



TRANSPORTATION PLANNING BOARD

July 20, 2016
12:00 - 2:00 P.M.
Walter A. Scheiber Board Room

AGENDA

- 12:00 P.M. 1. PUBLIC COMMENT ON TPB PROCEDURES AND ACTIVITIES**
Bridget Newton, TPB Vice Chairman
- Interested members of the public will be given the opportunity to make brief comments on transportation issues under consideration by the TPB. Each speaker will be allowed up to three minutes to present his or her views. Board members will have an opportunity to ask questions of the speakers, and to engage in limited discussion. Speakers are encouraged to bring written copies of their remarks (65 copies) for distribution at the meeting.
- 12:20 P.M. 2. APPROVAL OF THE MINUTES OF THE JUNE 15 MEETING**
Bridget Newton, TPB Vice Chairman
- 12:25 P.M. 3. REPORT OF THE TECHNICAL COMMITTEE**
Tim Roseboom, TPB Technical Committee Chairman
- 12:30 P.M. 4. REPORT OF THE CITIZENS ADVISORY COMMITTEE**
Doug Stewart, TPB Citizens Advisory Committee Chairman
- 12:40 P.M. 5. STEERING COMMITTEE ACTIONS AND REPORT OF THE DIRECTOR**
Kanti Srikanth, TPB Staff Director
- This agenda item includes Steering Committee actions, letters sent/received, and announcements and updates.
- 12:45 P.M. 6. CHAIRMAN'S REMARKS**
Bridget Newton, TPB Vice Chairman

ACTION ITEMS

- 12:50 P.M. 7. APPROVAL OF THE NATIONAL CAPITAL REGION FREIGHT PLAN**
Jon Schermann, TPB Transportation Planner
- This plan is a major update to the 2010 National Capital Region Freight Plan. The plan was released for a 30-day public comment period on June 9, 2016 and the board was briefed on the draft plan on June 15, 2016. The plan describes the role of freight in the Region's economy, provides an overview of the multimodal

freight transportation system, describes the drivers of freight demand and resulting freight flows, and discusses significant freight issues. It includes a set of regional freight policies, a list of projects important for freight, and recommendations for future freight planning actions. It is intended to be both a technical reference and a guide to future TPB freight planning activities.

Action: Adopt TPB Resolution R1-2017 approving the National Capital Region Freight Plan

- 1:05 P.M.** **8. APPROVAL OF PROJECTS RECOMMENDED FOR FUNDING UNDER THE FY 2017 SURFACE TRANSPORTATION BLOCK GRANT SET ASIDE PROGRAM FOR SUBURBAN MARYLAND TPB JURISDICTIONS**
Lamont Cobb, TPB Transportation Planner

A portion of the federal Surface Transportation Block Grant Set Aside Program (previously known as the Transportation Alternatives Program) is sub-allocated to the TPB for project selection in Suburban Maryland. The board will be briefed on the projects recommended by a technical review panel for funding in FY 2017 and asked to approve the recommended projects. The FY 2017 project solicitation, which was conducted by the Maryland Department of Transportation, ended on May 16, 2016.

Action: Adopt Resolution R2-2017 to approve projects for funding under the Federal Surface Transportation Block Grant Set Aside Program for Maryland for FY 2017.

- 1:15 P.M.** **9. APPROVAL OF REGIONAL CAR FREE DAY 2016 PROCLAMATION**
Nicholas Ramfos, TPB Operations Programs Director

In an effort to create awareness and encourage residents to go car free by using public transportation, bicycling or walking, or go car lite and carpool, Regional Car Free Day events are being organized in the region for September 22. These events will encourage the community and regional decision-makers to support car free policies and initiatives.

INFORMATION ITEMS

- 1:20 P.M.** **10. BRIEFING ON MITIGATION ACTIONS AND EXPERIENCES FROM WMATA'S SAFETRACK SURGE ACTIVITIES**
Eric Randall, TPB Transportation Engineer

The board will be briefed on experiences and mitigation actions taken by local jurisdictions and WMATA at locations that have recently undergone significant safety and maintenance work as part of WMATA's SafeTrack work plan.



1:45 P.M. 11. STRATEGIC PLAN FOR THE DEVELOPMENT OF THE TPB TRAVEL DEMAND MODEL

Ron Milone, TPB Travel Forecasting Director

Mark Moran, TPB Transportation Engineer

TPB staff and Cambridge Systematics, Inc. have developed a draft multi-year strategic plan for updating the regional travel demand forecasting model. The seven-year plan includes both updates to the existing trip-based travel model and an eventual transition to an activity-based travel model. The board will be briefed on how the plan was developed, the contents of the plan, and also on a short-term implementation plan that focuses on the first two years of the seven-year plan.

2:00 P.M. 12. ADJOURN

The next meeting is scheduled for September 21, 2016.

MEETING AUDIO

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**TRANSPORTATION PLANNING BOARD
MEETING MINUTES**

June 15, 2016

MEMBERS AND ALTERNATES PRESENT

Charles Allen, DC Council
Bob Brown, Loudoun County
James Davenport, Prince William County
Marc Elrich, Montgomery County
Dan Emerine, DC Office of Planning
Gary Erenrich, Montgomery County DOT
Jay Fisette, Arlington County
Tawanna Gaines, Maryland House
Jason Groth, Charles County
Rene'e Hamilton, VDOT
Konrad Herling, City of Greenbelt
Sandra Jackson, FHWA
Catherine Hudgins, Fairfax City Board of Supervisors
John Jenkins, Prince William County
Shyam Kannan, WMATA
Julia Koster, NCPC
R. Earl Lewis, Jr. MDOT
Tim Lovain, City of Alexandria
Dan Malouff, Arlington County
Phil Mendelson, DC Council
Ron Meyer, Loudoun County
Bridget Donnell Newton, City of Rockville
Martin Nohe, Prince William County
Mark Rawlings, DC DOT
Kelly Russell, City of Frederick
Peter Schwartz, Fauquier County
Elissa Silverman, DC Council
Jarrett K. Smith, City of Takoma Park
Linda Smyth, Fairfax County Board of Supervisors
David Snyder, City of Falls Church
Tammy Stidham, NPS
Jonathan Way, Manassas City
Victor Weissberg, Prince George's County/DPW&T
David Whitaker, Frederick County
Sam Zimbabwe, DDOT

MWCOG STAFF AND OTHERS PRESENT

John Swanson	
Andrew Meese	
Ron Milone	
Eric Randall	
Andrew Austin	
Michael Farrell	
Jon Schermann	
Marco Trigueros	
Ben Hampton	
Bryan Hayes	
Abigail Zenner	
Sergio Ritacco	
Lamont Cobb	
William Bacon	
Debbie Leigh	
Deborah Etheridge	
Chuck Bean	COG/EO
Steve Kania	COG/OPA
Paul DesJardin	COG/DCPS
Bill Orleans	HACK
Mike Lake	Fairfax County
Norman Whitaker	VDOT
Andrew Beacher	VDOT
Arlen Herrell	Mayor Bowser's Office
Jessica McVary	Union Station Redevelopment Corp.
Debbie Spielberg	Office of Councilmember Marc Elrich
Pierre Holloman	City of Alexandria
Tyson Byrne	MDOT
Patrick Durany	Supervisor Jenkins' Office
Alex Clegg	Coalition for Smarter Growth
Alex Cox	Coalition for Smarter Growth
Nancy Abeles	TPB/CAC
Richard Parsons	MDOT

1. PUBLIC COMMENT ON TPB PROCEDURES AND ACTIVITIES

Mr. Lovain called the June 15 meeting to order.

Mr. Richard Parsons, vice chair of the Suburban Maryland Transportation Alliance, commented on the Long Range Planning process. He said that there needs to be more capacity in the transportation network to deal with congestion. He also said all modes need to be taken into account and that congestion relief is the most important outcome. He noted a survey conducted by his organization that found that most people would pay more to ease congestion.

Mr. Stewart Schwartz from the Coalition for Smarter Growth said that traffic and transportation issues are a top concern of the public. He noted that in a growing region it will be impossible to solve the congestion problem by simply building more roads. He said better land use is key to smarter planning in a complex system.

2. APPROVAL OF MINUTES OF THE MAY 18 MEETING

A motion was made to approve the minutes of the May 18 meeting. The motion was seconded and was approved unanimously.

3. REPORT OF THE TECHNICAL COMMITTEE

Mr. Roseboom presented the report of the Technical Committee. The committee met on June 3 and reviewed some of the items on the TPB agenda including a presentation about some activities that COG staff have carried out to support WMATA's SafeTrack program, including through Commuter Connections radio ads and emails. He reported that WMATA staff reminded the committee that there will be effects throughout the system. He reported that the committee received briefings about the draft Freight Plan, Metro's efforts in support of transit-oriented development, and the new federal Metropolitan Transportation Planning Safety rules. He said the committee received updates on the long-range plan task force focused on project selection and an update on the proposed process for evaluating the TPB's public involvement activities. Finally, he said the committee honored long-time TPB COG staff member Bob Griffiths who was retiring.

4. REPORT OF THE CITIZEN ADVISORY COMMITTEE

Mr. Stewart said that the CAC met on June 9 and was briefed on the draft of the National Capital Region Freight Plan and COG's efforts to coordinate communication about WMATA's SafeTrack program. He reminded the board that the committee's top priority for the year is figuring out how the public can participate in and add value to the 2018 long-range plan update and prioritization of unfunded projects. He said that CAC members Nancy Abeles and Gary Hodge regularly attend the Long-Range Plan Task Force meetings and report back to the CAC. He said that the committee is concerned about the uncertainty of the process and the role that the public can play. He said that there needs to be a demonstrated product for the long-range plan, whether it is in the form of an unfunded project list, a list of projects and programs, or a description of policies and their intended impacts. He said that the CAC urges the TPB and the Long-Range Plan Task Force to think about how public input can be a part of the process early on and is not an afterthought. He added that the process should be transparent to the public.

5. REPORT OF STEERING COMMITTEE

Mr. Srikanth reported on the Steering Committee's actions. He said that the Steering Committee approved four amendments to the FY 2017-22 TIP – one from each of the three state DOTs and WMATA. He also reported that the Steering Committee was briefed on the new members of the Access for All Advisory Committee and that Mr. Charles Allen would chair the committee. Finally, Mr. Srikanth

took a moment to recognize Bob Griffiths upon his retirement after more than forty years of service to COG and the TPB. He talked about Mr. Griffiths' accomplishments in data analysis, his experience running the COG mainframe computer, and his time playing on the COG softball team. He mentioned that Mr. Griffiths' last day would be June 17 but that he would be back to help with the next household travel survey.

Mr. Griffiths thanked Mr. Srikanth for the kind words and thanked the COG and TPB boards, noting that he was impressed that they always read and understood the data that he provided them. He then thanked the board for the privilege of serving in his role and making the region better for transportation.

Mr. Lovain thanked Mr. Griffiths for his counsel and for being knowledgeable, wise and entertaining.

6. CHAIR'S REMARKS

Mr. Lovain mentioned that he provided testimony on behalf of the U.S. House of Representatives Highway and Transit Subcommittee on the safety and reliability of WMATA. He stated that his testimony emphasized WMATA's importance to the region and to the federal government as the region's largest employer, as well as the ongoing efforts and need for federal support in addressing WMATA's existing safety and reliability challenges. WMATA CEO Paul Wiedefeld and Acting Administrator of Federal Transit Administration Carolyn Flowers also gave testimony.

Mr. Lovain remarked on his participation on the June 13 COG forum titled "Metrorail at 40: Lessons from Major North American Transit Systems". The forum included six rail transit executives from Atlanta, Chicago, Miami-Dade, New York City, and Toronto, as well as rail transit expert Alex Barron from the Imperial College of London and former Congressman Tom Davis. He said that one of his take away was that Metro's challenges are not unique, that other systems have had similar challenges. Some of the other systems said that single-tracking and shutdowns are a routine part of their normal operations now. He noted that the other systems who spoke have a stable and predictable source of funding, and they all talked about how critical that was for enabling them to plan and have predictability. He also noted how most other general managers who spoke had said that time and money are the two things needed to address the challenges of an urban and aging metro system. He said that lesson for Metro is not just about the money, but also about taking time for Metro to address its challenges.

Mr. Lovain also noted that several of transit operators, talked about the need to deal with the skeptics in the community by taking initiatives in the short term that are real kind of quality of life, customer-friendly initiatives. He mentioned that Mr. Wiedefeld has done some of that with Metro like with that 15-minute opportunity to leave the station without being charged. He said Mr. Barron praised WMATA for its fare policy, but recommended the agency use robust performance measurement and reinvest in existing infrastructure. He also mentioned that Mr. Davis discussed the passing of the 2008 Passenger Rail Investment and Improvement Act (PRIIA) through Congress and convincing local elected officials outside of transit service areas to invest in the systems.

Mr. Lovain said that COG and the Board of Trade are working together to identify a plan for stable and predictable funding for WMATA by the end of the year. Both organizations hope to get the plan to Maryland and Virginia legislatures by 2018, and sooner in the District of Columbia. COG will also organize a technical assistance panel to develop financial and operating data on WMATA rail by the end of the year. Mr. Lovain stated that TPB staff would assist in those efforts.

Next Mr. Lovain mentioned that he had addressed the COG Board earlier in the month to share the TPB's priorities for the year. He mentioned that members of the COG board urged the TPB to identify some regionally important projects. He said that he informed the COG board that the TPB's Long-Range Task Force was working on the issue, but the board was not satisfied them because this has not happened. He said the discussion in the Task Force's meeting today was very lively on this very topic and that he tried to impress on the task force this morning that the group needs to take input from

everybody and come up with the best ideas possible. He said that hopefully the group can get a plan in place and start focusing in on some key projects in time for the CLRP update next year.

Mr. Lovain then called on Mr. Bean to comment on COG's efforts with the Board of Trade regarding WMATA.

Mr. Bean stated that the COG Board passed resolution R39-2016 to create a Metrorail Assessment Technical Assistance Panel. The panel will develop financial and operating data on Metrorail and report back to the COG Board in October 2016. The panel will collect data on operating benchmarks and performance metrics on safety and reliability. The panel will document funding projections for operating WMATA in a safe and reliable way, as well as implementing a system rehabilitation program. Mr. Bean said that if the panel discovers a gap in funding, it would explore potential sources for additional revenue. He noted that the Board of Trade supports exploring new revenue options for Metrorail.

Mr. Snyder expressed his thanks to COG and the Board of Trade in their efforts to work with WMATA, and stated his desire to distance himself from Virginia state legislators that do not support additional funding for WMATA. He spoke about the importance of getting WMATA to a position of safe and reliable operations.

INFORMATION ITEMS

7. BRIEFING ON ACTIONS IN SUPPORT OF THE WAMTA SAFETRACK SAFETY SURGE PLAN

Mr. Srikanth announced that staff would give regular briefings on WMATA's SafeTrack work plan. He noted that TPB and COG staff were providing coordination and technical support to WMATA through Commuter Connections and the TPB's various subcommittees. Mr. Srikanth mentioned that staff will give regular updates on this activities, as well as invite WMATA and local jurisdiction representatives to coordinate, discuss and share their experiences with SafeTrack over the next 11 months.

Mr. Srikanth welcomed Nicolas Perfili from Fairfax County, Regina Sullivan and James Hamre from WMATA, to discuss their experiences with the first SafeTrack safety surge.

Mr. Perfili reported that ten of the 15 SafeTrack surges will affect Fairfax County. The County has collaborated with Metro and Commuter Connections in its public outreach strategies. For Surge 1 and 2, the County's mitigation strategies include express shuttle service in the I-66 and Dulles corridors, with additional Metrobus service parallel to the Orange line, in addition to cars and vanpools, park & ride, and other efforts. He stated that early data reported mitigation efforts in the I-66 corridor removed 1000 trips per day from the highway. The County also went to park & ride facilities and directed commuters to existing bus service, SafeTrack express bus services, and slugline operators.

Mr. Perfili stated that for Surge 3 and 4, Fairfax County would work with Metro to develop bus bridges around work zones, provide supplemental bus service in Southern parts of the County, and promote park & ride, Metro, and VRE stations with available capacity.

Ms. Sullivan thanked COG, the TPB and all the region's jurisdictions for their cooperation in mitigation efforts for SafeTrack. She asked commuters to determine alternative routes to work, as WMATA needs a significant number of riders not to use Metrorail. WMATA will have extra staff at stations, bus bays, to supplement their online and social media communications, and provide human interaction with commuters. Ms. Sullivan also thanked Mr. Allen for his help in coordinating with Ward 6 constituents.

Mr. Hamre said that the challenge of the Metrobus Planning, Scheduling and Customer Facilities office is mitigating the SafeTrack closures and single tracking and providing options for commuters. He thanked local planners across the region for being good partners in the mitigation efforts. He also acknowledged Mr. Griffiths' work in providing the modal numbers that WMATA uses to determine

alternative capacity.

Mr. Hamre noted that during Surge 1, ridership declined 30 percent on the Orange line west of Ballston, and there was a 20 percent increase in bus ridership in that corridor. Extra staff on the platforms managed the flow of commuters and helped reduce crowding. For Surge 2, a similar level of ridership reduction will help WMATA serve half of rail commuters through shuttles. Mr. Hamre stated that commuters should be aware, patient, and make smart choices to make Surge 2 successful.

Mr. Erenrich thanked WMATA staff for their cooperation and ready attitude. He recommended that for future surges involving Montgomery County, the region should consider MARC train services as an important asset.

Mr. Lewis responded that MARC train operators are looking at how they can help.

Mr. Snyder asked about communications in the stations, both during SafeTrack and after, specifically where information shared through different mediums may not agree with each other.

Ms. Sullivan thanked Mr. Snyder for his comments and stated that WMATA staff are looking to make sure all their messaging points are consistent.

Ms. Silverman thanked Councilmember Allen and WMATA staff for their SafeTrack updates. She asked what lessons learned during the first surge could apply to future ones.

Mr. Hamre responded that one of the significant things was directing passengers to the correct platform at Ballston throughout Surge 1. In Reston, adapting to commuter needs, WMATA created a new bus schedule with lines running all the way to Downtown DC. They will take these lessons into surge 2, and include additional service staff at the stations.

Ms. Silverman asked how riders should give feedback.

Mr. Hamre responded that feedback can be provided through WMATA's customer service line, 202-637-7000, as well as through social media accounts. WMATA monitors the social media accounts.

Mr. Allen noted that Surge 2 would differ from Surge 1 in that it will involve full station closures, and he thanked WMATA staff for being flexible about the closures to address school schedules for families. He recommended that the District's Business Improvement Districts coordinate with WMATA to allow for additional customer service staff on site at Eastern Market station.

Ms. Sullivan stated that WMATA's external relations office is working with local BIDs, and that WMATA's transit police force would also be available to address crowding and customer concerns.

Mr. Allen asked about an update regarding planning and coordination. He referenced an upcoming D.C. United Soccer game on June 25, at which time Stadium-Armory station would be closed.

Mr. Hamre responded that WMATA has used shuttles during sporting events before, and approximately 1,200 buses will be idle and available to provide capacity. He was not certain about a concert at FedEx field in Maryland, but was comfortable that WMATA could handle the soccer game. WMATA will be coordinating with DOT staff on traffic signals, and lane openings/closings.

Mr. Herling asked if additional bus capacity would be enough for future closures involving the Green line.

Mr. Hamre responded that the work involving Greenbelt would be single tracking, not a closure. He said WMATA has three activities to address this surge: stand-by buses known as life-safety shuttles, capacity supplement to make up the difference of reduced trains, and major closure necessitating adjustments from WMATA and commuters.

Mr. Kannan stated that WMATA's bus bridges during SafeTrack would not be enough to supplement the reduced rail capacity, particularly for commuters during Surge 2. He asked meeting attendees to

reinforce the message that commuters should find alternatives to Metrorail to get to and from their daily commutes.

Mr. Zimbabwe thanked Mr. Perfili for the work of Fairfax County and acknowledged the level of coordination among jurisdictions during SafeTrack so far. He stated that the coordination should continue, and the District is working to collect early data on changes in travel behavior. He stated that District government held a webinar with several local employers regarding SafeTrack, and that folks should continue to communicate about the changes with their local community.

8. BRIEFING ON THE DRAFT NATIONAL CAPITAL REGION FREIGHT PLAN

Mr. Schermann said that the draft National Capital Regional Freight Plan builds on the region's first freight plan which was approved in 2010. He said that the plan is a technical document that is meant to serve as a reference for future planning activities. He said that the updated draft also includes freight policy priorities. Referring to the new draft, he described the contents of the report. He said that the region's population and economic growth means that there will be an increased demand for freight in the future. He said that freight moves through the region via roadways, railroads, airports, and pipelines.

Mr. Schermann said that the new policy section includes feedback from members of the board and reflects the board's collective take on freight planning. He said that the policies cover a range of topics that include: state of good repair, hazardous materials, routing, environmental justice, land-use, and activity centers. He noted that there are 17 policy statements, five of which emphasize issues related to freight rail and hazardous materials. He added that in response to comments received at the March TPB meeting a new policy was added: "The Transportation Planning Board supports the use of best practices for safety, engineering, and maintenance of freight-related transportation infrastructure."

Mr. Schermann said that a draft of the plan was released for public comment on June 9, and that the final version of the document, including changes, will be presented to the TPB for approval in July.

Mr. Allen said that he appreciates the heightened inclusion of safety and hazardous material policies.

9. BRIEFING ON ACTIVITIES TO PROMOTE TRANSIT-ORIENTED DEVELOPMENT NEAR METRO STATIONS

Mr. Scott said his presentation would focus on specific ways that WMATA can work with local governments to promote transit-oriented development (TOD). The agency seeks to increase ridership through TOD on the existing system. Through its planning group, WMATA will create a walkshed inventory of infrastructure improvements at all 91 stations, to increase the walkable area around stations and attract more riders. Through WMATA's real estate group, the agency will adjust its project development program to better work with developers in navigating WMATA building requirements with developer interests. Mr. Scott also mentioned that WMATA would work with local economic development offices in encouraging development near stations.

A board member asked if development plans around Phase One of the Silver Line, and Loudoun County's Comprehensive Plan Amendment fit WMATA's development model.

Mr. Scott responded that he would follow up to this question.

Mr. Herling referred to the Greenbelt Station development and asked about WMATA's efforts to meet its long-term economic development and ridership growth objectives.

Mr. Scott responded that WMATA looks for connections to enhance access, and sometimes those recommendations come from local government. He also noted the complexity in Greenbelt given the site under consideration by the General Services Administration for a future headquarters of the Federal Bureau of Investigation. WMATA is working to resolve issues around that potential development.

Mr. Zimbabwe noted that local jurisdictions can help promote TOD, both on WMATA property and outside of it, as well as the importance of small-scale changes to make neighborhoods and transit stations more walkable. He mentioned the progress of Purple Line TOD projects and recommended WMATA be included as a partner, and other jurisdictions learn from the process.

10. BRIEFING ON FEDERAL TRANSPORTATION PERFORMANCE MANAGEMENT REQUIREMENTS

Mr. Srikanth referenced a memo and provided a summary of the new federal regulations for metropolitan planning activities. He said that the presentation for this item would cover the background and context for the regulations, and that more information would be presented at future meetings. He said these rule changes will significantly change the way highway and transit projects are funded and also how highway and transit assets are maintained. He said that the new rules propose a considerable change in how MPOs across the country, including TPB, will be doing their long range planning moving forward. He said that failure to comply will have consequences not necessarily just limited to the MPOs, but to the transportation agencies at the state and local levels. He said that these new rules can be summarized by a federally mandated approach called "performance-based planning and programming," which is a way of planning projects and programming funds to achieve desired performance outcomes. He said that this rule looks at short-term performance. He said it also describes specific performance areas that all MPOs will have to address, in addition to naming the performance measures that MPOs should use. He said that this new work will guide the CLRP, the TIP, safety plans, and a process for congestion management.

Mr. Srikanth said that these rules respond to the law first proposed under MAP-21 and that reaffirmed by the FAST Act, both of which try to achieve a higher return on investments for transportation spending. These returns will be in the form of system performance and better accountability for agencies that are expending federal transportation funds. He said that the rule is a data-driven approach that requires coordination, cooperation, and good current data. He said that goals and measures are prescribed, and that the TPB will need to work with jurisdictions and agencies to develop an investment plan for meeting those goals. Once the investment plan is set, the TPB will need to monitor performance of the specific goal areas and report that performance back to the funding authorities.

Mr. Randall said that there are seven federally described goals for federally funded highway and transit investments. He said that MPOs need to identify performance measures of the highway and transit system for those goals. He said that setting these measures will require input from the states, transit agencies, and jurisdictions. He said that most of the performance-planning rules have been released, but that some are still outstanding. He said that highway safety and planning rules are final. He said that the transit rule is expected in July. He said that state DOTs or transit agencies are the lead for the respective rules. He said that formally adopting targets for performance measures will become part of the ongoing process. He referred to his handout and summarized the performance areas. He said that performance measures for highway safety include: fatalities, rates of fatality, number of serious injuries, rate for serious injuries, and the number of non-motorized fatalities and serious injuries.

Chairman Lovain said that state DOTs will establish targets and that MPOs have the option of adopting those targets or developing targets that exceed the state targets. He added that based upon these established targets, MPOs will evaluate how state investment of federal funds have helped achieve the targets. He said that this rule will have an impact on the TPB's budget, resources, and staff time.

A board member asked if there is a presentation slide on system performance.

Mr. Randall said yes. He continued to reference his handout as he described how data will be collected for performance evaluation. He said the new data will build on years of existing database work. He summarized the system performance rules for freight, congestion management, and air-quality.

Mr. Fisetete asked if these new rules contain criteria that could be useful as part of the discussion going

on at the Long-Range Plan Task Force.

Mr. Srikanth said yes to the extent that the board is interested and focused on how can to improve the performance outcomes of our long range plan and also tie it with some form of evaluation of the investments that are being made. The federal performance based planning approach is driven by the same two themes. He said that the rules provide some across-the-board criteria on system performance and maintenance but that what is missing from the criteria is accessibility and travel options.

Mr. Fisetto said the two goals are the performance outcomes and investment.

Mr. Srikanth said that the mandate says that local jurisdictions, the states, and the MPOs need to work together to determine an approach to meet the federally described outcomes.

Mr. Elrich asked if the rules describe concrete objectives or guidance on what is excessive.

Mr. Randall said that DOTs and MPOs can set their own criteria. He said the federal agencies are trying to impose a process system where information influences programming and projects.

Mr. Elrich expressed concern that this might encourage agencies to set low targets so that they can achieve those targets with minimal effort.

Mr. Srikanth said that these targets must also meet federal mandates in terms of speed limits and desired travel speeds. He said this means there is a performance threshold below which one cannot game the system.

Mr. Schwartz said that it looks like this rule matches the goals that some had for the Long-Range Plan Task Force which is to set goals in a definable, measureable, transparent way, and then evaluate your investment and your return on investment based on the goals you've set and your ability to achieve them. He asked for a link to the new regulations.

Mr. Srikanth said that the TPB has established working groups with DDOT, MDOT, VDOT, WMATA, and other transit agencies to coordinate efforts and identify where everyone is in regards to these rules.

Mr. Herling inquired about if the differences between the TPB and MWAQC with regard to measurement of pollutant levels have been resolved.

Mr. Srikanth noted that the CMAQ rules proposed under performance based planning is tied to CMAQ funds received by states for transportation projects and quantifying the emissions reductions from those projects. MWAQC's work with measuring pollutants is tied to federal air quality standards and thus refers to different type of measurement.

OTHER ITEMS

11. ADJOURN

The meeting was adjourned at 2:03 p.m.

TPB Technical Committee July 8 Meeting Highlights

July 14, 2016

The Technical Committee met on July 8, in the Ronald F. Kirby Training Center at COG. The following items were reviewed for inclusion on the TPB's July agenda:

- **TPB agenda item 7**
The committee was given a short final briefing on the draft 2016 National Capital Region Freight Plan. Staff said that no comments had been received while the plan was out for public comment. The committee recommends that the TPB approve the plan.
- **TPB agenda item 8**
Staff briefed the committee on projects that have been recommended for funding using a portion of the federal Surface Transportation Block Grant Set Aside Program (previously known as the Transportation Alternatives Program) that is sub-allocated to the TPB for project selection in Suburban Maryland. Staff reported that a technical review panel recommended funding for five projects, which are consistent with regional goals and policies. The Technical Committee recommends that the TPB approve the projects for funding.
- **TPB agenda item 9**
Staff briefed the committee on Regional Car-Free Day, which will be held on September 22. This international event is an effort to create awareness and encourage residents to go car free by using public transportation, bicycling or walking, or go car lite and carpool. The committee recommends that the TPB approve the proclamation for Car-Free Day
- **TPB agenda item 10**
The committee received a briefing on a TPB staff analysis of the impacts of WMATA's SafeTrack activities. The analysis, which used INRIX data provided by the I-95 Corridor Coalition Vehicle Probe Project, focused on Surge 1 impacts. Staff reported that weekday peak period traffic congestion was higher during Surge 1 compared to typical conditions. Although freeways had larger increases in congestion in the AM peak period than in the PM peak period, the PM peak period remained the most congested time to travel.
- **TPB agenda item 11**
Staff briefed the committee on a draft multi-year strategic plan for updating the regional travel demand forecasting model. The seven-year plan includes both updates to the existing trip-based travel model and an eventual transition to an activity-based travel model. The committee discussed how the TPB model is currently used – for regional, local and state analysis – and how changes in the model will affect local jurisdictions.

The following item were presented for information and discussion:

- Dan Emerine from the D.C. Office of Planning gave a briefing on a recently-completed study of parking utilization at multifamily residential properties throughout the District of Columbia. The study was funded in part through the TPB's Transportation Land Use Connections (TLC) Program in FY 2014.
- The committee was asked to review the draft 2016 Congestion Management Process (CMP) Technical Report, which was developed as a biennial update. The CMP is a federal requirement. The Technical Committee will be asked to approve it at a future date.

- The committee was briefed on the current status of the TPB Regional Priority Bus Project, which includes 15 project components being implemented by five project owners under a \$58.8-million TIGER grant administered by FTA.
- The committee was briefed on federal transportation rulemaking and performance-based planning and programming (PBPP) requirements, as well as recent activities in support of implementation.



MEMORANDUM

TO: Transportation Planning Board
FROM: Kanti Srikanth, TPB Staff Director
SUBJECT: Steering Committee Actions and Report of the Director
DATE: July 14, 2016

The attached materials include:

- Steering Committee Actions
- Letters Sent/Received
- Announcements and Updates



MEMORANDUM

TO: Transportation Planning Board
FROM: Kanti Srikanth, TPB Staff Director
SUBJECT: Steering Committee Actions
DATE: July 14, 2016

At its meeting on July 8, the TPB Steering Committee approved the following resolutions to amend the FY 2015-2020 Transportation Improvement Program (TIP) that are exempt from the air quality conformity requirement:

- SR1-2017: To include funding for the MD 234 Gilbert Swamp Run and MD 355 Urbana Pike Bridge Replacement projects, as requested by the Maryland Department of Transportation (MDOT)
- SR2-2017: To include funding for the Neighborhood Streetscape Improvements and Construction of Fiber Communication Network On Freeways projects, as requested by the District Department of Transportation (DDOT)
- SR3-2017: To include funding for the Boundary Channel Drive at I-395 Interchange, I-95 Directional Off-Ramp to Northbound Fairfax County Parkway, and Route 7 Corridor Improvements Phase 1 and 2 projects and the Vehicle Fuel Conversion Program, as requested by the Virginia Department of Transportation (VDOT)
- SR4-2017: To include funding for eleven transit projects, as requested by the Potomac and Rappahannock Transportation Commission (PRTC) and VDOT
- SR5-2017: To include funding for the Thomas Circle Tunnel Lights Conversion to LED and Streetlight Upgrade On Massachusetts Avenue projects, as requested by DDOT
- SR6-2017: To include funding for the Route 1 Widening from Featherstone Road to Mary's Way and Fairfax County Parkway Widening projects, as requested by VDOT

The TPB Bylaws provide that the Steering Committee “shall have the full authority to approve non-regionally significant items, and in such cases it shall advise the TPB of its action.”

Attachments

- SR1-2017
- SR2-2017
- SR3-2017
- SR4-2017
- SR5-2017
- SR6-2017

NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD
777 North Capitol Street, N.E.
Washington, D.C. 20002

**RESOLUTION ON AN AMENDMENT TO THE FY 2015-2020 TRANSPORTATION
IMPROVEMENT PROGRAM (TIP) THAT IS EXEMPT FROM THE AIR QUALITY
CONFORMITY REQUIREMENT TO INCLUDE FUNDING FOR THE MD 234 GILBERT
SWAMP RUN AND MD 355 URBANA PIKE BRIDGE REPLACEMENT PROJECTS,
AS REQUESTED BY THE MARYLAND DEPARTMENT OF TRANSPORTATION (MDOT)**

WHEREAS, the National Capital Region Transportation Planning Board (TPB), which is the metropolitan planning organization (MPO) for the Washington Region, has the responsibility under the provisions of the Fixing America's Surface Transportation (FAST) Act for developing and carrying out a continuing, cooperative and comprehensive transportation planning process for the Metropolitan Area; and

WHEREAS, the TIP is required by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) as a basis and condition for all federal funding assistance to state, local and regional agencies for transportation improvements within the Washington planning area; and

WHEREAS, on October 15, 2014 the TPB adopted the FY 2015-2020 TIP; and

WHEREAS, in the attached letter of July 1, 2016, MDOT has requested that the FY 2015-2020 TIP be amended to include \$823,000 in Bridge Replacement and Rehabilitation Program (BR) funding between FY 2015 and FY 2017 for preliminary engineering, and \$4.221 million in state funding between FY 2015 and FY 2018 for preliminary engineering and construction for the MD 234 Gilbert Swamp Run Bridge Replacement project; and to include \$9.056 million in state funding between FY 2015 and FY 2020 for preliminary engineering, right of way acquisition and construction for the MD 355 Urbana Pike Bridge Replacement project at Bennett Creek, as described in the attached materials; and

WHEREAS, these projects are exempt from the air quality conformity requirement, as defined in Environmental Protection Agency's (EPA) Transportation Conformity Regulations as of April 2012;

NOW, THEREFORE, BE IT RESOLVED THAT the Steering Committee of the National Capital Region Transportation Planning Board amends the FY 2015-2020 TIP to include \$823,000 in BR funding between FY 2015 and FY 2017, and \$4.221 million in state funding between FY 2015 and FY 2018 for the MD 234 Gilbert Swamp Run Bridge Replacement project; and to include \$9.056 million in state funding between FY 2015 and FY 2020 for the MD 355 Urbana Pike Bridge Replacement project at Bennett Creek, as described in the attached materials.

Adopted by the Transportation Planning Board Steering Committee at its regular meeting on July 8, 2016



Maryland Department of Transportation
The Secretary's Office

Larry Hogan
Governor

Boyd K. Rutherford
Lt. Governor

Pete K. Rahn
Secretary

July 1, 2016

The Honorable Timothy B. Lovain, Chair
National Capital Region Transportation Planning Board
Metropolitan Washington Council of Governments
777 North Capitol Street, N.E., Suite 300
Washington DC 20002

Dear Chairman Lovain:

The Maryland Department of Transportation (MDOT) requests the following amendments to the State Highway Administration (SHA) portion of the National Capital Region Transportation Planning Board's (TPB) FY 2015-2020 Transportation Improvement Program (TIP) for two new projects as described below and in the attached memo. The additional funds are available due to programmed State funds and an increase in federal-aid obligational authority. This action does not impact air quality conformity.

TIP ID#	Project	Phase	Amount of New Funding	Comment
6517	MD 234 at Gilbert Swamp Run Bridge Replacement	PE ROW CO	\$5,044,000	Add funding for preliminary engineering and construction.
6518	MD 355 at Bennett Creek Bridge Replacement	PE ROW CO	\$9,099,000	Add funding for preliminary engineering, right-of-way, and construction.

MDOT requests that this amendment be approved by the Transportation Planning Board (TPB) Steering Committee at its July 8, 2016 meeting.

The revised funding status will not impact scheduling or funding availability for other projects in the current TIP, which continues to be fiscally constrained. The cost does not affect the portion of the federal funding which was programmed for transit, or any allocations of state aid in lieu of federal aid to local jurisdictions.

My telephone number is _____
Toll Free Number 1-888-713-1414 TTY Users Call Via MD Relay
7201 Corporate Center Drive, Hanover, Maryland 21076

The Honorable Timothy B. Lovain
Page Two

We appreciate your cooperation in this matter. Should you have additional questions or concerns, please contact Ms. Kari Snyder at 410-865-1305, toll free 888-713-1414 or via e-mail at ksnyder3@mdot.state.md.us. Of course, please feel free to contact me directly.

Sincerely,



Lyn Erickson,
Manager, Regional Planning
Office of Planning and Capital Programming

Attachment

cc: Mr. Eric Beckett, Chief, Regional and Intermodal Planning Division (RIPD), SHA
Ms. Heather Murphy, Director, Office of Planning and Capital Programming, MDOT
Ms. Kari Snyder, Regional Planner, Office of Planning and Capital Programming,
MDOT



Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor

Pete K. Rahn, Secretary
Gregory C. Johnson, P.E., Administrator

MEMORANDUM

TO: DIRECTOR HEATHER MURPHY
PLANNING AND CAPITAL PROGRAMMING
MARYLAND DEPARTMENT OF TRANSPORTATION

ATTN: REGIONAL PLANNING MANAGER LYN ERICKSON
REGIONAL PLANNER KARI SNYDER

FROM: CHIEF ERIC BECKETT *for Markles*
REGIONAL AND INTERMODAL PLANNING DIVISION

SUBJECT: REQUEST TO AMEND THE FISCAL YEARS 2015-2020 NATIONAL CAPITAL
REGION TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

DATE: JUNE 29, 2016

PURPOSE OF MEMORANDUM

To request you approve and forward to the TPB for its approval the following TIP amendment.

SUMMARY

The Maryland Department of Transportation's State Highway Administration (SHA) hereby requests amendment of the FY 2015-2020 National Capital Region TIP. SHA is programming additional funding for two new projects in the National Capital Region, as in the attached table and detailed in the attached TIP report.

ANALYSIS

This amendment reflects:

- 1) The addition of \$5.0 million in preliminary engineering and construction funding for a new project; MD 234 Gilbert Swamp Run Bridge Replacement, for MD 234 Bridge 0804700 over Gilbert Swamp Run (TIP 6517). The existing structure over Gilbert Swamp Run is structurally deficient. The project is scheduled to advertise for construction in November 2016, with construction anticipated to begin in the Spring of 2017.
- 2) The addition of \$9.1 million in preliminary engineering, right of way, and construction funding for a new project; MD 355 Urbana Pike bridge replacement, for MD 355 bridge 1008600 over Bennett Creek (TIP 6518). The existing structure over Bennett Creek is structurally deficient. The project is scheduled to advertise for construction in November of 2016, with construction anticipated to begin in the Winter of 2017.

My telephone number/toll-free number is 410-545-5675 or 1-888-204-4828
Maryland Relay Service for Impaired Hearing or Speech 1.800.735.2258 Statewide Toll Free

Ms. Heather Murphy
Page Two

The additional funds are available due to programmed State funds and an increase in federal-aid obligational authority. The proposed action will not impact scheduling or funding availability for other projects in the current TIP, which continues to be fiscally constrained. The amended funding does not affect the portion of federal funding programmed for transit or allocations of state aid to local jurisdictions in lieu of federal aid.

After your review, please forward this request to the National Capital Region Transportation Planning Board. Upon approval of this requested TIP amendment, please amend the FY 2014-2017 Statewide TIP (STIP) using the funding information provided in the attachment. If you have any questions, please contact Ms. Samantha Biddle, SHA Regional Planner, at 410-545-5560 or via email at sbiddle@sha.state.md.us.

ATTACHMENTS

Table 1
FY 2015-2020 TPB TIP (6517) project CH2061 report
FY 2015-2020 TPB TIP (6518) project FR1321 report

cc: Mr. Matt Baker, Regional Planner, SHA
Ms. Samantha Biddle, Regional Planner, SHA
Ms. Aviva Brown, Assistant Regional Planner, SHA
Ms. Meredith Hill, Assistant Regional Planner, SHA
Mr. David Rodgers, Regional Planner, SHA
Ms. Jessica Shearer, Assistant Chief, Regional and Intermodal Planning Division, SHA
Mr. Brian Young, District 3 Engineer, SHA

Table 1

TIP	Project	Phase	New Funding	Comments
6517	MD 234 Gilbert Swamp Run Bridge Replacement	PE CO	\$1,044,000 \$4,000,000	The addition of \$5.0 million in preliminary engineering and construction funding. Add an additional \$1.0 million in funds for the preliminary engineering phase (\$0.35 million in BRR funds for FY 15, \$0.09 million in State funds for FY 15, \$0.13 million in BRR funds for FY 16, \$0.04 million in State funds for FY 16, \$0.34 million in BRR funds for FY 17, and \$0.09 million in State funds for FY 17). Add an additional \$4.0 million in funds for the construction phase (\$0.9 million in State funds for FY 17 and \$3.1 million in State funds for FY 18).
6518	MD 355 Urbana Pike Bridge Replacement	PE RW CO	\$823,000 \$276,000 \$8,000,000	The addition of \$9.1 million in preliminary engineering, right of way, and construction funding. Adding preliminary engineering State funding including \$475,000 to FY 15 and \$348,000 to FY 16. Adding right-of-way State funding including \$5,000 to FY 16, \$57,000 to FY 17, FY 18, FY 19, and FY 20, and \$43,000 to FY 21. Adding construction State funding including \$2,080,000 to FY 17 and \$5,920,000 to FY 18.

**SUBURBAN MARYLAND
TRANSPORTATION IMPROVEMENT PROGRAM
CAPITAL COSTS (in \$1,000)**

FY 2015 - 2020

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
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MDOT/State Highway Administration

Other
System Preservation Projects

TIP ID: 6517	Agency ID: CH2061	Title: MD 234 Gilbert Swamp Run Bridge Replacement	Complete: 2018	Total Cost:	\$5,044	
Facility: MD 234 at Gilbert Swamp Run	BR	100/0/0	353 a	126 a	344 a	823
From:						
To:	State	0/100/0	93 a	42 a	86 a	4,221
					3,100 c	
					900 c	
Total Funds: 5,044						

Description: Replacement of MD 234 Bridge# 08047 over Gilbert Swamp Run. The existing bridge is structurally deficient.



Amendment: Additional Funding for Preliminary Engineering and Construction **Approved on: 7/8/2016**
 Add an additional \$1.0 million in funds for the preliminary engineering phase (\$0.35 million in BRR funds for FY15, \$0.09 million in State funds for FY15, \$0.13 million in BRR funds for FY16, \$0.04 million in State funds for FY16, \$0.34 million in BRR funds for FY17, and \$0.09 million in State funds for FY17). Add an additional \$4.0 million in funds for the construction phase (\$0.9 million in State funds for FY17 and \$3.1 million in State funds for FY18).

TIP ID: 6518	Agency ID: FR1321	Title: MD 355 Urbana Pike Bridge Replacement	Complete: 2018	Total Cost:	\$9,099	
Facility: MD 355 at Bennett Creek	State/Local	0/100/0	475 a	348 a	57 b	9,056
From:						
To:				5 b	2,080 c	5,920 c
Total Funds: 9,099						

Description: Replacement of MD 355 Urbana Pike bridge 1008600 over Bennett Creek. The existing bridge is structurally deficient.

Amendment: Adding funding for preliminary engineering, right of way, and construction **Approved on: 7/8/2016**
 Adding funding to reflect a new regionally significant bridge replacement project including \$9,056,000 in State funds in FY 2015-2020. Adding preliminary engineering State funding including \$475,000 to FY 15 and \$348,000 to FY 16. Adding right of way State funding including \$5,000 to FY 16, \$57,000 to FY 17, FY 18, FY 19, and FY 20. Adding construction State funding including \$2,080,000 to FY 2017 and \$5,920,000 to FY 18. An additional \$43,000 will be programmed in FY 2021.

**NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD
777 North Capitol Street, N.E.
Washington, D.C. 20002**

**RESOLUTION ON AN AMENDMENT TO THE FY 2015-2020 TRANSPORTATION
IMPROVEMENT PROGRAM (TIP) THAT IS EXEMPT FROM THE AIR QUALITY
CONFORMITY REQUIREMENT TO INCLUDE FUNDING FOR THE NEIGHBORHOOD STREETScape
IMPROVEMENTS AND CONSTRUCTION OF FIBER COMMUNICATION NETWORK ON FREEWAYS
PROJECTS, AS REQUESTED BY THE DISTRICT DEPARTMENT OF TRANSPORTATION (DDOT)**

WHEREAS, the National Capital Region Transportation Planning Board (TPB), which is the metropolitan planning organization (MPO) for the Washington Region, has the responsibility under the provisions of the Fixing America's Surface Transportation (FAST) Act for developing and carrying out a continuing, cooperative and comprehensive transportation planning process for the Metropolitan Area; and

WHEREAS, the TIP is required by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) as a basis and condition for all federal funding assistance to state, local and regional agencies for transportation improvements within the Washington planning area; and

WHEREAS, on October 15, 2014 the TPB adopted the FY 2015-2020 TIP; and

WHEREAS, in the attached letter of June 29, 2016, DDOT has requested that the FY 2015-2020 TIP be amended to include \$11.278 million in National Highway Performance Program (NHPP) funding in FY 2016 for construction in the Neighborhood Streetscape Improvements project; and to add \$2 million in Highway Safety Improvement Program (HSIP) funding in FY 2016 for the Construction of Fiber Communication Network on Freeways project, as described in the attached materials; and

WHEREAS, these projects are exempt from the air quality conformity requirement, as defined in Environmental Protection Agency's (EPA) Transportation Conformity Regulations as of April 2012;

NOW, THEREFORE, BE IT RESOLVED THAT the Steering Committee of the National Capital Region Transportation Planning Board amends the FY 2015-2020 TIP to include \$11.278 million in NHPP funding in FY 2016 for construction in the Neighborhood Streetscape Improvements project; and to add \$2 million in HSIP funding in FY 2016 for the Construction of Fiber Communication Network on Freeways project, as described in the attached materials.

Adopted by the Transportation Planning Board Steering Committee at its regular meeting on July 8, 2016

Government of the District of Columbia

Department of Transportation



d. Policy, Planning and Sustainability Administration

June 29, 2016

The Honorable Tim Lovain, Chairperson
National Capital Region Transportation Planning Board
Metropolitan Washington Council of Governments
777 North Capitol Street N.E., Suite 300
Washington, DC 20002-4290

Dear Chairman Lovain,

The District Department of Transportation (DDOT) requests that the FY 2015-2020 Transportation Improvement Program (TIP) be amended to increase project costs over 20% for two projects, 14th Street NW Streetscape TIP# 5308, and Construction of Fiber Communication Network on Freeways TIP# 6503. The TIP project listing for the project is attached.

The 14th Street NW Streetscape (#5308) proposed amendment will increase project costs by approximately \$11,579,000 for total final construction cost of \$21,880,608 of National Highway Performance Program (NHPP) funds in FY 2016. The request for an increase is due to a bidding price increase for contractors and an increase in scope of work to include new design standards and stakeholder coordination such as the following:

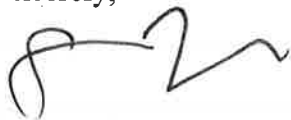
- DOEE's BMP requirements
- Transit Signal Priority (TSP) system for the entire corridor
- Bus islands installation
- Fiber Optic communication cables for the entire corridor
- ADA building entrances and vaults
- New ADA compliant MOT tools
- Rectangular Rapid Flashing Beacons (RRFBs) at un-signalized intersections
- LED Street lighting

The Construction of Fiber Communication Network on Freeways (#6503) proposed amendment will increase project costs by approximately \$2,000,000 for final construction estimate of \$5,500,000 funds in FY 2016 to reflect an increase of 36 percent and change funding source from Surface Transportation Program (STP) to Highway Safety Improvement Program (HSIP). The increase is mainly due to 10% contingency and another 10% for construction engineering.

The proposed amendment does not add additional capacity for motorized vehicles and does not require conformity analysis or public review and comment. The funding source has been identified, and the TIP will remain fiscally constrained. Therefore, DDOT requests that the TPB Steering Committee approve this amendment at its July 8, 2016 meeting.

We appreciate your cooperation in this matter. Should you have questions regarding this amendment, please contact Mark Rawlings at (202) 671-2234 or by e-mail at mark.rawlings@dc.gov. Of course, feel free to contact me directly.

Sincerely,



Samuel Zimbabwe
Associate Director, Policy, Planning, and Sustainability Administration (PPSA)

**DISTRICT OF COLUMBIA
TRANSPORTATION IMPROVEMENT PROGRAM
CAPITAL COSTS (in \$1,000)**

FY 2015 - 2020

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
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DDOT

Other

Roadside Improvements Citywide

TIP ID: 5308	Agency ID: SR070A, ED070	Title: Neighborhood Streetscape Improvements	Complete:	Total Cost:	\$22,253
Facility:	NHPP	80/20/0		200 a	50 b
From:				19,603 c	21,881 c
To:	NHS	80/20/0		50 b	
				6,000 c	
	STP	80/20/0		450 a	2,650 c
				1,280 c	
Total Funds:					44,384

Description: Improve sidewalks, curbs, gutters, trees, streetlights, traffic signals and trash receptacles. Projects include:

- A. 14th Street Streetscape, Thomas Circle - Florida Ave
- B. U St. NW Florida Ave. to 14th St.
- C. Sheriff Road NE safety improvements from 43rd St. to 51st St.
- D. Missouri Avenue, Kansas Avenue, Kennedy Street Intersection Improvements

Amendment: Increase FY 16 Construction NHPP by 72% for 14th Street Streetscape **Approved on: 7/8/2016**
 Request to amend 5308 to increase 14th Street Streetscape FY 16 construction costs. The 2011 construction cost was estimated at about \$9.9 million (excluding engineering contingency), and the August 2016 pre-final estimate is about \$17.1 million (excluding engineering contingency), an increase of \$7.2 million, or 72.7%.

Maintenance

Construction of Fiber Communication Network on Freeways

TIP ID: 6503	Agency ID:	Title: Construction of Fiber Communication Network on Freeways	Complete:	Total Cost:	\$5,500
Facility: Citywide	HSIP	80/20/0		5,500 c	5,500
From:					
To:					Total Funds: 5,500

Description: Perform feasibility study for upgrade of DDOT traffic signal system, conduct system design for implementation of advanced traffic controllers, Procure and install advanced traffic controllers and the associated devices; perform system integration.

Amendment: Increase cost by 36% **Approved on: 7/8/2016**
 We need to increase the amount from \$3.5M to \$5.5M. The increase is mainly due to 10% contingency and another 10% for construction engineering. In addition, DDOT intends to obligate the funds under HSIP rather than STP.

**NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD
777 North Capitol Street, N.E.
Washington, D.C. 20002**

**RESOLUTION ON AN AMENDMENT TO THE FY 2015-2020 TRANSPORTATION
IMPROVEMENT PROGRAM (TIP) THAT IS EXEMPT FROM THE AIR QUALITY
CONFORMITY REQUIREMENT TO INCLUDE FUNDING FOR THE BOUNDARY CHANNEL DRIVE
AT I-395 INTERCHANGE, I-95 DIRECTIONAL OFF-RAMP TO NORTHBOUND FAIRFAX COUNTY
PARKWAY, AND ROUTE 7 CORRIDOR IMPROVEMENTS PHASE 1 AND 2 PROJECTS
AND THE VEHICLE FUEL CONVERSION PROGRAM, AS REQUESTED BY
THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT)**

WHEREAS, the National Capital Region Transportation Planning Board (TPB), which is the metropolitan planning organization (MPO) for the Washington Region, has the responsibility under the provisions of the Fixing America's Surface Transportation (FAST) Act for developing and carrying out a continuing, cooperative and comprehensive transportation planning process for the Metropolitan Area; and

WHEREAS, the TIP is required by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) as a basis and condition for all federal funding assistance to state, local and regional agencies for transportation improvements within the Washington planning area; and

WHEREAS, on October 15, 2014 the TPB adopted the FY 2015-2020 TIP; and

WHEREAS, in the attached letters of June 28, 29 30, and July 1 2016, VDOT has requested that the FY 2015-2020 TIP be amended to include \$1.9 million in Revenue Sharing (REVSH) funds for the preliminary engineering, right-of-way acquisition, and construction phases and \$5.5 million in advanced construction (AC) for the construction phase for the Boundary Channel Drive at I-395 Interchange project; \$1.082 million in federal Demonstration (DEMO) funding and \$9+, ,000 in AC funding for right-of-way acquisition for the I-95 Directional Off-Ramp to NB Fairfax County Parkway project; \$20.1 million in AC for the preliminary engineering, and right-of-way phases, and \$9.3 million in Regional Surface Transportation Program (RSTP) funding for right-of-way acquisition for the Route 7 Corridor Improvements Phase 1 and 2 project; and \$24.6 million in AC funding for the Statewide Vehicle Fuel Conversion Program, as described in the attached materials; and

WHEREAS, these projects are either already included in the Air Quality Conformity Analysis of the 2015 CLRP Amendment and the FY 2015-2020 TIP or exempt from the air quality conformity requirement, as defined in Environmental Protection Agency's (EPA) Transportation Conformity Regulations as of April 2012;

NOW, THEREFORE, BE IT RESOLVED THAT the Steering Committee of the National Capital Region Transportation Planning Board amends the FY 2015-2020 TIP to include \$1.9 million in REVSH and \$5.5 million in AC for the Boundary Channel Drive at I-395 Interchange project; \$1.082 million in DEMO funding and \$978,000 in AC funding for the I-95 Directional Off-Ramp to NB Fairfax County Parkway project; \$20.1 million in AC and \$9.3 million in RSTP funding for the Route 7 Corridor Improvements Phase 1 and 2 project; and \$24.6 million in AC funding for the Statewide Vehicle Fuel Conversion Program, as described in the attached materials.

Adopted by the Transportation Planning Board Steering Committee at its regular meeting on July 8, 2016



COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION

4975 Alliance Drive
Fairfax, VA 22030

CHARLES A. KILPATRICK, P.E.
COMMISSIONER

June 30, 2016

The Honorable Tim Lovain, Chairman
National Capital Region Transportation Planning Board
Metropolitan Washington Council of Governments
777 North Capitol Street, N.E., Suite 300
Washington, DC 20002-4201

RE: National Capital Region FY 2015-2020 Transportation Improvement Program Amendment for TIP ID #5965, VDOT UPC #104323, Boundary Channel Dr. at I-395 Interchange

Dear Chairman Lovain:

The Virginia Department of Transportation requests an amendment to the FY 2015-2020 Transportation Improvement Program (TIP) to program funding for the preliminary engineering, right of way acquisition and construction phases of the Boundary Channel Drive at I-395 Interchange project. The project will improve regional traffic flow on Boundary Channel Drive adjacent to the I-395 interchange.

The amendment adds approximately \$1.9 million in Revenue Sharing funds for the Preliminary Engineering, Right of Way and Construction phases, as well as approximately \$5.5 million in Advance Construction funding for the Construction Phase. The total cost estimate for the project is \$9.3 million. VDOT staff has made appropriate revisions to the TPB's iTIP database.

While the proposed additional funds are new to the TIP, they are part of the total revenue estimates included in VDOT's financial plans for the 2014 CLRP update. This amendment will not impact the regional air quality conformity analysis as the project is not regionally significant for air quality conformity purposes.

VDOT requests that this TIP Amendment be considered and acted upon by the Transportation Planning Board's Steering Committee at its meeting on July 8, 2016. VDOT's representative will attend the meeting and be available to answer any questions about the amendments.

Thank you for your consideration of this request.

Sincerely,

A handwritten signature in blue ink that reads 'Helen Cuervo'.

Helen Cuervo, P.E.
District Administrator
Northern Virginia District

cc: Ms. Diane Mitchel, VDOT
Ms. Rene'e Hamilton, VDOT-NoVA
Ms. Maria Sinner, P.E., VDOT-NoVA
Mr. Norman Whitaker, AICP, VDOT-NoVA



COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION

4975 Alliance Drive
Fairfax, VA 22030

CHARLES A. KILPATRICK, P.E.
COMMISSIONER

July 1, 2016

The Honorable Tim Lovain, Chairman
National Capital Region Transportation Planning Board
Metropolitan Washington Council of Governments
777 North Capitol Street, N.E., Suite 300
Washington, DC 20002-4201

RE: National Capital Region FY 2015-2020 Transportation Improvement Program Amendment for TIP # 6221, UPC 93033, I-95 Directional Off-Ramp to NB Fairfax County Parkway

Dear Chairman Lovain:

The Virginia Department of Transportation requests an amendment to the FY 2015-2020 Transportation Improvement Program (TIP) to program funding for UPC 90333, I-95 Directional Off-Ramp to NB Fairfax County Parkway. This project will provide direct access to Fairfax County Parkway by adding a dual-lane off ramp from I-95 northbound to northbound Fairfax County Parkway. The additional funding is being programmed for the completion of the PE phase.

\$978,000

The amendment adds \$1,082,000 in federal Demonstration funds and ~~\$987,000~~ in Advance Construction (AC) funds for Preliminary Engineering in FY 2015. The total project cost is estimated at approximately \$83 million. VDOT staff has made appropriate revisions to the TPB's iTIP database.

While the proposed additional funds are new to the TIP, they are part of the total revenue estimates included in VDOT's financial plans for the 2014 CLRP update. This amendment will not impact the regional air quality conformity analysis as the project was included in the most recently approved air quality conformity analysis.

VDOT requests that this TIP Amendment be considered and acted upon by the Transportation Planning Board's Steering Committee at its meeting on July 8, 2016. VDOT's representative will attend the meeting and be available to answer any questions about the amendments.

Thank you for your consideration of this request.

Sincerely,

Helen Cuervo, P.E.
District Administrator
Northern Virginia District

cc: Ms. Diane Mitchel, VDOT
Ms. Rene'e Hamilton, VDOT-NoVA
Ms. Maria Sinner, P.E., VDOT-NoVA
Mr. Norman Whitaker, AICP, VDOT-NoVA



COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION

4975 Alliance Drive
Fairfax, VA 22030

CHARLES A. KILPATRICK, P.E.
COMMISSIONER

June 29, 2016

The Honorable Tim Lovain, Chairman
National Capital Region Transportation Planning Board
Metropolitan Washington Council of Governments
777 North Capitol Street, N.E., Suite 300
Washington, DC 20002-4201

RE: National Capital Region FY 2015-2020 Transportation Improvement Program Amendment for
TIP ID #6519, VDOT UPC #99478, Route 7 Corridor Improvements Phase 1 and Phase 2, HB2 FY17

Dear Chairman Lovain:

The Virginia Department of Transportation requests an amendment to the FY 2015-2020 Transportation Improvement Program (TIP) to program funding for the preliminary engineering, right of way acquisition and construction phases of the Route 7 Corridor Improvements project. Phase 1 will add one travel lane east and west bound; upgrade intersections; and construct pedestrian and bicycle facilities.

The amendment adds \$2.4 million in Advance Construction funds for preliminary engineering, approximately \$17.7 million in Advanced Construction funds for right of way, and approximately 9.3 million in RSTP funds for right of way. The total cost estimate for the project is approximately \$135 million. VDOT staff has made appropriate revisions to the TPB's iTIP database.

While the proposed additional funds are new to the TIP, they are part of the total revenue estimates included in VDOT's financial plans for the 2014 CLRP update. This amendment will not impact the regional Air Quality Conformity Analysis (AQC) because the project is included in the most recently approved AQC.

VDOT requests that this TIP Amendment be considered and acted upon by the Transportation Planning Board's Steering Committee at its meeting on July 8, 2016. VDOT's representative will attend the meeting and be available to answer any questions about the amendments.

Thank you for your consideration of this request.

Sincerely,

A handwritten signature in cursive script that reads "Helen Cuervo".

Helen Cuervo, P.E.
District Administrator
Northern Virginia District

cc:

Ms. Diane Mitchel, VDOT
Ms. Rene'e Hamilton, VDOT-NoVA
Ms. Maria Sinner, P.E., VDOT-NoVA
Mr. Norman Whitaker, AICP, VDOT-NoVA



COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION

4975 Alliance Drive
Fairfax, VA 22030

CHARLES A. KILPATRICK, P.E.
COMMISSIONER

June 28, 2016

The Honorable Tim Lovain, Chairman
National Capital Region Transportation Planning Board
Metropolitan Washington Council of Governments
777 North Capitol Street, N.E., Suite 300
Washington, DC 20002-4201

RE: National Capital Region FY 2015-2020 Transportation Improvement Program Amendment for TIP ID #6041, VDOT UPC #T11802

Dear Chairman Lovain:

The Virginia Department of Transportation requests an amendment to the FY 2015-2020 Transportation Improvement Program (TIP) to program funding for the statewide Vehicle Fuel Conversion Program project, a program to convert state vehicles for alternative fuel use.

The proposed amendment adds approximately \$24.6 million in CMAQ and advance construction funds to the TIP. The total cost estimate for the project is approximately \$25.7 million. While the proposed additional funds are new to the TIP, they are part of the total revenue estimates included in VDOT's financial plans for the 2014 CLRP update. This amendment will not impact the regional air quality conformity analysis as the project is not significant for air quality purposes. VDOT staff has made appropriate revisions to the TPB's iTIP database. Staff also notes that, as this is a statewide program, similar amendments are also occurring in other Districts around the Commonwealth.

VDOT requests that this TIP Amendment be considered and acted upon by the Transportation Planning Board's Steering Committee at its meeting on July 8, 2016. VDOT's representative will attend the meeting and be available to answer any questions about the amendments.

Thank you for your consideration of this request.

Sincerely,

A handwritten signature in cursive script that reads 'Helen Cuervo'.

Helen Cuervo, P.E.
District Administrator
Northern Virginia District

cc: Ms. Rene'e Hamilton, VDOT-NoVA
Ms. Maria Sinner, P.E., VDOT-NoVA
Mr. Norman Whitaker, AICP, VDOT-NoVA

**NORTHERN VIRGINIA
TRANSPORTATION IMPROVEMENT PROGRAM
CAPITAL COSTS (in \$1,000)**

FY 2015 - 2020

	Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total	
Interstate											
Boundary Chanel Drive Modifications											
TIP ID: 5965	Agency ID: 104323		Title: Boundary Chanel Drive Modifications				Project Cost: \$9,335				Complete: 2020
Facility:	AC	0/100/0				5,537 c				5,537	
From:											
To:	Local	0/0/100		8,000 c						8,000	
	REVSH	0/50/50			1,440 a	1,458 c				3,798	
					900 b						
Total Funds:										17,335	

Description: This project involves modifications to the intersection of Boundary Channel Drive and Old Jefferson Davis Highway immediately off of the I-395/Boundary Channel Drive Interchange. The project is part of the County's Long Bridge Park redevelopment initiative which includes the construction of a large regional aquatic Center.

Amendment: Add Funding **Approved on: 7/8/2016**
 Add \$720,000 (REVSH) FFY 16 PE Phase; add \$450,000 (REVSH) FFY16 RW Phase; add \$728,784 (REVSH) FFY17, add \$5,537,432 (AC-Other) FFY17 CN Phase

I-95 NB DIRECTIONAL OFF RAMP TO NB FAIRFAX COUNTY PARKWAY											
TIP ID: 6221	Agency ID: 93033		Title: I-95 Directional Off Ramp to NB Fairfax County Parkway				Project Cost: \$82,625				Complete:
Facility: I-95	AC	0/100/0	3,604 a	911 a						911	
From: FXCO Pkwy Exit 166 to											
To: 0.6 mi. W. of Exit 166	DEMO	90/10/0	3,718 a	1,082 a						1,082	
	NHS	80/20/0	32 a								
Total Funds:										2,065	

Description:

Amendment: Add New Project **Approved on: 7/8/2016**
 Amend project into the FY 2015-2020 TIP with \$1.082 million in federal Demonstration funding and \$911,000 in advanced construction funding.

**NORTHERN VIRGINIA
TRANSPORTATION IMPROVEMENT PROGRAM
CAPITAL COSTS (in \$1,000)**

FY 2015 - 2020

	Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total	
Primary											
Route 7 (Leesburg Pike) Widening (VA 267 to Reston Ave.)											
TIP ID: 6519		Agency ID: 99478		Title: RTE 7 CORRIDOR IMPROVEMENTS HB 2 FY17				Project Cost: \$135,872 Complete: 2022			
Facility: RT 7 Leesburg Pike		AC	0/100/0		2,400 a	17,668 b				20,068	
From: Reston Ave											
To: Jarrett Valley Drive		RSTP	20/80/0			9,331 b				9,331	
Total Funds:										29,399	

Description: Rt 7 Corridor Improvements to add one travel lane both EB and WB; upgrade intersections; and construct pedestrian and bicycle facilities EB and WB.

Amendment: Add New Project **Approved on: 7/8/2016**
 Add \$2.4 million in advance construction for PE in FY 2016; \$17.7 million in advance construction and \$9.3 million in RSTP funding for ROW acquisition in FY 2017.

Other											
Virginia Statewide Vehicle Fuel Conversion Program											
TIP ID: 6041		Agency ID: T11802		Title: Virginia Statewide Vehicle Fuel Conversion Program				Project Cost:		Complete:	
Facility:		AC	80/20/0		21,094 c					21,094	
From:											
To:		AC Conversion	80/20/0			1,227 c	600 c			1,827	
		CMAQ	80/20/0	1,130 c	1,688 c					1,688	
Total Funds:										24,610	

Description: The project is for implementing the Statewide Vehicle Fuel Conversion Program.

Amendment: Add Funding **Approved on: 7/8/2016**
 Add \$1,350,766 (CM) & \$18,337,234 (AC-CM) FFY16, add \$981,643 (ACC-CM) FFY17, add \$480,000 (ACC-CM) FFY18. Remaining balance of \$16,875,591 (AC-CM) to be converted in future years.

NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD
777 North Capitol Street, N.E.
Washington, D.C. 20002

**RESOLUTION ON AN AMENDMENT TO THE FY 2015-2020 TRANSPORTATION
IMPROVEMENT PROGRAM (TIP) THAT IS EXEMPT FROM THE AIR QUALITY
CONFORMITY REQUIREMENT TO INCLUDE FUNDING FOR ELEVEN TRANSIT PROJECTS, AS
REQUESTED BY THE POTOMAC AND RAPPAHANNOCK TRANSPORTATION COMMISSION (PRTC)
AND THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT)**

WHEREAS, the National Capital Region Transportation Planning Board (TPB), which is the metropolitan planning organization (MPO) for the Washington Region, has the responsibility under the provisions of the Fixing America's Surface Transportation (FAST) Act for developing and carrying out a continuing, cooperative and comprehensive transportation planning process for the Metropolitan Area; and

WHEREAS, the TIP is required by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) as a basis and condition for all federal funding assistance to state, local and regional agencies for transportation improvements within the Washington planning area; and

WHEREAS, on October 15, 2014 the TPB adopted the FY 2015-2020 TIP; and

WHEREAS, in the attached letter of June 27, 2016, VDOT has requested that the FY 2015-2020 TIP be amended to include Urbanized Area Formula Grant funding (S.5307), Capital Investment Grant funding (S.5309), State of Good Repair Grant funding (S.5337-SGR), Buses and Bus Facilities Grant funding (S.5339) and Surface Transportation Program (STP) funding, as summarized below and described in the attached materials:

- \$10.338 million in S.5309 funding for the PRTC – Bus Acquisition/Replacement Program
- An additional \$745,000 in S.5339, \$475,000 S.5337-SGR, \$938,000 in STP funding; and a reduction of \$4.277 million in S.5307 funding for the PRTC – Preventive Maintenance project
- \$2.305 million in S.5309-B funding for the PRTC – Rehabilitate/Rebuild OmniRide Buses project
- Reduction of \$66,000 in S.5307 funding for the PRTC Security Enhancements project
- \$1.2 million in S.5307 funding and a reduction of \$1.8 million in S.5309 funding for the VRE Fare Collection System/Comm. Improvements project
- \$25,000 in S.5307 funding for the VRE Security Enhancements Systemwide project
- \$6.8 million in S.5337-SGR funding for the VRE Rolling Stock Modifications and Overhauls project
- \$23.625 million in S.5307 funding for the VRE Rolling Stock Acquisition project
- An additional \$215,000 in S.5307 funding, and a reduction of \$7.458 million in S.5337-SGR funding for the VRE Stations and Facilities project
- \$30.169 million in S.5337-SGR funding, and reduction of \$4.797 million in S.5307 funding for the VRE Storage Yards Improvements
- Addition of \$1.629 million in STP funding for the VRE Track Lease Improvements project; and

WHEREAS, these projects are exempt from the air quality conformity requirement, as defined in Environmental Protection Agency's (EPA) Transportation Conformity Regulations as of April 2012₃₁

NOW, THEREFORE, BE IT RESOLVED THAT the Steering Committee of the National Capital Region Transportation Planning Board amends the FY 2015-2020 TIP to include Urbanized Area Formula Grant funding (S.5307), Capital Investment Grant funding (S.5309), State of Good Repair Grant funding (S.5337-SGR), Buses and Bus Facilities Grant funding (S.5339) and Surface Transportation Program (STP) funding, as summarized below and described in the attached materials:

- \$10.338 million in S.5309 funding for the PRTC – Bus Acquisition/Replacement Program
- An additional \$745,000 in S.5339, \$475,000 S.5337-SGR, \$938,000 in STP funding; and a reduction of \$4.277 million in S.5307 funding for the PRTC – Preventive Maintenance project
- \$2.305 million in S.5309-B funding for the PRTC – Rehabilitate/Rebuild OmniRide Buses project
- Reduction of \$66,000 in S.5307 funding for the PRTC Security Enhancements project
- \$1.2 million in S.5307 funding and a reduction of \$1.8 million in S.5309 funding for the VRE Fare Collection System/Comm. Improvements project
- \$25,000 in S.5307 funding for the VRE Security Enhancements Systemwide project
- \$6.8 million in S.5337-SGR funding for the VRE Rolling Stock Modifications and Overhauls project
- \$23.625 million in S.5307 funding for the VRE Rolling Stock Acquisition project
- An additional \$215,000 in S.5307 funding, and a reduction of \$7.458 million in S.5337-SGR funding for the VRE Stations and Facilities project
- \$30.169 million in S.5337-SGR funding, and reduction of \$4.797 million in S.5307 funding for the VRE Storage Yards Improvements
- Addition of \$1.629 million in STP funding for the VRE Track Lease Improvements project

Adopted by the Transportation Planning Board Steering Committee at its regular meeting on July 8, 2016



COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION

4975 Alliance Drive
Fairfax, VA 22030

CHARLES A. KILPATRICK, P.E.
COMMISSIONER

June 27, 2016

The Honorable Tim Lovain, Chairman
National Capital Region Transportation Planning Board
Metropolitan Washington Council of Governments
777 North Capitol Street, N.E., Suite 300
Washington, DC 20002-4201

RE: National Capital Region FY 2015-2020 Transportation Improvement Program Amendments for PRTC and VRE Projects

Dear Chairman Lovain:

On behalf of the Potomac & Rappahannock Transportation Commission (PRTC), the Virginia Department of Transportation (VDOT) requests amendments to the FY 2015-2020 Transportation Improvement Program (TIP) for the following projects:

- PRTC – Preventative Maintenance (TIP ID 5601, Agency ID PRTC0004)
- PRTC – Bus Acquisition/Replacement Program (TIP ID 4506, Agency ID PRTC0005)
- PRTC – Rehabilitate/Rebuild OmniRide Buses (TIP ID 5540, Agency ID PRTC0003)
- PRTC – Security Enhancements (TIP ID 5707, Agency ID PRTC0006)
- VRE – Track Lease Improvements (TIP ID 5489, Agency ID VRE0012)
- VRE – Storage Yard Improvements (TIP ID 4070, Agency ID VRE0007)
- VRE – Rolling Stock Acquisition (TIP ID 4534, Agency ID VRE0009)
- VRE – Rolling Stock Modifications (TIP ID 4818, Agency ID VRE0001)
- VRE – Fare Collection System/Comm. Improvements (TIP ID 4802, Agency ID VRE0002)
- VRE – Security Enhancements Systemwide (TIP ID 4277, Agency ID VRE0003)
- VRE – Stations and Facilities (TIP ID 4310, Agency ID VRE0011)

In total, the proposed amendments add approximately \$105,067,000 in funding to the TIP while removing approximately \$11,832,000 in other funds from the various projects. Details regarding the requested TIP amendments may be found in the enclosed letter from PRTC.

The requested changes are necessary as funds for these projects must be included in an approved TIP in order for PRTC to access the funds through the Federal Transit Administration grant application process. These amendments will not impact the regional air quality conformity analysis as the projects are already accounted for in the current analysis or are conformity-exempt. Programming of these funds was anticipated in the most recent update of the CLRP Financial plan. PRTC staff has made appropriate revisions to the TPB's iTIP online database.

VDOT requests that these TIP Amendments be approved by the Transportation Planning Board's Steering Committee at its meeting on July 8, 2016. VDOT's representative will attend the meeting and will be available to answer any questions about the amendments.

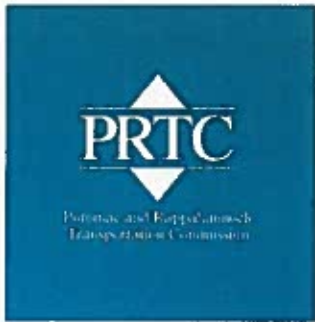
Thank you for your consideration of this request. Should you have any questions, please contact Norman Whitaker at 703-259-2799.

Sincerely,



Helen Cuervo, P.E.
District Administrator
Northern Virginia District

cc: Ms. Dianne Mitchell, VDOT
Ms. Maria Sinner, P.E., VDOT-NOVA
Ms. Jan Vaughn, VDOT-NOVA
Mr. Norman Whitaker, AICP, VDOT-NOVA
Ms. Betsy Massie, PRTC



14700 Potomac Mills Road
Woodbridge, VA 22192

June 7, 2016

Ms. Helen Cuervo, P.E.
District Engineer, NOVA
Virginia Department of Transportation
4975 Alliance Drive, Suite 4E-342
Fairfax, VA 22030

Dear Ms. *Helea* Cuervo:

The Potomac & Rappahannock Transportation Commission (PRTC) requests project amendments to the FY 2015-2020 Transportation Improvement Program (TIP) to reflect updated funding. The projects are already accounted for in the current conformity analysis or are conformity-exempt transit projects for the TIP. The changes we wish to be made to the FY2015-2020 TIP are outlined below and have been made in the iTIP:

- PRTC – Preventative Maintenance (TIP ID 5601, Agency ID PRTC0004). The proposed amendment will add \$745K in the construction phases of FY17-FY20 using FTA Section 5339 formula funds, decrease by \$4,277K in the construction phases of FY16-20 the Section 5307 formula funds to account for reduced funding, increase by \$475K in the construction phases of FY17-FY20 the Section 5337-SGR formula funds, and add \$938K in the construction phase of FY17 using STP funds.
- PRTC – Bus Acquisition/Replacement Program (TIP ID 4506, Agency ID PRTC0005). The proposed amendment will add \$10,338K in the construction phase of FY17 using Section 5339 Discretionary grant program funds. The funds will provide for the replacement of 16 commuter buses manufactured in 2002 that have reached the end of their useful life.
- PRTC – Rehabilitate/Rebuild OmniRide Buses (TIP ID 5540, Agency ID PRTC0003). The proposed amendment will add \$2,305K in the construction phase of FY16 using Section 5309 formula funds and will be used to overhaul nine commuter buses so that they will reach the end of their useful life in a state of good repair.
- PRTC – Security Enhancements (TIP ID 5707, Agency ID PRTC 0006). The proposed amendment will decrease by \$66K in the construction phases of FY16-FY20 the Section 5307 formula funds to account for reduced funding.
- VRE – Track Lease Improvements (TIP ID 5489, Agency ID VRE0012). The proposed amendment will increase by \$1,692K the construction phases of FY16-FY18 using STP funds and adds \$18,190K in the construction phase of FY19 also using STP funds.

