Northern Virginia Transportation Authority
The Authority for Transportation in Northern Virginia

Thursday, May 11, 2017
7:00pm
3040 Williams Drive, Suite 200
Fairfax, VA 22031

AGENDA

I. Call to Order Chairman Nohe

II. Roll Call Ms. Speer, Clerk

III. Minutes of the March 23, 2017 Meeting
Recommended action: Approval [with abstentions from those who were not present]

Presentations

IV. WMATA Governance, Operations and Financial Review
Ray LaHood, Former US DOT Secretary

V. Route 28 Corridor Study Mr. Canizales, Director of Transportation, PWC

VI. TransAction Baseline Conditions Briefing Mr. Jasper, Principal Planner

Action

VII. Approval of Six Year Program (FY2018-2023) Framework
Mr. Jasper, Principal Planner
Recommended action: Approval of Six Year Program Framework

VIII. Approval of Comments for the Commonwealth Transportation Board's Six Year Improvement Program (FY2018-2023) Ms. Backmon, Executive Director
Recommended action: Approval of Six Year Improvement Program Comments

IX. Approval of CMAQ/RSTP Reallocation for the City of Alexandria
Ms. Backmon, Executive Director
Recommended action: Approval of CMAQ/RSTP Reallocation for the City of Alexandria

X. Approve Public Hearing Date and Public Comment Period for the TransAction Update Ms. Backmon, Executive Director

Recommended action: Approval of Public Hearing Date and Public Comment Period

Discussion/Information

XI. Revisions to FY2018-2023 CMAQ/RSTP Strawman Ms. Backmon, Executive Director

XII. Planning & Programming Committee Chairman Nohe, Chair

XIII. Planning Coordination Advisory Committee Supervisor Buona, Chair

XIV. Technical Advisory Committee Report Mr. Boice, Chair

XV. Executive Director's Report Ms. Backmon, Executive Director

A. CMAQ/RSTP Reallocation Requests for Fairfax and Loudoun Counties and the City of Alexandria

XVI. Chairman's Comments

Closed Session

XVII. Adjournment

Correspondence

- VDOT Megaproject Briefing and Public Meeting for Six-Year Improvement Program
- Finance Metro/VRE Extensions to Haymarket without Raising Taxes

Next Meeting: June 8, 2017

Northern Virginia Transportation Authority
3040 Williams Drive (Suite 200)
Fairfax, VA 22031
www.TheNovaAuthority.org

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Thursday, March 23, 2017
6:00pm
3040 Williams Drive, Suite 200
Fairfax, VA 22031

MEETING MINUTES

I. Call to Order — Chairman Nohe

- Chairman Nohe called the meeting to order at 6:24pm.

II. Roll Call — Ms. Speer, Clerk

- Voting Members: Chairman Nohe; Chairman Bulova; Chair Randall; Council Member Lovain; Chair Fisette; Mayor Parrish; Mayor Meyer; Council Member Snyder; Mayor Rishell; Delegate Hugo; Delegate Minchew (arrived 6:32pm); Senator Black; Ms. Hynes; Mr. Kolb (arrived 6:28pm).
- Non-Voting Members: Mayor Burk; Ms. Cuervo; Ms. Mitchell (departed 7:24pm).
- Staff: Monica Backmon (Executive Director); Michael Longhi (CFO); Keith Jasper (Principal, Transportation Planning and Programming); Sree Nampoothiri (Transportation Planner); Harun Rashid (Transportation Planner); Carl Hampton (Investment & Debt Manager); Peggy Teal (Assistant Finance Officer); Camela Speer (Clerk); various jurisdictional staff.

III. Minutes of the February 9, 2017 Meeting

- Chair Randall moved approval of the February 9, 2017 minutes; seconded by Chairman Bulova. Motion carried with nine (9) yeas and three (3) abstentions [with Delegate Hugo, Senator Black and Council Member Lovain abstaining as they were not at the February 9, 2017 meeting].

Presentations

IV. I-66 and I-395 Corridor Updates
Ms. Jennifer Mitchell, DRPT and Ms. Susan Shaw, VDOT

- Ms. Shaw presented progress updates on the I-66 and I-395 Corridor projects, noting work done to date, project milestones and public outreach efforts.

(Mr. Kolb & Delegate Minchew arrived.)

- Ms. Mitchell presented updates on the transit and multimodal components of the I-66 and I-395 Corridor projects.

V. Manassas Park Parking Expansion Study Update Ms. Sonali Soneji, VRE

- Mr. Allen and Ms. Soneji briefed the Authority on the Virginia Railway Express (VRE) Manassas Park Parking Expansion project. Ms. Soneji reviewed the process, major evaluation criteria, options studied, preferred alternative and next steps.
- Chairman Nohe asked if the preferred alternative site is publically or city-owned. Mayor Rishell responded that it is city-owned. Chairman Nohe asked how the site was acquired by the City, adding that it would be interesting to know if federal dollars were used to acquire the site, noting that if not, this project is not automatically federalized. Mayor Rishell responded that she would check on it, stating that she did not believe federal dollars are involved. Chairman Nohe responded that projects get more complicated when they are federalized.
- Ms. Soneji also announced upcoming public meetings on March 29 & 30, 2017, for the VRE Crystal City Station improvements funded in the Authority's FY2015-2016 Program.
- Chair Fisette stated that one element being considered in this project is adding the ability to walk from downtown Crystal City to National Airport. Chair Fisette stated it would add tremendous accessibility if proven to be feasible.
- Delegate Minchew asked about the status of the VRE Gainesville Haymarket Expansion Study. Mr. Allen responded that the VRE Operations Board and the Prince William Board exercised much diligence in reviewing all the analysis on this study, noting that Chairman Nohe was the lead for Prince William County. He stated the decision made by the VRE Operations Board was to pursue an expansion of VRE's capacity at the existing Board Run complex. He added the resolution that was passed also speaks to the consideration of a future extension to Gainesville. Mr. Allen concluded that VRE will be focused on expanding capacity to operate more trains from the existing Board Run facility. Chairman Nohe added that Prince William County will keep the Gainesville Haymarket Expansion in its Comprehensive Plan, even though at this time it is not economically feasible to advance. He concluded that the short range goal is to get more trains on the track and the way to do that in the next few years is to expand the Board Run facility.
- Senator Black stated that he very much wanted to see the VRE extend to Haymarket. He added that a very thorough examination was done to see if there was any possibility to make this work. He concluded that even the most passionate advocates for this project recognized that there is not adequate ridership to make this practical at this time.
- Mr. Allen added that the thorough analysis that was done by VRE staff, particularly Christine Hoeffner, and its consultants was only possible because of the funding that the NVTA provided to do the study to make sure it was the

right investment. He concluded Broad Run will be a fine location to add the needed capacity and that VRE will make it function extremely well.

Action

VI. Approval of Financial Statement Audit Services Contract

Chairman Parrish, Finance Committee

- Mayor Parrish thanked NVTA staff and the Finance Committee members. He stated the Finance Committee discussed a number of items at its last meeting, as detailed in the Finance Committee Report. He added that one of those items was the recommendation to seek Authority approval to contract for financial statement audit services with PBMares.

- Mayor Parrish moved approval to acquire financial statement audit services through a rider on the VRE/PBMares LLP contract and authorize the NVTA Chief Financial Officer to sign related service agreements for fiscal year 2017 through fiscal year 2021; seconded by Chairman Bulova. Motion carried unanimously.

VII. Approval of Budget Transfer to Advance the FY2018 Planning Technology Project

Chairman Parrish, Finance Committee

- Mayor Parrish stated that the Finance Committee discussed the transfer of funds from the FY2018 Budget to the FY2017 Budget to accomplish planning technology projects that will allow the implementation of GIS mapping functions to show what NVTA funded projects are doing for the region. He added that this is something the Authority has been trying to do for a while.

- Mayor Parrish moved approval of an FY2017 transfer of $25,000 from the NVTA Operating Reserve to Expenditure Account 320 – HW/SW Peripheral Purchase GIS Costs, and an offsetting FY2018 transfer of $25,000 from Expenditure Account 320 to the NVTA Operating Reserve; seconded by Chairman Bulova. Motion carried unanimously.

VIII. CMAQ/RSTP Reallocation Request for Fairfax County

Ms. Backmon, Executive Director

- Chairman Bulova moved approval of the reallocation of Congestion Mitigation and Air Quality (CMAQ) and Regional Surface Transportation Program (RSTP) funds for Fairfax County; seconded by Senator Black. Motion carried unanimously.

Discussion/Information

IX. 2017 Legislative Update Ms. Hynes, Chair, Governance and Personnel

- Ms. Hynes noted Ms. Baynard was unable to attend this evening's meeting. She invited Ms. Backmon to present the legislative update and Ms. Mitchell to present an additional information item.
- Ms. Backmon provided a brief summary of the 2017 legislative items related to the Authority. She noted that the bills the Authority opposed were defeated. She highlighted:
  - ✓ HB 2121 that proposed adding sidewalks to the approved uses of 70% regional revenues was defeated. She added that the NVTA can fund sidewalks with 70% funds, provided the projects undergo the Authority's evaluation process.
  - ✓ HB 2120/SB 929 were both defeated, but not without a lot of work in the House. This bill proposed adding a town member as an 18th and voting member to the Authority.
  - ✓ HB 2137 was amended. The bill passed, but does not require additional analysis of the long range regional transportation plan and has a delayed enactment date of July 1, 2018. This bill requires the Authority to consider for revision and revise as necessary its regional transportation plan at least once every five years. The Authority is also required to specify any obstacles to achieving a reduction in congestion in Planning District 8 and any need for cooperation relating to any locality embraced by (i) the Authority, (ii) the District of Columbia, (iii) the State of Maryland, or (iv) any other regional entity in the metropolitan Washington area. Ms. Backmon stated that the Authority is already doing these things. She added the bill also requires the Authority to annually publish on its website any land use or transportation elements of a locality's comprehensive plan that each locality embraced by the Authority is currently required to report when such locality's plan is inconsistent with the Authority's regional transportation plan. An existing bill currently requires localities to notify the Authority of any changes to their transportation or land use sections of their comprehensive plan that are inconsistent with TransAction, now the Authority must post this information to its website.
- Ms. Mitchell briefed the Authority on the announcement earlier in the day regarding the State budget amendments related to Metro. She noted the General Assembly passed two versions of the Metro Safety Commission bill – HB 2136 and SB 2515 – and it is expected the Governor will sign these. She thanked Delegate Minchew for his work on the enactment clause that asks the State to look at financial and operational governance reforms at the Washington Metropolitan Area Transit Authority (WMATA), in close coordination with the Northern Virginia Transportation Commission (NVTC). Ms. Mitchell stated that that morning the Governor had announced that Virginia will be initiating a study to provide an independent review of WMATA. She noted Maryland and the District of Columbia were invited to

join the effort which will be led by former US Department of Transportation Secretary, Ray LaHood. Ms. Mitchell added that Secretary LaHood's participation is important to gain the support of all the regional partners and to provide the level of independence and credibility necessary to result in true changes at WMATA. She stated the study will begin right away and the consultants are already on-board. Ms. Mitchell stated that a final report will be ready by November. Ms. Mitchell added that additional details will be forthcoming about how Authority members will be engaged in this effort.

- Mayor Burk stated the towns are disappointed that the NVTA continues to object to the town's having a voting representative on the Authority.
- Chair Fisette asked, in addition to Virginia, if Secretary LaHood is being brought on-board by Maryland and the District of Columbia as well. Ms. Mitchell responded that Virginia is bringing him on, adding that the Virginia Department of Rail and Public Transportation (DRPT) is funding the study. She stated that it is expected that Secretary LaHood will be the regional facilitator of this effort. Chair Fisette asked if Maryland and the District were supportive of this. Ms. Mitchell replied that Governor McAuliffe had spoken to Governor Hogan and, by now, likely Mayor Bowser. She added that District staff had been contacted and are on board participating in this effort.
- Chair Randall thanked Delegate Minchew for his work on the Metro Safety bills, adding that Delegate LeMunyon was also a contributor. She expressed interest in a future meeting with Delegate Minchew to agree on a Loudoun response, and to update him on meetings with Mayor Bowser on Metro issues.
- Chairman Bulova spoke in support of the engagement of Secretary LaHood in the process to review WMATA governance and financing issues. She stated she had spoken to Secretary Layne regarding the number of groups looking at different aspects of WMATA. She noted a few:
  - ✓ The Federal City Council is looking into WMATA governance, adding this is very District-centric.
  - ✓ The Board of Trade is working on WMATA governance issues.
  - ✓ The Council of Governments (COG), in particular, is looking at a regional funding mechanism.
  - ✓ There are efforts addressing governance and everything that is in the Virginia state legislative enactment clause.

  Chairman Bulova stated that it is good that Secretary LaHood has been engaged for this study because he has the gravitas and ability to bring parties together. Chairman Bulova applauded Governor McAuliffe for reaching out to Secretary LaHood. She stated she had worked with Secretary LaHood when Fairfax was struggling with cost over-runs on Phase II of the Silver Line; the disagreement with the Metropolitan Washington Airports Authority (MWAA) board over an underground or above ground station at the airport; and Loudoun County's reconsideration of their involvement in the Silver Line plans. She noted that Secretary LaHood was magnificent in bringing everybody together. Chairman Bulova concluded Secretary LaHood can be really helpful in bringing all the regional entities together on the complicated and complex governance issues, adding that he understands all these things. She stated that

it is her belief that with changes or improvements to WMATA governance, support will flow for increased revenue for maintaining the Metro system.

- Ms. Mitchell stated that when Secretary LaHood was asked to lead this study, he made it clear that he did not want to be involved if this was just a one-sided, political statement by Virginia that the state wanted him to put his name on to give it credibility. He stated that he would only participate if this was a true regional, collaborative effort that would be independent. Ms. Mitchell stated that the Administration had confirmed that this was what was expected.
- Council Member Snyder stated it is important to remember that there is a statutorily authorized approach that involves the Governor and NVTC.
- Delegate Minchew requested a correction to the legislative report, noting that comments regarding HB 2120 indicated he had helped defeat this bill. Delegate Minchew stated that he had made the motion to report the bill, which passed on a 5 to 1 vote. He requested this be corrected. He noted that the bill would have recognized the five super towns (towns with population of 3,500 or more) in Northern Virginia - Leesburg, Dumfries, Herndon, Vienna and Purcellville - giving them a rotating seat on the Authority. Delegate Minchew stated that this bill had passed the subcommittee, but that issues had been brought to Delegate Keam's attention that caused him to allow his own bill to be tabled, at his own request. Delegate Minchew added that the main issue was NVTA's Bond Counsel's concern that it might present a non-conformance issue with the indenture documents if the Authority had a town, which is part of a county, with double voting power.
- Delegate Minchew provided some additional information regarding the enactment clause added to the Metro Safety Commission bill. He stated that the first version of the enactment clause included some very strong directives, or mandates, for WMATA to engage in institutional reforms to get labor costs in control and to work on a revision to the WMATA Compact, as has been requested by both sides of the Potomac. Delegate Minchew noted that this caused consternation from the Virginia Secretary of Transportation, therefore, the final version will empower NVTC and Secretary Layne's secretariat, to continue efforts to allow WMATA to get back on track. He concluded that it is an uncodified enactment clause, but one that in an indirect way may have given rise to today's announcement by the Commonwealth to retain Secretary LaHood and initiate a study of WMATA.

(Ms. Mitchell departed.)

- Chairman Nohe directed NVTA staff to correct the legislative report, as requested by Delegate Minchew. Ms. Backmon responded affirmatively.

X. Finance Committee Report Mayor Parrish, Chair

- No verbal report.

XI. Technical Advisory Committee Report Mr. Boice, Chair

- No verbal report.

XII. Planning Coordination Advisory Committee Report Supervisor Buona, Chair

- No verbal report.

XIII. Monthly Revenue Report Mr. Longhi, CFO

- No verbal report.

XIV. Operating Budget Report Mr. Longhi, CFO

- No verbal report.

XV. Executive Director's Report Ms. Backmon, Executive Director

- Ms. Backmon stated the NVTA will be hosting the 2nd Annual ITS Roundtable "Planning for Tomorrow's Transportation Today" on Wednesday, April 5, 2017, from 8am – noon. She thanked those Authority members who have registered to attend.
- Ms. Backmon stated that of the 79 regional projects, 14 have been closed out and an update is included in her report.
- Ms. Backmon reminded the Authority that there will be no April meeting. The next meeting will be May 11, 2017.

XVI. Chairman's Comments

XVII. Adjournment

- Meeting adjourned at 7:26 pm.

May 11, 2017

Route 28 Corridor Feasibility Study

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Northern Virginia Transportation Authority Briefing

Agenda

I. Introductions
II. Project Team
III. Goals and Objectives
IV. Study Area and Scope
V. Existing Conditions
VI. Development of Preliminary Alternatives
VII. Development of Screening Criteria
VIII. Screening of Preliminary Alternatives
IX. Open Discussion
X. Wrap Up

Project Team

II. Project Team

Rick Canizales
Prince William County
Co-Project Manager

Steve Burke
City of Manassas
Co-Project Manager

Randy Boice
JMT Project Manager

Brian Curtis
JMT Deputy Project Manager

Rodney Hayzlett
JMT Consultant Senior Advisor

Sujith Racha
JMT Senior Traffic Engineer

Project Goals and Objectives

III. Project Goals and Objective

GOAL

The project goals for the Route 28 Corridor Feasibility Study are to identify infrastructure improvements that will improve travel times and network reliability within the Route 28 Corridor through Prince William County, the City of Manassas and City of Manassas Park and develop a plan to implement these improvement project(s).

III. Project Goals and Objective

Objectives

1. Reduce congestion and improve network reliability on Route 28 from Godwin Drive through Historic Downtown Manassas to Liberia Avenue.
2. Reduce congestion and improve network reliability on Route 28, Centreville Road – between Liberia Avenue and Compton Road.
3. Facilitate the weekday peak period commuter flows between I-66 and the residential communities in Manassas Park, Manassas, and Prince William County.
4. Provide increased opportunities for alternative modes of travel such as travel by bicycles, walking and carpooling/vanpooling.
5. Provide improved access to transit facilities.
6. Identify improvement project(s) that have public consensus.
7. Identify improvement project(s) that avoid or minimize environmental impacts.

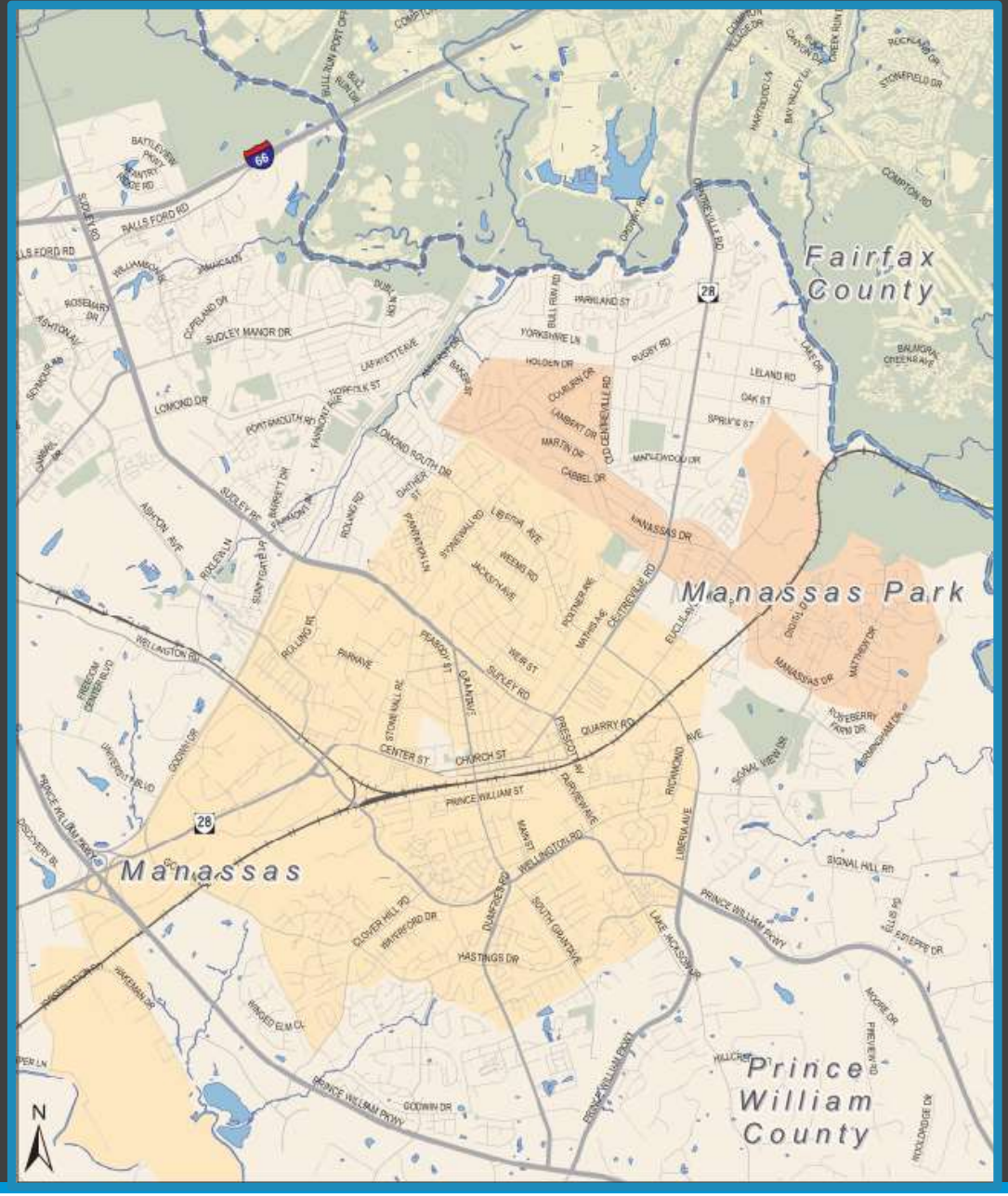
III. Project Goals and Objective

Objectives – cont.

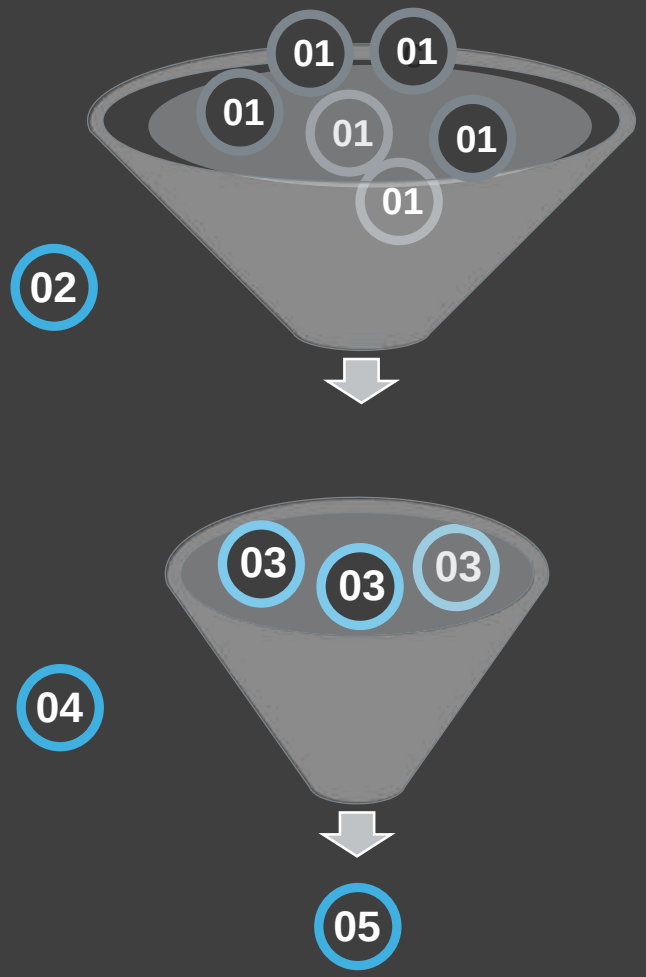
8. Identify improvement project(s) that avoid or minimize impacts to existing development.
9. Identify improvement project(s) that complement other Route 28 improvements currently being implemented by VDOT, Fairfax County, City of Manassas, City of Manassas Park, and Prince William County. These include:
    a. Widening of Route 28 to six lanes between Godwin Drive and Pennsylvania Avenue. Improvements include adding a dual-turn lane on northbound
    b. Route 28 Phase III - Widening of Route 28 to a six-lane divided facility between Linton Hall Road and Pennsylvania Avenue.
    c. Widening of Route 28 to six lanes in Fairfax County between Bull Run and Route 29 including intersections improvements and pedestrian/bicycle facilities.

Study Area and Scope

IV. Study Area



IV. Alternatives Screening / Evaluation



01 Preliminary Alternatives

02 Initial Screening

Criteria:
- Meeting study goals objectives
- Environmental fatal flaws
- Political support
- Ability to be implemented

03 Feasible Alternatives

Up to 5 for detailed analysis

04 Alternatives Evaluation

Criteria:
- Effectiveness in meeting study objectives
- 2040 Congestion Relief
- Environmental Impacts
- Right of Way / Utility Impacts
- Costs

05 Recommended Alternative(s)

Existing Conditions

V. Existing Conditions

Results

Travel Times

- Route 28 from Godwin Drive to Old Centreville Road

  AM northbound ~ 49 mins. PM southbound ~ 30 mins.

LOS

- A total of 34 signalized intersections were analyzed
- No. of intersections operating at a LOS E and/or worse

  AM peak hour – 8 PM peak hour – 9

Queueing

- Excessive queuing, blocking, and system volatility observed between Liberia Avenue to New Braddock Road along Route 28

  AM peak hour – northbound PM peak hour – southbound

Legend

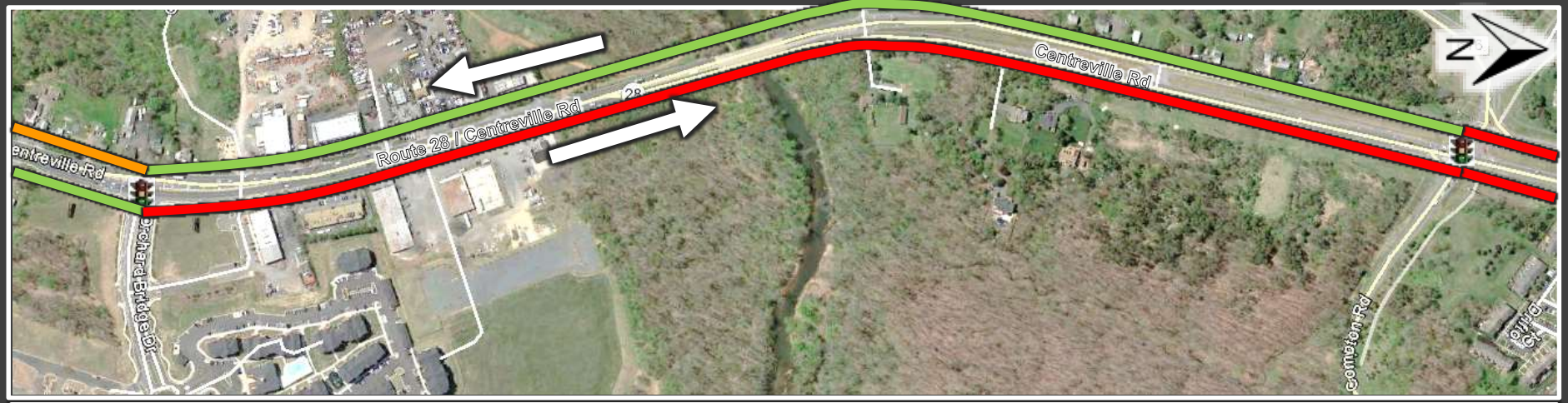
Level of Service

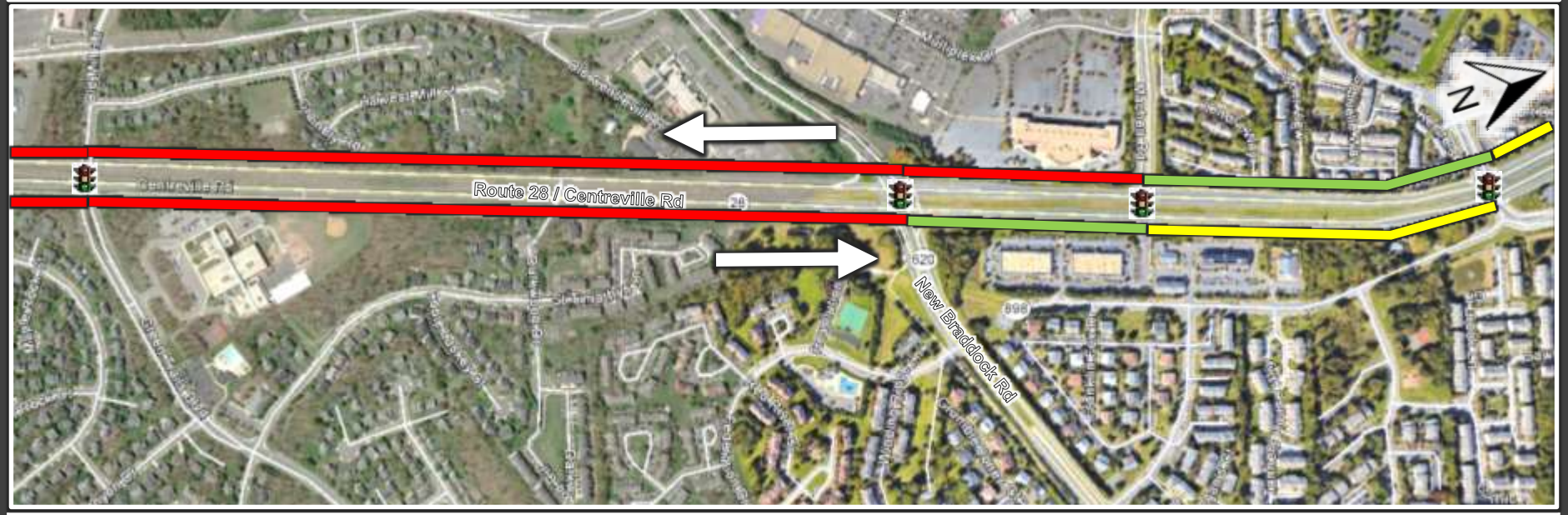
- LOS "A" through "C"
- LOS "D"
- LOS "E"
- LOS "F"

Signalized Intersection

AM Delay (sec) LOS | PM Delay (sec) LOS

Note: Map not to scale





Legend

Level of Service

- LOS "A" through "C"
- LOS "D"
- LOS "E"
- LOS "F"
- AM Northbound
- PM Southbound
- Signalized Intersection

Note: Map not to scale

Development of Preliminary Alternatives

VI. Development of Preliminary Alternatives

ALT. 1: No Build

ALT. 2A: Godwin Drive extended to Route 28 south of Bull Run

ALT. 2B: Godwin Drive extended to Compton Road

ALT. 3: Godwin Drive extended to match I-66 near the existing Compton Road crossing (the former Tri-County Parkway alignment)

ALT. 4: Widening Route 28 on existing alignment between Liberia Avenue and the Fairfax County line

ALT. 5: New Route 28 Reversible Lanes between Manassas Drive and the Fairfax County Line

ALT. 6: Widening Old Centreville Road/Ordway Road throughout its length

ALT. 7: Converting Old Centreville Road/Ordway Road to a reversible facility

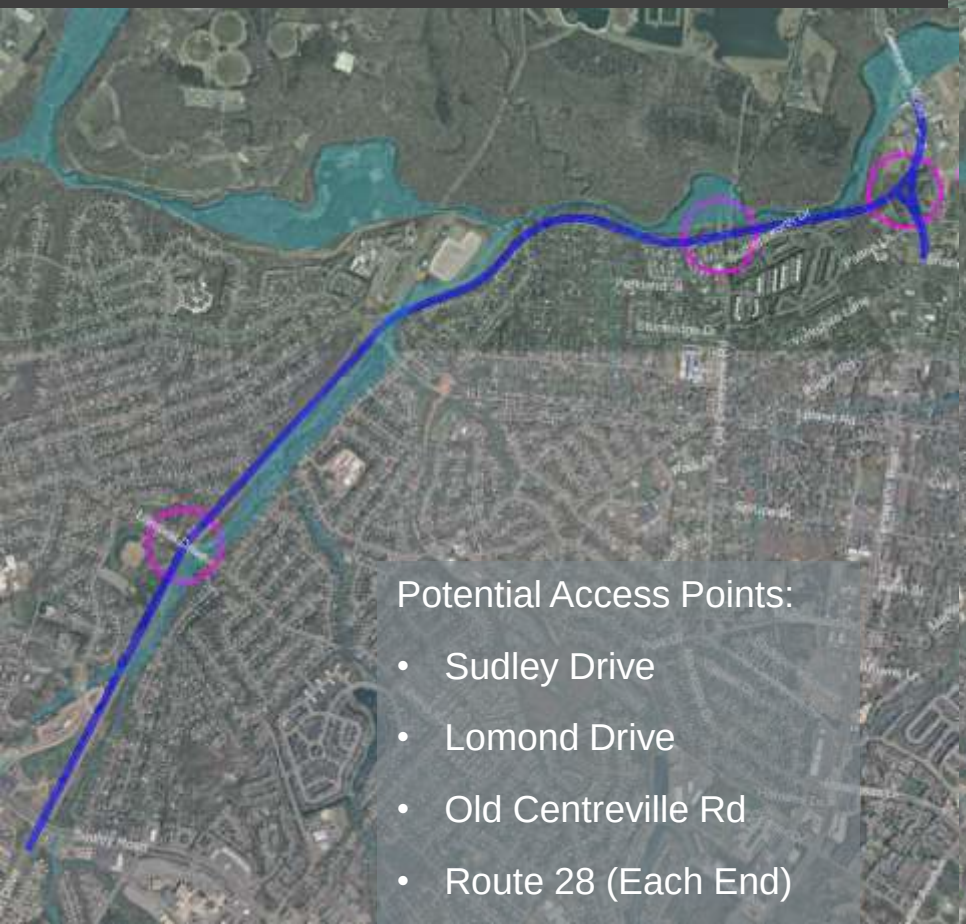
ALT. 8: Transit Alternatives to include BRT and/or VRE expansion along the corridor (Not Shown)

ALT. 9: Euclid Avenue extension north and south

ALT. 10: An new Eastern alignment

VI. Development of Preliminary Alternatives

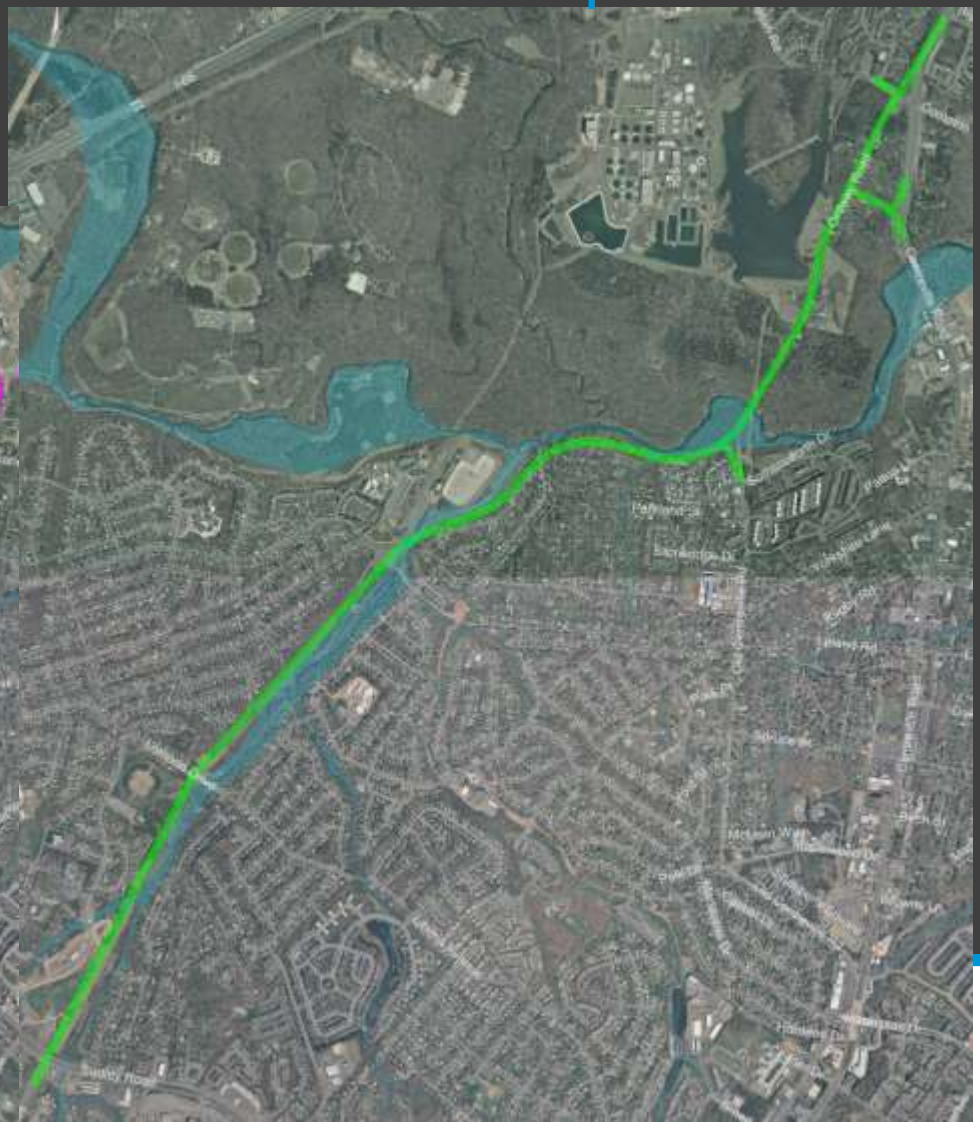
Alt 2A – Godwin Drive Extended



Potential Access Points:

- Sudley Drive
- Lomond Drive
- Old Centreville Rd
- Route 28 (Each End)

