

# National Committee on Uniform Traffic Control Devices

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## National Committee on Uniform Traffic Control Devices (NCUTCD) Recommended Changes to Proposed Text for 11<sup>th</sup> Edition of the MUTCD Docket Number: FHWA-2020-0001

**Federal Register Item Number:** 587 - 605

**NPA MUTCD Section Number:** Sections 9B.01 – 9B.25

**Legend:** Base text shown in proposal is the NPA “clean” proposed text.

- [NCUTCD recommendation for text to be added in final rule.](#)
- ~~NCUTCD recommendation for text to be deleted in final rule.~~
- [NCUTCD recommendation for text to be moved/relocated in final rule.](#)
- NPA text that was not previously approved by NCUTCD but is now approved.

Explanatory note: [\[Note that explains purpose of recommended change.\]](#)

The following pages present NCUTCD recommendations for changes to the MUTCD NPA proposed text, tables, and figures for Chapter 9B. Below is a short summary of the NCUTCD position for each section of this chapter. A more detailed summary is provided at the beginning of each section.

- NPA #587, Section 9B.01: Changes recommended based on Council action in spring 2021
- NPA #588, Section 9B.02: Changes recommended based on Council action in spring 2021
- NPA #589, Section 9B.03: Changes recommended based on Council action in spring 2021
- NPA #590, Section 9B.04: Changes recommended based on Council action in spring 2021
- NPA #NA, Section 9B.05: NCUTCD agrees with NPA content
- NPA #NA, Section 9B.06: NCUTCD agrees with NPA content
- NPA #NA, Section 9B.07: NCUTCD agrees with NPA content
- NPA #591, Section 9B.08: Changes recommended based on Council action in spring 2021
- NPA #NA, Section 9B.09: Changes recommended based on Council action in spring 2021
- NPA #592, Section 9B.10: NCUTCD agrees with NPA content
- NPA #593, Section 9B.11: Changes recommended based on Council action in spring 2021
- NPA #594, Section 9B.12: NCUTCD agrees with NPA content
- NPA #NA, Section 9B.13: NCUTCD agrees with NPA content
- NPA #595, Section 9B.14: Changes recommended based on Council action in spring 2021
- NPA #596, Section 9B.15: Changes recommended based on prior Council Action
- NPA #597, Section 9B.16: NCUTCD agrees with NPA content
- NPA #598, Section 9B.17: Changes recommended based on Council action in spring 2021
- NPA #599, Section 9B.18: Changes recommended based on Council action in spring 2021
- NPA #600, Section 9B.19: Changes recommended based on Council action in spring 2021
- NPA #601, Section 9B.20: NCUTCD agrees with NPA content
- NPA #602, Section 9B.21: Changes recommended based on prior Council Action
- NPA #603, Section 9B.22: Changes recommended based on Council action in spring 2021
- NPA #604, Section 9B.23: NCUTCD agrees with NPA content
- NPA #NA, Section 9B.24: NCUTCD agrees with NPA content

- NPA #605, Section 9B.25: NCUTCD agrees with NPA content

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**Section 9B.01 Comments:** NCUTCD generally agrees with 9B.01 as presented in the NPA, but recommends expanding the appropriate application of STOP and YIELD signs for all bicycle facilities.

## **Section 9B.01 STOP and YIELD Signs (R1-1, R1-2)**

### **Standard:**

STOP (R1-1) signs shall be installed on ~~shared-use paths, separated bikeways, or other bicycle facilities~~ at points where bicyclists are required to stop.

YIELD (R1-2) signs shall be installed on ~~shared-use paths, separated bikeways, or other bicycle facilities~~ 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. **[expand application of STOP and YIELD signs for all bicycle facilities.]**

**A STOP sign or a YIELD sign shall not be installed in conjunction with a bicycle signal face (see Chapter 4H)**

### **Option:**

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:**

*Where conditions require path users or bicyclists on separated bikeways, 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.*

*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.*

*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.*

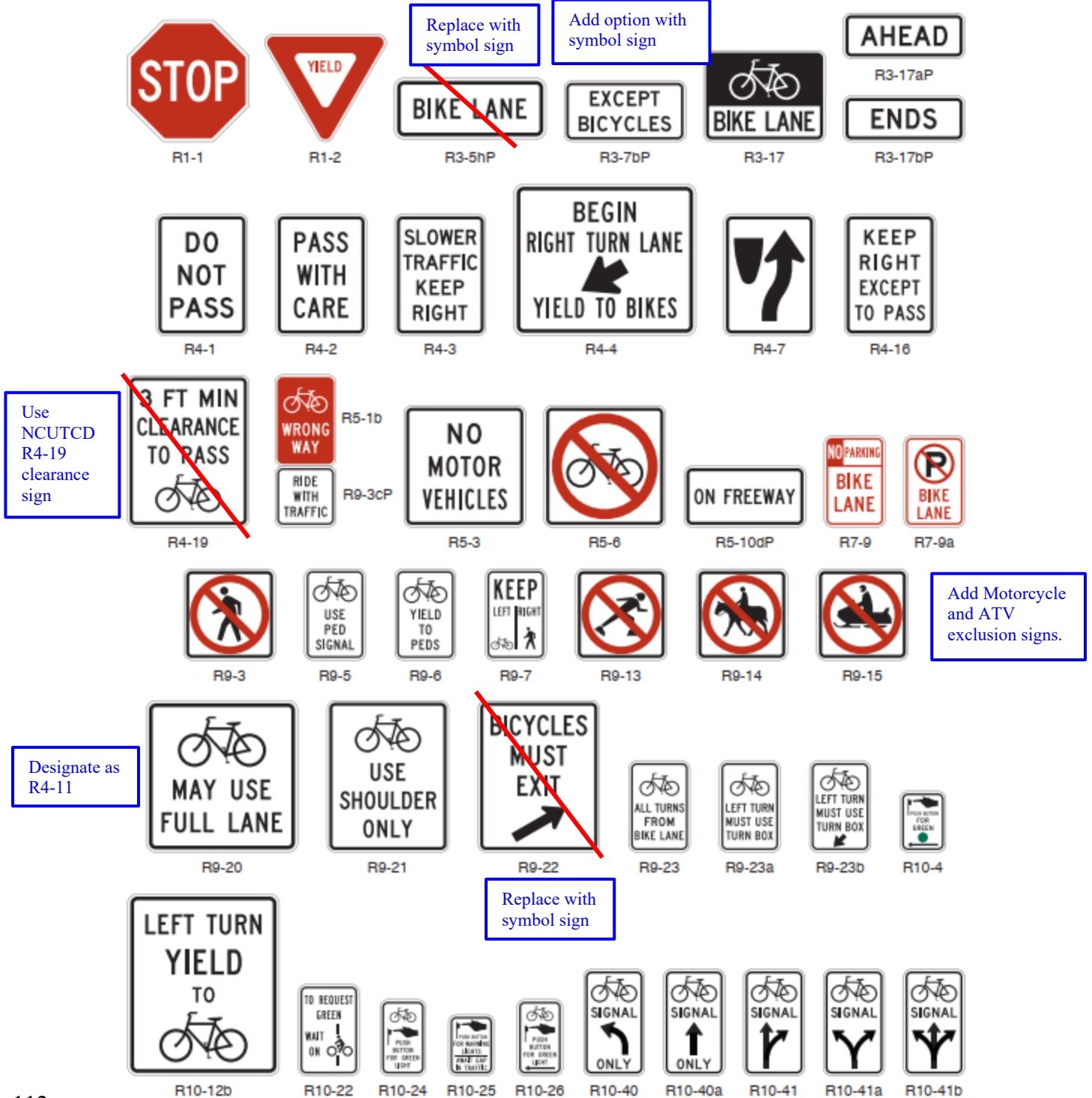
*When priority is assigned, the least restrictive control that is appropriate should be placed on the lower priority approaches. STOP signs should not be used where YIELD signs would be acceptable.*

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NCUTCD generally agrees with Figure 9B-1 in the NPA but recommends the following revisions:

