# National Capital Region Transportation Planning Board

777 North Capitol Street, N.E., Suite 300, Washington, D.C. 20002-4290 (202) 962-3310 Fax: (202) 962-3202

## MEETING NOTICE

Date: June 20, 2012
Time: 12 noon
Place: COG Board Room

10:30 am to 11:45 am **Work session on the Development of the TPB Regional Transportation Priorities Plan (RTPP)**

The RTPP is being developed to identify near and long term regional strategies that offer the greatest potential contributions toward addressing regional challenges. TPB staff will summarize lessons learned from listening sessions with regional stakeholders, and highlight the outcomes from a June 2 citizen focus group. The focus group was conducted to assess how best to communicate proposed regional challenges and strategies to the general public, and to provide insights for further outreach activities throughout the development of the plan.

## AGENDA
## (BEGINS PROMPTLY AT NOON)

12 noon 1. **Public Comment on TPB Procedures and Activities**
.....Chairman Turner

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 asked to bring written copies of their remarks (65 copies) for distribution at the meeting.

12:20 2. **Approval of Minutes of May 16 Meeting**
.....Chairman Turner

12:25 3. **Report of Technical Committee**
.....Mr. Rawlings
Chair, Technical Committee

12:30 4. **Report of the Citizen Advisory Committee**
.....Ms. Slater
Chair, Citizens Advisory Committee

12:40 5. **Report of Steering Committee**
..... Mr. Kirby
Director, Department of
Transportation Planning (DTP)

12:45 6. **Chair's Remarks**
.....Chairman Turner

*Alternative formats of this agenda and all other meeting materials are available upon request. Email: accommodations@mwcog.org. Phone: 202-962-3300 or 202-962-3213 (TDD). Please allow seven working days for preparation of the material.*
*Electronic versions are available at www.mwcog.org.*

## ACTION ITEMS

12:50 7. **Approval of CY 2012 Projects for Funding Under the Job Access Reverse Commute (JARC) and New Freedom Programs of the Federal Transit Administration (FTA)**

.....Mr. Wojahn, Chair
TPB Human Service Transportation
Coordination Task Force
Ms. Newman, DTP

In the Fall of 2006 the TPB became the designated recipient of the FTA JARC and New Freedom program funding for the Washington DC-VA-MD Urbanized Area. These funds are for improving mobility options of low-income commuters and persons with disabilities respectively. A project solicitation for JARC and New Freedom funds was conducted from February 16 through April 11. In April and May, a selection committee chaired by Mr. Wojahn reviewed the project applications and recommended projects to be presented to the TPB for funding approval. The Board will be briefed on the solicitation and selection process and asked to approve the projects for funding. The Board will also be briefed on the next project solicitation scheduled for early 2014.

**Action:** Adopt Resolution R17-2012 to approve CY 2012 projects for funding under the JARC and New Freedom Programs of the Federal Transit Administration.

1:00 8. **Approval of an Amendment to the FY 2011-2016 TIP that is Exempt from the Air Quality Conformity Requirement to Include Funding for the I-95 HOV/HOT Lanes Project as Requested by the Virginia Department of Transportation (VDOT)**

.....Mr. Moore, VDOT

In the enclosed letter of June 12, VDOT has requested an amendment to the FY 2011-2016 TIP to modify funding for the I-95 HOV/HOT Lanes Construction project and to include two new projects: I-95 Preliminary Engineering Studies, and I-95 HOV/HOT Lanes Project PPTA Development and Management Oversight. The I-95 HOV/HOT Lanes Project was included in the Air Quality Conformity Assessment of the 2011 CLRP, and these amendments will have no impact on that determination.

**Action:** Adopt Resolution R18-2012 to amend the FY 2011-2016 TIP to modify funding for the I-95 HOV/HOT Lanes Construction project and to include two new projects: I-95 Preliminary Engineering Studies, and I-95 HOV/HOT Lanes Project PPTA Development and Management Oversight.

## INFORMATION ITEMS

1:05 9. **Briefing on the Draft Air Quality Conformity Assessment of the 2012 CLRP and FY 2013-2018 TIP**

.....Ms. Posey, DTP

At the February 15 meeting, the Board approved the projects submitted for inclusion in the air quality conformity assessment for the 2012 CLRP and FY 2013-2018 TIP. On June 14 the draft plan and TIP together with a draft conformity assessment were released for a 30-day public comment at the TPB Citizens Advisory Committee (CAC) meeting. The Board will be briefed on the draft conformity assessment. The Board will be asked to adopt the conformity assessment at its meeting on July 18.

1:15 10. **Briefing on the Draft 2012 CLRP and FY 2013-2018 TIP**

..... Mr. Austin, DTP

On June 14 the draft plan and TIP were released for public comment at the CAC meeting. The Board will be briefed on the draft 2012 CLRP and FY 2013-2018 TIP. After the 30-day comment period, the Board will be asked to approve the 2012 CLRP and FY 2013-2018 TIP at its July 18 meeting.

1:20 11. **Briefing on the Montgomery County Executive's Task Force Report and Recommendations on Implementing a Rapid Transit System**

.....Mr. Elrich
Montgomery County Council

In May, a task force appointed by the Montgomery County Executive released its report and recommendations for implementing a 160-mile rapid transit vehicle (RTV) system utilizing sophisticated, surface level bus-type technology. The Board will be briefed on the proposed system and potential funding strategies.

1:35 12. **Update on the Development of the TPB Regional Transportation Priorities Plan (RTPP)**

.....Chairman Turner
Mr. Kirby, DTP

The TPB Regional Transportation Priorities Plan (RTPP) is being developed to identify near and long term regional strategies that offer the greatest potential contributions toward addressing regional challenges. The Board will be briefed on the outcomes of a June 2 citizen focus group that was conducted to assess how best to communicate proposed regional challenges and strategies to the general public, and on potential public outreach activities throughout the development of the priorities plan.

1:45 13. **Briefing on the Possible Addition of Tolling on I-95 in Virginia**

.....Mr. Moore, VDOT

The Virginia Department of Transportation (VDOT) is pursuing the possible addition of tolling on the I-95 corridor (south of the City of Fredericksburg at mile marker 126) through the Federal Highway Administration's Interstate System Reconstruction and Rehabilitation Pilot Program (ISRRPP). At the April 18 meeting, the Board was briefed on an overview of the I-95 Corridor Improvement Program and how toll revenue may possibly offset safety, mobility, and system preservation needs in the corridor. The Board will be provided a brief overview of preliminary results of the recent traffic and revenue study and planned next steps.

1:55 14. **Other Business**

2:00 15. **Adjourn**

2 hours
Lunch will be available for Board members and alternates at 11:30 am

**Item #2**

**METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS**
**NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD**
777 North Capitol Street, NE
Washington, D.C. 20002-4226
(202) 962-3200

# MINUTES OF THE TRANSPORTATION PLANNING BOARD

**May 16, 2012**

Members and Alternates Present

Monica Backmon, Prince William County
Melissa Barlow, FTA
Andrew Beacher, Loudoun County
Nat Bottigheimer, WMATA
Muriel Bowser, DC Council
Kerry Donley, City of Alexandria
Dan Emerine, DC Office of Planning
Gary Erenrich, Montgomery County
Lyn Erickson, MDOT
Jennie Forehand, Maryland Senate
Jason Groth, Charles County
Rene'e Hamilton, VDOT
Cathy Hudgins, Fairfax County
John Jenkins, Prince William County
Carol Krimm, City of Frederick
Mark Rawlings, DC-DOT
Rodney Roberts, City of Greenbelt
Paul Smith, Frederick County
Linda Smyth, Fairfax County Board of Supervisors
Reuben Snipper, City of Takoma Park
Kanti Srikanth, VDOT
Todd M. Turner, City of Bowie
Jonathan Way, Manassas City
Victor Weissberg, Prince George's County DPW&T
Tommy Wells, DC Council
Patrick Wojahn, City of College Park
Sam Zimbabwe, DDOT
Chris Zimmerman, Arlington County

MWCOG Staff and Others Present

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|---|---|
| Ron Kirby | |
| Gerald Miller | |
| Robert Griffiths | |
| Nicholas Ramfos | |
| Rich Roisman | |
| Andrew Austin | |
| Wendy Klancher | |
| Sarah Crawford | |
| Deborah Kerson Bilek | |
| Ben Hampton | |
| Eric Randall | |
| Ben Hampton | |
| Michael Farrell | |
| Karin Foster | |
| Debbie Leigh | |
| Deborah Etheridge | |
| Nicole Hange | COG/EO |
| Betsy Self | COG/DPSH |
| Steve Kania | COG/OPA |
| Lewis Miller | COG/OPA |
| Bill Orleans | HACK |
| Jim Maslanka | City of Alexandria |
| Randy Carroll | MDE |
| Judi Gold | Councilmember Bowser's Office |
| Patrick Durany | Prince William County |
| Nick Alexandrow | PRTC |
| Mike Lake | Fairfax County DOT |
| Danielle Wesolek | WMATA |
| Melissa Chow | WMATA |
| Christopher Falkenhayen | AAA Mid-Atlantic |
| John B. Townsend II | AAA Mid-Atlantic |
| Anne-Laurie Seannez | US DOT/FTA |
| Tina Slater | CAC Chair/President Action Committee for Transit |
| Robert Brown | Loudoun County – Transportation |
| Amy Inman | Virginia Dept. of Rail & Public Transportation |
| Alexis Verzosa | City of Fairfax |

## 1. Public Comment on TPB Procedures and Activities

There were no public comments.

## 2. Approval of Minutes of April 18 Meeting

A motion was made and seconded to approve the minutes from the April 18 TPB meeting. The motion passed unanimously.

## 3. Report of Technical Committee

Mr. Rawlings said that the Technical Committee met on May 4 and reviewed three items for inclusion in the TPB agenda, including the draft final Complete Streets policy, the household travel survey study on travel characteristics in specific sub-areas of the region, and the potential schedule for further Congressional action on the Federal surface transportation authorizing legislation. He added that four informational items were discussed, including the final COG Region Forward draft baseline report, the NCHRP study that the TPB is participating in to look at a performance-based planning and programming process with a focus on congestion and capacity improvements along bus priority corridors in Maryland, a status update of the FY2012 CLRP and new TIP inputs, and a discussion of the status of the TPB Regional Priority Bus Project, which he said includes 16 project components being implemented by five project owners under a $58 million TIGER grant administered by the FTA.

## 4. Report of the Citizen Advisory Committee

Ms. Davis, sitting in for Ms. Slater, provided a summary of the CAC meeting, which was held on May 10. She said the CAC received a presentation from the Access for All Advisory Committee, which included an outline of the "Three A's Approach" – Awareness, Analysis, and Action – to including low-income, minority, and disabled persons in the regional transportation process. She added that the CAC discussed how it could contribute to the inclusion of low-income, minority, and disability perspectives in the region, as well as expanding the reach of the Access for All Advisory Committee.

She said the CAC also received an update on the Regional Transportation Priorities Plan, including the forum scheduled for June 2, and that the CAC would like to be part of the public outreach activities that may result from the June 2 activities. She mentioned that some CAC members plan on participating in the June 20 work session on the priorities plan that is scheduled to occur in advance of the TPB meeting. She said that the CAC discussed the TPB Weekly Report, including ideas for improvement, and received an update on the draft Regional Complete Streets Policy, which she said the CAC wholeheartedly supports. She added that the CAC has some concerns surrounding on how this policy will be tracked in the TIP, and how implementation might work. Finally, she said that the CAC received an update on the Regional Clearinghouse initiative and an on the analysis of public acceptance data for the Value Pricing study.

Chair Turner thanked Ms. Davis and the CAC for their feedback on the TPB Weekly Report. He asked to whom the TPB Weekly Report was circulated, aside from the TPB, CAC, Technical Committee, and members of the TPB.

Mr. Kirby said that the TPB Weekly Report is circulated to a comprehensive list of interested recipients, and said that adopting some of the CAC's suggestions for improvements, such as

including a short header in the subject line, would be a good idea.

Mr. Wells thanked Ms. Davis for her leadership.

**5. Report of Steering Committee**

Mr. Kirby said that the Steering Committee met on May 4, and acted on two amendments to the FY2011-2016 TIP, which he said were described in detail in the mailout packet. He summarized that these amendments updated the funding for system preservation projects in Maryland, and added funding for the Sunnyside Avenue bridge replacement project in Prince George's County. He provided an overview of the letters packet, which he said included only one letter from Metro Board Chair Hudgins responding to the Access for All Advisory Committee Chair Wojahn who expressed the committee's views on the proposed fare increases.

Ms. Hudgins thanked Mr. Wojahn and the Access for All Advisory Committee, and said that the Metro Board has tried to respond to some of the fare issues raised. She added that she looks forward to continuing participation from the Access for All Advisory Committee in formulating future changes to the fare structure.

**6. Chair's Remarks**

Chair Turner introduced Mr. Emerine from the District Office of Planning, who filled in as an alternate at the TPB meeting.

Mr. Emerine thanked Chair Turner.

Chair Turner acknowledged that many TPB member jurisdictions are deep into their budget cycles, and advocated for the importance of transportation and transit as part of these budget discussions and negotiations. He reminded members of the TPB that Bike To Work Day is scheduled for Friday, May 18, and reminded the TPB of the previous month's briefing and the call to action for support on this initiative. Finally, he asked the members of the TPB to remember to keep both active-duty and retired veterans in mind in celebrating the Memorial Day weekend holiday.

Mr. Roberts said that the Sunnyside Avenue amendment mentioned by Mr. Kirby in his report of the Steering Committee is a very sensitive issue in the City of Greenbelt. He asked for clarification on whether the funding is solely for the bridge, or if it relates to other roadways as well.

Mr. Weissberg replied that the funding was approved just for the bridge.

Mr. Roberts asked if the county was coordinating this project with the state in relation to the proposed widening of Kenilworth Avenue.

Mr. Weissberg replied that the coordination with the state is intended to get the project included in the state TIP. He added that a community meeting would be held the following day, and invited Mr. Roberts to attend.

Mr. Roberts asked if Mr. Weissberg was aware of past litigation relating to this project.

Mr. Weissberg said he was aware of the project's history and is coordinating appropriately.

Mr. Roberts reiterated that he hoped that the City of Greenbelt would be included as a coordinating party on this project.

Mr. Weissberg agreed.

## ACTION ITEMS

### 7. Approval of Complete Streets Policy for the National Capital Region

Mr. Farrell said the TPB received a presentation on the Complete Streets policy at the last two meetings and that he would provide a short summary of the process and most recent changes to the policy and guidance. He said the concept for a regional complete streets policy came from a recommendation of the TPB's Citizens Advisory Committee (CAC) as a way to support to the TPB Vision, the regional Bicycle and Pedestrian Plan, and Region Forward goals. He said TPB staff worked with several subcommittees to develop the policy over the past year.

Mr. Farrell reviewed the changes made to the Complete Streets policy since the April TPB meeting. He said the most extensive changes were made to the TIP Project Description Form since it will now document the agency's own Complete Street policies. He said that following TPB approval, staff will survey members on the jurisdictions' complete streets policies, hold a training session for jurisdiction staff on complete streets, and create a regional information clearinghouse to direct members of the public to agency websites where detailed design information may be found.

Mr. Zimmerman made a motion to adopt Resolution R15-2012 to approve the regional Complete Streets policy. The motion was seconded.

Mr. Snyder proposed an amendment to II. of the Complete Streets Guidance and Policy template based on experience related to complete streets procedures in Falls Church. He proposed adding under Inclusions: "5. Significant public input should be acquired prior to the implementation of the policy to any particular facility." He said this language emphasizes that while the policy is generally good, there may be many unintended consequences, particularly in retrofit circumstances.

Mr. Zimmerman said there is a difference between a policy and a specific project proposal. He

said the application of a policy in particular situations does have to be sensitive to each situation. He said he has no objections to the amendment.

