PART 9 TRAFFIC CONTROL FOR BICYCLE FACILITIES

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PART 9
TRAFFIC CONTROL FOR BICYCLE FACILITIES

CHAPTER 9B. SIGNS

Section 9B.01 Application and Placement of Signs

Standard:

01 **Bicycle signs shall be standard in shape, legend, and color.**

02 **All signs shall be retroreflectorized for use on bikeways, including shared-use paths and bicycle lane facilities.**

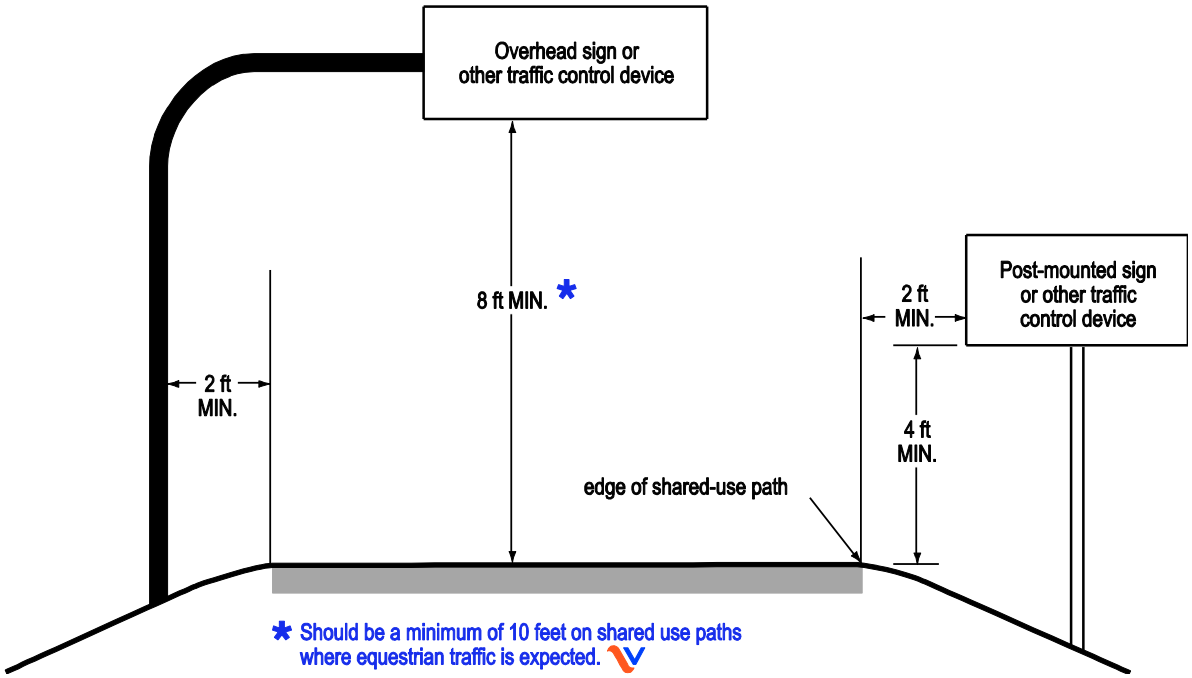
03 **Where signs serve both bicyclists and other road users, vertical mounting height and lateral placement shall be as provided in Part 2.**

04 **Where used on a shared-use path, no portion of a sign or its support shall be placed less than 2 feet laterally from the near edge of the path, or less than 8 feet vertically over the entire width of the shared-use path (see Figure 9B-1(VA) in this Supplement).**

Guidance:

05 *Where used on a shared-use path where equestrian traffic is expected, no portion of a sign or its support should be placed less than 10 feet vertically over the entire width of the shared use path (see Figure 9B-1(VA) in this Supplement).*

Figure 9B-1(VA). Sign Placement on Shared-Use Paths



Standard:

06 **Mounting height for post-mounted signs on shared-use paths shall be a minimum of 4 feet, measured vertically from the bottom of the sign to the elevation of the near edge of the path surface (see Figure 9B-1(VA) in this Supplement).**

Guidance:

07 *Signs for the exclusive use of bicyclists should be located so that other road users are not confused by them.*

08 *The clearance for overhead signs on shared-use paths should be adjusted when appropriate to accommodate path users requiring more clearance, such as equestrians, or typical maintenance or emergency vehicles.*

Section 9B.03 STOP and YIELD Signs (R1-1, R1-2)

Standard:

01 **STOP (R1-1) signs (see Figure 9B-2) shall be installed on shared-use paths at points where bicyclists are required to stop.**

02 **YIELD (R1-2) signs (see Figure 9B-2) shall be installed on shared-use paths at points where bicyclists have an adequate view of conflicting traffic as they approach the sign, and where bicyclists are required to yield the right-of-way to that conflicting traffic.**

Support:

03 The Code of Virginia, § 46.2-904 states that a person riding a bicycle on a shared use path shall have the same rights and duties as pedestrians. This should be taken into consideration when determining points at which bicycles are required to stop or yield.

Option:

04 A 30 x 30-inch STOP sign or a 36 x 36 x 36-inch YIELD sign may be used on shared-use paths for added emphasis.

Guidance:

05 *Where conditions require path users, but not roadway users, to stop or yield, the STOP or YIELD sign should be placed or shielded so that it is not readily visible to road users.*

06 *When placement of STOP or YIELD signs is considered, priority at a shared-use path/roadway intersection should be assigned with consideration of the following:*