Alt 2B – Godwin Drive Extended to Compton Rd



VI. Development of Preliminary Alternatives

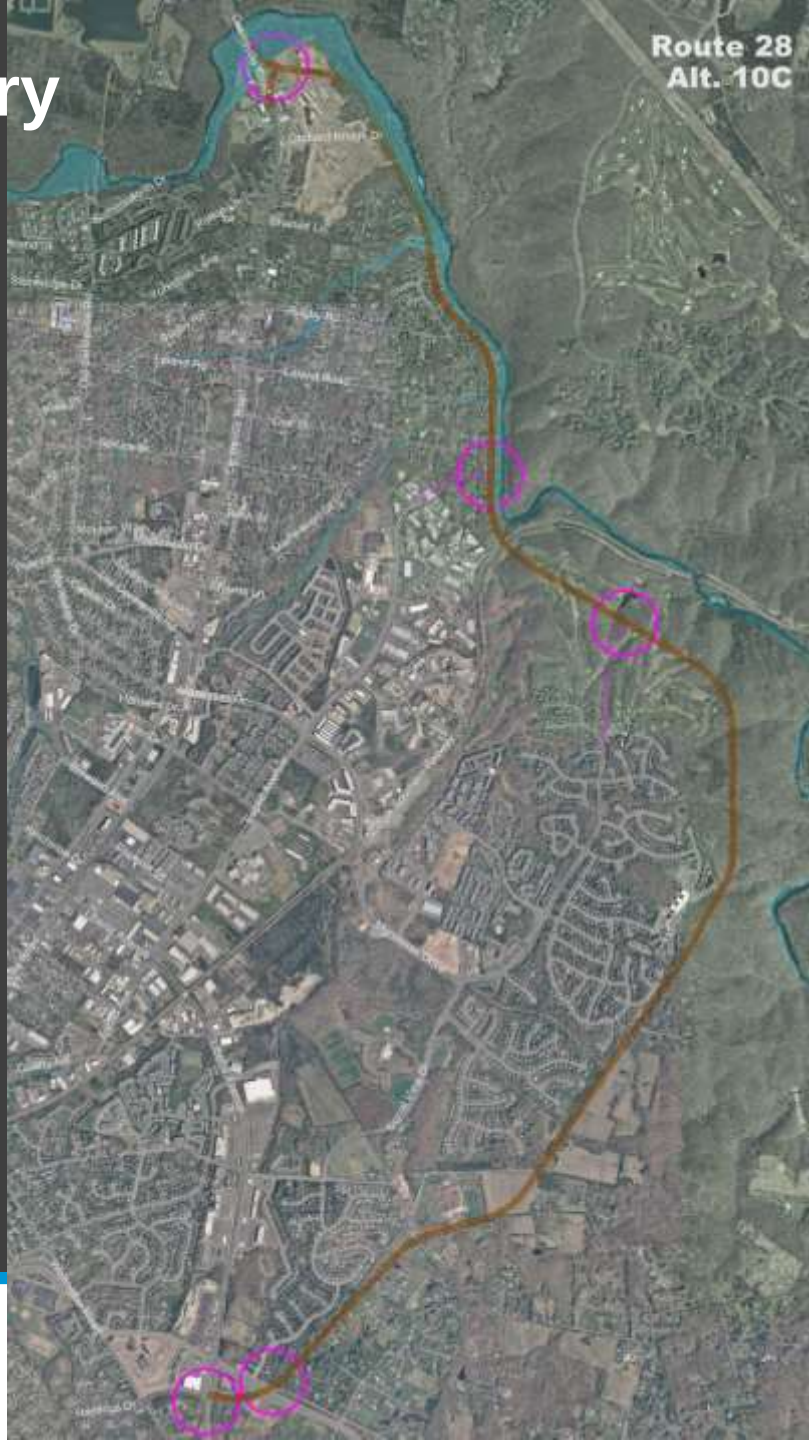
Alt 3 – Godwin Drive Extended to I-66

VI. Development of Preliminary Alternatives

Alt 10 – New Eastern Bypass

Potential Access Points:

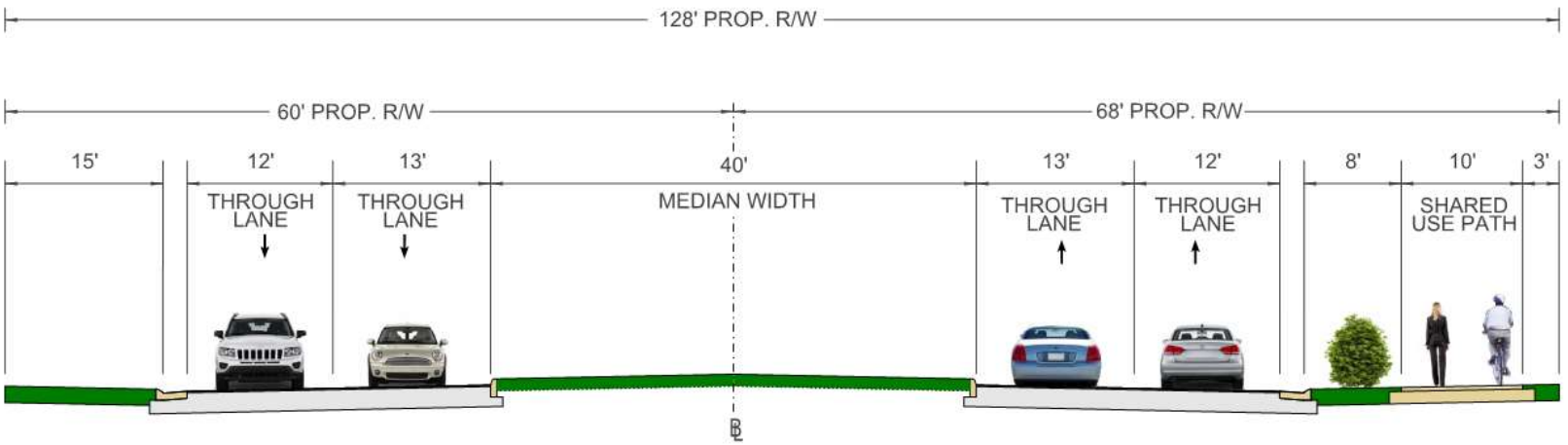
- Liberia Avenue
- Wellington Drive
- Manassas Drive Extended
- Euclid Avenue Extended
- Route 28 (Each End)



VI. Development of Preliminary Alternatives

Alternatives 2A, 2B, 3 & 10

TYPICAL SECTION
(Not to Scale)



VI. Development of Preliminary Alternatives

Alt 4 – Widen Route 28

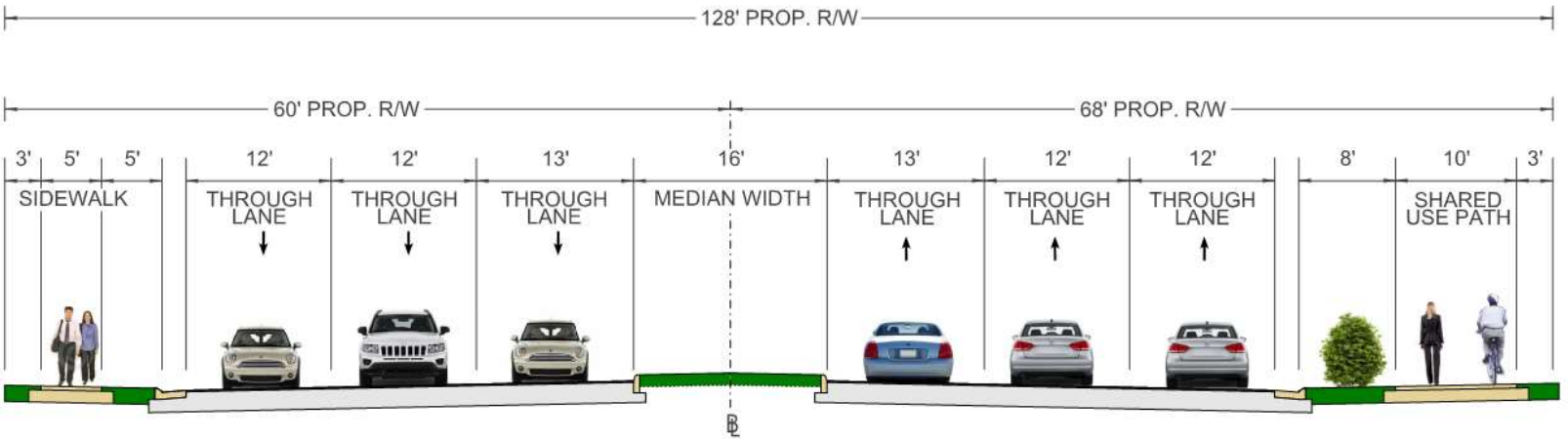
Alternative chosen to be modeled:

- Add a lane in each direction between Liberia Avenue and end of Fairfax County widening.

VI. Development of Preliminary Alternatives

Alternative 4

TYPICAL SECTION
(Not to Scale)



VIII. Development of Preliminary Alternatives

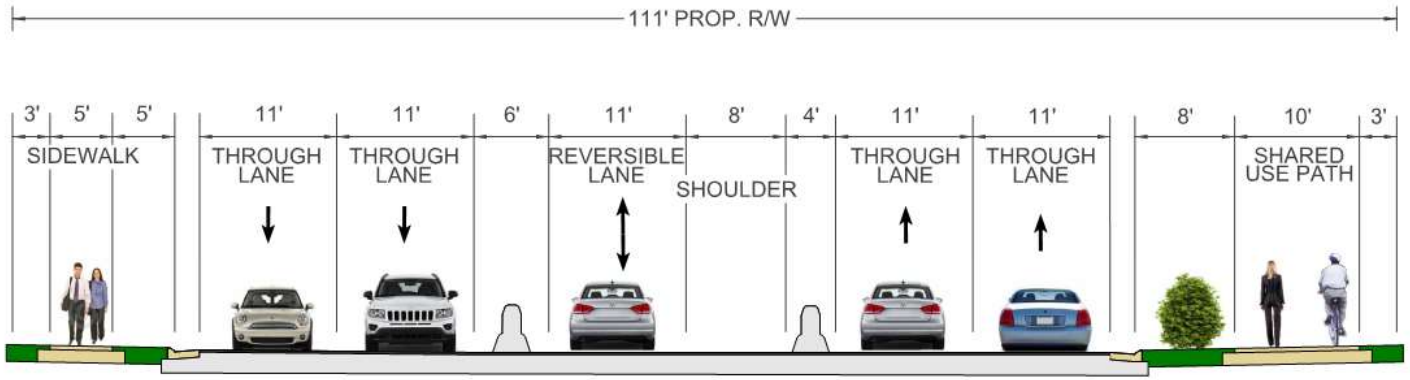
Alt 5 – Reversible Lanes on Route 28

1. Barrier separated lane between Manassas Drive and Fairfax County Line
2. No left turns between Manassas Drive and Bull Run all day.
3. Add a lane in each direction between Liberia Avenue and Manassas Drive

VI. Development of Preliminary Alternatives

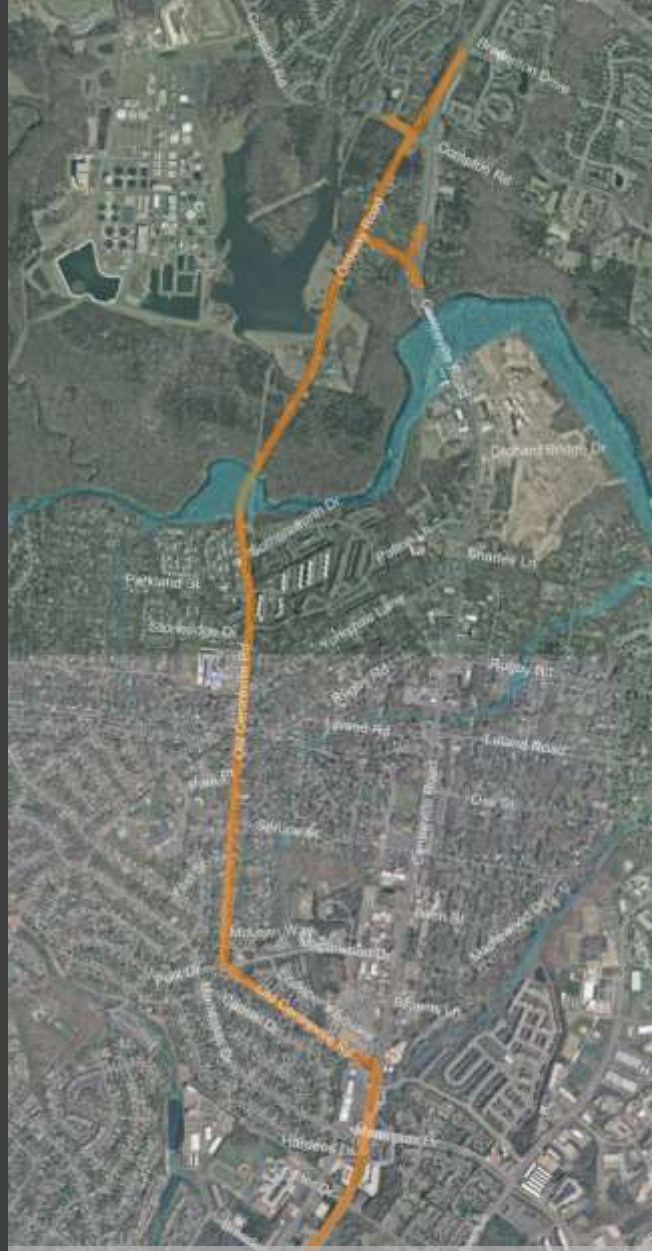
Alternative 5

TYPICAL SECTION
(Not to Scale)



VI. Development of Preliminary Alternatives

Alt 9 – Euclid Avenue Extension North & South

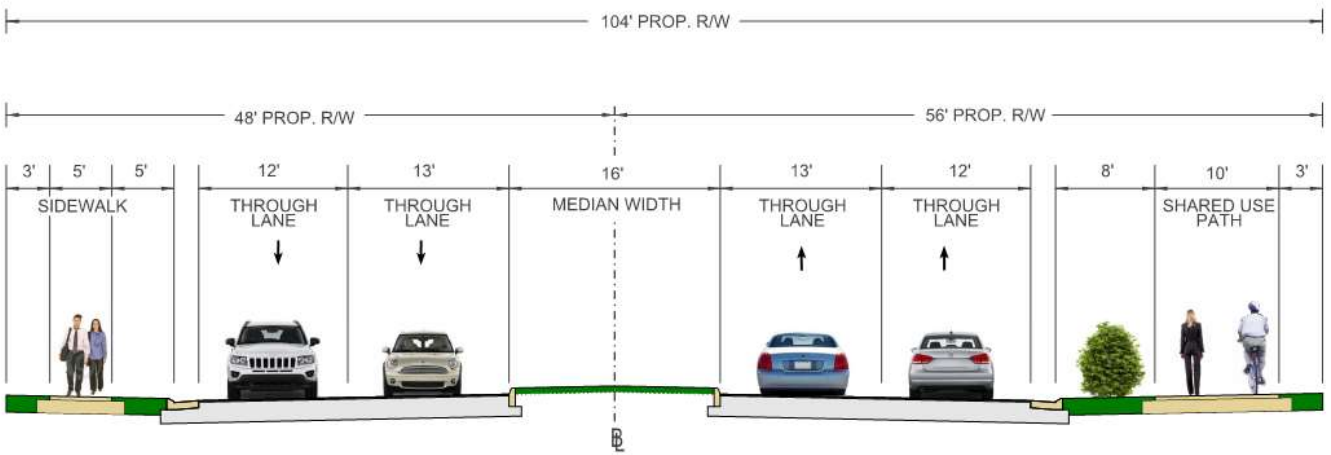


Alt 6 – Widen Old Centreville Rd

VI. Development of Preliminary Alternatives

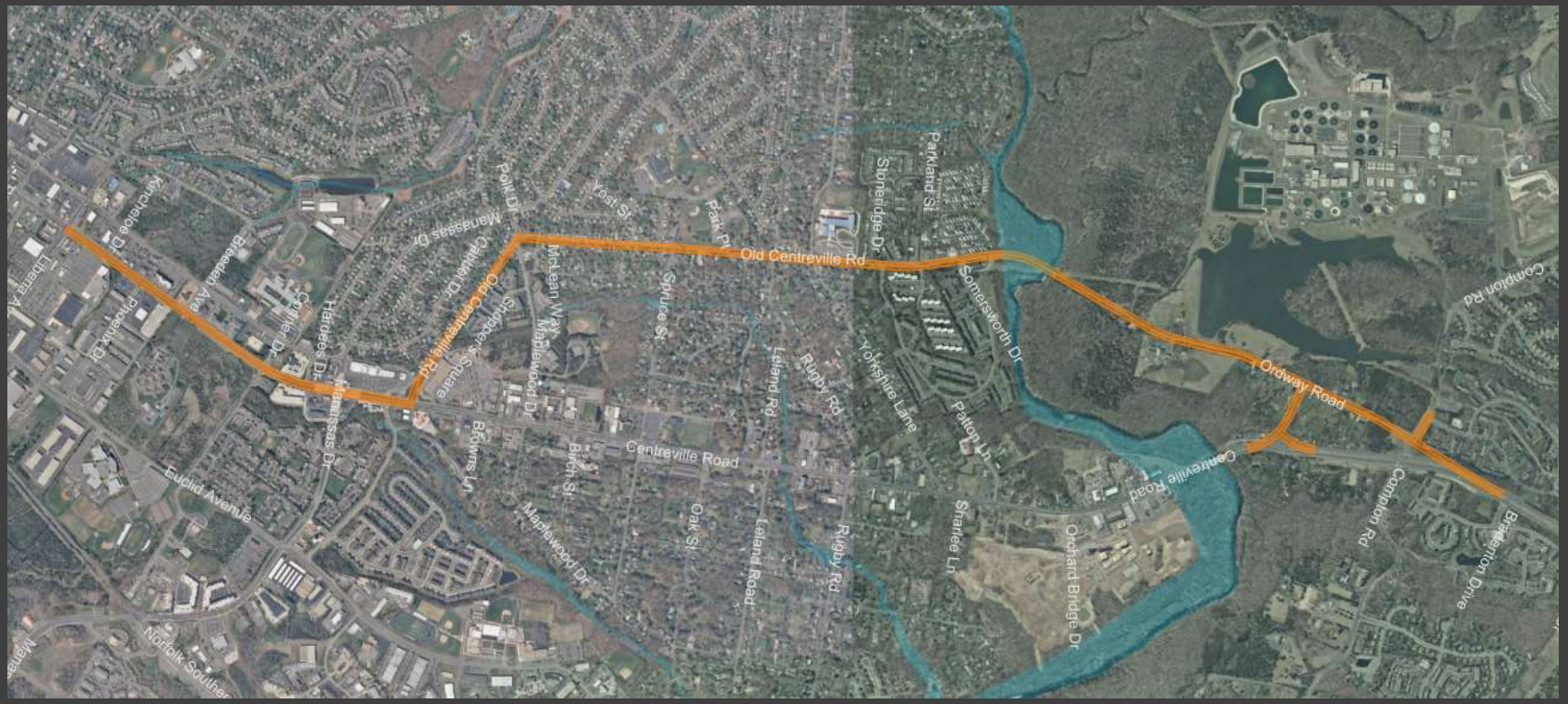
Alternatives 6 & 9

TYPICAL SECTION
(Not to Scale)



VI. Development of Preliminary Alternatives

Alt 7 – Reversible Lands on Old Centreville Rd

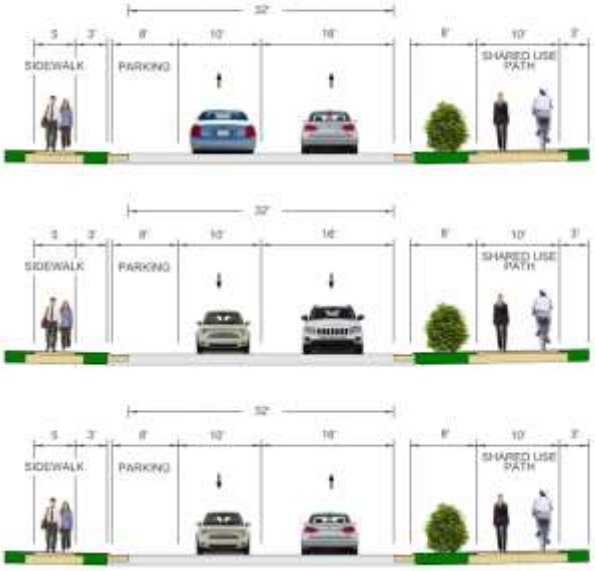


VI. Development of Preliminary Alternatives

Alternative 7

TYPICAL SECTION
(Not to Scale)

Southern Portion



AM Peak Hours

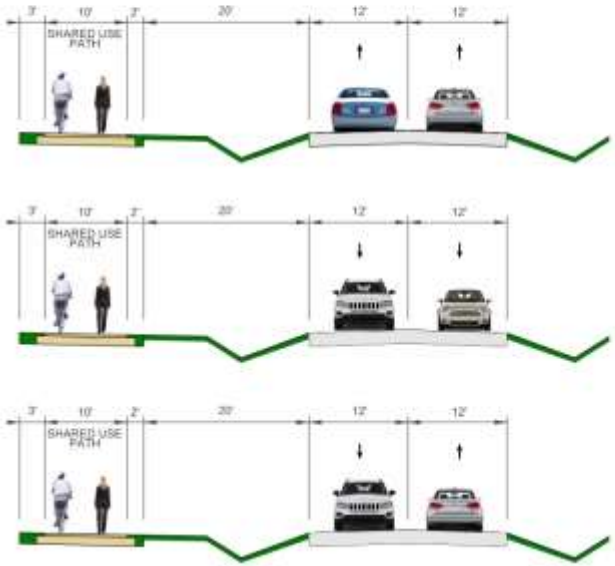
PM Peak Hours

Off Peak Hours

Alternative 7

TYPICAL SECTION
(Not to Scale)

Northern Portion



AM Peak Hours

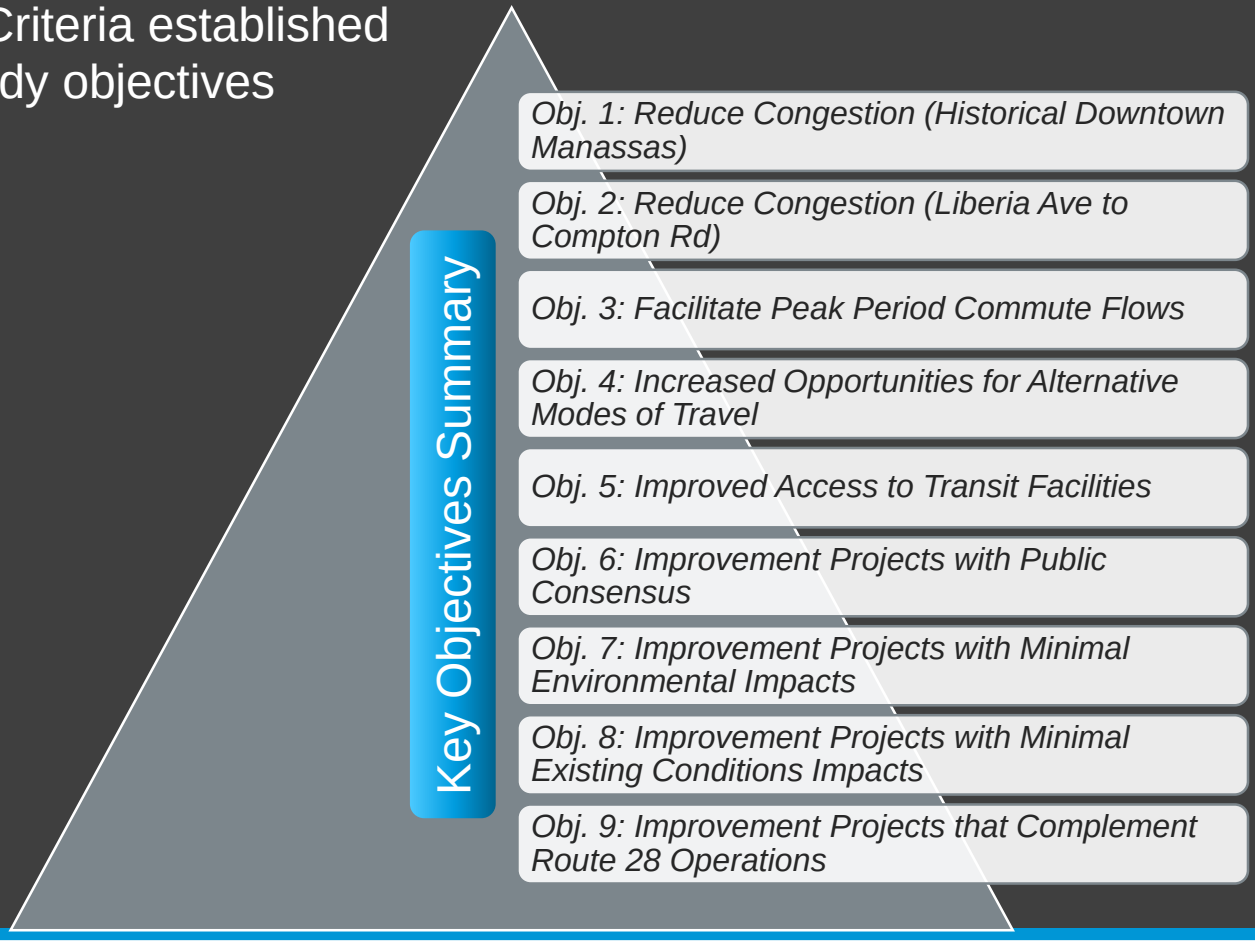
PM Peak Hours

Off Peak Hours

Development of Screening Criteria

VII. Development of Screening Criteria

Screening Criteria established to attain study objectives



VII. Development of Screening Criteria

Traffic Impacts	
3	Peak Periods (AM & PM) Traffic Served by Alternative
1	Change in Peak Periods (AM & PM) Traffic per Lane on Route 28 (Historic Downtown Manassas)
2	Change in Peak Periods (AM & PM) Traffic per Lane on Route 28 (Liberia Ave to Compton Rd)
3	Annual Travel Time Savings per Vehicle
4,5	Multimodal Compatibility

LEGEND

X Key Objective Attainable

Key Objectives Summary	
Obj. 1	*Reduce Congestion (Historical Downtown Manassas)*
Obj. 2	*Reduce Congestion (Liberia Ave to Compton Rd)*
Obj. 3	*Facilitate Peak Period Commute Flows*
Obj. 4	*Increased Opportunities for Alternative Modes of Travel*
Obj. 5	*Improved Access to Transit Facilities*
Obj. 6	*Improvement Projects with Public Consensus*
Obj. 7	*Improvement Projects with Minimal Environmental Impacts*
Obj. 8	*Improvement Projects with Minimal Existing Conditions Impacts*
Obj. 9	*Improvement Projects that Complement Route 28 Operations*

VII. Development of Screening Criteria

Policy Considerations

9	Consistency with Local & Regional Plans

Environmental Impacts

7	4f Properties / Conservation Easements / Historical Impacts
7	Floodway / Floodplains / Streams / Wetlands

Socioeconomic/ROW Impacts

8	ROW Impacts to Businesses / Residential / Churches / Schools
8	Access Management Issues

LEGEND

X — Key Objective Attainable

Key Objectives Summary	
Obj. 1	*Reduce Congestion (Historical Downtown Manassas)*
Obj. 2	*Reduce Congestion (Liberia Ave to Compton Rd)*
Obj. 3	*Facilitate Peak Period Commute Flows*
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Obj. 7	*Improvement Projects with Minimal Environmental Impacts*
Obj. 8	*Improvement Projects with Minimal Existing Conditions Impacts*
Obj. 9	*Improvement Projects that Complement Route 28 Operations*

Screening of Preliminary Alternatives

VIII. Screening of Preliminary Alternatives

Alternative Rating

Positive Impacts		
•	0 pts.	Neutral / Minimal / No Positive Impact
☐	1 pts.	Low Positive Impact
◘	2 pts.	Medium Positive Impact
■	3 pts.	High Positive Impact

Negative Impacts		
•	0 pts.	Neutral / Minimal / No Negative Impact
☐	1 pts.	Low Negative Impact
◘	2 pts.	Medium Negative Impact
■	3 pts.	High Negative Impact

VIII. Screening of Preliminary Alternatives

Alternative Evaluation Matrix

Conceptual Alternative #	Alignment Color	Length in Miles	Traffic Impacts (when compared to 2040 No-Build): Peak Periods (AM & PM) Traffic Served by Alternative	Traffic Impacts: Change in Peak Periods (AM & PM) Traffic per Lane on Route 28 (Historical Downtown Manassas)	Traffic Impacts: Change in Peak Periods (AM & PM) Traffic per Lane on Route 28 (Liberia Ave to Compton Rd)	Traffic Impacts: Annual Travel Time Savings per Vehicle	Traffic Impacts: Multimodal Compatibility	Policy Considerations: Consistency with Local & Regional Plans	Environmental Impacts: 4f Properties / Conservation Easements / Historical Impacts	Environmental Impacts: Floodway / Floodplains / Streams / Wetlands	Socioeconomic/ROW Impacts: ROW Impacts to Businesses / Residential / Churches / Schools	Socioeconomic/ROW Impacts: Access Management Issues	Alternative Rating	Alternative Selected to Move Forward
Key Objectives Attainable			*3*	*1*	*2*	*3*	*4, 5*	*9*	*7*	*7*	*8*	*8*		
2040 No-Build			•	•	•	•	•	•	•	•	•	•	0	✓
Alt 2A		4	▫	□	▫	▫	□	▫	□	▪	▪	▫	6	✓
Alt 2B		4.5	▪	□	▫	▫	□	▫	□	▪	▪	▫	7	✓
Alt 3		4	▪	□	□	▫	□	▪	■	■	□	▫	6	⊘✱
Alt 4		3.5	□	•	□	□	▫	▫	•	□	▪	□	4	✱
Alt 5		3.5	□	•	□	▫	▫	□	•	□	▪	▪	-2	⊘
Alt 6		4.5	▪	•	□	□	▫	•	•	□	▫	•	4	✱
Alt 7		4.5	▫	•	□	□	▫	□	•	•	□	▪	-1	⊘
Alt 9		5	□	•	▪	▪	▫	□	□	▫	▪	□	5	✓
Alt 10		6.5	▫	□	▪	▪	□	•	■	■	■	▫	1	⊘

Notes:

✓ *This alternative is recommended to be advanced for further study.*

⊘ *This alternative is not recommended to be advanced for further study.*

✱ *Based on Executive Committee input, these alternatives may be advanced for further study.*

⊘✱ *Alternative 3 is not recommended to move forward due to significant environmental impacts and the unlikelihood of the alternative to be approved by Federal Agencies based on outcome of previous NEPA studies.*

Alternative 8: Exclusive BRT option along Route 28 is not currently planned nor included in the MWCOG model. Therefore, this alternative is eliminated from further evaluation.

Objective 6 (Public Consensus) will be evaluated under second screening process.

Preliminary Alternatives	
Alt. 1	No Build
Alt. 2A	Godwin Dr extended to existing Route 28 south of Bull Run
Alt. 2B	Godwin Dr extended to Existing Route 28 at Compton Rd
Alt. 3	Godwin Dr extended to match I-66 near existing Compton Rd crossing (former Tri-County Pkwy alignment)
Alt. 4	Widening Route 28 on existing alignment between Liberia Avenue and the Fairfax County line
Alt. 5	New Route 28 Reversible Lanes between Manassas Drive and the Fairfax County Line
Alt. 6	Widening Old Centreville Rd/Ordway Rd throughout its length
Alt. 7	Converting Old Centreville Rd/Ordway Rd to a reversible facility
Alt. 8	Transit Alternatives to include BRT and/or VRE expansion along the corridor (Not Shown)
Alt. 9	Euclid Avenue extension north and south
Alt. 10	A new Eastern alignment

Legend

Negative Impacts			Positive Impacts		
•	0 pts.	Neutral / Minimal / No Negative Impact	•	0 pts.	Neutral / Minimal / No Positive Impact
□	-1 pts.	Low Negative Impact	□	1 pts.	Low Positive Impact
▫	-2 pts.	Medium Negative Impact	▫	2 pts.	Medium Positive Impact
■	-3 pts.	High Negative Impact	■	3 pts.	High Positive Impact

Key Objectives Summary	
Obj. 1	Reduce Congestion (Historical Downtown Manassas)
Obj. 2	Reduce Congestion (Liberia Ave to Compton Rd)
Obj. 3	Facilitate Peak Period Commute Flows
Obj. 4	Increased Opportunities for Alternative Modes of Travel
Obj. 5	Improved Access to Transit Facilities
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Obj. 7	Improvement Projects with Minimal Environmental Impacts
Obj. 8	Improvement Projects with Minimal Existing Conditions Impacts
Obj. 9	Improvement Projects that Complement Route 28 Operations

Route 28 Corridor Feasibility Study

Preliminary Alternative Evaluation Matrix: 1st Screening

VIII. Screening of Preliminary Alternatives

Alternatives Carried Forward

Executive Committee Recommendations

- ALT. 2A: Godwin Drive extended to existing Route 28 north of Bull Run
- ALT. 2B: Godwin Drive extended to match existing Route 28 north of Bull Run
- ALT. 4: Widening Route 28 on existing alignment between Liberia Avenue adn the Fairfax County line
- ALT. 9: Euclid Avenue extension north and south

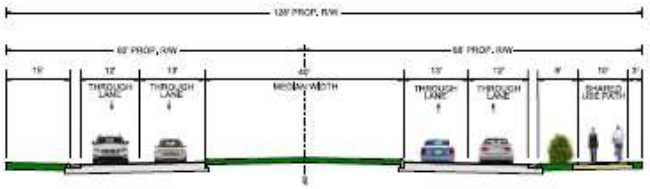
VIII. Screening of Preliminary Alternatives

Alternatives Carried Forward

Typical Sections

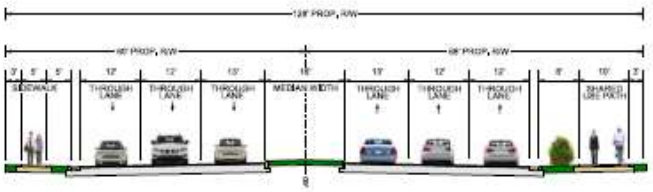
Alternatives 2A, 2B

TYPICAL SECTION
(Not to Scale)



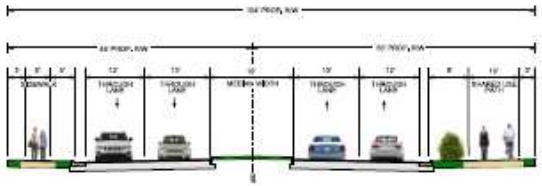
Alternative 4

TYPICAL SECTION
(Not to Scale)



Alternative 9

TYPICAL SECTION
(Not to Scale)



Open Discussion

Wrap-Up

X. Next Steps

- Develop Forecasts for Each Alternative
- Evaluate Alternatives
- Select Preferred Alternative
- Second Round of Public Involvement and Briefings of Elected Officials
- Public Information Meeting
- Brief County Board and City Councils

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VI

NVTA's TransAction

Transportation Action Plan for Northern Virginia

TransAction Preview: 2040 Baseline Conditions

May 11, 2017

NVTA's TransAction

Agenda

- Overall Approach
- 'No Build' (2040) Baseline Conditions
- Draft Plan: Initial Findings

Overall Approach

- Two Parallel Tracks
  - Public Engagement (Spring and Fall 2016)
  - Technical Analysis

Technical Analysis

- Simulated ‘No Build’ conditions in 2040
- Developed a Draft Plan for 2040 including 358 candidate regional projects that address needs:
  - ‘bottom-up’ projects
  - ‘top-down’ projects, e.g. ICM/ITS, TDM, high performance transit
- Compared Draft Plan to ‘No Build’ (2040) conditions
- Compared Draft Plan against four Alternate Futures

Modeling Approach

Current Conditions (2016)	‘No Build’ (2040)	‘No Build’ Alternate Futures (2040)	Draft Plan (2040)
Current population/ employment patterns	MWCOG Round 9.0 forecasts (population/ employment)	Modified from ‘No Build’ for each of four Alternate Futures	Same as ‘No Build’
Current transportation system	Current transportation system plus ‘committed’ projects	Modified from ‘No Build’ for each of four Alternate Futures	Same as ‘No Build’ plus 358 candidate regional projects

NVTA's TransAction

‘No Build’ (2040)

- ‘Committed’ projects include:
  - Projects currently under construction
  - Future projects with full funding
- ‘No Build’ (2040) includes:
  - Metrorail Silver Line Phase II
  - Transform 66
  - I-395 Express Lanes
  - I-95 Express Lanes extension

Alternate Futures

- Many Alternate Futures are possible
- Four Alternate Futures tested:
  - Scenario A: Technology makes driving easier
  - Scenario B: Changes in travel behavior
  - Scenario C: Dispersed land use growth
  - Scenario D: Concentrated land use growth
- Scenarios are ‘plausible’ alternate futures, but are neither ‘predicted’ nor ‘preferred’; hybrid scenarios are ‘probable’
- Scenario (sensitivity) analysis provides an understanding of the robustness of TransAction findings and recommendations
- NVTA may wish to explore future proactive policy guidance associated with selected Alternate Futures

Draft Plan (2040)

- TransAction embraces regional transportation solutions that address regional transportation needs
- TransAction is a fiscally unconstrained plan
- TransAction includes candidate regional projects that are not fully funded, regardless of whether such projects are eligible for NVTA's regional revenues

Draft Plan (2040)

Total Projects in Draft Plan	Draft Plan Cost Estimate w/ ROW ($bn)*
358	$43.9

Project Type	Total Projects**
Roadway	240
Transit	104
Non-motorized	45
ITS[1] / ICM[2] / TDM[3]	30

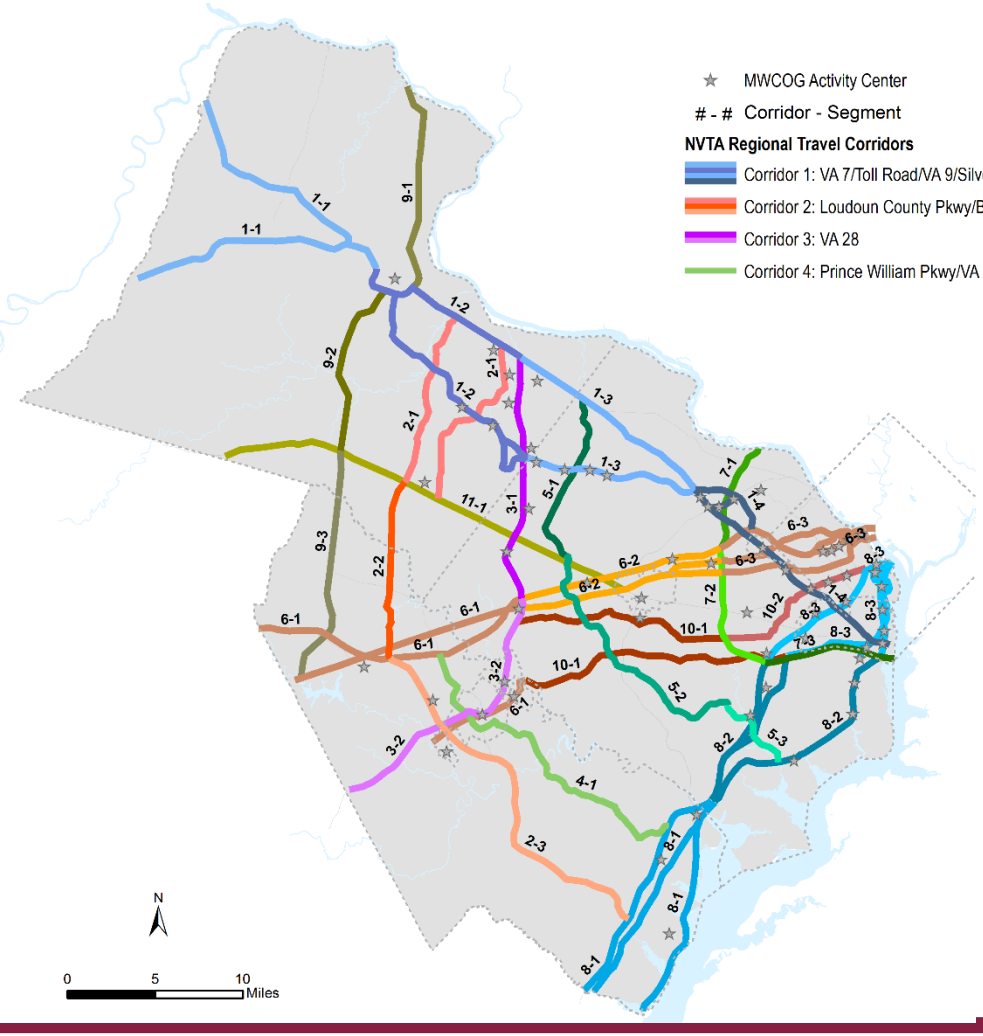
*Cost estimates are for entire projects, regardless of potential funding sources
**Projects can be categorized as multiple types

[1] ITS: Intelligent Transportation Systems
[2] ICM: Integrated Corridor Management
[3] TDM: Transportation Demand Management

Draft Plan (2040)

- Approximately half of the Draft Plan cost estimate associated with 23 ‘Mega’ projects (cost estimate > $0.25 billion)
  - Metrorail expansions include new Blue Line alignment under the Potomac near Rosslyn, extensions to Centerville and Potomac Mills, additional rolling stock, and station improvements
  - VRE enhancements include rail capacity improvements for the Manassas and Fredericksburg Lines, and between Alexandria and DC
  - New highway crossings over the Potomac River north and south of the Beltway
  - Highway capacity improvements on I-95, US-1, Route 123, Route 234, Route 286, and Seven Corners
  - BRT and/or LRT services along or near US-1, Route 28, Route 7, and Merrifield/Tysons

Corridors and Segments



Focus on improving travel conditions on 11 multi-modal corridors, divided into 28 corridor segments

NVTA's TransAction

Process – Performance Measures

- Performance Measures
  - Performance of the plan evaluated at multiple levels (regional, corridor, corridor segment)
  - Evaluation uses 15 measures, including all seven HB 599 (2012) measures; each measure weighted 5 or 10 percent
  - Integrates HB 599 process into TransAction
- Benefit/Cost Analysis
  - TransAction includes a ‘planning level’ BCA, using project cost estimates and encompassing all performance measures

Process – Performance Measures

Vision

In the 21st century, Northern Virginia will develop and sustain a multimodal transportation system that enhances quality of life and supports economic growth. Investments in the system will provide effective transportation benefits, promote areas of concentrated growth, manage both demand and capacity, and employ the best technology, joining rail, roadway, bus, air, water, pedestrian, and bicycle facilities into an interconnected network that is fiscally sustainable.