Ms. Smyth asked if the policy is geared more towards new projects or retrofit projects.

Chair Turner said his understanding is that a jurisdiction would adopt a complete streets policy pursuant to the regional Complete Streets policy that would only impact projects going forward. He asked if the complete streets policy would apply retroactively to a project that is already in the CLRP or TIP.

Mr. Farrell said the policy would not be retroactive. He said that in general, complete streets policies are aimed at new construction. He said it is up to the individual agency and jurisdiction to decide if it would like a policy that attempts to retroactively incorporate complete streets principles on existing facilities.

Ms. Smyth said a lot of what is done in her jurisdiction is redevelopment and revitalization, noting that the right-of-way is often limited and choices must be made between on-street parking and residential property.

Mr. Beacher spoke on behalf of Vice Chair York and said the Loudoun County supports complete streets policies and has such principles in its comprehensive plan. He said Vice Chair York would have preferred to leave the TPB's Complete Streets document as a template due to concerns that there could be an inherent disconnect between the jurisdiction's policies and what the TPB is advocating. He said that there is a concern that there is an implication that if a jurisdiction does not following the recommendations of the TPB policy, that it is not measuring up to a regional standard. He said there is also a concern about including the complete streets language in the TIP form for the same reasons. He said certain projects may have to justify adherence to the regional policy when the project may be perfectly suitable in the context of the local jurisdiction's policy.

Mr. Farrell said the TIP form has been altered so that it documents an agency's implementation of its own complete streets policy. He said the information contained in the TIP form is for informational purposes only. He said that there are certain common elements of the template that numerous jurisdictions felt should be included in a regional Complete Streets policy, but that there is plenty of flexibility to add or subtract provisions to meet a local complete streets policy.

Mr. Way said that at the April TPB meeting, it was discussed that the policy would apply to all roads and all jurisdictions, not just projects in the CLRP. He said this would have the TPB take an active role in encouraging and evaluating jurisdictional compliance with the policy. He said he understands that the TPB would establish a region-wide database to allow the public to identify and evaluate how well the policy is being implemented in each jurisdiction. He said the issue before the Manassas City Council was the level of involvement of the TPB in smaller road projects and the staff workload in reporting and updating projects in the TPB's database. He said the Council voted to direct him to vote in favor to support the TPB policy if it is restricted to larger regionally significant projects, or vote against the policy if it will be applied to all road

projects in a jurisdiction.

Ms. Hudgins questioned the use of the word "significant" in Mr. Snyder's amendment to the motion. She said that simply including the opportunity for community input is preferable rather than attempting to measure the adequacy of community input as "significant." She suggested removing the word "significant."

Mr. Snyder said he accepted the revision to his amendment.

Mr. Zimmerman confirmed that the Snyder amendment as revised is now part of the main motion.

Chair Turner said that is correct, there being no objection. No objection was registered.

Mr. Zimmerman noted that some jurisdictions have had a complete streets policy for quite some time. He said that the policies often represent an aspiration of what a jurisdiction wants to look like and that it's not just for new projects. He said the policies prescribe an ideal of what a jurisdiction is trying to accomplish. He said jurisdictions understand that full implementation of a policy, including retrofitting facilities, takes time, resources, and exceptions. He said the TPB's policy is a flexible policy. He said that the TPB's Complete Streets policy statement is an endorsement of the concept, including encouraging member jurisdictions to adopt a complete streets policy that includes common elements that the TPB believes reflects best practices. He said project information collection is a role that the TPB should be undertaking as a regional agency, as well as providing training for jurisdiction staff. He said that the TPB does not truly function as a regional transportation planning agency and that most of the control is with the local jurisdictions. He said one of the important roles for the TPB is to encourage something regionally that is identified as a good practice, keep records on it, and centralize information that can be provided to jurisdictions.

Mr. Roberts said that a complete streets policy would need to be for both new construction and for major redevelopment or reconstruction of a facility, particularly related to capacity expansion.

Ms. Bowser acknowledged the work of the CAC and thanked all involved for bringing the final document to the TPB. She said she would like to associate herself with Mr. Zimmerman's comments. She said it is important to work towards balance in the transportation infrastructure and how every mode can access the network. She said it is important for all modes to be represented and to increase capacity for all users. She said every jurisdiction can aspire to incorporate some of the goals into local policies, as they are very achievable. She said she looks forward to seeing what can be done in the District.

Mr. Wojahn said that as Chair of the TPB's Access for All Committee, he acknowledges that there is a lot of importance contained within the TPB's Complete Streets policy for persons with disabilities and low-income communities. He said it is important to develop this policy to reflect priorities as a region. He reiterated that the policy is a guidance document that demonstrates

priorities for the region, not requirements for individual jurisdictions. He said the training that will be provided by TPB staff is critical for jurisdictions that may need some assistance in implementation of a complete streets policy.

Ms. Hudgins spoke on behalf of WMATA and said that access to transit is critical and requires the jurisdiction to work to provide adequate facilities for all modes.

Vice Chair Wells said that COG's Region Forward plan clearly aims to increase the share of walk, bike, and transit trips in all regional activity centers, thus reducing vehicle miles traveled per capita. He said adopting this policy would be concurrent with what is outlined in Region Forward.

Chair Turner said that he supports moving forward with the resolution. He said he shares many of the comments and concerns voiced by members. He said it is aspirational for each jurisdiction to adopt its own complete streets policy. He called for a vote. The motion passed, with Mr. Way voting no.

**8. Approval of an Amendment to the FY 2011-2016 TIP to Include the WMATA FY2013 Capital Improvement Program**

Mr. Bottigheimer said the TPB is being asked to approve WMATA's FY 2013 CIP as a routine administrative action. He said the budget has been approved internally at WMATA and will allow WMATA to apply immediately for federal grants so it may begin spending on July 1 on the highly needed capital projects within the CIP.

Ms. Hudgins made a motion to approve an amendment to the FY 2011-2016 TIP to include the WMATA FY 2013 CIP. The motion was seconded by Ms. Bowser and approved unanimously.

## INFORMATION ITEMS

**9. Briefing on Household Travel Characteristics and Behavior in Ten Focused Geographic Subareas of the Region**

Mr. Griffiths of TPB staff briefed the Board on initial results from recently-completed household travel surveys in ten geographically-focused areas of the region: the 14th Street NW/Logan Circle neighborhood in the District of Columbia; the Crystal City area, the Shirlington area, and the Columbia Pike corridor in Arlington County; the Purple Line corridor in Montgomery and Prince George's Counties in Maryland; the area around the White Flint Metrorail station in Montgomery County; the area around the Largo Metrorail station in Prince George's County; Reston, Virginia; Woodbridge, Virginia; and the City of Frederick in Maryland.

The surveys are a follow-up to the regional Household Travel Survey conducted by the TPB in 2007 and 2008. Mr. Griffiths explained that the follow-up surveys came as a result of requests

for information from local planning staff who wanted data for more focused geographic areas to support local planning efforts. He said that detailed data for small geographic areas is no longer available either through the decennial Census or the Census Bureau's American Community Survey (ACS). He explained to the Board that the focused surveys took place in a variety of different communities to provide opportunities to compare and contrast the travel patterns in areas with different densities, physical characteristics, and transportation options. He also said that the longer-term objective of the focused survey project is to build a database that can be used to measure changes over a period of time—for example, before and after major redevelopment in a given area occurs or when major new transportation facilities are constructed.

Mr. Griffiths' presentation to the Board included an overview of each of the ten study areas, why the areas were chosen, and some highlighted findings from each. His presentation also included tables of key characteristics for all ten survey areas to aid in comparing survey areas to one another as well as to the regional average. In particular, he featured comparisons of mode share of all daily trips, mode share of all commute trips, household size, vehicle availability, and age of household members for the ten study areas. He also listed the areas where the next round of surveys is currently underway and those where surveys are planned for fall 2012 and spring 2013.

Chair Turner thanked Mr. Griffiths for his presentation and opened the floor to questions from Board members.

Ms. Smyth asked why staff were planning to survey Tysons Corner in fall 2013. Mr. Griffiths said that it would set a baseline for later analysis after the Silver Line opened through that area.

Mr. Wojahn suggested that staff work with the University of Maryland to take advantage of the extensive surveying of faculty, staff, and students that they do regarding travel patterns.

Mr. Wells asked whether the term "vehicle availability" includes car-sharing. Mr. Griffiths said that it does not. Mr. Wells also suggested that staff make a point of including lower-income neighborhoods in the District as a baseline before housing prices and family incomes in those areas increase in coming years. Mr. Griffiths said that staff would be working with the District Department of Transportation and the District Office of Planning to select future study areas.

Mr. Roberts asked how staff thought the availability of public transportation affects the numbers that were shown in the presentation. Mr. Griffiths responded by saying that distance from the regional core generally results in less access to transit, and that staff will be focusing on the question of how accessibility affects transit ridership as they continue to analyze the survey results. Mr. Roberts suggested that perhaps planners ought to focus more on bringing transportation to people rather than encouraging development everywhere just to make use of the transportation system.

Mr. Emerine suggested that staff should take the information gathered so far and begin looking for causal relationships to determine what factors really drive mode choice among travelers. He suggested looking at relationships between travel patterns and physical characteristics like land

use mix, density of street intersections, and block sizes in a given area.

Mr. Zimbabwe asked how the data from the focused surveys gets folded back into the regional travel demand model, noting that the mode split observed in the Logan Circle area probably dramatically outperformed what the regional model would have predicted. Mr. Kirby said that the regional travel demand model is based on regional data, that there are ways of characterizing different areas in the model but that obviously such fine-grain detail as was collected during the focused surveys has not made its way into the model. He said that one good opportunity to use the neighborhood-level data is in the TPB's scenario planning efforts to model what would happen if certain land use and transportation conditions were replicated elsewhere in the region.

Mr. Zimbabwe followed up Mr. Kirby's response by commenting that if the models are overestimating vehicular traffic, then those who are planning and making decisions about transportation investments might be overbuilding infrastructure. Mr. Kirby responded by noting local staff interest in using the focused, neighborhood-level data to implement and monitor compliance with adequate public facilities requirements.

Mr. Erenrich reminded staff and the Board that the data presented by Mr. Griffiths was just a sample, and that trying to expand the information to larger areas might not be appropriate. He also suggested that staff should look more closely at population density and land use to answer questions about what kind of transit can be supported by different population and employment densities.

Mr. Zimmerman echoed Mr. Erenrich's point, suggesting that staff look more closely not only at population density but also the availability and frequency of transit. He explained that knowing where behaviors change the most—relative to increasing densities and increasing transit availability—is important in figuring out how to achieve the desired results.

Ms. Hudgins asked whether the population listed in the presentation for Reston included all of Reston or a subarea. Mr. Griffiths said that only a subarea of Reston was studied and that the population that was listed was the population of that subarea.

Ms. Hudgins also pointed out that the initial results and analysis provided by staff do not take into account employment density in the study areas, and its influence on walking and other transit trips "to work" might not be captured by the surveys as a result. But she said that the current survey will serve as a good baseline for when the Silver Line comes to Reston.

Mr. Griffiths provided one point of clarification on a point raised earlier by Mr. Zimbabwe. He explained to the Board that part of the reason for conducting the focused surveys—especially in the case of Arlington County, which instigated the focused survey project—was to provide planners with empirical rather than model-derived data that they could use as part of their outreach to the public, especially when trying to show what effect higher-density, mixed-use development can have on traffic patterns when it is introduced.

Finally, Chair Turner asked whether the information that was collected as part of this project is

being shared directly with the local jurisdictions, and departments of transportation and planning. Mr. Griffiths confirmed that it will soon be available to local jurisdictions. Chair Turner also asked if staff and the Technical Committee would consider adding the City of Bowie to the list of future survey sites.

**10. Briefing on the Results of Recently Completed Projects under the Continuous Airport Systems Planning (CASP) Program**

Mr. Roisman provided a briefing on the recently completed projects under the Continuous Airport System Planning (CASP) program. Referring to a PowerPoint Presentation, he said that the program provides a regional process that supports planning, development, and operation of airport and airport-serving facilities, and is monitored by the Aviation Technical Subcommittee of the TPB Technical Committee. He added that partner agencies include the FAA and the state airport planning and DOT agencies as well as MWAA, and that the program is focused on the three commercial service airports in the area: National, Dulles, and BWI. He discussed air system planning as part of the TPB Vision, and summarized historic forecast data for the three regional commercial service airports, citing significant growth in air cargo. He reported that the CASP program periodically monitors travel times between regional activity centers and the three commercial airports. He presented vehicular and transit travel pattern trends for the region's airports. He summarized identified projects – both past and future – that improve access to the region's airports, including the expansion of the ramp from the Capital Beltway outer loop to the Dulles toll road, the replacement of the Woodrow Wilson Bridge, the Intercounty Connector, the Silver Line the Dulles, the HOT lanes on both I-95 and the Capital Beltway, and the spot improvements along I-66. He added that, in general, recent air passenger and air cargo trends and forecasts show continued strong growth at the region's three commercial service airports. He said that travel times from major regional activity centers along the highways to the airports are increasing, and previous TPB actions have resulted in some surface network improvements that have improved airport access. The annual regional economic impact of the three commercial airports has been estimated at more than $30 billion and a quarter of a million jobs per year.

Mr. Snyder stated that he uses all three airports frequently in connection with his job, and has noticed that the difference between most major international airports and the region's airports is the absence of transit connections, and very little transit connection outside of the daylight hours, particularly to BWI. He said this challenge contributes to time loss and frustration for passengers, air pollution, and is holding back airports from economic viability. He said he'd be interested to see how the TPB works with the information presented in the future.

Chair Turner thanked Mr. Roisman. He expressed the importance of monitoring these issues since airports are a key part of the transportation network.

**11. Update on Reauthorization of Federal Surface Transportation Legislation**

Mr. Kirby said that the SAFETEA-LU legislation has been extended through June 30. He added that the House of Representatives approved an extension through September 30 that mostly

resembles SAFETEA-LU. He said that if a bill is passed, it would likely resemble the Senate MAP-21 bill, which he explained has a number of new provisions relating to performance-based planning, as well as an expansion of the TIFIA loan program.

Chairman Turner thanked Mr. Kirby, and called on members of the TPB to advocate for the passage of legislation to their respective members of Congress. He then asked Mr. Kirby for confirmation that a Regional Priority Plan Work Group has been scheduled for the morning of the June 20, prior to the TPB meeting.

Mr. Kirby provided confirmation. He said this Regional Priority Plan Work Group would begin at 10:30am in the COG Board Room on June 20.

**12. Other Business**

There was no other business brought before the TPB.

**13. Adjourn**

Chair Turner adjourned the TPB meeting at 1:55pm.

**Item 3**

**TPB Technical Committee Meeting Highlights**

**June 1, 2012**

The Technical Committee met on June 1 at COG. Four items were reviewed for inclusion on the TPB agenda on June 20.

- TPB agenda Item 7

  The Committee was briefed on the 2012 solicitation and competitive selection process for the Federal Transit Administration's (FTA's) Job Access Reverse Commute (JARC) and New Freedom program funding for the Washington Urbanized Area. The Board will be asked to approve the selected projects for funding at the June 20 meeting.

- TPB agenda Item 9

  The Committee was briefed on the draft conformity analysis of the 2012 CLRP and FY 2013-2018 TIP. This conformity assessment and draft plan and TIP were released for public comment on June 14. The TPB will be asked to approve and conformity assessment at its July 18 meeting.

- TPB agenda Item 10

  The Committee was briefed on the draft 2012 CLRP and FY 2013-2018 TIP which were released for public comment on June 14. After the 30-day comment period, the TPB will be asked to approve the 2012 CLRP and FY 2013-2018 TIP at its July 18 meeting.