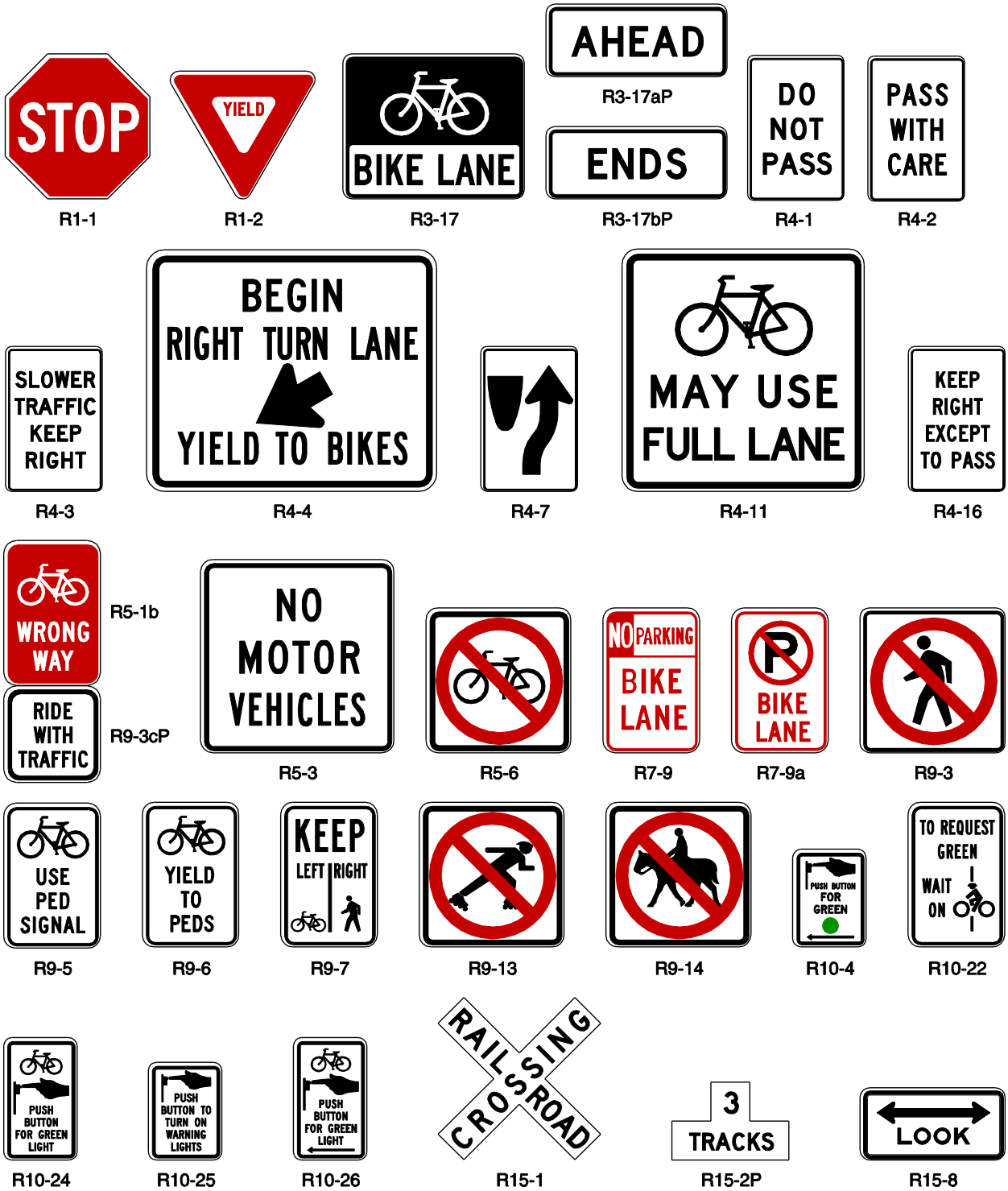
A. Relative speeds of shared-use path and roadway users,

B. Relative volumes of shared-use path and roadway traffic, and

C. Relative importance of shared-use path and roadway.

07 *Speed should not be the sole factor used to determine priority, as it is sometimes appropriate to give priority to a high-volume shared-use path crossing a low-volume street, or to a regional shared-use path crossing a minor collector street.*

Figure 9B-2. Regulatory Signs and Plaques for Bicycle Facilities



08 *When priority is assigned, the least restrictive control that is appropriate should be placed on the lower priority approaches. STOP signs should not be used where YIELD signs would be acceptable.*

Section 9B.06 Bicycles May Use Full Lane Sign (R4-11)

Option:

01 The Bicycles May Use Full Lane (R4-11) sign (see Figure 9B-2) may be used on roadways where no facilities usable by bicycles exist, such as bicycle lanes, wide curb lanes, or adjacent shoulders, and where travel lanes are too narrow for bicycists and motor vehicles to operate side by side.

Standard:

02 **The R4-11 sign shall be used only where "substandard width" lanes make it unsafe for a bicyclist to travel along the right curb or edge of the roadway.**

Support:

03 The Code of Virginia, § 46.2-905, item 3, allows bicyclists not to ride as close as safely practical to the curb or right hand edge of the roadway when "substandard width" lanes make is unsafe to continue along the right curb or edge.

04 The Uniform Vehicle Code (UVC) defines a "substandard width lane" as a "lane that is too narrow for a bicycle and a vehicle to travel safely side by side within the same lane."

Option:

05 The Bicycles May Use Full Lane sign may be used in locations where it is important to inform road users that bicyclists might occupy the center of the travel lane.

