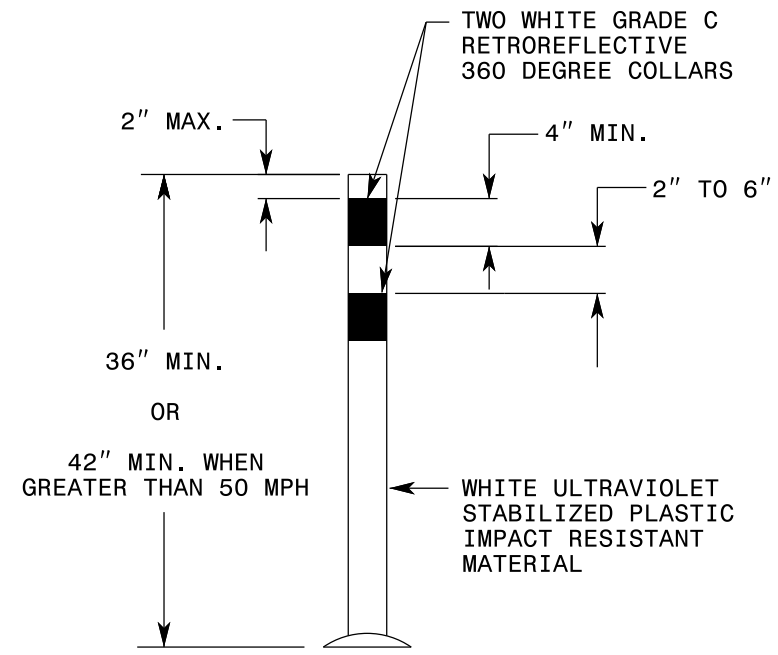
TYPICAL APPLICATIONS OF TYPE 2 OR TYPE 3 OBJECT MARKERS INCLUDES DELINEATION OF BRIDGE PIERS, ABUTMENTS, HANDRAILS, CULVERT HEADWALLS, NARROW SHOULDERS, DROP-OFFS, OR OTHER UNDESIRABLE CONDITIONS WHEN GUARDRAIL OR OTHER ROADSIDE PROTECTION IS NOT IN PLACE.

LEGEND	
	OBJECT MARKER
	DIRECTION OF TRAFFIC FLOW

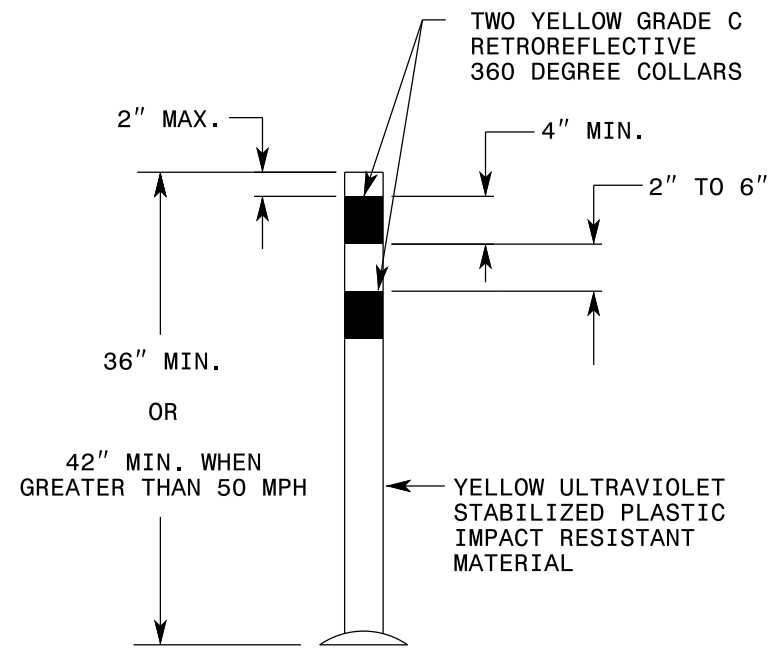
STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
OBJECT MARKERS
 INSTALLATION

TUBULAR MARKER WHITE



TUBULAR MARKER YELLOW



GENERAL NOTES:

- 1- USE TUBULAR MARKERS THAT ARE CIRCULAR IN SHAPE AND HAVE A MINIMUM HEIGHT OF 36" WITH A BROADENED BASED.
- 2- USE TUBULAR MARKERS THAT HAVE A MINIMUM HEIGHT OF 42" ON ROADWAYS WITH POSTED SPEED LIMITS GREATER THAT 50 MPH.
- 3- SPACING OF TUBULAR MARKERS SHALL BE DETERMINED BY THE ENGINEER ON A CASE BY CASE BASIS.
- 4- SECURE/INSTALL TUBULAR MARKERS TO THE PAVEMENT SURFACE USING EPOXY OR OTHER APPROVED TYPES OF ADHESIVES.

