Northern Virginia Transportation Authority
The Authority for Transportation in Northern Virginia

Project Description Form – 8Y

Basic Project Information

Submitting Jurisdiction/Agency: Arlington County

Project Title: Crystal City Streets: 12th Street Transitway, Clark/Bell Realignment & Intersection Improvements

Project Location:

a. 12th Street South between South Eads Street and South Clark Street
b. South Clark Street between 12th Street South and 15th Street South
c. 23rd Street South between South Eads Street and South Clark Street

Project Description: The existing street network in Crystal City is dominated by a limited number of north-south streets, contains several disjointed and separated streets, one-way streets, and inadequate intersections. This existing situation does not function efficiently as a network, and thus limits overall circulation, resulting in unnecessary road and transit congestion throughout Crystal City. The goal of these improvements is to streamline the existing road network, make movements for all modes of transportation more efficient, create new connections to the street grid network, and to construct an extension of the Crystal City-Potomac Yard (CCPY) Transitway, Northern Virginia's first Metroway line. Metroway is a limited stop bus service with segments on exclusive right-of-way. The Crystal City Streets Program was developed to support the 2010 Crystal City Sector Plan, the Crystal City Multimodal Study, and the Arlington Transportation Master Plan.

The 12th Street South portion of the Crystal City Streets Program will reconfigure the street between South Eads Street and South Clark Street to provide exclusive transit lanes serving this portion of the extended CCPY Transitway. The project will also include improvements to intersections, pedestrian accessibility, and safety. Following the County-funded demolition of a functionally obsolete section of Clark Street, this project will also reconfigure and realign a segment of Clark Street with Bell Street, creating a new more efficient street network. The improvements will normalize the existing intersection, improve traffic circulation and pedestrian safety and connectivity, and accommodate the southern one-way portion of the CCPY Transitway. The intersection improvements around 23rd Street South and US-1 will simplify the design of

Project Analysis Summary*

NVTA Quantitative Score	48.74		Rank	11
Congestion Reduction Relative to Cost Ratio (NVTA Share)	0.13	hours saved/$	Rank	15
Congestion Reduction Relative to Cost Ratio (Total Cost)	0.13	hours saved/$	Rank	14

*Detailed scoring information can be found at: http://www.thenovaauthority.org/planning-programming/fy2017-program/

three closely-spaced intersections that are confusing and inefficient for all modes of travel, thus improving traffic operations and pedestrian circulation within this important activity center. The project is in various stages of engineering design. The proposed cost of $11,600,000 will fund all three components into construction.

Project Milestones

Project Milestones by Project Phase:

- **Engineering:** 2013 – 06/2017
- **Environmental Work:** 2014 – 06/2017
- **Design:** 2013 – 06/2017
- **Right of Way Acquisition:** n/a (no additional ROW required)
- **Construction:** 07/2016 – 06/2020
- **Capital Asset Acquisitions:** n/a (none required)
- **Other:**

