Crystal City/Potomac Yard Corridor Interim Transit Improvement Project

Draft Technical Memorandum:
Station Area Planning

December 2005

1.0 INTRODUCTION

This section will discuss the purpose of this station stop planning endeavor, review a brief history of station stop planning considerations to date, and outline alignment and configuration issues that will affect the location and design of the station stops.

1.1 Purpose

One of key factors that will affect the development of interim transit improvements for the Crystal City/Potomac Yard corridor in Arlington and Alexandria, Virginia will be the placement and configuration of transit stops within the study corridor. The transit stops will determine the convenience of the system for potential users. In terms of access to service, placement and configuration will affect the way in which the system can operate, and how it will most appropriately fit into the character of the surrounding environments.

An objective of this station stop planning activity is to verify preliminary locations of stops. The current effort focuses on interim improvements (5 to 8 year time frame) recognizing that a higher capacity transit service would be developed for implementation over the longer term. Stop locations and configurations identified for the interim, or mid-term service, should not preclude any of the longer term improvements as outlined in the 2003 Alternatives Analysis. Station stop siting and design should be able to accommodate future conversion to bus rapid transit (BRT), streetcar, or light rail (LRT) service. Additional objectives include the definition of the basic site plans for typical station stops, as well as ascertaining the kinds of facilities and amenities that may be provided throughout the system. These decisions will allow the jurisdictions, DRPT, and the public to envision and evaluate potential impacts of the proposed system.

This report outlines the station stop design considerations that affect placement, site planning and components of the station stops. It describes prototype station stop design in a conceptual format, and describes the information received related to station stop planning during several public workshops and Technical Advisory Committee meetings.

1.2 History

Station stop locations were originally proposed as part of the Alternatives Analysis of 2003. Preliminary generalized stops were proposed for the preferred alternative that resulted from that study. The analysis proposed 23 stop locations (including those along an optional transit alignment). These were carried forward into the current study, and modifications to the locations were made during several reviews of the corridor. Following the additions made to the alignments, the number of station stops under consideration rose to about 30. These were subsequently refined as outlined in Section 3 of this report, resulting in 22 station stops.

1.3 Alignment and Configuration Alternatives

In the initial phases of this study, new alignment options were proposed that expanded the original preferred alternative outlined in the Alternatives Analysis. These alternatives were included to provide routes to additional major destinations, to provide routes adjacent to new development proposed or underway, to allow for flexibility in operations, and to meet objectives in the plans and guidelines of the jurisdictions. Several optional alignments, shown in Appendix A, added a number of potential new station stop locations. As outlined in Section 3 of this document, station stop locations and alignment options have been designated through technical analysis and policy guidance from the jurisdictions.

In the northern portion of the Arlington segment, the principal alternative alignment considered was along South Eads Street south of 12th Street. It was also proposed that service be extended to Pentagon City along either 12th Street or South Hayes Street.

In Alexandria, alternative alignments included new options on Route 1 north of the Monroe Avenue Bridge and on Main Street in Potomac Yard. Further south, alternative routes between Bashford Lane and the Braddock Road Metrorail Station were proposed.

Figure 1 shows the proposed transit alignments resulting from refinement of the alignment options. Because of lower anticipated demand at the southern end of the corridor, and the assumption that some service should be provided to Pentagon City, three different routes are proposed: a) the Pentagon to the Braddock Road Metrorail station in Alexandria, b) the Pentagon to Potomac Yard Town Center in Alexandria, and c) Pentagon City to Potomac Yard Town Center in Alexandria.

The three routes share the same alignment through the majority of the corridor. From the Pentagon the alignment will follow Eads Street south to 12th Street, then east along 12th Street to Clark Street. The route serving Pentagon City would begin near the intersection of 12th Street South and South Hayes Street, and proceed along South 12th Street to Clark Street.

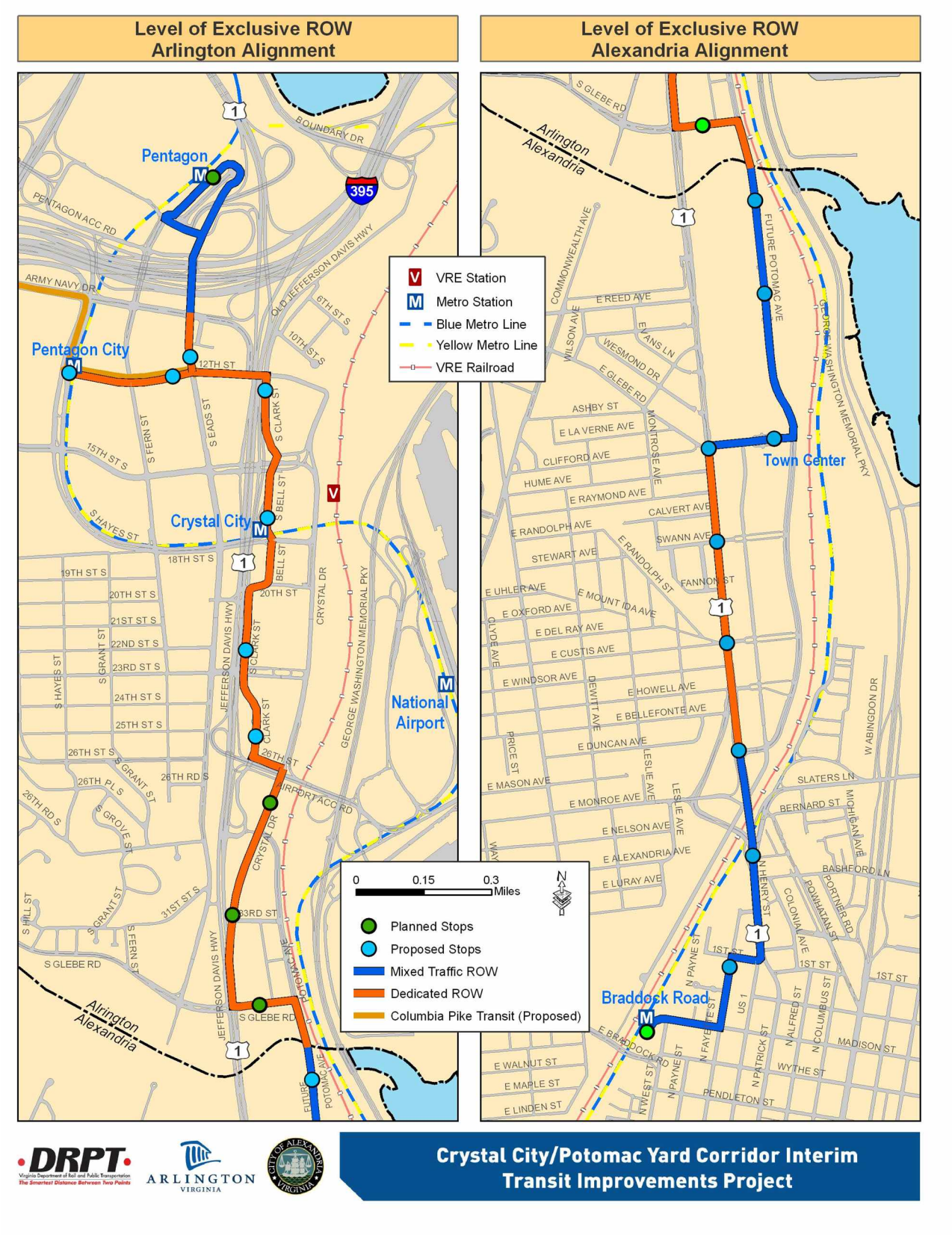
All routes follow Clark Street south to the Crystal City Metrorail Station, then South Bell Street south to 20th Street South, and then briefly west on 20th Street South before continuing south on South Clark Street. The alignment would follow South Clark Street to 26th Street South, where it would turn east before heading south on Crystal Drive. From Crystal Drive, it would head south briefly along Jefferson Davis Highway before turning east again on South Glebe Road, then south on Potomac Avenue to the Four Mile Run Bridge.

The alignment would cross the Four Mile Run Bridge to enter Alexandria and the Potomac Yard shopping center, following Potomac Avenue south to the Potomac Yard Town Center station where the Town Center routes would terminate.

The Pentagon to Braddock Road route would continue along Potomac Avenue south to East Glebe Road. After turning west on East Glebe Road, the alignment would turn south on U.S. 1. The route would then continue on U.S. 1 across the straightened alignment of the Monroe Avenue Bridge to North Henry Street. The alignment would then turn west on 1st Street to Fayette Street, then would follow Fayette Street south to Madison Street and west to the Braddock Road Metrorail Station.

In addition to the alignment alternatives proposed in the course of the study, other issues affecting station stop location have been considered. These include the configuration of the transit guideway. There are portions of the system in which an exclusive guideway separate from traffic lanes for automobile travel are preferred, while some sections of the system will be built using transit lanes that are shared with those for automobile traffic. Related to this issue is the location of the transit lanes within the right-of-way. In most of the Arlington alignment the transit lanes will be located adjacent to the outside curb of the overall roadway. In Alexandria, a portion of the transit guideway is proposed to be located in the center median of Route 1. These options affect the location of the station stops. The extent of the exclusive guideway is shown in Figure 1.

Figure 1: Transit Alignment, with Level of Exclusive Right-of-Way



2.0 STATION STOP DESIGN CONSIDERATIONS

This section outlines design guidelines that determine the placement and layout of station stops, describes the circumstances in which a particular layout is appropriate, and lists potential furnishings and amenities. Information gathered during an intensive series of implementation workshops at the beginning of this study provides a context for consideration of the character of station stops and is key in the development of specific design guidelines. Specific information about station stop location will be a component of the determination of environmental effects, and the potential impacts on rights of way. Specific consideration of station stop design will be a component of ascertaining the overall costs of the system.

2.1 Station Stop Location Guidelines

Station stops were identified in a general way on system maps early in this study. In order to be more specific about these locations, a number of guidelines have been outlined. These include the following:

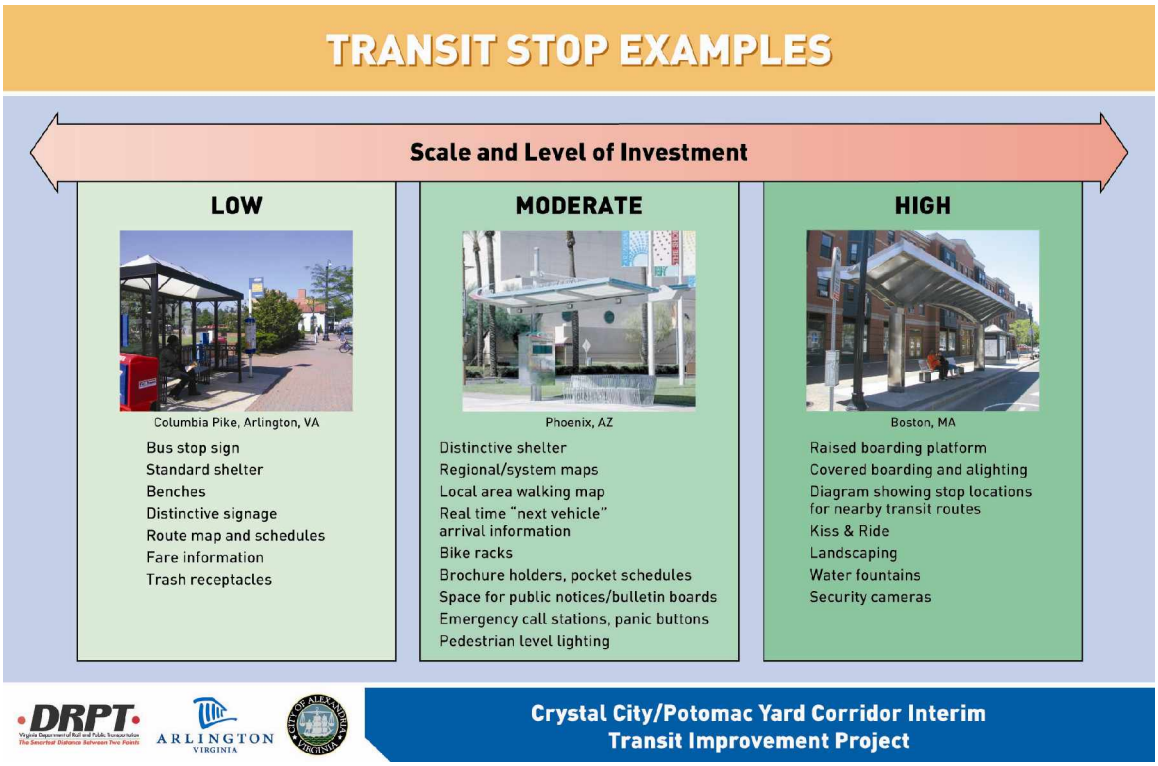
- Insofar as possible, effort should be made to locate the station stops within the confines of the existing right-of-way. Where this is not possible, the intrusion onto adjacent properties should minimize the disruption of active uses.
- Station stops should be located to serve nearby destinations, with attention to pedestrian ways giving access directly to the central points and front doors of those destinations and uses. This will ensure exposure to the highest volume of potential patrons.
- Station stop location should take into account pedestrian safety, with locations that avoid difficult traffic situations and busy intersections. Attention should be given to well located and designed crosswalks, and to direct connections to existing pedestrian systems. Station stops should allow for adequate width to be maintained for existing sidewalks.
- Station stop locations should allow for coherent overall use of the roadway for both transit and vehicular traffic. Locations should allow for continuous access to adjacent properties and avoid conflict with existing access and driveways.
- Station stops should be located to allow for optimal transit operations, taking into account the reintegration of transit vehicles into traffic flow in mixed traffic, and allowing for proper turning radius at corners.
- Locations chosen for interim improvements should not preclude long term enhancements to the transit system. These locations should be able to accommodate future conversion to BRT, streetcar, or LRT service, and would not preclude any future Metrorail station.
- Station stops should be designed to be congruent with the overall pattern of adjacent development. They should avoid conflict with front doors and other key features of existing surroundings, and allow for integration with adjacent public spaces and streetscape. Where possible, they should be designed as integral parts of site and building plan for new developments.

2.2 Design Input from Public Workshops

A series of design dialogue workshops was held in June of 2005. These workshops included a component that addressed station stop design and amenities. This included material to represent station stop design and amenities at basic, intermediate, and advanced levels of investment. The design components for these levels of investment were categorized to include shelter, boarding, waiting and loading, safety, lighting, information, and furnishings. The

presentation board used to illustrate the amenities at each level of investment is shown in Figure 2.

Figure 2: Transit Stop Examples Board from Design Dialogue Workshops



Workshop participants were invited to rate the importance of these potential components on a survey form. The features most frequently mentioned by participants were:

- Trash receptacles
- Real time information
- Level boarding
- Safety – lighting, crosswalks, emergency phone
- Weather protection
- "Theme and variations" station stop architecture

A figure and table in Appendix B detail the rankings that survey respondents gave to suggested stop amenities: shelter, boarding, waiting and loading, safety, lighting, information, and furnishings.

2.3 Platform Design Guidelines

Information received in the public workshops, as discussed previously, has provided a context for the specific recommendations for station stop design. This information is incorporated into the subsequent discussion. In all of the design considerations discussed here, assumptions have been made about the transit vehicles that will be used.

1. First, it is assumed that vehicles will be low-floor, allowing access between the platform and the vehicle at the same level, without the necessity for steps or ramps. These vehicles have a floor elevation of between 11 inches and 14 inches above the surface of

the street. For level boarding, this indicates that the elevation of the boarding platform should be at the same height. This condition is illustrated in Figure 3.

