



Project Description Form – 8EE

Basic Project Information

Submitting Jurisdiction/Agency: Town of Dumfries

Project Title: Route 1 (Fralely Blvd) Widening: Brady's Hill Road to Dumfries Road

Project Location: US Route 1 from southern Town Limits to northern Town Limits



Project Description: This project will complete another segment of the Route 1 Corridor identified in VDOT's Route 1 Location Study. U S Route 1 is bisected through the Town of Dumfries with northbound Route 1 on an alignment on the east side of Town and southbound Route 1 on a separate alignment, also serving as Main Street for the town. No other community in Prince William County has Route 1 dividing its town and stifling traffic for its entire community six to seven days a week. Currently 54,000 vehicles per day travel through the approximately 2.01 miles (10,650 ft) of Route 1. Future road studies estimate that 80,000 vehicle per day will travel this segment. Route 1 is being widened by Prince William County to the north and south of this choke point. This project will complete the Northern segment of a Prince William County funded project (VDOT's Route 1 / Route 619) and will allow both local traffic to travel to and from Quantico / Stafford to the Route 234 interchange and communities along the Route 1 corridor. This project will bring northbound and southbound Route 1 onto the same alignment by widening Route 1 NB from two lanes to six lanes, with a wide curb lane for on-road bicycle use and a sidewalk and multi-use trail for pedestrians and other modes. It includes replacing the bridge over Quantico Creek. The southbound alignment can then be used as Main Street for the town of Dumfries, enhancing the economic development of the town and the safety of the town's citizens.

Route 1 Northbound (Fralely Blvd) between Route 1109 (Brady's Hill Road) and Route 234 (Dumfries Road) is classified as an Urban Principal Arterial. The intent of this project is to widen Route 1 NB from 2-lanes undivided roadway to 6-lanes divided roadway from Brady's Hill Road to Possum Point Road so both NB/SB traffic will be on the existing Route 1 NB alignment and widen Route 1 NB/SB lanes from 4-lanes undivided roadway to 6-lanes divided roadway from Possum Point Road to Route 234-Dumfries Road. The proposed typical section for the 2.1 mile project will consist of six lanes with three 12' lanes in each direction and

Project Analysis Summary*

NVTA Quantitative Score	47.47	Rank	13
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/>

appropriate turn lanes. The outermost lane in each direction will be 15' wide to accommodate bicycles. The proposed design will provide a 16' raised median, with sidewalks and shared use paths on opposite sides of the roadway. The design will follow the GS-5 (Urban Principal Arterial) standard at 45 mph design speed, as outlined in the Road Design Manual. The typical section will include CG-7 curbing and standard green space/buffer space adjacent to pedestrian facilities. The roadway superelevation will be based on urban low speed (TC-5.11 ULS) design standards. Side slopes will be 3:1 or flatter, where feasible. The existing SB Route 1 (Main St) is on separate alignment from NB Route 1 (Fraley Rd) for the majority of the project limits; the separate alignment will be converted to a two-way roadway for local traffic and the proposed design will include mill and overlay adjustments, along with signing and markings, to complete the conversion. Since the project is located in a built-up area the design baseline may have to be 'optimized' to minimize Right of Way impacts. Environmental studies and NEPA document will be performed for the project. A Citizen Information meeting is being planned for early 2016 (Ongoing Prel. design by VDOT L&D, consistent with Route 1 Location Study, Segment A).

Project Milestones

Project Milestones by Project Phase:

- **Engineering:** 03/2015 - 06/2017
- **Environmental Work:** Included above
- **Design:** Included above
- **Right of Way Acquisition:** 11/2017 - 11/2020
- **Construction:** 12/2020 - 06/2024
- **Capital Asset Acquisitions**
- **Other**

Project Cost

Requested NVTA FY2017 Funds: \$16,500,000

Total Cost to Complete Project: \$168,766,000

Project Phases	Requested NVTA FY2017 Funds	Other Sources of Funding	Total Cost by Phase
Engineering		\$500,000 (SYIP FY2014) \$3,500,000 (NVTA FY 2015) \$3,400,000 (NVTA FY 2016)	\$7,400,000
Environmental Work		Included above	
Design		Included above	
Right of Way Acquisition	\$16,500,000 (FY2017)	\$49,596,000.00 (FY2018-21 ^{1, 2, 3})	\$66,096,000
Construction		\$95,270,000.00 (FY 2021-24 ^{1, 2, 3})	\$95,270,000
Capital Asset Acquisitions			
Other			
TOTAL	\$16,500,000	\$152,266,000	\$168,766,000

¹ Not yet determined

² Subject to future funding requests including NVTA, VDOT, and RSTP

³ Subject to and submitted for consideration under HB 2.

