Florida Greenbook

Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways

Sub-committee Meeting

Chapter 13 – Public Transit

Agenda

February 3, 2026
1:00 PM – 2:00 PM

Virtual on Microsoft Teams
MS Teams Link

1:00 PM	Welcome and Introductions	Derwood Sheppard
1:10 PM	Chapter 13 Draft Review (17th Edition)	Jacqui Morris, Kittelson Staff
1:30 PM	Sub-Committee Discussion	Chapter 3 Sub-Committee
1:40 PM	Action Items and Next Steps	Jacqui Morris, Kittelson Staff
1:50 PM	Closing remarks • Public Comment	Jacqui Morris

Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways

Commonly known as the

Florida Greenbook

Subcommittee Meeting
Chapter 13 – Public Transit

February 3, 2026

1:00 PM – 2:00 PM
Virtual – Microsoft Teams

Public Meeting

FDOT

Welcome & Introductions

Agenda

February 3, 2026

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1:30 PM	Sub-Committee Discussion	Chapter 13 Sub-Committee
1:40 PM	Action Items and Next Steps	Jacqui Morris, Kittelson Staff
1:50 PM	Closing remarks • Public Comment	Jacqui Morris

Online Attendees
Meeting Logistics

The chat feature can be used to ask questions to the presenters or share resources.

Be sure to mute your microphone unless you are asking a question.

You may turn on or off your video camera accordingly.

Raise your virtual hand to ask a live question.

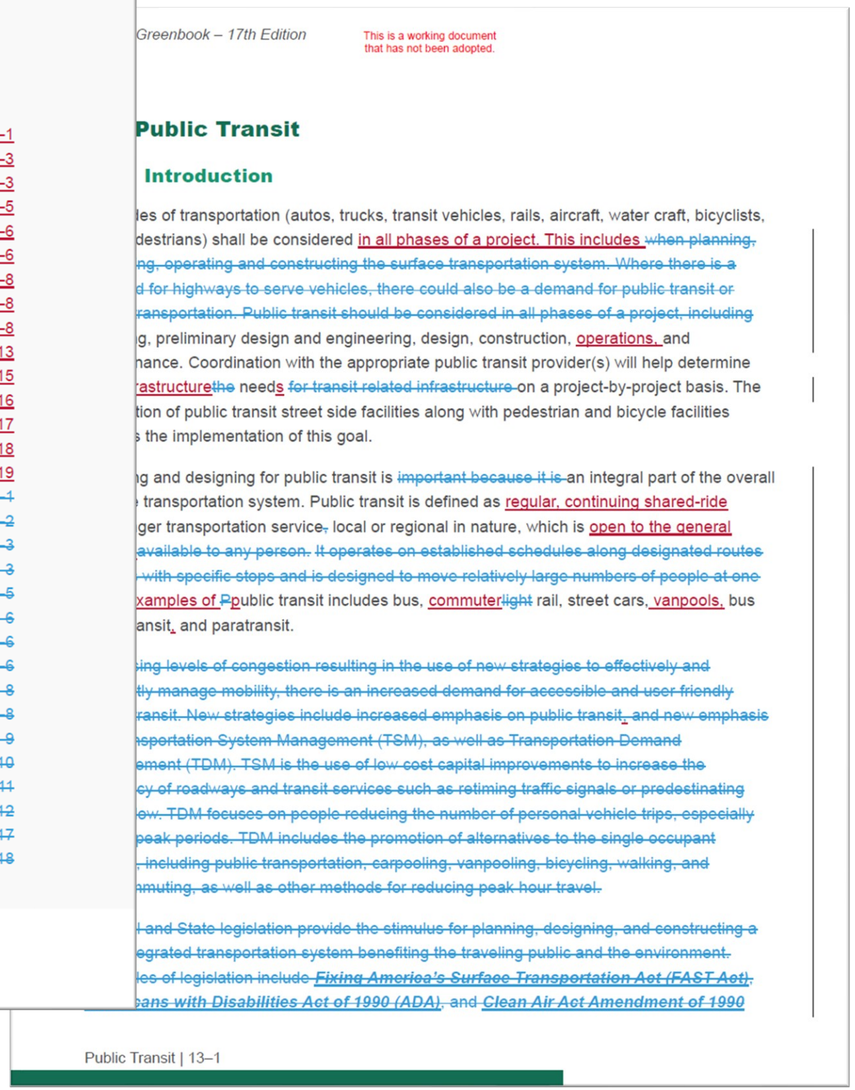
Chapter 13 - Review

This is a working document that has not been adopted.

Chapter 13

Public Transit

Figures



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Public Transit

Introduction

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~~ing levels of congestion resulting in the use of new strategies to effectively and tly manage mobility, there is an increased demand for accessible and user friendly ransit. New strategies include increased emphasis on public transit, and new emphasis nsportation System Management (TSM), as well as Transportation Demand ement (TDM). TSM is the use of low cost capital improvements to increase the cy of roadways and transit services such as retiming traffic signals or predestinating ow. TDM focuses on people reducing the number of personal vehicle trips, especially peak periods. TDM includes the promotion of alternatives to the single occupant , including public transportation, carpooling, vanpooling, bicycling, walking, and nmuting, as well as other methods for reducing peak hour travel.~~

~~l and State legislation provide the stimulus for planning, designing, and constructing a egrated transportation system benefiting the traveling public and the environment. les of legislation include *Fixing America's Surface Transportation Act (FAST Act)*, *ans with Disabilities Act of 1990 (ADA)*, and *Clean Air Act Amendment of 1990*~~

17th Edition

Subcommittee Discussion

General Discussion

Open for public comment

Online Attendees

Microsoft Teams Meeting Logistics

The chat feature can be used to ask questions to the presenters or share resources.

Be sure to mute your microphone unless you are asking a question.

You may turn on or off your video camera accordingly.

Raise your virtual hand to ask a live question.

Thank you for attending!

Contact

If you have any questions, comments or suggestions regarding the ***Florida Greenbook***, please contact:

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FDOT

Florida Greenbook

Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways

Sub-committee Meeting

Chapter 13 – Public Transit

Agenda

February 3, 2026
1:00 PM – 2:00 PM

Virtual on Microsoft Teams

Attendees

Alex Barrero
Barry Westmark
Bob Esposito
Tara Bracken
Caitlin Ward
Carey Allie Caldwell
Colleen Crigger
Andrew Gray
John Patrick
Ed Kestory
Elizabeth Kreider
Laura Hardwicke
William Leidy
Min-Tang Li
Lisa Maack
Naresh Machavarpu
Margie Tamblyn
Michael Grzelka
Mark Musselman

Nathan George
Keith Ng
Felix Padilla
Lori Palaio
Terra Parish
Rafael S. Aguilar
Nousheen Rahman
Ramon D. Gavarrete
Ron Gogoi
Juvenal Santana Jr.
Jorge Sevilla
Kyle Simpson
Elizabeth Sofsky
Brian Stanger
Chris Wiglesworth

Jacqueline (Jacqui) Morris
Jennifer Musselman
Carrigan Allison

Topic		
1	Welcome and Introduction [Slide #1 – 3]	Jacqui Morris
	Jaqui Morris introduced herself and welcomed everyone. Jacqui invited committee members and FDOT technical staff to introduce themselves.	
2	Chapter 13 Review (17th Edition) [Slide #4]	Jacqui Morris, Kittelson Staff
	- Jennifer recapped key themes from the April 2025 full-committee meeting. These included opportunities to provide guidance on shared bus–bike lanes, mid-block crossings for transit access, park-and-ride design, and center-running bus lane configurations. - Jennifer then introduced the proposed Table of Contents (TOC) reorganization. She explained that the previous structure separated transit components and facilities; however, due to overlap, the revised approach consolidates content into Transit Facilities and Transit Lane Configurations. **3.1 Introduction** - Jennifer discussed streamlining the introduction by simplifying language, adding clarifying items, and more explicitly considering transit operations. Some background information was removed to improve clarity and focus. **13.2.3 Bus Benches** - Jennifer addressed new language in the bus benches section that directs readers to Chapter 4: Roadside Design for lateral offset criteria. **13.2.4 Stops and Stations** - Jennifer reviewed updates related to stops and stations, which mostly consolidates information from two previous sections. **13.2.5 Bus Bays** - Jennifer reviewed revised language clarifying when bus bays may be appropriate. The updated text emphasizes coordination with local public transit providers to determine the need and interest for bus bays. **13.2.6 Bus Stop Lighting**	

- Jennifer noted that the lighting guidance was relocated earlier in the chapter.