Figure 3: Level Boarding on the MAX System in Las Vegas

2. Second, it is assumed that all vehicles will have the same configuration, with all right-side entry doors. This allows for flexibility in the use of any low floor transit vehicles on this system. It indicates also that any platforms placed in the median of roadways must account for this.
3. Thirdly, it is assumed that station stop plans should be defined for an ultimate build-out, and that their design should accommodate future BRT, streetcar, or LRT vehicles that may be used, recognizing that smaller installations may be appropriate early in the development of the system.

The typical basic station stop consists of a platform, signage, and waiting area with shelter for patrons. This study assumes a typical platform that is seventy-five feet long and twelve feet wide, which allows for adequate waiting room, circulation, and boarding, with enough area to ensure that patrons have protection from vehicles in adjacent lanes. These dimensions may be modified to fit local circumstances. Platforms shorter than seventy-five feet may not accommodate larger transit vehicles. Narrower platforms may be used where there are constraints due to narrow right-of-way or adjacent existing conditions. However, platforms less than eight feet in width may not have enough circulation area to accommodate patrons safely.

In order to achieve level boarding, the top of the platform must be at the same elevation as the floor of the vehicle. This varies from eleven inches to fourteen inches above the street. The height of a typical curb and sidewalk adjacent to a street is five or six inches above the street, thus the platform will be between six and nine inches higher than the surrounding sidewalk. Consequently a ramp at one or both ends of the platform will be required to allow for handicapped access. The ramp is assumed to be the width of the platform and fifteen feet in length. To insure the safety of patrons on the platform and to clearly differentiate the platform

from the adjacent sidewalk, the edge may be indicated by a change in paving material, a rail, bollards, or an elevated lip.

2.4 Guidelines for Shelters, Passenger Information, and Other Amenities

As described above, discussions of passenger amenities were a focus of public and stakeholder workshops. The preferences expressed informed the following design guidelines. A sheltered waiting area is assumed, in the form of a roofed structure for sun and rain protection. This can be paired with wind screens to mitigate the effects of wind and wind-blown rain. The shelter need not cover the entire platform. Some preference has been expressed for a shelter which extends over the transit vehicle, allowing for weather protected boarding.

An essential component of station stop design is information. This is generally provided by signs that identify the station stop and the routes served, provide timetables for transit schedules, and which may also have information about the overall transit system and the local area. Real time electronic information is increasingly becoming the norm. Signage is also a component of providing a comprehensive identity of the transit system.

Other station stop amenities often include seating and lean bars, waste receptacles, and emergency telephones. In more advanced applications, planters, trees special lighting, and street furnishings may be included.

2.5 Features to be Included at Station Stops

Based on technical analysis and input received from the project Technical Advisory Committee, a program of specific features is assumed for each station stop location. The features, listed in Table 1, will vary to fit the size and configuration of the specific stops.

Table 1: Station Stop Features

Platform	• The typical platform is reinforced concrete, 75 feet long and 12 feet wide by 14 inches high, with a 15-foot ramp at one end. • In cases of limited right-of-way, the typical platform is narrowed to 8 feet. • The smaller platform is 30 feet long and 8 feet wide, with a 15-foot ramp at one end. • Stone or tile pavement finishes with a tactile warning strip at the edge of platform. • Wiring for lighting and passenger information systems and a hose bib for cleaning.
Shelter	• For the typical platform, 75 feet long and 12 feet wide, the shelter is 30 feet long and 12 feet wide. • The shelter slightly overlaps the loading area for the transit vehicle, thus allowing for some shelter at the point of boarding. • Shelters for smaller stops should be designed as appropriate for those stops. • Design is in keeping with the architecture of development surrounding the station. • Design refers to a specific vocabulary common to all stops along the corridor. • Design is appropriate to the configuration of the platform, which may vary due to the specifics of the location.
Wind screens	• Transparent wind screens on at least two sides, preferably integral to the structure of the shelter. • Stop identification and other graphical material are affixed to wind screens.
Seating	• At least two benches 18 inches by 8 feet are assumed under the shelter. • Leaning bars are provided where warranted.

Table 1 (continued): Station Stops Features

Signage	• Station identification signs, designed as detached pylons, or integral to the structure. • Graphics that locate the stop in relation to the surroundings, together with a schedule and information on connecting transit services. • Real time information about arrivals. • Graphic and sign components may be designed as an integral unit, or may be attached to the shelter as separate components.
Safety	• Emergency telephone. • Crosswalks at each station stop facilitate pedestrian access across heavily traveled streets and at intersections. • Additional stop and area lighting is assumed in order to increase ambient light levels. Lighting may reflect prevailing streetscape standards at specific locations.
Other amenities	• Trash receptacles. • Planting and trees that fit in with the local environment.

2.5 Typical Station Stop Configurations

Conceptual site plans for the station stops recommended in this study are illustrated and discussed in this section. Prototypes for typical situations are provided, as shown in the accompanying illustrations. These do not represent all of the possible configurations to be encountered in this corridor, but depict those situations that are most prevalent.

Figure 4 depicts a typical full-sized stop located on and loading at the curb. The transit vehicles in this configuration may operate in mixed traffic, or may travel in exclusive transit lanes.

Figure 4: Curbside Station Stop (Typical)

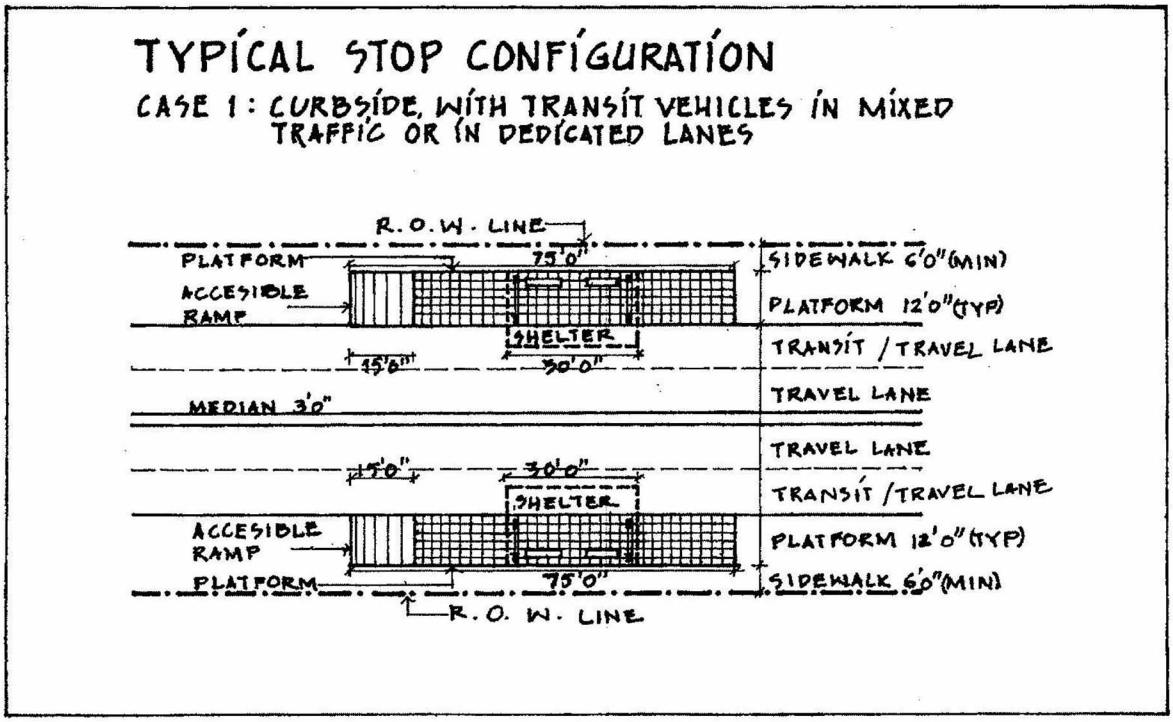


Figure 5 shows the configuration of a stop that is located at the curb in a constrained or sensitive environment, in which visual and functional intrusion into the neighborhood is minimized. In this example, the station is simplified and reduced in size to fit within its context, and the transit vehicles should operate in mixed traffic on a local street.

Figure 5: Curbside Station Stop (Constrained Environment)

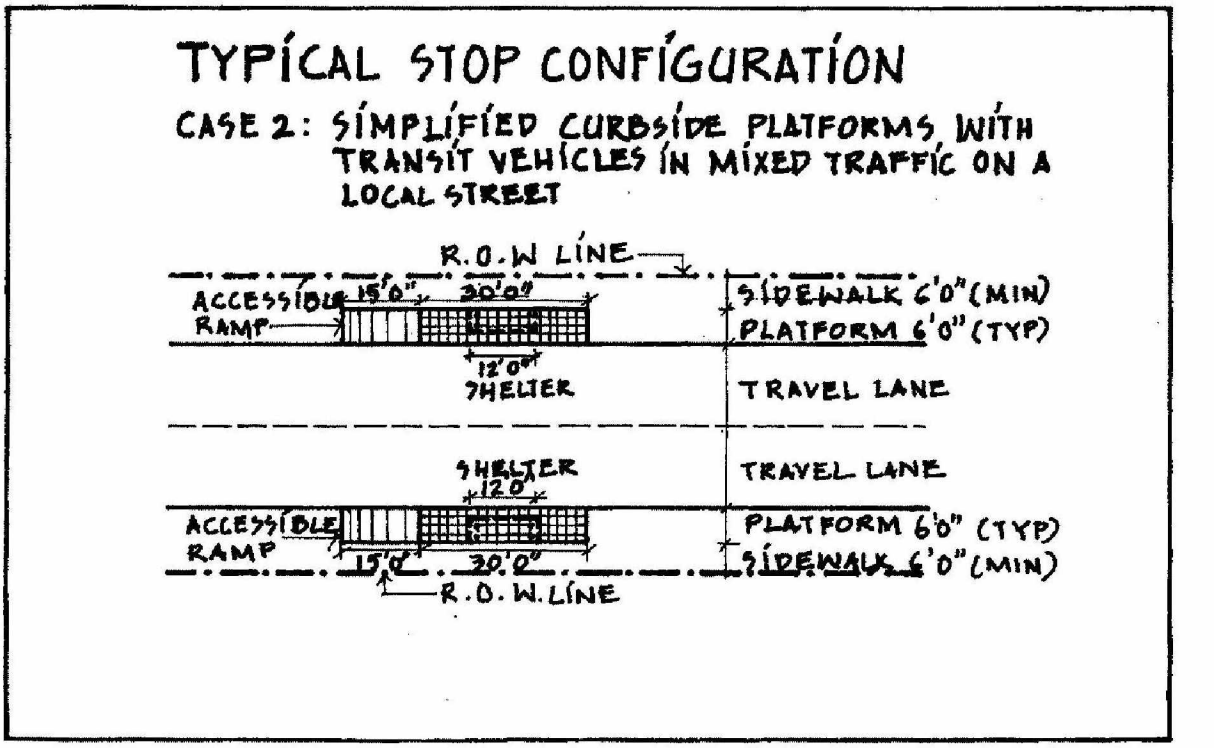
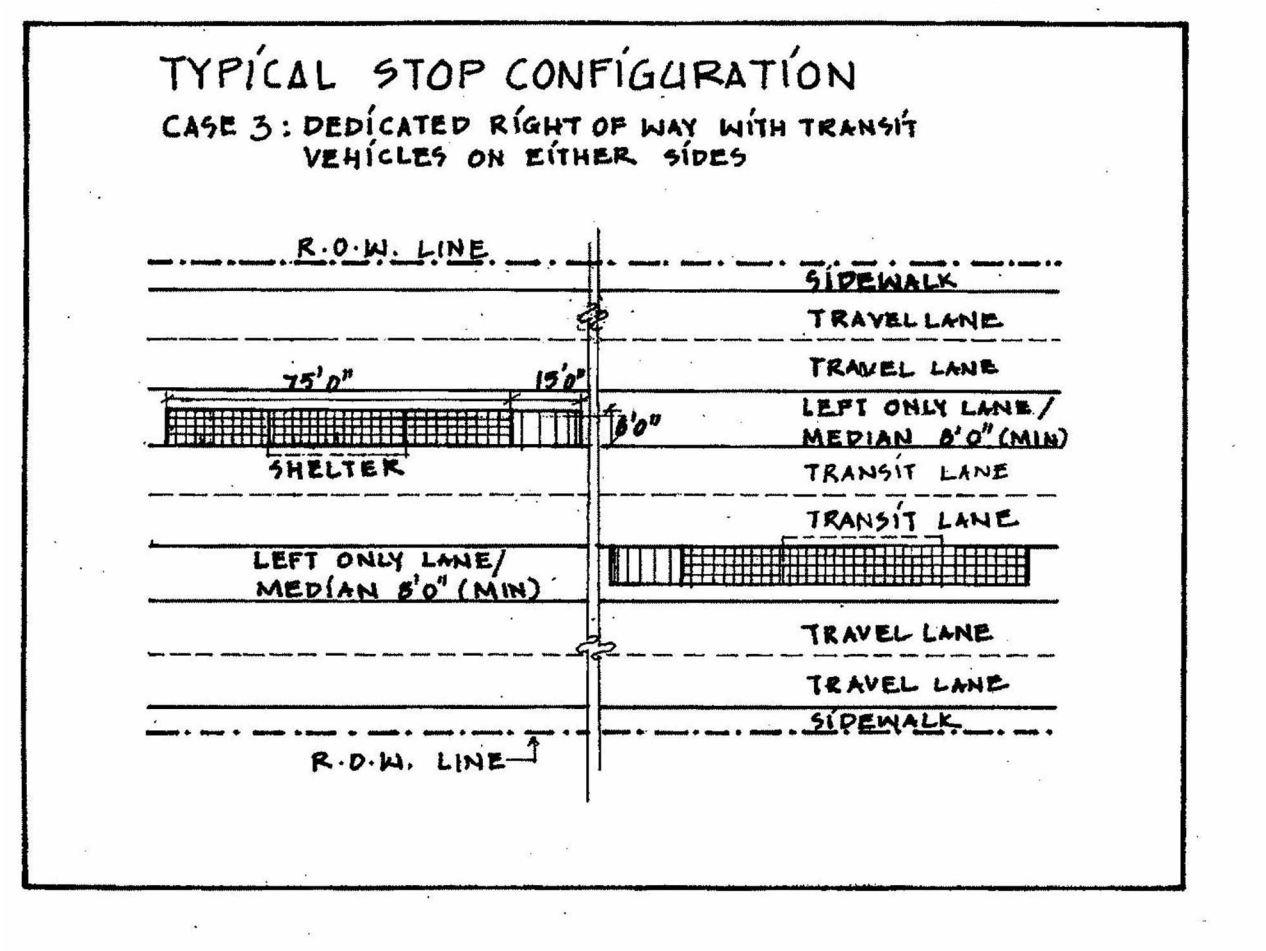


Figure 6 shows a stop located at curbside within a constrained right-of-way, with a narrow but full length platform. This example can minimize the need for additional right-of-way.

Figure 6: Curbside Station Stop (Narrow Right-of-Way)



Well-designed stations from other locations illustrate the combinations of these amenities, as shown in Figure 7.

Figure 7: Station Stop Examples

Clockwise from top left: Vancouver, BC; Miami, FL; San Francisco, CA; Los Angeles, CA.

3.0 STATION STOP SITTING

This section discusses the refinements made to the original station stop locations as the result of consultation with Arlington County and the City of Alexandria. The preferred results are illustrated and discussed in the subsequent material.

Preliminary locations for station stops were reviewed in workshop meetings with Arlington County and City of Alexandria staff. Issues included an overview of the location of stops, specific siting for each, and any planning and development issues that might be associated with each location. In the process of these discussions, some of the original station stop locations were eliminated or moved to alternative locations. It should be noted that these changes are sometimes relatively minor. The station stops listed here reflect the changes made in these meetings.