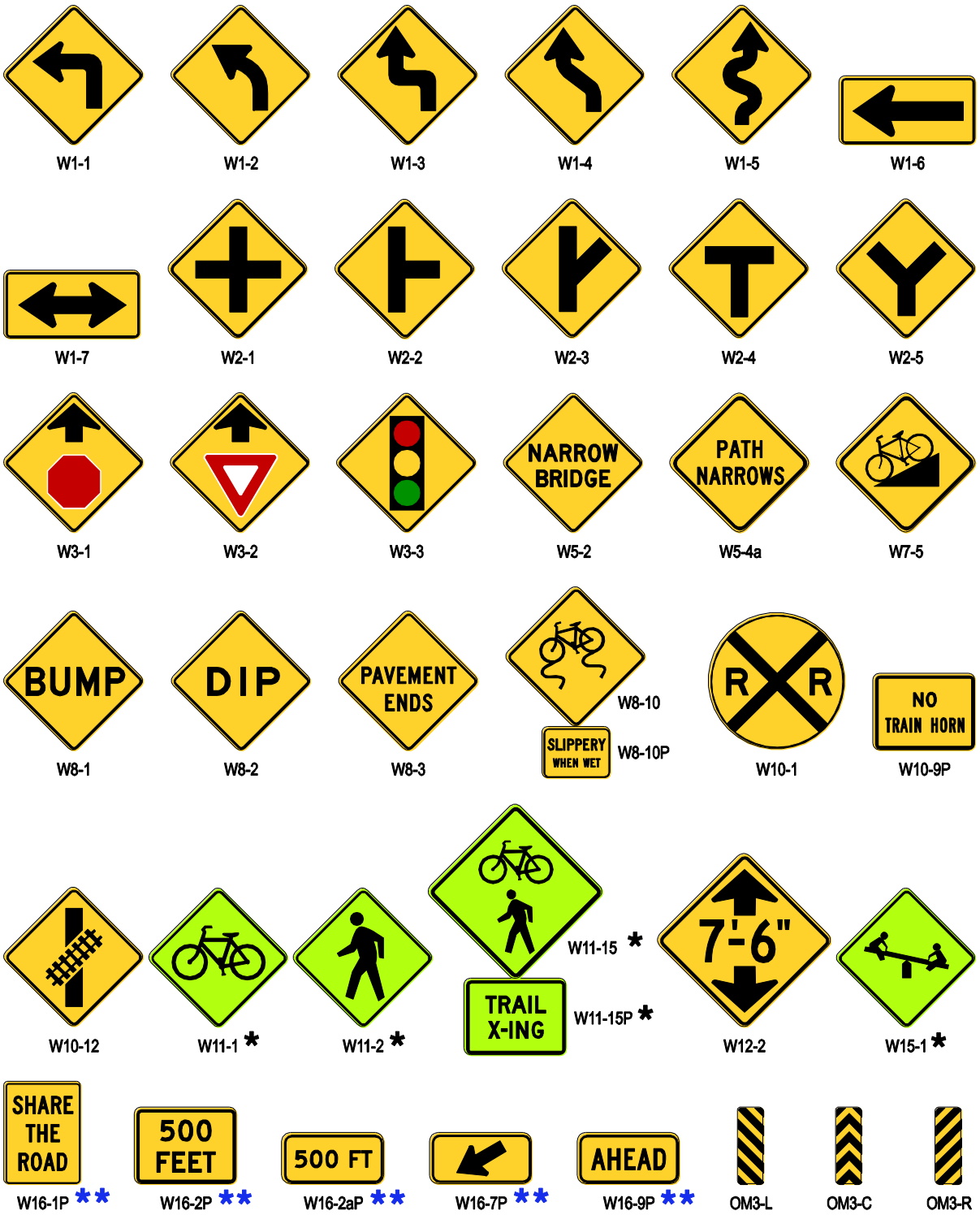
06 Section 9C.07 of the MUTCD describes a Shared Lane Marking that may be used in addition to or instead of the Bicycles May Use Full Lane sign (when used in accordance with the Standard in Paragraph 2) to inform road users that bicyclists might occupy the travel lane.

Section 9B.18 Bicycle Warning and Combined Bicycle/Pedestrian Signs (W11-1 and W11-15)

Support:

01 The Bicycle Warning (W11-1) sign (see Figure 9B-3(VA) in this Supplement) alerts the road user to unexpected entries into the roadway by bicyclists, and other crossing activities that might cause conflicts. These conflicts might be relatively confined, or might occur randomly over a segment of roadway. See Section 9B.19 of this Supplement for additional information on use of the Bicycle Warning (W11-1) sign along with the Share the Road (W16-1P) supplemental plaque.

Figure 9B-3(VA). Warning Signs and Plaques and Object Markers for Bicycle Facilities



* A fluorescent yellow-green background color ~~may~~ shall be used for this sign or plaque.

** The background color of the plaque ~~should~~ shall match the color of the warning sign that it supplements.

Option:

02 The combined Bicycle/Pedestrian (W11-15) sign (see Figure 9B-3(VA) in this Supplement) may be used where both bicyclists and pedestrians might be crossing the roadway, such as at an intersection with a shared-use path. A TRAIL X-ING (W11-15P) supplemental plaque (see Figure 9B-3(VA) in this Supplement) may be mounted below the W11-15 sign.

03 A supplemental plaque with the legend AHEAD or XX FEET may be used with the Bicycle Warning or combined Bicycle/Pedestrian sign.

Guidance:

04 *If used in advance of a specific crossing point, the Bicycle Warning or combined Bicycle/Pedestrian sign should be placed at a distance in advance of the crossing location that conforms with the guidance given in Table 2C-4.*

Standard:

05 **Bicycle Warning and combined Bicycle/Pedestrian signs, when used at the location of the crossing, shall be supplemented with a diagonal downward pointing arrow (W16-7P) plaque (see Figure 9B-3(VA) in this Supplement) to show the location of the crossing.**

06 **A fluorescent yellow-green background color with a black legend and border shall be used for Bicycle Warning and combined Bicycle/Pedestrian signs and supplemental plaques.**

~~*Guidance:*~~

07 ~~*When the fluorescent yellow-green background color is used, a systematic approach featuring one background color within a zone or area should be used. The mixing of standard yellow and fluorescent yellow-green backgrounds within a zone or area should be avoided.*~~

Section 9B.19 Other Bicycle Warning Signs

Option:

01 Other bicycle warning signs (see Figure 9B-3(VA) in this Supplement) such as PATH NARROWS (W5-4a) and Hill (W7-5) may be installed on shared-use paths to warn bicyclists of conditions not readily apparent.

02 In situations where there is a need to warn motorists to watch for bicyclists traveling along the highway, the SHARE THE ROAD (W16-1P) plaque (see Figure 9B-3(VA) in this Supplement) may be used in conjunction with the W11-1 sign.

03 The Bicycle Warning Sign (W11-1) and SHARE THE ROAD supplemental plaque (W16-1P) assembly may be considered at the following locations, if observation reflects routine bicycle use:

- Where shared-use paths end at roadways.
- Where shoulders or wide curb lanes drop prior to features such as narrow bridge or overpasses.