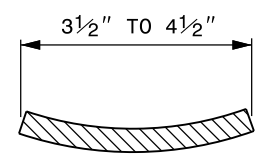
STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

1-24

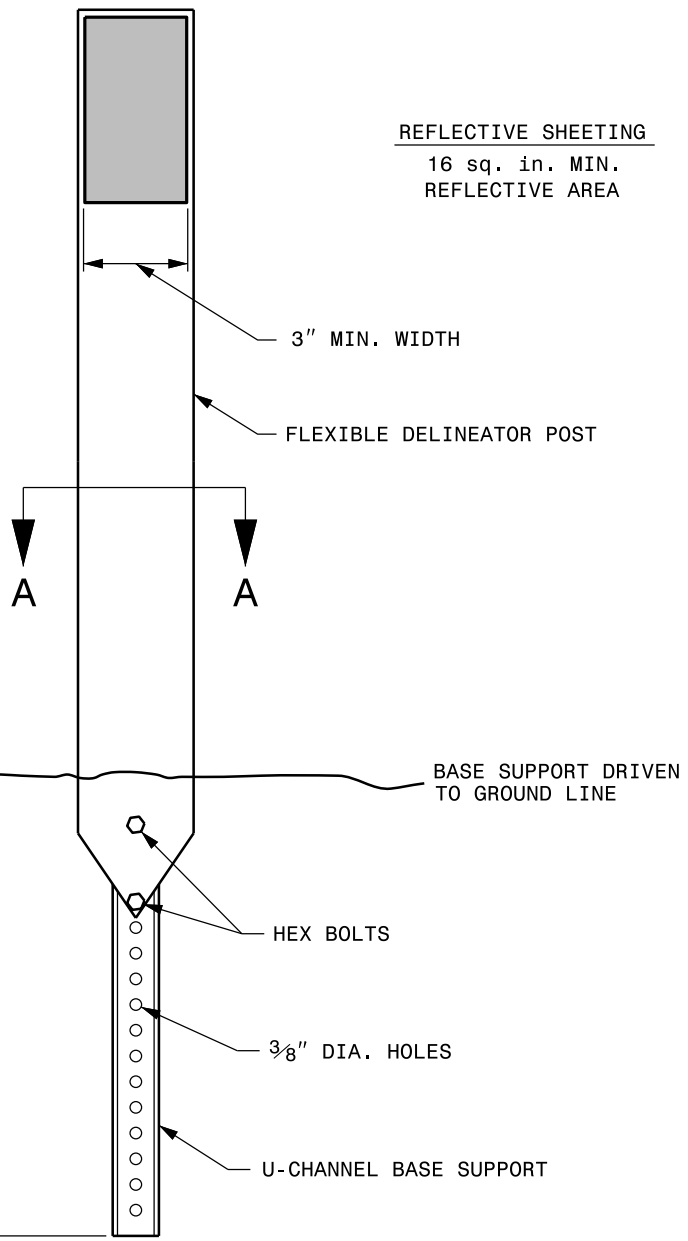
ROADWAY STANDARD DRAWING FOR
RAISED PAVEMENT MARKERS
 TUBULAR MARKERS

FLEXIBLE DELINEATOR ASSEMBLY

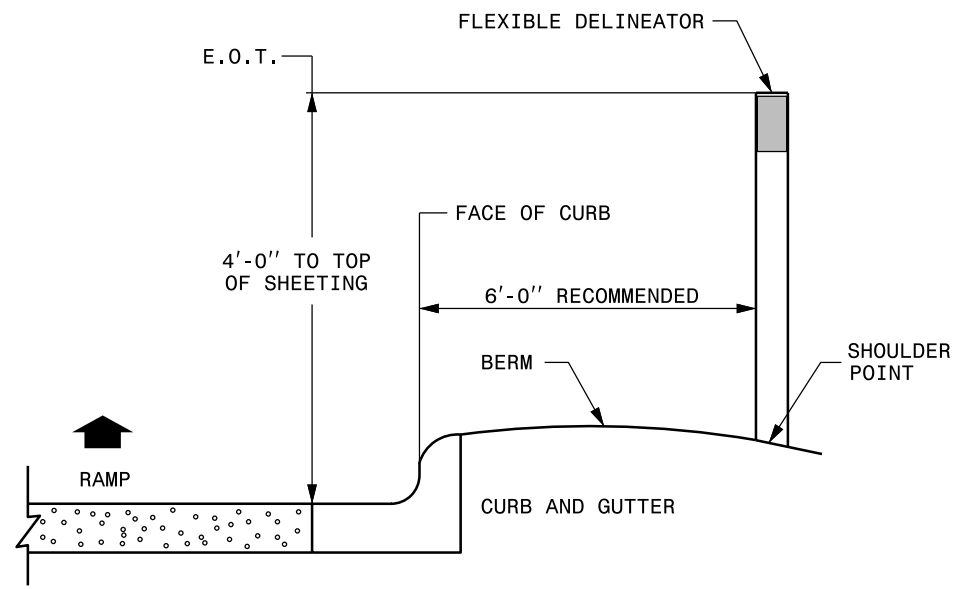
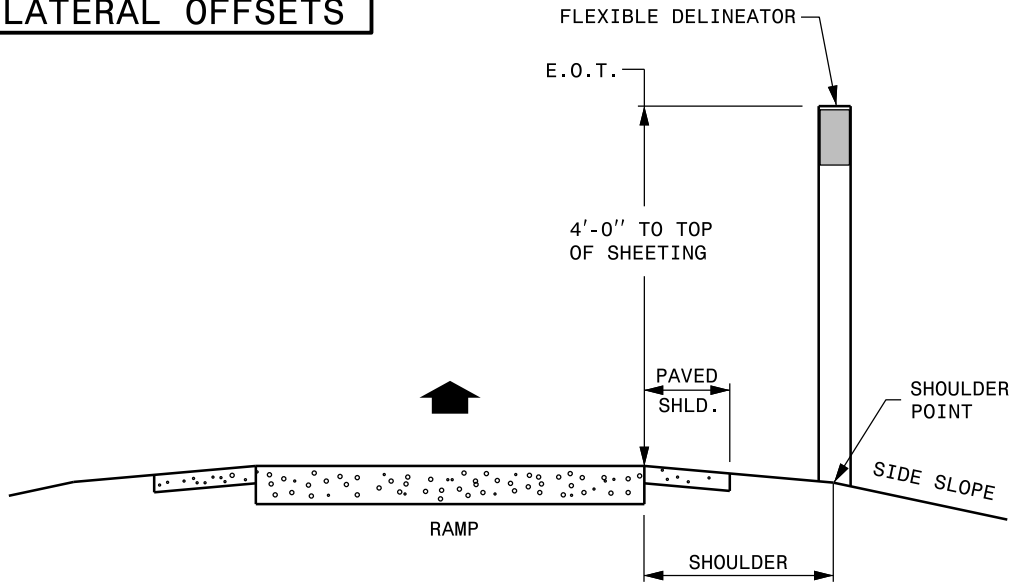
POST SECTION VIEW A-A



DIRECTION OF TRAFFIC



LATERAL OFFSETS



GENERAL NOTES:

1- PLACE DELINEATORS AT CONSTANT DISTANCE FROM TRAVELWAY.

LEGEND	
W	= WIDTH OF TRAVEL LANE
E.O.T.	= EDGE OF TRAVEL
▲	DIRECTION OF TRAFFIC FLOW