OmniRide • Metro Direct • OmniLink • Cross County Connector • OmniMatch • VRE

Administrative Office: (703) 583-7782 • Customer Info: (703) 730-6664 • Toll Free: (888) 730-6664 • Fax: (703) 583-1377 • PRTCtransit.org

- VRE – Storage Yard Improvements (TIP ID 4070, Agency ID VRE0007). The proposed amendment will add \$11,375K and \$18,794K in the construction phases of FY16 and FY17, respectively, using Section 5337-SGR formula funds, delete \$5,261K of Section 5307 formula funds in the construction phase of FY16, and increase by \$464K the construction phase of FY17 using Section 5307 formula funds. The funds will provide for the construction of a Life-Cycle Overhaul and Upgrade Facility at Crossroads Yard among other improvements to the maintenance and storage yards.
- VRE – Rolling Stock Acquisition (TIP ID 4534, Agency ID VRE0009). The proposed amendment will add \$23,625K in the construction phase of FY2016 using Section 5307 formula funds. These funds will be used for the acquisition of nine rail cars that will be added to the existing trainsets, lengthening the trains. The proposed amendment also moves partial funding in the construction phases of FY16- FY20 from Section 5307 to Section 5337 formula funds which will be used for the continuing debt service on seventy-one railcars.
- VRE - Rolling Stock Modifications (TIP ID 4818, Agency ID VRE0001). The proposed amendment will add \$1,900K and \$4,900K in the construction phases of FY16 and FY17, respectively using Section 5337-SGR formula funds which will be used for projects that provide for rolling stock state of good repair.
- VRE - Fare Collection System/Comm. Improvements (TIP ID 4802, Agency ID VRE0002). The proposed amendment removes \$1,800K in the construction phase of FY16 of Section 5309 formula funds to account for reduced funding and adds \$1,200K in the construction phase of FY17 using Section 5307 formula funds. The funding will be used to upgrade the fare machines to accept chip-embedded credit cards.
- VRE – Security Enhancements Systemwide (TIP ID 4277, Agency ID VRE0003). The proposed amendment will add \$25K in the construction phases of FY16-FY20 using Section 5307 formula funds. Funding will provide for enhanced lighting systemwide.
- VRE – Stations and Facilities (TIP ID 4310, Agency ID VRE0011). The proposed amendments eliminates \$428K of Section 5307 formula funds in the construction phases of FY17-FY20 and increases by \$643K the construction phase of FY16 using Section 5307 formula funds. The proposed amendment also increases by \$7,458K the construction phases of FY16 and FY17 using Section 5337-SGR formula funding. These funds will be used for projects that provide for stations and other facilities state of good repair.

PRTC requests that the Transportation Planning Board's (TPB) 2015-2020 TIP and the Commonwealth's FY2015-2020 STIP be amended to reflect the aforementioned changes as

Ms. Helen Cuervo

June 7, 2016

Page 3

project funds must be included in an approved TIP and STIP before PRTC can access these funds through the Federal Transit Administration grant application process.

Should you have any questions, please feel free to contact Betsy Massie at (703) 580-6113 or at bmassie@omniride.com. We greatly appreciate Mr. Whitaker's and Mr. Beacher's continuing assistance in facilitating these actions.

Sincerely,



Eric Marx
Interim Executive Director

cc: Betsy Massie, PRTC
Andrew Austin, MWCOG
Christine Hoeffner, VRE
Jan Vaughan, VDOT
Norman Whitaker, AICP, VDOT-NOVA
Andrew Beacher, P.E., VDOT
Marie Berry, VDRPT

**NORTHERN VIRGINIA
TRANSPORTATION IMPROVEMENT PROGRAM
CAPITAL COSTS (in \$1,000)**

FY 2015 - 2020

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
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Transit

PRTC - Bus Acquisition / Replacement Program

TIP ID: 4506	Agency ID: PRTC0005	Title: PRTC - Bus Acquisition / Replacement Program	Project Cost: \$10,338	Complete:
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Facility: PRTC - Bus Acquisition	Sect. 5309	80/16/4	572 a							
From: NOVA Districtwide										
To:	Sect. 5339	80/16/4			10,338 c					10,338

Total Funds: 10,338

Description: Replacement of sixteen commuter buses manufactured in 2002 that have reached the end of their useful life.

Amendment: Add Funding **Approved on: 7/8/2016**
 The proposed amendment will add \$10,338K in the construction phase of FY17 using Section 5339 Discretionary grant program funds. The funds will provide for the replacement of 16 commuter buses manufactured in 2002 that have reached the end of their useful life.

PRTC - Capital Cost of Contracting

TIP ID: 5601	Agency ID: PRTC0004	Title: PRTC - Preventive Maintenance	Project Cost: 	Complete: 2040
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Facility:	Sect. 5307	80/0/20	5,095 c	2,610 c	2,310 c	1,513 c	1,600 c	1,650 c	1,700 c	11,383
From:										
To:	Sect. 5337-SGR	80/0/20	1,917 c	1,008 c	1,008 c	1,157 c	1,300 c	1,450 c	1,600 c	7,523
	Sect. 5339	80/0/20				161 c	177 c	194 c	213 c	745
	STP	80/16/4				938 c				938

Total Funds: 24,223

Description: Maintenance of the Omniride and Omnilink fleet.

Amendment: Add Funding **Approved on: 7/8/2016**
 The proposed amendment will add \$745K in the construction phases of FY17-FY20 using FTA Section 5339 formula funds, decrease by \$4,277K in the construction phases of FY16-20 the Section 5307 formula funds to account for reduced funding, increase by \$475K in the construction phases of FY17-FY20 the Section 5337-SGR formula funds, and add \$938K in the construction phase of FY17 using STP funds.

PRTC - Rehabilitate / Rebuild OmniRide Buses

TIP ID: 5540	Agency ID: PRTC0003	Title: PRTC - Rehabilitate / Rebuild OmniRide Buses	Project Cost: \$10,854	Complete: 2019
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Facility: OmniRide Buses	Sect. 5309-B	32/64/4	8,549 c		2,305 c					2,305
From: Prince William County										
To:										Total Funds: 2,305

Description: Overhaul OmniRide buses in order to meet bus useful life in a state of good repair.

Amendment: Add Funding **Approved on: 7/8/2016**
 The proposed amendment will add \$2,305K in the construction phase of FY16 using Section 5309 formula funds and will be used to overhaul nine commuter buses so that they will reach the end of their useful life in a state of good repair.

**NORTHERN VIRGINIA
TRANSPORTATION IMPROVEMENT PROGRAM
CAPITAL COSTS (in \$1,000)**

FY 2015 - 2020

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
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PRTC Security Enhancements

TIP ID: 5707	Agency ID: PRTC0006	Title: PRTC Security Enhancements	Project Cost: \$846	Complete: 116
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Facility: PRTC Transit Center	Sect. 5307	80/16/4	64 c	27 c	24 c	15 c	16 c	17 c	17 c	116
From:										
To:	Total Funds: 134									

Description: Ongoing
Improves safety and security at the PRTC Transit Center. Grantees must certify that at least 1% of Formula funding received each fiscal year is being used for transit security projects. Projects include cameras, additional lighting, drills, communications systems, facility access, System Safety Security Plan, etc.

Amendment: Reduce Funding **Approved on: 7/8/2016**
The proposed amendment will decrease by \$66K in the construction phases of FY16-FY20 the Section 5307 formula funds to account for reduced funding.

VRE - Administration / Studies / Training

TIP ID: 4802	Agency ID: VRE0002	Title: Fare Collection System/Comm. Improvements	Project Cost: \$18,728	Complete: 2030
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Facility:	Sect. 5307	80/16/4				1,200 c				1,200
From: Systemwide										
To:	Total Funds: 1,200									

Description: Ongoing maintenance of the fare collection equipment and the next generation of fare equipment. Fare Collection III

Amendment: Reprogram Funding **Approved on: 7/8/2016**
The proposed amendment removes \$1,800K in the construction phase of FY16 of Section 5309 formula funds to account for reduced funding and adds \$1,200K in the construction phase of FY17 using Section 5307 formula funds. The funding will be used to upgrade the fare machines to accept chip-embedded credit cards.

TIP ID: 4277	Agency ID: VRE0003	Title: Security Enhancements Systemwide	Project Cost: \$2,100	Complete: 2040
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Facility:	Sect. 5307	80/16/4	200 c	100 c	105 c	105 c	105 c	105 c	105 c	625
From: Systemwide										
To:	Total Funds: 625									

Description: Grantees must certify that at least 1% of 5307 funding received each fiscal year is being used for transit security projects

Amendment: Add Funding **Approved on: 7/8/2016**
The proposed amendment will add \$25K in the construction phases of FY16-FY20 using Section 5307 formula funds. Funding will provide for enhanced lighting systemwide.

**NORTHERN VIRGINIA
TRANSPORTATION IMPROVEMENT PROGRAM
CAPITAL COSTS (in \$1,000)**

FY 2015 - 2020

	Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total	
VRE - Rolling Stock Acquisition											
TIP ID: 4818	Agency ID: VRE0001	Title: Rolling Stock Modifications and Overhauls					Project Cost: \$35,765 Complete:				
Facility:	Sect. 5307 1	80/16/4	483 c		2,905 c					2,905	
From: Systemwide											
To:	Sect. 5309 1	80/16/4	2,283 c								
	Sect. 5337-SGR	80/16/4	4,900 c	2,000 c	1,900 c	4,900 c				8,800	
Total Funds:										11,705	

Description: Technological developments and safety mandates from the Federal Railroad Administration (FRA), may require ongoing improvements to the VRE fleet. Projects that bring VRE into compliance with future federal mandates will be given the highest funding priority. Implementing PTC as required by FRA.

Amendment: Add Funding **Approved on: 7/8/2016**
 The proposed amendment will add \$1,900K and \$4,900K in the construction phases of FY16 and FY17, respectively using Section 5337-SGR formula funds which will be used for projects that provide for rolling stock state of good repair.

TIP ID: 4534	Agency ID: VRE0009	Title: Rolling Stock Acquisition					Project Cost: \$58,761 Complete:				
Facility: VRE Rolling Stock	Sect. 5307	80/20/0	3,574 c								
From: Systemwide											
To:	Sect. 5307 1	28/68/4			23,625 c					23,625	
	Sect. 5307 2	80/16/4	6,545 c	5,750 c		2,726 c	2,726 c	2,726 c	2,726 c	16,654	
	Sect. 5309-FG	80/20/0	5,135 c								
	Sect. 5337-SGR	80/16/4	13,793 c	4,146 c	4,675 c	3,878 c	3,878 c	3,878 c	3,878 c	24,333	
	STP	80/13/7		9,023 c						9,023	
Total Funds:										73,635	

Description: VRE has purchased from Sumitomo 11 cab cars (base order), 50 cab and trailers (option order) and an additional 10 cars. This project includes funding for a new procurement of up to 42 railcars with of base order of eight cars and option orders of seven, five and nine cars.

Amendment: Add Funding **Approved on: 5/1/2015**
 Add \$9,023,439 Flexible STP funding in FY 2015 for expansion railcars.

Amendment: Add Funding **Approved on: 9/4/2015**
 Add \$4.725 million in Flexible STP funds in FY 2016 and \$18.9 million in Flexible STP funds in FY 2017 for 9 expansion railcars.

Modification: Update Funding **Approved on: 9/28/2015**
 Change the funding source and split of \$4.725 million in FY 2016 and \$18.9 million in FY 2017 from STP to Section 5307 with 68% federal, 68% state, and 4% local funding.

Amendment: Add Funding **Approved on: 7/8/2016**
 The proposed amendment will add \$23,625K in the construction phase of FY2016 using Section 5307 formula funds. These funds will be used for the acquisition of nine rail cars that will be added to the existing trainsets, lengthening the trains. The proposed amendment also moves partial funding in the construction phases of FY16- FY20 from Section 5307 to Section 5337 formula funds which will be used for the continuing debt service on seventy-one railcars.

**NORTHERN VIRGINIA
TRANSPORTATION IMPROVEMENT PROGRAM
CAPITAL COSTS (in \$1,000)**

FY 2015 - 2020

	Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total	
VRE - Stations and Facilities											
TIP ID: 4310	Agency ID: VRE0011	Title: VRE Stations and Facilities						Project Cost: \$4,612	Complete:		
Facility: VRE Stations and Facilities	Sect. 5307	80/16/4	100 c	107 c	750 c					857	
From: Districtwide	Sect. 5309	80/20/0	500 c								
To:	Sect. 5337-SGR	80/16/4	500 c	1,346 c	5,420 c	3,930 c	946 c	946 c	946 c	13,534	
Total Funds:										14,391	

Description: Involves the addition of second platforms, canopy and platform extensions, replacement of signage and other related improvements at various VRE stations in order to keep the stations in good repair. This work will be done at various stations including Fredericksburg, Leeland Road, Brooke, Manassas, Manassas Park, Woodbridge, Rippon, Rolling Road, Broad Run, Burke and other stations to be determined.

Amendment: Add Funding **Approved on: 7/8/2016**
 The proposed amendments eliminates \$428K of Section 5307 formula funds in the construction phases of FY17-FY20 and increases by \$643K the construction phase of FY16 using Section 5307 formula funds. The proposed amendment also increases by \$7,458K the construction phases of FY16 and FY17 using Section 5337-SGR formula funding. These funds will be used for projects that provide for stations and other facilities state of good repair.

VRE - Tracks and Storage Yards											
TIP ID: 4070	Agency ID: VRE0007	Title: VRE Storage Yards Improvements						Project Cost: \$44,801	Complete: 2030		
Facility:	Sect. 5307	80/10/0	5,626 c	2,422 c						2,422	
From: Systemwide	Sect. 5307 1	62/34/4				5,100 c	4,636 c			9,736	
To:	Sect. 5309	80/10/10	262 c								
	Sect. 5337-SGR	80/16/4	5,497 c	17,099 c	11,375 c					28,474	
	Sect. 5337-SGR 1	62/34/4				18,794 c				18,794	
Total Funds:										59,426	

Description: As additional cars are added to accommodate ridership demand, storage yards and maintenance facilities must be obtained and/or upgraded. Improvements to the yards and maintenance facilities will allow additional maintenance to be performed by VRE contractors and additional vehicles to be stored.

Amendment: Add Funding **Approved on: 7/8/2016**
 The proposed amendment will add \$11,375K and \$18,794K in the construction phases of FY16 and FY17, respectively, using Section 5337-SGR formula funds, delete \$5,261K of Section 5307 formula funds in the construction phase of FY16, and increase by \$464K the construction phase of FY17 using Section 5307 formula funds. The funds will provide for the construction of a Life-Cycle Overhaul and Upgrade Facility at Crossroads Yard among other improvements to the maintenance and storage yards.

**NORTHERN VIRGINIA
TRANSPORTATION IMPROVEMENT PROGRAM
CAPITAL COSTS (in \$1,000)**

FY 2015 - 2020

	Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total	
VRE Track Lease Improvements											
TIP ID: 5489	Agency ID: VRE0012		Title: VRE Track Lease Improvements				Project Cost: \$229,971				Complete:
Facility: VRE Track	STP	50/34/16	28,560 c	15,603 c	16,337 c	17,024 c	17,490 c	18,190 c		84,644	
From: NoVA and District of Columbia										Total Funds: 84,644	
To:											

Description: Provides capitalized access fees in the form of long term and related capital improvements on the railroad systems that VRE operates on, railroad systems owned by Amtrak, CSX, and Norfolk Southern.

Amendment: Add Funding **Approved on: 7/8/2016**
 The proposed amendment will increase by \$1,692K the construction phases of FY16-FY18 using STP funds and adds \$18,190K in the construction phase of FY19 also using STP funds.

NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD
777 North Capitol Street, N.E.
Washington, D.C. 20002

**RESOLUTION ON AN AMENDMENT TO THE FY 2015-2020 TRANSPORTATION
IMPROVEMENT PROGRAM (TIP) THAT IS EXEMPT FROM THE AIR QUALITY
CONFORMITY REQUIREMENT TO INCLUDE FUNDING FOR THE THOMAS CIRCLE TUNNEL LIGHTS
CONVERSION TO LED AND STREETLIGHT UPGRADE ON MASSACHUSETTS AVENUE PROJECTS,
AS REQUESTED BY THE DISTRICT DEPARTMENT OF TRANSPORTATION (DDOT)**

WHEREAS, the National Capital Region Transportation Planning Board (TPB), which is the metropolitan planning organization (MPO) for the Washington Region, has the responsibility under the provisions of the Fixing America's Surface Transportation (FAST) Act for developing and carrying out a continuing, cooperative and comprehensive transportation planning process for the Metropolitan Area; and

WHEREAS, the TIP is required by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) as a basis and condition for all federal funding assistance to state, local and regional agencies for transportation improvements within the Washington planning area; and

WHEREAS, on October 15, 2014 the TPB adopted the FY 2015-2020 TIP; and

WHEREAS, in the attached letter of July 1, 2016, DDOT has requested that the FY 2015-2020 TIP be amended to include \$1.3 million in Surface Transportation Program (STP) funding to FY 2016 for construction of the Thomas Circle Tunnel Lights Conversion to LED Lights project; and \$4.8 million in STP funding to FY 2016 for the Streetlight Upgrade on Massachusetts Avenue SE from 19th St. to 6th St. project, as described in the attached materials; and

WHEREAS, these projects are exempt from the air quality conformity requirement, as defined in Environmental Protection Agency's (EPA) Transportation Conformity Regulations as of April 2012;

NOW, THEREFORE, BE IT RESOLVED THAT the Steering Committee of the National Capital Region Transportation Planning Board amends the FY 2015-2020 TIP to include \$1.3 million in STP funding to FY 2016 for construction of the Thomas Circle Tunnel Lights Conversion to LED Lights project; and \$4.8 million in STP funding to FY 2016 for the Streetlight Upgrade on Massachusetts Avenue SE from 19th St. to 6th St. project, as described in the attached materials.

Adopted by the Transportation Planning Board Steering Committee at its regular meeting on July 8, 2016

Government of the District of Columbia

Department of Transportation



d. Policy, Planning and Sustainability Administration

July 1, 2016

The Honorable Tim Lovain, Chairperson
National Capital Region Transportation Planning Board
Metropolitan Washington Council of Governments
777 North Capitol Street N.E., Suite 300
Washington, DC 20002-4290

Dear Chairman Lovain,

The District Department of Transportation (DDOT) requests that the FY 2015-2020 Transportation Improvement Program (TIP) be amended to increase amounts of over 20% of total project costs for two projects, Thomas Circle Tunnel Lights Conversion to LED Lights TIP# 6420, and Streetlight Upgrade on Massachusetts Ave from 19th St SE to 6th St NE TIP# 6421. The TIP project listing for the project is attached.

Thomas Circle Tunnel Lights Conversion to LED Lights (6420) proposed amendment will increase project costs by approximately 50 percent for total final construction costs of \$2,600,000 of Surface Transportation Program (STP) funds in FY 2016. The request is due to the addition of emergency power supply, additional control system provisions, and MOT. The requested increase amount includes construction budget of \$2,200,000.00 and CE of \$400,000.00.

The second proposed amendment will be to increase Massachusetts Avenue Streetlight Construction from 6th Street NE to 19th Street SE (6421) project costs by approximately 39 percent for total final construction costs of \$4,800,000 of Surface Transportation Program (STP) funds in FY 2016. The increase is due to an analysis of bid prices that revealed four pay items that account for the 69 percent of the total overrun. The engineer's estimate was based on previous bid prices; however, new provision was added to the specification and was not reflected on the price. If the engineer's estimate is revised, lowest bid would be 8.768 percent above the "adjusted" engineer's estimate. The requested increase amount includes construction budget of \$4,000,000.00 and CE of \$800,000.00.

The proposed amendment does not add additional capacity for motorized vehicles and does not require conformity analysis or public review and comment. The funding source has been identified, and the TIP will remain fiscally constrained. Therefore, DDOT requests that the TPB Steering Committee approve this amendment at its July 8, 2016 meeting.

We appreciate your cooperation in this matter. Should you have questions regarding this amendment, please contact Mark Rawlings at (202) 671-2234 or by e-mail at mark.rawlings@dc.gov. Of course, feel free to contact me directly.

Sincerely,

A handwritten signature in black ink, appearing to read 'S Zimbabwe', written over a horizontal line.

Samuel Zimbabwe
Associate Director, Policy, Planning, and Sustainability Administration (PPSA)

**DISTRICT OF COLUMBIA
TRANSPORTATION IMPROVEMENT PROGRAM
CAPITAL COSTS (in \$1,000)**

FY 2015 - 2020

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
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DDOT

ITS

Traffic Signal LED Replacement

TIP ID: 6420	Agency ID:	Title: Thomas Circle Tunnel Lights Conversion to LED Lights	Complete: 2018	Total Cost: \$3,000
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Facility: Thomas Circle Tunnel	STP	80/20/0	200 a	2,600 c					2,800
From:									Total Funds: 2,800
To:									

Description: The objective of this project is to upgrade the existing condition of the tunnel lights and controller under the Thomas Circle Tunnel. The project includes replacing the existing lights with new LED lights, installing the new conduit system, and cables. This will be the first tunnel LED lighting conversion project.

Amendment: Add Funding **Approved on: 7/8/2016**
 The increase is due to the addition of emergency power supply, additional control system provisions, and MOT. Add \$1.3 million in STP funding for construction in FY 2016.

Maintenance

Streetlight Upgrade

TIP ID: 6421	Agency ID:	Title: Streetlight Upgrade on Massachusetts Ave from 19th St SE to 6th St	Complete: 2018	Total Cost: \$2,900
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Facility: Massachusetts Ave	STP	80/20/0	2,900 c	4,800 c					7,700
From: 19th St SE									Total Funds: 7,700
To: 6th St NE									

Description:

Amendment: Add Funding **Approved on: 7/8/2016**
 Add 4,800,000 STP in FY 2016.

NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD
777 North Capitol Street, N.E.
Washington, D.C. 20002

**RESOLUTION ON AN AMENDMENT TO THE FY 2015-2020 TRANSPORTATION
IMPROVEMENT PROGRAM (TIP) THAT IS EXEMPT FROM THE AIR QUALITY
CONFORMITY REQUIREMENT TO INCLUDE FUNDING FOR THE ROUTE 1 WIDENING FROM
FEATHERSTONE ROAD TO MARY'S WAY AND FAIRFAX COUNTY PARKWAY WIDENING PROJECTS,
AS REQUESTED BY THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT)**

WHEREAS, the National Capital Region Transportation Planning Board (TPB), which is the metropolitan planning organization (MPO) for the Washington Region, has the responsibility under the provisions of the Fixing America's Surface Transportation (FAST) Act for developing and carrying out a continuing, cooperative and comprehensive transportation planning process for the Metropolitan Area; and

WHEREAS, the TIP is required by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) as a basis and condition for all federal funding assistance to state, local and regional agencies for transportation improvements within the Washington planning area; and

WHEREAS, on October 15, 2014 the TPB adopted the FY 2015-2020 TIP; and

WHEREAS, in the attached letters of July 7, 2016, VDOT has requested that the FY 2015-2020 TIP be amended to include \$400,000 in Northern Virginia Transportation Authority (NVTA) Bond funding to FY 2016 for planning and engineering, \$2.779 million in NVTA Bond funding to FY 2016 for right-of-way acquisition, \$2.5 million in National Highway Performance Program (NHPP) funding to FY 2016 for right-of-way acquisition, and release \$9.853 million in NVTA Bond funding from FY 2017 and \$16.122 million in Advanced Construction (AC), and reprogram \$5.182 million from Regional Surface Transportation Program (RSTP) to AC Conversion for the Route 1 Widening from Featherstone Road to Mary's Way project; and to include \$10 million in NVTA Paygo funding in FY 2016 for preliminary engineering of the Fairfax County Parkway widening from Ox Road to Lee Highway project, as described in the attached materials, and

WHEREAS, these projects are already included in the Air Quality Conformity Analysis of the 2015 CLRP Amendment and the FY 2015-2020 TIP;

NOW, THEREFORE, BE IT RESOLVED THAT the Steering Committee of the National Capital Region Transportation Planning Board amends the FY 2015-2020 TIP to include \$400,000 in NVTA Bond funding to FY 2016 for planning and engineering, \$2.779 million in NVTA Bond funding to FY 2016 for right-of-way acquisition, \$2.5 million in NHPP funding to FY 2016 for right-of-way acquisition, and release \$9.853 million in NVTA Bond funding from FY 2017 and \$16.122 million in AC, and reprogram \$5.182 million from RSTP to AC Conversion for the Route 1 Widening from Featherstone Road to Mary's Way project; and to include \$10 million in NVTA Paygo funding in FY 2016 for preliminary engineering of the Fairfax County Parkway widening from Ox Road to Lee Highway project and described in the attached materials:

Adopted by the Transportation Planning Board Steering Committee at its regular meeting on July 8, 2016



COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION

CHARLES A. KILPATRICK, P.E.
COMMISSIONER

4975 Alliance Drive
Fairfax, VA 22030

July 7, 2016

The Honorable Tim Lovain, Chairman
National Capital Region Transportation Planning Board
Metropolitan Washington Council of Governments
777 North Capitol Street, N.E., Suite 300
Washington, DC 20002-4201

RE: National Capital Region FY 2015-2020 Transportation Improvement Program Amendment for
TIP ID #6446, VDOT UPC #104303

Dear Chairman Lovain:

The Virginia Department of Transportation requests an amendment to the FY 2015-2020 Transportation Improvement Program (TIP) to program funding for the Widen Route 1 to Six Lanes project. This project widens Route 1 to six lanes between Featherstone Road and Mary's Way in Prince William County. The amendment is needed to reflect the latest planned funding obligations and cost estimates for the project.

The amendment adds approximately \$5.7 million in NVTVA, Federal NHPP and other funds to the TIP. In addition, it releases/removes approximately \$27.5 million in advance construction and other funds (including match). The total cost estimate for the project is \$96.4 million. While the proposed additional funds are new to the TIP, they are part of the total revenue estimates included in VDOT's financial plans for the 2014 CLRP update. This amendment will not impact the regional air quality conformity analysis since the project is already included in the approved CLRP. VDOT staff has made appropriate revisions to the TPB's iTIP database.

VDOT requests that this TIP Amendment be considered and acted upon by the Transportation Planning Board's Steering Committee at its meeting on July 8, 2016. VDOT's representative will attend the meeting and be available to answer any questions about the amendments.

Thank you for your consideration of this request.

Sincerely,

Helen Cuervo, P.E.
District Administrator
Northern Virginia District

cc: Ms. Rene'e Hamilton, VDOT-NoVA
Ms. Maria Sinner, P.E., VDOT-NoVA
Mr. Norman Whitaker, AICP, VDOT-NoVA



COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION

4975 Alliance Drive
Fairfax, VA 22030

CHARLES A. KILPATRICK, P.E.
COMMISSIONER

July 7, 2016

The Honorable Tim Lovain, Chairman
National Capital Region Transportation Planning Board
Metropolitan Washington Council of Governments
777 North Capitol Street, N.E., Suite 300
Washington, DC 20002-4201

RE: National Capital Region FY 2015-2020 Transportation Improvement Program Amendment for TIP#6520, UPC 107937, Widen Fairfax County Parkway to 6 Lanes between Route 123 and 2,000 ft. North of Route 29.

Dear Chairman Lovain:

The Virginia Department of Transportation requests an amendment to the FY 2015-2020 Transportation Improvement Program (TIP) to program funding for UPC 107937, Fairfax County Parkway widening. This project will widen Fairfax County Parkway from 4 lanes to 6 lanes between Route 123 (Ox Road) and a point 2,000 feet North of Route 29 (Lee Highway). This project is part of a long-term program of upgrades for Fairfax County Parkway.

The amendment adds \$10 million in Northern Virginia Transportation Authority (NVTA) funding for Preliminary Engineering in FY 2016. The total project cost is estimated at approximately \$82 million. VDOT staff has made appropriate revisions to the TPB's iTIP database.


While the proposed funds are new to the TIP, they are part of the total revenue estimates included in VDOT's financial plans for the 2014 CLRP update. This amendment will not impact the regional air quality conformity analysis, as construction of the project was included in the most recently approved air quality conformity analysis.

The Honorable Tim Lovain, Chairman
July 7, 2017
Page 2

VDOT requests that this TIP Amendment be considered and acted upon by the Transportation Planning Board's Steering Committee at its meeting on July 8, 2016. VDOT's representative will attend the meeting and be available to answer any questions about the amendments.

Thank you for your consideration of this request.

Sincerely,


Helen Cuervo, P.E.
District Administrator
Northern Virginia District

cc: Ms. Diane Mitchel, VDOT
Ms. Rene'e Hamilton, VDOT-NoVA
Ms. Maria Sinner, P.E., VDOT-NoVA
Mr. Norman Whitaker, AICP, VDOT-NoVA

**NORTHERN VIRGINIA
TRANSPORTATION IMPROVEMENT PROGRAM
CAPITAL COSTS (in \$1,000)**

FY 2015 - 2020

	Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
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Primary

Route 1 Improvements

TIP ID: 6446	Agency ID: 104303	Title: Route 1 Widening from Featherstone Road to Mary's Way	Project Cost: \$96,391	Complete: 2019
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Facility: US 1 Route 1	AC Conversion	80/20/0					5,185 b		5,185
From: Featherstone Road	NHPP	100/0/0		2,500 b					2,500
To: Mary's Way	NVTA-BOND	0/100/0		4,100 a					55,579
				51,479 b					
	RSTP	80/20/0		300 a					300

Total Funds: 63,564

Description: Widen from a 4 lane undivided highway to a 6 lane divided highway

Amendment: Add Funding **Requested on: 7/8/2016**
 TIP AMD add \$400,000 (Other-NVTA) PE phase; add \$2,778,794 (Other) FFY16, release \$1,491,518 (AC-RSTP) FFY16, add \$2,500,000 (NHPP) FFY16 RW phase; remove \$9,853,175 (Other-NVTA) & \$12,897,551 (AC-RSTP) FFY17 CN phase

Secondary

Fairfax County Parkway Improvements

TIP ID: 6520	Agency ID: UPC 107937	Title: Fairfax County Parkway widen from 4 to 6 lanes	Project Cost: \$82,431	Complete: 2025
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Facility: 286 Fairfax County Parkway	NVTA-PAYGO	0/100/0					10,000 a		10,000
From: 123 Ox Road									
To: 29 2,000 ft. north of Lee Highway									

Total Funds: 10,000

Description: Widen Fairfax County Parkway from 4 lanes to 6

Amendment: Add New Project **Requested on: 7/8/2016**
 Amend project into the FY 2015-2020 TIP with \$10 million in NVTA-PAYGO funding for preliminary engineering in FY 2016.



MEMORANDUM

TO: Transportation Planning Board
FROM: Kanti Srikanth, TPB Staff Director
SUBJECT: Letters Sent/Received
DATE: July 14, 2016

The attached letters were sent/received since the last TPB meeting.



Committee on Transportation and Infrastructure
U.S. House of Representatives

Washington, DC 20515

Bill Shuster
Chairman

Peter A. DeFazio
Ranking Member

June 15, 2016

Christopher P. Bertram, Staff Director

Katherine W. Dedrick, Democratic Staff Director

The Honorable Tim Lovain
Chairman
Transportation Planning Board
Metropolitan Washington Council of Governments
777 North Capitol St NE #300
Washington, DC 20002

Dear Chairman Lovain:

Thank you for your testimony before the Subcommittee on Highways and Transit on May 24, 2016, concerning "Improving the Safety and Reliability of the Washington Metro." I am pleased you appeared and testified. The Subcommittee gained valuable insight from the information you provided at the hearing.

Enclosed, please find additional questions for written responses for the record. The Subcommittee appreciates your written responses no later than July 15, 2016. Please provide an electronic version of your response via email to Caryn.Lund@mail.house.gov.

If you or your staff have any questions or need further information, please contact Caryn Moore Lund of the Subcommittee at (202) 225-6715.

Sincerely,

Sam Graves
Chairman
Subcommittee on Highways and Transit

Enclosure

**Hearing on “Improving the Safety and Reliability of the Washington Metro”
Subcommittee on Highways and Transit
Tuesday, May 24, 2016 at 10:00 a.m.
2167 Rayburn House Office Building
Washington, D.C.**

Questions for the Record (QFR)

Submitted on behalf of Chairman Sam Graves:

1. State and local governments from the Washington, D.C. region have supported expansion of the Metro system – from the Silver Line to a proposed station at Potomac Yard. What are state and local governments doing to ensure that WMATA can handle the additional ridership and operation expenses that would come with expansion?
2. Since 2010, the failures of the Tri-State Oversight Committee have been well documented. However, neither Virginia nor Maryland legislatures have enacted the necessary enabling legislation for the Metropolitan Safety Commission. What are local leaders doing to urge the Virginia General Assembly to establish a safety oversight agency that meets federal requirements?

Submitted on behalf of Ranking Member Eleanor Holmes Norton:

1. As chair of a Transportation Planning Board for a region with two states, the District of Columbia, and the federal government, what unique challenges do you face compared to other planning boards? Do you think WMATA faces these same challenges?
2. Given your testimony on the multitude of metrics that show the federal workforce is heavily dependent on WMATA to get to their jobs, do you think it's essential to have federal stakeholders on WMATA's board and federal dollars on the table?



Responses to Questions for the Record
From
The Honorable Timothy Lovain
Chairman
National Capital Region Transportation Planning Board
Metropolitan Washington Council of Governments

Following the Testimony Before the Subcommittee on Highways and Transit
Under the Committee on Transportation and Infrastructure
U.S. House of Representatives on May 24, 2016

July 13, 2016

Questions on behalf of Chairman Sam Graves:

1. **State and local governments from the Washington, D.C. region have supported expansion of the Metro system – from the Silver Line to a proposed station at Potomac Yard. What are the state and local governments doing to ensure that WMATA can handle the additional ridership and operation expenses that would come with expansion?**

Response: WMATA is a member of the National Capital Region Transportation Planning Board (TPB) and so are all of the jurisdictions served by WMATA. From the many discussions the board has conducted on various WMATA-related topics, I have learned that the WMATA member jurisdictions are engaged with the WMATA Board and its staff on a number of fronts to ensure that the anticipated increase in ridership and the additional operational expenses needed for the expanded Metro rail system are met. I understand that these activities include the annual assessment of funding needs for operations, station area access improvements, and capital improvements within the stations. At the Transportation Planning Board, WMATA and its member jurisdictions worked diligently and cooperatively to examine the funding needed to maintain the WMATA system (Bus, Rail and Paratransit) at a state of good repair for the 2015-2040 period and were able to identify funding that was reasonably expected to be available. This analysis accounted for ridership increases forecast for all three service offerings of WMATA. I also understand from reports to the TPB by WMATA representatives that the WMATA Board works with its members to develop a multi-year Capital

Improvement Plan and a Capital Funding Agreement with its members to ensure the agency will be able to plan and implement the enhancements needed to safely accommodate the forecast increase in ridership.

2. **Since 2010, the failures of the Tri-State Oversight Committee have been well documented. However, neither Virginia nor Maryland legislatures have enacted the necessary enabling legislation for the Metropolitan Safety Commission. What are the local leaders doing to urge the Virginia General Assembly to establish a safety oversight agency that meets federal requirements?**

Response: The leaders of the region's local governments are fully and directly engaged in assisting Virginia, Maryland and the District of Columbia in expeditiously reconstituting the Tri-State Oversight Committee into the Metropolitan Safety Commission. All of the WMATA member jurisdictions are members of the Metropolitan Washington Council of Governments (COG) whose membership also includes legislative representatives from the District of Columbia, Maryland, and Virginia. At the request of the Governors of Maryland and Virginia and the Mayor of the District of Columbia, COG has accepted the position of being the Designated Recipient for the U.S. Department of Transportation's State Safety Oversight Program. In this role, COG receives federal funding made available to establish the Metropolitan Safety Commission (MSC) and provides decision support and administrative oversight of the efforts to establish the MSC. COG has also established a working group of select legislators from the District of Columbia, Maryland and Virginia and representatives of the Administrations in those three jurisdictions to regularly meet, discuss and coordinate the planned legislative actions within the three legislatures. Finally, membership of the National Capital Region Transportation Planning Board (TPB) includes WMATA member jurisdictions, WMATA and legislators from the District of Columbia, Maryland and Virginia. Furthermore, the TPB, which is staffed by COG's Transportation Planning Department, provides opportunity for regular engagement between local leaders and state legislators on the work currently underway among the three jurisdictions to establish the MSC.

Questions on behalf of Ranking Member Eleanor Holmes Norton:

- 1. As chair of a Transportation Planning Board for a region with two states, the District of Columbia, and the federal government, what unique challenges do you face compared to other planning boards? Do you think WMATA faces these same challenges?**

Response: The Transportation Planning Board (TPB) is the federally designated Metropolitan Planning Organization for the National Capital Region. As noted, the planning area for the TPB includes the entire District of Columbia, and parts of Maryland and Virginia. The 43 members of the TPB represent 21 Counties and Cities, three different Departments of Transportation, legislators from the District of Columbia, Maryland, and Virginia, members of the FHWA, FTA, WMATA, National Park's Service and National Capital Planning Commission among others. This broad array of members represents not just the geographic breadth of the region but also the diversity of issues, needs, policies, and priorities of the member jurisdictions, not to mention the different governing structures of the various administrative and legislative bodies. While this diversity is one of the strengths of the National Capital Region, it also requires regional bodies such as the TPB to strive harder to find consensus on solutions to the region's issues. Such consensus among multiple stakeholders with varied perspectives and preferences is critical to addressing the needs of the region. Building consensus takes time and requires an open-minded collaborative approach in crafting solutions to regional challenges. The TPB's operating philosophy in the face of such diversity has been to encourage its members to "Think Regionally and Act Locally."

WMATA similarly serves the entire District of Columbia, and parts of Maryland and Virginia. Additionally, the federal government—with its hundreds of thousands of employees and many hundreds of thousands in contract employees located in all three jurisdictions—is one of the major customers and stakeholders of WMATA's services. As

such, the diversity of the transit agency's service area and the complexity of its operating, governance and funding environment is very similar to that faced by TPB.

It should also be noted that while the TPB is the region's Metropolitan Planning Organization, it is not directly responsible for the operations and maintenance of any transportation infrastructure or service as WMATA is. With operational responsibilities over multiple jurisdictions covering a large geographic area and with a variety of funding sources, the task of developing effective solutions to the various issues that would garner consensus and secure decision and funding support from its diverse stakeholders is all the more challenging for WMATA

- 2. Given your testimony on the multitude of metrics that show the federal workforce is heavily dependent on WMATA to get to their jobs, do you think it's essential to have federal stakeholders on WMATA's board and federal dollars on the table?**

Response: As noted in my testimony, the importance of the Metrorail system to the National Capital Region on so many fronts cannot be overstated. To echo comments from my fellow area officials at the Council of Governments and Transportation Planning Board, Metro cannot fail. Metro rail has helped tie our multi-state region together. It has had a significant impact on our region's mobility, economy, land use, and in cultivating dozens of vibrant, transit-oriented communities.

It is important to note that more than any other transit system, Metro helps the federal government do business. Recent data indicate that slightly more than one third of average weekday Metro rail riders are federal employees and also that about 40 percent of the federal workforce in the region use the Metrorail system for their commuting or business related travel. Additionally, there are hundreds of thousands of private sector employees who support the various federal agencies located throughout the region who use the Metro system. The Metrorail system also plays a critical homeland security role by enabling the evacuation of more than 120,000 people per hour. With such a direct

impact to federal employees, contractors, and clients, I believe that federal government representation on WMATA's board is valuable and essential.

Equally important is federal funding for the Metro system. As noted earlier, a majority of federal employees depend on the Metro system for their commutes to and from work. Additionally, as a world capital this region receives about 19 million annual visitors from not just across the country but from across the world. Many of these visitors depend on the Metrorail system and their impressions of the capital region are shaped in part by their experience of the Metro system. The federal government has recognized the important role that Metro plays right from the beginning when its funding accounted for \$6.4 billion—more than two-thirds—of the system's initial construction. Federal funding has also contributed to the recent expansion of the rail system with the Silver Line extension. The federal government again reaffirmed its commitment to maintain the Metro as a world class system by committing to provide matching funds to keep the system in a state of good repair through the 2008 Passenger Rail Investment and Improvement Act (PRIIA). Continuation of this funding is critical to Metro's ability to undertake the many actions it needs to take to improve the safety and reliability of the system. I believe that the region remains committed to match the federal funds in this regard thanks to the Governors of Maryland and Virginia and the Mayor of the District of Columbia.

Despite all of these contributions, Metro's needs are greater than the funding currently available. Now, as the system faces serious challenges, our region's success will depend on our working together to support Metro and ensure safe and reliable service. Federal funds make up less than 20 percent of WMATA's annual budget. While the region is also working to explore how it can increase funding at the state and local levels, we look forward to continued and increased financial support from the federal government as well.



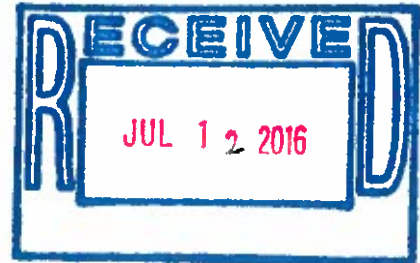
U.S. Department
of Transportation

**Federal Transit
Administration**

Administrator

1200 New Jersey Avenue, SE
Washington, DC 20590

JUN 28 2016



Mr. Timothy Lovain
Chair
National Capital Region Transportation Planning Board
777 North Capitol Street, NE, Suite 300
Washington, DC 20002

Dear Chairman Lovain:

Thank you for your letter supporting the application that the National Capital Region Transportation Planning Board submitted under the U.S. Department of Transportation's Bus and Bus Facilities Program.

The Bus Program (49 U.S.C. 5339), administered by the Federal Transit Administration (FTA), makes Federal funding available to States, Indian Tribes, and public transportation providers to help them purchase, lease, construct, or rehabilitate buses and related equipment and bus-related facilities. It aims to create new and better job opportunities for communities across the Nation by increasing access to public transportation.

I assure you that all properly submitted applications will receive full and careful consideration. The FTA will announce final project selections this fall after the review process is complete.

I appreciate your interest in this program. If I can provide further information or assistance, please feel free to contact me directly on (202) 366-4040.

Sincerely yours,

Carolyn Flowers
Acting Administrator



**U.S. Department of
Transportation**
Office of the Secretary
of Transportation

Under Secretary for Policy

1200 New Jersey Avenue, S.E.
Washington, DC 20590

June 27, 2016

Mr. Timothy Lovain
Chair, National Capital Region
Transportation Planning Board
777 North Capitol Street NE, Suite 300
Washington, DC 20002



Dear Mr. Lovain:

Thank you for your letter supporting funding for Fairfax County's Virginia State Route 7 widening project under the Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies (FASTLANE) Grant Program, which is funded by the Fixing America's Surface Transportation (FAST) Act. Secretary Foxx has asked me to respond on his behalf.

The FASTLANE Grant Program provides dedicated, discretionary funding for nationally and regionally significant projects that improve our Nation's highways and bridges. For the first time in the U.S. Department of Transportation's 50-year history, Congress has funded a program with broad, multiyear eligibilities for freight infrastructure investments.

The FASTLANE Grant Program is authorized at \$4.5 billion for Fiscal Years (FY) 2016-2020, including \$800 million for FY 2016, and provides a major opportunity to fund transformative freight and highway projects on the National Highway System (NHS). In addition, the FAST Act also designates a portion of program funds for rail, maritime port, and multimodal transportation projects.

A Federal Register notice, published on March 2, 2016, announced the availability of funding for the first of five rounds of FASTLANE discretionary grant awards, project selection criteria, and application requirements. The deadline for submitting final applications was April 14, 2016, and we plan to announce selected projects this summer.

The U.S. Department of Transportation welcomes the opportunity to fund projects that address critical challenges facing our NHS through the FASTLANE discretionary grant program, and I assure you that all properly submitted applications will receive full and careful consideration.

I appreciate your interest in the FASTLANE Grant Program. I can provide further information or assistance, please feel free to contact me.

Sincerely,

Carlos Monje, Jr.
Acting Under Secretary



**U.S. Department of
Transportation**
Office of the Secretary
of Transportation

Under Secretary for Policy

1200 New Jersey Avenue, S.E.
Washington, DC 20590

June 27, 2016

Mr. Timothy Lovain
Chair, National Capital Region
Transportation Planning Board
777 North Capitol Street NE, Suite 300
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Dear Mr. Lovain:

Thank you for your letter supporting funding for the National Park Service's Arlington Memorial Bridge Reconstruction Project under the Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies (FASTLANE) Grant Program, which is funded by the Fixing America's Surface Transportation (FAST) Act. Secretary Foxx has asked me to respond on his behalf.

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Carlos Monje, Jr.
Acting Under Secretary



**U.S. Department of
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1200 New Jersey Avenue, S.E.
Washington, DC 20590

June 27, 2016

Mr. Timothy Lovain
Chair, National Capital Region
Transportation Planning Board
777 North Capitol Street NE, Suite 300
Washington, DC 20002



Dear Mr. Lovain:

Thank you for your letter supporting funding for the State of Virginia's Atlantic Gateway project under the Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies (FASTLANE) Grant Program, which is funded by the Fixing America's Surface Transportation (FAST) Act. Secretary Foxx has asked me to respond on his behalf.

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Sincerely,

Carlos Monje, Jr.
Acting Under Secretary



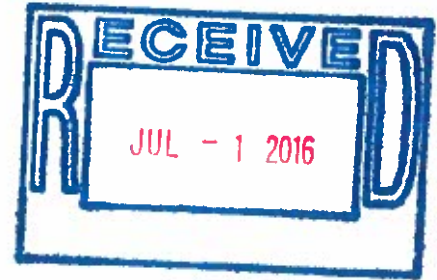
**U.S. Department of
Transportation**
Office of the Secretary
of Transportation

Under Secretary for Policy

1200 New Jersey Avenue, S.E.
Washington, DC 20590

June 27, 2016

Mr. Timothy Lovain
Chair, National Capital Region
Transportation Planning Board
777 North Capitol Street NE, Suite 300
Washington, DC 20002



Dear Mr. Lovain:

Thank you for your letter supporting funding for Prince William County's US Route 15 Improvements with Railroad Overpass project under the Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies (FASTLANE) Grant Program, which is funded by the Fixing America's Surface Transportation (FAST) Act. Secretary Foxx has asked me to respond on his behalf.

The FASTLANE Grant Program provides dedicated, discretionary funding for nationally and regionally significant projects that improve our Nation's highways and bridges. For the first time in the U.S. Department of Transportation's 50-year history, Congress has funded a program with broad, multiyear eligibilities for freight infrastructure investments.

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I appreciate your interest in the FASTLANE Grant Program. I can provide further information or assistance, please feel free to contact me.

Sincerely,

Carlos Monje, Jr.
Acting Under Secretary



MEMORANDUM

TO: Transportation Planning Board
FROM: Kanti Srikanth, TPB Staff Director
SUBJECT: Announcements and Updates
DATE: July 14, 2016

The attached documents provide updates on activities that are not included as separate items on the TPB agenda.



MEMORANDUM

TO: Transportation Planning Board
FROM: Kanti Srikanth, TPB Staff Director
Eric Randall, TPB Transportation Engineer
SUBJECT: Proposed revisions to regional planning by Metropolitan Planning Organizations
DATE: July 14, 2016

In the June 27, 2016 edition of the Federal Register the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) published proposed revisions to the transportation planning regulations that govern the regional planning activities of Metropolitan Planning Organizations (MPOs) such as the TPB. FHWA and FTA are accepting comments on the proposed revisions to the planning regulations till August 26, 2016. The proposed revisions are substantive in scope and would require significant actions by the TPB, in close coordination with adjacent MPOs and the Governors of Maryland, Virginia, and the Mayor of the District of Columbia to fully comply with the proposed revised requirements.

Staff is currently reviewing the proposed revisions to the planning regulations and plans to develop comments on the proposed revisions. Staff will be holding consultations with the transportation departments in Maryland, Virginia, and the District of Columbia, as well as the two adjacent MPOs (the Baltimore Regional Transportation Board and the Fredericksburg MPO) to develop their comments. Additionally, staff plans to coordinate the review and comment process with those being undertaken by the Association of MPOs (AMPO), the National Association of Regional Councils (NARC), and the American Association of State Highway and Transportation Officials (AASHTO). A nationwide webinar is being held by FHWA and FTA on July 15 to brief the stakeholder agencies on the proposed revisions.

Additionally, on April 22, 2016 FHWA published proposed rules under the National Performance Management Measures; Assessing Performance of the National Highway System, Freight Movement on the Interstate System, and Congestion Mitigation and Air Quality Improvement Program. This is the third set of rules proposed under performance management requirements of MAP-21. The proposed rule seeks to establish national measures for traffic congestion; on-road mobile source emissions; freight movement on the Interstate System; performance of the Interstate System; and performance of the non-Interstate National Highway System. FHWA is accepting comments on the proposed rules till August 20, 2016. Staff is working with the Departments of Transportation in Maryland, Virginia and the District of Columbia to develop comments on the proposed rule.

Given that the comments on both of the above proposed rules are due in August when the Board is not scheduled to meet staff will work with the officers of the Board in finalizing the comments prior to submitting it to the federal docket.

SUMMARY OF PROPOSED MPO COORDINATION AND PLANNING AREA REFORM RULE

The stated purpose of the proposed revisions to the planning rule is to improve the transportation planning process by strengthening the coordination of MPOs and States and promoting the use of regional approaches to planning and decision-making.

The proposed rule would revise the regulatory definition of metropolitan planning area to “better align with the statutory requirements in 23 U.S.C. 134 and 49 U.S.C. 5303.” Currently, most MPOs including the TPB, treat its metropolitan planning area (MPA) synonymous with the MPO’s boundary. The proposed revisions would specifically amend the definition of MPA to require the MPA, at a minimum, include the entire urbanized area and the contiguous area expected to become urbanized within a 20-year forecast period for the metropolitan transportation plan. The proposed revisions to the planning rule notes that a single MPO would conduct the metropolitan planning activities for a MPA (as defined above) unless the Governor(s) (and Mayor) and the affected MPOs determine that the size and complexity of the MPA make the designation of multiple MPOs for the MPA appropriate. If they determine that designation of multiple MPOs is appropriate, then the MPOs may remain separate, with separate boundaries of responsibility within the MPA, as established by the affected MPOs and the Governor.

The proposed revisions to the rule: (1) clarify that where more than one MPO serves an MPA, the Governor and affected MPOs will establish or adjust the boundaries for each MPO within the MPA by agreement; and (2) would establish additional coordination requirements for areas where multiple MPOs are designated within the MPA.

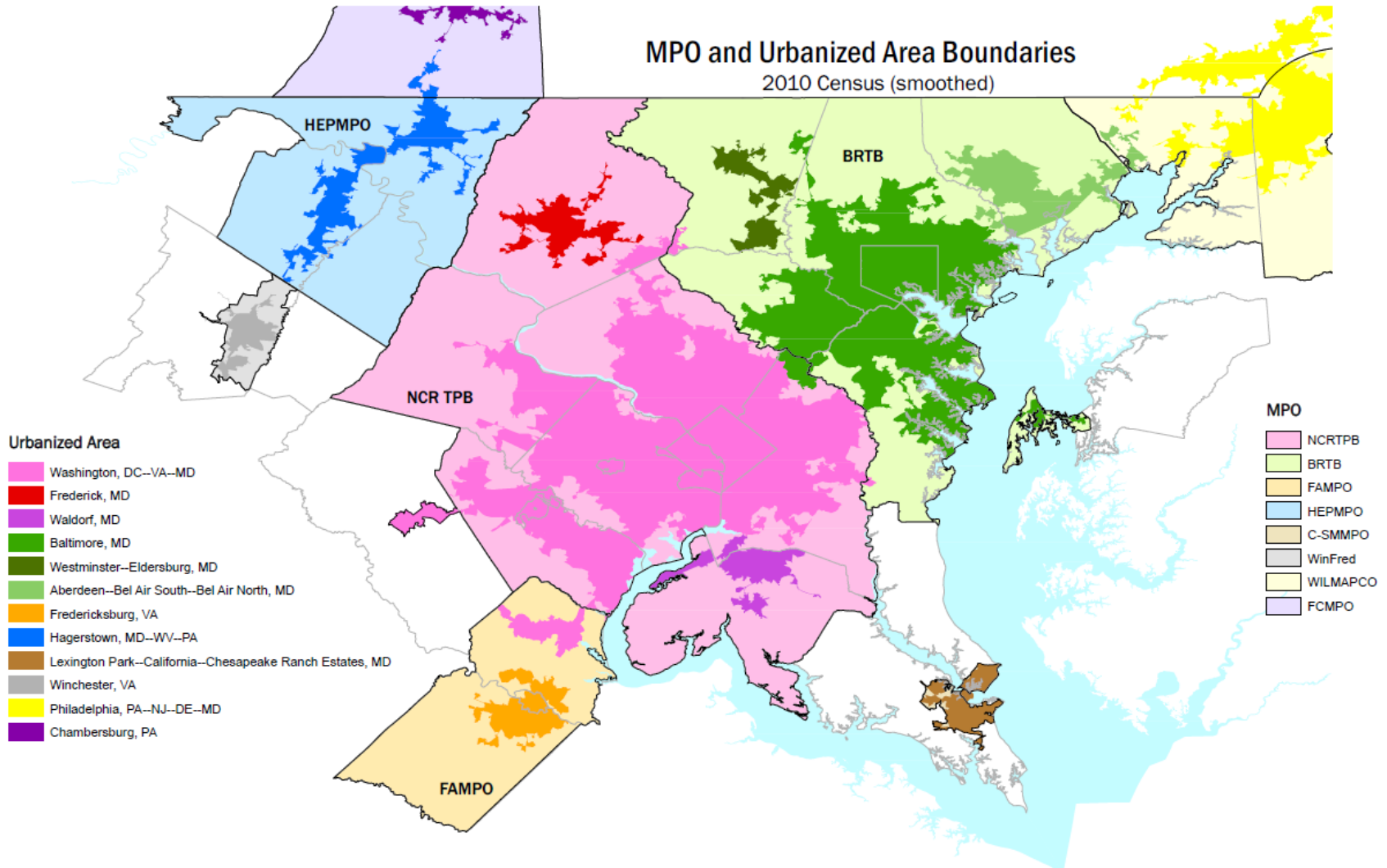
Furthermore, the proposed rule would require those multiple separate MPOs to jointly develop unified planning products: a single long range plan (the CLRP is the TPB’s long range plan), a Transportation Improvement Plan (TIP) and a jointly established set of performance targets for the MPA.

The TPB’s metropolitan planning area which coincides with its boundary includes three urbanized areas based on 2010 census data and is displayed in Figure 1 (attached). At present one of three 2010 census based urbanized areas within the TPB’s boundary stretches in to the boundaries of the Baltimore and Fredericksburg MPOs.

Should the proposed revisions be integrated without change into the final planning rule a number of substantive activities will have to be undertaken. These include: (1) determining the change to TPB’s planning area to reflect the contiguous area expected to become urbanized within the 20-year forecast period of the CLRP; (2) determining the appropriateness of multiple MPOs within this metropolitan planning area; (3) creating multi-state, multi-MPO agreements on the boundaries for these multiple MPOs; (4) establishing procedures with the other MPOs in the MPA for joint decision-making in developing the CLRP, TIP and performance targets and a process for resolving disagreements; and (5) having a agreed upon process with the States for resolving disagreements.

Staff will update the Board on the comments received on the proposed revisions to the planning rule and the final resolution by the FHWA and the FTA on the proposed revisions.

Figure 1 2010 CENSUS URBANIZED AREAS AROUND THE NATIONAL CAPITAL REGION





MEMORANDUM

TO: Transportation Planning Board
FROM: Eric Randall, TPB Transportation Engineer
SUBJECT: Update on the Implementation of the TPB Regional Priority Bus Project under the Transportation Investments Generating Economic Recovery (TIGER) Program
DATE: July 14, 2016

This memorandum provides a report on the implementation status and grant funding drawdown on the group of projects funded with federal Transportation Investments Generating Economic Recovery (TIGER) funds awarded to the TPB in February 2010. Also included in the memorandum is a summary status report of the ongoing activities of projects underway and scheduled to be completed in the next months.

The \$58.8 million TIGER grant program, as revised, has fifteen component projects being implemented on transit corridors across the District of Columbia, Maryland, and Virginia. There are five implementing agencies: the City of Alexandria, Virginia; the District of Columbia Department of Transportation (DDOT); the Maryland Department of Transportation (MDOT); the Potomac and Rappahannock Transportation Commission (PRTC); and the Washington Metropolitan Area Transit Authority (WMATA). Table 1 lists the individual projects along with the budget and the lead agency responsible for project implementation.

IMPLEMENTATION AND FUNDING DRAWDOWN

As of June 30, 2016, eleven of the 15 projects are essentially complete. Approximately \$50.6 million of the grant, or 86%, has been invoiced and has been or is in the process of being reimbursed. As of June 30, 2016, the 11 remaining projects have remaining a combined amount of about \$8.2 million (14%) in unexpended funds. Approximately \$3.5 million of additional work has been completed by contractors and manufacturers for the implementing agencies, but invoices have not yet been submitted to COG for federal reimbursement.

The grant expires in September 30, 2016, and unused funds will be returned to the US Treasury. With the time needed for final invoicing and processing of the reimbursement from the Federal Transit Administration (FTA), all construction and implementation work must essentially be complete.

REMAINING FUNDING

<i>Major Projects (Agency)</i>	<i>Total Budget</i>	<i>Remaining Funds</i>
Georgia Avenue Bus Lane (DDOT)	\$3.5 million	\$1.5 million
Takoma Langley Transit Center (MDOT/MTA)	\$13.8 million	\$2.6 million
Transit Signal Priority (DDOT, City of Alexandria and WMATA)	\$8.0 million	\$1.4 million
Pentagon and Franconia Springfield Stations (WMATA)	\$9.7 million	\$1.6 million

While the implementing agencies are nearing completion of the construction and technology projects, delayed invoicing could impact the ability to fully drawdown the funds by September 2016.

STATUS REPORT UPDATE

The TPB was briefed in January and in May 2016 on the progress of the projects funded by the grant, in response to a request for periodic updates. Memorandum updates were provided at intervening meetings.

MAJOR PROJECT PROGRESS REPORT

Georgia Avenue Bus Lane (DDOT)

The Bus Lane opened for pilot operation on April 11, 2016 and received its final red high-friction pavement treatment the second week of June. Final invoices are pending.

Takoma/Langley Transit Center (MDOT/MTA)

The construction of the transit center is largely complete, with the contractor now completing the final set of punch list activities, including minor repairs to site work. MTA has stated its portion of the project is ready for handover to WMATA, however the Maryland Board of Public Works first needs to take action to authorize. WMATA will then begin a pre-operation period of 60-90 days, including additional work to install items CCTV cameras, PA system, and information displays. These technology projects may not be completed within the lifetime of the TIGER grant, and might have to be paid out of other available funds. In addition, State Highway Administration will need to activate the traffic signals for bus access.

Transit Signal Priority (TSP) Project (WMATA, City of Alexandria and DDOT)

Transit Signal Priority (TSP) installation is complete along the various corridors/areas, and onboard bus equipment has been installed by WMATA on Metrobuses for each corridor.

- VA 7 (Leesburg Pike) with 25 signals in Fairfax County, the City of Alexandria, and the City of Falls Church.
- DDOT TSP Project is up and running at 195 locations throughout the District, in final operational testing. All queue jumps have also been implemented, which required the development of new traffic signal protocols by DDOT.
- City of Alexandria completed installation at the nine locations along the Van Dorn-Pentagon corridor.
- WMATA has upgraded 141 buses with TSP enabled technology that allows for an active priority signal to be sent to wayside equipment installed throughout the region.

The grant-funded part of the project should be completed this month, though operational testing will continue and implementation and further refinement will become part of ongoing operations.

Pentagon and Franconia-Springfield Station Improvements (WMATA)

At the Pentagon transit station, major work is complete, including construction of pedestrian access, safety, and security improvements, station bus pads, lighting and security bollards. Final construction work on security fencing and bollards along the perimeter and additional concrete work at the upper bus bay areas is almost complete. Two security technology projects, CCTV cameras and a PA system have been installed and tested.

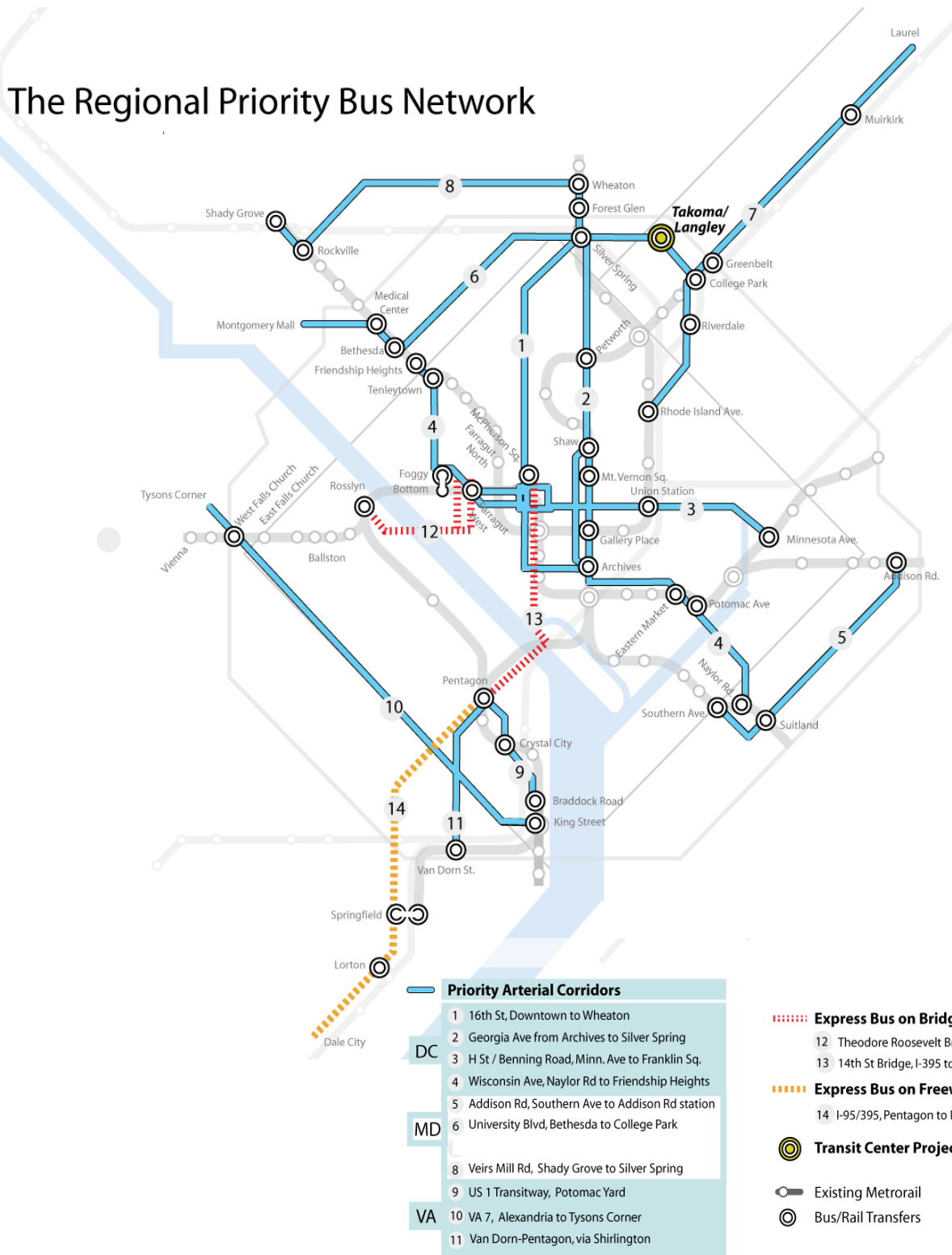
At the Franconia-Springfield transit station, construction work is about 90 percent complete, with installation of the new canopy and bus shelter structures complete and repaving of the garage access road in progress. Additional work including the installation of real time passenger information (RTPI) signs will continue in July 2016.

Table 1: NCR TIGER Priority Bus Transit Grant Project Component Descriptions
 Following approved project revisions of January 28, 2016

#	Project Components (As Revised January 15, 2015)	Lead Agency	Budget
1	16th Street Bus Priority Improvements: Capital improvements include a queue jump lane, bus stop improvements, real time passenger information (RTPI) displays at up to 17 stop locations, and transit signal priority/traffic system management (left turn phase for bus) at 31 intersections.	DDOT	\$1,321,770
2	Georgia Avenue Bus Priority Improvements: Improvements include a short bus-only lane that will be constructed on Georgia Avenue to alleviate current bus delays. Additionally, improvements include transit signal priority, bus stop improvements, queue jumps, and real time passenger information (RTPI) displays will be installed.	DDOT	\$5,401,604
3	H Street/Benning Road Bus Priority Improvements: This project will implement RTPI displays and install security cameras at select locations.	DDOT	\$447,109
4	Wisconsin Avenue Bus Priority Improvements : Capital improvements include transit signal priority and RTPI displays deployed to a number of express service stop locations.	DDOT	\$1,487,934
5	Addison Road Improvements : This is a WMATA priority bus corridor that connects the Addison Road and Southern Avenue Metrorail stations. The project includes the replacement of bus shelters along with installation of real-time passenger information displays at select locations.	WMATA	\$214,000
6	University Boulevard Bus Priority Improvements: Planned improvements include installation of RTPI displays and a series of bus stop enhancements along the corridor.	MDOT	\$235,864
8	Veirs Mill Bus Priority Improvements: Improvements include deployment of RTPI displays.	MDOT	\$98,479
9	US 1 Transitway: A bus transitway in the median of US 1 within the city limits will provide exclusive right of way for buses.	City of Alexandria	\$8,202,500
10	VA 7 (Leesburg Pike) Bus Priority Improvements: A WMATA Priority Corridor that connects the Cities of Alexandria and Falls Church with the commercial center of Tysons Corner, the TIGER grant funds improvements that include transit signal priority at up to 25 intersections along the corridor.	WMATA	\$1,122,597
11	Van Dorn-Pentagon Rapid Bus: The project will provide runningway improvements to support a future rapid bus service in the City of Alexandria from the Van Dorn Metrorail Station in the City of Alexandria to the Pentagon in Arlington County. TIGER funding will support signal prioritization technology and two queue jump lanes. These improvements will enhance transit service along three current bus routes in addition to a future new BRT route.	City of Alexandria	\$688,765

#	Project Components (As Revised January 15, 2015)	Lead Agency	Budget
12	<p>Theodore Roosevelt Bridge to K Street Bus Priority Improvements: Implementation of an integrated transit signal priority and traffic signal optimization system along E Street, northbound 18th Street, and southbound 19th Street. Additionally, uninterruptable power supply installation will take place at select traffic lights will prevent traffic signals outages following power interruptions.</p>	DDOT	\$1,703,683
13	<p>14th Street to K Street Bus Priority Improvements: Implementation of an integrated transit signal priority and traffic signal optimization system along 14th Street from the bridge to K Street. Additionally, uninterruptable power supply installation will take place at select traffic lights.</p>	DDOT	\$2,686,975
14a	<p>Pentagon and Franconia-Springfield Station Improvements: Station improvements at Pentagon Station and Franconia/Springfield Station, including bus bays, real time bus information, and traffic circulation/access/security improvements. Major technology improvements include real-time bus information displays.</p>	WMATA	\$9,731,953
14b	<p>PRTC Buses and ITS Technology: This component includes the replacement of 13 buses, with new vehicles using state-of-the-art clean-fuel technology. The project also includes security cameras outfitted on 15 buses and the procurement of computer-aided dispatch and automatic vehicle location (CAD/AVL) technology.</p>	PRTC	\$9,650,000
TC	<p>Takoma/Langley Transit Center: This transit center at the intersection of University Boulevard and New Hampshire Avenue will consolidate the bus stops at the intersection into one facility (although some existing bus stops will still remain in order to prevent requiring pedestrians to cross busy roads to their final destinations). The transit center will provide a safe, attractive, comfortable and efficient facility for passengers and improve pedestrian safety and accessibility.</p>	MDOT	\$13,785,537
TOTAL CONSTRUCTION COSTS FOR 15 COMPONENT PROJECTS			\$56,778,670

FIGURE 1: MAP OF THE 15 COMPONENT PROJECTS OF THE NCR TIGER GRANT





MEMORANDUM

TO: Transportation Planning Board
FROM: Andrew Meese, TPB Systems Performance Planning Director
SUBJECT: Dedication of a Plaque Honoring Ronald Kirby at MATOC
DATE: July 13, 2016

At their June 24, 2016 meeting, the Steering Committee of the Metropolitan Area Transportation Operations Coordination Program, or MATOC, dedicated a plaque honoring Ronald Kirby to hang in MATOC’s operations center in College Park. The plaque reads as follows:

*IN GRATEFUL RECOGNITION
 Ronald F. Kirby, Founding Board Member, MATOC Steering Committee*

We hereby honor Ronald F. Kirby of the Metropolitan Washington Council of Governments, for his leadership in establishing the Metropolitan Area Transportation Operations Coordination (MATOC) Program, and his guidance as a member of the MATOC Steering Committee from 2007 to 2013. Mr. Kirby was instrumental in MATOC’s conceptualization, and worked unwaveringly to facilitate its establishment. It is fitting that we remember the legacy of Ronald F. Kirby in this MATOC Operations Facility his inspiration and efforts helped create.

*MATOC Steering Committee and Staff
 June 24, 2016*



Left Photo of Plaque (Photo Credit: Taran Hutchinson). Right Photo (left to right): Thomas Jacobs, University of Maryland; Taran Hutchinson, MATOC; Andrew Meese, TPB Staff; Glenn McLaughlin, Maryland State Highway Administration; Soumya Dey, DDOT; Michael Pack, University of Maryland (Photo Credit: Marco Trigueros).



MEMORANDUM

TO: Transportation Planning Board
FROM: Andrew Meese, TPB Systems Performance Planning Director, and
Erin Morrow, TPB Transportation Engineer
SUBJECT: Summary of COG's Workshop on Road Salt Management
DATE: July 14, 2016

On June 27, 2016, COG convened a workshop entitled "Salt Management in the Washington Region: Environmental and Transportation Perspectives." Coordinated by COG and TPB staff, the workshop brought together more than 60 representatives from transportation agencies, water utilities, and environmental agencies.

The workshop was designed to be the beginning of a regional discussion on best management practices for road salt use prompted by new developments in environmental regulation, in particular, regulations known as "Total Maximum Daily Loads" (TMDLs), which EPA and state regulators use to set limits on allowable levels of pollutants that degrade water quality. Both the Virginia Department of Environmental Quality (VDEQ) and the Maryland Department of the Environment (MDE) are moving ahead with localized TMDLs to address high chloride levels in area streams.

The workshop featured a diverse group of panelists speaking throughout the day on issues surrounding road salt management.

- Dr. Joel Moore from Towson University discussed evidence of road salt's impacts on the region's water bodies and ground water quality and why action is needed on a regional basis to address its impacts.
- Representatives from Fairfax Water and the Washington Suburban Sanitary Commission (WSSC) discussed the impact of sodium and chloride on drinking water quality and water infrastructure.
- Jeremy Walgrave from Limno-Tech discussed the development of a regional chloride management plan in the Twin Cities (Minneapolis) area.
- Representatives from Maryland State Highway Administration (SHA), Virginia Department of Transportation (VDOT), the District Department of Public Works (DPW), and the Federal Highway Administration (FHWA) shared perspectives from the transportation sector. The panelists discussed issues of public safety, cost, mobility, and environmental impact.
- Representatives from the Virginia Department of Environmental Quality (VDEQ), Maryland Department of the Environment (MDE), and the District of Columbia Department of Energy and the Environment discussed state regulatory expectations for chloride TMDLs.

The issue of road salt management in the Washington region will be an ongoing discussion amongst stakeholders including transportation. Next steps include the development of a COG work plan and formation of an ongoing stakeholder working group.

Presentations from the workshop are posted on the COG website:

<https://www.mwcog.org/events/2016/6/27/salt-management-in-washington-region-environmental-and-transportation-perspectives/>



MEMORANDUM

TO: Transportation Planning Board
FROM: Kanti Srikanth, TPB Staff Director
SUBJECT: 2016 FASTLANE Grants in the National Capital Region
DATE: July 13, 2016

On July 5, 2016, awards were announced under the 2016 U.S. Department of Transportation *Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies (FASTLANE)* grant program, including two major awards in the National Capital Region: funding toward the *Arlington Memorial Bridge Reconstruction Project*, as well as funding toward the Commonwealth of Virginia's *Atlantic Gateway: Partnering to Unlock the I-95 Corridor* project.

BACKGROUND

In February 2016, the U.S. Department of Transportation (USDOT) announced that it was soliciting applications for FASTLANE, a new program in the Fixing America's Surface Transportation (FAST) Act to fund critical freight and highway projects across the country. The FAST Act authorizes \$800 million in funding for the FASTLANE program for fiscal year 2016, with portions of the grant reserved for rural projects (25%) and smaller projects (10%). USDOT recently notified Congress that the agency intends to award a total of \$759 million in federal "FASTLANE" grants to 18 projects around the country (out of some 200 applications totaling \$9.8 billion), initiating a 60-day Congressional review period before the grants become final. The full list of the 18 awarded projects as distributed by USDOT is attached.

ARLINGTON MEMORIAL BRIDGE RECONSTRUCTION PROJECT

The deteriorating condition of the Arlington Memorial Bridge has been well-documented by the National Park Service, its owner, in press articles and other discussions. In an April 8, 2016 support letter for the National Park Service's FASTLANE grant application for the bridge, TPB Chair Timothy Lovain noted that "the bridge is structurally deficient and its poor condition has already begun to constrain regional movement ... without assistance, a project of this magnitude poses a nearly impossible challenge to the National Park Service's transportation budget". The letter also notes that the project supports USDOT's emphasis on economic growth, partnerships, and reflected the calls for addressing infrastructure bottlenecks and safety.

As noted in a joint Congressional press release (attached), the \$90 million would help complete a \$166 million 'Phase 1' of the bridge's reconstruction, which will extend the bridge's useful life out to 2030, when additional work will need to be done for a 'Phase 2' reconstruction of its main bascule span. Sources of funding for the remaining Phase 1 and Phase 2 costs are to be determined.