- Where there has been a significant history of bicycle crashes involving vehicles.
- Where roadway improvements needed to address bicycle safety issues are not practical due to physical or environmental constraints.

04 A Bicycle Warning sign (W11-1) and SHARE THE ROAD supplemental plaque (W16-1P) assembly may be considered where all of the following conditions exist:

- A bike lane ends,
- The speed limit is 40 MPH or greater, and
- A hazard exists, such as a narrow bridge or overpass, narrow lane, parallel parked vehicles, or a downstream intersection with many turning vehicles. (The end of a bike lane, by itself, is not a hazard.)

Standard:

05 **A Bicycle Warning sign (W11-1) and SHARE THE ROAD supplemental plaque (W16-1P) assembly shall not be used as a substitute for a bike route sign or where a jurisdiction wants to communicate a general policy statement.**

Guidance:

06 *If used, other advance bicycle warning signs should be installed at least 50 feet in advance of the beginning of the condition.*

07 *Where temporary traffic control zones are present on bikeways, appropriate signs from Part 6 should be used.*

Option:

08 Other warning signs described in Chapter 2C may be installed on bicycle facilities as appropriate.

Guidance:

09 *A Bicycle Warning sign (W11-1) and SHARE THE ROAD supplemental plaque (W16-1P) assembly should not be used where a bike lane ends and the speed limit is 35 MPH or less. Such circumstances could include a college or university campus, a central business district, or other area characterized by low speeds and a large amount of interaction between bicycles and motorized vehicles.*

CHAPTER 9C. MARKINGS

Section 9C.04 Markings for Bicycle Lanes

Support:

01 Pavement markings designate that portion of the roadway for preferential use by bicyclists. Markings inform all road users of the restricted nature of the bicycle lane. Typical pavement marking details are shown in Figure 9C-V1 in this Supplement.

Standard:

02 **Longitudinal pavement markings shall be used to define bicycle lanes.**

Guidance:

03 *If used, bicycle lane word, symbol, and/or arrow markings (see Figure 9C-3(VA) in this Supplement) should be placed at the beginning of a bicycle lane and at periodic intervals along the bicycle lane based on engineering judgment.*

Standard:

04 **Except as provided in Paragraph 5, if bicycle lane markings are used, the helmeted bicyclist symbol marking (see Figures 9C-3(VA) and 9C-V1 in this Supplement) shall be used.**

Option:

05 The bike symbol or bike word message may be used to supplement the helmeted bicyclist symbol marking on a limited basis if engineering judgment determines a need for it. Such circumstances include new installations of bike lanes in an area of Virginia where drivers may be less familiar with the meaning of the helmeted bicyclist symbol.

Standard:

06 **If the bicycle lane symbol marking is used in conjunction with word or arrow messages, it shall precede them.**

Option:

07 If the word, symbol, and/or arrow pavement markings shown in Figure 9C-3(VA) in this Supplement are used, Bike Lane signs (see Section 9B.04 of the MUTCD) may also be used, but to avoid overuse of the signs not necessarily adjacent to every set of pavement markings.

Standard:

08 **A through bicycle lane shall not be positioned to the right of a right turn only lane or to the left of a left turn only lane.**

Support:

09 A bicyclist continuing straight through an intersection from the right of a right-turn lane or from the left of a left-turn lane would be inconsistent with normal traffic behavior and would violate the expectations of right- or left-turning motorists.

Figure 9C-V1. VDOT Pavement Marking Standard (Typical Pavement Markings for Bicycle Lane)