A list of stop locations associated with each proposed service is shown in Table 2. The option to provide service to Pentagon City affects the final list of station stops. The different operating scenarios that may be used to serve the Pentagon and Pentagon City from Braddock Road and the Potomac Yard town center are discussed in detail in the Service Implementation Plan Technical Memorandum. These scenarios have informed the station stop location process.

Table 2: Stop Locations

Pentagon to Braddock Road Metro Service	Pentagon to Potomac Yard Town Center Service	Pentagon City to Potomac Yard Town Center Service
Pentagon	Pentagon	
12th Street and Eads Street	12th Street and Eads Street	
		Pentagon City
		12th Street & Fern/Eads Street
12th Street & Clark	12th Street & Clark	12th Street & Clark
Crystal City Metrorail Station	Crystal City Metrorail Station	Crystal City Metrorail Station
22nd Street	22nd Street	22nd Street
25th Street	25th Street	25th Street
26th Street	26th Street	26th Street
31st Street	31st Street	31st Street
South Glebe Road	South Glebe Road	South Glebe Road
Potomac Yard – North	Potomac Yard – North	Potomac Yard – North
Potomac Yard – Central	Potomac Yard – Central	Potomac Yard – Central
Potomac Yard Town Center	Potomac Yard Town Center	Potomac Yard Town Center
Hume Street		
Swann Avenue		
East Custis Avenue		
North of Monroe Avenue Bridge		
Slaters Lane		
1st Street		
Braddock Road Metrorail Station		

Recommended Station Stop Site Plans:

At the workshop meetings with City and County staff, participants consulted maps of each station stop area and 3 stop templates (side platform, small side platform, and median platform). The maps and templates were produced at the same scale, so it would be readily apparent whether station stops would fit in the available right-of-way. The specific station stop locations were determined based on the physical space available, as well as other issues such as pedestrian access and proximity to major attractions. The locations selected are preliminary, and may be adjusted based on ongoing traffic analysis, required utilities relocations, and other factors.

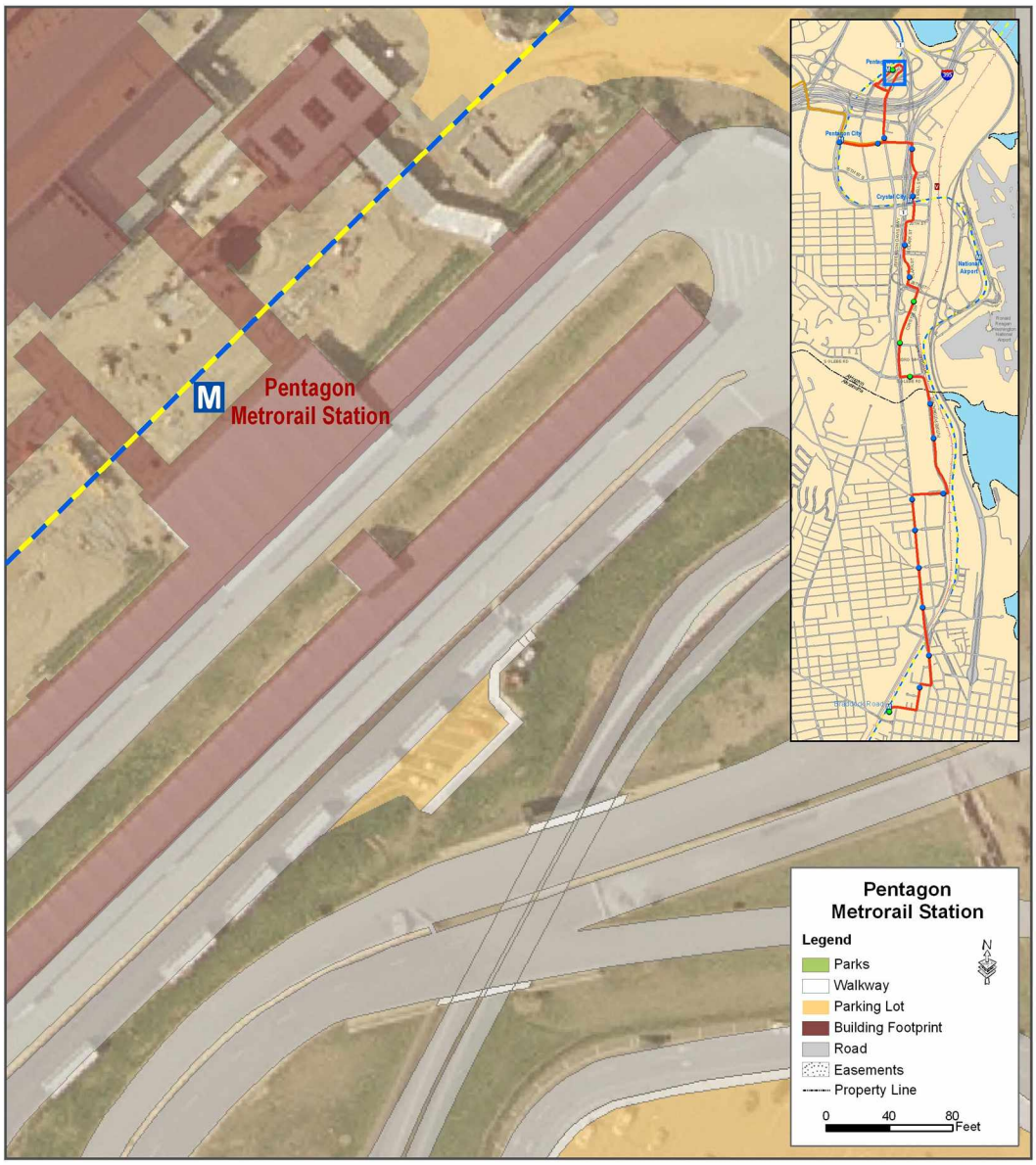
The following text and figures illustrate the results of these discussions. These are the station site plans that are recommended in this study.

Arlington County

3.1 Pentagon Metrorail Station

All Crystal City/Potomac Yard corridor vehicles serving the Pentagon will stop at standard bus bays at the Pentagon Metrorail Station transfer center. Vehicles will likely use the upper level of the Pentagon Bus Transfer Center, which is designated for all day bus service.

Figure 8: Pentagon Metrorail Station



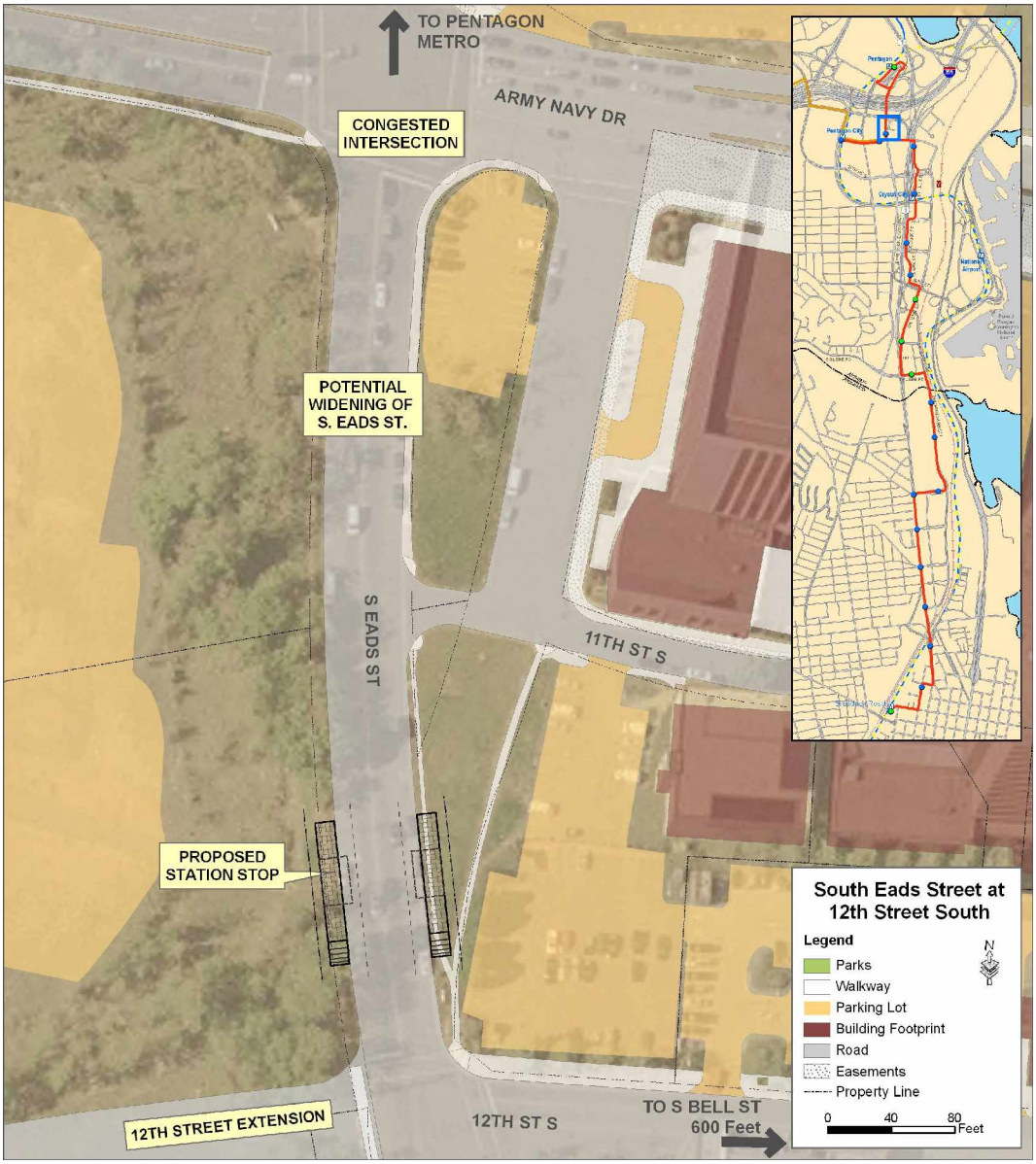
3.2 South Eads Street at 12th Street South

This station stop will be located north of 12th Street South on South Eads Street. It is anticipated that this location will provide direct access to the conference center proposed for the site to the west of Eads Street. Other planning issues involve the possible widening of Eads Street and what consideration should be given for on-street parking. The intersection of Army Navy Drive has an extremely poor level of service currently. Any changes should take possible effects on this intersection into account.

Characteristics of this station stop include:

- Platforms will be 12 feet wide and 75 feet long;
- Transit will run in curbside dedicated lanes at this location;
- Intersection improvements at 12th and Eads Streets assume 12th Street extension and include enhanced crosswalks and modified traffic signal.

Figure 9: South Eads Street at 12th Street South



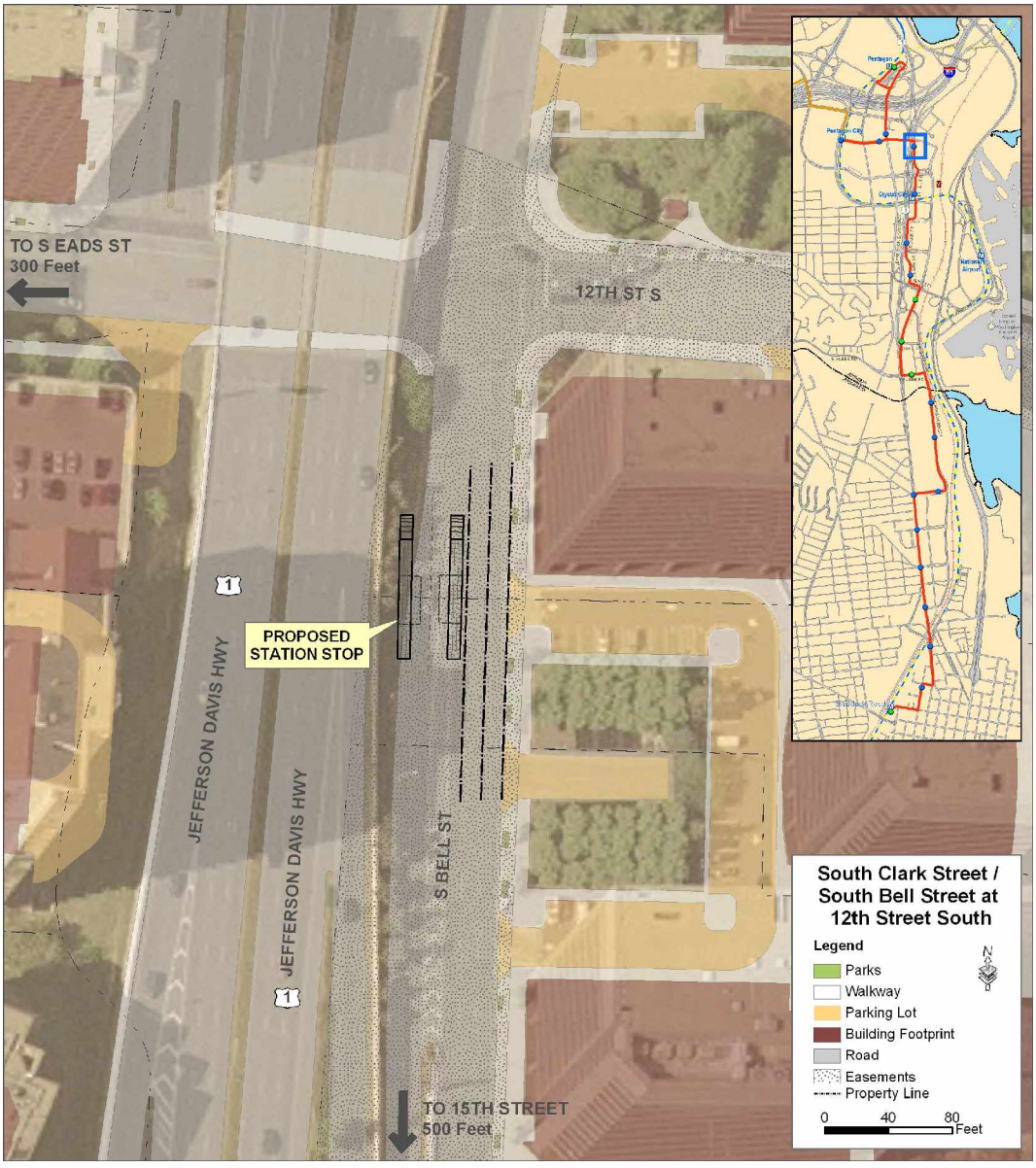
3.3 South Clark Street/South Bell Street at 12th Street South

This station stop will be located on South Clark Street, south of 12th Street South. The transitway at this point will be running on the east side of South Clark Street, transitioning to the east side of South Bell Street at the point where the two streets diverge. Station stops will be side platforms. Platforms will also be narrowed to save space.