13.2.6 Park-and-Ride Lots

- Jennifer introduced expanded guidance for park-and-ride facilities, including design elements such as parking, lighting, signage, bus loading areas, and space for future multimodal uses.
- Conceptual figures were discussed, including both simple and complex park-and-ride layouts. The complex example illustrates integration with rail, paratransit, taxi access, bicycle facilities, and shared mobility to support multimodal connectivity.

13.2.8 Mid-Block Crossing

- Jennifer reviewed new language addressing mid-block pedestrian crossings to support access to transit when bus stops are not located at intersections. The revisions emphasize placement downstream of bus stops to improve visibility and alignment with pedestrian desire lines. Additional references were added to the MUTCD, Accessing Transit, and Chapter 8 – Pedestrian Facilities.

13.3.1 Exclusive Bus Lanes

- Jennifer reviewed new guidance establishing minimum and preferred lane widths, separation treatments, shy distances, and pavement markings for exclusive bus lanes.

13.3.2 Shared Bus and Bike Lanes

- Jennifer discussed expanded guidance for shared bus and bicycle lanes.

13.3.3 Center-Running Bus Lanes

- Jennifer reviewed new content describing center-running bus lanes, including one-way and two-way configurations. A new table summarizes design standards for lane widths, separators, station platforms, and shy distances.

3	Sub-Committee Discussion [Slide #5]	Chapter 13 Sub-Committee

13.3.1 Exclusive Bus Lanes

- Laura Hardwicke suggested allowing a narrower bus lane width if it is adjacent to a buffer area or center turn lane.

	- Juvenal Santana mentioned there are trolleys that operate on 10 foot wide lanes while providing room for 8 foot rumble strips compared to the remarked 11 foot wide. **13.3.3 Center Running Bus Lanes** - Nathan George from Palm Beach MPO cautioned that the current language is prescriptive and suggested making the language more flexible for design opportunities. - He additionally mentioned there may be more room for the inclusion of context, volume, and roadway character when considering the need for a physical barrier. - Jennifer added that speed could be added as well. - Both Jennifer and Nathan agreed it may be beneficial to adjust the language slightly. **13.2.5 Bus Bays** - Nousheen Rahman discussed conflicts with ROW, and how it would be helpful to include information on where to get transferrable guidance on bus lanes. - Multiple attendees expressed support to include information on bus boarding islands. - There was also a request for additional guidance on bus bay specific design criteria including interactions with bike lanes.	
4	Closing Remarks Public Comment [Slide #6-7]	Jacqui Morris
	Jacqui provided a reminder that this is a public meeting and provided an opportunity for public comment. Jacqui thanked everyone for their time and participation and said she will schedule a follow up meeting after the first of the year. Meeting adjourned at 1:34 p.m.	

Chapter 13

Public Transit

Figures

This is a working document that has not been adopted.

13 Public Transit

13.1 Introduction

All modes of transportation (autos, trucks, transit vehicles, rails, aircraft, water craft, bicyclists, and pedestrians) shall be considered in all phases of a project. This includes ~~when planning, designing, operating and constructing the surface transportation system. Where there is a demand for highways to serve vehicles, there could also be a demand for public transit or public transportation. Public transit should be considered in all phases of a project, including~~ planning, preliminary design and engineering, design, construction, operations, and maintenance. Coordination with the appropriate public transit provider(s) will help determine any infrastructure~~the~~ need~~s~~ ~~for transit related infrastructure~~ on a project-by-project basis. The integration of public transit street side facilities along with pedestrian and bicycle facilities furthers the implementation of this goal.

Planning and designing for public transit is ~~important because it is~~ an integral part of the overall surface transportation system. Public transit is defined as regular, continuing shared-ride passenger transportation service~~,~~ local or regional in nature, which is open to the general public. ~~available to any person. It operates on established schedules along designated routes or lines with specific stops and is designed to move relatively large numbers of people at one time.~~ Examples of ~~P~~public transit includes bus, commuter~~light~~ rail, street cars, vanpools, bus rapid transit, and paratransit.

~~With rising levels of congestion resulting in the use of new strategies to effectively and efficiently manage mobility, there is an increased demand for accessible and user friendly public transit. New strategies include increased emphasis on public transit, and new emphasis on Transportation System Management (TSM), as well as Transportation Demand Management (TDM). TSM is the use of low cost capital improvements to increase the efficiency of roadways and transit services such as retiming traffic signals or predestinating traffic flow. TDM focuses on people reducing the number of personal vehicle trips, especially during peak periods. TDM includes the promotion of alternatives to the single occupant vehicle, including public transportation, carpooling, vanpooling, bicycling, walking, and telecommuting, as well as other methods for reducing peak hour travel.~~

~~Federal and State legislation provide the stimulus for planning, designing, and constructing a fully integrated transportation system benefiting the traveling public and the environment. Examples of legislation include ***Fixing America's Surface Transportation Act (FAST Act)***, ***Americans with Disabilities Act of 1990 (ADA)***, and ***Clean Air Act Amendment of 1990***~~

~~***(CAAA)***. In response to this legislation, the surface transportation system should provide for concurrent use by automobiles, public transit and rail, bicycles, and pedestrians.~~

~~13.2 Objective~~

~~There are several methods to efficiently develop a coordinated surface transportation system. Coordination among agencies is necessary during the planning and design stages to:~~

- ~~incorporate transit needs and during the construction phase for re-routing bus (and complementary pedestrian) movements, and~~
- ~~for actual transit agency specific requirements (e.g., bus stop sign replacement, shelter installations, etc.).~~

~~For planning purposes, the state and local Transportation Improvement Program (TIP) should be referenced. Additionally, individual transit authorities have ten-year Transit Development Plans (TDPs) that are updated annually. The TDP can be used as a guide for planned transit needs along existing and new transportation corridors so transit consideration and transit enhancements can be incorporated where appropriate.~~

~~13.3~~13.2 Transit ~~Components~~Facilities

~~13.3.1~~13.2.1 Boarding and Alighting (B&A) Areas

Boarding and Alighting (B&A) areas help to create an accessible bus stop by providing a raised platform that is compatible with a bus that kneels or extends a ramp. A B&A area has a firm, stable and slip-resistant surface with a minimum clear length of 8.0 feet (measured perpendicular to the curb or roadway edge), and a minimum clear width of 5.0 feet (measured parallel to the roadway). Firm, stable, and slip resistant B&A areas are required if amenities such as benches or shelters are added to a bus stop. B&A areas are not required at bus stops on flush shoulder roadways where only a bus stop sign is provided. Coordinate with the appropriate public transit provider(s) to determine compatibility with equipment and transit vehicles.