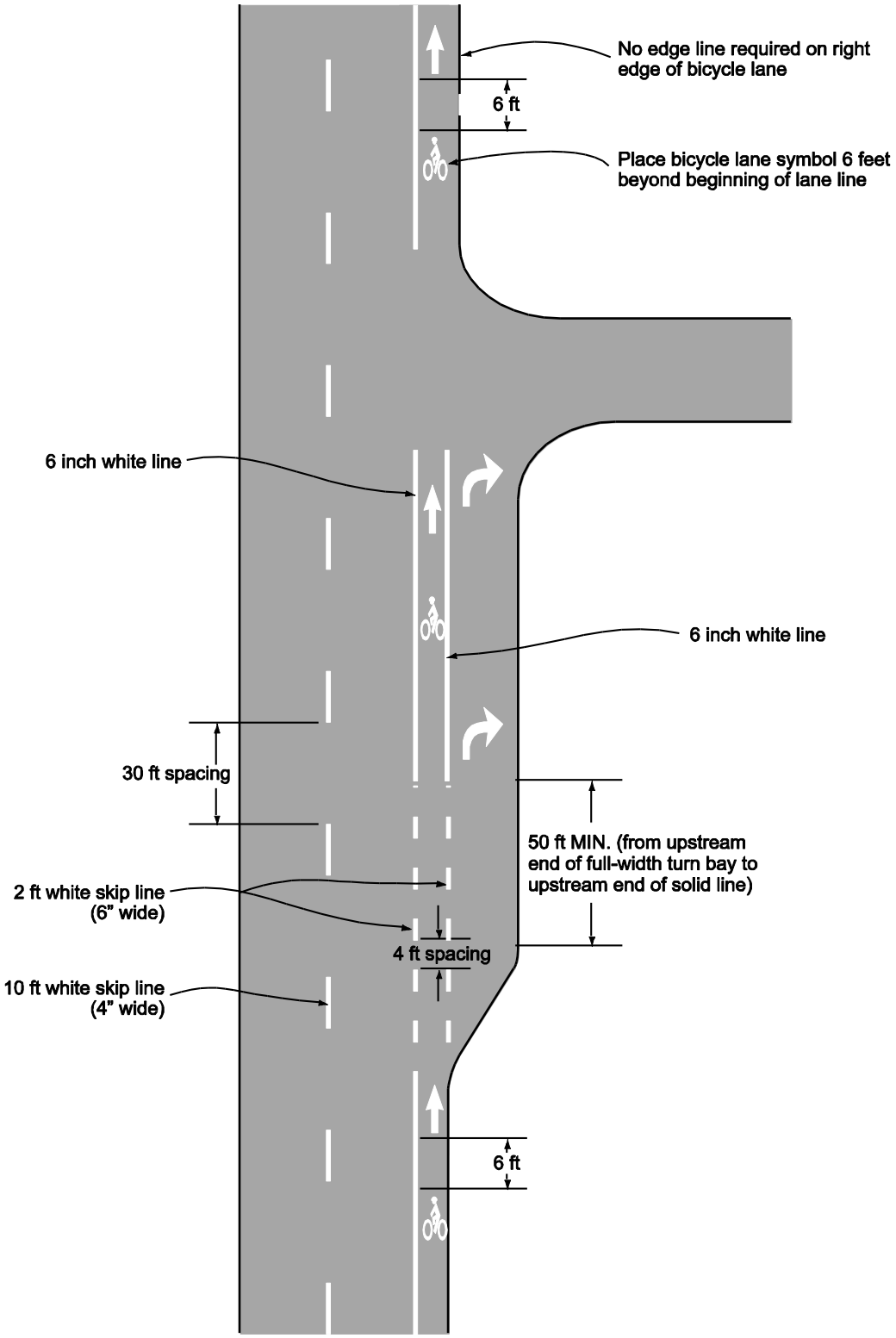
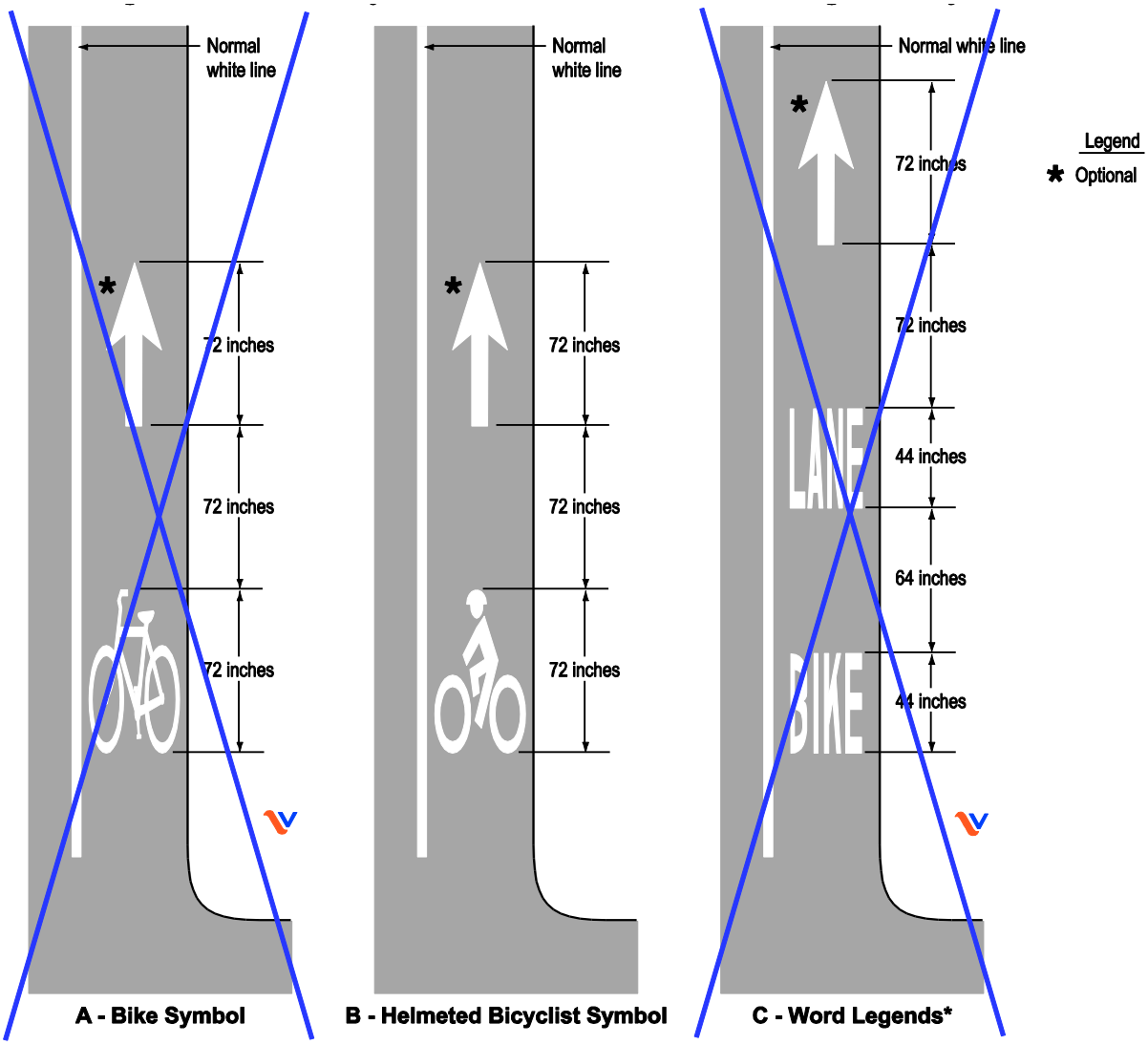


Figure 9C-3(VA). Word, Symbol, and Arrow Pavement Markings for Bicycle Lanes



Note: Drawing C is for placement details of word legends when used. However, word legends may be utilized in addition to, but not substituting for, the Helmeted Bicyclist symbol which is required.

Guidance:

10 *When the right through lane is dropped to become a right turn only lane, the bicycle lane markings should stop at least 100 feet before the beginning of the right-turn lane. Through bicycle lane markings should resume to the left of the right turn only lane.*

11 *An optional through-right turn lane next to a right turn only lane should not be used where there is a through bicycle lane. If a capacity analysis indicates the need for an optional through-right turn lane, the bicycle lane should be discontinued at the intersection approach.*

12 *Posts or raised pavement markers should not be used to separate bicycle lanes from adjacent travel lanes.*

Support:

13 Using raised devices creates a collision potential for bicyclists by placing fixed objects immediately adjacent to the travel path of the bicyclist. In addition, raised devices can prevent vehicles turning right from merging with the bicycle lane, which is the preferred method for making the right turn. Raised devices used to define a bicycle lane can also cause problems in cleaning and maintaining the bicycle lane.

