



# Bus Stop Guidelines Update: Floating Bus stops

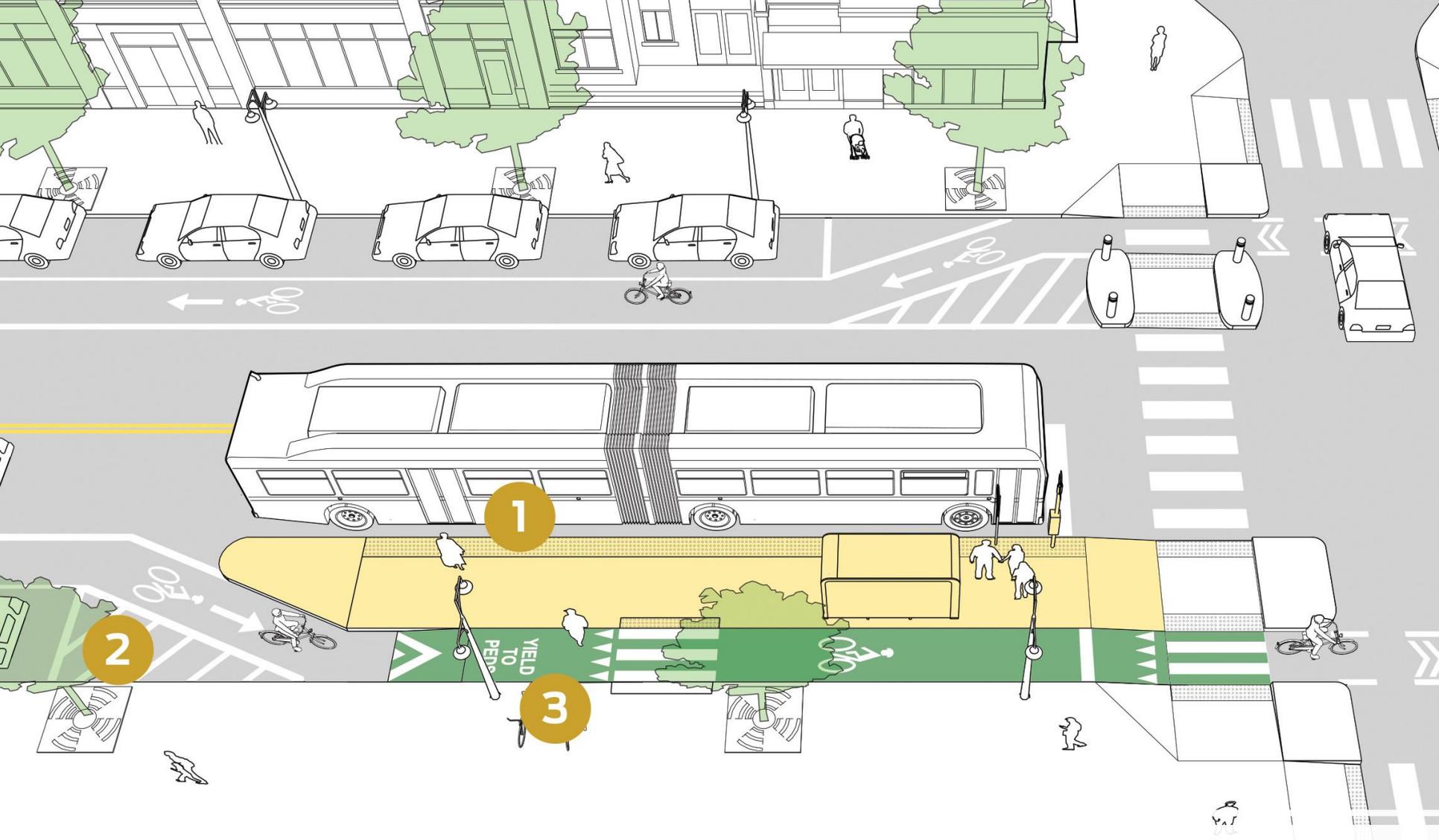


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Transit Advisory Committee  
&  
Accessibility Sub-committee  
May 10, 2022

# Floating Bus Stops

Floating bus stops are dedicated waiting and boarding areas for passengers that streamline transit service and improve accessibility by enabling in-lane stops.

Floating bus stops are separated from the sidewalk by a bike channel, eliminating conflicts between transit vehicles and bikes at stops. For buses, boarding islands allow the creation of accessible in-lane stops with near-level or level boarding.



