223 Bicycle Facilities

223.1 General

This chapter provides the minimum criteria to be used for the design of bicycle facilities on the State Highway System (SHS).

Provide a bicycle facility on all roadways on the SHS, except where its establishment would be contrary to public safety, e.g., limited access facilities as defined by ***FDM 211***. The various methods of providing bicycle facilities are discussed in ***FDM 223.2***.

Bicycle safety can be enhanced through the following measures:

(1) Maintaining a smooth, clean riding surface, free of obstructions. This includes ensuring drainage inlets and utility covers that cannot be moved out of the travel way are flush with grade, well seated, and use bicycle-compatible inlets, grates and covers.

(2) Responsive and appropriate traffic control devices, consistent with guidance in the ***Manual on Uniform Traffic Control Devices*** (***MUTCD***), including providing bicycle-oriented directional signage.

(3) Providing adequate lighting.

(4) Developing and maintaining a district bicycle facility plan to assign proposed bicycle facility types through a consistent and efficient process and ensure the following:

   (a) Integration of FDOT bicycle facilities with local and regional bicycle transportation systems.

   (b) The direct use of more complex facility types in a cost-effective and efficient manner.

(5) For more design guidance regarding bicycle facilities on arterials and collectors, refer to the ***FHWA Separated Bike Lane Planning and Design Guide*** and the ***AASHTO Guide for the Development of Bicycle Facilities***.

Process a Design Variation when a bicycle facility cannot be provided or when criteria contained within this chapter are not met.

223.2 Bicycle Facilities

A bicycle facility accommodates bicycle travel. Bicycle facilities play an important role in supporting bicycle travel.

Bicycle facilities include the following:

- Bicycle lanes
- Keyhole lanes
- Intersection bicycle boxes and two-stage bicycle turn boxes
- Paved shoulders
- Shared use paths
- Separated bicycle lanes
- Bicycle ramps

223.2.1 Bicycle Lanes

Bicycle lanes are a portion of a roadway designated for the exclusive use of bicyclists. Bicycle lanes are designated by a bicycle symbol pavement marking in accordance with ***Standard Plans*****, *Index 711-002*** and the ***MUTCD***, and illustrated in ***Exhibits 223-1*** through ***223-3***. Bicycle lane signs and plaques may be used in accordance with the ***MUTCD*** when high levels of bicycle traffic exist or are anticipated.

Bicycle lanes are one-way facilities and carry bicycle traffic in the same direction as the adjacent motor vehicle traffic. On one-way streets, bicycle lanes should typically be placed on the right side of the street. A bicycle lane on the left side of the street can be considered if it will substantially reduce the number of potential conflicts, such as those caused by frequent bus traffic, heavy right-turn movements, high-turnover parking lanes, or if there are a significant number of left-turning bicyclists.

Bicycle lanes can be used on roadways with design speeds ≤ 45 mph. However, it is best practice to consider other types of facilities for design speeds greater than 30 mph, such as a separated bicycle lane or shared use path.

Bicycle lanes may be provided on flush shoulder roadways when all the following are met:

(1) Design speed ≤ 45 mph,

(2) Shoulder width ≥ 5-foot (≥ 4-foot on RRR projects),

(3) Within C2T, C4, C5, C6, C3C context classification, or within C3R when demand is demonstrated, and

(4) Shared use path or separated bicycle lanes are not present along corridor.

223.2.1.1 Bicycle Lane Width

The width of the bicycle lane is measured from the edge of travel lane to the edge of pavement. For new construction projects when a bicycle lane has been selected as the bicycle facility, a 7-foot buffered bicycle lane is the standard. A buffered bicycle lane has a double-6-inch white edge line separating the bicycle lane and the adjacent travel lane.

Buffered bicycle lanes are depicted in ***Exhibit 223-1***. A buffered bicycle lane should not exceed 7 feet in width (including the buffer). Any additional pavement width that results from restricting the buffered bicycle lane to 7 feet in width should be applied to the outside travel lane.

For projects where a bicycle lane is needed and it is not practical to move the existing curb (e.g., RRR), the width of the bicycle lane depends on the width of the available roadway pavement. For these types of projects, the options in the order of priority are:

(1) 7-foot buffered bicycle lane

(2) 6-foot buffered bicycle lane

(3) 5-foot bicycle lane

(4) 4-foot bicycle lane

Do not place a bicycle lane with less than 5 feet of width adjacent to a 10-foot traffic lane.

When roadway pavement is continuous to the face of guardrail or barrier, the minimum bicycle lane width is 5 feet. See ***FDM 223.2.1.3*** when the bicycle lane is adjacent to a right-turn lane or bus bay.

223.2.1.2 Pavement Markings and Signage

Bicycle lane pavement marking symbols are illustrated in ***Exhibit 223-1***. Use the following guidance in determining the appropriate placement of bicycle lane markings:

(1) At an intersection approach, transition the buffer lane striping to a double 6-inch-wide stripe using a 2'-4' dotted pattern 150 feet in advance of the intersection to provide sufficient distance for an automobile or truck to merge into the bicycle lane before turning right.

(2) Provide continuous lane striping past low-volume and residential driveways.

(3) Place a Helmeted Bicyclist Symbol and Bicycle Lane Arrow (per ***Standard Plans, Index 711-002***) in the following locations:

(a) The beginning of a bicycle lane

(b) The far side of major intersections

(c) Prior to and within the keyhole lane

(4) The maximum spacing of the Helmeted Bicyclist Symbol and Bicycle Lane Arrow is 1,320 feet.

Provide "Bike Lane Ahead" and "Bike Lane End" signage in accordance with the ***MUTCD***.

See ***FDM 230.3.1.3*** for information on placing markings on concrete surfaces.

See ***FDM 127.2 (15)*** for limitations on aesthetic applications on bicycle facilities.

223.2.1.3 Keyhole Lanes

A keyhole lane is a bicycle lane that is placed between a through lane and the adjacent right-turn lane, merge lane, bus bay, or parking lane.

To reduce conflicts between motorists and bicyclists, consider transitioning a bicycle lane to an adjacent separated bicycle lane, shared use path, or urban side path prior to and through the conflict area. Keyhole lanes are not required where a separated bicycle lane is provided. Provide a keyhole lane on curbed roadways that have a bicycle lane approaching a right-turn lane, merge lane, bus bay, or parking lane. On curbed roadways that do not have a bicycle lane approaching an intersection with a right-turn lane, consider providing a 17-foot right-turn lane for development of future bicycle facilities. Provide a keyhole lane on flush shoulder roadways of any design speed where the approaching or departing paved shoulder is at least 4 feet in width.

Provide a 7-foot buffered keyhole lane on curbed roadways; however, when 7 feet is not obtainable, provide the greatest keyhole lane width possible, but not less than 5 feet. The keyhole lane should match the width of the paved shoulder on flush shoulder and high-speed curbed roadways, but not less than 5 feet.

See ***FDM 223.4*** for bicycle lane design criteria when adjacent to on-street parking.

Include Helmeted Bicyclist Symbol and Bicycle Lane Arrow pavement markings in the keyhole lane. Keyhole lanes are illustrated in ***Exhibit 223-2***.

For RRR projects, a keyhole lane should be provided except on projects that have inadequate R/W or utility conflicts.

223.2.1.4 Green-Colored Pavement Markings

Green-colored pavement markings may be used when the need to enhance the conspicuity of bicycle-vehicular conflict areas is demonstrated. Bicycle-vehicular conflict areas are illustrated in ***Exhibit 223-3,*** and include:

(1) Bicycle lane crosses a vehicular right-turn lane

  (a) Separate right-turn lane

  (b) Dropped lane transitioning into a right-turn lane

  (c) Free-flow channelized right-turn lane, such as at an interchange: lane addition or merge lane

(2) Bicycle lane adjacent to a dedicated bus bay

(3) Intersection bicycle boxes, see ***FDM 223.2.1.5***

(4) Two-stage bicycle turn boxes, see ***FDM 223.2.1.5***

Green-colored pavement markings supplement the required bicycle lane pavement markings and are not to be used as a substitute for such markings.