- TPB agenda Item 12

  The TPB Regional Transportation Priorities Plan (RTPP) will identify near and long term regional strategies that offer the greatest potential contributions toward addressing regional challenges. The Committee was briefed on the June 2 focus group that will examine how meaningful proposed regional challenges and strategies are to the general public, and on potential further public outreach activities for the development of the priorities plan.

Two items were presented for information and discussion:

- At its March 21, 2012 meeting, the TPB approved a letter to the Metropolitan Washington Air Quality Committee (MWAQC) recommending the incorporation of safety margins of 20 percent and 30 percent into out-year mobile emissions budgets for 2017 and 2025 respectively in a PM2.5 maintenance plan under development by MWAQC. The Committee was briefed on proposed additional TPB staff analyses of the potential impacts of changes to the mix and age of the vehicle fleet to be transmitted to MWAQC in support of the TPB’s March 21 letter.

- On March 15, 2012 the Senate approved MAP-21, a two-year reauthorization proposal, and on April 18 the House approved HR 4348, a reauthorization proposal with an extension of SAFETEA-LU through September 30, 2012 along with other provisions. A conference committee has been appointed to negotiate a final bill. The Committee was updated on the likely schedule for further Congressional action on the reauthorization of Federal surface transportation legislation.

# TPB TECHNICAL COMMITTEE MEMBERS AND ALTERNATES ATTENDANCE - June 1, 2012

## DISTRICT OF COLUMBIA

| | |
|---|---|
| DDOT | Mark Rawlings |
| DCOP | Dan Emerine |

## MARYLAND

| | |
|---|---|
| Charles County | Jason Groth |
| Frederick Co. | Ron Burns |
| City of Frederick | Tim Davis |
| Gaithersburg | ------- |
| Montgomery Co. | Gary Erenrich |
| Prince George's Co. | Vic Weissberg |
| Rockville | ------- |
| M-NCPPC | |
| Montgomery Co. | ------- |
| Prince George's Co. | ------- |
| MDOT | Lyn Erickson |
| | Renna Mathews |
| MTA | ------- |
| Takoma Park | ------- |

## VIRGINIA

| | |
|---|---|
| Alexandria | Jim Maslanka |
| Arlington Co. | Dan Malouff |
| City of Fairfax | Alexis Verzosa |
| Fairfax Co. | Mike Lake |
| Falls Church | ------- |
| Loudoun Co. | Robert Brown |
| Manassas | ------- |
| Prince William Co. | ------- |
| NVTC | ------- |
| PRTC | Nick Alexandrow |
| VRE | Christine Hoeffner |
| VDOT | Kanathur Srikanth |
| VDRPT | Amy Inman |
| NVPDC | ------- |
| VDOA | ------- |

## WMATA

| | |
|---|---|
| WMATA | Danielle Wesolek |

## FEDERAL/OTHER

| | |
|---|---|
| FHWA-DC | ------- |
| FHWA-VA | ------- |
| FTA | ------- |
| NCPC | ------- |
| NPS | ------- |
| MWAQC | ------- |

## COG Staff

Ronald Kirby, DTP
Gerald Miller, DTP
Mark Pfoutz, DTP
Jane Posey, DTP
Robert Griffiths, DTP
Rich Roisman, DTP
Andrew Austin, DTP
Beth Newman, DTP
Andrew Austin DTP
Ron Milone, DTP
Elena Constantine, DTP
Eric Randall, DTP
Yu Gao, DTP
Jinchul Park, DTP
Dusan Vuksan, DTP
William Bacon, DTP
Daniel Son, DTP
Anant Choudhary, DTP
Jim Yin, DTP
Stuart Freudberg, DEP

## Other Attendees

Randy Carroll, MDE
Bill Orleans, HACK

National Capital Region Transportation Planning Board

777 North Capitol Street, N.E., Suite 300, Washington, D.C. 20002-4290 (202) 962-3310 Fax: (202) 962-3202 TDD: (202) 962-3213

Item #5

**MEMORANDUM**

June 14, 2012

To: Transportation Planning Board

From: Ronald F. Kirby
Director, Department of
Transportation Planning

Re: Steering Committee Actions

At its meeting on June 1, 2012, the TPB Steering Committee approved the following resolutions:

- SR30-2012: Resolution on an amendment to the FY 2011- 2016 Transportation Improvement Program (TIP) that is exempt from the air quality conformity requirement to include funding for the Crystal City-Potomac Yard Transitway and Potomac Yard Transitway Improvements, as requested by the Virginia Department of Transportation (VDOT).

- SR31-2012: Resolution on an amendment to the FY 2011- 2016 TIP that is exempt from the air quality conformity requirement to include funding for the purchase of replacement buses for the Ride On bus system, as requested by the Montgomery County Department of Transportation (MCDOT)

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."

**TPB SR30- 2012**
**June 1, 2012**

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

**RESOLUTION ON AN AMENDMENT TO**
**THE FY 2011- 2016 TRANSPORTATION IMPROVEMENT PROGRAM (TIP)**
**THAT IS EXEMPT FROM THE AIR QUALITY CONFORMITY REQUIREMENT**
**TO INCLUDE FUNDING FOR THE CRYSTAL CITY-POTOMAC YARD TRANSITWAY**
**AND POTOMAC YARD TRANSITWAY IMPROVEMENTS, 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 Safe, Accountable, Flexible, and Efficient Transportation Equity Act - A Legacy for Users (SAFETEA-LU) 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 November 17, 2010 the TPB adopted the FY 2011-2016 TIP; and

**WHEREAS,** in the attached letter of May 29, 2012, VDOT has requested an amendment to the FY 2011-2016 TIP to include $625,000 in FTA New Starts and local funding from Arlington County for the Crystal City Potomac Yard Transitway, and $625,000 in FTA New Starts and local funding from the City of Alexandria for the Crystal Potomac Yard Transitway Improvements, as described in the attached materials; and

**WHEREAS,** these projects are included in the Air Quality Conformity Analysis of the 2011 CLRP and FY 2011-2016 TIP*;*

**NOW, THEREFORE, BE IT RESOLVED THAT** the Steering Committee of the National Capital Region Transportation Planning Board amends the FY 2011-2016 TIP to include $625,000 in FTA New Starts and local funding from Arlington County for the Crystal City Potomac Yard Transitway, and $625,000 in FTA New Starts and local funding from the City of Alexandria for the Crystal Potomac Yard Transitway Improvements, as described in the attached materials.

**Adopted by the Transportation Planning Board Steering Committee at its regular meeting on June 1, 2012.**

COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION
4975 Alliance Drive
Fairfax, VA 22030

GREGORY A. WHIRLEY
COMMISSIONER

May 29, 2012

The Honorable Todd Turner, 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 2011-2016 Transportation Improvement Program Amendment

Dear Chairman Turner:

On behalf of the City of Alexandria and Arlington County, the Virginia Department of Transportation (VDOT) is requesting an amendment to the FY 2011-2016 Transportation Improvement Program (TIP) to provide funding for the Crystal City Potomac Yard Transitway Project, a joint venture of the two jurisdictions.

The proposed project will be located between the Monroe Avenue Bridge in Alexandria, and Crystal City in Arlington. The Crystal City Potomac Yard Transitway Project is part of the air quality conformity analysis for the metropolitan Washington region. The proposed additional funds are new to the TIP and CLRP and are not being reprogrammed from other projects in the TIP/CLRP. As outlined below, each of the two jurisdictions received $500,000 in FTA 5309-5 (New Starts) funding that has to be added to the TIP. The required twenty percent non-federal matching funds are being provided by the City of Alexandria and Arlington County as noted below:

- Potomac Yard Transitway Improvements -- UPC# ALEX0005/T1837. The TIP amendment adds a total of $625,000, which includes $500,000 in FTA 5309-5 (New Starts) funding in FY 2013 for the construction phase, and $125,000 in local match (private developer's donation) in FY 2012 for the right of way phase. The attached addendum to the FY 2011-2016 TIP table arrays these changes.

- Crystal City Potomac Yard Transitway -- UPC# ARL0008. The TIP amendment adds a total of $625,000, which includes $500,000 in FTA 5309-5 (New Starts) funding in FY 2013 for the construction phase, and a total of $125,000 in matching funds ($60,075 in County funds and $64, 925 in DRPT state capital reimbursement funds).

The attached addendum to the FY 2011-2016 TIP table arrays these changes. Also attached are letters of request for this TIP Amendment from the City of Alexandria and Arlington County.

VDOT requests that this TIP Amendment be considered by the Transportation Planning Board Steering Committee at its June 1, 2012 meeting. Upon approval of this amendment, please furnish copies to Ms. Renee Hamilton, VDOT's Assistant District Administrator for Planning and Investment Management in Northern Virginia, and Mr. Chad Tucker in VDOT's Transportation and Mobility Planning Division in Richmond.

Thank you for your consideration of this request.

Sincerely,

Garrett W. Moore

Garrett W. Moore, P.E.
District Administrator
Northern Virginia District

Attachments

Copy: Renée N. Hamilton, VDOT
Susan Gygi, City of Alexandria
Bee Buergler, Arlington County
Marie Berry, VDRPT

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

**FY 2011 - 2016**

TIP Amendment - 6/20/2012

| | | Phase | Previous Funding | Funding Source | Funding Shares Fed | State | Local | FY11 | FY12 | FY13 | FY14 | FY15 | FY16 | Source Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Alexandria -Transit** | | | | | | | | | | | | | | |
| TIP ID: | Agency ID: ALEX0005 | | | | Title:Potomac Yard Transitway Station Improvements | | | | | | | | Complete: 2013 | |
| Facility: | Potomac Yard Transitway | PE | | | 0% | 0% | 0% | $0 | $0 | $0 | $0 | $0 | $0 | |
| From: | Monroe Avenue Bridge | R/W | | Private | 0% | 0% | 100% | $0 | **$125** | $0 | $0 | $0 | $0 | **$125.00** |
| To: | East Glebe Road | CN | | FTA-5309-5 | 80% | 20% | 0% | $0 | $0 | **$500** | $0 | $0 | $0 | **$500.00** |
| | | | | | | | | | | | | **Total Funds:** | | **$625.00** |
| Description: | The project involves the construction of transitway stations, from the Monroe Ave. Bridge to East Glebe Road | | | | | | | | | | | | | |
| Jurisdiction: | Alexandria | | | | | | | | | | | | | |
| Amendment: | TIP Amendment to add $125,000 in private funds in FY12 for right-of way and $500,000 in FTA 5309-5 New Starts funds in FY13. | | | | | | | | | | | | | |
| Air Quality: | The project is included in the Air Quality Conformity process for the Metropolitn Washington Region. | | | | | | | | | | | | | |
| **Arlington - Transit** | | | | | | | | | | | | | | |
| TIP ID: | Agency ID: ARL0008 | | | | Title:Crystal City Potomac Yard Transitway Project | | | | | | | | Complete: 2014 | |
| Facility: | Crystal City Transitway | PE | | | 0% | 0% | 0% | $0 | | $0 | $0 | $0 | $0 | |
| From: | Crystal City/Arlington | R/W | | | 0% | 0% | 0% | $0 | $0 | $0 | $0 | $0 | $0 | |
| To: | Alexandria/Arlington Boundary | CN | | FTA-5309-5 | 80% | 20% | 10% | $0 | **$500** | $0 | $0 | $0 | $0 | **$500.00** |
| | | CN | | County | 0% | 0% | 100% | $0 | **$60** | $0 | $0 | $0 | $0 | **$60.00** |
| | | CN | | DRPT Grant | 0% | 100% | 0% | $0 | **$65** | $0 | $0 | $0 | $0 | **$65.00** |
| | | | | | | | | | | | | **Total Funds:** | | **$625.00** |
| Description: | The project involves the construction of transitway improvements from Crystal City to Alexandria/Arlington Boundary. from the Monroe Ave. Bridge to East Glebe | | | | | | | | | | | | | |
| Jurisdiction: | Arlington | | | | | | | | | | | | | |
| Amendment: | TIP Amendment to add $125,000 in County and State (DRPT) funds and $500,000 in FTA 5309-5 (New Starts) funds. | | | | | | | | | | | | | |
| Air Quality: | The project is included in the Air Quality Conformity process for the Metropolitan Washington Region. | | | | | | | | | | | | | |

**TPB SR31- 2012**
**June 1, 2012**

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

**RESOLUTION ON AN AMENDMENT TO THE FY 2011- 2016 TRANSPORTATION IMPROVEMENT PROGRAM (TIP) THAT IS EXEMPT FROM THE AIR QUALITY CONFORMITY REQUIREMENT TO INCLUDE FUNDING FOR THE PURCHASE OF REPLACEMENT BUSES FOR THE RIDE ON BUS SYSTEM, AS REQUESTED BY THE MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION (MCDOT)**

**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 Safe, Accountable, Flexible, and Efficient Transportation Equity Act - A Legacy for Users (SAFETEA-LU) 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 November 17, 2010 the TPB adopted the FY 2011-2016 TIP; and

**WHEREAS,** in the attached letter of May 30, 2012, MCDOT has requested an amendment to the FY 2011-2016 TIP to increase funding in fiscal years 2012 and 2013 to include $4.8 million in Section 5307 funds, $3.066 million in Section 5308/Clean Fuels Grant funds, $7.853 million in Section 5309 funds, $6.55 million in ARRA/Section 5309 funds, and $15.755 million in state and local funds, as described in the attached materials; and

**WHEREAS,** this project is exempt from the air quality conformity requirement, as defined in Environmental Protection Agency (EPA) regulations "40 CFR Parts 51 and 93 Transportation Conformity Rule Amendments: Flexibility and Streamlining; Final Rule," issued in the May 6, 2005, *Federal Register;*

**NOW, THEREFORE, BE IT RESOLVED THAT** the Steering Committee of the National Capital Region Transportation Planning Board amends the FY 2011-2016 TIP to increase funding in fiscal years 2012 and 2013 to include $4.8 million in Section 5307 funds, $3.066 million in Section 5308/Clean Fuels Grant funds, $7.853 million in Section 5309 funds, $6.55 million in ARRA/Section 5309 funds, and $15.755 million in state and local funds, as described in the attached materials.

**Adopted by the Transportation Planning Board Steering Committee at its regular meeting on June 1, 2012.**

DEPARTMENT OF TRANSPORTATION

Isiah Leggett
*County Executive*

Arthur Holmes, Jr.
*Director*

May 30, 2012

The Honorable Todd Turner, Chairman
National Capital Region Transportation Planning Board
Metropoliatn Washington Council of Governments
777 North Capitol Street, NE, Suite 300
Washington, DC 20002-4290

Dear Chairman Turner:

The Montgomery County Department of Transportation (MCDOT) requests an amendment to the Montgomery County portion of the FY 2011-2016 Transportation Improvement Program (TIP) to update the Ride On Bus Fleet Project to reflect Federal grant for Clean Fuels Fleet award and to increase the state and local program funding. This amendment reflects the addition of $3,066,000 in Section 5308 Clean Fuels Fleet funding for FY 13 as well as the current County approved funding for FY 12.

The Ride On Bus Fleet replacement program for FY 12 increases to $20.689 million from $5.576 million in the current TIP and reflects $6.550 million in ARRA Section 5309 funding, $3.200 million in Section 5307 funding, and $7.853 million in Section 5309. The remaining $3.086 million is from state and local funding sources.

For FY 13, the Ride On Bus Fleet replacement program increases to $17.324 million from $7.363 million in the current TIP. The FY 13 program reflects the $3.066 million Clean Fuels Grant from Section 5308 and $1.6 million from Section 5307 funding. The remaining $12.658 million is from state and local funding sources.

MCDOT requests that this amendment be approved by the Transportation Planning Board Steering Committee at its June 1, 2012, meeting. We appreciate your cooperation in this matter. If you have any questions or comments, please do not hesitate to contact Gary Erenrich at 240-777-7156 or gary.erenrich@montgomerycountymd.gov.