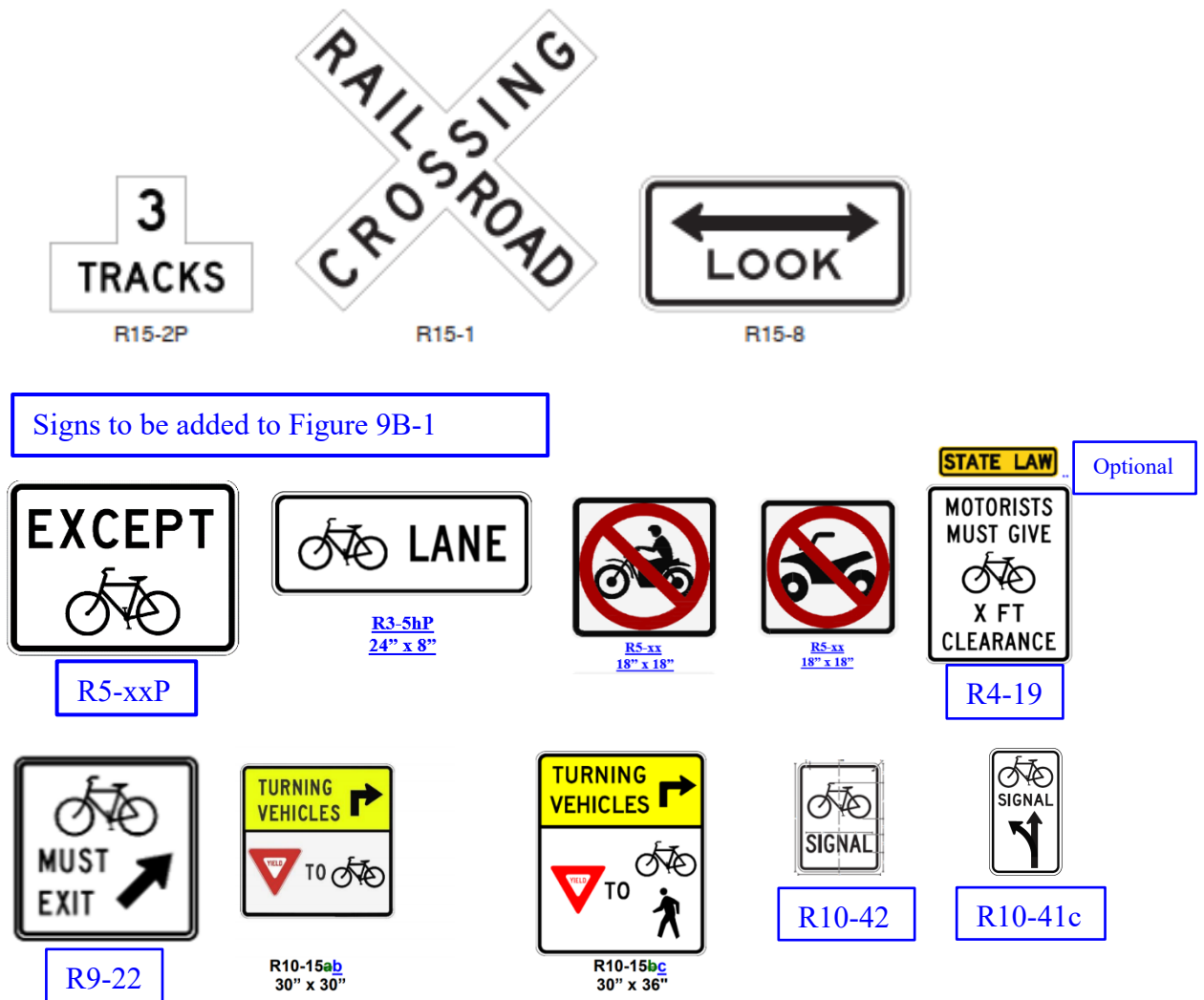
- Replace the NPA text sign for R3-5hP with a symbol sign in accordance with NCUTCD recommendation 14A-BIK-03.
- Add the symbol plaque version of the EXCEPT BIKES R3-xP in accordance with NCUTCD recommendation 09A-BIK-01.
- Replace the NPA version of the bicyclist passing clearance sign R4-19 with the version in accordance with NCUTCD recommendation 18A-BIK-01. The NCUTCD recommended sign is a product of the 2017 Traffic Control Device Pooled Fund Study, and additional comprehension testing was performed by Dr. Ron Van Houten at Western Michigan University.
- Add the selective exclusion signs for NO DIRT BIKES and NO ATV's R5-xx in accordance with NCUTCD recommendation 18B-BIK-03.
- Restore the 2009 sign designation for the BIKES MAY USE FULL LANE sign to R4-11 to match the designation stated in the text of Section 9B.14.
- Replace the NPA text sign version of BICYCLES MUST EXIT sign R9-22 in accordance with NCUTCD recommendation 09B-BIK-01.
- Add the TURNING VEHICLES YIELD TO BIKES sign R10-15b and TURNING VEHICLES YIELD TO BIKES & PEDS sign R10-15C in accordance with NCUTCD recommendation 18B-BIK-01.
- Add the BIKE SIGNAL sign R10-42 in accordance with NCUTCD recommendation 14A-STC-02.
- Add a BIKE SIGNAL sign R10-41c (mirror of R10-41 for left-through movements, such as on the left side of one-way streets).

Figure 9B-1. Regulatory Signs and Plaques for Bicycle Facilities (Sheet 1 of 2)



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Figure 9B-1. Regulatory Signs and Plaques for Bicycle Facilities (Sheet 2 of 2)



**Section 9B.02 Comments:** NCUTCD generally agrees with 9B.02 as presented in the NPA, but recommends adding the symbol version of the Except Bicycle plaque in accordance with NCUTCD recommendation 09A-BIK-01, plus minor editorial changes.

## Section 9B.02 Except Bicycles Plaque (R3-7bP, R5-xxP)

Support:

There are circumstances where it might be appropriate to except bicyclists from regulatory restrictions applied to other traffic.

Guidance:

Where an engineering study demonstrates that it is appropriate to exempt bicyclists from the provisions of a regulatory sign, the Except Bicycles plaque (R3-7bP) should be used.

Support:

Figure 9B-2 shows examples of how the Except Bicycles plaque can be applied.

Section 9C.05 contains information regarding the Except Bicycles plaque when applicable to a warning sign.

**Standard:**

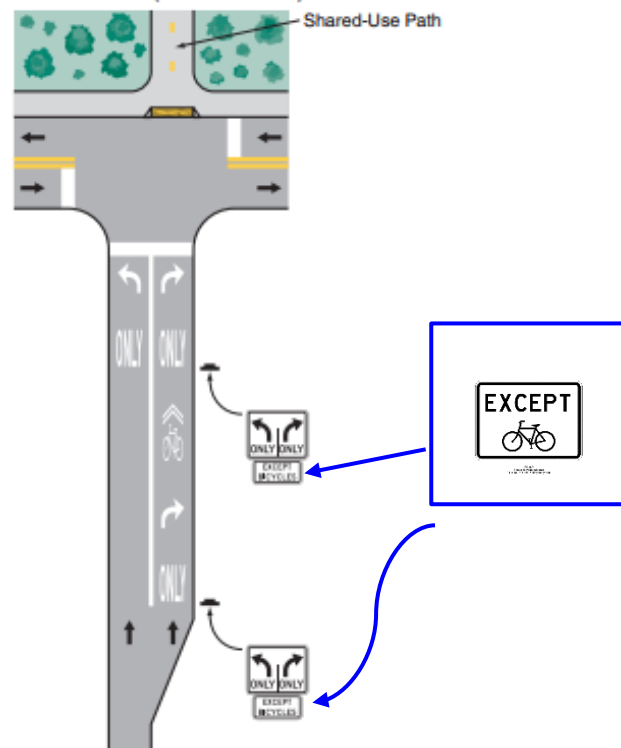
The Except Bicycles plaque shall not be used to circumvent the legal requirement of a STOP or YIELD sign, Yield Here To Pedestrians Signs, Stop Here For Pedestrians Signs, or a traffic signal indication.

Where a regulatory sign, such as the No Left Turn (R3-2) sign (see Section 2B.26~~28~~), is not in conflict with a Stop sign or a Yield sign and is installed to the same post or mounting as the Stop sign or Yield sign, the Except Bicycles plaque shall not be installed in conjunction with the regulatory sign to that post or mounting that includes the Stop sign or Yield sign.