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
FLEXIBLE DELINEATORS
INSTALLATION

TABLE A	
CURVATURES 4°00' OR LESS	
HORIZONTAL CURVATURE	DELINEATOR SPACING (FT)
TANGENT TO 0°30'	200'
GREATER THAN 0°30' TO 4°00'	150'
RAMP ACCELERATION DECELERATION LANES	200'
RAMP GORES	50'

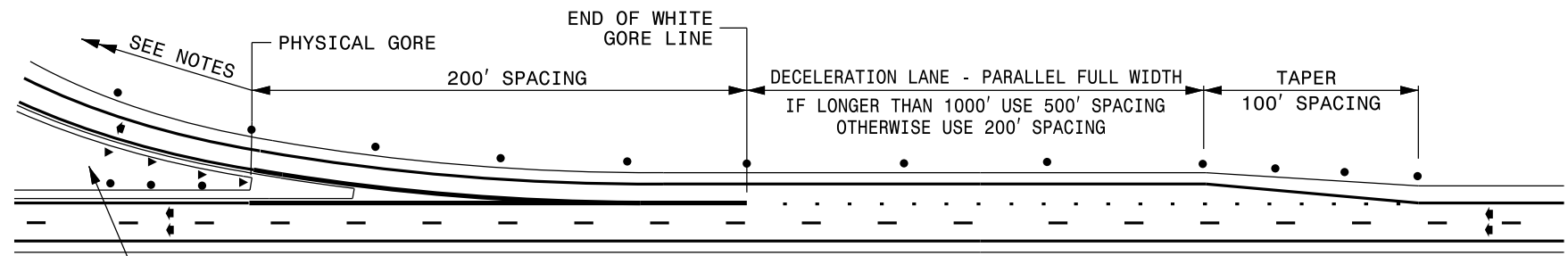
TABLE B	
CURVATURES GREATER THAN 4°00'	
CURVE RADIUS (R) (FT)	DELINEATOR SPACING (S) (FT)
50	20
150	30
200	35
250	40
300	50
400	55
500	65
600	70
700	75
800	80
900	85
1000	90
1100	95
1200	100
1300	105
1400	110

