Route 1

Multimodal Alternatives Analysis

APPENDIX H

Funding Analysis Report

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Route 1
Multimodal Alternatives Analysis

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Funding Analysis Report

November 18, 2014

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1.0 Introduction

The Route 1 Alternatives Analysis scope calls for a comprehensive assessment of applicable funding sources. Scarcity of funds and competition among projects at federal, state, local levels means that the project will need to be creative and resourceful, drawing from a mix of sources. As a recommended alternative is defined, and implementation steps and configuration of the project are established, a detailed funding plan will be developed. The purpose of this preliminary report is to assess the applicability and capacity of funding sources, informed by the anticipated project configuration and guided by initial discussions with County and agency staff.

The report describes the landscape of the potential federal, state, and local funding sources to support the recommended program of multimodal improvements. It explains the capacity of existing revenue sources (annual appropriations and matching requirements), competition from other projects and modes of transportation for these revenue sources, project eligibility, and process requirements. This discussion will help inform the project's future funding plan.

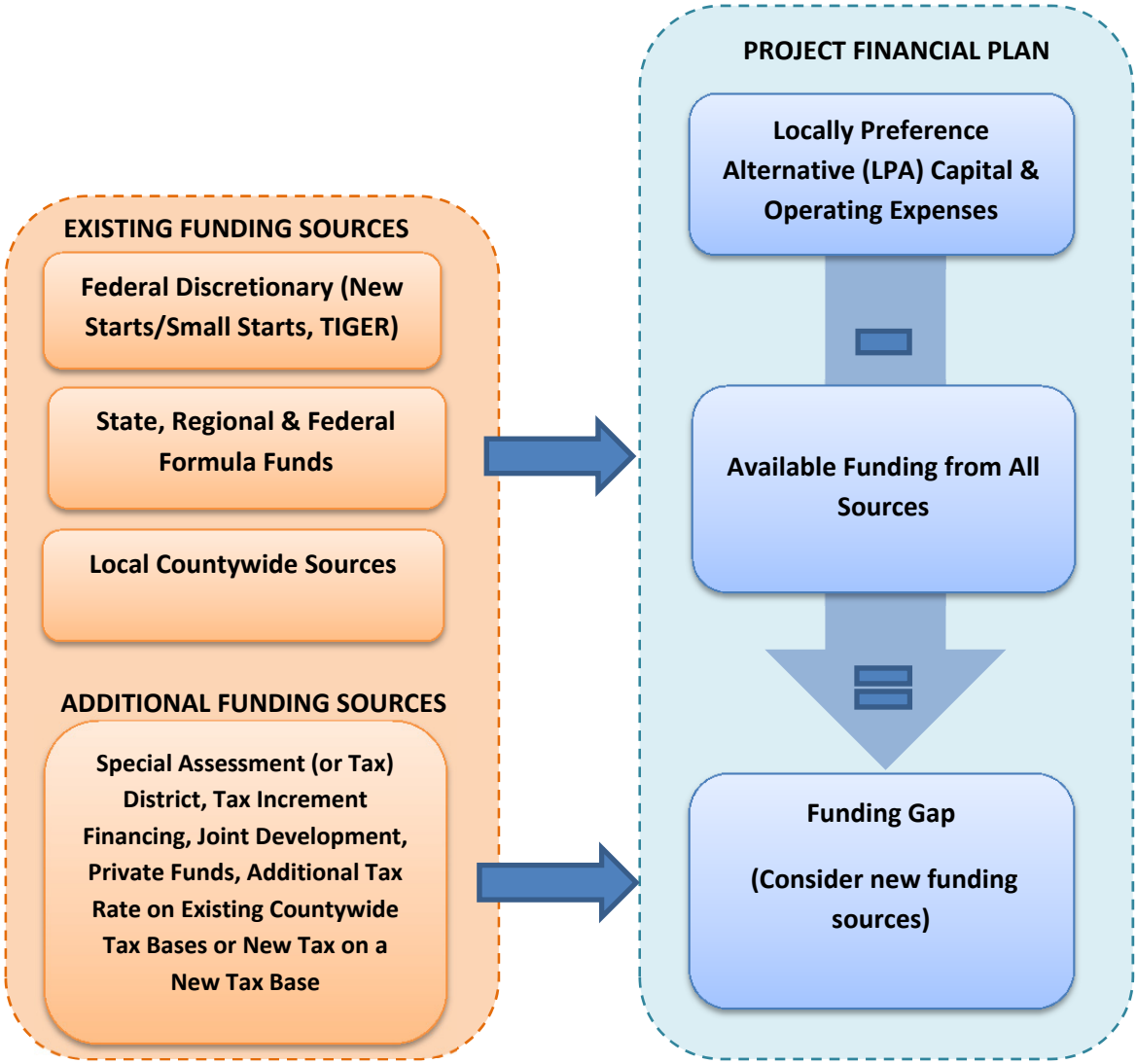
Because the transit component is the most capital-intensive portion of the multimodal recommendations, the early phases of project planning have been structured according to protocols from the Federal Transit Administration (FTA) Capital Investment Program. However, given the likely phasing of investments along the Route 1 corridor, this report assumes that different project sponsoring agencies will advance the different types of projects and draw from a range of funding sources. Again as an organizing principle, this report references FTA MAP-21 language and policy guidance on Local Financial Commitment.

Figure 1-1 summarizes conceptually the revenue sources reviewed in this report (listed on the left side) and how they can be applied in development of a Project Financial Plan (right side). Identification of local revenue sources early at the project development stage (including the project's capacity to encourage development and generate value) will be important for developing the project funding strategy.

The report is organized as follows:

- **Section 2.0:** Project's regulatory and institutional environment
- **Section 3.0:** Relevant federal funding sources
- **Section 4.0:** Relevant state funding sources
- **Section 5.0:** Northern Virginia specific or regional funding sources
- **Section 6.0:** Local funding sources
- **Section 7.0:** Summary of funding sources and recommendation of sources for the future project funding strategy
- **Section 8.0:** Application of the funding sources to the potential implementation schedules of the proposed Route 1 investments
- **Attachment A:** Summary of potential funding through value capture

Figure 1-1: Financial Analysis Summary Diagram



2.0 Transportation Planning Process and Resource Allocation

This section summarizes the transportation project planning process and explains its importance in the funding and resource allocation process for different transportation funding agencies. This section also discusses the key state and regional agencies that could potentially help fund the project.

2.1 Project Planning and Funding Environment

Regional, State, and Federal Funding Eligibility Requirement

To be eligible for state and/or federal formula funding, the project needs to be included in the Metropolitan Washington Council of Governments (MWCOG) National Capital Region's Financially Constrained Long-Range Transportation Plan (CLRP) and in the Transportation Improvement Program (TIPs). In Virginia, there are two kinds of TIPS: (i) a three-year Statewide Transportation Improvement Program (STIP), and (ii) the six-year Transportation Improvement Program (SYIP).

The CLRP and TIPs are the main transportation policy and planning documents which prioritize projects for funding in a fiscally constrained environment. The CLRP is developed and updated by the Transportation Planning Board (TPB), which is responsible for unified transportation planning for the region comprising the District of Columbia, suburban Maryland, and Northern Virginia and serves as the Metropolitan Planning Organization (MPO) for the Washington, DC—MD—VA Urbanized Area. TPB receives technical support from the Metropolitan Washington Council of Governments (MWCOG). TPB is required to conduct a major update of the CLRP and develop a new Financial Plan every four years. The latest update for 2014 has not yet been released.[1] The six-year TIP is updated every year.

State Funding Eligibility Requirements

In Virginia, the Commonwealth Transportation Board (CTB) establishes policies for Virginia's transportation system and apportions state and federal funds. The CTB governs Virginia Department of Transportation or VDOT (highway funding) and Virginia Department of Rail and Public Transportation or DRPT (rail and transit funding) and approves these agencies' six-year plans with specific projects and funding sources. Within northern Virginia, VDOT and DRPT plans inform the regional CLRP and TIP. The 18-member CTB is chaired by the Secretary of Transportation and supported by the Office of Intermodal Planning and Investment (OIPI). OIPI was created in 2002 to encourage coordination of multimodal and intermodal planning across the various transportation modes within the Commonwealth.

The OIPI assists the CTB in conducting a comprehensive review of statewide transportation needs focusing primarily on corridors of statewide significance, regional networks and urban development

[1] http://www.mwcog.org/clrp/process/schedule.asp

areas and developing the VTrans Vision policy document (VTrans 2040 is planned for completion in 2015). The VTrans policy document, in its turn, guides development of the long range Statewide Surface Transportation Plan and the respective agencies' long range plans:

- Statewide Highway Plan
- Statewide Rail Plan
- Statewide Transit and Transportation Demand Management Plan

Federal Formula Funding Eligibility Requirements and Plans

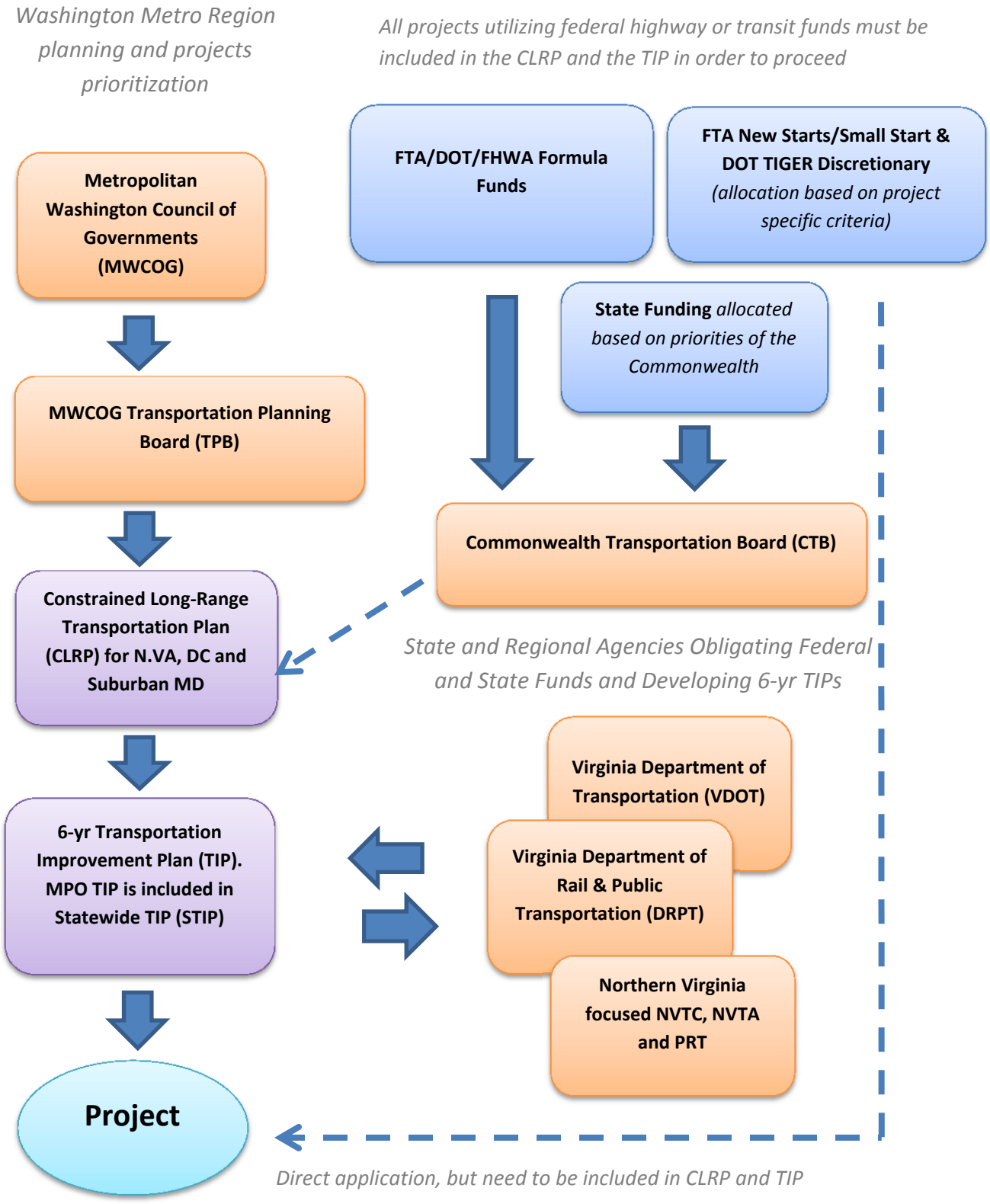
The Six-Year Improvement Program (SYIP) is the federally required transportation improvement plan that documents how Virginia will obligate its share of federal funds. This plan identifies those transit and highway construction and maintenance projects that will use federal funding, or for which federal approval will be required. DRPT and VDOT update the SYIP multiple times per year and the CTB adopts the SYIP annually in June. SYIP must include all projects included in the MPO TIPs. The current SYIP covers FY 2015 to FY2020, with funds programmed for 2015 for projects already recommended and approved for funding by the respective agencies, MPOs and the CTB.

Regional Funding Eligibility Requirements

Regional agencies obligating state and federal funding to the projects in Northern Virginia include Northern Virginia Transportation Authority (NVTA), Northern Virginia Transportation Commission (NVTC), and Potomac & Rappahannock Transportation Commission (PRTC).

Figure 2-1 summarizes the transportation planning and intergovernmental funding environment relevant to this project.