The use of green-colored pavement markings requires the approval of the District Design Engineer through Project Suite's Design Approval Request Process. The approval must be obtained during Phase I of design. The addition of green-colored pavement markings to bicycle lanes per these criteria does not require a local agency maintenance agreement. For placement on existing pavement, contact the State Materials Office for additional placement requirements.

Use the following guidance in the placement of green-colored pavement markings for bicycle lanes:

(1) When it is used in conjunction with white dotted lines, such as when extending a bicycle lane across a right-turn lane or access to a bus bay, the transverse-colored marking must match the 2'-4' white dotted line pattern of the bicycle lane extension.

(2) Start the green-colored pavement as a solid pattern 50 feet in advance of the dotted striping, match the 2'-4' dotted through the conflict area, and then resume the solid pattern for 50 feet after the conflict area, unless such an extent is interrupted by a stop bar, an intersection curb radius or a bicycle lane marking.

Include quantities in accordance with the ***BOE Manual.*** Load these quantities into the Designer Interface in the Signing and Pavement Marking Category.

Additional details on tracking can be found in the ***CADD Manual*** and at the following website: ***https://www.fdot.gov/gis/bim/green-pavement***.

223.2.1.5 Intersection Bicycle Box and Two-Stage Bicycle Turn Box

Intersection bicycle boxes increase the visibility of stopped bicycle traffic at an intersection and help group together bicyclists to clear intersections more quickly. Two-stage bicycle turn boxes provide another option for bicyclists to make a left-turn at an intersection.

The use of intersection bicycle boxes or two-stage bicycle turn boxes may be considered only at signalized intersections. Intersection bicycle boxes are to meet the requirements in the ***MUTCD*** and comply with all of the following conditions:

- 'Right-turn on red' is prohibited
- The left-turn signal is protective
- All approaches to the intersection have a posted speed no greater than 35 mph
- Bicycle detection is provided if detection is required to actuate the signal or the signals are not timed
- There is a bicycle lane or bicycle keyhole preceding the bicycle box
- There is no more than one through lane on the approach to the bicycle box
- There is a receiving bicycle facility (bicycle lane or paved shoulder) on the opposite side of the intersection

Two-stage bicycle turn boxes are used only in conjunction with bicycle lanes. They must meet the requirements in the ***MUTCD*** and comply with all of the following conditions:

- 'Right-turn on red' is prohibited
- All approaches to the intersection have a posted speed no greater than 45 mph
- Bicycle detection is provided if detection is required to actuate the signal or the signals are not timed

It is recommended that an educational program be developed to accompany the installation of bicycle boxes or two-stage bicycle turn boxes.

The use of intersection bicycle boxes or two-stage bicycle turn boxes require the approval of the State Roadway Design Engineer.

223.2.2 Paved Shoulders

A paved shoulder is the portion of the roadway contiguous with the traveled way for accommodation of errant vehicles, stopped vehicles, bicycle traffic, and emergency use. A paved shoulder must be a minimum width of 4 feet to serve as a bicycle facility.

See ***FDM 210.4*** for additional information on paved shoulder requirements. See ***FDM 223.2.1*** for bicycle lane criteria on flush shoulder roadways.

When audible and vibratory treatment is used adjacent to a paved shoulder that serves as a bicycle facility, see ***FDM 210.4.6***.

223.2.3 Shared Use Paths

A shared use path may be substituted for a bicycle lane when the roadway design speed is 35 mph or greater and all the following conditions are met:

- Context classification C1, C2, or C3,
- Separation can be maintained between bicycle and motorized traffic through intersections, and
- Conflict points are minimal and mitigated.

An urban side path, which is a category of shared used path, may be substituted for a bicycle lane when the roadway design speed is 35 mph or less and the following conditions are met:

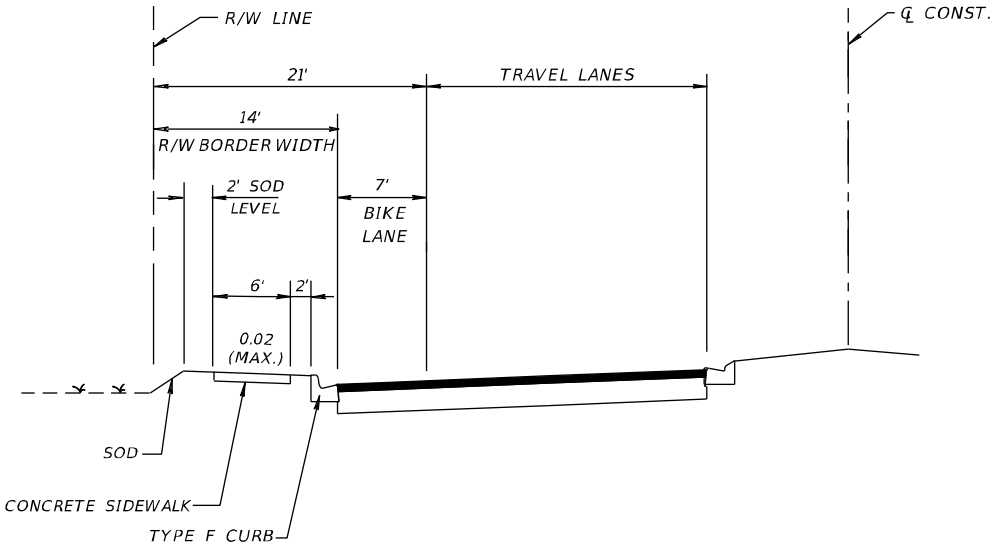
- Context Classification of C2T, C4, C5, and C6
- The adjacent roadway is curbed

As shown in ***Figure 223.2.1***, in some cases it may be possible to fit a shared use path into the same space required for a sidewalk and buffered bicycle lane. Process a Design Variation for signs placed within the path horizontal and vertical clearance envelope (see ***FDM 224.7*** and ***224.8***) or roadway lateral offset (see ***FDM 215*** and ***Standard Plans***). In other cases, additional width may be required. It is preferable to plan for shared use paths and separated bicycle lanes ahead of time by reflecting them in a district bicycle facility plan.

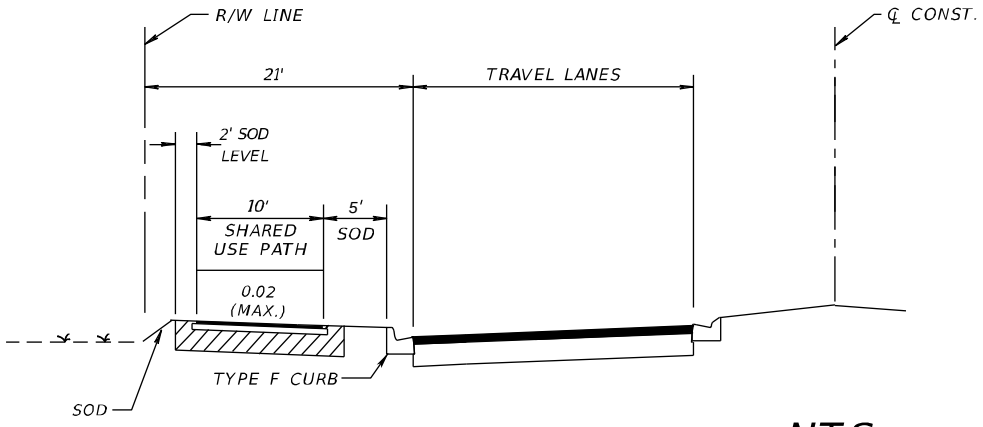
See ***FDM 224*** for shared use path design criteria.

Figure 223.2.1 Bicycle Lane and Shared Use Path Examples

Bicycle Lane and Sidewalk Example



Shared Use Path Example



NTS

223.2.4 Separated Bicycle Lanes (SBL)

Separated bicycle lanes are one-way or two-way bicycle lanes that are adjacent to and physically separated from the vehicular travel lane. Bicyclists in these facilities are separated from vehicular traffic.

A separated bicycle lane may be used when all the following conditions are met:

- Minimum required combined width of the separator and separated bicycle lane can be obtained,
- Separation can be maintained between bicycle and motorized traffic through intersections, and
- Conflict points are minimal and mitigated. Cyclists should be given priority at driveways and side street crossings.

A separated bicycle lane should be considered when street-level bicycle facility transitions are needed for interchange ramps and intersection approaches. See ***FDM 223.2.6*** for criteria for transitioning between elevations and ***FDM 211.18*** for ramp crossing criteria.