- SPACING ROUNDED TO NEAREST 5 FT.
- MIN. SPACING = 20 FT.
- SPACING FOR SPECIFIC RADII MAY BE INTERPOLATED FROM TABLE B OR COMPUTED FROM THE FORMULA $S = (3)\sqrt{R-50}$
WHERE S= SPACING, R= RADIUS, IN FEET.
IN ADVANCE OF AND BEYOND A CURVE, THE SPACING OF THE FIRST DELINEATOR IS 2S, THE SECOND 3S, AND THE THIRD 6S BUT NOT TO EXCEED 300 FEET. THE FIRST DELINEATORS ARE CONSIDERED THE ONES NEAREST TO THE ENDS OF THE CURVE.

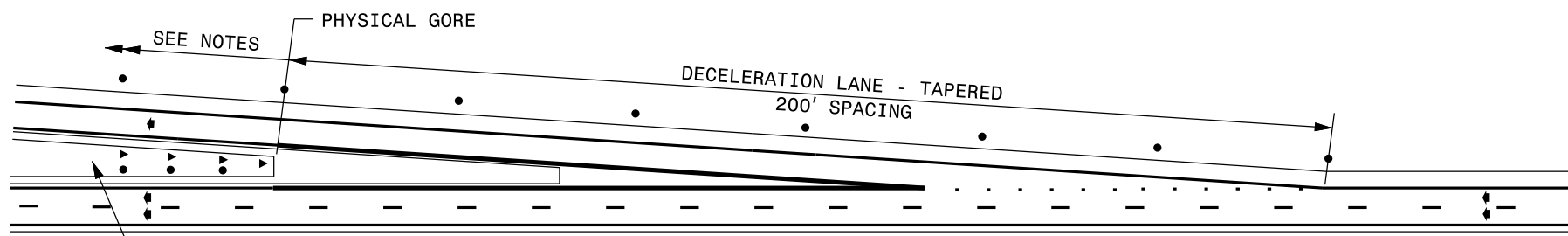
GENERAL NOTES:

- 1-FLEXIBLE DELINEATORS ARE REQUIRED ONLY AT INTERCHANGES.
- 2-FLEXIBLE DELINEATORS ARE NOT REQUIRED WHERE THEY FALL BEHIND GUARDRAIL, OR WHERE ADEQUATE FIXED SOURCE LIGHTING IS PROVIDED.

EXIT RAMPS

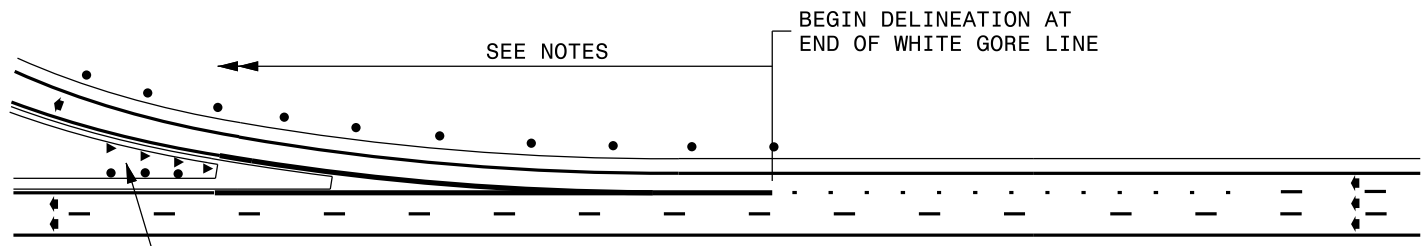


SEE GORE AREA TYPICAL



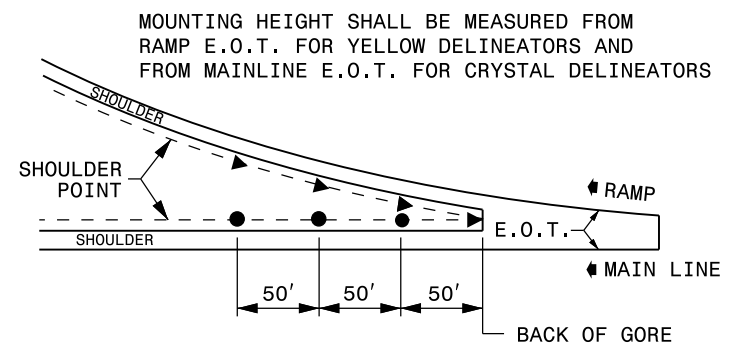
SEE GORE AREA TYPICAL

THRU-LANE DROP AT EXIT RAMP



SEE GORE AREA TYPICAL

GORE AREAS



GENERAL NOTES:

1- CONTINUE DELINEATORS ON RAMPS AND LOOPS, USING TABLES A OR B ON STD. DWG. 1267.02 AND THE FOLLOWING REQUIREMENTS:

PLACE CRYSTAL DELINEATORS ON RIGHT SIDE OF RAMP FOR ALL RIGHT AND LEFT HAND CURVES FOR RAMPS WITH CURVE RADII 1000 FT. OR GREATER.

PLACE YELLOW DELINEATORS ON LEFT SIDE OF CURVE (CONVEX SIDE) RANGING FROM THE P.C. OR S.C. TO THE P.T. OR C.S. IN ADVANCE OF AND BEYOND THE CURVE FOR RAMPS AND LOOPS WITH RIGHT HAND CURVE RADII LESS THAN 1000 FT. CONTINUE WITH CRYSTAL DELINEATORS ON THE RIGHT SIDE WITH A MINIMUM OVERLAP OF 2 DELINEATORS WITHIN THE CURVE. CONTINUE THE CRYSTAL DELINEATORS THROUGH THE RIGHT SIDE OF THE CURVE WHEN THE GAP BETWEEN CRYSTAL DELINEATORS IS LESS THAN 500 FT.

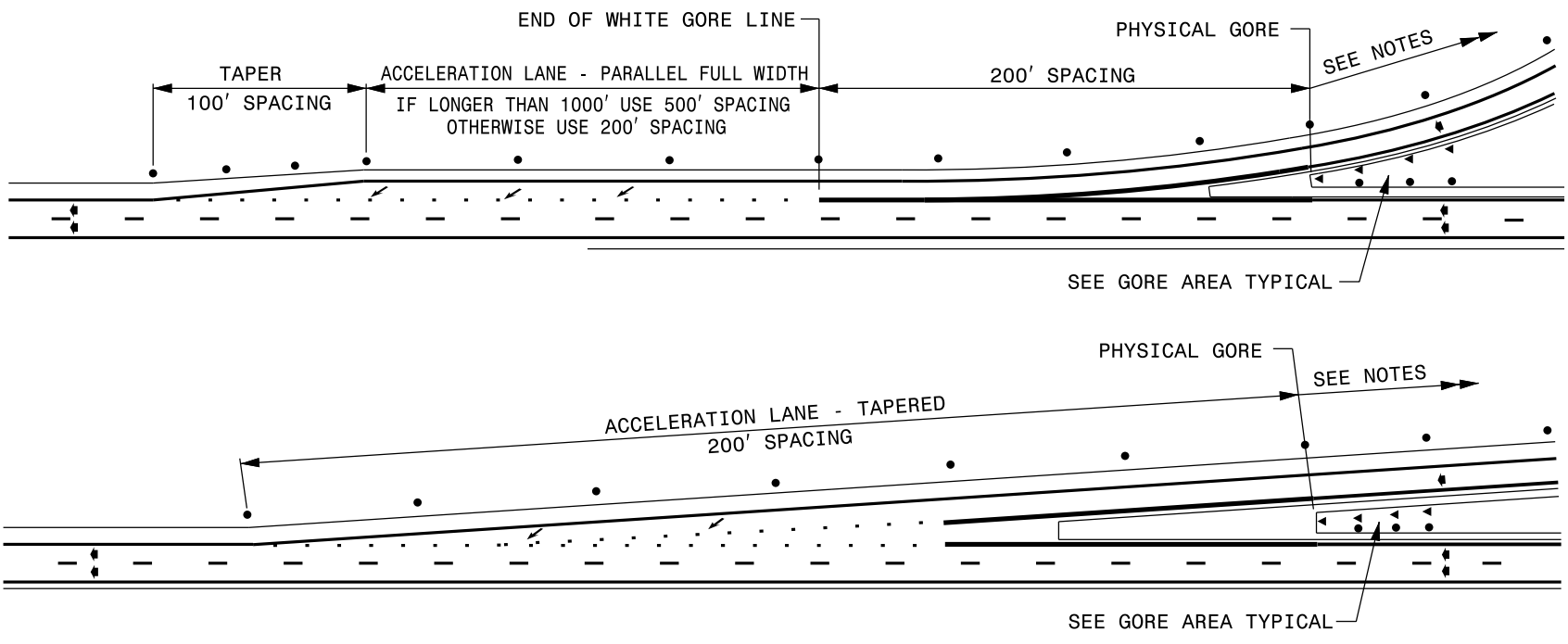
LEGEND	
E.O.T.=	EDGE OF TRAVEL
●	CRYSTAL DELINEATOR
◄	YELLOW DELINEATOR
◄	DIRECTION OF TRAFFIC FLOW