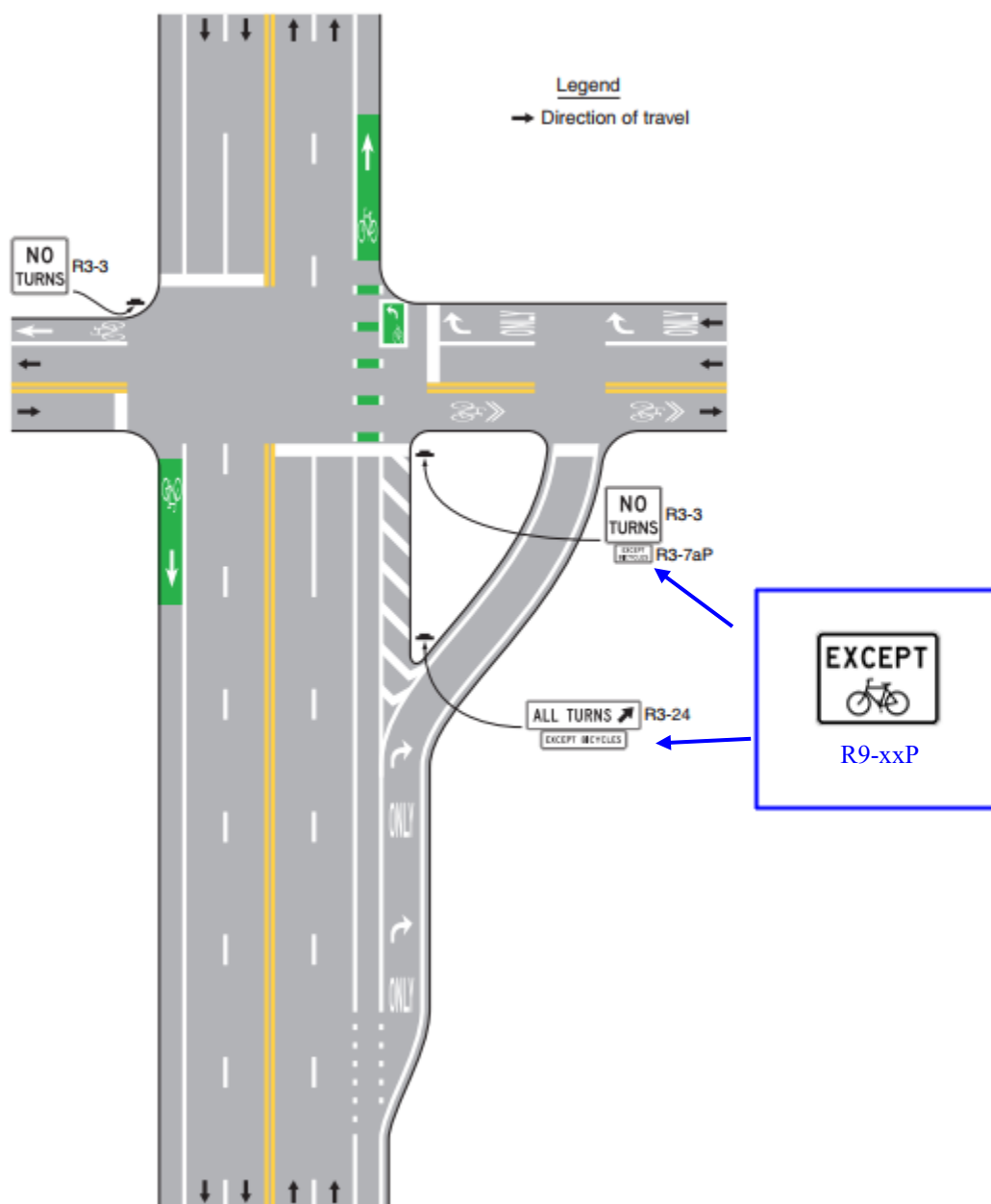
The Except Bicycles plaque shall be placed below the regulatory sign to which it supplements.

NCUTCD generally agrees with Figure 9B-2 as presented in the NPA, but recommends depicting the symbol version of the Except Bikes plaque R5-xxP instead of the word version in accordance with NCUTCD recommendation 09A-BIK-01.

Figure 9B-2. Example of Applications of the Except Bicycles Regulatory Plaque  
(Sheet 1 of 2)



Add EXCEPT  
Bikes plaque to  
this NO TURNS  
sign



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**Section 9B.03 Comments:** NCUTCD generally agrees with 9B.03 as presented in the NPA, but recommends deleting a redundant Standard statement regarding display of separated bicycle facilities on the sign, plus minor editorial changes.

### **Section 9B.03 Advance Intersection Lane Control Signs for Bicycle Lanes (R3-8 Series)**

#### **Option:**

Advance Intersection Lane Control (R3-8 Series) signs (see Section 2B.30~~32~~) may display the arrangement of a conventional, buffer-separated, or separated bicycle lane in relation to other lanes in the same direction that are present on a roadway approach to an intersection. [editorial]

#### **Support:**

The number and combination of permissible movements by both the motor vehicle and the bicycle on the same approach to an intersection might be practically limited by the amount of information that can be legibly displayed on signs or in signing sequences and still be readily comprehended by road users. The excessive display of all movements by more than one mode can result in unwieldy signs that are difficult to locate and install.

#### **Guidance:**

*On an approach to an intersection with complex geometry that can include multiple through lanes and multiple turn lanes and also includes a bicycle lane, consideration should be given to displaying all allowable movements on separate signs, such as using Mandatory Movement Lane Control (R3-5) signs (see Section 2B.28~~9~~) for the through lanes and Mandatory Movement Lane Control (R3-7) signs (see Section 2B.28~~30~~) for the turn lanes, and guide signs for bicycle routes (see Section 9D.02 through 9D.07) and Bicycle Route Sign Auxiliary plaques (see Section 9D.08) for the bicycle movement.* [editorial]

#### **Standard:**

**The portion of the sign face for the bicycle lane shall be limited to the relationship of the bicycle lane to other lanes on the roadway approach to the intersection. The portion of the sign face for the bicycle lane shall not be modified to display specific, supplementary information about the bicycle lane such as bicycle lane extensions, contiguous buffer spaces, or other ancillary bicycle operations such as two-stage turn boxes or bicycle boxes.**

**Counter-flow bicycle lanes shall not be displayed on Advance Intersection Lane Control signs.**

**Lanes shared between motor vehicles and bicycles and/or the shared-lane marking shall not be displayed on Advance Intersection Lane Control signs.**

~~Physically separated bikeways shall not be displayed on Advance Intersection Lane Control signs.~~ [delete redundant Standard statement]

**Advance Intersection Lane Control signs that display the bicycle lane shall use a contrasting white legend on a black background for the bicycle lane. The portion of the display for the bicycle lane shall not use the color green on the sign face in an attempt to be consistent with green-color pavement that may be present on the intersection approach.**

**Section 9B.04 Comments:** NCUTCD generally agrees with 9B.04 as presented in the NPA, but recommends adding the R3-17aP “AHEAD” to the list of plaques, plus minor editorial changes.



## Section 9B.04 Bike Lane Signs and Plaques (R3-17, R3-17aP, R3-5hP)

### Standard:

The BIKE LANE (R3-17) sign and the R3-17aP and R3-5hP plaques shall be used only in conjunction with marked bicycle lanes as described in Sections 9E.01, 9E.06, and 9E.07.

### Guidance:

*If used, Bike Lane signs and plaques should be used at the beginning of the bicycle lane and in advance of the downstream end of the bicycle lane.*

### Option:

Bike Lane signs and plaques may be used at periodic intervals along the bicycle lane as determined by engineering judgment based on the operating speed of bicycle and other traffic, block length, distances from adjacent intersections, and other considerations. [editorial]

Other regulatory plaques such as AHEAD (R3-17aP), BEGIN (M4-14P) and END (M4-6P) may be used with Bike Lane signs. [revise to add the AHEAD plaque and correct plaque designations]

### Support: [editorial]

Section 2B.33~~5~~ contains information for the application of BEGIN and END plaques.

Section 9B.03 contains information on displaying the bicycle lane on Advance Intersection Lane Control signs.

### Option:

Where two or more movements from a bicycle lane ~~is~~ are allowed, or where the emphasis of allowed bicycle movements is needed, an Optional Movement Lane Control (see Section 2B.29~~34~~) sign may be supplemented with a BIKE LANE plaque above the Optional Movement Lane Control sign. [editorial]

Where bicycle lanes are located between travel lanes on intersection approaches or where only a single bicycle movement is permitted from a certain bicycle lane, a Mandatory Movement Lane Control sign (see Section 2B.28~~9~~) may be supplemented with a R3-5hP plaque to require a bicyclist in a particular bicycle lane at an intersection to stay in the same lane and proceed straight through the intersection, or to indicate a required turn from a particular bicycle lane.

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**Section 9B.05 Comments:** NCUTCD agrees with 9B.05 as presented in the NPA.

## Section 9B.05 BEGIN RIGHT TURN LANE YIELD TO BIKES Sign (R4-4)

### Option:

Where motor vehicles entering an exclusive right-turn lane must weave across bicycle traffic in bicycle lanes, the BEGIN RIGHT TURN LANE YIELD TO BIKES (R4-4) sign may be used to inform both the motorist and the bicyclist of this weaving maneuver (see Figures 9E-3 and 9E-4).

### Guidance:

*The R4-4 sign should not be used when bicyclists need to move left because of a right-turn lane drop situation.*

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**Section 9B.06 Comments:** NCUTCD agrees with 9B.06 as presented in the NPA.

## Section 9B.06 Bicycle WRONG WAY Sign and RIDE WITH TRAFFIC Plaque (R5-1b, R9-3cP)

Option:

The Bicycle WRONG WAY (R5-1b) sign and RIDE WITH TRAFFIC (R9-3cP) plaque may be placed facing wrong-way bicycle traffic, such as on the left-hand side of a roadway.

This sign and plaque may be mounted back-to-back with other signs to minimize visibility to other traffic.

*Guidance:*

*The RIDE WITH TRAFFIC plaque should be used only in conjunction with the Bicycle WRONG WAY sign, and should be mounted directly below the Bicycle WRONG WAY sign.*

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**Section 9B.07 Comments:** NCUTCD agrees with 9B.07 as presented in the NPA.

### **Section 9B.07 NO MOTOR VEHICLES Sign (R5-3)**

Option:

The NO MOTOR VEHICLES (R5-3) sign may be installed at the entrance to a shared-use path.

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**Section 9B.08 Comments:** NCUTCD generally agrees with Section 9B.08 as presented in the NPA, but recommends including selective exclusion signs for dirt bikes/motorcycles and all-terrain vehicles (ATVs) evaluated as part of a FHWA Traffic Control Devices Pooled Fund Study and included in NCUTCD recommendation 18-BIK-03. NCUTCD also recommends correcting the code for the R9-15 No Snowmobiles sign.

### **Section 9B.08 Selective Exclusion Signs**

Option:

Selective Exclusion signs may be installed at the entrance to a roadway or facility to notify road or facility users that designated types of traffic are excluded from using the roadway or facility.