ATLANTIC GATEWAY: PARTNERING TO UNLOCK THE I-95 CORRIDOR

On July 5, Virginia Governor Terry McAuliffe announced Virginia's selection for a \$165 million FASTLANE grant for the Atlantic Gateway Project, a multi-pronged project to transform road and rail infrastructure along the I-95 Corridor. The \$165 million FASTLANE grant will leverage \$565 million in private investments and \$710 million in other transportation funds to:

- Build 14 miles of new rail track to improve reliability and capacity for freight, commuter, and passenger rail service, including phase I of the project to unlock rail congestion at Long Bridge
- Extend 95 Express Lanes for seven miles north to the Potomac River and improve access to the Pentagon
- Extend the 95 Express Lanes 10 miles south to Fredericksburg to alleviate backups at the current southern terminus
- Construct a new southbound bridge on I-95 across the Rappahannock River
- Provide dedicated on-going reinvestment in expanded bus service in the corridor to ensure that all populations have access to jobs, education and health care services
- Add new commuter parking, technology upgrades and truck parking along the corridor
- Build pavement for autonomous vehicle enhancement; this will provide the infrastructure to test and deploy driverless cars
- Acquire the S-line, an abandoned rail corridor that runs from North Carolina to the Richmond area, from CSX to provide public ownership of a corridor key for future Southeast High Speed Rail.

Governor McAuliffe's announcement stated that the program will move to construction in phases, and portions will start as early as 2017. Much of the upfront environmental and engineering work is complete or underway.

FUTURE FISCAL YEARS

FASTLANE 2016 grants were the first of several years of grants envisioned under the FAST Act, so there will be additional opportunities in future years for projects that did not receive grant awards in 2016, potentially including a number of other National Capital Region projects for which FASTLANE grants were sought, or may be sought in the future.



U.S. Department of Transportation Proposed FY 2016 FASTLANE Project Awards

Pursuant to Section 1105 of the FAST Act, the Department is providing this list of proposed awards to the authorizing committees of jurisdiction. This list must remain with the committees for 60 days before issuing the awards.

The U.S. Department of Transportation conducted a thorough and fully documented review process to choose projects that will have significant regional and national impacts by reducing congestion, expanding capacity, using innovative technology, improving safety, or moving freight more efficiently.

This list of proposed Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies (FASTLANE) grant awards is the culmination of a thorough technical assessment of 212 applications requesting a total of \$9.8 billion, more than 10 times the available amount. Due to funding limitations, we were only able to fund a small percentage of the excellent, eligible applications.

Project Name	Applicant Organization	State	Project Size	FASTLANE Proposed Award	Total Project Cost	117(d)(2)(A) Limitation*
Interstate 10 Phoenix to Tucson Corridor Improvements	Arizona Department of Transportation	AZ	Large	\$54,000,000	\$157,500,000	-
SR-11 Segment 2 and Southbound Connectors	California Department of Transportation	CA	Large	\$49,280,000	\$172,200,000	-
Arlington Memorial Bridge Reconstruction Project	National Park Service	DC	Large	\$90,000,000	\$166,000,000	-
Port of Savannah International Multi-Modal Connector	Georgia Ports Authority	GA	Large	\$44,000,000	\$126,700,000	\$32,000,000
I-10 Freight CoRE	Louisiana Department of Transportation and Development	LA	Large	\$60,000,000	\$193,508,409	-
Conley Terminal Intermodal Improvements and Modernization	Massachusetts Port Authority	MA	Large	\$42,000,000	\$102,890,000	\$42,000,000
I-390/I-490/Route 31 Interchange, Lyell Avenue Corridor Project	New York State Department of Transportation	NY	Large	\$32,000,000	\$162,900,000	-
US 69/75 Bryan County	Oklahoma Department of Transportation	OK	Large	\$62,000,000	\$120,625,000	-
Atlantic Gateway: Partnering to Unlock the I-95 Corridor	Virginia Department of Transportation	VA	Large	\$165,000,000	\$905,000,000	\$45,000,000
South Lander Street Grade Separation and Railroad Safety Project	City of Seattle	WA	Large	\$45,000,000	\$140,000,000	-
I-39/90 Corridor Project	Wisconsin Department of Transportation	WI	Large	\$40,000,000	\$1,195,300,000	-
Truck Parking Availability System (TPAS)	Florida Department of Transportation	FL	Small	\$10,778,237	\$23,983,850	-
Cedar Rapids Logistics Park	Iowa Department of Transportation	IA	Small	\$25,650,000	\$46,500,000	\$25,650,000
U.S 95 North Corridor Access Improvement Project	U.S 95 North Corridor Access Improvement Project	ID	Small	\$5,100,000	\$8,500,000	-
Maine Intermodal Port Productivity Project	Maine Department of Transportation	ME	Small	\$7,719,173	\$15,438,347	\$7,122,485
Cross Harbor Freight Program (Rail)	The Port Authority of New York and New Jersey	NY	Small	\$10,672,590	\$17,787,650	\$10,672,590
Coos Bay Rail Line - Tunnel Rehabilitation Project	Oregon International Port of Coos Bay	OR	Small	\$11,000,000	\$19,555,000	\$11,000,000
Strander Boulevard Extension and Grade Separation Phase 3	City of Tukwila	WA	Small	\$5,000,000	\$38,000,000	-
Total				\$759,200,000	\$3,612,388,256	\$173,445,075

Legend:
Urban: White
Rural: Gray

*Number is estimated and subject to revision based on final negotiated project budgets

VA & D.C. Congressional Delegation Announces Memorial Bridge Selected For \$90 Million FASTLANE Grant

July 5, 2016 | Press Release

Funding will allow National Park Service to begin repairs and keep Memorial Bridge open

Congressional representatives from Virginia and the District of Columbia today announced that **the National Park Service (NPS), jointly with the District Department of Transportation, has been awarded a \$90 million FASTLANE Grant from the U.S. Department of Transportation for repairs to Arlington Memorial Bridge**, which carries 68,000 vehicles daily. Sens. Mark R. Warner and Tim Kaine, Del. Eleanor Holmes Norton, and Reps. Don Beyer, Gerry Connolly and Barbara Comstock jointly issued the following statement:

“We are very pleased to announce that the Department of Transportation has selected Arlington Memorial Bridge to receive a \$90 million FASTLANE grant. While additional federal resources will be needed to complete this \$250 million project, this funding will allow NPS to move forward with planning and contracting immediately so that construction can begin early next year. This significant federal investment will go a long way towards ensuring that Memorial Bridge remains open, which is welcome news for the region’s commuters.”

“We are proud that the entire National Capital Region delegation worked together (<http://www.warner.senate.gov/public/index.cfm/2016/4/warner-kaine-beyer-connolly-norton-call-for-nps-regional-collaboration-on-memorial-bridge>) to make sure that the National Park Service submitted a strong application (http://www.warner.senate.gov/public/index.cfm/mobile/pressreleases?ContentRecord_id=828AEC26-9003-4562-A149-CF8BA4DD4685) for this FASTLANE Grant. This would not have been possible without the crucial support of Mayor Bowser and the District Department of Transportation.”

“The congressional delegation looks forward to working with all local jurisdictions and our colleagues in Congress to ensure that sufficient resources are allocated to fully repair the Bridge and keep this 84-year-old icon of American infrastructure standing strong.”

Today’s funding announcement will go toward Phase 1 of the reconstruction of the Arlington Memorial Bridge. The Memorial Bridge, which was originally built in 1932, has exceeded its 75-year design life and is structurally deficient, having never undergone a major rehabilitation. It is currently posted with a 10-ton load limit and buses are prohibited from crossing. Without a major overhaul, the project will be closed to vehicular traffic in 2021. Phase 1 will focus on the approach spans, which are the most in need of repairs, at a total cost of \$166 million. Completion of Phase 1 will allow the bridge to remain open until 2030 while additional actions are taken to complete Phase 2, the reconstruction of main bascule span.

Closing the Memorial Bridge would cost local governments a projected \$168,000 per day (\$75 million per year) in transportation outlays alone, according to the Metropolitan Washington Council of Governments. Transit studies suggest that traffic from the bridge would spill over onto other area bridges, particularly the 14th Street Bridge and Roosevelt Bridge.

In April, the congressional delegation wrote to U.S. Secretary of Transportation Anthony Foxx to endorse (http://www.warner.senate.gov/public/index.cfm/mobile/pressreleases?ContentRecord_id=828AEC26-9003-4562-A149-CF8BA4DD4685) the FASTLANE application. Last month, Sens. Mark R. Warner and Tim Kaine and D.C. Mayor Muriel Bowser joined NPS on a tour (http://www.warner.senate.gov/public/index.cfm/newsclips?ContentRecord_id=F920333C-DDE8-4A48-8C9D-B9BC6DDB334F) for a firsthand look at the rapidly deteriorating state of Memorial Bridge.

RELEASE: IMMEDIATE
CONTACT: Brian Coy
Brian.Coy@governor.virginia.gov

GOV
July 5, 2016

Governor McAuliffe Announces Virginia's Selection for \$165 Million FASTLANE Grant to Deliver the Atlantic Gateway Project
Multi-Pronged Project will Transform Road and Rail Infrastructure Along the I-95 Corridor

RICHMOND – Governor Terry McAuliffe announced today that Virginia's proposed Atlantic Gateway Project has been selected for a federal FASTLANE grant of \$165 million.

Combined resources for the project, including the federal grant, private investment and public funding, total \$1.4 billion to address the worst bottlenecks on the I-95 corridor in Northern Virginia, transforming travel along the entire East Coast.

The project will enhance passenger and freight rail along the corridor, improving reliability and capacity on the East Coast's rail network, and increase bus service. The 95 Express Lanes will be extended both to the north and south, offering commuters a reliable trip from Fredericksburg to the Potomac River, and points in between. Expanded bus service will also help keep more cars off of the road and shorten commute times.

"Winning this significant federal grant will allow Virginia to move forward on a project that will transform travel conditions and stimulate economic growth across our Commonwealth," said Governor Terry McAuliffe. "Our administration worked with federal, state, local and private sector parties to submit a package of transportation improvements that will have far-reaching benefits for everyone who travels the Commonwealth, whether by car, bus or train.

"Transportation leaders came to the table with one clear goal: improve travel in the most heavily traveled corridor in the Southeast by investing in road and rail improvements to move people and commerce more efficiently, not only through Virginia, but also from Florida to New York. I thank the USDOT for having the vision to select the Atlantic Gateway project for the FASTLANE grant. The Atlantic Gateway will create jobs and contribute to our efforts to build a new Virginia economy, and we could not have moved forward without this important federal funding."

The \$165 million FASTLANE grant will leverage \$565 million in private investments and \$710 million in other transportation funds to:

- Build 14 miles of new rail track to improve reliability and capacity for freight, commuter, and passenger rail service, including phase I of the project to unlock rail congestion at Long Bridge
- Extend 95 Express Lanes for seven miles north to the Potomac River and improve access to the Pentagon
- Extend the 95 Express Lanes 10 miles south to Fredericksburg to alleviate backups at the current southern terminus
- Construct a new southbound bridge on I-95 across the Rappahannock River
- Provide dedicated on-going reinvestment in expanded bus service in the corridor to ensure that all populations have access to jobs, education and health care services
- Add new commuter parking, technology upgrades and truck parking along the corridor
- Build pavement for autonomous vehicle enhancement; this will provide the infrastructure to test and deploy driverless cars
- Acquire the S-line, an abandoned rail corridor that runs from North Carolina to the Richmond area, from CSX to provide public ownership of a corridor key for future Southeast High Speed Rail.

Transportation Secretary Aubrey Layne added, “Our team has worked for two years to develop the Atlantic Gateway project for consideration under the FASTLANE grant program. Our selection is the result of support and cooperation from elected officials, local and regional leaders, chambers of commerce, the transportation industry, our private sector partners, and many others who clearly see the Atlantic Gateway project is absolutely essential to Northern Virginia and Virginia’s long-term economic competitiveness. This grant will allow the Commonwealth to transform the 95 corridor into a true multimodal corridor that better manages traffic and increases travel choices for people and goods.”

The Virginia Department of Transportation and the Department of Rail and Public Transportation are ready to work with the private industry and the state’s partners in federal, state and local governments to build improvements.

The program will move to construction in phases, and portions will start as early as 2017. Much of the upfront environmental and engineering work is complete or underway.

Background:

The award, made under USDOT’s FASTLANE competitive grant program, is part of a \$4.6 billion, 5-year program created by the FAST Act, which was signed into law in December 2015 and makes large-scale national investments to improve freight and highway mobility across the United States. Every grant under the program will be subject to a 60-day congressional review before final grant awards are announced.

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Information in VDOT news releases was accurate at the time the release was published. For the most current information about projects or programs, please visit the project or program Web pages. You may find those by searching by keyword in the search Virginia DOT box above.

Page last modified: July 5, 2016



MEMORANDUM

TO: Transportation Planning Board Technical Committee
FROM: Michael Farrell, TPB Senior Transportation Planner
SUBJECT: Update on the June 29th Separated Bike Lane Workshop
DATE: July 13, 2016

BACKGROUND

For many years, bicycle planning practice encouraged “vehicular cycling” whereby bicyclists were expected to share the road with motor vehicle traffic, painted bicycle lanes, and sharrows, which show bicyclists where to ride in the road. However, there has been a growing realization that on-road facilities do not serve children, the elderly, people in poor physical condition, or people who are reluctant to mix with traffic – effectively, the majority of the population of potential bicyclists. To build ridership, cities and counties are turning to European-style separated bicycle lanes.

As part of the Unified Planning Work Program, the Bicycle and Pedestrian Subcommittee sponsors at least one professional development workshop per year. The Subcommittee identified Separated Bike Lanes as the topic of the greatest interest and the greatest need for training, and decided to sponsor a workshop. Fortunately, the Washington region is a national innovator in separated bike lanes, and much of the expertise is right here.

The one-day workshop took place at COG on Wednesday, June 29th.

THE WORKSHOP

The morning session featured speakers from the Federal Highway Administration, and from Toole Design, who discussed the 2015 FHWA and Massachusetts DOT Separated Bike Lane Planning and Design Guides. The Federal guide is one of a series of documents FHWA has published in recent years to support safe and convenient walking and bicycling, and create a lower-stress environment for bicyclists. The MassDOT guide is the first state-level separated bike lane design guide. As a state guide, it contains more specifics on design, as well as a discussion of protected intersections, which are not discussed in the FHWA guide.

The afternoon sessions featured speakers from DDOT, Montgomery County, and Arlington County, who discussed their experiences building and maintaining separated bicycle lanes. DDOT has been one of the national leaders in separated bike lane design and implementation, opening its first protected bike lane on 15th Street NW in 2012.

The workshop concluded with a DDOT-led walking tour of the 1st Street NE Separated Bike Lane.

Roughly 65 people attended the workshop, the most of them agency and consultant engineering and planning staff. The workshop was interactive and well-received, with nearly everyone staying until the end. The presentations are available on the COG web site.



MEMORANDUM

TO: Transportation Planning Board
FROM: Nicholas Ramfos, Transportation Operations Program Director
SUBJECT: 2016 Commuter Connections Employer Recognition Awards
DATE: July 20, 2015

The intent of this memorandum is to provide a summary of the 2016 Commuter Connections Employer Recognition Awards.

Each fiscal year, COG/TPB staff coordinates the annual Commuter Connections Employer Recognition Awards for employers showing commitment towards voluntarily implementing commute alternative programs and telecommuting at their respective worksite.

During FY 2016, nominations for the awards categories of Incentives, Marketing and Telework were received in February and reviewed by a selection committee in March which was chaired by District of Columbia Council Member and TPB 2nd Vice Chair Charles Allen.

The 2016 Employer Recognition Awards event was held at the Metro Marriott on June 27, 2016. The event was emceed by District of Columbia Council Member and TPB 2nd Vice Chair Charles Allen. Awards presenters included: City of Alexandria Council Member and TPB Chair Timothy Lovain, Gwen Wright, Director, Montgomery County Planning Department; Courtney Menjivar, Principal Associate, Wells + Associates, and Nina Madoo, Principal and Owner, Nina Madoo Consulting.

Awards recipients included:

Incentives: Toole Design Group, Silver Spring, MD

Marketing: MITRE Corporation, McLean, VA

Telework: United Educators, Bethesda, MD

Employer Services Sales Team Achievement Award: Arlington County Commuter Services

Employer Services Organization Achievement Award: District Department of Transportation (goDCgo)



MEMORANDUM

TO: Transportation Planning Board
FROM: Wendy Klancher, TPB Principal Transportation Planner
Bryan Hayes, TPB Transportation Planner
SUBJECT: Summary of the June 23 Access for All (AFA) Advisory Committee Meeting
DATE: July 20, 2016

Attached you will find a meeting summary of the recently re-launched Access for All Advisory Committee (AFA) from June 23. Mr. Charles Allen, Councilmember from the District of Columbia and TPB Vice-Chairman, serves as the AFA Chairman and led the enthusiastic and well-attended kick-off meeting.

Earlier this summer TPB staff finished recruiting new members for the AFA committee, a group first set up in 2001 to give a voice to people traditionally underserved by our region's transportation system. TPB members were asked to provide suggestions for members of the new committee and can still do so should they see a gap in the membership. The new committee includes over 30 community leaders representing one or more of the following groups: low-income individuals, minority communities, persons with disabilities, those with limited English skills, and older adults. The committee also includes ex-officio members representing federal, state and local transportation or social service agencies and private transportation providers, including the Washington Metropolitan Area Transit Authority (WMATA), the District of Columbia Department of Transportation (DDOT), the Maryland Department of Transportation (MDOT), the Virginia Department of Transportation (VDOT), the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA).

At the June 23 meeting, members received an orientation on the TPB and major planning products. Chairman Allen facilitated a roundtable discussion about the most significant regional transportation issue facing traditionally-disadvantaged communities. The major themes from this discussion will inform discussion topics at future AFA meetings, and include:

- Concerns about high transit fares for people with limited incomes;
- Safety for pedestrians, transit users, and older drivers;
- Inclusiveness of shared mobility services;
- Additional and improved transit and paratransit options;
- The need for better information on existing options;
- Cross-jurisdictional coordination;
- Negative impacts from traffic and congestion; and
- Driver shortages in bus systems and volunteer driver programs.

The next meeting of the AFA will be held on Thursday, August 25 from 12 noon to 2 p.m.

**TPB ACCESS FOR ALL ADVISORY COMMITTEE
DRAFT MEETING SUMMARY**

June 23, 2016

1. WELCOME

Charles Allen, AFA Chairman

Mr. Allen welcomed committee members and guests to the newly re-launched AFA. He provided a brief overview of the agenda.

2. INTRODUCTIONS

Charles Allen, AFA Chairman

Mr. Allen asked attendees to break into groups of two and talk about who they are and their reasons for participating in the AFA. Then each pair introduced their partner to the whole committee these interactive introductions helped the committee get to know one another.

3. OVERVIEW OF THE TPB AND THE FINANCIALLY CONSTRAINED LONG-RANGE TRANSPORTATION PLAN (CLRP)

Bryan Hayes, TPB Transportation Planner

Kanti Srikanth, TPB Staff Director

Mr. Hayes provided a brief overview about the Transportation Planning Board (TPB) that included a description of the board membership, the TPB's key roles, and the main planning documents.

Mr. Srikanth described the TPB's responsibility for long-range transportation planning and the process for developing the TPB's Financially Constrained Long-Range Transportation Plan. He talked about the role of public participation in that process and the federal requirements that the TPB must meet.

4. OVERVIEW OF THE TPB'S ACCESS FOR ALL ADVISORY COMMITTEE

Wendy Klancher, TPB Transportation Planner

Ms. Klancher provided a short history of the AFA, Human Services Transportation Coordination Task Force, and the decision to merge the two groups. She shared the activities of the new committee, which fall into three different categories: 1) Input into the TPB's transportation planning process, 2) Human Service Transportation Coordination including updates to the Coordinated Human Service Transportation Plan, and 3) Discussion of operational issues and concerns. She also described the requirements for membership eligibility and said that AFA members should be community connectors that are able to represent a larger group to the committee.

Mr. Clark, from the Tri-County Council, asked about the efforts made to include veteran's groups in the membership of the committee.

5. ROUNDTABLE ON TRANSPORTATION ISSUES IMPORTANT TO THE AFA

Charles Allen, AFA Chairman

Mr. Allen facilitated a roundtable discussion with meeting participants. Each person was asked to share the single most important regional transportation issues experienced by the traditionally-disadvantaged communities that members represent. The following are the top concerns shared by meeting participants:

- With the aging of the Baby Boomers, transportation for those wishing to “age in place” is a concern
- For Prince George’s County, it’s challenge finding funding to expand “The Bus” service Metrorail is not everywhere and bus services provide key services to fill the gap, but the hours are limited
- There should be a checklist of environmental oversight regulations for major developments so communities understand what air quality, environmental and health assessments must be done for major developments such as proposals for GSA at St. Elizabeth’s and a new location for the Mystic Center
- The cost of Metrorail is too high for some people, especially for those working part-time with hourly wages
- Metrorail should be extended into the suburbs “last mile” problems make it difficult to live in these areas without a car
- The new interest in providing alternatives to paratransit, such as the use of Uber and Lyft, need to be examined carefully, and there is a need to understand how these flexible alternatives are being thought out to make sure they work for people with disabilities
- The lack of late night and off peak service is an issue and there is a need for more travel training and accessible pathways
- There is a need for more affordable as well as safe mobility for older adults, including safe driving education and technology, travel training and travel alternatives such as escorted transportation
- What are the lessons learned from SafeTrack, and what tweaks that are made could be kept in place?
- Language access to transit for people with limited English proficiency is a top concern also its confusing to have different reduced fare policies for older adults– an example of D.C. vs Maryland County’s was given
- Construction projects block accessible pathways and very often wheelchair access to sidewalks is eliminated. There is a need to better communicate changes in accessibility related to construction, especially at transit stops
- Interest in the health impacts of planning decisions, such as high asthma rates for those living near major roadways
- The extent to which transportation planning is done in an equitable fashion and doesn’t place one community above another
- Concerns that services such as Uber and Lyft do not accommodate people using wheelchair or service animals
- Challenges with the need for more funding for bus systems, increase the fleet size and hiring work ready skilled drivers
- The need for education to both drivers and people in wheelchairs about bike lanes wheelchair users sometimes are in the bike lanes which is dangerous
- Increase opportunities to address equity for people with low-incomes in active transportation
- Human service agencies serving people with developmental disabilities are having difficulties finding sufficient resources to support the new policy to move clients into community based models
- Family members of those with developmental disabilities have a fear of their children using public transit or MetroAccess, which puts more pressure on human service agency to provide their own transportation services
- There is room for greater cooperation among jurisdictions and agencies across state lines
- There is need for more options for the first mile/last mile problem for people using transit
- The need for safe pedestrian access without items blocking curb cuts or other features for people with disabilities

- Safe pedestrian crossings around major highways, especially for people who are deaf
- WMATA needs more funding
- Congestion can have a negative impact on quality of life
- Safety on Metrorail is a concern especially after the smoke incident on the Green Line
Communication lines between the public and Metro need to be improved
- People shouldn't have to worry about their personal safety at transit stops with increased violent crime at transit stops people always have to keep their eyes open
- Safe, adequate and affordable transportation options during SafeTrack is a concern
- Interest in continued innovation to provide alternatives to MetroAccess and raising awareness about the accessibility of Metro
- Concern about the cost of transportation for people with low-incomes
- Improved coordination of paratransit services in D.C.
- MetroAccess is unreliable and inefficient
- In outer ring counties and rural areas, there is very little transit access in rural areas, and existing services are being cut making transportation even more challenging for people with developmental and intellectual disabilities
- The consequences of land use planning decisions in jurisdictions impact travel patterns and there is a need to examine how different choices impact traditionally-disadvantaged population groups. For example, land use planning can impact travel times for low-income workers and can be cost-inefficient.
- Metrorail fares can be prohibitive for the homeless, making it difficult to find work and access services. Fewer organizations are providing fare subsidies so the homeless can access transit
- Safety at bus shelters in SE is a concern. Mothers with infants and frail seniors using these stops
- There is an increasing number of requests for trips from older adults and organizations are not able to recruit enough drivers to serve the demand more recruitment efforts are needed to find additional volunteer drivers

Mr. Srikanth acknowledged and thanked Mr. Shaw, Director of the D.C. Office of Planning, for participating in the meeting, and for being an active voice on the TPB for equity concerns.

Ms. Klancher of the TPB staff provided a summary of the themes from the facilitated discussion and stated that a meeting summary would be emailed to the committee for review.

Mr. Allen stated that the feedback received would be used to inform future AFA agendas, and thanked everyone for their participation and enthusiasm before adjourning the meeting.

ATTENDEES

Alexa Mavroidis, Arlington Transit Advisory Committee Accessibility Subcommittee	Kristen Franklin, Prince George's County Department of Public Works and Transportation	Charles Allen, AFA Chairman, Councilmember from the District of Columbia
Andy Wexler, Arlington Transit	Lessie Henderson, Prince George's Advocates for Community-Based Transit	Kanti Srikanth, TPB Staff Director
Angela Miller, Direct Action (for people with Disabilities)	Lorena Rios, Hispanic Chamber of Commerce of Northern Virginia	Wendy Klancher, staff
Brenda Richardson, Earth Conservation Corps	Marieannette Otero, Safe Routes to School National Partnership	Bryan Hayes, staff
Charlie Crawford, Representing people with disabilities and AFA liaison to AAC	Monica White, Maryland Transit Administration	Lynn Winchell-Mendy, staff
Chris Blake, Washington Metropolitan Area Transit Authority Office of ADA Programs	Nadia Anderson, AAA	Lamont Cobb, staff
Dan Emerine, DC Office of Planning	Nechama Masliansky (phone), SOME (So Others Might Eat)	John Swanson, staff
Daria Cervantes, The Arc of Montgomery County	Nicole Goines, Federal City Council	Abigail Zenner, staff
David Do, Mayor's Office for Asian and Pacific Islander Affairs	Raka Choudhry, District Department of Transportation	Sergio Ritacco, staff
Debby Fisher, CHI, Inc.	Richard Ezike, Congressional Black Caucus Foundation	Anne Phelps, Staff to DC Councilmember Allen
Era Pandya, Montgomery County Public Schools	Rikki Epstein (phone), The Arc of Northern Virginia	Bill Orleans, resident
Eric Shaw, DC Office of Planning	Roger Hoskin, Represents older adults	
George Clark, Tri-County Council for Southern Maryland	Sandra Dent (phone),	
Harriet Block, Jewish Council for the Aging	Susie McFadden-Resper, DC Office of Disability Rights	
Janine Ashe, Federal Highway Administration - DC Metro Division	Thomas Curtis, Maryland Department of Disabilities	
Jayson Green, YMCA Fairfax County Reston	Tyra Redus, District Department of Transportation	
Jennifer Kanarek (phone), NV Rides	William Farrell (phone), Shepherd's Center of Oakton-Vienna	
Karen Smith, The Arc of Greater Prince William	Kate Robb, American Public Health Association	
Kari Snyder, Maryland Department of Transportation		

ITEM 7 – Action
July 20, 2016

Approval of the National Capital Region Freight Plan

Staff

Recommendation: Adopt TPB Resolution R1-2017 approving the National Capital Region Freight Plan briefing

Issues: None

Background: This plan is a major update to the 2010 National Capital Region Freight Plan. The plan was released for a 30-day public comment period on June 9, 2016 and the board was briefed on the draft plan on June 15, 2016. The plan describes the role of freight in the Region's economy, provides an overview of the multimodal freight transportation system, describes the drivers of freight demand and resulting freight flows, and discusses significant freight issues. It includes a set of regional freight policies, a list of projects important for freight, and recommendations for future freight planning actions. It is intended to be both a technical reference and a guide to future TPB freight planning activities.

**NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD
777 North Capitol Street, N.E.
Washington, D.C. 20002**

**RESOLUTION APPROVING
THE NATIONAL CAPITAL REGION FREIGHT PLAN**

WHEREAS, the National Capital Region Transportation Planning Board (TPB) has been designated by the Governors of Maryland and Virginia and the Mayor of the District of Columbia as the Metropolitan Planning Organization (MPO) for the Washington Metropolitan Area; and

WHEREAS, the TPB Vision, which was adopted on October 21, 1998 includes:

- Policy Goal 2, which states that “... the region will develop, implement, and maintain an interconnected transportation system that enhances quality of life and promotes a strong and growing economy throughout the region...”; and
- Policy Goal 2, Objective 5: “Efficient and safe movement of people, goods, and information, with minimal adverse impacts on residents and the environment”; and
- Policy Goal 8, Strategy 5: “Develop a regional plan for freight movement”; and

WHEREAS, freight plays a critical role in the region’s economy; and

WHEREAS, the TPB created a Freight Subcommittee with the primary mission to advise the TPB, the TPB Technical Committee, and other TPB subcommittees on freight transportation matters, as well as to provide a forum for information sharing and coordination on freight transportation issues among TPB member agencies and freight stakeholders; and

WHEREAS, members of the Freight Subcommittee supported the development of the *National Capital Region Freight Plan 2016* to help guide freight program activities; and,

WHEREAS, the Freight Subcommittee and staff worked in close coordination on the development of the *National Capital Region Freight Plan 2016*; and

WHEREAS, following from the discussions at the October 21, 2015 TPB work session, TPB staff in consultation with the TPB, the Freight Subcommittee, the TPB Technical Committee, and other stakeholders developed a comprehensive set of regional freight polices that are included within the *National Capital Region Freight Plan*; and

WHEREAS, the *National Capital Region Freight Plan* identifies a number of findings and recommendations in support of the TPB Vision and Regional Transportation Priorities Plan goals; and

WHEREAS, the National Capital Region Freight Plan reflects an emphasis on safety, including hazardous materials issues and infrastructure state of good repair; and

WHEREAS, at its June 15, 2016 meeting, the TPB was briefed on the draft *National Capital Region Freight Plan*.

NOW, THEREFORE, BE IT RESOLVED THAT THE NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD approves the attached *National Capital Region Freight Plan*.

DRAFT

National Capital Region Freight Plan Executive Summary

June 2016



National Capital Region
Transportation Planning Board

ABOUT THE TPB

The National Capital Region Transportation Planning Board (TPB) is the federally designated metropolitan planning organization (MPO) for metropolitan Washington. It is responsible for developing and carrying out a continuing, cooperative, and comprehensive transportation planning process in the metropolitan area. Members of the TPB include representatives of the transportation agencies of the states of Maryland and Virginia and the District of Columbia, 22 local governments, the Washington Metropolitan Area Transit Authority, the Maryland and Virginia General Assemblies, and nonvoting members from the Metropolitan Washington Airports Authority and federal agencies. The TPB is staffed by the Department of Transportation Planning at the Metropolitan Washington Council of Governments (COG).

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ACCOMMODATIONS

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This plan is dedicated to Karin C. Foster (1977-2013),
friend, colleague, freight planning expert, and consummate professional.

Note on the Executive Summary Version:

This Executive Summary provides excerpts of key information from the National Capital Region Freight Plan. For more information and further detail on these topics, please refer to the full report.

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INTRODUCTION

The National Capital Region's (hereafter referred to as "the Region") multimodal transportation system is vital to the economy of the Region and to the quality of life of its residents. It connects people and businesses to important regional activity centers and to major domestic and international markets. Each year hundreds of millions tons of freight valued in the billions of dollars move over the Region's roadways and railways and pass through its airports. The Region's service-based economy, with its growing employment, population, and wealth will continue to drive demand for freight in the foreseeable future. Economic growth along the eastern seaboard, throughout the nation, and across the world will also result in greater quantities of goods moving into, out of, and through the Region—especially along the I-95 corridor. Evolving logistics practices, changes in where

The Region's service-based economy, growing employment and population, and increasing wealth will continue to drive demand for freight.

goods are produced and how they are distributed, expansion of the Panama Canal, and increasing urbanization are but a few of the factors that will impact how freight will move across the Region in the future. The Transportation Planning Board (TPB) as the Metropolitan Planning Organization (MPO) for the National Capital Region has an important role to play in ensuring that the regional transportation system continues to be responsive to and supportive of the freight demands placed upon it by its residents, businesses, and visitors.

Freight Planning in the National Capital Region

TRANSPORTATION PLANNING BOARD VISION

The TPB Transportation Vision, adopted in 1998, provides a framework to guide the Region's transportation planning and investment decisions into the 21st century. It lays out eight broad goals with associated objectives and strategies. Two of the goals are closely tied to freight transportation (see below) and are supported by this Plan:

- Goal 2: The Washington metropolitan region will develop, implement, and maintain an interconnected transportation system that enhances quality of life and promotes a strong and growing economy throughout the region, including a healthy regional core and dynamic regional activity centers with a mix of jobs, housing, and services in a walkable environment.
- Goal 2, Objective 3. A web of multi-modal transportation connections which provide convenient access (including improved mobility with reduced reliance on the automobile) between the regional core and regional activity centers, reinforcing existing transportation connections and creating new connections where appropriate.
- Goal 8, Strategy 5: Develop a regional plan for freight movement.

REGIONAL FREIGHT PLANNING

The TPB included a dedicated freight planning task within its unified planning work program beginning in fiscal year 2007. While freight issues were addressed in overall transportation planning before that time, such involvement was mostly limited to participation in freight-related groups such



Karin Foster, COG

as the I-95 Corridor Coalition and the Baltimore Metropolitan Council's Freight Movement Task Force. Responding to recommendations described in a May 2007 consultant-led study entitled, *Enhancing Considerations of Freight in Regional Transportation Planning*, the TPB strengthened its freight planning capacity by hiring an additional staff person with responsibility to further the Region's freight program. This additional resource enabled the TPB to engage public- and private-sector stakeholders, gather and analyze freight data, and better integrate freight considerations into overall transportation planning activities. The increased focus on these activities led to the establishment of the TPB Freight

Subcommittee in April 2008, providing a venue in which both public- and private-sector representatives share information and provide input on the regional transportation planning process. The first National Capital Region Freight Plan was published in 2010. The 2016 edition of the National Capital Region Freight Plan builds upon the foundation provided by that initial effort.

Compliance with Federal Law – MAP-21 and FAST

The Moving Ahead for Progress in the 21st Century Act (MAP-21) requires MPOs to establish, monitor, and set targets for freight performance. These requirements were continued under the Fixing America's Surface Transportation (FAST) Act signed by the President of the United States on December 4, 2015.

TPB Activities to Address FAST Act Requirements

At the time of this Plan's release, the FHWA together with the FTA are in the process of translating the MAP-21 and FAST legislations into regulations that define what states, local governments, MPOs, and other entities must do to comply with the law. The TPB is monitoring the federal government's periodic releases of MAP-21/FAST Act notices of proposed and final rule makings, reviewing their contents, identifying the requirements within them that are relevant to MPOs, and developing preliminary plans and processes to address them. The recently released freight performance management proposed rule requires states and MPOs such as the TPB to develop and track freight performance measures and set freight performance targets. Complying with these requirements will

Federal legislation requires states and MPOs such as the TPB to develop and track freight performance measures and set freight performance targets.

require close coordination with DDOT, VDOT, and MDOT. Key freight performance management personnel within each of these organizations have been identified and preliminary meetings to discuss their various performance management approaches, including data sources and methodologies, have been scheduled. Further TPB actions related to the FAST Act will be developed as additional proposed rules, final rules, and guidance are released.

FREIGHT PLANNING IN MEMBER JURISDICTIONS

Among TPB member jurisdictions, the state-level agencies are the most engaged in freight planning activities. The District of Columbia, the State of Maryland, and the Commonwealth of Virginia have each developed studies and plans that include regionally significant freight-related provisions.

While many of the TPB's non-state member jurisdictions have not developed freight-specific plans, some of them address freight issues within their respective planning documents. One member jurisdiction, Frederick County Maryland, developed a freight-specific document. The Frederick County Freight and Land Use Plan (2011) provides transportation infrastructure recommendations and a set of land-use tools the county can use to improve the coordination between freight related land uses and the multimodal transportation system. TPB staff works closely with the states and local jurisdictions to ensure coordination among state, regional, and local freight plans.

THE MULTIMODAL FREIGHT SYSTEM

Freight Transportation System Overview

The region's multimodal freight transportation system consists of:

- More than 16,000 miles of roadways carrying more than 300 million tons of goods annually.
- Two Class I railroads – CSX Transportation and the Norfolk Southern Corporation – operating over 250 miles of mainline track and carrying more than 47 million tons of local freight annually.
- Two major cargo airports – Washington Dulles International Airport and Baltimore Washington International Thurgood Marshall Airport.
- An extensive pipeline network that carries more than nine million tons of freight per year.
- A number of key intermodal connectors – short roadway segments that tie rail terminal facilities, airports, and pipeline terminal facilities to the National Highway System (NHS).

Trucking and the Region's Roads

The region's highway system is organized into the following categories:

- Interstate – More than 230 miles of 4- to 10-lane highways that connect the region to the rest of the nation.
- Primary – More than 2,400 miles of 2- to 8-lane roads that connect communities within the Region to each other and to the interstates.
- Secondary – More than 2,100 miles of connector roads.
- Local – More than 12,000 miles of local streets.

THE REGIONAL FREIGHT-SIGNIFICANT NETWORK

Certain components of the region's highway system are particularly important for goods movement. Each of the Region's member states, Maryland, Virginia, and the District of Columbia have identified a designated truck network linking major freight shipping and receiving areas and accommodating

The regional freight significant network is a system of truck-allowed routes that are particularly important for goods movement.

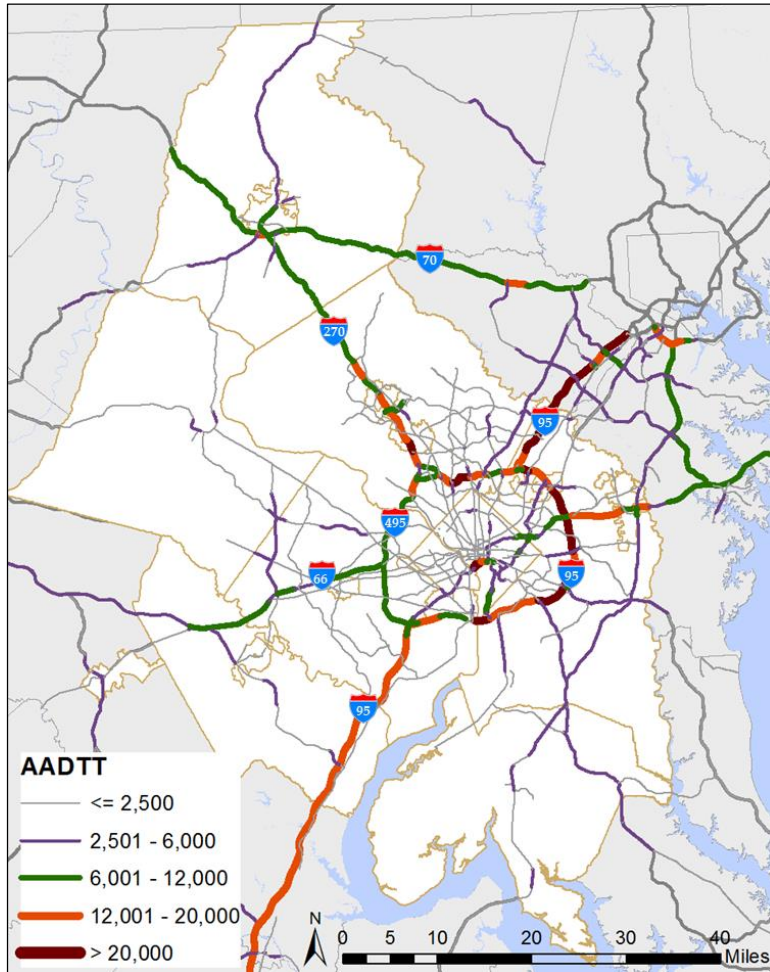
through state freight movement. Within the Region, most of these state designated truck routes are represented by interstate highways and major arterials. At the regional level, the importance of roadways other than state designated truck routes is also recognized. These regionally freight-significant roadways function as important connectors between retail establishments, warehouse and distribution centers, and state-designated truck routes.

TPB staff, in consultation with the TPB Freight Subcommittee, identified a network of these freight-important roadways using a combination of data analysis and collective expertise. The resulting regional freight significant network is organized into three tiers.

TRUCK UTILIZATION

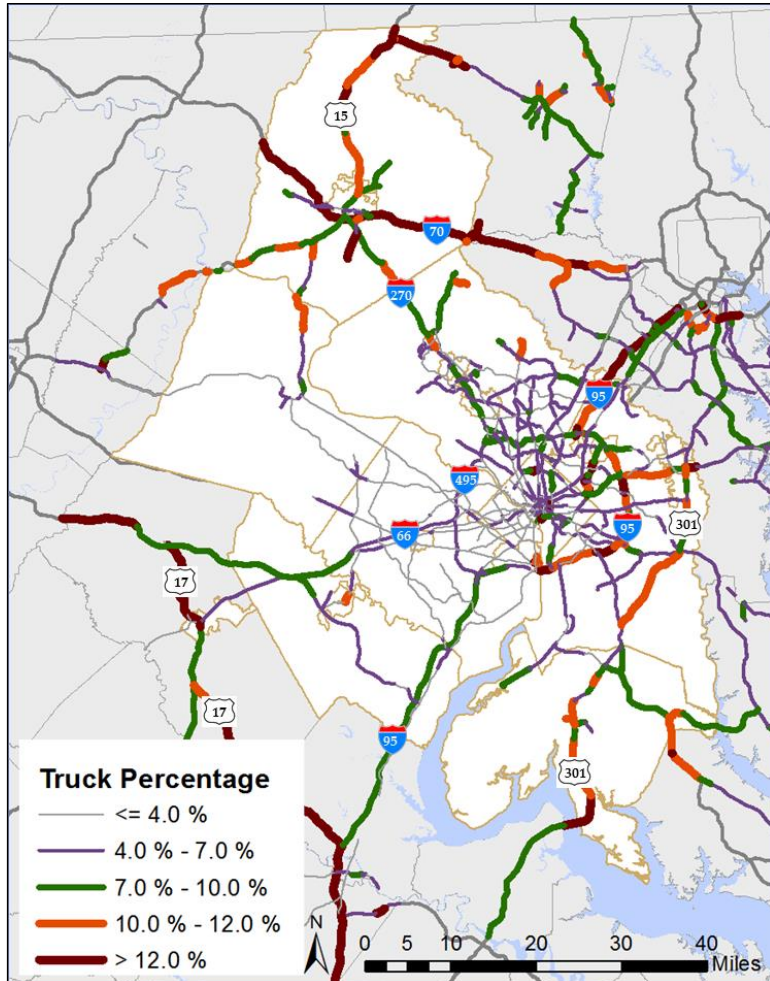
Analysis of Highway Performance Monitoring System (HPMS) data provides average annual daily truck traffic (AADTT) and truck percentage data by roadway segment. Viewing these data (See Figures ES 2 and ES 3) provide an understanding of which roadways have the most truck volume and which roadways have a high proportion of truck traffic.

Figure ES 2: Average Truck AADTT



Source: COG Analysis of 2013 Highway Performance Monitoring System Submittal – for planning purposes only.

Figure ES 3: Average Truck Percentage



Source: COG Analysis of 2013 Highway Performance Monitoring System Submittal – for planning purposes only.

Please refer to the full report for additional information about truck parking and truck safety.

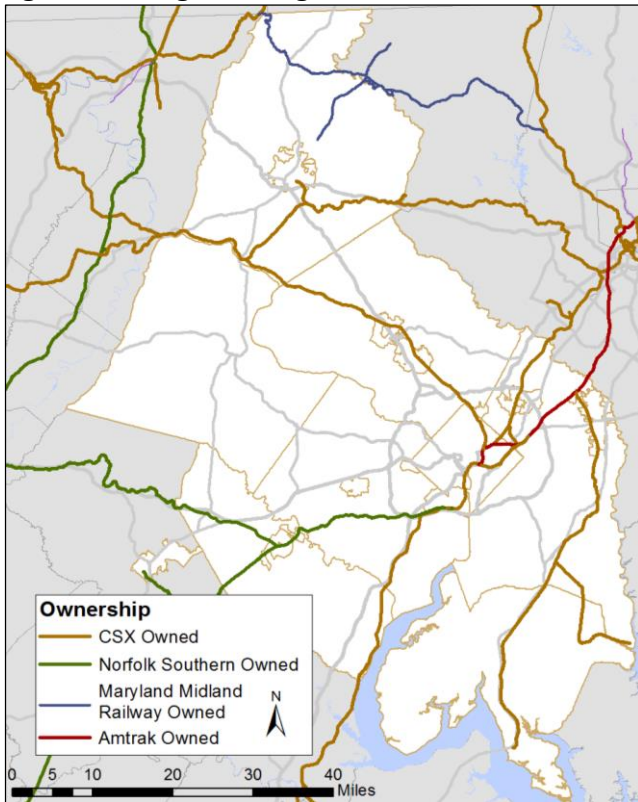
Railroads

The Region's rail system consists of more than 300 miles of mainline track, most of which are operated by two railroads – CSX (211 miles), and the Norfolk Southern Corporation (46 miles). Additionally, the Region is served by Maryland Midland Railway, a short line operating in Frederick County, Maryland. Three passenger systems – Amtrak, Virginia Railway Express, and MARC – also operate over the Region's freight rail system.

RAIL SYSTEM INVENTORY

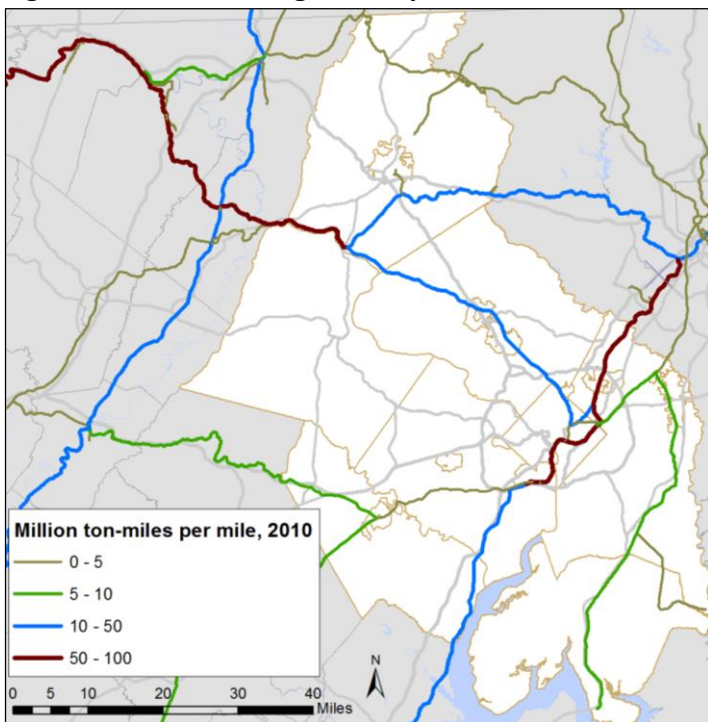
Figures ES 4 and ES 5 show the rail system by ownership and by rail density respectively.

Figure ES 4: Regional Freight Rail Network



Source: COG Analysis of 2013 National Transportation Atlas Database – for planning purposes only.

Figure ES 5: Railroad Freight Density



Source: COG Analysis of 2013 National Transportation Atlas Database – for planning purposes only.

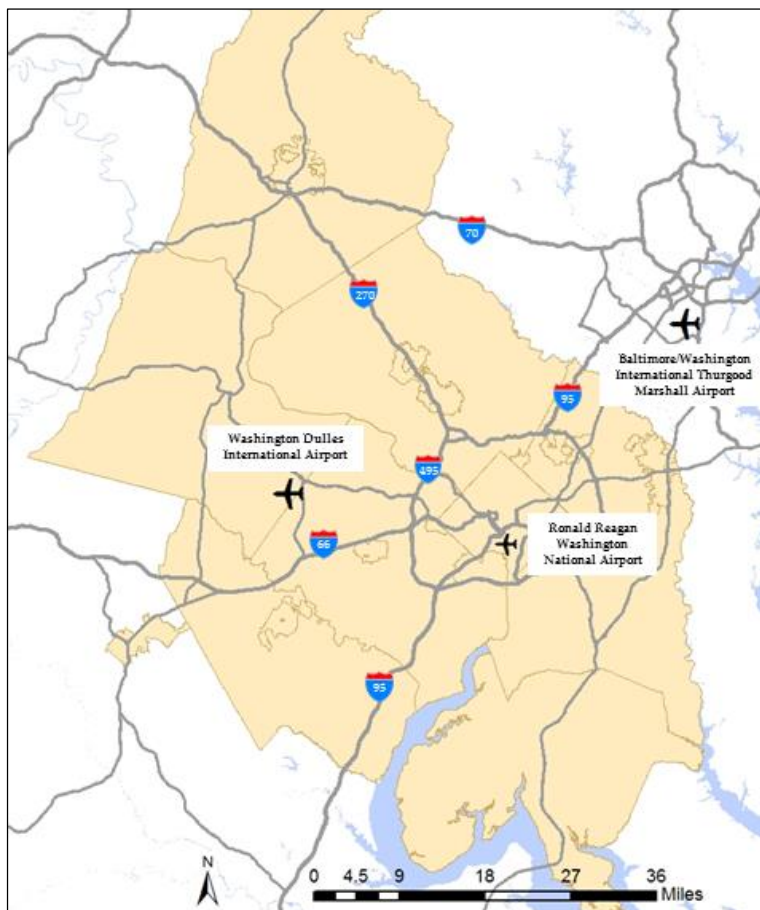
Please refer to the full document for additional information on types of freight rail service and the locations of major intermodal facilities served by rail.

Air Cargo

Of the 13 public use airports serving the National Capital Region, two of them, as shown in Figure ES 6, provide for nearly all of the reported air cargo tonnage. While small amounts of air cargo are handled out of Washington Reagan National Airport, the vast majority is handled at Washington Dulles International Airport (Dulles) and Baltimore/Washington Thurgood Marshall International Airport (BWI).

Dulles and BWI are ranked 23rd and 36th respectively according to Airports Council International (ACI) 2014 rankings of North American cargo airports. Dulles and BWI airports are important economic drivers of the National Capital Region's economy, yet they are dwarfed in size by the largest national air cargo hubs. For example, New York's JFK airport handled nearly five times as much cargo as Dulles and more than 12 times as much cargo as BWI in 2014.

Figure ES 6: Major Cargo Airports Serving the National Capital Region



Source: COG

Please refer to the full report for additional information about cargo activity at Dulles and BWI airports.

INTERMODAL CONNECTORS

NHS intermodal connectors are short roadway segments that tie airport, seaport, and rail terminal facilities to the National Highway System (NHS). They tend to carry lower volumes of traffic at slower speeds than a typical NHS route and are therefore typically designed to lower standards. However, large and heavy trucks use these critical roadway segments to carry the full range of commodities

Intermodal connectors tie airport seaport, and rail terminal facilities to the National Highway System.

essential to the nation's economy. The FHWA identifies one freight-related intermodal connector within the National Capital Region and two more that are located just outside of it:

- Alexandria Intermodal (Ethanol Transfer Station) – Norfolk Southern - Van Dorn Street (I-95 to Metro Road) and Metro Road (Van Dorn Street to facility entrance)
- Virginia Inland Port – Port of Virginia / Norfolk Southern – U.S. Route 340 (I-66 to facility entrance)
- Jessup TDSI Auto Terminal – CSX – MD 175 (I-95 to Dorsey Run Road), Dorsey Run Road (MD 175 to MD 32)

While not included on the FHWA list of official intermodal connectors, the following road serves as an important “intermodal connector” in the Region:

- Plantation Pipeline Terminal – Terminal Road (I-95 to facility entrance)

FREIGHT DEMAND

National Capital Region Commodities

By analyzing the commodities that are most critical to the Region's economy – those that are moving into, out of, and within (but not through) the Region, important links between economic activity and freight movement become apparent.¹

WEIGHT AND VALUE

The two primary measures of freight activity are weight and value. Value is an indicator of the economic activity associated with freight, while weight is an indicator of the demand that freight places on transportation infrastructure. In this report weight is measured in tons and value in 2007 dollars.

Inbound, outbound, and intraregional commodities totaling nearly 212 million tons and with an equivalent value of more than \$240 billion moved over the Region's multimodal transportation system in 2007. These figures include both domestic trade (within the Region or between the Region and other areas of the United States) as well as international trade (between the Region and other countries).

Weight

Four major commodity groups are responsible for more than 50 percent of the Region's tonnage – gravel and crushed stone, waste and scrap, nonmetallic mineral products, and petroleum products. Other important commodity groups by weight include natural sands, prepared foodstuffs, wood products, nonmetallic minerals, mixed freight, and coal among others. These data show that construction activities, electric power generation, and retail consumption generate much of the freight (by weight) moving across the Region's transportation network.

By weight, gravel and crushed stone is the top commodity type hauled in the Region.

By value, electronic and electrical equipment is the top commodity type hauled in the Region

Value

Four major commodity groups – electronic and electrical equipment, machinery, mixed freight, and pharmaceutical products – account for more than 40 percent of the total value of commodities moved in the Region. Other important commodity groups include textiles, leather and articles of textiles and leather; motorized vehicles and parts; miscellaneous manufactured products; prepared foodstuffs; articles of base metal; and precision instruments and apparatus among others. These data reflect the importance of the technology and life sciences sectors to the Region's economy as well as the demands for goods by the Region's businesses and consumers.

DIRECTION OF TRADE

The Region's freight moves in different directions, depending on the commodity:

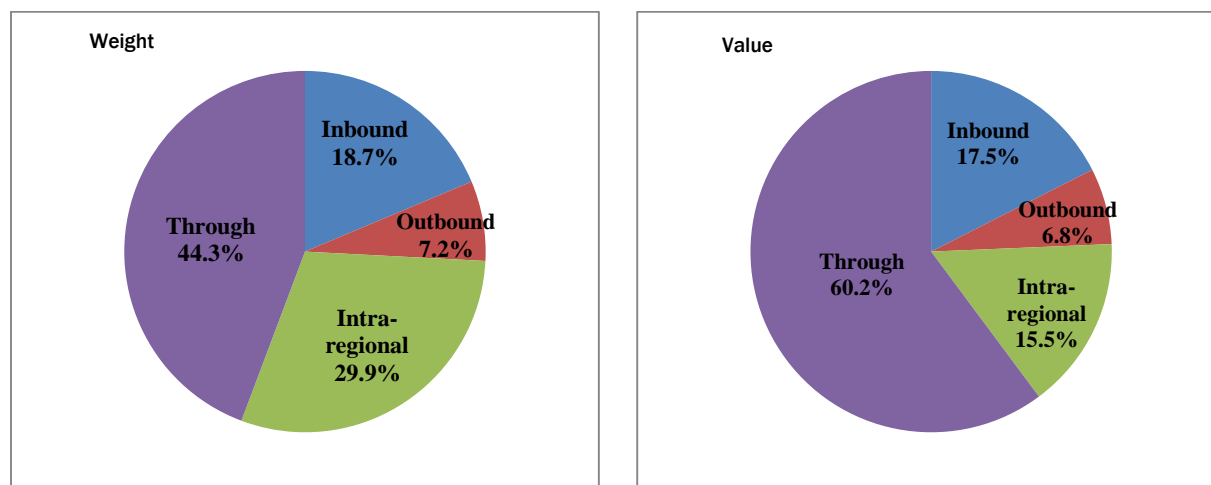
¹ The Federal Highway Administration's Freight Analysis Framework dataset is the primary source of the information presented in this section.

- Inbound freight is moved from other states, or other countries, to the Region.
- Outbound freight is moved from the Region to other areas of the United States, or to other countries.
- Intraregional freight is moved from one point in the Region to another point in the Region.
- Through freight is moved from a location outside of the Region to another location outside of the Region, via transportation infrastructure within the Region. Through freight does not contribute significantly to the region’s economy and is not included in the tabulation of commodities.

The Region receives over 2 ½ times more inbound freight than it produces outbound freight.

Figure ES 7 summarizes the direction of travel for the Region’s commodities based on weight and value.

Figure ES 7: Total Freight (Weight and Value) by Direction



Source: COG analysis of Federal Highway Administration Freight Analysis Framework data.

TRANSPORTATION MODES USED

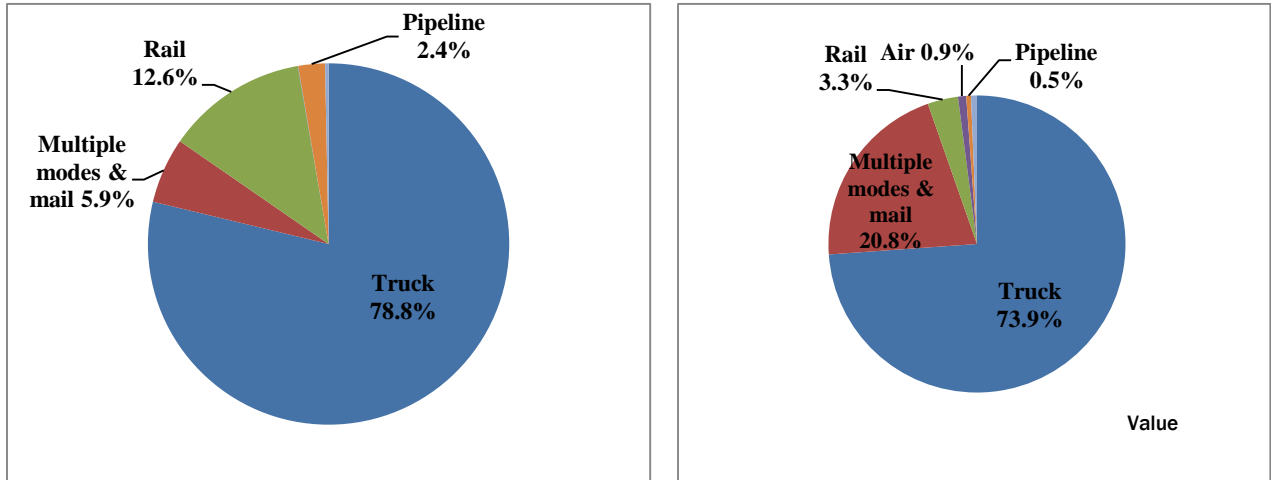
All freight moves utilize either a single mode or a combination of more than one mode of transportation. The Freight Analysis Framework² (FAF) categorizes each freight move as being one of the following (see the full report for more detailed information about the FAF modes):

- Truck;
- Rail;
- Multiple modes and mail;
- Water;
- Air (includes truck-air);
- Pipeline; and
- Other/unknown

² The Freight Analysis Framework (FAF) is a publicly available dataset developed and maintained by the Federal Highway Administration.

Figure ES 8 summarizes the modes used for the Region’s commodities, based on weight and value, while Figure ES 9 compares the mode share profile of the Region to that of the nation as a whole.

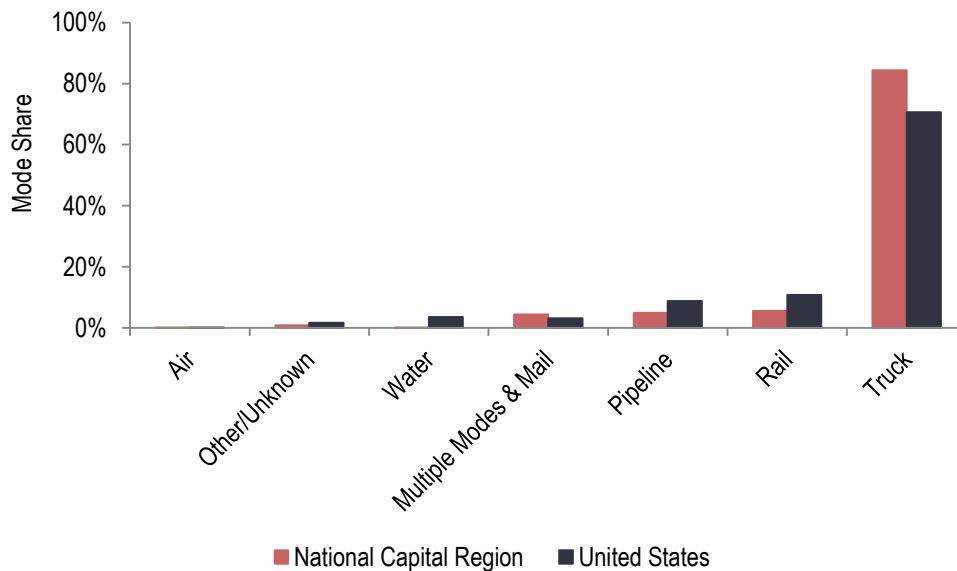
Figure ES 8: Total Freight (Weight and Value) by Mode



Source: COG analysis of Federal Highway Administration Freight Analysis Framework data.

Trucks haul a greater proportion of total freight (by weight) in the Region than in the nation overall. Relatively less freight is hauled by rail, water, or pipeline in the Region than in the broader nation (see Figure ES 9).

Figure ES 9: Transportation Modes Used (by Weight) – National Capital Region and United States



Source: COG analysis of Federal Highway Administration Freight Analysis Framework data.

Please refer to the full report for additional information including top commodities, regional trading partners, and mode-specific analyses.

FREIGHT TRENDS AND ISSUES

While the freight transportation system is currently performing at a level that supports the Region's economy and quality of life, recurring bottlenecks on some roadways and railways negatively affect the reliability of freight deliveries. The growth in freight volumes forecasted for the region is a result of an increasing demand for goods – demand driven by the Region's expanding economy, growing population, and increasing standard of living. To fully realize the benefits associated with the forecasted growth in freight traffic, the Region will need to address the challenges to the multimodal transportation system in light of that growth. These challenges include more trucks sharing the roadways with passenger vehicles, bicycles, and pedestrians; more commuter and intercity passenger trains sharing the railways with freight trains; and increased wear and tear on pavements,

Addressing the challenges associated with truck deliveries in dense and vibrant regional activity centers is a key planning issue.

bridges, and rail infrastructure. Because trucks are the primary means by which goods are delivered to stores, restaurants, businesses, and residences, the more dense and vibrant a neighborhood becomes, the more that trucks must share the streets in close proximity to pedestrians, bicyclists, and other vulnerable road users. Addressing the challenges associated with truck deliveries in dense and vibrant regional activity centers is a key planning issue.

Trends Impacting Freight in the Region

DEMOGRAPHIC AND ECONOMIC DRIVERS OF FREIGHT DEMAND

The physical movement of freight is of critical importance to any region's economy. Consumers rely on efficient and reliable freight transportation for shipments of consumer products to homes and retail establishments and for product returns and trash removal. Commercial enterprises rely on efficient and reliable freight transportation for inbound shipments of raw materials, intermediate goods, and other supplies required for the production of finished goods as well as outbound shipments of intermediate goods and finished products to regional, national, and global markets. Commercial enterprises in the service sector stimulate freight demand by providing income to their employees, who in turn use that income to purchase goods and services.

To understand freight movement, it is useful to examine the key economic and demographic drivers of freight demand.

All commercial enterprises depend on freight, but those that are directly involved in activities such as transporting goods, farming, mining, manufacturing, construction, and managing retail operations depend on it more strongly than others. These freight-dependent industries account for 19 percent of the Region's gross domestic product (GDP) and 18 percent of its total employment.

To understand freight movement in the Region, it is therefore useful to examine the key economic and demographic drivers of freight demand, including overall employment, GDP, economic structure, population, and wealth.

Recent Trends

POPULATION

As of 2013 the Washington-Arlington-Alexandria Metropolitan Statistical Area was home to 5.6 million people, making it the 7th most populous metropolitan statistical area in the nation. The Region is adding population at a faster pace than the nation as a whole. Expanding employment in the business and professional service- and government-sectors attracts highly educated people from throughout the United States and the world. The Region's population is expected to grow an additional 32 percent by the year 2040. Each new resident creates additional demand for consumer

The Region's population is expected to grow by 32 percent by 2040.

goods – residents with higher disposable income generate greater demand for material goods and correspondingly greater overall demand for freight transportation. The Region ranks second in the nation for median household income (\$90,149 in 2013), 73 percent above the national average. This means that the median regional household earns approximately \$38,000 more per year than the median American household. The combination of a growing population and rising consumer affluence generates high demand for consumer goods, which translates into high demand for freight transportation services.

EMPLOYMENT AND GROSS DOMESTIC PRODUCT

The Region's economy employed 2.8 million people in 2013, roughly 1.9 percent of all U.S. jobs. Between 2002 and 2013, total employment in the Region increased by 245,000 or 9.6 percent, compared to a U.S. growth rate of 5.5 percent.

In 2013, the Region's gross domestic product (or GDP) was \$464 billion. GDP is a measure of the total value added to goods and services due to economic activity in the Region. As with employment, the Region has been surpassing the United States as a whole in terms of GDP growth. In nominal

There is a direct relationship between the growth in economic activity and the demand for freight transportation.

terms, the Region's GDP grew by 61 percent between 2002 and 2013, compared to 53 percent for the United States overall. There is a direct relationship between the growth in economic activity, as measured by GDP, and the demand for freight transportation.³

³ The United States Bureau of Transportation Statistics (BTS) defines this relationship as the ratio of total ton-miles of freight to total GDP. In 2002 this freight transportation intensity ratio was 0.38 ton-miles per dollar, indicating that every marginal dollar of GDP would be expected to generate an additional 0.38 ton-miles of freight activity.

Forecasts

Population and employment forecasts for the Region indicate that demand for goods, along with the associated demand for freight transportation services, will continue to grow in the future.

The Region's population is forecast to increase by 32 percent through 2040. By 2040, the Region is expected to have over 6.6 million people, an increase of 1.6 million people. This population growth will have a direct impact on freight transportation demand. More people mean more freight trips generated, more services required, and more goods purchased. In addition, population and economic growth in the rest of the nation and around the world will result in increased freight shipments on the regions highways, railroads, and airports.

Due to forecasted growth in population and employment, demand for freight transportation in the Region will continue to grow.

Employment in the Region is forecasted to grow even faster than population. By 2040 the Region is expected to employ over 4.3 million people, an increase of 1.3 million or 43 percent. This expansion of jobs provides evidence that the Region's businesses, including those that are freight dependent, will generate increasing demand for freight transportation services in the future.

EVOLVING SUPPLY CHAINS AND LOGISTICS PATTERNS

New technology coupled with increasingly demanding customer expectations are pushing businesses to reduce costs and improve responsiveness. The various aspects of e-commerce are enabling some businesses to accomplish both of these imperatives while transforming the supply chain in the process. Consumers are spending less time in retail stores and more time shopping via the internet. They increasingly expect immediate gratification and successful businesses are working to satisfy those expectations. Businesses that do not keep up with these changing expectations are at increased risk of failure. The confluence of e-commerce and customer's high expectations are changing the retail landscape and introducing new transportation providers. These changes are being manifested in terms of the designs and locations of distribution centers and in the way products are distributed to the end customer.

Evolving Distribution Center Design and Locations

A typical distribution center is roughly rectangular in shape and features a large number of loading docks. Traditional distribution centers typically employ about 0.3 workers per thousand square feet whose primary work tasks involve shipping and receiving activities. The rise in e-commerce is resulting in a transformation of the typical distribution center into an e-commerce fulfillment center. An e-commerce fulfillment center typically employs about 1.0 workers per thousand square feet

Newer "fulfillment centers" employ more workers and benefit from transit accessibility.

whose primary work tasks include picking and packing in addition to shipping and receiving activities. These additional workers require places to park, so fulfillment centers have larger

employee parking lots. While traditional distribution centers are typically not located to maximize transit options, newer fulfillment centers are better able to attract the work force needed if they have robust transit options available.

The Changing Last Mile

In an effort to increase speed to market, traditional retailers are converting their brick and mortar stores into centrally located urban distribution centers. This enables same day fulfillment of a customer's online order from the urban department store. Online retailers such as Amazon are installing lockers in locations such as transit stations, Dunkin Donut shops, and convenience stores to enable secure delivery of packages while customers are away from home. As the emphasis of last mile logistics continues to shift towards personalized delivery services, the number of trucks on the Region's streets and roadways will grow. However, these additional trucks are likely to be smaller on average.

The potential impact of automated trucks, drone deliveries, and other disruptive technologies is difficult to plan for, however, regional planners and transportation officials at all levels would be wise to keep abreast of developments in these areas and be prepared to engage elected officials and the general public as needed.

TRENDS IN THE TRANSPORTATION INDUSTRY

The freight transportation industry is dynamic and continues to evolve with large firms making strategic investments in infrastructure and technology.

Trucking

Small trucking firms are likely to continue to contract to larger carriers and utilize load-matching services in an effort to maximize their return on capital. Trucking firms that effectively utilize information technology are likely to prosper relative to firms that are less technology-adept. This trend favors larger firms. Driver shortages will continue to be a problem for the industry, particularly for long haul routes, but as the economy continues to generate high value time sensitive goods, demand for trucking services will continue to be high.

As of early 2015, the profitability of trucking firms was at multi-year highs due to the combination of record tonnage, high shipping rates, and low fuel prices. Industry observers expect this environment to continue through 2015 and fleet owners are investing part of their profits in equipment upgrades and expansion. While the incentives for these investments are related to the need to expand capacity rather than the desire for greater fuel efficiency, fleet turnover is likely to result in a higher proportion of cleaner and more fuel-efficient trucks across the nation and in the Region.

Rail

Deregulation of the railroad industry in the 1980s enabled railroads to steadily increase productivity by restructuring the rail system, shedding unprofitable lines, creating new business opportunities through long-haul intermodal service, and by transporting coal from mines in Appalachia and Wyoming's Powder River Basin. Improvements in hydraulic fracturing techniques enable oil to be extracted more economically from shale deposits and have provided business opportunities for railroads to transport this oil to refineries primarily along the Gulf Coast and in the Northeast. However, due to the steep decline in crude oil prices from midyear 2014 to the publication of this Plan in midyear 2016, shale oil production has fallen substantially resulting in less demand for rail

transport. This illustrates the cyclical nature of rail transport demand for energy products such as coal and crude oil.

The two Class I railroads operating in the National Capital Region, Norfolk Southern and CSX Transportation, are also working to expand their intermodal business through major initiatives to add additional track, straighten curves, increase clearances, and add intermodal terminals on key rail corridors to clear the way for trains hauling double stack container cars moving between Mid-Atlantic ports and the Midwestern markets (CSX National Gateway) and between the Southeast and the Northeast (Norfolk Southern Crescent Corridor)

Air Cargo

In the air cargo industry, freight forwarder and air carrier networks route freight through operationally efficient, cost-effective airports that provide the highest level of customer service. To realize the benefits of these efficient and cost-effective airports, cargo is sometimes trucked many hundreds of miles before being loaded onto an aircraft.

Air cargo is, in most cases, fluid and has many airport options. The ultimate efficiency of airport cargo facilities depends largely on local and regional air cargo demand patterns, available aircraft cargo capacity, sufficient cargo infrastructure, ease of access to the interstate highway system, and the degree of connectivity among freight forwarders, cross-dock and warehouse facilities, and off airport properties. Access in and out of the airport is important to air cargo businesses, and truck transportation is the critical link to the end-user.

Ports and Shipping

To realize greater economies of scale, shipping lines have continued to acquire larger and larger ships. To accommodate them, a program to expand the Panama Canal is currently underway and expected to be completed in early 2016. Container terminals at the Port of Baltimore and at the Port of Virginia, along with at least three other East Coast ports, are currently able to accommodate these larger post-Panamax ships and are anticipating increased container traffic as a result. The advent of larger container ships may impact the size of nearby distribution centers. This is not only because greater volumes of containers are expected overall, but also because there are more containers per ship to offload. This creates demand for larger buildings to accommodate the “surge” volume. While it is difficult to predict all of the effects that the Panama Canal expansion will have on the National Capital Region, it will likely result in some increase in economic activity coupled with more rail and truck freight on the Region’s multimodal transportation system.

REGIONAL FREIGHT ISSUES, CHALLENGES, AND OPPORTUNITIES

Congestion

ROADWAYS

Congestion on the nation’s roadways is a significant cost to shippers and to the economy overall. The American Transportation Research Institute (ATRI) estimates that congestion added over \$9.2 billion in operational costs and resulted in 141 million hours in lost productivity to the trucking industry in 2013. This is the equivalent of over 51,000 truck drivers sitting idle for a working year. Freight congestion is concentrated in urban areas and is most apparent at bottlenecks on highways - especially those serving major international gateways, major domestic freight hubs, and in major urban areas where important national truck flows intersect congested urban areas. ATRI ranked

congestion in the Washington, DC metropolitan area as fifth in the nation in terms of its contribution to increased operating costs for the trucking industry.

RAIL

Congestion on the freight rail network increases costs to shippers and hampers the reliability and on-time performance of commuter and inter-city passenger rail operations. Railroad capacity is not only a function of track infrastructure; but also of rolling stock and railroad operating strategies related to train speed, train size, and scheduling. Typical infrastructure related capacity constraints include insufficient mainline tracks, lack of adequate sidings, low ceiling tunnels, antiquated bridges, outdated signal systems, missing connections, and inadequate terminal capacity.

The most significant freight rail capacity constraints in the National Capital Region are the Virginia Avenue Tunnel and the Long Bridge. The Virginia Avenue Tunnel is a roughly $\frac{3}{4}$ mile passage beneath Virginia Avenue in southeast Washington, DC housing a single track without enough vertical clearance to accommodate double stack container traffic. The Long Bridge is a two-track railroad

The most significant freight rail capacity constraints in the National Capital Region are the Virginia Avenue Tunnel and the Long Bridge.

bridge across the Potomac River between Virginia and the District of Columbia. These two constraints are both located on a critical, CSX-owned, rail line linking port terminals in the Hampton Roads area to markets in the Northeast and Midwest. A project to remove the capacity and clearance constraints of the Virginia Avenue Tunnel is currently underway. The Long Bridge project, which will double the rail capacity over the Potomac River to accommodate additional passenger and freight trains, is currently in the planning stages.

Freight Rail Safety and Security

The Transportation Planning Board (TPB) is particularly interested in and concerned about the safety and security of the Region's freight rail system. Rail incidents such as the May 1, 2016 CSX derailment in northeast Washington, DC, have highlighted the need for continual improvement of

Safety on the nation's railroads is regulated by the Federal Railroad Administration.

preventative safety and security measures on the freight rail system. Major concerns include the operational handling and tracking of railcars that carry Toxic Inhalation Hazard (TIH) materials, which can cause fatalities if released into the atmosphere. Safety on the nation's railroads is regulated by the Federal Railroad Administration (FRA). It enforces regulations for hazardous materials, highway-rail crossings, track conditions, rail motive power and equipment, operating practices, and train control and signaling. Federal rail safety regulations preempt state rail safety laws and the FRA maintains direct oversight of railroad practices relevant to safety. States can participate in railroad-related investigative and surveillance activities through the FRA's State Safety Participation Program. To participate in the Program, states must have an agreement with the FRA to enable the delegation of some federal investigative and surveillance authority to the State.

The FRA reserves exclusive authority to assess penalties, issue emergency orders, and undertake any other enforcement actions under federal railroad safety laws. Maryland's rail safety authority is

States can participate in railroad-related investigative and surveillance activities through the FRA's State Safety Participation Program.

under the jurisdiction of the Department of Labor, Licensing, and Regulation (DLLR). Virginia's rail safety authority is under the Virginia State Corporation Commission Division of Utility and Railroad Safety. Currently, the District of Columbia does not have an office of rail safety.