Goals	Objectives		Measures					FY2017 HB599 weightings	TA Sub-Cmtee	TAC	PCAC	Mean	PPC
Goal 1: Enhance quality of life and economic strength of Northern Virginia through transportation	1.1	Reduce congestion and crowding experienced by travelers in the region	1.1.1	Total Person Hours of Delay (HB599)	❶		③	9.1	10	10	9	9.7	10
			1.1.2	Transit Crowding (HB599)	❶	②		5.2	5	6	5	5.3	5
			1.1.3	Person Hours of Congested Travel in Automobiles (HB599)	❶		③	6.9	5	8	7	6.7	5
			1.1.4	Person Hours of Congested Travel in Transit Vehicles (HB599)	❶		③	5.3	5	7	5	5.7	5
	1.2	Improve Travel Time Reliability	1.2.1	Congestion Severity: Maximum Travel Time Ratio	❶	②			2	2	9	4.3	5
			1.2.2	Congestion Duration (HB599)	❶	②	③	12.6	8	15	9	10.7	10
	1.3	Increase access to jobs, employees, markets, and destinations	1.3.1	Percent of jobs/population within 1/2 mile of high frequency and/or high performance transit	❶				5	7	3	5.0	5
			1.3.2	Access to Jobs within 45 mins by auto or within 60 mins by transit (HB599)	❶			4.3	10	5	3	6.0	5
	1.4	Improve connections among and within areas of concentrated growth	1.4.1	Average travel time per motorized trip between Regional Activity Centers	❶				5	5	2	4.0	5
			1.4.2	Walkable/bikeable environment within a Regional Activity Center	❶		③		5	5	3	4.3	5
									60	70	55	61.7	60
Goal 2: Enable optimal use of the transportation network and leverage the existing network	2.1	Improve the safety of transportation network	2.1.1	Safety of the transportation system	①	❷			5	5	10	6.7	5
	2.2	Increase integration between modes and systems	2.2.1	First and last mile connections	①	❷			13	8	6	9.0	10
	2.3	Provide more route and mode options to expand travel choices and improve resiliency of the system	2.3.1	Share of travel by non-SOV modes	①	❷	③		15	5	7	9.0	10
	2.4	Sustain and improve operation of the regional system	2.4.1	Person hours of travel caused by 10% increase in PM peak hour demand (HB599)		❷		1.6	2	2	2	2.0	5
									35	20	25	26.7	30
Goal 3: Reduce negative impacts of transportation on communities and the environment	3.1	Reduce transportation-related emissions	3.1.1	Vehicle miles traveled (VMT) by speed			❸		5	10	20	11.7	10
									5	10	20	11.7	10
							HB599 Measures	45	45	53	40	46	45
							Other Measures	55	55	47	60	54	55
							Total	100	100	100	100	100	100

Notes

❶❷❸ indicate primary goal supported by each measure
①②③ indicate other goals supported by each measure

Measures 1.4.2, 2.1.1, and 2.2.1 are qualitative measures. All others are quantitative measures.

NVTA's TransAction

Reminders

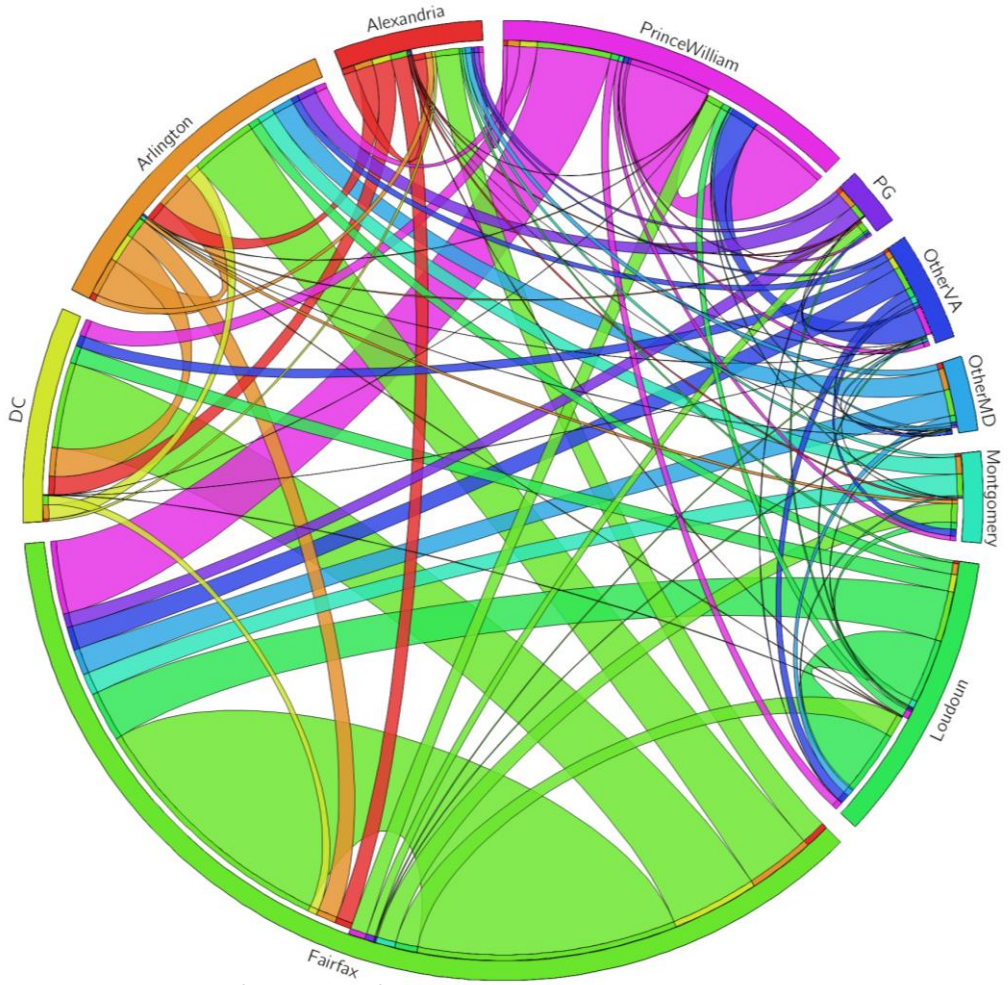
- TransAction is a multi-modal long range regional transportation plan; it does not seek to evaluate or optimize individual projects
- Focus on ‘bigger picture’ relative changes rather than microscopic details
- Analytical approach addresses recurring congestion

Population and Employment

	Current Conditions (2016)	'No Build' (2040)	% Change
Population			
Northern VA	2,413,009	2,994,401	24%
DC Metro	7,150,948	8,788,431	23%
Employment			
Northern VA	1,362,880	1,873,262	37%
DC Metro	4,066,099	5,253,305	29%

Commute Patterns

'No Build' (2040)
Commute Patterns

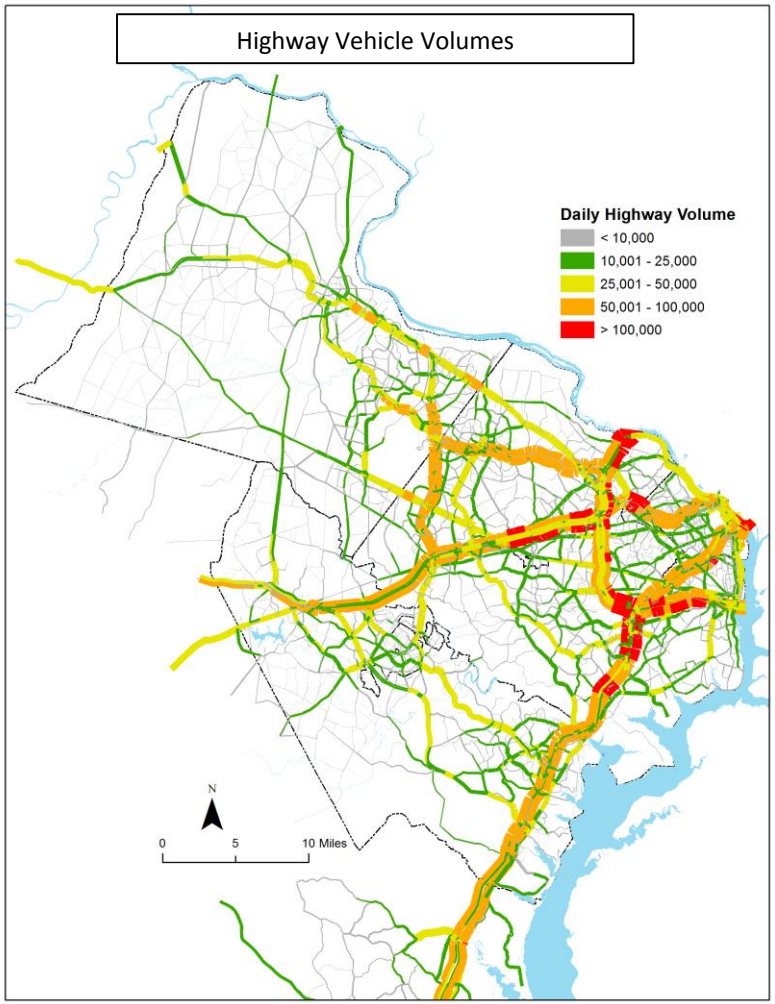


Source: MWCOG 2040 Travel Forecasts, Round 9.0 Land Use

NVTA's TransAction

Weekday Highway Vehicle Volumes

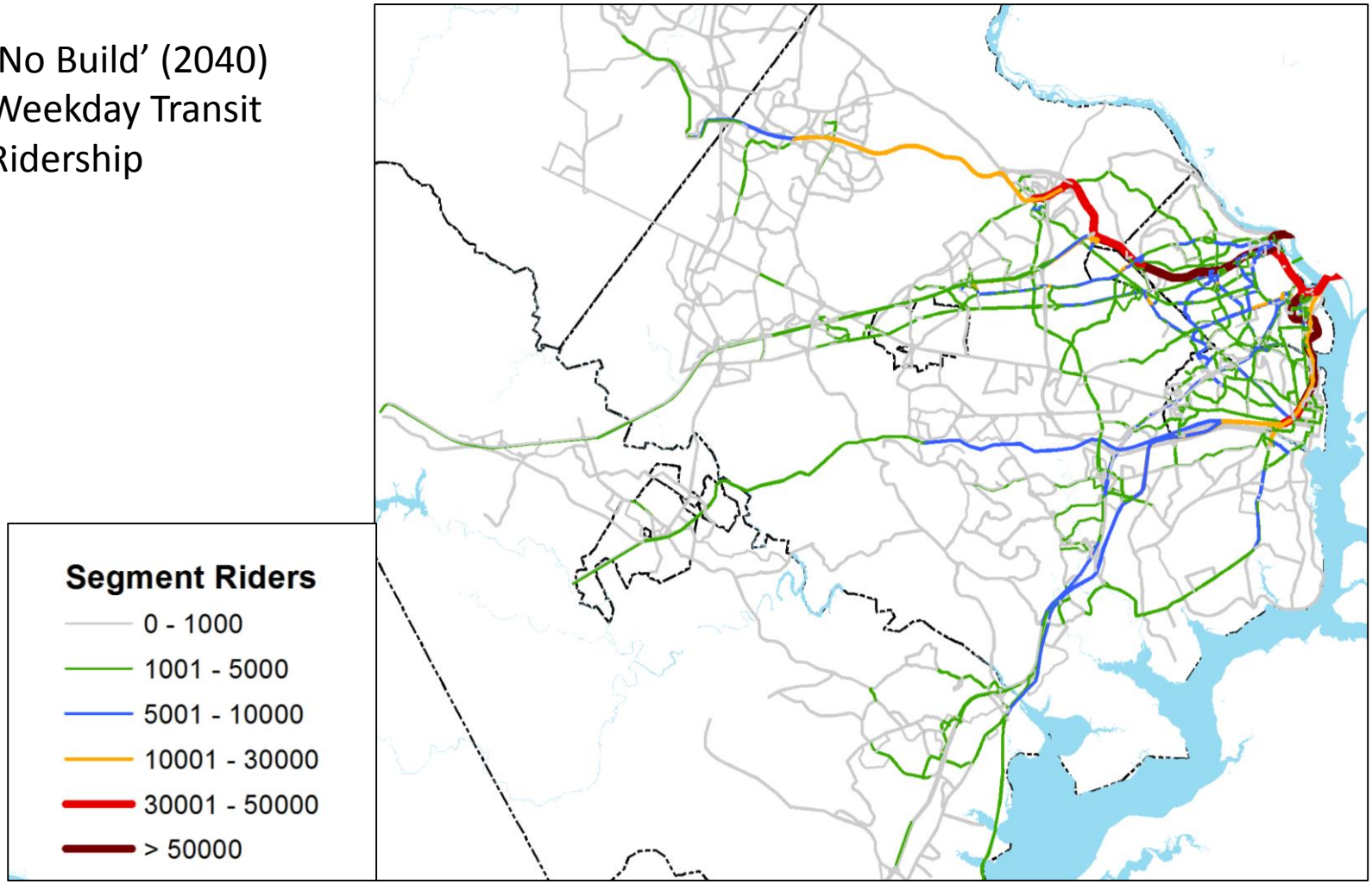
'No Build' (2040) Weekday Highway Vehicle Volumes



NVTA's TransAction

Weekday Transit Ridership

'No Build' (2040) Weekday Transit Ridership



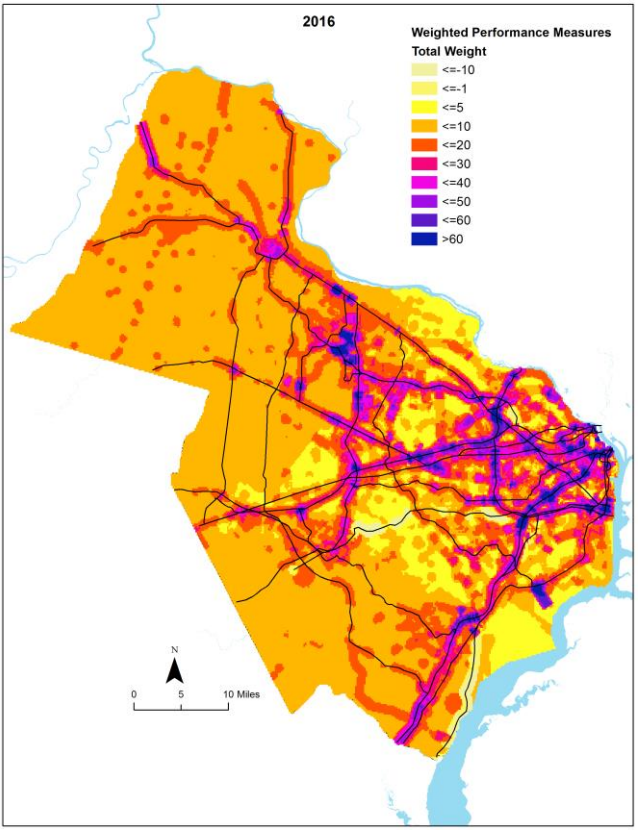
NVTA's TransAction

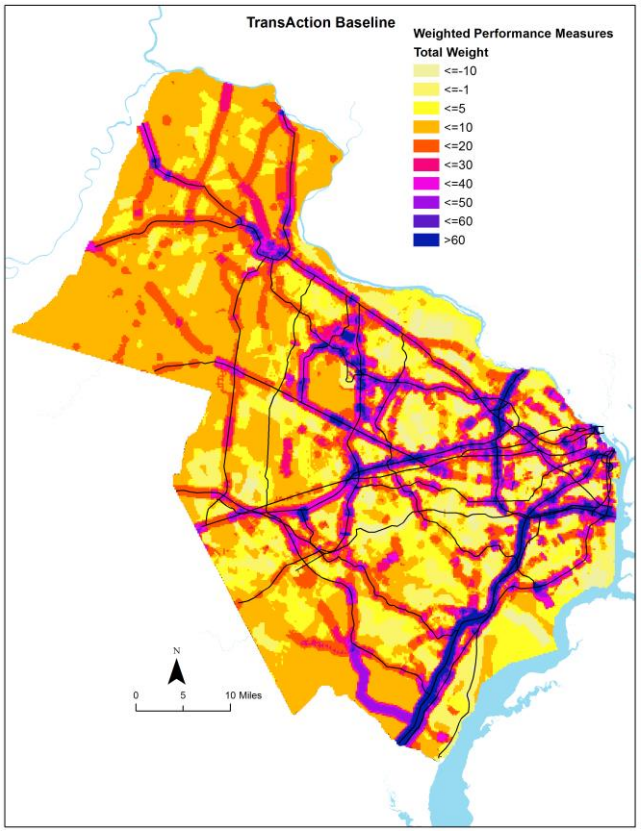
Selected Measures

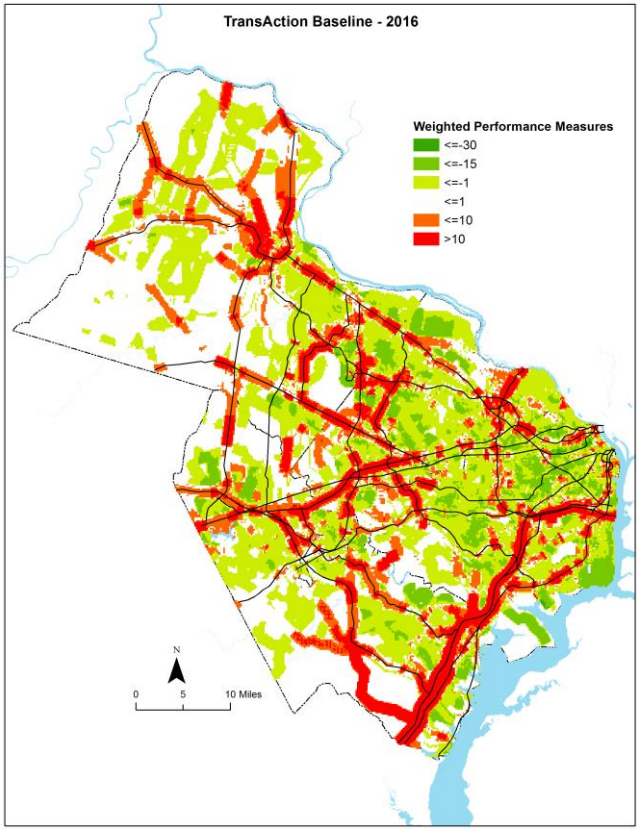
Measures (Weekday)	Current Conditions (2016)	'No Build' (2040)	% Change
Motorized Trips	8,737,000	10,462,000	19.7%
Auto Trips	7,862,000	9,432,000	20.0%
Transit Trips	876,000	1,030,000	17.6%
Transit Share	10.0%	9.8%	-0.2%
Transit Boardings	1,002,000	1,359,000	35.6%
Miles of Travel	104,838k	125,378k	19.6%
Hours of Travel	3,298,000	5,811,000	76.2%
Hours of Delay	1,007,000	3,030,000	201%
Transit Crowding	10,800	20,100	86.8%

Impact of ‘No Build’ (2040)

‘No Build’ (2040) compared to Current Conditions (2016)







NVTA's TransAction

Alternate Futures: Key Highlights

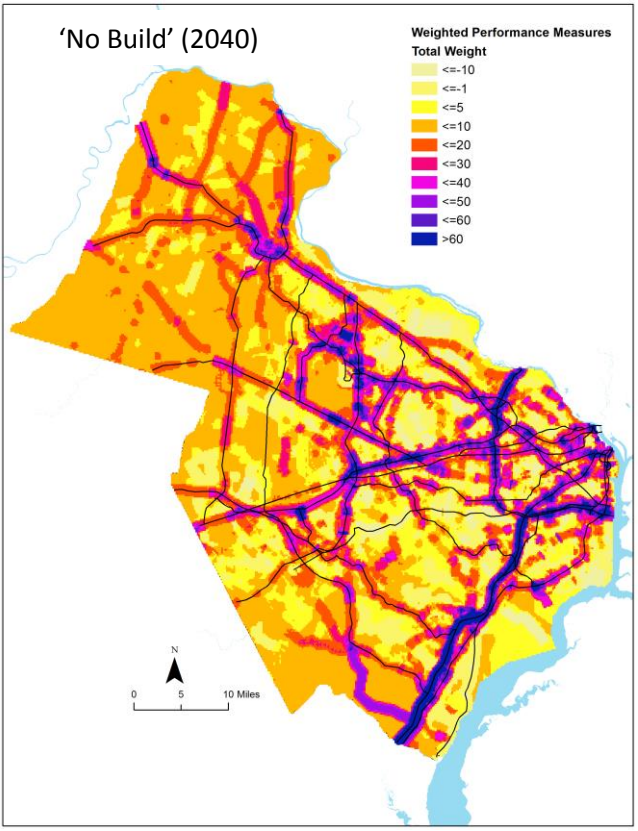
- Scenarios A and B provide the greatest improvement in travel conditions over the 2040 TransAction Baseline
  - Scenario A has the lowest person hours of delay (less than 55% of Baseline and Scenarios C and D)
  - Scenario B has the lowest level of transit crowding
- Scenarios C and D highlight the relationship between land use and transportation
  - Scenario C appears to be the least desirable alternate future, is still better than the 2040 TransAction Baseline

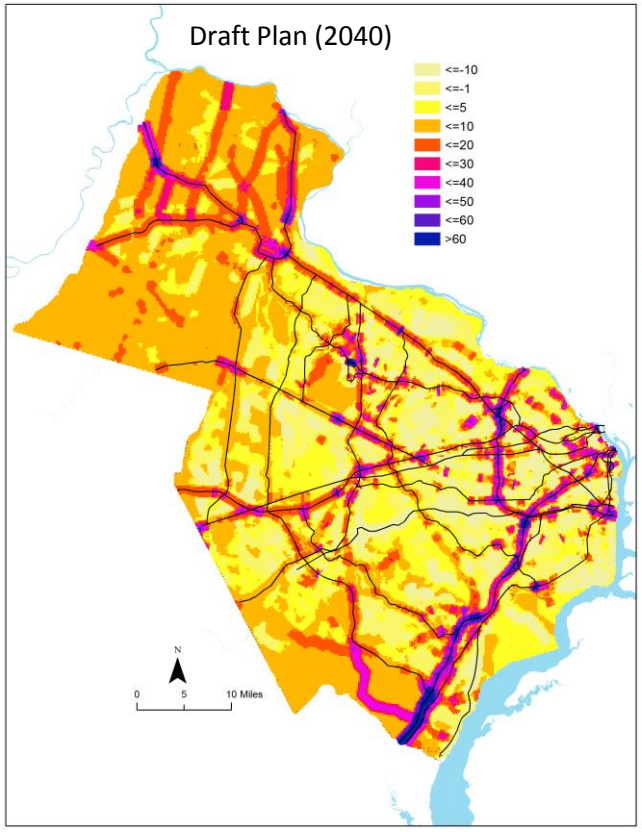
Draft Plan: Initial Findings

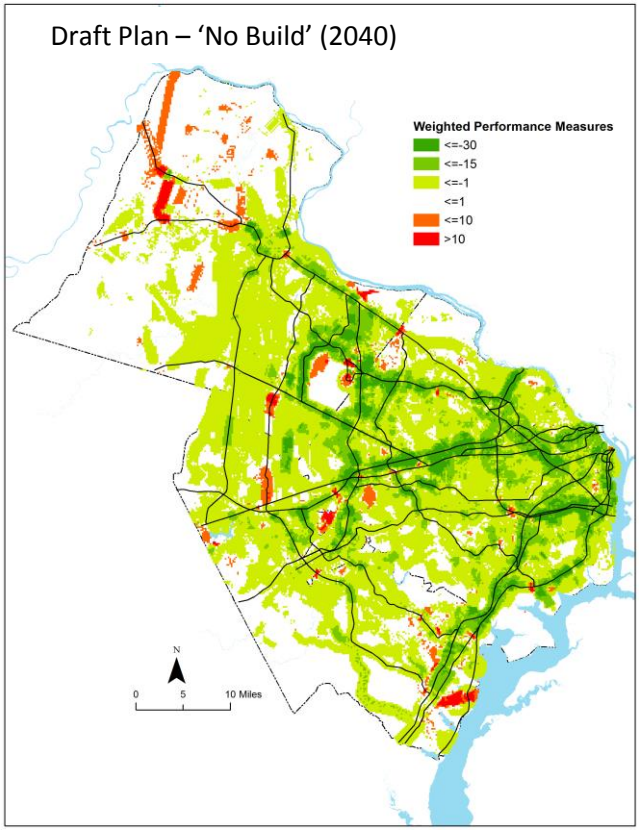
Measures (Weekday)	Current Conditions (2016)	'No Build' (2040)	Draft Plan (2040)	% Change
Motorized Trips	8,737,000	10,462,000	10,563,000	1.0%
Auto Trips	7,862,000	9,432,000	9,444,000	0.1%
Transit Trips	876,000	1,030,000	1,119,000	8.7%
Transit Share	10.0%	9.8%	10.6%	8.2%
Transit Boardings	1,002,000	1,359,000	1,539,000	13.2%
Miles of Travel	104,838k	125,378k	124,829k	-0.4%
Hours of Travel	3,298,000	5,811,000	4,387,000	-24.5%
Hours of Delay	1,007,000	3,030,000	1,645,000	-45.7%
Transit Crowding	10,800	20,100	7,100	-64.9%

Overall Impact of Draft Plan

Draft Plan (2040) compared to 'No Build' (2040)





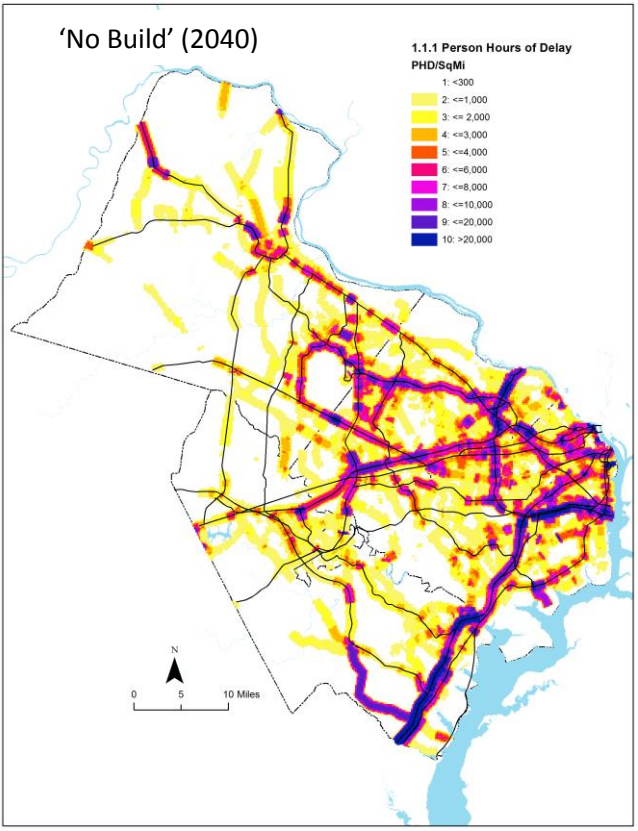


NVTA's TransAction

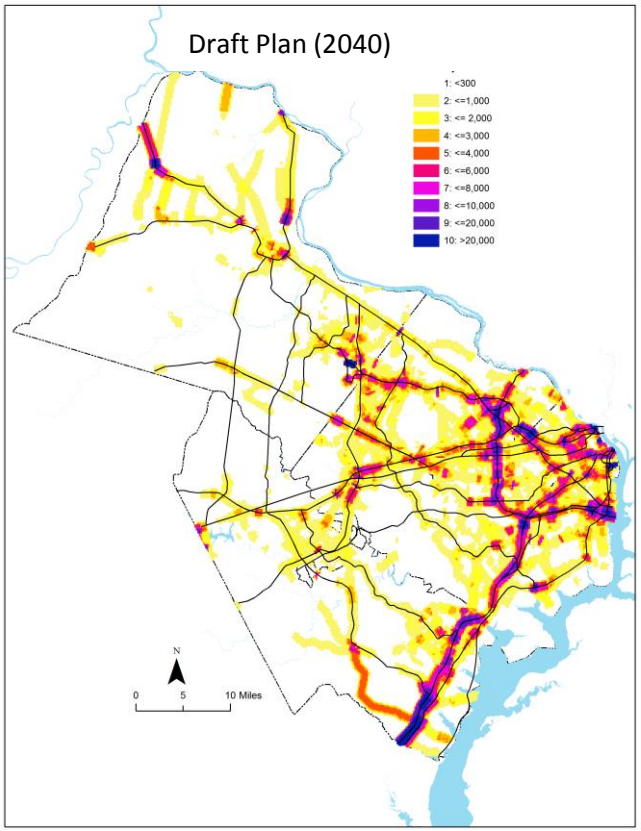
Impact on Person Hours of Delay

Draft Plan (2040) compared to 'No Build' (2040)

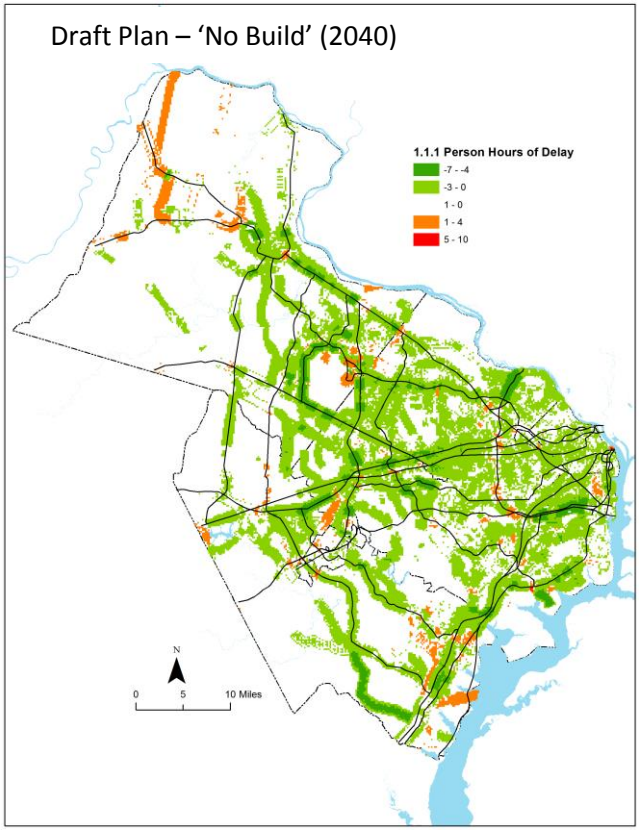
'No Build' (2040)



Draft Plan (2040)



Draft Plan – 'No Build' (2040)

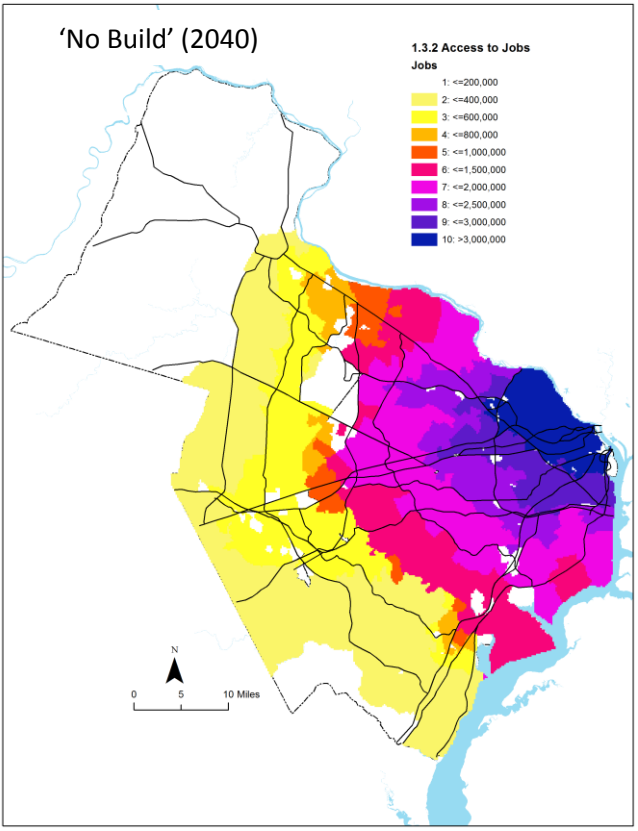


NVTA's TransAction

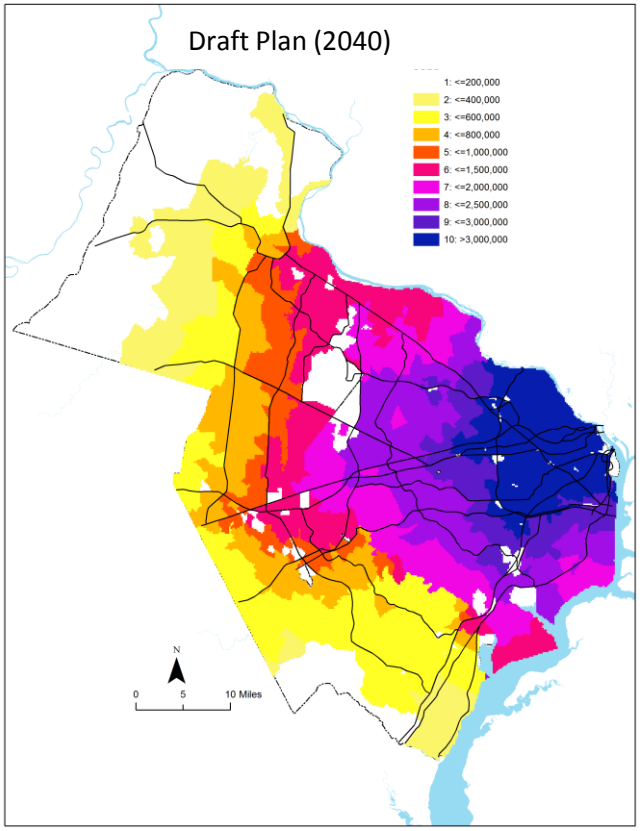
Impact on Access to Jobs

Draft Plan (2040) compared to 'No Build' (2040)

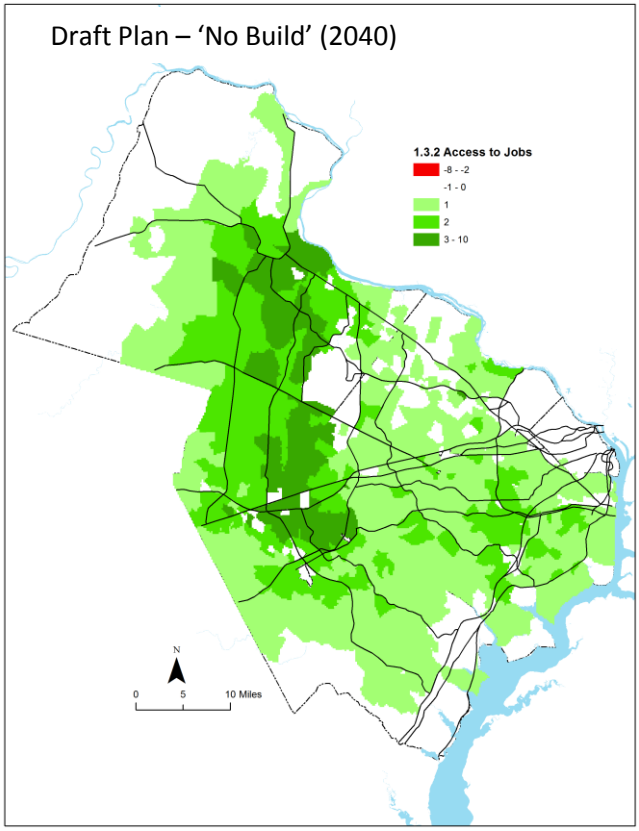
'No Build' (2040)



Draft Plan (2040)



Draft Plan – 'No Build' (2040)



NVTA's TransAction

Draft Plan: Summary

- Compared to the 'No Build' (2040), the Draft Plan:
  - Modestly increased total trips (1.0%), but with increased transit share (by 8.2%)
  - Person miles traveled decreased marginally, but person hours of travel and hours of delay noticeably reduced (by 25% and 46%)
  - Transit crowding significantly reduced (by 65%) to below 2016 levels, in part due to regional BRT/LRT additions
  - Noticeable improvement in job accessibility for residents in a broad corridor from Leesburg to Prince William County
  - Residual problem areas include I-95 and I-495

VII

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

M E M O R A N D U M

FOR: Members, Northern Virginia Transportation Authority

FROM: Martin E. Nohe, Chairman, Planning and Programming Committee

DATE: May 5, 2017

SUBJECT: Approval of Six Year Program Framework

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1. **Purpose.** To seek Northern Virginia Transportation Authority (NVTA) approval of the Six Year Program Framework. This Framework establishes an overall methodology for developing the Authority's FY2018-23 Six Year Program and subsequent updates.