Support:

Typical exclusion messages include:

A. No Bicycles (R5-6),

B. No Pedestrians (R9-3),

C. No Skaters (R9-13),

D. No Equestrians (R9-14), ~~and~~

E. No Snowmobiles (~~R5-15~~R9-15). [revise as per 09A-RW-01]

F. No Motorcycles (R5-xx), and [revise per 18B-BIK-03]

G. No ATVs (R5-xx). [revise per 18B-BIK-03]

Option:

Where bicyclists, pedestrians, and motor-driven cycles are all prohibited, it may be more desirable to use the R5-10a word message sign that is described in Section 2B.52.

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**Section 9B.09 Comments:** NCUTCD generally agrees with 9B.09 as presented in the NPA, with minor editorial changes.

### **Section 9B.09 No Parking Bike Lane Signs (R7-9, R7-9a)**

297 **Standard:**

298 **If the installation of signs is necessary to restrict parking, standing, or stopping in a**  
299 **bicycle lane, appropriate signs as described in Sections 2B.536 through 2B.558, or the No**  
300 **Parking Bike Lane (R7-9 or R7-9a) signs shall be installed.** [editorial]  
301

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302  
303 **Section 9B.10 Comments:** NCUTCD agrees with 9B.10 as presented in the NPA.  
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305 **Section 9B.10 Back-In Parking Sign (R7-10)**

306 Option:

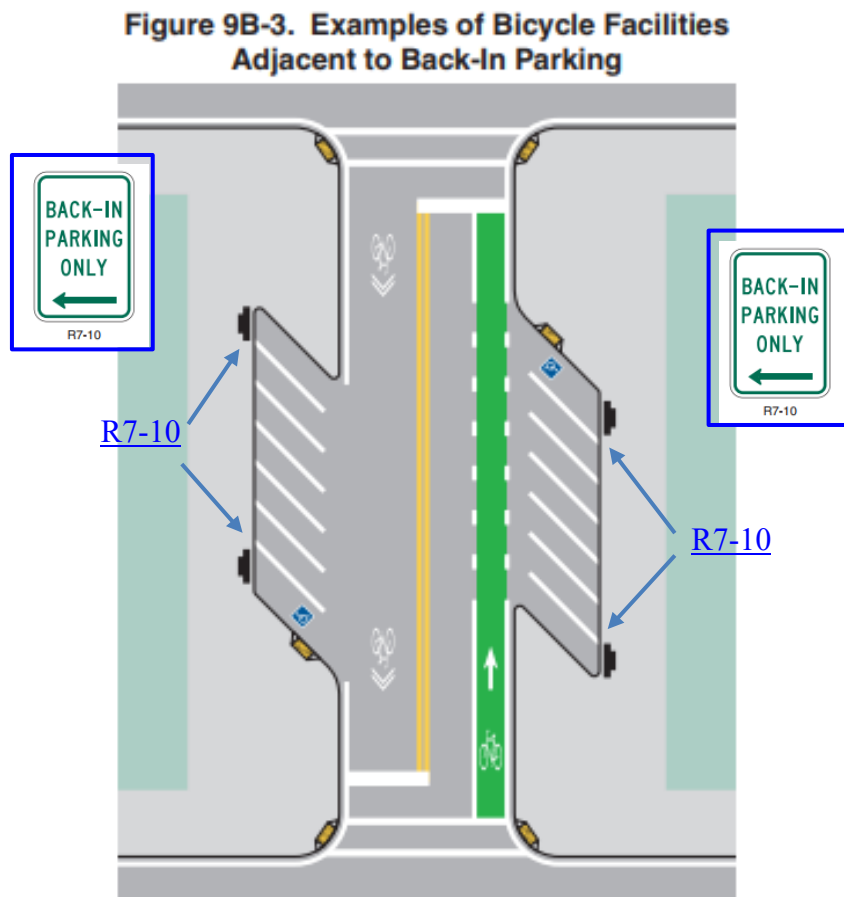
307 The R7-10 sign (see Section 2B.54) may be used where back-in parking is required by motor  
308 vehicles in the presence of a bicycle lane or movement.

309 Support:

310 Angled back-in curb parking is commonly applied on streets where a bicycle lane is present  
311 so that the scanning behavior of a motorist typical with the back-in angle parking task, both  
312 entering and exiting the parking space, would place a bicyclist in a bicycle lane in a more direct  
313 view of the motor vehicle operator.

314 Figure 9B-3 shows an example of where back-in parking signs can be used in conjunction  
315 with bicycle lanes.  
316  
317

NCUTCD generally agrees with Figure 9B-3 in the NPA, but recommends revisions to show sign designations, the addition of R7-10 signs, and illustration of green colored pavement markings to match dashed bike lane in accordance with Section 3H.06. Designate green colored pavement as optional.



Show signs and sign numbers in Figure. Green pavement markings to be dashed to match dashed bike lane in conflict zone. Show Green pavement markings as optional.

**Section 9B.11 Comments:** NCUTCD recommends deleting Option and Support statements that are covered in Sections 2B.60 and 9B.21.

### Section 9B.11 Bicycles Use Ped Signal (R9-5)

Option:

The Bicycles Use Ped Signal (R9-5) sign may be used where the crossing of a street by bicyclists is controlled by pedestrian signal indications.

~~In order to remind drivers who are making turns to yield to pedestrians or bicyclists, a Turning Vehicles Yield to Pedestrians (R10-15), or Left Turns Yield to Bicycles (R10-12b) sign may be used.~~ [delete - addressed in other sections]

Guidance:

If used, the R9-5 sign should be installed in the vicinity of where bicyclists will be crossing the street.

Support:

More information on the use of the Left Turns Yield to Bicycles (R10-12b) sign is provided in Section 9B.20. [delete - addressed in other sections]

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**Section 9B.12 Comments:** NCUTCD agrees with 9B.12 as presented in the NPA.

**Section 9B.12 Bicycles Yield to Peds Sign (R9-6).**

Option:

The Bicycles Yield to Peds (R9-6) sign may be used at locations where a bicyclist is required to cross or share a facility used by pedestrians and is required to yield to the pedestrians.

**Standard:**

Where the Bicycles Yield to Peds sign is supported by a yield line pavement marking (see Section 3B.19) to establish the yielding point, the sign and the pavement marking shall be installed adjacent to each other.

The Bicycles Yield to Peds sign shall not be used in bicycle corridors to establish a programmatic regulation where no yielding point exists.

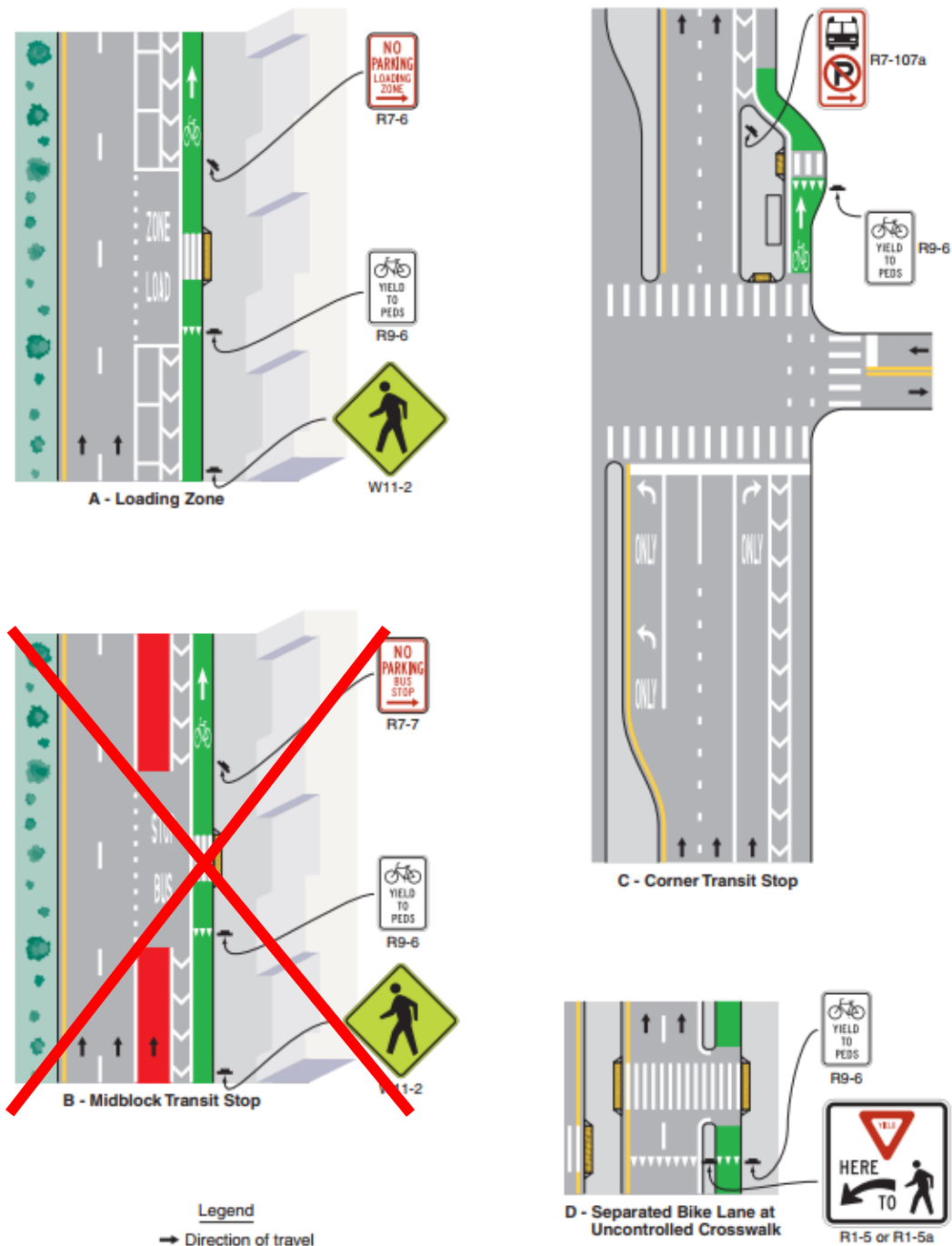
The Bicycles Yield to Peds sign shall not be used in conjunction with a STOP or YIELD sign, Yield Here To Pedestrians Sign, or a Stop Here For Pedestrians Sign.