The slope of the B&A area parallel to the roadway shall to the extent practicable, be the same as the roadway. For water drainage, a maximum slope of 2% perpendicular to the roadway is allowed. Benches and other site amenities shall not be placed on the B&A area. The B&A area can be located either within or outside the shelter, and shall be connected to streets, sidewalks, or pedestrian circulation paths by an accessible route.

On flush shoulder roadways, a B&A area may be constructed at the shoulder point (or edge of shoulder pavement on roadways with a design speed of 45 mph or less) as shown in **Figures 13 – 1** and **13 – 2** Boarding and Alighting Area for Flush Shoulder Roadways. A Type “E” curb (5” curb height) should be used.

A sidewalk and/or ramp provided with the B&A area shall be a minimum of 5 feet in width, and the ramp shall not exceed a slope of 1:12. A detectable warning is required where a sidewalk associated with a B&A area connects to the roadway at grade. Except for the area adjacent to the 5” curb, the areas surrounding the B&A area shall be flush with the adjacent shoulder and side slopes and designed to be traversable by errant vehicles. On the upstream side of the platform, a maximum slope of 1:12 should be provided, and may be grass or a hardened surface. The B&A area (and ramp and level landing if needed) should be constructed with 6” thick concrete.

Figure 13-1 Boarding and Alighting Area for Flush Shoulder Roadways with Connection to the Roadway

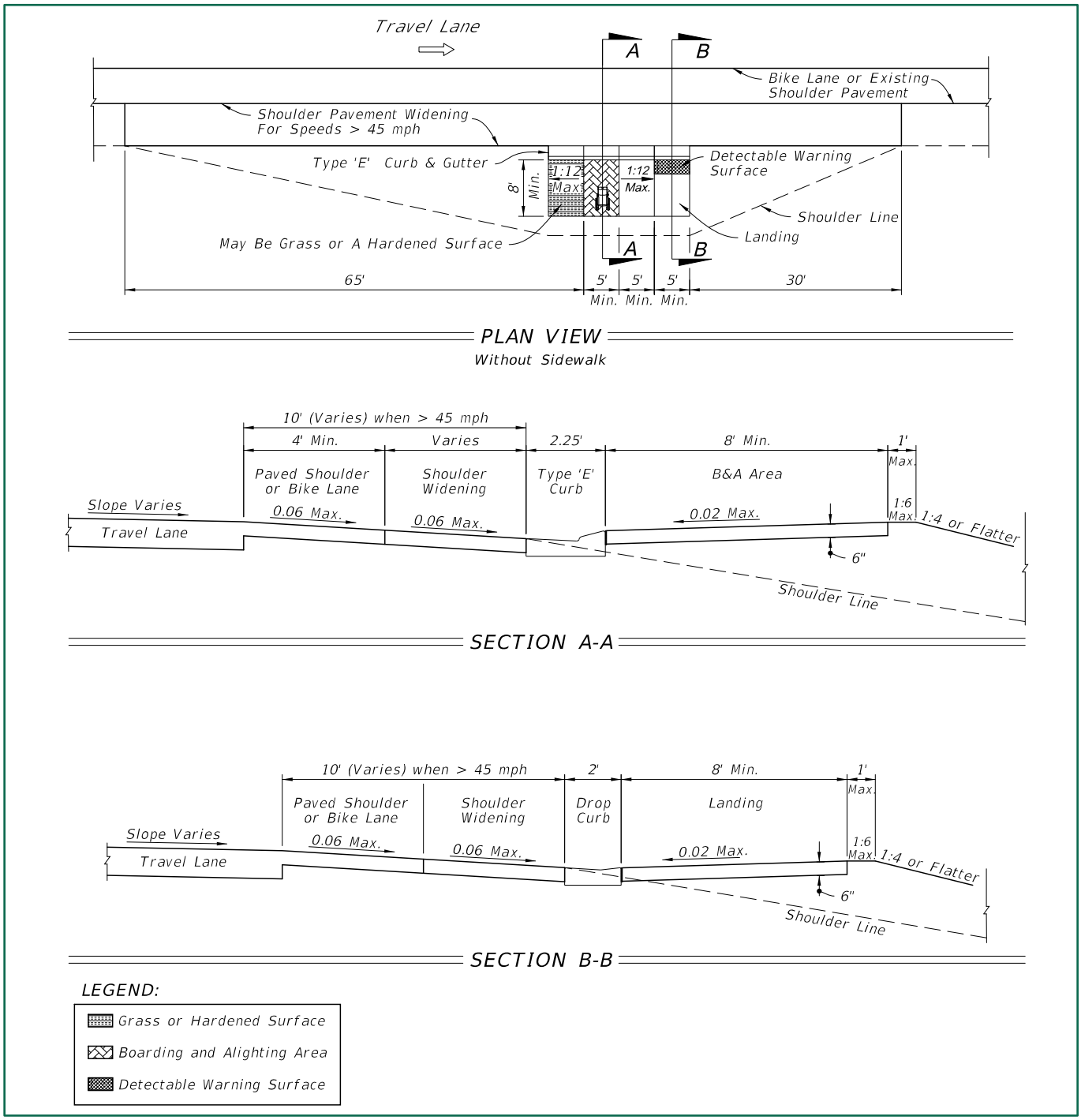
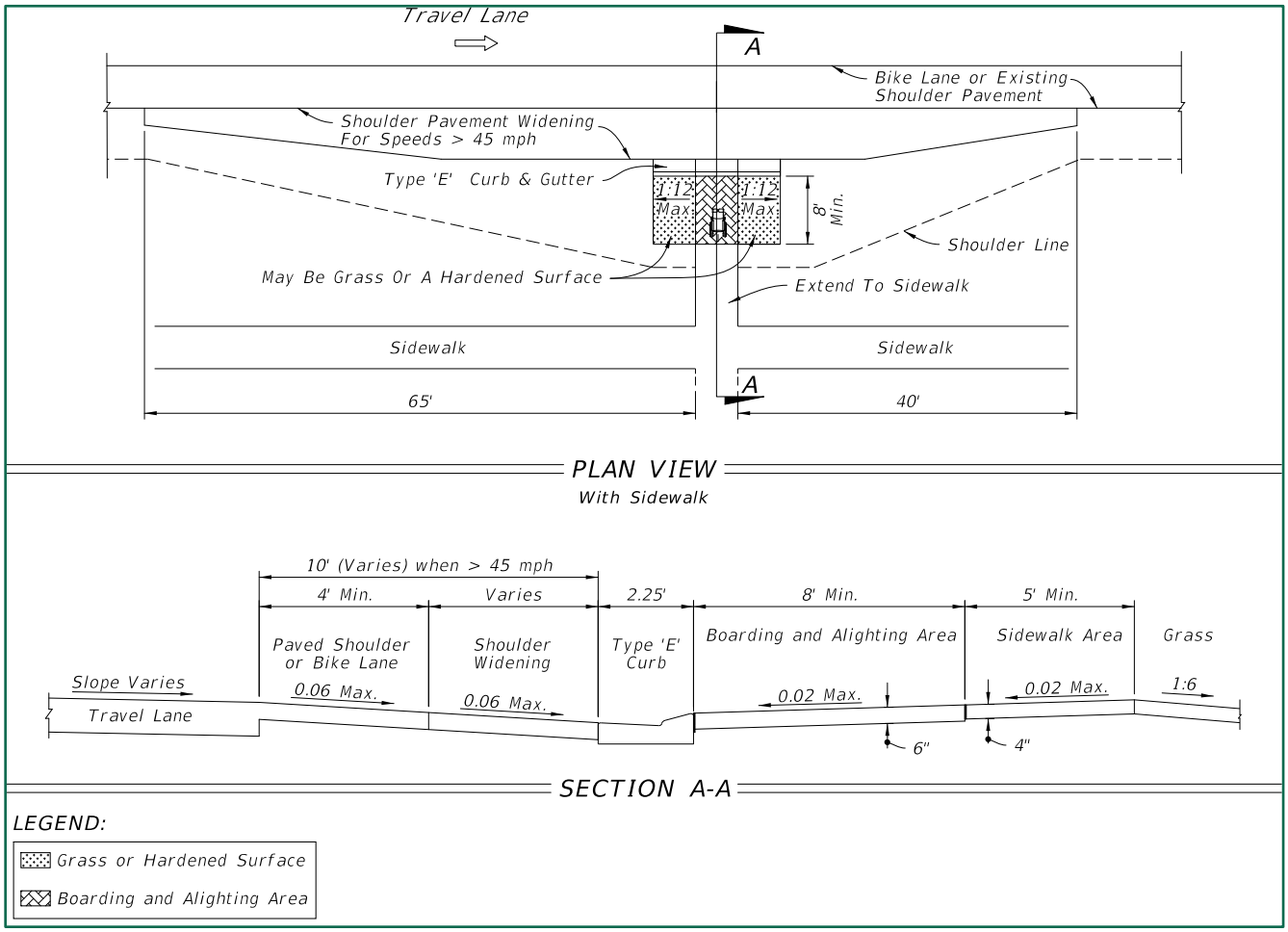