Figure 2-1: Transportation Planning and Funding Environment



2.2 Project Sponsors and Potential Project Funding Partners

At the local level, the counties whose population will benefit from the improved transit service and road improvements are Fairfax County and Prince William County. Fairfax and Prince William County will likely be the project sponsors.

Given the institutional landscape, the potential funding partners include state agencies such as the Department of Rail and Public Transportation and Virginia Department of Transportation, and regional agencies active in the Northern Virginia such as Northern Virginia Transportation Authority, Northern Virginia Transportation Commission, and Potomac & Rappahannock Transportation Commission. **Figure 2-2** summarizes local, regional and state stakeholders in the project.

2.2.1 State Agencies

State agencies include:

- **Virginia Department of Rail and Public Transportation (DRPT):** The Department of Rail and Public Transportation (DRPT) is an agency of the Commonwealth of Virginia. Its mission is "to improve the mobility of people and goods while expanding transportation choices in the Commonwealth." The three primary areas of DRPT activity are the state's railroads, public transportation, and commuter services. The Agency's director is a member of Northern Virginia Transportation Commission, and Potomac & Rappahannock Transportation Commission described below. The DRPT cooperates with VDOT on issues related to the TPB.

- **Virginia Department of Transportation (VDOT):** The Virginia Department of Transportation (VDOT) is responsible for building, maintaining and operating the state's roads, bridges and tunnels. VDOT is directed by a commissioner who sits on CTB. VDOT also serves as staff to the CTB and is a voting member of TPB.

2.2.2 Regional Agencies

Three regional agencies include:

- **Northern Virginia Transportation Authority (NVTA):** NVTA was created by the Virginia General Assembly in 2002, to develop a regional transportation plan for Northern Virginia, including projects of regional significance. The Authority is made up of nine jurisdictions including: the counties of Arlington, Fairfax, Loudoun and Prince William; as well as the cities of Alexandria, Fairfax, Falls Church, Manassas and Manassas Park. NVTA sets priorities for regional transportation projects. NVTA communicates priorities for federal and state funding to TPB. In 2012 the Authority completed TransAction 2040, its regional transportation plan consisting of projects of which would "reduce congestion, improve travel times, reduce delays, connect

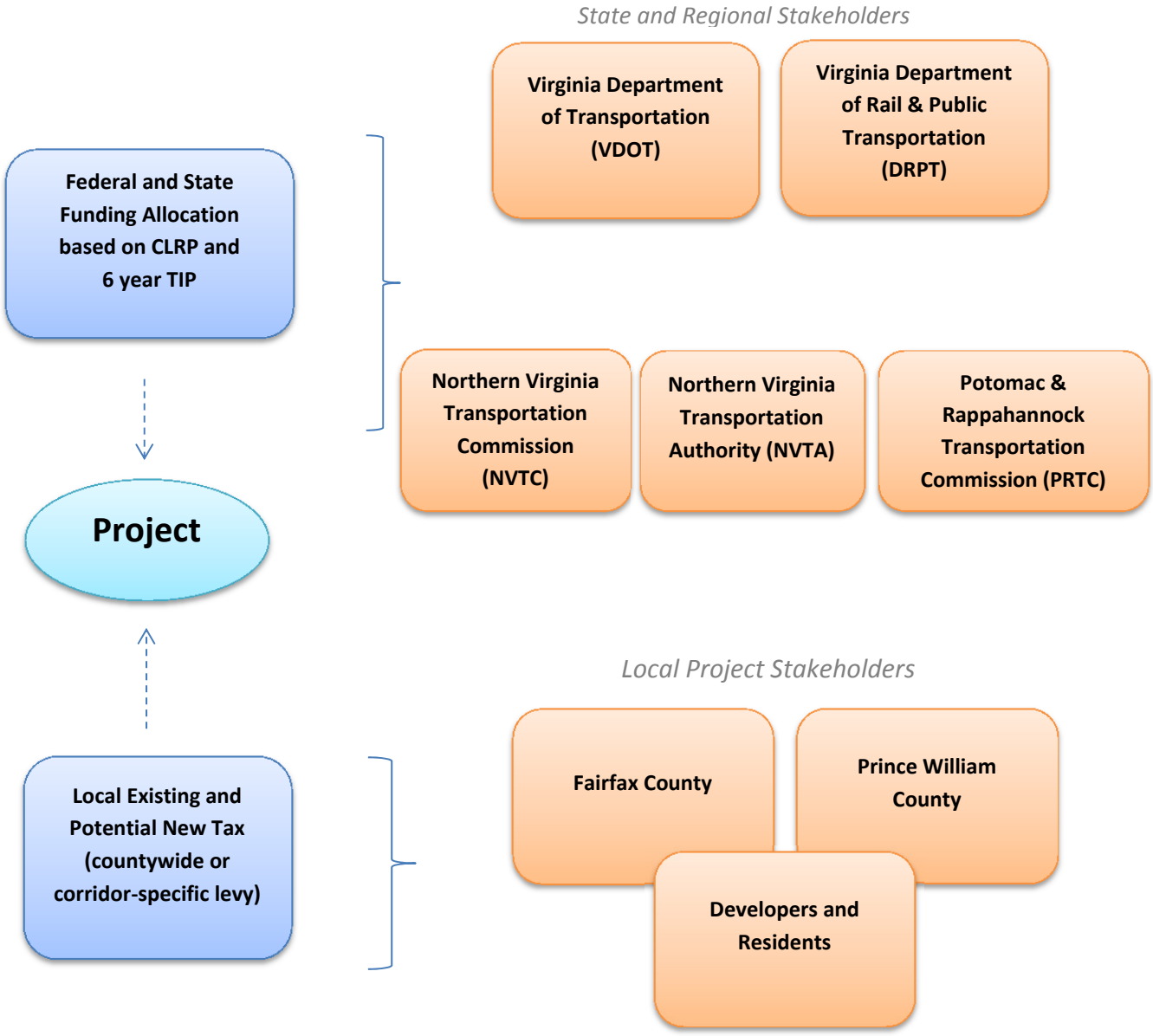
regional activity centers, improve safety, improve air quality, and move the most people in the most cost-effective manner".[2]

- **The Northern Virginia Transportation Commission (NVTC):** NVTC was created in 1964 by General Assembly to manage and control the functions, affairs, and property of the Northern Virginia Transportation District and to facilitate planning and developing a transportation system for Northern Virginia. Member jurisdictions include Arlington County, Fairfax County, and Loudoun County, and the cities of Alexandria, Fairfax, and Falls Church. It allocates over $100 million per year of regional, state and federal assistance to the six member jurisdictions and serves as a forum for regional transit and ridesharing policymaking. NVTC co-manages the Virginia Railway Express commuter rail service with PRTC.

- **The Potomac & Rappahannock Transportation Commission (PRTC):** The Potomac & Rappahannock Transportation Commission (PRTC), created in 1986, is a public transportation system in Prince William County, Virginia, plus two adjacent independent cities, Manassas and Manassas Park, that together are surrounded by the county. Transit services provided by PRTC include OmniRide, OmniLink, and OmniMatch. Together with the NVTC, PRTC operates the Virginia Railway Express.

[2] http://www.thenovaauthority.org/mission.html

Figure 2-2: Project State and Local Stakeholders and Relationships to Funding Sources



3.0 Federal Funding Sources

This section describes the Federal transit and highway funding options, including both discretionary grants and formula grants. Discretionary grant programs such as the Federal Transit Administration (FTA) Capital Investment Program (Section 5309) and TIGER are competitive nationwide programs. FTA Urbanized Area Grants, Federal Highways Administration (FHWA) Surface Transportation Program, and National Highway Performance Program (NHPP) provide transportation funding to the states and regions based on a specific formula.

The following sub-sections describe each federal funding source which may be considered for the project, recent trends, and the size of potential funding which could be expected.

3.1 FTA Transit Grants

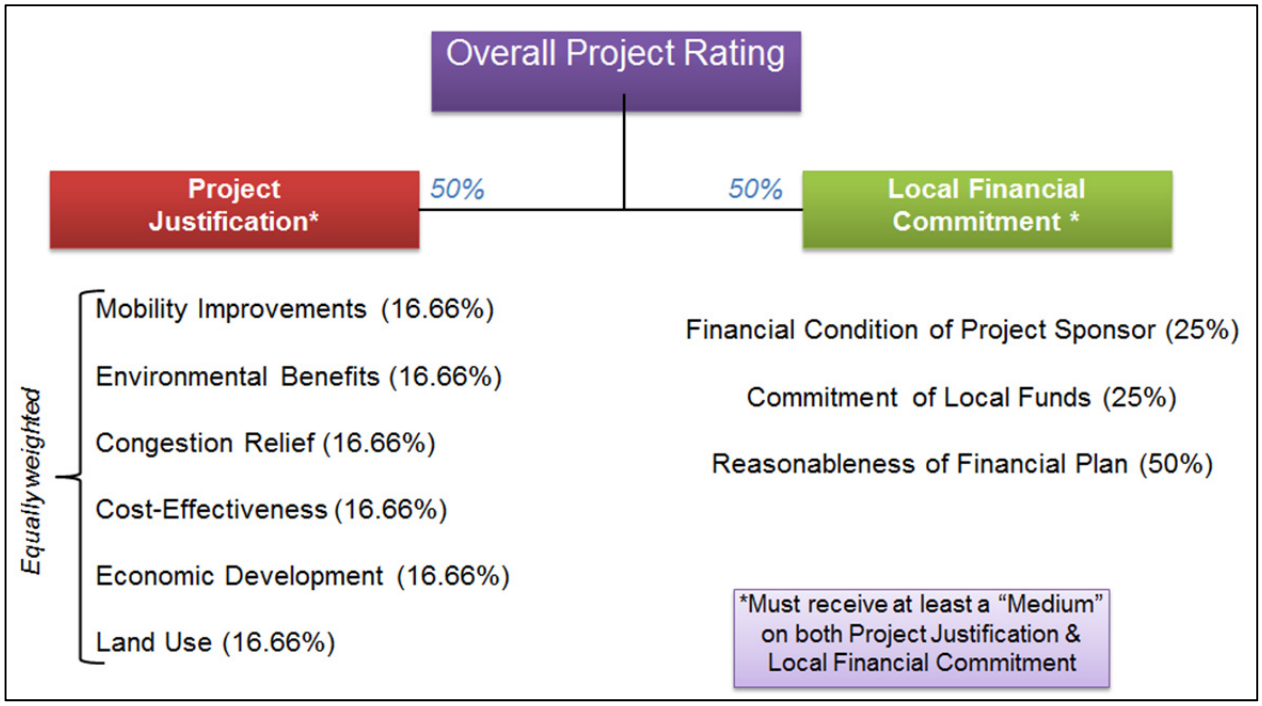
3.1.1 FTA New Starts/Small Starts

Program Eligibility and Evaluation Criteria

FTA Section 5309 Fixed Guideway Capital Investment Grant Program, also known as "New Starts/Small Starts", awards grants on a competitive basis for major investments in new and expanded rail, bus rapid transit (BRT), and ferry systems. Projects with a capital cost of over $250 million are eligible for New Starts funding, while projects eligible for Small Starts funding are less than $250 million.

New Starts/Small Starts Grant Program is becoming more competitive, placing a greater focus on local funding commitment. There are two sets of criteria that guide the FTA project selection. FTA applies *Project Justification* criteria shown on the left of the **Figure 3-1** (assigning equal weights to each criteria) and *Local Financial Commitment* criteria shown on the right side of the figure (assigning 25 percent weight to the Financial Condition of the Project Sponsor(s), 25 percent to the Commitment of Local Funds, and 50 percent weight to the strength of the Project Financial Plan. The overall rating is a combined rating based both on the strength of the Project Justification and the Local Financial Commitment.

Figure 3-1: New Starts Evaluation Framework



Source: http://www.fta.dot.gov/documents/NS-SS_Final_PolicyGuidance_August_2013.pdf

It is important to recognize that the Financial Plan requirements for FTA New Starts/Small Starts submission are different for New Starts and Small Starts. Development of a Financial Plan for the project will require clarification on the following assumptions:

- Assumption on target amount of federal share, which will determine the local match (based on the track record of previous projects-applicants 50 percent federal share will be a conservative estimate).
- Assumed maximum annual funding which may be available under the Full Funding Grant Agreement (based on the recent trends, also could be confirmed with the FTA New Starts/Small Starts Program staff).

Program Funding

Table 3-1 summarizes federal fiscal years 2011-2014 budget requests for New Starts/Small Starts. The budget funds newly signed Full Funding Grant Agreements (FFGAs), FFGAs that carry over from prior years, and FFGAs for projects under construction.

Table 3-1: FY 2011-FY2014 Budget Request for New Starts/Small Starts

Fiscal Year	Budget Request	New FFGAs	FFGAs approved in prior years, carry over	Continued Funding (Construction)
FY 2014	$1.9 billion for 27 projects	8 new projects	9 projects	10 projects
FY 2013	$2.2 billion for 29 projects	7 new projects	10 projects	12 projects
FY 2012	$3.2 billion for 28 projects	10 new projects	11 projects	7 projects
FY 2011	$1.82 billion for 27 projects	10 new projects	9 projects	8 projects

Source: http://www.fta.dot.gov/12347_5221.html

The Government Accountability Office (GAO) analysis of the FTA's 2004 through 2012 New Starts/Small Starts project data revealed that historically the federal share in the New Starts financing has been about 45.0 per cent, local about 48.1 per cent and state 6.9 percent. For Small Starts, the federal share was larger or 67 percent, with local contributing 24.1 percent and state - about 8.8 percent.[3]

If the project submits a competitive application and is approved by FTA into Engineering or for a Full Funding Grant Agreement, FTA could be expected to provide about 50 percent in federal share for the capital costs. Projects seeking FTA funding must demonstrate strong local financial commitment and achieve sufficient ratings in the Project Justification factors listed on the left side of the **Figure 3-1** above.