# Floating Bus Stops

**Fall –  
Winter  
2021/2022  
Arlington  
County  
Listening  
Sessions**

- |                         |  |
|-------------------------|--|
| <b>24 Sep.<br/>2021</b> | Arlington County meeting with Montgomery County (Matt Johnson) |
| <b>12 Oct.<br/>2021</b> | Metro Accessibility Advisory Sub-Committee                     |
| <b>19 Oct.<br/>2021</b> | Arlington County Disability Advisory Commission                |
| <b>21 Oct.<br/>2021</b> | Arlington County Transit Advisory Accessibility Sub-Committee  |
| <b>24 Jan.<br/>2022</b> | Arlington County Commission on Aging                           |
| <b>7 Feb.<br/>2022</b>  | Bicycle Advisory Committee                                     |
| <b>2 Feb.<br/>2022</b>  | Pedestrian Advisory Committee                                  |

## Concerns we Heard

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There is a need for mitigation  
for the conflict between  
pedestrians and bicycles

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Way-finding for individuals  
with low-vision

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Regional standards for the  
construction of Floating Bus  
Stops

# Update to Bus Stop Guideline

# Arlington's Bus Stop Guidelines & Standards Manual ¶

Vision, Plan, Design, Construct, Maintain ¶

DES/DOT/Transit Bureau ¶

LAST UPDATED: NOVEMBER 2019 ¶

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The *Arlington's Bus Stop Guidelines & Standards Manual* contains detailed information on the placement and installation of bus stops

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Floating bus stop Standards were added to "Section 4: Bus Stop Design Standards" to address the elements unique to Floating Bus Stops

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Other minor additions were made where appropriate.

## Floating Bus Stop Guidelines

## Concrete Island

- Design
- Furnishings

## Channelized Bike Lane

- Design
- Traffic Control signs
- High Visibility Pavement Markings

## Pedestrian Wayfinding

- Longitudinal Directional Indicators
- Detectable Warning Surfaces
- Guidance Post

# Floating Bus Stop Standards

## Concrete Island

1. Concrete Island (Required): The concrete island is a key element of floating bus stops. The concrete island shall be installed with the following guidance:
  - a. The island should be a preferred minimum width of ten (10) feet; perpendicular to the travel lane with a minimum width of nine (9) feet. Reduction of the minimum width can be considered where there are significant roadway cross-section constraints contingent on approval by the Transit Bureau.
  - b. The height shall be minimum of 6"
  - c. The island shall be installed with a one (1) foot shy distance (clearance) from the travel lane.
  - d. The island shall be long enough to accommodate a forty-five (45) foot long stopping area from the installation of the bus stop flag parallel to the travel lane to accommodate a single bus stopping area as outlined in H-3.10. The stopping area can be reduced in depending on the length of the buses serving the stop.
  - e. The island shall include an ADA-compliant Passenger Loading Pad as defined in section 3 of this document.
    - i. A detectable warning surface shall be at the loading area parallel to the curb. This detectable warning surface shall be a minimum of twenty-four (24) inches wide and sixty (60) inches long at the front-loading areas.

## Concrete Island (continued)

- f. The island shall include at least one access point for pedestrians, which may consist of an ADA compliant curb cut ramp or an ADA compliant at-grade crossing across the bike lane connecting the sidewalk to the bus island. If the island includes a pedestrian refuge, it must be compliant with Arlington County standards and ADA.
  - i. It is preferred for the crosswalk to connect directly to the bus loading area so that those using mobility aids/devices can have improved direct access to the sidewalk.
  - ii. It is preferred that the crosswalk to the island is level and/or raised with the sidewalk and the island in accordance with County standards for raised crosswalks.
  - iii. The primary crosswalk at an intersection may be an acceptable connection to the island depending on how it is designed.
  - iv. A second crosswalk should be considered if the primary crosswalk does not connect directly to the loading area.