Sincerely,

Edgar Gonzalez
Deputy Director for Transportation Policy

EG:tt

cc: Ronald Kirby, Director of Transportation, Metropolitan Washington Council of Governments

# Montgomery County

## Transit

## RideOn Bus System

TIP ID: **3072** Agency ID: Title: **RideOn Bus System** Complete:

Facility:
From:
To:

| Source | Fed/St/Loc | Previous Funding | FY 11 | FY 12 | FY 13 | FY 14 | FY15 | FY 16 | Source Total |
|---|---|---|---|---|---|---|---|---|---|
| ARRA/5309-B | 100/0/0 | | | 6,550 e | | | | | 6,550 |
| Local | 0/0/100 | | | 2,686 e | 12,258 e | 20,249 e | 18,550 e | | 53,743 |
| Section 5307 | 100/0/0 | | | 3,200 e | 1,600 e | 1,600 e | 1,600 e | 1,600 e | 9,600 |
| Section 5307. | 80/0/20 | | 2,100 e | | | | | | 2,100 |
| Section 5308 | 100/0/0 | | | | 3,066 e | | | | 3,066 |
| Section 5309 | 100/0/0 | | | 7,853 e | | | | | 7,853 |
| State/DC | 0/100/0 | | | 400 e | 400 e | 400 e | 400 e | | 1,600 |
| | | | | | | | | ***Total Funds:*** | ***84,512*** |

Description: This project provides for the purchase of replacement buses in the Ride On fleet in accordance with the Division of Transit Services' bus replacement plan. The FY 11-16 plan calls for the following:

FY 11: 5 full-size
FY 12: 12 full-size buses
FY 13: 8 full-size and 11 small buses
FY 14: 24 full-size and 32 small buses
FY 15: 33 full-size and 17 small buses
FY 16: 8 full-size buses

Full-size transit buses have an expected useful life of twelve years. Smaller buses have an expected useful life of five to seven years

**Amendment - Add New Project** **Approved on:** 2/3/2012

Amend this project into the FY 2011-2016 TIP with $61.253 million in federal (Section 5307 and Section 5309) funds with matching state and local funds.

**Amendment - Modify Funding** **Approved on:** 6/1/2012

This amendment increases funding in FY 2012 from $5.576 million to $20.689 million ($6.55 million in ARRA/Section 5309, $7.853 in Section 5309, $3.2 million in Section 5307, and $3.086 from state and local funds), and funding in FY 2013 from $7.363 million to $17.324 million ($3.086 million in Section 5308/Clean Fuels Grant, $1.6 million in Section 5307, and $12.658 million from state and local funds).

# National Capital Region Transportation Planning Board

777 North Capitol Street, N.E., Suite 300, Washington, D.C. 20002-4290 (202) 962-3310 Fax: (202) 962-3202 TDD: (202) 962-3213


**Item #5**

**MEMORANDUM**

**June 14, 2012**

**TO:** Transportation Planning Board

**FROM:** Ronald F. Kirby
Director, Department of
Transportation Planning

**RE:** Letters Sent/Received Since the May 16th TPB Meeting

The attached letters were sent/received since the May 16th TPB meeting. The letters will be reviewed under Agenda #5 of the June 20th TPB agenda.

Attachments

For Immediate Release
May 18, 2012

CONTACT: Anne Marie Corbalis: (845) 855-7077 /
amcorbalis@archstreetcommunications.com;
Lewis Miller: (202) 962-3209 / lmiller@mwcog.org

# Record Breaking 12,700 Bike to Work

Washington, D.C. - Commuters swapped gas pedals for bike pedals in the metropolitan Washington region today, as 12,700 cycled to work for the annual Bike to Work Day event. More people than ever before participated in this year's event which promotes bicycling as a healthy, low cost commute alternative. Bike to Work Day 2012 exceeded its goal of 12,500 commuters and the number of participants increased by almost 2,000 compared to 2011.

The event, coordinated by Commuter Connections and the Washington Area Bicyclist Association, was attended by dozens of elected officials who spoke to crowds of cyclists at 58 pit stops located throughout the District of Columbia, Maryland, and Virginia, from Frederick County to Prince William County. Pit stops welcomed cyclists and bicycling convoys with free T-shirts, food, beverages, entertainment, bike checks and prizes provided by regional and local sponsors.

"This event has increased the popularity of bicycling as a reliable, sustainable, and healthy commuting option thanks to the support and dedication of participants, sponsors, volunteers and officials," said David Robertson, Executive Director of the Metropolitan Washington Council of Governments. "Regionally, Bike to Work Day has grown tremendously. Five years ago 6,600 people participated in the event, since then the number has nearly doubled and pit stops have increased from 49 to 58. Next year, we look forward to even more participants."

"Commuters throughout the metropolitan area are looking for ways to make their commutes easier and less costly. Bicycling to work is one of the options that can improve the daily commute," said Nicholas Ramfos, Director of Commuter Connections. "The dramatic growth of this event is an indicator that area commuters view bicycling as a viable commute alternative that can fit into their daily routine."

Generous contributions from major regional sponsors, including, Marriott International, REI, ICF International, City Bikes, Whole Foods Market, Bike Arlington, BicycleSPACE, AAA Mid-Atlantic and The City of Alexandria helped make the event a success. Bike to Work Day celebrates National Bike Month in cities throughout the United States.

**Photos from Bike to Work Day available upon request. Please contact Lewis Miller at (202) 962-3209 or lmiller@mwcog.org.*

# # #

*Commuter Connections, www.commuterconnections.org is a program of the National Capital Region Transportation Planning Board at the Metropolitan Washington Council of Governments, www.mwcog.org.*

*Commuter Connections promotes bicycling to work, ridesharing and other alternatives to drive alone commuting, and provides ridematching for carpools and vanpools and offers the Guaranteed Ride Home and 'Pool Rewards programs. Commuter Connections, is funded by the District of Columbia, Maryland, Virginia and U.S. Departments of Transportation.*

# National Capital Region Transportation Planning Board

777 North Capitol Street, N.E., Suite 300, Washington, D.C. 20002-4290 (202) 962-3310 Fax: (202) 962-3202 TDD: (202) 962-3213


## Memorandum

TO: Transportation Planning Board

FROM: Patrick Wojahn
Chair, TPB Access for All (AFA) Advisory Committee
College Park City Council

SUBJECT: AFA Comments on 2012 Draft Financially-Constrained Long-Range Transportation Plan and General Transportation-Related Concerns of the Committee

DATE: June 13, 2012

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The TPB Access for All Advisory (AFA) Committee received a presentation on the significant changes to the Draft 2012 Financially Constrained Long Range Transportation Plan (CLRP) at its May 3, 2012 meeting. During a roundtable discussion, the AFA provided the following comments on projects in the plan, and raised several other concerns about issues for low-income communities, minority communities and people with disabilities and suggestions to address these issues at the regional and local level. The AFA is submitting the following comments based on discussion at the May meeting and other discussions during AFA meetings in 2012.

## Comments on New Projects and Significant Changes in the CLRP

### The AFA supports public transportation options that are accessible and affordable.

- The AFA approves of the many public transportation projects included in the 2012 CLRP and stresses the importance of ensuring that these options are accessible and affordable to low-income communities and people with disabilities.
- The AFA would also like to ensure that low fares and accessibility remain a priority as these projects proceed.

### The AFA requested clarification of the costs, benefits, and funding of specific CLRP projects.

- The AFA raised a question about how new transit projects, such as the proposed BRT from Van Dorn to Pentagon Metrorail stations, may impact the funding of other large-scale transit projects, such as the Silver Line Phase II.

- The committee raised a concern about what the costs and benefits are of providing Bus Rapid Transit (BRT) or rail service in corridors where bus transit already exists, also referring to the Van Dorn to Pentagon Metrorail stations.
- More generally, the AFA asked for an explanation of what happens to the other projects in the plan when new projects are added. Members asked if there was really funding for all of these projects.

## General Comments on Transportation-Related Concerns

### The AFA has expressed strong opposition to fare increases on MetroBus, MetroRail and MetroAccess that were approved as part of WMATA's FY2013 budget.

- The AFA opposes increasing the surcharge for using paper fare-cards on MetroRail because this could significantly disadvantage people with limited incomes throughout the region.
- The AFA opposes increasing the cash payment surcharge on MetroBus because this will significantly disadvantage riders who are reliant on cash payments. The surcharge increase will have significant impacts specifically on low-income and minority riders since nearly half of MetroBus riders who pay with cash are low-income residents, and a majority are minority residents.
- The AFA strongly opposes raising MetroAccess fares, and recommends that WMATA should restructure the MetroAccess fare system to simplify and lower rates. The current MetroAccess fares are making it difficult for people reliant on paratransit service to meet their daily transportation needs and the increase will exacerbate the problem. With the fare increase implemented last year, many MetroAccess users have found it difficult to pay for the much needed service.

### The AFA expressed concern about the District Department of Transportation's (DDOT) red top meter program, which has recently been suspended.

- There has been a lack of communications from DDOT to the disability community concerning the details and the suspension of the red top meter program. Persons with disabilities and advocacy organizations were not told why the program was suspended, or when it might come back online.
- There doesn't seem to be much opportunity for public input on the program, especially from those with disabilities.
- When the program was in place, there were too few meters that were not well distributed throughout the city.
- In addition, many of the meters that are in place are hard to access by people with mobility limitations. These meters should to accessible by all potential users.

As WMATA evaluates proposals responding the new MetroAccess RFP, the AFA recommends that particular attention should be paid to the following:

- The MetroAccess contract(s) should be structured in such a way to ensure clear lines of communication, reporting and responsibility between scheduling, dispatching, the call center and the transportation vendors.
- If the "Multiple Contractor with a Broker" model is utilized, the contract should be written so that the broker is truly independent of conflicting considerations and acts on behalf of Metro. The broker should not operate any MetroAccess service.
- The transition to the new paratransit business model and contractors should be seamless, and there should be no interruptions in service.

The AFA applauds the TPB's efforts to develop guidance for complete streets policies throughout the region.

- Providing safe and accessible pedestrian infrastructure is necessary to accommodate all road users throughout the region. This is especially important to people with disabilities, including those who use wheelchairs, or have other mobility or visual impairments. This policy guidance is a great step in the direction of making all transportation infrastructure compliant with ADAAG standards (ADA Accessibility Guidelines for Buildings and Facilities).
- The AFA would like to see the following strategies for addressing safe and accessible pedestrian infrastructure included in complete streets policies throughout the region:
  - Accessible pedestrian signals, markings, and signage at intersections.
  - Audible, visual, and vibro-tactile information features at bus stop and bus bays;
  - Adequate crossing times at intersections to allow people with disabilities and older adults to safely cross; and
  - The maintenance of safe pedestrian access for people with visual and physical disabilities as roadways are being constructed or upgraded.

# National Capital Region Transportation Planning Board

777 North Capitol Street, N.E., Suite 300, Washington, D.C. 20002-4290 (202) 962-3310 Fax: (202) 962-3202


June 1, 2012

Honorable Phil Mendelson
Chairman
Metropolitan Washington
Air Quality Committee (MWAQC)
777 North Capitol Street, NE, #300
Washington, DC 20002

Dear Chairman Mendelson:

At its March 21, 2012 meeting, the National Capital Region Transportation Planning Board (TPB) approved a letter to MWAQC recommending the incorporation of safety margins of 20 percent and 30 percent into out-year mobile emissions budgets for 2017 and 2025 respectively in a PM2.5 maintenance plan under development by MWAQC. In this letter, TPB staff is providing additional information in support of the TPB's March 21 recommendation.

If MWAQC proceeds with the development of a PM2.5 maintenance plan for the Washington region, mobile emissions budgets will need to be developed for the out-years of 2017 and 2025 for both precursor NOx and primary PM2.5. EPA conformity regulations require that these budgets be based on current estimates of those emissions for 2017 and 2025 using the latest assumptions about future transportation and land use for the region, as well as the age and composition of the region's vehicle fleet and the parameters and procedures incorporated into the model currently mandated by EPA for estimating motor vehicle emissions. Once set, these budgets will be used, perhaps for many years, for determining the conformity of the TPB's plans and programs with the requirements of the Clean Air Act of 1990, as amended. The key issue of concern to the TPB is that future emissions estimates that the TPB will be required to develop to demonstrate conformity for these out-years could be impacted significantly by changes in the composition and age of the region's vehicle fleet, as well as by revisions to EPA's emissions estimation model (currently "MOVES 2010a"), both of which are external inputs to the planning process administered by the TPB.

<u>The potential impact of changes in the vehicle fleet</u>

TPB staff is providing as an attachment to this letter, and as a supplement to the TPB's March 21 letter, detailed results of a sensitivity test designed to assess the potential impact of changes in the mix and age of the vehicle fleet. As discussed later, these results form part of the rationale for the TPB's recommendation of safety margins of 20 percent and 30 percent for 2017 and 2025 respectively.

The TPB has collected and analyzed Vehicle Identification Number (VIN) data for all vehicles registered in the Washington region for three distinct points in time in 2005, 2008, and 2011. Snapshots of the VIN data were taken on July 1 of each of these years, and it is anticipated that similar snapshots will be taken each July 1 at three year intervals into the future: 2014, 2017, 2020, and so on.

Since the TPB has VIN data for 2005, 2008, and 2011, it has been possible for TPB staff to estimate precursor NOx and primary PM2.5 fine particulate emissions for 2017 and 2025 for different vehicle fleet mix and age assumptions. Specifically, TPB staff calculated these emissions with the most recent 2011 VIN data (already programmed for use in the PM2.5 maintenance SIP), and also with the 2005 VIN data. As documented in the attached Power Point presentation, significant differences were found in the emissions levels using the two different years of VIN data. For 2017, precursor NOx and primary PM 2.5 emissions were found to be higher by 25 percent and 22 percent respectively with 2011 VIN data than with 2005 VIN data, due largely to aging of the fleet between 2005 and 2011. For 2025, the differences were found to be 8 percent and 11 percent respectively. Breakdowns by vehicle type found that these differences were due predominately to light commercial trucks, buses and heavy duty trucks. For precursor NOx only 41 percent of the difference in 2017 and 21 percent in 2025 was due to passenger vehicles. The corresponding percentages for primary PM2.5 were 19 percent and 40 percent respectively.

The levels of emissions reductions that will actually be achieved in 2017 and 2025 will be highly dependent on continued steady turnover of not only passenger vehicles, but also light commercial trucks, buses and heavy duty trucks. If the turnover rates are slower than currently projected, the anticipated reductions will not be achieved. Such slower turnover rates could result in revised precursor NOx and primary PM2.5 projections that exceed the TPB staff projections currently being considered by MWAQC for use in setting mobile emissions budgets for 2017 and 2025. It is to allow for the possibility of such slower turnover rates, as well as possible changes in EPA's mandated emissions model, that the TPB has recommended the incorporation of safety margins in mobile emissions budgets for 2017 and 2025.

Summary

The specific safety margins recommended by the TPB in its March 21 letter to MWAQC, 20 percent for 2017 and 30 percent for 2025, are based in part on the VIN data assessment reported above, and in part on previous experience with changes in EPA's mandated emissions estimating procedures, which have typically resulted in significantly higher emissions estimates from the same set of local inputs. While there is no basis at this time for predicting the impact of future changes in EPA's emissions estimating procedures, the likelihood of such changes occurring increases as time goes on; hence the significantly higher safety margins recommended for 2025 than for 2017.

Three charts that were provided in the attachment to the TPB's March 21 letter are provided again in the PowerPoint attached to this letter. First, page 10 shows that primary PM2.5 emissions currently projected for 2040 are 2.1 percent higher than projected for 2025, so that conformity could not currently be demonstrated for 2040 if the 2025 mobile emissions budget were set at the 2025 projected level. Second, pages 11 and 12 show that even with the safety margins recommended by the TPB, total emissions from all sources are significantly below the levels required for a PM2.5 maintenance plan.