3.1.2 Section 5307 Urbanized Area Formula Grants

Program Eligibility and Evaluation Criteria

Section 5307 Urbanized Area Formula Grants program provides grants to urbanized areas (UZAs) with populations of more than 50,000 to support public transportation. Funding is distributed by formula based on the level of transit service provided, population, and other factors. Eligible projects include capital projects, planning, job access and reverse commute projects, operating and maintenance for operators in UZAs less than 200,000 in population and for small operators in larger UZAs.

Unlike FTA New Starts/Small Starts, Section 5307 Urbanized Area Formula funds are distributed through the state agencies such as Virginia Department of Rail and Public Transportation (DRPT) based on the federally-determined formula and project eligibility requirements as well as state and regional transportation priorities laid out in the Financially Constrained Long-Range Transportation Plan (CLRP) developed and updated by the National Capital Region Transportation Planning Board (TPB).

[3] GAO Report to Congressional Committees on Public Transit Funding for New Stars and Small Starts Projects, October 2004 through June 2012, November 2012
http://www.gao.gov/assets/660/650030.pdf

Program Funding

Total program FY 2014 Funding was about $4.45 billion. Northern Virginia receives Section 5307 Urbanized Area Formula funds as part of the Washington, DC, VA, and MD urbanized area (UZA). **Table 3-2** shows the FTA allocation of Section 5307 and 5340 funding to Northern Virginia as part of the Washington Capital Metro region under MAP-21.

Table 3-2: FTA 2013 Section 5307 and 5340 Urbanized Area Apportionments[4]

Area	Amount
Regional Total	$169.3 million
District of Columbia	$87.9 million
Maryland	$48.6 million
Northern Virginia	$32.9 million

Source: http://www.fta.dot.gov/12853_14875.html

3.2 Other Federal Highway Administration Grants

FHWA administers two relevant formula grant programs. Federal Surface Transportation Program (STP) funds and National Highway Performance Program (NHPP) funds are obligated by the Virginia Department of Transportation (VDOT) based on the transportation plans approved by the TPB and the CTB. The following sub-sections describe both programs.

3.2.1 FHWA Surface Transportation Program (STP)

Program Eligibility and Evaluation Criteria

The Surface Transportation Program (STP) provides flexible funding that may be used by States and localities for projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge, and tunnel projects on any public road; pedestrian and bicycle infrastructure and transit capital projects, including intercity bus terminals.

VDOT jointly with DRPT obligates federal STP funding based on the list of recommended regional STP projects approved by the Commonwealth Transportation Board (CTB). VDOT works with NVTA to identify and obligate funding for eligible STP projects in Northern Virginia (including Fairfax and Prince Williams Counties). NVTA receives applications for regional STP funding, reviews them and recommends a list of projects for funding approval by VDOT and CTB.

Program Funding

STP is funded from the Highway Account of the Highway Trust Fund. $10.1 billion were allocated to the Program for FY 2014 under MAP-21[5]. About $41 million in regional STP funds were projected to become

[4] Section 5340, the Growing States and High Density States Formula Program (49 U.S.C. 5340), can be applied to qualifying UZAs in addition to section 5307 funds

[5] http://www.fhwa.dot.gov/map21/factsheets/stp.cfm

available for FY 2020 STP applications within Northern Virginia. STP funds recipients have 12 months to obligate the funds and then 36 months to expend the funds.

Projected STP funding is fully programmed for FY 2014 to FY2020. New projects can be added only after funding of the next phase of the existing projects is provided. **Table 3-3** shows the projects and funding allocations for FY2020, which is indicative of the potential funding capacity for this source.

Table 3-3: Projected FY 2020 STP Regional Funding for Fairfax and Prince William Counties [1]

County	Total STP Funding	Funding Breakdown
Fairfax County	Total $18.3 million	$8 million for Tysons Corner Roadway Improvements, $4 million for Route 236/Beauregard Street Intersection Improvements, Route 7, $4.3 million for Reston Ave to Reston Pkwy and $2 million for Rolling Road (Old Keene Mill to FCP)
Prince William County	Total $8.1 million	$8.1 million for Route 1 widening from Featherstone Drive to Mary's Way

3.2.2 National Highway Performance Program (NHPP)

Program Eligibility and Evaluation Criteria

The NHPP Program was formed under MAP-21 through consolidation of Interstate Maintenance, National Highway System and some provisions of Highway Bridge programs under the prior federal funding authorization legislation, SAFETEA-LU. NHPP funds are used to support the condition and performance of the National Highway System (NHS), for the construction of new facilities on the NHS, and to ensure that investments of Federal-aid funds in highway construction are directed to support progress toward the achievement of performance targets established in an asset management plan of a State for the NHS.[6] MAP-21 establishes a performance basis for maintaining and improving the NHS. Eligible projects include rural and urban roads on the NHS, links to intermodal terminals, transit, bicycle and pedestrian improvements in NHS corridors.

Program Funding

The NHPP is authorized at $21.8 billion in FY 2014. A brief review of the VDOT FY 2014 annual budget shows that most of the NHPP funding is recommended for constructing roads and bridges on the interstate highway systems.[7]

[1] http://www.thenovaauthority.org/PDFs/Meetings/2013/12.12.13/X%20FY20%20CMAQ%20RSTP%20Strawman.pdf

[6] http://www.fhwa.dot.gov/map21/factsheets/stp.cfm

[7] http://www.virginiadot.org/about/resources/FY_14_Budget_final.pdf

3.3 Combined Multimodal Programs

The following sub-sections describe The Transportation Investment Generating Economic Recovery (TIGER) Grant Program, which is administered by the Department of Transportation (DOT), and the Congestion Mitigation and Air Quality Improvement (CMAQ) Program administered jointly by FHWA and FTA.

3.3.1 Federal TIGER Grants

Program Eligibility and Evaluation Criteria

The TIGER is a discretionary Grant program that provides competitive grants to fund investments in road, rail, transit, and port projects that promise to have a significant impact on the Nation, a region or a metropolitan area. Projects must demonstrate strong non-federal contribution and TIGER funding is usually the "last dollar in" to complete the financial plan. Projects need to be “shovel ready”, demonstrating project readiness. Projects should have received all Federal, State, and local permits and approvals, including completion of the NEPA process at the time the project is submitted.

The primary selection criteria for TIGER Grants include:

- **State of Good Repair:** Improving the condition of existing transportation facilities and systems, with particular emphasis on projects that minimize life-cycle costs.
- **Economic Competitiveness:** Contributing to the economic competitiveness of the United States over the medium- to long-term.
- **Livability:** Fostering livable communities through place-based policies and investments that increase transportation choices and access to transportation services for people in communities across the United States.
- **Environmental Sustainability:** Improving energy efficiency, reducing dependence on oil, reducing greenhouse gas emissions and benefitting the environment.
- **Safety:** Improving the safety of U.S. transportation facilities and systems.
- **Job Creation & Economic Stimulus:** quickly creating and preserving jobs and stimulating rapid increases in economic activity, particularly jobs and activity that benefit economically distressed areas.

The TIGER program has provided funding to many transit projects including Fort Lauderdale Wave Streetcar $18 million), Kansas City Downtown Streetcar ($20 million), Houston Regional Multimodal Connections Project ($15 million), City of Foley (AL) Transportation Regional Infrastructure Pedestrian System ($4.7 million) and others.

Program Funding

Congress provided $600 million for the FY 2014 round of TIGER Grants. In 2013, the DOT announced TIGER grants awards for 52 capital projects in 37 states.

The FY 2013 Appropriations Act specified that individual TIGER Discretionary Grants may be not less than $10 million (except in rural areas) and not greater than $200 million. It further stated that no more than 25 percent of the funds made available for TIGER Discretionary Grants could be awarded to projects in a single State.[8] "Eligible Applicants" for TIGER Discretionary Grants are State, local, and tribal governments, including U.S. territories, transit agencies, port authorities, metropolitan planning organizations (MPOs), other political subdivisions of State, or local governments.

Similar to FTA Capital Investment Program, the TIGER program is highly competitive. **Table 3-3** compares the number of applicants versus the awarded grants per year from 2010-2013.

Table 3-3: TIGER Grant Awards (2010-2014)

Program	Applications Received	Grants Awarded
TIGER 2014	797 applications for $9.5 billion	72 grants split $600 million
TIGER 2013	585 applications for $9 billion	52 grants split $474 million
TIGER 2012	703 applications for $10.2 billion	47 grants split $500 million
TIGER 2011	848 applications for $14.29 billion	46 grants split $511 million
TIGER 2010	1700 applications for $54 billion	75 grants split $583.7 million

Source: Eno Center for Transportation, Lessons Learned from the TIGER Discretionary Grant Program (April 2013), https://www.enotrans.org/wp-content/uploads/wpsc/downloadables/TIGER-paper.pdf

Based on the brief review of the past history of grant awards for other transit projects the potential TIGER grant size could be in the range of $10 to $20 million. Richmond Broad Street BRT received a $24.9 million grant award in 2014. A project needs to meet TIGER Grant eligibility criteria to qualify.

3.3.2 Congestion Mitigation and Air Quality Improvement (CMAQ) Program

Program Eligibility and Evaluation Criteria

Jointly administered by the FHWA and FTA, the Congestion Mitigation and Air Quality Improvement (CMAQ) Program provides a flexible funding source for transportation projects and programs that help improve air quality and reduce congestion. Funds are distributed by formula for areas that do not meet the National Ambient Air Quality Standards (nonattainment areas) as well as former nonattainment areas that are now in compliance (maintenance areas). The distribution formula is based on an area's population by county and the severity of its ozone and carbon monoxide problems within the nonattainment or maintenance area, with greater weight given to areas that are both carbon monoxide and ozone nonattainment or maintenance areas. Eligible uses are projects that reduce emissions or improve air quality, including capital costs of transit and highway projects; intermodal freight facilities

[8] TIGER Program website, FAQ: http://www.dot.gov/tiger/application-resources

and operations; and three years of operating and maintenance costs for new service, such as transit service or traffic management operations centers.

Program Funding

VDOT and DRPT jointly obligate federal CMAQ funding based on the list of recommended CMAQ projects approved by the CTB. VDOT works with NVTA to identify and obligate funding for CMAQ eligible projects in Northern Virginia (including Fairfax and Prince William Counties). NVTA receives applications for CMAQ funding, reviews them and recommends a list of projects for funding approval by VDOT and CTB. Thus, about $30 million in CMAQ funds were projected to be available for FY 2020 CMAQ applications. For CMAQ programs, the recipient has 24 months to obligate the funds and then 48 months to expend the funds.

CMAQ projects are included in the agencies' six-year plans. Projected CMAQ funding is fully programmed for FY 2014 to FY2020. New projects can be added but only after funding of the next phase of the existing projects is provided.

Fairfax County was proposed to receive about $11.2 million for the Columbia Pike Streetcar Project and $0.6 million for the Countywide Transit Stores project.[9] DRPT has an overall budget of CMAQ funding of $789.000 for FY15 and FY16, then $2.3 million in FY17 and $8.6 million in FY18.

The project area is located in nonattainment area for ozone and for particulate matter.[10] The project may be eligible to apply for funding for post FY 2020 regional CMAQ allocation. A brief review of the FY 2020 CMAQ projects recommended by the NVTA for funding in Fairfax County shows that CMAQ budgets are in the range of $5 to $10 million.

[9] http://www.thenovaauthority.org/PDFs/Meetings/2013/12.12.13/X%20FY20%20CMAQ%20RSTP%20Strawman.pdf

[10] Air Quality Conformity Determination of the 2013 Constrained Long Range Plan, the FY2013-2018 Transportation Improvement Program for the Washington Metropolitan Region: 2013, http://www.mwcog.org/transportation/activities/quality/Conformity/2013/2013_Conformity_Report.pdf

4.0 State Funding

4.1 DRPT Capital Assistance Grants

DRPT uses a tiered approached for the allocation of all transit capital funding allocations. The CTB adopted capital tiers are listed as follows:

- Tier 1 at 68% of State Share: rolling stock for replacement or expansion and related items
- Tier 2 at 34% of State Share: infrastructure and facilities
- Tier 3 at 17% of State Share: support vehicles, shop equipment, spare parts, etc.

Major capital investments, such as this project, would be funded at Tier 2 level for DRPT (or an assumed 33% state funding).