Figure 13-2 Boarding and Alighting Area for Flush Shoulder Roadways with Connection to the Sidewalk



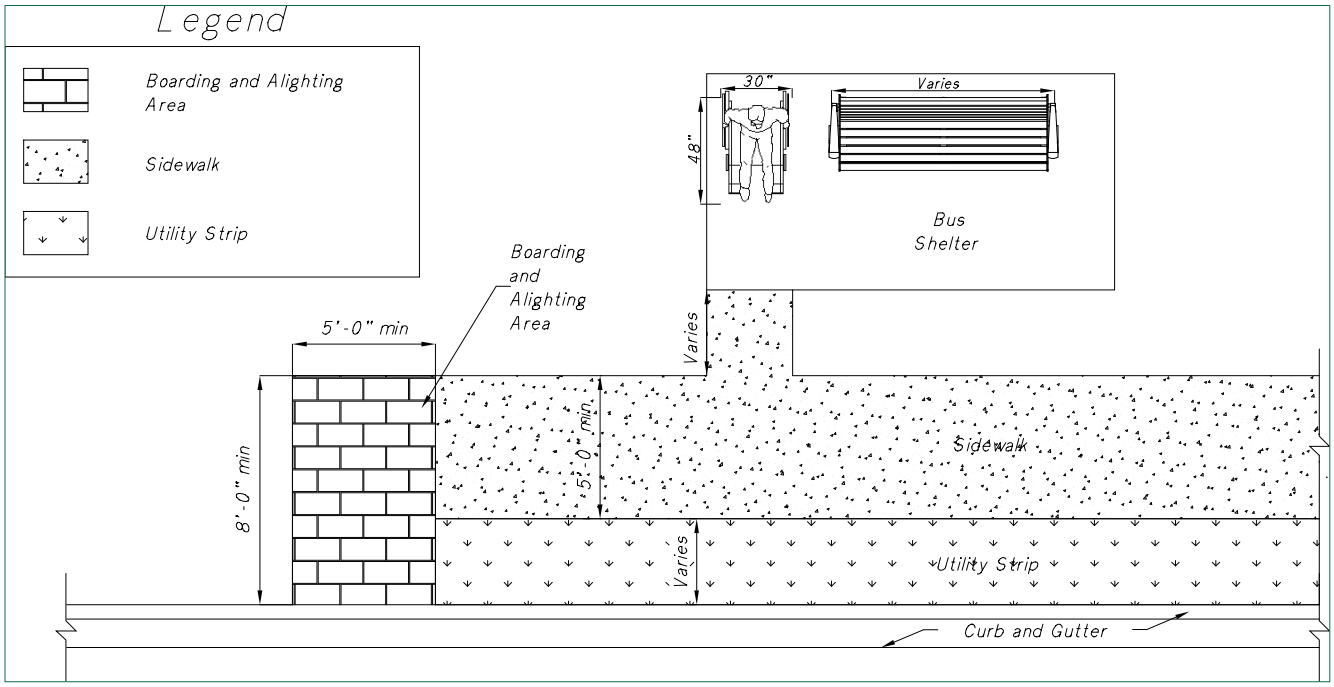
~~13.3.2~~13.2.2 Shelters

Every public transit system has different needs with regards to shelters and corresponding amenities (e.g., benches, information kiosks, leaning posts, trash receptacles, etc.). Shelter foundation and associated pad size vary from stop to stop based on right of way availability, line of sight, and facility usage. New or replaced bus shelters shall be installed or positioned to provide an accessible route from the public way (sidewalk or roadway) to reach a location that has a minimum clear floor area of 30 inches by 48 inches, entirely within the perimeter of the shelter.

Shelters shall be connected by an accessible route to a B&A area as illustrated in **Figure 13 – 3**. Transit shelters shall comply with ***Chapter 14-20, Florida Administrative Code***. Coordinate with the appropriate public transit provider(s). Where feasible, shelters should provide a location for a bicycle rack. Shelters should be installed at locations where demand warrants installation and in accordance with clear zone criteria in ~~**Chapter 3 – Geometric Design,**~~

~~Section 3.3.10.5 Bus Benches and Transit Shelters~~ and **Chapter 4 – Roadside Design, Table 4 – 4~~2~~ Lateral Offset.** ~~of this Manual.~~

Figure 13-3 Bus Shelter Locations



~~13.3.3~~13.2.3 Benches

If a bench is provided, it should be on an accessible route, out of the path of travel on a sidewalk. Benches shall have an adjacent firm, stable and slip-resistant surface at least 30 inches wide and 48 inches deep to allow a user of a wheelchair to sit next to the bench, permitting the user shoulder-to-shoulder seating with a companion. Connection between the bench, sidewalk and/or bus B&A area shall be provided. Coordinate with the local public transit provider(s).

Bus benches should meet lateral offset criteria defined in **Chapter 4 – Roadside Design** in curbed sections. Bus benches should be outside the clear zone in flush shoulder sections. See **Chapter 4 – Roadside Design, Table 4 – 4 Lateral Offset** for further information. Transit facilities shall comply with ***Chapter 14-20, Florida Administrative Code***.