Support:

Figure 9B-4 shows examples of applying the Bicycles Yield to Peds sign with a yield line pavement marking.

NCUTCD generally agrees with Figure 9B-4 as presented in the NPA, but recommends deleting example B, as it depicts an undesirable application.

**Figure 9B-4. Examples of Applications for the Bicycles Yield to Pedestrian Sign**



**Section 9B.13 Comments:** NCUTCD agrees with 9B.13 as presented in the NPA.

### **Section 9B.13 Shared-Use Path Restriction Sign (R9-7)**

#### **Option:**

The Shared-Use Path Restriction (R9-7) sign may be installed to supplement a solid white pavement marking line (see Section 9E.13) on facilities that are to be shared by pedestrians and bicycles in order to provide a separate designated pavement area for each mode of travel. The symbols may be switched as appropriate.

#### **Guidance:**

*If two-way operation is permitted on the facility for pedestrians and/or bicyclists, the designated pavement area that is provided for each two-way mode of travel should be wide enough to accommodate both directions of travel for that mode.*

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**Section 9B.14 Comments:** NCUTCD generally agrees with 9B.14 as presented in the NPA, but recommends relocating text within the section referencing the UVC.

### **Section 9B.14 Bicycles May Use Full Lane Sign (R4-11)**

#### **Support:**

The 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. [relocate from the end of this section]

#### **Option:**

The Bicycles May Use Full Lane (R4-11) sign may be used on roadways where no bicycle lanes or adjacent shoulders usable by bicycles are present and where travel lanes are too narrow for bicycles and motor vehicles to operate side by side.

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

Section 9E.09~~8~~ describes a shared-lane marking that may be used in addition to or instead of the Bicycles May Use Full Lane sign to inform road users that bicycles might occupy the travel lane.

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**Section 9B.15 Comments:** NCUTCD recommends revising 9B.15 as follows:

- Add an Option paragraph to allow use of a STATE LAW header panel to enhance compliance with local ordinance or laws in accordance with Part 2.
- Revise the Guidance statement to clarify where the R4-19 sign should not be used in accordance with NCUTCD recommendation 18B-BIK-02. If the use of this sign is discouraged on roadways with shoulders or standard bicycle lanes, it can hinder efforts to promote reasonably safe passing of bicyclists where minimal lateral separation exists between the bikeway and the motor vehicle travel way. NCUTCD recommends revisions to remove these restrictions.

### **Section 9B.15 Bicycle Passing Clearance Sign (R4-19)**

#### **Option:**

The Bicycle Passing Clearance (R4-19) sign may be used in jurisdictions that have defined in law or ordinance a specific clearance to be provided by motor vehicles passing bicycles.



The specific clearance displayed on the Bicycle Passing Clearance (R4-19) sign may be adjusted to reflect the applicable law or ordinance.

The legend STATE LAW may be added within a header panel above the Bicycle Passing Clearance (R4-19) sign in accordance with Section 2A.15 based on engineering judgement.

[add Option for STATE LAW header panel]

**Standard:**

**The Bicycle Passing Clearance (R4-19) sign shall not be used in jurisdictions that do not have a specific passing clearance to be provided by motor vehicles passing bicycles, as defined in law or ordinance.**

**Guidance:**

*The Bicycle Passing Clearance (R4-19) sign should not be used on roadways with separated bicycle lanes ~~or with shoulders usable for bicycle travel.~~*

[revise per 18B-BIK-02]

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**Section 9B.16 Comments:** NCUTCD agrees with 9B.16 as presented in the NPA.

**Section 9B.16 Bicycles Use Shoulder Only Sign (R9-21)**

**Option:**

The Bicycles Use Shoulder Only (R9-21) sign may be used to denote locations on a freeway or expressway where bicycles are permitted, but must remain on an available and usable shoulder.

The On Freeway plaque (R5-10dP) may be used with an appropriate Selective Exclusion sign to denote a prohibition on ramps leading to an adjacent or parallel freeway (see Figure 9B-5).

**Guidance:**

*The Bicycles Use Shoulder Only sign should be limited to use on freeways and expressways.*

*The Bicycles Use Shoulder Only sign should be placed adjacent to the on-ramp or entrance to the freeway at or near the location where the full-width shoulder resumes beyond the entrance ramp taper.*

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**Section 9B.17 Comments:** NCUTCD generally agrees with the 9B.17 as presented in the NPA, but recommends removing duplicate language.

**Section 9B.17 Signing for Bicycles on Freeways and Expressways**

**Standard:**

**The Bicycles Must Exit (R9-22) sign shall be used in advance of a location where a freeway or expressway becomes prohibited to bicycle travel, and shall be placed in advance of the intersection or ramp prior to the prohibited segment of roadway (see Figure 9B-5).**

~~If the Bicycles Must Exit sign is used, the R5-6 No Bicycles sign shall be placed downstream from the intersection or ramp where the prohibited segment of freeway begins.~~ [delete]

**Option:**

The Bicycles Must Exit sign may be used below a post-mounted Exit Direction sign.

**Standard:**

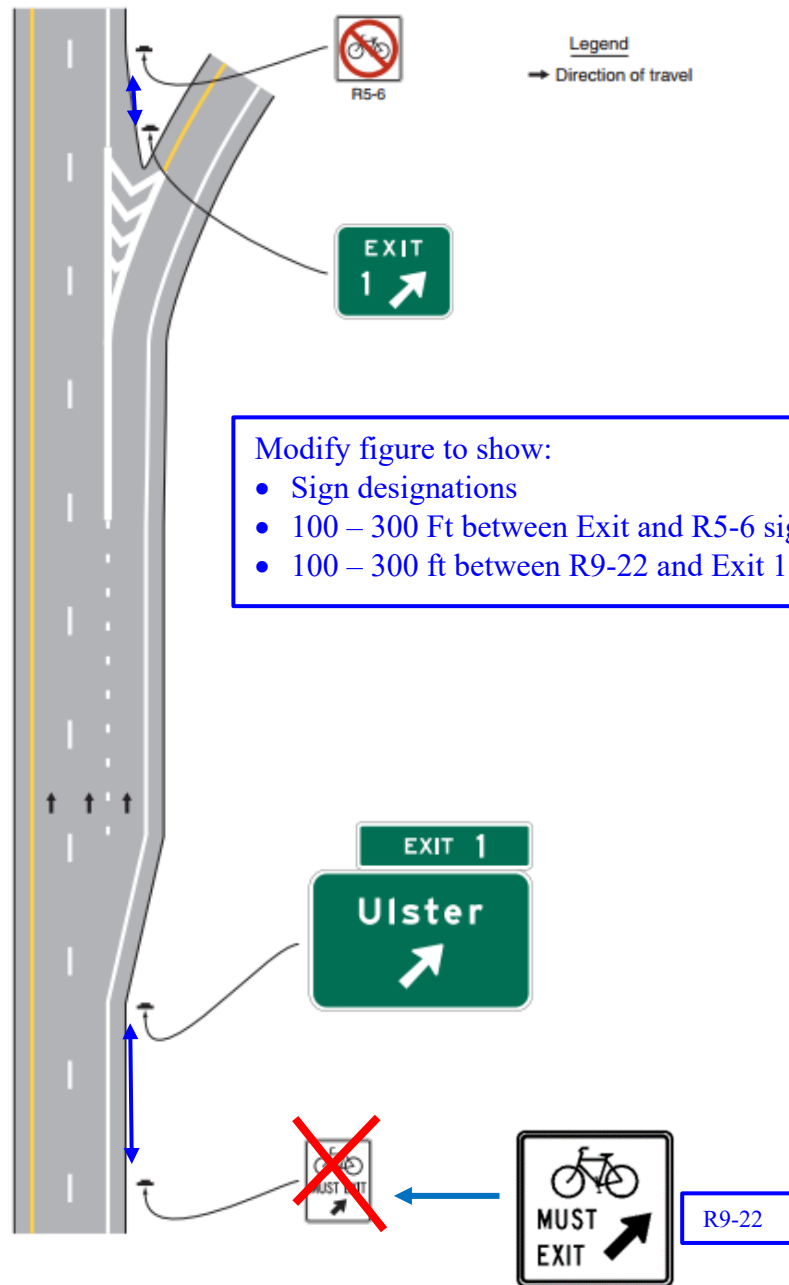
465       A No Bicycling sign (R5-6) shall be placed downstream from the ramp departure point  
466 where the prohibited segment of freeway or expressway begins. The No Bicycling sign  
467 shall not be placed below the Exit Gore sign if an Exit Gore sign is used.  
468