2. **Suggested Motion:** *I move approval of the Six Year Program Framework.*

3. **Background.** The Planning and Programming Committee (PPC) met on Wednesday, May 3, 2017 to review the NVTA staff recommendations for the Six Year Program Framework. The draft Framework has undergone an extensive review and input process with the Authority's Technical Advisory Committee (TAC), Planning Coordination Advisory Committee (PCAC), as well as the PPC. In addition, the Regional Jurisdiction and Agency Coordinating Committee (RJACC), comprised of staff representatives, has provided feedback to the Authority's Executive Director. This review process was initiated in the fall of 2016, concluding with the May 3, 2017 PPC meeting.

   The PPC recommendation for the Six Year Program Framework is included as an attachment to this memorandum.

4. **Discussion.** In developing these recommendations, NVTA staff incorporated a range of comments, such as a clearer demarcation between the Authority's planning and programming functions, inclusion of a Call for Regional Projects, an extension to the deadline for submitting Board Resolutions, and removal of a template for Board Resolutions. The Framework incorporates a synchronized schedule with the Commonwealth's Smart Scale cycle.

   The PCAC, TAC and PPC have recommended that the Authority approve the final NVTA staff recommendation.

   The Finance Committee will meet as needed in the coming months to discuss detailed aspects related to the FY2018-23 Six Year Program. As noted in the Six Year Program Framework, the Finance Committee will consider Financial Principles addressing the

allocation of PayGo revenues for each program year, utilization of the Authority's debt capacity, and the need for new or enhanced policies. While essential to the development of the FY2018-23 Six Year Program, these are detailed subjects that will be addressed at the appropriate time and that do not prevent Authority approval of the Six Year Program Framework at this time.

5. **Next steps.** NVTA staff will brief RJACC members during summer 2017 on the specifics of the Call for Regional Projects, scheduled to be issued on October 12, 2017 (subject to Authority approval.)

Attachment: PPC recommendation for the Six Year Program Framework

Six-Year Program (SYP) Framework

May 11, 2017

Northern Virginia Transportation Authority

The Authority for Transportation in Northern Virginia

What is the SYP Framework?

- Describes how TransAction (TA) and the FY2018-23 Six Year Program will be integrated;
- Describes how the FY2018-23 Six Year Program will be developed;
- Identifies roles, responsibilities, schedule, and other 'structural' aspects of the FY2018-23 Six Year Program;
- Incorporates Financial Principles;
- Will <u>not</u> include list of projects or funding allocations.

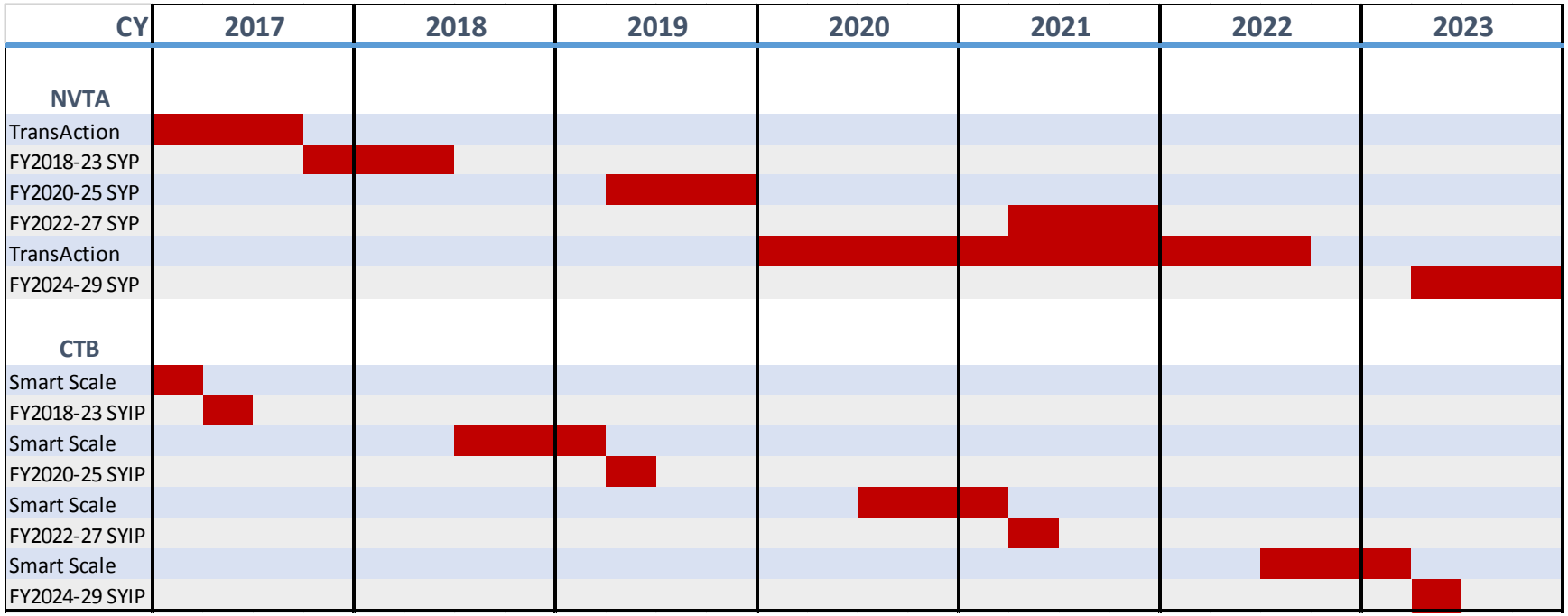
Desired SYP Features

- Transparent and Accountable
  - No secrets or surprises;
  - Leverages cost and time efficiencies wherever possible.
- Flexible
  - Adapts to changing circumstances, e.g. financial, transportation;
  - Maximizes Regional Revenue Fund project use through proactive cash flow and investment management.
- Predictable
  - Provides multi-year funding stream;
  - Matches expected project expenditure profile or funding verification requirements.

Proposed SYP Features – 1

- Assuming the FY2018-23 Six Year Program is adopted in Spring 2018, subsequent updates will be adopted by:
  - Fall 2019 (FY2020-25)
  - Fall 2021 (FY2022-27)
- Updates to the SYP will accommodate:
  - Project/project phase completions;
  - Project schedule and budget adjustments (subject to NVTA policies);
  - Fluctuations in regional revenues;
  - Updated NVTA regional priorities.
- TransAction will be next updated and adopted by Fall 2022;
- Ad-hoc TransAction updates or amendments may occur under exceptional circumstances, subject to NVTA approval and the identification of an acceptable funding source.

Integrated NVTA/CTB Schedule



Proposed SYP Features – 2

- Much like jurisdictional Capital Improvement Plans (CIPs) NVTA's SYP will set an expectation for future funding of the identified projects;
- Subject to Finance Committee recommendation, the SYP will:
  - Allocate estimated revenues (PayGo) for each year of the Program
  - Utilize the Authority's available debt capacity when fiscally prudent.

Proposed SYP Features – 3

- For the FY2018-23 Six Year Program, and subsequent updates, the following process will be followed:
  - Finance Committee will affirm estimated available PayGo revenues for each year of the Six Year Program, through annual budget cycle;
  - NVTA staff brief jurisdiction and agency staff in detail on the SYP process;
  - 'Call for Regional Projects' (CfRP) will be issued by the Authority (mid 10/17), with a 60-day response period (thru mid 12/17);
  - Additional 30-day response period (thru mid 1/18) for Governing Body resolutions
  - Review of responses and evaluation of projects by NVTA staff during a 90-day period following the CfRP response deadline (mid 12/17 – mid 3/18);
  - Review of NVTA staff recommendations during the following 60-day period (mid 3/18 – early 5/18);
  - Public Hearing (5/18) and optional 'Town Hall' meetings during a 30-day public comment period (during 5/18);
  - Adoption of the SYP, generally at the first Authority meeting following the Public Hearing (6/18).

Proposed SYP Features – 4

- Responses to the CfRP will identify a candidate pool of regional projects focused on Northern Virginia's transportation needs;
- The requirements of the CfRP will include, as a minimum:
  - Project description, including specific link to relevant TransAction evaluation;
  - For all project phases: cost, schedule, funding requested, external funding available (with supporting documentation);
  - Commitment to engage/recognize NVTA as a partner in all public-facing outputs, e.g. advanced coordination for public events, branding;
  - Any other documentation that highlights a project's regional significance, e.g. extent to which project addresses regional needs, scale of regional impacts, and multi-jurisdictional commitments;
  - Resolution of support from the Governing Body, or Governing Bodies in the case of multi-jurisdictional projects.

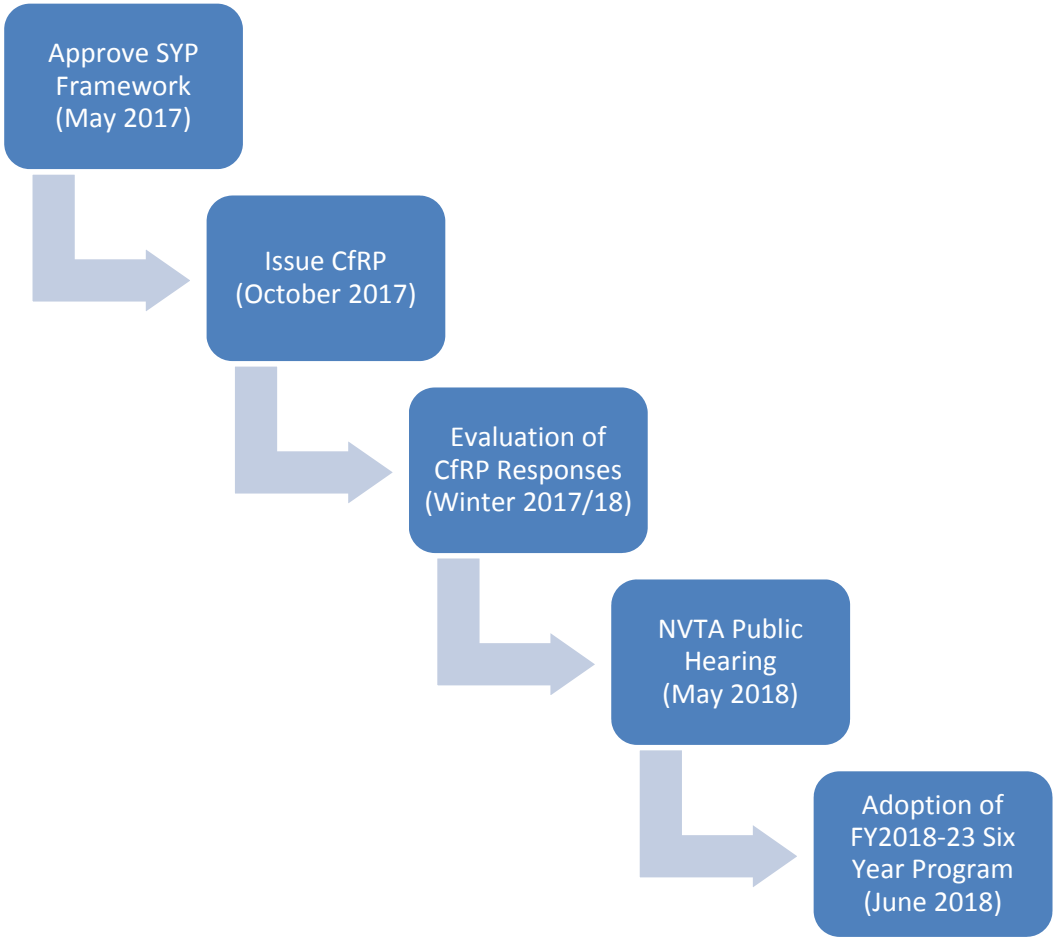
Proposed SYP Features – 5

- The review of CfRP responses and evaluation of projects by NVTA staff will include, as a minimum:
  - Verification of accuracy and completeness of responses;
  - Validation of project eligibility and consistency with relevant NVTA policies;
  - Posting of a summary of responses to NVTA's website;
  - Review of relevant TransAction evaluations, including 'regional coherence', phasing, and sequencing of CfRP projects;
  - Calculation of CRRC ratios;
  - Consideration of the TransAction scenario analysis
  - Documentation of relevant qualitative considerations;
  - Development of initial recommendation, for review by NVTA's Committees;
  - Development of draft recommendation, based on feedback from NVTA's Committees, for Authority action.

Other SYP Considerations

- Finance Committee to recommend Financial Principles addressing:
  - Proportion of estimated available PayGo funding that should be allocated in each Fiscal Year of the SYP;
  - Factors that influence the extent to which available debt capacity should be used, and when;
  - Provision for NVTA to provide matching funds for federal grant programs.
- Finance Committee will consider new/enhanced policies related to NVTA's programming process;
- High level review of Long Term Benefit status.

Key Milestones – Six Year Program



VIII

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

M E M O R A N D U M

TO: Chairman Martin E. Nohe and Members
Northern Virginia Transportation Authority

FROM: Monica Backmon, Executive Director

DATE: May 5, 2017

SUBJECT: Comments on the Commonwealth Transportation Board's Draft Six-Year Improvement Program (FY2018-2023)

Recommendation: To seek Northern Virginia Transportation Authority (NVTA) approval of comments on the Commonwealth Transportation Board's (CTB) draft Six-Year Improvement Program (SYIP) (FY2018 – 2023).

Suggested motion: *I move Authority approval of the comments on the Commonwealth Transportation Board's draft Six-Year Improvement Program (FY2018 – 2023).*

Background: As was done in previous years, the Secretary of Transportation and the Commonwealth Transportation Board conducted public hearings throughout Virginia to solicit public comment on the draft FY2018-2023 SYIP.

A total of 436 applications were submitted across the Commonwealth, and 404 were scored using the Smart Scale methodology, for a total funding request of $8.6 billion. The state estimates that approximately $659 million will be available for this round of funding for High Priority Projects and $359 million for the District Grants Program, with approximately $80 million of the District Grants Program provided to Northern Virginia. In January 2017, the Virginia Secretary of Transportation's Office released the scores, along with a recommended scenario for funded projects. The FY2018 – 2023 SYIP is expected to be adopted in July 2017.

The DRAFT comments include updates to requests previously made by the Authority, as well as comments pertaining to Smart Scale. Specifically, changes from the testimony approved by the Authority in 2016 include:

- Updating the language regarding coordination between the Commonwealth and the Authority, to include references to the Authority developing its Six Year Program.
- Updating the State of Good Repair and Highway Maintenance and Operations Fund language to reflect updated road condition information.
- Adding language noting the projected decline in state transit funding and the work being undertaken by the Transit Capital Project Revenue Advisory Board; and noting the hope that this effort will provide sufficient and reliable funding from the Commonwealth for transit systems.

- Adding language pertaining to the need for funding for the Virginia Railway Express to maintain and expand its service.
- Removing language pertaining to funding of the Transform I-66 Outside the Beltway I project, as the project is not expected to utilize Authority or Commonwealth funds.

The public hearing for Northern Virginia was held Wednesday, May 3, 2017, at VDOT's Northern Virginia District Office. Comments will be received through May 16, 2017.

Attachment: DRAFT comment letter on the CTB's Draft FY 2018 – 2023 Six-Year Improvement Program.

Northern Virginia Transportation Authority
The Authority for Transportation in Northern Virginia

May 11, 2017

The Honorable Aubrey L. Layne, Jr.
Secretary of Transportation
Patrick Henry Building
1111 East Broad Street, Third Floor
Richmond, Virginia 23218

Reference: Northern Virginia Transportation Authority Comments on the Commonwealth Transportation Board's Draft Six-Year Improvement Program (FY2018 – 2023)

Dear Secretary Layne,

The Northern Virginia Transportation Authority (NVTA) respectfully submits these comments on the Commonwealth Transportation Board's (CTB) draft Six-Year Improvement Program (FY2018 – 2023), as well as comments on several other matters.

- The Authority continues to work diligently to implement the Northern Virginia components of HB 2313 (2013). The NVTA has adopted three funding programs covering each fiscal year since FY2014. HB 2313 funding has been deployed on 79 projects throughout the region. These projects are multimodal investments that increase capacity and reduce congestion. The NVTA and the Commonwealth are funding partners on several of these projects. Further, the NVTA is fulfilling its regional transportation planning responsibility through the update of TransAction. TransAction, Northern Virginia's long range multimodal transportation plan, is the catalyst for HB 2313 eligibility and will guide funding decisions for the NVTA's first Six Year Program (SYP) for FY2018 through 2023. As the NVTA updates TransAction and establishes its first SYP, continued collaboration between the Commonwealth and the Authority will be essential as local, regional, state-wide, and federal funds are all part of the solution for addressing the critical transportation needs of the Commonwealth. It is essential that we continue to work together to ensure these needs are met.

- It is important that Northern Virginia continues to receive its fair share of statewide revenues. As stated in HB 2313, Northern Virginia's regional funds cannot be used to calculate or reduce the share of local, federal, or state revenues otherwise available to participating jurisdictions. This is especially important as the Smart Scale process continues and as various formulas and processes for transportation funding are being established and/or modified.

- As the Smart Scale process evolves, the Authority also believes that the impacts on funding for multimodal projects should continue to be studied to ensure the process is effectively rating projects of all modes.

- The Authority requests that the Commonwealth consider the condition of our region's secondary roads as State of Good Repair and Highway Maintenance and Operations Funds (HMOF) funds are allocated. While 89 percent of roads in Northern Virginia are in Fair or Better Condition, our secondary pavement conditions are the worst in the Commonwealth, according to VDOT's dashboard. Only 36 percent of the secondary roads are in Fair or Better Condition. This is far less than the Commonwealth's average of 60 percent and far from the 63 percent target. Millions of people drive on these roads every day and the deteriorated pavements will only get worse until something is done to address them.

- The Authority also remains concerned about the substantial decrease in funding for the Revenue Sharing program. This program significantly leverages state transportation funds by encouraging local governments to spend their own money on transportation projects. This program has been a success in Northern Virginia, where our localities regularly apply for these funds, with several applying for the maximum amount allowed. While many of the projects may be eligible for Smart Scale, Smart Scale funding is extremely oversubscribed and many applications will not receive funding. Further, many other projects that are submitted through Revenue Sharing may not necessarily be suitable for the Smart Scale prioritization process. All these projects are extremely important to the localities that submit applications. By design, the Revenue Sharing program has allowed more projects throughout the Commonwealth to move forward. Reducing this funding will only slow our mutual efforts to improve our transportation system.

- While these comments are based on the information provided as part of the Smart Scale process and other information that has been released, the Authority believes that it may also be important to have the opportunity to comment on the DRAFT SYIP once it is released.

In addition to addressing the foregoing major issues, the Authority also wishes to comment on the following:

- We thank you for continuing to include the Virginia match for Federal dedicated funding for the Washington Metropolitan Area Transit Authority (WMATA) and ask that the Commonwealth continue to provide these vital funds. We appreciate this significant commitment to help WMATA bring its system into a state of good repair and restore safe and reliable operations. Support of WMATA's rebuilding efforts is vital, as the system is critical to meeting the region's needs today and in the future.

- While the General Assembly has helped address the significant decline in state transit funding expected to occur in 2018, the Commonwealth's projected funding for transit capital projects is still expected to drop significantly. These funds support our region's local bus systems, as well as capital needs of WMATA and the Virginia Railway Express (VRE). Later this year, the Transit Capital Project Revenue Advisory Board will report to the General Assembly on potential new sources of revenue to meet these transit needs, as well as methods for prioritizing the use of those funds. The Revenue Advisory Board's recommendations will lay the groundwork for possible legislative action, which

we hope will provide sufficient and reliable funding from the Commonwealth for transit systems in our region and throughout Virginia.

- The Authority continues to be concerned by provisions in the State Code that provide VDOT and the CTB the ability to decide whether a local transportation plan is consistent with the Commonwealth's priorities. If VDOT and the CTB decide that a local plan is not consistent, the CTB can withhold funding for projects. While efforts to better coordinate local and state transportation planning are appreciated, these provisions essentially transfer the responsibility for land use planning, as it relates to transportation, from local governments to the Commonwealth. Our localities work diligently with our residents, property owners, and the local business communities on land use and transportation plans. These provisions could inhibit development and redevelopment efforts throughout Virginia.

- The Authority remains opposed to any policy which requires the transfer of secondary road construction and maintenance responsibilities to counties, and specifically, Northern Virginia jurisdictions. Unfunded mandates of this magnitude would result in dire consequences to localities.

- The VRE, like other transit systems in the Commonwealth, needs resources to meet its growing demand. Earlier this year, the CTB's Rail Committee confirmed that over the next 20 years VRE will need an average increased annual investment of $45 million per year to maintain the current level of service, with additional funds being necessary for VRE to expand its system to meet growing ridership demands. The Authority believes the partnership between the region and the Commonwealth is vital to ensure the long-term viability of this system.

- The Authority requests that the CTB, DRPT and VDOT support, promote, and encourage walking and bicycling as viable modes of transportation and look for opportunities to enhance pedestrian and bicycle connectivity in Northern Virginia.

- The Authority supports the policy that major transportation corridor studies, related to facilities wholly within one VDOT construction district, should be managed by that construction district rather than the VDOT Central Office. Regional VDOT staff is better equipped to address the concerns of the affected citizens and local governments.

We request that this testimony be made part of the CTB's Draft Six-Year Improvement Program public hearing record, and full consideration be given to these comments in preparing the FY2018 - 2023 Six-Year Improvement Program. Thank you again for the opportunity to provide these comments.

Please let me know if you have any questions or if I can provide any clarification regarding the Authority's comments.

Sincerely,

Martin E. Nohe
Chairman

CC: Nick Donohue, Deputy Secretary of Transportation
Mary Hughes Hynes, CTB & NVTA Member
NVTA Members

IX

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

M E M O R A N D U M

TO: Chairman Martin E. Nohe and Members
Northern Virginia Transportation Authority

FROM: Monica Backmon, Executive Director

DATE: May 5, 2017

SUBJECT: Approval of Reallocation of Regional Surface Transportation Program (RSTP) funds for the City of Alexandria

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1. **Purpose.** To seek Northern Virginia Transportation Authority (NVTA) approval of the Reallocation Requests of Regional Surface Transportation Program (RSTP) funds for the City of Alexandria.

2. **Suggested Motion:** *I move Authority approval of the reallocation of Regional Surface Transportation Program (RSTP) funds for the City of Alexandria.*

3. **Background:** On September 11, 2008, the Authority delegated the authority to approve requests to reallocate Congestion Mitigation and Air Quality (CMAQ) and Regional Surface Transportation Program (RSTP) funding between projects that were previously approved by the NVTA to the Regional Jurisdiction and Agency Coordinating Committee (RJACC). However, the Authority will need to approve the transfer requests for new projects before any funds can be reallocated.

   On April 19, 2017, the City of Alexandria requested the following reallocations to King-Beauregard Phase II (UPC 107962):
   - $238,926 in FY 2012 RSTP funds from Holmes Run Trail (UPC 82842).
   - $140,075 in FY 2011 RSTP funds from Dedicated Transit Corridors (UPC 79794); and
   - $150,000 in FY 2017 RSTP funds from Bicycle Sharing Initiative (UPC 109816).

   The reallocation will allow the City of Alexandria to proceed with the construction of the second phase of the King-Beauregard intersection reconstruction project. The City plans to begin construction of this phase in 2019.

   On April 19, 2017, the City of Alexandria requested the following reallocation:
   - $395,741 in FY 2015 RSTP funds from Ridesharing Enhancements (UPC 106807) to Eisenhower Widening (UPC 77378). This reallocation will allow the City to proceed with the construction of Eisenhower Avenue from Holland Lane to Mill Road. The City plans to begin construction in 2018.

On April 21, 2017, the City of Alexandria requested the following reallocation:

- $500,000 in FY2017 RSTP funds from Ridesharing Enhancements (UPC 106807) to the BRAC Neighborhood Protection Plan (UPC TBD). The City will use these funds to make roadway and intersection safety improvements along roadway corridors impacted by traffic associated with the BRAC Marc Center facility. Currently, the City is funding a traffic study to evaluate the traffic impact and determine mitigation recommendations to enhance safety.

At its meeting on April 27, 2017, the RJACC recommended approval of the reallocation request for the City of Alexandria.

Attachment(s): DRAFT Letter to VDOT NOVA District Administrator Cuervo
Request Letters from the City of Alexandria

Coordination: Regional Jurisdiction and Agency Coordinating Committee

Northern Virginia Transportation Authority
The Authority for Transportation in Northern Virginia

May 11, 2017

Ms. Helen Cuervo
District Administrator
Virginia Department of Transportation
4975 Alliance Dr. Suite 4E-342
Fairfax, Virginia 22030

Reference: Request to Reallocate Regional Surface Transportation Program (RSTP) funds for the City of Alexandria

Dear Ms. Cuervo:

On September 11, 2008, the Northern Virginia Transportation Authority (NVTA) delegated the authority to approve requests to reallocate Congestion Mitigation and Air Quality (CMAQ) and Regional Surface Transportation Program (RSTP) funding between projects that were previous approved by the NVTA to the Regional Jurisdiction and Agency Coordinating Committee (RJACC). However, since the receiving projects are new, the Authority needs to approve the transfer requests before any funds can be reallocated.

On April 19, 2017, the City of Alexandria requested the following reallocations to King-Beauregard Phase II (UPC 107962):

- $238,926 in FY 2012 RSTP funds from Holmes Run Trail (UPC 82842).
- $140,075 in FY 2011 RSTP funds from Dedicated Transit Corridors (UPC 79794); and
- $150,000 in FY 2017 RSTP funds from Bicycle Sharing Initiative (UPC 109816).

The reallocation will allow the City of Alexandria to proceed with the construction of the second phase of the King-Beauregard intersection reconstruction project. The City plans to begin construction of this phase in 2019.

On April 19, 2017, the City of Alexandria requested the following reallocation:

- $395,741 in FY 2015 RSTP funds from Ridesharing Enhancements (UPC 106807) to Eisenhower Widening (UPC 77378). This reallocation will allow the City to proceed with the construction of Eisenhower Avenue from Holland Lane to Mill Road. The City plans to begin construction in 2018.

On April 21, 2017, the City of Alexandria requested the following reallocation:

- $500,000 in FY 2017 RSTP funds from Ridesharing Enhancements (UPC 106807) to the BRAC Neighborhood Protection Plan (UPC TBD). The City will use these funds to make roadway and intersection safety improvements along roadway corridors impacted by traffic associated with the BRAC Marc Center facility. Currently, the City is funding a traffic study to evaluate the traffic impact and determine mitigation recommendations to enhance safety.

On May 11, 2017, the Authority approved the request noted above. Please take the necessary steps to reallocate these funds in the Transportation Improvement Program and the State Transportation Improvement Program. Thank you very much.

Sincerely,

Martin E. Nohe
Chairman

cc: Monica Backmon, Executive Director, NVTA
Yon Lambert, Director, City of Alexandria Department of Transportation and Environmental Services

DEPARTMENT OF TRANSPORTATION
AND ENVIRONMENTAL SERVICES
P.O. Box 178 - City Hall
Alexandria, Virginia 22313
703.746.4025

alexandriava.gov

April 19, 2017

Noelle Dominguez, Chairman
Regional Jurisdiction and Agency Coordinating Committee (RJACC)
Northern Virginia Transportation Authority (NVTA)
3040 Williams Drive, Suite 200
Fairfax, Virginia 22031

Reference: Request to Reallocate Regional Surface Transportation Program (RSTP) Funds for the City of Alexandria

Dear Ms. Dominguez,

The City of Alexandria requests the Regional Jurisdictional Coordinating Committee's (RJACC)'s recommendation and the Authority's approval to reallocate the following funds to UPC #107962 (King-Beauregard Phase II):

- $238,926 from UPC #82842 (Holmes Run Trail) of previously allocated FY2012 RSTP funds;
- $140,075 from UPC #79794 (Dedicated Transit Corridors) of previously allocated FY2011 RSTP funds; and
- $150,000 from UPC #109816 (Bicycle Sharing Initiative) of previously allocated FY2017 RSTP funds.

This reallocation will allow the City of Alexandria to proceed with the construction of the second phase of the King-Beauregard intersection reconstruction project. The City plans to begin construction of this phase in 2019.

Thank you for your assistance in this matter. Should you have further questions, please don't hesitate to contact Carrie Sanders, Deputy Director of Transportation & Environmental Services, at carrie.sanders@alexandriava.gov or 703.746.4088.

Sincerely,

Carrie Sanders

Carrie Sanders, AICP
Deputy Director

Attachment: Transfer Request Form for King/Beauregard Phase II

cc: Yon Lambert, AICP, Director
Allan Fye, Acting Division Chief of Transit

CMAQ/RSTP Transfer Request Form

(One Sheet Needed Per Donor Project)

Date: 4/18/2017

ATTACHMENT

Name of Jurisdiction/Agency Requesting: City of Alexandria

Current Balance of CMAQ/RSTP Funds Currently Allocated to Donor Project (Prior to this Transfer): RSTP- $238.926 + RSTP $140,074+ RSTP $150,000

From (Donor): To (Recipient):

UPC	Project Description	Type of Funds	Transfer from Previous Fiscal Years	If No, Year Requested	Transfer Amount	UPC	Project Description	Previously Approved by NVTA	If Yes, Year Approved	JACC Approval (NVTA)	Authority Approval (NVTA)	Funds Verified (VDOT)	Completed (VDOT)
82842	Holmes Run Trail	RSTP	N	2012	$238,926.00	107962	King Beaurgard Phase II	N					
79794	Dedicated Transit Corridors	RSTP	N	2011	$140,075.00	107962	King Beaurgard Phase II	N					
109816	Bicycle Sharing Initiative	RSTP	N	2017	$150,000.00	107962	King Beaurgard Phase II	N					

TOTAL OF TRANSFER $529,001.00

Attach Signed Request of Transfer Letter

DEPARTMENT OF TRANSPORTATION
AND ENVIRONMENTAL SERVICES
P.O. Box 178 - City Hall
Alexandria, Virginia 22313
703.746.4025

alexandriava.gov

April 19, 2017

Noelle Dominguez, Chairman
Regional Jurisdiction and Agency Coordinating Committee (RJACC)
Northern Virginia Transportation Authority (NVTA)
3040 Williams Drive, Suite 200
Fairfax, Virginia 22031

Reference: Request to Reallocate Regional Surface Transportation Program (RSTP) Funds for the City of Alexandria

Dear Ms. Dominguez,

The City of Alexandria requests the Regional Jurisdictional Coordinating Committee's (RJACC)'s recommendation and the Authority's approval to reallocate the following funds to UPC #77378 (Eisenhower Widening):

- $395,741 from UPC #106807 (Ridesharing Enhancements) of previously allocated FY2015 RSTP funds to UPC #77378 (Eisenhower Widening).

This reallocation will allow the City of Alexandria to proceed with the construction of Eisenhower Avenue from Holland Lane to Mill road. The City plans to begin construction in 2018.

Thank you for your assistance in this matter. Should you have further questions, please do not hesitate to contact Carrie Sanders, Deputy Director of Transportation & Environmental Services at carrie.sanders@alexandriava.gov or 703.746.4088.

Sincerely,

Carrie Sanders

Carrie Sanders
Deputy Director

Attachment: Transfer Request Form for Eisenhower Widening

cc: Yon Lambert, Director, T&ES
Mitch Bernstein, Director, Department of Project Implementation
Allan Fye, Acting Division Chief of Transit, T&ES

CMAQ/RSTP Transfer Request Form

(One Sheet Needed Per Donor Project)

Date: 4/18/2017

ATTACHMENT

Name of Jurisdiction/Agency Requesting: City of Alexandria

Current Balance of CMAQ/RSTP Funds Currently Allocated to Donor Project (Prior to this Transfer): RSTP-$395,741

From (Donor): To (Recipient):

UPC	Project Description	Type of Funds	Transfer from Previous Fiscal Years	If No, Year Requested	Transfer Amount	UPC	Project Description	Previously Approved by NVTA	If Yes, Year Approved	IACC Approval (NVTA)	Authority Approval (NVTA)	Funds Verified (VDOT)	Completed (VDOT)
106807	Ridesharing Enhancements	RSTP	N	2015	$395,741.00	77378	Eisenhower Widening	N					

TOTAL OF TRANSFER $395,741.00

Attach Signed Request of Transfer Letter

DEPARTMENT OF TRANSPORTATION
AND ENVIRONMENTAL SERVICES
P.O. Box 178 - City Hall
Alexandria, Virginia 22313
703.746.4025

alexandriava.gov

April 21, 2017

Noelle Dominguez, Chairman
Regional Jurisdiction and Agency Coordinating Committee (RJACC)
Northern Virginia Transportation Authority (NVTA)
3040 Williams Drive, Suite 200
Fairfax, Virginia 22031

Reference: Request to Reallocate Regional Surface Transportation Program (RSTP) Funds for the City of Alexandria

Dear Ms. Dominguez,

The City of Alexandria requests the Regional Jurisdictional Coordinating Committee's (RJACC)'s recommendation and the Authority's approval to reallocate the following funds to the BRAC Neighborhood Protection Plan:

- $500,000 from UPC #106807 (Ridesharing Enhancements) of previously allocated FY2017 RSTP funds to the BRAC Neighborhood Protection Plan.

At the request of many nearby residents, the City will use these funds to make roadway and intersection safety improvements along roadway corridors impacted by traffic associated with the BRAC Marc Center facility. Currently the City is funding a traffic study to evaluate the traffic impact and determine mitigation recommendations to enhance safety.

Thank you for your assistance in this matter. Should you have further questions, please do not hesitate to contact me at carrie.sanders@alexandriava.gov or 703.746.4088.

Sincerely,

Carrie Sanders

Carrie Sanders
Deputy Director
Transportation & Transit Services
Department of Transportation and Environmental Services

Attachment: Transfer Request Form - BRAC

cc: Yon Lambert, Director, T&ES
Allan Fye, Acting Division Chief of Transit Services, T&ES

CMAQ/RSTP Transfer Request Form

(One Sheet Needed Per Donor Project)

Date: 4/21/2017

ATTACHMENT

Name of Jurisdiction/Agency Requesting: City of Alexandria

Current Balance of CMAQ/RSTP Funds Currently Allocated to Donor Project (Prior to this Transfer): $0

From (Donor): To (Recipient):

UPC	Project Description	Type of Funds	Transfer from Previous Fiscal Years	If No, Year Requested	Transfer Amount	UPC	Project Description	Previously Approved by NVTA	If Yes, Year Approved	JACC Approval (NVTA)	Authority Approval (NVTA)	Funds Verified (VDOT)	Completed (VDOT)
106807	Rideshare Enhancements	RSTP	N	2017	$500,000.00		BRAC Neighborhood Protection Plan	N					

TOTAL OF TRANSFER $500,000.00

Attach Signed Request of Transfer Letter

X

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

M E M O R A N D U M

TO: Members, Northern Virginia Transportation Authority

FROM: Martin E. Nohe, Chairman, Planning and Programming Committee

DATE: May 2, 2017

SUBJECT: Approval of dates for TransAction Public Hearing and Public Comment Period

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1. **Purpose.** To seek Northern Virginia Transportation Authority (NVTA) approval of July 13, 2017 as the date of the Public Hearing for the draft TransAction Plan and approve a public comment period of June 9, 2017 through midnight on July 23, 2017. This will enable NVTA staff to initiate necessary actions associated with the advertisement and posting requirements for the public comment process for the draft Plan.