4.2 Commonwealth Transportation Fund

The Commonwealth Transportation Fund (CTF) receives state revenues from collection of:

- Motor Fuels Tax
- Motor Vehicle Sales and Use Tax
- State Retail Sales Tax
- Motor Vehicle Licenses

Composed of the Highway Maintenance and Operating Fund (HMOF) and the Transportation Trust Fund (TTF), the CTF is the major source of revenues for the construction and maintenance of highways in the Commonwealth. In 2013 the HMOF received about $1.4 billion in revenue and the TTF received about $1.1 billion in revenue. The funding projected for 2014 includes $1.6 for HMOF and $1.2 billion for TTF, or a total of $2.8 billion for both.[11] **Table 4-1** presents VDOT six-year forecast of CTF revenues and Table 4-2 summarizes how these funds are projected to be expended. Both tables compare FY2015-2020 funding to FY2014-2019 funding levels. **Table 4-2** shows a slight reduction in allocation to Rail and Public Transportation and shows a steady funding to the Northern Virginia Transportation Authority. VDOT notes that "DRPT reduction impacts Mass Transit and Rail Enhancement programs". [12]

Based on the 2013 adopted Virginia Transportation Funding Bill HB2313 and effective July 1, 2013, a new 0.3 percent additional state Retail Sales and Use Tax was imposed statewide bringing the existing state sales tax from 5 percent to 5.3 percent (4.3 percent state tax which increased from 4 to 4.3 percent and the remaining state levy of 1 percent local tax).[13] This additional 0.3 percent sales tax will accrue to the CTF and fund projects throughout the state as determined by the CTB priorities.

[11] http://www.dmv.state.va.us/webdoc/pdf/fiscal.pdf
[12] http://www.ctb.virginia.gov/resources/2014/jan/pres/Presentation_Agenda_Item_4.pdf
[13] HB2313 § 58.1-638.3.: http://lis.virginia.gov/cgi-bin/legp604.exe?131+sum+HB2313

Table 4-1: VDOT Reported Preliminary CTF Revenue Forecast for FY 2015-2020

(Amounts in millions)

	2015	2016	2017	2018	2019	2020	Total	FY 14-19	Difference
State Transportation Revenues									
HMO	$1,824.3	$1,956.1	$2,004.7	$2,028.9	$2,052.8	$2,078.8	$ 11,945.6	$11,903.7	$ 41.9
TTF net interest	1,108.9	1,149.7	1,185.1	1,218.8	1,251.7	1,285.7	7,199.9	7,316.8	(116.9)
PTF (From TTF)	168.7	177.3	183.1	189.9	200.8	207.8	1,127.6	1,108.1	19.5
Regional Transportation Funds	455.2	494.1	512.1	531.5	551.9	572.5	3,117.2	3,174.8	(57.6)
Local and Other Revenues	338.8	369.0	394.1	433.3	480.0	379.1	2,394.3	2,208.7	185.6
Total	**3,895.9**	**4,146.2**	**4,279.1**	**4,402.4**	**4,537.2**	**4,523.9**	**25,784.6**	**25,712.1**	**72.6**
Federal Revenues	**891.2**	**923.3**	**923.3**	**923.3**	**923.3**	**923.3**	**5,507.6**	**5,634.7**	**(127.2)**
Total Revenues	**4,787.1**	**5,069.5**	**5,202.3**	**5,325.6**	**5,460.4**	**5,447.2**	**31,292.2**	**31,346.8**	**(54.6)**
Other Financing Sources									
GARVEE Bonds	-	375.0	225.2	130.0	110.0	-	840.2	1,042.9	(202.7)
Capital Projects Revenue Bonds	122.9	122.9	122.9	122.9	61.6	50.0	603.2	837.3	(234.1)
Total	**122.9**	**497.9**	**348.1**	**252.9**	**171.6**	**50.0**	**1,443.5**	**1,880.3**	**(436.8)**
Total Revenues and Other Financing Sources	**$4,910.0**	**$5,567.4**	**$5,550.4**	**$5,578.5**	**$5,632.1**	**$5,497.2**	**$ 32,735.6**	**$33,227.1**	**$ (491.4)**

Table 4-2: VDOT Reported Preliminary Allocations of CTF Funds, FY 2015-2020

(in millions)

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Total	Total from FY14-19 SYFP	Difference
Debt Service	$ 338.7	$ 369.1	$ 424.2	$ 481.4	$ 540.2	$ 404.1	$ 2,557.7	$ 2,371.2	$ 186.5
Other Agencies & Transfers	60.5	60.6	43.3	43.7	44.8	45.8	298.7	304.1	(5.5)
Maintenance & Operations	1,922.8	1,984.2	2,028.1	2,062.7	2,099.7	2,139.5	12,237.0	11,934.4	302.5
Tolls, Administration & Other Programs	431.2	441.4	453.0	464.0	474.1	484.4	2,748.1	2,712.7	35.3
Rail and Public Transportation	495.3	511.7	525.4	547.5	489.8	478.3	3,048.0	3,141.5	(93.5)
Port Trust Fund	38.5	41.1	42.3	43.5	44.7	45.8	255.9	262.4	(6.5)
Airport Trust Fund	21.9	23.4	24.1	24.8	25.5	26.2	146.0	150.4	(4.4)
Northern Virginia Transportation Authority Fund	299.3	310.4	321.0	332.3	344.1	356.4	1,963.4	1,898.5	64.9
Hampton Roads Transportation Fund	155.9	183.7	191.1	199.1	207.7	216.2	1,153.8	1,276.3	(122.5)
Construction	1,145.9	1,641.9	1,497.8	1,379.5	1,361.4	1,300.6	8,327.2	9,175.4	(848.2)
Total	**$ 4,910.0**	**$ 5,567.4**	**$ 5,550.4**	**$ 5,578.5**	**$ 5,632.1**	**$ 5,497.2**	**$ 32,735.6**	**$ 33,227.1**	**$ (491.4)**

Source: http://www.ctb.virginia.gov/resources/2014/jan/pres/Presentation_Agenda_Item_4.pdf

Table 4-3: VDOT Reported Preliminary Allocations of CTF Funds, FY 2015-2020

Six Year Projection of Allocations for the Rail and Public Transportation Improvement Program

	FY15	FY16	FY17	FY18	FY19	FY20	Total
Mass Transit Trust Fund:							
Operating Assistance:	$ 175,379,366	$ 176,994,284	$ 183,819,431	$ 188,843,488	$ 193,886,221	$ 198,371,488	$ 1,117,294,278
Operating Assistance - I-95 Technical Memo #3	-	629,000	629,000	629,000	629,000	1,355,000	3,871,000
Capital Assistance:	60,534,070	47,953,932	52,917,380	54,661,310	56,412,292	59,148,185	331,627,169
Capital Assistance - Multi Year/Other Projects	3,520,513	3,520,513	926,908	926,908	926,908	-	9,821,750
Special Projects-Other:	2,363,954	1,576,933	1,861,314	2,070,586	2,280,704	2,497,782	12,651,273
Special Projects-TDM/TMP:	3,820,036	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	23,820,036
Paratransit Assistance Program (From MTTF):	1,258,949	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	8,758,949
Total Mass Transit Trust Fund Allocation:	**246,876,888**	**236,174,662**	**245,654,033**	**252,631,292**	**259,635,125**	**266,872,455**	**1,507,844,455**
Mass Transit Capital Fund (Bond Funds):	44,740,482	60,000,000	60,000,000	60,000,000	27,333,390	-	252,073,872
Capital Bonds / PRIIA Match:	50,000,000	50,000,000	50,000,000	50,000,000	50,000,000	50,000,000	300,000,000
Capital Bonds - Multi Year/Other Projects	22,301,500	3,910,000	-	-	-	-	26,211,500
Dulles Extension:	-	-	-	-	-	-	-
Local Funds:	701,000	855,290	872,396	889,844	907,641	907,641	5,133,812
State Match to FTA Section 5303/5304 Program:	482,762	600,000	600,000	600,000	600,000	600,000	3,482,762
Rail Enhancement Program (Including Interest):	41,496,682	31,129,331	33,873,205	12,815,802	12,282,539	7,680,000	139,277,559
Intercity Passenger Rail Program:	51,933,988	46,289,768	67,619,744	41,316,627	29,345,618	13,270,444	249,776,188
Rail Preservation Program (Including Interest):	13,850,639	12,915,616	4,608,770	4,011,608	1,444,800	1,188,600	38,020,033
Flexible STP Funds for Transit:	11,204,782	16,831,390	24,224,312	24,224,312	24,224,312	25,587,412	126,296,520
Flexible STP - Multi Year/Other Projects	6,938,102	6,938,102	1,363,100	1,363,100	1,363,100	-	17,965,504
FHWA Program Funds:	26,640,511	12,056,482	9,276,137	2,618,771	35,323,781	10,262,299	96,177,981
State Match to FHWA Program Funds:	-	12,891,347	14,291,737	47,758,664	20,196,574	28,683,697	123,822,019
FTA State Administered Program Funds:	45,701,544	34,283,482	34,283,482	34,283,482	34,283,482	34,283,482	217,118,954
FRA High Speed Rail Funds:	7,176,800	7,176,800	2,808,000	2,808,000	4,492,800	-	24,462,400
Total Rail and Public Transportation Allocations:	**570,045,680**	**532,052,270**	**549,474,916**	**535,321,502**	**501,433,162**	**439,336,030**	**3,127,663,559**
Congestion Mitigation Air Quality (CMAQ)	789,202	789,202	2,398,741	8,632,734	5,924,498	8,879,070	27,413,447
Regional Surface Transportation Program (RSTP)	-	-	-	4,011,431	2,400,000	1,840,000	8,251,431
State Match from Transportation Trust Fund (TTF)	197,301	197,301	599,685	3,161,041	2,081,125	2,679,767	8,916,220
Total MPO CMAQ and RSTP Allocations	**986,503**	**986,503**	**2,998,426**	**15,805,206**	**10,405,623**	**13,398,837**	**44,581,099**
Total Allocations	**$ 571,032,183**	**$ 533,038,773**	**$ 552,473,342**	**$ 551,126,708**	**$ 511,838,785**	**$ 452,734,867**	**$ 3,172,244,657**

Source: http://www.drpt.virginia.gov/about/files/FY15%20SYIP%20Draft%204-7-2014.pdf

5.0 Regional Funding

Regional funding consists of the regional 2.1 percent Motor Vehicle Wholesale Fuel Sales Tax and recently adopted additional 0.7 percent Regional Sales and Use tax, Grantor's Tax (a tax on home sales), the Transient Occupancy Tax (a tax on hotels based on occupancy).

5.1 Northern Virginia 2.1% Motor Vehicle Wholesale Fuel Sales Tax

A 2.1 percent motor vehicle wholesale fuel sales tax is imposed on sales of fuel to any retail dealer for retail sale in the Northern Virginia Transportation District (Counties of Arlington, Fairfax and Loudoun and the Cities of Alexandria, Fairfax, and Falls Church) and in the Potomac and Rappahannock Transportation District (Counties of Prince William, Spotsylvania and Stafford and the Cities of Fredericksburg, Manassas and Manassas Park).[14] The tax receipts are remitted to the Northern Virginia Transportation Commission (NVTC) and Potomac and Rappahannock Transportation Commission (PRTC) to fund operation of the Virginia Railway Express (VRE) and bus operations.

PRTC and NVTC maintain the tax receipts separately for the benefit of each member jurisdiction and are used to pay administrative costs of PRTC and NVTC and transportation projects serving a particular jurisdiction.[15] According to the 2013 NVTC Comprehensive Annual Financial Report, Fairfax County contributed about $25.1 million in motor vehicle fuel sale taxes in FY 2013. Similar data from Prince William is not readily available from the PRTC.

5.2 Northern Virginia Additional Sales, Grantor's and Transient Occupancy Taxes

The 2013 adopted Virginia Transportation Funding Bill HB2313 imposed an additional 0.7 percent sale tax in the Northern Virginia (Planning District Commission 8) and Hampton Roads (Planning District Commission 23) regions bringing the total rate of the state and local Retail Sales and Use Tax in these jurisdictions to 6.0 percent.[16] The regional tax will be administered in the same way as the state Retail Sales and Use Tax and will constitute a dedicated source of funding for NVTA.

In addition to the 0.7 percent sales tax increase, HB2313 enacted increase in two other additional regional taxes which will be dedicated to the Northern Virginia Transportation Authority Fund to fund project in Northern Virginia. These are:

- **A Regional Congestion Relief Fee**: a fee at a rate of $0.15 per $100 of the value of the real property sold in Northern Virginia[17]

[14] http://www.tax.virginia.gov/Documents/TaxFacts.pdf
[15] http://www.prtctransit.org/docs/PRTC_FY12_Audited_Financial_Statements.pdf, p. 4.
[16] HB2313 § 58.1-604.01.
[17] HB2313 § 58.1-802.2.: http://lis.virginia.gov/cgi-bin/legp604.exe?131+ful+CHAP0766

- **Additional 2 percent Transient Occupancy Tax**: additional transient occupancy tax at the rate of two percent of the amount of the charge for the occupancy of any room or space occupied.[18] This tax increase from the original rate of 5 percent to 7 percent.

The amount of estimated funding NVTA could receive from the additional sales tax, regional congestion fee, and additional transient occupancy tax are reported to be in the order of $300 to $350 million annually.[19]

[18] HB2313 § 58.1-1742.: http://lis.virginia.gov/cgi-bin/legp604.exe?131+ful+CHAP0766
[19] http://www.fairfaxcounty.gov/chairman/pdf/va_transportation.pdf

6.0 Local Funding

This section describes the local revenue sources considered for the project that do not yet exist in the corridor. The local revenue sources are not only the most likely revenue source for the project, they are also very important to consider early in the planning process if the project applies for FTA New Starts/Small Starts funding.

6.1 Application of Broad-Based County-Level Budget Funds to Specific Projects

In order to implement large capital projects, local jurisdictions are applying broad-based tax revenues to fund their Capital Improvement Programs either via sales of general obligation debt backed predominantly by the county property taxes revenue or on a pay-as-you-go basis.