POSITIVE TRAIN CONTROL

As part of their safety oversight responsibilities and in response to a mandate within the Rail Safety Improvement Act of 2008, the FRA published a final rule on January 15, 2010 requiring mainlines that transport any poisonous-inhalation-hazardous (PIH) materials and where regularly scheduled intercity passenger or commuter rail services are provided to implement positive train control (PTC). PTC is a technological system designed to prevent train-to-train collisions, derailments, incursions into work zones, and movement through an improperly positioned switch. The implementation deadline, originally set for December 31, 2015 has been extended to December 31, 2018.

RAIL SECURITY

The U.S. Department of Homeland Security (DHS) is the primary federal agency responsible for security of the transportation sector. The DHS National Infrastructure Protection Plan (2013) includes the Transportation Systems Sector-Specific Plan, which is focused on developing strategies to reduce the risks to critical transportation infrastructure from terrorism threats. The leadership of the District of Columbia, the State of Maryland, the Commonwealth of Virginia, area local

COG coordinates and hosts many of the regional emergency support function (R-ESF) committees that are working together to advance preparedness in the region.

governments, and the Department of Homeland Security's Office for National Capital Region Coordination (NCR) are working in partnership with non-profit organizations and private sector interests to reduce the vulnerability of the National Capital Region (NCR) from terrorist attacks. The Metropolitan Washington Council of Governments (MWCOG) coordinates and hosts many of the regional emergency support function (R-ESF) committees that are working together to advance preparedness in the region. The RESF-1 Transportation Committee meets monthly to address role of transportation (including freight rail) in the NCR Homeland Security Program. The committee has representation at the local, state, regional, and federal levels from all NCR jurisdictions and provides a forum for regional transportation officials to exchange information and discuss emergency response, coordination, and recovery requirements.

Freight in Regional Activity Centers

The National Capital Region Transportation Planning Board (TPB) and the Metropolitan Washington Council of Governments (MWCOG) recognize that the Region is supported largely by the economic activity that occurs in major housing and jobs centers, known as activity centers. These mixed-use activity centers are places that are intended to accommodate much of the Region's future growth

and development. Concentrating future growth within activity centers enables the more effective and efficient use of existing facilities and fosters increased economic activity.

Because the initial impetus for rethinking how urban and suburban places should be developed came from planners and other stakeholders interested in improving livability, they most often focused on improving accommodations for pedestrians, cyclists, and transit users. Stakeholders

As more development is concentrated in activity centers, the needs of all users, including those that move goods, must be considered in the planning process.

involved in goods movement were included less often in the urban design conversation. Recently, however, cities and states around the country are beginning to include the consideration of truck movements in their land-use and transportation planning activities. In the National Capital Region, the District Department of Transportation (DDOT) is developing and implementing strategies to address goods movement issues in the urban core. The Region has an opportunity to apply the findings of recent and ongoing research as well as the lessons learned by cities and counties across the nation to ensure that as more development is concentrated in activity centers, the needs of all users, including those that move goods, are considered in the planning process.

REGIONAL FREIGHT POLICIES

The Regional freight policies are intended to provide a framework for transportation planning activities conducted by the Transportation Planning Board (TPB). TPB member jurisdictions are also encouraged to consider these freight policies as they conduct their respective transportation planning functions.

Freight Policy Background

These freight policy statements are the result of an extensive development process based upon TPB member input, a review of existing policy language within published Virginia, Maryland, and District of Columbia documents, regional stakeholder outreach, and multiple TPB freight subcommittee and TPB technical committee reviews. To ensure coverage of all the relevant topic areas, the set of freight policy statements has been correlated with both Regional Transportation Priority Plan goals and National Freight Goals.

TPB Freight Policies

The Transportation Planning Board...

1. supports the prioritized advancement of freight-related transportation projects that provide maximum value, efficiency, and safety with particular emphasis on those that improve freight access to activity centers.
2. supports investments that maintain a state of good repair for the Region's freight transportation system.
3. supports the use of best practices for safety, engineering, and maintenance, of freight-related transportation infrastructure.
4. supports the alleviation of roadway bottlenecks where feasible to improve travel times and reliability for trucks and passenger vehicles.
5. supports maximizing opportunities to expand transportation options, address roadway congestion, and reduce pollution by increasing the use of passenger and freight rail.
6. supports the consideration of potential social, economic, and environmental effects of freight-related programs, policies, and activities on minority populations, low-income populations, and people with disabilities.
7. recognizes freight's role in economic development and supports efforts to maximize the use of important economic drivers, including airports, ports, and intermodal facilities serving the Region's residents and businesses.
8. supports the safe and community-friendly accommodation of freight deliveries within the Region's activity centers.
9. supports improvements in truck safety using education, enforcement, and engineering strategies.
10. supports efforts to route hazardous materials away from the National Capital Region; for hazardous materials that must be transported to, from, within, and through the Region, the TPB supports the selection of the safest and most secure modes and routes.

11. encourages information sharing on explosive, toxic by inhalation, and radioactive materials being shipped to, from, within, and through the Region, including real-time notifications and long-term planning information.
12. supports robust first responder training and exercise activities regarding freight in general and hazardous materials transport in particular.
13. supports collaboration among agencies and with the private sector on freight planning and operations concerns to support mutual goals.
14. supports the proactive analysis of freight-related performance measures in the context of overall regional performance measurement to identify lessons learned and promote regional goals.
15. promotes sustainable methods of freight operations that are sensitive to environmental, cultural, and community resources.
16. encourages collaboration among transportation planners, land use planners, private railroads, elected officials, and other stakeholders to find creative ways to facilitate community-beneficial land use development (residential, commercial, or industrial as appropriate) while providing space for necessary future rail expansion along key rail corridors.
17. supports the review and study of new freight-related technologies, emerging business practices, and evolving commodity mixes and mode shares to advance regional goals.

RECOMMENDATIONS AND NEXT STEPS

The TPB vision is to develop, implement, and maintain an interconnected transportation system that enhances quality of life and promotes a strong and growing economy including a healthy regional core and dynamic regional activity centers. Realizing this vision requires a focus on the efficient transportation of both people and goods. The following recommended actions, which can be accomplished with resources that are already in place, will help the Region move towards its vision. These actions are organized into two categories; those related to maintaining and strengthening the existing regional freight planning process and longer-term, strategic actions.

Actions Related to Maintaining and Strengthening the Regional Freight Planning Process

- Continue to Support the TPB Freight Subcommittee
- Maintain and Strengthen Private-Sector Participation in the TPB Freight Subcommittee
- Create Opportunities to Hold Joint Meetings with Other TPB Subcommittees
- Develop “Freight Around the Region” Brochures in Coordination with Member Jurisdictions
- Organize Periodic Regional Freight Forums
- Collect and Analyze Freight Data and Make Available to Member Jurisdictions and the Public
- Continue Coordination with Federal, State, Local, and Private-Sector Freight Partners
- Coordinate TPB’s MAP-21/FAST Freight-Related Activities – Including Performance Measures
- Identify and Communicate Freight-Related Infrastructure Issues to Member Agencies to Address in their Planning and Programming Activities
- Strengthen Relationships with Local Jurisdiction Planners
- Highlight Economic Development Aspects of Freight with Local Jurisdiction Planners

Strategic Regional Freight Planning Activities

- Raise Freight Profile within Local and Regional Planning Processes
- Develop and Communicate Helpful Information about Accommodating Freight within Regional Activity Centers
- Continue Participation in FHWA Effort to Develop Innovative Strategies for Improving Freight Movement in Urban Areas
- Monitor Developments of Autonomous and Connected Freight Vehicles
- Monitor Key Economic and Industry Trends Impacting Goods Movement
- Monitor the Development of New and Emerging Freight-Relevant Data Sources and Incorporate them into Transportation Planning Activities as Appropriate
- Provide Information to the TPB and Freight Stakeholders on the Status or Progress on this Plan’s Identified Freight Policies When Such Information Becomes Available

DRAFT NATIONAL CAPITAL REGION FREIGHT PLAN

July 2016



National Capital Region
Transportation Planning Board

NATIONAL CAPITAL REGION FREIGHT PLAN

Draft: July 14, 2016

ABOUT THE TPB

The National Capital Region Transportation Planning Board (TPB) is the federally designated metropolitan planning organization (MPO) for metropolitan Washington. It is responsible for developing and carrying out a continuing, cooperative, and comprehensive transportation planning process in the metropolitan area. Members of the TPB include representatives of the transportation agencies of the states of Maryland and Virginia and the District of Columbia, 22 local governments, the Washington Metropolitan Area Transit Authority, the Maryland and Virginia General Assemblies, and nonvoting members from the Metropolitan Washington Airports Authority and federal agencies. The TPB is staffed by the Department of Transportation Planning at the Metropolitan Washington Council of Governments (COG).

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ACCOMMODATIONS

Alternative formats of this document are available upon request. Visit www.mwcog.org/accommodations or call (202) 962-3300 or (202) 962-3213 (TDD).

This plan is dedicated to Karin C. Foster (1977-2013),
friend, colleague, freight planning expert, and consummate professional.

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SUMMARY OF KEY POINTS

The National Capital Region Freight Plan (the Plan) describes the role freight transportation plays in the Region's economy, provides an overview of the Region's multimodal freight transportation system, describes the drivers of freight demand and the freight flows resulting from it, identifies the most significant freight issues in the region, and provides recommendations to ensure the multimodal freight transportation system continues to support the economy of the region and the quality of life of its residents and visitors. The Plan is a technical reference and serves as a foundation for future regional freight planning activities and sets the stage for freight to be considered in the Region's Constrained Long-Range Plan (CLRP) and all other regional planning activities.

The following are key points from the Plan.

1. **The Transportation Planning Board (TPB) supports a set of freight planning actions that will maintain and strengthen the regional transportation planning process.** These include continuing support for the Freight Subcommittee, ongoing freight data collection and analysis, development of federally mandated performance measurements, strengthening relationships with local planners, and monitoring of autonomous and connected vehicle developments. *See Section 7.0 for more information about recommendations and next steps.*
2. **The TPB has developed a set of regional freight policies** that cover a range of topics including prioritized advancement of freight projects, state of good repair, activity centers, environmental justice, safety, hazardous materials, and performance measures among others. *See Section 5.0 for more information about regional freight policies.*
3. **Safe transportation of freight, by both truck and rail, is very important to the Region's residents and policy makers.** The Region supports continual improvement of preventative safety measures on the freight rail system as well as efforts to route hazardous materials away from the Region. The Region also supports improving truck safety through education, enforcement, and engineering strategies and supports VDOT and MDOT efforts to improve truck parking availability to ensure drivers have places to rest. *See Sections 2.2, 4.2, and 5.0 for more information about, and policies relating to, truck and rail safety.*
4. **Ensuring that freight requirements are considered along with the needs of pedestrians, bicyclists, and other transportation system users will better enable regional activity centers to realize their full potential.** *See Sections 4.2 and 5.0 for more information about, and policies relating to, freight in regional activity centers.*
5. **Technological innovation combined with increasing consumer demands for prompt deliveries is driving businesses to transform their supply chains and logistics practices,** changing where goods are produced and how they are distributed. This has resulted in more truck movements, more home deliveries, repurposing of urban department stores into mini distribution centers, and higher demand for distribution and fulfillment center floor space. Continued innovation (e.g., unmanned aerial vehicles / automated vehicles) will further transform the freight system and have planning consequences that are not yet fully understood. *See Sections 4.1 and 4.2 for more information about freight trends and issues.*

6. **Congestion on the Region’s roadways and railways is a significant cost to shippers and a burden on the regional economy.**
 - In 2013 the American Transportation Research Institute (ATRI) ranked the Washington, DC metropolitan area as fifth in the nation in terms of congestion’s cost to the trucking industry. See Section 4.2 for more information about congestion’s impact on freight movements.
 - The Virginia Avenue Tunnel project is an effort to increase capacity on the CSX freight rail network and enable double-stack clearance for trains moving between the East Coast and the Midwest. Additional capacity adding projects to accommodate projected growth in passenger and freight are in the planning stages for several freight rail lines in the Region. *See Section 6.0 for more information about regional transportation projects that are important for goods movement.*
7. **The Region receives over 2 ½ times more inbound freight than it produces outbound freight.** *See Section 3.0 for details on the direction of freight movements in the Region.*
8. **Trucks haul the majority of the freight moving over the Region’s multimodal transportation system.**¹ *See Section 3.0 for details on how the different modes are utilized for freight movements in the Region.*
9. **Freight demand is driven by people and businesses.** Each year hundreds of millions tons of freight valued in the billions of dollars move over the Region’s roadways and railways and pass through its airports. *See Section 4.1 for more information about the drivers of freight demand.*
10. **Freight movement is vital to the economy of the National Capital Region and to the quality of life of its residents.**

¹ 79 percent by weight and 74 percent by value respectively

SECTION 1.0 INTRODUCTION

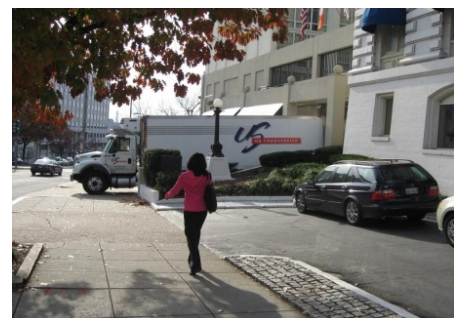
The National Capital Region’s (hereafter referred to as “the Region”) multimodal transportation system is vital to the economy of the Region and to the quality of life of its residents. It connects people and businesses to important regional activity centers and to major domestic and international markets. Each year hundreds of millions tons of freight valued in the billions of dollars move over the Region’s roadways and railways and pass through its airports. The Region’s service-based economy, with its growing employment, population, and wealth will continue to drive demand

The Region’s service-based economy, growing employment and population, and increasing wealth will continue to drive demand for freight.

for freight in the foreseeable future. Economic growth along the eastern seaboard, throughout the nation, and across the world will also result in greater quantities of goods moving into, out of, and through the Region—especially along the I-95 corridor. Evolving logistics practices, changes in where goods are produced and how they are distributed, expansion of the Panama Canal, and increasing urbanization are but a few of the factors that will impact how freight will move across the Region in the future. The Transportation Planning Board (TPB) as the Metropolitan Planning Organization (MPO) for the National Capital Region has an important role to play in ensuring that the regional transportation system continues to be responsive to and supportive of the freight demands placed upon it by its residents, businesses, and visitors.

1.1 About the Plan

The **National Capital Region Freight Plan** (the Plan) describes the role freight transportation plays in the Region’s economy, provides an overview of the Region’s multimodal freight transportation system, describes the drivers of freight demand and the freight flows resulting from it, identifies the most significant freight issues in the region, and provides recommendations to ensure the multimodal freight transportation system continues to support the economy of the region and the quality of life of its residents and visitors. The Plan serves as a foundation for future regional freight planning activities and builds on the results of the previous **National Capital Region Freight Plan** adopted in 2010. Much of the content in the Plan has its origins in that previous Plan and in the extensive freight and rail planning efforts of the Federal Highway Administration, the Federal Motor Carrier Safety Administration; the Federal Railroad Administration; a wide range of State and regional freight plans – especially those of the Commonwealth of Virginia, the District of Columbia, and the State of Maryland; and numerous publications of the Transportation Research Board. It provides relevant context and support for the freight element of the **Constrained Long-Range Transportation Plan**. It provides the basis for understanding the goods movement impacts of transportation projects included in the Region’s **Transportation Improvement Program**. Because the efficient and safe movement freight is important to the economic health of



Urban Delivery (Karin Foster)

the Region and the quality of life of its residents, this freight plan is intended to be a helpful reference to planners and elected officials in their continuing efforts to make the Region a better place to live, work, and visit.

1.1.1 OVERVIEW

The Plan is organized into the following major sections:

Executive Summary – provides highlights of the Plan.

1.0 Introduction – underscores the importance of freight to the Region, provides an overview of the Plan, and describes its institutional and regulatory context.

2.0 Multimodal Freight Transportation System – describes the physical infrastructure, including roadways, railways, airports, and intermodal facilities, that comprise the Region’s freight transportation system.

3.0 Freight Demand – identifies the key commodities transported into, out of, within, and through the region; describes the relative importance of the various transportation modes used to move these commodities; identifies their origins and destinations; and forecasts how these elements are expected to change in the future.

4.0 Freight Trends and Issues – discusses the broad trends impacting freight and identifies some of the key issues associated with freight transportation in the Region.

5.0 Regional Freight Policies – describes the freight-related policies that the Transportation Planning Board promotes. Member jurisdictions are also encouraged to consider these policies within their respective transportation planning processes.

6.0 National Capital Region Projects Important to Freight - lists projects that are important to goods movement in the Region.

7.0 Recommendations and Next Steps – a brief summary of the Plan’s key findings and recommendations.

Appendices – provides additional background and technically detailed materials that support the content within the body of the main document.

1.2 Freight Planning in the National Capital Region

1.2.1 TRANSPORTATION PLANNING BOARD VISION

The TPB Transportation Vision, adopted in 1998, provides a framework to guide the Region’s transportation planning and investment decisions into the 21st century. It lays out eight broad goals with associated objectives and strategies. Two of the goals are closely tied to freight transportation (see below) and are supported by this Plan:

- Goal 2: The Washington metropolitan region will develop, implement, and maintain an interconnected transportation system that enhances quality of life and promotes a strong and

growing economy throughout the region, including a healthy regional core and dynamic regional activity centers with a mix of jobs, housing, and services in a walkable environment.

- Goal 2, Objective 3. A web of multi-modal transportation connections which provide convenient access (including improved mobility with reduced reliance on the automobile) between the regional core and regional activity centers, reinforcing existing transportation connections and creating new connections where appropriate.
- Goal 8, Strategy 5: Develop a regional plan for freight movement.

Issues that indirectly relate to freight transportation (e.g. safety) are included within other goals.

Regional Transportation Priorities Plan

On January 15, 2014, the TPB approved the **Regional Transportation Priorities Plan (RTPP)**. The RTPP builds on the Vision goals by identifying strategies with the greatest potential to respond to our most significant transportation challenges. The strategies are intended to be complementary, to make better use of existing infrastructure, and to be within reach both financially and politically. The RTPP identifies priorities and strategies that impact freight, including the following:

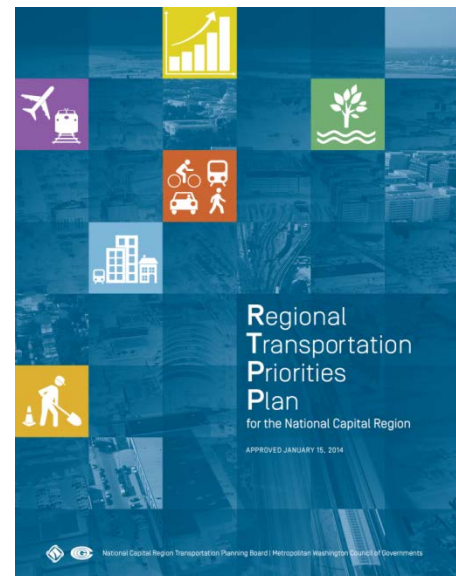
- Ensure maintenance of roads and bridges;
- Alleviate roadway bottlenecks;
- Concentrate growth in activity centers; and
- Enhance circulation within activity centers.

1.2.2 REGIONAL FREIGHT PLANNING

The TPB included a dedicated freight planning task within its unified planning work program beginning in fiscal year 2007.

While freight issues were addressed in overall transportation planning before that time, such involvement was mostly limited to participation in freight-related groups such as the I-95 Corridor Coalition and the Baltimore Metropolitan Council's Freight Movement Task Force. Responding to recommendations described in a May 2007 consultant-led study entitled, **Enhancing Considerations of Freight in Regional Transportation Planning**, the TPB strengthened its freight planning capacity by hiring an additional staff person with responsibility to further the Region's freight program. This additional resource enabled the TPB to engage public- and private-sector stakeholders, gather and analyze freight data, and better integrate freight considerations into overall transportation planning activities. The increased focus on these activities led to the establishment of the TPB Freight Subcommittee in April 2008, providing a venue in which both public- and private-sector representatives share information and provide input on the regional transportation planning process.

In July 2009, TPB staff published the **Integrate Freight Report** highlighting regional freight trends and identifying the steps necessary to incorporate freight into the transportation planning process. This was followed by the publication of the first **National Capital Region Freight Plan** in 2010. This 2016 edition of the **National Capital Region Freight Plan** builds upon the foundation provided by that initial effort.



1.2.3 ROLE OF THE METROPOLITAN PLANNING ORGANIZATION

The TPB is the federally designated Metropolitan Planning Organization (MPO) for the Region. The role of an MPO is to implement the comprehensive regional transportation planning process as initially required by the Federal-Aid Highway Act of 1962 and amended by subsequent legislation.

The TPB brings key decision-makers together to coordinate planning activities for the Region's transportation system.

One of the primary objectives of any MPO is to ensure that expenditures for transportation projects and programs are part of a continuing, cooperative, and comprehensive planning process. The TPB accomplishes these objectives by bringing key decision-makers together to coordinate planning activities for the Region's transportation system. The TPB is composed of representatives from 22 local governments; the Departments of Transportation of Maryland, Virginia, and the District of Columbia; the state legislatures of Maryland, Virginia, and the District of Columbia; the Washington Metropolitan Area Transit Authority (WMATA); the Metropolitan Washington Airports Authority (MWAA); the Federal Highway Administration (FHWA); the Federal Transit Administration (FTA); the National Park Service (NPS); and the National Capital Planning Commission (NCPC). See Figure 1 on page 8 for a map of TPB member jurisdictions. These members collaborate through the TPB process to develop two federally mandated documents; the financially **Constrained Long-Range Transportation Plan (CLRP)** and the **Transportation Improvement Program (TIP)**.

Constrained Long-Range Transportation Plan

The **Constrained Long-Range Transportation Plan (CLRP)** identifies all significant transportation projects and programs that are planned in the Region over a 25 to 30 year period. This list of projects is financially constrained; meaning that they have a reasonable expectation of funding. Some of these projects will be completed in the near future, while others are only in the initial planning stages. A major update of the CLRP is done every four years.



Transportation Improvement Program

The **Transportation Improvement Program (TIP)** is a six-year financial program that describes the schedule for obligating federal funds to state and local transportation projects. The TIP contains projects and funding information for all modes of transportation including highways and transit. The TIP is formally updated every two years, however state, regional and local transportation agencies frequently amend or modify the TIP as priorities arise.

CLRP and TIP updates are made through an annual “Call for Projects” process that enables member agencies to submit new projects or updates to existing projects. As part of the project submittal process, agencies complete a project description form that describes what the project entails, its estimated cost, and how it will benefit the region. Each project submittal requires the agency to indicate which regional goals the project supports and which of the federally required planning factors apply to it. The project description form has included language designed to identify the freight

benefits of candidate projects since November of 2009. The following two freight-related questions are included in the current project description form.

Question 27: Support Interregional and International Travel and Commerce

- Please identify all freight carrier modes that this project it enhances, supports, or promotes:
 - Long Haul Truck
 - Local Delivery
 - Rail
 - Air

Question 29: (MAP-21 Planning Factors) please identify any and all planning factors that are addressed by this project:

- (a) Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and deficiency
- (e) Increase accessibility and mobility of freight
- (g) Enhance the integration and conductivity of the transportation system, a cross and between modes, for people and freight

- Federal Highway Administration (FHWA): supports state and local governments in the design, construction, and maintenance of the Nation’s highway system and provides financial and technical assistance to state and local governments.
- Federal Motor Carrier Safety Administration (FMCSA): issues and enforces commercial vehicle related safety regulations; works to improve safety information systems and commercial motor vehicle technologies; and works to strengthen vehicle standards and increase safety awareness.
- Federal Railroad Administration (FRA): issues, implements, and enforces railroad safety regulations; makes selective investments in rail corridors; conducts research; and develops technology.
- Federal Aviation Administration (FAA): ensures that aircraft and the national airport system is safe, efficient, and environmentally responsible.
- Maritime Administration (MARAD): works in areas involving ships and shipbuilding, port operations, vessel operations, national security, the environment, and safety.
- Pipeline and Hazardous Materials Safety Administration (PHMSA): establishes national policy on pipelines and hazardous materials transport; sets and enforces standards; conducts research to prevent incidents; and prepares first responders.

Among the agencies listed above, the FHWA has the greatest influence on freight transportation planning for the Region. By law, every four years the FHWA, together with the FTA, must jointly certify the TPB’s transportation planning process. This certification process includes a review of the Region’s freight transportation planning activities.

Compliance with Federal Law – MAP-21 and FAST

The Moving Ahead for Progress in the 21st Century Act (MAP-21) was signed by the President of the United States on July 6, 2012 and became law on October 1, 2012. While it did not significantly change the existing MPO planning goals or the process of administering federal planning funds to the MPOs, it did include provisions to improve national, state, and regional freight policy and planning and to improve the condition and performance of the national freight network. Most of MAP-21’s freight provisions affect federal transportation agencies and State Departments of Transportation. The most significant change for MPOs with respect to freight transportation is the requirement to, in consultation with State DOTs, establish, monitor, and set targets for freight performance. The Fixing America’s Surface Transportation (FAST) Act was signed by the President of the United States on December 4, 2015. It is the first federal law in over a decade to provide long-term funding certainty for surface transportation planning and investment. The FAST Act continues the requirements developed under MAP-21 to establish, monitor, and set targets for freight performance. Key freight provisions affecting all levels of government include:²

- Establishment of a National Multimodal Freight Policy: The FAST Act established a national multimodal freight policy that includes national goals to guide decision-making.
- Development of a National Freight Strategic Plan: The USDOT will develop a national freight strategic plan to implement the goals of the National Multimodal Freight Policy. The National Freight Strategic Plan will address the conditions and performance of the multimodal freight

² This list of FAST provisions is adapted from several USDOT and FHWA web pages.

system, identify strategies and best practices to improve intermodal connectivity and performance of the national freight system, and mitigate the impacts of freight movement on communities.

- Creation of the Fostering Advancements in Shipping and Transportation for the Long-Term Achievement of National Efficiencies (FASTLANE) grant program: This discretionary freight-focused grant program will invest \$4.5 billion over 5 years. It allows States, Metropolitan Planning Organizations (MPOs), local governments, tribal governments, special purpose districts and public authorities (including port authorities), and other parties to apply for funding to complete projects that improve safety and hold the greatest promise to eliminate freight bottlenecks and improve critical freight movements.
- Establishment of a National Highway Freight Network: The USDOT will establish a national highway freight network consisting of:
 - the primary highway freight system (PHFS);
 - critical rural freight corridors;
 - critical urban freight corridors; and
 - those portions of the Interstate System that are not part of the PHFS.
- Establishment of a National Highway Freight Program: The Act provides \$6.3 billion in formula funds over five years for States to invest in freight projects on the National Highway Freight Network. Up to 10 percent of these funds may be used for intermodal projects.
- Establishment of a National Multimodal Freight Network: The USDOT will establish a National Multimodal Freight Network consisting of:
 - The National Highway Freight Network;
 - The freight rail systems of the Class I railroads;
 - U.S. public ports that have total annual foreign and domestic trade of at least 2 million short tons;
 - U.S. inland and intracoastal waterways;
 - The Great Lakes, the St. Lawrence Seaway, and coastal and ocean domestic freight routes;
 - The 50 largest U.S. airports with the highest annual landed weight; and
 - Other strategic freight assets, including strategic intermodal facilities and other freight rail lines.
- Establishment of new requirements to improve project delivery and facilitate innovative finance: The FAST Act includes provisions intended to reduce the time it takes to break ground on new freight transportation projects, including by promoting best contracting practices and innovating financing and funding opportunities and by reducing uncertainty and delays with respect to environmental reviews and permitting.
- Encouragement of state freight advisory committees: the USDOT will encourage states to establish freight advisory committees that consist of a representative cross-section of public and private freight stakeholders.
- State Freight Plans: To receive funding under the National Highway Freight Program the FAST Act requires each State to develop a State freight plan, which must comprehensively address the State's freight planning activities and investments (both immediate and long-range). A State may develop its freight plan either separately from, or incorporated within, its statewide strategic long-range transportation plan.

- **Freight conditions and performance report:** The FAST Act continues the MAP-21 requirement for the USDOT to provide Congress with a biennial report on the condition and performance of the National Highway Freight Network.
- **Performance:** The emphasis on performance under MAP-21 is continued under the FAST Act. USDOT will continue to establish national performance goals, measures, and targets in the areas of safety, infrastructure condition, congestion reduction, system reliability, freight movement and economic vitality, and environmental sustainability. States will be required to set targets in each of the above areas and MPOs will set targets in some cases as well. To the maximum extent practicable, state and MPO target setting should be coordinated.

The federal planning factors issued by Congress through SAFETEA-LU and MAP-21 have been enhanced through FAST to include the topics of; 1) system resiliency and reliability, and 2) the reduction or mitigation of storm-water impacts on the surface transportation system. The two planning factors that apply directly to freight planning remain unchanged and are:

- Increase the accessibility and mobility of people and freight; and
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.

TPB's ongoing regional freight planning program addresses each of these factors.

TPB Activities to Address FAST Act Requirements

At the time of this Plan's release, the FHWA together with the FTA are in the process of translating the MAP-21 legislation (also supported by the FAST Act) into regulations that define what states, local governments, MPOs, and other entities must do to comply with the law. The TPB is monitoring the federal government's periodic releases of MAP-21/FAST Act notices of proposed and final rule makings, reviewing their contents, identifying the requirements within them that are relevant to MPOs, and developing preliminary plans and processes to address them. The recently released freight performance management proposed rule requires states and MPOs such as the TPB to develop and track freight performance measures and set freight performance targets. Complying with these requirements will require close coordination with DDOT, VDOT, and MDOT. Key freight performance management personnel within each of these organizations have been identified and preliminary meetings to discuss their various performance management approaches, including data sources and methodologies, have been scheduled. Further TPB actions related to the FAST Act will be developed as additional proposed rules, final rules, and guidance are released.

1.2.5 FREIGHT PLANNING IN MEMBER JURISDICTIONS

Among TPB member jurisdictions, the state-level agencies (Maryland, Virginia, and the District of Columbia) are the most engaged in freight planning activities.

District of Columbia Freight Planning

The District of Columbia has recently published two major documents that include significant freight provisions.

- **The District of Columbia Freight Plan:** (2014) This plan addresses issues surrounding urban goods movement and includes strategies and recommendations to support sustainable future economic growth and balance the needs of communities and industries within the District. It is the foundation for integrating freight priority projects into the District's capital programming process.

- MoveDC: (2014) MoveDC is the District’s multimodal long-range transportation plan. It includes a freight element based on information developed in the District of Columbia Freight Plan.
- The District of Columbia State Rail Plan (under development): This long range (20+ year) Plan will provide a vision for rail transportation in the District of Columbia. It will inform and educate the public, identify needed improvements along with funding sources, and place rail within a multimodal transportation context. It is scheduled for completion during calendar year 2016.

The urban goods delivery issues identified in the Freight Plan and MoveDC are likely to become relevant in the future for those areas of the Region becoming more urbanized as growth is concentrated in activity centers.

Commonwealth of Virginia Freight Planning

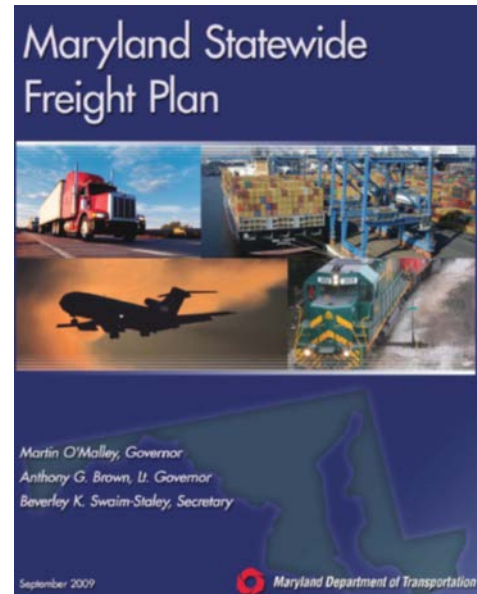
The Commonwealth’s Office of Intermodal Planning and Investment (OIPI) coordinates freight planning efforts of several state agencies, including the Virginia Department of Transportation (VDOT), the Virginia Department of Rail and Public Transportation (DRPT), and the Virginia Port Authority (VPA). Representatives from both VDOT’s Northern Virginia region office and DRPT are regular participants in TPB freight planning and coordinating activities. The Commonwealth has published several freight planning documents that are important to the National Capital Region including:

- Virginia Statewide Multimodal Freight Study, Phase I: (2007) This study established a guiding framework for near-term and long-range freight policy and investment strategies. It compiled available information, identified current and projected future needs, and provided implementable recommendations for Commonwealth freight planning and programming. Many structural elements of this Plan were modeled on this Phase I Study.
- Virginia Statewide Multimodal Freight Study, Phase II: (2011) This study developed analysis tools, analyzed corridor and regional freight needs and alternatives, and evaluated infrastructure projects and policy alternatives based on public benefits and return on investment to the Commonwealth.
- Virginia Multimodal Freight Plan: (2013) This plan provides the vision, goals, and investment strategies designed to keep freight moving in Virginia. It describes the relationship among statewide transportation goals, freight specific priorities, and investment strategies; identifies key performance indicators to track progress; and summarizes outreach efforts to engage public agencies and freight stakeholders.
- Virginia Statewide Rail Plan: (2013) This plan provides a vision for passenger and freight rail transportation in Virginia through 2040. It profiles the Commonwealth’s current rail assets, services, and capacity choke points. It includes recommended improvement projects and is part of a multimodal interagency transportation planning effort guided by VTrans, Virginia’s statewide long-range multimodal policy plan.
- Virginia Truck Parking Study: (2015) This study documents the supply of truck parking spaces throughout the state, including public and private facilities, and estimates truck parking demand for each Corridor of Statewide Significance (CoSS) The study also provides recommendations for actions that VDOT can take to increase the supply of truck parking spaces in appropriate areas.

State of Maryland Freight Planning

Most of Maryland's statewide and regional freight planning activities are coordinated through the Maryland Department of Transportation (MDOT) Office of Freight and Multimodalism (OFM). Representatives from MDOT and the Maryland State Highway Administration (SHA) are regular participants in TPB freight planning and coordinating activities. MDOT has published several relevant freight planning documents including:

- Maryland Statewide Freight Plan: (2009) This plan provides a comprehensive overview of Maryland's current and long-range freight system performance and identifies the public and private investments and policies needed to ensure the efficient movement of freight across the state.
- Maryland State Rail Plan: (2015) This Plan provides an overview of the current and planned rail network and services within Maryland and outlines the public and private investments and policies needed to ensure the efficient, safe, and sustainable movement of freight and passengers by rail.
- Maryland Strategic Goods Movement Plan: (draft) This update to the Maryland Statewide Freight Plan will examine existing conditions and long range projections, and recommend policy positions and strategies for MDOT and freight stakeholders to advance over the next five years.
- Maryland Freight System Performance Annual Report(s): This periodically updated report identifies freight performance measures for each Modal Administration within MDOT.



Freight Planning in Other Member Jurisdictions

While many of the TPB's non-state member jurisdictions have not developed freight-specific plans, some of them address freight issues within their respective planning documents. One member jurisdiction, Frederick County Maryland, developed a freight-specific document. The **Frederick County Freight and Land Use Plan** (2011) provides transportation infrastructure recommendations and a set of land-use tools the county can use to improve the coordination between freight related land uses and the multimodal transportation system. TPB staff works closely with the states and local jurisdictions to ensure coordination among state, regional, and local freight plans.

SECTION 2.0 THE MULTIMODAL FREIGHT SYSTEM

This section describes the elements that make up the regional freight system. Understanding these elements enables the TPB to better assess the way that freight vehicles use the system and how freight movements contribute to congestion, pavement consumption, bridge stress, economic development, and quality of life.

2.1 Freight Transportation System Overview

The region's multimodal freight transportation system consists of:

- More than 16,000 miles of roadways carrying more than 300 million tons of goods annually.
- Two Class I railroads – CSX Transportation and the Norfolk Southern Corporation – operating over 250 miles of mainline track and carrying more than 47 million tons of local freight annually.
- Two major cargo airports – Washington Dulles International Airport and Baltimore Washington International Thurgood Marshall Airport.
- An extensive pipeline network that carries more than nine million tons of freight per year.
- A number of key intermodal connectors – short roadway segments that tie rail terminal facilities, airports, and pipeline terminal facilities to the National Highway System (NHS).

2.2 Trucking and the Region's Roads

The region's highway system is organized into the following categories:

- Interstate – More than 230 miles of 4- to 10-lane highways that connect the region to the rest of the nation.
- Primary – More than 2,400 miles of 2- to 8-lane roads that connect communities within the Region to each other and to the interstates.
- Secondary – More than 2,100 miles of connector roads.
- Local – More than 12,000 miles of local streets.

2.2.1 TRUCK TYPES

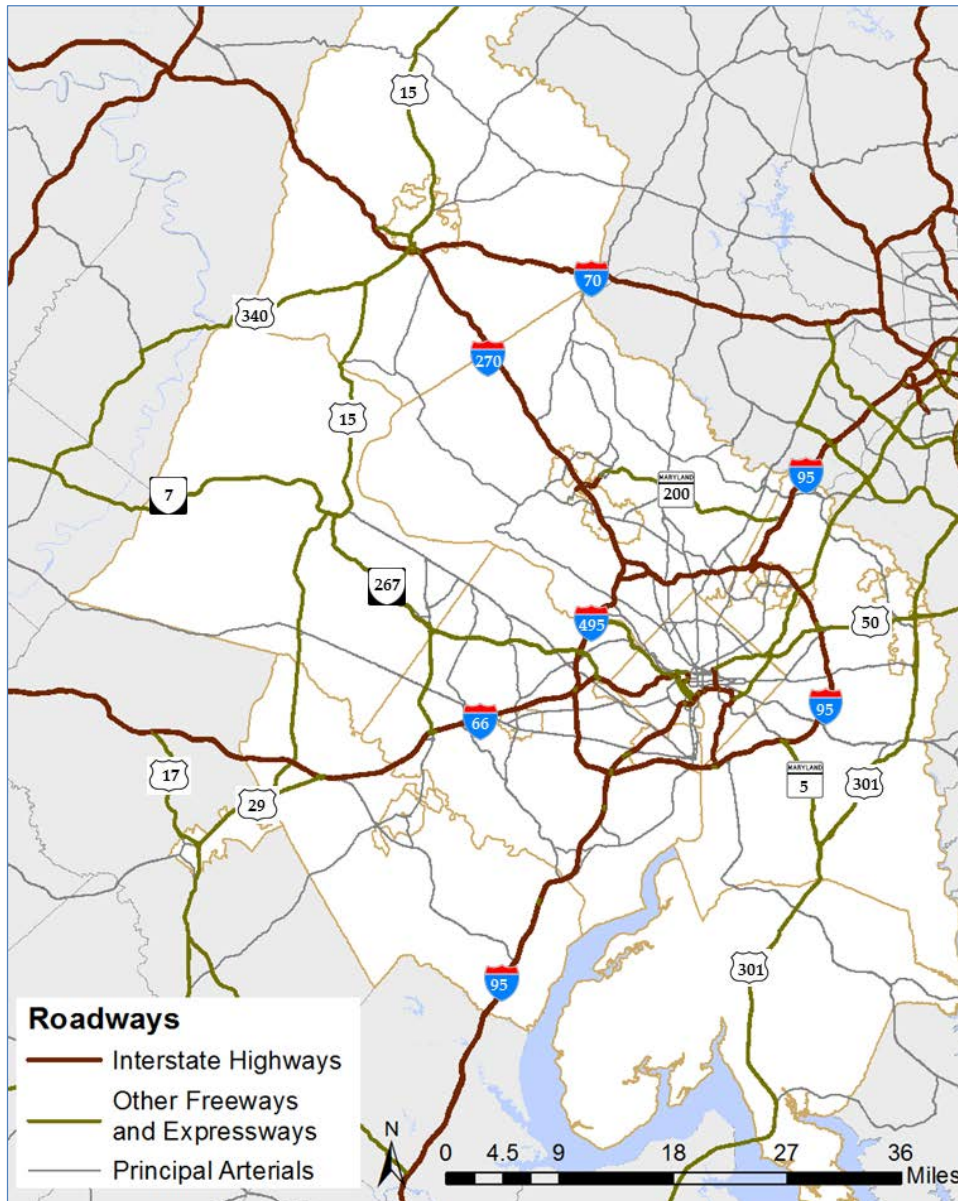
The Region's highway network is publicly owned, and the majority of truck freight is moved over the interstate and primary highway systems. However, the trucks and trailers using that network are privately owned. Different types and sizes of trucks are used to haul certain types of cargo. Trucks vary in size from small delivery vans, to medium-size "single-unit" vehicles, or large combination tractor-trailer vehicles. Cargo can be carried in a "dry van", on a flatbed trailer, on a specialized "auto rack", in a hopper or a liquid bulk tank, or in an intermodal shipping container designed for direct transfer between truck, ship, and train using specialized overhead lift equipment. There may be a refrigerator unit for keeping the cargo at a suitably cool temperature.³

³ Virginia Multimodal Freight Study – Phase I

2.2.2 HIGHWAY INVENTORY

Figure 2 below illustrates the locations of the National Capital Region's major highways.

Figure 2: Interstate and Primary Highway Systems in the Region



2.2.3 THE REGIONAL FREIGHT SIGNIFICANT NETWORK

Certain components of the region's highway system are particularly important for goods movement. Each of the Region's member states, Maryland, Virginia, and the District of Columbia have identified a designated truck network linking major freight shipping and receiving areas and accommodating through state freight movement. Within the Region, most of these state designated truck routes are represented by interstate highways and major arterials. At the regional level, the importance of roadways other than state designated truck routes is also recognized. These regionally freight-

significant roadways function as important connectors between retail establishments, warehouse and distribution centers, and state-designated truck routes.

TPB staff, in consultation with the TPB Freight Subcommittee, identified a network of these freight-important roadways using a combination of data analysis and collective expertise. The resulting regional freight significant network is organized into three tiers.

- Tier 1 - roadways in this tier include state-designated truck routes, interstates, and other high volume roadways. These roads are the means by which most freight enters and leaves the Region and are typically used by pass-through trucks.
- Tier 2 - roadways in this tier allow trucks to permeate the Region and provide access to important freight generators and attractors.
- Tier 3 - roadways in this tier provide last mile connectivity.

The regional freight significant network is a system of truck-allowed routes that are particularly important for goods movement. The freight significant network is intended for regional data analysis and is not promoted as truck routes in the same way that officially state-designated truck routes are. The primary purpose of developing the regional freight-significant network is to facilitate performance monitoring. For example, congestion can be measured on the freight significant network and compared to that of the overall region. Similar comparisons can be made for pavement condition, bridge condition, or safety. The regional freight-significant network is shown in Figure 3. Additional information on the components of the regional freight-significant network are provided in Table 1 and detailed maps are provided in the Appendix.

Figure 3: Regional Freight-Significant Network

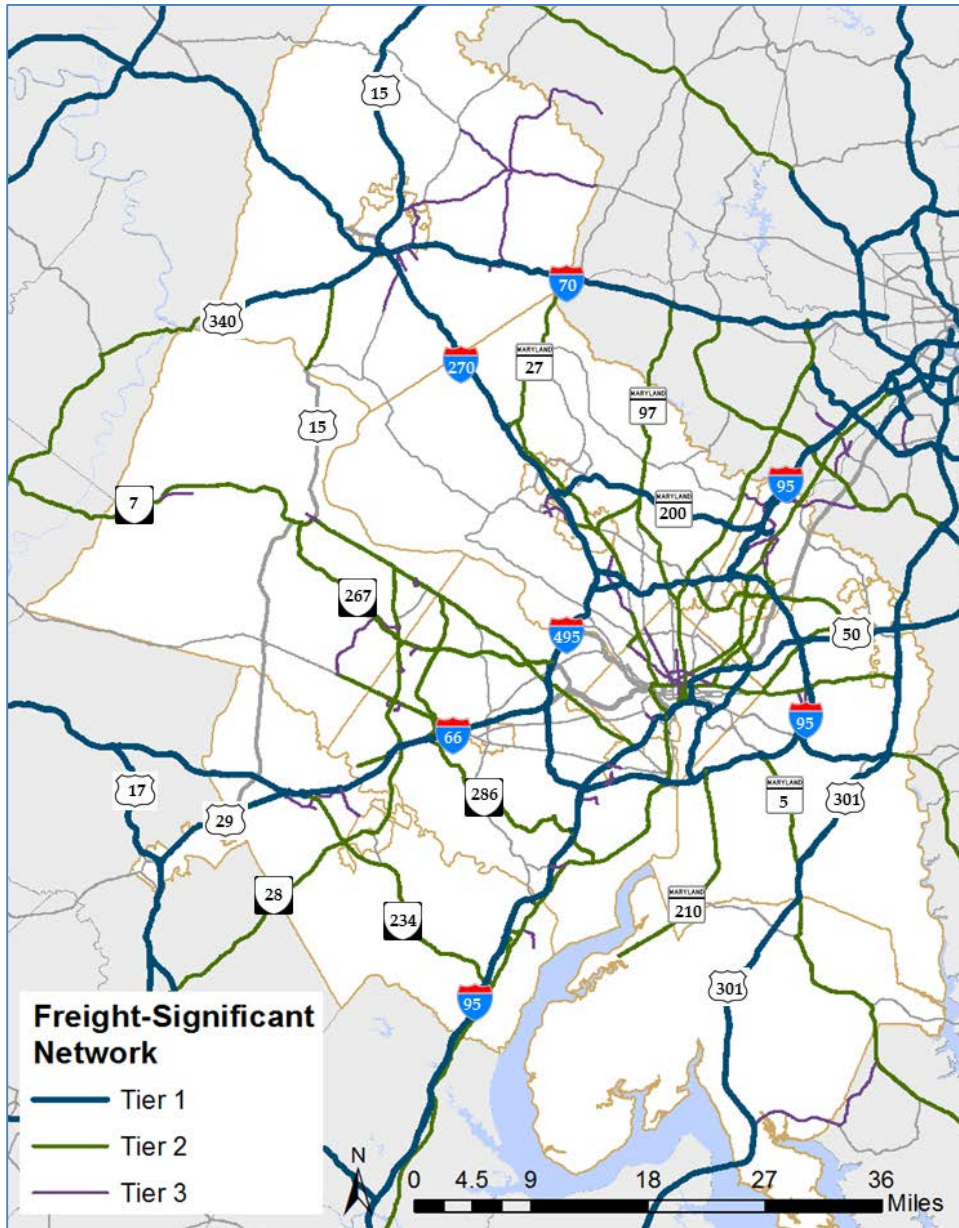


Table 1: Components of the Regional Freight-Significant Network

Route Name	Tier	From	To	Comments
<i>Frederick County, MD</i>				
I-70	Tier 1	Washington-Frederick County line	Frederick-Carroll County line	Part of Maryland Truck Route System
I-270	Tier 1	Montgomery-Frederick County line	I-70	Part of Maryland Truck Route System
US-15	Tier 1	US-340	Maryland-Pennsylvania line	Provides good truck access from Frederick to Gettysburg, PA and points north
US-340	Tier 1	Washington-Frederick County line	I-70	Part of Maryland Truck Route System
US-15	Tier 2	MD 28	US-340	Provides access to commercial and freight routes to Point of Rocks and points south – note vehicle length restrictions in place on US-15 in Loudoun County, VA
MD 140	Tier 2	US-15	Frederick-Carroll County line	Provides truck access to various facilities in northern Frederick and Carroll Counties
MD 26	Tier 3	US-15	Frederick-Carroll County line	Provides access to commercial and industrial areas including MD 75 and to Carroll County and beyond
MD 75	Tier 3	W. Baldwin Road	Frederick-Carroll County line	<u>South of I-70:</u> provides truck access to W. Baldwin Road / Intercoastal Drive and on to Costco distribution facility – note vehicle height restrictions south of W. Baldwin Road <u>North of I-70:</u> provides truck access to cement plant in Carroll County
MD 85	Tier 3	I-70	Manor Woods Road	Provides truck access to industrial areas
MD 355	Tier 3	MD 85	New Technology Way	Provides truck access to commercial and industrial areas – note trucks are not encouraged beyond New Technology Way
MD 550	Tier 3	MD 194	MD 26	Provides truck access to Woodsboro Mining and connection to MD 75 via MD 26
Monocacy Blvd	Tier 3	South Street / Reichs Ford Road	MD 26	Provides truck access to industrial areas in and around Frederick
Reichs Ford Road	Tier 3	I-70	Ray Smith Road	Provides truck access to industrial and commercial areas

Route Name	Tier	From	To	Comments
W. Baldwin Road & Intercoastal Drive	Tier 3	MD 75	Costco distribution facility	Provides truck access to Costco distribution facility
Montgomery County, MD				
I-270	Tier 1	I-495	Montgomery-Frederick County line	Part of Maryland Truck Route System
I-270 SPUR	Tier 1	I-495	I-270	Part of Maryland Truck Route System
I-370	Tier 1	I-270	MD 200	Provides truck connection between I-270 and I-95
I-495	Tier 1	Virginia – Maryland line	Montgomery-Prince George's County line	Part of Maryland Truck Route System
MD 200	Tier 1	I-370	Montgomery-Prince George's County line	Provides truck connection between I-270 and I-95
US-29	Tier 2	DC-Maryland line	Montgomery-Howard County line	Connects to DC Truck Route (Georgia Ave.) and provides truck access to a variety of commercial areas in Silver Spring, White Oak, and Columbia
MD 27	Tier 2	MD 355	Montgomery-Howard County line	Provides truck access to northern Montgomery County
MD-28	Tier 2	I-270	MD 97	Provides truck access to commercial areas in central Montgomery County
MD 97	Tier 2	US-29	Montgomery-Howard County line	Connects to DC Truck Route (Georgia Ave.) via US-29 and provides access to commercial areas of Silver Spring, Wheaton and points north
MD 355	Tier 2	I-495	MD 27	Provides truck access to commercial areas of Rockville and Gaithersburg
MD 355	Tier 2	MD 410 / MD 187	DC-Maryland line	Connects to DC Truck Route (Wisconsin Ave.) and provides truck access to a variety of commercial areas in the District of Columbia and Bethesda
MD 193	Tier 2	I-495	Montgomery-Prince George's County line	Provides truck access to commercial areas in southern Montgomery and western Prince George's Counties
Father Hurley Blvd & Ridge Road	Tier 2	I-270	MD 27 / MD 355	Provides truck access to commercial areas in Germantown and connects I-270 to MD 27 and MD 355
MD 28	Tier 3	I-270	Darnestown Road	Provides truck access to Johns Hopkins and Adventist Hospital as well as adjacent commercial areas

Route Name	Tier	From	To	Comments
MD 119	Tier 3	Sam Eig Highway	MD 28	Provides truck access to Johns Hopkins and Adventist Hospital as well as adjacent commercial areas
MD 187	Tier 3	MD 355 (in Bethesda)	MD 355 (north of I-495)	Provides truck access to commercial and medical facilities including the National Institutes of Health, Montgomery Mall, and Bethesda
MD 198	Tier 3	U.S-29	Montgomery-Prince George's County line	Provides truck access from U.S. 29 to industrial areas along Sweitzer Ln – also provides truck access to Laurel and Fort Meade.
Sam Eig Highway	Tier 3	I-270 / I-370	MD 119	Provides truck access to Johns Hopkins and Adventist Hospital as well as adjacent commercial areas

Prince George's County, MD

I-95	Tier 1	Virginia – Maryland line	Prince George's-Howard County line	Part of Maryland Truck Route System
I-295	Tier 1	I-495	Maryland-DC line	Part of Maryland Truck Route System
I-495	Tier 1	Montgomery-Prince George's County line	I-95	Part of Maryland Truck Route System
US-50	Tier 1	DC-Maryland line	Prince George's-Anne Arundel County line	Part of Maryland Truck Route System – provides connectivity to DC Truck route System (New York Ave)
US-301	Tier 1	Charles-Prince George's County line	Prince George's-Anne Arundel County line	Part of Maryland Truck Route System
MD 3	Tier 1	US-50	Prince George's-Anne Arundel County line	Part of Maryland Truck Route System
MD 4	Tier 1	I-95	US-301	Part of Maryland Truck Route System
MD 200	Tier 1	Montgomery-Prince George's County line	US-1	Provides truck connection between I-270 and I-95 / US-1
MD 201	Tier 1	US-50	Maryland-DC line	Provides critical truck connection between US-50 and DC-295 (DC Truck Route) and for trucks leaving DC to reach US-50 and I-95 / I-495
US-1	Tier 2	DC-Maryland line	Prince George's-Howard County line	Provides truck access to a variety of commercial and industrial areas along the entire length of the corridor. Connects to DC Truck Route (Rhode Island Avenue)

Route Name	Tier	From	To	Comments
US-1 ALT	Tier 2	DC-Maryland line	US-1	Connects to DC Truck Route (Bladensburg Rd) – provides access to commercial and industrial areas in and around Hyattsville
MD 4	Tier 2	US-301	Prince George’s-Anne Arundel County line	Provides truck access from US-301 to points east and south and to commercial areas of Calvert County
MD 5	Tier 2	I-95	Prince George’s-Charles County line	Provides truck connection between Southern Maryland and the National Capital Region - connects Southern Maryland to the National Freight Network
MD 193	Tier 2	Montgomery-Prince George’s County line	MD 450	Provides truck access to commercial areas in Langley Park, College Park, Greenbelt, and Bowie
MD 201	Tier 2	US-50	MD 212	Provides truck access to commercial and industrial areas of Greenbelt, Bladensburg, Cheverly, and Hyattsville – including the Pepsi bottling plant in Cheverly and the Tuxedo Road industrial area in Hyattsville
MD 210	Tier 2	I-95	Prince George’s-Charles County line	Provides truck access to Indian Head from I-95 / I-495
MD 214	Tier 2	DC-Maryland line	US-301	Provides truck connection to East Capitol St. (DC Truck Route) – provides truck access to and from the industrial areas off Ritchie Rd and Hampton Park Blvd
MD 450	Tier 2	MD 193	MD 704	Links MD-193 to MD-704
MD 704	Tier 2	DC-Maryland line	MD 450	Connects DC Truck Route system (East Capitol St. via 63rd St) to commercial areas in central Prince George’s County and to US-50
MD 198	Tier 3	Montgomery-Prince George’s County line	Prince George’s-Anne Arundel County line	Provides access from I-95 and US-29 to industrial areas along Sweitzer Ln – also provides truck access to Laurel and Fort Meade
MD 212	Tier 3	US-1	MD 201	Connects the industrial areas in Beltsville (east of the CSX Capital Subdivision) to US-1 – note: the portion of MD-212 (Powder Mill Rd) between Ammendale Rd and US-1 is “not” part of the Regional Freight-Significant Network

Route Name	Tier	From	To	Comments
MD 212 – Ammendale Rd – Virginia Manor Road	Tier 3	I-95	Konterra Dr – Muirkirk Rd	Provides truck access between I-95 and the commercial and industrial areas along Virginia Manor Rd and Konterra Dr., including the FedEx and Frito Lay facilities along Trolley Lane - the portion of MD-212 (Powder Mill Rd) between Ammendale Rd and US-1 is “not” part of the Regional Freight-Significant Network
Edmonston Rd – Old Baltimore Pike	Tier 3	MD-201 / MD- 212	Muirkirk Rd	Provides truck access to industrial areas in and around Beltsville
Leeland Rd	Tier 3	Safeway distribution center entrance	US-301	Provides truck access to and from major Safeway distribution center – note: Leeland Rd east of the Safeway distribution center is not recommended for trucks
Muirkirk Rd	Tier 3	Virginia Manor Rd / Konterra Dr	Old Baltimore Pike	Provides truck access from MD-200 and I-95 to Beltsville industrial areas (via Konterra Dr and Virginia Manor Rd / MD-212 – note: Bridge over CSX on Muirkirk Rd is weight restricted - 56,000 lbs for single unit trucks and 54,000 lbs for combinations
Ritz Way	Tier 3	Virginia Manor Rd	US-1	Provides access to US-1 in Beltsville from MD-200 via Konterra Dr and Virginia Manor Rd and from I-95 via MD-212 and Virginia Manor Rd
Sweitzer Ln – Konterra Dr	Tier 3	MD 198	Virginia Manor Rd / Muirkirk Rd	Provides truck access to industrial areas including a major UPS facility and a WSSC Filtration Plant
<i>Charles County, MD</i>				
US-301	Tier 1	Virginia- Maryland line	Charles-Prince George’s County line	Part of Maryland Truck Route System
MD 5	Tier 2	US-301	Charles-St. Mary’s County line	Provides truck connection between Southern Maryland and the National Capital Region - connects Southern Maryland to the National Freight Network
MD 210	Tier 2	Prince George’s- Charles County line	Naval Support Facility Indian Head	Provides truck access to Indian Head from I-95 / I-495
MD 234	Tier 3	US-301	Charles-St. Mary’s County line	Provides a connection (in combination with MD-236, MD-5, and MD-235) between industrial and commercial areas of St. Mary’s county and US-301

Route Name	Tier	From	To	Comments
<i>District of Columbia</i>				
I-295	Tier 1	Maryland-DC line	I-695 / DC-295	Provides truck access to the District of Columbia from I-95 / I-495 and points south
I-395	Tier 1	Virginia – DC line	New York Avenue	Provides truck access to the District of Columbia from I-95 / I-495 and points south
I-695	Tier 1	I-395	I-295 / DC-295	Major east-west Interstate connection through the District of Columbia
DC-295	Tier 1	I-295 / I-695	DC-Maryland line	Provides truck access to the District of Columbia from Maryland and points east
New York Avenue (US-50)	Tier 1	Maryland-DC line	I-395	Provides truck access to the District of Columbia from Maryland and points east
Benning Road	Tier 2	Bladensburg Road	East Capitol Street	Provides truck connections between commercial areas in the District and Maryland
Bladensburg Road	Tier 2	Benning Road	DC-Maryland line	Provides truck connections between commercial areas in the District and Maryland
East Capitol Street	Tier 2	Benning Road	DC-Maryland line	Provides truck connections between commercial areas in the District and Maryland
Georgia Avenue	Tier 2	7 th Street NW	DC-Maryland line	Provides truck connections between commercial areas in the District and Maryland
Independence Avenue	Tier 2	14 th Street NW	7 th Street NW	Provides truck connections between 7 th Street NW and access points to I-395 via 12 th and 14 th Streets NW
Rhode Island Avenue	Tier 2	7 th Street NW	DC-Maryland line	Provides truck connections between commercial areas in the District and Maryland
Western Avenue	Tier 2	Wisconsin Avenue	Massachusetts Avenue	Provides truck connection between Wisconsin and Massachusetts Avenues
Whitehurst Freeway	Tier 2	M Street NW	K Street NW	Links Key Bridge and Virginia to the central business district
Wisconsin Avenue	Tier 2	Maryland-DC line	K Street NW	Provides truck connections between commercial areas in the District and Maryland
H Street (NW and NE)	Tier 2	Massachusetts Avenue	Benning Road	Provides truck connections from the central business district to Maryland and points east
K Street NW	Tier 2	Georgetown	12 th Street NW	Provides truck connections between the central business district, Georgetown, the Whitehurst Freeway, Virginia and points south

Route Name	Tier	From	To	Comments
M Street NW	Tier 2	Wisconsin Avenue	US-29	Provides truck connection between Wisconsin Avenue, Virginia, and points south
7 th Street NW	Tier 2	Independence Avenue	Georgia Avenue	Provides truck connections from the central business district to Maryland
12 th Street NW	Tier 2	I-395	Massachusetts Avenue	Provides truck access from I-395 to the central business district
Connecticut Avenue	Tier 3	K Street NW	DC-Maryland line	Provides truck access to commercial areas along Connecticut Avenue
Florida Avenue	Tier 3	Benning Road	Massachusetts Avenue	Provides truck access to commercial areas in the District
Massachusetts Avenue	Tier 3	H Street NW	DC-Maryland line	Provides truck access to commercial areas along Massachusetts Avenue
14 th Street NW	Tier 3	I-395	Upshur Avenue NW	Provides truck access to commercial areas along 14 th Street NW
<i>Loudoun County, VA</i>				
US-50	Tier 2	VA-606	Loudoun-Fairfax County line	Provides truck access to Dulles Airport and to Arcola and Chantilly industrial areas
VA-7	Tier 2	Loudoun-Frederick County line	Loudoun-Fairfax County line	Provides truck access to Purcellville, Leesburg, and the commercial areas along VA-7 in eastern Loudoun County - STAA National Network (western Loudoun County), STAA Virginia Qualifying Highway (eastern Loudoun County)
VA-28	Tier 2	VA-7	Loudoun-Fairfax County line	Provides truck access to commercial and industrial areas in Loudoun, Fairfax, and Prince William Counties and the Cities of Manassas and Manassas Park - STAA Virginia Qualifying Highway
VA-267	Tier 2	VA-7	Loudoun-Fairfax County line	Provides truck connections to Leesburg, Dulles Airport, Reston/Herndon, and I-495 - STAA Virginia Access Route
VA-606	Tier 3	VA-28	US-50	Links warehouse area north of Dulles Airport to VA-28, VA-267, and US-50
Cascades Pkwy - Bartholomew Fair Dr	Tier 3	VA-7	Price Cascades Plaza	Provides truck access to Costco and Potomac Run Plaza retail areas - STAA Virginia Access Route
E. Market St	Tier 3	VA-7	Catoctin Circle	Provides truck access to commercial areas of Leesburg - STAA Virginia Access Route
W. Main St	Tier 3	VA-7	N. 23rd St	Provides truck access to downtown Purcellville - STAA Virginia Access Route

Route Name	Tier	From	To	Comments
<i>Fairfax County, VA</i>				
I-66	Tier 1	Prince William-Fairfax County line	I-495	STAA National Network
I-95	Tier 1	Prince William-Fairfax County line	Fairfax County-City of Alexandria line	STAA National Network
I-395	Tier 1	I-95 / I-495	Fairfax County-City of Alexandria line	STAA National Network
I-495	Tier 1	I-95 / I-395	Virginia-Maryland line	STAA National Network
US-1	Tier 2	Prince William-Fairfax County line	Fairfax County-City of Alexandria line	Provides truck access to Fort Belvoir, Quantico, and an assortment of businesses in Stafford, Prince William, and Fairfax Counties as well as the City of Alexandria
US-29	Tier 2	Luck Stone quarry just east of the Manassas National Battlefield Park	I-66	Provides truck access to Luck Stone quarry
US-50	Tier 2	Loudoun-Fairfax County line	I-66	Provides access to Dulles Airport and to Arcola and Chantilly industrial areas - STAA Virginia Access Route between Lee Rd and I-66
VA-7	Tier 2	Loudoun-Fairfax County line	Fairfax County-City of East Falls Church line	Provides truck access to commercial areas along VA-7 in Fairfax County
VA-7	Tier 2	City of East Falls Church-Fairfax County line	Fairfax County-City of Alexandria line	Provides truck access to commercial areas along VA-7 in Fairfax County
VA-28	Tier 2	Loudoun-Fairfax County line	Fairfax-Prince William County line	Provides truck access to commercial and industrial areas
VA-267	Tier 2	Loudoun-Fairfax County line	I-495	Provides truck connections to Dulles Airport, Reston/Herndon, and I-495 - STAA Virginia Access Route
VA-286	Tier 2	VA-7	US-1	Provides truck connections between VA-7, I-66, and I-95 and access to Fort Belvoir
Braddock Rd – Port Royal Rd	Tier 3	I-495	Terminus of Port Royal Rd	Provides truck access to industrial areas along Port Royal Rd - STAA Virginia Access Route

Route Name	Tier	From	To	Comments
Centreville Rd	Tier 3	VA-267	Coppermine Rd	Provides truck access to commercial areas along Centreville Rd - STAA Virginia Access Route
Franconia Rd – Fleet Rd	Tier 3	I-95	Fleet Industrial Park	Provides truck access to commercial and industrial areas including Springfield Town Center and Fleet Industrial Park - STAA Virginia Access Route
Lee Rd	Tier 3	US-50	Flint Lee Rd	Provides truck access to industrial areas along Lee Rd and to the Chantilly Crossing Shopping Center (Costco) - STAA Virginia Access Route
Lorton Rd	Tier 3	I-95	US-1	Provides a truck connection between I-95 and US-1 in Lorton - STAA Virginia Access Route
McLearen Rd – Towerview Rd – Park Center Rd	Tier 3	VA-28	Terminus of Park Center Rd	Provides truck access to industrial areas along Park Center and Towerview Roads - STAA Virginia Access Route
Terminal Rd	Tier 3	VA-286	Terminus	Provides truck access to Plantation Pipeline Terminal facilities and other industrial areas - STAA Virginia Access Route
Walney Rd – Willard Rd	Tier 3	US-50	Brookfield Corporate Drive	Provides truck access to the Dulles Expo Center and other commercial areas - STAA Virginia Access Route

City of Falls Church, VA

VA-7	Tier 2	Fairfax County-City of Falls Church line	City of Falls Church- Fairfax County line	Provides truck access to commercial areas along VA-7 in Falls Church and connects to VA-7 on either side of Falls Church
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Prince William County, VA

I-66	Tier 1	Fauquier-Prince William County line	Prince William-Fairfax County line	STAA National Network
I-95	Tier 1	Stafford-Prince William County line	Prince William-Fairfax County line	STAA National Network
US-29	Tier 1	Fauquier-Prince William County line	I-66	STAA National Network
US-1	Tier 2	Stafford-Prince William County line	Prince William-Fairfax County line	Provides truck access to Fort Belvoir, Quantico, and an assortment of businesses in Stafford, Prince William, and Fairfax Counties
VA-28	Tier 2	Fairfax-Prince William County line	Prince William County-City of Manassas Park line	Provides truck access to commercial and industrial areas in Loudoun, Fairfax, and Prince William Counties and the Cities of Manassas and Manassas Park

Route Name	Tier	From	To	Comments
VA-28	Tier 2	City of Manassas-Prince William County line	Prince William-Fauquier County line	Provides truck access to commercial and industrial areas in Loudoun, Fairfax, and Prince William Counties and the Cities of Manassas and Manassas Park
VA-234	Tier 2	I-66	City of Manassas-Prince William County line	Provides truck connection through Prince William County between US-1, I-95, City of Manassas, I-66, and the Balls Ford Road industrial area
VA-234	Tier 2	City of Manassas-Prince William County line	US-1	Provides truck connection through Prince William County between US-1, I-95, City of Manassas, I-66, and the Balls Ford Road industrial area
Balls Ford Road	Tier 3	Wellington Rd	Terminus of Balls Ford Rd	Provides truck access to industrial areas along the length of Balls Ford Rd – provides truck connection to Wellington Rd industrial and commercial areas - STAA Virginia Access Route
Dale Blvd – Neabsco Mills Rd	Tier 3	I-95	US-1	Provides truck connection between I-95 and US-1 - STAA Virginia Access Route
Featherstone Rd – Farm Creek Dr	Tier 3	US-1	Terminus of Farm Creek Dr	Provides truck access to industrial areas along Farm Creek Dr - STAA Virginia Access Route
Opitz Blvd	Tier 3	I-95	US-1	Provides truck connection between I-95 and US-1 - STAA Virginia Access Route
Sudley Rd	Tier 3	I-66	Godwin Dr	Provides truck access to industrial and commercial areas, including Costco, Westgate Plaza Shopping Center, and Manassas Mall - STAA Virginia Access Route
Wellington Rd	Tier 3	Limestone Dr	Livingston Rd	Provides truck access to industrial areas - STAA Virginia Access Route
<i>City of Manassas, VA</i>				
VA-28	Tier 2	City of Manassas Park-City of Manassas line	City of Manassas – Prince William County line	Provides truck access to commercial and industrial areas in Loudoun, Fairfax, and Prince William Counties and the Cities of Manassas and Manassas Park
VA-234	Tier 2	Prince William County-City of Manassas line	City of Manassas – Prince William County line	Provides truck connection through Prince William County between US-1, I-95, City of Manassas, I-66, and the Balls Ford Road industrial area

Route Name	Tier	From	To	Comments
<i>City of Manassas Park, VA</i>				
VA-28	Tier 2	Prince William County-City of Manassas Park line	City of Manassas Park- City of Manassas line	Provides truck access to commercial and industrial areas in Loudoun, Fairfax, and Prince William Counties and the Cities of Manassas and Manassas Park
<i>Fauquier County, VA (Urbanized Area)</i>				
US-29	Tier 1	Through urbanized area		STAA National Network
US-17	Tier 1	Through urbanized area		STAA National Network - trucks prohibited on US-17 between I-66 and US-50
<i>Arlington County, VA</i>				
I-395	Tier 1	City of Alexandria-Arlington County line	Virginia-DC line	STAA National Network
US-1	Tier 2	City of Alexandria-Arlington County line	Virginia-DC line	Provides truck access to an assortment of businesses in Arlington County and the City of Alexandria
VA-110	Tier 2	I-395	Rosslyn	Provides a truck connection between I-395 and US-29 / Key Bridge
Lynn St - Fort Meyer Dr	Tier 2	VA-110	Virginia-DC line - Key Bridge	Provides truck connection between the Key Bridge and VA-110
VA-27	Tier 3	I-395	2 nd Street S.	Provides truck access Fort Myer - STAA Virginia Access Route
VA-233	Tier 3	US-1	Washington Reagan National Airport	Provides truck access to Washington Reagan National Airport
<i>City of Alexandria, VA</i>				
I-95	Tier 1	Fairfax County-City of Alexandria line	Virginia-Maryland line	STAA National Network
I-395	Tier 1	Fairfax County-City of Alexandria line	City of Alexandria-Arlington County line	STAA National Network
US-1	Tier 2	Fairfax County-City of Alexandria line	City of Alexandria-Arlington County line	Provides truck access to Arlington and Fairfax Counties as well as the City of Alexandria
VA-7	Tier 2	Arlington County-City of Alexandria line	I-395	Provides truck access to the commercial areas along VA-7 in Fairfax County

Route Name	Tier	From	To	Comments
Duke Street	Tier 3	I-395	S. Pickett St	Provides truck access to the Landmark Mall and other commercial areas - STAA Virginia Access Route
Van Dorn St – Metro Rd	Tier 3	I-95 / I-495	Edsall Rd	Provides truck access to industrial areas and CSX intermodal facility - STAA Virginia Access Route and FHWA Intermodal Connector

2.2.4 TRUCK PARKING

Commercial motor vehicle operators often drive long hours on busy roadways. To ensure that truck drivers remain alert, federal regulations require them to keep track of how many hours they are on duty and to stop driving when they have reached certain hours of service limits. Truck drivers, however, cannot always find parking spaces at rest areas or commercial truck stops, and often choose to park on shoulders (of roadways or ramps) or at other undesignated locations, increasing the risk of crashes and accelerating the deterioration of shoulder pavements. The USDOT’s findings in the **Jason’s Law Truck Parking Survey Results and Comparative Analysis** show most states reported having truck parking shortages occurring at all times of the day during every day of the week. The demand for truck parking spaces in the National Capital Region is significantly greater than the supply. VDOT estimates that Northern Virginia alone has a shortage of over 1,000 truck parking spaces. MDOT highlights truck parking as safety and security issue in the **Maryland Strategic Goods Movement Plan** (draft). Both Maryland and Virginia are actively working to address truck parking shortages in and around the National Capital Region.

According to the **Virginia Truck Parking Study** (2015), the most frequently reported reason for trucks parking in undesignated areas was a shortage of available official/formal truck parking spaces at the time of need. Contributing reasons include:

- Truckers do not know where available truck parking spaces are located.
- Truck parking facilities, if they exist, are oftentimes already at or over capacity when truckers arrive.
- Many shippers and receivers have scheduled delivery and pick-up times that are not flexible and do not allow on-site truck parking, which increases the demand for staging areas with available parking near the shippers and receivers.

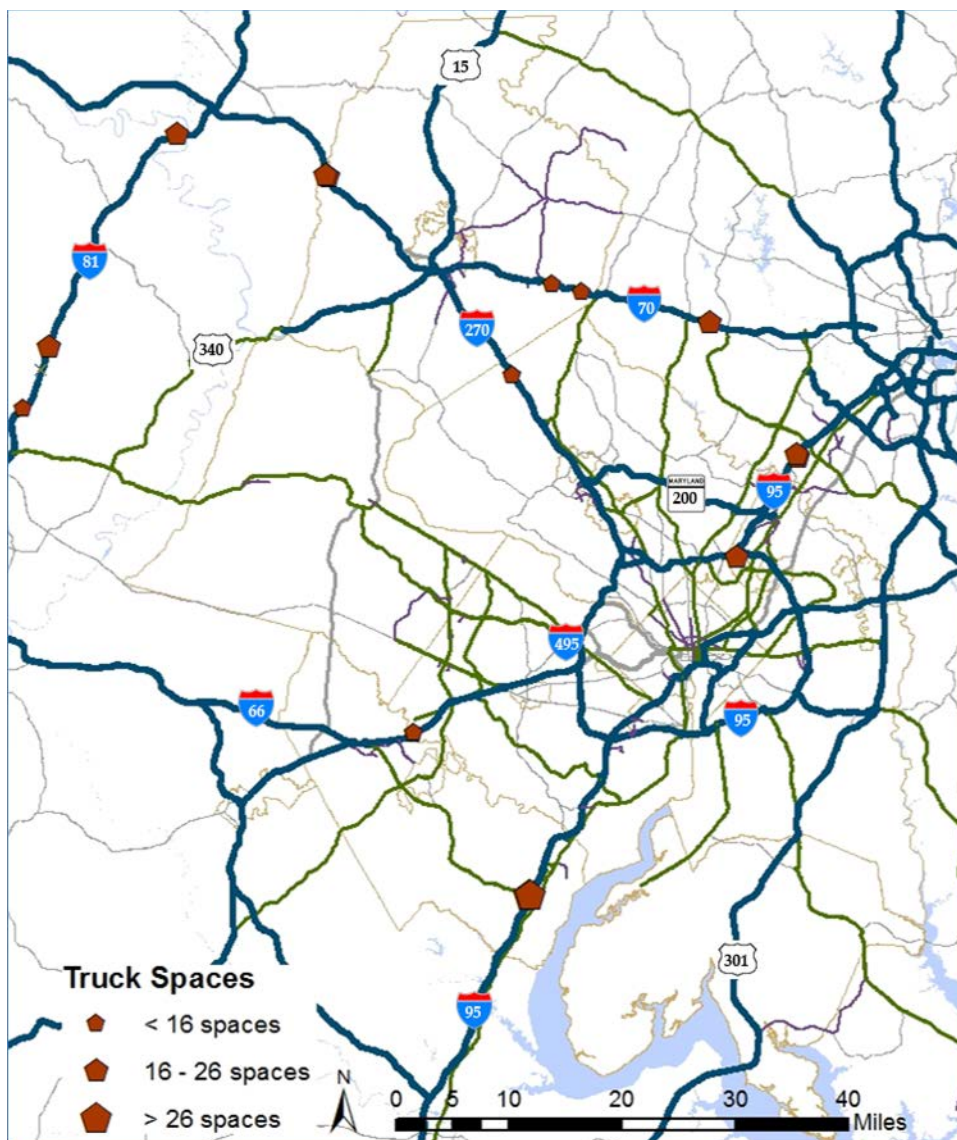
There are several issues that contribute to the challenges of increasing truck parking in the Region. Three of the primary issues are:

- **Transportation Congestion:** The delays that frequently occur in the Region result in fewer miles of travel for trucks before drivers use up their available “hours of service”, after which they are required to rest – and therefore to find an available truck parking space. This has the effect of increasing the demand for truck parking spaces.
- **Land Acquisition Costs:** Truck parking spaces consume a great deal of land. Land costs in and near urban areas are very high compared to rural locations. This makes the business case for private-sector developers difficult when it comes to truck parking.