2. **Suggested Motion:** *I move approval of July 13, 2017 as the Public Hearing date for the draft TransAction Plan and June 9, 2017 through midnight on July 23, 2017 as the public comment period for the draft Plan.*

3. **Background.** At its May 3, 2017 meeting, the NVTA Planning and Programming Committee recommended NVTA approval of July 13, 2017, which is the evening of a regularly scheduled Authority meeting, as the date of the public hearing for the draft TransAction Plan. Planning for a range of related public engagement and outreach activities will be initiated when the date of the Public Hearing and public comment period is confirmed.

   The recommended approach is consistent with that used for previous Public Hearings.

4. **Discussion.**
   Subject to Authority approval:
   a. **Open House 5:30pm**---there will be an Open House that allows for one-on-one discussions with NVTA staff, jurisdiction and agency staff volunteers (Ambassadors) and the TransAction Consultant Team.
   b. **Public Hearing 7:00pm**---the Public Hearing will begin. The Authority meeting will start immediately after the conclusion of the Public Hearing.
   c. **Public Comment Period—June 9, 2017 through July 23, 2017 (midnight)**---Jurisdiction-led Town Hall meetings, board, transportation commission meetings and briefings are being scheduled during the public comment period.

   Following the public comment period, NVTA staff and the TransAction Consultant Team will summarize all comments, consider the need for additional analysis, and report back to the

PPC in September 2017. Adoption of the TransAction Update remains on schedule for October 12, 2017.

5. **Next steps.** Initiate planning for the Public Hearing and a range of related public engagement activities and outreach. Authority approval to release the draft TransAction Plan is anticipated at the June 8, 2017, Authority meeting.

XI

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

M E M O R A N D U M

TO: Chairman Martin E. Nohe and Members
Northern Virginia Transportation Authority

FROM: Monica Backmon, Executive Director

DATE: May 5, 2017

SUBJECT: Revisions to FY2018-2023 Congestion Mitigation Air Quality (CMAQ) and Regional Surface Transportation Program (RSTP) Fund Strawman

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1. **Purpose.** To inform Northern Virginia Transportation Authority (NVTA) of the revisions to the previously adopted FY2018 and FY2023 CMAQ/RSTP Strawman.

2. **Background.** The NVTA adopted the FY2023 CMAQ/RSTP Strawman list of projects and allocations at its February 9, 2017 meeting and authorized the Executive Director to make revisions if required.

   Since the adoption of the Strawman, the Virginia Department of Transportation (VDOT) informed staff of revisions to the FY2018 CMAQ and RSTP funds and the FY2023 RSTP funds. The revision to the FY2023 CMAQ/RSTP funds will result in an overall **increase** of $1,003,681.

   The revision to the FY2018 CMAQ/RSTP funds will result in a **decrease** of $379,885 in CMAQ funds and $872,258 in RSTP funds.

3. **Update.** The NVTA staff worked with the Regional Jurisdiction and Agency Coordinating Committee (RJACC) and recommended the following proposal to meet the revised fund allocations.

FY2018 Reductions	Jurisdiction	Project	Amount
CMAQ	Fairfax County	TMSAMS (UPC 100469)	**$ (379,885)**
RSTP	Fairfax County	RMAG (UPC 100470)	**$ (872,258)**
Total			**$(1,252,143)**

   These deductions will be compensated with FY2023 additional RSTP funds available ($1,003,681).

FY2023 Additional Amount	Jurisdiction	Project	Amount
RSTP	Fairfax County	Route 1 Multi-modal Improvements (UPC 107187)	**$ 1,003,681**

These revisions leave a compensation gap of $248,462 to be returned to Fairfax County. The RJACC recommended that Fairfax County be reimbursed off-the-top during the FY2024 CMAQ/RSTP Strawman, which will be programmed in January-February 2018.

Attachment(s): Revised FY2023 CMAQ and RSTP Program and the revisions made to the FY2018 Program.

FY 2023 CMAQ/RSTP Proposed Allocations
Winter 2016 Strawman

XI.ATTACHMENT

FY2023 CMAQ Estimate	$	29,598,216

CMAQ FUNDS	Overall Ranking	FY 2023 Requested	FY 2023 Proposed
OFF-THE-TOP PROJECTS/REGIONAL		**$ 933,581**	**$933,581**
COG/TPB - Commuter Connections Operations Center (UPC 52726)		$293,131	$293,131
VDOT/COG - Metropolitan Area Transportation Operations Coordination (MATOC), (UPC T17894)		$400,000	$400,000
VDOT - Clean Air Partners (UPC 52725)		$240,450	$240,450
CMAQ BALANCE REMAINING FOR JURISDICTIONAL ALLOCATIONS		**$ -**	**$ 28,664,635**
JURISDICTIONAL ALLOCATIONS*	**Overall Ranking**	**Requested**	**Proposed**
ALEXANDRIA, CITY		**$ 1,650,000**	**$1,650,000**
West End Transitway Operations	1 of 8	$1,000,000	$1,000,000
Transportation Demand Management (UPC T18035)	3 of 8	$400,000	$400,000
Bicycle Sharing (UPC 100420)	4 of 8	$250,000	$250,000
ARLINGTON COUNTY		**$ 7,850,000**	**$ 6,500,000**
Signal Optimization (UPC 70625)	1 of 4	$600,000	$600,000
Commuter Services Program (ACCS),(UPC T100)	2 of 4	$7,000,000	$5,900,000
Capital Bikeshare (UPC 106495)	3 of 4	$250,000	$0
DUMFRIES, TOWN		**$ -**	**$ -**
FAIRFAX, CITY		**$ -**	**$ -**
FAIRFAX COUNTY		**$ 5,044,635**	**$5,044,635**
Richmond Highway Bus Rapid Transit (UPC 106921) (See RSTP) **PM2.5**	1 of 7	$4,394,635	$3,144,165
Richmond Highway Bus Rapid Transit (UPC 106921) (See RSTP)	1 of 7		$1,250,470
Countywide Transit Stores (UPC T207)	6 of 7	$650,000	$650,000
FALLS CHURCH, CITY		**$ -**	**$ -**
HERNDON, TOWN		**$ 300,000**	**$ 50,000**
Herndon Metrorail Intermodal Access Improvements (UPC 106986, 104328)	3 of 3	$300,000	$50,000
LEESBURG, TOWN		**$ -**	**$ -**
LOUDOUN COUNTY		**$ 4,000,000**	**$4,000,000**
Bike/Ped for Silver Line Metrorail (UPC T17499) (See RSTP)	1 of 2	$3,960,000	$3,960,000
Lowes Island Park & Ride Lot Lease (UPC 79679)	2 of 2	$40,000	$40,000
MANASSAS, CITY		**$ -**	**$ -**
MANASSAS PARK, CITY		**$ -**	**$ -**
PRINCE WILLIAM COUNTY		**$ 5,285,000**	**$ 2,900,000**
Prince William Parkway Sidewalk	3 of 5	$ 1,100,000	$1,100,000
Hoadly Road Asphalt Trail	4 of 5	$ 2,485,000	$1,800,000
Catharpin Road Asphalt Trail & John Marshall Sidewalk	5 of 5	$ 1,700,000	$0
PURCELLVILLE, TOWN		**$ -**	**$ -**
VIENNA, TOWN		**$ -**	**$ -**
	Total Jurisdictional	**$ 24,129,635**	**$ 20,144,635**

AGENCY ALLOCATIONS		Requested	Proposed
PRTC (Prince William, Manassas, Manassas Park)		**$ 2,000,000**	**$ 1,720,000**
PRTC Commuter Assistance Program (UPCT1833)	1 of 2	$350,000	$350,000
Commuter Bus Replacements (3 new 45 ft. Buses), (UPC T158) **PM 2.5**	2 of 2	$1,650,000	$1,370,000
VDOT		**$ 2,890,000**	**$ 2,400,000**
Traffic Signal Optimization (Fairfax, Loudoun, & Prince William)	1 of 5	$2,000,000	$2,000,000
Multi-modal Travel Information Displays Upgrade and Expansion	2 of 5	$890,000	$400,000
WMATA (Arlington, Alexandria, Fairfax City, Fairfax County, Falls Church)		**$ 11,100,000**	**$ 3,500,000**
Virginia Metrobus Replacement (UPC 12878); **PM 2.5**	1 of 1	$11,100,000	$3,500,000
VRE		**$ 2,300,000**	**$ 900,000**
Backlick Road Station Platform Extention	1 of 5	$500,000	$500,000
Burke Center Station 2nd Platform	2 of 5	$450,000	
Manassas Park Station 2nd Platform	3 of 5	$450,000	$400,000
Rolling Road Station 2nd Platform	4 of 5	$450,000	
Backlick Road Station 2nd Platform	5 of 5	$450,000	
	Total Agency	**$ 18,290,000**	**$ 8,520,000**

	TOTAL CMAQ	**$ 43,353,216**	**$ 29,598,216**

CMAQ PM 2.5 Set Aside Requirement (25%)	**$**	**7,399,554**
Total CMAQ PM 2.5 Allocation	**$**	**8,014,165**
CMAQ PM 2.5 Allocation as a Percentage of Total CMAQ		**27%**

FY 2023 CMAQ/RSTP Proposed Allocations
Winter 2016 Strawman

FY2023 RSTP Estimate	**$ 53,648,590**

RSTP FUNDS	Overall Ranking	FY 2023 Requested	FY 2023 Proposed
OFF-THE-TOP PROJECTS/REGIONAL		$ -	$ -
$2,000,000 is allocated to Fairfax County off-the-top as per 7/14/2016 NVTA resolution. This is included in the aollocation below.			
RSTP BALANCE REMAING FOR JURISDICTIONAL ALLOCATIONS			$ 53,648,590
JURISDICTIONAL ALLOCATIONS*		**Requested**	**Proposed**
ALEXANDRIA, CITY		$ 2,650,000	$ 2,650,000
Bus Shelters (UPC 106962)	2 of 8	$400,000	$400,000
ITS Integration (UPC 106562)	5 of 8	$400,000	$400,000
DASH Technology	6 of 8	$600,000	$600,000
Pedestrian & Safety Mobility Enhancements	7 of 8	$1,000,000	$1,000,000
Parking Technologies (UPC 102943)	8 of 8	$250,000	$250,000
ARLINGTON COUNTY		$ 600,000	$ -
Transportation System Management and Communications Plant Upgrade (UPC 101689, 87493)	4 of 4	$600,000	$0
DUMFRIES, TOWN		$ -	$ -
FAIRFAX, CITY		$ 1,000,000	$ 755,462
Citywide Multimodal Transportation Improvements	1 of 1	$1,000,000	$755,462
FAIRFAX COUNTY		$ 51,605,365	$ 31,409,046
Richmond Highway Bus Rapid Transit (UPC 106921) (See CMAQ)	1 of 7	$5,605,365	$5,605,365
Richmond Highway Widening (UPC 107187)	2 of 7	$9,000,000	$10,003,681
Tysons Corner Roadway Improvements (UPC 100478)	3 of 7	$9,000,000	$7,500,000
Reston Roadway Improvements (UPC 106939)	4 of 7	$9,000,000	$5,000,000
Fairfax County Parkway Improvements	5 of 7	$10,000,000	$2,500,000
Seven Corners Interchange Improvements (UPC T17486)	7 of 7	$9,000,000	$800,000
FALLS CHURCH, CITY		$ 600,000	$ 408,000
Pedestrian, Bicycle, Bridge, and Traffic Calming Improvements (UPC 100411)	1 of 1	$600,000	$408,000
HERNDON, TOWN		$ 1,200,000	$ 750,000
East Elden Street Widening and Improvements (UPC 50100)	1 of 3	$700,000	$650,000
Spring Street Widening (UPC 105521)	2 of 3	$500,000	$100,000
LEESBURG, TOWN		$ 1,700,000	$ 1,650,000
Route 15 Bypass @ Edwards Ferry Rd Interchange (UPC 89890)	1 of 1	$1,700,000	$1,650,000
LOUDOUN COUNTY		$ 5,800,000	$ 5,800,000
Bike/Ped for Silver Line Metrorail (UPC T17499) (See CMAQ)	1 of 2	$5,800,000	$5,800,000
MANASSAS, CITY		$ 750,000	$ 750,000
Manassas signal replacements, span wires to mast arms Godwin Drive and Milic Street	1 of 1	$750,000	$750,000
MANASSAS PARK, CITY		$ -	$ -
PRINCE WILLIAM COUNTY		$ 9,476,082	$ 9,476,082
Route 15 Improvement w/ Railroad Overpass (UPC 1803)	1 of 5	$4,738,041	$4,738,041
Route 234/Balls Ford Road Interchange (UPC 105420)	2 of 5	$4,738,041	$4,738,041
PURCELLVILLE, TOWN		$ -	$ -
VIENNA, TOWN		$ -	$ -
	Total Jurisdictional	**$ 75,381,447**	**$ 53,648,590**
	TOTAL RSTP	**$ 75,381,447**	**$ 53,648,590**

FY2018 Deductions and Compensation

4/24/2017

FY18 Reductions	Jurisdiction	Project	Amount
CMAQ	Fairfax County	TMSAMS (UPC 100469)	$ (379,885)
RSTP	Fairfax County	RMAG (UPC 100470)	$ (872,258)
Total			**$ (1,252,143)**

FY23 Additional Amount	Jurisdiction	Project	Amount
RSTP	Fairfax County	Route 1 Multi-modal Improvements (UPC 107187) *Already added to the Strawman	$ 1,003,681

Reamaining Gap to be filled with FY24 CMAQ/RSTP	**$ 248,462**

XII

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

M E M O R A N D U M

FOR: Members, Northern Virginia Transportation Authority

FROM: Martin E. Nohe, Chairman, Planning and Programming Committee

DATE: May 5, 2017

SUBJECT: Report from the Planning and Programming Committee

---

1. **Purpose.** To inform the Northern Virginia Transportation Authority (NVTA) on recent activities of the NVTA Planning and Programming Committee (PPC).

2. **Background.** The PPC met on March 27, 2017 and May 3, 2017.

   The Committee discussed the draft Six Year Program Framework and received a briefing on the 2040 TransAction baseline conditions. The Committee also took action on the date of the Public Hearing for the draft TransAction Plan.

3. **Draft Six Year Program Framework.** The PPC unanimously approved a recommendation that the Authority approve the draft Six Year Program Framework, developed by NVTA staff.

   The Committee acknowledged that NVTA staff had addressed feedback to include a Call for Regional Projects, and agreed with the proposed approach to synchronize future Calls with the Commonwealth's Smart Scale cycles. The Committee noted the proposed schedule to issue the Call for Regional Projects associated with the FY2018-23 Six Year Program at the same time as TransAction is adopted, currently scheduled for October 12, 2017.

4. **TransAction Public Hearing.** The PPC unanimously approved a recommendation that the Authority approve July 13, 2017 as the date for the TransAction Public Hearing.

   Subject to Authority approval, the Public Hearing will take place at 7:00pm on the evening of the regular Authority meeting. It will be preceded at 5:30pm by an Open House that allows for one-on-one discussions with NVTA staff, jurisdiction and agency staff volunteers (Ambassadors) and the TransAction Consultant Team.

   Subject to Authority approval, the Public Comment period for the draft TransAction Plan will commence on June 9, 2017 and end at midnight on July 23, 2017. Jurisdiction-led Town Hall meetings and briefings are being scheduled during the Public Comment period, subject to available resources.

5. **TransAction Update Preview.** The Committee received a briefing from NVTA staff on the 2040 TransAction baseline conditions, and a summary of the draft TransAction Plan.

   The Committee noted the forecast travel conditions for 2040, including worsening delay and transit crowding across the region. The Committee provided feedback related that will enhance communications during the public comment period.

6. **Next steps.** The PPC will continue to be engaged in the process to update TransAction, and the development of NVTA's FY2018-23 Six Year Program.

   The date for the next meeting of the PPC is Wednesday, May 31, 2017.

XIII

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

M E M O R A N D U M

TO: Chairman Martin E. Nohe and Members
Northern Virginia Transportation Authority

FROM: Supervisor Buona, Chairman, Planning Coordination Advisory Committee

DATE: May 2, 2017

SUBJECT: Report from the Planning Coordination Advisory Committee

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1. **Purpose.** To inform the Northern Virginia Transportation Authority (NVTA) on recent activities of the NVTA Planning Coordination Advisory Committee (PCAC).

2. **Background.** The PCAC met on March 22, 2017 and April 26, 2017.

   The Committee discussed the draft Six Year Program Framework and received a briefing on the 2040 TransAction baseline conditions.

3. **Draft Six Year Program Framework.** The PCAC unanimously approved a recommendation that the Authority approve the draft Six Year Program Framework, developed by NVTA staff.

   The Committee acknowledged that NVTA staff had addressed feedback to include a Call for Regional Projects, and agreed with the proposed approach to synchronize future Calls with the Commonwealth's Smart Scale cycles. The Committee noted the proposed schedule to issue the Call for Regional Projects associated with the FY2018-23 Six Year Program at the same time as TransAction is adopted, currently scheduled for October 12, 2017.

4. **TransAction Update Preview.** The Committee received a briefing from NVTA staff on the 2040 TransAction baseline conditions, and a summary of the draft TransAction Plan.

   The Committee noted the forecast travel conditions for 2040, including worsening delay and transit crowding across the region. The Committee recognized the impacts associated with the four 'Alternate Futures', and the opportunity for the Authority to explore future proactive policy guidance associated with some of these.

5. **Next steps.** The PCAC will continue to be engaged in the process to update TransAction, and the development of NVTA's FY2018-23 Six Year Program.

   The date for the next meeting of the PCAC is Wednesday, May 24, 2017.

XIV

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

M E M O R A N D U M

TO: Chairman Martin E. Nohe and Members
Northern Virginia Transportation Authority

FROM: Randy Boice, PE, Chairman, Technical Advisory Committee

DATE: May 2, 2017

SUBJECT: Report from the Technical Advisory Committee

---

1. Purpose. To inform the Northern Virginia Transportation Authority (NVTA) of the recent activities of the Authority's Technical Advisory Committee (TAC).

2. Background. The TAC met on April 19, 2017. The Committee recommends the Authority approve the Six Year Program Framework as proposed by NVTA staff.

The Committee received a brief presentation on the TransAction baseline conditions and draft plan analysis. The briefing detailed the TransAction process to date as noted below:

- public outreach,
- establishment of the 2040 baseline,
- corridor-based approach for analyses,
- development of performance measures, and,
- the analytical approach.

The Committee discussed the baseline conditions, draft plan projects, draft plan model results, results of four alternate future scenarios, and a sensitivity analysis of the draft plan with and without two new Potomac bridge crossings.

The Committee suggested including the two new bridges in the draft plan, as they seem to contribute improvements to the system performance.

3. Next steps. The Committee will continue to be engaged with the TransAction update, as well as the Six Year Program development, providing technical input and advice as needed. The next meeting of TAC is scheduled for May 17, 2017, 7:00 pm at the NVTA offices.

XV

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

M E M O R A N D U M

TO: Chairman Martin E. Nohe and Members
Northern Virginia Transportation Authority

FROM: Monica Backmon, Executive Director

DATE: May 5, 2017

SUBJECT: Executive Director's Report

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1. **Purpose:** To inform the Northern Virginia Transportation Authority (NVTA) of items of interest not addressed on the agenda.

2. **May 18, 2017 Crystal City Multimodal Center Ribbon Cutting---** In coordination with Arlington County, the NVTA will be hosting a Ribbon Cutting for the Crystal City Multimodal Center on Thursday, May 18, 2017 at 10:00am. The multimodal center expands bus capacity by adding bus bays for local service, Fairfax Connector and, in the near future, Loudoun County Transit and PRTC/OmniRide commuter services. In addition to the expanded capacity provided by the new bus bays, the project creates a safer and more efficient area for transfers at the Crystal City Metrorail Station, with designated curb space for shuttles and kiss-n-ride, new bus shelters, improved sidewalks and crosswalks, and new lighting. This project was approved by the Authority in the FY2014 Program.

3. **Transportation Planning Board's Long Range Plan Task Force**----The TPB's Long-Range Plan Task Force is working to identify a limited set of regionally significant projects, programs and policies above and beyond what is in the current Constrained Long-Range Transportation Plan (CLRP). By July of this year, the Task Force aims to identify approximately 6-10 such initiatives that will advance the goals laid out in TPB and COG governing documents. The group also aims to develop a process by which the TPB will make a final selection, from among these initiatives, for concerted TPB action in 2018 and beyond.

   The Task Force is charged with completing work by December 31, 2017, to inform the upcoming comprehensive update to the CLRP, as well as future updates.

   Chair Fisette is chairing this effort. Other Northern Virginia members include:
   - Chairman Marty Nohe
   - Supervisor Cathy Hudgins (Fairfax County)
   - Supervisor Ron Meyer (Loudoun County)
   - Ms. Rene'e Hamilton (VDOT)

4. **Bike to Work Day—** May 19, 2017 has been designated as Bike to Work Day for the region. Bike to Work Day is a regional event coordinated by COG's Commuter Connections program and the Washington Area Bicyclist Association. The event is geared towards encouraging commuters in the region to bike to work on Bike to Work Day, and on an on-going basis afterwards.

   NVTA staff will be participating in Bike to Work Day at the Mosaic pit stop. See Attachment B for information on the event and its 85 pit stops.

5. **Technology Project Plan –** At the March Authority meeting, the Authority approved a budget transfer to advance the FY2018 Planning Technology Project. Since the approval, NVTA staff has been working to develop interactive GIS maps of the adopted regional revenue funded projects to increase transparency and share on the Authority's website. A demonstration of this new mapping feature is anticipated for the June Authority meeting.

6. **NVTA Standing Committee Meetings**
   - **Planning and Programming Committee:** The NVTA Planning and Programming Committee will meet on Wednesday, May 31, 2017 at 10:00am.
   - **Finance Committee:** The NVTA Finance Committee will meet on Thursday, May 18, 2017 at 1:00pm.
   - **Governance and Personnel Committee:** The NVTA Governance and Personnel Committee will meet on Thursday, May 11, 2017 at 6:00pm.

7. **NVTA Statutory Committee Meetings:**
   - **Planning Coordination Advisory Committee:** The PCAC will meet on Wednesday, May 24, 2017 at 6:30pm.
   - **Technical Advisory Committee:** The TAC will meet on Wednessday, May 17, 2017 at 7:00pm.

8. **CMAQ-RSTP Transfers:**
   - CMAQ and RSTP Transfers that do not require additional Authority action and have been requested since the last Executive Director's report are presented in Attachment A.

9. **FY2014-2016 NVTA Regional Projects Status Report:**
   - Please note the updated Regional Projects Status Report (Attachment C), which provides a narrative update for each project and the amount of project reimbursements requested and processed to date.

Attachments:

A. CMAQ-RSTP Transfers

B. Bike to Work Day Flyer

C. FY2014-2017 NVTA Regional Projects Status Report

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

M E M O R A N D U M

TO: Chairman Martin E. Nohe and Members
Northern Virginia Transportation Authority

FROM: Monica Backmon, Executive Director

DATE: May 5, 2017

SUBJECT: Approval of Reallocation of Congestion Mitigation and Air Quality (CMAQ) and Regional Surface Transportation Program (RSTP) funds for Loudoun County, the City of Alexandria, and Fairfax County

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1. **Purpose:** To inform the Northern Virginia Transportation Authority (NVTA) of the Regional Jurisdiction and Agency Coordinating Committee (RJACC) Approval of Reallocation of Congestion Mitigation and Air Quality (CMAQ) and Regional Surface Transportation Program (RSTP) funds for Loudoun County, the City of Alexandria and Fairfax County.

2. **Background:** On September 11, 2008, the Authority delegated the authority to approve requests to reallocate Congestion Mitigation and Air Quality (CMAQ) and Regional Surface Transportation Program (RSTP) funding between projects that were previously approved by the NVTA to the Regional Jurisdiction and Agency Coordinating Committee (RJACC).

   On April 6, 2017, Loudoun County requested the following reallocation:
   - $5,717,347 in prior year CMAQ funds from the Leesburg Park and Ride Project (UPC 100472) to the Metro Station Area Pedestrian Improvements Project (UPC 17499).

   On April 18, 2017, the City of Alexandria requested the following reallocation:
   - $130,000 in FY2017 RSTP funds from the Citywide Bicycle Parking Facilities and Amenities project (UPC 103457) to the Installation of Bicycle Parking in Conjunction with the West End Transitway (UPC 103560). This reallocation will allow the City of Alexandria to proceed with the construction of bicycle parking in conjunction with the West End Transitway and Metrorail Stations.

   On April 27, 2017, Fairfax County requested the following reallocation:
   - $300,000 in RSTP funds from Reston Metrorail Access Improvements Program (UPC 100470) to Route 50 (RMAG) (UPC 108502). According to recent construction estimates, Route 50 is in need of additional funds and Fairfax County has identified funding in the RMAG project that can be used to support this project.

The RJACC approved these requests on April 27, 2017.

Attachment(s): DRAFT Letter to VDOT NOVA District Administrator Cuervo
Request from Loudoun County
Request from the City of Alexandria
Request from Fairfax County

Coordination: Regional Jurisdiction and Agency Coordinating Committee

May 11, 2017

Ms. Helen Cuervo
District Administrator
Virginia Department of Transportation
4975 Alliance Dr. Suite 4E-342
Fairfax, Virginia 22030

Reference: Request to Reallocate Congestion Mitigation and Air Quality (CMAQ) and Regional Surface Transportation Program (RSTP) funds for Loudoun County, the City of Alexandria, and Fairfax County

Dear Ms. Cuervo:

On September 11, 2008, the Authority delegated the authority to approve requests to reallocate Congestion Mitigation and Air Quality (CMAQ) and Regional Surface Transportation Program (RSTP) funding between projects that were previously approved by the NVTA to the Regional Jurisdiction and Agency Coordinating Committee (RJACC).

On April 6, 2017, Loudoun County requested the following reallocation:

- $5,717,347 in prior year CMAQ funds from the Leesburg Park and Ride Project (UPC 100472) to the Metro Station Area Pedestrian Improvements Project (UPC 17499).

On April 18, 2017, the City of Alexandria requested the following reallocation:

- $130,000 in FY 2017 RSTP funds from the Citywide Bicycle Parking Facilities and Amenities project (UPC 103457) to the Installation of Bicycle Parking in Conjunction with the West End Transitway (UPC 103560). This reallocation will allow the City of Alexandria to proceed with the construction of bicycle parking in conjunction with the West End Transitway and Metrorail stations.

On April 27, 2017, Fairfax County requested the following reallocation:

- $300,000 in RSTP funds from Reston Metrorail Access Improvements Program (UPC 100470) to Route 50 (RMAG) (UPC 108502). According to recent construction estimates, Route 50 is in need of additional funds and Fairfax County has identified funding in the RMAG project that can be used to support this project.

NVTA's delegation requires that the RJACC notify the NVTA of these requests. The RJACC approved these requests on April 27, 2017, and the NVTA was informed at their May 11, 2017, meeting. The NVTA has not objected to these reallocations.

Please take the necessary steps to reallocate these funds in the Transportation Improvement Program and the State Transportation Improvement Program. Thank you very much.

Sincerely,

Noelle Dominguez
NVTA RJACC Chairman

cc: Martin E. Nohe, Chairman, NVTA
Monica Backmon, Executive Director, NVTA
Joseph Kroboth, Director, Loudoun County Department of Transportation and Capital Infrastructure
Yon Lambert, Director, City of Alexandria Department of Transportation and Environmental Services
Tom Biesiadny, Director, Fairfax County Department of Transportation

Loudoun County, Virginia
www.loudoun.gov
Department of Transportation and Capital Infrastructure
101 Blue Seal Drive, SE, Suite 102, MSC #64
P.O. Box 7500
Leesburg, VA 20177-7000
Telephone (703) 737-8624 • Fax (703) 737-8513

April 6, 2017

Ms. Noelle Dominquez, Chair
Northern Virginia Transportation Authority
Regional Jurisdiction and Agency Coordinating Committee
3040 Williams Drive, Suite 200
Fairfax, Virginia 22031

RE: Loudoun County Request to Reallocate Congestion Mitigation and Air Quality Funds (CMAQ) Funds

Dear Ms. Dominquez:

Loudoun County requests the approval of the Regional Jurisdiction and Agency Coordinating Committee (JRCC) to transfer the following CMAQ funds:

- Transfer $5,717,347 of prior year CMAQ funds from the Leesburg Park and Ride Project (UPC 104472) to the Metro Station Area Pedestrian Improvements Project (UPC 17499).

If you have any questions regarding this request, please contact Susan Glass (703-777-0251, susan.glass@loudoun.gov) or Bob Brown, Loudoun's representative to the JACC (703-777-0122, bob.brown@loudon.gov).

Sincerely,

Joseph Kroboth, III, PE, LS, Director

Cc via email: Penny Newquist, Deputy Director
Susan Glass, Program Manager
Bob Brown, Regional Coordinator

CMAQ/RSTP Transfer Request Form

(One Sheet Needed Per Donor Project)

Date: 6-Apr-17

Name of Jurisdiction/Agency Requesting: Loudoun County

Current Balance of CMAQ/RSTP Funds Currently Allocated to Donor Project (Prior to this Transfer): 5,400,000

From (Donor): To (Recipient):

UPC	Project Description	Type of Funds	Transfer from Previous Fiscal Years	If No, Year Requested	Transfer Amount	UPC	Project Description	Previously Approved by NVTA	If Yes, Year Approved	JACC Approval (NVTA)	Authority Approval (NVTA)	Funds Verified (VDOT)	Completed (VDOT)
100472	Leesburg Supplemental Park & Ride Facility	CMAQ	Y	2017	$5,717,347.00	17499	Metro Station Bicycle & Pedestrian Access						

TOTAL OF TRANSFER $5,717,347.00

Attach Signed Request of Transfer Letter

DEPARTMENT OF TRANSPORTATION
AND ENVIRONMENTAL SERVICES
P.O. Box 178 - City Hall
Alexandria, Virginia 22313
703.746.4025

alexandriava.gov

April 18, 2017

Noelle Dominguez, Chairman
Regional Jurisdiction and Agency Coordinating Committee (RJACC)
Northern Virginia Transportation Authority (NVTA)
3040 Williams Drive, Suite 200
Fairfax, Virginia 22031

Reference: Request to Reallocate Regional Surface Transportation Program (RSTP) Funds for the City of Alexandria

Dear Ms. Dominguez,

The City of Alexandria requests the Regional Jurisdictional Coordinating Committee's (RJACC)'s approval to reallocate the following funds to UPC #103560 (Installation of Bicycle Parking in Conjunction with the West End Transitway):

- $130,000 from UPC #103457 (Citywide Bicycle Parking Facilities and Amenities) of previously allocated FY2017 RSTP funds;

This reallocation will allow the City of Alexandria to proceed with the construction of bicycle parking in conjunction with the West End Transitway and Metrorail stations

Thank you for your assistance in this matter. Please feel free to contact Carrie Sanders, Deputy Director of Transportation & Transit, at 703.746.4088 or carrie.sanders@alexandriava.gov should you have further questions.

Sincerely,

Carrie Sanders

Carrie Sanders, AICP
Deputy Director, Transportation/Transit

Enclosure: Worksheet-RSTP Funds to WET Bike

cc: Yon Lambert, Director, T&ES
Allan Fye, Acting Division Chief, Transit/T&ES

CMAQ/RSTP Transfer Request Form

(One Sheet Needed Per Donor Project)

Date: 5-Apr-17

Name of Jurisdiction/Agency Requesting: City of Alexandria

Current Balance of CMAQ/RSTP Funds Currently Allocated to Donor Project (Prior to this Transfer): $130,000 (RSTP)

From (Donor): Citywide Bicycle Parking To (Recipient): West End Transitway Bike Parking

UPC	Project Description	Type of Funds	Transfer from Previous Fiscal Years	If No, Year Requested	Transfer Amount	UPC	Project Description	Previously Approved by NVTA	If Yes, Year Approved	JACC Approval (NVTA)	Authority Approval (NVTA)	Funds Verified (VDOT)	Completed (VDOT)
103457	Citywide Bicycle Parking Facilities	RSTP	N	2017	$130,000.00	103560	West End Transitway Bike Parking	N					

Bicycle

TOTAL OF TRANSFER $130,000.00

Attach Signed Request of Transfer Letter

County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

April 27, 2017

Ms. Noelle Dominguez, Chairman
Regional Jurisdiction and Agency Coordinating Committee
Northern Virginia Transportation Authority
3040 Williams Drive, Suite 200
Fairfax, Virginia 22031

Re: Reallocation of Regional Surface Transportation Program (RSTP) Funds

Dear Ms. Dominguez: Noelle:

Fairfax County requests the approval of the Regional Jurisdiction and Agency Coordinating Committee (RJACC) and the Northern Virginia Transportation Authority (NVTA) to transfer a total of $300,000 in RSTP funds from Reston Metrorail Access Improvements Program or RMAG (UPC 100470) to Route 50 (UPC 108502). According to recent construction estimates, Route 50 is in need of additional funds. Fairfax County has identified funding in the RMAG that can be used to support this project.

If you have any questions or concerns about this request, please contact Brent Riddle at (703) 877-5659.

Sincerely,

Tom Biesiadny
Director

cc. Todd Wigglesworth, Fairfax County Department of Transportation (FCDOT)
Brent Riddle, Fairfax County Department of Transportation (FCDOT)
Carole Bondurant, Virginia Department of Transportation (VDOT)
Bethany Mathis, VDOT
Jan Vaughan, VDOT

Fairfax County Department of Transportation
4050 Legato Road, Suite 400
Fairfax, VA 22033-2895
Phone: (703) 877-5600 TTY: 711
Fax: (703) 877-5723
www.fairfaxcounty.gov/fcdot

FCDOT
Serving Fairfax County for 30 Years and More

CMAQ/RSTP Transfer Request Form

(One Sheet Needed Per Donor Project)

Date: 4/27/2017

Name of Jurisdiction/Agency Requesting: Fairfax County

Current Balance of CMAQ/RSTP Funds Currently Allocated to Donor Project (Prior to this Transfer): (UPC 100470) $11,748,837

From (Donor): To (Recipient):

UPC	Project Description	Type of Funds	Transfer from Previous Fiscal Years	If No, Year Requested	Transfer Amount	UPC	Project Description	Previously Approved by NVTA	If Yes, Year Approved	JACC Approval (NVTA)	Authority Approval (NVTA)	Funds Verified (VDOT)	Completed (VDOT)
100470	Reston Metrorail Access Improvements Project	RSTP	Y		$300,000.00	108502	Route 50	Y	2002				

TOTAL OF TRANSFER $300,000.00

Attach Signed Request of Transfer Letter

Pre-register by May 12 for Free T-Shirt* and Bike Raffles!

FREE FOOD, BEVERAGES and GIVEAWAYS at all locations

Visit biketoworkmetrodc.org for pit stop locations & times.
*T-Shirts available at pit stops to first 16,000 who register.
Over 85 pit stops throughout D.C., Maryland, and Virginia!

XV.B BIKE TO WORK DAY 2017

FRIDAY MAY 19

COMMUTER CONNECTIONS

WASHINGTON AREA BICYCLIST ASSOCIATION

Takoma Bicycle

ICF

GO Alex

BICYCLE SPACE

Bike Arlington

Allegra ALLERGY

California TORTILLA

DC BIKE RIDE

THE JBG COMPANIES

Marriott

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS AASHTO

FAIR LAKES

POTOMAC PEDALERS MD • DC • VA

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goDCgo powered by d.