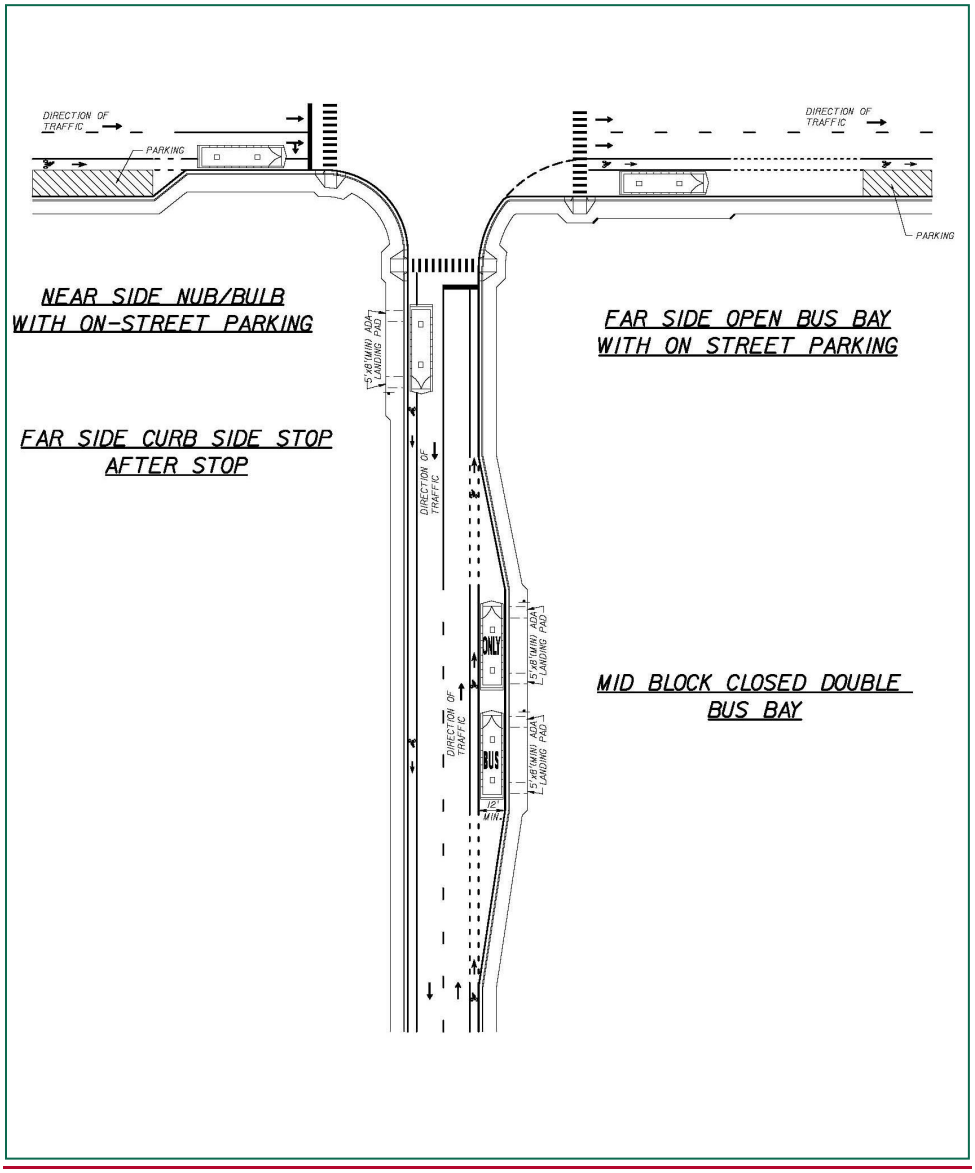
~~13.3.4~~13.2.4 Stops and Station Areas

Transit stops should be located so that there is a level and stable surface for boarding vehicles. Bus stop locations can be categorized as far side, near side and mid-block stops as shown in **Figure 13 – 4**. Locating transit stops at signalized intersections increases the usability for pedestrians with disabilities. Where transit stops are not located adjacent to a

pedestrian crossing, a sidewalk connection should be provided to the nearest crossing opportunity.

Curb-side facilities are the most common~~, simple, and convenient~~ form of facilities at a bus stop. These include bus stop signs, shelters, bus stop B&A areas, benches, bike racks, leaning rails, and shelter lighting. ~~Guidance on stop and station treatments by context is provided in the ***Context Classification Framework for Bus Transit (2020)*** while ***Accessing Transit, Version IV (2023)*** offers additional details and standards for various facility types. "Accessing Transit" provides additional details and guidelines for each type of transit facility.~~ Coordinate with the appropriate public transit provider(s) to determine the most suitable amenities and their placement. ~~the appropriate type and placement of amenities.~~

Figure 13-4 Bus Stop Locations



~~13.3.5~~13.2.5 Bus Bays (Pullout or Turnout Bays)

Bus stops may be designed with a bus bay or pullout to allow buses to pick up and discharge passengers in an area outside of the travel lane. This design feature allows traffic to flow freely without the obstruction of stopped buses. ~~Bus bays for transit vehicles may be necessary (e.g., extended dwell time, layover needs, safety reasons, high volumes or speed of traffic.).~~ Bus bays can be designed for one or more buses. Coordinate with the local public transit provider(s) to determine the need and interest for bus bays.

When possible, bus bays should be located on the far side of a signalized intersection. The traffic signal will create the critical gap needed for bus re-entry into traffic. ~~There are several publications available which provide additional design information for transit system applications. The FDOT District Public Transportation Office(s) maintains a library of these publications.~~

See ***Accessing Transit, Version 3IV (20123)*** ~~and ***Accessing Transit Update (2017)***~~ for a more detailed discussion of the location of the bus stop or bay.

13.2.6 Bus Stop Lighting

Lighting design for bus stops should meet the same criteria for minimum illumination levels, uniformity ratios and max-to-min ratios that are being applied to the adjoining roadway based on **Chapter 6 – Lighting** ~~of this Manual~~. If lighting is not provided for the adjoining roadway, coordinate with the transit agency to determine if lighting should be provided for the bus stop area, particularly when night transit services are provided. A decision to install lighting for the adjoining bus stop area may include illumination of the bus bay pavement area. ~~The use of solar panel lighting for bus stops is another option that should be considered.~~

13.2.7 Park-and-Ride Lots

Park-and-ride facilities are designed to support commuters transferring between personal vehicles and public transit. Facilities incorporate parking, durable pavements, adequate lighting, and clear signage. Facilities should also provide space for transit terminals, bus loading areas, and potential carpool/vanpool staging.

Park-and-ride facilities shall include ADA-accessible parking spaces. A recommended layout provides 9’ x 18’ spaces with 4-foot access aisles between designated spaces. Refer to **Table 13 – 3,** for guidance on the minimum number of spaces. Remaining parking spaces should be designed in accordance with ***MUTCD*** for markings and signage.

Table 13-1 ADA Parking Space Requirements

Total Parking Spaces	Minimum Number of Accessible Spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1,000	2%
Over 1,000	20 places - 1 for each 100 over 1000

Effective pavement design for park-and-ride facilities requires consideration of each area's intended use to support long-term durability, safety, and reliable performance. **Table 13 – 4** summarizes recommended pavement types for different park-and-ride facility areas, with notes on load requirements and material considerations. For more guidance on pavement design refer to **Chapter 5 – Pavement Design and Construction.**

Table 13-2 Park-and-Ride Pavement Criteria

Facility Area	Pavement Type	Notes
Bus lanes and loading stations	Rigid Concrete	High static wheel loads and temperatures
Internal Circulation Roads	Flexible Asphalt	Supports slow-speed transit vehicles
Car parking and paths	Permeable Pavement	Limited transit vehicle travel. Encouraged to use porous materials for drainage

Proper lighting at park-and-ride facilities can enhances safety, security, and visibility, making the facility more accessible and comfortable for users.

Table 13 – 5 outlines recommended lighting standards for park-and-ride facilities, including requirements for parking areas, bus loading zones, and pedestrian paths. For more guidance on lighting design see **Chapter 6 – Lighting.**

Table 13-3 Park-and-Ride Lighting Criteria

Location	Standard	Objective
Parking areas	Illumination per IESNA RP-8*	Even coverage, pedestrian visibility
Bus loading	Enhanced Illumination	Support passenger interaction and visibility
Pedestrian Paths	Continuous Lighting	Meet ADA requirements

** Illuminating Engineering Society of North America (IEASNA) Recommended Practice for Roadway Lighting (RP-8)*

Signing and pavement markings provide clear guidance for vehicles, bicycles, and pedestrians as they circular the park-and-ride. **Table 13 – 6** summarizes recommended signage and pavement markings for park-and-ride facilities, including guidance for vehicle, bicycle, and pedestrian wayfinding.