Use the criteria contained in ***FDM 223.2.4*** in conjunction with the ***FHWA Separated Bike Lane Planning and Design Guide*** to plan and design separated bicycle lanes on the State Highway System.

223.2.4.1 Type of Separation

Tubular markers, islands, on-street parking, and rigid barriers may be used as forms of separation for the appropriate design speeds as follows:

- 35 mph or less: Tubular markers, channelizing curb, traffic separators, islands, rigid barriers, or on-street parking. For separated bicycle lanes adjacent to on-street parking, use an island (see ***Figure 223.2.2***).
- 40-45 mph: Traffic separator, islands, or rigid barriers.

Use curb types for separated bicycle lanes as shown in ***FDM 223.2.5***. Other forms of separation require approval from the State Roadway Design Engineer.

223.2.4.2 Sidewalk Level Separated Bicycle Lanes

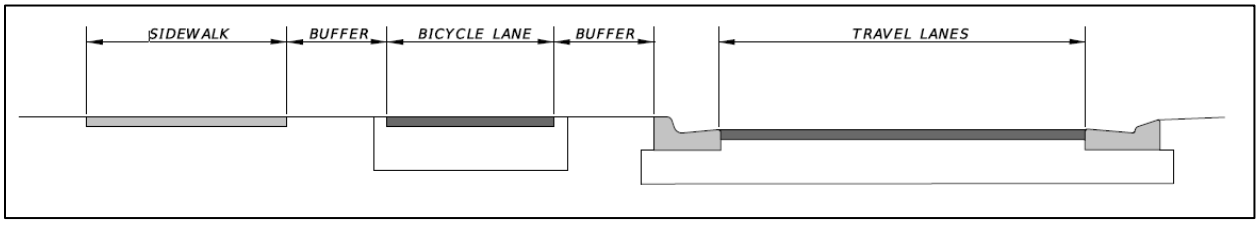
Sidewalk level separated bicycle lanes (sidewalk level SBLs), also known as raised bicycle lanes, are exclusive bicycle facilities located at sidewalk level directly adjacent to the roadway.

Use the following criteria when designing sidewalk level SBLs:

- In C2T, C4, C5, or C6 context classifications where the design speed is 35 mph or less, use urban side path criteria per FDM 224 for the following elements. In other conditions, use shared use path criteria for these elements.
    - Horizontal Clearance
    - Vertical Clearance
    - Design Speed
    - Horizontal Alignment
    - Separation from Roadway
    - Longitudinal Grades
    - Cross Slopes
- Follow the width criteria in ***Table 223.2.1***
- When adjacent to a sidewalk, provide a 2-foot detectable buffer (e.g. grass strip or textured pavement) between the sidewalk and separated bicycle lane. A 1-foot detectable buffer may be used in constrained conditions.

A sidewalk level bike lane does not substitute for a sidewalk where a sidewalk is required. See ***Figure 223.2.2*** for an example of a sidewalk level bike lane.

Figure 223.2.2 Example of Sidewalk Level Bicycle Lane

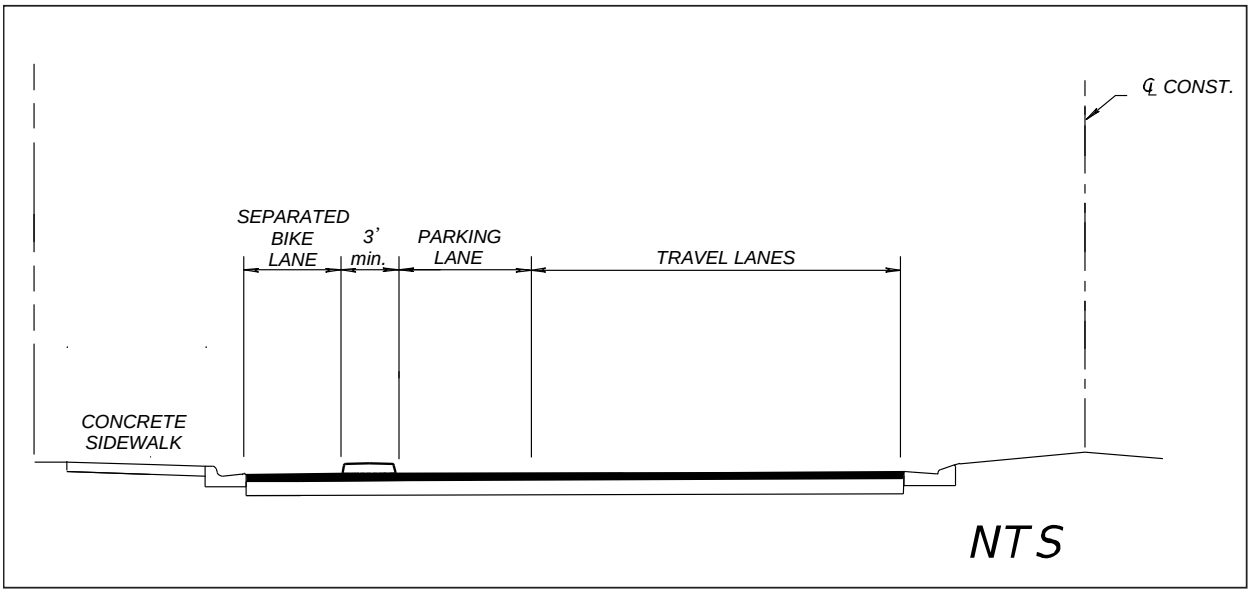


223.2.4.3 Width of Separation

The widths of separation are as follows:

- 3 feet minimum if adjacent to on-street parking. See ***Figure 223.2.3*** for more information.
- If adjacent to travel lanes:
    - o 35 mph or less: 6 feet preferred, 3 feet minimum unless using tubular markers or islands, then 2 feet minimum.
    - o 40 to 45 mph: 8 feet preferred, 3 feet minimum.

Figure 223.2.3 On-Street Parking Minimal Separation



223.2.4.4 Separated Bicycle Lane Widths

Use wider lanes where higher volumes are expected.

The preferred lane width for one-way separated bicycle facilities is 7 feet. For two-way facilities, the preferred lane width is 12 feet.

Use the following minimum separated bicycle lane widths in **Table 223.2.1** along one-way and two-way separated bicycle lane facilities under constrained conditions:

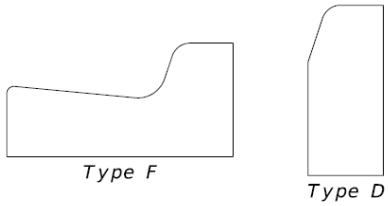
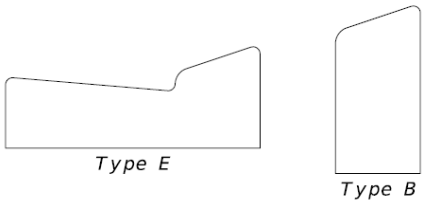
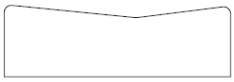
Table 223.2.1 Minimum Separated Bicycle Lane Widths

One-Way Facility	Width (feet)
Between drop curbs, types E or B curbs, at sidewalk level, or adjacent to one type F or D curb	5
Between two type F or D curbs	6
Two-Way Facility	**Width (feet)**
Between drop curbs, types E or B curbs, or at sidewalk level	8
Adjacent to one type F or D curb	9
Between two type F or D curbs	10
Notes: (1) A continuous barrier is treated the same as a type F or D curb.	

223.2.5 Separated Bicycle Lane (SBL) Curb Types

Selecting the appropriate curb type is important when designing separated bicycle lanes and street buffer zones. Increased risks of bicycle wheel or pedal strikes and crashes can be influenced by the curb type. The curb angle and curb height can have an impact when exiting the bicycle lane, accessing parking, and determining risk of encroachment by motor vehicles. ***Figure 223.2.4*** illustrates and describes curb types used for separated bicycle lanes.