- **Public Perception:** Support of local residents for plans to build truck parking facilities is difficult to come by due to perceptions that such facilities generate noise and air pollution, and attract crime. This is a particular headwind because land use decisions are the purview of local governments who are responsive to the concerns of their residents.

Both VDOT and MDOT are working to overcome these challenges and increase the supply of truck parking spaces in the Region through partnering with private industry and local governments to increase capacity, working to provide real-time parking supply and availability information, and increasing the supply of truck parking facilities at State-owned facilities. Figure 4 shows the location of public truck parking facilities in the Region.

Figure 4: Public Truck Parking Areas

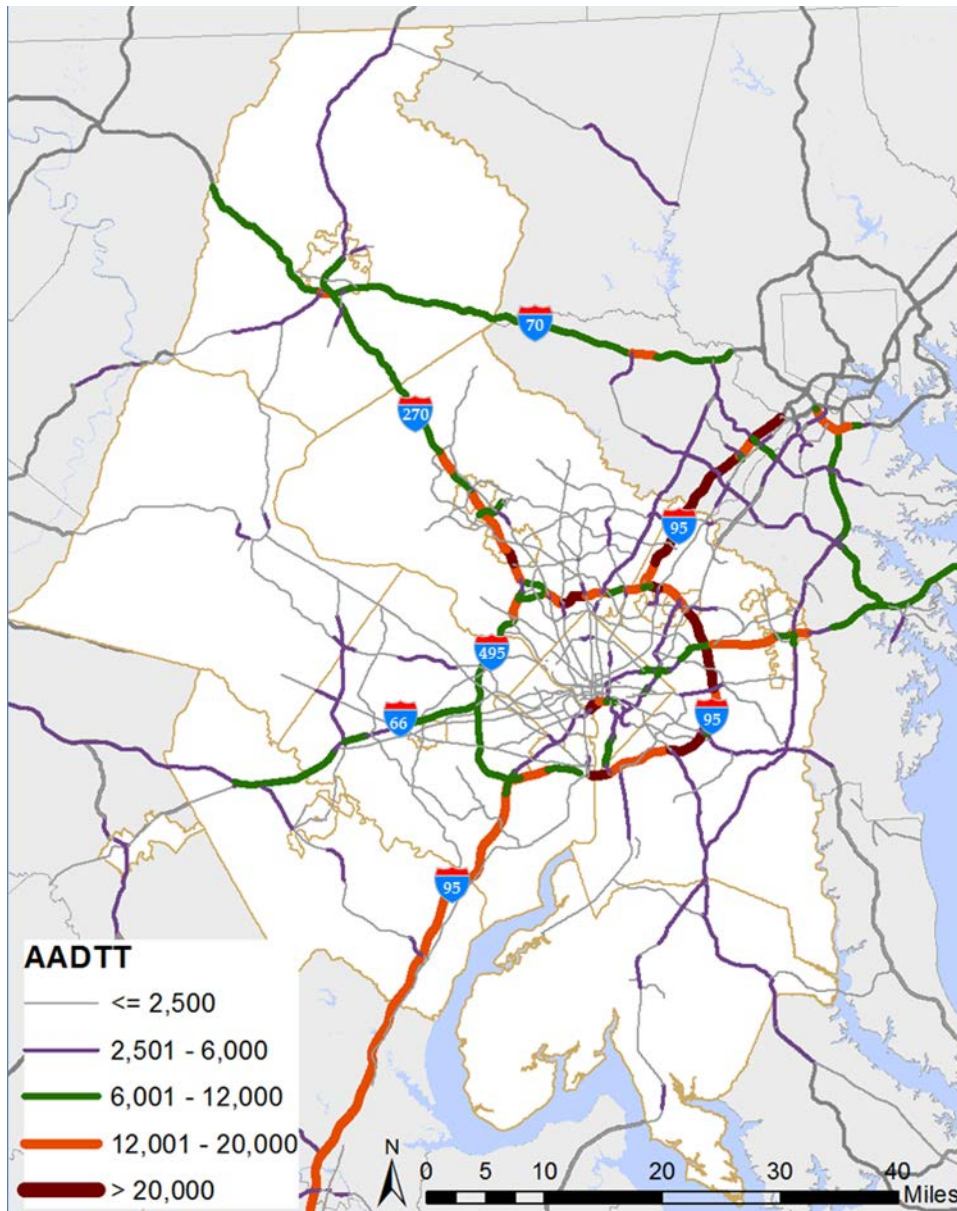


Source: Facilities and Spaces shape file from FHWA Office of Operations

2.2.5 TRUCK UTILIZATION

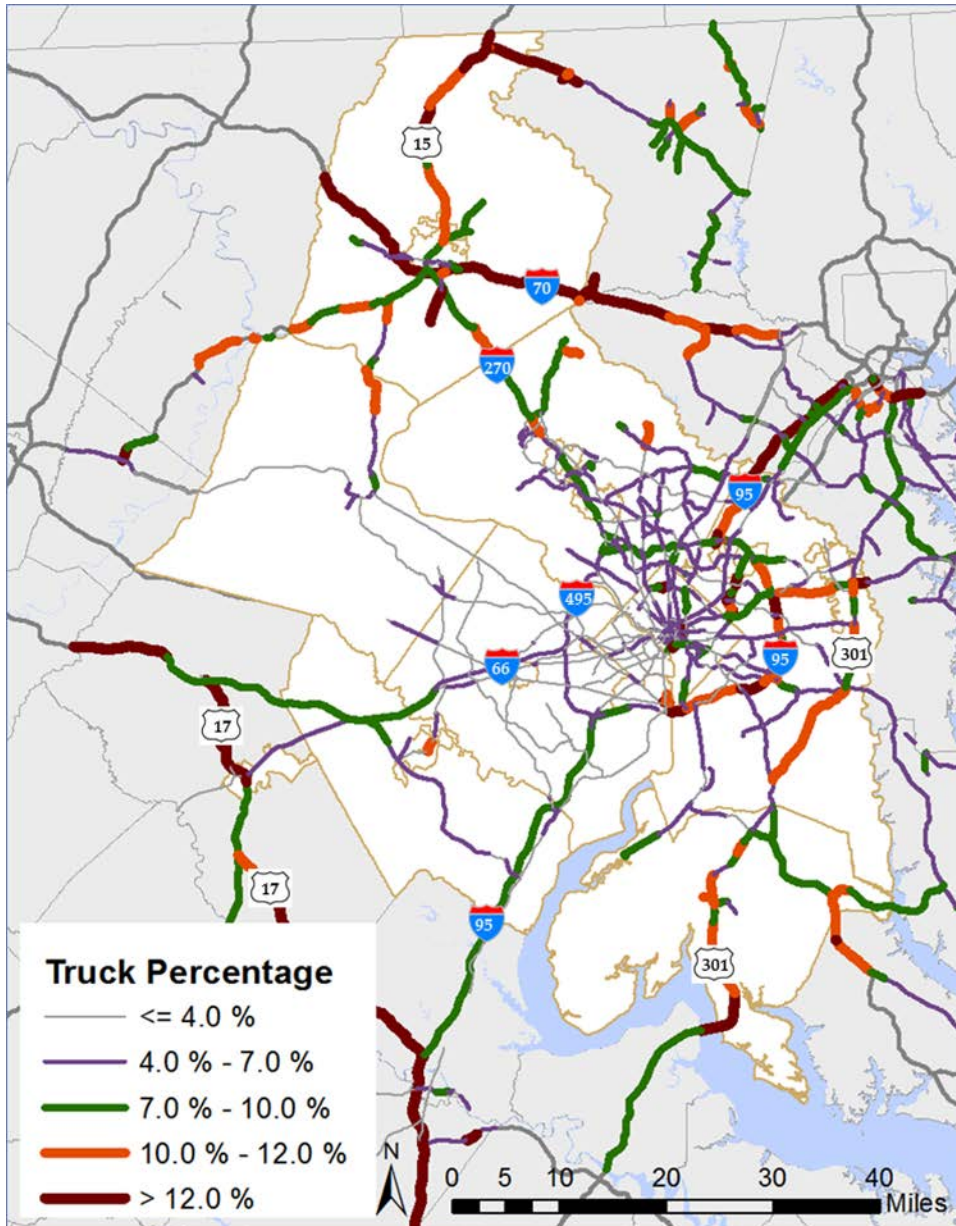
Analysis of Highway Performance Monitoring System (HPMS) data provides average annual daily truck traffic (AADTT) and truck percentage data by roadway segment. Viewing these data (See Figures 5 and 6) provide an understanding of which roadways have the most truck volume and which roadways have a high proportion of truck traffic.

Figure 5: Average Truck AADTT Map



Source: COG Analysis of 2013 Highway Performance Monitoring System Submittal - for planning purposes only.

Figure 6: Average Truck Percentage Map

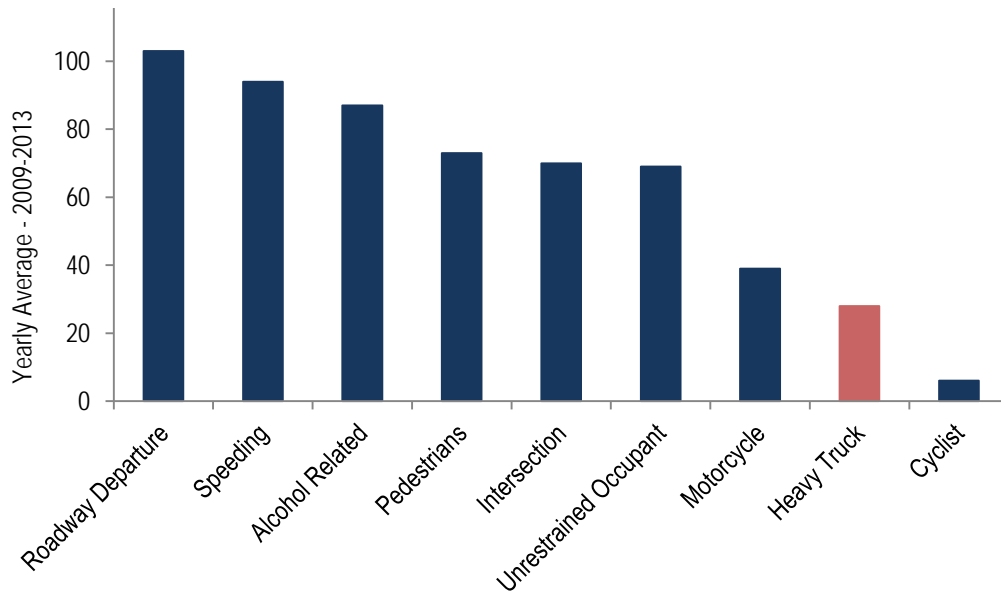


Source: COG Analysis of 2013 Highway Performance Monitoring System Submittal – for planning purposes only.

2.2.6 TRUCK SAFETY

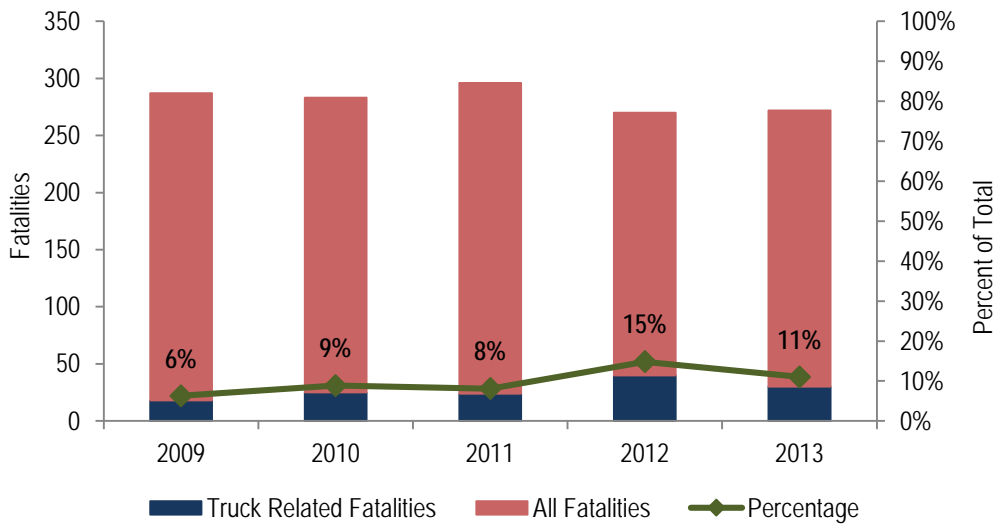
The involvement of heavy trucks is less a contributing factor in fatal crashes in the Region than are roadway departure, speeding, alcohol involvement, pedestrian involvement, intersections, failure to wear safety belts, and motorcycle involvement (see Figure 7). However, crashes involving trucks are typically more severe than other types of crashes due to their greater size and weight. As shown in Figure 8, the proportion of total fatalities represented by truck-involved crashes in the period from 2009 to 2013 ranged from 6 percent to 13 percent, and was 11 percent in 2013, the most recent year for which data were available.

Figure 7: Fatalities in the Region by Emphasis Area



Source: COG analysis of District Department of Transportation, Maryland Highway Safety Office, and Virginia Department of Motor Vehicles safety data - for planning purposes only

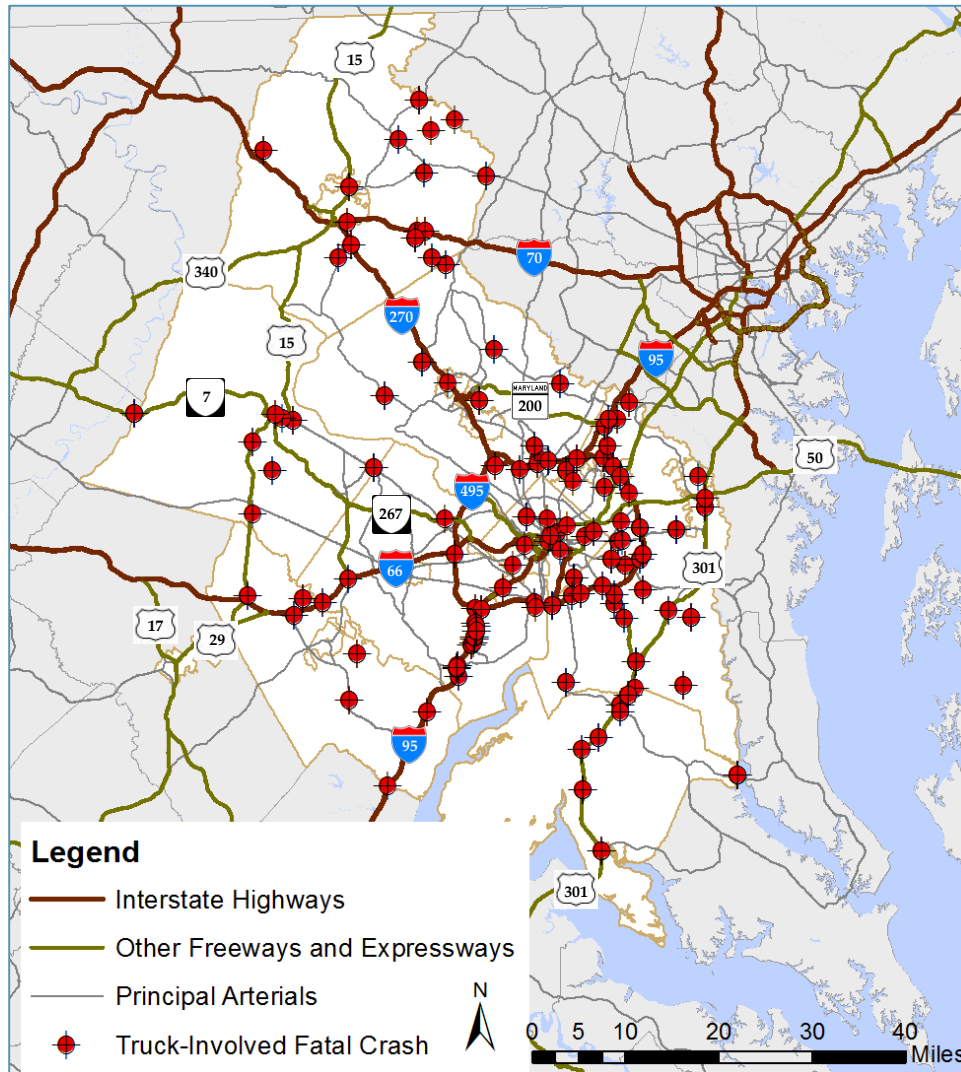
Figure 8: National Capital Region Crash-Related Fatalities



Source: COG analysis of District Department of Transportation, Maryland Highway Safety Office, and Virginia Department of Motor Vehicles safety data - for planning purposes only

Between 2009 and 2013 fatal truck-involved crashes in the Region were clustered along the I-95 corridor, around the Capital Beltway, and along the U.S. 301 / MD 5 corridor (see Figure 9).

Figure 9: Fatal Truck Crashes in the Region – 2009 – 2013



Source: COG analysis of Fatality Analysis Reporting System (FARS) data - for planning purposes only

2.3 Railroads

The Region's rail system consists of more than 300 miles of mainline track, most of which are operated by two railroads – CSX (211 miles), and the Norfolk Southern Corporation (46 miles). Additionally, the Region is served by Maryland Midland Railway, a short line operating in Frederick County, Maryland. Three passenger systems – Amtrak, Virginia Railway Express, and MARC – also operate over the Region's freight rail system.

2.3.1 RAIL SYSTEM INVENTORY

Table 2 provides information about each of the railroads operating in the Region by class⁴ and miles of mainline track owned. Figures 10 and 11 show the rail system by ownership and by rail density respectively.

Table 2: National Capital Region Railroads

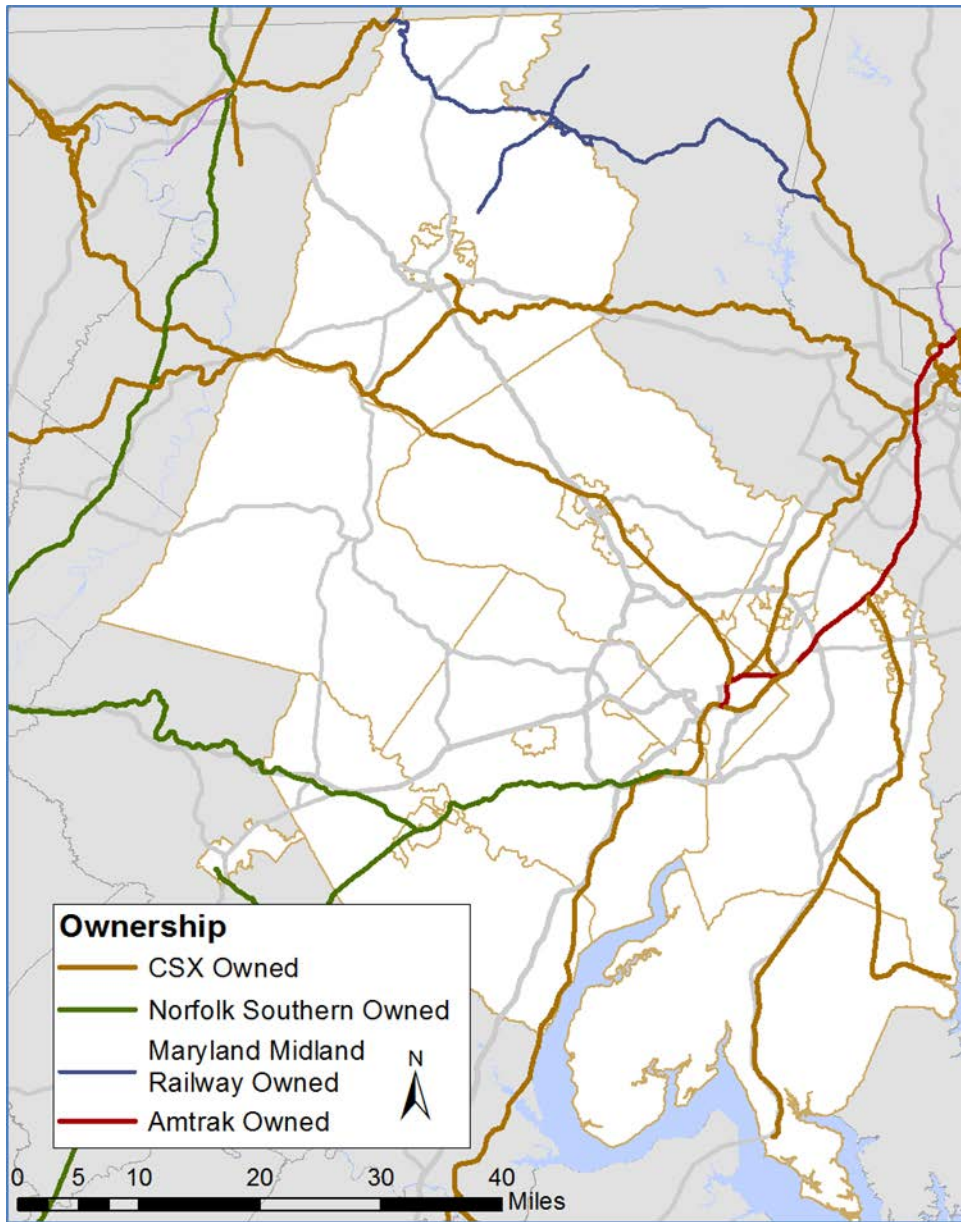
Railroad	Class I Freight	Class III Freight	Passenger	Miles Owned in the Region
CSX Transportation	√			211
Norfolk Southern Corporation	√			46
Maryland Midland Railway*		√		26
Amtrak			√	18

* Maryland Midland Railroad is a subsidiary of Genesee & Wyoming Inc.

Source: Metropolitan Washington Council of Governments analysis of National Transportation Atlas Database Rail Network file – 2013.

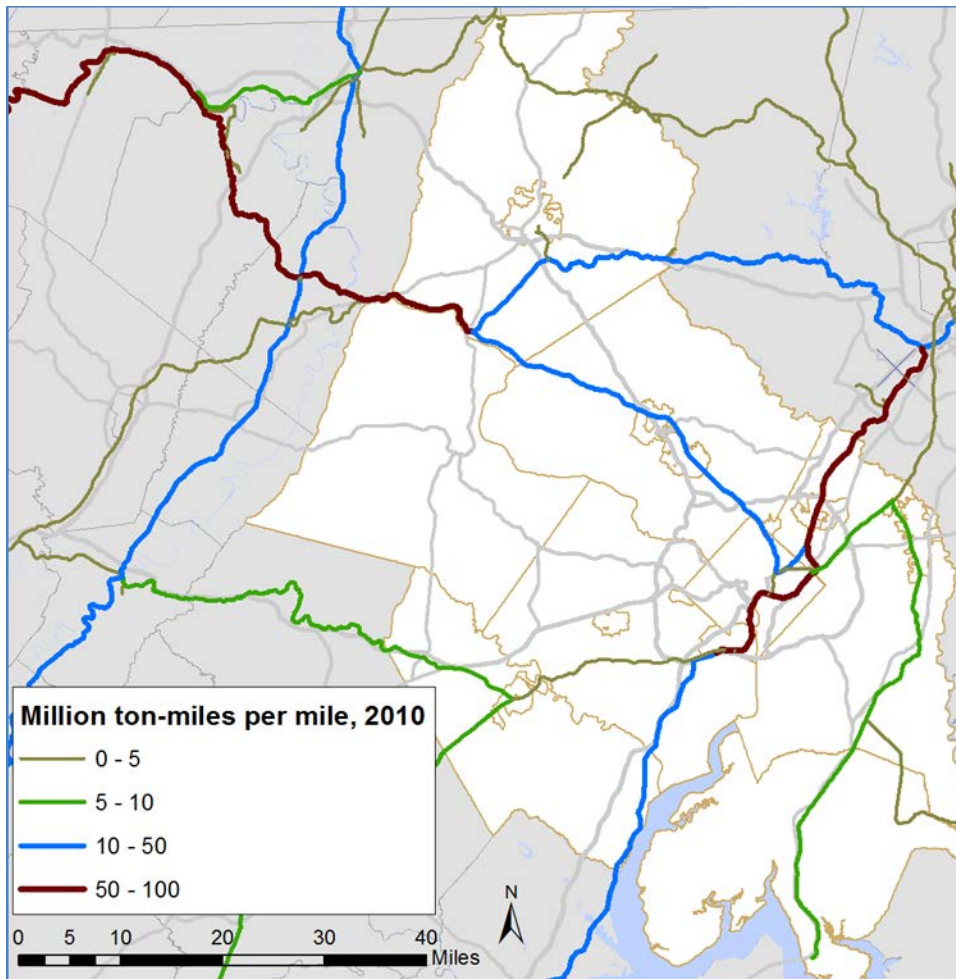
⁴ Railroad classifications are set by the Surface Transportation Board and are based on annual operating revenue. After adjusting for inflation, annual operating revenues must exceed \$250 million to be classified as Class I, be less than \$250 million but in excess of \$20 million for Class II, and \$20 million or less for Class III.

Figure 10: Regional Freight Rail Network



Source: COG Analysis of 2013 National Transportation Atlas Database – for planning purposes only

Figure 11: Railroad Freight Density



Source: COG Analysis of 2013 National Transportation Atlas Database – for planning purposes only

2.3.2 RAIL SERVICES

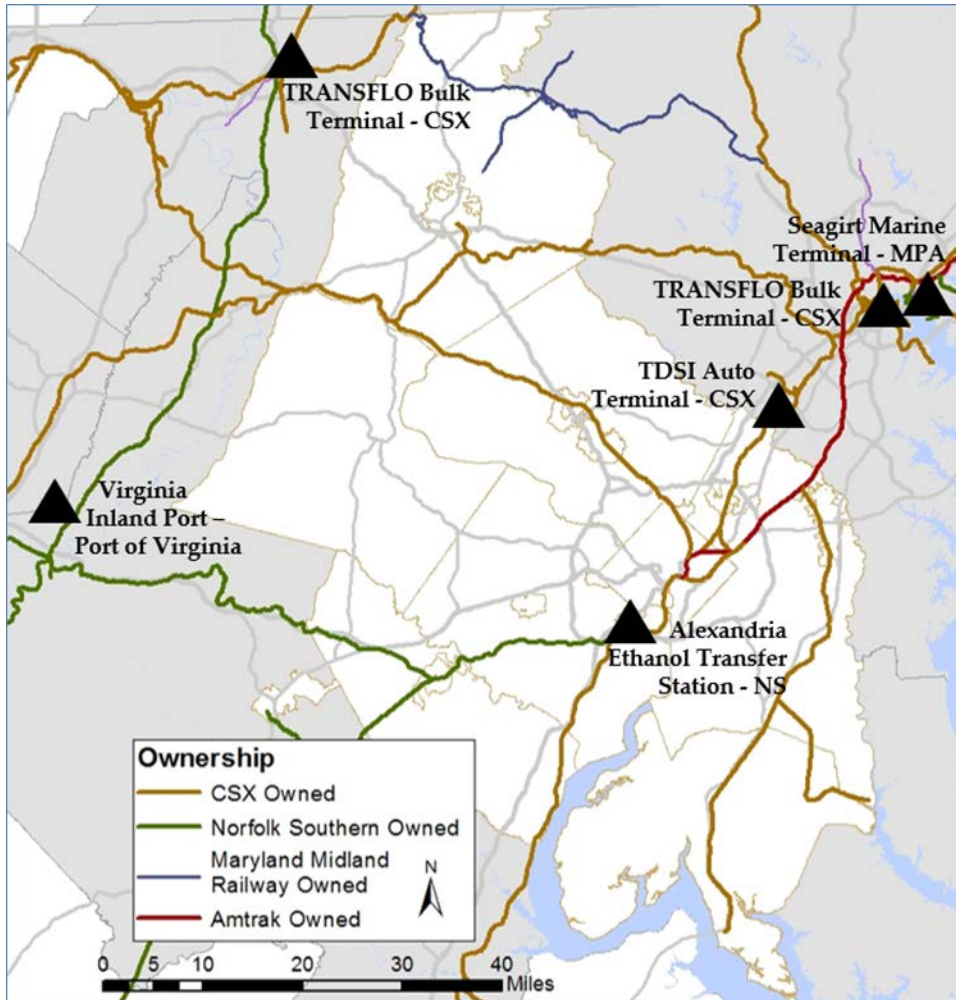
The many types of services offered by freight railroads fall into three main categories; bulk, intermodal, and carload or “mixed” service.⁵

- **Bulk services** utilize liquid or dry-bulk carrying railcars, often assembled in long “unit trains” consisting of a single commodity and railcar type. Unit trains offer economies of scale because they involve long trains made up of a single railcar type, moving between major origins and destinations. Coal and grain are often moved in unit trains.
- **Intermodal services** involve transporting containers (single-stacked or double-stacked), truck trailers (on flat cars), entire trucks (known as “piggyback” service), and sometimes “autoracks” (specialized two-level or three-level railcars carrying automobiles). Intermodal trains aim to provide a level of service comparable to trucking, with scheduled high-speed service. Figure 12 shows where the major rail-intermodal terminals within and near the Region are located.

⁵ This section adapted from the Virginia Multimodal Freight Study – Phase I.

- **Carload services:** Carload trains carry a mix of different types of railcars and commodities, coming from different origins and moving to different destinations. Smaller shippers and receivers who might use a few railcars per day or per week, or larger shippers and receivers who handle multiple types of commodities, are typical carload customers.

Figure 12: Major Intermodal Facilities Served by Rail



Source: COG analysis of National Transportation Atlas Database and railroad website data – for planning purposes only.

2.4 Air Cargo

Air cargo refers to the shipment of commercial freight in either dedicated cargo aircraft or passenger aircraft. Because size and weight in an aircraft is at a premium, air cargo typically consists of high value and/or time sensitive goods. While large and heavy materials are sometimes shipped as air cargo, especially if they are time sensitive, more typical examples include pharmaceuticals, computer chips and electronic components, medical supplies, automotive parts, documents, and perishable commodities such as flowers, fresh fruits, and fish.

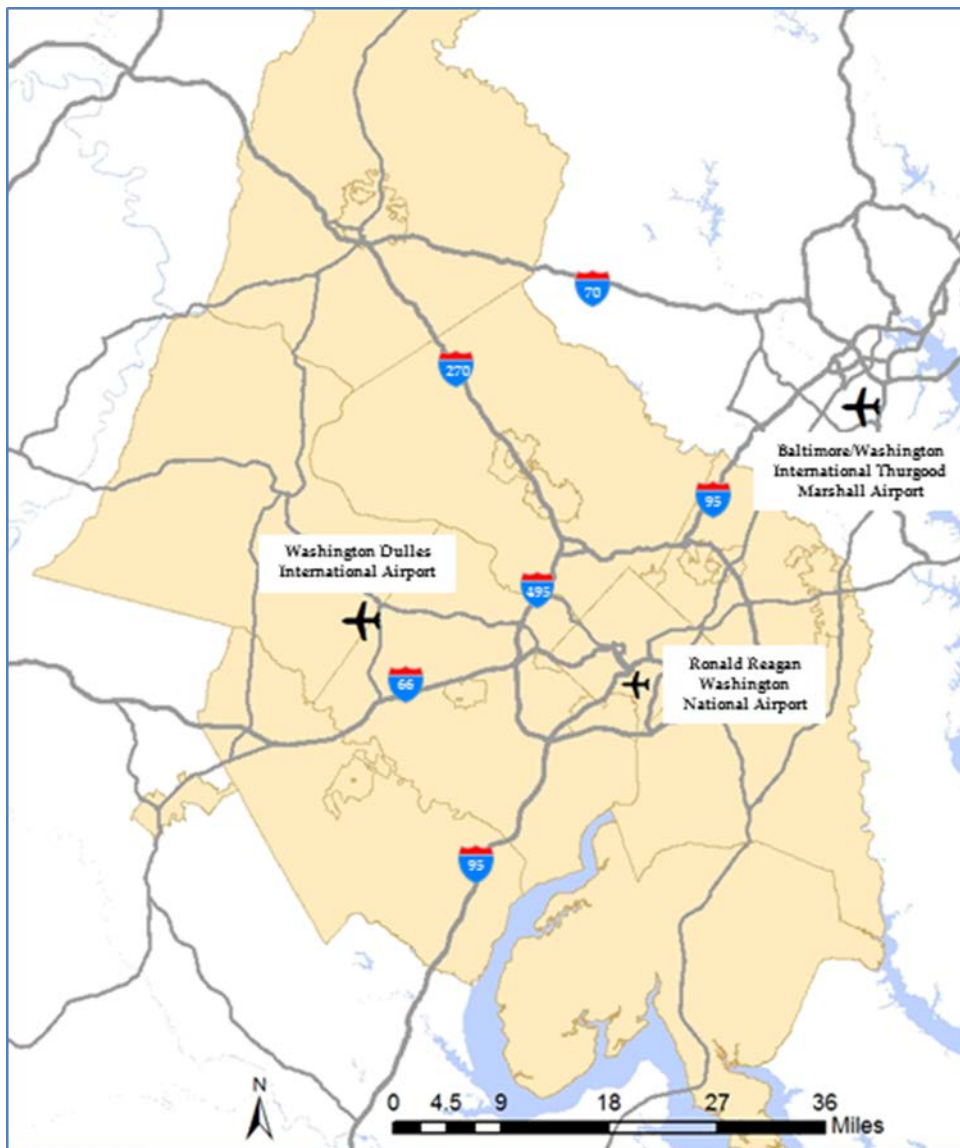
2.4.1 AIR CARGO SERVICE TYPES

Air cargo is handled on pallets or in small, specialized containers called unit load devices that are shaped to fit different aircraft types. These can be loaded on dedicated all-cargo planes (like those operated by UPS and FedEx), or as belly cargo on passenger planes.

2.4.2 AIR CARGO SYSTEM INVENTORY

Of the 13 public use airports serving the National Capital Region, two of them, as shown in Figure 13 below, provide for nearly all of the reported air cargo tonnage. While small amounts of air cargo are handled out of Washington Reagan National Airport, the vast majority is handled at Washington Dulles International Airport (Dulles) and Baltimore/Washington Thurgood Marshall International Airport (BWI).

Figure 13: Major Cargo Airports Serving the National Capital Region



2.4.3 AIR CARGO OPERATIONS

Table 3 shows the Airports Council International (ACI) 2014 rankings of the top 50 North American airports for total air cargo. Dulles and BWI are ranked 23rd and 36th respectively and are both among the top 50 cargo airports in North America. While these airports are important economic drivers of the National Capital Region's economy, they are dwarfed in size by the largest national air cargo hubs. For example, New York's JFK airport handled nearly five times as much cargo as Dulles and more than 12 times as much cargo as BWI in 2014.

Table 3: Top 50 North American Airports for Air Cargo – 2014

Rank	City (Airport Code)	Total Cargo (metric tons)
1	Memphis TN (MEM)	4,258,531
2	Anchorage AK (ANC)	2,492,754
3	Louisville KY (SDF)	2,293,231
4	Miami FL (MIA)	1,998,779
5	Los Angeles CA (LAX)	1,816,269
6	Chicago IL (ORD)	1,377,663
7	New York NY (JFK)	1,303,889
8	Indianapolis IN (IND)	1,070,196
9	Cincinnati OH (CVG)	652,666
10	Newark NJ (EWR)	639,930
11	Dallas/Fort Worth TX (DFW)	634,997
12	Atlanta GA (ATL)	601,269
13	Oakland CA (OAK)	503,568
14	Houston TX (IAH)	461,492
15	Toronto ON (YYZ)	448,634
16	Ontario CA (ONT)	430,319
17	Honolulu HI (HNL)	414,870
18	San Francisco CA (SFO)	400,614
19	Philadelphia PA (PHL)	392,506
20	Seattle WA (SEA)	326,582
21	Phoenix AZ (PHX)	283,739
22	Boston MA (BOS)	275,522
23	Washington DC (IAD)	267,735
24	Vancouver BC (YVR)	256,935
25	Denver CO (DEN)	235,572
26	Portland OR (PDX)	207,785
27	Detroit MI (DTW)	202,032
28	Minneapolis MN (MSP)	198,574
29	Orlando FL (MCO)	172,869
30	Salt Lake City UT (SLC)	161,860
31	San Diego CA (SAN)	156,149
32	Fort Worth TX (AFW)	110,329
33	Charlotte NC (CLT)	105,845
34	San Antonio TX (SAT)	105,839
35	Hartford CT (BDL)	105,310
36	Baltimore MD (BWI)	105,153
37	Rockford IL (RFD)	101,912
38	Las Vegas NV (LAS)	98,658
39	Huntsville AL (HSV)	86,752
40	Kansas City MO (MCI)	85,002
41	Tampa FL (TPA)	84,975
42	Montreal QC (YMX)	82,972
43	Montreal QC (YUL)	82,463
44	El Paso TX (ELP)	78,435
45	Fort Lauderdale, FL (FLL)	77,967

Rank	City (Airport Code)	Total Cargo (metric tons)
46	Raleigh-Durham NC (RDU)	76,200
47	Pittsburgh PA (PIT)	75,658
48	Cleveland OH (CLE)	75,012
49	Greensboro NC (GSO)	74,284
50	Manchester, NH (MHT)	72,289

Source: Airports Council International

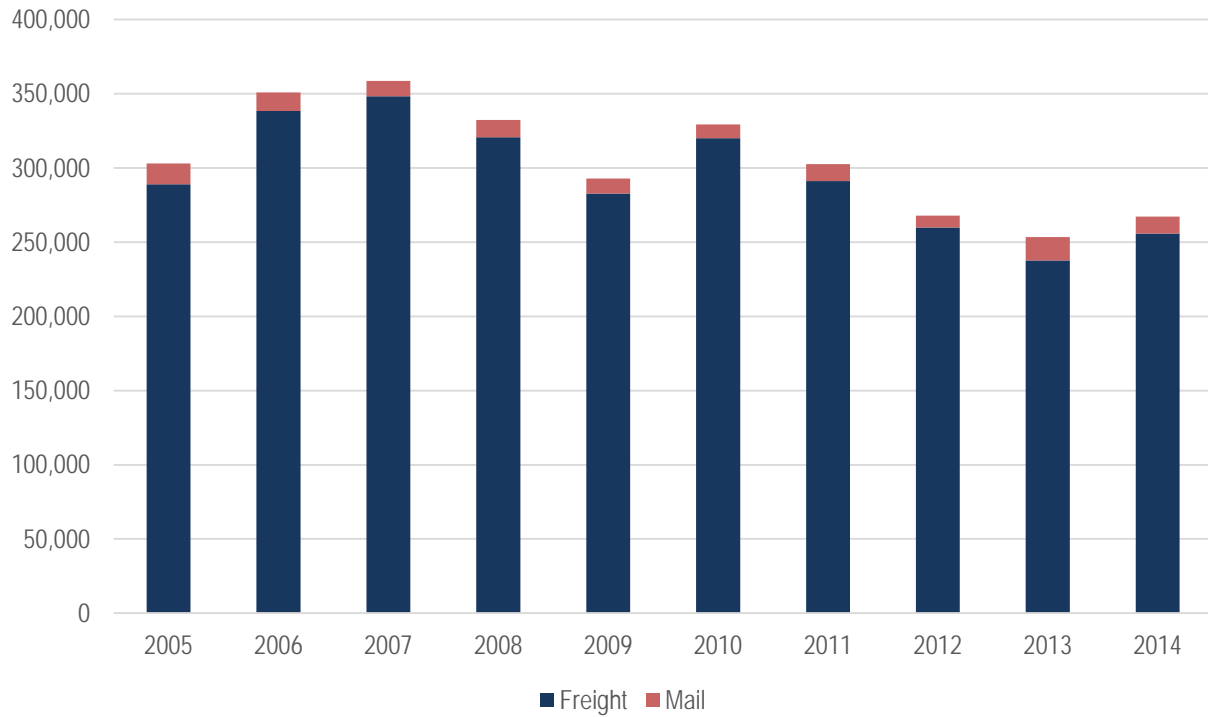
Table 4 shows historical air cargo tonnage handled at Dulles and BWI airports. Figures 14 and 15 display these tonnages for Dulles and BWI airports respectively. Total air cargo has declined by nearly 12 percent between 2005 and 2014 at Dulles and by nearly 19 percent over the same time period at BWI. Between 2005 and 2014 international freight tonnage at Dulles increased by 24 percent, partially offsetting a 35 percent decline in domestic freight tonnage. The decline in domestic tonnage has occurred as the airlines serving Dulles transitioned from wide-body aircraft to narrow-body aircraft. The spike in Dulles cargo from 2006 through 2008 was due to the increase in military support activity to Europe and the Middle East.

Table 4: Freight Activity at Cargo Airports Serving the Region

Year	IAD-Freight (metric tons)	IAD-Mail (metric tons)	IAD-Total (metric tons)	BWI-Freight (metric tons)	BWI-Mail (metric tons)	BWI-Total (metric tons)
2005	288,929	14,135	303,064	119,018	10,114	129,132
2006	338,449	12,437	350,885	113,545	10,430	123,975
2007	348,194	10,486	358,680	108,952	6,470	115,422
2008	320,603	11,759	332,362	94,529	7,654	102,183
2009	282,686	10,088	292,774	94,229	6,152	100,381
2010	319,993	9,280	329,273	96,969	5,410	102,379
2011	291,152	11,510	302,662	102,668	5,091	107,759
2012	259,814	8,058	267,872	106,764	4,986	111,750
2013	237,713	15,622	253,335	104,192	4,804	108,996
2014	255,753	11,395	267,148	100,465	4,665	105,130

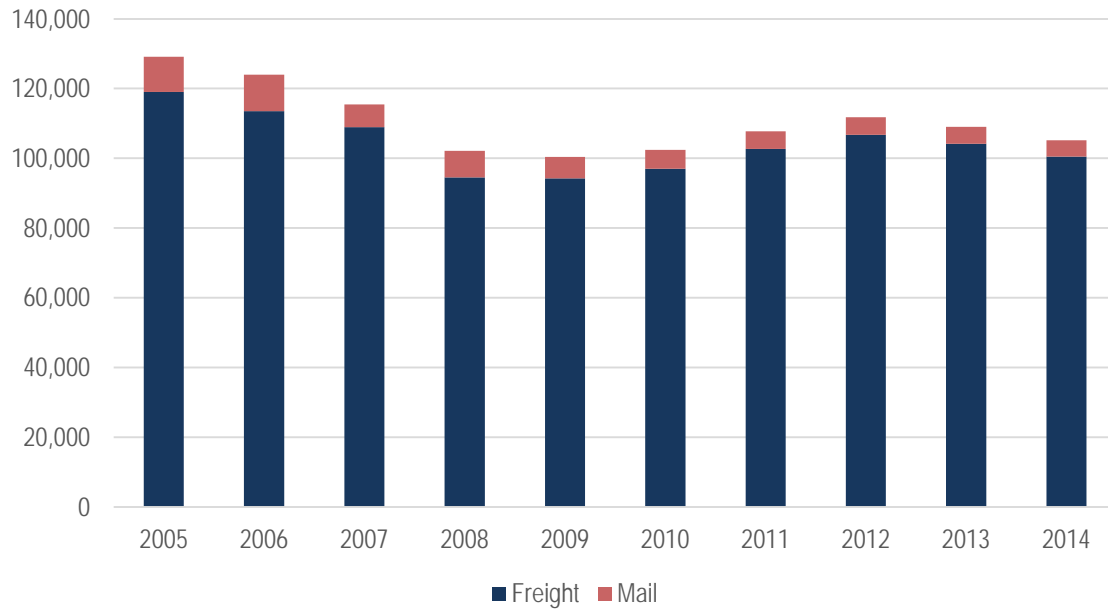
Source: BWI and IAD Airport websites

Figure 14: Freight Activity at Dulles International Airport



Source: Dulles Airport website

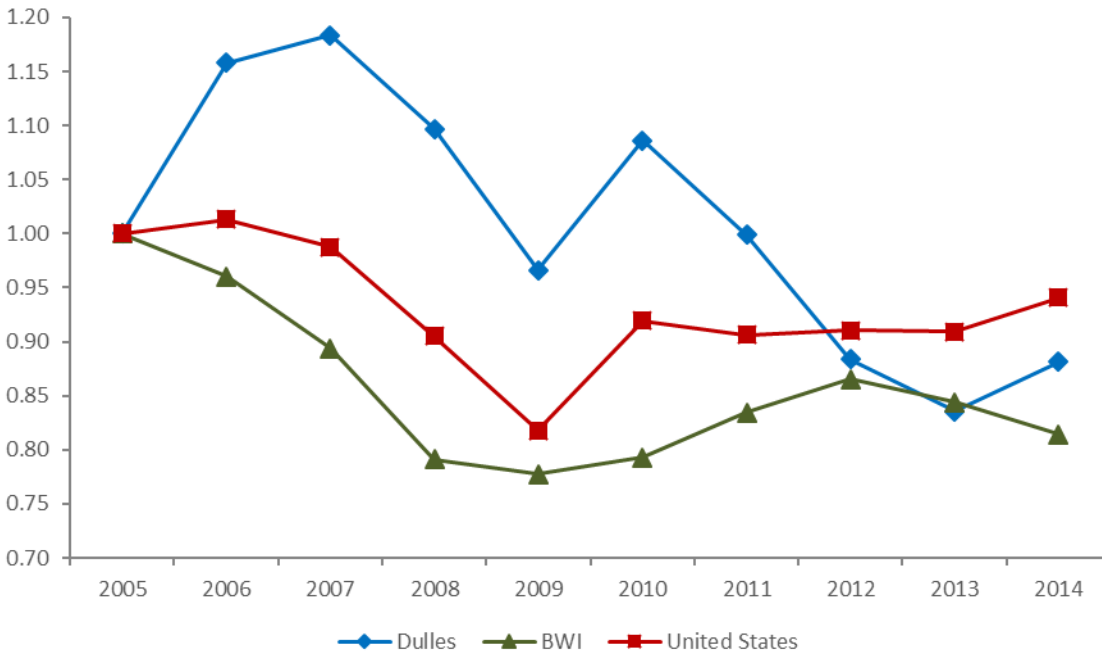
Figure 15: Freight Activity at BWI Airport



Source: BWI Airport website

Total combined annual air cargo tonnage at the 50 largest US cargo airports was 5.9 percent lower in 2014 than it was in 2005. Annual tonnage at BWI dropped by 18.6 percent over the same time period while annual tonnage at Dulles declined by nearly 12 percent. Figure 2.16 displays the normalized growth trends for the Region’s cargo airports as well as that of the combined top 50 US cargo airports.

Figure 16: Historic Air Cargo Growth Trends: Dulles, BWI, and the United States



Source: BWI and IAD Airport websites; Airports Council International sum of top 50 US Cargo Airports

See also Section 4.0 for trends affecting air cargo.

2.5 Intermodal Connectors

NHS intermodal connectors are short roadway segments that tie airport, seaport, and rail terminal facilities to the National Highway System (NHS). They tend to carry lower volumes of traffic at slower speeds than a typical NHS route and are therefore typically designed to lower standards. However, large and heavy trucks use these critical roadway segments to carry the full range of commodities essential to the nation’s economy. Ensuring that these connectors are designed properly and kept in good condition helps avoid slowing freight movement or damaging goods in transit. Intermodal connectors also support defense mobilization and national security. The FHWA identifies one freight-related intermodal connector within the National Capital Region and two more that are located just outside of it:

1. Alexandria Intermodal (Ethanol Transfer Station) – Norfolk Southern - Van Dorn Street (I-95 to Metro Road) and Metro Road (Van Dorn Street to facility entrance)
2. Virginia Inland Port – Port of Virginia / Norfolk Southern – U.S. Route 340 (I-66 to facility entrance)

3. Jessup TDSI Auto Terminal – CSX – MD 175 (I-95 to Dorsey Run Road), Dorsey Run Road (MD 175 to MD 32)

While not included on the FHWA list of official intermodal connectors, the following road serves as an important “intermodal connector” in the Region:

4. Plantation Pipeline Terminal – Terminal Road (I-95 to facility entrance)

SECTION 3.0 FREIGHT DEMAND

To examine the linkage between the economic and demographic drivers of freight (described in the previous section) and actual freight movement, it is helpful to consider various commodity flow data, such as:

The Region's transportation system handled more than 379 million tons of freight worth more than \$604 billion in 2007

- The types of commodities that are being moved in support of the Region's economy including their weights, values, and direction of travel;
- The transportation modes used to move these commodities;
- The origins and destinations of freight in the Region, and
- Forecasts for freight movement in the Region.

Information obtained from analyses of these data provide insight into the types of industries that generate the most freight demand in the Region, help to identify the products and are consumed and produced, and highlight the relative importance of key regional trading partners. This Section presents the results of these analyses in the form of summary tables and graphics.

3.1 Freight Analysis Framework

The freight demand analysis presented in this report relies on the Freight Analysis Framework⁶ (FAF), a publicly available dataset developed by the Federal Highway Administration. The most recently available FAF dataset (for the 2007 calendar year) provides estimates of the quantity of freight by weight (in tons) and by value (in 2007 dollars) moving between different geographic areas, by various freight transportation modes (truck, rail, water, air, pipeline, multiple modes), and by commodity type for the year 2007 with forecasts at intervals out to the year 2040.⁷

The FAF is constructed primarily from United States Census Bureau's Commodity Flow Survey data. The transportation modes, commodity classifications, and geographies developed for the Commodity Flow Survey are carried through to the FAF and described below.

3.1.1 FAF TRANSPORTATION MODES

The FAF assigns freight moves to one of seven modes as defined in Table 5 below.

⁶ For detailed information about the FAF and to download FAF data please visit the Federal Highway Administration's web site at: http://www.ops.fhwa.dot.gov/freight/freight_analysis/faf/

⁷ Detailed descriptions of the FAF commodity types as well as a discussion of FAF geographies is provided in the Appendix

Table 5: FAF Modes

Mode	Description
Truck	Includes private and for-hire truck. Does not include truck that is part of Multiple Modes & Mail or truck moves in conjunction with domestic air cargo.
Rail	Includes any common carrier or private railroad. Does not include rail that is part of Multiple Modes & Mail.
Multiple Modes & Mail	Includes shipments by multiple modes and by parcel delivery services, U.S. Postal Service, or couriers. This category is not limited to containerized or trailer-on-flatcar shipments. Shipments reported as Multiple Modes can include anything from containerized cargo to coal moving from mine to railhead by truck and rail to harbor. The "Mail" component recognizes that shippers who use parcel delivery services typically do not know what modes were involved after the shipment was picked up.
Water	Includes shallow draft, deep draft, Great Lakes and intra-port shipments. Does not include water that is part of Multiple Modes & Mail.
Air (includes truck-air)	Includes shipments typically weighing more than 100 pounds that move by air or a combination of truck and air in commercial or private aircraft. Includes air freight and air express. Does not include shipments weighing 100 pounds or less which are typically classified with Multiple Modes & Mail. In the case of imports and exports by air, domestic moves by ground to and from the port of entry or exit are categorized with Truck.
Pipeline	Includes crude petroleum, natural gas, and product pipelines. Does not include pipeline that is part of Multiple Modes & Mail.
Other & Unknown	Includes movements not elsewhere classified such as flyaway aircraft, and shipments for which the mode cannot be determined.

Source: Federal Highway Administration Freight Analysis Framework

3.2 National Capital Region Commodities

By analyzing the commodities that are most critical to the Region's economy – those that are moving into, out of, and within (but not through) the Region, important links between economic activity and freight movement become apparent.

3.2.1 WEIGHT AND VALUE

The two primary measures of freight activity are weight and value. Value is an indicator of the economic activity associated with freight, while weight is an indicator of the demand that freight places on transportation infrastructure. In this report weight is measured in tons and value in 2007 dollars.

Inbound, outbound, and intraregional commodities totaling nearly 212 million tons and with an equivalent value of more than \$240 billion moved over the Region's multimodal transportation system in 2007. These figures include both domestic trade (within the Region or between the Region and other areas of the United States) as well as international trade (between the Region and other countries).

Considering weight first, as shown in Table 6:

- Four major commodity groups are responsible for more than 50 percent of the Region’s tonnage – gravel and crushed stone, waste and scrap, nonmetallic mineral products, and petroleum products. Other important commodity groups by weight include natural sands, prepared foodstuffs, wood products, nonmetallic minerals, mixed freight, and coal among others. These data show that construction activities, electric power generation, and retail consumption generate much of the freight (by weight) moving across the Region’s transportation network.

By weight, *gravel and crushed stone* is the top commodity type hauled in the Region.

By value, *electronic and electrical equipment* is the top commodity type hauled in the Region.

Next, considering value, as shown in Table 7:

- Four major commodity groups – electronic and electrical equipment, machinery, mixed freight, and pharmaceutical products – account for more than 40 percent of the total value of commodities moved in the Region. Other important commodity groups include textiles, leather and articles of textiles and leather; motorized vehicles and parts; miscellaneous manufactured products; prepared foodstuffs; articles of base metal; and precision instruments and apparatus among others. These data reflect the importance of the technology and life sciences sectors to the Region’s economy as well as the demands for goods by the Region’s businesses and consumers.

Table 6: Top Commodity Types by Weight

Rank	Commodity Class	Total (thousands of tons)	Cumulative Share
1	Gravel & crushed stone	41,277	19%
2	Waste & scrap	32,319	35%
3	Nonmetallic mineral products	25,212	47%
4	Other petroleum products	14,421	53%
5	Natural sands	8,869	58%
6	Other prepared foodstuffs	8,032	61%
7	Wood products	7,821	65%
8	Other nonmetallic minerals	7,212	69%
9	Mixed freight	7,164	72%
10	Coal	6,230	75%
11	Gasoline/aviation fuel/ethanol	5,549	78%
12	Fuel oils	3,709	79%
13	Cereal grains	3,439	81%
14	Machinery	3,438	83%
15	Articles of base metal	2,982	84%
16	Other agricultural products	2,549	85%
17	Alcoholic beverages	1,941	86%
18	Milled grain & bakery products	1,890	87%
19	Printed products	1,725	88%
	All other commodities	21,745	100%
	Grand Total	211,693	

Source: Federal Highway Administration Freight Analysis Framework

Table 7: Top Commodity Types by Value

Rank	Commodity Class	Total (millions of \$)	Cumulative Share
1	Electronic & electrical equipment	31,848	13%
2	Machinery	27,578	25%
3	Mixed freight	22,584	34%
4	Pharmaceutical products	19,225	42%
5	Textiles, leather & their articles	13,143	48%
6	Motorized vehicles & parts	11,280	52%
7	Miscellaneous manufactured products	11,143	57%
8	Other prepared foodstuffs	9,214	61%
9	Articles of base metal	8,231	64%
10	Precision instruments and apparatus	7,102	67%
11	Plastics and rubber	6,359	70%
12	Basic chemicals	5,993	72%
13	Other petroleum products	5,566	74%
14	Other chemical products	5,359	77%
15	Nonmetallic mineral products	5,349	79%
16	Furniture/mattresses/lamps/signs	5,216	81%
17	Printed products	5,065	83%
18	Wood products	4,885	85%
19	Meat/poultry/fish/seafood	3,704	87%
	All other commodities	26,614	100%
	Grand Total	240,712	

Source: Federal Highway Administration Freight Analysis Framework

3.2.2 DIRECTION OF TRADE

The Region’s freight moves in different directions, depending on the commodity:

- Inbound freight is moved from other states, or other countries, to the Region.
- Outbound freight is moved from the Region to other areas of the United States, or to other countries.
- Intraregional freight is moved from one point in the Region to another point in the Region.
- Through freight is moved from a location outside of the Region to another location outside of the Region, via transportation infrastructure within the Region. Through freight does not contribute significantly to the region’s economy and is not included in the tabulation of commodities.

Tables 8 and 9 describe the directions of travel for the Region’s commodities, based on weight and value.

As shown in Table 8, the directions of travel for the Region’s top commodities on the basis of weight are:

- Approximately 34 percent of total freight by weight is inbound, 13 percent is outbound, and 54 percent is intraregional. Commodities that are primarily inbound include: petroleum products; wood products; mixed freight; coal; and articles of base metal. Commodities that are primarily

The Region receives over 2 ½ times more inbound freight than it produces outbound freight

intraregional include: gravel and crushed stone; waste and scrap; nonmetallic mineral products; natural sands; nonmetallic minerals; gasoline, aviation fuel. And ethanol; fuel oils; machinery; and alcoholic beverages. Other commodity groups do not show a clearly dominant direction. The fact that inbound freight by weight is more than 2 ½ times greater than outbound freight indicates that the Region’s economy consumes significantly more goods than it produces.

Table 8: Direction of Travel for Top Commodities by Weight

Rank	Commodity Class	Inbound	Outbound	Intraregional
1	Gravel & crushed stone	18%	3%	78%
2	Waste & scrap	19%	21%	60%
3	Nonmetallic mineral products	22%	16%	61%
4	Other petroleum products	55%	1%	44%
5	Natural sands	27%	3%	70%
6	Other prepared foodstuffs	42%	24%	33%
7	Wood products	54%	17%	29%
8	Other nonmetallic minerals	28%	18%	54%
9	Mixed freight	63%	16%	21%
10	Coal	96%	4%	0%
11	Gasoline/aviation fuel/ethanol	28%	16%	56%
12	Fuel oils	25%	16%	59%
13	Cereal grains	44%	48%	8%
14	Machinery	27%	4%	69%
15	Articles of base metal	50%	7%	43%
16	Other agricultural products	41%	14%	45%
17	Alcoholic beverages	43%	3%	54%
18	Milled grain & bakery products	31%	48%	21%
19	Printed products	44%	28%	28%
	All other commodities	44%	12%	43%
	Grand Total	34%	13%	54%

Source: Federal Highway Administration Freight Analysis Framework

As shown in Table 9 below, the directions of travel for the Region’s top commodities on the basis of value are:

- Approximately 43 percent of total freight by value is inbound, 17 percent is outbound, and 39 percent is intraregional. Commodities that are primarily inbound include: mixed freight; motorized vehicles and parts; miscellaneous manufactured products; precision instruments and apparatus; plastics and rubber; petroleum products; chemical products; furniture, mattresses, lamps, lighting fittings, and illuminated signs; and wood products. Commodities that are primarily intraregional include machinery and basic chemicals. Other commodity groups do not show a clearly dominant direction. By value, inbound freight is more than 2 ½ times greater than outbound freight, indicating that the Region’s economy consumes more goods than it produces.

Table 9: Direction of Travel for Top Commodities by Value

Rank	Commodity Class	Inbound	Outbound	Intraregional
1	Electronic & electrical equipment	44%	31%	25%
2	Machinery	16%	5%	79%
3	Mixed freight	67%	12%	21%
4	Pharmaceutical products	39%	25%	36%
5	Textiles, leather & their articles	45%	27%	28%
6	Motorized vehicles & parts	57%	11%	31%
7	Miscellaneous manufactured products	57%	22%	21%
8	Other prepared foodstuffs	46%	25%	28%
9	Articles of base metal	44%	10%	46%
10	Precision instruments and apparatus	54%	10%	36%
11	Plastics and rubber	70%	18%	13%
12	Basic chemicals	15%	4%	81%
13	Other petroleum products	66%	2%	32%
14	Other chemical products	53%	21%	26%
15	Nonmetallic mineral products	44%	16%	40%
16	Furniture/mattresses/lamps/signs	54%	13%	33%
17	Printed products	41%	34%	25%
18	Wood products	56%	14%	30%
19	Meat/poultry/fish/seafood	48%	15%	37%
	All other commodities	35%	13%	53%
	Grand Total	44%	17%	39%

Source: Federal Highway Administration Freight Analysis Framework

3.2.3 TRANSPORTATION MODES USED

All freight moves utilize either a single mode or a combination of more than one mode of transportation. The FAF categorizes each freight move as being one of the following (see Table 8 for more detailed information about the FAF modes):

- Truck;
- Rail;
- Multiple modes and mail;
- Water;
- Air (includes truck-air);
- Pipeline; and
- Other/unknown

From Table 10 below it can be seen that trucking accounts for 86 percent of total freight moved by weight, followed by rail at 5 percent, multiple modes and mail at 4 percent and pipelines at 1

86 percent of total freight (by weight) in the Region is hauled by truck

percent respectively. Except for coal and petroleum products, the other leading tonnage commodities depend heavily on trucking. Rail has a dominant share of coal traffic and a significant

share of cereal grains traffic⁸, while petroleum products, especially natural gas, are transported via pipeline. Water and air are not significant modes of regional freight transport in terms of weight.

Table 10: Commodities Share of Tonnage by Mode

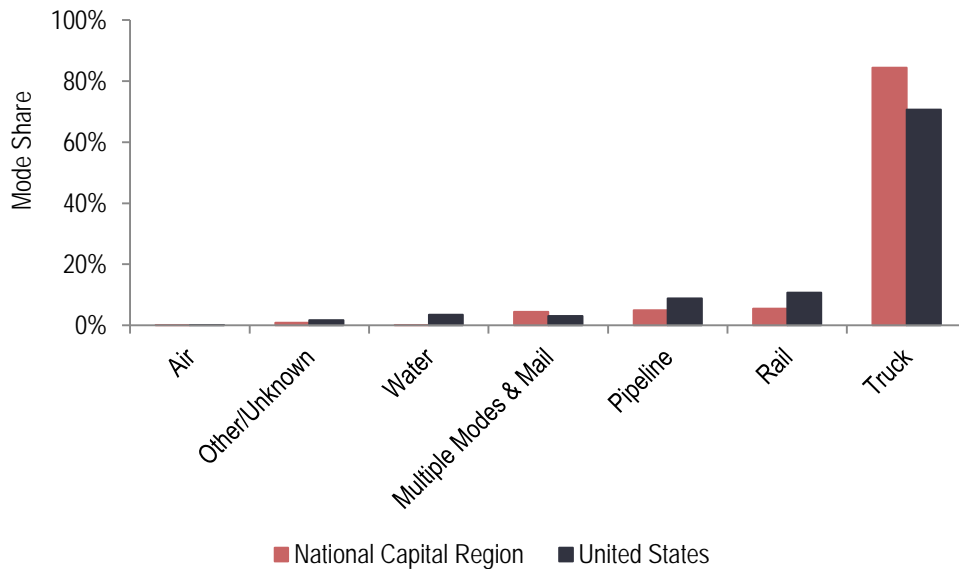
Commodity Class	Truck	Rail	Multiple Modes & Mail	Water	Air	Pipeline	Other / Unknown
Gravel & crushed stone	89%		11%				
Waste & scrap	97%	3%					
Nonmetal mineral. products	95%	4%					1%
Other petroleum products	34%	2%		1%		63%	
Natural sands	98%		1%				1%
Other prepared foodstuffs	93%	2%	5%				
Wood products	92%	6%	1%				1%
Other nonmetallic minerals	96%	2%	2%				
Mixed freight	99%		1%				
Coal	5%	94%	1%				
Gasoline/aviation fuel/ethanol	100%						
Fuel oils	99%						
Cereal grains	65%	17%	17%				
Machinery	98%	1%	1%				
Articles of base metal	95%	1%	3%				1%
Other agricultural products	94%	4%	2%				
Alcoholic beverages	97%	1%	1%				
Milled grain & bakery products	94%		3%				3%
Printed products	88%		4%		1%		7%
All other commodities	90%	4%	4%				2%
Total	86%	5%	4%	0%	0%	4%	1%

Source: Federal Highway Administration Freight Analysis Framework

Trucks haul a greater proportion of total freight (by weight) in the Region than in the nation overall. Relatively less freight is hauled by rail, water, or pipeline in the Region than in the broader nation (see Figure 17).

⁸ Except for a few coal-fired power plants, one intermodal terminal, and a relatively small number of businesses with active sidings, there are relatively few significant rail shippers and receivers in the Region. Consequently, most of the rail freight observed in the Region is “through” freight.

Figure 17: Transportation Modes Used (by Weight) – National Capital Region and United States



Source: Federal Highway Administration Freight Analysis Framework

From Table 11 below we see that trucking accounts for 79 percent, multiple modes and mail for 15 percent, air for 2 percent, and rail and pipeline each for 1 percent of total freight moved by value.

79 percent of total freight (by value) in the Region is hauled by truck

Pipelines carry the majority of petroleum products by value (especially natural gas), and a meaningful share of precision instruments are transported via air freight. Water is not a significant mode of regional freight transport in terms of either value or weight.

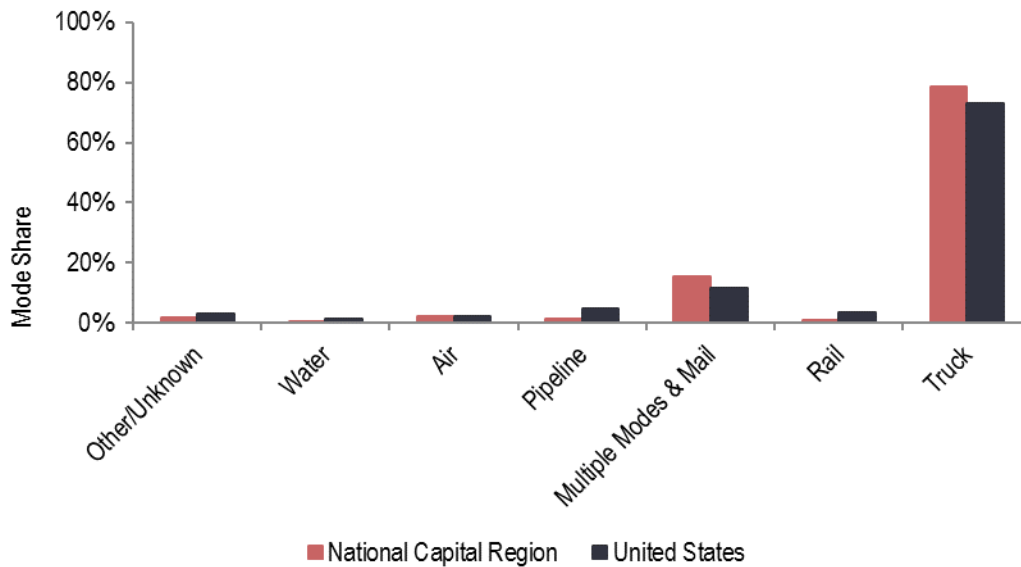
Table 11: Commodities Share of Tonnage by Value

Commodity Class	Truck	Rail	Multiple Modes & Mail	Water	Air	Pipeline	Other / Unknown
Electronic & electrical equipment	56%	1%	31%		9%		3%
Machinery	95%		4%				
Mixed freight	92%		6%				1%
Pharmaceutical products	69%		31%		1%		
Textiles, leather & their articles	68%		29%		3%		1%
Motorized vehicles & parts	82%		6%				12%
Misc. manufactured products	65%		33%		2%		1%
Other prepared foodstuffs	89%	2%	9%				
Articles of base metal	88%	1%	10%				1%
Precision instruments & apparatus	44%		38%		18%		
Plastics & rubber	78%	3%	17%				2%
Basic chemicals	94%	3%	3%				
Other petroleum products	41%	1%	1%	1%		56%	
Other chemical products	83%	2%	13%				2%
Nonmetallic mineral products	79%	1%	10%		4%		6%
Furniture/mattresses/lamps/signs	91%		9%				
Printed products	63%		32%		1%		4%
Wood products	94%	3%	2%				1%
Meat/poultry/fish/seafood	99%		1%				
All other commodities	91%	3%	6%				1%
Total	79%	1%	15%	0%	2%	1%	2%

Source: Federal Highway Administration Freight Analysis Framework

A greater proportion of total freight (by value) in the Region is hauled via truck or multiple modes and mail than in the nation overall. Relatively less freight is hauled by rail, water, or pipeline in the Region than in the broader nation (see Figure 18).

Figure 18: Transportation Modes Used (by Value) – National Capital Region and United States



Source: Federal Highway Administration Freight Analysis Framework

3.3 The National Capital Region’s Freight Transportation Modes

3.3.1 TRUCKING

Trucks are essential to freight transportation. They are responsible for the most tonnage handled⁹, the largest number of trips, and the largest number of ton-miles in the United States. Trucks are enormously flexible in that they can accommodate a broad range of commodities, from raw materials to semi-finished goods to consumer goods to post-consumer products. Trucks, unlike any of the other modes, can access virtually any origin or destination. Often they provide key links between

Gravel and crushed stone, waste and scrap, and nonmetallic mineral products are the leading truck-hauled commodities in the Region

other modes within complex, multimodal supply chains. Every freight shipper or receiver that is not located on an active rail line, next to a navigable waterway, or inside the gates of an airport, is dependent on trucking. The continued growth and evolution of e-commerce systems, reliance on just-in-time inventory practices, and expansion of expedited small package home delivery services, points to the growing significance of the role that trucks will play in the future.

By tonnage, the leading truck-hauled commodities in the Region are gravel and crushed stone, waste and scrap, and nonmetallic mineral products followed by natural sands, other foodstuffs, wood products, and mixed freight. By value, machinery; mixed freight; electronic and electrical equipment;

⁹ According to the 2007 Commodity Flow Survey, trucks carried about 85 percent of total tonnage and total value shipped in the United States.

and pharmaceutical products are the leading commodities followed by motorized vehicles and parts; textiles, leather and products of textiles and leather; and prepared foodstuffs.

Table 12: Commodity Types Handled via Truck

Top Tonnage Commodities	Thousands of Tons	Top Value Commodities	Millions of Dollars
Gravel & crushed stone	36,668	Machinery	26,318
Waste & scrap	31,231	Mixed freight	20,820
Nonmetallic mineral products	23,949	Electronic & electrical equipment	17,910
Natural sands	8,723	Pharmaceutical products	13,208
Other prepared foodstuffs	7,432	Motorized vehicles & parts	9,244
Wood products	7,202	Textiles, leather & their articles	8,980
Mixed freight	7,061	Other prepared foodstuffs	8,191
Other nonmetallic minerals	6,925	Articles of base metal	7,233
Gasoline/aviation fuel/ethanol	5,549	Misc. manufactured products	7,221
Other petroleum products	4,865	Basic chemicals	5,631

Source: Federal Highway Administration Freight Analysis Framework

3.3.2 RAIL

Rail operations specialize in long-haul transportation of high-value containerized goods; transportation of bulk goods, such as coal; and long-haul transportation of mixed car types (known

Coal is the leading rail-hauled commodity in the Region

as carload service). The availability of rail service can reduce the dependence on trucking. This can be particularly important for heavy commodities that can damage pavements if hauled by truck. By weight, the leading commodity moved by rail in the Region by far is coal, followed by waste and scrap, and nonmetallic mineral products. By value, the leading rail commodities are electronic and electrical equipment, coal, prepared foodstuffs, and basic chemicals.

Table 13: Commodity Types Handled via Rail

Top Tonnage Commodities	Thousands of Tons	Top Value Commodities	Millions of Dollars
Coal	5,864	Electronic & electrical equipment	305
Waste & scrap	1,029	Coal	280
Nonmetallic mineral products	984	Other prepared foodstuffs	200
Cereal grains	597	Basic chemicals	171
Wood products	432	Plastics & rubber	165
Other petroleum products	343	Wood products	152
Basic chemicals	313	Cereal grains	109
Plastics & rubber	199	Chemical products	100
Other nonmetallic minerals	157	Articles of base metal	92
Other prepared foodstuffs	155	Machinery	92

Source: Federal Highway Administration Freight Analysis Framework

3.3.3 MULTIPLE MODES AND MAIL

Due to the nature of the available data underlying the FAF dataset, some freight flows cannot be assigned to a specific mode. These flows are reported as multiple modes and mail in FAF and include truck-rail, truck-water, and rail-water intermodal shipments involving one or more end-to-end

transfers of cargo between two different modes.¹⁰ It also includes parcel delivery service shipments weighing 100 pounds or less (because shippers that use such services do not typically know what modes are involved in the actual shipping process).

By tonnage, the leading multiple modes and mail commodity is gravel and crushed stone, followed by cereal grains and prepared foodstuffs. By value, the leading multiple modes and mail commodities are electronic and electrical equipment, pharmaceutical products, textile and leather products, miscellaneous manufactured products, and precision instruments, among others.

Table 14: Commodity Types Handled via Multiple Modes and Mail

Top Tonnage Commodities	Thousands of Tons	Top Value Commodities	Millions of Dollars
Gravel & crushed stone	4,608	Electronic & electrical equipment	9,875
Cereal grains	587	Pharmaceutical products	5,870
Other prepared foodstuffs	427	Textiles, leather & their articles	3,749
Electronic & electrical equipment	133	Misc. manufactured products	3,681
Chemical products	132	Precision instruments & apparatus	2,688
Plastics & rubber	128	Printed products	1,639
Other nonmetallic minerals	117	Mixed freight	1,410
Nonmetallic mineral products	104	Plastics & rubber	1,098
Wood products	101	Machinery	990
Articles of base metal	98	Articles of base metal	858

Source: Federal Highway Administration Freight Analysis Framework

3.3.4 WATER

A small quantity of cargo, mainly petroleum products, is transported by water in the National Capital Region. Because there are no major port facilities within the Region, such waterborne shipments rely solely on barge transport.

Table 15: Commodity Types Handled via Water

Top Tonnage Commodities	Thousands of Tons	Top Value Commodities	Millions of Dollars
Other petroleum products	95	Other petroleum products	34
Other nonmetallic minerals	5	Plastics & rubber	1
Cereal grains	2		

Source: Federal Highway Administration Freight Analysis Framework

3.3.5 AIR

Air cargo enables fast, reliable, just-in-time delivery service that integrated carriers such as UPS and FedEx have perfected. Air freight is more expensive than other modes and is therefore typically used

By value, electronic / electrical equipment and precision instruments are the leading air cargo commodities in the Region

for transport of high value, time-sensitive goods such as mail and express packages, perishable products, specialized machinery, consumer goods, etc.

¹⁰ The Freight Analysis Framework, Version 3: Overview of the FAF3 National Freight Flow Tables. pg. 6. Federal Highway Administration, Washington, D.C.

The leading air freight commodities in the Region by weight are electronic and electrical equipment, printed products, motorized vehicle parts, and textile products. By value, the leading air freight commodities are electronic and electrical equipment, precision instruments and apparatus, and textile products.

Table 16: Commodity Types Handled via Air

Top Tonnage Commodities	Thousands of Tons	Top Value Commodities	Millions of Dollars
Electronic & electrical equipment	37	Electronic & electrical equipment	2,906
Printed products	12	Precision instruments & apparatus	1,258
Motorized vehicles & parts	4	Textiles, leather & their articles	330
Textiles, leather & their articles	4	Nonmetallic mineral products	216
Precision instruments & apparatus	2	Misc. manufactured products	180
Misc. manufactured products	2	Pharmaceutical products	108
Pharmaceutical products	2	Railway equipment/aircraft/boats.	87
Articles of base metal	1	Printed products	62
Machinery	1	Machinery	54
Railway equipment/aircraft/boats	1	Motorized vehicles & parts	54

Source: Federal Highway Administration Freight Analysis Framework

3.3.6 PIPELINE

Pipelines are a very efficient way to transport large quantities of liquids or gas. In the National Capital Region, pipelines carry refined petroleum products, including natural gas. The Plantation Pipeline Terminal in Newington, VA receives petroleum products via pipeline from Gulf Coast refineries, performs various blending operations, distributes gasoline products via truck to area gas stations, and distributes jet fuel via pipelines to Dulles International Airport and Ronald Reagan Washington National Airport.