Project Impacts

What regional benefit(s) does this project offer? This project will complete a segment of the Route 1 Corridor identified in VDOT's Route 1 Location Study. This segment lies between two other segments (Stafford County Line to Joplin/Fuller Road (Route 619) and Dumfries Road to Dale Boulevard (Route 784)) and will allow for the proper movement of intrastate travel on Route 1. Route 1 through Dumfries is a major secondary roadway to Interstate 95 and serves as a major artery for the Eastern part of the Commonwealth.

This project alleviates traffic on a regionally congested corridor and provides an alternate route to I-95. This project will improve both vehicular and pedestrian/bicycle mobility in the area.

This project is on a Corridor of Statewide Significance and is in NVT A Corridor 8.

How will the project reduce congestion? According to the Route 1 Location Study Project A prepared by PB Americas (dated December 2008), the Level of Service (LOS) during the AM peak hours is E/F and during the PM peak hours it is D. The project will add one northbound travel lane, and replace the existing two southbound travel lanes which pass through the Main Street portion of the Town with three southbound travel lanes aligned with Fraley Boulevard, where there are fewer intersections.

How will the project increase capacity? According to the Route 1 Location Study Project A prepared by PB Americas (dated December 2008), the Level of Service (LOS) during the AM peak hours is E/F and during the PM peak hours it is D. The project will add one northbound travel lane, and replace the existing two southbound travel lanes which pass through the Main Street portion of the Town with three southbound travel lanes aligned with Fraley Boulevard, where there are fewer intersections. The project will also modify and upgrade the current signals. A sign structure with traveler information will be provided and linked to an existing TMC network/ITS architecture.

How will the project improve auto and pedestrian safety? The project will improve auto and pedestrian safety by:

1. separating high-volume pass-through traffic onto the six lane Route 1, while lower volume, lower speed residential and business traffic is on Main Street;
2. providing a 12' to 16' median to separate opposing traffic;
3. providing two 12' and one 15' travel lane in each direction, with the fifteen' outer travel lane to additionally accommodate bicycle use;
4. providing a 6' sidewalk with 4' buffer for pedestrian use;
5. providing safe pedestrian passage over Quantico Creek (see Figure 1).

How will the project improve regional connectivity? US Route 1 is part of the Northern Virginia regional network, serving Prince William County and the Town of Dumfries. It connects the southern portion of Northern Virginia to all Activity Centers toward Washington DC and Manassas.

Specifically, the project will improve regional connectivity from the southern portion of the Northern Virginia region (Dumfries and southern Prince William County), most directly to Potomac Shores, Potomac Town Center and North Woodbridge (identified as MWCOG Activity Centers - Northern Virginia 136, 135 and 134 respectively). Potomac Town Centers (previously identified by MWCOG as Potomac Mills) has been identified

by MWCOG as a Suburban Employment Center. Woodbridge has been identified as an Emerging Employment Center.

Furthermore, the project will improve regional connectivity from Dumfries to the central Prince William County Activity centers of Manassas Park (137), Manassas (138) and Manassas Airport (139). The project will improve connectivity for Highway and Bus Transit modes.

Finally, the project will improve connectivity into the approved First Town Center multi-use development in the Town of Dumfries. This 422,707 square foot development will provide housing and commercial facilities contributing to the economic development of the Town.

How will the project improve bicycle and pedestrian travel options? The southeast portion of the Town has a large townhouse community that currently does not have flexible biking/walking access to the commercial facilities located in the north and east portions of the Town. The project will provide a sidewalk on the west side of Fraley Boulevard and a shared use path along the east side of Fraley Boulevard. These improvements will provide bicycle and pedestrian travel options between the north and south ends of the Town which do not currently exist. Crosswalks and pedestrian signals will be provided at all signalized intersections, providing bicycle and pedestrian travel options from the east side of the Town to the west side.

How will the project improve the management and operation of existing facilities through technology applications? This project will replace/provide a sign structure with traveler information that will be directly linked to an existing TMC network/ITS architecture. Additionally, the project will provide signal modifications and upgrades.

Additional Information in Support of This Project

None.