469 Support:

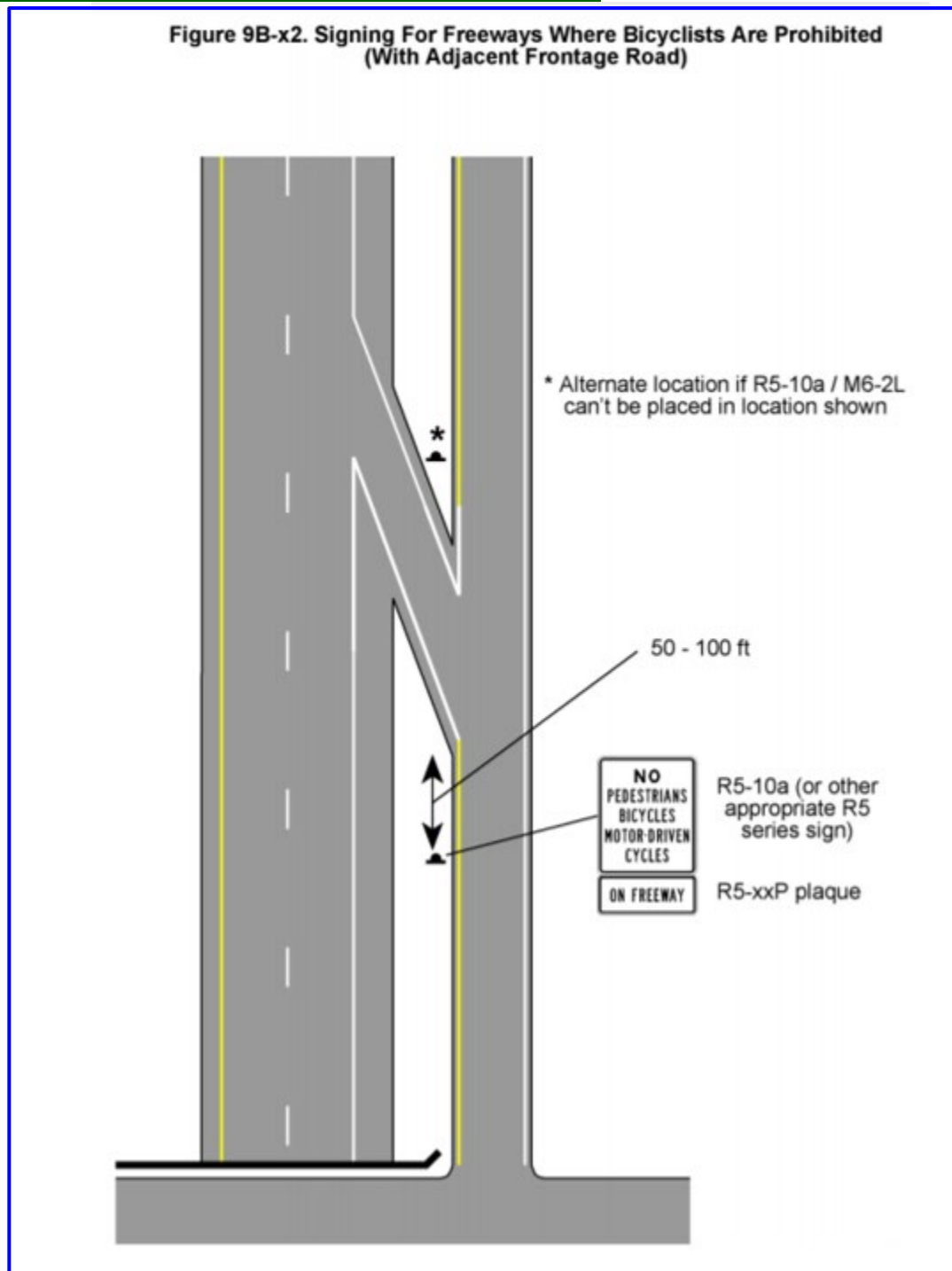
470       Section 2B.46~~52~~ contains information on regulatory signing for prohibiting bicycles from  
471 using particular roadways or facilities. [editorial]  
472  
473

NCUTCD generally agrees with Figure 9B-5 as presented in the NPA, but recommends including sign designations and distances as per NCUTCD recommendation 09B-BIK-01.

Figure 9B-5. Signing for Termination of Bicycle Access on Freeways and Expressways



NCUTCD recommends adding a new Figure 9B-x2 to address signing for freeways where bicyclists are prohibited but an adjacent frontage or service road exists that is open to bicycle travel, in accordance with NCUTCD recommendation 09B-BIK-01.



**Section 9B.18 Comments:** NCUTCD recommends revising 9B.18 in accordance with NCUTCD recommendation 14B-BIK-01 as follows:

- Revise the first Support statement to include material from the Standard statement regarding appropriate conditions for two-stage bicycle turn boxes
- Add a new Guidance statement regarding whether a two-stage bicycle turn box is appropriate
- Revise the Standard statement to delete material moved to Support and Option, and add a reference to passive detection
- Add a new Guidance statement regarding turning conflicts and use of R10-11 sign.

### **Section 9B.18 Two-Stage Bicycle Turn Box Regulatory Signing (R9-23 series)**

#### **Support:**

~~Where two-stage bicycle turn boxes are provided in an intersection, the design of an approach to that intersection will determine if the use of a two-stage bicycle turn box is required by bicycles to facilitate a turn.~~ [delete]

The conditions for which a two-stage bicycle turn box can facilitate turns at an intersection include:

- A. Locations where the upstream access to a turn lane for motor vehicles traffic is physically inaccessible to bicycles;
- B. Locations where all turns by motor vehicles are prohibited at the intersection; or
- C. Locations where traffic and roadway characteristics on the intersection approach (volume, speed, number of lanes, width, presence of rail tracks, etc.) make it difficult for bicycles to use a turn lane for motor vehicle traffic

#### **Guidance:**

Engineering judgement should be used to determine whether a bicycle turn box is an appropriate treatment at an intersection. [restate deleted Support as Guidance]

#### **Standard:**

~~Situations in which a two-stage bicycle turn box is required to facilitate turns shall include, but are not limited to those in which:~~

~~A. A separated bicycle facility is provided where upstream access to a lane used to facilitate turns by motor vehicle traffic is physically inaccessible to bicycles, or~~

~~B. All turns are prohibited at the intersection, or~~

~~C. Characteristics of the roadway approach to the intersection (volume, speed, number of lanes, width, presence of rail tracks, etc.) make it practical to prohibit the bicycle from using a lane used by motor vehicle traffic to facilitate turns.~~ [delete - revised to Support above]

Where bicycles are required to use a two-stage bicycle turn box, the Two-Stage Bicycle Turn Box Regulatory sign series (see Figure 9B-6) shall be used.

Where bicycles are required to use a two-stage bicycle turn box, the All Turns From Bike Lane advance regulatory sign (R9-23) shall be mounted in advance of the intersection, and at least one Bicycle Turn Must Use Turn Box sign (R9-23a, R9-23b) shall be used at the intersection.

Where used, the Bicycle Turn Must Use Turn Box sign (R9-23a) shall be mounted on the near side of the intersection.

535 Where used, the Bicycle Turn Must Use Turn Box location sign (R9-23b) shall be  
536 mounted on the far side of the intersection.

537 Passive detection of bicycles in the two-stage turn queuing box shall be provided if  
538 detection is required to actuate the signal which allows bicyclists to cross. [add per 14B-BIK-  
539 01]

540 ~~Where use of a two-stage bicycle turn box is optional, a the Two-Stage Bicycle Turn~~  
541 ~~Box guide sign series (D11-20 series, see Section 9D.13) may be used to provide directional~~  
542 ~~information.~~ [move to Option]

543  
544  
545 Option:

546 Where use of a two-stage bicycle turn box is optional, a the Two-Stage Bicycle Turn Box  
547 guide sign series (D11-20 series, see Section 9D.13) may be used to provide directional  
548 information.