Table 17: Commodity Types Handled via Pipeline

Top Tonnage Commodities	Thousands of Tons	Top Value Commodities	Millions of Dollars
Other petroleum products	9,061	Other petroleum products	3,105

Source: Federal Highway Administration Freight Analysis Framework

3.3.7 TOTAL WEIGHT AND VALUE

In 2007, the Region's transportation system handled about 379 million tons of freight worth more than \$604 billion, including inbound, outbound, intraregional, and through traffic.

Total weight and value handled by the Region's multimodal freight transportation system is summarized in Figure 19 and Tables 18 and 19 below.

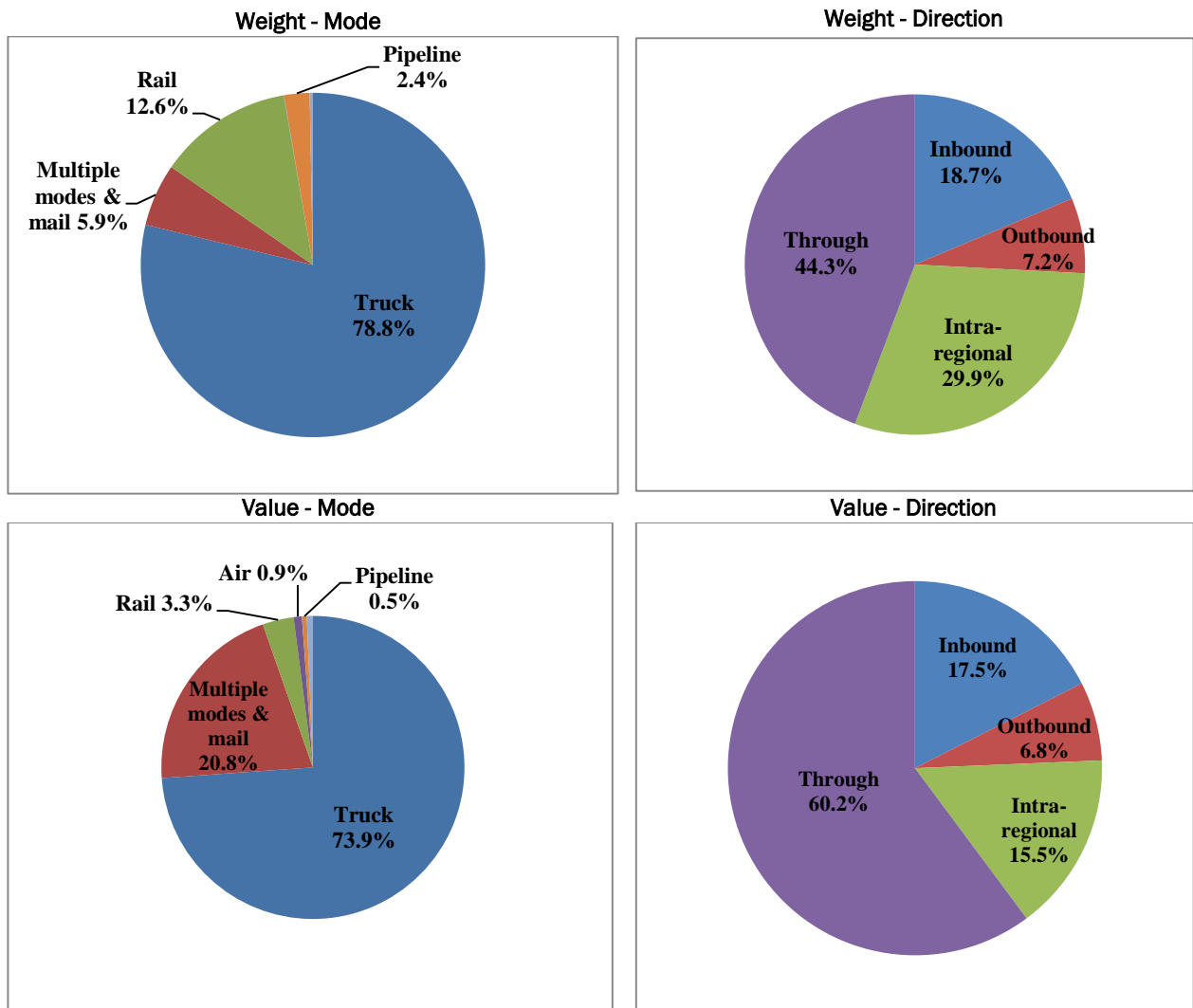
On the basis of weight:

- Trucks handled about 79 percent of total tonnage, followed by rail at 13 percent, multiple modes and mail at 6 percent, pipeline at 2 percent, and air at less than 0.1 percent.
- Approximately 19 percent of total tonnage was inbound, 7 percent was outbound, 30 percent was intraregional, and 44 percent was through.

On the basis of value:

- Trucks handled around 74 percent of value, followed by multiple modes and mail at 21 percent, rail at 3 percent, air at 1 percent, and pipeline at 0.5 percent.
- Around 18 percent of value was inbound, 7 percent was outbound, 16 percent was intraregional, and 60 percent was through.

Figure 19: Total Freight Weight and Value by Mode and Direction



Source: Federal Highway Administration Freight Analysis Framework and Metropolitan Washington Council of Governments

Table 18: National Capital Region Freight Modes – Weight (thousands of tons)

Mode	Inbound	Outbound	Intraregional	Through	Total
Truck	48,690	24,544	109,810	116,144	299,188
Multiple modes & mail	6,559	909	24	14,791	22,283
Rail	9,232	1,520	0	37,240	47,991
Air	35	34	0	N/A	68
Water	100	2	0	N/A	102
Pipeline	5,675	31	3,355	N/A	9,061
Other / Unknown	641	133	400	N/A	1,174
Total	70,931	27,173	113,589	168,174	379,867

Source: Federal Highway Administration Freight Analysis Framework and Metropolitan Washington Council of Governments

Table 19: National Capital Region Freight Modes – Value (millions of dollars)

Mode	Inbound	Outbound	Intraregional	Through	Total
Truck	70,469	30,179	88,550	257,359	446,557
Multiple modes & mail	25,617	8,124	3,212	88,542	125,495
Rail	1,932	267	0	17,847	20,047
Air	3,802	1,519	0	N/A	5,321
Water	36	0	0	N/A	36
Pipeline	2,046	11	1,048	N/A	3,105
Other / Unknown	1,993	1,100	805	N/A	3,889
Total	105,896	41,200	93,616	363,748	604,460

Source: Federal Highway Administration Freight Analysis Framework and Metropolitan Washington Council of Governments

3.4 National Capital Region’s Freight Origins and Destinations

3.4.1 TRADING PARTNERS

Analyses of FAF data reveal the relative importance of other regions in terms of the quantity and value of goods moved. These National Capital Region trading partners are sorted in terms of the sum of freight flows (inbound to the National Capital Region from the other region plus outbound

The Region’s top three trading partners (by weight) are the Baltimore region, and the states of West Virginia and Virginia

from the National Capital Region to the other region). According to these analyses, the leading trading partner regions are listed in Tables 20 (by weight) and 21 (by value) below.

Table 20: Top Trading Partner Regions by Weight

Rank	Partner Region	Thousands of		Cumulative
		Tons	Percent	
1	Baltimore MD MSA	20,673	21%	21%
2	West Virginia	10,940	11%	32%
3	Remainder of Virginia	10,113	10%	43%
4	Remainder of Pennsylvania	7,226	7%	50%
5	Richmond VA MSA	6,132	6%	56%
6	Remainder of Maryland	5,466	6%	62%
7	Norfolk VA MSA	4,382	4%	66%
8	New York NY CSA	3,608	4%	70%
9	Philadelphia PA CSA	3,310	3%	73%
10	Houston TX CSA	2,619	3%	76%
11	Remainder of New York	1,303	1%	77%
12	Remainder of North Carolina	1,117	1%	78%

Source: Federal Highway Administration Freight Analysis Framework

Table 21: Top Trading Partner Regions by Value

Rank	Partner Region	Millions of		Cumulative
		Dollars	Percent	
1	Baltimore MD MSA	20,959	14%	14%
2	New York NY CSA	12,334	8%	23%
3	Remainder of Pennsylvania	8,323	6%	28%
4	Philadelphia PA CSA	6,928	5%	33%
5	Remainder of Virginia	6,531	4%	37%
6	Los Angeles CA CSA	6,084	4%	42%
7	Richmond VA MSA	5,742	4%	45%
8	Memphis TN MSA	3,903	3%	48%
9	Norfolk VA MSA	3,560	2%	51%
10	Chicago IL CSA	2,757	2%	52%
11	Remainder of Maryland	2,755	2%	54%
12	Houston TX CSA	2,719	2%	56%

Source: Federal Highway Administration Freight Analysis Framework

3.5 Freight Transportation Forecasts

3.5.1 NATIONAL CAPITAL REGION FREIGHT FORECASTS

Freight Analysis Framework data for the National Capital Region includes a set of forecasts for growth in freight tonnage and value, by mode, by commodity, and by origin-destination pair. These forecasts are derived from broader forecasts for the national economy. Like most forecasts, these represent a base case scenario. More detailed forecasting would consider a range of scenarios and reflect a variety of “what if” conditions, such as significant changes in economic activity, fuel prices, climate, and logistics practices.

National Capital Region Commodities

Growth in output and consumption drive growth in freight demand and result in increased tonnage moving across the Region’s transportation infrastructure and increased in inflation-adjusted dollars. Growth in some types of commodities will be greater than others and will change the relative proportions of commodity types transported within the Region.

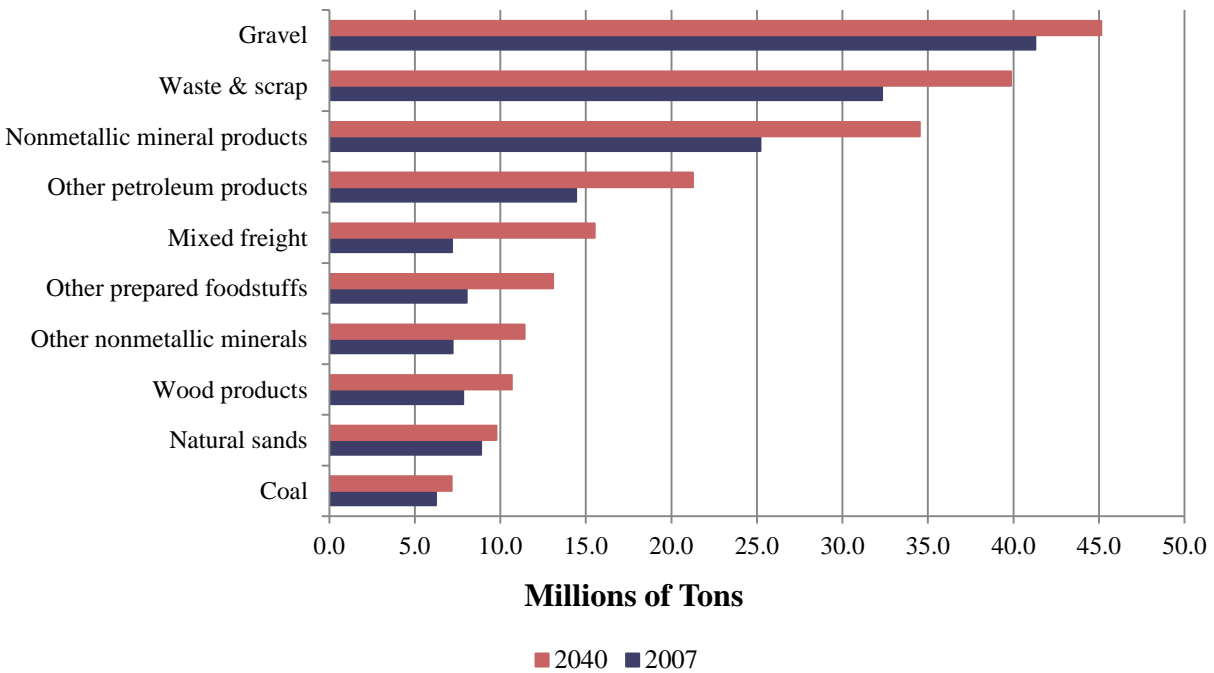
On the basis of weight (see Figure 20):

The volume of gravel and crushed stone is projected to grow slightly yet remain the top commodity type in 2040. Similarly, waste and scrap, nonmetallic mineral products, and petroleum products are

Commodities in the mixed freight category are projected to more than double in volume (by weight) by 2040

forecasted to grow in volume and retain their 2nd, 3rd, and 4th rankings in 2040. Mixed freight is projected to more than double in volume by 2040 causing it to rise in ranking from 9th to 5th overall.

Figure 20: Forecasted Growth in Regional Commodities by Weight



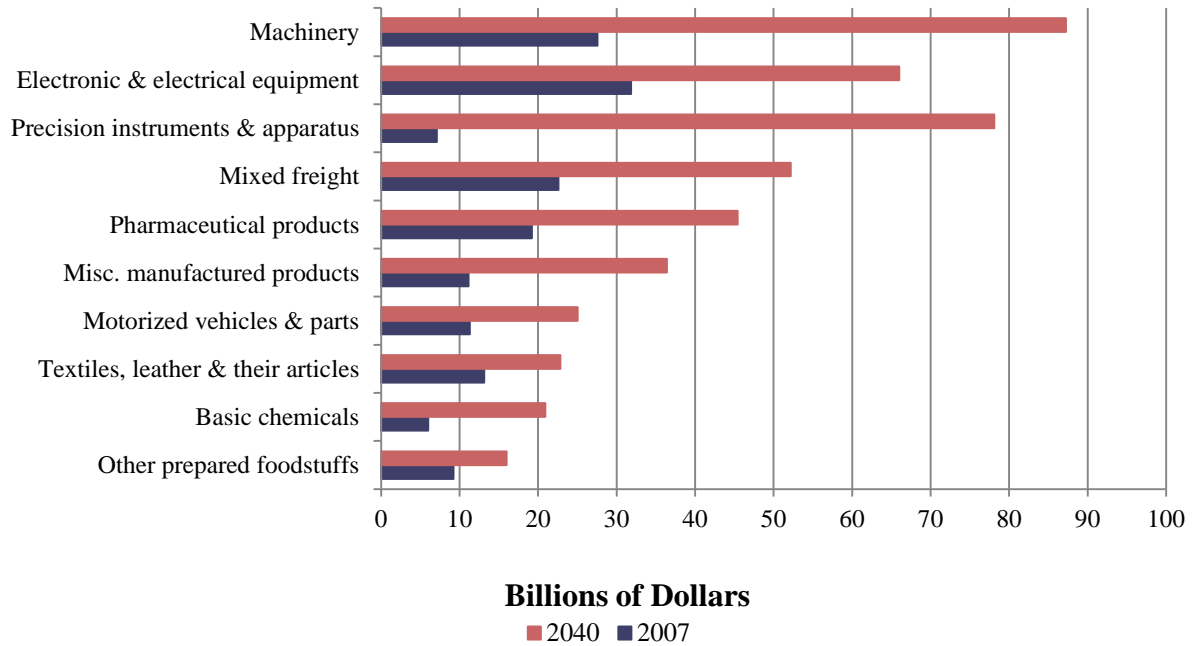
Source: Federal Highway Administration Freight Analysis Framework

On the basis of value (see Figure 21):

Eight of the ten top regional commodities by value are expected to more than double by 2040 with the value of precision instruments and apparatus projected to grow nearly tenfold. Machinery, miscellaneous manufactured products, and basic chemicals are each projected to grow over threefold in value over the same time period.

Precision instruments and apparatus are projected to grow more than tenfold (by value) by 2040

Figure 21: Forecasted Growth in Regional Commodities by Value



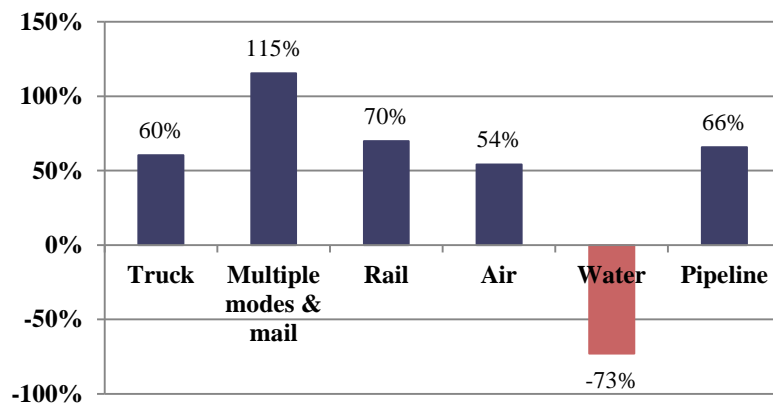
Source: Federal Highway Administration Freight Analysis Framework

National Capital Region Modes

Different transportation modes will experience different growth rates. Modes that specialize in the fastest growing commodities will grow fastest.

The fastest growth is for multiple modes and mail which is anticipated to increase by 115 percent by 2040. Trucking, rail, air, and pipeline traffic are expected to increase at rates between 54 percent and 66 percent over the same time period. Waterborne freight, which is very small relative to the other modes, is projected to decline significantly.

Figure 22: Forecasted Growth in Tonnage by Mode



Source: Federal Highway Administration Freight Analysis Framework

SECTION 4.0 FREIGHT TRENDS AND ISSUES

While the freight transportation system is currently performing at a level that supports the Region's economy and quality of life, recurring bottlenecks on some roadways and railways negatively affect the reliability of freight deliveries. The growth in freight volumes forecasted for the region is a result of an increasing demand for goods – demand driven by the Region's expanding economy, growing population, and increasing standard of living. To fully realize the benefits associated with the forecasted growth in freight traffic, the Region will need to address the challenges to the multimodal transportation system in light of that growth. These challenges include more trucks sharing the



Truck blocking crosswalk (Karin Foster)

roadways with passenger vehicles, bicycles, and pedestrians; more commuter and intercity passenger trains sharing the railways with freight trains; and increased wear and tear on pavements, bridges, and rail infrastructure. Because trucks are the primary means by which goods are delivered to stores, restaurants, businesses, and residences, the denser and more vibrant a neighborhood becomes, the more that trucks must share the streets in close proximity to pedestrians, bicyclists, and other vulnerable road users. Addressing the challenges associated with truck deliveries in dense and vibrant regional activity centers is a key planning issue.

4.1 Trends Impacting Freight in the Region

4.1.1 DEMOGRAPHIC AND ECONOMIC DRIVERS OF FREIGHT DEMAND

The physical movement of freight is of critical importance to any region's economy. Consumers rely on efficient and reliable freight transportation for shipments of consumer products to homes and retail establishments and for product returns and trash removal. Commercial enterprises rely on efficient and reliable freight transportation for inbound shipments of raw materials, intermediate goods, and other supplies required for the production of finished goods as well as outbound shipments of intermediate goods and finished products to regional, national, and global markets. Commercial enterprises in the service sector stimulate freight demand by providing income to their employees, who in turn use that income to purchase goods and services.

All commercial enterprises depend on freight, but those that are directly involved in activities such as transporting goods, farming, mining, manufacturing, construction, and managing retail operations

Freight-dependent industries account for 19 percent of the Region's gross domestic product.

depend on it more strongly than others. These freight-dependent industries account for 19 percent of the Region's gross domestic product (GDP) and 18 percent of its total employment.

To understand freight movement in the Region, it is therefore useful to examine the key economic and demographic drivers of freight demand, including overall employment, GDP, economic structure, population, and wealth.

Recent Trends

POPULATION

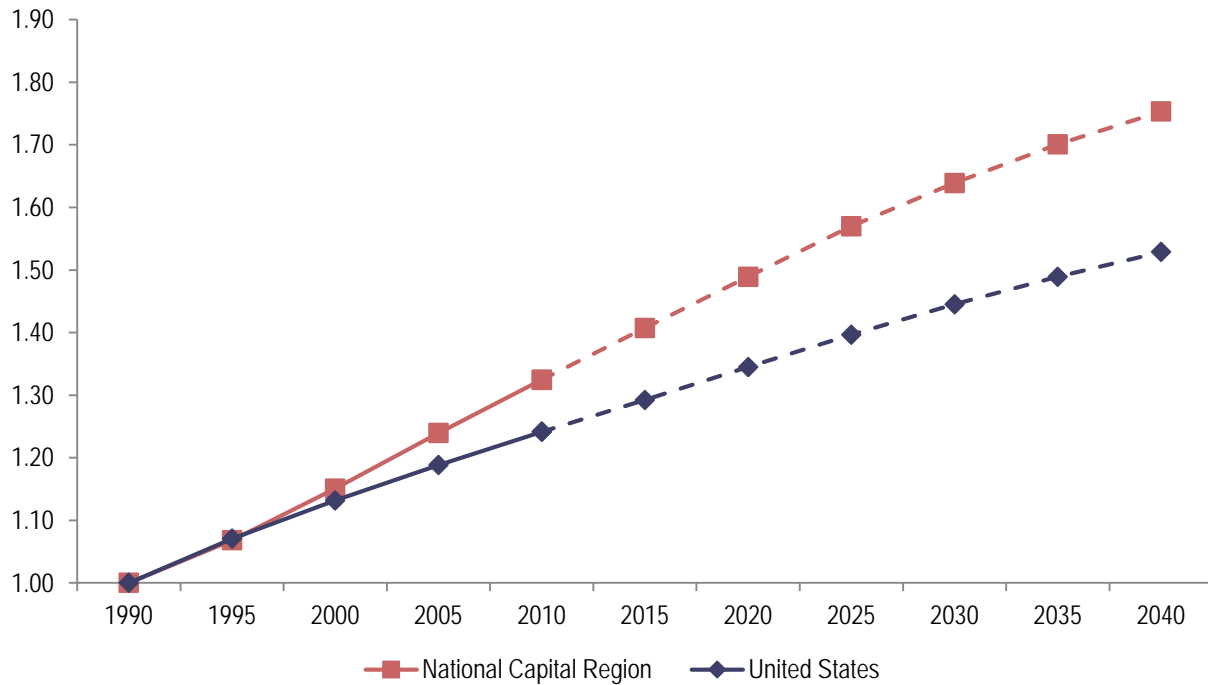
As of 2013 the Washington-Arlington-Alexandria Metropolitan Statistical Area was home to 5.6 million people, making it the 7th most populous metropolitan statistical area in the nation. The Region is adding population at a faster pace than the nation as a whole (see Figure 23). Expanding employment in the business and professional service- and government-sectors attracts highly educated people from throughout the United States and the world. The Region's population is

The Region's population is expected to grow by 32 percent by 2040.

expected to grow by an additional 32 percent by the year 2040. Each new resident creates additional demand for consumer goods – residents with higher disposable income generate greater demand for material goods and correspondingly greater overall demand for freight transportation. The Region ranks second in the nation for median household income (\$90,149 in 2013), 73 percent above the national average.¹¹ This means that the median regional household earns approximately \$38,000 more per year than the median American household. The combination of a growing population and rising consumer affluence generates high demand for consumer goods, which translates into high demand for freight transportation services.

¹¹ U.S. Census Bureau, 2013 American Community Survey 1-Year Estimates.

Figure 23: Population Growth Trends - National Capital Region and United States



Sources: U.S. Census Bureau¹²; Metropolitan Washington Council of Governments¹³

EMPLOYMENT AND GROSS DOMESTIC PRODUCT

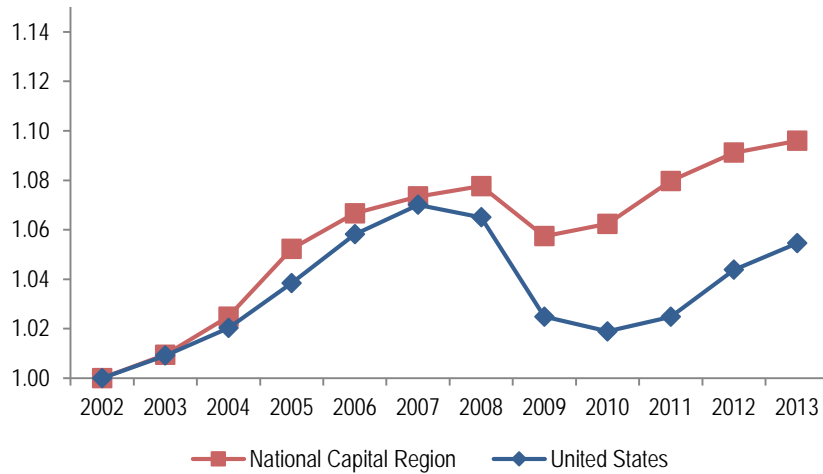
The Region’s economy employed 2.8 million people in 2013¹⁴, roughly 1.9 percent of all U.S. jobs. Between 2002 and 2013, total employment in the Region increased by 245,000 or 9.6 percent, compared to a U.S. growth rate of 5.5 percent (see Figure 24).

¹² For all historical data points; 1990 – 2010 and United States population projections; 2015 – 2040.

¹³ For TPB Planning Area and District of Columbia population projections; 2015 – 2040.

¹⁴ Quarterly Census of Employment and Work (QCEW)

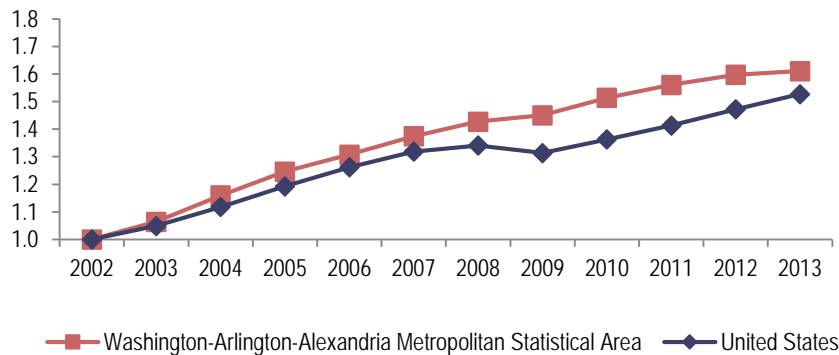
Figure 24: Historic Employment Trends - National Capital Region and United States



Sources: U.S. Bureau of Labor Statistics and Metropolitan Washington Council of Governments compilation of Quarterly Census of Employment and Work (QCEW) summaries for TPB Planning Area jurisdictions.

In 2013, the Region’s gross domestic product (or GDP) was \$464 billion. GDP is a measure of the total value added to goods and services due to economic activity in the Region. As with employment, the Region has been surpassing the United States as a whole in terms of GDP growth. In nominal terms, the Region’s GDP grew by 61 percent between 2002 and 2013, compared to 53 percent for the United States overall (see Figure 25). There is a direct relationship between the growth in economic activity, as measured by GDP, and the demand for freight transportation. The United States Bureau of Transportation Statistics (BTS) defines this relationship as the ratio of total ton-miles¹⁵ of freight to total GDP. In 2002 this freight transportation intensity ratio was 0.38 ton-miles per dollar, indicating that every marginal dollar of GDP would be expected to generate an additional 0.38 ton-miles of freight activity.¹⁶

Figure 25: Regional and U.S. Gross Domestic Product



Source: U.S. Bureau of Economic Analysis

¹⁵ A ton-mile is defined as one ton of freight carried one mile.

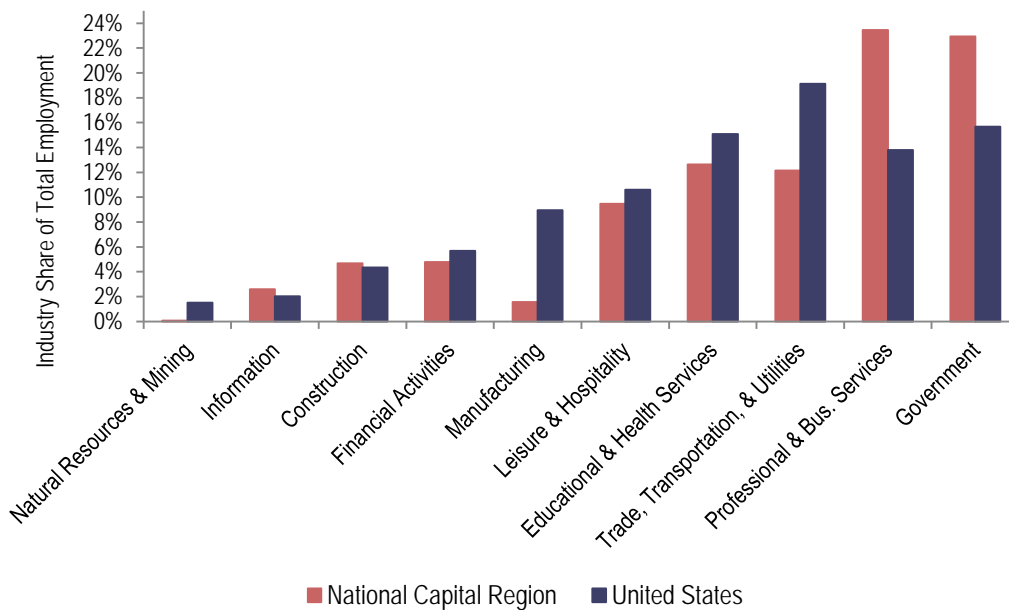
¹⁶ Measured in year 2000 dollars. See U.S. Bureau of Transportation web site http://www.rita.dot.gov/bts/programs/freight_transportation/html/freight_and_growth.html accessed June 6, 2015.

STRUCTURE OF THE ECONOMY

The structure of the Region’s economy is significantly different than that of the United States as a whole. The proportion of total employment in the government sector and in the professional and business services sector is higher in the Region than it is nationwide. Conversely, the proportion of total employment in the manufacturing; trade, transportation, and utilities; and natural resources and mining sectors is lower in the Region than it is nationwide. The Region’s other sectors; information, construction, financial activities, leisure and hospitality, and educational and health services, are roughly equivalent to that of the United States as a whole (see Figure 26) in terms of employment proportions.

This relatively high representation of government and professional and business services employment and relatively low representation of manufacturing, mining, and trade, transportation and utilities employment is consistent with service-based regional economy that demands more goods than it produces.

Figure 26: Economic Structure – Share of Employment by Industry Sector, National Capital Region and United States



Sources: U.S. Bureau of Labor Statistics and Metropolitan Washington Council of Governments

Freight Demand by Industry

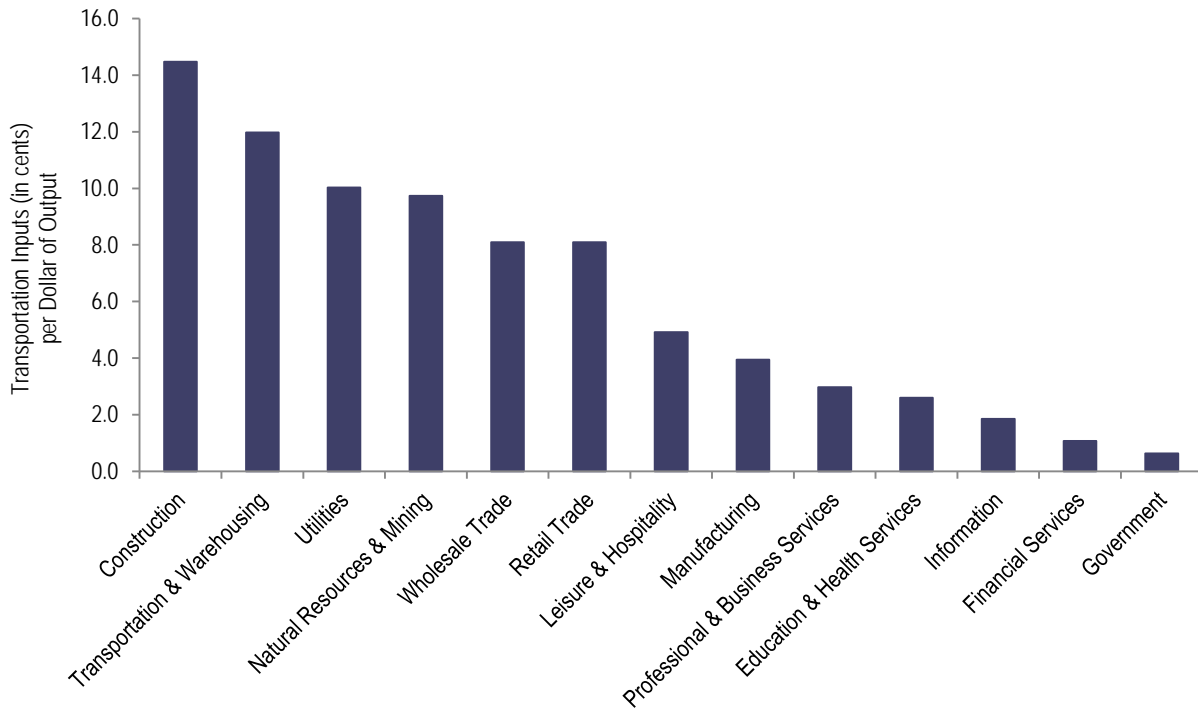
Transportation is a cost of doing business and an important input for major sectors of the Region’s economy. The impact of transportation costs on a given business depends in large part upon the type of industry the business is in. By examining the transportation inputs required to produce a given output by industry sector, it is possible to identify which sectors are particularly dependent on freight transportation.

DEMAND FOR FREIGHT TRANSPORTATION SERVICES

Figure 27 shows the relative use of freight and passenger transportation services by industry, and illustrates the industry sectors that are most dependent on transportation services. In order, the most transportation dependent industries are: construction, transportation and warehousing,

utilities, wholesale and retail trade, leisure and hospitality, and manufacturing. Except for leisure and hospitality, these sectors are primarily dependent on freight transportation, rather than passenger transportation.

Figure 27: Transportation Reliance by Industry



U.S. Department of Transportation, Bureau of Transportation Statistics Transportation Satellite Accounts, 1997

FREIGHT DEPENDENT INDUSTRIES

Regional businesses, such as farms that grow crops or raise animals, and quarries that extract gravel for use in construction, depend on freight movement to move the products they produce to processing plants, wholesalers, and retail outlets. Other producing businesses, like manufacturers and construction firms, also depend on freight transportation to bring them the intermediate products – fabricated steel, component parts, concrete, etc. – needed to manufacture finished products or construct buildings and infrastructure. Businesses in the transportation, warehousing and logistics, and wholesale trade industries connect producers and consumers; ensuring that needed goods are transported where and when they are needed. Finally, consumers such as retail establishments, residents, and utilities rely on freight movement to deliver goods and materials to the final point-of-sale or point-of-use. These freight dependent industries can be organized into three categories or clusters:

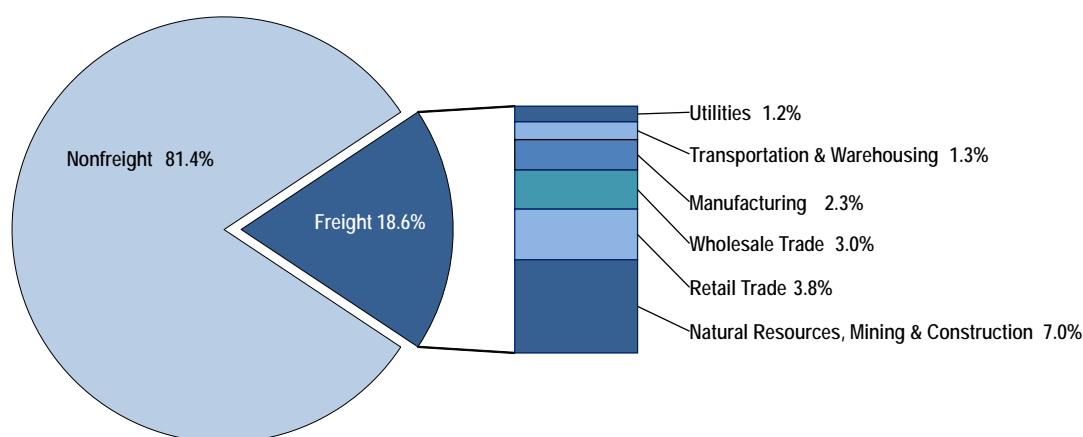
- The **goods movement cluster** is composed of businesses that provide freight transportation services, such as trucking companies, logistics firms, railroads, air cargo firms, wholesalers, and warehouse / distribution / fulfillment center operators. Overall, the goods movement cluster represents a little more than four percent of the Region’s GDP.
- The **freight intensive industry cluster** is composed of industries where the transportation of raw materials, intermediate products, and finished goods accounts for a significant share of their cost

of doing business such as natural resources, mining, manufacturing, construction, and utilities. The freight intensive industry cluster represents around 11 percent of the Region’s GDP.

- The **retail cluster** is composed of consumer outlets – such as supermarkets, auto dealers, and apparel stores – that require freight transportation services to stock and replenish their inventory. The retail cluster represents a little less than four percent of the Region’s GDP.

While other industries depend on freight movement to some extent they are not considered freight dependent in this analysis. These non-freight dependent industries include government, financial services, information, education and health services, professional and business services, and leisure and hospitality and represent about 81 percent of the Region’s GDP.

Figure 28: National Capital Region Freight- and Nonfreight-Related Industry Sectors by Share of Gross Regional Product



Source: U.S Bureau of Economic Analysis

Forecasts

Population and employment forecasts (see Table 4.1) for the Region indicate that demand for goods, along with the associated demand for freight transportation services, will continue to grow in the future.

Table 22: National Capital Region Population and Employment Growth Projections

	2010 (thousands)	2040 (thousands)	Growth (absolute)	Growth (percentage)
Population	5,046.6	6,682.2	1,635.7	32.4%
Employment	3,069.6	4,386.7	1,317.1	42.9%

Source: Metropolitan Washington Council of Governments, Round 8.3 Cooperative Forecasts¹⁷

4.1.2 EVOLVING SUPPLY CHAINS AND LOGISTICS PATTERNS¹⁸

Thirty to forty years ago most businesses operated within a *push* supply chain paradigm. Materials, supplies, and finished products were pushed from suppliers to manufacturers to distributors and finally to retail outlets. A key feature of this supply chain paradigm is the requirement for businesses

¹⁷ note: Cooperative Forecast numbers include military employees and the self-employed – people that are not included in the Quarterly Census of Employment and Work (QCEW) figures used in the review of historical employment shown in Figure 24

¹⁸ Special thanks to A. Strauss-Wieder, Inc. for the information and analysis described in this section. Material adapted from a presentation by Anne Strauss-Wieder to the TPB Freight Subcommittee in March, 2015.

to maintain large and expensive inventories as insurance against stockouts. Because businesses in this paradigm have access to significant inventories, they can generally absorb late deliveries with little impact to their operations. However, having large inventories presented several problems including the high cost of owning and storing inventoried items and the inability to quickly respond to changes in customer demand.¹⁹ To reduce these costs and to better respond to changing consumer preferences, businesses have engaged in a long-term and sustained effort to reduce inventories. These efforts have resulted in a shift towards a pull or on-demand supply chain paradigm.

Pull supply chains feature an emphasis on replenishing parts or products whenever they are consumed or sold. Once a part is consumed in a manufacturing process or a product is sold in a retail outlet, a signal is generated up the supply chain causing the part or product to be replenished on a just-in-time basis. Instead of relying on a large stock (or inventory) to ensure product availability, businesses in a pull supply chain environment will typically only have enough inventory on hand to meet customer demand for a short period of time – sometimes less than a day. To satisfy customers by always having products available when demanded while at the same time holding a minimal level of stock on hand, businesses must manage inventories very closely and develop systems to make sure products arrive where they are needed on schedule. This is why private sector businesses place a high value on the reliability of the freight transportation system.

The current pull or on-demand supply chain paradigm has resulted in retail businesses locating their distribution centers at the periphery of major urban areas. These large distribution centers are strategically placed so as to service retail establishments in one or more metropolitan area. To maximize efficiency, trucks must be able to leave the distribution center, deliver goods to retail stores, and return in one shift. While it is most efficient to use trucks with 53 foot trailers to service multiple stores, congestion in many urban areas has caused a shift towards more trucks, albeit often smaller ones - each of which services fewer stores.

New technology coupled with increasingly demanding customer expectations are continuing to push businesses to further reduce costs and improve responsiveness. The various aspects of e-commerce are enabling some businesses to accomplish both of these imperatives while transforming the supply chain in the process. Consumers are spending less time in retail stores and more time shopping via the internet. They increasingly expect immediate gratification and successful businesses are working to satisfy those expectations. Businesses that do not keep up with these changing expectations are at increased risk of failure. The confluence of e-commerce and customer's high expectations are changing the retail landscape and introducing new transportation providers.

Retailers are increasingly moving toward an omni-channel model where merchants utilize multiple channels to serve their customer base. It involves planning and utilizing traditional brick and mortar stores in combination with e-commerce. Examples of how retail merchants are using omni-channel ideas include:

¹⁹ The following two examples illustrate how the presence of large inventories reduces the ability of a business to respond quickly to the market or address quality issues: (1) a clothing retailer has a large inventory of a particular style of shirt – if that style goes out of fashion, the retailer will have to mark down or scrap a large number of them due to the excess inventory; (2) an auto manufacturer maintains a large inventory of transmissions – if a quality problem with the transmission is discovered, the manufacturer will have to rework or scrap a large number of them. With just-in-time inventory, the negative impacts of these issues are minimized.

- If a customer does not find the item they want in a brick and mortar store, there is an e-commerce booth available where it can be ordered;
- Customers can purchase an item online and pick it up in the brick and mortar store;
- Customers can return an item purchased online at a brick and mortar store.

The combination of ever tightening inventory control systems and consumers increasing use of e-commerce is affecting the way goods are distributed. These changes are being manifested in terms of the designs and locations of distribution centers and in the way products are distributed to the end customer.

Evolving Distribution Center Design and Locations

A typical distribution center is roughly rectangular in shape and features a large number of loading docks. Traditional distribution centers typically employ about 0.3 workers per thousand square feet whose primary work tasks involve shipping and receiving activities. The rise in e-commerce is resulting in a transformation of the typical distribution center into an e-commerce fulfillment center. An e-commerce fulfillment center typically employs about 1.0 workers per thousand square feet whose primary work tasks include picking and packing in addition to shipping and receiving activities. These additional workers require places to park, so fulfillment centers have larger employee parking lots. While traditional distribution centers are typically not located to maximize transit options, newer fulfillment centers are better able to attract the work force needed if they have robust transit options available. Fulfillment centers also require more secured truck parking, typically two or three trailer locations per loading dock. This allows truck drivers to drop off and pick up trailers during off-peak hours thereby enabling full use of the available loading docks.

The Changing Last Mile

In an effort to increase speed to market, traditional retailers are converting their brick and mortar stores into centrally located urban distribution centers. This enables same day fulfillment of a customer's online order from the urban department store. Online retailers such as Amazon are installing lockers in locations such as transit stations, Dunkin Donut shops, and convenience stores to enable secure delivery of packages while customers are away from home. As the emphasis of last mile logistics continues to shift towards personalized delivery services, the number of trucks on the Region's streets and roadways will grow. However, these additional trucks are likely to be smaller on average.

The potential impact of automated trucks, drone deliveries, and other disruptive technologies is difficult to plan for, however, regional planners and transportation officials at all levels would be wise to keep abreast of developments in these areas and be prepared to engage elected official and the general public as needed.

4.1.3 TRENDS IN THE FREIGHT TRANSPORTATION INDUSTRY

The freight transportation industry is dynamic and continues to evolve with large firms making strategic investments in infrastructure and technology.

Trucking

Over the past 30 years the trucking industry has undergone a series of consolidations and restructurings – a trend that industry observers expect to continue. Larger trucking firms have been making significant investments in GPS and other technologies to help track and manage shipments.

Smaller trucking firms, of which there are still a large number, often lack the expertise and capital required to implement tracking technology to the same degree as the larger firms can.

While small trucking firms will continue to exist, they will increasingly contract to larger carriers and utilize load-matching services in an effort to maximize their return on capital. Trucking firms that effectively utilize information technology are likely to prosper relative to firms that are less technology-adept. This trend favors larger firms. Driver shortages will continue to be a problem for the industry, particularly for long haul routes, but as the economy continues to generate high value time sensitive goods, demand for trucking services will continue to be high.

As of early 2015, the profitability of trucking firms was at multi-year highs due to the combination of record tonnage, high shipping rates, and low fuel prices. Industry observers expect this environment to continue through 2015 and fleet owners are investing part of their profits in equipment upgrades and expansion. While the incentives for these investments are related to the need to expand capacity rather than the desire for greater fuel efficiency, fleet turnover is likely to result in a higher proportion of cleaner and more fuel-efficient trucks across the nation and in the Region.

Rail

Deregulation of the railroad industry in the 1980s enabled railroads to steadily increase productivity by restructuring the rail system, shedding unprofitable lines, creating new business opportunities through long-haul intermodal service, and by transporting coal from mines in Appalachia and Wyoming's Powder River Basin. Improvements in hydraulic fracturing techniques enable oil to be extracted more economically from shale deposits and have provided business opportunities for railroads to transport this oil to refineries primarily along the Gulf Coast and in the Northeast. However, due to the steep decline in crude oil prices from midyear 2014 to the publication of this Plan in midyear 2016, shale oil production has fallen substantially resulting in less demand for rail transport. This illustrates the cyclical nature of rail transport demand for energy products such as coal and crude oil.

Due to the chemical makeup of the crude oil extracted from many shale deposits, the likelihood of fire and explosions as a result of a derailment is greater than it is with other types of crude oil. The resulting headline-grabbing effects of recent derailments has elevated public safety concerns about crude oil shipments by rail throughout the nation and issues are therefore national in scope. The National Capital Region does not have petrochemical refineries or terminals where crude oil is transferred from rail to barges. CSX's north-south rail line through the Region is not geographically oriented to be a major transportation artery for crude oil transport. However, CSX's east-west rail line through Frederick County is a probable route for the transport of crude oil from the middle of the continent to refineries in the Philadelphia area or to barge terminals in Baltimore.

The two Class I railroads operating in the National Capital Region, Norfolk Southern and CSX Transportation, are also working to expand their intermodal business through major initiatives to add additional track, straighten curves, increase clearances, and add intermodal terminals on key rail corridors to clear the way for trains hauling double stack container cars moving between Mid-Atlantic ports and the Midwestern markets (CSX National Gateway) and between the Southeast and the Northeast (Norfolk Southern Crescent Corridor).

Air Cargo

In the air cargo industry, freight forwarder and air carrier networks route freight through operationally efficient, cost-effective airports that provide the highest level of customer service. To realize the benefits of these efficient and cost-effective airports, cargo is sometimes trucked many hundreds of miles before being loaded onto an aircraft.

There are several key factors that determine how attractive a particular airport is to air cargo shippers, receivers, and forwarders. The leading factors include the following:

- Local and regional air cargo demand patterns, including a rough balance of inbound and outbound freight opportunities;
- Available aircraft cargo capacity, including international and wide-body flights;
- Sufficient airport cargo infrastructure such as runway length, aircraft parking ramps, air cargo warehouse space, and truck maneuvering and parking space;
- Connectivity to the interstate highway system; and
- A critical mass of logistics and freight forwarding companies to support cargo consolidations.

Air cargo is, in most cases, fluid and has many airport options. This means that, unless an airport meets almost all of the above key factors, it is not likely that its “fair” share of the cargo market will be captured. The ultimate efficiency of airport cargo facilities depends largely on the degree of connectivity among freight forwarders, cross-dock and warehouse facilities, and off airport properties. Access in and out of the airport is important to air cargo businesses, and truck transportation is the critical link to the end-user.

The Region’s cargo airports play an important role in supporting the regional economy, enabling businesses and residents to conveniently ship and receive high-value, time-sensitive goods and materials. The Region’s economic structure features a higher proportion of government and professional services employment and a lower proportion of manufacturing employment than occurs in the nation overall. This, coupled with the relative affluence of the Region’s residents, creates demand for more inbound air cargo than outbound. Despite this imbalance, the Region’s cargo airports have been, and are continuing to, invest in the infrastructure needed to support cargo operations and are aggressively marketing their individual strengths. Dulles airport for example, is leveraging their frequent service to the Middle East and Europe to attract air cargo from states like Georgia, Tennessee, and North Carolina. These goods are trucked via regularly scheduled shuttles from Charlotte-Douglas and Atlanta-Hartsfield to Dulles airport for departure. However, the structural imbalance between inbound and outbound air cargo opportunities is a headwind that Dulles and BWI have to contend with as they compete with other, larger cargo airports such as JFK and Atlanta. The information below correlates each of the Region’s primary cargo airports with the key factors listed above.

Key Factor

Local and regional air cargo demand patterns, including a rough balance of inbound and outbound freight opportunities

Available aircraft cargo capacity, including international and wide body flights

Sufficient airport cargo infrastructure such as runway length, aircraft parking ramps, air cargo warehouse space, and truck maneuvering and parking space

Connectivity to the interstate highway system

A critical mass of logistics and freight forwarding companies to support cargo consolidations

Regional Cargo Airports

The imbalance between inbound and outbound demand is a headwind that both Dulles and BWI airports face in the effort to grow their respective air cargo volumes. This is an issue of cost and efficiency because carriers want to fill their cargo holds for outbound as well as inbound flights.

The strength of Dulles Airport with respect to this factor is its robust international connections to the Middle East and Europe. In terms of air cargo, BWI is primarily a domestic freight facility.

Both Dulles and BWI meet the requirements of this key factor.

Both Dulles and BWI meet the requirements of this key factor.

Compared to their larger competitors (JFK, Atlanta, Miami, Chicago O'Hare) Dulles and BWI are supported by a significantly smaller set of logistics and freight forwarding companies.

Cargo operations at Dulles and BWI airports are well adapted to the structure of the Region's economy. Illustrative examples include:

- Vaccines, pharmaceuticals, and medical devices produced by the Region's biotechnology sector rely on air transportation, primarily out of Dulles airport, to meet the time-sensitive medical needs of people across the globe. Dulles is a key gateway for military support exports to Europe, the Middle East, and beyond due to its international network.
- BWI airport provides a key supply chain link to seafood, fresh produce, and other wholesale food products distributed out of Maryland Food Center Authority facilities in Jessup, a major distribution center that serves Maryland, District of Columbia, Virginia, and other mid-Atlantic states. BWI airport has the only United States Fish and Wildlife Service inspection gateway in the Mid-Atlantic region.

COMPETITION FROM OTHER MODES

Recent advances, such as faster container ships and refrigeration for containers on ocean going vessels, have enabled some perishable commodities, including flowers and foodstuffs, to be transported by sea rather than air. This has enabled shippers to realize significant transport cost savings for some perishable but not otherwise time sensitive commodities, thus diverting some portion of global cargo shipments out of airplanes and onto ships.

ROLE OF OUT-OF-REGION AIRPORTS

A significant portion of the Region's air cargo demand is handled by major cargo hub airports located outside of the National Capital Region. In today's environment, trucking is approximately 10 times cheaper than air transportation. Much of the National Capital Region is within a one-day drive of a larger cargo airport, such as JFK, Atlanta, or Philadelphia. Many air cargo shippers, receivers, and

forwarders select the lower costs and better schedules offered by these major hubs. Even airports as far away as Miami and Chicago are strong cargo competitors to Dulles and BWI. The additional truck haul required to transport cargo to and from large cargo gateway airports is often accepted by forwarders and shippers as part of the cost of doing business.

Ports and Shipping

To realize greater economies of scale, shipping lines have continued to acquire larger and larger ships. To accommodate them, a program to expand the Panama Canal is currently underway and expected to be completed in early 2016. Container terminals at the Port of Baltimore and at the Port of Virginia, along with at least three other East Coast ports, are currently able to accommodate these larger post-Panamax ships and are anticipating increased container traffic as a result. The advent of larger container ships may impact the size of nearby distribution centers. This is not only because greater volumes of containers are expected overall, but also because there are more containers per ship to offload. This creates demand for larger buildings to accommodate the “surge” volume. While it is difficult to predict all of the effects that the Panama Canal expansion will have on the National Capital Region, it will likely result in some increase in economic activity coupled with more rail and truck freight on the Region’s multimodal transportation system.

4.2 Regional Freight Issues, Challenges, and Opportunities

4.2.1 CONGESTION AND DELAY

Roadways

Congestion on the nation’s roadways is a significant cost to shippers and to the economy overall. The American Transportation Research Institute (ATRI) estimates that congestion added over \$9.2 billion in operational costs and resulted in 141 million hours in lost productivity to the trucking industry in 2013.²⁰ This is the equivalent of over 51,000 truck drivers sitting idle for a working year. Freight congestion is concentrated in urban areas and is most apparent at bottlenecks on highways - especially those serving major international gateways, major domestic freight hubs, and in major urban areas where important national truck flows intersect congested urban areas. In fact, ATRI ranked congestion in the Washington, DC metropolitan area as fifth in the nation in terms of its contribution to increased operating costs for the trucking industry (see Table 23).

Table 23: Cost of Congestion for Trucking by Metropolitan Area - 2013

Rank	Metropolitan Area	Cost to the Trucking Industry (millions of dollars)
1	Los Angeles, CA	1,081.7
2	New York, NY	984.3
3	Chicago, IL	466.9
4	Dallas, TX	406.1
5	Washington, DC	379.4
6	Houston, TX	373.6
7	Philadelphia, PA	292.1
8	San Francisco, CA	288.6
9	Boston, MA	278.2
10	Atlanta, GA	275.1

Source: American Transportation Research Institute

²⁰ ATRI, Cost of Congestion to the Trucking Industry report, April, 2014.

The Transportation Planning Board has been monitoring congestion in the Region for many years. Table 24 identifies the 10 most significant bottlenecks on the Region’s interstate highways. Because the freight-significant network includes many of the Region’s interstate highways, nine of these top ten general bottlenecks are also freight bottlenecks.

Table 24: Regional Bottlenecks

Rank	Location	Direction	Average Duration	Average Maximum Length (miles)	Occurrences	Impact Factor ¹	Located on Freight-significant Network?
1	I-95 at Fredericksburg/ Stafford County Line	SB	5 hr 36 min	33.6	24	270,972	Yes
2	I-270 at I-495/MD 355	SB	2 hr 3 min	18.1	74	165,339	Yes
3	I-395 at 2 nd St.	NB	2 hr 30 min	6.6	156	154,793	Yes
4	I-95 at VA-630/Exit 140	SB	3 hr 46 min	22.4	30	151,575	Yes
5	I-95 at VA-3/Exit 130	SB	4 hr 48 min	36.2	13	135,657	Yes
6	I-95 at VA-606/Exit 118	SB	7 hr 57 min	50.1	5	119,430	Yes
7	I-66 at VA-7/Exit 66	WB	1 hr 7 min	1.2	1,410	111,572	No
8	I-95 at Russell Rd/Exit 148	SB	2 hr 18 min	6.4	126	110,853	Yes
9	I-270 at Middlebrook Rd/Exit 13	NB	1 hr 49 min	6.8	138	102,357	Yes
10	I-395 at 2 nd St	NB	1 hr 29 min	3.3	318	94,077	Yes

Note 1: The Impact Factor accounts for multiple aspects of the bottleneck including duration, length, number of occurrences, and traffic volumes

Source: COG/TBP

The projected growth in population and employment (see section 4.1.1) will tend to add VMT (of all vehicle types) to the Region’s transportation system, potentially exacerbating congestion and delay.

Rail

Congestion on the freight rail network increases costs to shippers and hampers the reliability and on-time performance of commuter and inter-city passenger rail operations. Railroad capacity is not only a function of track infrastructure; but also of rolling stock and railroad operating strategies related to train speed, train size, and scheduling. Typical infrastructure related capacity constraints include insufficient mainline tracks, lack of adequate sidings along single track lines, low ceiling tunnels, antiquated bridges, outdated signal systems, missing connections, and inadequate terminal capacity.

The most significant freight rail capacity constraints in the National Capital Region are the Virginia Avenue Tunnel and the Long Bridge. The Virginia Avenue Tunnel is a roughly $\frac{3}{4}$ mile passage beneath Virginia Avenue in southeast Washington, DC housing a single track without enough vertical clearance to accommodate double stack container traffic. The Long Bridge is a two-track railroad bridge across the Potomac River between Virginia and the District of Columbia. These two constraints are both located on a critical, CSX-owned, rail line linking port terminals in the Hampton Roads area to markets in the Northeast and Midwest. A project to remove the capacity and clearance constraints of the Virginia Avenue Tunnel is currently underway. The Long Bridge project, which will double the rail capacity over the Potomac River to accommodate additional passenger and freight trains, is currently in the planning stages.

4.2.2 FREIGHT RAIL SAFETY AND SECURITY

The Transportation Planning Board (TPB) is particularly interested in and concerned about the safety and security of the Region's freight rail system. Rail incidents such as the May 1, 2016 CSX derailment in northeast Washington, DC, have highlighted the need for continual improvement of preventative safety and security measures on the freight rail system. Major concerns include the operational handling and tracking of railcars that carry Toxic Inhalation Hazard (TIH) materials, which can cause fatalities if released into the atmosphere. Safety on the nation's railroads is regulated by the Federal Railroad Administration (FRA). It enforces regulations for hazardous materials, highway-rail crossings, track conditions, rail motive power and equipment, operating practices, and train control and signaling. Federal rail safety regulations preempt state rail safety laws and the FRA maintains direct oversight of railroad practices relevant to safety. States can participate in railroad-related investigative and surveillance activities through the FRA's State Safety Participation Program. To participate in the Program, states must have an agreement with the FRA to enable the delegation of some federal investigative and surveillance authority to the State. State agency personnel involved in investigative and surveillance activities must be qualified in one or more of the following FRA safety disciplines:

- Track
- Signal and train controls
- Motive power and equipment
- Operating practices
- Hazardous materials
- Highway-rail grade crossings

The FRA reserves exclusive authority to assess penalties, issue emergency orders, and undertake any other enforcement actions under federal railroad safety laws. Maryland's rail safety authority is under the jurisdiction of the Department of Labor, Licensing, and Regulation (DLLR). Virginia's rail safety authority is under the Virginia State Corporation Commission Division of Utility and Railroad Safety. Currently, the District of Columbia does not have an office of rail safety. Fatalities and injuries on the Region's freight rail system have remained roughly constant since 2006. Table 25 shows rail fatalities by category and Table 26 shows the nonfatal injuries associated with rail accidents and incidents in the Region.

Table 25: Rail Accident / Incident Fatalities

Category	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Employee deaths	-	-	1	-	-	-	-	-	-	-
Highway-rail incident deaths	-	-	-	-	-	1	-	-	-	1
Other incident deaths	6	7	4	5	7	6	2	5	6	3
Train accident deaths	-	-	-	-	-	-	-	-	-	-
Total	6	7	5	5	7	7	2	5	6	4

Source: FRA Safety Database

Table 26: Nonfatal Injuries from Rail Accidents / Incidents

Category	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Highway-rail incident injuries	2	4	4	9	1	1	3	2	1	5
Other incident injuries	184	138	117	131	143	150	154	180	145	142
Train accident injuries	7	-	20	-	9	-	-	2	-	-
Total	193	142	141	140	153	151	157	184	146	147

Source: FRA Safety Database

Positive Train Control

As part of their safety oversight responsibilities and in response to a mandate within the Rail Safety Improvement Act of 2008, the FRA published a final rule on January 15, 2010 requiring mainlines that transport any poisonous-inhalation-hazardous (PIH) materials and where regularly scheduled intercity passenger or commuter rail services are provided to implement positive train control (PTC). PTC is a technological system designed to prevent train-to-train collisions, derailments, incursions into work zones, and movement through an improperly positioned switch. The implementation deadline, originally set for December 31, 2015 has been extended to December 31, 2018.

Rail Security

The U.S. Department of Homeland Security (DHS) is the primary federal agency responsible for security of the transportation sector. The DHS National Infrastructure Protection Plan (2013) includes the Transportation Systems Sector-Specific Plan, which is focused on developing strategies to reduce the risks to critical transportation infrastructure from terrorism threats. The leadership of the District of Columbia, the State of Maryland, the Commonwealth of Virginia, area local governments, and the Department of Homeland Security's Office for National Capital Region Coordination (NCRC) are working in partnership with non-profit organizations and private sector interests to reduce the vulnerability of the National Capital Region (NCR) from terrorist attacks. The Metropolitan Washington Council of Governments (COG) coordinates and hosts many of the regional emergency support function (R-ESF) committees that are working together to advance preparedness in the region. The RESF-1 Transportation Committee meets monthly to address role of transportation (including freight rail) in the NCR Homeland Security Program. The committee has representation at the local, state, regional, and federal levels from all NCR jurisdictions and provides a forum for regional transportation officials to exchange information and discuss emergency response, coordination, and recovery requirements.

4.2.3 FREIGHT IN REGIONAL ACTIVITY CENTERS

The National Capital Region Transportation Planning Board (TPB) and the Metropolitan Washington Council of Governments (COG) recognize that the Region is supported largely by the economic activity that occurs in major housing and jobs centers, known as activity centers. These mixed-use activity centers are places that are intended to accommodate much of the Region's future growth and development. Concentrating future growth within activity centers enables the more effective and efficient use of existing facilities and fosters increased economic activity.

Because the initial impetus for rethinking how urban and suburban places should be developed came from planners and other stakeholders interested in improving livability, they most often focused on improving accommodations for pedestrians, cyclists, and transit users. Stakeholders involved in goods movement were included less often in the urban design conversation. Recently, however, cities and states around the country are beginning to include the consideration of truck movements in their land-use and transportation planning activities. In the National Capital Region, the District Department of Transportation (DDOT) is developing and implementing strategies to address goods movement issues in the urban core. The Region has an opportunity to apply the findings of recent and ongoing research as well as the lessons learned by cities and counties across the nation to ensure that as more development is concentrated in activity centers, the needs of all users, including those that move goods, are considered in the planning process.

SECTION 5.0 REGIONAL FREIGHT POLICIES

The Regional freight policies described in this section are intended to provide a framework for transportation planning activities conducted by the Transportation Planning Board (TPB). TPB member jurisdictions are also encouraged to consider these freight policies as they conduct their respective transportation planning functions.

5.1 Freight Policy Background

These freight policy statements are the result of an extensive development process based upon TPB member input, a review of existing policy language within published Virginia, Maryland, and District of Columbia documents, regional stakeholder outreach, and multiple TPB freight subcommittee and TPB technical committee reviews. To ensure coverage of all the relevant topic areas, the set of freight policy statements has been correlated with both Regional Transportation Priority Plan goals and National Freight Goals²¹ as shown in Figure 5.1.

5.2 TPB Freight Policies

The Transportation Planning Board...

1. supports the prioritized advancement of freight-related transportation projects that provide maximum value, efficiency, and safety with particular emphasis on those that improve freight access to activity centers.
2. supports investments that maintain a state of good repair for the Region's freight transportation system.
3. supports the use of best practices for safety, engineering, and maintenance, of freight-related transportation infrastructure.
4. supports the alleviation of roadway bottlenecks where feasible to improve travel times and reliability for trucks and passenger vehicles.
5. supports maximizing opportunities to expand transportation options, address roadway congestion, and reduce pollution by increasing the use of passenger and freight rail.
6. supports the consideration of potential social, economic, and environmental effects of freight-related programs, policies, and activities on minority populations, low-income populations, and people with disabilities.
7. recognizes freight's role in economic development and supports efforts to maximize the use of important economic drivers, including airports, ports, and intermodal facilities serving the Region's residents and businesses.

²¹ National Freight Goals were established in the MAP-21 legislation and continued under the FAST Act.

8. supports the safe and community-friendly accommodation of freight deliveries within the Region's activity centers.
9. supports improvements in truck safety using education, enforcement, and engineering strategies.
10. supports efforts to route hazardous materials away from the National Capital Region; for hazardous materials that must be transported to, from, within, and through the Region, the TPB supports the selection of the safest and most secure modes and routes.
11. encourages information sharing on explosive, toxic by inhalation, and radioactive materials being shipped to, from, within, and through the Region, including real-time notifications and long-term planning information.
12. supports robust first responder training and exercise activities regarding freight in general and hazardous materials transport in particular.
13. supports collaboration among agencies and with the private sector on freight planning and operations concerns to support mutual goals.
14. supports the proactive analysis of freight-related performance measures in the context of overall regional performance measurement to identify lessons learned and promote regional goals.
15. promotes sustainable methods of freight operations that are sensitive to environmental, cultural, and community resources.
16. encourages collaboration among transportation planners, land use planners, private railroads, elected officials, and other stakeholders to find creative ways to facilitate community-beneficial land use development (residential, commercial, or industrial as appropriate) while providing space for necessary future rail expansion along key rail corridors.
17. supports the review and study of new freight-related technologies, emerging business practices, and evolving commodity mixes and mode shares to advance regional goals.

Figure 29: Correlation of Freight Policies to RTPP Goals and to National Freight Goals

National Freight Goals	RTPP Goals						Supports all RTPP Goals
	Provide a Comprehensive Range of Transportation Options	Promote a Strong Regional Economy, Including a Healthy Regional Core and Dynamic Activity Centers	Ensure Adequate System Maintenance, Preservation, and Safety	Maximize Operational Effectiveness and Safety of the Transportation System	Enhance Environmental Quality, and Protect Natural and Cultural Resources	Support Inter-Regional and International Travel and Commerce	
To invest in infrastructure and to implement operational improvements that... strengthen the contribution of the national freight network to the economic competitiveness of the U.S., reduce congestion [and that] increase productivity, particularly for domestic industries and businesses that create high-value jobs	P1 P4 P5	P7 P8		P13	P16	P5 P7	
To improve the safety, security, and resilience of freight transportation	P1	P8	P3, P9, P10 P11, P12				
To improve the state of good repair of the national freight network			P2, P3				
To use advanced technology to improve the safety and efficiency of the national freight network			P11				P17
To incorporate concepts of performance, innovation, competition, and accountability into the operation and maintenance of the national freight network				P14			
To improve the economic efficiency of the national freight network	P1	P7				P7	
To reduce the environmental impacts of freight movement on the national freight network	P5, P6		P10 P11		P15	P5	

SECTION 6.0 NATIONAL CAPITAL REGION PROJECTS IMPORTANT TO FREIGHT

The following two tables list projects that are important to goods movement in the National Capital Region. These two tables represent a compilation of projects beneficial to freight movement in the Region. All projects were gathered from existing or in-process plans or reports and input from the TPB Freight Subcommittee. Sources for these projects include the TPB’s Constrained Long Range Plan (CLRP), the MARC Growth and Investment Plan Update, information from Norfolk Southern Corporation and CSX Transportation, Inc, Virginia Railway Express, the Long Bridge Phase II Study, and the Virginia Department of Rail and Public Transportation led DC2RVA study. CLRP sourced projects are already scheduled to be funded and built. Some of the rail projects listed are partially or entirely outside the boundaries of the National Capital Region, but are included in the list because of their importance to the regional economy. Table 27 lists rail projects and Table 28 lists highway projects.

Table 27: Rail Projects Included in Agency/Jurisdictional/Private Railroad Plans Important to Freight

#	Title	Description	Jurisdiction	Source	Owner
1	Potomac Shores and Arkendale to Fredericksburg 3 rd Main Line	Add 3 rd track from Potomac Shores and Arkendale to Fredericksburg	Stafford County / Prince William County	DC2RVA/VRE	CSX
2	Occoquan River to Powell’s Creek 3 rd Main Line	Add 3 rd track from Occoquan River to Powell’s Creek	Prince William County	DC2RVA/VRE	CSX
3	Franconia to the Occoquan River - 3 rd Main Line	Add 3 rd track between Franconia and the Occoquan River	Fairfax County	DC2RVA/VRE	CSX
4	Potomac River to Alexandria - 4 th Main Line	Add 4 th track between the Long Bridge and Alexandria	City of Alexandria / Arlington County	DC2RVA/VRE	CSX
5	AF Bypass Track	Project for VRE access to Alexandria Station from NS tracks	City of Alexandria	VRE	VRE
6	Long Bridge	Project to increase the number of main line tracks across the Potomac River from 2 to 4	Washington D.C.	Long Bridge Phase II Study	CSX
7	CP VA to L’Enfant/Potomac River 4 th Main Line	Add 4 th track from L’Enfant (just north of the Long Bridge) to CP VA (near the split between the RF&P and 1 st St. tunnel)	Washington D.C.	VRE	CSX
8	12th Street track lowering	Undercut to lower tracks	Washington D.C.	CSX-National Gateway	CSX
9	10th Street track lowering	Undercut to lower tracks	Washington D.C.	CSX-National Gateway	CSX
10	I-395 ramp track lowering	Undercut to lower tracks	Washington D.C.	CSX-National Gateway	CSX
11	New Jersey Avenue track lowering	Undercut to lower tracks	Washington D.C.	CSX-National Gateway	CSX

#	Title	Description	Jurisdiction	Source	Owner
12	Virginia Avenue Tunnel	Replace existing single track tunnel with a two-track tunnel having double stack clearance	Washington D.C.	CSX-National Gateway	CSX
13	Gainesville-Haymarket Extension	Expand rail infrastructure along Norfolk Southern's 'B' Line to Haymarket and upgrade Manassas Wye	City of Manassas / Prince William County	VRE	NS
14	Manassas to Balls Ford Road - 2nd Main Line	Add a 2nd main line track from Manassas to Balls Ford Road, connecting with a 2-mile passing track constructed several years ago	City of Manassas	NS	NS
15	Manassas to S. Manassas - 3rd Main Line	Add a 3rd main line track from Manassas to South Manassas	City of Manassas / Prince William County	NS	NS
16	Alexandria Ethanol Transload Facility Expansion and Relocation	Reconfigure the track layout at the transload facility, install new equipment including spill-containment gear, and move the rail-to-truck ethanol transfer point 0.25 miles west - farther from residential neighborhoods.	City of Alexandria	NS	NS
17	Barnesville Hill - 3rd Main Line	Add 3rd track at Barnesville Hill on the Metropolitan Subdivision	Montgomery County	MGIP Update	CSX
18	Metropolitan Subdivision - 3rd Main Line	Add additional triple tracking on the Metropolitan Subdivision	Montgomery / Frederick Counties	MGIP Update	CSX
19	Savage to Laurel - 3rd Main Line	Add 3rd track between Savage and Laurel on the Capital Subdivision	Anne Arundel / Prince George's Counties	MGIP Update	CSX
20	Washington D.C. to Baltimore - 3rd Main Line	Continue expansion to 3 main tracks between Baltimore and Washington D.C. on the Capital Subdivision	Anne Arundel / Prince George's / Baltimore Counties and Baltimore City	MGIP Update	CSX
21	Northeast Corridor - 4th Main Line	Add 4th track between BWI Airport and New Carrollton	Anne Arundel / Prince George's Counties	MGIP Update	Amtrak
22	Howard Street Tunnel	Expand the Howard Street Tunnel to provide double-stack clearance and enable efficient rail transport of containers to/from the Port of Baltimore	Baltimore City	MDOT/CSX	CSX

Source Legend:

DC2RVA: District to Richmond Southeast High Speed Rail – A Virginia Department of Rail and Public Transportation (VDRPT) led effort to complete environmental analysis and preliminary engineering for a set of projects to improve intercity passenger rail along the Washington, D.C. to Richmond, VA segment of the Southeast High Speed Rail Corridor

VRE: Virginia Railway Express

CSX: CSX Transportation, Inc.

NS: Norfolk Southern Corporation

MGIP Update: MARC Growth and Investment Plan Update (September 9, 2013)

MDOT: Maryland Department of Transportation

Note:VRE has a program of projects to add a second platform and grade-separated pedestrian access to platforms that contributes to CSX's operational fluidity and improves safety.