TPB staff is transmitting with this letter a set of detailed results of the VIN data assessment reported above. The letter and the supporting data tables are being provided to help inform ongoing MWAQC deliberations about the development of a PM2.5 maintenance plan, and the implications of such a plan for the TPB's ability to meet air quality conformity requirements for future updates to the region's transportation plans and programs.

Sincerely,

Ronald F. Kirby
Director, Department of
Transportation Planning

Item 5

# THE POTENTIAL IMPACT OF CHANGES IN THE REGIONAL VEHICLE FLEET ON FUTURE NOx AND PM2.5 EMISSIONS — A SENSITIVITY TEST

TPB Technical Committee Meeting
June 1, 2012

# PURPOSE & SCOPE OF THE SENSITIVITY TEST

## Purpose:

- To assess the potential impact of changes in the mix and age of the vehicle fleet on NOx and PM2.5 emissions for 2017 and 2025

## Scope:

- To calculate and compare NOx and PM2.5 emissions for 2017 and 2025 with
  (1) 2011 VIN data and
  (2) 2005 VIN data,
  keeping all other input data unchanged

# 2011 and 2005 REGIONAL VEHICLE FLEETS

## Fleet Composition

| | 2011 VIN | | 2005 VIN | |
|---|---|---|---|---|
| | # of Units | Percent | # of Units | Percent |
| Passenger Cars/Trucks | 3,326,987 | 88.35% | 3,056,520 | 89.01% |
| Light Commercial Trucks | 389,406 | 10.34% | 325,843 | 9.49% |
| Buses | 16,033 | 0.43% | 21,629 | 0.63% |
| Heavy Duty Trucks | 33,083 | 0.88% | 29,784 | 0.87% |
| All Vehicle Types | 3,765,509 | 100% | 3,433,776 | 100% |

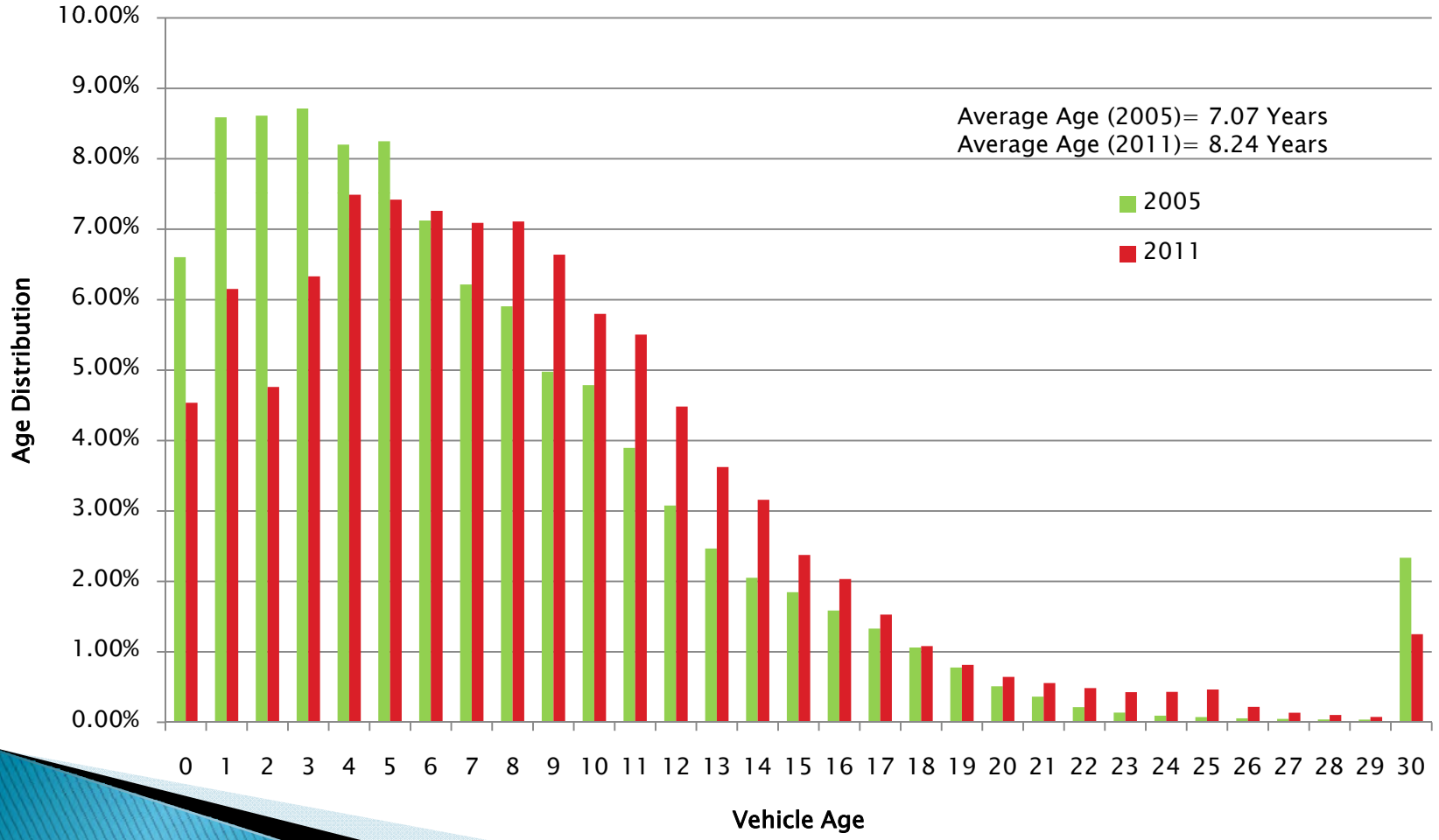
# 2011 and 2005 REGIONAL VEHICLE FLEETS

## Average Vehicle Age

| | 2011 VIN | 2005 VIN | Difference |
|---|---|---|---|
| Passenger Cars/Trucks | 8.21 | 7.08 | 1.13 |
| Light Commercial Trucks | 8.09 | 6.63 | 1.46 |
| Buses | 10.36 | 9.99 | 0.37 |
| Heavy Duty Trucks | 11.28 | 9.15 | 2.13 |
| All Vehicle Types | 8.24 | 7.07 | 1.17 |

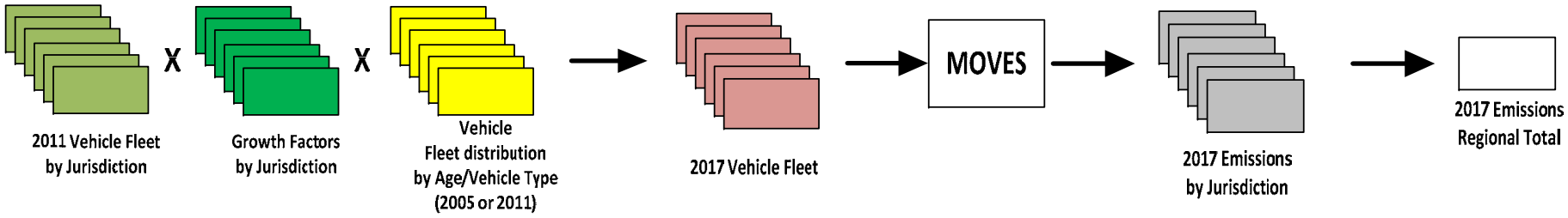
# 2011 and 2005 REGIONAL VEHICLE FLEETS

## Vehicle Age Distribution

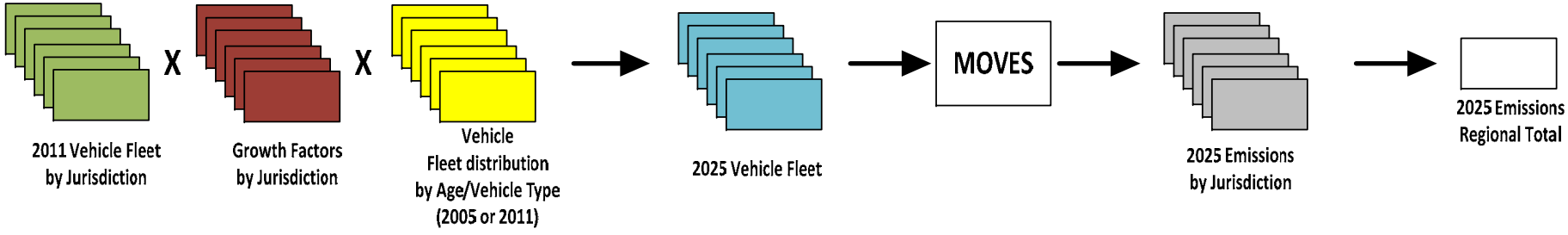


# DEVELOPMENT OF MOTOR VEHICLE EMISSIONS ESTIMATES

## Conceptual Flow Chart




2017 Inventories




2025 Inventories

# MOTOR VEHICLE EMISSIONS COMPARISON

| | 2017 | | 2025 | |
|---|---|---|---|---|
| | NOx (t/yr) | PM2.5 (t/yr) | NOx (t/yr) | PM2.5 (t/yr) |
| 2011VIN Basis | 41,709 (1) | 1,787 (4) | 27,400 (7) | 1,322 (10) |
| 2005VIN Basis | 33,468 (2) | 1,465 (5) | 25,406 (8) | 1,187 (11) |
| Difference | 8,241 (3) | 322 (6) | 1,994 (9) | 136 (12) |
| Ratio | 1.25 | 1.22 | 1.08⊛ | 1.11⊛ |

Source:

(1): Appendix Table 1.1
(2): Appendix Table 1.2
(3): Appendix Table 1.3
(4): Appendix Table 1.4
(5): Appendix Table 1.5
(6): Appendix Table 1.6
(7): Appendix Table 2.1
(8): Appendix Table 2.2
(9): Appendix Table 2.3
(10): Appendix Table 2.4
(11): Appendix Table 2.5
(12): Appendix Table 2.6

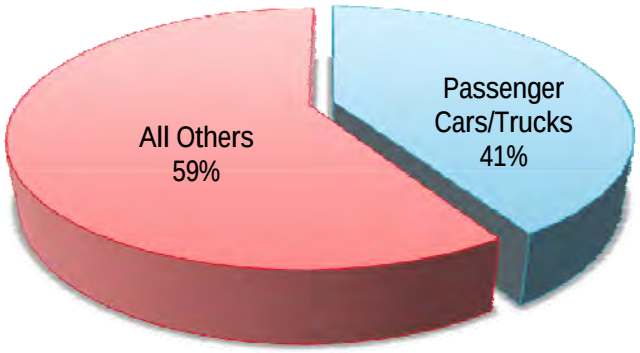
⊛ Note: Ratios of 1.19 and 1.16 provided on page 12 of the March 21 PowerPoint were incorrect due to use of a vehicle age distribution for 2002 rather than for 2005

# ORIGINS OF THE MOTOR VEHICLE EMISSIONS DIFFERENCES

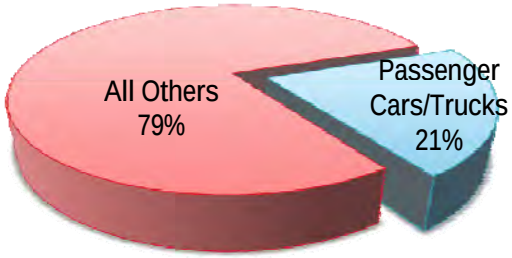
| | 2017 | | | | 2025 | | | |
|---|---|---|---|---|---|---|---|---|
| | NOx | | PM2.5 | | NOx | | PM2.5 | |
| | t/yr | Percent | t/yr | Percent | t/yr | Percent | t/yr | Percent |
| Passenger Cars/Trucks | 3,399 | 41% | 60 | 19% | 423 | 21% | 55 | 40% |
| Light Commercial Trucks | 1,040 | 13% | 26 | 8% | 244 | 12% | 12 | 9% |
| Buses | 256 | 3% | 18 | 6% | 160 | 8% | 15 | 11% |
| Heavy Duty Trucks | 3,546 | 43% | 217 | 67% | 1,168 | 59% | 54 | 40% |
| All Vehicle Types | 8,241 (1) | 100% | 322 (2) | 100% | 1,994 (3) | 100% | 136 (4) | 100% |

Source:
(1): Appendix Table 1.3 (2): Appendix Table 1.6 (3): Appendix Table 2.3 (4): Appendix Table 2.6