Table 13-4 Park-and-Ride Signage Criteria

Sign/Marking Type	Purpose	Example
Guide	Directs vehicles to parking, kiss-and-ride lot, bike storage, etc.	Facility name at entrance
Regulatory	Controls unauthorized use, parking restrictions	ADA, tow-away zones, and no overnight parking
Pavement Markings	Defines traffic flow and parking	Stop bars, arrows, and crosswalks
Bicycle	Directs bicyclists to storage and routes	Sharrows or bike lanes when appropriate

See the ***FDOT State Park-and-Ride Guide (2012)*** for additional guidance on the design of park-and-ride facilities. This resource provides detailed recommendations to support effective planning and implementation.

A simple conceptual park-and-ride lot includes designated handicapped and general parking areas as shown in **Figure 13 – 8**, with sidewalks providing direct connections from the parking lot to the kiss-and-ride area and bus shelter, enhancing accessibility and circulation.

This is a working document that has not been adopted.

Figure 13-4 Conceptual Park-and-Ride Lot (Simple)

[Recreate drawing below with smaller parking area and pedestrian walkways (shown in red)]

FDOT – State Park-and-Ride Guide Revised – June 1, 2012

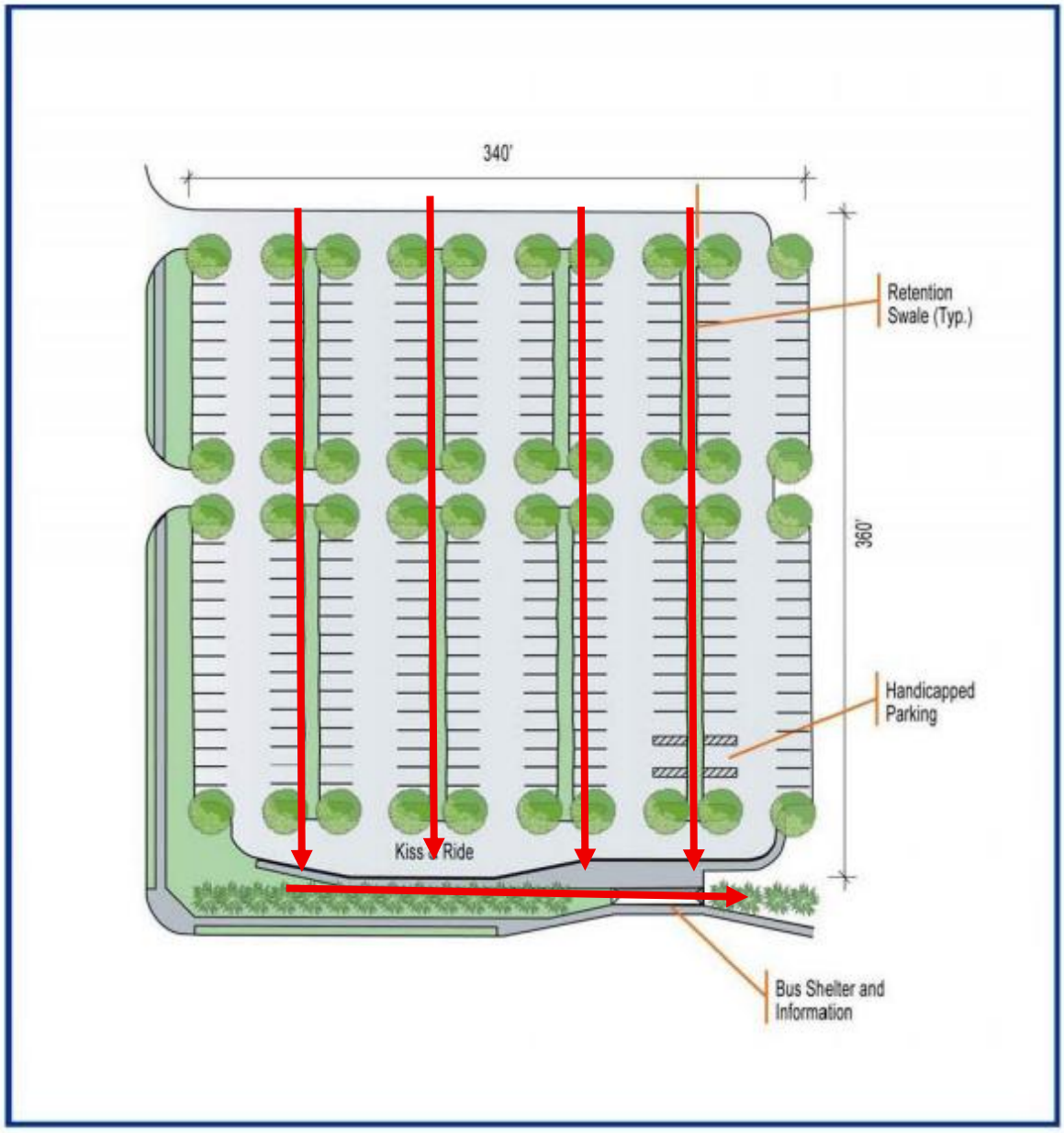


Figure 7-2: Conceptual Design for Urban Park-and-Ride Lot
(D5 Park-and-Ride Implementation Manual)

More complex park-and-ride lots may include additional elements such as rail connections, paratransit, taxi access, and shared mobility stations to support user needs and improve overall connectivity. **Figure 13 – 9** illustrates a complex conceptual park-and-ride design that

incorporates a station platform, paratransit and taxi queuing areas, bicycle racks, rail crossings, and landscape to create a multimodal hub that enhances accessibility, safety, and user comfort.

Figure 13-5 Park-and-Ride Lot (Complex)

[Recreate in Greenbook style]