6.1.1 Fairfax County

Fairfax County Capital Improvement Program is funded from the General Obligation Bond sales, pay-as-you-go or current year funding from the General Fund, as well as from other sources such as federal funds, revenue bonds and user fees (sewer system revenues). Fairfax County maintains a policy of funding project through the sale of General Obligation Bonds.[20] According to the County's adopted 2012-2016 CIP document "this allows the cost of the facility to be spread over a number of years so that each generation of taxpayers contributes a proportionate share of the use of these long-term investments". The bond program is projected to provide "a healthy level of approximately $1.2 billion of capita construction funds over the CIP five year period.[21] Every bond sale has to be approved by voters.

The county directs funds raised though bond sale to funding transportation and pedestrian access projects. In addition to bond proceeds, the County's commercial and industrial real estate tax rate (approved by County legislators in 2007) provides a dedicated source of funding for transportation projects. The current rate of 12.5 cents per $100 of assessed value (adopted at the maximum allowable rate) approved for FY2014 budget would generate approximately $50.5 million for capital and transit projects.

As a result of passage of HB2313, as discussed in section 5.2, Fairfax County will generate approximately $125.2 million in additional transportation revenues annually beginning in FY 2014. Of this total, $37.5 million of 30 percent will be available directly to the County with the balance of $87.7milion of 70

[20] Fairfax County, 2012-2016 Capital Improvement Program, p 26: http://www.fairfaxcounty.gov/dmb/fy2012/adopted/cip.pdf
[21] Fairfax County 2014 Adopted Budget, p 2: http://www.fairfaxcounty.gov/dmb/fy2014/adopted/volume1/00140.pdf

percent flowing to the Northern Virginia Transportation Authority.[22] NVTA will use its portion of new funding to fund projects priorities and selected as part of the NVTA's TransAction 2040 Plan.

Error! Reference source not found. below lists the funds programmed by Fairfax County in its current Four-year Transportation Program.

Table 6-1: Fairfax County Four-Year Transportation Program (2013-2016)

Program	Four-Year Total	Share of Total
Regional Surface Transportation Program (RSTP) and Federal Congestion Mitigation and Air Quality funds (CMAQ)	$237 million ($59 million annual average)	25%
Existing and proposed County General Obligation and Revenue Bonds	$245 million (61 million annual average	26%
County Commercial and Industrial Tax revenues	$262 million (66 million annual average)	25%
Other federal and private sources	$193 million (48 million annual average)	21%
Total	**$937 million**	100%

Source: http://www.fairfaxcounty.gov/fcdot/fouryearprogram.htm

6.1.2 Prince William County

Similarly to Fairfax County, Prince William County is funding its capital improvement program through a mix of federal and state assistance, bond proceeds, general fund support and dedicated revenue. Thus, the County earmarks a portion of the Recordation tax revenue for transportation purposes or predominantly for road improvement projects. Recordation tax is a tax on admission to records of deeds, deeds of trusts, mortgages, leases and contracts relating to real estate. This tax generates about $5 million annually for transportation projects.[23]

For the transit and rail services in Prince William County, the County contributes to the operating subsidy as well as the capital improvement program expenditures of the Potomac and Rappahannock Transportation Commission (PRTC). This subsidy is funded from the revenues generated by a 2.1 percent motor vehicle wholesale fuel sales tax discussed in section 5.0.

[22] Ibid.
[23] Virginia Department of Taxation: http://www.tax.virginia.gov/Documents/TaxFacts.pdf

6.2 Value Capture (VC)

Funding for the transit and highway improvements along the Route 1 corridor may come from the application of approaches categorized as Value Capture (VC), which include:

- Tax Increment Financing (TIF)
- Special Assessment District (SAD)
- Joint Development

Value Capture mechanisms "capture" increases in property values that occur over time resulting from public investments in infrastructure, including transit and transportation projects, possibly in combination with other public redevelopment investments. The "captured" value, typically in the form of additional tax revenue resulting incremental property assessed value or a special property tax assessment, are then applied, in part, to fund investments in public infrastructure or repay debt incurred to fund the public investment.

Attachment A provides preliminary findings of potential use of value capture in the corridor.

6.2.1 Tax Increment Financing (TIF)

Under Virginia law, a TIF District can include all taxable real estate (office, commercial, retail, industrial and residential properties) located in TIF District designated area.[24] TIF can be established by a local ordinance. TIF districts examples in Virginia include the Crystal City TIF (established by Arlington County Board in 2010) which includes properties in Crystal City, Pentagon City, and Potomac Yard. Per the Board's policy, up to 33 percent of the incremental new property tax revenues generated in the TIF defined area may go into the TIF Fund to benefit the Crystal City streetcar and the street-grid realignments needed to enable new development including public spaces.

TIF District revenues are dependent on the magnitude and timing in real estate appreciation in the project area. This makes it difficult to finance a portion of the project costs with a pure TIF-backed revenue bond. Thus, many localities in Virginia have used different versions of a "shadow TIF" approach:

- **Shadow TIF 1:** The County does not actually set up a TIF district. Instead, bonds issued to pay for upfront investment costs are general obligation (GO) debt, as is normally the case for infrastructure investment in a locality. However, the results of the TIF analysis—demonstrating the expected future development and tax revenues—are used to convince the project stakeholders and beneficiaries of the worth of the investment and its ability to pay for itself over time.
- **Shadow TIF 2:** The County does designate and create a TIF district and segregates the incremental property tax revenues in that district into a separate account which is dedicated to paying back the investment costs. However, the bonds are still GO bonds (thus avoiding the higher interest rates associated with a pure TIF-backed revenue bond), and County general

[24] Virginia Code, sections § 58.1-3245.2: https://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+58.1-3245.2

funds are likely to be used to pay debt service in the early years, while TIF revenues are still building. In later years, once the majority of the development has occurred, the TIF fund would then be able to take over the debt service and also pay back the general fund for its earlier expenditures.

6.2.2 Special Assessment Districts

A Special Assessment District (SAD) is another form of Value Capture which involves establishment of a special tax district to generate funds which would fund public investments such as transit improvements. A special tax or a fee is then applied to the commercial and industrial properties (per $100 of assessed value or per square foot basis) located in the district which would benefit from the public investment. SADs Districts generally exclude residential properties. This tax or a fee is applied to the assessed value in addition to the existing real estate property tax rate.

In Virginia, a SAD is referred to as a Transportation Improvement Districts (TID). The Virginia Code allows creation of a TID to fund transportation projects upon petition by owners of 51 percent (by land area or assessed value) of taxable property in the proposed district. The law precludes inclusion of residential properties in TID (rental property such as apartment buildings can be included as commercial use). The law also specifies the statutory maximum rate of $0.40 per $100 assessed value with all funds raised to be used for District purposes.[25] Once a TID is in place, it may have a significant advantage of producing a sizable stream of revenue immediately upon its adoption, as opposed to TIF where revenue stream will depend on the timing of increase in land values and hence the increase in the real estate assessed value.

Examples of TIDs in Virginia include:

- Dulles Metrorail extension in Fairfax County: A special assessment district covers the entire rail corridor. This special tax district imposes a levy of $0.21 per $100 assessed value on commercial and industrial zoned property.
- Route 28 Transportation Tax District in Fairfax and Loudon Counties: This special tax district imposes a levy of $0.18 per $100 assessed value on commercial and industrial zoned property, or property used for commercial or industrial purposes within the district.

6.2.3 Joint Development

Joint Development (JD) is another value capture mechanism often applied on a small scale of one or more related parcels of real property. Joint development commonly refers to the coordinated development of public transportation facilities with other non-transit development, including commercial and residential development. Coordinated development often involves private and public entities working in concert on projects of mutual interest where transit and non-transit developments are integrally related to one another and are often co-located. Interested developers could be engaged in JD whereby they would pay a part of the station construction costs (example: WMATA NoMa-

[25] Virginia Code, sections §§ 33.1-430 to 33.1-446

Gallaudet U--formerly New York Avenue--Station Development). Other examples include leasing or sale by transit agencies of the surface and or air rights owned by them to the private developers when such development does not interfere with the operation of the transit system (examples include Washington Metropolitan Area Transit Authority (WMATA), Metropolitan Atlanta Rapid Transit Authority, (MARTA), Bay Area Rapid Transit (BART), and Miami Dade Transit (MDT).

Examples of Joint Development mechanisms applied in Virginia include:

- WMATA Dunn Loring-Merrifield Station: High density development including the creation of 628 residential units (including 8 percent affordable housing units) and 125,000 retail square feet, including new Harris Teeter supermarket (60,000 square feet of the 125,000 retail square feet will be in and adjacent to a Metro parking structure.
- WMATA East Falls Church Station: Future plans include similar development to the above, recently advertised in the I-66 Air Rights Request for Information to developers.

Feasibly of Joint Development potential will be assessed if public land within the project corridor (including properties to be purchased for the construction and operation of the project) can be leased or sold for development around the stations.

Excess property which could be leased or sold to private developers and air rights around the planned stations along the proposed Route 1 Corridor would determine the potential for Joint Development. The Joint Development however, is more frequently utilized around the rail stations development and BRT technology may not attract a significant developers' interest as it does not involve "tracks on the ground" like heavy rail and light rail options.

7.0 Preliminary Findings and Conclusions

This section draws conclusions from the review of the potential federal, state, and local funding sources for the project described in Sections 3 to 6. Section 7.2 presents various funding strategies used by other projects in the region to fund capital project expenses. **Table 7-1** summarizes the funding sources reviewed and suggests sources which could be advanced for further consideration as part of the project funding strategy. **Section 8** is a specific application of funding assumptions applied to the recommended project in a phased approach.

7.1 Conclusions

7.1.1 Federal Funding Considerations

FTA Capital Investment Program (New Starts)

The potential mix of local revenue sources (local, state and regional) is very important to consider early on in the project development if the project is to apply for the FTA New Starts/Small Starts Capital Investment Program. If the decision is made to apply for the FTA New Starts capital grant the project can expect that about 50 percent of the project capital costs would have to be covered through the local revenue sources ("local match") with the FTA contributing the remaining 50 percent. The FTA's share of funding could be higher for Small Starts program. FTA looks favorably at project applications that commit a higher level of the "local match" to the project costs.

With the annual budget allocation of about $2 billion, FTA New Starts/Small Starts became a popular and highly competitive nationwide capital grants program for the transit industry. An FTA-ready Financial Plan could be developed for the project once the Locally Preferred Alternative (LPA) for the project is selected.

Transportation Investment Generating Economic Recovery (TIGER)

The other federal discretionary grant program to be considered is the Transportation Investment Generating Economic Recovery (TIGER) grant program. Similar to the FTA New Starts/Small Starts the TIGER Grant Program is a nationwide competitive grant program, and project sponsors must demonstrate strong non-federal contribution. The TIGER Grant Program funds other transportation modes such as highways, intercity rail, transit, and ports that can demonstrate significant economic impacts (such as potential to improve livability, environmental sustainability, safety, create jobs). The TIGER Grant Program is also smaller than the FTA New Starts/Small Starts in terms of annual funding available; FTA provided roughly $2 billion on annual basis for transit projects in recent years. The typical project award amount ranges from $15-20 million and is usually the "last dollar in" to complete the financial plan.

The TIGER Program provided funding to a number of transit projects including Fort Lauderdale Wave Streetcar ($18 million), Kansas City Downtown Streetcar ($20 million), Houston Regional Multimodal Connections Project ($15 million), and many others.

Federal Formula Funds

Unlike discretionary funds such as FTA New Starts/Small Starts and TIGER Grant Program, federal formula funds are distributed through state agencies based on the federally determined formulas and state transportation priorities laid out in the Long Range Financial Constrained Long Range Transportation Plan (CLRP) and six-year Transportation Improvement Plan (TIP). Federal formula funds include Section 5307, Urbanized Area Formula Grants; Surface Transportation Program (STP) funds, National Highway Performance Program (NHPP), and Congestion Mitigation and Air Quality Improvement Program (CMAQ). The project would need to be included in the CLRP as well as VDOT's and DRPT's six-year TIPs to be eligible for this funding.

Regional Funding

Both Fairfax County and Prince William County are members of the Northern Virginia Transportation Authority (NVTA) which in 2002 received a legislative mandate to facilitate regional transportation planning and congestion relief in the Northern Virginia Region. The agency was tasked with preparation of TransAction 2040 (a regional transportation plan for Planning District 8) and with the passage of Commonwealth of Virginia House Bill 2313 (Acts of Assembly 2013, Chapter 766) in 2013 it was provided with a dedicated funding to invest in priority transportation projects in the Northern Virginia. As a result of HB2313 the NVTA would receive about $300 to $350 in annual funding starting in 2014.

State Funding

The project funding strategy should consider state funding. In Virginia, these funds are distributed by the VDOT and DRPT. Both state and federal formula funds may not be available to the project in the short run, as the project will need to be first included in the CLRP and the six-year TIP. In accordance with HB2313, major capital investments are funded at Tier 2 investment levels, or 34 percent state funding.

Local Funding: General Funds

Many jurisdictions implementing major transit capital investments dedicate general revenues to the projects and impose additional tax mechanisms to generate additional revenue. Fairfax County and Prince William County will consider adding the Route 1 improvements to their priorities to be funded through their ongoing Capital Improvement Programs. Given recent increases in sales tax rates to fund transportation improvements in northern Virginia, the jurisdictions would seek to make use of these funds through NVTA, and it is unlikely that additional taxes would be imposed.