Standard:

14 **Bicycle lanes shall not be provided on the circular roadway of a roundabout.**

Guidance:

15 *Bicycle lane markings should stop at least 100 feet before the crosswalk, or if no crosswalk is provided, at least 100 feet before the yield line, or if no yield line is provided, then at least 100 feet before the edge of the circulatory roadway.*

Support:

16 Examples of bicycle lane markings at right-turn lanes are shown in Figures 9C-1(VA), 9C-4(VA), and 9C-5(VA) in this Supplement. Examples of pavement markings for bicycle lanes on a two-way street are shown in Figure 9C-6(VA) in this Supplement. Pavement word message, symbol, and arrow markings for bicycle lanes are shown in Figure 9C-3(VA) in this Supplement.

Standard:

17 **Pavement markings consisting of arrow and bicycle lane symbols shall be placed at the beginning of the bicycle lane at right turn lanes. Markings shall also be placed at the end of the bicycle lane at right turn lanes if the solid white line separating the bicycle lane from the right turn lane is greater than 100 feet in length.**

18 **Bicycle lane symbols shall be placed a maximum of 500 feet apart.**

Guidance:

19 *The bicycle lane pavement line marking should be a minimum of:*

- *4 feet from the edge of pavement on curb and gutter roadways (where the edge of the concrete gutter pan meets the edge of the pavement).*
- *5 feet from the edge of curb/pavement on roadways without a gutter pan (where the face of the concrete curb meets the edge of pavement).*
- *5 feet from the edge of the pavement on roadways without curb and gutter (where the edge of asphalt meets the shoulder or roadside).*

Option:

20 On asphalt roadways where the bicycle lane is beside curb and gutter and the asphalt portion of the bicycle lane is of insufficient width to allow placement of the bicycle symbol entirely on the asphalt, the symbol may be reduced and sized to fit entirely on the asphalt.

Figure 9C-1(VA). Example of Intersection Pavement Markings—Designated Bicycle Lane with Left-Turn Area, Heavy Turn Volume, Parking, One-Way Traffic, or Divided Highway