FDOT – State Park-and-Ride Guide Revised – June 1, 2012

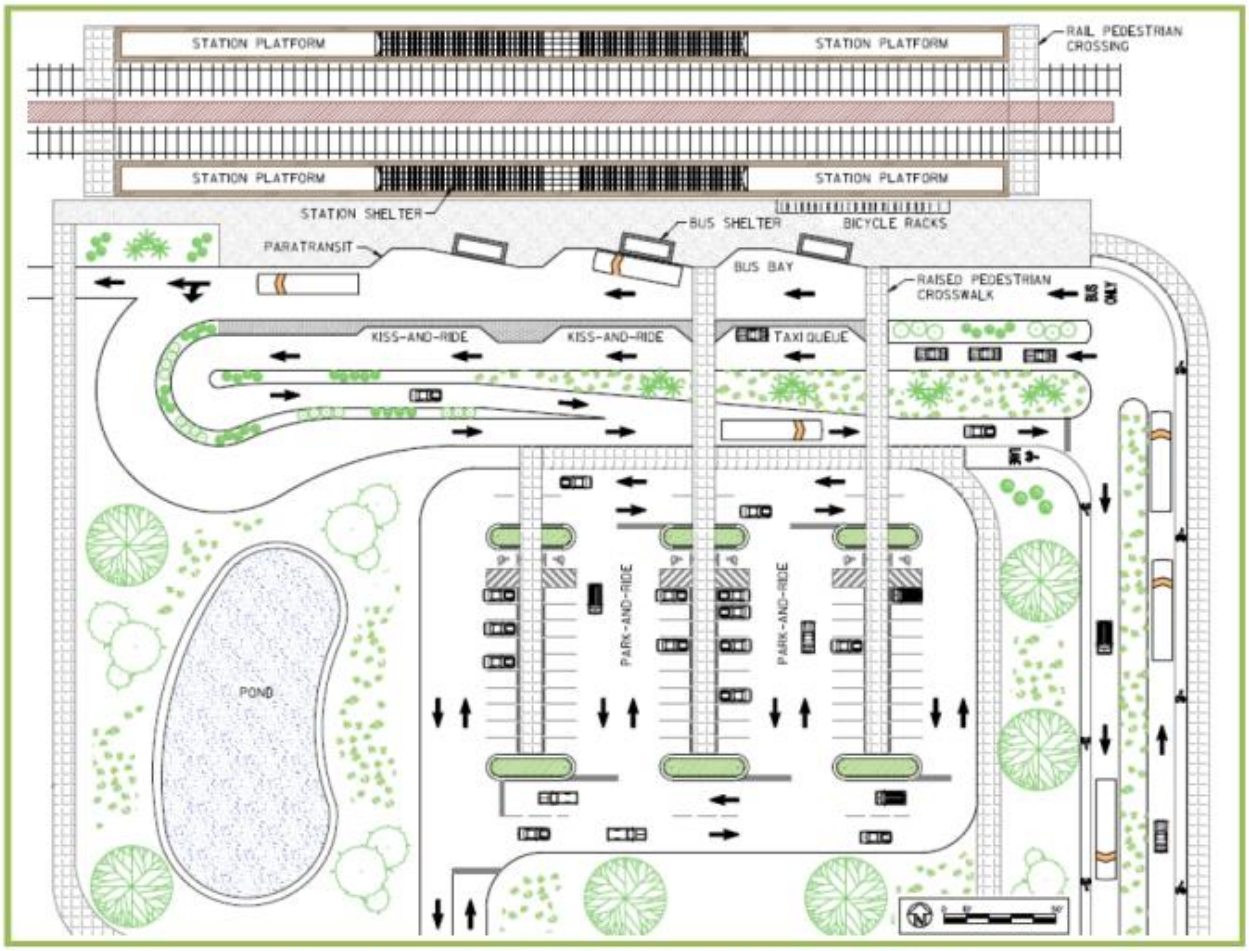
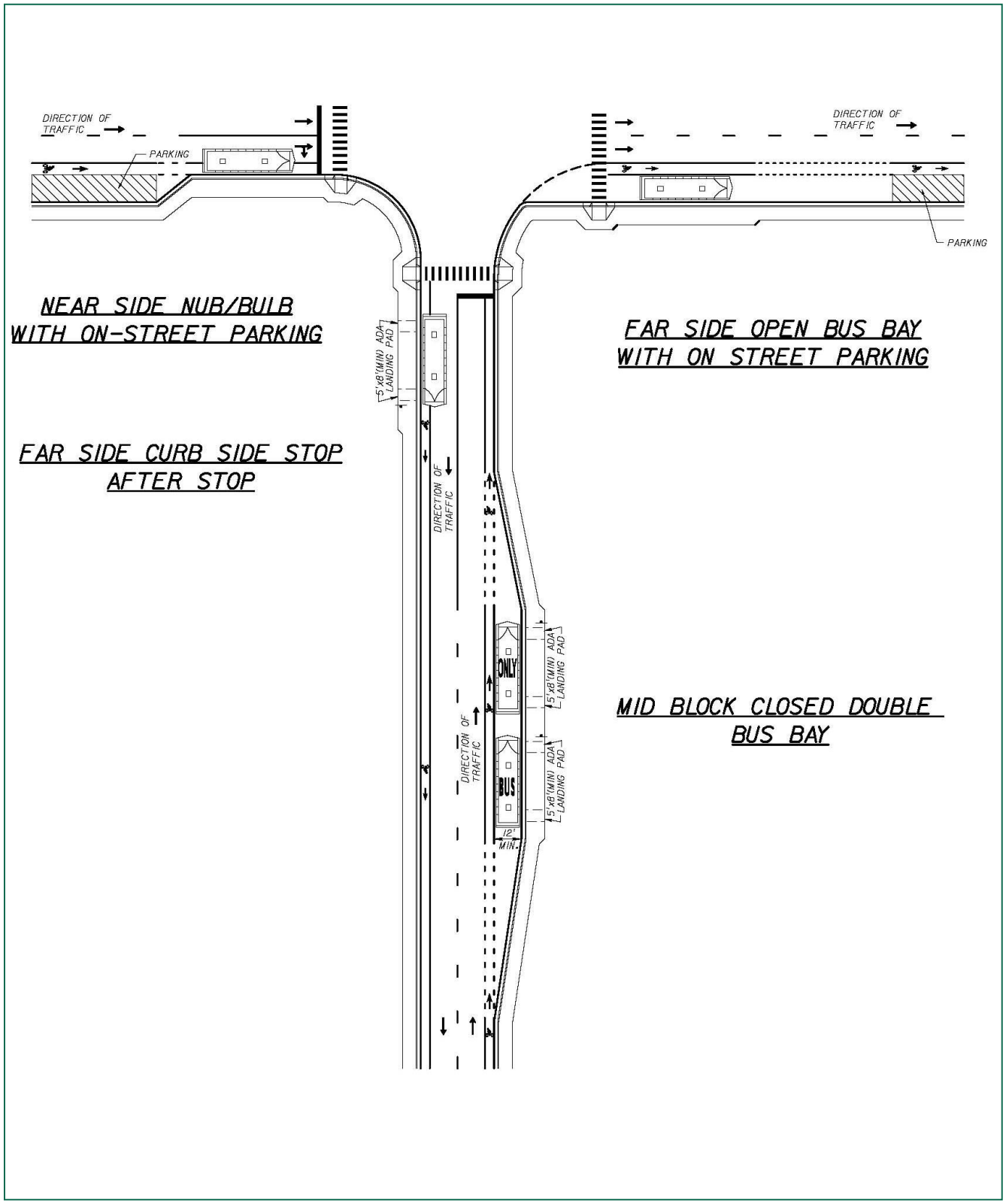


Figure 7-3: Conceptual Design for Park-and-Ride Lot Serving Rail Station
(Guidelines for Enhancing Intermodal Connections at Florida Transit Stations)

13.2.8 Mid-Block Crossings

Mid-block crossings can support access to transit when bus stop placement is outside of an intersection. Crossings should be placed downstream of bus stops to improve visibility for both pedestrians and drivers as shown in **Figure 13 – 10**. Placement should follow primary pedestrian paths and minimize walking distance to stops while considering ridership, roadway speed, and sight distance. Refer to the ***MUTCD*** and ***Accessing Transit, Version IV (2023)*** for guidelines on pedestrian markings, signage, and control devices. See **Chapter 8 – Pedestrian Facilities** for midblock crossing criteria.