Local Funding: Value Capture

In weighing the decision to pursue TIF or SAD funding mechanisms, a local jurisdiction must evaluate not only the financial feasibility (i.e. potential revenue yield), but also the likelihood of successful implementation, reflecting the advantages and disadvantages of each. **Attachment A** provides a

summary of a conceptual approach to assessing the scale of potential value capture within the Route 1 corridor.

Table 7-1: Summary of Funding Sources & Decision to Advance for Further Consideration

Candidate Sources	Description	Main Considerations	Consider for Further Analysis? Yes or No
FTA New Starts/Small Starts Discretionary Nationwide Grant Program	Capital Grants for investments in new and expanded rail, bus rapid transit, and ferry	Competitive, depends on congressional appropriations but a large source of capital funding dedicated to mass transit – approx. $2 billion/year for about 30 projects (new & ongoing). Focus on local project sponsorship & local commitment (about 50% of costs)	Yes, this source may provide up to **50% of project costs** for New Starts and about 65% for Small Starts
TIGER Discretionary Nationwide Grant Program	Capital Grants for investments in road, rail, transit & port projects that promise to achieve national objectives (job creation, economic competitiveness, environment)	Competitive, dependent on congressional appropriations. The funding is about $500-600 million per annum for about 50 projects on average. Need to demonstrate project readiness and long term economic impact.	Yes, this source may provide **$10 to $20 million** if project qualifies and Congress continues funding
Federal Formula Grants: STP, CMAQ, Urbanized Area Grants (UZAs), NHPP	• Section 5307: Urbanized Area Grants for capex, opex & planning for UZAs's public transportation • CMAQ: flexible funding for projects that reduce congestion and improve air quality • STP: projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian & bicycle infrastructure, and transit capital projects, including intercity bus terminals • NHPP: supports condition and performance of the National Highway System	• Section 5307: apportioned based on population to Northern VA as part of total apportionment to Washington DC-VA-MD Metro Area • CMAQ: the project should be located in or benefit a nonattainment or maintenance area. Route 1 project is located in nonattainment area for ozone, but attainment for particulate matter and carbon monoxide. • STP: flexible funding for projects to improve conditions on Federal–aid highway and transit capital projects. • NHPP: A brief review of the VDOT FY 2014 annual budget revealed that most of the NHPP funding is recommended for constructing roads and bridge on the interstate highway systems.	Yes for Section 5307, CMAQ, STP and NHPP. The project cannot count on funding until it is included in Long Range Transportation Plan & 6-yr TIPs. These funds are already programmed until FY2020. • Section 5307: About $30m for all of Northern VA. • CMAQ: About $5 to $10 million, for post FY 2020 allocation, if project qualifies on air quality • STP: $2 to $8 million depending on type of improvement • NHPP: funded at $21.8 billion for nationwide allocation in 2014. This source may provide funding for road widening, adding new lanes.

Table 7-1: Summary of Funding Sources & Decision to Advance for Further Consideration (Continued)

Candidate Sources	Description	Main Considerations	Consider for Further Analysis? Yes or No
State	• Commonwealth Transportation Trust Fund or CTF (consolidates state and federal funding and planned bond proceeds) • House Bill 2313 imposed an additional 0.3% Sales Tax	• Grants applied to statewide priorities with about $500 million allocated to rail and public transportation in FY 2015-2020 VDOT Revenue Forecast • Planned to be allocated to the CTF	• Yes, but likely delay in programming, as funds are allocated based on the six year TIP priorities.
Regional	• Northern Virginia 2.1% Motor Vehicle Wholesale Fuel Sales Tax • House Bill 2313 imposed an additional 0.7% Sales Tax, additional 2% Transient Occupancy Tax and a Regional Congestion Relief Fee of $0.15 per $100 of the value of the real property sold in the Northern Virginia and Hampton Roads regions	• 2.1 % Motor Vehicle Wholesale Fuel Sales Tax is apportioned between NVTC and PRTC to fund rail and transit operations in member jurisdictions. • Both Fairfax County and Prince William County are members of NVTA. As reported by the Fairfax County about 30% of the new revenues will go directly to the County and 70% will flow to the NVTA. For NVTA funding the project needs to be part of the TransAction 2040 plan or its next update	• No, 2.1 % motor fuel sales tax is funding transit and rail operations of NVTC and PRTC in Prince William and Fairfax. These agencies rely on this tax for operations and capital needs. • Yes. Fairfax County projects about $37.5 million of the new HB2313 related funding will be available to the County directly, could be used for additional bonding or direct contribution. NVTA receives about $300-$350 million in annual funding from VDOT due to House Bill 2313 additional taxes
Local	County General Funds	Sales, property and/or other taxes used to fund county level transportation projects	Yes, likely source of local funds if Counties become project sponsors
Value Capture	Corridor-specific revenue tied to increases in property tax base, potential to earn revenue for leasing/sale of land or air rights around the stations to developers	Most likely revenue sources for the project, revenue yield will depend on the real estate development potential	Yes, likely source of local funds

7.2 Funding Structures of Other Regional Projects

Several planned and recently implemented transit projects in the region provide examples of the potential funding structure for a Route 1 project. These projects and their funding structures are described below.

Richmond Broad Street Rapid Transit: FTA, State, and Local

The proposed project is a 7.6-mile and 13-station BRT line on existing streets with operation expected to begin 2017. The total capital costs are estimate at $50 Million. The funding structure is shown in **Table 7-2**.

Table 7-2: Richmond Broad Street Rapid Transit – Funding Structure

Funding Source	Type	Share (YOE)
Federal	Small Starts	$25 M (50%)
State	DRPT	$17 M (34%)
Local	City County	$8 M (15%) $0.4 M (1%)
Total Cost		*$50 M*

Norfolk TIDE Light Rail: FTA, State, and Local

The first modern light rail line in Virginia, the initial project is a 7.4-mile and 13-station LRT line on rail right of way and existing streets in Norfolk, Virginia. The revenue service began in 2011. The total costs were $316 Million. The funding structure is shown in the **Table 7-3**.

Table 7-3: Norfolk TIDE Light Rail – Funding Structure

Funding Source	Type	Share (YOE)
Federal	FTA New Starts Other Federal Total Federal	$129 M (41%) $74 M (23%) $200M (64%)
Regional	n/a	
State	Commonwealth of Virginia	$62 M (20%)
Local	City of Norfolk	$54 M (17%)
Total Cost		*$316 M*

MWAA Silver Line Phase 1 & Phase 2 FTA, State, Local, and Tolls (Dulles Toll Road)

The Silver Line, expected to begin operations in 2014 is a Metrorail line extension to the Dulles Airport build in two phases:

- Phase 1: 11.7 miles/5 stations , operation expected end of summer 2014
- Phase 2: 11.4 miles/6 stations + yard

The total capital cost is estimated at $5.5 billion. The funding structure is shown in **Table 7-4**.

Table 7-4: MWAA Silver Line Phase 1 & Phase 2 – Funding Structure

Funding Source	Type	Phase I (YOE)	Phase II (YOE)	Total Share (YOE)
Federal	New Starts	$900 M		$900 M (16%)
State	DRPT	$252 M	$323 M	$575 M (11%)
Local	Fairfax County	$400 M	$484 M	$884 M (16%)
	Loudoun County		$264 M	$264 M (5%)
Other	MWAA (Aviation)		$225 M	$225 M (4%)
	MWAA (Dulles Toll Road)	$1.4 B	$1.3 B	$2.6 B (48%)
Total Cost		*$2.9 B*	*$2.6 B*	*$5.5 B*

MDOT Purple Line: FTA, State, TIFIA, and Private Equity

The Purple Line is a 16-mile / 21-station LRT line along exclusive and shared ROW with operation expected to start in 2020. The project is currently being tendered and the final RFP is expected to be sent to private bidders currently in the run for this contract in June 2014. The project will be delivered via a Design-Build-Finance-Operate-Maintain contract between MDOT and a competitively selected private contractor. The private contractor will operate and maintain the line for 30 years after which it will be handed over to MDOT. The private contractor will be compensated by the MDOT via availability payments which will be tied to the performance, i.e. financial penalties will be trigged if the contractor fails to deliver a service as agreed with MDOT.

This project is an example of the transit investment delivered through an alternative delivery mechanism involving a private financing partner. The funding structure included an FTA New Starts capital grant, state funds, a TIFIA loan, private equity and borrowed funds. The funding structure is presented in **Table 7-5**.

Table 7-5: MDOT Purple Line – Funding Structure

Funding Source	Type	Share (YOE)
Federal	New Starts	$0.9 B (38%)
Regional	n/a	
State	MD Transportation Trust Fund (TTF)	$0.7 B (28%)
Other	-Federal TIFIA with financing by private sector -Private equity & borrowed funds	$0.7 B (31%) $0.1 B (3%)
Total Cost		*$2.4 B*

8.0 Preliminary Findings: Application to Route 1 Funding Approaches

This section describes application of the funding sources described in **Table 7-1** to the potential implementation schedules or phasing of the proposed Route 1 roadway, transit and bike/pedestrian and ROW investments. **Table 7-1** summarized the funding sources reviewed and suggested sources that could be applied as part of the project funding strategy.

A potential funding mix showing relative proportions of funding by each source was created for and is summarized in sub-sections 8.0 and **Error! Reference source not found.**. The findings and funding assumptions are preliminary and serve to facilitate future funding discussions.

It is important to note that in order to access state, regional and federal funding the project needs to be:

- **Incorporated in MWCOG Constrained Long Range Plan (CLRP):** the project needs to be included in the regional long range transportation plan in order to qualify for funding, including New Starts or Small Starts funding. This step includes a preliminary identification of local funding levels.
- **Included in the Fairfax County Long Term Transportation Plans:** the project needs to be consistent with the Fairfax County Comprehensive Plan, included in the Fairfax County Transportation Plan, and endorsed for funding by its Board of Supervisors as part of the Boards of Supervisors Four-Year Transportation Program. The Comprehensive Plan is used as a guide in decision-making about the built and natural environment by the county's Board of Supervisors and other agencies, such as the Planning Commission and the Board of Zoning Appeals. The project needs to be a part of the Fairfax County long terms plans have has to have some form of local funding identified to support it before it is submitted for consideration for LRTP and regional TIP.
- **Submitted for NVTA and CTB project prioritization** (congestion mitigation, economic development, accessibility, safety and environmental quality). In Northern Virginia congestion mitigation may be required to be weighted the highest among factors.[26] The weights are currently being developed with a lead by the Commonwealth of Virginia Office of the Secretary of Transportation. Currently, highway projects need to be scored on congestion mitigation (while transit projects are exempt). Transit projects however will be subject to ranking against other prioritization criteria listed.

[26] Commonwealth of Virginia Office of the Secretary of Transportation , House Bill 2 Update; http://www.ctb.virginia.gov/resources/2014/may/pres/Presentation_Agenda_Item_7.pdf

8.1 Initial Implementation Approach

The implementation approach is intended to implement the multimodal improvements, including roadway, bicycle/pedestrian, and transit projects, in four phases (see **Figure 8-1**). The first phase would implement multimodal improvements, including initiating Right of Way acquisition, from Huntington to Hybla Valley; Phase II would implement multimodal improvements from Hybla Valley tot Fort Belvoir; Phase III would implement improvements from Fort Belvoir to Woodbridge. Finally, Phase IV would extend the Metrorail Yellow Line to Hybla Valley. **Figure 8-1** shows the phasing approach, and **Table 8-1** summarizes the total capital expenditure costs by phase.

Figure 8-1: Phasing Approach

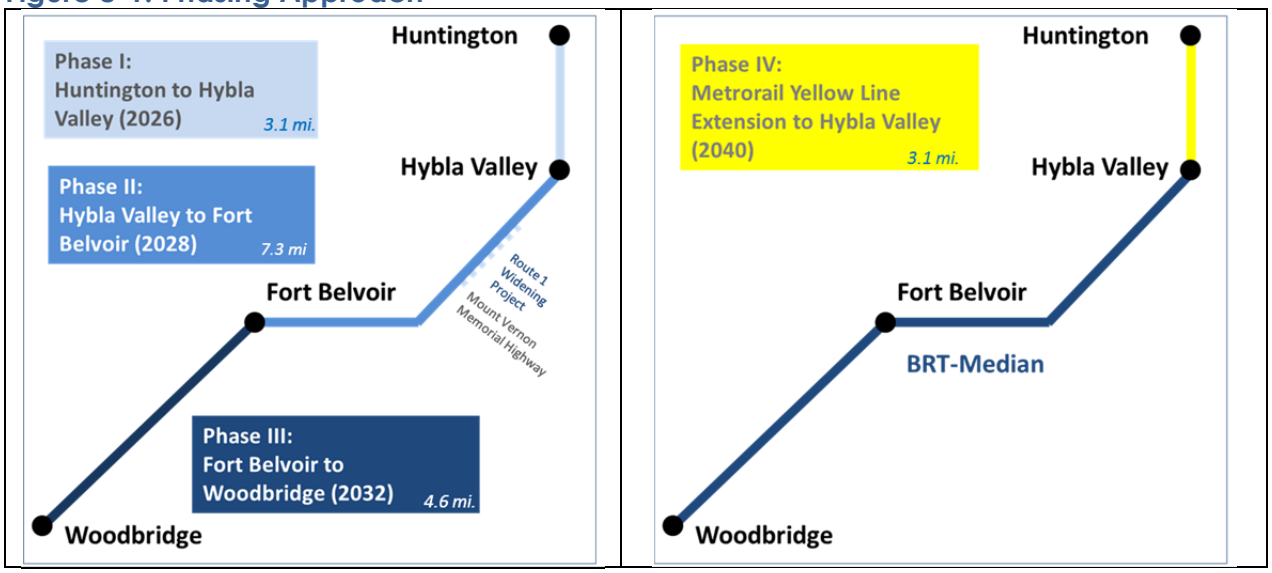


Table 8-1: Capital Expenditure Costs by Phase (Costs in millions, 2014 dollars)

	Phase I: Multimodal Improvements from Huntington to Hybla Valley (and planned roadway widening near Hybla Valley)	Phase II: Multimodal Improvements from Hybla Valley to Pohick Road North (Fort Belvoir)	Phase III: Multimodal Improvements from Pohick Road North (Fort Belvoir) to Woodbridge	Phase IV: Extend to Metrorail to Hybla Valley
Roadway	$118	$29	$145	
Bike/Ped	$21	$2.5	$11	
Transit	$116	$188	$310	$1,461
ROW	$52	$5	$6	
Total	***$305***	***$224***	***$472***	***$1,461***

Figure 8-2 summarizes required annual funding levels by phases (2014 $ million), **Figure 8-3** summarized annual funding levels by type of projects (2014 $ million). The Transit-Metro metro investment makes up 59 percent of the total investment in the project of $2.46 billion.