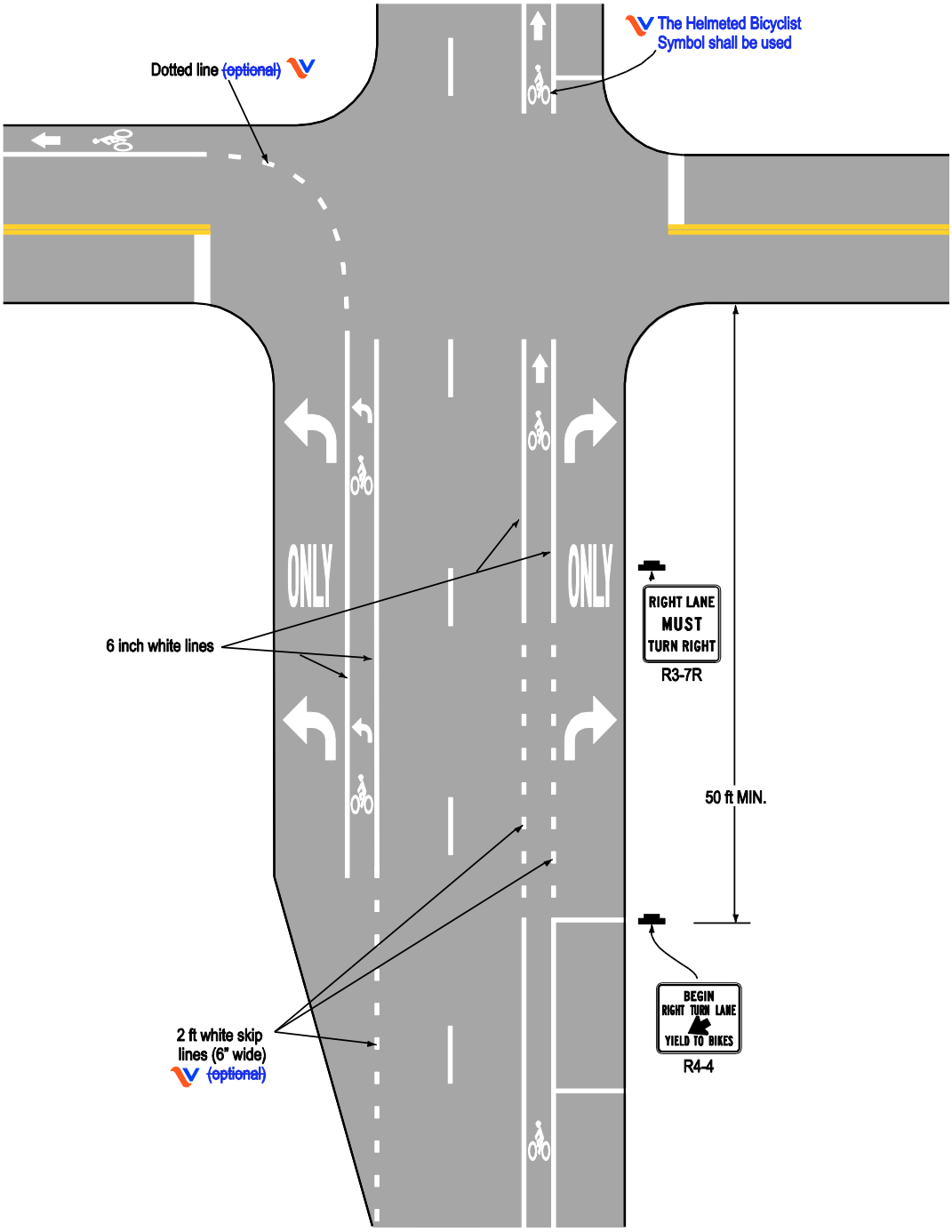


Figure 9C-4(VA). Example of a Bicycle Lane Treatment at a Right-Turn Only Lane

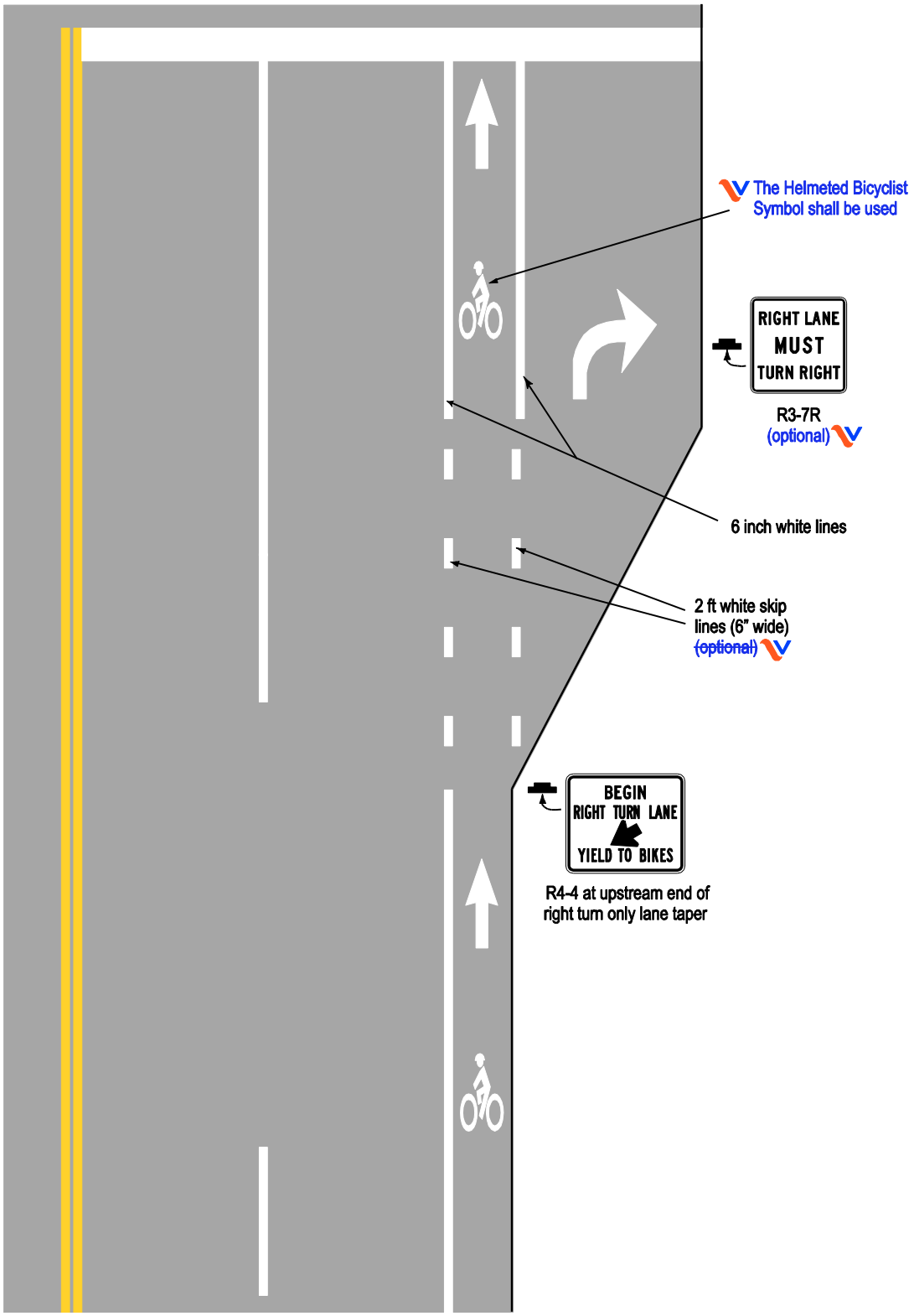


Figure 9C-5(VA). Example of Bicycle Lane Treatment at Parking Lane into a Right-Turn Only Lane