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

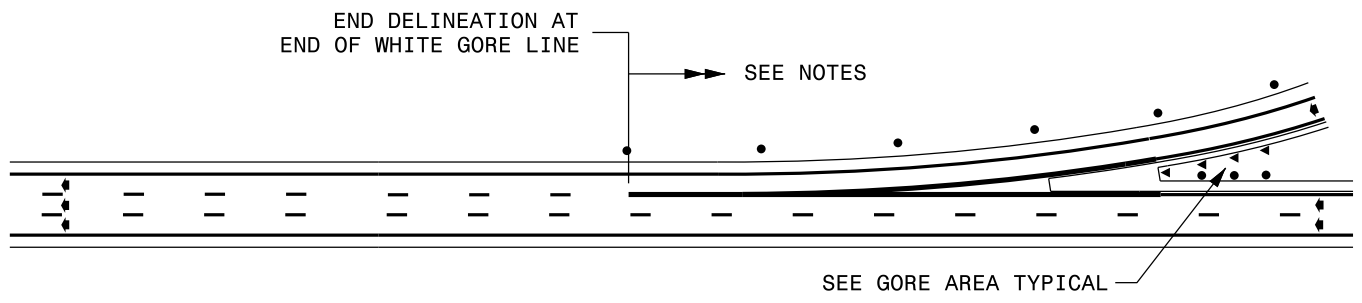
1-24

ROADWAY STANDARD DRAWING FOR
FLEXIBLE DELINEATORS
 INTERCHANGE PLACEMENT

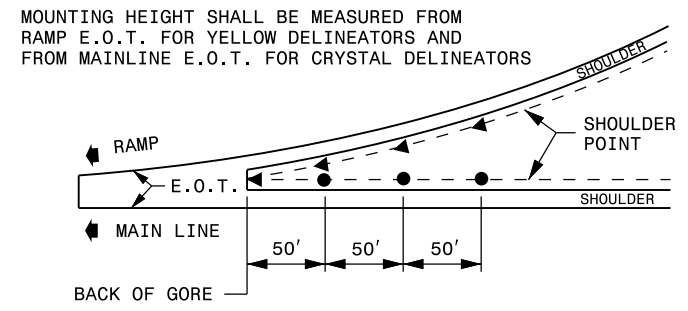
ENTRANCE RAMPS



LANE ADDITION FROM ENTRANCE RAMP



GORE AREAS



GENERAL NOTES:

1- CONTINUE DELINEATORS ON RAMPS AND LOOPS, USING TABLES A OR B ON STD. DWG. 1267.02 AND THE FOLLOWING REQUIREMENTS:

PLACE CRYSTAL DELINEATORS ON RIGHT SIDE OF RAMP FOR ALL RIGHT AND LEFT HAND CURVES FOR RAMPS WITH CURVE RADII 1000 FT. OR GREATER.

PLACE YELLOW DELINEATORS ON LEFT SIDE OF CURVE (CONVEX SIDE) RANGING FROM THE P.C. OR S.C. TO THE P.T. OR C.S. IN ADVANCE OF AND BEYOND THE CURVE FOR RAMPS AND LOOPS WITH RIGHT HAND CURVE RADII LESS THAN 1000 FT. CONTINUE WITH CRYSTAL DELINEATORS ON THE RIGHT SIDE WITH A MINIMUM OVERLAP OF 2 DELINEATORS WITHIN THE CURVE. CONTINUE THE CRYSTAL DELINEATORS THROUGH THE RIGHT SIDE OF THE CURVE WHEN THE GAP BETWEEN CRYSTAL DELINEATORS IS LESS THAN 500 FT.