ABUS Security Tech Germany

BROMPTON

Arlington Transportation Partners

GREEN GURU

pdw

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GENERAL DYNAMICS Information Technology

SARIS BICYCLE PARKING

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for free registration
or call 800.745.7433

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Bike to Work Day is also funded by DC, MD, VA and U.S. Departments of Transportation.

bike to work day 2017

NVTA FY2014-17 Program Project Status

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Arlington County	**Boundary Channel Drive Interchange –** Constructs two roundabouts at the terminus of the ramps from I-395 to Boundary Channel Drive, which eliminate redundant traffic ramps to/from I-395. In addition, the project will create multi-modal connections to/from the District of Columbia that will promote alternate modes of commuting into and out of the District.	$4,335,000 (FY2014)	Construction	Planning and design underway; construction of the interchange begins in Fiscal Year 2020; construction of the local road that connects to the interchange (Long Bridge Drive) began in early October 2016.	By end of Calendar year 2018 (Long Bridge Drive) and by end of Calendar year 2022 (interchange)	Mid-2019	9.3%
Arlington County	**Columbia Pike Multimodal Improvement** – Includes a modified street cross-section with reconfigured travel and transit lanes, medians and left-turn lanes, utility undergrounding and other upgrades along Arlington's 3.5 mile Columbia Pike corridor from the Fairfax County line on the west end to Four Mile Run.	$12,000,000 (FY2014)	Construction	Design notice to proceed was provided in October 2014. Streetscape and Undergrounding plan approval expected in March 2017. Washington Gas relocations began April 12, 2017. Invitation to Bid scheduled for release July 2017, with construction expected to be under way in Nov 2017.	Fall 2019	Fall 2019	0%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Arlington County	**Columbia Pike Multimodal Street Improvements (East End)** – Includes a modified street cross-section along the eastern portion of Arlington's 3.5 mile Columbia Pike corridor. Specific works includes realignment of road including shifting the roadway south of its existing location, eliminating the s-curves, utility undergrounding and enhancing pedestrian facilities	$10,000,000 (FY2015-16)	Engineering Construction	Segment A (East End) has been split into two sections. First section is Orme to Oak (West) and the second is Oak to Joyce Street (East). Segment A West completed the 90% plan review in April 2017. Right-of-Way acquisition underway, but must be completed prior to final plan approval and construction. Segment A East is subject to negotiations with Arlington National Cemetery.	Western Half – Spring 2020; Eastern Half – projected Summer 2020	Western Half – Spring 2020; Eastern Half – projected Summer 2020	0%
Arlington County	**Crystal City Multimodal Center** – Provides four additional saw-tooth bus bays for commuter and local bus services, seating, dynamic information signage, lighting, additional bicycle parking, curbside management plan for parking, kiss and ride, and shuttles, and pedestrian safety improvements along 18th Street South between South Bell Street and South Eads Streets.	$1,500,000 (FY2014)	Construction	Construction started July 6, 2015. The NVTA funded phase of this project is significantly completed as of June 2016. Final paving and striping was mostly completed in December 2016 at the same time as an adjacent County project. Only punch-list items remain on this project, plus green bike lane painting. A ribbon cutting ceremony is scheduled for May 18, 2017.	Spring 2017	Spring 2017.	75.5%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Arlington County	**Ballston-MU Metrorail Station West Entrance –** Constructs a second entrance to the Ballston-MU Metrorail Station, at North Fairfax Drive and North Vermont Street. Includes two street-level elevators & escalators, connecting to an underground passageway & new mezzanine. It will have fare gates, fare vending machines and an attended kiosk. Provides direct access, relieves congestion at the current entrance and provides for more even distribution along the platform	$12,000,000 (FY2015-16)	Design	Design work to run for two years from Fall 2017.	Start of construction in winter 2019	Fall 2019	0%
Arlington County	**Glebe Road Corridor Intelligent Transportation System Improvements** – Design and construction of Intelligent Transportation System (ITS) and Adaptive Traffic Control System, including hardware and software for real time traffic data collection, Forward Looking Infra Red (FLIR) traffic detection, 3D pedestrian and bike detection, interactive audible ADA accessible pedestrian crossings, CCTVs, backup power supply information systems, queue detections, and dynamic message signs.	$2,000,000 (FY2015-16)	Engineering Construction	Task 1 – On Site Support - Engineer has been procured for this project. Task 2 – Chain Bridge ITS upgrades – Consultant procurement is underway Task 3 – Chain Bridge Fiber communication – In construction phase. Task 4 – ITS Equipment Installations – Field assessment underway. Task 5 – TSP equipment installation – Waiting on contract to procure TSP equipment.	Task 2 – Summer 2019 Task3 - August 2017 Task 4 – Dec. 2017 Task 5 – Summer 2018	Task 2 – Summer 2019 Task3 - August 2017 Task 4 – Dec. 2017 Task 5 – Summer 2018	3.3%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Arlington County	**Lee highway Corridor ITS Enhancements – The** project proposes to address congestion, safety, and transit issues by installing an Intelligent Transportation System (ITS) and corresponding Adaptive Traffic Control System program, to better manage traffic flow for both automobiles and buses. The project will install additional Bluetooth devices, count stations, CCTV cameras, and Forward Looking Infrared (FLIR) detectors in order to monitor traffic flow and safety of all modes. At the interchange of Lee Highway and I-66, the project will upgrade two signals, providing a better-timed connection between I-66 and Lee Highway. The project will also upgrade existing mast arm signals and add or improve existing streetlights along Lee Highway.	$3,000,000 (FY2017)	Design, PE, ROW, Construction	Preliminary field assessment has been completed. Survey requests have been submitted and survey work will start in a few weeks.	June 2020	June 2020	0%

Arlington County	**Crystal City Streets:** 12th Street Transitway, Clark/Bell Realignment & Intersection Improvements – The goal is to streamline the existing road network, make movements for all modes of transportation more efficient, create new connections to the street grid network, and to construct an extension of the Crystal City-Potomac Yard (CCPY) Transitway. It includes reconfiguring the street between South Eads Street and South Clark Street to provide exclusive transit lanes, reconfigure and realign a segment of Clark Street with Bell Street, and the intersection improvements around 23rd Street South and US-1 will simplify the design of three closely-spaced intersections that are confusing and inefficient for all modes.	$11,600,000 (FY2017)	Design, PE, ROW, Construction	Design work began in fall 2016. 12th Street plans are at 30%. A public meeting was held on April 5, 2017. The County has decided to combine this phase of the project with the larger CCPY extension project to Pentagon City Metro. County engineers will bring that phase to 30% and then complete overall design concurrently. 23rd street has been split into 3 phases. The segment between US1 and Eads will be completed in Phase 1 using County design team as well as County road crews for construction. This should be completed before the end of CY2017. Phase 2 will include the reconfiguration of US1 interchange and adjacent pedestrian facilities, to be designed immediately. Phase 3 addresses the section of 23rd Street from Eads to Crystal Drive. This will be completed in conjunction with adjacent private-sector redevelopment projects in the future. Clark/Bell Realignment has completed 30% design. Comment resolution is currently scheduled and the design is progressing into the 60% level.	June 2020	June 2020	0%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Fairfax County	**Innovation Metrorail Station** – Construction of the Silver Line Phase II extension of the rail system from Washington DC, to and beyond the Dulles International Airport. This multimodal facility will include bus bays, bicycle parking, kiss-and-ride and taxi waiting areas, as well as pedestrian bridges and station entrances from both the north and south sides of the Dulles Airport Access Highway/Dulles Toll Road.	$41,000,000 (FY2014)	Design Construction	Pedestrian bridge assembly, precast, and masonry work is currently underway for station entrances. The County is in the process of awarding a contract for the construction of the kiss and ride, bus bays, bike facilities and taxi waiting areas.	Spring 2019	Spring 2019	89%
	Innovation Metrorail Station (Continuation) - Construction of the Silver Line Phase II extension of the rail system from Washington DC, to and beyond the Dulles International Airport. This multimodal facility will include bus bays, bicycle parking, kiss-and-ride and taxi waiting areas, as well as pedestrian bridges and station entrances from both the north and south sides of the Dulles Airport Access Highway/Dulles Toll Road.	$28,000,000 (FY2015-16)	Construction	Pedestrian bridge assembly, precast, and masonry work is currently underway for station entrances. The County is in the process of awarding a contract for the construction of the kiss and ride, bus bays, bike facilities and taxi waiting areas.	Spring 2019	Spring 2019	0%
Fairfax County	**West Ox Bus Garage** - Expands capacity of the West Ox bus facility and allows for additional, increased Fairfax Connector bus service. Includes 9 maintenance bays and expansion of facilities for bus drivers and security.	$20,000,000 (FY2015-16)	Construction	The Maintenance Building is dried-in and finish work is ongoing. The bus lift installation is ongoing and scheduled for completion in late May. Work at the Administration Building expansion is ongoing and the building dry-in is scheduled for mid-May.	September 2017	September 2017	24.2%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Fairfax County	**VA Route 28 Widening – Prince William County Line to Route 29** - Widen from 4 to 6 lanes including intersection improvements and pedestrian/bicycle facilities.	$5,000,000 (FY2015-16)	PE and Environmental Study	Design: Project PIM anticipated in summer 2017. Survey: Received Preliminary Environmental Inventory (PEI) on 5/1/16. Solicited proposal for the Cultural Resources section of NEPA documentation. NTP issued on 10/20/16. VDHR approvals received on permit applications. In process to acquire VDOT LUP. Archeological survey ongoing. Traffic: NTP issued mid-March 2016, counts completed in May 2016, draft traffic report review completed. Consultant revising traffic report based on comments received from County and VDOT. Utility Designation: NTP given to consultant in March 2016. Utility designation survey completed in May 2016. Geotech: Meeting held with VDOT on 10/26/16 to review Phase I Work Plan. NTP for Phase II Geotechnical work issued on 12/21/16. LUP for Geotechnical survey work received from VDOT; survey ongoing.	2020	February 2018	31.1%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
	VA Route 28 Widening – Prince William County Line to Route 29 (continuation) - Widen from 4 to 6 lanes including intersection improvements and pedestrian/bicycle facilities.	$5,000,000 (FY2017)	PE, ROW	Continuation of the 2015-16 project.	2020	June 2018	0%
Fairfax County	**Fairfax County Parkway Improvements** – A Study of short and long-term corridor improvements, Environmental Assessment (EA)/ Finding of No Significant Impact (FONSI), and/or Preliminary Engineering for five segments of the Parkway.	$10,000,000 (FY2015-16)	Design, Environmental, PE	VDOT advertised the final RFP for a design consultant on 7/18/2016 and completed technical interviews in September. Traffic counts completed in Nov 2016. Survey completed in Spring 2017. VDOT is expected to award the contract and start the project soon.	2022	June 2020	0%
Fairfax County	**Route 286 Fairfax County Parkway Widening: Route 123 to Route 29** – Widen Route 286 from four lanes (undivided) to six lanes (divided). It also includes bike-ped amenities such as paved trail. Intersection improvement and access management will be considered in design.	$10,000,000 (FY2017)	ROW	VDOT advertised the final RFP for design consultant on 7/18/2016 and completed technical interviews in September. Traffic counts completed in Nov 2016. Survey completed in Spring 2017. VDOT is expected to award the contract and start the project soon.	2022	June 2020	0%
Fairfax County	**Rolling Road Widening –** Widen Rolling Road from 2 to 4 lanes from Old Keene Mill Road (VA 644) to Franconia Springfield Pkwy (VA 289) and Fairfax County Parkway (VA 286). Project will add pedestrian and bicycle facilities.	$5,000,000 (FY2015-16)	Design, PE, ROW	Design is 30% completed. Staff met with elected officials to discuss the typical section. Public Information Meeting (PIM) was held on June 22, 2016. Meetings with individual HOAs completed. Project Public Hearing anticipated in early 2017.	2018	Summer 2017	62.5%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Fairfax County	**Frontier Drive Extension -** Extend Frontier Drive from Franconia-Springfield Parkway to Loisdale Road, including access to Franconia-Springfield Metrorail Station and interchange improvements (braided ramps) to and from the Parkway. Provide on-street parking along Frontier Drive where feasible, as well as add pedestrian and bicycle facilities.	$2,000,000 (FY2015-16)	Design, PE	VDOT is administering this project. Design and Preliminary Engineering related efforts are underway. Preliminary Field inspection meeting was held on February 8, 2017. Final draft IMR has been submitted and will be sent to VDOT Central Office for final approval in May 2017. Public Hearing is anticipated to be held in fall 2017 with design approval anticipated in spring 2018.	2022-2023	Fall 2018	0%
Fairfax County	**Route 7 Widening: Colvin Forest Drive to Jarrett Valley Drive –** Widen Route 7 from four to six lanes, improve intersections, and add 10-ft shared use path on both sides with connections to local trails.	$10,000,000 (FY2017)	ROW	30% plans completed. Public information meeting held on 6/16/16. Public hearing held on 11/15/16. Board endorsement of Design. Public Hearing Plans TBD.	2025	June 2020	0%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Fairfax County/ Virginia Department of Transportation UPC 82135	**Route 7 Bridge over Dulles Toll Road -** Widen Route 7 from 4 lanes to 6 lanes, from approximately 0.1 mile west of Tyco Road to approximately 0.6 mile west of Tyco Road. The project will add one extra lane and 14 foot wide shared-use path on each direction.	$13,900,000 (FY2015-16)	Construction	ROW Acquisitions and Utility relocations are ongoing. Existing piers are being widened to replace the full superstructure. Construction of three underpasses and two overpasses along shared-use paths is underway. Final design for the roadway is complete. Lighting plans along the roadway under review by MWAA, Fairfax County and VDOT. Westbound roadway traffic switched on new bridge in between two existing RT 7 bridges over DATR on December 22, 2016.Old eastbound bridge removed. Drainage and cut/fill in NW quadrant installed. Pier modifications and substructure repairs on RT 7 piers underway.	Spring 2018	Spring 2017	83.3%
Loudoun County	**Leesburg Park and Ride** – Funding of land acquisition for a second Leesburg Park and Ride facility to accommodate a minimum of 300 spaces.	$1,000,000 (FY2014)	ROW Acquisition	On September 22, 2016, the Board of Supervisors authorized staff to finalize negotiations with Springfield East L.C. for a written contract in the amount of $5,475,000 for development, construction and purchase of a turnkey Commuter Parking Lot on the property designated as Lot 1, Section 1 Village at Leesburg.	Acquisition of land anticipated by Summer 2018.	Summer 2018	0%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Loudoun County	**Belmont Ridge Road (North)** – Widening of Belmont Ridge between Gloucester Parkway and Hay Road Segment, including a grade separation structure to carry the W&OD trail over Belmont Ridge Road.	$20,000,000 (FY2014)	ROW Acquisition Construction	This is a design build project being administered by VDOT. Contract was awarded to Dewberry Shirley and notice to proceed was issued in October 2015. A ground breaking ceremony was held on September 27, 2016 for this project. VDOT held a "Pardon Our Dust" meeting on October 27, 2016 to inform the public about the construction schedule. Right-of-Way (ROW) acquisition, clearing and grubbing, erosion and sediment control measures installation, and earthwork activities are underway. Installation of signage and temporary concrete barrier commenced. Project construction continues; work has begun on the steel girder placement for the bridge over the W&OD trail (northbound).	December 2018	December 2018 (Full payment made to VDOT)	100%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Loudoun County	**Belmont Ridge Road - Truro Parish Road to Croson Ln –** The road will be widened from a substandard two-lane rural section to a four-lane arterial standard with the appropriate auxiliary turn lanes and signalization.	$19,500,000 (FY2015-16)	Construction	100% design plans were submitted to Building & Development and VDOT on November 30, 2016. Coordination of utility relocation designs with Dominion Virginia Power, Verizon, and adjacent property owners continues. DTCI and its consultant, Dewberry, are also working to finalize the dedication and easement plats. Completion of the design phase is delayed from Fall 2016 to Spring 2017 due to Dominion Virginia Power and Verizon relocation coordination. Appraisals have been ordered; ROW acquisition will begin when appraisals are received.	February 2018	February 2018	0%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Loudoun County	**Loudoun County Parkway (VA Route 607) – U.S. 50 to Creighton Rd –** Provides for the design, right-of-way acquisition and construction of Loudoun County Parkway from Creighton Road to U.S. Route 50. The project will be designed as a four-lane urban major collector with a divided median in a six-lane ultimate right-of-way, associated turn lanes and shared use path.	$31,000,000 (FY2015-16)	Construction	A portion of the project is administered by VDOT as a Design Build contract. Dewberry prepared the final design; Shirley Contracting has begun construction at the intersection of Loudoun County Parkway and Route 606. One lane of Route 606/Loudoun County Pkwy intersection scheduled to open in September 2017, two lanes to open by December 2017; two lanes of Route 606 between the Greenway and Commerce Center Court will open in December 2017; the remainder of the road improvements completed August 2018. VDOT has prepared a Standard Project Administration Agreement to capture the Loudoun County Parkway related charges that are being constructed as part of the Route 606 widening project; this agreement was approved by the Board of Supervisors on February 23, 2017. Southbound and northbound Route 606 traffic is being shifted to the new southbound bridge over the Horsepen Dam spillway followed by construction of the north bound bridge.	Mid 2021	Mid 2021	0.4%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Prince William County	**Route 1 Widening from Featherstone Road to Marys Way** – Widen Route 1 from a 4 lane undivided highway to a 6 lane divided highway. The total distance for the project will be 1.3 miles and will include the construction of a 10 foot wide multi-use trail on the west side and a five foot wide sidewalk on the east side, along the entire route.	$3,000,000 (FY2014)	Design	Right of Way plans for total acquisitions approved by VDOT on 23 Feb 2017. Right of Way plans for partial acquisitions under VDOT review. Approval anticipated in summer 2017.	Construction advertisement December 2017.	Design October 2017.	52.2%
	Route 1 Widening from Featherstone Road to Marys Way (continuation) - Widening of Route 1 from a 4 lane undivided highway to a 6 lane divided highway. The total distance for the project will be 1.3 miles and will include the construction of a 10 foot wide multi-use trail on the west side and a five foot wide sidewalk on the east side, along the entire route.	$49,400,000 (FY2015-16)	Design ROW Acquisition Construction	Construction to begin in January 2018. There are approximately 73 parcels impacted with 12 properties with possible major impacts. Appraisals for total tasks under review. Appraisals for partial takes ongoing. Design public hearing held in November 2016. Duct bank construction and utility relocations to occur in 2018.	April 2021	April 2021	0%
	Route 1 Widening from Featherstone Road to Marys Way (continuation) - Widening of Route 1 from a 4 lane undivided highway to a 6 lane divided highway. The total distance for the project will be 1.3 miles and will include the construction of a 10 foot wide multi-use trail on the west side and a five foot wide sidewalk on the east side, along the entire route.	$11,000,000 (FY2017)	Construction	Continuation of the FY2014 and FY2015-16 projects above.	April 2021	April 2021	0%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Prince William County	**Route 28 Widening from Linton Hall Road to Fitzwater Drive** -- Widen from a 2 lane undivided roadway to a 4 lane divided highway. Project includes the construction of a multi-use trail on the south side and a sidewalk on the north side.	$28,000,000 (FY2014)	Engineering ROW Acquisition Construction	ROW appraisals and negotiations are complete. Utility relocation to be completed by the end of May 2017. Project rebid as a standalone project. Bids open on May 9, 2017.	October 2019	October 2019	0%
Prince William County	**Route 28 Widening from Route 234 Bypass to Linton Hall Road** - Widen approximately 1.5 miles of Route 28 from a 4 lane undivided highway to a 6 lane divided highway, which will include a multi-use trail and sidewalk.	$16,700,000 (FY2015-16)	Design ROW Acquisition Construction	An unsolicited PPTA (Public-Private Transportation Act) proposal was received in April 2017 and is under evaluation.	TBD	TBD	0%
	Route 28 Widening from Route 234 Bypass to Linton Hall Road (continuation) - Widen approximately 1.5 miles of Route 28 from a 4 lane undivided highway to a 6 lane divided highway, which will include a multi-use trail and sidewalk.	$10,000,000 (FY2017)	Construction	Continuation of the FY2015-16 project above.	TBD	TBD	0%
City of Manassas/Prince William County	**Route 28 (Manassas Bypass) Study – Godwin Drive Extended -** This study will evaluate the scope, cost, environmental, traffic forecasts, alternative alignments and feasibility factors required to gain approval for Route 28 corridor congestion improvements between the City of Manassas and Fairfax County.	$2,500,000 (FY2015-16)	Engineering Study	Consultant (JMT) has been procured. Steering Committee approved four alternatives for detailed analysis. Traffic analysis and travel demand modeling are underway.	Location study (phase 1 of the overall study) to be completed by September 2017	Location study (phase 1 of the overall study) to be completed by September 2017	0%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
City of Alexandria	**Potomac Yard Metrorail Station EIS** – This project supports ongoing design and environmental activities associated with the development of a new Blue/Yellow Line Metrorail station at Potomac Yard, located between the existing Ronald Reagan Washington National Airport Station and Braddock Road Station.	$2,000,000 (FY2014)	Design Environmental	The Records of Decision (RODs) were issued on Oct 31 and Nov 1, 2016. The design-build RFP was issued on November 28, 2016. Contract award forecasted fall 2017.	Expected to open by year-end 2020.	2017	44.8%
	Potomac Yard Metrorail Station (continuation) - Planning, design, and construction of a new Metrorail station and ancillary facilities at Potomac Yard along the existing Metrorail Blue and Yellow lines between the Ronald Reagan Washington National Airport Station and the Braddock Road Station.	$1,500,000 (FY2015-16)	Planning, PE, Design	Conceptual design of the station began in fall 2015. The design-build RFP was issued on November 28, 2016. Contract award forecasted fall 2017.	2020	2017	0%
	Potomac Yard Metrorail Station (continuation) - Planning, design, and construction of a new Metrorail station and ancillary facilities at Potomac Yard along the existing Metrorail Blue and Yellow lines between the Ronald Reagan Washington National Airport Station and the Braddock Road Station.	$66,000,000 (FY2017)	Design, PE, Construction (Design-Build)	Records of Decision were issued on Oct 31 and Nov 1, 2016. The design-build RFP was issued on November 28, 2016. Contract award forecasted fall 2017.	2020	2020	0%
City of Alexandria	**Shelters and Real Time Transit Information for DASH/WMATA** – Constructs bus shelters and provides associated amenities such as real time information at high ridership stops.	$450,000 (FY2014)	Asset Acquisition	First two shelters were opened to public in February. Two additional shelters have been installed and one shelter is currently under construction. Anticipate construction to start on six shelters in May.	September 2018	December 2017	1.1%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
City of Alexandria	**Traffic Signal Upgrades/Transit Signal Priority** – Includes design of transit priority systems on Route 1 and Duke Street, and purchase of equipment and software to install transit signal priority and upgrade traffic signals on Route 1.	$660,000 (FY2014)	Design Asset Acquisition	Kittelson & Associates is preparing design plans for Route 1 TSP project.	Summer 2018	Summer 2018	2.5%
City of Alexandria	**Duke Street Transit Signal Priority -** Includes design, install and implementation of a transit vehicle signal priority system (on board system on DASH and field equipment along the route) on Duke Street.	$190,000 (FY2015-16)	Construction	Kittelson & Associates is preparing design plans for Route 1 TSP project.	Summer 2018	Summer 2018	8%
City of Alexandria	**West End Transitway (WET) -** Will provide frequent, reliable transit service connecting major activities. The WET will connect to two metro stations (Van Dorn, Pentagon), major employment centers (Pentagon, Mark Center), and major transit nodes (Landmark Mall, Southern Towers, and Shirlington Transit Center).	$2,400,000 (FY2015-16)	Design, Construction	FTA issued CE Approval on April 21, 2017. The project has now completed NEPA. The contract for the Bridging Documents has been awarded and the project kick-off meeting is expected in early May, 2017.	2021	2019	0%
City of Fairfax	**Chain Bridge Road Widening/Improvements from Route 29/50 to Eaton Place** – Widen Route 123 (Chain Bridge Road) to six lanes, improves the lane alignments of the roadway approaches for the intersection of Route 29/50 (Fairfax Boulevard) at Route 123 and improves pedestrian accommodations at all legs of the intersection. Includes extensive culvert improvements to eliminate roadway flooding caused by the inadequate culvert under Route 123.	$5,000,000 (FY2014)	ROW Acquisition, Construction	NTP for construction was issued on September 19, 2016.	2018	2018	47.5%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
	Chain Bridge Road Widening/Improvements from Route 29/50 to Eaton Place "Northfax" – Widens Route 123 (Chain Bridge Road) to 6 lanes, improves the lane alignments of the roadway approaches for the intersection of Route 29/50 (Fairfax Boulevard) at Route 123 and improves pedestrian accommodations at all legs of the intersection. Includes extensive culvert improvements to eliminate roadway flooding caused by the inadequate culvert under Route 123.	$10,000,000 (FY2015-16)	Construction	NTP for construction was issued on September 19, 2016.	2018	2018	0%
City of Fairfax	**Kamp Washington Intersection Improvements** – Eliminates the existing substandard lane shift between Route 50 and Route 236 through the intersection; signalization phasing improvements; construction of an additional southbound lane on U.S 29 from the Kamp Washington (50/29/236) intersection to the existing third southbound lane; extension of the westbound through lanes on VA 236 (Main Street) from Chestnut Street to Hallman Street; lengthening of turn lanes to provide additional storage for turning vehicles from Route 50 to Route 50/29 and Route 236 to Route 29; new crosswalks, curb ramps, sidewalks and pedestrian signalization; and replacement of span-wire signals with mast arm signals.	$1,000,000 (FY2015-16)	Construction	Construction began in December 2015. Project is under construction.	April 2017	April 2017	0%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
City of Falls Church	**Bus Stops Changes** – Includes the provision of shelters and pedestrian way-finding information. Also includes consolidation of existing stops, design, ROW acquisition and construction for bus stop changes along Route 7, and provision of bus shelters.	$200,000 (FY2014)	Engineering Construction Inspection Services	Construction of six shelters complete. Easement acquisition is on-going with construction of four to six shelters in spring 2017.	Summer 2017	Complete in April 2017	100%
City of Falls Church	**Pedestrian Access to Transit** – Includes the provision of enhanced pedestrian connections to the Intermodal Plaza being designed for the intersection of South Washington Street and Hillwood Avenue. The Intermodal Plaza will serve as a focal point for bus transportation in the area when completed.	$700,000 (FY2014)	Engineering Environmental Construction	100% design completed. Finalizing utility undergrounding plans. Right of way negotiations for utility undergrounding complete. Anticipated to begin utility undergrounding in Spring 2017 – starting work on bid package. Continuing coordination with Washington Gas and Dominion to resolve conflicts and coordinate separate projects in the area.	Fall 2018	Fall 2018	18.5%
City of Falls Church	**Pedestrian Bridge Providing Safe Access to the East Falls Church Metro Station** – Includes the expansion of an existing bridge on Van Buren Street to include a segregated pedestrian area. The existing bridge lacks such a facility and requires pedestrians to detour onto the pavement in order to access the Metro Station.	$130,227.61 (FY2014)	Design Construction	90% design completed. Final plans completed. Starting work on bid package. Utility pole relocation underway with Dominion Virginia Power, may cause delay to project.	Winter 2017	Completed	100%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
City of Manassas	**Route 28 Widening South to City Limits –** Includes widening Route 28 from 4 lanes to 6 lanes from Godwin Drive in Manassas City to the southern city/Prince William County limits. This project also adds a dual left turn lane on north bound Route 28 to serve Godwin Drive. The project eliminates a merge/weave problem that occurs as travelers exit the 234 bypass and attempt to cross 2 lanes to access Godwin Drive. Signalization improvements are included.	$3,294,000 (FY2015-16)	Engineering ROW Acquisition Construction	PE phase is ongoing. PE plans at 80%. Obtained CTB approval for "Limited Access Control Change."	October 2019	October 2019	0%
Town of Dumfries UPC 90339	**Widen Route 1 (Fraley Boulevard) Brady's Hill Road to Route 234 (Dumfries Road) -** This project will complete the Northern segment of a Prince William County funded project (VDOT's Route 1 / Route 619) and will allow 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 2 lanes to 6 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.	$6,900,000 (FY2015-16)	Engineering	The full six lane design concept will be developed to a PFI level by summer 2017 and then VDOT and Town of Dumfries will decide on whether public outreach should be pursued based on the prospect of right of way acquisition funding becoming available and the likely timeline for that.	FY2025	Mid-2019	0.3%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Town of Herndon	**Intersection Improvements (Herndon Parkway/Sterling Road)** – Street capacity improvements for congestion relief. Project includes ROW acquisition and construction to build a sidewalk on the north side of Sterling Road between Herndon Parkway and the town limits.	$500,000 (FY2014)	Final Engineering ROW Acquisition Construction	Right of way acquisition for new sidewalk connectivity and improvements has been completed to accommodate retaining/sound wall that allows for an ADA 5' sidewalk construction. Utility relocation to occur during spring/summer 2017.	Highway capacity improvements completed November 2014. Sidewalk improvements expected in mid-2017.	Fall 2017	40.1%
Town of Herndon	**Intersection Improvements (Herndon Parkway/Van Buren Street)** – Street capacity improvements for congestion relief. Project includes sidewalk/trail connectivity to Herndon Metrorail.	$500,000 (FY2014)	Construction	Procurement approved and awarded in February 2015. Project is in design.	Expected in 2018, prior to the opening of Dulles Metrorail Phase II.	2018	0%
Town of Herndon	**Access Improvements (Silver Line Phase II – Herndon Metrorail Station)** – Provides additional vehicle and bus pull-off bays and major intersection improvements to include ADA accessible streetscape, paver crosswalks, bike-pedestrian signalization, refuge media islands and bus shelter/transit facilities.	$1,100,000 (FY2014)	Engineering ROW Acquisition Construction	Procurement approved and awarded in March 2015. Engineering underway at 30%. Design ROW acquisition/street dedication is to begin in early 2017 to be ready for construction in 2019.	Expected in 2018, prior to the opening of Dulles Metrorail Phase II.	2018	0%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Town of Herndon	**East Elden Street Improvement & Widening -** Widen and reconstruct East Elden Street from 4 to 6 lanes with a raised landscaped median between Fairfax County Parkway and Herndon Parkway; continue as a 4-lane section with a raised landscaped median and dedicated turning lanes between Herndon Parkway and Van Buren Street; transition to a 2-lane section with left-turn lanes between Van Buren and Monroe Street. The project will be ADA accessible to include pedestrian/audio signalization, crosswalk enhancements and bus stop improvements at select major intersections as well as proposed bike lanes along the length of the project.	$10,400,000 (FY2015-16)	ROW, Utilities	VDOT's Location and Design Public Hearing was held on October 27, 2016. On February 14, 2017, Herndon's Town Council held a public meeting and adopted a resolution that listed public comments to be incorporated into VDOT's engineering design plans. Town Public Hearing scheduled for May 9, 2017 to adopt a resolution recommending to VDOT a traffic management option for the construction of the Sugarland Run bridge upgrade.	Project advertisement 2021	December 2018	0%
Town of Leesburg UPC 89890	**Edwards Ferry Road and Route 15 Leesburg Bypass Grade Separated Interchange (Continuation)** - The project consists of development of a new grade-separated interchange on Edwards Ferry Road at the Route 15 Leesburg Bypass. The existing signalized at-grade intersection at this location is heavily congested.	$1,000,000 (FY2015-16)	Design	Interchange Justification Report Traffic Framework document was approved on 7/14/16. Public Involvement Meeting was held on March 2 where three alternative proposals were presented. The project will advance the preferred alternative.	Design approval expected in spring 2018.	Design approval expected in spring 2018.	50%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Town of Leesburg UPC 106573	**Route 7 East Market Street and Battlefield Parkway Interchange -** Improve safety and pedestrian/vehicle flow by building a grade-separated interchange which will allow Route 7 to become a limited-access freeway through the Town of Leesburg	$13,000,000 (FY2015-16)	Design	Traffic analysis including development of the existing conditions VISSIM model, additional travel time runs and queuing observations, and responding to IJR framework document comments are underway. The IJR framework document has been approved. Traffic volumes have been forecasted for the design year, 2040, and have been approved, Continuing to develop alternative interchange configurations. A public information meeting is scheduled for May 16, 2017.	2020	2018	23.1%
	Route 7 East Market Street and Battlefield Parkway Interchange (continuation) - Improve safety and pedestrian/vehicle flow by building a grade-separated interchange which will allow Route 7 to become a limited-access freeway through the Town of Leesburg.	$20,000,000 (FY2017)	Construction	Continuation of the FY2015-16 project above.	2020	2020	0%
Northern Virginia Transportation Commission	**Transit Alternatives Analysis (Route 7 Corridor Fairfax County/Falls Church/Arlington County/Alexandria)** – Corridor study to study transit options on Route 7.	$838,000 (FY2014)	Planning for Phase 2 of Study	Commission approved the recommendations at the July 7, 2016 meeting. Final report submitted.	Final report submitted in February 2017. Final payment being processed.	Final report submitted in February 2017. Final payment being processed.	94.6%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Potomac and Rappahannock Transportation Commission	**Western Maintenance Facility** – New facility will alleviate overcrowding at PRTC's Transit Center (which was designed to accommodate 100 buses, but is currently home to over 166 buses) and to permit service expansion as envisioned and adopted in PRTC's long range plan.	$16,500,000 (FY2015-16)	Construction Testing Inspection Oversight	Building Permit was approved by Prince William County on 2/5/2016. Building Permit has been extended through December 2016. Start of construction expected in Summer 2017.	Spring 2019	Spring 2019	0%
Virginia Department of Transportation	**Route 28 Hot Spot Improvements (Loudoun Segment)/Area 1** – Loudoun segment of Route 28 improvements from Sterling Blvd. to the Dulles Toll Road.	$12,400,000 (FY2014)	Construction Contract Admin.	ROW acquisition, storm water installation, bio-retention pond and swale, clearing, and grubbing are complete. Completed shoulder between RT 606 and Innovation Ave. Installed three high mast lights at Sterling Blvd. interchange. Completed surface asphalt from Waxpool Road to Dulles Toll Road; Installed guardrail and permanent pavement markings from Waxpool Road to Innovation Avenue. Installed ROW fence between Sterling Blvd. and Route 606. Completed topsoil placement for SWM Pond 46.	Summer 2017	Summer 2017	95.4%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Virginia Department of Transportation	**Route 28 Widening Dulles Toll Road to Route 50/Area 2** – Widen Route 28 from 3 to 4 lanes Southbound from Dulles Toll Road to Route 50.	$20,000,000 (FY2014)	Construction Contract Admin.	ROW acquisition and clearing within existing ROW are complete. Construction of double box culvert extension south of Dulles Toll Road is complete. Placed aggregate subbase and asphalt as well as graded shoulder stone in median between Dulles Toll Road and Frying Pan Road. Placed intermediate and surface asphalt in median between Dulles Toll Road and McLearen Road. Light poles are being installed. Roadway work going on. Completed three high mast light foundations; mass excavation on Southbound 28 between Air and Space Parkway and Route 50; shoulder foundation for Overhead Sign #2. Started CTA and base asphalt placement Air and Space Parkway and Route 50.	Summer 2017	Summer 2017	77.9%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Virginia Department of Transportation	**Route 28 Widening McLearen Road to Dulles Toll Road/Area 3** – Widen Route 28 from 3 to 4 lanes Northbound from McLearen Road to Dulles Toll Road.	$11,100,000 (FY2014)	Construction Contract Admin.	Completed surface asphalt from Frying Pan Road to Dulles Toll Road. Performed cut to fill operations at Frying Pan Road interchange. Started surface asphalt placement between McLearen Road and Frying Pan Road. Installed Overhead Signs #5 and #10. Placed and graded roadway subbase and shoulder stone at Frying Pan Road Interchange. Installed two high mast lights at Frying Pan Road interchange. Performed undercut and fine grading on northbound 28 north of the McLearen Road interchange. Completed deck grooving and joint seal installation at Horsepen Run Bridge.	Summer 2017	Summer 2017	91.2%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Virginia Railway Express	**Alexandria Station Tunnel** – Includes a pedestrian tunnel connection between Alexandria Union Station/VRE Station and the King Street Metrorail Station, as well as the improvement of the VRE station east side platform to enable it to service trains on both sides.	$1,300,000 (FY2014)	Construction	Project cost increase has required a search for new sources of funds for construction. Notified of successful Smart Scale grant application. Will know in May 2017 for use in construction. Will use NVTA funds to advance design to construction plans and begin construction. Considering CM/GC (CMAR) project delivery to get designer and construction contractor on board at same time. Schedule will be revised when notification of Smart Scale Award is official.	Fall 2020	June 2019	0%
Virginia Railway Express	**Gainesville to Haymarket Extension** – Corridor study and preliminary engineering development of an 11-mile VRE extension from Manassas to Gainesville-Haymarket.	$1,500,000 (FY2014)	Planning Project Development Conceptual Design	Phase I, planning and alternatives analyses, complete. VRE Operations Board recommended advancing Phase II of study, NEPA/PE, for an expanded Broad Run terminus in support of VRE Manassas Line expansion. Phase II initiation is pending DRPT NTP for REF funds for study and amendment of VRE consultant contract, estimated for July 2017.	Winter 2017-18	Winter 2017-18	38.6%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Virginia Railway Express	**Lorton Station Second Platform** – Includes final design and construction of a 650 foot second platform at the VRE Lorton Station in Fairfax County to accommodate trains up to 8 cars in length.	$7,900,000 (FY2014)	Final Design Construction	NTP for PE as part of Penta Platform Effort issued 8/4/2016 effective 8/5/2016. 24 month anticipated Preliminary Engineering and NEPA Schedule. 12 month Final Design Schedule. Some concurrency possible. Construction is anticipated in summer 2018. Survey, Environmental Assessment and geotechnical field work were accomplished over last couple of months with flagging support from CSX. Conceptual design alternatives are being developed and analyzed while environmental documentation is being prepared.	Summer 2020	June 2019	0%
Virginia Railway Express	**Manassas Park Station Parking Expansion** - Planning and engineering investigations to expand parking and pedestrian connections at the VRE Manassas Park station	$500,000 (FY2015-16)	Planning & Engineering Studies	Contract was awarded at June 2016 VRE Board Meeting. NTP has been issued. The City Council endorsed VRE's recommended site on November 15, 2016. The technical report for the Alternatives Analysis task will be finalized in May 2017. VRE Board awarded Optional Task A for PE and NEPA on January 27, 2017. Site survey was conducted in Mar/Apr 2017. PE and NEPA analysis has been initiated.	Fall 2017	Summer 2017	26.9%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
	Manassas Park Station Parking Expansion (continuation) - Planning and engineering investigations to expand parking and pedestrian connections at the VRE Manassas Park station.	$2,000,000 (FY2017)	Design, PE, Environmental	Continuation of the FY2015-16 project above.	Construction completion in July 2020	Fall 2018	0%
Virginia Railway Express	**Franconia-Springfield Platform Expansion** - Design and construction to extend the existing north-side (Metro station side) platform by up to 550 feet to allow the north-side platform at the station to be usable by VRE trains on a regular basis. It also includes design and construction of modifications to the south-side platform at the station.	$13,000,000 (FY2015-16)	Design Construction	NTP for PE as part of Penta Platform Effort issued 8/4/2016 effective 8/5/2016. 24 month anticipated Preliminary Engineering and NEPA Schedule. 12 month Final Design Schedule. Some concurrency possible. Construction is anticipated in summer 2018. Survey, Environmental Assessment, and geotechnical field work were accomplished over last couple of months with flagging support from CSX. Conceptual design alternatives are being developed and analyzed while environmental documentation is being prepared.	Summer 2020	Summer 2021	0%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Virginia Railway Express	**Rippon Station Expansion and Second Platform** - Includes NEPA, design and construction to modify the existing platform and add a second platform at the station to service trains up to 8 cars long. An elevator will also be constructed to get passengers to the new platform.	$10,000,000 (FY2015-16)	NEPA Design Construction	NTP for PE as part of Penta Platform Effort issued 8/4/2016 effective 8/5/2016. 24 month anticipated Preliminary Engineering and NEPA Schedule. 12 month Final Design Schedule. Some concurrency possible. Construction is anticipated in summer 2018. Survey, Environmental Assessment, and Geotechnical field work were accomplished over last couple of months with flagging support from CSX. Conceptual design alternatives are being developed and analyzed, while environmental documentation is being prepared.	Summer 2020	March 2019	0%
Virginia Railway Express	**Slaters Lane Crossover** - Includes the design and construction of a rail crossover and related signal equipment near Slaters Lane, north of the VRE Alexandria station. It will enable trains to move between all 3 tracks and makes the east side (Metro side) platform at the VRE Alexandria station usable from both sides.	$7,000,000 (FY2015-16)	Design Construction	Final design by CSXT began in July 2016 and recent information indicates that project is on hold pending CSX reorganization. Construction schedule pending final design. All work to be done by CSXT forces.	Summer 2017	Summer 2017	0%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Virginia Railway Express	**Crystal City Platform Extension Study** - Includes planning and engineering investigations to evaluate the options for expansion of the VRE Crystal City station that will alleviate existing crowding, improve multimodal connections, and accommodate future service expansion and bi-directional service. The project includes development of a NEPA checklist.	$400,000 (FY2015-16)	Planning Engineering Studies	VRE Operations Board authorized RFP for consultant services in February 2016. NTP awarded in December 2016. Public outreach to solicit feedback on the proposed options and the evaluation criteria conducted in Mar/Apr 2017.	Fall 2017	December 2017	0%
Washington Metropolitan Transit Authority	**8-Car Traction Upgrades** – Begins the process of upgrading traction power along the Orange Line by incrementally improving the power system to increase power supply capacity to support the future expanded use of eight car trains.	$4,978,685 (FY2014)	Construction Contract Admin.	Invitation for Bid (IFB) was released 10/20/2015, bids were received 12/9/2015. Procurement determined the bid package must be resolicited. Contract was re-advertised on 3/4/2016 and second round of bids were received 3/18/2016. Contract NTP issued on 10/26/2016. Site Surveys have been conducted for the NVTA locations, Shop drawings have been approved and the manufacturing phase is underway. Installation is scheduled to commence mid-June 2017.	Projected Contract Close-out March 2018	December 2017	3.5%

Jurisdiction/ Agency	Project Description	NVTA Funds	Phase(s) Funded	Status	Completion (Project)	Completion (NVTA funded Phases)	Percentage Reimbursed as of 4/28/17
Washington Metropolitan Transit Authority	**Blue Line 8-Car Traction Upgrades** – Begins the process of upgrading traction power along the Blue Line by incrementally improving the power system to increase power supply capacity to support the future expanded use of eight car trains.	$17,443,951 (FY2017)	Engineering, Construction, Contract Admin.		March 2019	March 2019	0%

Correspondence Section

COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION
4975 Alliance Drive
Fairfax, VA 22030

CHARLES A. KILPATRICK, P.E.
COMMISSIONER

April 10, 2017

Dear Official:

Subject: Megaproject Briefing and Public Meeting for Six-Year Improvement Program

The Commonwealth Transportation Board (CTB) will conduct a public meeting in your area to give citizens the opportunity to provide comments on projects and programs to be included in the Fiscal Year 2018-2023 Six-Year Improvement Program (FY2018-2023 SYIP), including highway, rail and public transportation initiatives. These projects and programs represent important improvements to address safety, congestion and preservation of Virginia's transportation network.