Characteristics of this station stop include:

- Platforms will be 8 feet wide and 75 feet long;
- Station stops will be located adjacent to dedicated transit lanes along the west side of South Bell Street;

Figure 10: South Clark Street/South Bell Street at 12th Street South



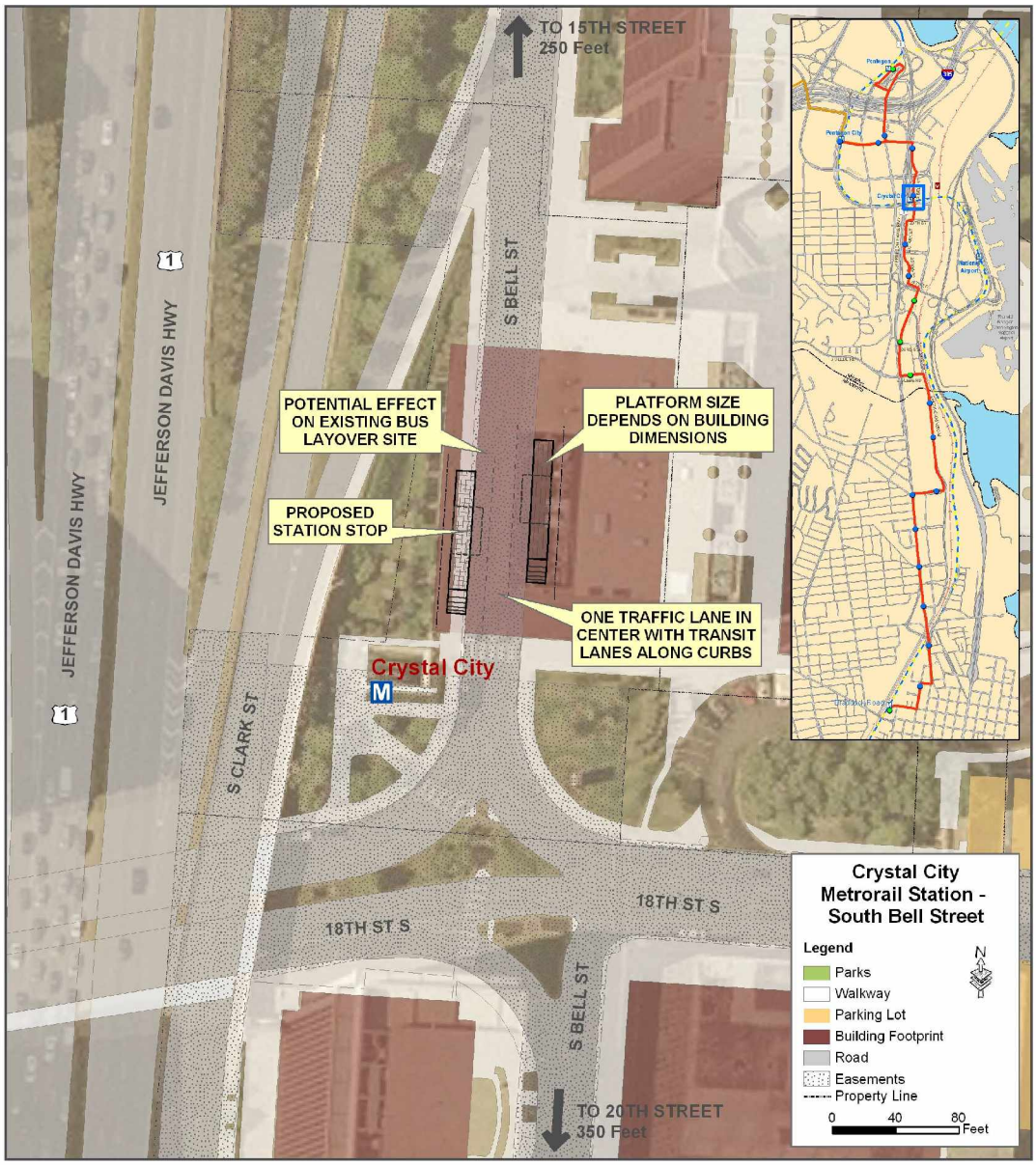
3.4 Crystal City Metrorail Station – South Bell Street

This station stop/stop will be located on South Bell Street north of 18th Street South. South Bell Street could possibly be closed to automobile traffic between the ramp to South Clark Street and 18th Street South. This location is currently used by multiple bus routes serving the Metrorail Station. Metrobus routes that lay over in this location will use 18th Street South instead.

Characteristics of this station stop include:

- Platforms will be 12 feet wide and 75 feet long;
- Station stops will be located adjacent to curbside running, dedicated transit lanes;
- Partial reconfiguration of intersection at Clark and 18th Streets to include enhanced crosswalks and modified traffic signals.

Figure 11: Crystal City Metrorail Station – South Bell Street



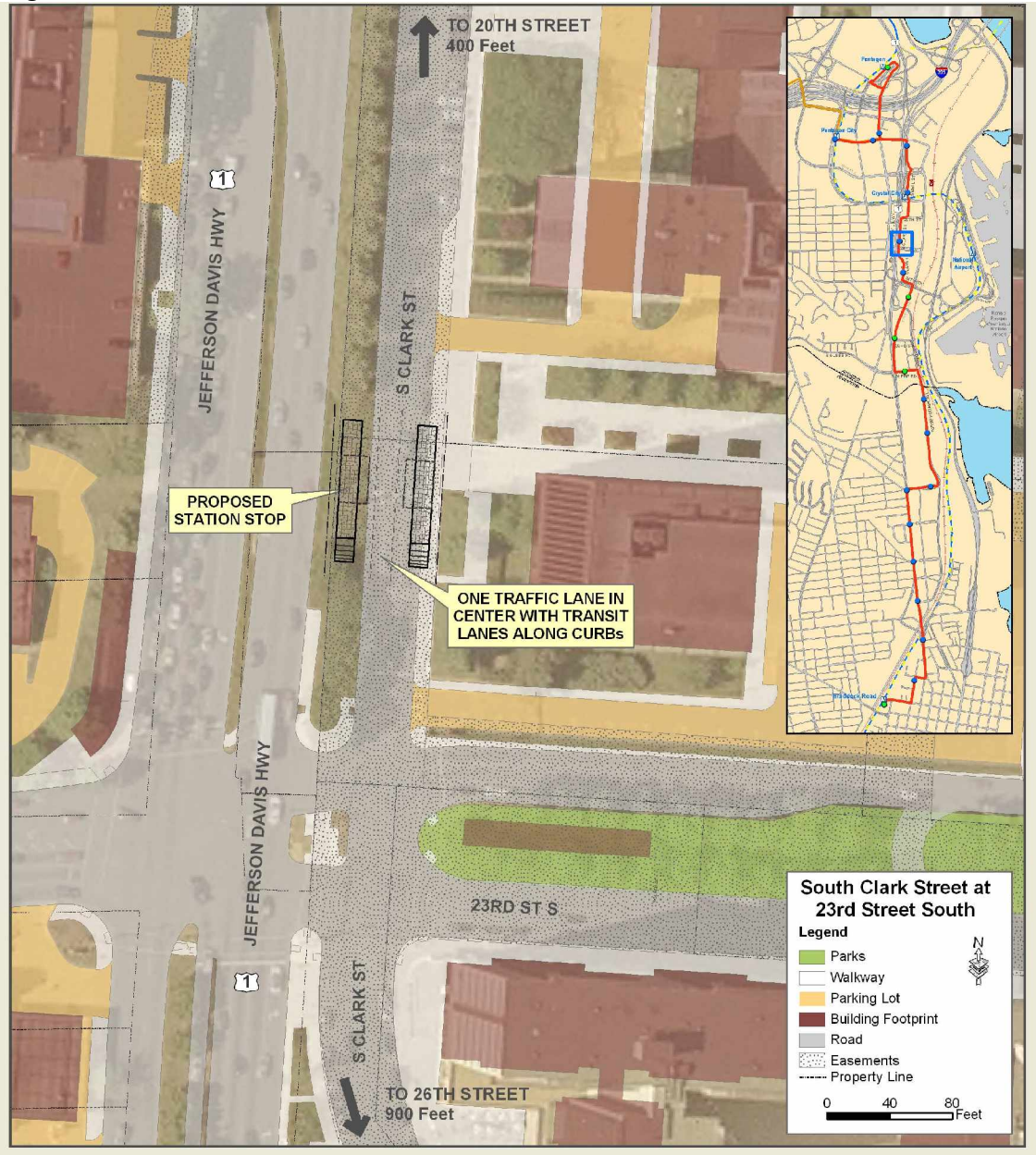
3.5 South Clark Street at 23rd Street South

This station stop will be located on South Clark Street north of 23rd Street South. This location will serve offices and businesses between 20th Street South and 23rd Street South.

Characteristics of this station stop include:

- Platforms will be 12 feet wide and 75 feet long;
- Station stops will be located adjacent to curbside running, dedicated transit lanes.
- Intersection improvements at Clark and 23rd Streets to include enhanced pedestrian features.

Figure 12: South Clark Street at 23rd Street South



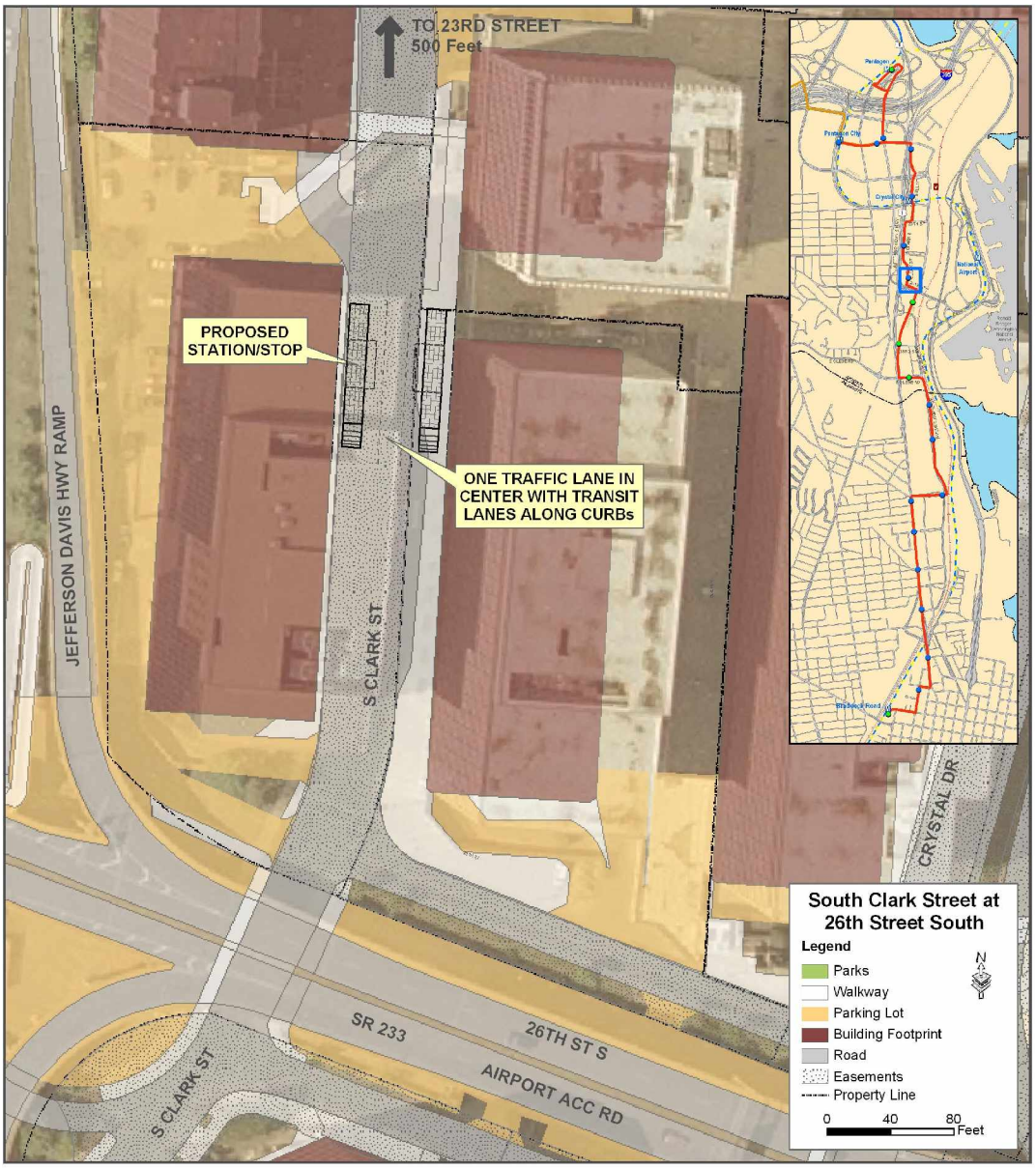
3.6 South Clark Street at 26th Street South

This station stop will be located on South Clark Street midway between 23rd Street South and 26th Street South. This location provides access to buildings in this area.

Characteristics of this station stop include:

- Platforms will be 12 feet wide and 75 feet long;
- Station stops will be located adjacent to curbside running, dedicated transit lanes.

Figure 13: South Clark Street at 26th Street South



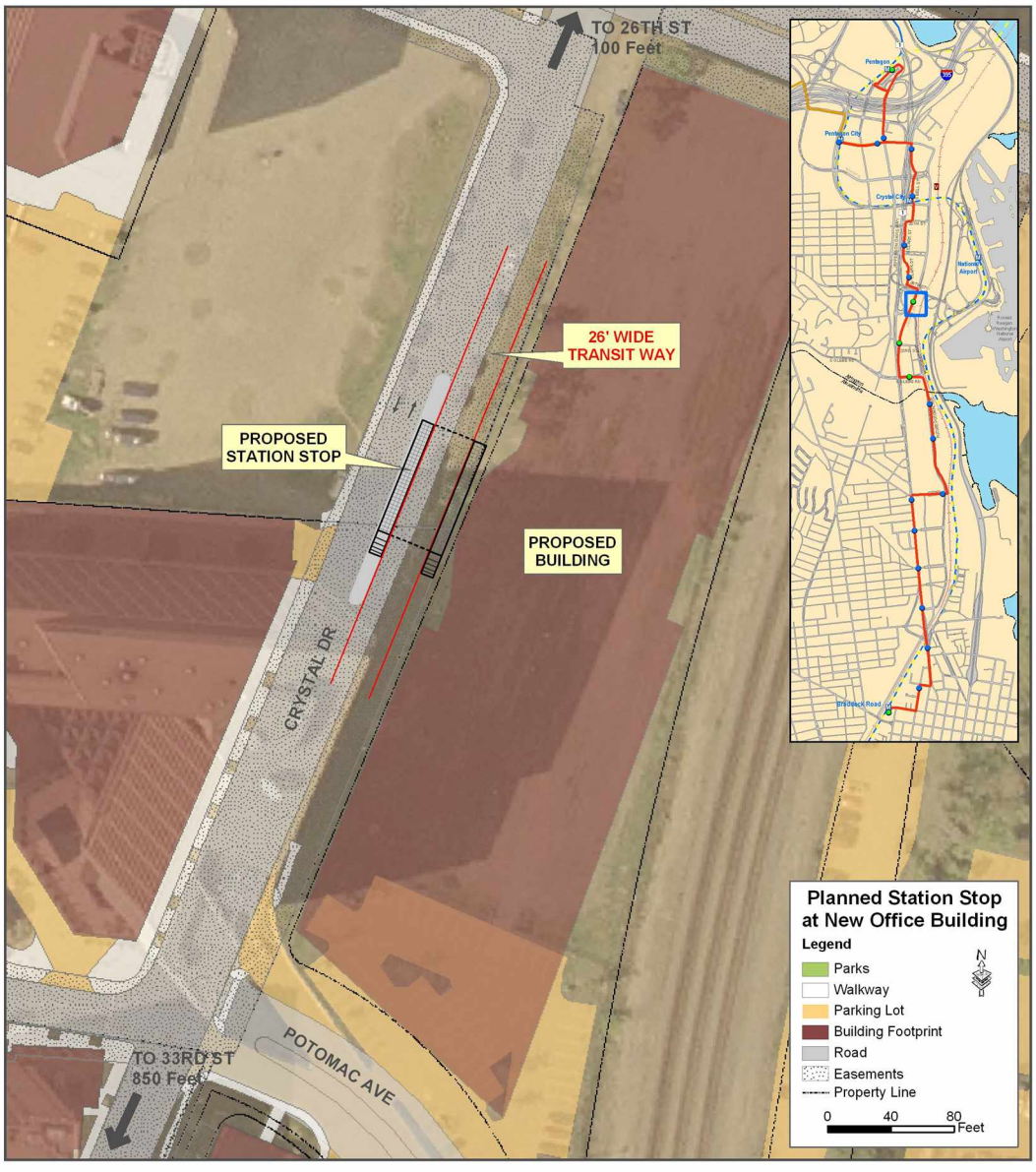
3.7 Crystal Drive at 27th Street South

This station stop is at 50% design as part of Phase I of the Arlington Transitway. This station stop will be in front of the new EPA building, with platforms on either side of a curbside transitway on the eastern side of Crystal Drive.