Table 28: Highway Projects Included in the CLRP That Are Important to Freight

#	Title	Description	Project Completion	Cost Estimate (millions)	Jurisdiction	CLRP ID
1	I-495 HOT/HOV Lanes	Add HOT/HOV lanes to the Capital Beltway between Springfield and VA 193 Georgetown Pike.	2030	\$899.0	VDOT-Fairfax County	2069
2	I-395 Construct 4th Southbound Lane	Add a continuous south bound lane on I 395 from north of Duke St. to south of Edsall Rd.	2018	\$58.5	VDOT-Fairfax County, City of Alexandria	3179
3	I-395 Construct Northbound Auxiliary Lane	Provide final design and construction of auxiliary lane and noise wall (if required) on northbound I-395 between Duke Street on ramp and Seminary Road off ramp.	n/a	\$20.0	VDOT-City of Alexandria	3070
4	I-395 Express Lanes	Convert and reconfigure the two existing reversible HOV lanes on I-395 inside the Capital Beltway to a three-lane, reversible HOT facility ("Express Lanes").	2019	\$220.0	VDOT – Fairfax County, Arlington County, City of Alexandria	3525
5	I-495 Auxiliary Lanes	Connect the on ramps and off ramps along the Capital Beltway between Hemming Ave. underpass and Georgetown Pike in both directions.	2030	\$1.0	VDOT-Fairfax County	3272
6	I-66 HOV & SOV Widening	The existing 4-lane roadway will be widened to provide 6 lanes between US 15 Haymarket and Gainesville. During the peak period in the peak direction, the median lane will be marked as a diamond lane and restricted to HOV traffic.	2017	\$131.9	VDOT-Prince William County	1752
7	I-66 Auxiliary Lanes	Connect the on ramps and off ramps along the Capital Beltway between Hemming Ave. underpass and Georgetown Pike in both directions.	2030	\$1.0	VDOT-Fairfax County	3273
8	I-66 Improvements Outside the Beltway	Add two new HOT lanes in each direction. One lane will be new while the other will come from converting the existing HOV lane.	2021, 2040	\$2,000 - \$3,000	VDOT – Fairfax County, Prince William County	3448
9	I-270/US 15 Corridor Study	Multi-modal corridor study to consider highway and transit improvements in the I-270/US 15 corridor from Shady Grove Metro Station to north of Biggs Ford Road. Alternatives include managed lanes.	2030	\$5,471.8	SHA-Montgomery and Fairfax Counties	1186

#	Title	Description	Project Completion	Cost Estimate (millions)	Jurisdiction	CLRP ID
10	I-70 Widening	Widen I-70 from Mt. Phillip Road to west of MD 355	2020	\$142.5	SHA-Frederick County	1187
11	Dulles Toll Road Eastbound Collector/Distributor/Additional Lane	Construct collector-distributor road between VA 684 Spring Hill Rd. and Wiehle Ave. to allow additional closely spaced interchanges to be constructed in Tysons.	2036	\$62.0	VDOT-Fairfax County	3151
12	Dulles Toll Road Westbound Collector/Distributor/Additional Lane	Construct collector-distributor road between VA 684 Spring Hill Rd. and Wiehle Ave. to allow additional closely spaced interchanges to be constructed in Tysons.	2037	\$124.0	VDOT-Fairfax County	3154
13	Governor Harry W. Nice Bridge Improvement Project	Construct a new four-lane bridge north of the existing bridge, with a barrier-separated, two-way bicycle/pedestrian path on the south side of the bridge.	2030	\$850.0	MDTA-Charles County	2617
14	MD 5 Widening and Upgrade	Upgrade MD 5 to a multi-lane freeway from US 301 interchange at T.B. to north of I-95/I-495 Capital Beltway.	2025	\$1,354.8	SHA-Prince George's County	1196
15	MD 210 Corridor Study	Multi-modal transportation study to relieve traffic congestion along MD 210 and improve intersections from I-95/I0495 to MD 228.	2030	\$585.4	SHA-Prince George's County	1199
16	MD 4 Widening and Upgrade	Upgrade existing MD 4 to a multilane freeway from MD 223 to I-95/I-495 (Capital Beltway). Includes interchanges at Dowerhouse Road and Westphalia Road.	2035	\$325.7	SHA-Prince George's County	1194
17	MD 3 Corridor Study	Study to upgrade MD 3 from US 50 to MD 32 to address safety and capacity concerns.	2030	\$399.0	SHA-Prince George's County	1195
18	US 1 Widening	Improvements to Route 1 to improve the safety and operation of intersections and/or roadway segments. By 2025, widen an additional lane in each direction from VA 235 north to the Capital Beltway. Reconstruct/ replace bridges, as necessitated by maintenance demands or other causes, to the 6-lane width.	2035		VDOT-Stafford, Prince William, and Fairfax Counties	1942

#	Title	Description	Project Completion	Cost Estimate (millions)	Jurisdiction	CLRP ID
19	US 1 Widening	Construct 6-Lane Divided Roadway between Fuller Rd and Stafford County Line.	2040	\$58.0	VDOT-Prince William County	3291
20	US 1 Widening	Construct 6-Lane Divided Roadway between VA 1109 Brady's Hill Rd. and Neabsco Mills Rd.	2025	\$23.0	VDOT-Prince William County	2594
21	US 1 Widening	Construct 6-Lane Divided Roadway between Neabsco Mills Rd and Featherstone Rd.	2025	\$23.0	VDOT-Prince William County	2685
22	US 1 Widening	Construct 6-Lane Divided Roadway between Featherstone Rd and Mary's Way.	2040	\$44.5	VDOT-Prince William County	3173
23	US 1/ VA 123 Interchange, Widening	Construct interchange at intersection of US 1 and VA 123; construct bridge over CSX railroad to provide new access point to Belmont Bay; widen US 1 to 6 lanes from Mary's Way to Annapolis Way; and widen VA 123 to 6 lanes from Annapolis Way to US 1.	2018	\$110.1	VDOT-Prince William County	2161
24	US 1 Widening	Construct 6-Lane Divided Roadway between Annapolis Way and Lorton Rd.	2035	\$125.0	VDOT-Prince William and Fairfax Counties	3180
25	US 1 Widening	Reconstruct US 1, from College Avenue to Cherry Hill Road to provide a four-lane divided roadway. Widen US 1, from Cherry Hill Road to I-95/I-495, to a six-lane divided roadway.	2025	\$145.2	SHA-Prince George's County	1202
26	US 50 Widening	Widen to 6 lanes from VA 695 Relocated to Sully Rd. Reconstruct / replace bridges, as necessary.	2025	\$99.9	VDOT-Fairfax and Loudoun Counties	1906
27	VA 7 Bypass Widening	Widen the Leesburg Bypass from 4-lane divided to 6-lane divided freeway between the west Business VA 7 interchange and the east Business VA 7/US 15 interchange. Construct overpass at Sycolin Road.	2035	\$54.7	VDOT-Loudoun County	1870
28	VA 7 Widening	Widen and upgrade the existing 4-lane roadway to a 6-lane freeway between Leesburg and the Dulles Toll Road. VA 7 between the Dulles Toll Road and I-495 to be widened to 8 lanes/maintained as arterial.	2025	\$49.3	VDOT-Fairfax County	2105

#	Title	Description	Project Completion	Cost Estimate (millions)	Jurisdiction	CLRP ID
29	VA 7 Widening	Road Widening between I-495 and I-66.	2021	\$71.0	VDOT-Fairfax County	3161
30	VA 7 Widening	Widen the existing 4-lane roadway to 6 lanes between Seven Corners and Bailey's Crossroads.	2025	\$34.3	VDOT-Fairfax County	2175
31	VA 28 Widening	Widen from 2 to 4 lanes from Fauquier County Line to VA 215, and VA 215 to VA 219. Widen from 4 to 6 lanes from VA 219 to Manassas (234 Bypass). Replace the existing bridge over Broad Run with a 6-lane structure and 4-lane approaches.	2025	\$11.1	VDOT-Prince William County	2045
32	VA 123 Widening	Widen to 6 lanes from Horner Rd. to Devil's Reach Rd.	2022	\$3.0	VDOT-Prince William County	1723
33	VA 286 Fairfax County Parkway Widening	Widen the Parkway to 6 lanes. North of I-66, additional lanes will function as HOV lanes in the peak period. Construct interchange at Fair Lakes Parkway & Monument Drive, widen VA 286 to 8 lanes between I-66 and Fair Lakes Parkway, widen VA 286 to 6 lanes between Fair Lakes Parkway and Rugby Road, and upgrade VA 286 to a freeway between I-66 and US 50.	2035	\$295.0	VDOT-Fairfax County	2106
34	Monocacy Blvd & Gashouse Pike Reconstruction	Reconstruct Monocacy Blvd. from Schifferstadt to Gas House Pike	2017	\$15.0	Frederick County	1181
35	MD 85 Widening	Widen MD 85 to a four-lane divided highway from south of English Muffin Way to the State Highway Administration/Westview development complex, then 6 lanes through the I-270 interchange area, then 4 lanes to Grove Road.	2020	\$242.7	SHA-Frederick County	1210
36	MD 27 Reconstruction	Reconstruct MD 27 from Brink Rd to Skylark Rd	2020		SHA-Montgomery County	1434
37	MD 187 Old Georgetown Rd Widening	Construct 1,600 feet of Old Georgetown Road (MD 197) as a six lane roadway from Nicholson Lane/Tilden Lane to Executive Boulevard.	n/a		Montgomery County	2921

#	Title	Description	Project Completion	Cost Estimate (millions)	Jurisdiction	CLRP ID
38	MD 355 / Randolph Rd. CSX Grade Separation	Construct a CSX Railroad grade-separated crossing and interchange improvements on Randolph Road/Montrose Road.	2020	\$136.0	SHA-Montgomery County	1217
39	MD 97 at Brookeville	Construct a new two-lane roadway on MD 97 from Gold Mine Rd. south of Brookeville to north of Brookeville. Two-lane roadway relocated west of Brookeville with roundabouts at northern and southern termini on MD 97.	2018	\$37.2	SHA-Montgomery County	1213
40	VA 621 Balls Ford Rd Widening	Widen Rt 621/Balls Ford Rd to 4 lanes from Ashton Ave to Groveton Dr.	2025	\$28.4	VDOT-Prince William County	3377
41	VA 621 Balls Ford Rd Widening	Widen Rt 621/Balls Ford Rd to 4 lanes from Rt 234 Business to 234 Bypass and then to Devlin Rd.	2035	\$32.0	VDOT-Prince William County	2357
42	Wellington Rd Widening	Widen to 4 lanes from Relocated Linton Hall Road to Rixlew Lane, where it will tie into the recently widened segment between Rixlew Lane and the Western City Limit of Manassas. Relocate Wellington Road from the vicinity of its intersection with Limestone Drive and tie it into Relocated Linton Hall Road in the vicinity the intersection with Lakeview Drive.	2025	\$20.6	VDOT-Prince William County	2145
43	Muirkirk Rd Reconstruction	Construction and reconstruction from west of U.S. 1 to Odell Rd. to provide a four-lane facility.	2020	\$6.4	Prince George's County	1296
44	Florida Avenue Transportation Study Implementation	Implementation of Florida Avenue Transportation Study recommendations, which will include reconstruction of Florida Ave from Benning Rd to New York Ave.	2018	\$12.0	DDOT	3382

SECTION 7.0 RECOMMENDATIONS AND NEXT STEPS

The TPB vision is to develop, implement, and maintain an interconnected transportation system that enhances quality of life and promotes a strong and growing economy including a healthy regional core and dynamic regional activity centers. Realizing this vision requires a focus on the efficient transportation of both people and goods. The following recommended actions, which can be accomplished with resources that are already in place, will help the Region move towards its vision. These actions are organized into two categories; those related to maintaining and strengthening the existing regional freight planning process and longer-term, strategic actions.

7.1 Actions Related to Maintaining and Strengthening the Regional Freight Planning Process

- Continue to Support the TPB Freight Subcommittee
- Maintain and Strengthen Private-Sector Participation in the TPB Freight Subcommittee
- Create Opportunities to Hold Joint Meetings with Other TPB Subcommittees
- Develop “Freight Around the Region” Brochures in Coordination with Member Jurisdictions
- Organize Periodic Regional Freight Forums
- Collect and Analyze Freight Data and Make Available to Member Jurisdictions and the Public
- Continue Coordination with Federal, State, Local, and Private-Sector Freight Partners
- Coordinate TPB’s MAP-21/FAST Freight-Related Activities – Including Performance Measures
- Identify and Communicate Freight-Related Infrastructure Issues to Member Agencies to Address in their Planning and Programming Activities
- Strengthen Relationships with Local Jurisdiction Planners
- Highlight Economic Development Aspects of Freight with Local Jurisdiction Planners

7.2 Strategic Regional Freight Planning Activities

- Raise Freight Profile within Local and Regional Planning Processes
- Develop and Communicate Helpful Information about Accommodating Freight within Regional Activity Centers
- Continue Participation in FHWA Effort to Develop Innovative Strategies for Improving Freight Movement in Urban Areas
- Monitor Developments of Autonomous and Connected Freight Vehicles
- Monitor Key Economic and Industry Trends Impacting Goods Movement
- Monitor the Development of New and Emerging Freight-Relevant Data Sources and Incorporate them into Transportation Planning Activities as Appropriate

- Provide Information to the TPB and Freight Stakeholders on the Status or Progress on this Plan's Identified Freight Policies When Such Information Becomes Available

APPENDIX A: REGIONAL FREIGHT-SIGNIFICANT NETWORK

This appendix contains a series of detailed describing the Regional Freight Significant Network.

Figure 30: Regional Freight-Significant Network – Frederick County Area

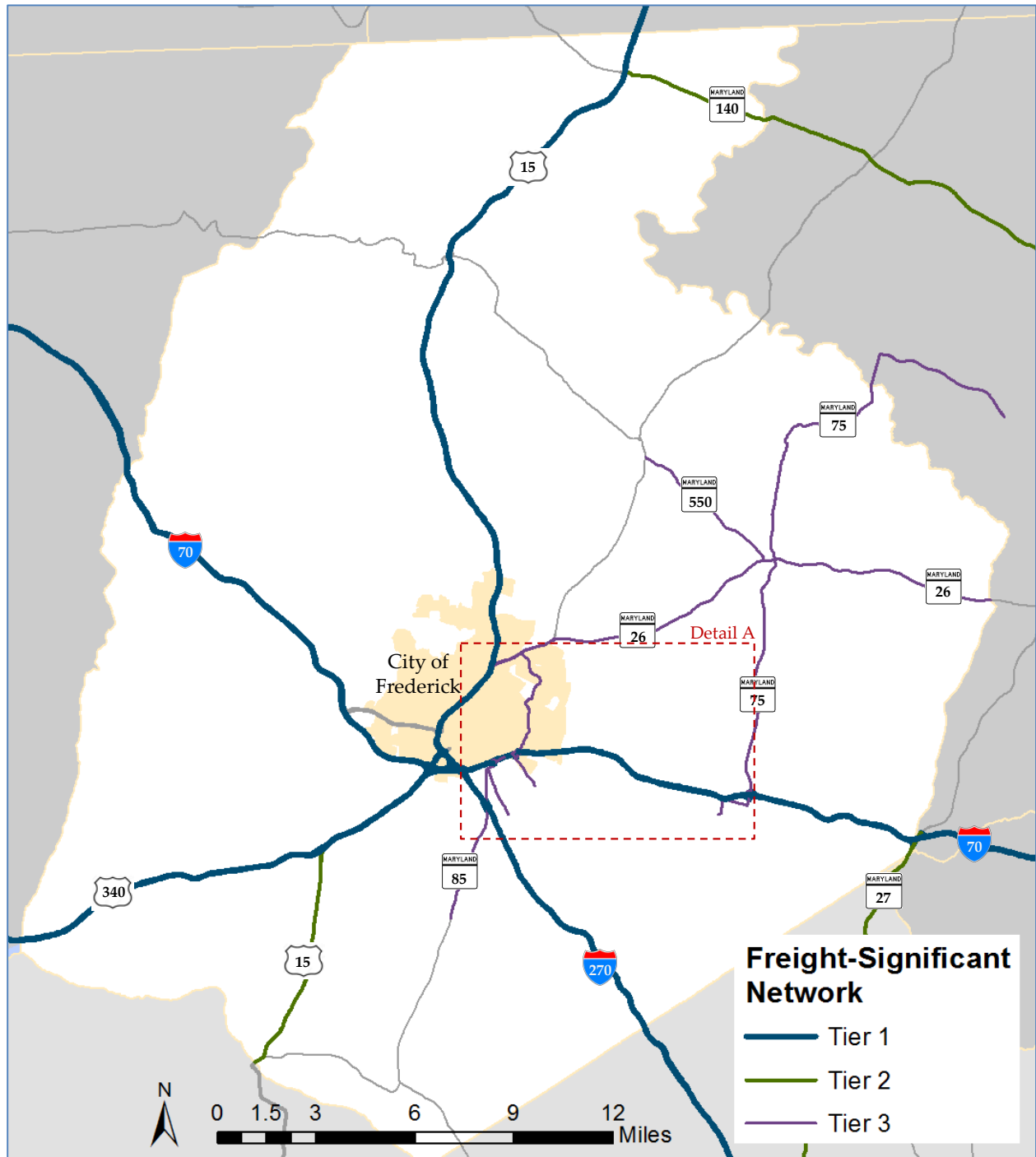


Figure 31: Regional Freight-Significant Network – Frederick County Detail A

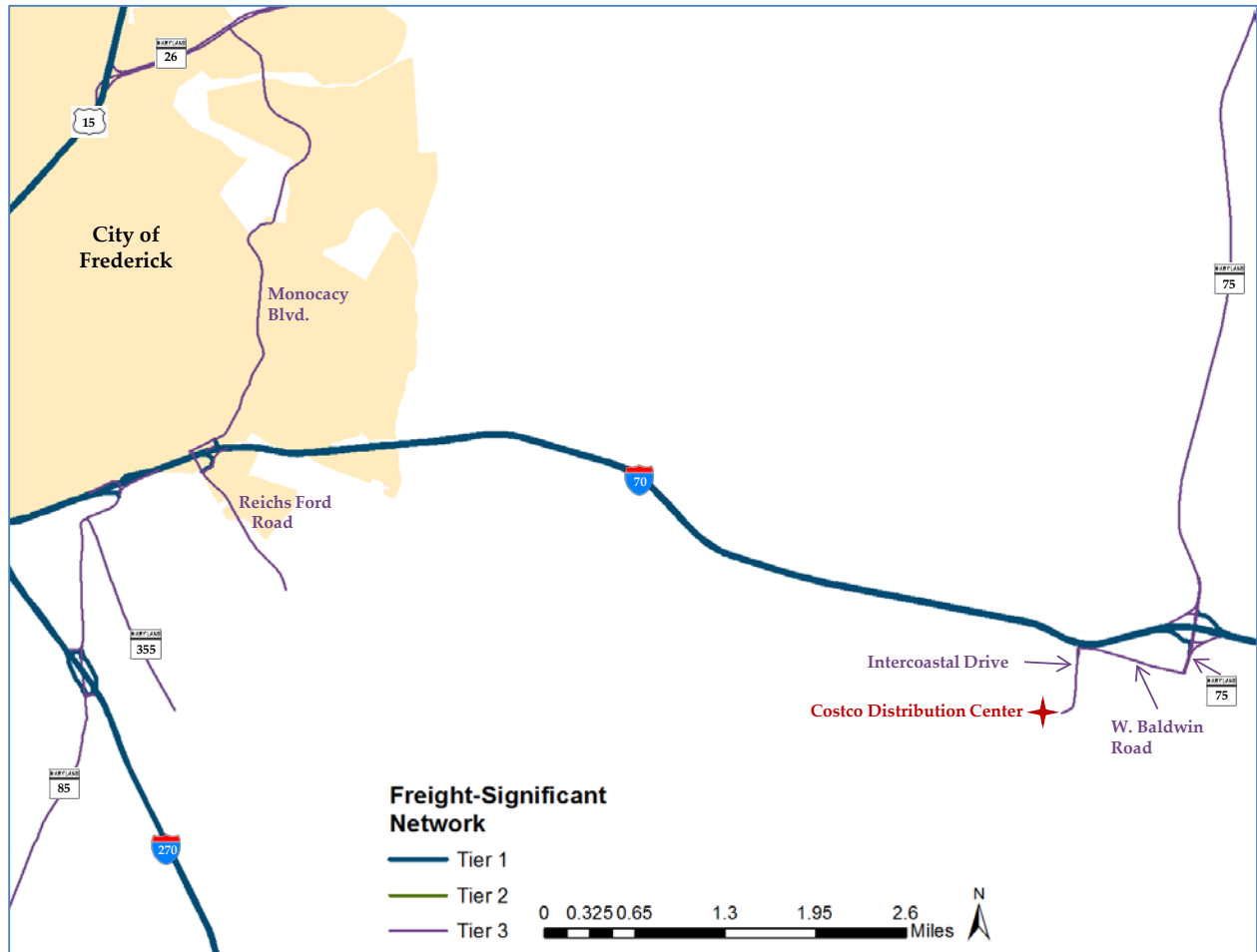


Figure 32: Regional Freight-Significant Network – Montgomery County Area

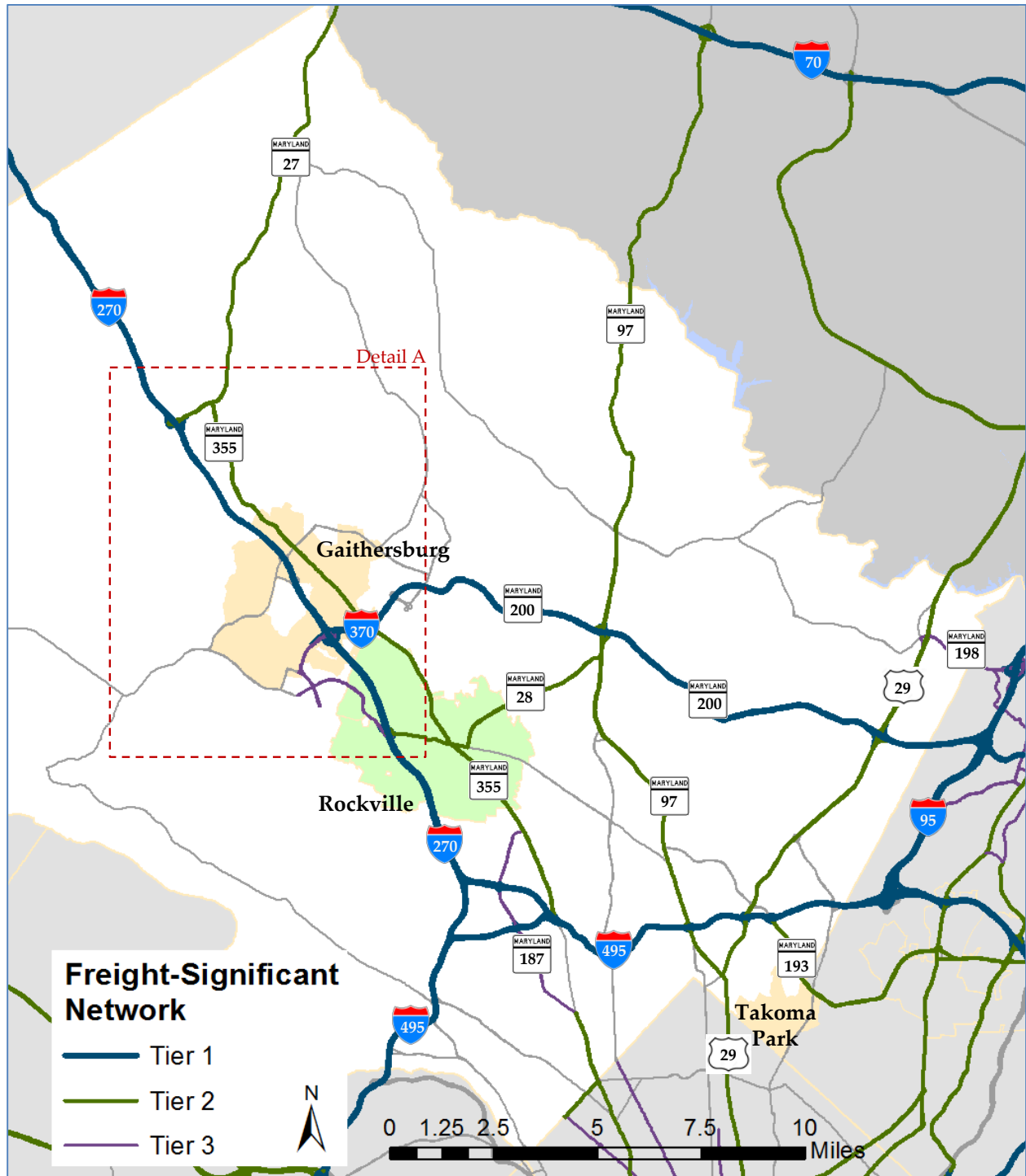


Figure 33: Regional Freight-Significant Network – Montgomery County Detail A

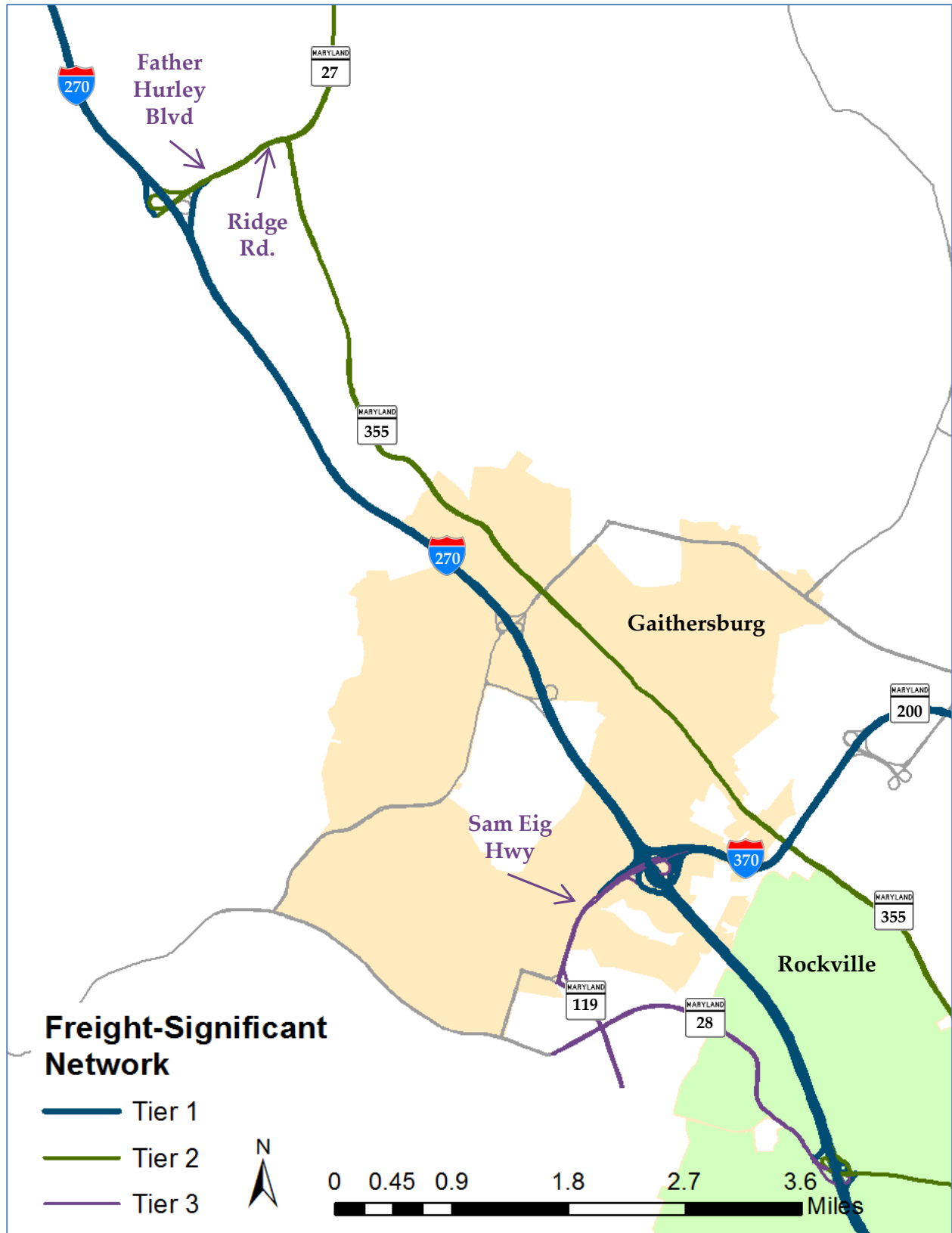


Figure 34: Regional Freight-Significant Network – Prince George’s County Area

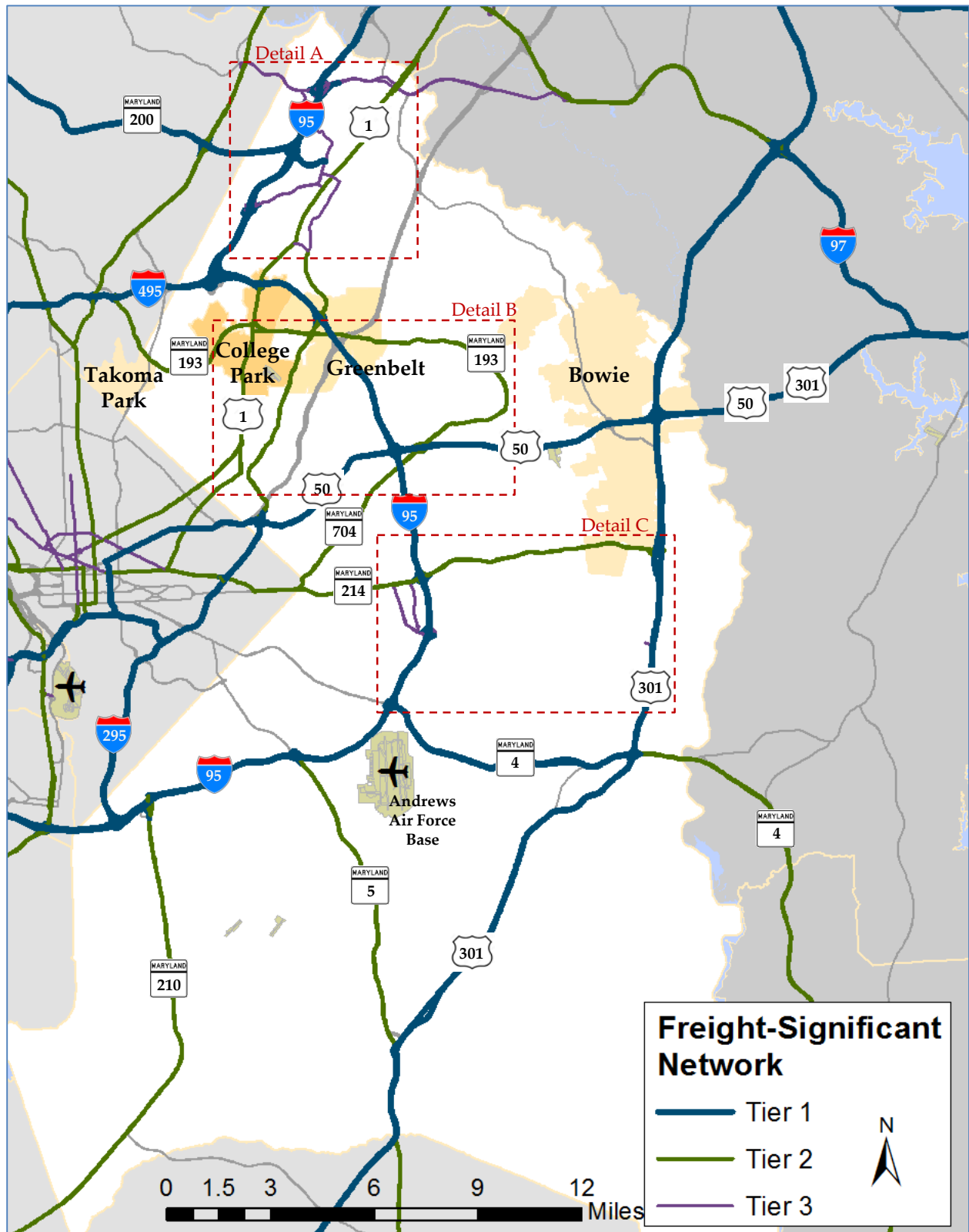


Figure 35: Regional Freight-Significant Network – Prince George’s County Detail A

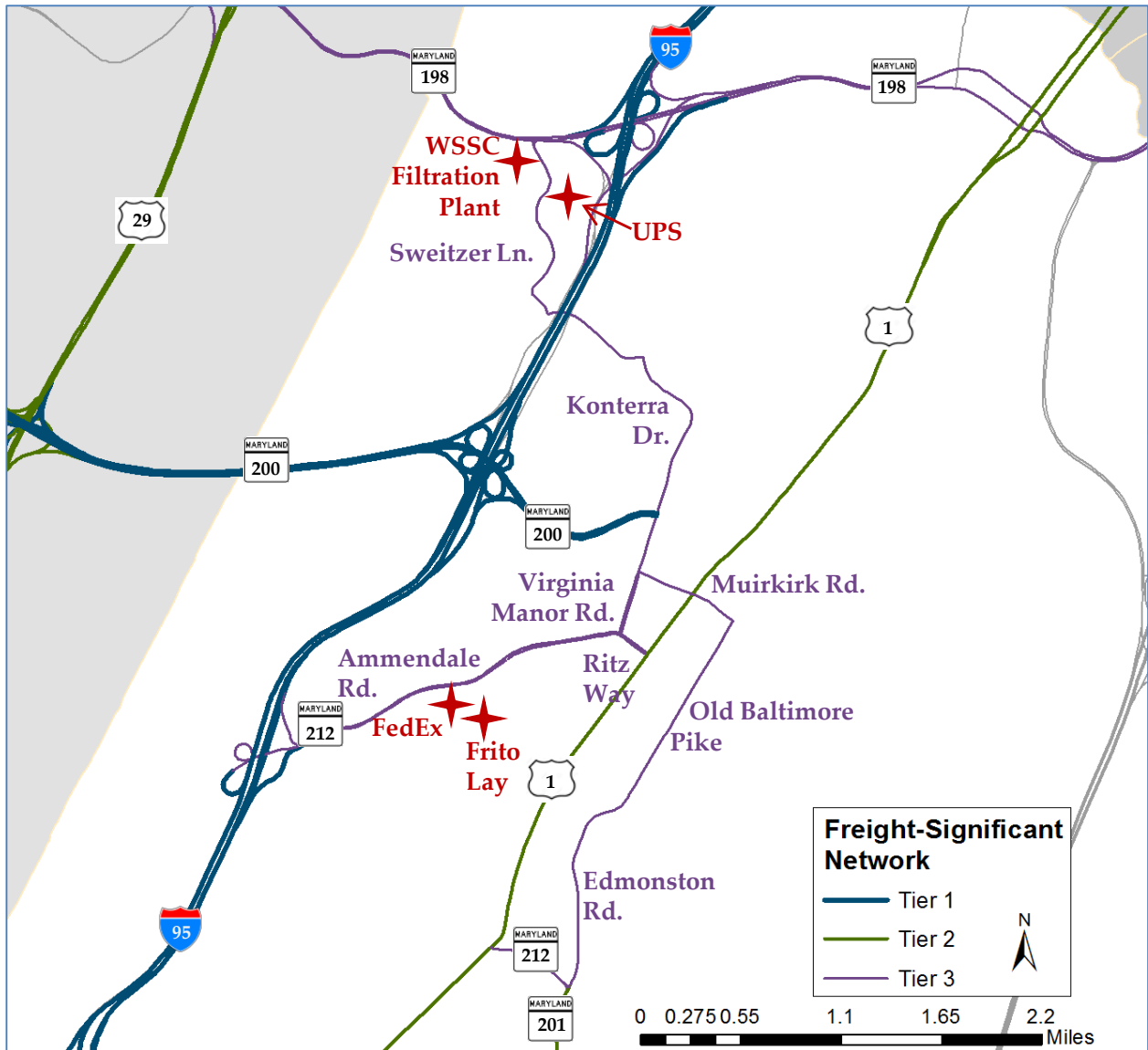


Figure 36: Regional Freight-Significant Network – Prince George’s County Detail B



Figure 37: Regional Freight-Significant Network – Prince George’s County Detail C

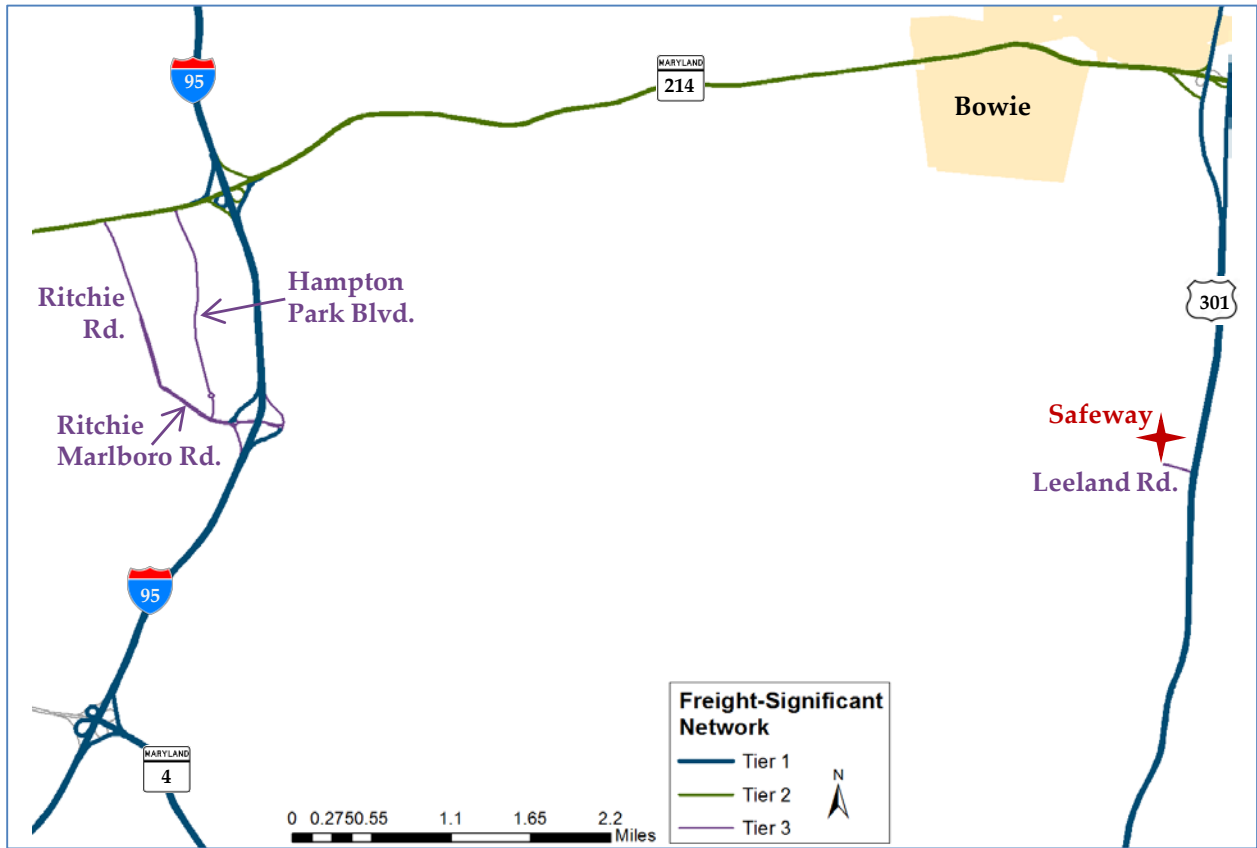


Figure 38: Regional Freight-Significant Network – Charles County

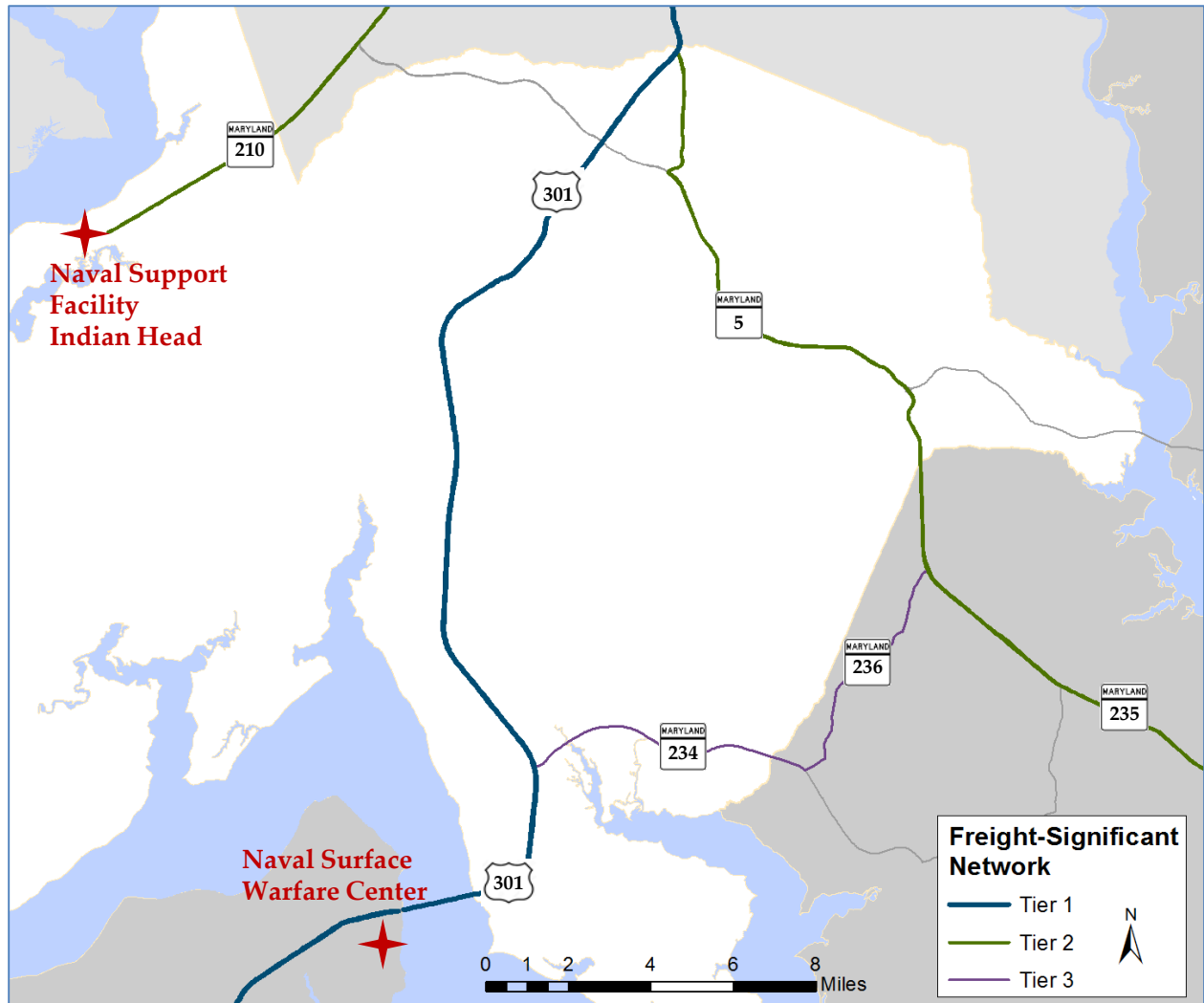


Figure 36: Regional Freight-Significant Network – District of Columbia

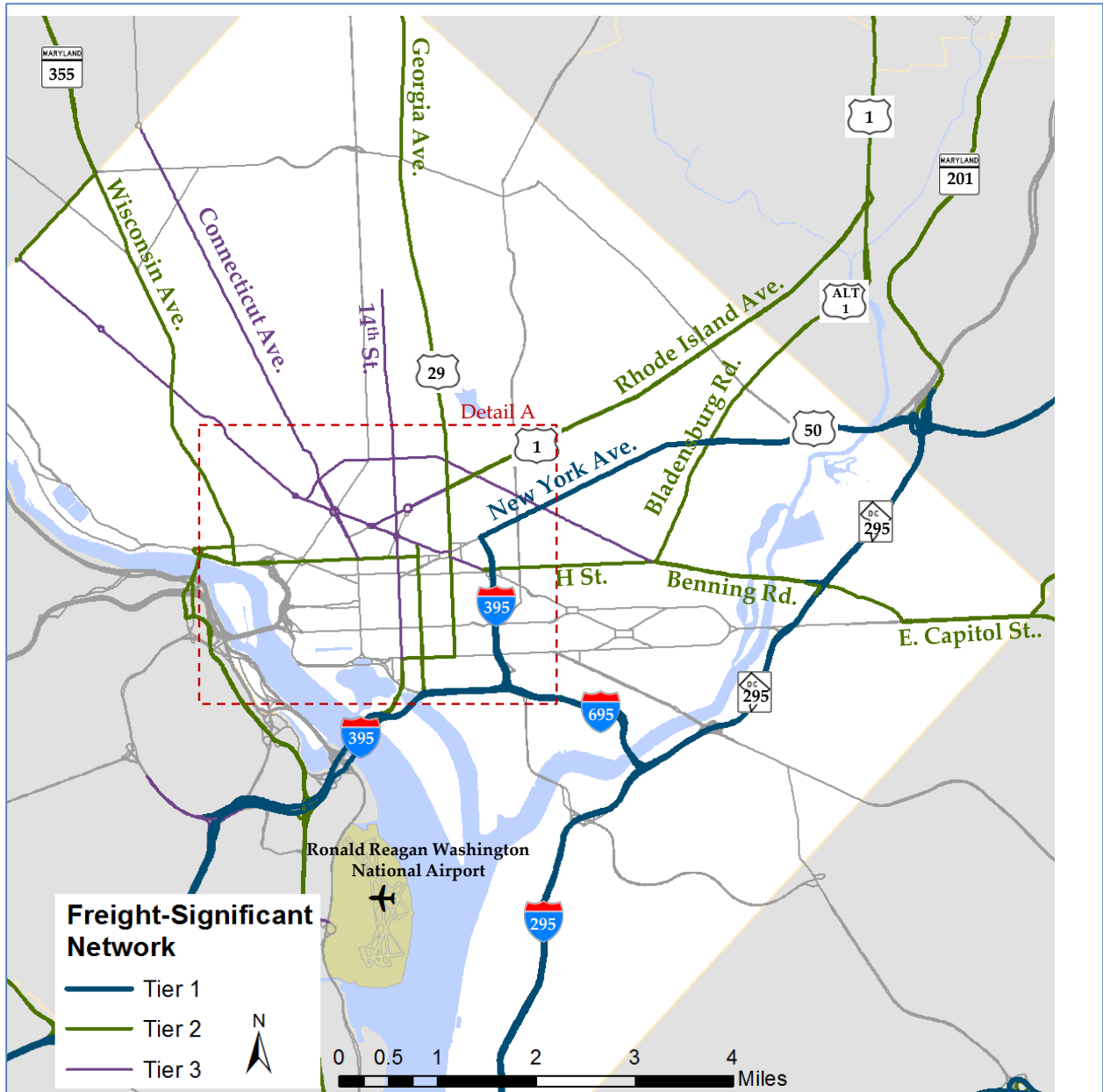


Figure 40: Regional Freight-Significant Network – District of Columbia Detail A



Figure 41: Regional Freight-Significant Network – Loudoun County Area

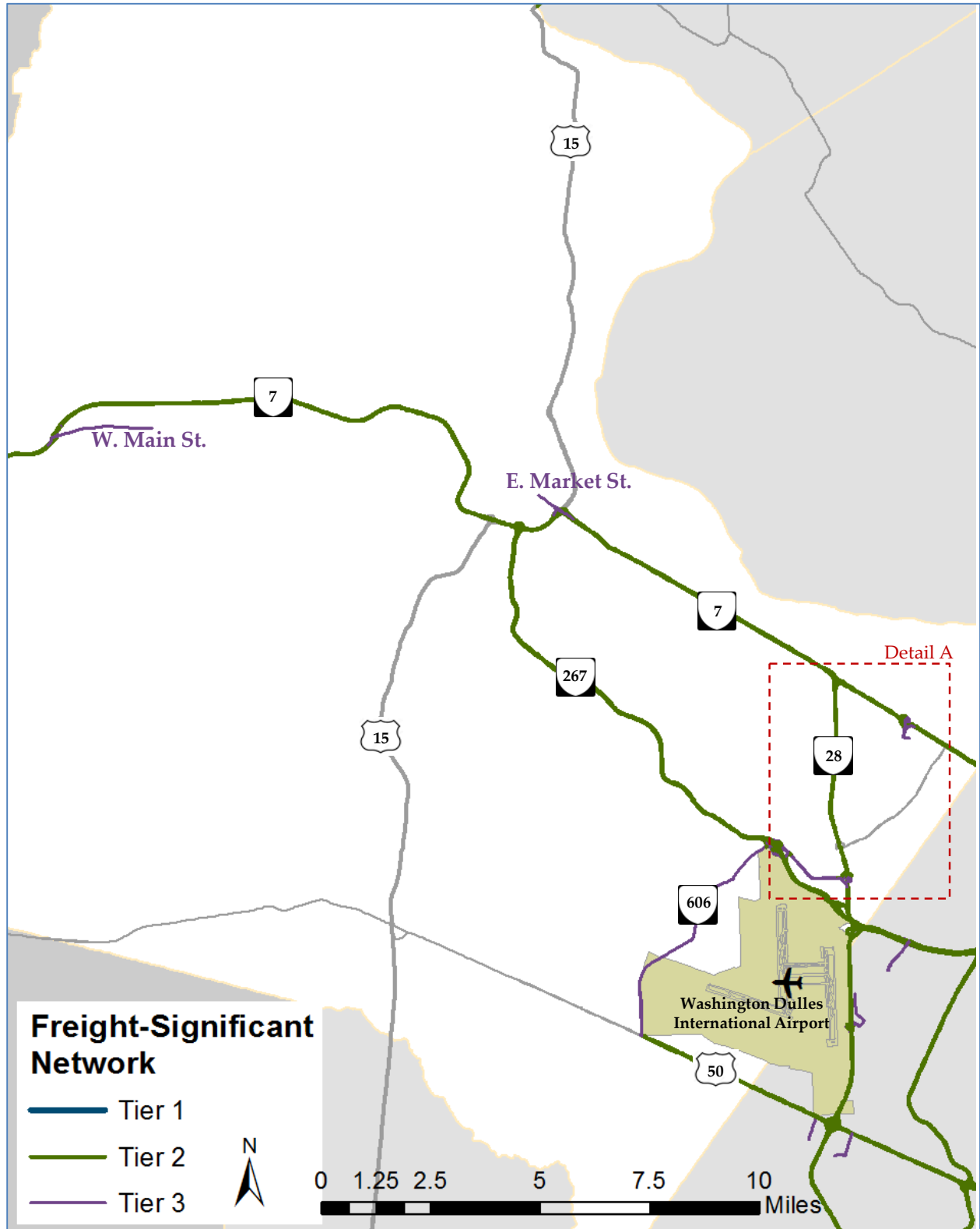


Figure 42: Regional Freight-Significant Network – Loudoun County Detail A

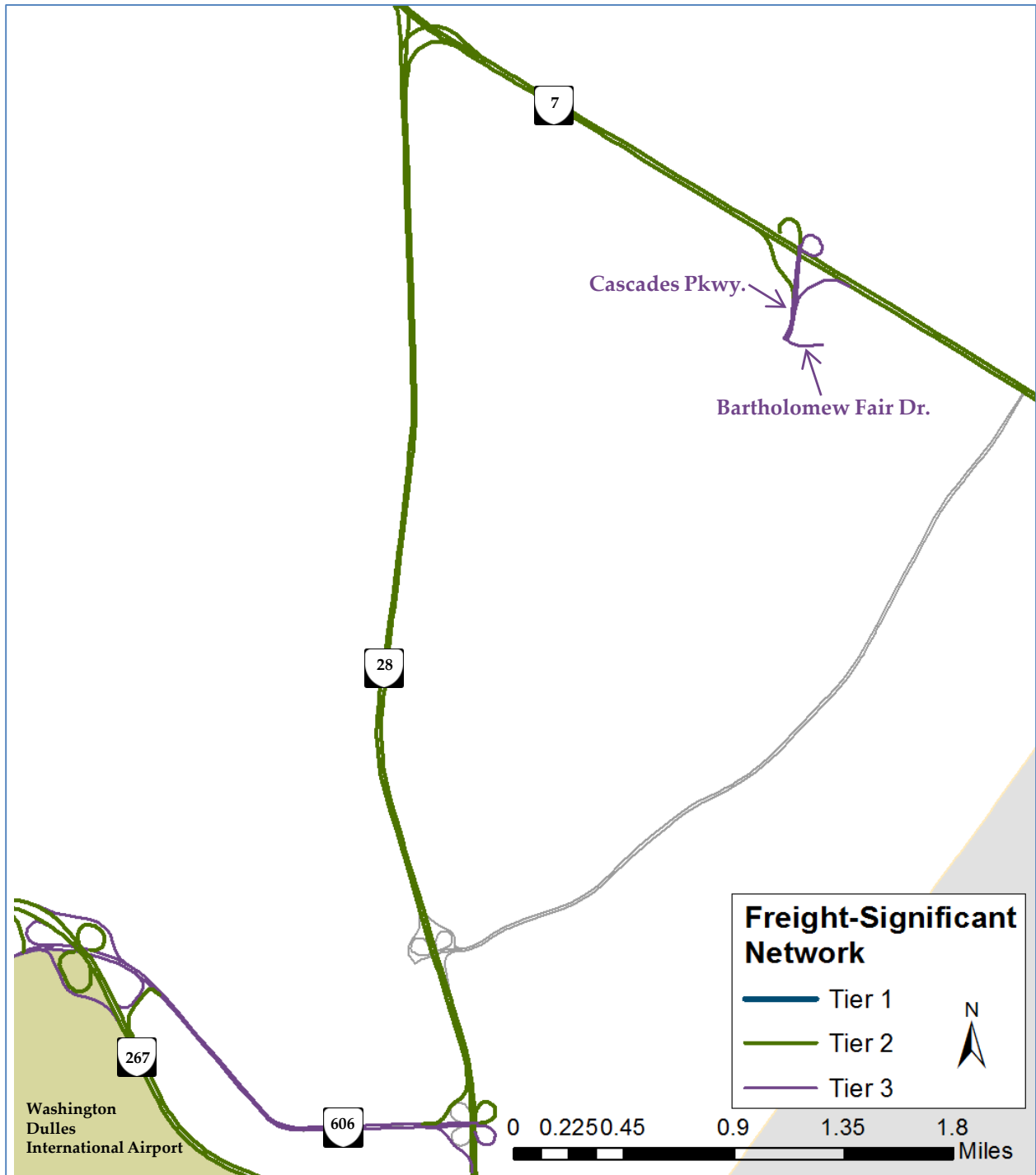


Figure 43: Regional Freight-Significant Network – Fairfax County Area

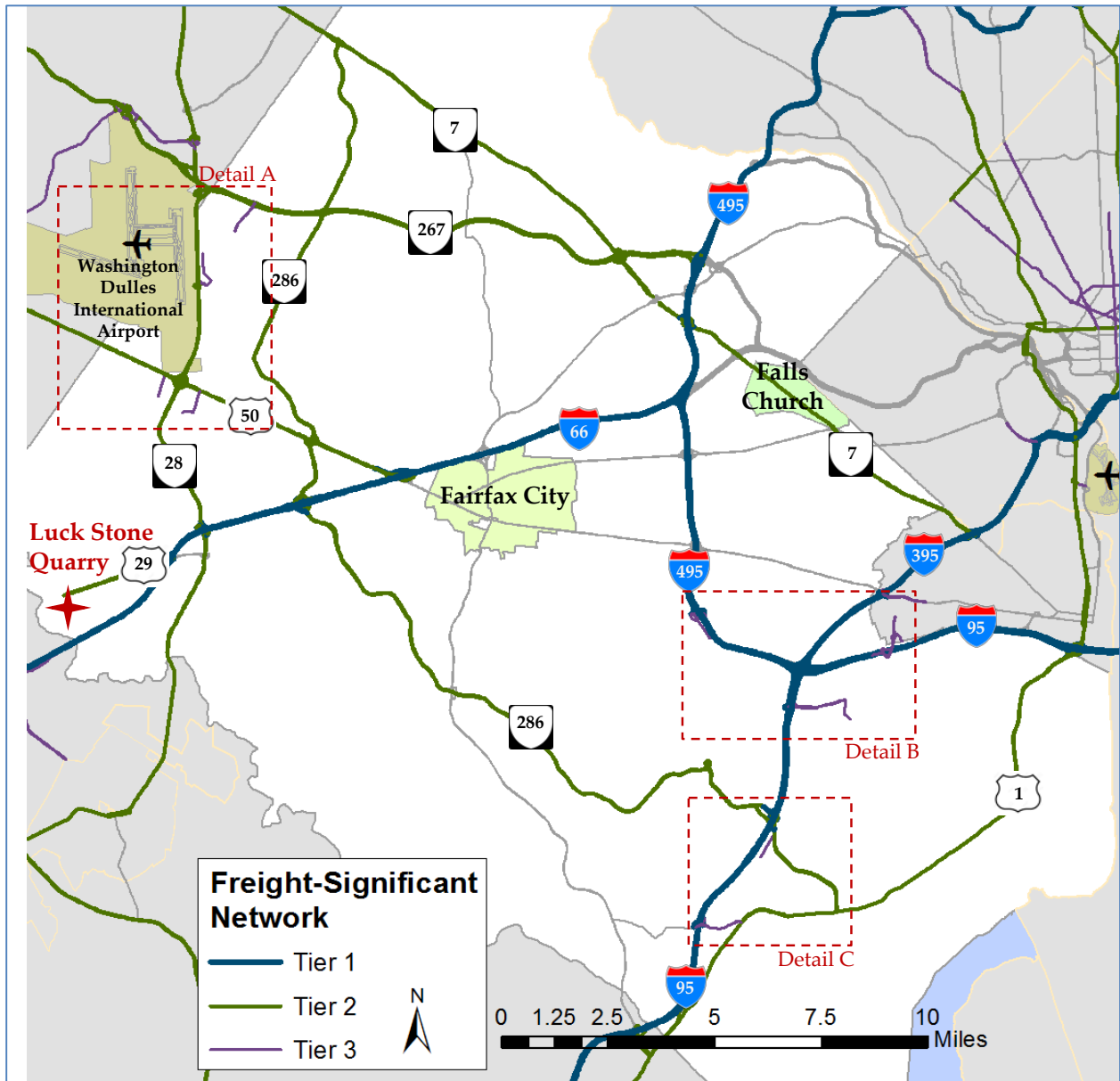


Figure 44: Regional Freight-Significant Network – Fairfax County Detail A

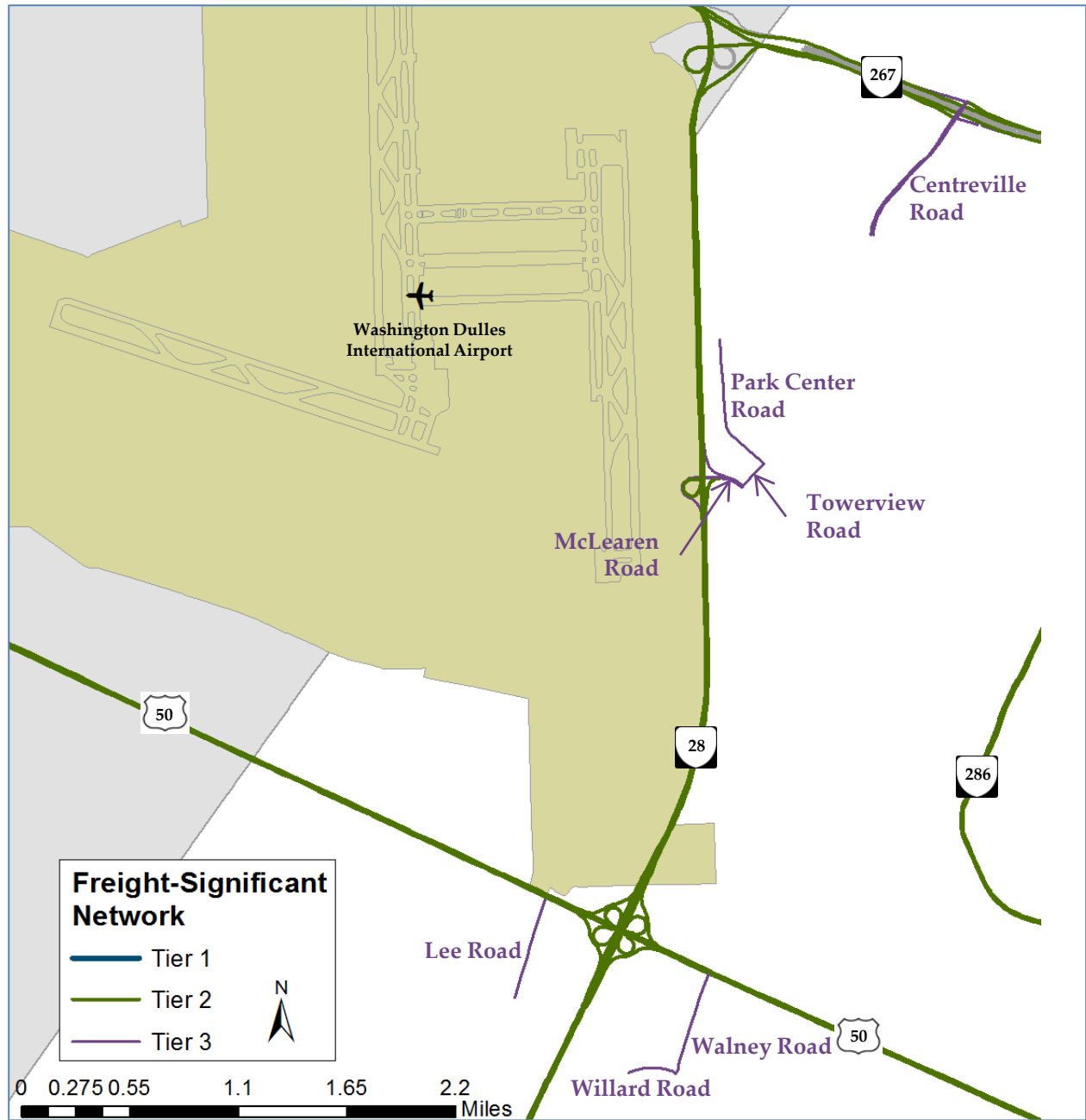


Figure 37: Regional Freight-Significant Network – Fairfax County Detail B



Figure 46: Regional Freight-Significant Network – Fairfax County Detail C

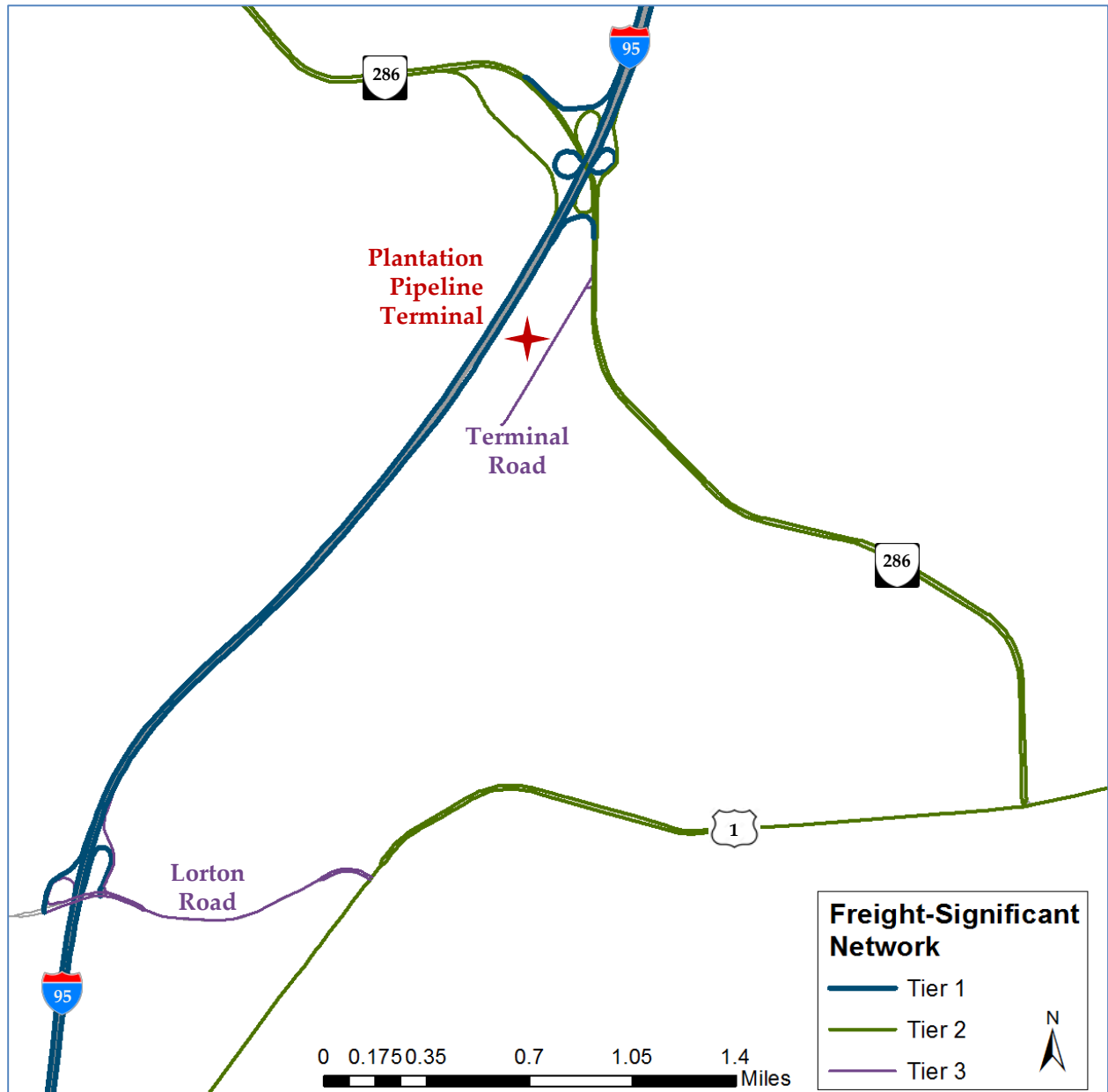


Figure 47: Regional Freight-Significant Network – Prince William County Area

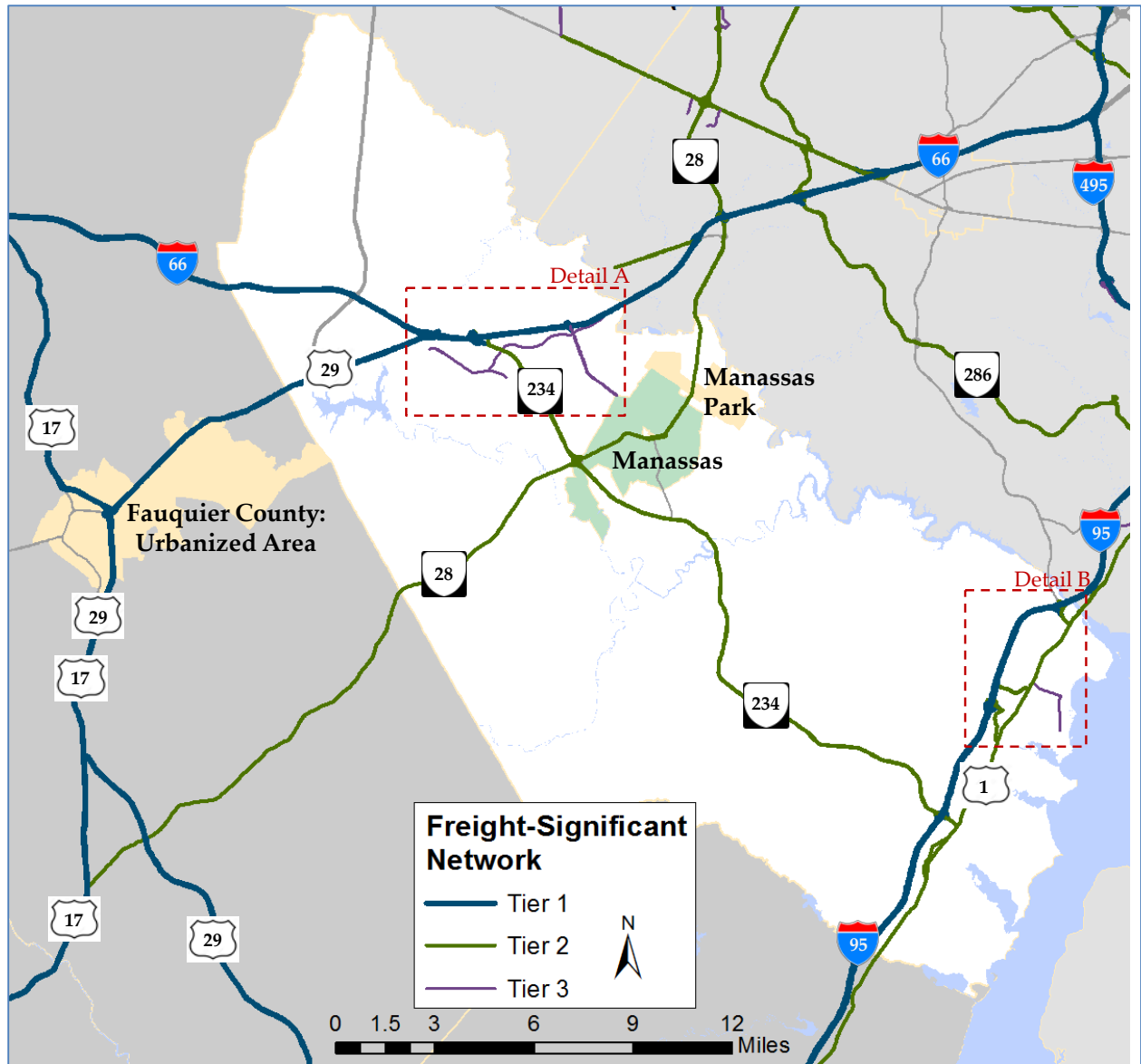


Figure 48: Regional Freight-Significant Network – Prince William County Detail A

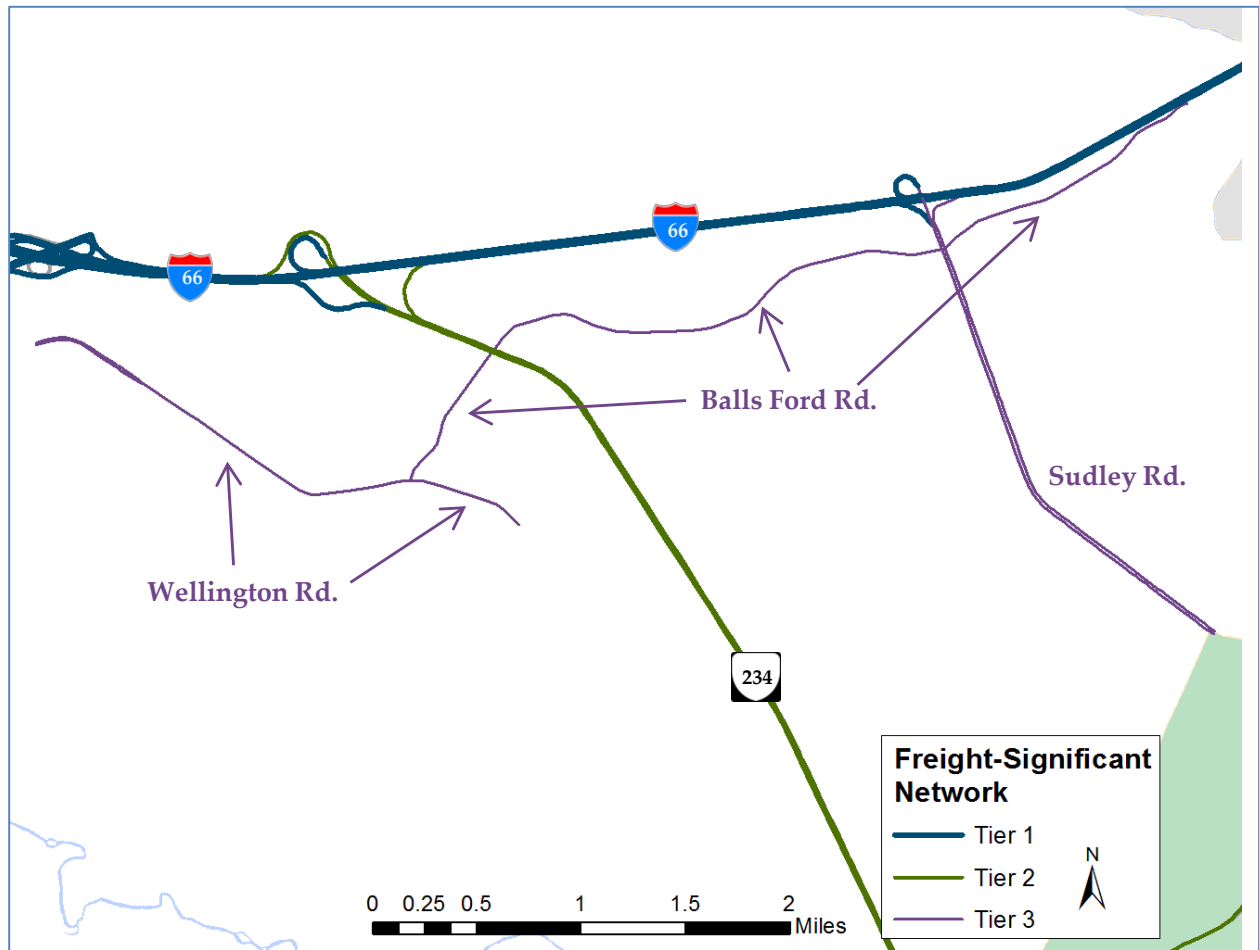


Figure 49: Regional Freight-Significant Network – Prince William County Detail B

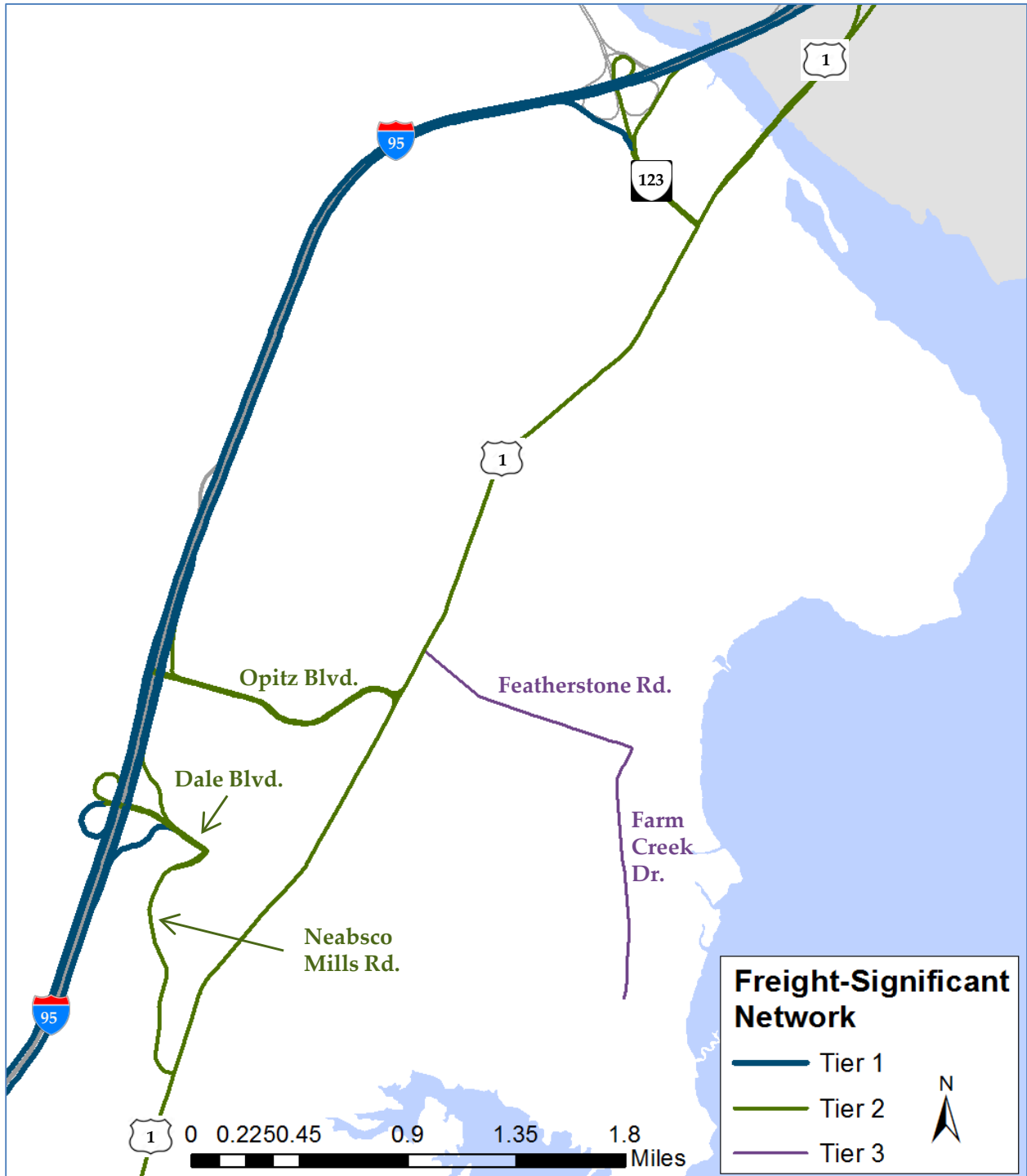


Figure 50: Regional Freight-Significant Network – Arlington County

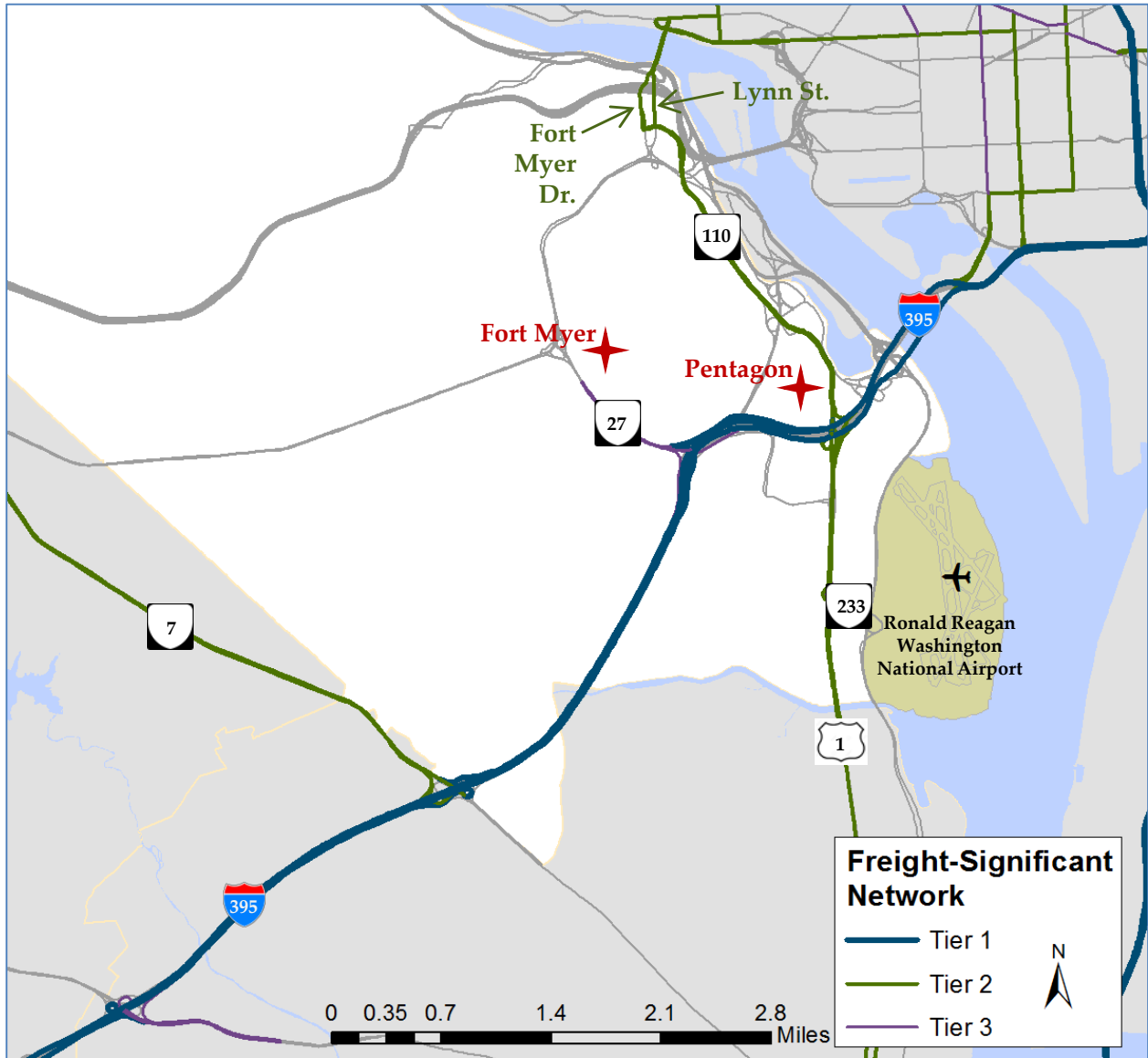
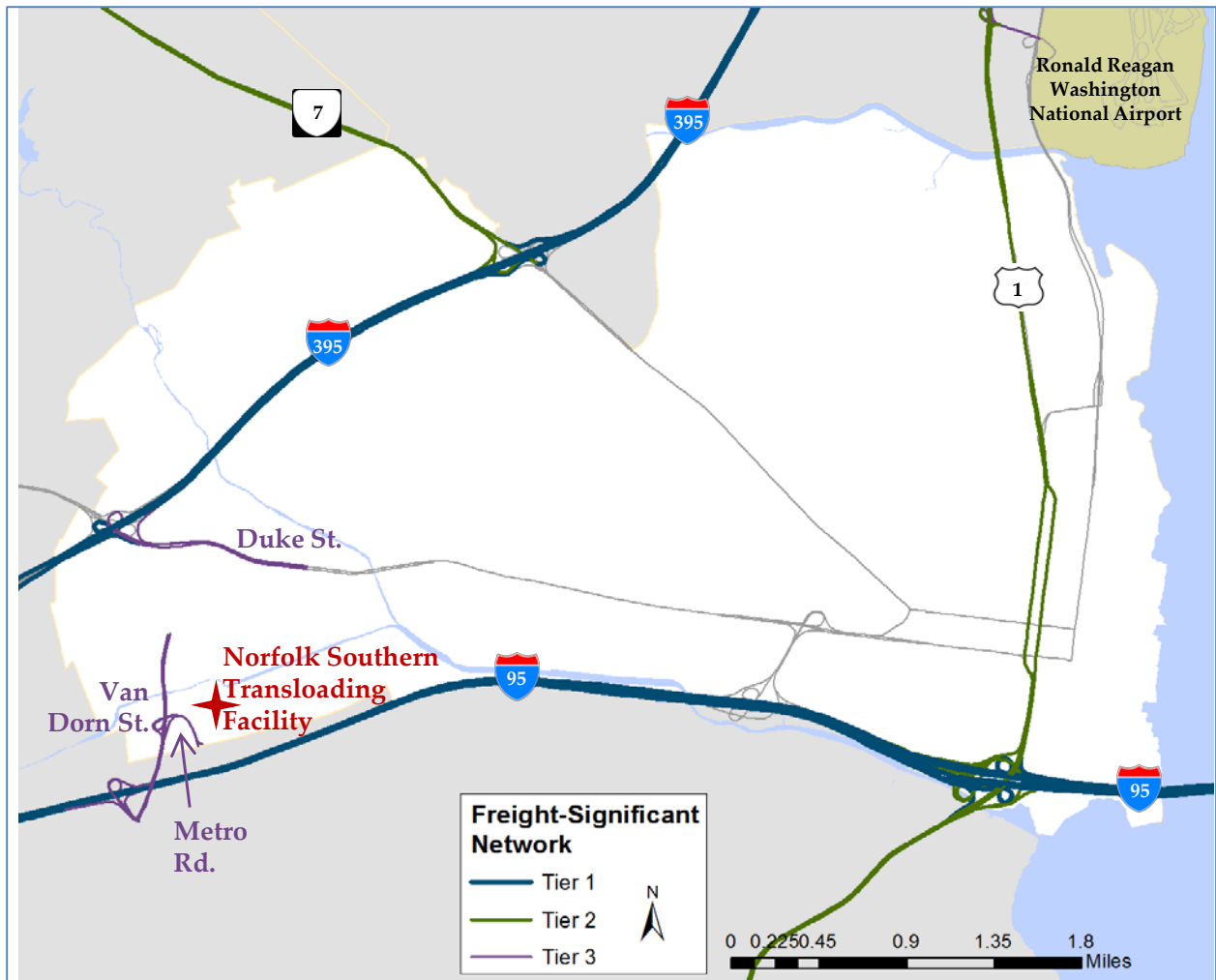


Figure 51: Regional Freight-Significant Network – City of Alexandria



APPENDIX B: FREIGHT ANALYSIS FRAMEWORK

This appendix contains technical information and supplementary materials for the National Capital Region Freight Plan. Relevant sections of the main body of the Freight Plan are referenced directly under each major topic area of this appendix.