Figure 223.2.4 SBL Curb Types

Curb Types	Description
	Types F and D Curbs assist in channelizing bicycles, but wheels or pedals could strike the curb.
	Types E and B curbs also assist in channelizing bicycles, reduces pedal strikes, and provide easier access to the sidewalk for dismounting.
	Drop Curbs are designed with a forgiving angle that minimizes pedal strikes but consumes more cross section width that could be used for the bicycle lane or a buffer. The curbs also allow safer exit from the bicycle lane, without impeding fellow bicyclists. However, the curb can be encroached by motor vehicles and bicycles.
See References: FDOT Standard Plan–Index 520–001, 520–002 FDOT Drainage Manual–Table 3.2	(N.T.S)

223.2.5.1 Pavement Markings

Pavement markings used for separated bicycle facilities must conform to the ***MUTCD***, ***Traffic Engineering Manual (TEM)***, or ***FDM 230***. Markings that do not conform to any of these manuals require approval by the State Roadway Design Engineer and State Traffic Operations Engineer.

223.2.5.2 Intersections and Driveways

Chapter 5 of the ***FHWA Separated Bike Lane Planning and Design Guide*** includes typical designs to address the following:

- Facility connections at intersections,
- Side streets and driveways, and
- Traffic operation tools such as bicycle signal faces and signal phasing.

See the ***TEM*** for more information on traffic operation tools.

Maintain separation between bicycle and motorized traffic through intersections (e.g., do not use mixing zones and keyhole lanes).

Minimize turning conflicts through access management. Cyclists should have priority at the driveway and side street crossings that remain.

223.2.6 Bicycle Ramps

Use bicycle ramps when connecting on-street bicycle facilities to sidewalk level SBLs or shared use paths on curbed roadways.

Figure 223.2.5 illustrates the geometrics for a bicycle ramp when a utility strip of at least 5-feet is present. The desired angle between the ramp and the roadway ranges from 20 to 25 degrees (not to exceed 35 degrees).

Figure 223.2.6 illustrates the geometrics for a bicycle ramp when the sidewalk on the approach leg is adjacent to or near the back of curb.

Place a Directional Tactile Walking Surface Indicator (a.k.a., Directional Indicator) at the top of the bicycle ramp to provide a tactile cue for visually impaired pedestrians to continue down the sidewalk or shared use path. Do not place detectable warning surfaces on the bicycle ramp. See ***Developmental Specification Dev528*** and ***Developmental Standard Plans (DSP) Index D528-001*** for additional requirements. Do not include a Directional Indicator when connecting an on-street bicycle facility to a sidewalk level SBL.

Figure 223.2.5 Angled Bicycle Ramp

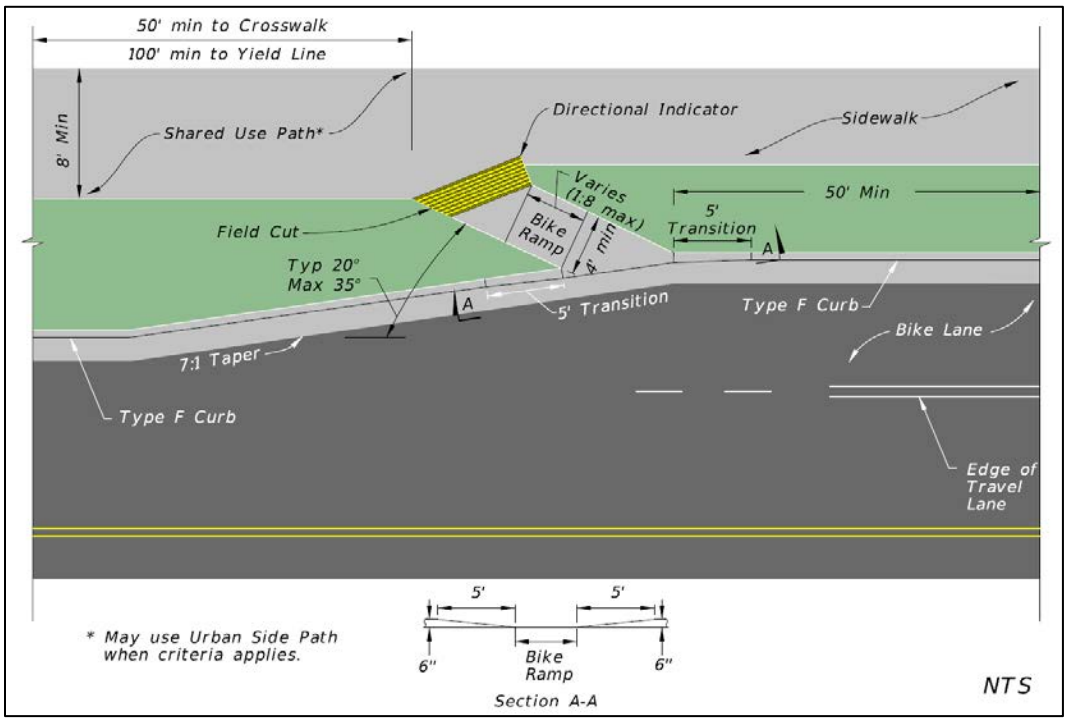
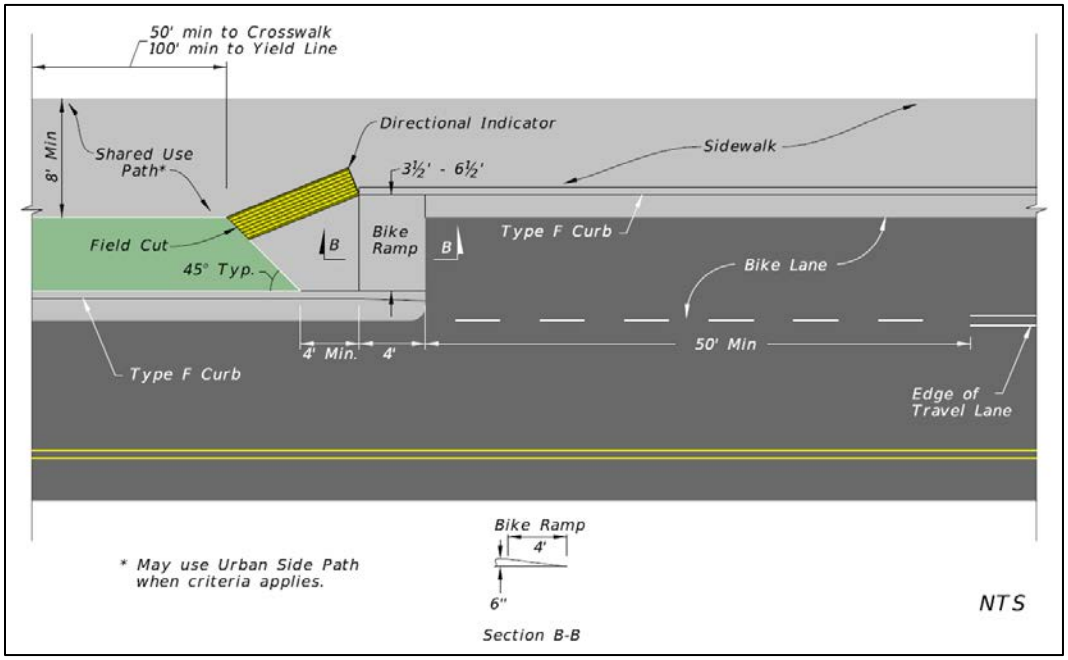
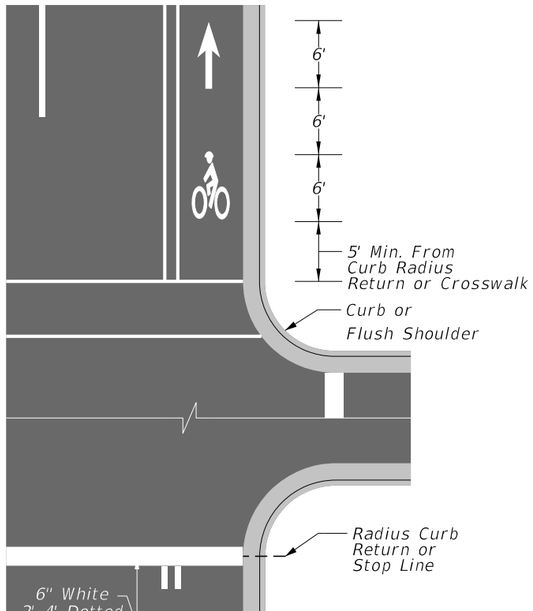