Your input is also welcomed on the transportation projects scored through the SMART SCALE prioritization process. This process helps determine critical transportation needs through a fair and objective analysis. The SMART SCALE Policy Guide describing the process for the prioritization process is available and can be found at **www.vasmartscale.org**.

The public meeting for citizens in our region will start at 6 p.m. on Wednesday, May 3, 2017 at the District Office, 4975 Alliance Drive, Fairfax, VA 23219. Formal public comment on projects proposed to be included in the draft SYIP and projects that have been scored through the new prioritization process will be accepted at the meeting. Written comments may also be submitted during the meeting, or they may be mailed or emailed afterwards and accepted through May 16, 2017.

Prior to the Norther Virginia District's Six-Year Plan meeting, Secretary Aubrey Layne invites you to attend a briefing starting at 4:30 p.m. to get updates on Northern Virginia's Megaprojects, including the Transform I-66 Inside and Outside the Beltway Projects, and I-395/I-95 Express Lanes Extension Projects. If you plan to attend please RSVP by Friday, April 28 to Michelle Holland at **Michelle.Holland@vdot.virginia.gov** and 703-259-3378.

If you cannot attend the meeting, you may send your comments to Infrastructure Investment Director at 1401 E. Broad Street, Richmond, VA 23219 or email them to **Six-YearProgram@vdot.virginia.gov**. For transit and public transportation you may send your comments **DRPTPR@drpt.virginia.gov**, Public Information Office, Virginia Department of Rail and Public Transportation 600 East Main Street, Suite 2102, Richmond VA, 23219.

Comments on the Draft SYIP and candidate projects will be received until May 16, 2017. For more information, please visit **www.vasmartscale.org** or **www.virginiadot.org/syip.**

I truly appreciate your attendance at this session. If you have any questions prior to the meeting, please contact Maria Sinner 703-259-2342.

Sincerely,

Helen L. Cuervo, P.E.
District Administrator

Enclosure: Public Meetings

VDOT Virginia Department of Transportation | DRPT Virginia Department of Rail and Public Transportation

Public Hearings

Funding the Right Transportation Projects

You are invited to share comments on transportation projects that have been scored and recommended for funding through the SMART SCALE prioritization process based on an objective and data-driven analysis. Additionally, pursuant to §33.2-202, comments will be accepted for new projects valued in excess of $25 million. The Commonwealth Transportation Board will take your comments into consideration as it develops the Six-Year Improvement Program (FY 2018-2023 SYIP). The program allocates public funds to highway, road, bridge, rail, bicycle, pedestrian and public transportation projects. All federally eligible projects in the SYIP will be included in the Statewide Transportation Improvement Program to document how Virginia will obligate its federal funds.

You can can review the list of scored projects as well as those recommended for funding at www.vasmartscale.org.

Public meetings begin at 5:30 p.m. in each of the locations except as noted below:
A formal comment period will be held at these meetings.

Tuesday, March 21, 2017 Salem - Holiday Inn Valley View 3315 Ordway Drive Roanoke, VA 24017	**Wednesday, March 29, 2017** Hampton Roads – Hampton Roads Transportation Planning Organization, 723 Woodlake Drive Chesapeake, VA 23320	**Monday, April 10, 2017** Fredericksburg – Germanna Community College Center for Workforce & Community Education, 10000 Germanna Point Drive Fredericksburg, VA 22408
Thursday, April 13, 2017 Bristol - Southwest Virginia Higher Education Center One Partnership Cir, Abingdon, VA 24210	**Thursday, April 20, 2017** Lynchburg - Lynchburg District Office Ramey Memorial Auditorium 4303 Campbell Avenue, Route 501 Lynchburg, VA 24501	**Tuesday, April 25, 2017** Culpeper - District Office, Auditorium 1601 Orange Road Culpeper, VA 22701
Thursday, April 27, 2017 Staunton – Blue Ridge Community College, Plecker Center for Continuing Education, One College Lane Weyers Cave, VA 24486	**Monday, May 1, 2017** Richmond - District Office Auditorium 2430 Pine Forest Drive Colonial Heights, VA 23834	**Wednesday, May 3, 2017** Northern Virginia - District Office, Potomac Room 4975 Alliance Drive Fairfax, VA 22030 ***Meeting starts at 6 p.m.**

You can also submit your comments by email or mail by May 16, 2017:

For roads and highways: Six-YearProgram@VDOT.Virginia.gov, or Infrastructure Investment Director, Virginia Department of Transportation 1401 East Broad St., Richmond, VA 23219.

For rail and public transportation: DRPTPR@drpt.virginia.gov , Public Information Office, Virginia Department of Rail and Public Transportation 600 East Main Street, Suite 2102, Richmond VA, 23219.

The Commonwealth is committed to ensuring that no person is excluded from participation in, or denied the benefits of its services on the basis of race, color or national origin, as protected by Title VI of the Civil Rights Act of 1964. If you need further information on these policies or special assistance for persons with disabilities or limited English proficiency, please contact the Virginia Department of Transportation's Title VI Compliance Officer at 804-786-2730 or the Virginia Department of Rail and Public Transportation 's Title VI Compliance Officer at 804-786-4440 (TTY users call 711).

Grow Smart Planet
Sustainable "Smart Growth" for the 21st Century

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April 30, 2017

Delegate David Bulova
Virginia House of Representatives
9900 Main Street, Plaza 102
Fairfax, VA 22031

RE: Finance Metro/VRE Extensions to Haymarket without Raising Taxes

Dear Delegate Bulova,

We met in Fairfax in April 2016 to discuss how Northern Virginia could finance extensions of rail transit lines with high capital costs **locally** - ***without raising taxes or waiting years for scarce federal funds.*** The attached documents expand on these ideas.

I am confident that extending the Metro in the I-66 corridor 20 miles west to Haymarket would attract at least ***$2 billion per mile*** in new transit-oriented-development (TOD) near it, comparable to results already achieved for the Metro Silver Line to Tysons Corner and Reston. At ***existing tax rates*** for Fairfax County, in 30 years this would yield:

> ***$7.66 billion per mile*** from new office/commercial areas
> ***$2.5 billion per mile*** from new residential areas

The attached spreadsheet shows how these estimates were calculated. These figures are ***7 to 22 times the $350 million per mile*** budget we would recommend for new elevated rapid transit like those recently built. Rapid transit lines built on grade would cost less (about ***$250 million per mile*** in 2020 dollars). Revenues would be lower in Prince William County because median incomes are somewhat lower than in Fairfax, but still ***more than enough to pay for the Metro and VRE extensions to Haymarket in just a few years.***

We recommend a predesign budget of $30-50 million per mile for the 11-mile extension of VRE from Manassas to Haymarket now entering design development. VRE now attracts about 215 passengers per mile. This extension could attract more riders approaching Gainesville on I-66 and US. 29. Both extensions would make sense because they would reduce traffic congestion on I-66 and give riders two ways to reach employment centers in Arlington, Alexandria, and DC.

Cities planning new transit lines today must face the fact that federal funds now rarely pay more than 25% of total costs. Honolulu citizens and visitors are paying 75% of the $6.7+ billion cost of a 20-mile long elevated rapid transit line with a one-half percent excise tax on all goods and services estimated to yield $4.8 billion in 20 years. FTA funds: $1.55 billion. The federal budget recently proposed includes no funds for transit lines that do not already have FTA funding agreements. The clear message: ***cities must now use local/regional funds.*** This is why a completely new funding approach is now needed for new transit projects.

The goals attachment explains how regions can invest in multi-billion-dollar transit systems ***without using funds needed for other projects and services public officials often consider a higher priority.*** It also explains how future revenues and savings from compact growth near the new lines actually make it easier to fund those line items and consider ***reducing tax rates.***

When we met last year, you asked for inputs on legislative language Virginia might need to approve to help jurisdictions seeking to adopt similar plans. My guess is that the state may now restrict the ability of local jurisdictions to issue bonds in multi-billion-dollar amounts without a guaranteed revenue stream. My recommendation: the state should require local jurisdictions to develop clearly-defined plans and zoning incentives for higher-density development near the new transit lines as "collateral" before bonds could be issued. These plans should be developed by planning organizations at regional level and reviewed by financial "experts" to refine estimates of new tax revenues like those in the attached spreadsheet.

My book documents how much development comparable transit lines have attracted, including several DC region examples, to help local jurisdictions make a strong case for funding new lines.

If I get a positive response to these ideas from you and the others copied below, I plan to send additional copies of the attachments and a similar letter to Metro, MWCOG, VDOT, and other organizations and individuals you might suggest. ***Please let me know what you think!***

Sincerely,

Michael Burrill

Michael Burrill AICP
Community and Transportation Planner
Grow Smart Planet

Atchs:

Grow Smart Planet Goals
Spreadsheet, Finance "Low Carbon" Transportation without Raising Taxes, Northern Virginia

Cc: The Honorable Sharon Bulova, Chair, Fairfax County Board of Supervisors
The Honorable Martin Nohe, Chair, Northern Virginia Transportation Authority (NVTA)
Joseph Swartz, Virginia Railway Express GHX Comments

Finance "Low-Carbon" Transportation Without Raising Taxes
Northern Virginia

By 2013, 65 transit lines had attracted $100 million+ per mile in Transit-Oriented Development (TOD):

38 Rapid Transit/Subway Lines	**$100 million to $5.9 billion per mile**
10 Modern Streetcar Lines	**$118 million to $1.2 billion per mile**
13 Light Rail Lines	**$138 million to $850 million per mile**
3 Bus Rapid Transit (BRT) Lines	**$457 million to $1 billion per mile**
1 Commuter Rail Line	**$127 million per mile**

Source: Sustainable Transportation and Development, Chapter 6 and Table 8, Michael Burrill, 2014.

Alternative Building Functions and Primary Building Users for $100 Million in TOD:

Building Functions	Cost	Gross Square Feet (GSF)			Per Dwelling Unit		Total Users	
	Per GSF	Total	Per Unit	Per Adult	Adults	Children	Adults	Children
Offices/Commercial	$275	363,636		200			1,818	
408 Apartment Units	$175	571,429	1400		1.5	0.2	612	82
250 Townhouse Units	$200	500,000	2000		2	0.6	500	150
178 Single-Family Units	$225	444,444	2500		2	1	356	178

Sources: R. S. Means 2017 Square Foot Construction Costs (Cost Per GSF)
Planning Factors per GSF/Dwelling Unit: Michael Burrill

Projected Property Tax Revenues in Millions from $2 Billion TOD:

Building Functions	Tax	Property Taxes	
	Rate	Per Yr	30 Yrs
All Building Types	0.89%	17.8	$534

Projected Income Tax Revenues in Millions from $2 Billion TOD:

Building Functions	Tax	Taxable	Income Tax Rates		Annual Taxes		30 Years of Taxes	
	Payers	Income	State	Local	State	Local	State	Local
Offices/Commercial	36,360	$113,575	5.75%	0.0%	$237.5	$0.0	$7,124	$0
Residential Mix	8,000	$113,575	5.75%	0.0%	$52.2	$0.0	$1,567	$0

Projected Sales and Excise Taxes in Millions from $2 Billion TOD:

Building Functions	Tax	Taxable	Sales Tax Rates		Annual Taxes		30 Years of Taxes	
	Payers	Items	State	Local	State	Local	State	Local
Residential Mix	8,000	$28,394	4.3%	1.7%	9.8	3.9	293	116

30 Years of Tax Revenues in Millions from $2 Billion TOD:

Revenue Sources	Office/Commercial				Residential Mix			
	State	County	City	Totals	State	County	City	Totals
Property Taxes		$534				$534		
Income Taxes	$7,124				$1,567			
Sales and Excise Taxes					$293	$116		
Totals	**$7,124**	**$534**	**$0**	**$7,658**	**$1,860**	**$650**	**$0**	**$2,510**

Total revenues far exceed the capital cost of "low carbon" public transportation per mile (all modes).

Source of Tax Rates: www. 2017 Tax-Rates.Org

Grow Smart Planet
Sustainable "Smart Growth" for the 21st Century

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The goals of ***Grow Smart Planet*** emerged from the book below. It describes how to plan ***sustainable*** transportation and development to ***preserve resources for future generations.*** It encourages people to live close to work, school, shops, and fun. It describes transportation modes that reduce pollution and use of fossil fuels and operate with lower tax subsidies to achieve both ***environmental*** and ***fiscal sustainability***. It compares driving, buses, ferries, and more than 600 public transit lines: speeds, ridership, capital costs, and farebox recovery rates. It documents development each mode has attracted. It recommends using ***local and regional funds*** to get "low carbon" transportation systems built much faster - ***without raising taxes*** – and explains how.

Sustainable Transportation and Development
Planning/Funding/Results

Michael Burrill AICP, NCARB
Architect, Community and Transportation Planner

Cities seeking funds for new transit lines now spend millions and years developing detailed plans just to seek scarce federal funds that rarely pay more than 25% of capital costs. While they do, costs keep rising. It makes more sense for regions to pay the entire cost of new lines or complete regional transit systems - ***locally*** - and use tax revenues from new development near them to pay off bonds quickly. Compact growth with lively public spaces centered on transit enhances the quality of life ***and attracts new businesses and taxpayers.*** It reduces costs for land, construction, schools, commuting, and public services and allows regions to ***reduce tax rates.*** Most important, it also helps save human life on our planet by ***reducing greenhouse gas emissions.***

Live Close to Work, School, Shops and Fun

We do not have to spend billions to encourage people to reduce their carbon footprints by living close to work, school, shops, and fun. All over the world, you can find cities and towns where people walk, use bikes, and take transit often. Countries like ours invested billions for high-speed highways instead and adopted policies that encouraged people to buy single family homes in outer suburbs. Commutes that once took less than an hour at speed limits now take far longer. Many Americans now want to live closer to places they go often, including jobs in suburbs.

It remains possible to live in low-rise housing with short commutes and a low carbon footprint. I walked or rode a bike to excellent schools or work ***almost half of 62 years***. For ten years, my bus rides averaged 30 minutes. My carpools and solo drives to work were 2-10 miles long and averaged 20-22 minutes. I lived happily without a car for two years in a townhouse that is only a five minute walk away from shops, food, movies, and buses to the regional DC Metrorail system.

My dad taught me to live close to jobs and schools, even in cities with only bus systems. ***Cincinnati and San Antonio are the nation's two largest cities without a regional rail transit system.*** In Cincinnati, we moved from a new home ten miles from work to an older home only 1.7 miles away. ***I rode a bike to work for ten years and cut my driving in half.*** It is no accident my San Antonio apartment was only two miles from work.

Even with a "full court press" to convince more Americans they should simply move closer to their most frequent destinations, ***we may be unable to reduce emissions of greenhouse gases fast enough to stop global warming.*** Our political climate does not yet support taxes on fossil fuels or regulations that restrict their use. If worldwide efforts to reduce population growth are unsuccessful, our small planet will need to support ***two billion*** more people by 2050.

Grow Smart Planet's response: ***create strong economic incentives that encourage more people to voluntarily reduce carbon footprints – by saving them money, creating millions of jobs, and reducing tax rates.*** We do not need more low-rise housing in suburbs 30+ miles from jobs.

Many regions already have attractive pedestrian and bike-oriented neighborhoods with frequent transit service and great schools – in downtowns and suburbs. You do not have to build high-rise buildings everywhere to do this. Most recent Transit-Oriented-Development (TOD) includes a mix of 3-5 story office-retail buildings and housing densities averaging 10-20 dwelling units per acre. This can generate enough riders to support transit. In the 1950s, we lived in a single family home three blocks from Arlington's Columbia Pike. Frequent buses to the Pentagon, downtown, and the DC Metrorail system now serve more bus riders than anywhere else in Virginia.


Mixed-uses and older townhouses near Columbia Pike, Arlington, VA

To achieve these goals, regions must first make an informed choice on transportation modes, reach consensus on routes, and develop plans and incentives to attract TOD near the lines.

Sustainable Driving

Transit advocates must concede that efforts to encourage people to take public transit, ride a bike, or walk often fall on deaf ears. A 2009 Federal Highway Administration survey cited in Chapter 3 of Sustainable Transportation and Development found that 70% of the oil consumed in the U. S. was for transportation, mostly in single-occupant vehicles used for ***82% of all trips.*** More than half of Americans lived in areas with no or very limited transit service. Even in regions with robust, multi-mode regional transit systems, only 10-25% took transit to work.

To reduce use of fossil fuels, we must make driving more sustainable. The strategies below are obvious, but they will all help:

- Increase fuel efficiency
- Increase vehicle occupancy
- Use alternative fuels
- Drive fewer miles
- Design durable vehicles, streets, and highways

The book explores ways to achieve these goals. It also estimates the full cost of driving to allow readers to compare it to the cost of taking transit. It urges raising fuel taxes about 60 cents per gallon to eliminate the funding shortfall to keep roads and bridges in good repair. ***If we do this and fund transit systems locally, it would be easier to convince people to take transit to save thousands of dollars - even if they pay fares high enough to cover all operating costs.***

Walking and Biking

To encourage more people to walk or ride bicycles, we need to redesign suburbs with a compact mix of land uses in close proximity: residential, offices, retail, institutional, sports, recreation, entertainment. Biking is a mainstream mode in many countries and can become one in North America as well. Why? It is low-cost, energy efficient, almost zero pollution – and fun! It attracts people of all ages (I started biking uphill to work at age 50). ***The mode share for biking in five large cities in Europe and Asia is 20-50+%.*** Mode shares in the five most progressive cities and towns here ranged from only 4% to 15.5%. All of them have college campuses.

We also need to make biking in urban and suburban areas safer. ***Protected bike lanes cost far less than other transportation upgrades.*** You should budget about $100,000 per mile for a two-way bike lane with protective barriers like this one on 15th Street in Washington, D.C.

2-way bike lane

Trucks unload and cars park near lane

To encourage biking, more funding for dedicated, protected bike lanes is clearly needed.

Transportation Modes, Performance, and Costs

Chapter 5 of Sustainable Transportation and Development summarizes the performance and costs of more than 600 public transportation lines. Together with Table 3, it defines each mode with photos for readers unfamiliar with transit terms and the wide range of mode choices.

- Table 3 summarizes mode performance, capital costs, and farebox recovery rates
- Table 4 provides performance and capital cost information for each line and mode
- Table 5 provides the construction inflation factors used to convert actual costs into 2011 dollars and inflation factors readers can use to estimate future costs (2012 to 2025)
- Table 6 provides performance, cost and TOD information for each line by location
- Table 7 summarizes TOD in New York City (1979-2016)

Cities that did not seek federal funds for rail transit lines when costs were low (and the federal share of capital costs ranged from 50-80%) are now faced with much higher capital costs per mile. Light rail lines that cost only $7-10 million per mile in the early 1980s now cost about $125 million per mile if they are built on-grade and are bid by 2020. Budgets for elevated lines and subways should be much higher. ***Our budget recommendations for all modes on the next page estimate costs per mile for on-grade, elevated, and underground lines, which vary widely.***

Most planners and public officials presented with today's high capital costs for high-capacity rail transit systems have sticker shock and consider only light-capacity systems with much lower ***capital costs per mile***: buses, Bus Rapid Transit (BRT), commuter rail, and modern streetcars. ***This is a big mistake.*** Planners should instead compare ***boardings per mile*** for each mode (see page 6). Chapter 8 uses boardings to calculate more useful ***capital costs per rider*** (2020 dollars):

Mode	Lines in Operation	Lines in Planning
Bus Rapid Transit	$ 6,706	$ 30,989
Streetcars	$ 18,285	$ 77,026
Monorails	$ 36,808	N/A
Rapid Transit	$ 38,182	$133,534
Commuter Rail	$ 63,158	$185,874
Light Rail	$ 84,550	$115,811
Automated Guideway	$224,887	$341,703

Costs for planned rapid transit lines included high-cost subways in New York; costs for planned light rail lines included lines in two cities with bridges and tunnels. The most surprising result: ***high ridership made monorails and rapid transit more cost-effective than commuter and light rail lines. They were built in corridors with high levels of development.***

Planners should also compare ***farebox recovery rates*** (the share of costs paid by transit riders):

Mode	Range	2011 Average
Bus riders	**8-49%**	**23-36%**
Rapid transit riders	**13-77%**	**66%**
Commuter rail riders	**12-62%**	**52%**
Light rail/streetcar riders	**2-57%**	**30-36%**
Vanpool riders	**53-98%**	**63%**

Average Capital Costs of "Low Carbon" Transportation
Million Dollars per Mile in 2020 Dollars

Transportation Modes	Code	Operating as of 2013		Planned as of 2013		Pre-design Budgets for New Lines		
		# of Lines	Million $	# of Lines	Million $	On-Grade	Elevated	Underground
Dedicated bike lanes	BK	1	**$0.1**	N/A	$0	**$0.15**	N/A	N/A
Bus Rapid Transit	BRT	49	**$16**	22	**$26**	**$30**	N/A	N/A
Electric Trolleybus	TB	45	N/A	0	N/A	**$45**	N/A	N/A
Rapid Transit	RT	76	**$279**	7	**$532**	**$250**	**$350**	**$1,700**
Commuter Rail	CR	94	**$12**	11	**$50**	**$50**	**$350**	N/A
Streetcar Rail	SR	33	**$29**	23	**$68**	**$70**	N/A	N/A
Light Rail Transit	LR	62	**$110**	48	**$230**	**$125**	**$350**	**$1,100**
Automated Guideway	AG	6	**$347**	3	**$313**	N/A	**$350**	N/A
Monorail	MR	6	**$155**	0	$0	N/A	**$350**	N/A
Aerial Tramway	AT	2	**$133**	0	$0	N/A	**$150**	N/A
Cable Car	CC	3	**$45**	0	$0	**$100**	N/A	N/A
Inclined Plane	IP	4	N/A	0	$0	**$100**	N/A	N/A
Ferryboat	FB	3	**$51**	0	$0	**$80**	N/A	N/A

NOTES:

1. **Source: Sustainable Transportaton and Development, Tables 3-5, Michael Burrill, 2014.**
2. **Actual costs for most lines were posted on agency websites (Tables 4, 6-9).**
   Actual costs per mile were adjusted to Jan 2011 dollars using R.S. Means indexes in Table 5.
   Future costs per mile were estimated based on 5% annual inflation using factor (1.551) in Table 5.
3. **Planned Subways in NYC had very deep tunnels and costs estimated at $1.737 billion per mile (2011 $)**
   Subways built close to ground level allow "cut and cover" construction at much lower costs.
   Elevated RT lines in Honolulu, Vancouver, and Virginia had costs estimated at $219 million per mile (2011 $).
   Current technology for RT lines has power near rails, requiring safety barriers that add costs.
   Future technology may allow RT lines to get power from overhead lines, reducing costs per mile.
4. **Planned light rail lines in two cities included bridges and tunnels, increasing average costs per mile.**
5. **Higher capital costs for elevated lines and subways can be offset by automated operation, reducing costs.**
   They also offer the potential of high levels of transit-oriented develoment (TOD) and tax revenues.

Performance of "Low Carbon" Transportation Modes

Transit Lines in Operation in the United States in 2013

Transportation Modes	% Travel	Miles Per Trip	Speed (mph) Range	Speed (mph) Avg	Boardings Per Mile	Farebox Recovery Range	Farebox Recovery 2011 Avg
Bus (MB)	38.9%	4.0	N/A	12.9	72 - 504	8-49%	27.7%
Bus Rapid Transit (BRT)		N/A	8-29	N/A	4,752	16-49%	22.9%
Electric Trolleybus (TB)	0.3%	1.6	7-17	7.1	1,260	18-43%	36.2%
Rapid Transit (RT)	30.4%	4.6	17-41	20.2	14,614	13-77%	66.0%
Commuter Rail (CR)	20.1%	23.4	23-66	32.9	379	12-62%	52.1%
Hybrid Rail (YR)			25-39			3-40%	10.8%
Streetcar Rail (SR)	4.0%	4.8	6-12	15.0	3,196	2-28%	35.6%
Light Rail Transit (LR)			9-38		2,602	12-57%	30.0%
Automated Guideway (AG)	3.5%	N/A	9-20	N/A	3,085	0-8%	10.0%
Monorail (MR)		N/A	16-30	N/A	8,422	114%	
Aerial Tramway (AT)		N/A	12-14	N/A	7,062	N/A	N/A
Cable Car (CC)		N/A	6-7	N/A	4,275	44.7%	44.7%
Inclined Plane (IP)		N/A	4-7	N/A	3,696	29-690%	152.0%
Ferryboat (FB)		6.3	12-16	9.6	3,179	0-143%	23.9%
Vanpool (VP)		34.8	N/A	41.1	N/A	53-98%	63.0%
Demand Response (DR/DT)	2.8%	7.9	N/A	14.9	66	N/A	7.3-10%
Multi-Mode Systems	N/A	N/A	6-55	N/A	N/A	0-102%	26.5%

Comparison to other Countries/Years

Transportation Modes Locations	Years	Miles Per Trip	Speed (mph) Range	Speed (mph) Avg	Boardings Per Mile	Farebox Recovery Range	Farebox Recovery Avg
59 Streetcar/Tram lines, Europe	2013	N/A	8-19	12	7,936	24%	24.0%
430 Lines in 57 US Cities	2010-11	5.3	7-66	25	N/A	0-166%	36.6%
32 Lines in 6 Canadian Cities	2010	N/A	18-35	N/A	N/A		52.7%

NOTES:

1. Source: Sustainable Transportation and Development, Tables 3-4, 10-11, Michael Burrill, 2014.
2. % of Travel, Trip Miles, Average Speeds cited in APTA 2012 Public Transportation Fact Book.
3. Speeds include stops. Range of speeds are for all lines studied in Table 4.
4. Boardings for most systems were cited in APTA Transit Ridership Report, 2nd Qtr 2013. Website sources were used for other lines. Boardings are "unlinked trips." Riders who transfer from one vehicle to another are counted twice. Total riders is lower.
5. Farebox Recovery rates are the share of operating costs paid by transit riders. Systems with high farebox recovery rates reduce operating costs paid by taxpayers.

Corridor Planning and Mode Selection

Chapter 8 of Sustainable Planning and Development describes why it has become so difficult to expand transportation choices in the United States. Planners, public officials, and citizens must work together to consider the costs and benefits of competing transit modes, alignments, and complex planning issues for related development. It often now takes ***decades*** to study transit choices in several corridors, select transit modes, and get voters and local, state and federal agencies to fund them – before detailed design and construction can begin. The process encourages regions to select different modes in each corridor – forcing too many transfers.

Cincinnati, for example, began in-depth multi-million dollar studies of four corridors in 1993. In 2002, officials asked voters in only one county to fund most of a regional light rail and expanded bus system that would serve 2 million people in seven counties. The referendum failed. It took another decade to obtain $148 million for a short streetcar line downtown. After 24 years of planning, a diesel-powered light rail line now estimated at $22 million per mile is still unfunded. ***Cincinnati once had 222 miles of streetcar lines that were built much faster with local funds.***

The bold decision to build ***41,000 miles*** of interstate highways with ***90% federal funding*** in the 1950's also transformed American life much faster than the federal transit planning process allows today. ***The mode choice was already made.*** Most people could see the benefits of driving faster on safer highways to new suburbs or across the country. No one had to vote for local taxes to pay for highways in their region. The highway trust fund created from federal and state fuel taxes made it easy to get new highways built once alignments were determined. By 2006, the total cost of the interstate highway system was $425 billion (about ***$485 billion*** in 2011 dollars). ***If we had spent a comparable amount on public transportation, we would now have 50 cities with regional rapid transit systems, each with about 100 miles of double track lines.***

Chapter 6 and Tables 8-9 of the book describe which modes are most likely to attract Transit-Oriented Development (TOD). Selecting transportation modes for specific corridors and even entire regional systems is no easy task when you consider the wide range of vehicle design and planning concepts. We recommend focusing on the following:

Market Share: What percent of residents are likely to use each mode under consideration?
Miles per Trip: How long are the trips anticipated? What vehicles will offer comfortable rides?
Speed and Frequency: How fast will vehicles go, including stops? How often will they come?
Riders per Mile: How many riders will new lines likely attract? How many per mile?
Capital Costs per Mile and Per Rider: How do these costs compare for competing modes?
Farebox Recovery Rates: What share of operating costs will riders pay?
TOD: How much development will each mode attract? What tax revenues will result?
Environmental: How do modes compare in use of energy/fossil fuels, noise/air pollution?

The book makes it easier to answer these questions. It recommends that time-consuming studies now included in most transportation plans be deferred until ***after*** the transportation mode is chosen and funds are approved. Examples: detailed plans for alignments, stations, land uses, architecture and landscaping, and preservation of historic and natural resources.

The current transportation planning and mode selection process takes far too long. Funding milestones are missed and costs keep rising.

Chapter 8 also explains how to improve corridor planning and the design of transit vehicles and facilities to attract more riders, increase farebox recovery rates, and avoid mistakes in selecting transit modes and vehicle designs. The most common mistake is to assume riders enjoy standing up! Modern streetcars with only 34 seats that cost $3 million don't make sense - even for short trips downtown. They are fast enough to serve the suburbs on dedicated routes, but vehicles must be designed with comfortable seats looking forward for everyone - to attract more riders.

Finance "Low Carbon" Transportation Without Raising Taxes

Planners and public officials familiar with capital and operating costs for new transportation systems cannot easily imagine how they could finance them ***without raising taxes.*** If relatively large regions like Cincinnati could not get voters to support small tax increases for regional rail lines - and took years to get approval of local funds for short streetcar lines - how could they or much smaller regions fund regional multi-mode systems that would cost billions?

The federal government no longer funds a large share of the capital costs of new public transit systems. Revenues generated from fuel taxes are not high enough to keep roads and bridges in good repair - a funding shortfall estimated at only 60 cents per gallon in 2013. Congress refuses to raise federal fuel taxes. The fossil fuel industry may not want more people using "low carbon" transportation - even if this would help save human life on our small planet. Regardless of where you stand on the global warming debate, there are many other reasons to fund transit ***locally***:

- Why should people in one region pay for systems elsewhere they will never or rarely use?
- It is inefficient to send dollars to Washington and wait years to get only some of them back.
- A much simpler transportation planning process is feasible for locally-funded lines.
- We can get more transit lines funded sooner with tax revenues from TOD.

To help planners make informed mode choices and strengthen the case for funding new transit lines locally, we spent a year documenting how much transit-oriented development (TOD) had been built by 2013 near the more than 600 transit lines studied. Most transit and planning agencies had not taken time to encourage TOD or realize the importance of tracking it. We found incomplete or no reliable information for 90% of the lines studied, even for cities like San Diego or Atlanta where a casual glance reveals many new buildings near their transit lines. The good news: ***65 transit lines attracted more than $100 million per mile in TOD:***

Mode	TOD per Mile
38 Rapid Transit/Subway Lines	$100 million to $5.9 billion
10 Modern Streetcar Lines	$118 million to $1.2 billion
13 Light Rail Lines	$138 million to $850 million
3 Bus Rapid Transit Lines	$457 million to $1.0 billion
1 Commuter Rail Line	$127 million

Most streetcar, light rail, and bus rapid transit lines were opened later than the rapid transit lines. ***Development near them continues.*** For example, we counted only $700 million in TOD planned near Cincinnati's short streetcar line ***five years before it opened.*** It is a loop with 3.6 miles of one-way track in a corridor 1.8 miles long. We used corridor length to facilitate comparison to rail lines with dual tracks and yield a TOD cost of ***$389 million per mile***. We excluded costs for two new stadiums and a school that would have been built regardless of the streetcar.

We also excluded $2.7 billion for other projects in early planning. Once they are completed, there will be ***$1.9 billion per mile*** in TOD near a streetcar loop that began running in late 2016.

When calculating future tax revenues from new transit lines, most consultants consider only higher assessments for existing land and buildings as the new lines make property nearby more desirable. Estimates of "value capture" can yield large increases in tax revenues that should not be ignored, but it would be hard to convince anyone to use them to pay off bonds for new transit lines. Our townhouse in Fairfax, VA is four miles from DC Metro lines, but it more than doubled in value in 25 years. My dad's home in Arlington is three miles from the DC Metro, but it is now valued at 24 times what he paid for it in 1954. Tax revenues from higher assessments are usually offset by lower tax rates to make living in desirable areas more affordable. This is why property ***tax rates*** in the Washington region are about half those in Cincinnati. Our home in Fairfax is assessed at twice the amount of our Cincinnati home, but taxes are much lower.

Planners rarely consider tax revenues from new development because they lack information on future plans or consider them too far in the future to count. ***This is a huge mistake.*** One example: the MetroWest planned community with 2,250 dwelling units replaced 69 "postwar bungalows" on 56 acres directly south of the Vienna-Fairfax-GMU Metrorail station. The project has 33 times as many units as the original subdivision. My conservative estimate of the increase in property values: ***$1.3 to $1.9 billion.*** With almost ***2,200 new households,*** it makes also makes sense to consider ***income and sales taxes*** they will pay. A complete analysis would also consider savings achieved by compact growth from projects like this.

To make it easier to estimate tax revenues and savings from TOD in your city, we have estimated what could be built for every $100 million invested (see next page). Regardless of building type, $100 million TOD yields $1 million in annual tax revenues if property is taxed at 1%; it yields $2 million annually if taxed at 2%. In 30 years, property taxes range from ***$15 to $75 million.***

The website www.2017Tax-Rates.Org makes it easier for planners to calculate property, income, and sales tax rates and median incomes for U.S. cities and counties. We have compared them for all cities with rail transit lines and several other cities large enough to finance new regional systems. We were not surprised to find lower property tax rates in most cities with high property values. Ten cities have no income taxes, and one has no sales tax. The spreadsheet on the next page shows the range of income and sales taxes $100 million in TOD would yield in 30 years:

Office/Commercial space	***$93 million to $529 million***
Residential Mix	***$27 million to $143 million***

If a new transit line attracts only $500 million TOD per mile, the tax revenues yielded in 30 years are five times these amounts; at $1 billion per mile, they are ten times these amounts; at $2 billion per mile, twenty times these amounts – ***all far more than new transit line capital costs.***

Finance "Low-Carbon" Transportation Without Raising Taxes

By 2013, 65 transit lines had attracted $100 million+ per mile in Transit-Oriented Development (TOD):

38 Rapid Transit/Subway Lines	**$100 million to $5.9 billion per mile**
10 Modern Streetcar Lines	**$118 million to $1.2 billion per mile**
13 Light Rail Lines	**$138 million to $850 million per mile**
3 Bus Rapid Transit (BRT) Lines	**$457 million to $1 billion per mile**
1 Commuter Rail Line	**$127 million per mile**

Source: Sustainable Transportation and Development, Chapter 6 and Table 8, Michael Burrill, 2014.