Project Cost

Requested NVTA FY2017 Funds: $11,600,000

Total Cost to Complete Project: $11,600,000

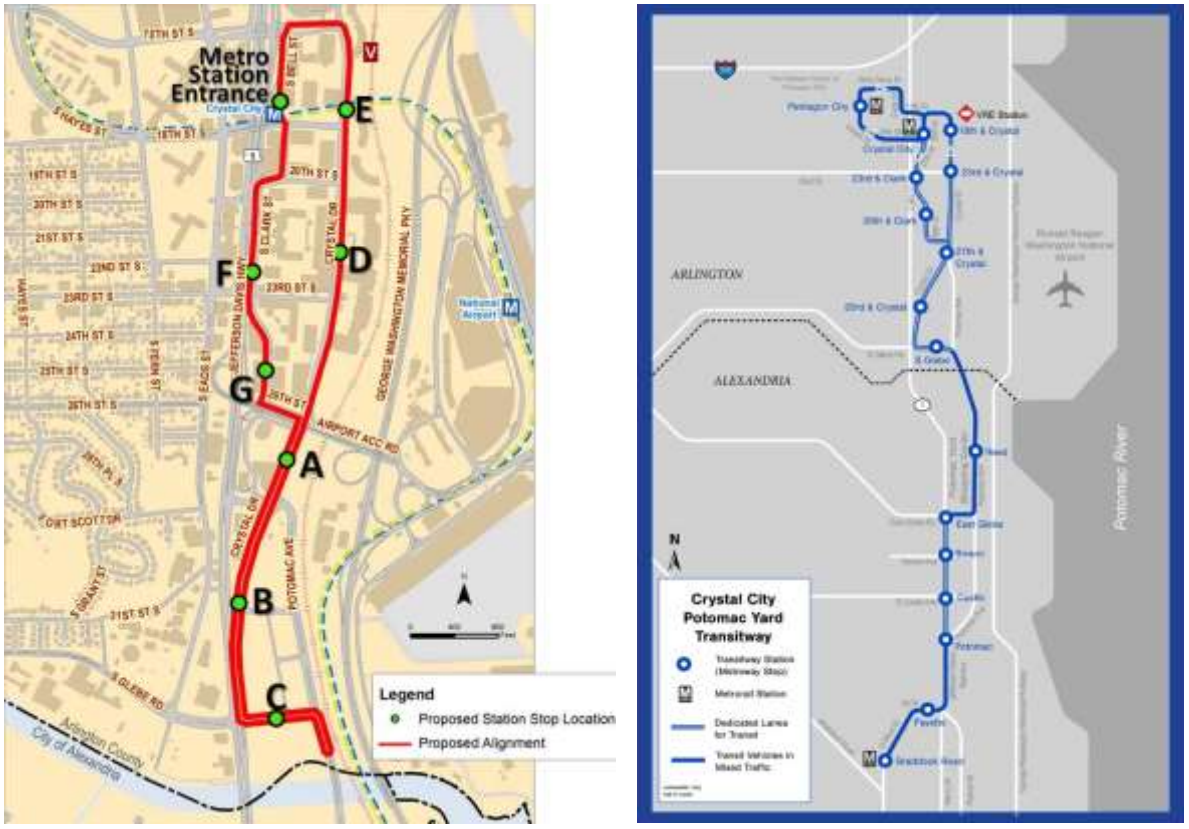
Project Phases	Requested NVTA FY2017 Funds	Other Sources of Funding	Total Cost by Phase
Engineering	$350,000 (FY2017) $100,000 (FY2018)		$350,000 (FY2017) $100,000 (FY2018)
Environmental Work	$60,000 (FY2017) $40,000 (FY2018)		$60,000 (FY2017) $40,000 (FY2018)
Design	$350,000 (FY2017) $100,000 (FY2018)		$350,000 (FY2017) $100,000 (FY2018)
Right of Way Acquisition			
Construction	$1,200,000 (FY2017) $5,700,000 (FY2018) $3,500,000 (FY2019) $200,000 (FY2020)		$1,200,000 (FY2017) $5,700,000 (FY2018) $3,500,000 (FY2019) $200,000 (FY2020)
Capital Asset Acquisitions			
Other			
TOTAL	**$11,600,000**		**$11,600,000**

Project Impacts

What regional benefit(s) does this project offer? This project is a key roadway component of Crystal City, Pentagon City, and the Pentagon, which forms a major regional activity center, employment center, multimodal transportation hub, and a key gateway for travel between Northern Virginia and downtown Washington, DC. It contains an estimated 73,400 jobs in 2015 and is forecasted to reach 112,700 jobs by 2040. The Crystal City Streets Program will reconfigure the network of streets in Crystal City from a poorly-functioning grid of one-way streets to a more convenient network of two-way multimodal streets. The improved streets will streamline automobile traffic, reducing congestion by allowing drivers and buses to more directly reach their destinations without circling long blocks. The new streets will also allow better and safer access to transit for pedestrians.

This project will also extend the Crystal City-Potomac Yard Transitway, Virginia's first Metroway service. The Metroway connects Crystal City in Arlington with Potomac Yard and the Braddock Road Metrorail Station in Alexandria, then runs as a normal slow surface bus between Crystal City and Pentagon City. This project will extend the rapid transit features of the line north to the Pentagon City Metro station.

Extending Metroway service will provide new rapid transit access to multiple activity centers, take cars off congested streets, and add transit capacity at one of the Metrorail system's most congested points.



These maps show the route of the under construction CCPY (top left), initial planned transit service (top right) of the under construction CCPY Transitway, and the planned CCPY Transitway extension to Pentagon City (bottom).