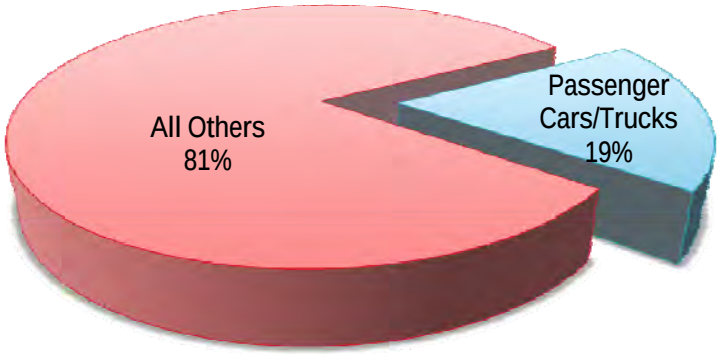
# ORIGINS OF THE MOTOR VEHICLE EMISSIONS DIFFERENCES



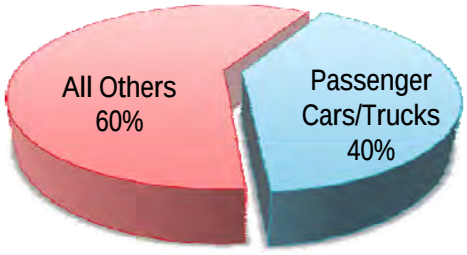

2017 NOx Emissions Difference = 8,241 t/yr




2025 NOx Emissions Difference = 1,994 t/yr



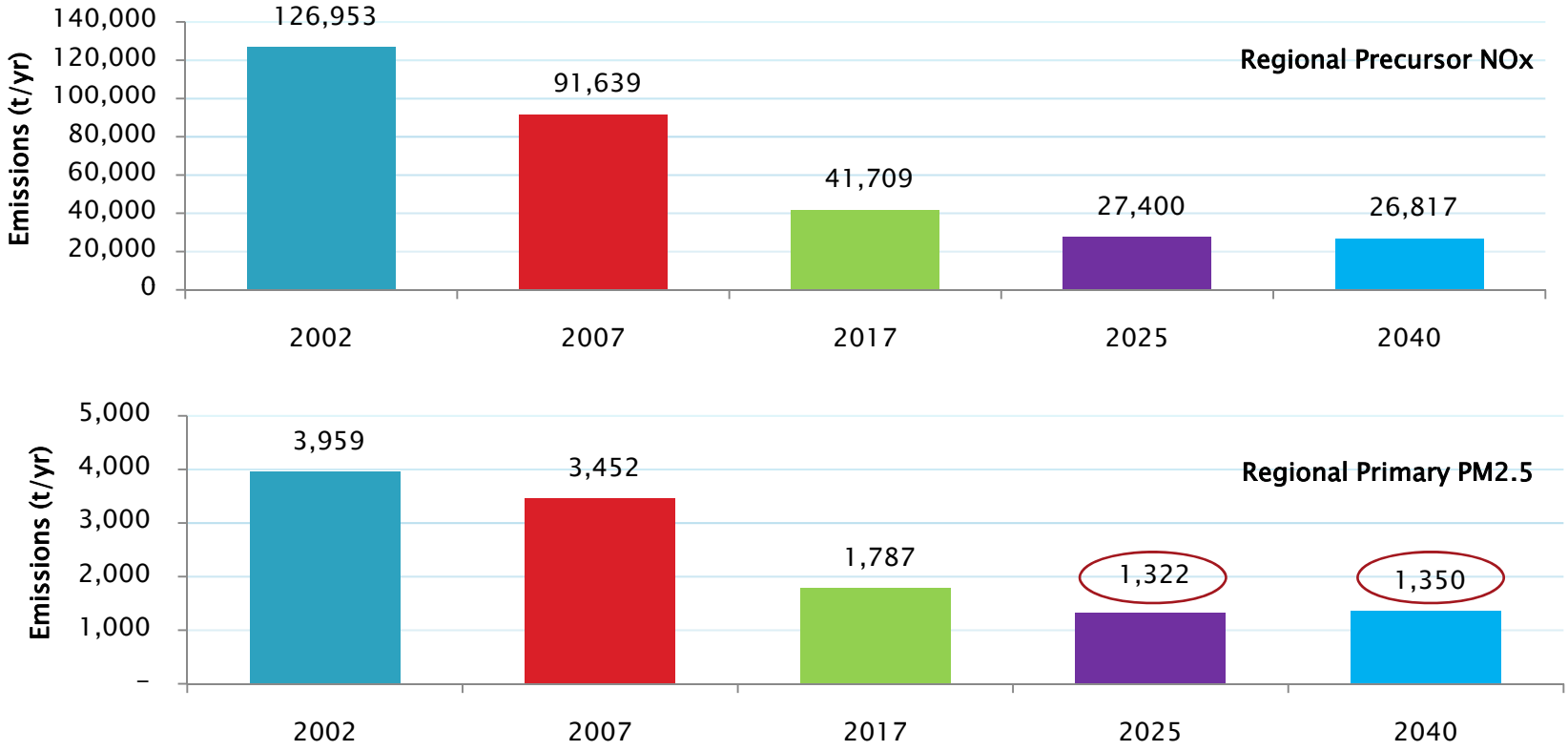

2017 PM2.5 Emissions Difference = 322 t/yr




2025 PM2.5 Emissions Difference = 136 t/yr

# MOTOR VEHICLE EMISSIONS BUDGETS

## Implications for the 2011 Constrained Long Range Plan (CLRP)

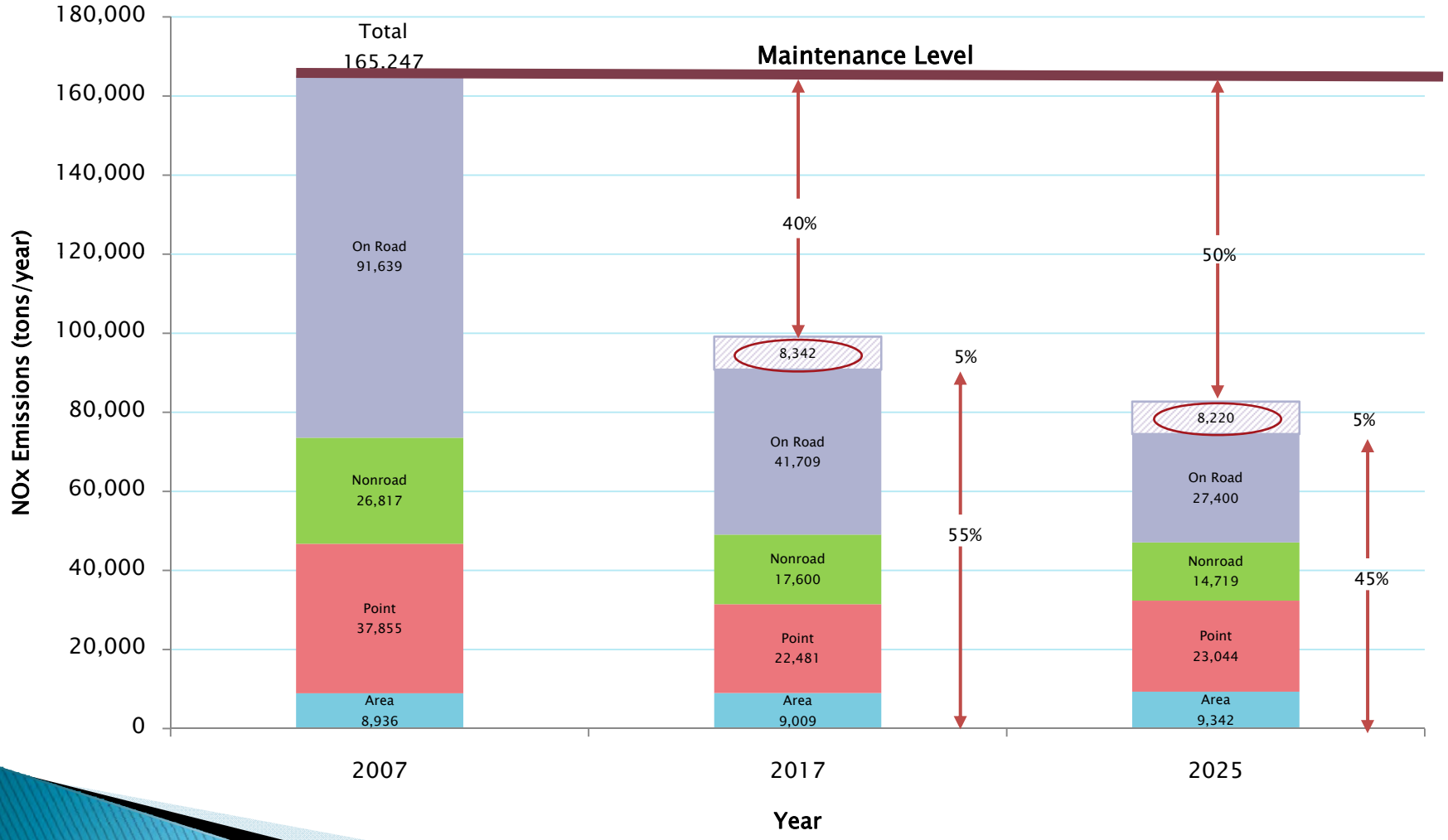



Example:

- If the 2025 mobile budget for primary PM2.5 had been set and in effect at the inventory level of 1,322 tons per year, conformity could not have been demonstrated for 2040.
- The new 2017 and 2025 budgets for precursor NOx and primary PM2.5 could be in effect for the 2013 CLRP update.

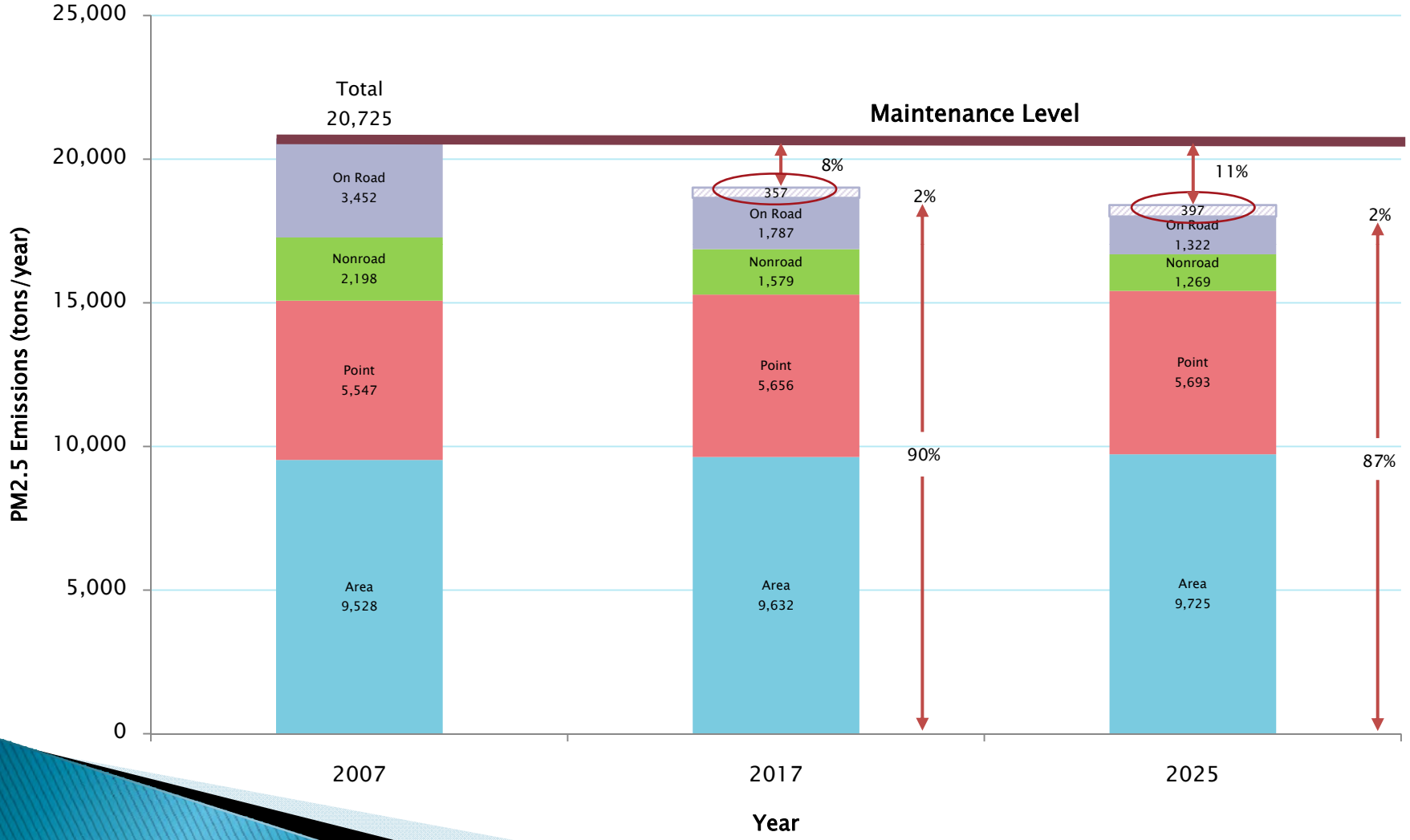
# SETTING MOTOR VEHICLE EMISSIONS BUDGETS

## Safety Margins as Percentages of Maintenance Level for NOx



# SETTING MOTOR VEHICLE EMISSIONS BUDGETS

## Safety Margins as Percentages of Maintenance Level for PM2.5



# Appendix

## Emissions by Vehicle Type and Vehicle Age in Tons/Year

TPB Technical Committee Meeting
June 1, 2012

**2011 VIN Basis**

**Table 1.1** 2017 NOX Emissions (by Vehicle Type and Vehicle Age) in tons/year

| | MOVES SourceUseType Vehicle Categories | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MC | PC | PT | LCT | IB | TB | SB | RT | SUSH | SULH | MH | CUSH | CULH | |
| Veh_Age | Motorcycle | Passenger Car | Passenger Truck | Light Commercial Truck | Intercity Bus | Transit Bus | School Bus | Refuse Truck | Single Unit Short-haul Truck | Single Unit Long-haul Truck | Motor Home | Combination Short-haul Truck | Combination Long-haul Truck | TOTAL |
| 0 | 8 | 108 | 238 | 125 | 3 | 9 | 3 | 6 | 107 | 6 | 1 | 70 | 180 | 864 |
| 1 | 7 | 160 | 292 | 150 | 6 | 14 | 1 | 4 | 74 | 4 | 1 | 54 | 145 | 912 |
| 2 | 13 | 134 | 179 | 94 | 7 | 17 | 2 | 5 | 89 | 5 | 1 | 65 | 177 | 789 |
| 3 | 11 | 154 | 294 | 159 | 5 | 12 | 4 | 5 | 97 | 6 | 2 | 55 | 146 | 951 |
| 4 | 12 | 257 | 410 | 211 | 6 | 11 | 5 | 16 | 251 | 16 | 5 | 203 | 452 | 1,854 |
| 5 | 10 | 245 | 409 | 220 | 15 | 25 | 4 | 14 | 193 | 12 | 4 | 184 | 400 | 1,735 |
| 6 | 8 | 272 | 523 | 269 | 14 | 26 | 2 | 14 | 228 | 15 | 5 | 190 | 412 | 1,977 |
| 7 | 6 | 258 | 512 | 264 | 8 | 15 | 8 | 8 | 153 | 10 | 4 | 113 | 242 | 1,601 |
| 8 | 7 | 347 | 581 | 317 | 19 | 38 | 9 | 19 | 188 | 13 | 4 | 270 | 369 | 2,182 |
| 9 | 5 | 346 | 548 | 288 | 26 | 50 | 14 | 14 | 172 | 12 | 5 | 191 | 253 | 1,923 |
| 10 | 4 | 373 | 524 | 260 | 28 | 52 | 14 | 18 | 205 | 15 | 6 | 244 | 338 | 2,081 |
| 11 | 3 | 445 | 509 | 272 | 66 | 115 | 26 | 32 | 343 | 26 | 10 | 468 | 536 | 2,849 |
| 12 | 2 | 375 | 486 | 300 | 26 | 44 | 29 | 22 | 243 | 19 | 8 | 305 | 349 | 2,207 |
| 13 | 1 | 385 | 456 | 298 | 41 | 68 | 14 | 15 | 179 | 14 | 6 | 217 | 253 | 1,942 |
| 14 | 2 | 627 | 773 | 345 | 49 | 78 | 9 | 12 | 134 | 11 | 5 | 167 | 205 | 2,417 |
| 15 | 1 | 569 | 571 | 244 | 18 | 27 | 10 | 14 | 103 | 8 | 3 | 219 | 258 | 2,047 |
| 16 | 1 | 551 | 395 | 177 | 15 | 22 | 14 | 17 | 148 | 12 | 6 | 247 | 269 | 1,875 |
| 17 | 1 | 359 | 298 | 125 | 18 | 25 | 14 | 11 | 83 | 7 | 3 | 168 | 203 | 1,315 |
| 18 | 1 | 316 | 207 | 88 | 11 | 14 | 7 | 7 | 60 | 5 | 3 | 98 | 117 | 932 |
| 19 | 0 | 331 | 170 | 63 | 21 | 20 | 7 | 6 | 74 | 7 | 3 | 91 | 94 | 887 |
| 20 | 0 | 248 | 143 | 56 | 14 | 16 | 20 | 7 | 75 | 7 | 4 | 101 | 109 | 799 |
| 21 | 0 | 196 | 134 | 54 | 15 | 19 | 25 | 7 | 95 | 9 | 6 | 103 | 103 | 767 |
| 22 | 0 | 207 | 315 | 112 | 43 | 48 | 24 | 6 | 66 | 6 | 4 | 94 | 110 | 1,036 |
| 23 | 0 | 155 | 317 | 109 | 37 | 42 | 9 | 6 | 67 | 6 | 5 | 91 | 111 | 954 |
| 24 | 0 | 125 | 389 | 131 | 32 | 35 | 4 | 8 | 78 | 8 | 5 | 112 | 141 | 1,067 |
| 25 | 0 | 95 | 491 | 158 | 27 | 30 | 2 | 5 | 73 | 7 | 6 | 80 | 91 | 1,066 |
| 26 | 0 | 74 | 155 | 54 | 23 | 26 | 1 | 3 | 47 | 5 | 5 | 39 | 38 | 470 |
| 27 | 0 | 58 | 76 | 27 | 22 | 23 | 1 | 1 | 19 | 2 | 2 | 15 | 14 | 260 |
| 28 | 0 | 42 | 52 | 18 | 24 | 25 | 1 | 1 | 20 | 2 | 3 | 15 | 14 | 218 |
| 29 | 0 | 21 | 45 | 15 | 21 | 21 | 1 | 1 | 12 | 1 | 2 | 11 | 11 | 162 |
| 30 | 2 | 558 | 399 | 168 | 24 | 23 | 96 | 6 | 63 | 7 | 10 | 93 | 122 | 1,569 |
| SUBTOTAL | 109 | 8,392 | 10,891 | 5,163 | 684 | 989 | 381 | 308 | 3,738 | 284 | 138 | 4,372 | 6,259 | 41,709 |
| % OF SUBTOTAL | 0.3% | 20.1% | 26.1% | 12.4% | 1.6% | 2.4% | 0.9% | 0.7% | 9.0% | 0.7% | 0.3% | 10.5% | 15.0% | 100.0% |
| TOTAL | 19,392 | | | 5,163 | 2,054 | | | 15,100 | | | | | | |
| % OF TOTAL | 46% | | | 12% | 5% | | | 36% | | | | | | |