Alternative Building Functions and Primary Building Users for $100 Million in TOD:

Building Functions	Cost	Gross Square Feet (GSF)			Per Dwelling Unit		Total Users	
	Per GSF	Total	Per Unit	Per Adult	Adults	Children	Adults	Children
Offices/Commercial	$275	363,636		200			1,818	
408 Apartment Units	$175	571,429	1400		1.5	0.2	612	82
250 Townhouse Units	$200	500,000	2000		2	0.6	500	150
178 Single-Family Units	$225	444,444	2500		2	1	356	178

Sources: R. S. Means 2017 Square Foot Construction Costs (Cost Per GSF)
Planning Factors per GSF/Dwelling Unit: Michael Burrill

Projected Property Tax Revenues in Millions from $100 Million TOD:

Building Functions	Tax	Property Taxes	
	Rate	Per Yr	30 Yrs
All Building Types	0.5%	0.5	$15
All Building Types	1.0%	1.0	$30
All Building Types	1.5%	1.5	$45
All Building Types	2.0%	2.0	$60
All Building Types	2.5%	2.5	$75

Projected Income Tax Revenues in Millions from $100 Million TOD:

Building Functions	Tax	Taxable	Income Tax Rates		Annual Taxes		30 Years of Taxes	
	Payers	Income	Low	High	Low	High	Low	High
Offices/Commercial	1,818	$50,000	3.4%	9.7%	$3.1	$8.8	$93	$265
Offices/Commercial	1,818	$60,000	3.4%	9.7%	$3.7	$10.6	$111	$317
Offices/Commercial	1,818	$70,000	3.4%	9.7%	$4.3	$12.3	$130	$370
Offices/Commercial	1,818	$80,000	3.4%	9.7%	$4.9	$14.1	$148	$423
Offices/Commercial	1,818	$100,000	3.4%	9.7%	$6.2	$17.6	$185	$529
Residential Mix	400	$50,000	3.4%	9.7%	$0.7	$1.9	$20	$58
Residential Mix	400	$60,000	3.4%	9.7%	$0.8	$2.3	$24	$70
Residential Mix	400	$70,000	3.4%	9.7%	$1.0	$2.7	$29	$81
Residential Mix	400	$80,000	3.4%	9.7%	$1.1	$3.1	$33	$93
Residential Mix	400	$100,000	3.4%	9.7%	$1.4	$3.9	$41	$116

Projected Sales and Excise Taxes in Millions from $100 Million TOD:

Building Functions	Tax	Taxable	Sales Tax Rates		Annual Taxes		30 Years of Taxes	
	Payers	Items	Low	High	Low	High	Low	High
Residential Mix	400	$12,500	4.5%	9.0%	0.2	0.5	7	14
Residential Mix	400	$15,000	4.5%	9.0%	0.3	0.5	8	16
Residential Mix	400	$17,500	4.5%	9.0%	0.3	0.6	9	19
Residential Mix	400	$20,000	4.5%	9.0%	0.4	0.7	11	22
Residential Mix	400	$25,000	4.5%	9.0%	0.5	0.9	14	27

Source of Tax Rates: www. 2017 Tax-Rates.Org

Planners seeking to apply this approach to real-world examples will find the spreadsheet format on the next page helpful. Cincinnati has enjoyed high levels of development downtown and in uptown in the last 20 years. We are confident that a regional multi-mode rail and bus transit system would attract at least ***$1 billion TOD per mile*** and reduce highway congestion by adding suburban jobs. At ***existing tax rates*** for areas within city limits, in ***30 years*** this would yield

$2.2 billion per mile from new office/commercial areas
$1.08 billion per mile from new residential areas

These figures are almost ***9 to 18 times the $125 million per mile*** predesign budget we would recommend for new light rail transit lines like those in Cincinnati's 2002 MetroMoves plan. Revenues would be lower in counties outside city limits that do not have income taxes, but still ***more than enough to pay for a regional transit system in just a few years.*** If the region continues to plan only short rail transit lines that do not extend to the newer suburbs, the lines will attract fewer riders, riders will be less likely to pay all operating costs, and the region will not save enough money from compact growth to consider reducing tax rates.

We used the same spreadsheet format to estimate tax revenues from TOD in two other areas where we have lived: Northern Virginia and San Antonio. The results confirm that revenues would be high enough to finance extensions of DC Metrorail to suburbs now served by buses. We used a conservative ***$2 billion TOD per mile*** for Northern Virginia, based on recent results for the new Silver Line. We used only ***$1 billion TOD per mile*** for San Antonio. The city attracts two million visitors annually, already has many jobs located in the suburbs, and the airport is only eight miles from downtown. At existing tax rates, in ***30 years*** tax revenues would be:

Location	**TOD Per Mile**	**Tax Revenues from TOD Per Mile**	
		Office/Commercial Areas	**Residential Areas**
Northern VA	$2 billion	$7.66 billion	$2.5 billion
San Antonio	$1 billion	$ 636 million	$ 773 million

The Virginia figures are about ***7 to 22 times the $350 million per mile*** budget we would recommend for new elevated rapid transit lines like those recently built, and still far more than capital costs anticipated for new underground lines. Revenues in San Antonio would be much lower because Texas has no income tax, but they are still ***5 to 6 times the $125 million per mile*** budget we would recommend for on-grade light rail lines that could connect downtown to the airport and suburban jobs with faster service. The transit agency estimated a new BRT line in one corridor to downtown would average ***15 mph*** with stops. Speeds for 62 light rail lines operating in 2013 ranged from ***9 to 38 mph*** with stops (faster in suburbs, slower downtown).

Cities planning to use some of the tax revenues from TOD must concurrently develop master plans showing higher-density development near the lines and encourage it to happen with zoning changes and much lower parking requirements. TOD areas must be clearly defined to help overcome NIMBY objections from existing residents. This is how Arlington was able to attract 76,500 new jobs and $5.9 billion per mile in TOD to just one corridor three miles long, where 18% of the new residents don't own cars and half walk, bike, or take transit to work. Only ***11% of land in this small county was designated for higher-density development.*** Most housing units in Arlington look just like they did in the 1950s. Residents in them still enjoy great schools, high property values, and also have easy access to lively urban areas all over the region.

Cincinnati Ohio Tri-State Region

By 2013, 65 transit lines had attracted $100 million+ per mile in Transit-Oriented Development (TOD):

38 Rapid Transit/Subway Lines	**$100 million to $5.9 billion per mile**
10 Modern Streetcar Lines	**$118 million to $1.2 billion per mile**
13 Light Rail Lines	**$138 million to $850 million per mile**
3 Bus Rapid Transit (BRT) Lines	**$457 million to $1 billion per mile**
1 Commuter Rail Line	**$127 million per mile**

Source: Sustainable Transportation and Development, Chapter 6 and Table 8, Michael Burrill, 2014.

Alternative Building Functions and Primary Building Users for $100 Million in TOD:

Building Functions	Cost	Gross Square Feet (GSF)			Per Dwelling Unit		Total Users	
	Per GSF	Total	Per Unit	Per Adult	Adults	Children	Adults	Children
Offices/Commercial	$275	363,636		200			1,818	
408 Apartment Units	$175	571,429	1400		1.5	0.2	612	82
250 Townhouse Units	$200	500,000	2000		2	0.6	500	150
178 Single-Family Units	$225	444,444	2500		2	1	356	178

Sources: R. S. Means 2017 Square Foot Construction Costs (Cost Per GSF)
Planning Factors per GSF/Dwelling Unit: Michael Burrill

Projected Property Tax Revenues in Millions from $1 Billion TOD:

Building Functions	Tax	Property Taxes	
	Rate	Per Yr	30 Yrs
All Building Types	2.0%	20.0	$600

Projected Income Tax Revenues in Millions from $1 Billion TOD:

Building Functions	Tax	Taxable	Income Tax Rates		Annual Taxes		30 Years of Taxes	
	Payers	Income	State	City	State	City	State	City
Offices/Commercial	18,180	$62,000	2.64%	2.1%	$29.8	$23.7	$893	$710
Residential Mix	4,000	$62,000	2.64%	2.1%	$6.5	$5.2	$196	$156

Projected Sales and Excise Taxes in Millions from $1 Billion TOD:

Building Functions	Tax	Taxable	Sales Tax Rates		Annual Taxes		30 Years of Taxes	
	Payers	Items	State	City	State	City	State	City
Residential Mix	4,000	$15,500	5.75%	1.25%	3.6	0.8	$107	$23

30 Years of Tax Revenues in Millions from $1 Billion TOD:

Revenue Sources	Office/Commercial				Residential Mix			
	State	County	City	Totals	State	County	City	Totals
Property Taxes		$600				$600		
Income Taxes	$893		$710		$196		$156	
Sales and Excise Taxes					$107		$23	
Totals	**$893**	**$600**	**$710**	**$2,203**	**$303**	**$600**	**$179**	**$1,082**

Total revenues far exceed the capital cost of "low carbon" public transportation per mile (all modes).

Source of Tax Rates: www. 2017 Tax-Rates.Org

Savings from Smart Growth near Public Transportation

Compact medium-density "Smart Growth" near public transportation yields huge savings for families, developers, commuters, public school systems, and public entities responsible for building and maintaining land, infrastructure, and other public services. We have estimated those savings for some big ticket items here, but they are just the tip of the iceberg. Sustainable Transportation and Development also estimates huge savings in energy and greenhouse gas emissions that could help save the planet from global warming while also saving money. The spreadsheet on page 15 estimates auto-related savings.

Capital Costs Avoided if Households Have Only One Car:

Each household would save at least ***$158,460*** in 30 years if they did not have to buy a second car every ten years and costs increased 5% annually. The example uses $30,000 for a car bought in the first year. Savings would be higher if they avoid buying more expensive cars. Households would also save money on parking at home, with garage space costing more than space in surface lots. The range of capital cost savings to households: ***$163,460 to $198,860***. The book also describes related savings in fuel, loan payments, insurance, taxes, tolls, and tags.

Capital Costs Avoided if Employees Do Not Drive to Work:

If employees do not drive to work, employers or public entities do not have to provide parking spaces for them in land wasting surface lots or costly garages. For surface lots this would save about ***$5,000 per car***; for above-ground garages, ***$33,200 per car***; for underground garages, ***$38,400 per car*** (2017 dollars). Savings for 500 cars: ***$2.5 to $19.2 million.*** These savings exclude costs for land, financing, operation and maintenance. If half of the residents in a corridor walk, bike, or take transit to work (as they do near DC Metrorail in Arlington), the number of parking spaces in new office buildings can be reduced significantly. At $202 per GSF, new office space costs $40,400 per employee if they average 200 GSF each. It is very wasteful to spend almost as much for unused parking spaces or cars that do not move most of the day!

Commuting Costs Saved by Wage Earners who Walk, Bike, or Take Public Transit:

A solo driver who commutes ten miles in an energy-efficient car that averages 25 mpg, pays $2.50 per gallon, averages ten cents per mile for maintenance/repairs, and pays $10 to park at work will spend ***$3,500 per year*** for 250 round trips per year. We estimated transit fares at $8 per day for a 20-mile round trip to get ***$2,000 per year.*** Many riders pay lower fares for trips that long (example: only $3.50 in Cincinnati today). Transit riders would save ***$1,500 per year***, or ***$45,000 in 30 years.*** They would save more if they avoid longer commutes by car. Commuters who move close enough to work to walk or take a bike would save ***$102,000 in 30 years.***

Public School Savings from Smart Growth:

The spreadsheet on page 16 estimates public school savings from Smart Growth in a region with land values of $150,000 per acre, 2 million people, and about 728,000 housing units. These savings occur because the average number of public school children living in townhouses and apartments is far less than in single-family units. The $35,000 capital costs for new or fully renovated schools and the $15,500 annual budget per child are based on actual Cincinnati costs.

A region with low-density residential areas averaging ***3.8 units per acre*** would average about ***0.84 public school children per unit*** with a mix of 75% single-family homes, 10% townhouses, and 15% low-rise apartments. This yields 611,520 school children, capital costs, and education costs shown in the first section of the spreadsheet.

A region with medium-density residential areas averaging about ***10.5 units per acre*** would average about ***0.5 public school children per unit*** with a mix of 25% single-family homes, 25% townhouses, and 50% low- rise apartments. This yields 364,000 school children. With 247,520 fewer children, it yields the savings highlighted in green below the second section of the spreadsheet: ***$8.7 billion*** in capital costs and ***$115 billion in education costs in 30 years.***

A region with higher density residential areas averaging about ***17.9 units per acre*** would average only ***0.44 public school children per unit*** with a mix of 10% single-family homes, 40% townhouses, and 50% mid-rise apartments. This yields 320,320 school children. With half as many school children as the low-density residential region, it yields the savings highlighted in green below the third section of the spreadsheet: ***$10.2 billion*** in capital costs and ***$135.4 billion in education costs in 30 years.*** Savings would be higher in TOD residential areas with more apartments, fewer townhouses, and no single-family homes.

For a reality check, we compared education costs per pupil and the number of public school children per unit in Cincinnati and three Northern Virginia counties. We were not surprised to find only ***0.22 children per unit*** in Arlington, VA and ***0.26 children per unit*** in Cincinnati. Both areas have many older single-family homes and apartments. Newer housing that attracts young families with more children usually yields higher numbers. Arlington could afford to spend more money per child ***($18,957)***, thanks to revenues from very high levels of TOD ***($5-5.9 billion per mile).*** ***Schools represent only 33-34% of annual budgets in both areas.***

The City of Fairfax and Fairfax County, VA averaged ***0.51 children per unit.*** These jurisdictions are further from Washington and have many new single-family homes and large townhouses. We combined budgets for both jurisdictions on the spreadsheet because the county operates City of Fairfax schools. ***The school budget is more than half of the combined annual budget,*** even with a budget of ***$14,432*** per child, 9% lower than Cincinnati and 24% lower than Arlington.

Prince William County is even further from Washington, has a higher percentage of single-family homes, and averaged ***0.64 children per unit.*** The school budget was about ***49% of the county operating budget*** despite much lower education costs of ***$10,981*** per child.

These results indicate even moderate increases in density yield big savings in school costs. Not only is Arlington the county with the nation's highest level of transit-oriented development near five miles of DC Metrorail lines, it has high-performing public schools that cost taxpayers less than the schools in suburbs further from Washington. The original plan for the first Metro line serving Arlington was to run trains in the median of I-66 to reduce capital costs. Arlington invested ***$300 million in local funds*** to build Metro lines underground for three miles instead. In the next 40 years, the county gained $17.6 billion in new TOD and 76,500 new jobs in this corridor alone. Property and other tax revenues from TOD are still funding great schools in a county that already had excellent public schools in the 1950s when my family lived there.

Savings from Smart Growth near Public Transportation

Capital Costs Avoided if Households Have Only One Car:

Description	GSF Per Car	# of Cars	Unit Cost	Year	Inflation Rate	Inflation Factor	Total $
Energy-efficient Hybrid car		1	$30,000	2011	5%	1.000	$30,000
Energy-efficient Hybrid car		1	$30,000	2021	5%	1.629	$48,870
Energy-efficient Hybrid car		1	$30,000	2031	5%	2.653	$79,590
Savings in 30 Years							**$158,460**
Parking, surface lot at home	400	1	$12.50	2017	5%	1.000	$5,000
Parking, attached garage at home	200	1	$72	2017	5%	1.000	$14,400
Parking, aboveground garage at home	400	1	$83	2017	5%	1.000	$33,200
Parking, underground garage at home	400	1	$96	2017	5%	1.000	$38,400
Savings in 30 Years						**Low**	**$163,460**
Car Plus Parking Costs at Home						**High**	**$196,860**

Capital Costs Avoided if Employees Do Not Drive to Work:

Description	GSF Per Car	# of Cars	Unit Cost	Year	Inflation Rate	Inflation Factor	Total $
Parking, surface lot at work	400	1	$12.50	2017	5%	1.000	**$5,000**
Parking, aboveground garage at work	400	1	$83	2017	5%	1.000	**$33,200**
Parking, underground garage at work	400	1	$96	2017	5%	1.000	**$38,400**
Parking, surface lot at work	400	**500**	$12.50	2017	5%	1.000	**$2,500,000**
Parking, aboveground garage at work	400	**500**	$83	2017	5%	1.000	**$16,600,000**
Parking, underground garage at work	400	**500**	$96	2017	5%	1.000	**$19,200,000**

NOTES:

1. **Table 5, Sustainable Transportation and Development, has inflation factors for 3% & 5% inflation.**
2. **Construction costs per GSF based on 2017 R. S. Means Square Foot Construction Costs.**
3. **Garages for 10,000+ cars at the University of Cincinnati average about 400 GSF/car.**
   Surface lots with spaces 9 foot wide and driving lanes 25 feet wide average about 400 GSF/car.

Commuting Costs Saved by Wage Earners who Walk, Bike, or Take Public Transit:

Description	Fuel mpg	Miles Per Yr	Gallons Per Yr	Fuel $/gal	M&R Per Mile	Parking $/Day	Total $
Drive 10 miles to work, 250 days/yr	25	5,000	200	$2.50	$0.10	$10	**$3,500**
Public Transit, $8 per day, 250 days/yr	N/A	5,000	N/A	N/A	N/A	$0	**$2,000**
Annual Savings							**$1,500**
Savings in 30 Years							**$45,000**
Walk/bike 2 miles to work, 250 days	N/A	1,000	0	N/A	0.10	0	**$100**
Savings in 30 Years							**$102,000**

NOTES:

1. **Driving costs above do not include car loan payments, insurance, taxes, tolls, or tags.**
   See Table 2, Sustainable Transportation and Development for all monthly driving costs
2. **Estimated $8 per day for transit fares is for a 20-mile round trip. Many riders pay lower fares.**

Public School Savings from Smart Growth near Public Transportation

Land Values:	**$150,000**	**Per Acre**
Population:	**2,000,000**	**Persons**
Housing Units:	**728,000**	**Estimated @ 2.75 persons/unit (US/Canada average)**
Capital Budget:	**$35,000**	**Cost of new or fully-renovated schools per child**
Education budget:	**$15,500**	**Annual operating budget per child**

Planning Factors	Land $ Per Acre	Mix %	Per Acre	Total Acres	Total Units	School Children Per Unit	School Children Total	Capital $ Millions	Education (Million $) Annual	Education (Million $) 30 Yrs
Single-Family homes	$150,000	**75%**	**3**	182,000	546,000	**1.0**	546,000	$19,110	$8,463	$253,890
Townhouses	$150,000	**10%**	**10**	7,280	72,800	**0.6**	43,680	$1,529	$677	$20,311
Apartments	$150,000	**15%**	**25**	4,368	109,200	**0.2**	21,840	$764	$339	$10,156
Low-Density Residential			**3.8**	**193,648**	**728,000**	**0.84**	**611,520**	**$21,403**	**$9,479**	**$284,357**
Single-Family homes	$150,000	**25%**	**5**	36,400	182,000	**1.0**	182,000	$6,370	$2,821	$84,630
Townhouses	$150,000	**25%**	**10**	18,200	182,000	**0.6**	109,200	$3,822	$1,693	$50,778
Apartments	$150,000	**50%**	**25**	14,560	364,000	**0.2**	72,800	$2,548	$1,128	$33,852
Medium-Density Residential			**10.5**	**69,160**	**728,000**	**0.50**	**364,000**	**$12,740**	**$5,642**	**$169,260**
Savings							**247,520**	**8,663**	**$3,837**	**$115,097**
Single-Family homes	$150,000	**10%**	**8**	9,100	72,800	**1.0**	72,800	$2,548	$1,128	$33,852
Townhouses	$150,000	**40%**	**12**	24,267	291,200	**0.6**	174,720	$6,115	$2,708	$81,245
Apartments	$150,000	**50%**	**50**	7,280	364,000	**0.2**	72,800	$2,548	$1,128	$33,852
Higher-Density Residential			**17.9**	**40,647**	**728,000**	**0.44**	**320,320**	**$11,211**	**$4,965**	**$148,949**
Savings							**291,200**	**10,192**	**$4,514**	**$135,408**

NOTES:

1. **Land costs widely. We estimated values for 24 locations based on median home values cited in 2017 Tax-Rates.Org. Values ranged from $133,380 per acre in Hamilton County, OH to almost $8 million per acre in Manhattan, NYC.**
2. **Capital costs estimated based on recent major capital investments in Cincinnati, OH. They exclude land costs.**
3. **Number of public school students per unit based on studies for new housing in Montgomery County, PA/Connecticut. Students per unit generated found in most zoning regulations are much higher than real-world numbers.**
4. **Costs per pupil also vary, even within one region. Examples from Cincinnati and Washington Area Board of Education:**

Public School District	Total Cost Per Pupil	Fiscal Year	Total Units	School Children Per Unit	School Children Total	Annual Budgets (Million $) Schools	City/Cty	Total	% Schools
Cincinnati, Ohio (CPS)	**$15,503**	2016-7	133,420	**0.26**	35,000	$543	$1,053	$1,596	**34.0%**
Arlington County, VA	**$18,957**	2016-7	112,529	**0.22**	25,302	$463	$943	$1,406	**32.9%**
Fairfax County & City, VA	**$14,432**	2016-7	368,091	**0.51**	185,979	2,684	$2,064	$4,748	**56.5%**
Prince William County, VA	**$10,981**	2016-7	137,115	**0.64**	88,117	526	$544	$1,070	**49.2%**

In Northern Virginia, the number of students per unit is much higher in outer suburbs with more single family homes.
Arlington County is the suburb closest to Washington with high levels of development near the DC Metro.
Fairfax County is a suburb further away with more than a million residents. Some areas have bus service to the DC Metro.
Prince William County is a low-density outer suburb that also had $140 million in school capital projects in FY 2016-17.

Savings from Smart Growth in a Region of 2 Million People

The spreadsheet on the next page estimates capital cost savings from Smart Growth in a region with land values of $150,000 per acre, two million people, 728,000 housing units, 910,000 wage earners, and 182 million GSF of office/retail space.

The first section estimates total GSF, acres, and capital costs for land and construction if this space is built at low densities, with residential areas averaging ***3.7 units per acre***, 2-4 story office/retail buildings, and surface parking at home and work.

The second section estimates comparable costs if this space is built at medium densities, with residential areas averaging ***10 units per acre*** and 2-4 story office/retail buildings. Half of the parking spaces for townhouse and apartment residents would be in surface lots and half in above-ground garages. Half of the parking spaces at work would be in surface lots and half in above-ground garages. The savings from medium-density development are highlighted in green:

189 million GSF of space
175,116 acres of land valued at $26.3 billion dollars
$64.3 billion in construction costs

The third section estimates comparable costs if this space is built at higher densities, with residential areas averaging ***17.3 units per acre*** and 5-10 story office/retail buildings. Only 25% of the parking spaces for townhouse/apartment residents would be in surface lots; 75% would be in underground garages. Only 25% of the parking spaces at work would be in surface lots; 75% would be in underground garages. Savings from higher-density development are in green:

200 million GSF of space
219,770 acres of land valued at $33 billion dollars
$40.5 billion in construction costs

In a region with land values of $450,000 per acre, savings for land would be higher:

$78.8 billion from medium-density development
$98.9 billion from higher-density development

Private-sector developers and residents would save most of this money, but the public sector could have similar savings. Multi-story public buildings and schools designed to serve more students would cost less if designed with fewer parking spaces because they are near public transit. Arlington County's offices are next to a Metro stop (see photo on page 1, lower right).

The spreadsheet can be used to estimate savings in energy, operation and maintenance, and public costs for streets, utilities, police and fire protection. Two million people in 728,000 housing units at 10 units per acre would use only ***37% as much land*** as they would at 3.7 units per acre, or only ***21% as much land*** at 17.3 units per acre – ***even with all units the same size.*** Townhouses and apartments save energy because they have less outside wall area than single-family homes; usually they are much smaller. ***Savings in transportation costs and greenhouse gas emissions would be huge too.*** It would be easy for people to live closer to work, schools, shops, fun, and to walk, bike, or take transit (or have much shorter commutes in cars).

Savings from Smart Growth near Public Transportation

Land Values:	**$150,000**	**Per Acre**
Population:	**2,000,000**	**Persons**
Housing Units:	**728,000**	**Estimated @ 2.75 persons/unit (US/Canada average)**
Wage Earners:	**910,000**	**Estimated @ 1.25 per housing unit**
Office/Retail Space:	**182**	**Million GSF (average 200 GSF/wage earner)**

Planning Factors	Land $ Per Acre	Mix %	Per Acre	Unit GSF	Million GSF	Units Spaces	Total Acres	$ Per GSF	Totals (Million $) Land	Constr
Single-family homes	$150,000	**75%**	**3**	2,500	1,365	546,000	182,000	**$200**	$27,300	$273,000
Townhouses	$150,000	**10%**	**10**	2,000	146	72,800	7,280	**$175**	$1,092	$25,480
Apartments	$150,000	**15%**	**25**	1,400	153	109,200	4,368	**$196**	$655	$29,964
Surface parking, TH/APTS	$150,000	**100%**	**109**	400	73	182,000	1,671	**$12**	$251	$874
Residential Areas			**3.7**		**1,736**	**910,000**	**195,319**		**$29,298**	**$329,318**
Office/retail space (2-4 stories)	$150,000		**10,000**		182		18,200	**$202**	$2,730	$36,764
Surface parking, work	$150,000	**100%**	109	400	364	910,000	8,356	**$12**	$1,253	$4,368
Subtotals, Office/Residential					**2,282**	**1,820,000**	**221,876**		**$33,281**	**$370,450**
Streets/utilities (+25%)	$150,000				0		55,469		$8,320	$92,613
Low-Density Growth					**2,282**		**277,344**		**$41,602**	**$463,063**
Single-family homes	$150,000	**25%**	**5**	2,500	455	182,000	36,400	**$200**	$5,460	$91,000
Townhouses	$150,000	**25%**	**10**	2,000	364	182,000	18,200	**$175**	$2,730	$63,700
Apartments	$150,000	**50%**	**25**	1,400	510	364,000	14,560	**$196**	$2,184	$99,882
Surface parking, TH/APTS	$150,000	**50%**	**109**	400	109	273,000	2,507	**$12**	$376	$1,310
Aboveground garages, TH/APTS	$150,000	**50%**	**218**	400	109	273,000	1,253	**$83**	$188	$9,064
Residential Areas			**10.0**		**1,547**	**1,274,000**	**72,920**		**$10,938**	**$264,956**
Office/retail space (2-4 stories)	$150,000		**50,000**		182		3,640	**$202**	$546	$36,764
Surface parking, work	$150,000	**50%**	109	400	182	455,000	4,178	**$12**	$627	$2,184
Aboveground garages, work	$150,000	**50%**	436	400	182	455,000	1,045	**$83**	$157	$15,106
Subtotals, Office/Residential					**2,093**	**2,184,000**	**81,783**		**$12,267**	**$319,010**
Streets/utilities (+25%)	$150,000				0		20,446		$3,067	$79,752
Medium-Density Growth					**2,093**		**102,229**		**$15,334**	**$398,762**
Savings					**189**		**175,116**		**$26,267**	**$64,301**
Single-family homes	$150,000	**10%**	**8**	2,500	182	72,800	9,100	**$200**	$1,365	$36,400
Townhouses	$150,000	**40%**	**12**	2,000	582	291,200	24,267	**$175**	$3,640	$101,920
Apartments	$150,000	**50%**	**50**	1,400	510	364,000	7,280	**$234**	$1,092	$119,246
Surface parking, TH/APTS	$150,000	**25%**	**109**	400	66	163,800	1,504	**$12**	$226	$786
Underground garages, TH/APTS	$150,000	**75%**	**N/A**	400	197	491,400	**0**	**$96**	**$0**	$18,870
Residential Areas			**17.3**		**1,536**	**1,383,200**	**42,151**		**$6,323**	**$277,222**
Office/retail space (5-10 stories)	$150,000		**100,000**		182		1,820	**$184**	$273	$33,488
Surface parking, work	$150,000	**25%**	**109**	400	91	227,500	2,089	**$12**	$313	$1,092
Underground garages, work	$150,000	**75%**	**N/A**	400	273	682,500	**0**	**$96**	**$0**	$26,208
Subtotals, Office/Residential					**2,082**	**2,293,200**	**46,060**		**$6,909**	**$338,010**
Streets/utilities (+25%)	$150,000				0		11,515		$1,727	$84,503
Higher-Density Growth					**2,082**		**57,575**		**$8,636**	**$422,513**
Savings					**200**		**219,770**		**$32,965**	**$40,550**

NOTES:

1. **Land costs per acre vary. See estimates for 24 locations based on median home values cited in 2017 Tax-Rates.Org.**
2. **Construction costs per GSF based on 2017 R.S. Means Square Foot Construction Costs.**
   Costs for single-family homes includes 2-car attached garage. Garage cost: $14,360 per space.
3. **25% allowance for streets and utility lines is based on cost analyses for large subdivisions and planned communities.**

Think Globally, Act Locally

Grow Smart Planet has identified 27 regions with a total population of 38.6 million that are large enough to support regional rail transit systems with crosstown feeder bus routes. Most of them have no rail lines or just a short "starter" line now. Many other cities have rail transit lines serving several areas, but are considering extensions or crosstown routes that remain unfunded. ***The role we would like to play is simply to spread these ideas to as many regions as possible.*** We anticipate many regions will be able to take the ball and run with it without spending a fortune on costly planning and engineering consultants. This will be easier if they order a few copies of Sustainable Transportation and Development and get the right people to read it. If demand is high enough, we plan to go to print again soon.

Grow Smart Planet is a big fan of Chicago architect Daniel Burnham, who said **"Make No Little Plans"** and then helped implement big plans there and in Washington, D.C. His words have inspired us to take on this challenging task because far too many people still do not think global warming is a huge problem for human life on earth. They oppose solutions like carbon taxes and birth control that would clearly help, or they think solving it will slow economic growth or cost billions in new taxes (at the expense of other important needs). They do not realize we have already spent billions coping with the impacts of climate change, and we will soon spend trillions more on stop-gap mitigation efforts like flood controls in coastal cities. ***It would cost far less to reduce energy demand in buildings and transportation to help solve the many core environmental problems caused by our excessive use of fossil fuels.***

We are lucky that most countries with rapidly expanding populations use less energy and carbon-based fuel per person than the United States or other countries where auto-oriented "suburban sprawl" accurately describes current development patterns. Our goal is to transform existing cities and suburbs into more compact mixed-use areas focused on "low-carbon" transportation corridors, allowing both to attract new businesses and residents at much lower costs. We are confident low-density communities nationwide can follow Arlington's example and transform themselves into highly-desirable places to live where 50% of their residents walk, bike, or take transit. They can work in energy-efficient new or renovated offices, live in homes powered by renewable energy, or have short commutes to jobs only accessible by car.

Let's simply cut our use of energy and greenhouse gas emissions in half by 2030.

Grow Smart Planet hopes ***you will now take actions*** that will convince public officials, planners, and residents in your city to plan new ***regional*** "low carbon" transportation systems and transit-oriented development where people can easily live close to work, schools, work and fun; use less energy at home, work, and while commuting; and reduce greenhouse gas emissions.

Convince them that property and other tax revenues from new businesses and residents will be enough to ***pay the full capital cost of the new transportation systems with local funds in just a few years***, and will be the "gift that keeps on giving" for decades to come.

Convince them they do not have to choose between paying for regional transportation systems and budget items they may think are more important. ***They can have their cake and eat it too.*** Why? The revenues from TOD will come from taxes on ***new*** property and ***new*** residents (as well

as new jobs created during construction). Even if some of the people living and working in the new buildings move from elsewhere in the same region, the homes and buildings they leave will soon be filled by other taxpayers. This is why it would make sense to use tax revenues generated by new buildings and taxpayers ***in TOD zones*** to pay off bonds used for capital costs quickly.

Convince them that the new tax revenues and huge savings from Smart Growth ***will allow them to spend more money on worthwhile projects and services and still reduce tax rates in the future***, just as most regions that already have regional transit systems have done.

Convince them that it makes more sense to invest billions for a regional rail and high-speed bus transit system than to simply expand bus service ***because riders on faster, region-wide rail systems will pay a much higher share of operating costs.***

Convince them it no longer makes sense to compete with other cities seeking scarce federal funds, which requires preparation of costly, complex planning and environmental studies. Conceptual planning studies that focus on the "big picture" mode selection and corridor planning decisions outlined here and in Sustainable Transportation and Development would cost far less.

Convince them that ***they do not need to give tax breaks to developers proposing projects located near new transit lines.*** The new transit lines bring workers and customers to their doors and allow developers to build more usable space with fewer high-cost parking spaces. The regional transit system will make their properties more desirable and profitable – ***without tax breaks.*** This will require a change in mindset for public officials and developers in most cities, but it is not without precedent. Developers will line up for the opportunity to build mixed-use projects with higher densities near new rail transit lines - if they know these areas have already been planned for growth - and it will not take years to get approval of specific projects.

Convince local residents they will not be asked to pay for the capital costs of the new transit lines, and higher-density development will only occur within the boundaries designated. Explain they will benefit from higher property values (with lower tax rates), higher tax revenues for schools and other services, and a faster transportation system than buses stuck in traffic.

Convince state lawmakers and bankers to allow cities and suburbs to issue bonds to cover capital costs of multi-billion-dollar regional systems because revenues from TOD near the lines will be more than enough to pay the bonds back in just a few years. Use plans for TOD as collateral.

If you live in a city that already has a regional rail and bus transit system, convince public officials that they should support plans to replace outmoded trains, buses, and bus shelters; upgrade transit stations; improve schedules and routes; and take other actions that will attract more riders and improve farebox recovery rates. The book describes many ways to do this. Most cities with existing rail systems could finance these upgrades from new TOD near existing lines and extensions to outer suburbs or new crosstown routes – ***without raising taxes.***

Grow smart. Save big. Help save the planet from the adverse impacts of global warming.

We welcome your comments and questions!

COMMONWEALTH OF VIRGINIA
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SHARON BULOVA
CHAIRMAN

September 20, 2016

The Honorable Aubrey L. Layne, Jr.
Secretary of Transportation
1111 E. Broad Street, Room 3054
Richmond, Virginia 23219

Reference: Comments on Proposed Truck Usage of I-66 Express Lanes Outside the Beltway

Dear Secretary Layne:

During the Commonwealth Transportation Board (CTB) meeting held on July 28, 2016, you announced that the final Request for Proposals (RFP) for the Transform 66 Outside the Beltway Project would allow concessionaires to consider permitting trucks to utilize the I-66 Outside the Beltway Express Lanes. The proposed changes were included in the final RFP documents that were released to the public on July 30, 2016, and also the Final RFP Addendum #1 dated August 19, 2016. This change was not reflected in the previous version of the Revised Draft RFP, dated May 13, 2016 (Page A-38).

I am writing to you to express the Fairfax County Board of Supervisors' concerns about the proposed changes in allowing heavy vehicles along I-66 Outside the Beltway Express Lanes. The proposed changes were not provided to the public with sufficient time to comment prior to the release of the final RFP. This topic was also not included as part of the previous public meetings and hearings, nor in the numerous meetings held with individual homeowner associations.

The Board is concerned about the impact of the proposed changes, particularly the potential increase in noise levels near neighborhoods, and the impact on the local roadway network. It appears that the proposed changes have not been fully assessed to determine their impacts, since the proposed changes differ from the assumptions applied to the various analyses performed for this project. These prior assumptions are described in the "I-66 Project TTR/IJR Scoping Framework Document (dated November 11, 2015)," which includes "Table 1: Travel Demand Forecasting Model Assumptions" on page 20. This table specifically notes the analysis assumes that heavy trucks will not be permitted in the I-66 Outside the Beltway Express Lanes. If this was the basis of the previous analyses performed for this project, then the impacts of allowing trucks in the I-66 Outside the Beltway Express Lanes were not accurately assessed. This issue would also pertain to the environmental and traffic analyses performed to date. The assumption of not permitting heavy trucks in the I-66 Outside the Beltway Express Lanes is also specified in the "I-66 Corridor Improvements Project – Interchange Justification Report (dated August 24, 2016)," which includes "Table 8.1: Travel Demand Modeling Assumptions" on page 8-3.

The Board is requesting that the Commonwealth reconsider this decision. Potential impacts to the communities adjacent to the I-66 Express Lane corridor need to be evaluated, especially the anticipated increase in noise and air quality impacts to nearby neighborhoods. The impacts of these proposed changes on the performance of the I-66 Express Lanes, the on and off ramps, adjacent intersections and secondary streets in the vicinity of the I-66 interchanges must also be evaluated, especially but not limited to the Vaden Drive ramp. The Board is also concerned that allowing trucks to use the Express Lanes would result in higher tolls, due to reduced capacity.

One of our consistent comments on the I-66 project is that tolls be kept "reasonable". This change will make "reasonable" tolls less likely, since trucks will purchase capacity that otherwise would be sold to commuters. If VDOT proceeds with these proposed changes, necessary mitigation measures to address the impacts should be identified and developed upfront. Further, since this proposed change was not included as part of the project during the previous public meetings or hearings, it will be important to obtain the public's input on the change and any proposed mitigation.

Lastly, the Board is concerned that this change was not coordinated with Fairfax County or the public in advance and should not have been included in the RFP without some consideration and public review. Fairfax County has been supportive of the I-66 project and has worked diligently with VDOT to resolve numerous issues related to the project in the past, so there was no reason this issue should not have been coordinated with us.

Fairfax County appreciates the work that has been undertaken on this project to date and look forward to working closely with the Commonwealth to develop a mutually beneficial project to County residents and the region. However, it is important that the Commonwealth coordinate the details of the project with its local partners. Until a comprehensive analysis is done addressing our concerns about the impacts of trucks using the HOT Lanes, the Board of Supervisors is forced to oppose this change to the project.

If you have any questions or need additional information, please contact me at (703) 324-2321.

Sincerely,

Sharon Bulova

Sharon Bulova
Chairman

cc:

Members, Fairfax County Board of Supervisors
Members, Fairfax County General Assembly Delegation
The Honorable Mark R. Warner, United States Senate
The Honorable Timothy M. Kaine, United States Senate
The Honorable Gerald E. Connolly, United States House of Representatives
The Honorable Donald Beyer, United States House of Representatives
The Honorable Barbara Comstock, United States House of Representatives
Mary Hughes Hynes, Northern Virginia District Board Member, Commonwealth Transportation Board
F. Gary Garczynski, At-Large Urban Board Member, Commonwealth Transportation Board
E. Scott Kasprowicz, At-Large Urban Board Member, Commonwealth Transportation Board
Helen Cuervo, District Administrator, VDOT, Northern Virginia
Renee Hamilton, Deputy District Administrator, VDOT, Northern Virginia
Susan Shaw, Megaprojects Director, VDOT
Young Ho Chang, Project Manager
Edward L. Long Jr., County Executive
Robert A. Stalzer, Deputy County Executive
Catherine A. Chianese, Assistant County Executive
Tom Biesiadny, Director, Department of Transportation
Fred R. Selden, Director, Department of Planning & Zoning

Kirk W. Kincannon, Director, Fairfax County Park Authority
James Patteson, Director, Department of Public Works and Environmental Services
Claudia Arko, Legislative Director