## Concrete Island (continued)

- g. Furnishing (Required/Considered): Furnishings shall be included compliant with ADA and *Arlington County Bus Stop Guideline & Standards* with the following guidance:
  - i. Railing (Required/Considered): Railings shall be installed on the platform (bike lane side) and should be used to channelize pedestrians to designated crossing locations. Railings can be considered along the sidewalk if deemed necessary.
    1. Railings shall be installed 34 inches (865 mm) minimum and 38 inches (965 mm) maximum vertically above walking surfaces" per ADA. Preferred Arlington County standard of 3.5 feet tall.
    2. Railings shall be, cane-detectable, and colored to contrast visually with the background color as outlined in Arlington County standards for railing installations.
    3. A clearance of at least 6" shall be provide between the edge of the bike lane and the railing/bus shelter to avoid catching the handlebars of cyclists.
  - ii. Bus Shelters (Considered): Bus shelter installations shall be considered and installed per Arlington's Bus Stop Guidelines. Bus shelters shall be located minimum of 5 feet from crosswalk(s) and 10 feet preferred. connecting the floating bus stop island to the sidewalk to allow for a higher level of visibility for cyclists and individuals utilizing the boarding and alighting area.
  - iii. Benches (Considered): Bench installations should be considered and installed per Arlington's Bus Stop Guidelines.
  - iv. Trash Receptacles (Considered): Trash Receptacle installations should be considered and installed per Arlington's Bus Stop Guidelines.

## Channelized Bike Lane

2. Channelized Bike Lane (Required): The channelized bike lane is a key element of the floating bus stop. The bike lane shall be installed in compliance with Arlington County standards with the following guidance:
  - a. The bike lane shall be a minimum of five (5) feet wide for a single direction bike facility; a minimum of ten (10) feet wide, twelve (12) feet preferred for a two-way bike facility. Bike lanes may be reduced to the minimum width at the points where pedestrians cross the bike lane. Reduction of the bike lane at pedestrian crossing points shall be coordinated with Transit Bureau staff.
  - b. The bike lane shall have a distinct contrast of color from the pedestrian area and bus island. For example: material differences (concrete vs. asphalt) or painting the lane. If the entire bike lane is raised through the bus stop zone, the bike lane shall be painted green to delineate the bike lane from the surrounding environment.

## Channelized Bike Lane (continued)

- c. Reflective Bicycle Traffic Control signs (Required): Reflective bicycle traffic control signs shall be installed preceding the bus stop zone, compliant with Arlington County Standards, and the following guidance:
  - i. Traffic control signs shall be installed before the bus stop zone, easily identifiable to alert bicyclists of the pedestrian crossing.
  - ii. Additional signs advising slower speed and heightened awareness in the bus stop zone can be considered.
  - iii. Yield/stop for pedestrian signs shall be used at crosswalks accessing the bus island.
- d. High Visibility Bike Lane pavement markings (Required):
  - i. Marked Crosswalk(s) (Required): All crosswalks from the sidewalk to the island
  - ii. Crosswalk yield markings
  - iii. Bicycle stop bar at the intersection
  - iv. Raised crosswalk (speed table) marking
  - v. The bike lane shall have color that contrasts the pedestrian area and bike lane. The entire bike lane may be painted green through the entire bus stops zone where the concrete island starts to where the concrete island ends.

# Wayfinding

1. Pedestrian Wayfinding (Required): The requirement for pedestrians to cross another travel mode to use the bus stop is unique to floating bus stops. Wayfinding signage and treatments will vary the most from standard bus stop guidelines and standards.
  - a. Longitudinal Directional Indicators (Require/Considered): Guidance Strips shall be installed in accordance with ADA and Arlington County's Bus Stop Guidelines and standards with the following additional guidance.
    - i. A longitudinal directional indicator shall be installed perpendicular to the pedestrian path of travel on the sidewalk to alert people with vision disabilities to the presence of the bus stop and direct them to the crosswalk.
    - ii. The longitudinal directional indicator shall have a contrasting color to the surrounding area.
    - iii. The longitudinal directional indicator can be installed running within the bus stop zone parallel to the travel lane to provide additional wayfinding assistance and is preferred on sidewalk over five (5) feet in width.
    - iv. The longitudinal directional indicator shall be installed to provide three (3) feet of pedestrian clear space to enable wheelchair users to access the crosswalk without having to roll one wheel on top of the guidance strip when traveling parallel to it.
    - v. The longitudinal directional indicator shall connect to detectable warning surfaces at travel mode crossings.

## Wayfinding (continued)

- a. Detectable Warning Surfaces at crossings (Required): Detectable warning surface should be placed per Arlington County standards for the installation of detectable warning surfaces with the following additional guidance.
  - i. Detectable warning surfaces shall be placed in conjunction with ADA compliant ramps and at all pedestrian access paths to the bus island.
  - ii. A detectable warning surface shall be placed at the 5'X8' loading area and from a second detectable warning area shall be place 13' from the installation of the bus flag and extend to 30' from the bus flag installation.
- b. Guidance Post (Required/RESERVED): A cane decantable guidance post will be placed where the crosswalk connects directly to the 5'X8' loading pad.