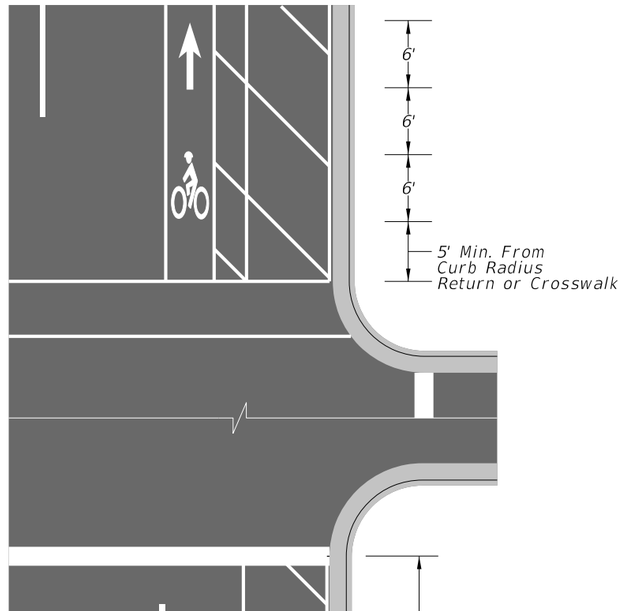
Figure 223.2.6 Straight Bicycle Ramp



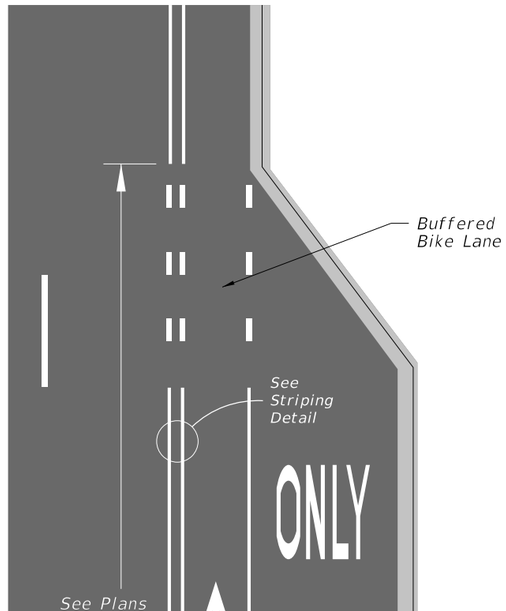
BIKE LANE TYPICAL PAVEMENT MARKINGS



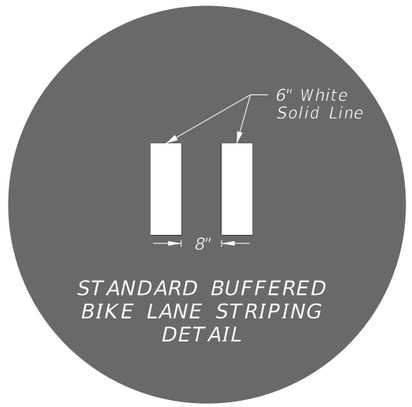
BIKE LANE
INTERSECTION
APPROACH DETAILS



BIKE LANE
ADJACENT TO
ON-STREET PARKING



BIKE LANE
ADJACENT TO
BUS BAY



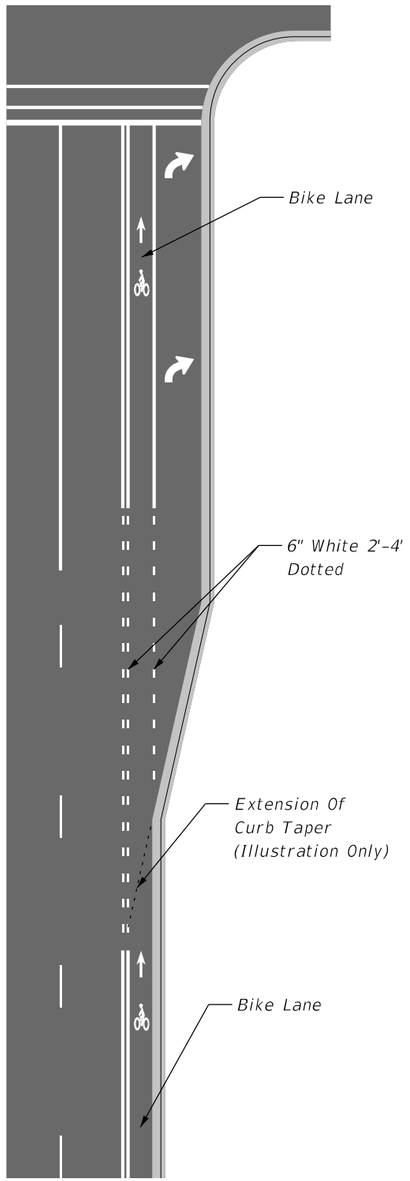
STANDARD BUFFERED
BIKE LANE STRIPING
DETAIL

Note:
See Exhibit 230-9 in FDM 230 for bike lane and midblock crossings pavement markings.