Figure 8-2: Construction Funding Required By Phases (2014 $ Millions)

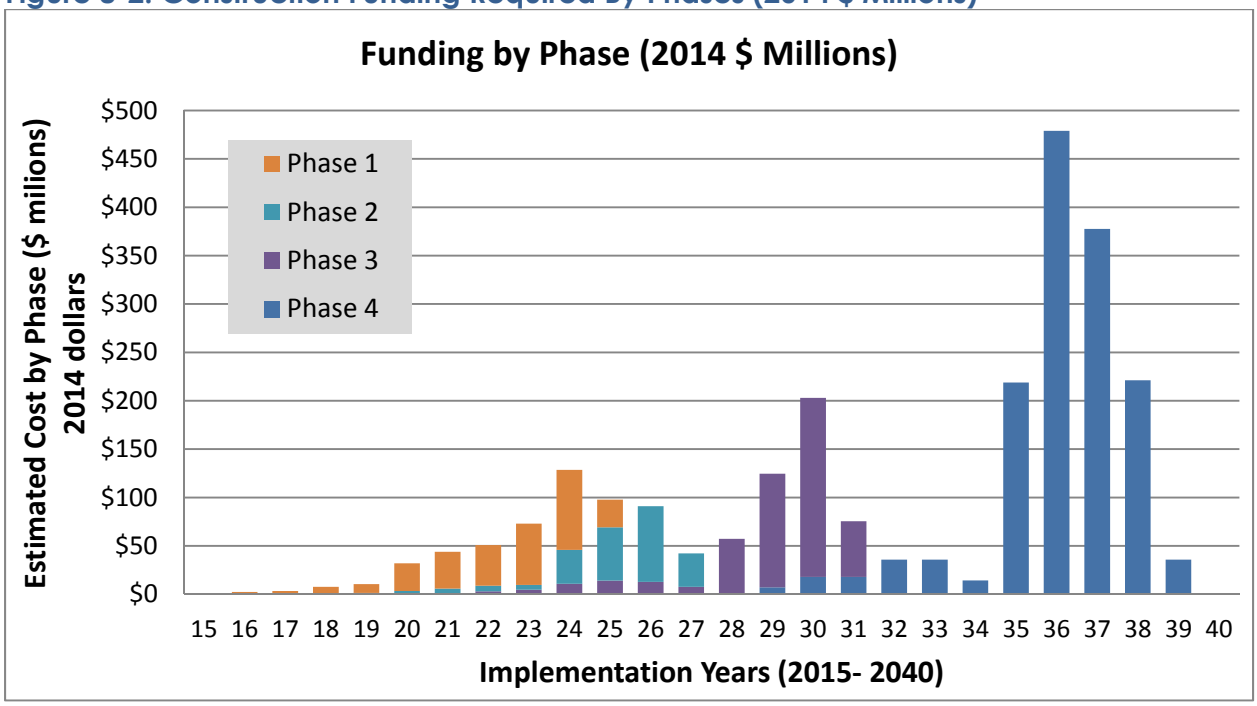
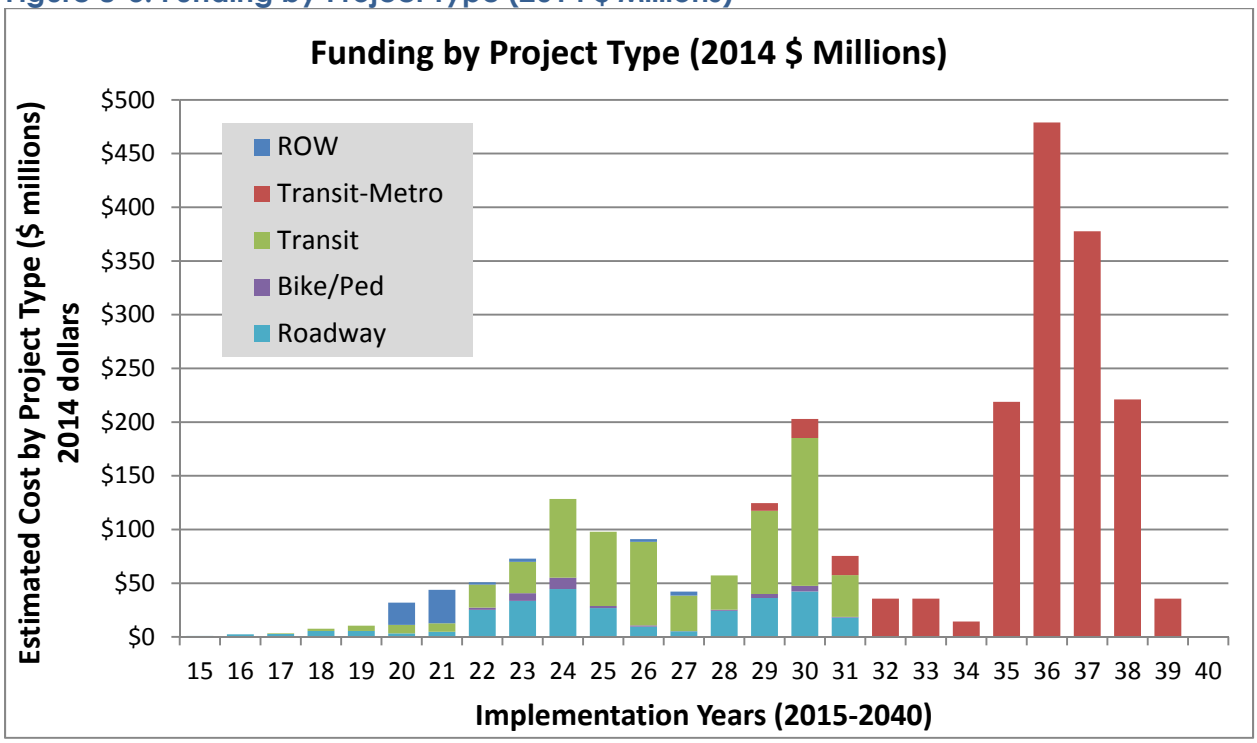


Figure 8-3: Funding by Project Type (2014 $ Millions)



8.1.1 The Funding Mix for the Overall Project

The rationale for determining the potential overall funding mix consisted of the following considerations:

- **Modest share of FTA New Starts Funding:** The project team performed an initial analysis of the potential competitiveness for FTA New Starts funding for each phase. In regards to FTA New Starts project justification criteria (mobility improvements, environmental benefits, congestion relief, cost effectiveness, economic development, and land use) described in sub-section 3.1.1, preliminary findings suggest that Phases I and II (Huntington to Fort Belvoir) of the BRT project could be competitive for FTA New Starts funding, or it could receive a "medium" rating required for FTA funding.[27] At present, Phase III of the BRT project would likely not receive a "medium" rating under the project justification criteria. The Metrorail investment of Phase IV is also assumed to obtain at least a "medium" rating required for FTA funding, but these investments will only be competitive for FTA funding if there is substantial development growth in the corridor by 2040.

  BRT phases may also score well under the FTA local financial commitment criteria as funding is not as capital intensive as the Metrorail extension and may be available from either the recently augmented NVTA budget and/or Fairfax County budget. Also, transit projects are currently exempt from the NVTA's ranking of projects for funding based on congestion mitigation criteria. The project may need to demonstrate economic development, accessibility, safety and environmental quality benefits, the criteria which reportedly may be added to both CTB and NVTA project prioritization processes[28].

- **The project will rely primarily on state and local funding sources, specifically on the NVTA and Fairfax County as well as the Commonwealth Transportation Fund (VDOT and DRPT funds).**
  - NVTA received dedicated funding to fund projections within 17 jurisdictions located in the Northern Virginia Transportation District (the projected annual funding of $300 to $350 million a year).
  - Fairfax County has a dedicated revenue source for transportation -Commercial and Industrial (C&I) Real Estate Tax (the current rate of $0.125 per $100 of assessed value adopted at the maximum allowable rate). Roughly $50 to $60 million in annual funding.
  - Fairfax County issues general obligation and revenue bonds backed by the general fund and C&I revenues thus leveraging the tax funding it collects. Roughly $60 million in bond proceeds a year under the current Four Year Transportation Plan.
  - The Commonwealth Transportation Fund consolidates state and federal funding as well as planned bond proceeds, thus leveraging tax receipts with bond funding. $500 million is allocated to rail and public transportation in FY2015-2020.

[27] The analysis assumed that the right-of-way acquisition, roadway widening and realignment would not be included in the total transit project costs, as these improvements would be implemented along with the roadway improvements and paid for under a separate funding source.
[28] http://www.ctb.virginia.gov/resources/2014/may/pres/Presentation_Agenda_Item_7.pdf

  - The potential for Value Capture and private proffer revenues will depend on the level of economic development and private sector interest. These sources would likely provide a modest contribution to transit improvement along the corridor.
- **The federal formula funds will not make up a significant portion of funding.** Federal formula funds are distributed amongst a large number of recipients or projects. The funding from federal formula funds (STP, CMAQ) have been roughly in order of up to 5 to 10 million per project. The recipients of Section 5307 Urbanized Area Formula Funds are primarily transit agencies with funding formula tied to the systems size and population.

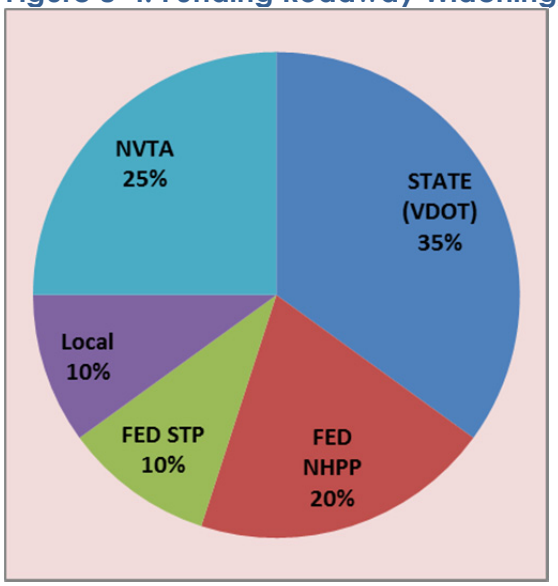
8.1.2 Funding Roadways Widening and Improvements

The Approach includes $292 million in roadway improvements. The funding mix for these investments may include a combination of state, federal formula, regional and local funds as shown in **Figure 8-4**[29]**.** The combination of assumed funding includes:

- 20 percent National Highway Performance Program (NHPP) ($54 million total)
- 10 percent Surface Transportation Program (STP) ($27 million total)
- 10 percent local share ($27 million total)
- 25 percent NVTA share ($67 million total)
- 35 percent state funding (CTF) through VDOT ($94 million total).

In order to access NVTA funding, the project's roadway improvements will need to demonstrate congestion mitigation impact per NVTA project prioritization criteria. NHPP, STP and State CTF funds are obligated by the VDOT as part of its 6-year TIP.

Figure 8-4: Funding Roadway Widening/Reconfiguration (2014 $ Millions)



[29] Funding for Roadway Widening and Improvements is partially reliant on Fairfax County's Six Year Transportation Improvement Program, which is not included in the breakdown of funding sources, as the funding for the Six Year Transportation Improvement Program already represents a mix of local, regional, state, and federal sources.

8.1.3 Funding Right-Of-Way

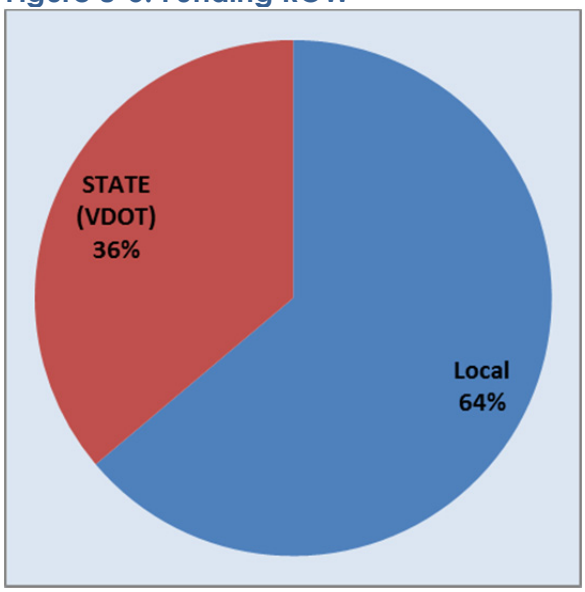
The total estimated investment in Right-Of-Way stands at about $52 million[30]. The investments related to securing and reserving Right-Of-Way are assumed to be funded by a combination of:

- 64 percent local share ($20 million total)
- 36 percent state funding (CTF) through VDOT ($11 million total).