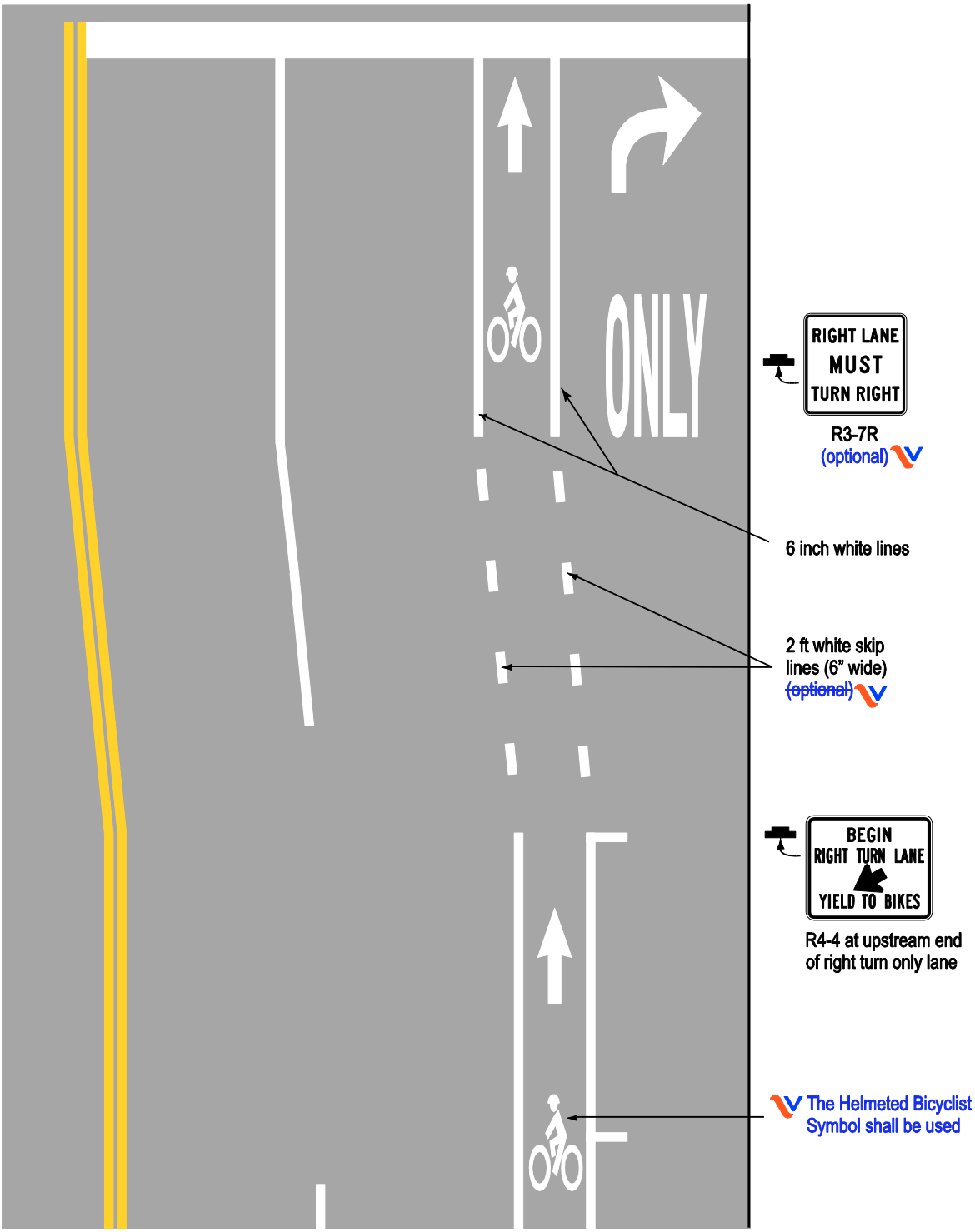
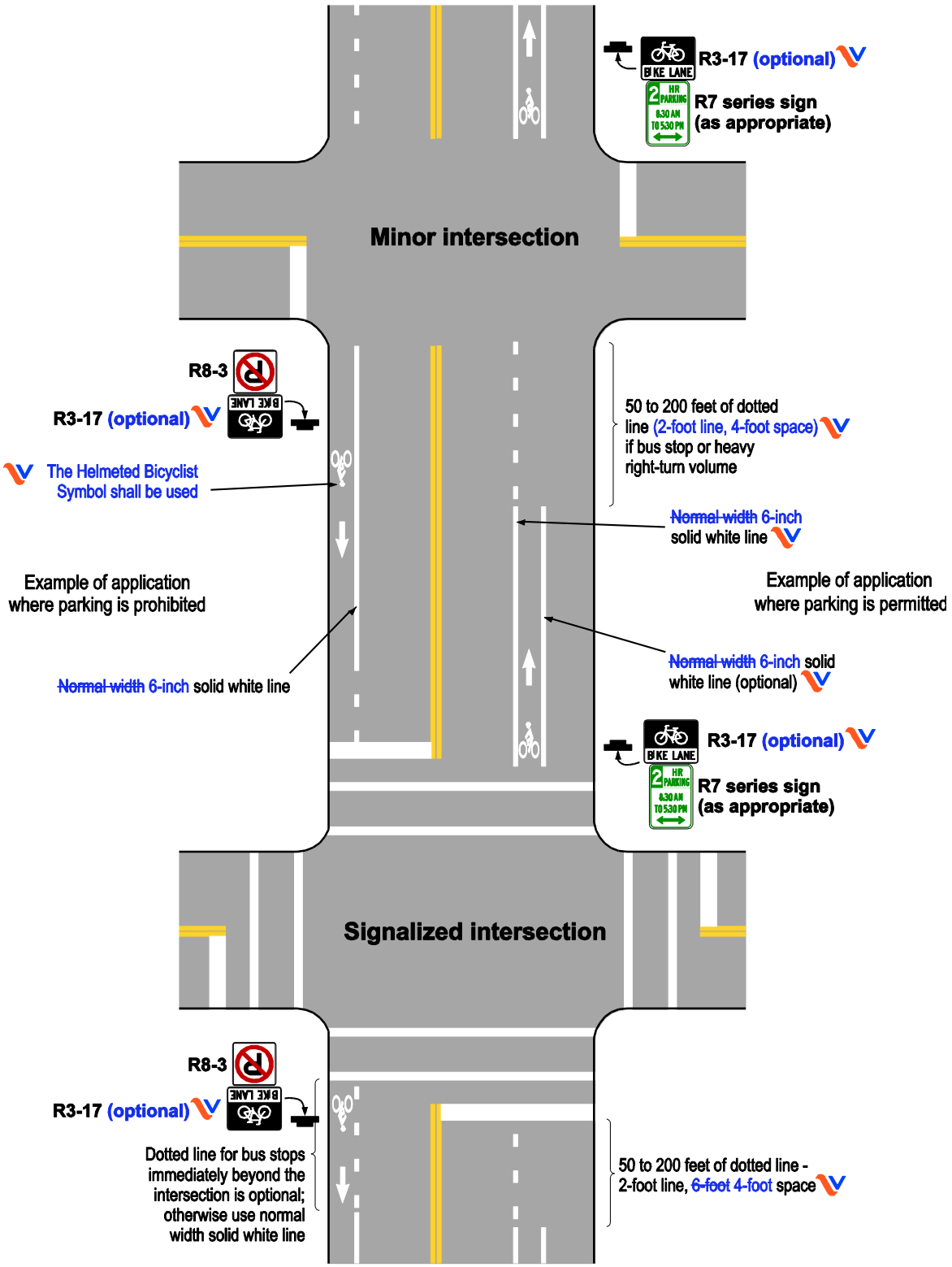


Figure 9C-6(VA). Example of Pavement Markings for Bicycle Lanes on a Two-Way Street



Standard:

21 **If the bicycle symbol is reduced, it shall be reduced to no less than 4 feet in length.**

Support:

22 Typical bicycle lane pavement marking details are shown in Figure 9C-V1 in this Supplement.