549 If used, an appropriately sized Street Name (see Section 2D.4544) sign (D3-1) may be  
550 installed below the All Turns From Bike Lane sign to identify the cross street where the turn box  
551 will be available. [editorial]

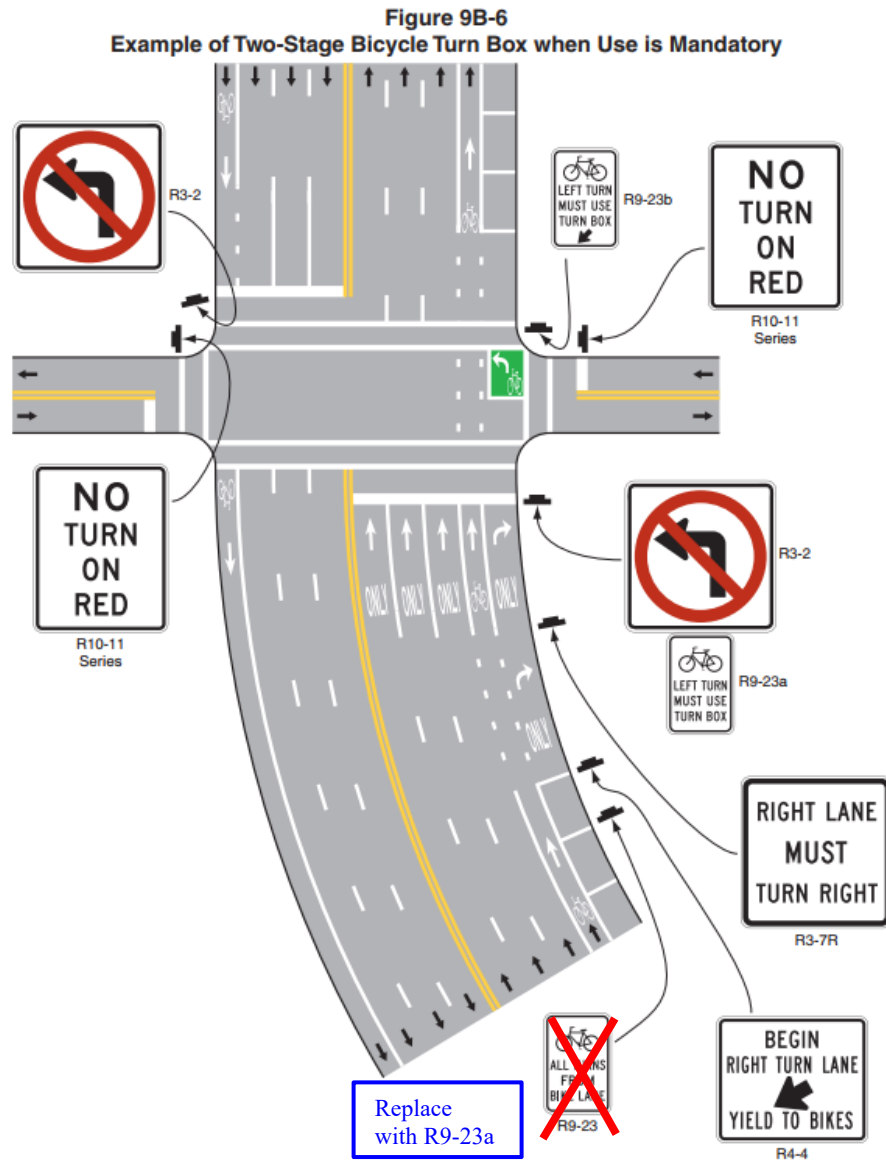
552 Support:

553 Section 9E.11 contains information regarding pavement markings for two-stage turn boxes.

554 Guidance:

555 A two-stage turn queuing box should be located outside of the path of turning traffic. A No  
556 Turn on Red (R10-11) sign should be installed where a two-stage turn queuing box is not located  
557 outside the path of right turning traffic. [add per 14B-BIK-01]

NCUTCD generally agrees with Figure 9B-6 as presented in the NPA, but recommends replacing the advance R9-23 with a R9-23a sign, as it conflicts with the mandatory lane movement markings. NCUTCD also recommends including sign designations and distances.





**Section 9B.19 Comments:** NCUTCD generally agrees with 9B.19 as presented in the NPA, but recommends adding Support explaining the reason for bicycle jughandle signs, plus minor editorial changes.

## **Section 9B.19 Bicycle Jughandle Signs (R9-24, R9-25, R9-26, and R9-27 Series)**

### Support:

Bicycle jughandle turns ~~can~~ allow bicycles to use the traffic control provided for the cross street ~~rather than subjecting the bicycle to use the lane provided on the approach to motor vehicle traffic~~ for facilitating a left turn (or right) or U-turn. [editorial]

Because bicycle jughandle turn designs are not widely used in the United States, regulatory and guide signing at decision points can help bicyclists know what to expect and where to go.  
[add Support to explain the reason for signs]

### Option:

An R9-24 series sign may be used where ~~all~~ bicycles are required to use the bicycle jughandle turn in order to facilitate all turns. [editorial]

An R9-25 series sign may be used where bicycles are required to use a bicycle jughandle turn to facilitate U and left turns and where right-turning bicycles are exempted or the right turn is not available or possible (see Figure 9B-7).

An R9-26 series sign may be used where bicycles are required to use a jughandle to facilitate a U-turn and where left- and right-turning bicycles are exempted or the left or right turn is not available or possible.

An R9-27 series sign may be used where bicycles are required to use a jughandle to facilitate a left turn and where U- and right-turning are exempted or the U or right turn is not available or possible (see Figure 9B-7).

The legend RIGHT may be substituted for the legend LEFT on Bicycle Jughandle signs to represent bicycle facilities on the left side of the roadway where facilitating a right turn would be applicable.

### Guidance:

*Applications of Bicycle Jughandle signs should be limited to ~~brief independent~~ ~~alignments either through~~ physical separation or islands formed by pavement markings.*  
[editorial]

*Bicycle Jughandle signs should not be used for the turning movement facilitated by two-stage turn boxes (see Section 9B. ~~18-17~~).* [editorial]

### Support:

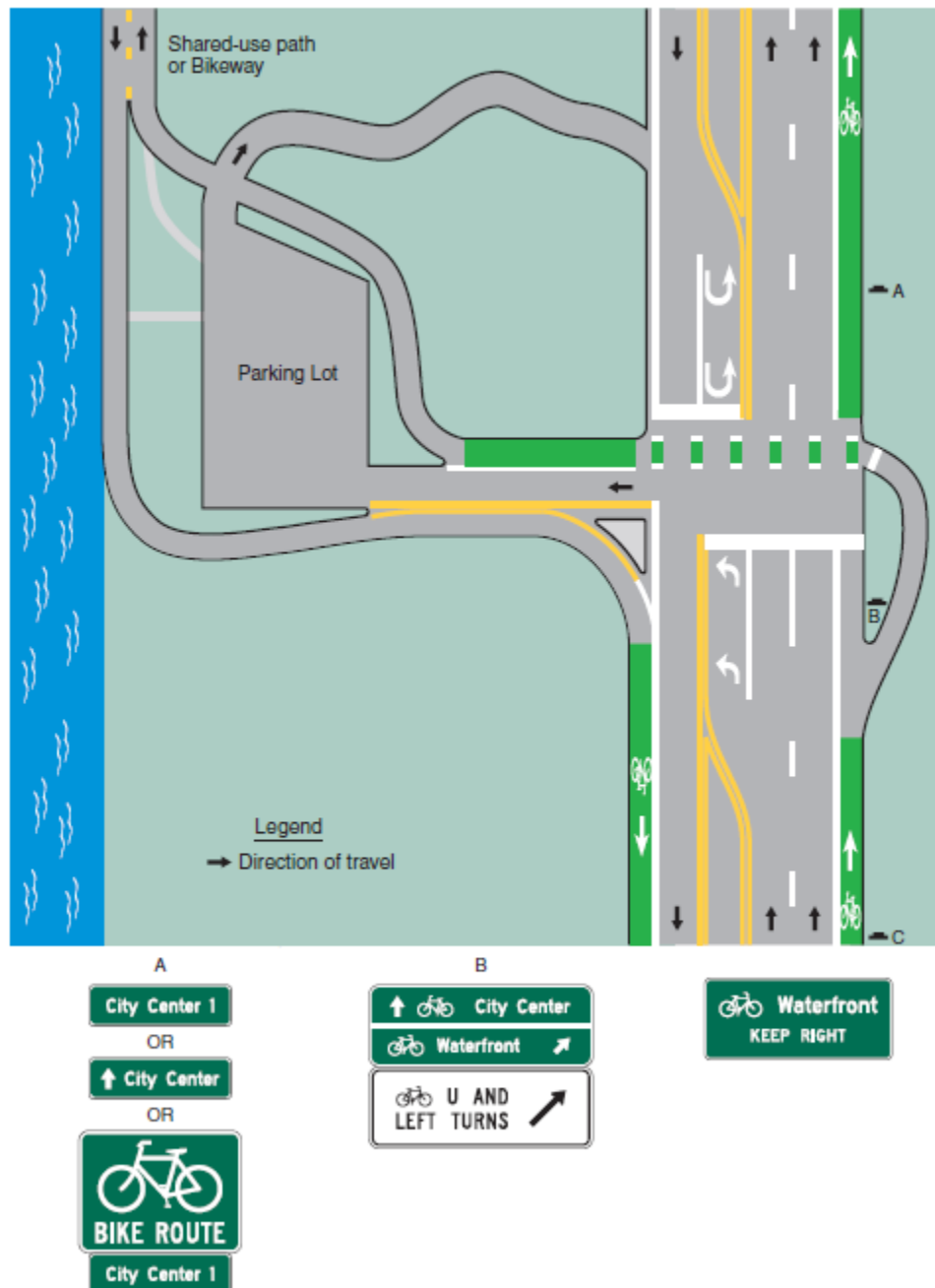
Bicycle jughandle signs are designed to be mounted below conventional guide signs.