The funding mix for Right-Of-Way can also be seen in

Figure 8-5**.**

Figure 8-5: Funding ROW



8.1.4 Funding Multi-Use Paths

The total estimated investment in Multi-Use Paths for the Phase I stands at about $21 million. As these are bike and pedestrian improvements, the analysis assumed a combination of:

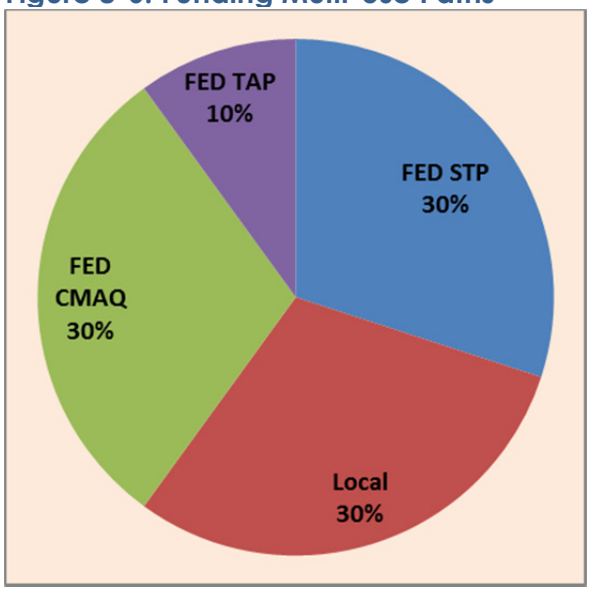
- 30 percent Surface Transportation Program (STP) ($6 million total)
- 30 percent Congestion Mitigation and Air Quality (CMAQ) ($6 million total)
- 10 percent Transportation Alternatives Program (TAP) ($2 million total)
- 30 percent local share ($6 million total)

[30] Funding for Right-Of-Way is partially reliant on Fairfax County's Six Year Transportation Improvement Program, which is not included in the breakdown of funding sources, as the funding for the Six Year Transportation Improvement Program already represents a mix of local, regional, state, and federal sources.

About $6 million from STP, CMAQ, and local sources is a reasonable estimate given past allocations to projects in Fairfax County in the range of up to $10 million. These small scale projects contribute to less driving and alternatives to more environmentally friendly commuting and thus better air quality.

Figure 8-6 shows the funding mix for the investments in multi-use paths.

Figure 8-6: Funding Multi-Use Paths



8.1.5 Funding Transit – FTA Competitive Investments

As mentioned in section 8.1.1 for the purpose of defining a potential funding mix, the transit investments were reviewed in regards to the FTA's project justification criteria (mobility improvements, environmental benefits, congestion relief, cost effectiveness, economic development, and land use). Based on this review, both BRT-related transit improvements in Phases I and II as well as Phase IV investments (three mile Metrorail extension) by 2040 were identified as "FTA Competitive". These investments totaling $1,764 million (2014 $) are listed in

Table 8-2. These investments may qualify to be submitted for FTA New Starts grant funding.

Table 8-2: Transit Stations and Park and Ride, FTA-Competitive Investments

Project Element	Cost (2014 $Millions)
Phase 1	
Transit Elements (all other)	$ 71
Stations	$ 26
Vehicle Maintenance Capacity	$ 8
Phase 2	
Transit Elements (all other)	$ 65
Stations	$ 26
Transit Elements (all other)	$ 80
Stations	$ 17
Fort Belvoir Shuttle System	$ 11
Phase 4	
Transit Elements (all other)	$ 715
Underground Guideway	$ 499
Metro Stations	$ 247
Total	**$ 1,764**

A potential funding mix for investments listed in

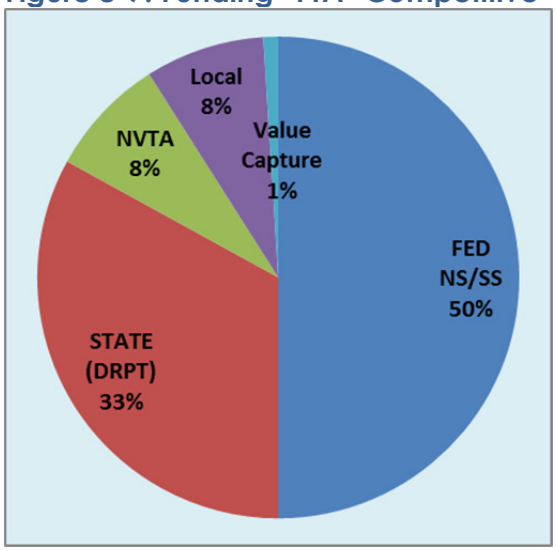
Table 8-2 is summarized in

- **Figure** 8-7. FTA will require submission of a robust financial plan and analysis. The funding mix described in

Figure 8-7 consists of:

- 50 percent FTA share in the total capital funding ($867 million total).
- 8 percent NVTA share ($139 million total)
- 8 percent local share ($139 million)
- 1 percent local value capture/private proffer ($17 million total)
- 33 percent DRPT share ($572 million total)

Figure 8-7: Funding "FTA- Competitive" Transit Investments



8.1.6 Funding Transit – All Other Investments

The capital expenditures for transit improvements for Phase III are listed in **Table 8-3**. These investments may be funded by a mix of state (including NVTA) and local funding source and some federal formula funds. Preliminary analysis suggests that a BRT system from Fort Belvoir to Woodbridge may not be "competitive" under FTA project justification criteria (mobility improvements, environmental benefits, congestion relief, cost effectiveness, economic development, and land use); therefore, this phase did not assume any federal discretionary grants. Due to this limitation, the mix of funding for Phase III assumes a gap of 15%, which will need to be funded from a source that is currently unidentified.

Table 8-3: Transit Stations and Park and Ride, FTA-Non Competitive Investments

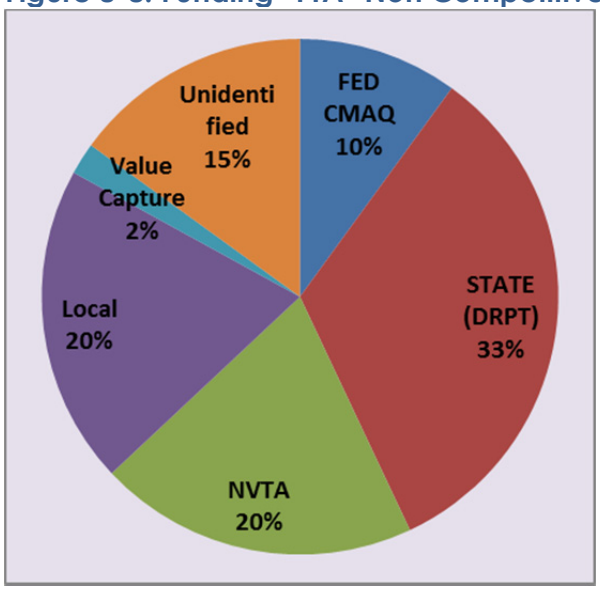
Project Element	Cost (2014 $Millions)
Phase 3	

Transit Elements (all other)	$ 112
Stations	$ 17
Park & Ride at Lorton	$ 64
Transit Elements (all other)	$ 48
Stations	$ 4
Park & Ride at Woodbridge	$ 64
Total	**$ 310**

The funding mix described in **Figure 8-8** consists of:

- 20 percent NVTA share ($62 million total)
- 20 percent local share ($64 million)
- 2 percent local VC including Proffer ($4 million total)
- 10 percent federal formula funds including CMAQ, STP and Urbanized Area/Section 5307 ($31 million total)
- 33 percent DRPT share ($102 million total)
- 15 percent funding gap, denominated as "Unidentified" ($46 million total)

Figure 8-8: Funding "FTA- Non Competitive" Transit Investments



Attachment A

Value Capture Funding Preliminary Findings

A-1. Value Capture Funding Preliminary Findings

This section describes a preliminary quantification of the potential revenue yield from the application of the Tax Incremental Finance (TIF) and Special Assessment District (SAD) for the project as described in section 6.0.

The SAD or TIF districts were assumed to start in 2018 which is the year the project is assumed to begin construction. The District was assumed to dissolve in 25 years. The objective was to estimate potential revenue streams from TIF and SAD to determine % of the total capital costs that could be funded

- **TIF:** existing tax rate of $1.085 per $100 is applied to incremental tax base; all incremental property tax base and tax receipts were assumed to accrue to TIF fully
- **SAD:** additional tax rate was applied to existing and future growth in tax base; limited to tax rate charged for similar projects (Dulles Metrorail Extension & Route 28) = $0.20 per $100

The projected increase in assessed value was based on three land use scenarios which were considered as part of the Alternatives Analysis. The land use scenarios determine the magnitude of increase in the assessed value in the TIF District and therefore the size of the potential revenue yield. **Table A-4** describes the assumed land scenarios.

Table A-4: Assessed Value Growth Scenarios to Be Considered by Funding Analysis

Land Use Scenario	Basis for Assessed Value Growth Assumptions	To Be Applied to
Scenario 1	"Base Land Use Scenario" per 2035 Metropolitan Washington Council of Governments(MWCOG) regional forecast	Initial comparison of all mode alternatives: BRT, LRT, Metrorail and Metro Rail/BRT Hybrid
Scenario 2	Assumes population and employment growth 25% growth over MWCOG regional forecast	BRT, LRT, Metrorail and Metro Rail/BRT Hybrid
Scenario 3	Assumes population & employment growth rate to achieve density levels supportive of Metrorail, based on DRPT Guidelines (activity density of 70)	Metrorail and Metro Rail/BRT Hybrid

Source: Route 1 Alternatives Analysis

In addition to the change in the land use and increased density in the project corridor, the installation of the new transit line may positively impact the existing land values resulting in additional property premium due to the project. The potential land value increase will vary by mode: Metrorail may induce a higher property premium than BRT for example. A TIF revenue analysis considered the potential

increase in property taxes due to changes in the land use and installation of the transit line. The methodology included the following steps:

- Drawing of the TIF boundary, i.e. all taxable properties along a one-half mile-wide corridor from the proposed project alignment and/or all taxable properties with one-half of the planned stations, based on data from Fairfax and Prince William County assessors' records.
- Quantifying the Baseline Assessed Value of properties located within the TIF boundaries by type of use (residential, commercial, industrial, other)
- Estimating the potential increase in the Baseline Assessed Value due to the project (projected increase in land value due to the project and change in the land use around the stations will result in higher assessed value)
- Quantifying the incremental assessed value due to the project (Projected Assessed Value minus Baseline Assessed Value)
- Applying the existing base tax rate to the Incremental Assessed Value
- Deriving a stream of property tax revenues and calculate the total present value of the projected revenues over a 20-year to 30-year horizon.

The revenue yield results were measured as total 25 year revenue yield discounted at 5% as a share of total project capital costs. These results are presented in Table A-6

, **Table A-7**, and **Table A-8** are preliminary and will be further refined. The results will depend on the further refinement of the land use scenarios for the corridor and will also depend on the transit technology chosen for the project (BRT, LRT, HRT/BRT and HRT).

The analysis provides early insights on the TIF and SAD potential for the project.

Table A-5 summarizes the baseline Assessed Value which would be the tax base for the project if TIF or SAD districts are established to include all taxable properties within on-half mile of the planned stations.

Table A-5 shows that the Assessed Value in the project area is predominantly residential use. The TIF district would include both residential and commercial land uses.

Table A-5: VC Analysis: Existing Tax Base

Land Use	2013 Assessed Value $Millions
Residential	$5,133
Office	$178
Retail	$209
Commercial, Hotel & Lodging	$100
Total	$5,620

Source: Fairfax County and Prince William County assessor records.

Table A-6: Conceptual Construction Costs

	Bus Rapid Transit 1 – Curb	Bus Rapid Transit 2- Median	Light Rail Transit- Median	Metrorail/ BRT- Median Hybrid	Metrorail (15-Miles)
Conceptual Capital Cost	$500 M	$780 M	$1,200 M	$1,570 M	$4,800 M

Table A-7: TIF revenue (@ $1.085 per $100) as % of construction cost

	Bus Rapid Transit 1 – Curb	Bus Rapid Transit 2- Median	Light Rail Transit- Median	Metrorail/ BRT- Median Hybrid	Metrorail (15-Miles)
Scenario 1	32.4%	20.8%	13.5%	N/A	N/A
Scenario 2	41.4%	26.5%	17.2%	13.2%	4.3%
Scenario 3	N/A	N/A	N/A	40.6%	13.3%

Table A-8: SAD revenue (@ $0.20 per $100) as % of construction cost:

	Bus Rapid Transit 1 – Curb	Bus Rapid Transit 2- Median	Light Rail Transit- Median	Metrorail/ BRT- Median Hybrid	Metrorail (15-Miles)
Scenario 1	5.0%	3.2%	2.1%	N/A	N/A
Scenario 2	6.7%	4.3%	2.8%	2.1%	0.7%
Scenario 3	N/A	N/A	N/A	6.5%	2.1%