Characteristics of this station stop include:

- Station stops will be located adjacent to dedicated transit lanes running on the east side of Crystal Drive.

Figure 14: Crystal Drive at 27th Street South



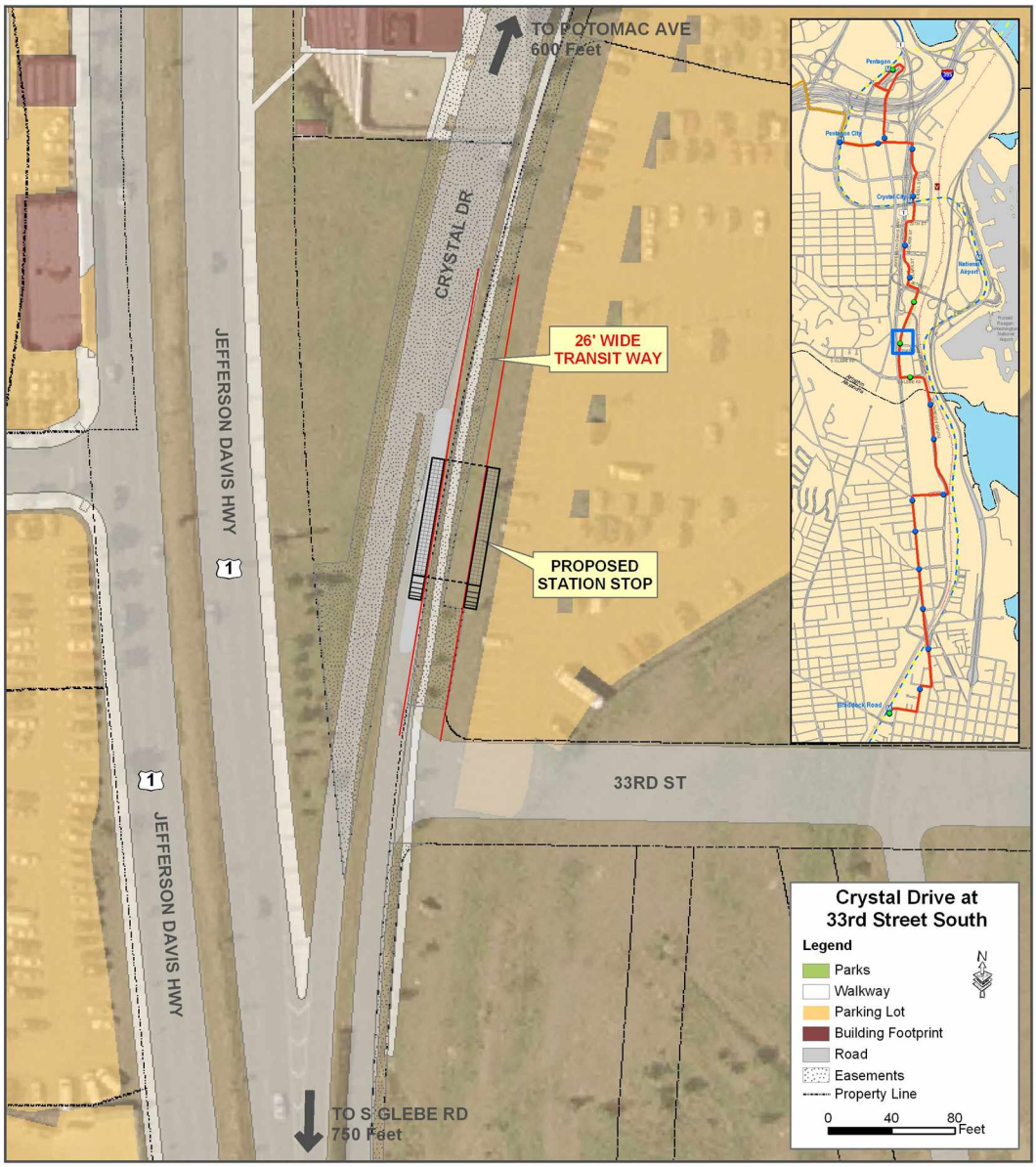
3.8 Crystal Drive at 33rd Street South

This station stop is being designed as part of Phase I of the Arlington transitway. It will be located north of 33rd Street South, with platforms on either side of a curbside transitway on the eastern side of Crystal Drive.

Characteristics of this station stop include:

- Station stops will be located adjacent to dedicated transit lanes running on the east side of Crystal Drive.

Figure 15: Crystal Drive at 33rd Street South



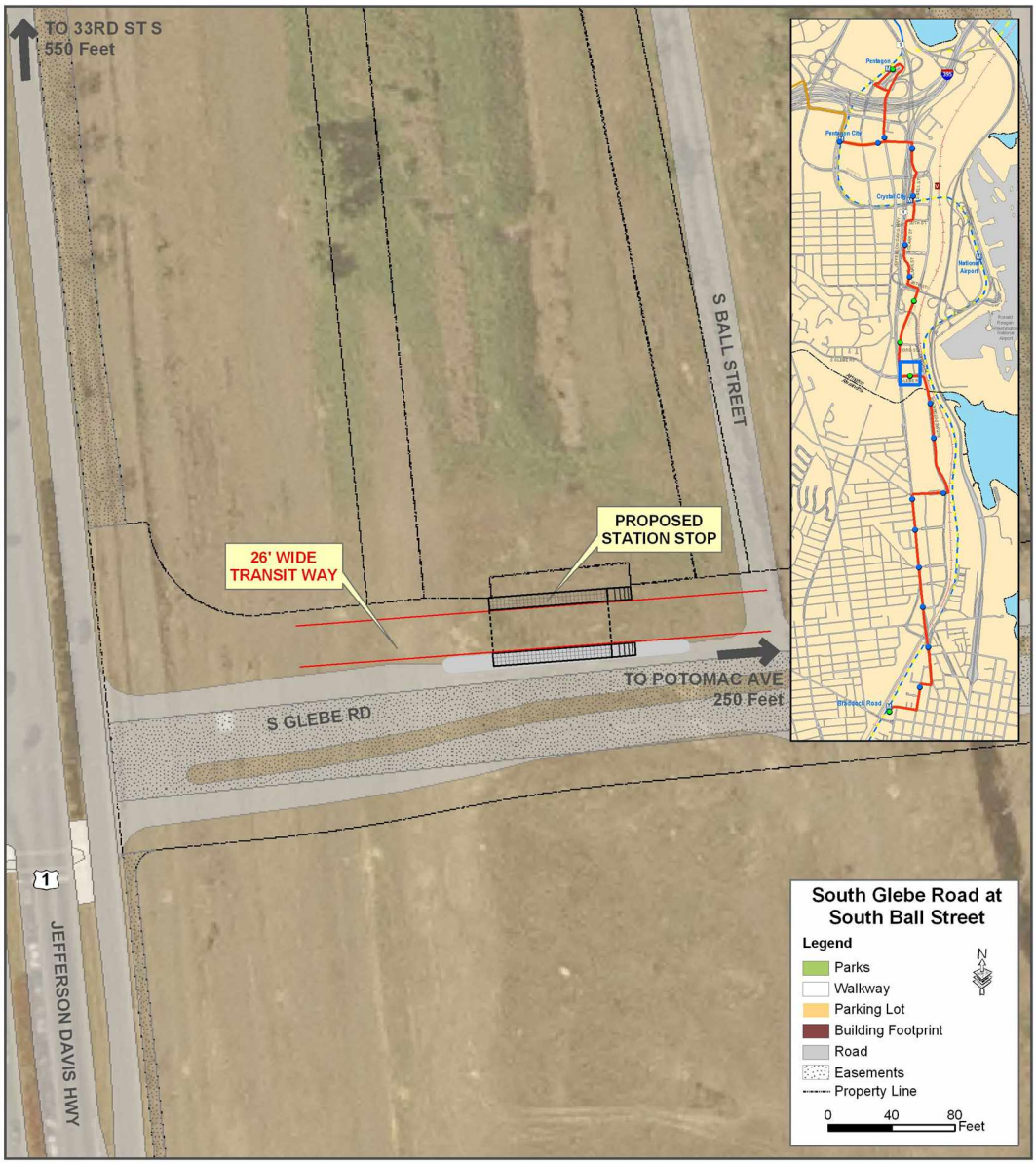
3.9 South Glebe Road at Crystal Drive

This station stop is being designed as part of Phase I of the Arlington transitway. It will be located east of Crystal Drive, with platforms on either side of a curbside transitway on the northern side of South Glebe Road.

Characteristics of this station stop include:

- Station stops will be located adjacent to dedicated transit lanes running on the north side of South Glebe Road.

Figure 16: South Glebe Road at Crystal Drive

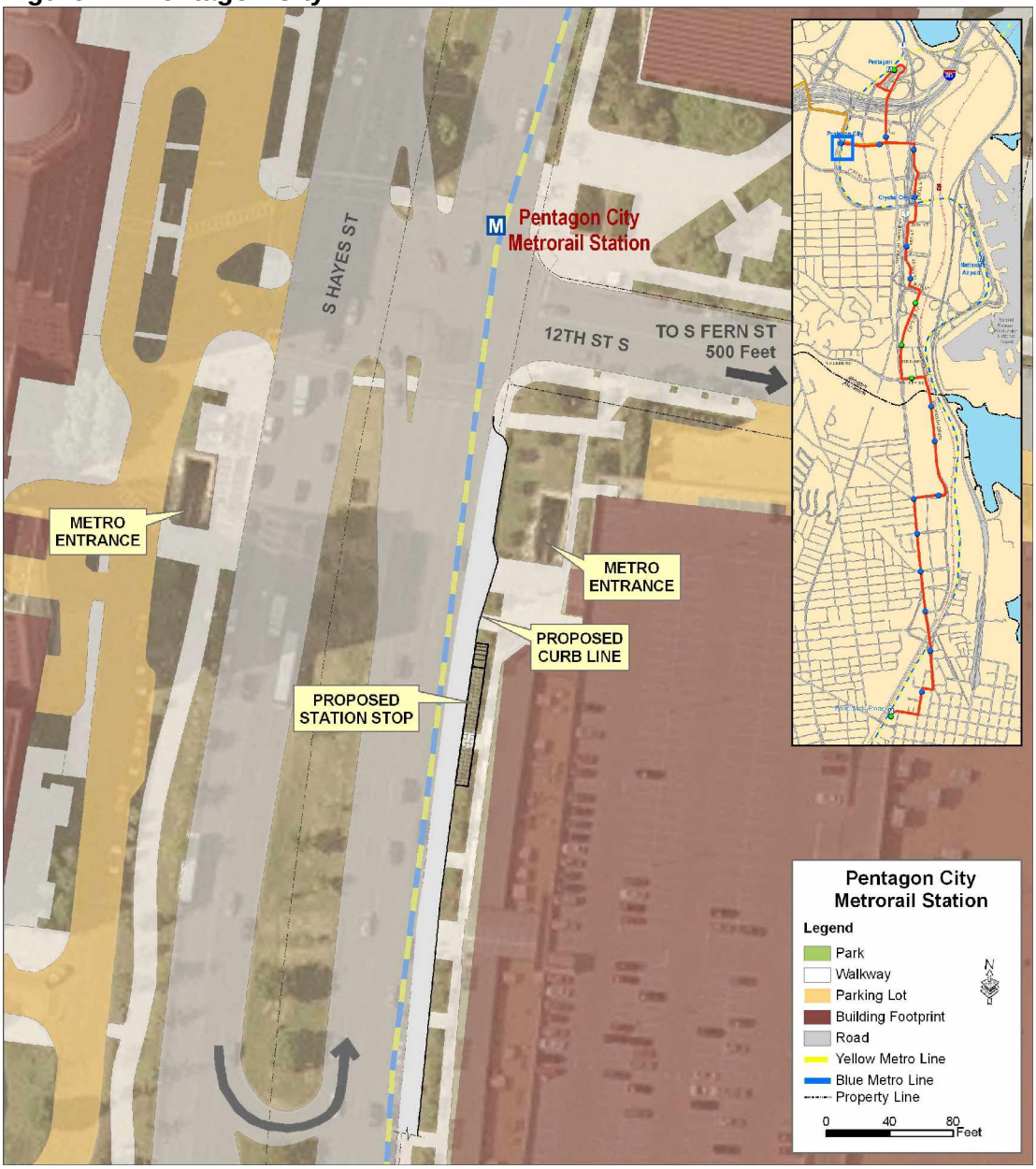


Additional Station stops in Arlington

3.10 Pentagon City

(Pentagon City route) It is anticipated Crystal City/Potomac Yard service will share stops with other bus routes at Pentagon City. Exclusive transit lanes end at the intersection of 12th Street South and South Hayes Street, where vehicles will turn left into mixed traffic on South Hayes Street, stopping at a bus stop on the west side of the street, before making a mid-block U-turn back to 12th Street South. The current bus stops at Pentagon City are located adjacent to the Metrorail Station entrance. This entire area will be redesigned as part of the Pentagon City Metrorail Station Enhancements program, at which time the bus stops will be moved to a location farther south on South Hayes Street.

Figure 17: Pentagon City



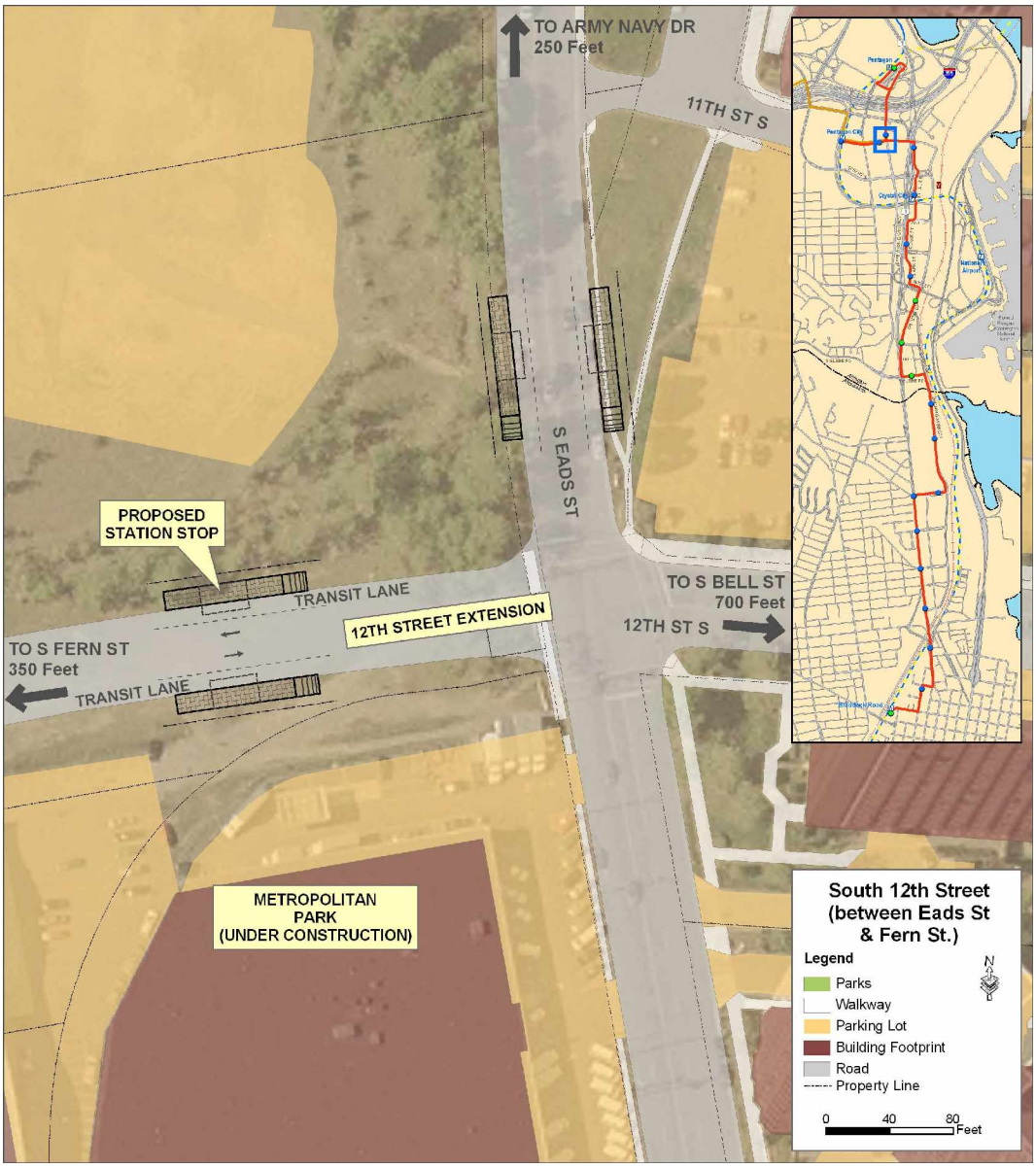
3.11 12th Street South between South Fern and South Eads Streets

(Pentagon City route) This station stop will be located on 12th Street South, approximately midway between South Fern and South Eads streets. This portion of 12th Street South has not yet been constructed. It is anticipated that this street, when constructed, will have limited vehicular access and be predominantly oriented towards pedestrians.