# Next Steps

## DRAFT

- February – May 2022: DRAFT – Arlington County Floating Bus Stops Guidelines

## Return

- May – July 2022: Return to Advisory Boards/Committees/Commissions to discuss/receive comments on the proposed guidelines. Review comments and adjust as needed.

## Finalize/Adopt

- September 2022: Finalize/Adopt. Adoption of the floating bus stop guideline additions should coincide with adoption of WMATA/Regional standards.

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Arlington County is committed to providing a safe transportation environment

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Arlington County is committed to working with the community to ensure concerns are addressed

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Mitigation of the conflict between bicyclists and pedestrians is the overarching consideration.

## Guiding Principles

Outreach and  
Training for use of  
floating bus stops

Plan for retrofitting  
already installed  
floating bus stops (*if  
needed*)

Outstanding  
issues

# Active projects

Floating Bus Stop Locations	Direction	Delivery Method	Delivery Timeline	Notes
1 Ft Myer Dr and Wilson Blvd	Southbound	Rosslyn Core Study		Floating bus islands were incorporated as part of the two-way raised cycle track design
2 N Nash St and Key Blvd	Northbound	AMES Site plan	2023/2024	1st submission CEP
3 Wilson Blvd and Ft Myer Dr	Westbound	Rosslyn Core Study		Floating bus islands were incorporated as part of the two-way raised cycle track design
4 Wilson Blvd and N Rhodes St	Westbound	TE&O Safety Project	Summer 2022	90% Design, has gone through several rounds of engagement with the Disability Advisory Commission
5 Clarendon Blvd and N Pierce St	Eastbound	Transit/TE&O	Fall 2022	Stop relocation was determined and promised after an access audit
6 Wilson Blvd and N Courthouse Rd	Westbound	Wendy's Site Plan		Pre 4.1 site plan
7 Clarendon Blvd and N Courthouse Rd	Eastbound	Wendy's Site Plan		Pre 4.1 site plan
8 Walter Reed Dr and 5th St S	Southbound	TPCPM CIP	2023/2024	Concept Design that has been show as part of the community engagement
9 Walter Reed Dr and 8th St S	Southbound	TPCPM CIP	2023/2024	Concept Design that has been show as part of the community engagement
10 Walter Reed Dr and 8th St S	Northbound	TPCPM CIP	2023/2024	Concept Design that has been show as part of the community engagement
11 Waler Reed Dr and Columbia Pike	Northbound	TPCPM CIP	2023/2024	Concept Design that has been show as part of the community engagement
12 Army Navy Dr and S Joyce St	Eastbound	TPCPM CIP	2022/2023?	90% Design CP01
13 Army Navy Dr and S Lynn ST	Eastbound	TPCPM CIP	2024	Concept Design CC25
14 Army Navy Dr and S Lynn ST	Westbound	TPCPM CIP	2024	Concept Design CC25
15 12th St and S Hayes St	Eastbound	Transit CIP		30% Design MA13 Segment IIB center running transit lanes
16 12th St and S Elm St	Eastbound	Transit CIP		60% Design MA13 Segment IIA center running transit lanes
17 12th St and S Elm St	Westbound	Transit CIP		60% Design MA13 Segment IIA center running transit lanes
18 S Eads St and 11th St S	Southbound	Pen Place Site Plan		Pre 4.1 site plan
19 S Eads St and 13th St S	Southbound	Met Park 6, 7, 8 Site Plan	Check with Joanne	Approved CEP Site Plan that is currently in construction
20 S Eads St and 15th St S	Southbound	Met Park 6, 7, 8 Site Plan	Check with Joanne	Approved CEP Site Plan that is currently in construction
21 15th St S and S Eads	Westbound	Met Park 6, 7, 8 Site Plan	Check with Joanne	Approved CEP Site Plan that is currently in construction
22 S Eads and 22nd St S	Northbound	Crystal House	TBP	Approved 4.1 Site Plan
23 S Eads and 22nd St S	Southbound	Crystal House	TBP	Approved 4.1 Site Plan
24 S Eads and 18th St S	Southbound	Crystal House	TBP	Approved 4.1 Site Plan
25 23rd St S and Crystal Dr	Eastbound	223 23rd St and 2300 Crystal Dr	TBP	Concept Design for pre 4.1 site plan that has been presented as part of the CCBN community engagement