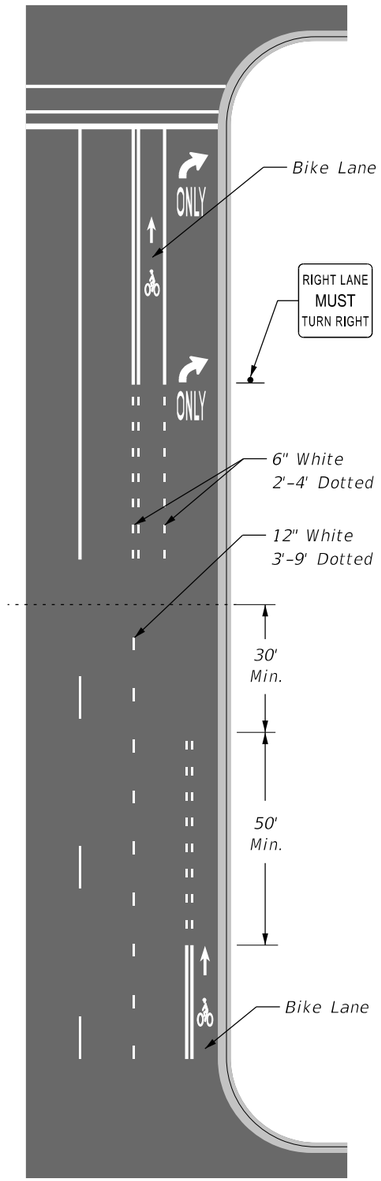
NOT TO SCALE

EXHIBIT 223-1
01/01/2025

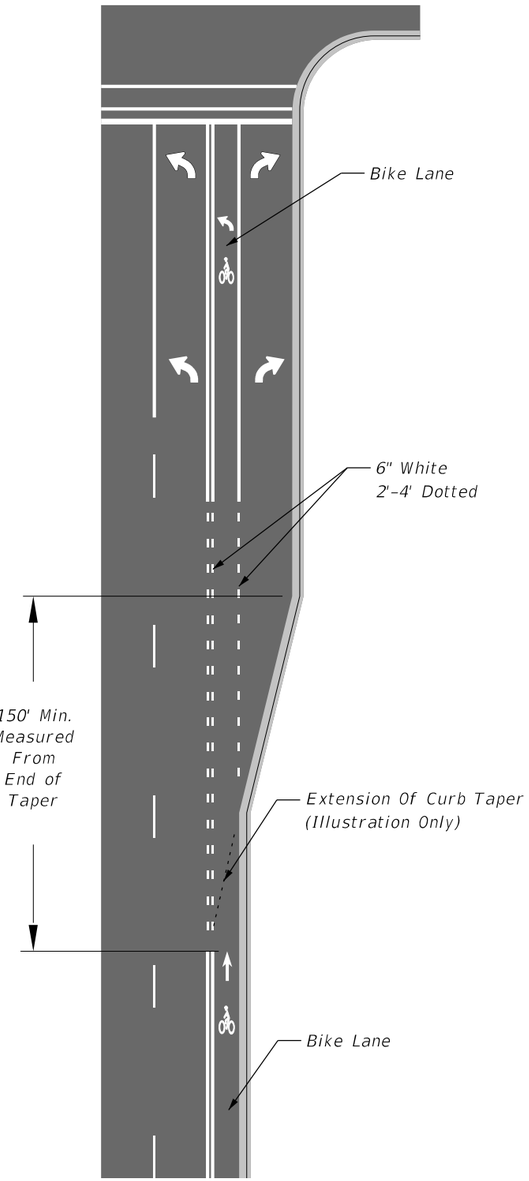
TYPICAL KEYHOLE LANES



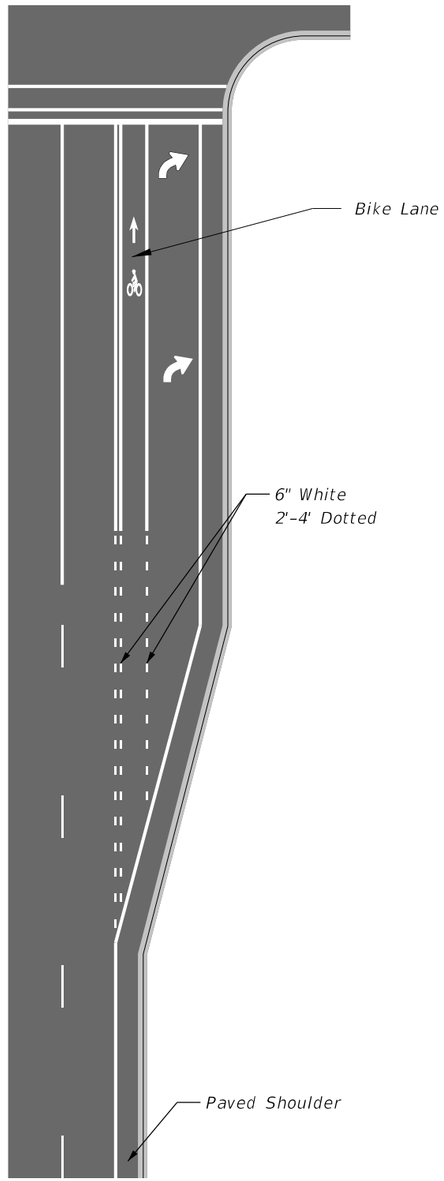
CURBED ROADWAY INTERSECTION WITH SEPARATE RIGHT TURN LANE



CURBED ROADWAY INTERSECTION WITH RIGHT TURN DROP LANE



CURBED ROADWAY "TEE" INTERSECTION WITH SEPARATE RIGHT-TURN LANE

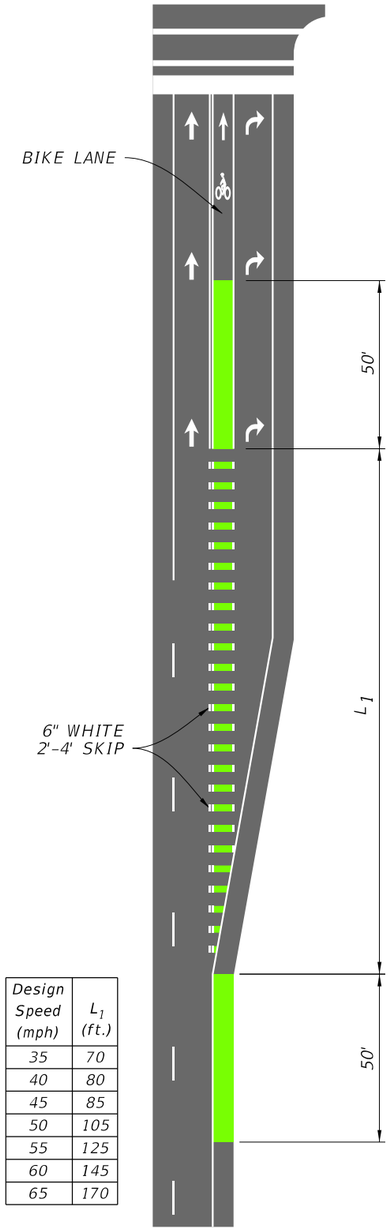


FLUSH SHOULDER ROADWAY INTERSECTION WITH SEPARATE RIGHT-TURN LANE

NOT TO SCALE

EXHIBIT 223-2
01/01/2025

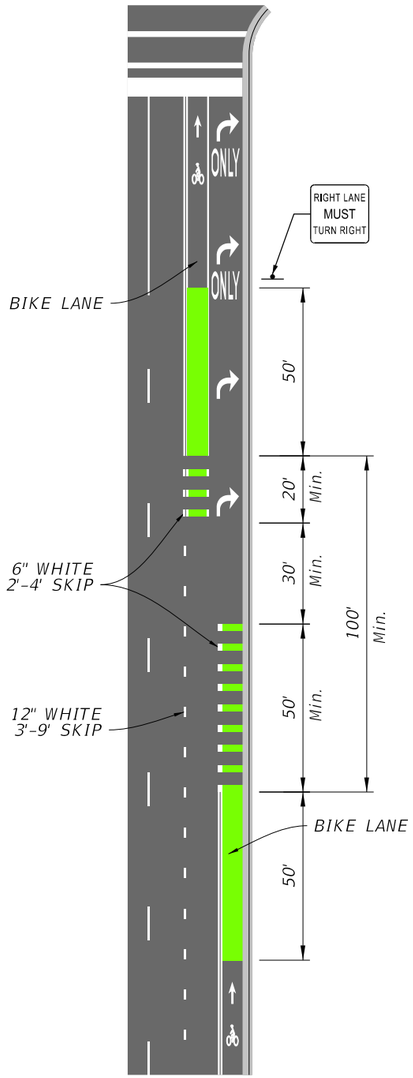
GREEN-COLORED BIKE LANES



Design Speed (mph)	L_1 (ft.)
35	70
40	80
45	85
50	105
55	125
60	145
65	170

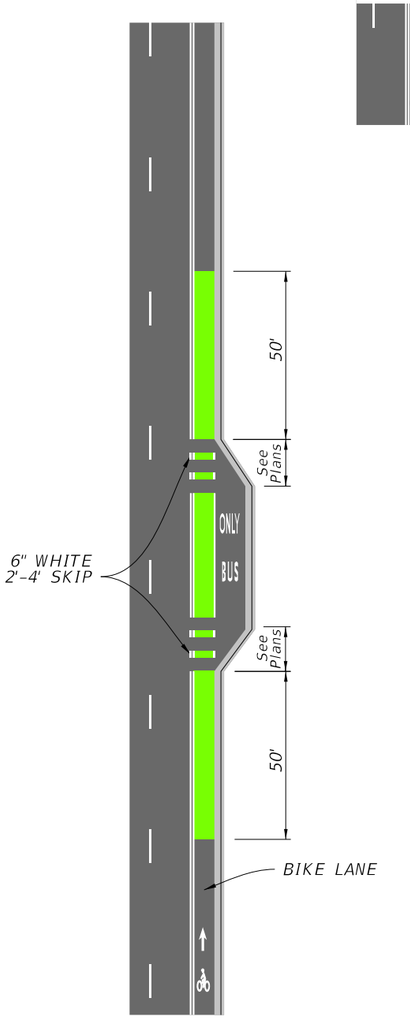
A

FLUSH SHOULDER ROADWAY
BIKE LANE WITH
SEPARATE RIGHT-TURN LANE



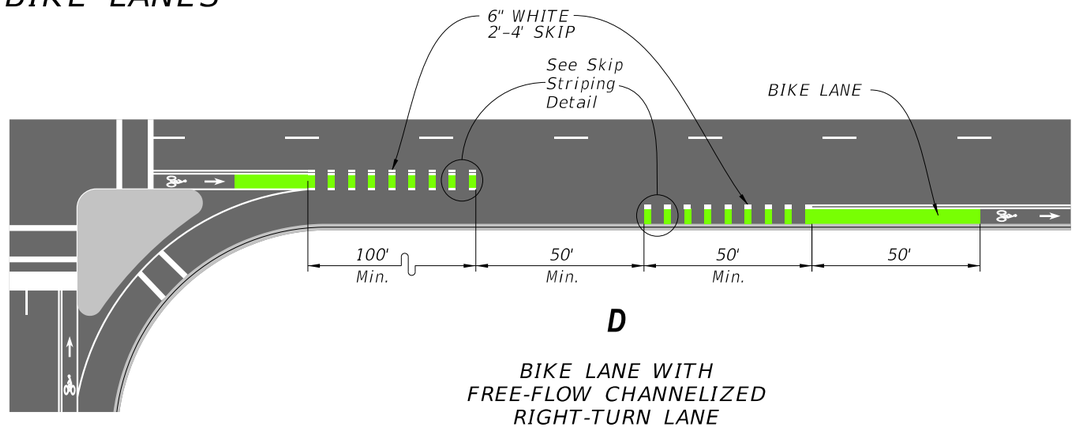
B

CURBED ROADWAY
BIKE LANE WITH
RIGHT-TURN DROP LANE



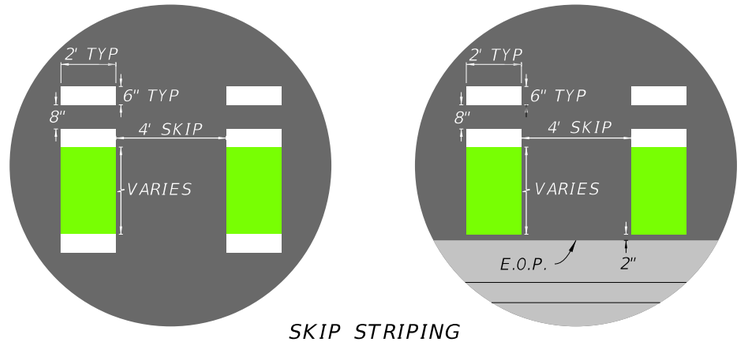
C

CURBED ROADWAY
BIKE LANE ALONG
BUS BAY

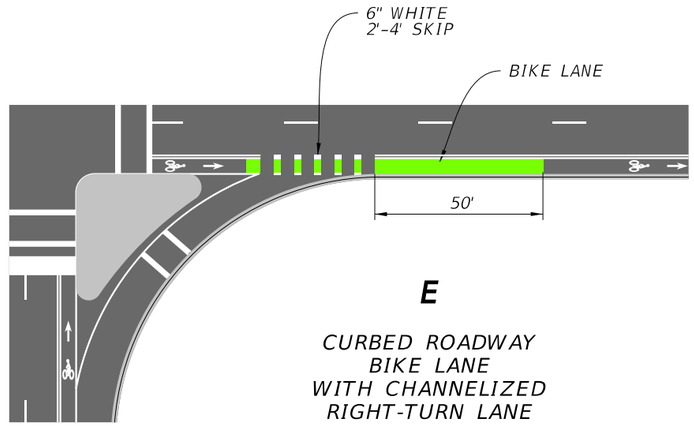


D

BIKE LANE WITH
FREE-FLOW CHANNELIZED
RIGHT-TURN LANE



SKIP STRIPING
DETAILS



E

CURBED ROADWAY
BIKE LANE
WITH CHANNELIZED
RIGHT-TURN LANE

NOT TO SCALE

Legend
Green Colored Pavement

EXHIBIT 223-3
01/01/2025

223.3 Shared Lane Markings (Sharrows)

Shared lane markings, or "Sharrows", are optional pavement markings used to indicate a shared environment for bicycles and motor vehicles. Sharrows are used where it is not practical to provide a bicycle facility, and any of the following conditions exist:

(1) With on-street parallel parking in order to reduce the chance of a bicyclist impacting the open door of a parked vehicle.

(2) To fill a gap in an otherwise continuous bicycle facility, generally for a short distance.

(3) As part of an approved temporary traffic control plan, see ***FDM 240***.

Streets with low traffic volumes and low traffic speeds are better suited to support mixed bicycle and motor vehicle traffic. Do not use Sharrows on roadways with a posted speed greater than 35 mph or on shared use paths.

Place Sharrows in the center of the travel lane. This placement provides guidance to bicyclists to “command the lane”, which discourages motorists from passing too closely. This placement also informs drivers that cyclists are entitled to ride in the center of the lane for their safety. To effectively convey this message, place Sharrows immediately after intersections and at a maximum spacing of 250 feet. Refer to ***MUTCD Section 9E.09*** when considering the use of sharrows within a right-turn lane.