Characteristics of this station stop include:

- Platforms will be 12 feet wide and 75 feet long;
- Transit will run curbside in mixed traffic at this location;
- Intersection improvements at 12th and Eads Streets assume 12th Street extension and include enhanced crosswalks and modified traffic signal.

Figure 18: 12th Street South between South Fern and South Eads Streets



City of Alexandria

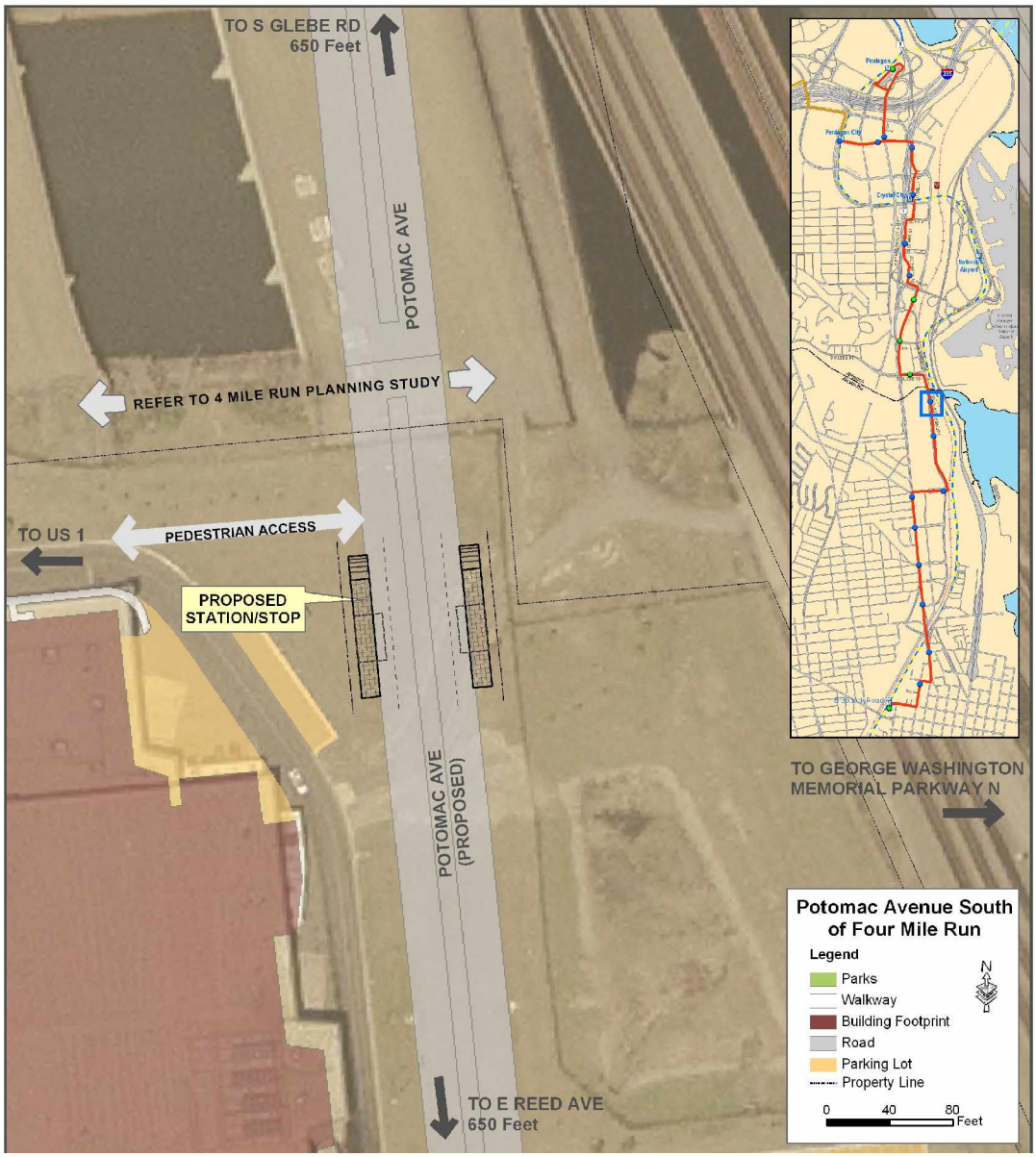
3.11 Potomac Avenue North

This station stop will be on the south side of Four Mile Run, in order to provide access to Potomac Yard Shopping Center. Issues for this location include enhancing pedestrian access to the Shopper's Food along the north side of the building, and coordination with planning efforts to improve recreational access to Four Mile Run.

Characteristics of this station stop include:

- Platforms will be 12 feet wide and 75 feet long;
- Transit will run in curbside lanes in mixed traffic at this location.

Figure 19: Potomac Avenue North



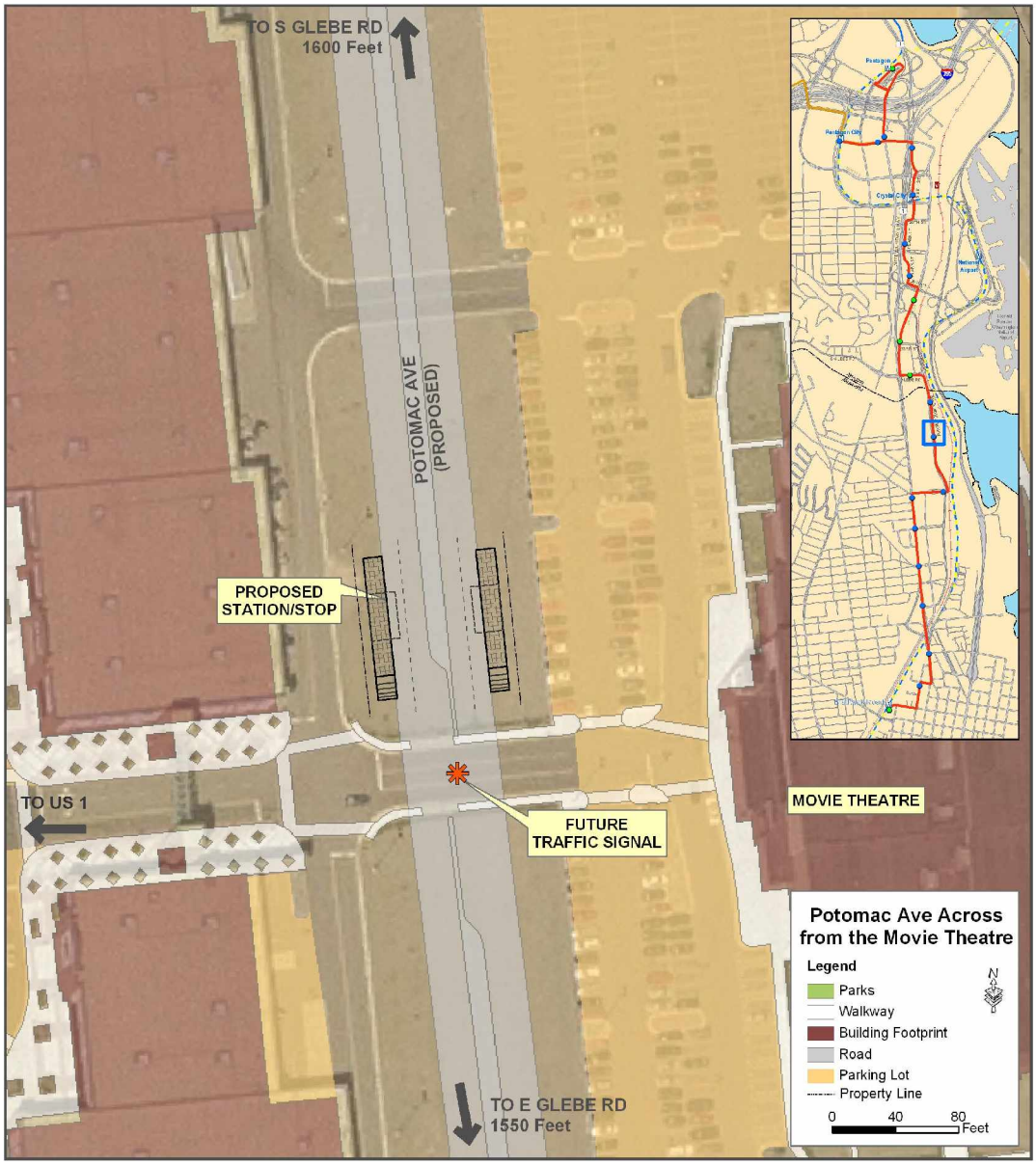
3.13 Potomac Avenue Central

Both platforms for this station stop will be on Potomac Avenue north of the road through the Shopping Center from Route 1. This would enable transfers with possible feeder services coming from Route 1. In the future, this intersection will have a traffic signal.

Characteristics of this station stop include:

- Platforms will be 12 feet wide and 75 feet long;
- Transit will run in curbside lanes in mixed traffic at this location.
- Intersection improvements at future Potomac Ave. and theater access to include enhanced crosswalks and a new traffic signal.

Figure 20: Potomac Avenue Central



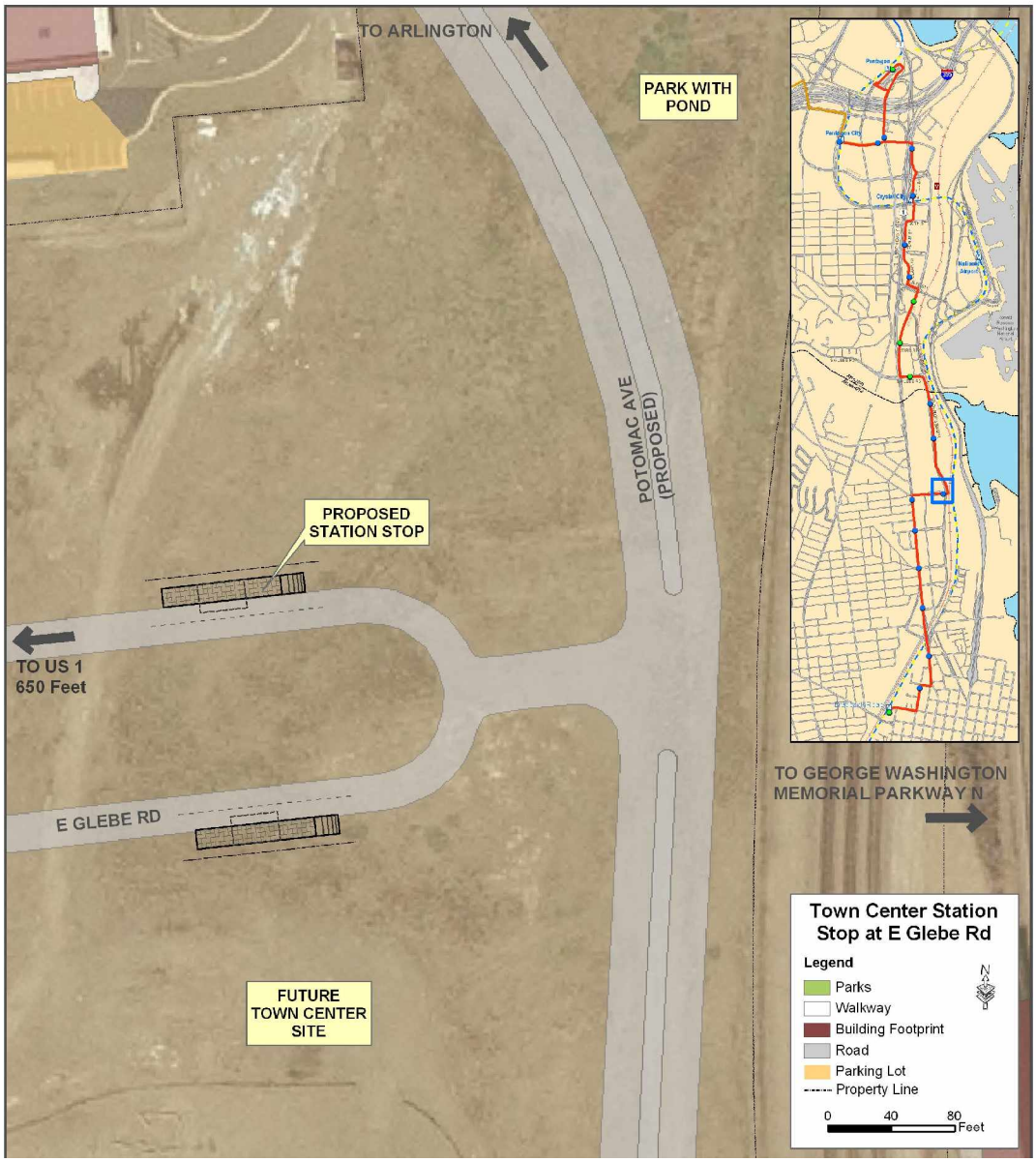
3.14 Potomac Avenue - Town Center

This area is planned to be the town center for Potomac Yard. The location of this station stop will be influenced by future plans and studies. These plans include the preliminary infrastructure plan for Potomac Yard, any plans for location of an infill Metrorail station, and specific developer site plans. In the meantime, it will be assumed that side platforms will be located on East Glebe Road at the intersection of Potomac Avenue.

Characteristics of this station stop include:

- Platforms will be 12 feet wide and 75 feet long;
- Transit will run in curbside lanes in mixed traffic at this location;
- Intersection improvements at East Glebe Road and Potomac Avenue include crosswalks and could include reconfigured turn lanes at East Glebe Road.