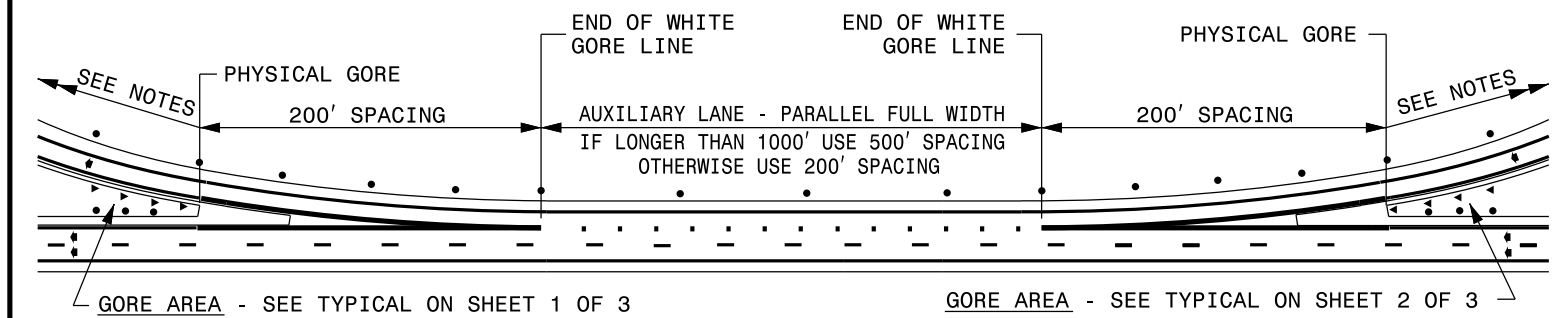
LEGEND	
E.O.T.=	EDGE OF TRAVEL
●	CRYSTAL DELINEATOR
▲	YELLOW DELINEATOR
◄	DIRECTION OF TRAFFIC FLOW

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

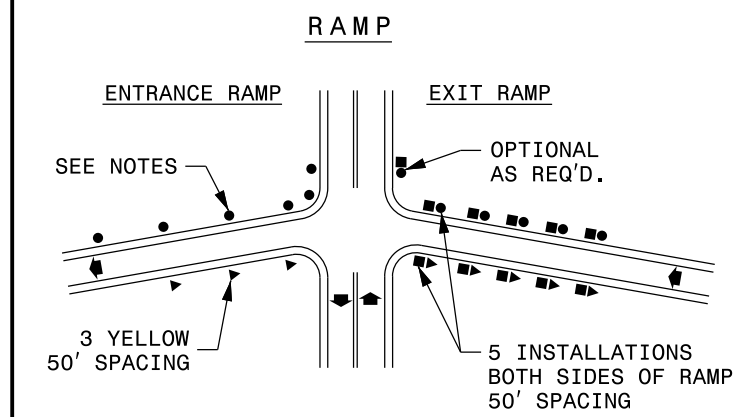
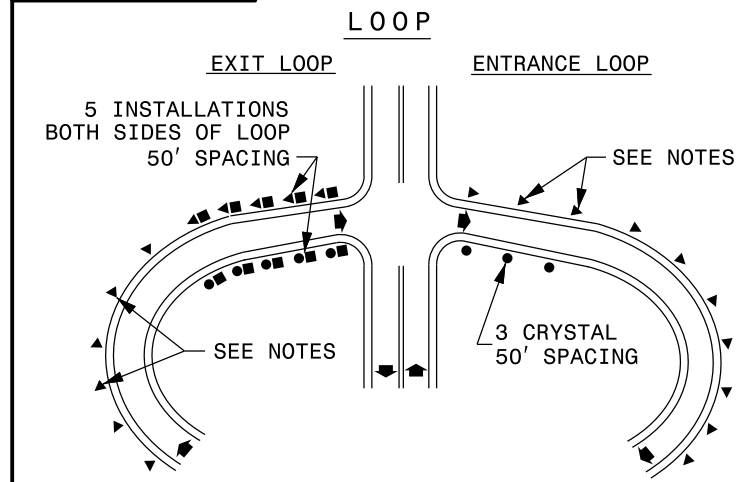
1-24