**2005 VIN Basis**

**Table 1.2 2017 NOX Emissions (by Vehicle Type and Vehicle Age) in tons/year**

| | MOVES SourceUseType Vehicle Categories | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MC | PC | PT | LCT | IB | TB | SB | RT | SUSH | SULH | MH | CUSH | CULH | |
| Veh_Age | Motorcycle | Passenger Car | Passenger Truck | Light Commercial Truck | Intercity Bus | Transit Bus | School Bus | Refuse Truck | Single Unit Short-haul Truck | Single Unit Long-haul Truck | Motor Home | Combination Short-haul Truck | Combination Long-haul Truck | TOTAL |
| 0 | 26 | 154 | 333 | 179 | 5 | 13 | 1 | 17 | 271 | 15 | 4 | 222 | 599 | 1,839 |
| 1 | 17 | 192 | 475 | 257 | 6 | 15 | 8 | 9 | 169 | 10 | 3 | 109 | 285 | 1,556 |
| 2 | 16 | 195 | 447 | 243 | 6 | 14 | 3 | 8 | 125 | 7 | 2 | 101 | 285 | 1,453 |
| 3 | 11 | 198 | 442 | 235 | 6 | 14 | 6 | 6 | 118 | 7 | 2 | 72 | 192 | 1,309 |
| 4 | 8 | 277 | 462 | 241 | 8 | 14 | 8 | 11 | 170 | 11 | 3 | 130 | 292 | 1,635 |
| 5 | 6 | 296 | 407 | 216 | 14 | 23 | 6 | 14 | 196 | 13 | 4 | 177 | 383 | 1,754 |
| 6 | 4 | 295 | 446 | 231 | 3 | 7 | 10 | 9 | 165 | 11 | 4 | 112 | 235 | 1,532 |
| 7 | 3 | 262 | 370 | 181 | 10 | 18 | 7 | 9 | 141 | 10 | 3 | 112 | 249 | 1,374 |
| 8 | 3 | 323 | 400 | 216 | 45 | 89 | 11 | 21 | 211 | 15 | 4 | 283 | 389 | 2,010 |
| 9 | 2 | 292 | 338 | 175 | 5 | 10 | 15 | 9 | 118 | 8 | 3 | 126 | 165 | 1,266 |
| 10 | 2 | 364 | 299 | 150 | 13 | 24 | 30 | 11 | 159 | 12 | 5 | 143 | 183 | 1,394 |
| 11 | 2 | 347 | 278 | 146 | 18 | 31 | 28 | 15 | 152 | 11 | 4 | 196 | 229 | 1,455 |
| 12 | 1 | 301 | 228 | 137 | 13 | 23 | 23 | 11 | 123 | 9 | 4 | 153 | 183 | 1,209 |
| 13 | 1 | 302 | 199 | 131 | 24 | 40 | 20 | 5 | 93 | 7 | 4 | 64 | 62 | 953 |
| 14 | 1 | 476 | 323 | 140 | 17 | 27 | 18 | 5 | 82 | 7 | 4 | 64 | 68 | 1,230 |
| 15 | 1 | 497 | 287 | 127 | 19 | 29 | 37 | 12 | 133 | 11 | 5 | 169 | 173 | 1,500 |
| 16 | 1 | 375 | 324 | 143 | 57 | 84 | 58 | 11 | 99 | 8 | 4 | 158 | 171 | 1,493 |
| 17 | 0 | 245 | 315 | 129 | 82 | 116 | 22 | 12 | 104 | 9 | 4 | 178 | 209 | 1,426 |
| 18 | 0 | 230 | 265 | 109 | 43 | 56 | 41 | 9 | 84 | 7 | 4 | 124 | 141 | 1,114 |
| 19 | 0 | 223 | 239 | 87 | 5 | 5 | 23 | 6 | 72 | 6 | 3 | 93 | 98 | 861 |
| 20 | 0 | 155 | 134 | 56 | 20 | 23 | 15 | 5 | 67 | 6 | 4 | 80 | 84 | 648 |
| 21 | 0 | 100 | 103 | 42 | 7 | 8 | 16 | 3 | 40 | 4 | 3 | 35 | 33 | 393 |
| 22 | 0 | 88 | 109 | 40 | 3 | 3 | 13 | 0 | 7 | 1 | 1 | 6 | 6 | 276 |
| 23 | 0 | 50 | 71 | 26 | 3 | 4 | 6 | 1 | 8 | 1 | 1 | 9 | 10 | 188 |
| 24 | 0 | 30 | 51 | 19 | 4 | 4 | 3 | 1 | 11 | 1 | 1 | 7 | 6 | 139 |
| 25 | 0 | 17 | 40 | 15 | 5 | 5 | 3 | 1 | 25 | 2 | 3 | 16 | 13 | 146 |
| 26 | 0 | 10 | 35 | 13 | 6 | 6 | 1 | 1 | 12 | 1 | 1 | 9 | 9 | 104 |
| 27 | 0 | 6 | 32 | 12 | 8 | 8 | 1 | 1 | 13 | 1 | 2 | 7 | 5 | 96 |
| 28 | 0 | 3 | 28 | 10 | 12 | 13 | 0 | 0 | 3 | 0 | 0 | 2 | 2 | 75 |
| 29 | 0 | 2 | 29 | 10 | 15 | 15 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 75 |
| 30 | 0 | 920 | 1,153 | 410 | 14 | 14 | 114 | 7 | 83 | 9 | 13 | 102 | 127 | 2,966 |
| SUBTOTAL | 106 | 7,225 | 8,661 | 4,122 | 495 | 756 | 548 | 230 | 3,054 | 221 | 103 | 3,060 | 4,886 | 33,468 |
| % OF SUBTOTAL | 0.3% | 21.6% | 25.9% | 12.3% | 1.5% | 2.3% | 1.6% | 0.7% | 9.1% | 0.7% | 0.3% | 9.1% | 14.6% | 100.0% |
| TOTAL | 15,992 | | | 4,122 | 1,799 | | | 11,554 | | | | | | |
| % OF TOTAL | 48% | | | 12% | 5% | | | 35% | | | | | | |

**Table 1.3** 2017 NOX Emissions Differences (by Vehicle Type and Vehicle Age) in tons/year

| | MOVES SourceUseType Vehicle Categories | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MC | PC | PT | LCT | IB | TB | SB | RT | SUSH | SULH | MH | CUSH | CULH | |
| Veh_Age | Motorcycle | Passenger Car | Passenger Truck | Light Commercial Truck | Intercity Bus | Transit Bus | School Bus | Refuse Truck | Single Unit Short-haul Truck | Single Unit Long-haul Truck | Motor Home | Combination Short-haul Truck | Combination Long-haul Truck | TOTAL |
| 0 | (18) | (46) | (95) | (54) | (2) | (4) | 2 | (11) | (164) | (9) | (2) | (152) | (419) | (975) |
| 1 | (10) | (32) | (183) | (108) | (0) | (1) | (7) | (4) | (96) | (5) | (2) | (56) | (140) | (644) |
| 2 | (3) | (61) | (268) | (149) | 1 | 2 | (1) | (3) | (36) | (2) | (1) | (37) | (108) | (665) |
| 3 | 0 | (44) | (147) | (75) | (1) | (2) | (2) | (1) | (21) | (1) | (1) | (17) | (46) | (358) |
| 4 | 4 | (19) | (53) | (30) | (2) | (4) | (3) | 5 | 81 | 5 | 2 | 73 | 160 | 218 |
| 5 | 5 | (51) | 2 | 4 | 1 | 2 | (2) | 0 | (2) | (0) | (0) | 7 | 17 | (19) |
| 6 | 4 | (23) | 77 | 38 | 10 | 20 | (9) | 4 | 63 | 4 | 1 | 79 | 177 | 445 |
| 7 | 3 | (3) | 141 | 83 | (2) | (3) | 1 | (1) | 12 | 1 | 1 | 1 | (7) | 227 |
| 8 | 4 | 24 | 181 | 101 | (26) | (51) | (1) | (2) | (23) | (2) | (0) | (13) | (20) | 173 |
| 9 | 3 | 54 | 210 | 114 | 21 | 40 | (1) | 5 | 54 | 4 | 1 | 65 | 88 | 657 |
| 10 | 2 | 8 | 224 | 111 | 16 | 29 | (16) | 7 | 47 | 3 | 1 | 101 | 155 | 687 |
| 11 | 1 | 98 | 231 | 126 | 48 | 84 | (2) | 17 | 191 | 14 | 6 | 272 | 307 | 1,394 |
| 12 | 1 | 75 | 258 | 163 | 12 | 21 | 6 | 10 | 120 | 9 | 4 | 152 | 167 | 998 |
| 13 | 1 | 83 | 257 | 162 | 17 | 27 | (6) | 10 | 86 | 7 | 2 | 152 | 191 | 989 |
| 14 | 1 | 151 | 450 | 205 | 32 | 51 | (9) | 7 | 52 | 4 | 1 | 103 | 137 | 1,186 |
| 15 | 1 | 73 | 284 | 117 | (1) | (2) | (27) | 2 | (29) | (3) | (2) | 50 | 86 | 548 |
| 16 | 1 | 176 | 71 | 35 | (42) | (62) | (44) | 5 | 49 | 4 | 2 | 89 | 98 | 382 |
| 17 | 1 | 114 | (17) | (4) | (64) | (91) | (8) | (1) | (21) | (2) | (1) | (10) | (5) | (111) |
| 18 | 0 | 85 | (58) | (21) | (32) | (42) | (35) | (2) | (24) | (2) | (1) | (25) | (24) | (182) |
| 19 | (0) | 108 | (68) | (24) | 16 | 15 | (16) | (0) | 2 | 0 | 0 | (2) | (5) | 25 |
| 20 | (0) | 93 | 10 | (0) | (6) | (7) | 6 | 1 | 8 | 1 | 0 | 21 | 25 | 151 |
| 21 | 0 | 96 | 31 | 13 | 9 | 11 | 9 | 5 | 56 | 5 | 3 | 68 | 70 | 374 |
| 22 | 0 | 119 | 206 | 72 | 40 | 45 | 11 | 6 | 59 | 6 | 3 | 88 | 104 | 759 |
| 23 | 0 | 106 | 246 | 83 | 34 | 39 | 3 | 6 | 59 | 5 | 4 | 82 | 101 | 766 |
| 24 | 0 | 95 | 338 | 111 | 28 | 31 | 1 | 7 | 67 | 6 | 4 | 105 | 135 | 928 |
| 25 | 0 | 78 | 450 | 143 | 23 | 25 | (1) | 4 | 48 | 5 | 3 | 63 | 78 | 920 |
| 26 | 0 | 64 | 120 | 41 | 18 | 19 | 0 | 2 | 35 | 4 | 4 | 30 | 29 | 367 |
| 27 | 0 | 52 | 45 | 14 | 14 | 15 | 0 | 0 | 6 | 1 | 1 | 8 | 8 | 164 |
| 28 | 0 | 39 | 24 | 8 | 12 | 12 | 1 | 1 | 17 | 2 | 3 | 13 | 12 | 144 |
| 29 | 0 | 19 | 16 | 6 | 6 | 6 | 1 | 1 | 11 | 1 | 2 | 9 | 10 | 87 |
| 30 | 2 | (362) | (754) | (243) | 10 | 9 | (18) | (1) | (20) | (2) | (4) | (9) | (5) | (1,397) |
| SUBTOTAL | 3 | 1,167 | 2,230 | 1,040 | 189 | 233 | (167) | 78 | 684 | 63 | 34 | 1,312 | 1,374 | 8,241 |
| % OF SUBTOTAL | 0.0% | 14.2% | 27.1% | 12.6% | 2.3% | 2.8% | -2.0% | 1.0% | 8.3% | 0.8% | 0.4% | 15.9% | 16.7% | 100.0% |
| TOTAL | 3,399 | | | 1,040 | 256 | | | 3,546 | | | | | | |
| % OF TOTAL | 41% | | | 13% | 3% | | | 43% | | | | | | |

**2011 VIN Basis**

**Table 1.4** 2017 PM2.5 Emissions (by Vehicle Type and Vehicle Age) in tons/year

| | MOVES SourceUseType Vehicle Categories | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MC | PC | PT | LCT | IB | TB | SB | RT | SUSH | SULH | MH | CUSH | CULH | |
| Veh_Age | Motorcycle | Passenger Car | Passenger Truck | Light Commercial Truck | Intercity Bus | Transit Bus | School Bus | Refuse Truck | Single Unit Short-haul Truck | Single Unit Long-haul Truck | Motor Home | Combination Short-haul Truck | Combination Long-haul Truck | TOTAL |
| 0 | 1 | 14 | 17 | 5 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 3 | 2 | 44 |
| 1 | 0 | 20 | 20 | 6 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 2 | 54 |
| 2 | 1 | 17 | 13 | 4 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | 42 |
| 3 | 1 | 19 | 21 | 7 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | 54 |
| 4 | 1 | 25 | 31 | 10 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 7 | 6 | 86 |
| 5 | 1 | 24 | 31 | 10 | 1 | 1 | 0 | 1 | 4 | 0 | 0 | 6 | 5 | 83 |
| 6 | 1 | 25 | 33 | 10 | 1 | 1 | 0 | 1 | 4 | 0 | 0 | 6 | 5 | 87 |
| 7 | 0 | 24 | 32 | 10 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 4 | 3 | 77 |
| 8 | 0 | 26 | 33 | 10 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 3 | 3 | 80 |
| 9 | 0 | 24 | 30 | 9 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | 71 |
| 10 | 0 | 26 | 28 | 9 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 3 | 3 | 73 |
| 11 | 0 | 26 | 27 | 12 | 7 | 9 | 2 | 3 | 20 | 2 | 0 | 38 | 37 | 183 |
| 12 | 0 | 20 | 20 | 11 | 3 | 3 | 3 | 2 | 14 | 1 | 0 | 25 | 24 | 127 |
| 13 | 0 | 16 | 15 | 10 | 4 | 5 | 1 | 1 | 10 | 1 | 0 | 18 | 18 | 101 |
| 14 | 0 | 13 | 15 | 9 | 5 | 6 | 1 | 1 | 8 | 1 | 0 | 14 | 14 | 86 |
| 15 | 0 | 15 | 12 | 7 | 1 | 1 | 1 | 1 | 5 | 0 | 0 | 11 | 12 | 66 |
| 16 | 0 | 14 | 9 | 6 | 1 | 1 | 1 | 1 | 8 | 1 | 0 | 12 | 12 | 66 |
| 17 | 0 | 12 | 8 | 4 | 1 | 1 | 1 | 1 | 4 | 0 | 0 | 8 | 9 | 50 |
| 18 | 0 | 8 | 5 | 3 | 1 | 1 | 0 | 0 | 3 | 0 | 0 | 5 | 5 | 32 |
| 19 | 0 | 7 | 3 | 1 | 1 | 1 | 0 | 0 | 3 | 0 | 0 | 3 | 3 | 24 |
| 20 | 0 | 8 | 4 | 2 | 1 | 1 | 1 | 0 | 4 | 0 | 0 | 6 | 6 | 34 |
| 21 | 0 | 6 | 4 | 2 | 1 | 1 | 2 | 0 | 5 | 1 | 0 | 6 | 5 | 33 |
| 22 | 0 | 5 | 5 | 3 | 3 | 2 | 2 | 0 | 4 | 0 | 0 | 5 | 6 | 33 |
| 23 | 0 | 4 | 5 | 3 | 2 | 2 | 1 | 0 | 4 | 0 | 0 | 5 | 6 | 31 |
| 24 | 0 | 3 | 6 | 3 | 2 | 1 | 0 | 0 | 3 | 0 | 0 | 5 | 6 | 31 |
| 25 | 0 | 3 | 8 | 3 | 1 | 1 | 0 | 0 | 3 | 0 | 0 | 4 | 4 | 27 |
| 26 | 0 | 2 | 3 | 1 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | 14 |
| 27 | 0 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 9 |
| 28 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 7 |
| 29 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 30 | 0 | 28 | 12 | 6 | 2 | 1 | 6 | 0 | 4 | 0 | 0 | 7 | 10 | 76 |
| SUBTOTAL | 7 | 440 | 449 | 177 | 43 | 48 | 23 | 18 | 135 | 11 | 4 | 214 | 217 | 1,787 |
| % OF SUBTOTAL | 0.4% | 24.6% | 25.1% | 9.9% | 2.4% | 2.7% | 1.3% | 1.0% | 7.6% | 0.6% | 0.2% | 12.0% | 12.2% | 100.0% |
| TOTAL | 896 | | | 177 | 114 | | | 599 | | | | | | |
| % OF TOTAL | 50% | | | 10% | 6% | | | 34% | | | | | | |