Figure 21: Potomac Avenue – Town Center



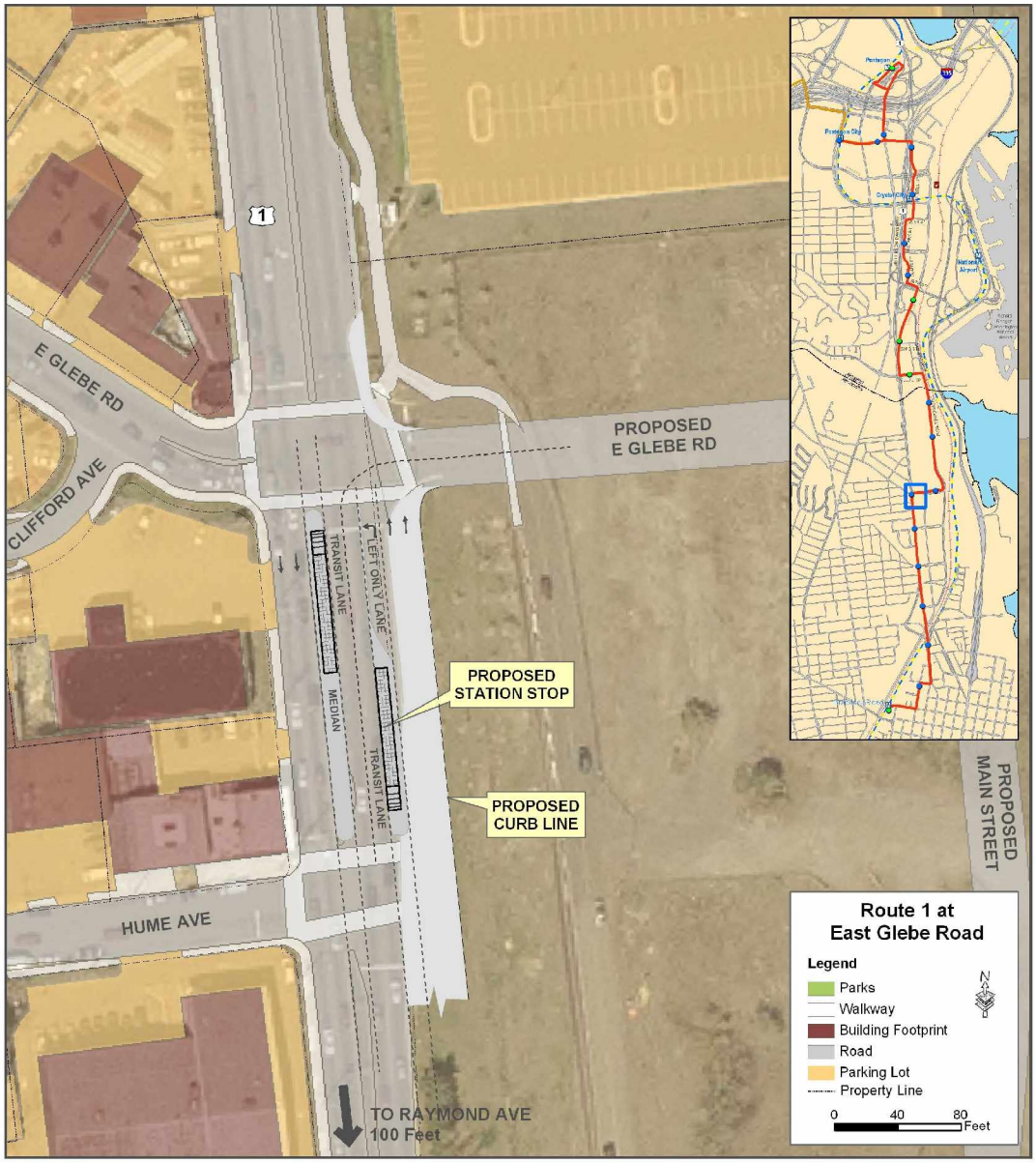
3.15 Route 1 at East Glebe Road

This station stop will be located on Route 1, south of the intersection with East Glebe Road. A median station stop location is shown below; other configurations appear in Appendix C.

Characteristics of this station stop include:

- Platforms will be 8 feet wide and 75 feet long;
- Transit will run in dedicated lanes along a median transitway;
- Intersection improvements at East Glebe Road and Route 1 will include enhanced crosswalks and modified traffic signals.

Figure 22: Route 1 at East Glebe Road



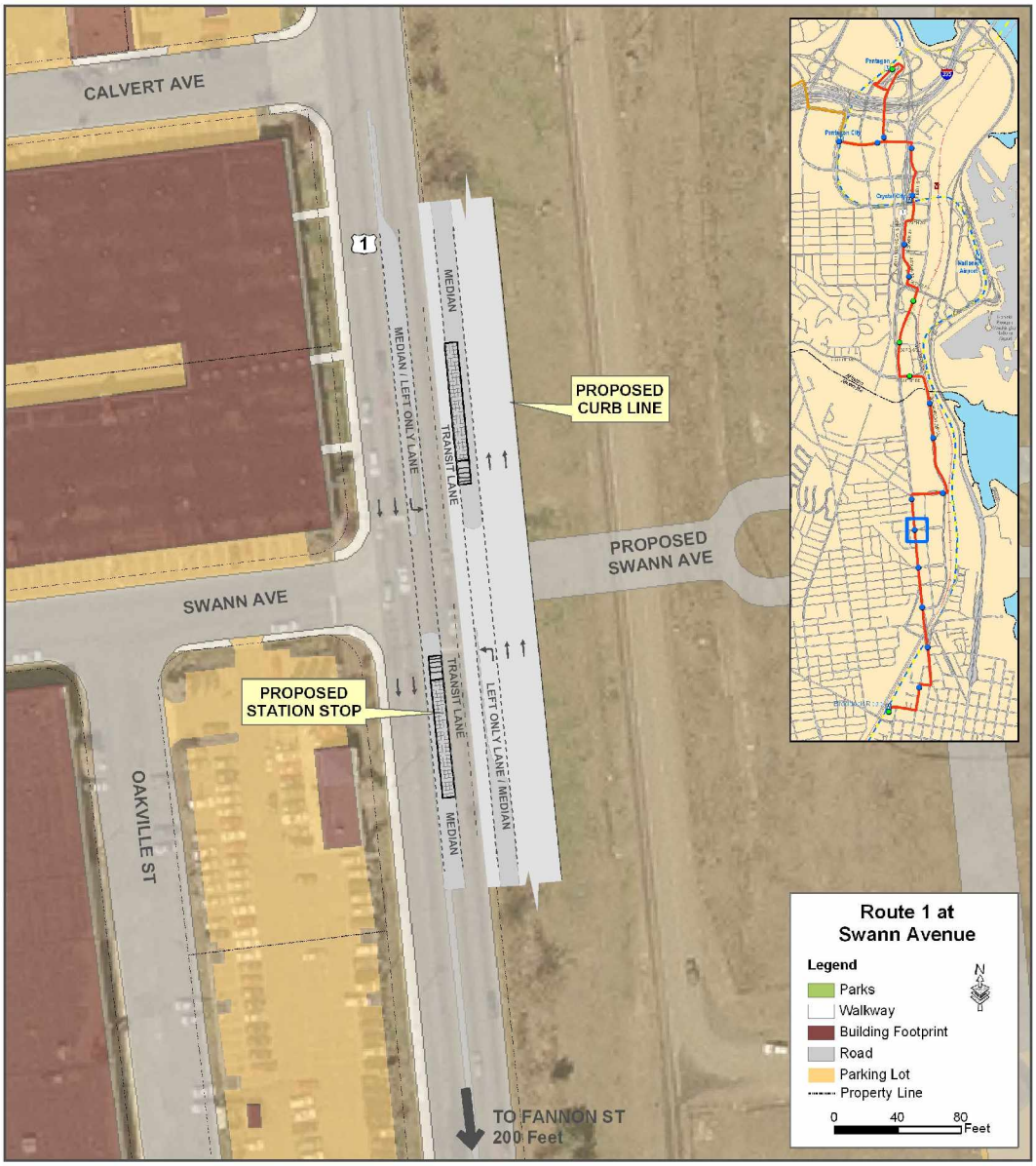
3.16 Route 1 at Swann Avenue

This station stop will be located on Route 1, south of the intersection with Swann Avenue. A median station stop location is shown below; other configurations appear in Appendix C.

Characteristics of this station stop include:

- Platforms will be 8 feet wide and 75 feet long;
- Transit will run in dedicated lanes along a median transitway;
- Intersection improvements at Swann Avenue and Route 1 will include enhanced crosswalks and modified traffic signals.

Figure 23: Route 1 at Swann Avenue (Median Transitway)



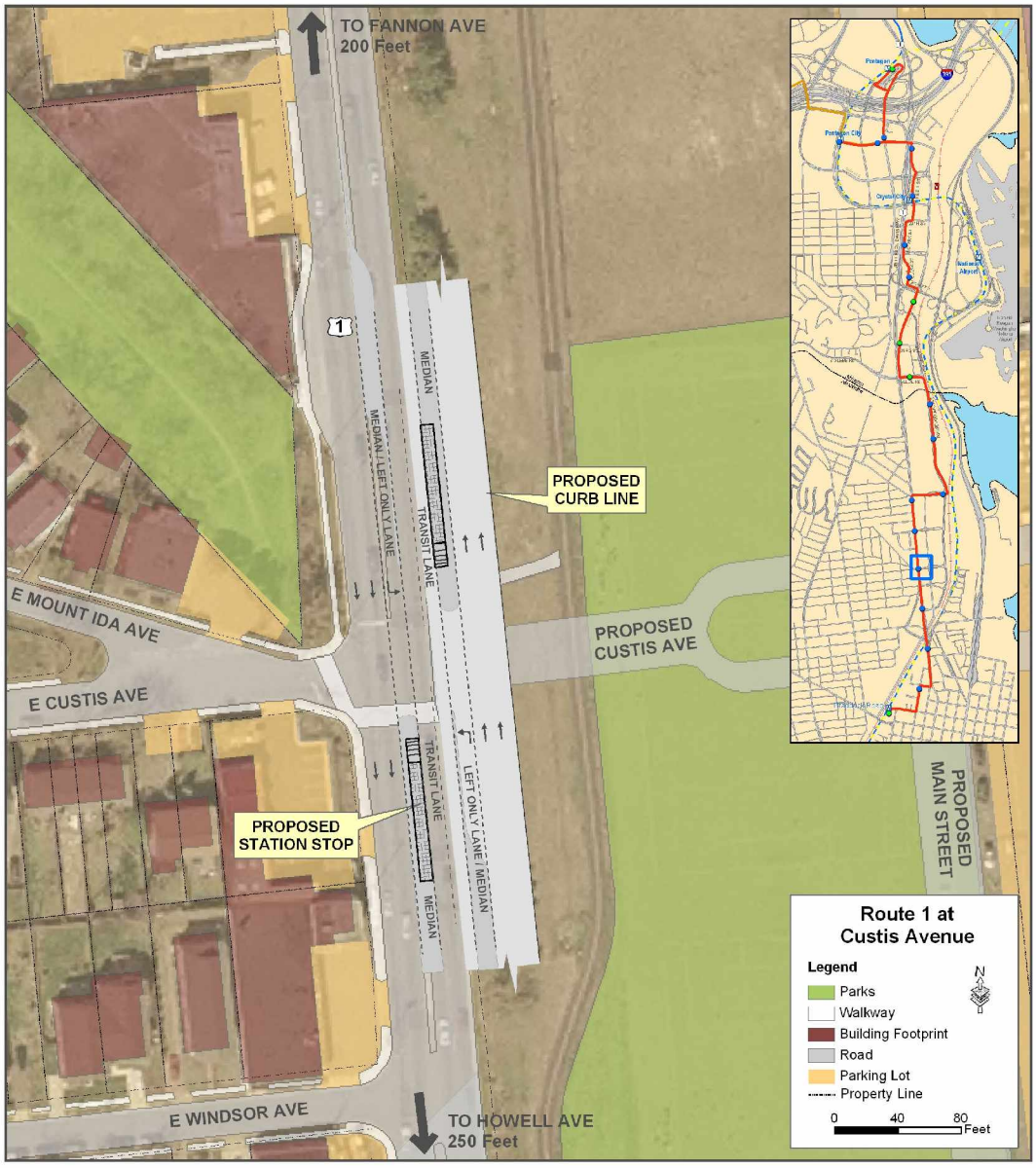
3.17 Route 1 at East Custis Avenue

This station stop will be located on Route 1, north of the intersection with East Custis Avenue. A median station stop location is shown below; other configurations appear in Appendix C.

Characteristics of this station stop include:

- Platforms will be 8 feet wide and 75 feet long;
- Transit will run in dedicated lanes along a median transitway;
- Intersection improvements at Custis Avenue and Route 1 will include enhanced crosswalks and modified traffic signals.

Figure 24: Route 1 at East Custis Avenue (Median Transitway)



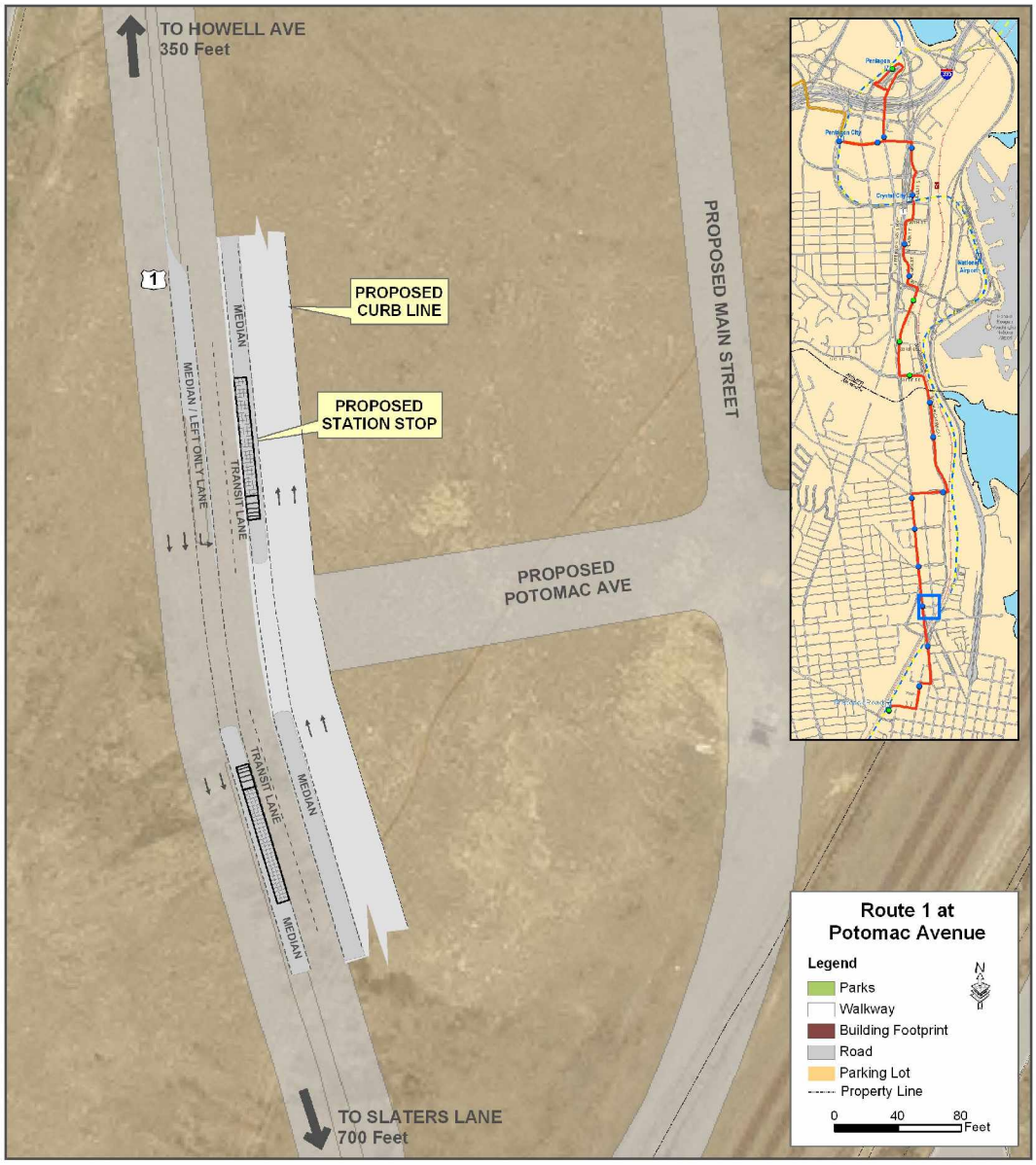
3.18 Monroe Avenue Bridge

This station stop will be located on Route 1 between East Bellefonte Avenue and the straightened Monroe Avenue Bridge. A narrow side-platform station stop in the median will be located just south of East Bellefonte Avenue. This would provide room for transit vehicles to transition from the median transitway to mixed-traffic operations before coming to the bridge. Pedestrian access from the neighborhood to the west of Route 1 is an issue for this location. A median station stop location is shown below; other configurations appear in Appendix C.