ROADWAY STANDARD DRAWING FOR
FLEXIBLE DELINEATORS
 INTERCHANGE PLACEMENT

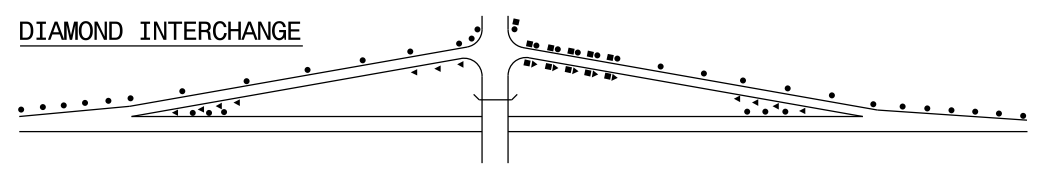
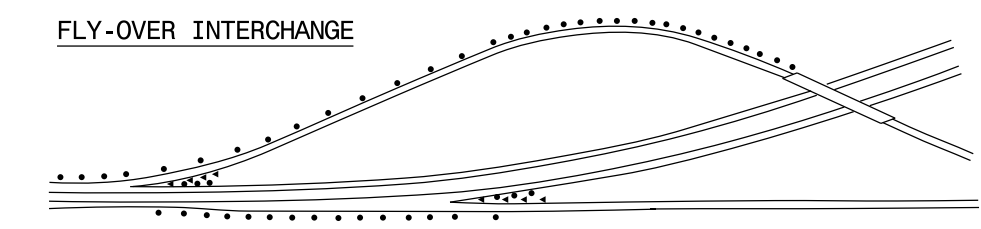
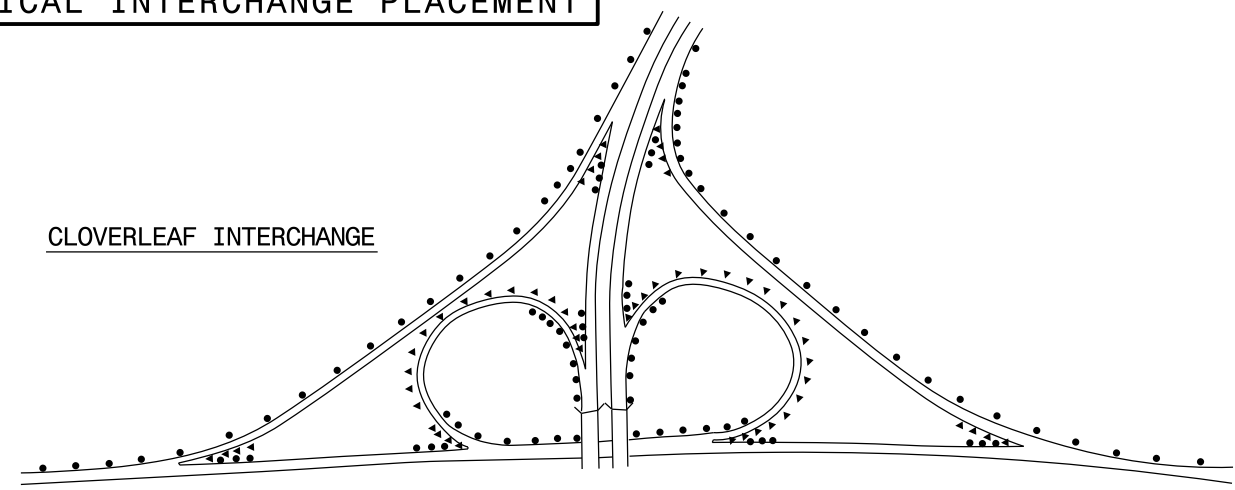
CLOVERLEAF INTERCHANGE



TERMINALS



TYPICAL INTERCHANGE PLACEMENT



GENERAL NOTES:

1- CONTINUE DELINEATORS ON RAMPS AND LOOPS, USING TABLES A OR B ON STD. DWG. 1267.02 AND THE FOLLOWING REQUIREMENTS:

PLACE CRYSTAL DELINEATORS ON RIGHT SIDE OF RAMP FOR ALL RIGHT AND LEFT HAND CURVES FOR RAMPS WITH CURVE RADII 1000 FT. OR GREATER.

PLACE YELLOW DELINEATORS ON LEFT SIDE OF CURVE (CONVEX SIDE) RANGING FROM THE P.C. OR S.C. TO THE P.T. OR C.S. IN ADVANCE OF AND BEYOND THE CURVE FOR RAMPS AND LOOPS WITH RIGHT HAND CURVE RADII LESS THAN 1000 FT. CONTINUE WITH CRYSTAL DELINEATORS ON THE RIGHT SIDE WITH A MINIMUM OVERLAP OF 2 DELINEATORS WITHIN THE CURVE. CONTINUE THE CRYSTAL DELINEATORS THROUGH THE RIGHT SIDE OF THE CURVE WHEN THE GAP BETWEEN CRYSTAL DELINEATORS IS LESS THAN 500 FT.

LEGEND	
●	CRYSTAL DELINEATOR
■	CRYSTAL DELINEATOR BACK TO BACK WITH RED DELINEATOR
◀	YELLOW DELINEATOR
◀■	YELLOW DELINEATOR BACK TO BACK WITH RED DELINEATOR

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-24

ROADWAY STANDARD DRAWING FOR
FLEXIBLE DELINEATORS
INTERCHANGE PLACEMENT