Section 9D.01 contains information regarding the use of Bicycle Destination signs that can be used for jughandles.

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NCUTCD generally agrees with Figure 9B-7 sheet 1 of 2, but recommends deleting the U-turn pavement markings, adding sign designations, and verifying correct sign layout.

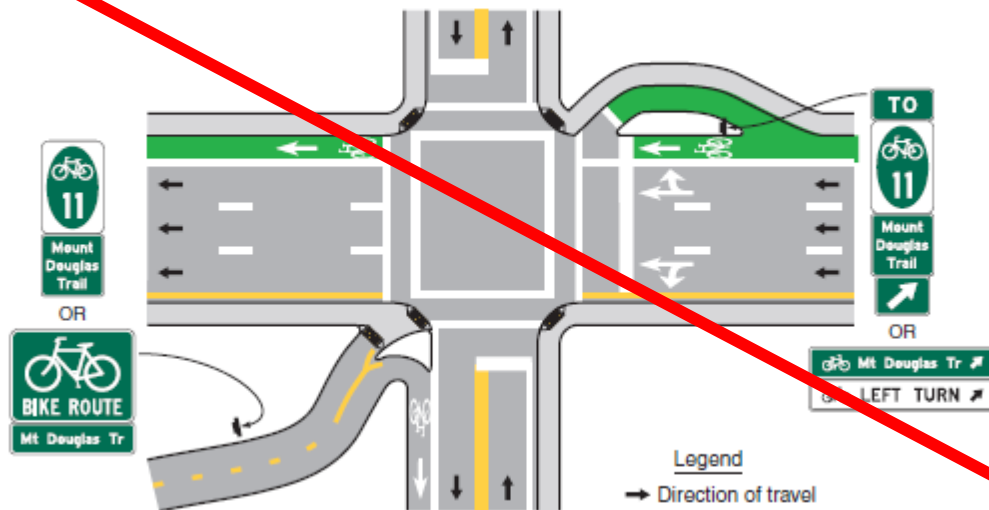
Figure 9B-7. Examples of Applications of Bicycle Jughandle Signs (Sheet 1 of 2)



Remove U-turn pavement markings. Add sign designations. Verify depicted signs use correct letter series.

NCUTCD recommends deleting Figure 9B-7 sheet 2 of 2.

Figure 9B-7-2. Examples of Applications of Bicycle Jughandle Signs (Sheet 2 of 2)



**Section 9B.20 Comments:** NCUTCD agrees with 9B.20 as presented in the NPA, with minor editorial changes.

#### Section 9B.20 Bicycle Actuation Signs (R10-4, R10-22, R10-24, R10-25, and R10-26)

##### Option:

Where it is not intended for bicycles to be controlled by pedestrian signal indications, the R10-4, R10-24, or R10-26 sign (see Section 2B.5962) may be used. [editorial]

##### Guidance:

*If used, the R10-4, R10-24, or R10-26 signs should be installed in the vicinity of where bicycles will be crossing the street.*

##### Option:

If bicycles are crossing a roadway where In-Roadway Warning Lights (see Section 4U.02) or other warning lights or beacons have been provided, the R10-25 sign may be used.

The Bicycle Detector (R10-22) sign may be installed at signalized intersections where markings are used to indicate the location where a bicycle is to be positioned to actuate the signal (see Section 9E.1546). [editorial]

##### Guidance:

*If the Bicycle Detector sign is installed, it should be placed at the roadside adjacent to the marking to emphasize the connection between the marking and the sign.*

**Section 9B.21 Comments:** NCUTCD recommends revising 9B.21 to include the R10-15b and R10-15c TURNING VEHICLES YIELD signs and add a new Option statement for consistency with Section 2B.60 in accordance with NCUTCD recommendation 18B-BIK-01.

**Section 9B.21 LEFT TURN YIELD TO Bicycles Sign (R10-12b), TURNING VEHICLES YIELD TO Bicycles (R10-15b) and TURNING VEHICLES YIELD TO BICYCLES AND PEDESTRIANS (R10-15c) SIGN**

Option:

At unsignalized intersections, driveways or alleys on roadways with a bicycle lane positioned adjacent to a general purpose lane from which turns are permitted, a Turning Vehicles Yield to Bicycles (R10-15b) sign or Left Turn Yield to Bicycles Sign (R10-12b) (see Figure 2B-27 and Figure 9B-1) may be used on the approach to or at the intersection, driveway or alley to remind drivers who are making turns to yield to bicycles when turning across or merging into the bicycle lane.

At unsignalized intersections, driveways or alleys on roadways with a shared use path that crosses intersecting streets, driveways or alleys, or when turning vehicles would cross an adjacent bicycle lane and crosswalk, a Turning Vehicles Yield to Bicycles and Pedestrians (R10-15c) sign (see Figure 2B-27) may be used on the approach to or at the intersection or driveway/alley to remind drivers who are making turns to yield to bicycles and to pedestrians in the crosswalk. [add Option to be consistent with 2B.60 per 18B-BIK-01]

Support:

The LEFT TURN YIELD TO Bicycles sign, Turning Vehicles Yield to Bicycles (R10-15b) sign and Turning Vehicles Yield to Bicycles and Pedestrians (R10-15c) sign is used to emphasize the requirement for motorists to yield to bicycles in situations where the motorist is turning across a bicycle movement that may be unexpected in direction, location, or some other quality that would run counter to the typical bicycle lane. See Section ~~2B.61~~ 2B.60 for use at signalized intersections. [editorial]

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**Section 9B.22 Comments:** NCUTCD recommends revising 9B.22 as follows:

- Add reference to Section 4H.04, as bicycle signal sign usage is discussed in Part 4
- Revise the Standard statement to:
  - add missing signs
  - delete provisions for usage, as these are discussed in Chapter 4H
  - add text to address sign sizes in different situations
- Add an Option statement to address sign sizes for near-side signals

**Section 9B.22 Bicycle SIGNAL Signs (R10-40, R10-40a, R10-41, R10-41a, R10-41b, R10-41c, R10-42)**

Support:

The primary purposes of the Bicycle SIGNAL sign are to inform road users that the signal indications in the bicycle signal face are intended only for bicycles, and to inform bicycles which specific bicycle movements are controlled by the bicycle signal face.

Section 4H.04 contains [information on signs that are used in conjunction with bicycle signal faces](#). ~~additional information on bicycle signal signs.~~ [Revise to consolidate all usage provisions into Part 4.]

**Standard:**

~~The Bicycle SIGNAL—Mandatory Movement (R10-40, R10-40a) sign or the Bicycle SIGNAL—Optional Movement (R10-41, R10-41a, or R10-41b) sign, if used, shall require bicycles to turn, shall permit turns where such turns would otherwise not be allowed, shall require a bicycle to stay in the same lane and proceed straight through an intersection, or shall indicate allowed movements when a GREEN BICYCLE symbol is displayed on a bicycle signal face.~~ [delete - covered in Chapter 4H]

The Bicycle Signal signs (R10-40, R10-40a, R10-41, R10-41a, R10-41b, or R10-41c) shall have a minimum size of 24 inches x 36 inches if it is placed next to an overhead-mounted bicycle signal face and shall have a minimum size of 12 inches x 21 inches if it is placed next to a post-mounted bicycle signal face.

Except when used with a supplemental near side bicycle signal face containing 4-inch indications, the Bicycle Signal sign (R10-42) sign shall have a minimum size of 18 inches x 24 inches. [add to address sign sizes in different situations]

Option:

A Bicycle Signal (R10-42) sign that is a minimum size of 12 inches x 18 inches may be used with a supplemental near-side bicycle signal face containing 4-inch indications. [add to address signs for near-side signals]

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**Section 9B.23 Comments:** NCUTCD agrees with 9B.23 as presented in the NPA.

**Section 9B.23 LOOK Sign (R15-8)**

Option:

At railroad or LRT grade crossings with shared-use paths or separated bikeways, the LOOK (R15-8) sign may be mounted as a supplemental plaque on the Crossbuck support, or on a separate post in the immediate vicinity of the grade crossing on the railroad or LRT right-of-way.

*Guidance:*

*A LOOK sign should not be mounted as a supplemental plaque on a Crossbuck Assembly that has a YIELD or STOP sign mounted on the same support as the Crossbuck.*

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**Section 9B.24 Comments:** NCUTCD agrees with 9B.24 as presented in the NPA.

**Section 9B.24 Other Regulatory Signs**

Option:

Other regulatory signs described in Chapter 2B and Chapter 8B may be installed on bicycle facilities as appropriate.

**Section 9B.25 Comments:** NCUTCD agrees with 9B.25 as presented in the NPA.

**Section 9B.25 General Service Signing for Bikeways**

Option:

General Service signs (See Chapter 2I) may be used on bikeways.

**Standard:**

**General Service signs intended for viewing by both bicycles and other road users shall conform to the sizes in Table 2I-1.**

Option:

General Service signs intended for the exclusive use of bicycles may be of reduced size.