223.4 On-Street Parking

Roadways with on-street parking must provide room to cyclists to minimize impacts related to the close proximity of parked vehicles (e.g., door zone avoidance). The following treatments are required for roadways with on-street parking:

- Parallel Parking:
    - Provide a 4-foot bicycle lane adjacent to the travel lane with a 3-foot buffer between the parallel parking lane and the bicycle lane, per ***Exhibit 223-1***.
    - Provide a shared lane marking in place of a bicycle facility when there is less than 7 feet available for the bicycle lane and buffer.
- Angle Parking:
    - Use a shared lane marking in place of a bicycle facility.

223.5 Bicycle Parking Amenities

Appropriately placed bicycle and micromobility parking supports those who choose to use the bicycle or micromobility devices (devices) as their mode of transportation. Bicycle and micromobility parking facilities are installed and maintained by local agencies and require approval of the District Design Engineer when on FDOT R/W. Locate and design bicycle and micromobility device parking facilities so that:

- Sidewalk-level facilities meet the following lateral offset requirements based on roadway design speed:
    - o $\leq$ 35 mph: 1.5 feet
    - o $\geq$ 40 mph: 4 feet
- On-street facilities are no closer than 1.5 feet to the traveled way
- When parked, the device fits completely within the parking area (i.e. does not extend into the travel lane) and does not interfere with pedestrian facilities
- Racks provide two points of support to the device

Consider the following:

- Shelters are desirable for long-term device parking and for shielding devices from inclement weather conditions
- Lockers can provide a secure place to store and prevent access when closed

When on-street parking is being used to create bicycle and micromobility device parking as seen in ***Figure 223.5.1*** and ***Figure 223.5.2:***

- Use only where vehicular on-street parking is also allowed per ***FDM 210.2.3***
- Parking should be flush with the bicycle lane or accessible by a mountable curb
- Vertical ground-mounted objects (i.e. tubular markers) may also be used for motor vehicle and bicycle parking separation

Figure 223.5.1 illustrates on-street bicycle parking at midblock and ***Figure 223.5.2*** illustrates on-street bicycle parking at an intersection.

Figure 223.5.1 On-Street Bicycle Parking (Midblock)