Figure 13-64 Bus Stop Locations



~~13.4~~13.3 ~~Public~~ Transit ~~Facilities~~Lane Configurations

~~When a project includes a public transit route, curb-side and street-side transit facilities for bus stops should be considered in the roadway design process. Transit facilities shall comply with ***Chapter 14-20, Florida Administrative Code***.The "Accessing Transit: Design Handbook for Florida Bus Passenger Facilities" provides guidance relating to provisions for curb-side and street-side facilities.~~

~~13.4.1 Curb-Side Facilities~~

~~Curb-side facilities are the most common, simple, and convenient form of facilities at a bus stop. These include bus stop signs, shelters, bus stop B&A areas, benches, bike racks, leaning rails, and shelter lighting. "Accessing Transit" provides additional details and guidelines for each type of transit facility. Coordinate with the appropriate public transit provider(s) to determine the appropriate type and placement of amenities.~~

~~13.4.2 Street-Side Facilities~~

~~Bus stop locations can be categorized as far side, near side and mid-block stops. Bus stops may be designed with a bus bay or pullout to allow buses to pick up and discharge passengers in an area outside of the travel lane. This design feature allows traffic to flow freely without the obstruction of stopped buses. Far side bus stops and bays are preferred. See ***Accessing Transit, Version 3 (2013)*** and ***Accessing Transit Update (2017)*** for a more detailed discussion of the location of the bus stop or bay.~~

~~Bus bays can be closed-ended, open-ended, or nubs/bulbs, and can be positioned near-side, far-side, or mid-block in relation to an intersection, as illustrated in **Figure 13 – 3 Bus Shelter Location**. The total length of the bus bay should allow room for an entrance taper, a stopping area, and an exit taper as a minimum. However, in some cases it may be appropriate to consider providing acceleration and deceleration lanes depending on the volume and speed of the through traffic. This decision should be based upon site specific conditions. "Accessing Transit" provides detailed bus bay dimensions for consideration with various right of way and access conditions.~~

~~13.4.3~~13.1.1 ~~Bus Stop Lighting~~

~~Lighting design for bus stops should meet the same criteria for minimum illumination levels, uniformity ratios and max-to-min ratios that are being applied to the adjoining roadway based on **Chapter 6 – Lighting** of this Manual. If lighting is not provided for the adjoining roadway, coordinate with the transit agency to determine if lighting should be provided for the bus stop area, particularly when night transit services are provided. A decision to install lighting for the adjoining bus stop area may include illumination of the bus bay pavement area. The use of solar panel lighting for bus stops is another option that should be considered.~~

13.3.1 Exclusive Bus Lanes

Exclusive bus lanes are reserved travel lanes that may be configured as curbside or offset as shown in **Figure 13 – 5**.

Exclusive transit lanes shall have a minimum width of 11 feet, with 12 feet preferred. Exclusive transit lanes shall be separated from adjacent general-purpose lanes using solid single or double white stripes in accordance with ***MUTCD.*** If a physical separator is used, it shall be at least 6 inches wide, with 1 foot preferred. Shy distance should be a minimum of 1 foot for smooth bus operations.

Bus-only pavement markings reinforce exclusivity.

Figure 13-75 Exclusive Bus Lanes

[Replace photo with schematic graphic in Greenbook style]

13.3.2 Shared Bus and Bike Lane

Shared Bus and Bike Lanes are designated curbside lanes that accommodate both bus and bicycle operations, typically used in constrained rights-of-way with high transit frequency.

These lanes shall have a minimum width of 11 feet, with 12 feet preferred as illustrated in **Figure 13 – 6**. Near bus stops, 15–16 feet is preferred to allow bicycles to pass a stopped bus.

Shared lanes shall be separated from adjacent general-purpose lanes with a solid 6-inch white line in accordance with the ***MUTCD.*** If a physical separator is used, it shall be at least 6 inches wide, with 1 foot preferred. Shy distance should be at least 1 foot, as buses do not operate with their tires directly against a curb or separator.

Refer to the ***MUTCD*** for in-lane markings and signage requirements for preferential lanes.

Figure 13-86 Shared Bus and Bike Lane

[Replace photo with schematic graphic in Greenbook style]

13.3.3 Center Running Bus Lanes

A center running bus lane is a dedicated lane that can be configured for one-way or two-way bus operations as shown in **Table 13 – 1**. In a one-way configuration, buses operate directionally along the roadway median, separated from general traffic lanes by a curb or barrier that may be mountable to allow emergency or maintenance access. Station platforms are positioned adjacent to the bus lane to accommodate passenger boarding.

In a two-way configuration, the busway supports bi-directional operations with both lanes serving median stops/shelters. The facility is separated from general traffic by a curb or barrier, while the two directions of bus travel typically share a center platform to serve passengers in both directions as illustrated in **Figure 13 – 7**.

Table 13-5 Design Standards for Center Running Busways

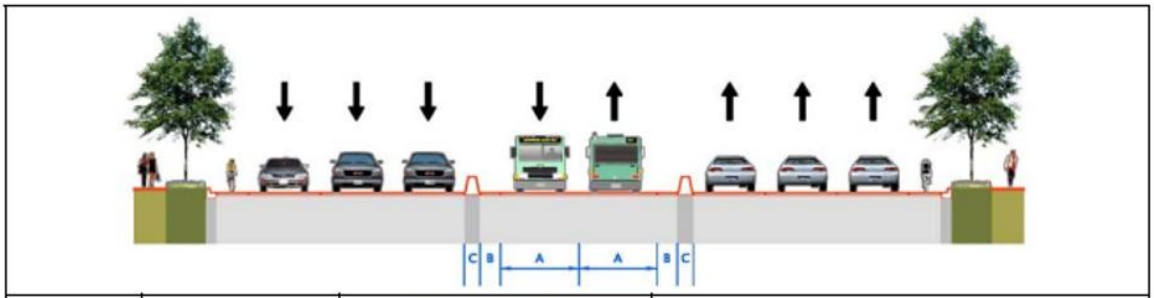
Lane Type	Lane Width	Curb Separator	Station Platform	Shy Distance
One-way	11-12’	2’	10-12’	1’ - 4’
Two-way	22-24’	2’	12-14’	1’ - 4’

This is a working document that has not been adopted.

Figure 13-9 Two-Way Median Busway Example

[Recreate to illustrate table dimensions]

FIGURE 8
Two-Way Median Busway, Typical Cross-Section



Designation	Description	Dimension (feet)		Notes
		Preferred	Constrained	
A	BRT/bus lane	12	11	
B	Shy distance	4	1	No shoulder with guided busway.
C	Curb separator	2	2	Possible to replace with 8-inch ripple paint stripe.

~~13.5~~13.4 References for Informational Purposes

The following is a list of publications that may be referenced for further guidance:

- FDOT's Accessing Transit, Design Handbook for Florida Bus Passenger Facilities, Version ~~III~~IV, 202~~1~~3

  http://www.fdot.gov/transit/

- ~~TCRP Report 155 – Track Design Handbook for Light Rail Transit, Second Edition~~

  ~~http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_155.pdf~~

- ~~Central Florida Commuter Rail Transit Project, Design Criteria – Phase 2 South RFP~~

  ~~https://corporate.sunrail.com/wp-content/uploads/2015/06/P2S-RFP-Design-Criteria-06-15-15.pdf~~

- Transit facilities shall comply with Chapter 14-20, Florida Administrative Code, Private Use of Right of Way

  https://www.flrules.org/gateway/ChapterHome.asp?Chapter=14-20

- Traffic Control Devices (MUTCD), 11th Edition, December 2023
  Federal Highway Administration (FHWA)

  https://mutcd.fhwa.dot.gov/kno_11th_Edition.htm

- Florida Department of Transportation – *State Park-and-Ride Guide*, June 1, 2012

  https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/transit/transit-facilities-design/finalparkandrideguide20120601.pdf?sfvrsn=a592696c_0

- ~~Florida Department of Transportation, Freight Logistics and Passenger Operations, Transit Office. (2020, December). *Context classification framework for bus transit.*~~

  ~~https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/transit/transit-facilities-design/context-classification-framework-for-bus-transit-final.pdf?sfvrsn=a53e4325_2~~