Characteristics of this station stop include:

- Platforms will be 8 feet wide and 75 feet long;
- Transit will run in dedicated lanes along a median transitway;
- Intersection improvements at proposed Potomac Avenue and Route 1 will include enhanced crosswalks and modified traffic signals.

Figure 25: Monroe Avenue Bridge (Median Transitway)



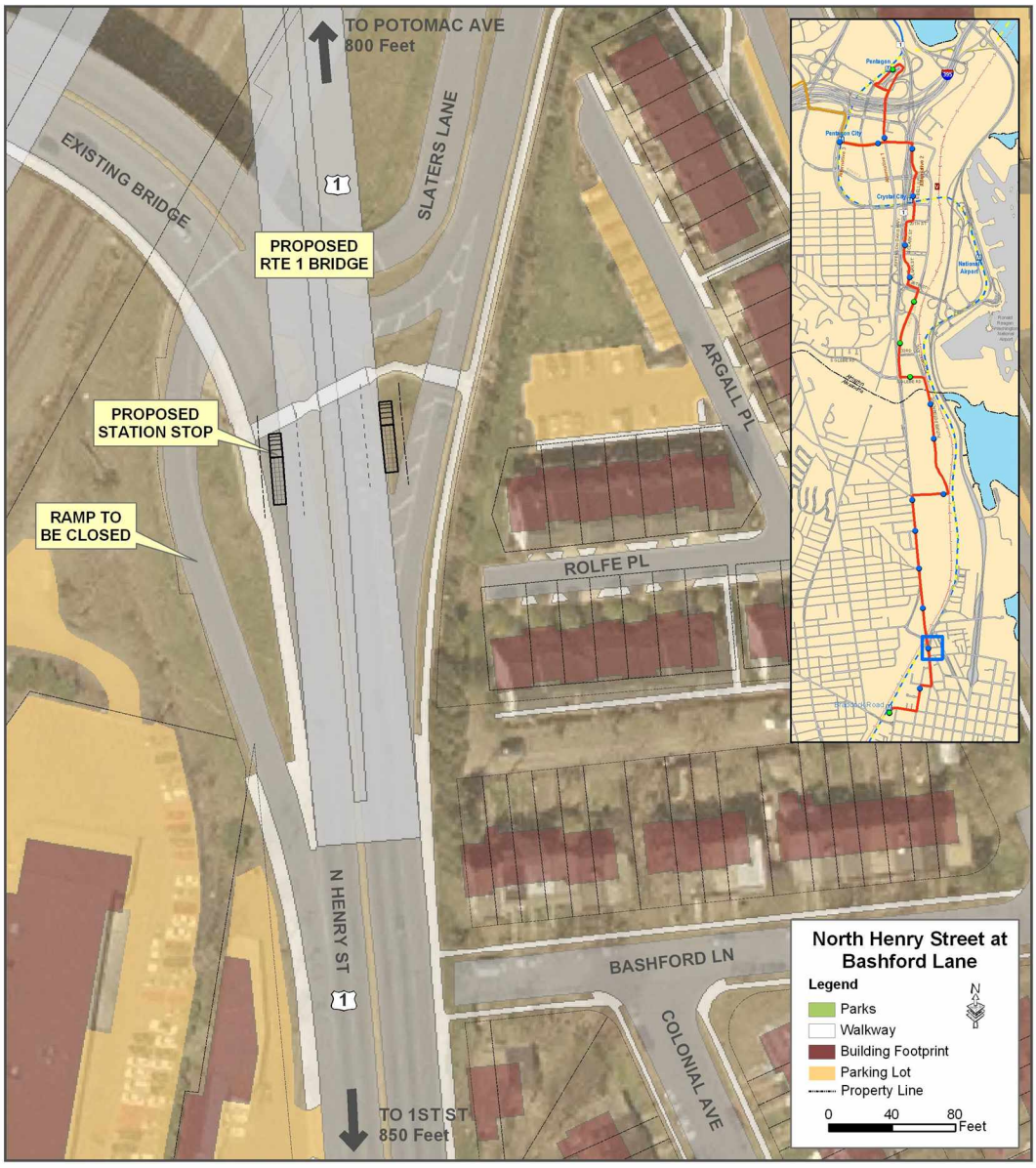
3.19 North Henry Street at Slaters Lane

This location has a number of issues related to pedestrian access from surrounding neighborhoods and future road design.

Characteristics of this station stop include:

- Platforms will be 8 feet wide and 30 feet long;
- Transit will run in curbside lanes in mixed traffic at this location.
- Intersection improvements at North Henry Street and Slaters Lane will include enhanced pedestrian crossings.

Figure 26: North Henry Street at Slaters Lane



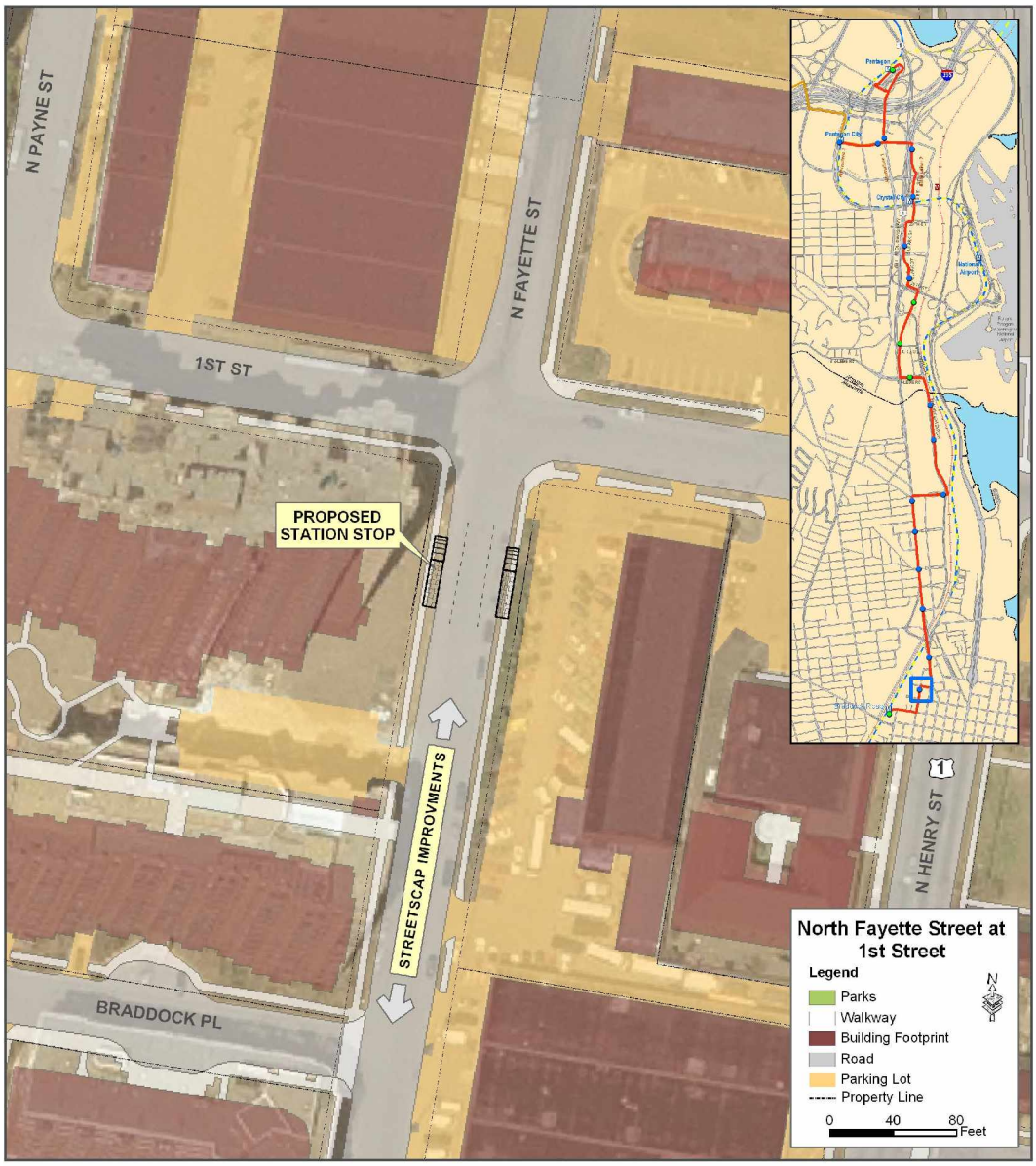
3.20 North Fayette Street at 1st Street

This station stop will be located on North Fayette Street south of the intersection with 1st Street. Small platforms on the adjacent sidewalk will be used. Platforms will be reduced in size in order to fit on narrow sidewalks. This location should provide good access to redevelopment in the area.

Characteristics of this station stop include:

- Platforms will be 8 feet wide and 30 feet long;
- Transit will run in curbside lanes in mixed traffic at this location.
- Intersection improvements at First and North Fayette Streets will include enhanced crosswalks and new traffic signals.

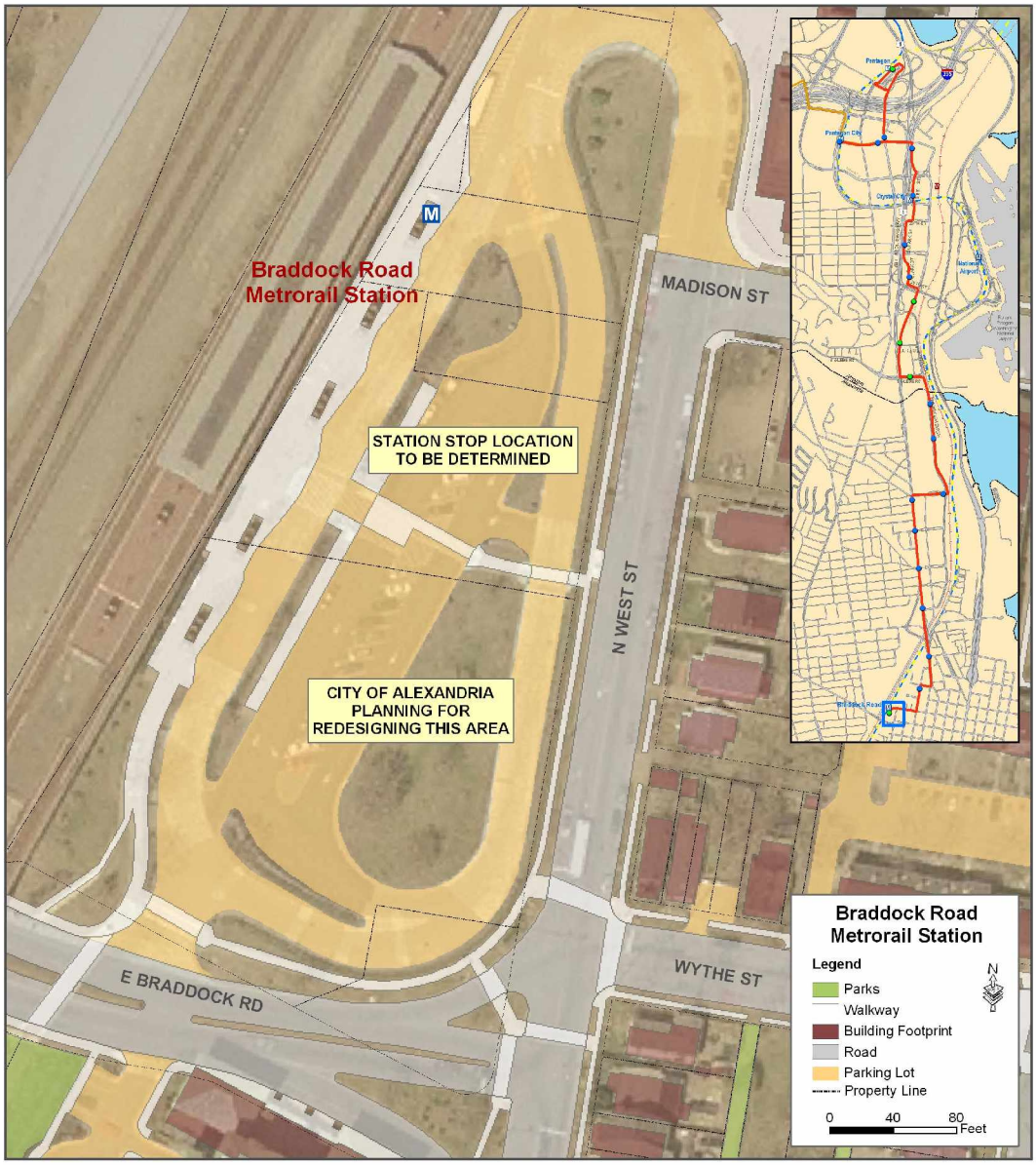
Figure 27: North Fayette Street at 1st Street



3.21 Braddock Road Metrorail Station

The City of Alexandria is currently considering options for reconfiguration of access to the Braddock Road Metrorail Station. It is assumed that the station stop for the Crystal City/Potomac Yard service will be located in the same area as other bus stops or bus bays.

Figure 28: Braddock Road Metrorail Station



4.0 NEXT STEPS

There are several areas of consideration that may be appropriate as follow up to the station stop planning undertaken in this study. These include the following:

Traffic and transportation
Traffic and transportation implications of the station stop locations recommended here are being investigated by the jurisdictions. In some locations, station stop placement implies modifications to travel lanes and the general pattern of circulation. Among the issues are turns at intersections, sidewalks, bike lanes, and pedestrian crossings. Care should also be taken to ensure that dedicated guideways minimize impacts on access to adjacent properties.

Right-of-Way
Of particular concern would be any requirement for additional right-of-way to accommodate all travel modes within the corridor, as well as any capital improvements that may be necessary to support the transit system. In this study, station stops and transitway improvements have been located in such a way as to avoid potential right-of-way impacts. As the project advances, surveys will be undertaken to confirm these initial findings.

Utilities conflicts
No provision for potential utilities conflicts has been made during preliminary siting of station stops. Ongoing study and design activities will catalog potential conflicts and station stops will be adjusted to minimize expected utility relocation requirements.

Station design for system identity
The specific design of the station stops themselves should contribute towards establishing an identity for the system. Both Arlington County and the City of Alexandria have high expectations related to the design of public facilities, and to protecting and enhancing the character of their communities. Public input indicated the desirability of an approach that established a ‘theme and variations’ approach to design, in which an architectural vernacular is established, within which individual station stops may not be identical but related.

The specifics of station stop architecture should include conceptual plans and sections, the definition of furnishings and amenities, and preliminary cost estimates. These may be communicated through plan sketches and axonometric representation.

Planning for transit oriented development
Of concern to both Arlington County and the City of Alexandria is how the station stops may be integral parts of the surrounding communities. Each jurisdiction has undertaken planning efforts for major portions of the corridor. As an additional layer to this, opportunities to encourage transit oriented development may be outlined. This should be accomplished in conjunction with the local planning endeavors. Additionally, specific opportunities may be identified for the provision of streetscape, landscape, and urban design installations.