How will the project reduce congestion? The Crystal City Streets Program will reduce congestion by completing a two-way street grid in Crystal City, eliminating excess time lost and vehicle-miles traveled by drivers attempting to reach their destinations through a disorienting one-way street grid that unnecessarily requires drivers to loop and double back to reach destinations. The Streets Program will also induce new transit trips and reduce congestion on Metrorail through its extension of the Crystal City-Potomac Yard Metroway line to Pentagon City. These new connections and dedicated bus lanes will reduce the travel time and increase the capacity of planned transit service, reducing vehicle trips and reducing both roadway and transit congestion. The improvements to the intersection of 23rd Street South, South Eads Street, and Route 1 will reduce congestion by realigning the intersection with planned improvements in Crystal City, simplifying intersection geometries, and creating safer travel conditions for all modes.

How will the project increase capacity? The Crystal City Streets Program will complete two segments of the extended Crystal City-Potomac Yard Transitway, allowing for uninterrupted rapid transit trips on 12th Street South and on South Clark Street through the project areas identified. This facility currently runs in mixed-traffic, resulting in potential service disruption, lower reliability, and higher travel times. These dedicated facilities do not currently exist, and the proposed transit circulation patterns are not currently possible on the existing one-way street grid. The two proposed road realignments and reconfigurations in this project would enable faster transit trips along the extended CCPY.

By allowing buses to travel along their route faster, the same number of buses will be able to make more trips along their route, thus directly increasing the through-capacity of transit in the corridor. In addition to that direct capacity improvement, an additional rapid transit connection between Pentagon City, Crystal City, and Braddock Road Metro stations will reduce the burden on the Metrorail system to carry local trips, thus increasing the effective capacity of the Metrorail Yellow and Blue lines.

The reconfiguration of South Clark and South Bell Streets will enable additional local street connections, increase roadway capacity, and allow for additional turning movements. The intersection of 23rd Street

South and Route 1 is confusing and dangerous for vehicles and pedestrians. The realignment and reconfiguration of this intersection will reduce conflict points and simplify the intersection geometry, increasing the vehicular capacity of these major local and regional streets.

Finally, given the extremely high volume of pedestrian traffic in Crystal City, pedestrian capacity will be increased via wider sidewalks and improved pedestrian crossings. Without this additional pedestrian capacity, pedestrians will spill onto the roadway, resulting in an unsafe situation and impeding vehicular travel.

How will the project improve auto and pedestrian safety? The Crystal City Streets Program will address both auto and pedestrian safety. Intersections will feature new signals and updated signal timing. Comprehensive traffic analysis will inform all the designs within the project area in order to simplify the vehicle movements and reduce conflict points. Pedestrian safety will be improved with new, wider sidewalks, updated pedestrian ramps, median refuges where possible, new crosswalks designed specifically for the high pedestrian volumes in Crystal City area, and new pedestrian signals.

How will the project improve regional connectivity? The project will directly improve pedestrian, bicycle, vehicular, and transit connectivity within and between the **Pentagon City** and **Crystal City** activity centers in Arlington. By enabling the extension CCPY transitway, this project will connect these Arlington activity centers to the **Potomac Yard** and **Braddock Road** activity centers in Alexandria. These connections will be improved for transit vehicles and automobiles.

Finally, by reducing the burden on Metrorail to carry short distance trips, this project will add capacity to the most crowded section of the Blue and Yellow lines, thus improving connectivity between **Downtown Washington and Rosslyn,** and activity centers further south including **King Street, Carlyle, Beauregard, Landmark, Huntington, Beltway South,** and **Springfield**.

How will the project improve bicycle and pedestrian travel options? Pedestrian and bicycle connectivity will both be improved by the completion of the Crystal City street grid as part of this Project. Completing the street grid will allow for direct trips between points in Crystal City that are not currently possible due to a lack of street connections. Additionally, new protected bicycle lanes included in the Crystal City Streets Program will be funded by this request. Comparable protected bicycle lanes in Arlington have increased bicycle trips by 93% on affected streets.

How will the project improve the management and operation of existing facilities through technology applications? The County will leverage the recently constructed fiber optic network, CCTV camera installations, and improved detection and pre-emption infrastructure components to make Transit Signal Priority successful in the CCPY area. In addition, new technologies such as queue jumps can be implemented to further enhance transit throughout the corridor.

Additional Information in Support of This Project

http://projects.arlingtonva.us/projects/15th-street-clark-bell-street-realignment/
http://projects.arlingtonva.us/projects/23rd-street-south-realignment/
http://arlingtonva.s3.amazonaws.com/wp-content/uploads/sites/5/2014/03/sprc_Jul3012_SectorPlan_CrystalCityPO.pdf

Project Location in relation to existing conditions and the Crystal City Sector Plan (adopted 2010).