B.1 Freight Analysis Framework

This section of the appendix provides additional detail on the commodity codes and geographic regions used within the Freight Analysis Framework (FAF). It relates to Section 3.0: Freight Demand within the main body of the Plan.

B.1.1 FAF COMMODITY TYPES

The FAF dataset defines freight commodities according to the Standard Classification of Transported Goods²² (SCTG) coding system. To provide concise commodity descriptions in the many tables and figures in this report, the FAF commodity descriptions have been shortened as shown in Table 29 below. Detailed information about the specific types of goods included within each of the FAF commodities is available from the United States Census Bureau.²³

Table 29: FAF Commodity Descriptions

SCGT Code	FAF Commodity Description	Commodity Description Used in this Report
1	Live animals and live fish	Animals & fish (live)
2	Cereal grains	Cereal grains
3	Other agricultural products	Other agricultural products
4	Animal feed and products of animal origin, n.e.c.	Animal feed
5	Meat, fish, seafood, and their preparations	Meat/poultry/fish/seafood
6	Milled grain products and preparations, bakery products	Milled grain & bakery products
7	Other prepared foodstuffs and fats and oils	Other prepared foodstuffs
8	Alcoholic beverages	Alcoholic beverages
9	Tobacco products	Tobacco products
10	Monumental or building stone	Monumental or building stone
11	Natural sands	Natural sands
12	Gravel and crushed stone	Gravel & crushed stone
13	Nonmetallic minerals n.e.c.	Other nonmetallic minerals
14	Metallic ores and concentrates	Metallic ores & concentrates
15	Coal	Coal
16	Crude petroleum	Crude petroleum
17	Gasoline and aviation turbine fuel	Gasoline/aviation fuel/ethanol
18	Fuel oils	Fuel oils

²² The SCTG coding system was developed by agencies of the United States and Canadian governments to address statistical needs in regard to products transported.

²³ A thorough description of each of the SCTG codes is available in a document titled 2012 COMMODITY FLOW SURVEY: STANDARD CLASSIFICATION OF TRANSPORTED GOODS (SCTG) available here: <https://bhs.econ.census.gov/bhs/cfs/Commodity%20Code%20Manual%20%28CFS-1200%29.pdf>

SCGT Code	FAF Commodity Description	Commodity Description Used in this Report
19	Coal and petroleum products, n.e.c.* (includes Natural gas)	Other petroleum products
20	Basic chemicals	Basic chemicals
21	Pharmaceutical products	Pharmaceutical products
22	Fertilizers	Fertilizers
23	Chemical products and preparations, n.e.c.*	Other chemical products
24	Plastics and rubber	Plastics & rubber
25	Logs and other wood in the rough	Logs & wood in the rough
26	Wood products	Wood products
27	Pulp, newsprint, paper, and paperboard	Pulp/newsprint/paper/paperboard
28	Paper or paperboard articles	Paper & paperboard articles
29	Printed products	Printed products
30	Textiles, leather, and articles of textiles or leather	Textiles, leather & their articles
31	Nonmetallic mineral products	Nonmetallic mineral products
32	Base metal in primary or semi-finished forms and in finished basic shapes	Base metals in primary forms
33	Articles of base metal	Articles of base metal
34	Machinery	Machinery
35	Electronic and other electrical equipment and components and office equipment	Electronic & electrical equipment
36	Motorized and other vehicles (including parts)	Motorized vehicles & parts
37	Transportation equipment, n.e.c.*	Railway equipment/aircraft/boats
38	Precision instruments and apparatus	Precision instruments & apparatus
39	Furniture, mattresses and mattress supports, lamps, lighting fittings, and illuminated signs	Furniture/mattresses/lamps/signs
40	Miscellaneous manufactured products	Misc. manufactured products
41	Waste and scrap	Waste & scrap
43	Mixed freight	Mixed freight
99	Commodity unknown	Unknown

* n.e.c. – not elsewhere classified

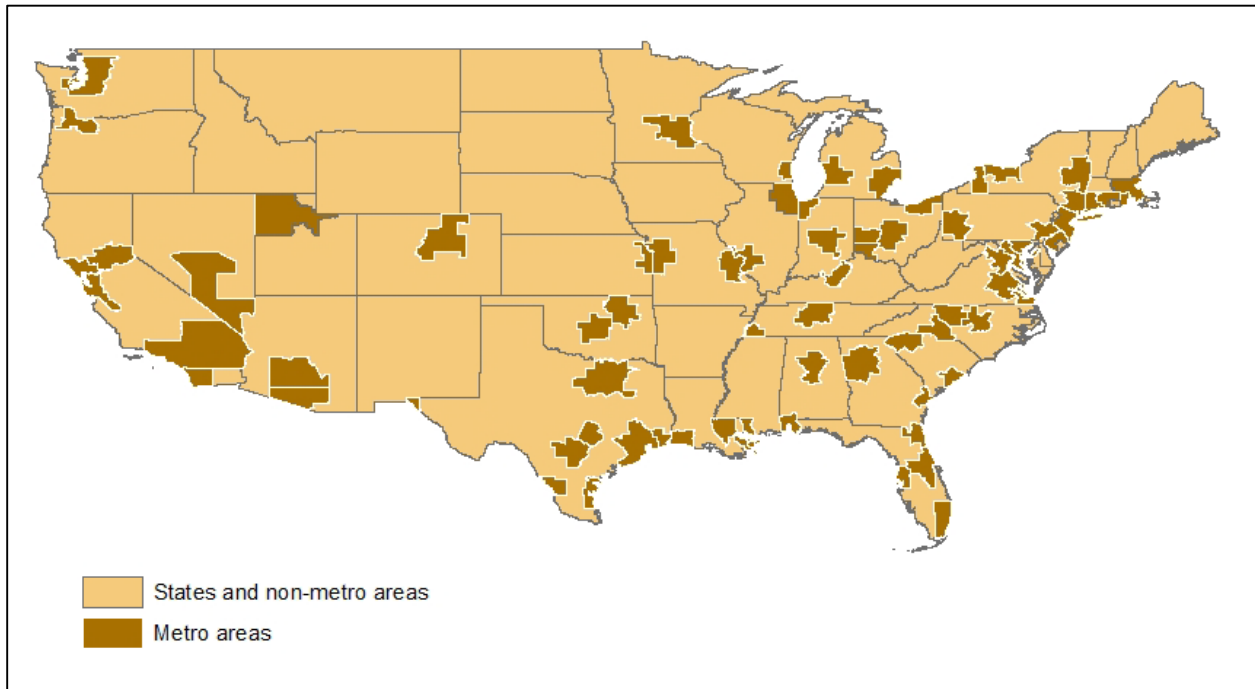
Source: Federal Highway Administration Freight Analysis Framework and Metropolitan Washington Council of Governments

B.1.2 FAF GEOGRAPHIES

The FAF dataset is organized into 123 domestic FAF regions (see Figure 52). Each of these FAF regions falls into one of the following categories:

- Census defined Consolidated Statistical Region (CMA)
- Census defined Metropolitan Statistical Area (MSA)
- The rest of a state (everything in a state that is not included in a CSA or MSA)
- An entire state (if that state does not include a CMA or MSA)

Figure 52: FAF Regions



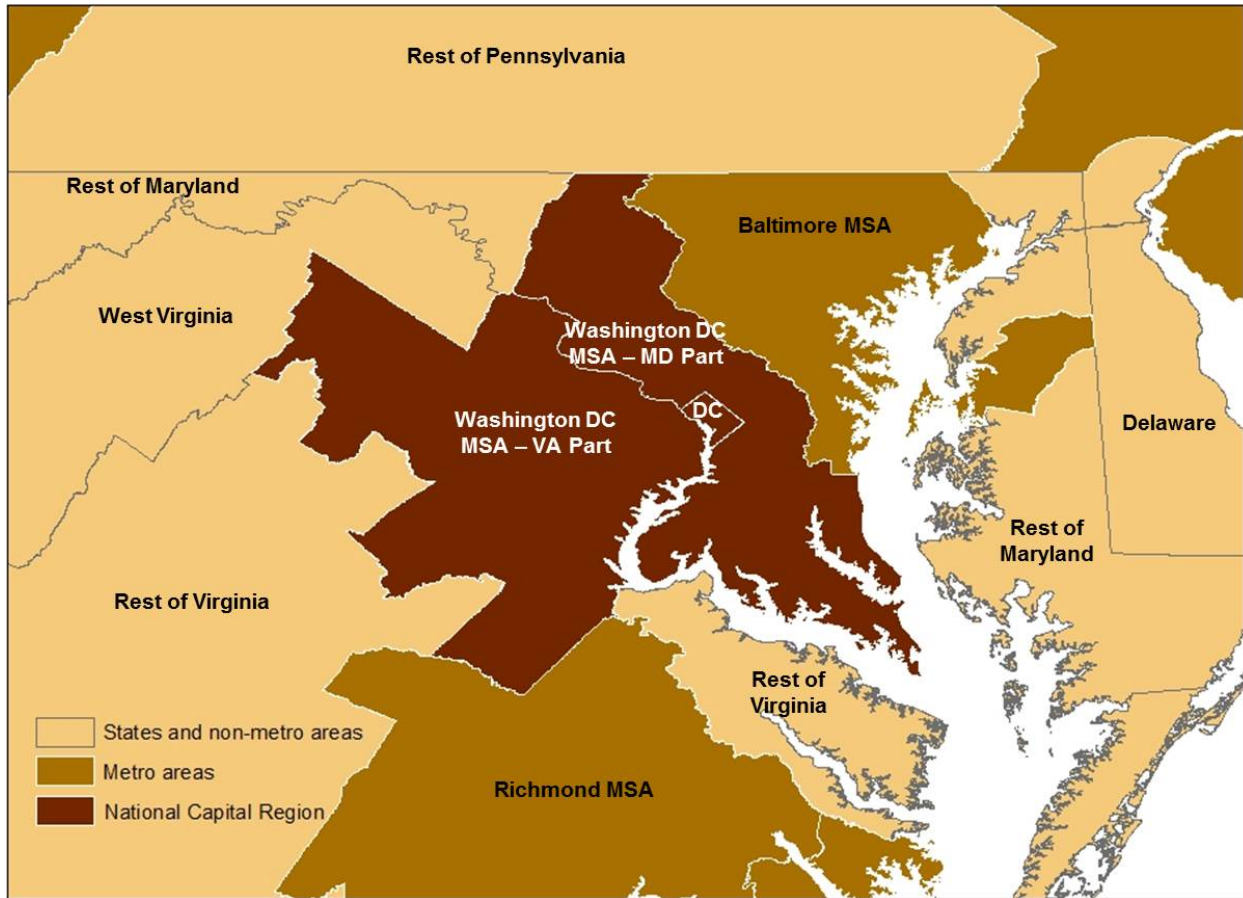
Source: Federal Highway Administration Freight Analysis Framework and Metropolitan Washington Council of Governments

For purposes of FAF analysis, the National Capital Region is an amalgamation of three FAF regions (see Figure 53):

- Washington, DC MSA – District of Columbia part
- Washington, DC MSA – Maryland part
- Washington, DC MSA – Virginia part

While the geography of these combined FAF regions does not precisely match the boundaries of the National Capital Region’s planning area, it is sufficiently proximate to provide useful information.

Figure 53: FAF Regions Comprising the National Capital Region



Source: Federal Highway Administration Freight Analysis Framework and Metropolitan Washington Council of Governments



National Capital Region
Transportation Planning Board

Metropolitan Washington Council of Governments
777 North Capitol Street NE, Suite 300
Washington, DC 20002

mwcog.org/tpb

ITEM 8 – Action
July 20, 2016

Approval of Projects Recommended for Funding under the FY 2017
Surface Transportation Block Grant Set Aside Program for Suburban
Maryland TPB Jurisdictions

Staff

Recommendation: Adopt Resolution R2-2017 to approve projects for funding under the Federal Surface Transportation Block Grant Set Aside Program for Maryland for FY 2017. briefing

Issues: None

Background: A portion of the federal Surface Transportation Block Grant Set Aside Program (previously known as the Transportation Alternatives Program) is sub-allocated to the TPB for project selection in Suburban Maryland. The board will be briefed on the projects recommended by a technical review panel for funding in FY 2017 and asked to approve the recommended projects. The FY 2017 project solicitation, which was conducted by the Maryland Department of Transportation, ended on May 16, 2016.

**NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD
777 North Capitol Street, N.E.
Washington, D.C. 20002**

**RESOLUTION TO APPROVE PROJECTS FOR FUNDING UNDER THE SURFACE
TRANSPORTATION BLOCK GRANT PROGRAM SET-ASIDE FOR FY 2017 IN
SUBURBAN MARYLAND**

WHEREAS, the National Capital Region Transportation Planning Board (TPB), the metropolitan planning organization (MPO) for the Washington Region, has the responsibility under the provisions of the Fixing American's Surface Transportation Act (FAST Act) for developing and carrying out a continuing, cooperative and comprehensive transportation planning process for the Metropolitan Area; and

WHEREAS, under the FAST Act's Surface Transportation Program, a portion of the statewide transportation program funds are set aside (STP Set Aside) under the block grant program for MPOs in large urbanized areas; and

WHEREAS, the MPOs are required "to develop a competitive process to allow eligible entities to submit projects for funding ... in consultation with the relevant State"; and the STP Set Aside provides funding for transportation programs and projects defined as eligible per section 1109 of the FAST Act; and

WHEREAS, the STP Set Aside offers MPOs an opportunity to work with States to fund projects that implement regional priorities and complement planning activities; and

WHEREAS, the TPB, in coordination with the relevant State, uses the STP Set Aside to support the Regional Transportation Priorities Plan, which promotes improved non-motorized circulation within regional Activity Centers and improved pedestrian and bicycle access to transit; and

WHEREAS, the STP Set Aside is a complementary component of the TPB's Transportation/Land-Use Connections (TLC) Program, which provides technical assistance for planning and design studies to TPB member jurisdictions; and

WHEREAS, a year-round solicitation for FY 2017 STP Set Aside projects was concluded by the Maryland State Highway Administration on May 16, 2016; and

WHEREAS, the TPB's STP Set Aside Review Panel met on June 28, 2016 and recommended fully or partially funding five of the applications received based on project readiness, eligibility, and each project's ability to meet the regional selection criteria; and

WHEREAS, on July 8, 2016, the TPB Technical Committee was briefed on the recommended projects;

NOW, THEREFORE, BE IT RESOLVED THAT the NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD approves the projects for funding under the STP Set Aside for FY 2017 in Suburban Maryland as described in the attached materials.



MEMORANDUM

TO: Transportation Planning Board
FROM: Lamont B. Cobb, Transportation Planner
SUBJECT: Funding Recommendations for the FAST Act Surface Transportation Block Grant/Transportation Alternatives Program in Suburban Maryland
DATE: July 20, 2016

Under the federal Surface Transportation Block Grant Program, also known as Transportation Alternatives (STP/TAP), the Federal Highway Administration sub-allocates funds to the TPB for project selection in Suburban Maryland, Northern Virginia and the District of Columbia. For FY 2017 in Maryland, the TPB’s STP/TAP Selection Panel recommends \$1,100,114 in funding for projects. The TPB will be asked to approve the funding recommendations via resolution R2-2017.

The TPB’s Selection Panel recommends the following projects for approval at the July 20 TPB meeting:

City of Frederick – East Street Rails with Trails	\$479,000
College Park – Sidewalks for Safe Routes to School	\$57,464
Prince George’s County - Central Avenue Connector Trail Phase III	\$109,400
Prince George’s County (Town of Edmonston) – Crittenden and 52 nd Avenue Improvements for Safe Routes to School	\$179,250
Takoma Park – Improvements for Safe Routes to School	\$275,000
Total	\$1,100,114

BACKGROUND

The Transportation Alternatives Program was a MAP-21 formula program that provided funding to projects “alternative” to traditional highway capacity expansion. TAP combined three former federal programs: Transportation Enhancements (TE), Safe Routes to Schools (SRTS), and Recreational Trails (RTP). MAP-21 specified that in urbanized areas with populations over 200,000, the metropolitan planning organization (MPO) shall, “through a competitive process, select projects in consultation with the State.” Eligible recipients included local governments, regional transportation authorities, transit agencies, natural resource or public land agencies, school districts and agencies,

and other appropriate local or regional governmental entities. Non-profits could also apply, through partnership with local government agencies.

Under the 2015 Fixing America's Surface Transportation Act (FAST), TAP was integrated into the new legislation as a Set Aside under the Surface Transportation Block Grant Program. The types of recipients previously eligible to receive funding under the MAP-21 TAP funds are still eligible under the new program. In addition, FAST extended eligibility to non-profit organizations with local government sponsors. The funding formulas and level of MPO involvement remain unchanged from the previous TAP. The FAST Act provides funding for STP/TAP through FY 2020.

For the National Capital Region, the program offers an opportunity to support and enhance regional planning activities. At the direction of the Board, our region's STP/TAP is framed as a complementary component of the TPB's Transportation/Land-Use Connections (TLC) Program, which provides technical assistance for small planning studies to TPB member jurisdictions.

The funding also offers the region the ability to fund projects that support regional priorities and goals, based on recommendations outlined in the Regional Transportation Priorities Plan and Region Forward. The regional component of Maryland's application and the regional selection criteria are based on these priorities. In particular, these priorities support better non-motorized circulation within Regional Activity Centers and improved bicycle and pedestrian access to transit.

TPB staff works with Maryland's State Highway Administration (SHA) to conduct a cooperative solicitation for Suburban Maryland. Since the establishment of TAP in 2012, and STP/TAP in 2015, the TPB continues to combine its solicitations with the state departments of transportation in the District of Columbia, Maryland and Virginia.

FY 2017 SOLICITATION

SHA conducts a year-round solicitation for STP/TAP projects. The deadline to apply for FY 2017 funds was May 16, 2016. SHA included a separate application for projects in the National Capital Region, with a supplement requiring information on how projects respond to TPB priorities for the region, including multimodal access, accessibility to transit and employment, proximity to Activity Centers and rail stations, transportation access to disabled persons and other disadvantaged groups, and local funding commitment. SHA forwarded eight projects to TPB staff, for a total of \$2,858,205 in funding requests. The projects are eligible for the TPB's MPO sub-allocation, as well as statewide STP funding.

After SHA received project recommendations from the TPB and other Maryland MPOs, the agency will convene the state's TAP Technical Committee. The Technical Committee reviews all Maryland STP/TAP applications and forwards their recommendations to the TAP Executive Committee, made up of the executive leadership of SHA, the Maryland Department of Transportation, the Maryland Department of Natural Resources, and the Maryland Transit Administration Historic Preservation Office. The TAP Executive Committee makes their funding decisions based on a summary of all project applications, availability of uncommitted STP/TAP funds, the overall distribution of projects, and TAP Technical Committee recommendations. Maryland has \$12 million in statewide STP/TAP funds.

PROJECT SELECTION IN MARYLAND

Representatives from the District of Columbia and Virginia Departments of Transportation were invited to participate on the TPB's regional review panel with staff. The panel met on June 28. SHA also contributed on the panel as an ex-officio participant. Panel participants included:

- John Swanson, Plan Development and Support Manager, COG/TPB staff
- Michael Farrell, Senior Transportation Planner, COG/TPB staff
- Lamont Cobb, Transportation Planner, COG/TPB staff
- Cindy Engelhart, Bicycle and Pedestrian Coordinator, Northern Virginia District, Virginia Department of Transportation.
- Michael Alvino, Bicycle Program Specialist, District Department of Transportation
- Christy Bernal, Assistant Transportation Alternatives Program Liaison, Maryland State Highway Administration

Panel members individually reviewed and scored applications up to 100 points. The total score is a composite based on each reviewer's professional assessment (50pts) and regional selection criteria (50pts). The professional assessment is based on the panel member's knowledge of transportation planning in the region and local project management experience, as well as project readiness as presented in the applications.

The regional criteria are rooted in TPB policies and programs, with the understanding that some projects would not meet all criteria. Regional selection criteria included the following:

- **Transportation options (10pts):** Will the project significantly increase transportation options for pedestrians, bicyclists and other non-drivers? Will the transportation benefits of the project be more than just recreational?
- **Regional Activity Centers (10pts):** Does the project enhance walkability and accessibility within or between Regional Activity Centers?
- **Safe routes to schools (5pts):** Does the project enhance safe ped/bike access to schools?
- **Disadvantaged communities (5pts):** Does the project promote accessibility for disadvantaged communities?
- **People with disabilities (5pts):** Do project components significantly promote accessibility for people with disabilities?
- **Local commitment (5pts):** Does the application provide local matches greater than the 20 percent minimum requirement?

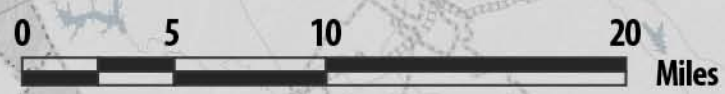
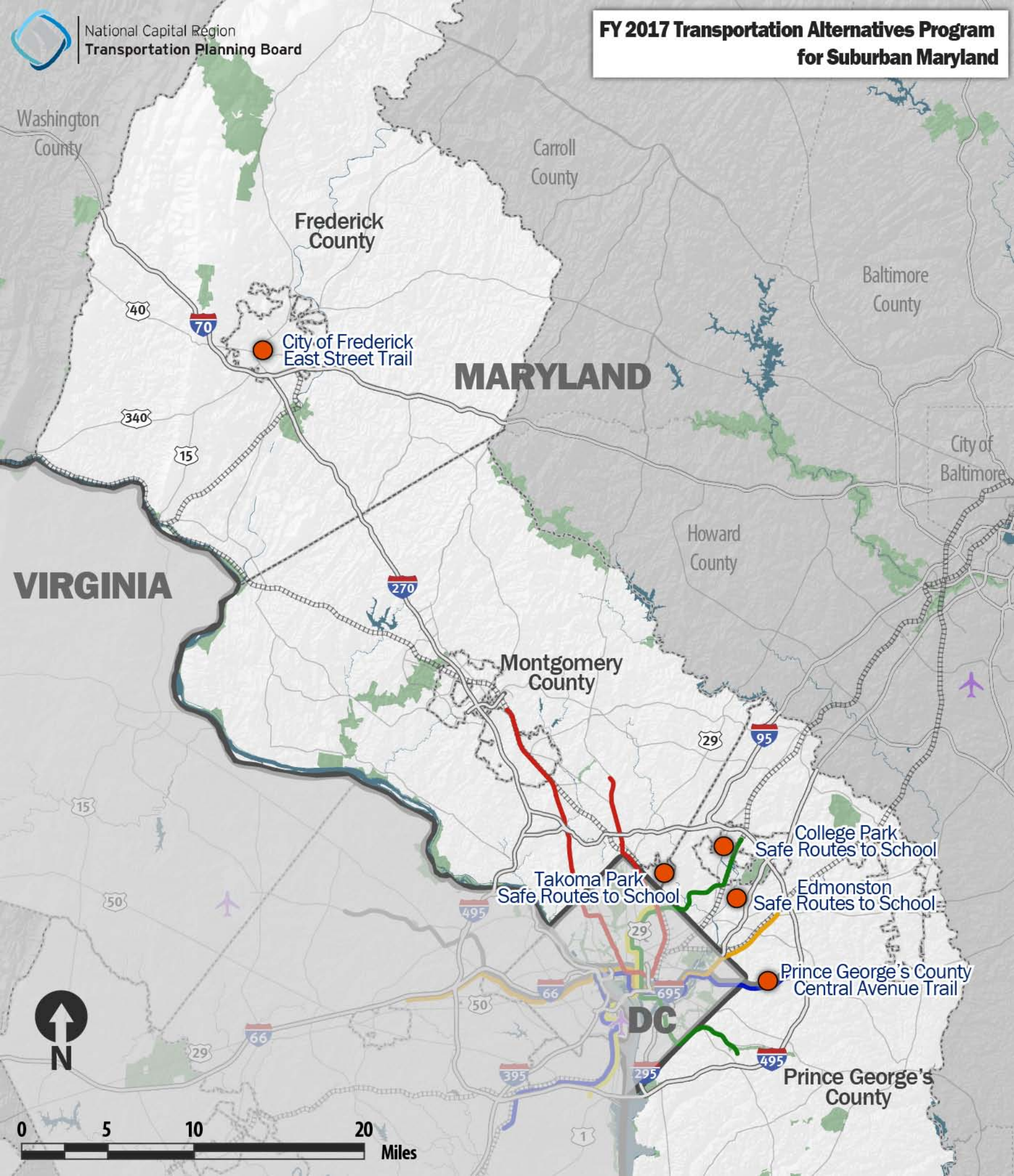
At the review panel's meeting on June 28, each member provided rankings of the project applications under consideration as high/medium/low based on the total scores. The panel then grouped and evaluated the projects for funding based on the rankings.

At the end of the June 28 meeting, the review panel recommended five projects for funding. A detailed list of recommended projects is at the end of this memo.

NEXT STEPS

Following the TPB's action on July 20, TPB staff will forward information regarding the selected projects to SHA as they convene Maryland's TAP Technical and Executive Committees. SHA has \$12 million available for statewide STP/TAP funds. Once all selections are finalized, SHA staff will work with applicants to administer funding.

Project Name	TPB Jurisdiction	Description	Funding Request	Local Match	Recommended Funding	Regional Activity Center	Rail Station	Safe Routes to School
East Street Rails with Trails	City of Frederick	Construction of a 3.7 mile off street shared use path and waysations along an old rail bed from the MARC Station to Mill Island.	\$1,016,859	\$338,953	\$479,000	Downtown Frederick, East Frederick Rising	Frederick MARC	N/A
College Park Sidewalks - Safe Routes to School	College Park	Construction of new sidewalk, curbs, and gutters on Berwyn Rd, Potomac St, Quebec St, and Rhode Island Avenue. Intersections will include crosswalks, water quality devices at drainage inlets, and pedestrian detection signals	\$57,464	\$14,366	\$57,464	N/A	N/A	Holy Redeemer ES
Rock Creek Trail Bridge over Silver Creek	Montgomery County	Design and construction of Rock Creek Hiker/Biker Trail improvements near the intersection of Beach Drive at Kensington Parkway, enhance the trail to meet ADA compliance and to complete design and construction for a pedestrian bridge over Silver Creek.	\$558,960	\$139,740		Kensington	N/A	N/A
Pinecrest Park - Safe Routes to School	Montgomery County	Construction of pathways and sidewalk connections through Pinecrest Local Park, adjacent to Pinecrest Elementary School	\$402,466	\$80,493		N/A	N/A	Pinecrest ES
3300 Rhode Island Avenue Pedestrian Enhancement Project	Prince George's County	Design landscape and hardscape improvements along the existing R-O-W between 3300, 3308 and 3310 Rhode Island Ave. The design will include new pedestrian walkways and bike racks to connect the residential and retail uses along Rhode Island Ave with the Metrobus transportation hub.	\$66,000	\$16,500		N/A	N/A	N/A
Central Avenue Connector - Phase III	Prince George's County	Preliminary Engineering (30% Design) for 0.32 miles of pedestrian/bicycle bridge structures, and two trail crossings. This phase of the trail starts at Capital Beltway/I-495, connecting to underground and above ground Metro lines, traveling from Morgan Boulevard Metro Station to Largo Town Center Metro Station.	\$109,400	\$27,350	\$109,400	Largo, Morgan Boulevard	Largo Metrorail Station, Morgan Boulevard Metrorail Station	N/A
Crittenden and 52nd Avenue Improvements - Safe Routes to School	Prince George's County	Construction of new sidewalk, ramps, curbs and gutters along 52nd Avenue and Crittenden Street. Funds will also support outreach events around public safety.	\$179,250	\$41,227	\$179,250	N/A	N/A	Rodgers Heights ES, William Wirt MS
Takoma Park Improvements - Safe Routes to School	Takoma Park	Construction of a bump out and crosswalks at the intersection of Philadelphia and Park Avenues. Sidewalk installation along Hodges Lane and Chestnut Avenue to connect to the schools and a raised intersection at Hodges Lane and Holly Avenue. Funds will also support enforcement activities, outreach, educational programming, and maintenance.	\$467,806	\$93,561	\$275,000	N/A	N/A	Five Schools
			\$2,858,205		\$1,100,114			



SURFACE TRANSPORTATION/ TRANSPORTATION ALTERNATIVES PROGRAM

Suburban Maryland

Lamont B. Cobb
Transportation Planner

Transportation Planning Board
July 20, 2016

Agenda Item #8



STP Block Grant (aka TAP)

- TAP was a federal formula program established under MAP-21 in 2012
 - Funded projects “alternative” to traditional highway capacity expansion
 - Combines three former programs: Transportation Enhancements, Safe Routes to School and Recreational Trails
- 2015 FAST Act reclassified TAP as a “Set-Aside” in STP Block Grant Program
- Funding formula, project and applicant eligibility remain largely unchanged
- Large MPOs participate in project selection



Agenda Item #8: Transportation Planning Board
July 20, 2016 | 2

Regional Priorities

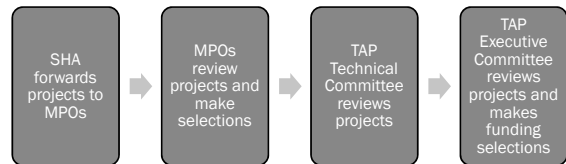
- Fund regional goals and priorities
 - Promote multimodal transportation options
 - Support regional activity centers
- Complement regional planning activities
 - TLC technical assistance
 - Regional Transportation Priorities Plan and Region Forward
 - 2012 Station Access Study



Agenda Item #8: Transportation Planning Board
July 20, 2016 | 3

Maryland Project Selection

- The TPB works with Maryland SHA for Project Selection
- FY 2017 application deadline: May 16, 2015



Agenda Item #8: Transportation Planning Board
July 20, 2016 | 4

Project Selection

- Selection Panel included transportation planning staff from DDOT, VDOT and SHA
- Panel members individually scored projects



- Based on scores, panel members rank projects “High/Medium/Low”
- Selection panel meeting on June 28, panel used rankings to help evaluate and prioritize projects for funding



Agenda Item #8: Transportation Planning Board
July 20, 2016 | 5

Evaluation Criteria

- Professional Assessment: knowledge of the region, project management experience, and analysis of project readiness
- Regional Criteria
 - Multimodal Transportation Options for non-drivers
 - Regional Activity Centers
 - Access to Transit
 - Safe Routes to School
 - Disadvantaged Communities
 - People with Disabilities
 - Local Commitment (% match in application)



Agenda Item #8: Transportation Planning Board
July 20, 2016 | 6

FY 2017 Project Recommendations

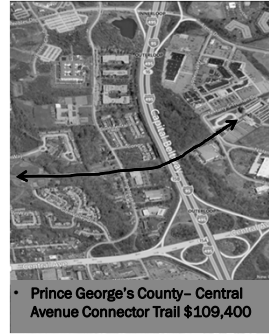


• College Park – Safe Routes to School \$57,464



• City of Frederick – East Street Rails with Trails \$479,000

FY 2017 Project Recommendations

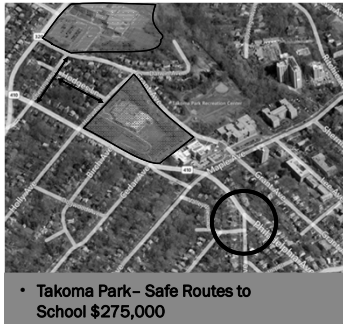


• Prince George's County – Central Avenue Connector Trail \$109,400



• Prince George's County (Town of Edmonston) – Safe Routes to School \$179,250

FY 2017 Project Recommendations



• Takoma Park – Safe Routes to School \$275,000

STP/TAP Next Steps

- TPB review and approve R2-2017
- Submit recommendations to SHA
- SHA continues process with state TAP Technical and Executive Committees

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Washington, DC 20002

ITEM 9 – Action

July 20, 2016

Approval of Regional Car Free Day 2016

Staff

Recommendation: Receive briefing

Issues: None

Background: In an effort to create awareness of and encourage residents to go car free by using public transportation, bicycling or walking, or go car lite and carpool, Regional Car Free Day events are being organized in the region for September 22. These events will encourage the community and regional decision-makers to support car free policies and initiatives.

July 20, 2016



**NATIONAL CAPITAL REGION
TRANSPORTATION PLANNING BOARD**

**PROCLAMATION ESTABLISHING SEPTEMBER 22, 2016
AS CAR FREE DAY
IN THE WASHINGTON METROPOLITAN REGION**

WHEREAS, the National Capital Region Transportation Planning Board (TPB) is the Metropolitan Planning Organization for the Washington Region; and

WHEREAS, the TPB through its Commuter Connections program promotes and organizes the annual Car Free Day event along with its network members throughout the Washington area; and

WHEREAS, Car Free Day invites Washington region citizens to telework and try alternative forms of transportation such as transit, bicycling and walking, and “car lite” methods such as carpools and vanpools; and

WHEREAS, Car Free Day benefits the National Capital Region through improved air quality, reduced traffic congestion and parking demands, and energy conservation; and

WHEREAS, Car Free Day corresponds with European Mobility Week, occurring September 16-22, celebrating sustainable mobility.

NOW, therefore, be it resolved that the National Capital Region Transportation Planning Board:

- 1. Proclaims September 22, 2016 as Car Free Day throughout the Washington Metropolitan Region; and**
- 2. Encourages citizens to pledge to be Car Free or Car-lite by visiting www.carfreemetrodc.org; and**
- 3. Asks TPB Member jurisdictions to adopt similar proclamations in support of Car Free Day.**



National Capital Region
Transportation Planning Board
July 20, 2016



Car Free Day Background

- First took place in the DC region in 2007.
- Event started in Europe in 1995, went global in 2000 and is part of Europe's mobility week.
- For at least one day during mobility week, cities set aside an area solely for pedestrians, cyclists and public transit that is ordinarily used by cars.
- Car Free Day is celebrated in 1,500 cities in 40 countries.



Car Free Day Background

- Regional rollout occurred in 2008 with TPB support.
- COG/TPB's Commuter Connections program promotes and organizes Car Free Day along with its network members.
- Invites Washington region citizens to try alternative forms of transportation such as transit, bicycling and walking.
- Includes car-lite methods such as carpools and vanpools; also supports practice of teleworking.
- Results included in the Commuter Connections TERM Analysis.



International



VICTORIA



PARIS

EUROPEAN MOBILITY WEEK
16-22 SEPTEMBER 2016



DUBAI



2015 Media Coverage Headlines

- Car-free day coming Sept. 23
- Going car free: it isn't just for New Yorkers
- On the Move: Car-free day urges drivers to take a hike
- Car Free Day Radio Interviews – WMAL and WPFW
- WUSA TV Car Free Day Interview
- On the Move: Car Maintenance 101
- Repeat the easy travel seen during the pope's visit? It would take a miracle.
- GU Wins Car Free Challenge

THE HOYA



103.5 FM 107.7 FM

FrederickNewsPost.com



WUSA 9



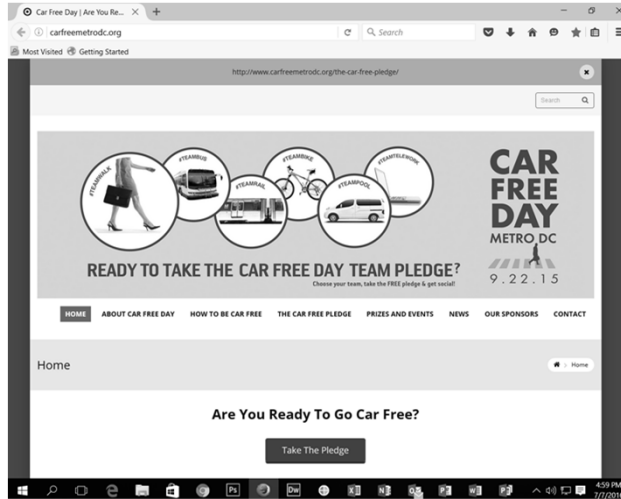
Open Participation

Pledge to be Car Free at
www.carfreemetrodc.org

- ✓ Workers
 - ✓ Students
 - ✓ Homemakers
 - ✓ Seniors
- Primary targets are individuals who ordinarily travel alone by car for work, errands and classes.
 - Secondary groups are those already in Car Free travel modes.



Car Free Day Web Site



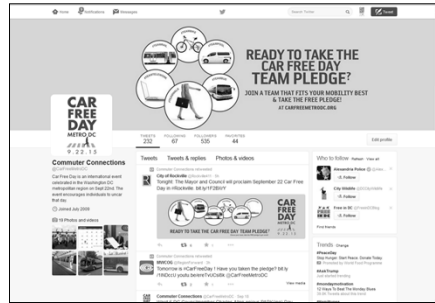
Promotional Materials



Social Media



twitter



Advertising/Marketing



Opt-In Text Messaging



Transit



Local Events



2016 CFD Call To Action

- 10,000 Pledges - Goal
- TPB Proclamation
- Pledges from TPB Members
- Local Activities/Events
- Media Coverage



Questions?



2015 TPB Proclamation Signing



ITEM 10 – Information
July 20, 2016

**Briefing on Mitigation Actions and Experiences from WMATA’s
SafeTrack Surge Program**

Staff

Recommendation: Receive briefing

Issues: None

Background: The board will be briefed on experiences and mitigation actions taken by local jurisdictions and WMATA at locations that have recently undergone significant safety and maintenance work as part of WMATA’s SafeTrack work plan.



MEMORANDUM

TO: Transportation Planning Board
FROM: Eric Randall, TPB Transportation Engineer
SUBJECT: Recent TPB and COG Activities in support of the WMATA SafeTrack Plan .
DATE: July 14, 2016

This memorandum provides an overview of recent TPB and COG activities in support of the WMATA SafeTrack safety surges.

COMMUTER CONNECTIONS UPDATE

Commuter Connections/TPB staff presented information during two webinars hosted by Montgomery County on June 23rd and 28th for employers which focused on promoting and using Teleworking and Alternative Work schedules during the SafeTrack project. The Commuter Connections SafeTrack Work Group held conference call meetings on June 30th, July 8th, and July 15th. Each meeting was held just prior to an upcoming SafeTrack Surge and allowed meeting participants to exchange information on TDM strategies being used along with lessons learned from previous Surges.

The Commuter Connections SafeTrack web site was updated throughout the month with new links added and can be accessed from the Commuter Connections home page at www.commuterconnections.org.

Approximately 60,000 Geo-targeted messages to employers and employees surrounding the impacted Metrorail stations for Surges 1-4 were developed and sent. The purpose of the e-mailed messages was to provide alternative commuting information and options to commuters affected by the SafeTrack Surges and for employers to disseminate the information to their respective employees. Staff also worked directly with the General Services Administration to reach federal Employee Transportation Coordinators with messaging about alternative commuting options during the SafeTrack project for federal government workers. Social media outreach continued for Surges 1-4 along with public service announcements, paid radio advertisements, and a paid ad in the Washington Business Journal.

The Commuter Connections SafeTrack Facebook ad that ran garnered 17,000 click-thru's. Out of 50,000 web page visits to the Commuter Connections web site in June, 16.5% of those were to the SafeTrack web hub making it the second most popular page after the site's home page. There was a 104% increase during the month of June for Ridesharing applications received (723) compared to June of 2015 (355).

COG PUBLIC OUTREACH

COG's Office of Communications has been sponsoring conference calls with each of the jurisdiction's Public Information Officers (PIOs) in order to coordinate outreach and messaging activities for each of the SafeTrack surges. Calls were held on June 13 in preparation for Surge 2 and June 27 in preparation for Surges 3 and 4. The calls have had good participation, with WMATA and Commuter Connections providing updates of their activities and answering questions from the PIOs.

REGIONAL ACTIVITIES

Briefings and discussions of SafeTrack have taken place at recent meetings of the TPB Technical Committee. Aside from regional coordination discussion, preliminary traffic analysis of the impacts of the SafeTrack surges is being conducted by TPB staff.

The Metropolitan Area Transportation Operations Coordination (MATOC) Program has hosted Transit Task Force teleconferences, most recently on June 20, June 22, and July 6, to share information on actions and impacts from the surges and transit activities.

TRANSPORTATION AGENCY INFORMATION

Agencies in the region are implementing a number of mitigation measures to provide transportation alternatives during the SafeTrack safety surges, including:

- Additional bus/shuttle service on routes in or near the surge work zones;
- Expanded rush hour parking restrictions along primary commuter and bus routes;
- Traffic signal re-timing and additional traffic control officers;
- Additional Capital Bikeshare bikes and stations, along with a new payment option;
- Bike convoys with guides;
- Promotion of carpooling, telework and flexible work options.

WMATA has also had customer service agents positioned in the impacted Metro stations guiding customers to alternative modes of travel and will also be hosting “pop-up” events at some of the key impacted stations.

The Office of Personnel Management issued a [memorandum](#) on May 20 to all agencies encouraging the use of Telecommuting and Flexible Work Schedules.

Specific actions by jurisdictions or transportation agencies can be found on their websites:

City of Alexandria <https://www.alexandriava.gov/SafeTrack>

Arlington County <https://topics.arlingtonva.us/safetrack/>

District of Columbia <http://safetrack.godcgo.com/>

Fairfax County <http://www.fairfaxcounty.gov/safetrack/>

Montgomery County

<http://gomontgomery.blogspot.com/2016/06/safetrack-to-affect-montgomery-county.html>

Prince George's County

<http://www.princegeorgescountymd.gov/2509/SafeTrack>

Virginia Railway Express (VRE) <http://www.vre.org/service/safetrack-information/>

WMATA <https://wmata.com/rail/safetrack.cfm>

Attached are WMATA's reports on the work completed during Surge 1 and Surge 2.



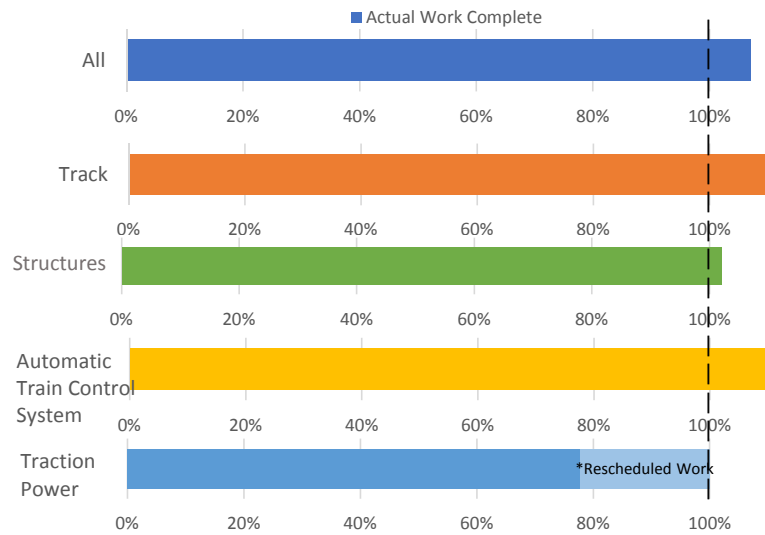
SafeTrack: Surge 1

June 4-16: Ballston to East Falls Church Track 1, Continuous Single Tracking

Final report: Data as of 06/22/16

The focus of Surge 1 is to repair/replace track and other rail infrastructure elements to provide a system that is free from safety defects, improves service reliability by eliminating speed restrictions and improves ride quality.

Overall Progress (% Planned Work Complete)



Surge 1 finished on June 16, 2016, with almost all tasks completed. As a result, this section of track 1 from Ballston to East Falls Church was brought into a state of good repair.

During the surge, priority was given to addressing potential safety defects and repairing or replacing critical rail infrastructure that affects train speeds and ride quality. Additional regular and preventive maintenance activities were fit in as time permitted. These maintenance activities are and will continue to be conducted on a regular basis during non-revenue hours to keep the infrastructure in a state of good repair.

Critical tasks accomplished during the surge include:

- + Replacement of over 1,800 cross-ties
- + Renewal of over 540 insulators
- + Renewal of over 3,100 linear feet of spot rail
- + Inspection and repair of 30 power cables and 24 expansion cables

In some cases, work crews were able to accomplish more than originally planned, such as renewing about 500 additional fasteners and inspecting and repairing about 70 additional Intrusion Detection Warning (IDW) systems.

- *Rescheduled work: one task remains for traction power
- +Two junction boxes will be inspected and repaired when crews return to this area during surge 5 at the end of July

*Surge #1 results are preliminary and subject to quality control processes which will remain continuous throughout the duration of SafeTrack. Any remediation work that is identified will be accomplished during normal maintenance times, without impacting passenger service.





SafeTrack: Surge 1 Detailed Report

6/22/2016

	Key Tasks	<i>unit</i>	Completed During Surge
Track	Crosstie renewal	# crossties	1,856
	Insulator renewal	# insulators	541
	Fastener renewal	# fasteners	2,214
	Spot rail renewal	# linear feet	3,184
		# linear feet cover	
	Third rail maintenance	board	410
	Joint elimination	# joints welded	16
Structures	Track bed cleaning	# linear feet	3,150
	Drain maintenance	# linear feet	4,191
	Leak repair	# leaks	20
	Tunnel light repair/relamp	# units	17
Automatic Train Control (ATC) System	Intrusion Detection Warning (IDW) System		
	Renewal	# IDW systems	208
Traction Power	Power Cables	# cables	30
	Expansion Cables	# cables	24



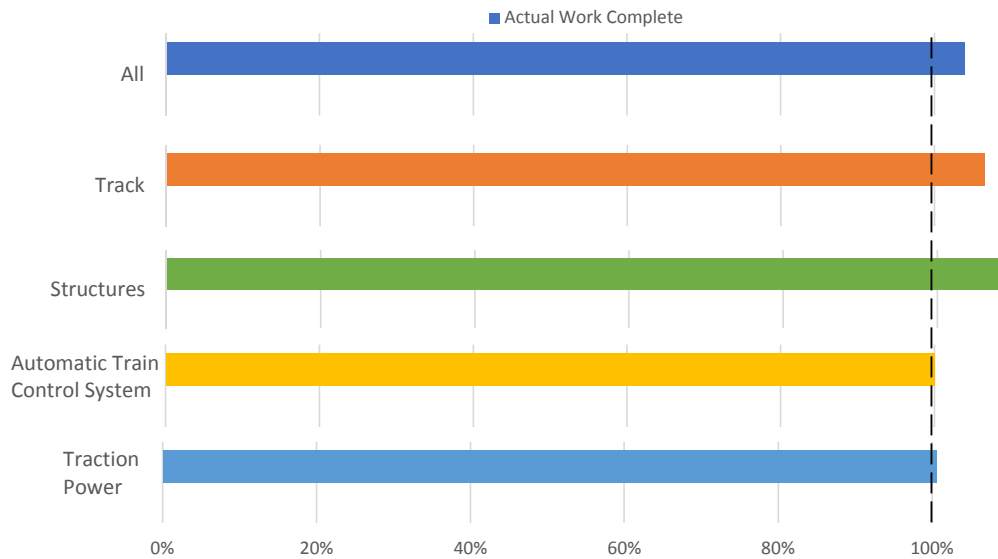
SafeTrack: Surge 2

June 18 - July 3: Eastern Market to Minnesota Ave & Benning Road, Line Segment Shutdown

Final Report
Data as of 07/05/16

The focus of Surge 2 is to repair/replace four major switches that allow trains to move from one track to another at the D&G junction, where the Orange, Blue and Silver lines split after Stadium-Armory Station. In addition, crews renewed most of the other rail infrastructure in this area, including crossties, rail, fasteners, signals, and power cables.

Overall Progress (% Planned Work Complete)



Notes:

*Surge #2 results are preliminary and subject to quality control processes which will remain continuous throughout the duration of SafeTrack. Any remediation work that is identified will be accomplished during normal maintenance times, without impacting passenger service.

Actual work complete represents the average % complete across all tasks.

Surge 2 finished on July 3, 2016 with all critical tasks completed. As a result, this key junction between Eastern Market and Minnesota Avenue and Benning Road was brought into a state of good repair.

During the surge, priority was given to addressing potential defects and repairing or replacing critical rail infrastructure that affects train speeds and ride quality. Additional regular and preventive maintenance activities were fit in as time permitted. These maintenance activities are and will continue to be conducted on a regular basis during non-revenue hours to keep the infrastructure in a state of good repair.

Critical tasks accomplished during the surge include:

- + Replacement of 4 major switches
- + Replacement of over 500 crossties
- + Renewal of over 230 insulators
- + Elimination of over 20 joints
- + Renewal of over 2,000 linear feet of grout pads
- + Renewal of 12 signals
- + Inspection and repair of over 180 power cables





SafeTrack: Surge 2 Detailed Report

Final Report: 7/5/2016

	Task	unit	Completed During Surge
Track	Crosstie renewal	# crossties	533
	Insulator renewal	# insulators	235
	Switch renewal	# switches	4
	Fastener renewal	# fasteners	2,116
	Stud renewal	# studs	2,754
	Third rail maintenance	# linear feet cover board	642
	Third Rail Expansion Joint elimination	# joints welded	10
	Stringer Rail renewal	# linear feet	1,745
	Joint elimination	# joints welded	22
Structures	Grout Pad renewal	# linear feet grout pad	2,005
	Track bed cleaning	# linear feet	3,160
	Drain maintenance	# linear feet	7,148
	Leak mitigation	# leaks	69
Automatic Train Control System	Signal replacement/refurbishment	# signals	12
Traction Power System	Emergency Trip Station Repair	# units	13
	Tunnel light repair/relamp	# units	140
	Power Cable repair/replacement	# cables	183

Materials for
Item 10 - Traffic Conditions During SafeTrack Safety Surges 1, 2 and 3
will be posted early next week

ITEM 11 – Information
July 20, 2016

Strategic Plan for the Development of
the TPB Travel Demand Model

Staff

Recommendation: Receive briefing

Issues: None

Background: TPB staff and Cambridge Systematics, Inc. have developed a draft multi-year strategic plan for updating the regional travel demand forecasting model. The seven-year plan includes both updates to the existing trip-based travel model and an eventual transition to an activity-based travel model. The board will be briefed on how the plan was developed, the contents of the plan, and also on a short-term implementation plan that focuses on the first two years of the seven-year plan.

STRATEGIC PLAN FOR THE DEVELOPMENT OF THE TPB TRAVEL DEMAND MODEL

Ronald Milone, TPB Travel Forecasting & Emissions Analysis Program Director
Mark S. Moran, TPB Principal Transportation Engineer

National Capital Region Transportation Planning Board

July 20, 2016



National Capital Region
Transportation Planning Board

Agenda Item # 11

Overview

- Current uses of the TPB travel demand model
- TPB models development program
- Strategic plan for models development
 - Formulation
 - Benefits



Photo credit: Andreas Levers



National Capital Region
Transportation Planning Board

Agenda Item #11: Strategic Plan for Models Development 7/20/2016 | 2

Current uses of the TPB travel model

TPB Staff Activities	TPB Member Activities
CLRP Evaluation	Project Planning/Evaluation
Air Quality Conformity Determination	Site Development Review
Mobile Emissions Inventories	County Planning
Environmental Justice	Alternatives Analysis
Regional Scenario Analysis	Corridor Planning
Project Planning (Technical Assistance)	Statewide Planning



TPB Models Development program

- Focused on maintenance, development and research
- Oversight: Travel Forecasting Subcommittee (TFS)
 - Representatives of state and local agencies
 - Consultants supporting project planning
 - Interested members of the public
- Since FY 2006, staff has maintained a consultant-assisted project to help improve the model

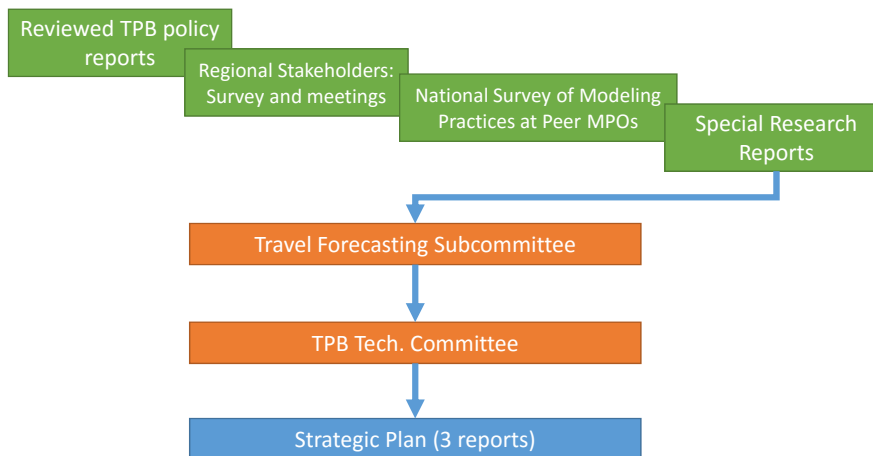


Features of the current TPB model

- Aggregate, trip-based model (“4-step” model)
- Developed & maintained largely by TPB staff
- Refined and updated each year
- Calibrated and validated with local data reflecting observed travel behavior
- Modeled area
 - Very large (22 counties/jurisdictions)
 - Multi-state (DC, MD, VA, one county in WV)
- Fully documented and transparent



Strategic Plan Formulation



Comparison of modeling approaches

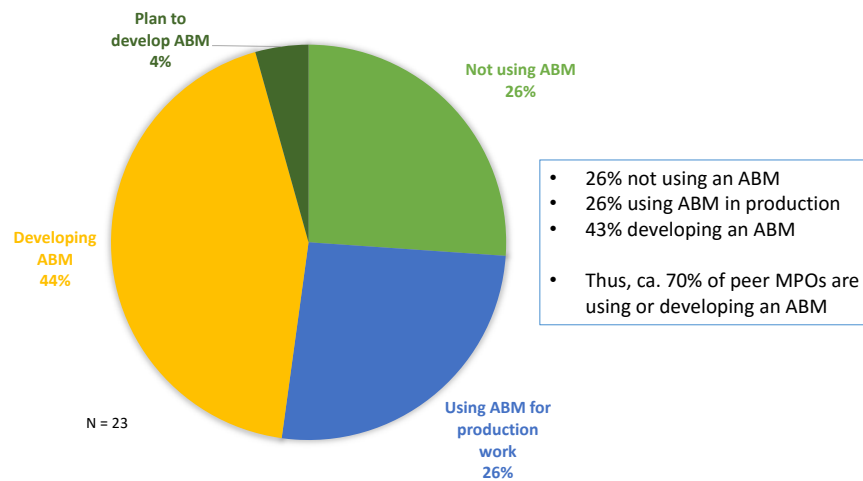
Trip-Based Model (current TPB model)	Activity-Based Model (ABM)
Trips are generated from zonal aggregations of households	Trips are generated based on the simulation of individual households and persons
Each trip is independent of every other trip	Trips are chained into tours, which allows continuity of information
Timing/direction of trips is not an explicit choice (fixed factors)	Starting and ending time of activities are modeled choices
Geographic scale: zone/TAZ	Geographic scale: Parcel and zone/TAZ

Outwater, Maren, and Joel Freedman. "Activity-Based Modeling, Session 1: Executive Perspective." Travel Model Improvement Program (TMIP) Webinar Series, February 2, 2012.

- It is not expected that an ABM will alter regional metrics (e.g., VMT, mode choice).
- Key advantage of ABM: More detailed information about travelers
=> better understanding of policy options



National survey of peer MPOs: ABM Usage



Strategic plan overview

- Three phases over seven years

	Description	Fiscal Years
1	Updates to the existing FSM	2016-2017
2	Development of an ABM with existing data	2018-2020
3	Development of an ABM with new data *	2021-2022

* New household travel survey to be conducted in FY 17; ready for use in FY 20



Benefits of Phase 1

- Provides a workable, federally approved model for annual TPB work activities
- Provides time and funding needed to develop the new model and collect new data
- Key improvements
 - Improved ability to model transit sub-modes
 - Improved modeling of HOV & priced facilities
 - Improved treatment of non-motorized travel
 - Updated treatment of non-resident travel in the region



Benefits of Phases 2 & 3

- Migration to an ABM (in line with peer MPOs)
- Improved ability to model how individuals make travel decisions
- Better able to study the behavior of traveler sub-populations
- Improved capabilities & sensitivities for modeling transportation pricing & environmental justice
- More detailed travel metrics



Conclusions

- We continue to monitor model development efforts at our peer MPOs, including the Baltimore Metropolitan Council
- Staff focus at present is to complete immediate trip-based modeling work (Phase 1 of strategic plan)
- Stakeholders will be brought along with us
- Improved methods are not a substitute for modeling data/ongoing data collection



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 Washington, DC 20002



Technical reports

- *Review of Consultant Recommendations from FY 2012-2014 of the COG/TPB Travel Demand Modeling Consultant-Assistance Project, Task Order 15.1.* Oct. 15, 2015.
- *Review of Transit Modeling with Respect to FTA Guidance, Task Order 15.3.* Oct. 15, 2015.
- *Identifying Potential Opportunities for Model Improvement, Task Order 15.2, Report 1 of 3.* Oct. 15, 2015.
- *Status of Activity-Based Models and Dynamic Traffic Assignment at Peer MPOs, Task Order 15.2, Report 2 of 3.* Oct. 15, 2015.
- *Strategic Plan for Model Development, Task Order 15.2, Report 3 of 3.* Oct. 15, 2015.

These reports can be found at the following page:

<https://www.mwkog.org/documents/tfs/consultant-end-of-fiscal-year-reports/>



Peer MPOs for TPB*

1. Southern California Association of Governments (SCAG)
2. New York Metropolitan Transportation Council (NYMTC)
3. The Chicago Metropolitan Agency for Planning (CMAP)
4. Metropolitan Transportation Commission (MTC)
5. North Jersey Transportation Planning Authority (NJTPA)
6. North Central Texas COG (NCTCOG)
7. Houston-Galveston Area Council (H-GAC)
8. Delaware Valley Regional Planning Commission (DVRPC)
9. **National Capital Region Transportation Planning Board (TPB)**
10. Atlanta Regional Commission (ARC)
11. Southeast Michigan COG (SEMCOG)
12. Maricopa Association of Governments (MAG)
13. Puget Sound Regional Council (PSRC)
14. Boston Region MPO
15. San Diego Association of Governments (SANDAG)
16. Metropolitan Council
17. Denver Regional COG (DRCOG)
18. Baltimore Regional Transportation Board (BRTB)
19. Southwestern Pennsylvania Commission (SPC)
20. East-West Gateway Council of Government (EWGCOG)
21. Sacramento Area COG (SACOG)
22. Portland METRO
23. Mid-Ohio Regional Planning Commission (MORPC)

*20 largest MPOs (based on 2010 population in the MPO planning area) plus three smaller MPOs known for innovation in travel demand modeling





MEMORANDUM

TO: National Capital Region Transportation Planning Board

FROM: Ronald Milone and Mark Moran, COG/TPB Staff

SUBJECT: Strategic Plan for the TPB Travel Model Development

DATE: July 12, 2016

INTRODUCTION

This memorandum provides a brief review of a multi-year strategic plan that will guide the future development of the TPB's travel forecasting methods. The plan was developed with the assistance of a nationally recognized transportation consultant, Cambridge Systematics, Inc.(CS), during FY 2015 and early FY 2016. The TPB Travel Forecasting Subcommittee (TFS), the oversight committee for the TPB's Models Development program, has received regular briefings on the plan throughout its development. Additionally, the TPB Technical Committee was briefed on the plan on April 3, 2015, December 4, 2015, and will be briefed again on July 8.

BACKGROUND

The currently adopted travel demand forecasting model, known as the Version 2.3 Model, supports many of the transportation planning studies conducted in the Washington, D.C. region. The current model is an aggregate, trip-based (or "four-step") model that operates on a 6,800-square-mile domain. The TPB model produces forecasts of highway, transit and non-motorized travel demand that are most meaningful at a regional scale of analysis. TPB model is not appropriate for sub-area or site-specific transportation studies, such as determining turning movements at roadway intersections or developing passenger demand at specific rail stations, since the model has not been validated at those levels. For sub-area or site-specific transportation studies, one should either post-process the outputs of the regional travel model, or use specially tailored software. Nonetheless, the TPB travel demand model provides a logical, rational and reasonable basis for conducting metropolitan-area studies including evaluations of the regional long-range transportation plan, mobile emission assessments, and corridor-level planning.

While TPB staff implements refinements to the adopted travel model on a yearly basis, the last formal strategic plan for the TPB travel models was prepared in 1993.¹ The development of a strategic plan is important as it allows staff to deliberatively chart out a model improvement course that takes into account local planning issues, best practices in travel demand forecasting at other metropolitan planning organizations (MPOs), and the latest advances emerging from research.

¹ Parsons Brinckerhoff Quade & Douglas, Inc., *A Strategic Plan for the Improvement of the Metropolitan Washington Council of Governments Transportation Modeling Procedures* (Washington, D.C.: Metropolitan Washington Council of Governments, January 8, 1993).

STRATEGIC PLAN GOALS

The primary goal of the strategic plan was to ensure that future modeling improvements would align with policy areas of interest of the TPB and its stakeholders. Staff consulted the TPB Vision² and the Regional Transportation Priorities Plan (RTPP)³ to identify key policy areas. The RTPP goals relate to themes that are quite relevant to travel modeling and include providing a comprehensive range of transportation options, promoting established activity centers as prime development locations, and maximizing operational effectiveness of the transportation system.

A secondary goal of the strategic plan was to ensure that the TPB travel modeling practice was within the state of the practice at other peer MPOs. As transportation issues and interests vary substantially between metropolitan areas, it is generally accepted by the profession that there is no single modeling approach that is suitable for all MPOs. Nonetheless, an evaluation of modeling procedures used in other metropolitan areas was deemed useful especially for identifying possible long-term improvements.

A third goal was to ensure that the improved regional model would be usable by all the key regional stakeholders, including state DOTs, local governments, and consultants.

STRATEGIC PLAN DEVELOPMENT

The strategic plan formulation was supported with information obtained both locally and nationally. TPB worked with CS to design and implement two surveys:

1. Model Stakeholder Survey: The online survey, conducted in spring of 2015, targeted travel modeling users in the Washington, D.C. region and inquired about how the regional model was being used and was used to solicit feedback on the positive and negative features of the currently adopted model. The respondents included local transportation agency staff as well as consultants who are familiar with the TPB model. After the survey was conducted, a special workshop was held, at which, TPB staff shared the initial results of the survey and also asked attendees some of the same questions as were found in the online survey.
2. A National Survey of Modeling Practices at Peer MPOs: In this second online survey, also conducted in spring of 2015, 23 MPOs were contacted and asked to identify features of their travel forecasting practice, both in application and in development. The sample included the top 20 MPOs, in terms of population (TPB is #9 on the list) and three smaller MPOs known for innovation in travel demand forecasting.

The stakeholder survey indicated that travel modelers in the region were generally quite satisfied with the existing model, model documentation and TPB staff support. However, stakeholders voiced some dissatisfaction with lengthy computing times and with difficulties in adapting the regional model to sub-area study needs. Stakeholders pointed to several emerging areas of planning interest that should be considered in the TPB's model improvement plans:

- peak spreading behavior and time-of-day policies;

² "The TPB Vision," *Metropolitan Washington Council of Governments*, 2015, <http://www.mwcog.org/transportation/activities/vision/>.

³ Ronald Kirby et al., *Regional Transportation Priorities Plan for the National Capital Region* (Washington, D.C.: National Capital Region Transportation Planning Board, Metropolitan Washington Council of Governments, January 15, 2014), <https://www.mwcog.org/transportation/priorities/>.

- transit modeling (demand for better differentiation of transit sub-modes; modeling transit oriented development and transit access);
- pricing and managed lanes, such as high-occupancy vehicle (HOV) lanes and high-occupancy/toll (HOT) lanes;
- travel time reliability; and
- non-motorized travel (bike and walk) sensitivity.

The national survey of MPO practices indicated that 70% of the agencies surveyed were either using or developing an activity-based travel demand mode (ABM). ABMs have emerged out of research as an alternative to conventional trip-based models. ABMs are different from trip-based models in that they model individual behavior as opposed to aggregate travel behavior, and they model tours (a tour is a sequence of trips). The survey determined that six of the 23 were using an ABM in production while 10 are currently developing an ABM. The findings of the national survey indicated to staff that TPB’s modeling practice should, at minimum, consider the exploration of an ABM in its travel modeling improvement planning, in order to remain consistent with modeling activities being undertaken by peer MPOs. In fact, our sister MPO in Baltimore - the Baltimore Metropolitan Council (BMC) – which models some of the same jurisdictions that we do and uses the same household travel survey as we do, has just completed a three-year project to develop its own ABM. TPB staff has been monitoring the progress of this effort and will consider its advances as we move forward with model improvements for the Washington, D.C. region.

STRATEGIC PLAN RECOMMENDATIONS

The TPB’s strategic plan is contained in three reports:

1. Identifying Potential Opportunities for Model Improvement;⁴
2. Status of Activity-Based Models and Dynamic Traffic Assignment at Peer MPOs;⁵ and
3. Draft Strategic Plan for Model Development.⁶

The first two reports focused on the presentation and evaluation of the information drawn from the stakeholder and national surveys conducted earlier. The third report detailed the recommended strategic plan, which was informed by the first two reports.

The recommended strategic plan is presented as a seven-year “roadmap” of travel modeling improvements. It is comprised of three phases over a seven-year timeframe:

- Phase 1 (Years 1-2): Four-Step Modeling Improvement
 Phase 2 (Years 3-5): Activity Based Model (using existing data)
 Phase 3 (Years 6-7): Enhanced Activity Based Model (using updated data)

⁴ Cambridge Systematics, Inc., *Identifying Potential Opportunities for Model Improvement, Task Order 15.2, Report 1 of 3*, Final Report (Washington, D.C.: Metropolitan Washington Council of Governments, National Capital Region Transportation Planning Board, October 15, 2015).

⁵ Cambridge Systematics, Inc., *Status of Activity-Based Models and Dynamic Traffic Assignment at Peer MPOs, Task Order 15.2, Report 2 of 3*, Final Report (Washington, D.C.: Metropolitan Washington Council of Governments, National Capital Region Transportation Planning Board, October 15, 2015), <http://www.mwcog.org/uploads/committee-documents/bVxfWF9Y20151027140413.pdf>.

⁶ Cambridge Systematics, Inc., *Draft Strategic Plan for Model Development, Task Order 15.2, Report 3 of 3*, Final Report (Washington, D.C.: Metropolitan Washington Council of Governments, National Capital Region Transportation Planning Board, October 15, 2015).

Phase 1 will focus on improving the existing trip-based model. The Phase 1 improvements will include transit modeling refinements, enhanced modeling treatment of managed (HOT/HOV) lanes, improved methods for modeling non-resident travel in the Washington region. Phase 1 will also include refinements to the treatment of non-motorized travel and several other technical refinements. This phase will also include preparatory activities supporting the next phases, such as developing a parcel-level database. Staff will also interact with BMC staff to gauge the comfort level they have with their ABM.

Phase 2 will begin the development of a “first-cut” ABM using existing data, such as the 2007/2008 COG/TPB Household Travel Survey. The ABM would likely be consistent with other such models that have been implemented in other metropolitan areas. Staff envisions that Phase 2 will serve as a demonstration that an ABM can be successfully developed for the Washington region and can serve as a robust analytical tool to model policies that are difficult to model with the existing trip-based model (such as pricing and environmental justice).

Phase 3 will involve the development of an enhanced ABM using newly collected household travel survey data (a 2017 survey is currently planned). The Phase 3 effort will, of course, be dependent upon the successful completion of Phase 2.

NEXT STEPS

Following the review and approval of the strategic plan by the TFS, COG/TPB staff, working with CS, begun to implement Phase 1 of the plan. To identify some of the updates and guide the work, a short-term implantation plan was developed.⁷ Following the review and approval of the Technical Committee, the strategic plan will be finalized and presented to the TPB at its July 20, 2016 meeting. COG/TPB staff will continue to monitor the developments at other peer MPOs, including BMC, and will apprise both the TFS and the Technical Committee of any new developments.

Ref: Strategic_Plan_Overview_v4.docx

⁷ John (Jay) Evans to Mark Moran, “Short-Term Trip-Based Model Strategy Implementation Plan,” Memorandum, (November 11, 2015).