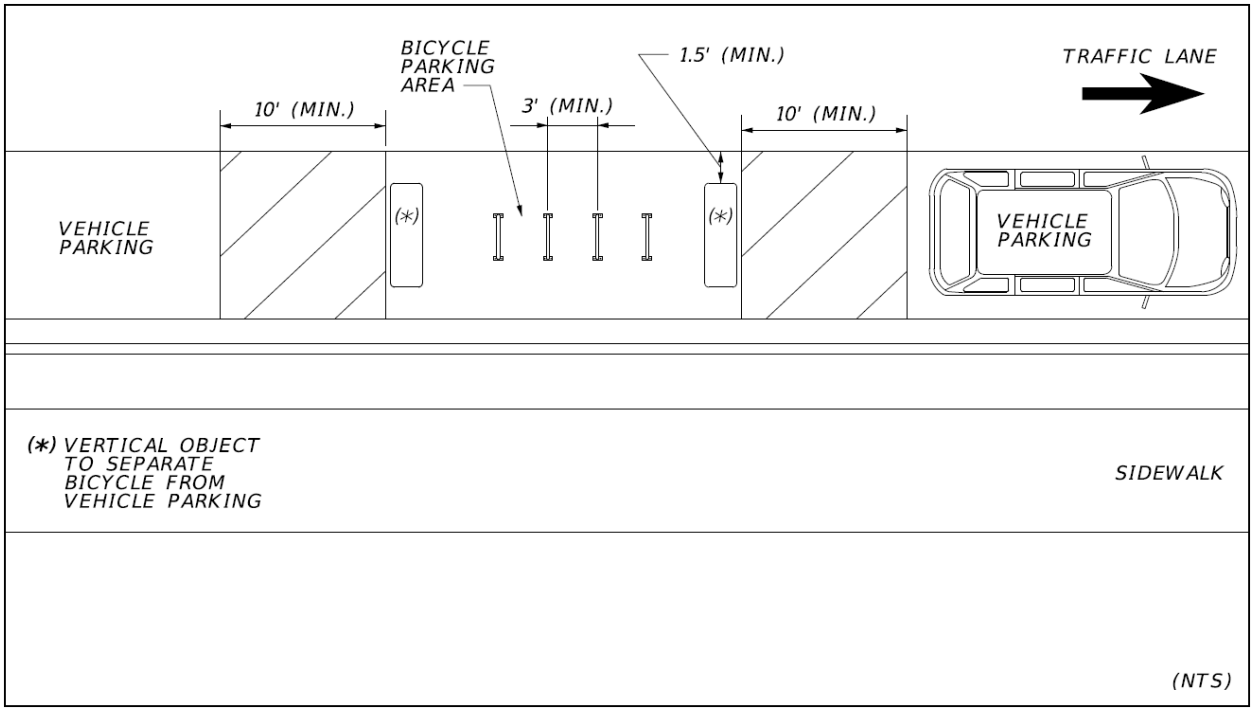
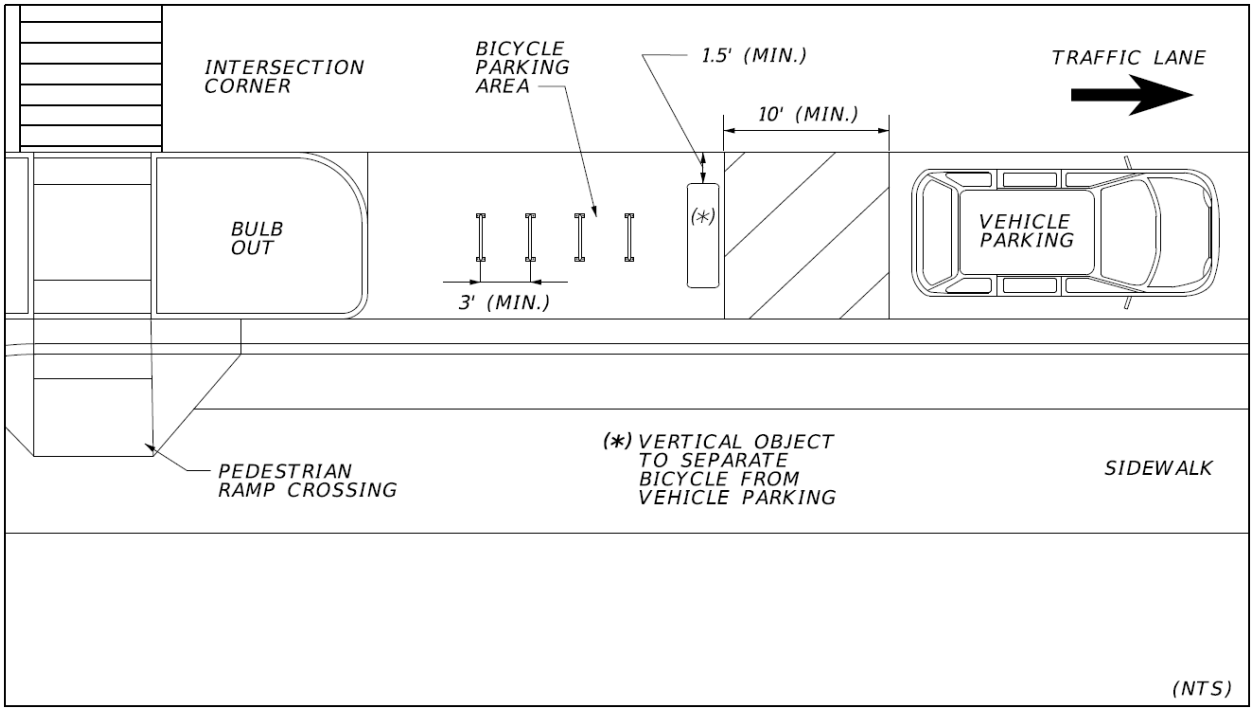


Figure 223.5.2 On-Street Bicycle Parking (Intersection)



See ***AASHTO's 2012 Guide for the Development of Bicycle Facilities*** for site-specific guidance for bicycle racks.

223.6 Bicycle Route System

Bicycle routes include roadways or shared use paths designated through signage, pavement markings or mapping. They provide directional and distance information, and aid bicyclists in wayfinding, especially in complex urban locations or along established long-distance bicycle routes.

Follow the signing guidance in ***MUTCD Part 9*** when including information directing bicyclists around temporary interruptions in a route***.*** Do not terminate bicycle routes at a barrier.

The decision whether to provide a bicycle route system should be based on the suitability of the particular roadway or shared use path for bicycle travel and the need for wayfinding information. Evaluations of suitability should include roadway width, volume, speed, and types of traffic, parking conditions, grade, sight distance, and connectivity to services, significant destinations, and local transit or regional transportation hubs. Other considerations include location and condition of drainage grates, railroad crossings, pavement surfaces, signals responsive to bicycles, and maintenance schedules.

223.6.1 U.S. Bicycle Route System

The U.S. Bicycle Route (USBR) System is a network of bicycle routes that span multiple states and are of national or regional significance. These routes are nominated for national designation by State Departments of Transportation (DOTs) and are designated and catalogued by the ***American Association of State Highway and Transportation Officials (AASHTO).***

The **National Corridor Plan** shows existing and proposed U.S. Bicycle Routes within the United States. Florida has three U.S. Bicycle Routes:

- U.S. Bicycle Route 1
- U.S. Bicycle Route 90
- U.S. Bicycle Route 15

Florida has adopted a policy entitled **U.S. Numbered Bicycle Routes, Topic No. 000-525-060-a** in support of the national route system.

223.6.1.1 Determining a U.S. Bicycle Route

The District Bicycle Pedestrian Coordinator(s), with assistance from the State Bicycle Pedestrian Coordinator, will conduct the following:

- Assess and evaluate possible routes and select the most appropriate alternative.
- Acquire written support from federal, state, or local agencies that have jurisdiction over the route or surrounding area, including the following:
    - Road authorities
    - Municipal governments
    - Departments of natural resources
    - Tribes
    - Parks and recreation
    - Federal land agencies; e.g., U.S. Forest Service, Bureau of Land Management, National Park Service.
- Secure a letter of concurrence from the adjacent state (Alabama or Georgia). When these states ask Florida for concurrence of a proposed route, the letter will be signed by the appropriate District Secretary.
- Prepare and submit the AASHTO application. Provide turn-by-turn instructions, map, state letter of concurrence, and written support from road owners. Also include discussion of economic benefits, liability, and signage for the route. The application is to be signed by the FDOT Secretary.

Table 223.6.1 provides criteria that can be used to evaluate route options. Route options are scored on a scale from 3 (fulfills selection criteria) to 0 (does not contribute to meeting selection criteria). “N/A” may be used when the criteria does not apply.

Table 223.6.1 U.S. Bicycle Route Criteria

Macro Criteria	3	2	1	0	NA
Within USBR corridor, with an emphasis on intrinsic scenic and cultural qualities of the corridor itself.					
Access to scenic, cultural, historical, and recreational destinations. (May not be directly on route but are nearby).					
Links major metropolitan areas to connect bicyclists to transportation hubs or major attractions.					
Reasonable direct route in connecting cities or attractions along the corridor.					
Supports natural connections between adjoining states.					
Includes or intersects existing or planned bicycle routes that are suitable for travel by touring bicycles.					
Micro Criteria	**3**	**2**	**1**	**0**	**NA**
Meets acceptable design criteria for on-road facilities and shared use paths.					
Utilizes already established and successful routes or paths.					
Easy to follow with limited turns; is well marked or has easily identified permanent landmarks to enable navigation.					
Connects to at least one neighboring state's USBR, suitable roadway, bicycle route, or trail system.					
Access to food, water, and overnight accommodations (including camping) at appropriate intervals (40-60 miles).					
Access to restaurants, libraries, retail shops and bicycle shops (parts and repair).					
Regularly scheduled ferry service for crossing water bodies. An alternate route should be identified when service may not be available.					
Topography is relatively easy for bicyclists; i.e., avoids extreme climbs.					
Total					