**2005 VIN Basis**

**Table 1.5** 2017 PM2.5 Emissions (by Vehicle Type and Vehicle Age) in tons/year

| | MOVES SourceUseType Vehicle Categories | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MC | PC | PT | LCT | IB | TB | SB | RT | SUSH | SULH | MH | CUSH | CULH | |
| Veh_Age | Motorcycle | Passenger Car | Passenger Truck | Light Commercial Truck | Intercity Bus | Transit Bus | School Bus | Refuse Truck | Single Unit Short-haul Truck | Single Unit Long-haul Truck | Motor Home | Combination Short-haul Truck | Combination Long-haul Truck | TOTAL |
| 0 | 2 | 19 | 23 | 7 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 8 | 7 | 74 |
| 1 | 1 | 23 | 33 | 11 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 4 | 3 | 81 |
| 2 | 1 | 24 | 31 | 10 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 4 | 3 | 77 |
| 3 | 1 | 24 | 31 | 10 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 3 | 2 | 74 |
| 4 | 1 | 26 | 35 | 11 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 4 | 4 | 86 |
| 5 | 0 | 28 | 31 | 10 | 1 | 1 | 0 | 1 | 4 | 0 | 0 | 6 | 5 | 86 |
| 6 | 0 | 26 | 28 | 9 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 3 | 75 |
| 7 | 0 | 23 | 23 | 7 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 3 | 3 | 65 |
| 8 | 0 | 24 | 23 | 7 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 3 | 3 | 65 |
| 9 | 0 | 20 | 18 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 49 |
| 10 | 0 | 25 | 16 | 5 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 2 | 2 | 53 |
| 11 | 0 | 20 | 15 | 6 | 2 | 2 | 2 | 1 | 9 | 1 | 0 | 16 | 16 | 91 |
| 12 | 0 | 16 | 10 | 5 | 1 | 2 | 2 | 1 | 7 | 1 | 0 | 13 | 13 | 70 |
| 13 | 0 | 13 | 7 | 5 | 2 | 3 | 2 | 1 | 5 | 0 | 0 | 5 | 4 | 47 |
| 14 | 0 | 10 | 6 | 4 | 2 | 2 | 2 | 0 | 5 | 0 | 0 | 5 | 5 | 41 |
| 15 | 0 | 13 | 6 | 4 | 1 | 2 | 2 | 1 | 7 | 1 | 0 | 8 | 8 | 52 |
| 16 | 0 | 10 | 8 | 5 | 4 | 4 | 4 | 1 | 5 | 0 | 0 | 8 | 8 | 56 |
| 17 | 0 | 8 | 8 | 4 | 5 | 6 | 1 | 1 | 5 | 0 | 0 | 9 | 10 | 58 |
| 18 | 0 | 6 | 6 | 3 | 3 | 3 | 3 | 1 | 4 | 0 | 0 | 6 | 6 | 42 |
| 19 | 0 | 5 | 4 | 2 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 3 | 4 | 23 |
| 20 | 0 | 5 | 4 | 2 | 1 | 1 | 1 | 0 | 4 | 0 | 0 | 4 | 4 | 27 |
| 21 | 0 | 3 | 3 | 2 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 2 | 2 | 16 |
| 22 | 0 | 2 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 23 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 24 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 25 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 5 |
| 26 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 27 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| 28 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 29 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 30 | 0 | 45 | 33 | 14 | 1 | 1 | 7 | 1 | 5 | 1 | 0 | 8 | 11 | 125 |
| SUBTOTAL | 7 | 422 | 408 | 151 | 29 | 34 | 32 | 12 | 96 | 8 | 3 | 134 | 130 | 1,465 |
| % OF SUBTOTAL | 0.5% | 28.8% | 27.8% | 10.3% | 2.0% | 2.4% | 2.2% | 0.8% | 6.6% | 0.5% | 0.2% | 9.1% | 8.9% | 100.0% |
| TOTAL | 836 | | | 151 | 96 | | | 382 | | | | | | |
| % OF TOTAL | 57% | | | 10% | 7% | | | 26% | | | | | | |

**Table 1.6** 2017 PM2.5 Emissions Differences (by Vehicle Type and Vehicle Age) in tons/year

| | MOVES SourceUseType Vehicle Categories | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MC | PC | PT | LCT | IB | TB | SB | RT | SUSH | SULH | MH | CUSH | CULH | |
| Veh_Age | Motorcycle | Passenger Car | Passenger Truck | Light Commercial Truck | Intercity Bus | Transit Bus | School Bus | Refuse Truck | Single Unit Short-haul Truck | Single Unit Long-haul Truck | Motor Home | Combination Short-haul Truck | Combination Long-haul Truck | TOTAL |
| 0 | (1) | (5) | (7) | (2) | (0) | (0) | 0 | (1) | (3) | (0) | (0) | (6) | (5) | (29) |
| 1 | (1) | (3) | (13) | (4) | (0) | (0) | (0) | (0) | (2) | (0) | (0) | (2) | (2) | (27) |
| 2 | (0) | (7) | (19) | (6) | 0 | 0 | (0) | (0) | (1) | (0) | (0) | (1) | (1) | (35) |
| 3 | 0 | (5) | (10) | (3) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (1) | (1) | (20) |
| 4 | 0 | (1) | (4) | (1) | (0) | (0) | (0) | 0 | 2 | 0 | 0 | 2 | 2 | (0) |
| 5 | 0 | (4) | 0 | 0 | 0 | 0 | (0) | 0 | (0) | (0) | (0) | 0 | 0 | (3) |
| 6 | 0 | (1) | 5 | 1 | 1 | 1 | (0) | 0 | 1 | 0 | 0 | 2 | 2 | 12 |
| 7 | 0 | 0 | 9 | 3 | (0) | (0) | 0 | (0) | 0 | 0 | 0 | 0 | (0) | 13 |
| 8 | 0 | 2 | 10 | 3 | (0) | (1) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | 14 |
| 9 | 0 | 4 | 11 | 4 | 0 | 0 | (0) | 0 | 1 | 0 | 0 | 1 | 1 | 22 |
| 10 | 0 | 1 | 12 | 4 | 0 | 0 | (0) | 0 | 1 | 0 | 0 | 1 | 1 | 21 |
| 11 | 0 | 6 | 12 | 5 | 5 | 7 | (0) | 2 | 11 | 1 | 0 | 22 | 21 | 92 |
| 12 | 0 | 4 | 11 | 6 | 1 | 2 | 1 | 1 | 7 | 1 | 0 | 12 | 11 | 56 |
| 13 | 0 | 4 | 9 | 6 | 2 | 2 | (1) | 1 | 5 | 0 | 0 | 12 | 13 | 53 |
| 14 | 0 | 3 | 8 | 5 | 3 | 4 | (1) | 1 | 3 | 0 | 0 | 8 | 10 | 45 |
| 15 | 0 | 2 | 6 | 4 | (0) | (0) | (2) | 0 | (1) | (0) | (0) | 2 | 4 | 14 |
| 16 | 0 | 5 | 2 | 1 | (3) | (3) | (3) | 0 | 3 | 0 | 0 | 4 | 4 | 11 |
| 17 | 0 | 4 | (0) | (0) | (4) | (5) | (0) | (0) | (1) | (0) | (0) | (1) | (0) | (8) |
| 18 | 0 | 2 | (1) | (1) | (2) | (2) | (2) | (0) | (1) | (0) | (0) | (1) | (1) | (10) |
| 19 | (0) | 2 | (1) | (0) | 1 | 1 | (1) | (0) | 0 | 0 | 0 | (0) | (0) | 1 |
| 20 | (0) | 3 | 0 | (0) | (0) | (0) | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 6 |
| 21 | 0 | 3 | 1 | 0 | 1 | 0 | 1 | 0 | 3 | 0 | 0 | 4 | 4 | 17 |
| 22 | 0 | 3 | 3 | 2 | 2 | 2 | 1 | 0 | 3 | 0 | 0 | 5 | 5 | 27 |
| 23 | 0 | 3 | 4 | 2 | 2 | 2 | 0 | 0 | 3 | 0 | 0 | 4 | 5 | 26 |
| 24 | 0 | 3 | 5 | 2 | 2 | 1 | 0 | 0 | 3 | 0 | 0 | 5 | 6 | 27 |
| 25 | 0 | 2 | 7 | 3 | 1 | 1 | (0) | 0 | 2 | 0 | 0 | 3 | 4 | 23 |
| 26 | 0 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 11 |
| 27 | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 28 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 5 |
| 29 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 30 | 0 | (17) | (21) | (8) | 1 | 0 | (1) | (0) | (1) | (0) | (0) | (1) | (0) | (49) |
| SUBTOTAL | 0 | 19 | 41 | 26 | 14 | 13 | (9) | 6 | 39 | 3 | 1 | 81 | 87 | 322 |
| % OF SUBTOTAL | 0.0% | 5.9% | 12.8% | 8.2% | 4.4% | 4.1% | -2.8% | 1.7% | 12.2% | 1.1% | 0.3% | 25.1% | 27.1% | 100.0% |
| TOTAL | 60 | | | 26 | 18 | | | 217 | | | | | | |
| % OF TOTAL | 19% | | | 8% | 6% | | | 67% | | | | | | |

**2011 VIN Basis**

**Table 2.1** 2025 NOX Emissions (by Vehicle Type and Vehicle Age) in tons/year

| | MOVES SourceUseType Vehicle Categories | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MC | PC | PT | LCT | IB | TB | SB | RT | SUSH | SULH | MH | CUSH | CULH | |
| Veh_Age | Motorcycle | Passenger Car | Passenger Truck | Light Commercial Truck | Intercity Bus | Transit Bus | School Bus | Refuse Truck | Single Unit Short-haul Truck | Single Unit Long-haul Truck | Motor Home | Combination Short-haul Truck | Combination Long-haul Truck | TOTAL |
| 0 | 8 | 119 | 260 | 136 | 4 | 9 | 3 | 7 | 118 | 7 | 2 | 77 | 200 | 949 |
| 1 | 7 | 176 | 319 | 164 | 6 | 14 | 1 | 5 | 81 | 5 | 1 | 59 | 161 | 1,000 |
| 2 | 14 | 147 | 196 | 103 | 7 | 17 | 2 | 6 | 98 | 6 | 2 | 71 | 197 | 866 |
| 3 | 12 | 169 | 322 | 174 | 5 | 12 | 4 | 5 | 107 | 7 | 2 | 61 | 163 | 1,044 |
| 4 | 13 | 283 | 448 | 231 | 6 | 11 | 5 | 17 | 278 | 17 | 6 | 225 | 504 | 2,044 |
| 5 | 11 | 269 | 448 | 241 | 13 | 24 | 4 | 14 | 204 | 13 | 4 | 183 | 430 | 1,857 |
| 6 | 9 | 298 | 572 | 294 | 13 | 25 | 2 | 14 | 242 | 16 | 6 | 189 | 442 | 2,120 |
| 7 | 6 | 285 | 549 | 286 | 7 | 14 | 8 | 8 | 162 | 11 | 5 | 112 | 261 | 1,714 |
| 8 | 7 | 354 | 567 | 283 | 6 | 13 | 4 | 7 | 115 | 8 | 3 | 96 | 241 | 1,704 |
| 9 | 5 | 328 | 516 | 253 | 8 | 17 | 6 | 5 | 105 | 7 | 4 | 68 | 166 | 1,487 |
| 10 | 4 | 331 | 446 | 217 | 9 | 19 | 6 | 7 | 124 | 9 | 4 | 86 | 222 | 1,484 |
| 11 | 3 | 333 | 370 | 182 | 11 | 21 | 5 | 6 | 126 | 9 | 5 | 83 | 210 | 1,366 |
| 12 | 2 | 262 | 300 | 148 | 4 | 8 | 6 | 4 | 90 | 7 | 4 | 54 | 137 | 1,026 |
| 13 | 1 | 217 | 224 | 105 | 7 | 14 | 3 | 3 | 69 | 5 | 3 | 43 | 103 | 799 |
| 14 | 1 | 179 | 196 | 96 | 9 | 16 | 2 | 2 | 50 | 4 | 3 | 33 | 84 | 676 |
| 15 | 1 | 151 | 151 | 70 | 2 | 3 | 1 | 2 | 32 | 3 | 2 | 24 | 63 | 503 |
| 16 | 1 | 152 | 110 | 59 | 4 | 7 | 5 | 5 | 80 | 7 | 4 | 73 | 107 | 614 |
| 17 | 1 | 119 | 86 | 44 | 5 | 7 | 5 | 4 | 46 | 4 | 2 | 50 | 81 | 454 |
| 18 | 1 | 92 | 60 | 30 | 3 | 4 | 2 | 2 | 34 | 3 | 2 | 30 | 47 | 309 |
| 19 | 0 | 83 | 47 | 25 | 9 | 12 | 4 | 3 | 46 | 4 | 3 | 40 | 49 | 324 |
| 20 | 0 | 66 | 47 | 27 | 5 | 7 | 9 | 3 | 41 | 4 | 3 | 39 | 51 | 302 |
| 21 | 0 | 66 | 55 | 36 | 6 | 7 | 11 | 3 | 52 | 5 | 4 | 40 | 48 | 334 |
| 22 | 0 | 90 | 127 | 57 | 17 | 20 | 11 | 3 | 37 | 4 | 3 | 37 | 52 | 458 |
| 23 | 0 | 72 | 123 | 54 | 25 | 29 | 7 | 5 | 46 | 4 | 3 | 66 | 87 | 522 |
| 24 | 0 | 57 | 153 | 65 | 22 | 24 | 3 | 6 | 53 | 5 | 4 | 83 | 112 | 587 |
| 25 | 0 | 37 | 193 | 75 | 18 | 20 | 1 | 4 | 49 | 5 | 5 | 59 | 74 | 541 |
| 26 | 0 | 35 | 70 | 30 | 16 | 16 | 1 | 2 | 32 | 3 | 4 | 29 | 30 | 268 |
| 27 | 0 | 37 | 41 | 15 | 17 | 13 | 1 | 1 | 18 | 2 | 2 | 14 | 13 | 175 |
| 28 | 0 | 28 | 30 | 12 | 17 | 15 | 0 | 1 | 17 | 2 | 2 | 13 | 12 | 150 |
| 29 | 0 | 15 | 26 | 10 | 15 | 14 | 0 | 1 | 10 | 1 | 2 | 9 | 10 | 113 |
| 30 | 2 | 599 | 458 | 191 | 17 | 15 | 78 | 5 | 55 | 6 | 7 | 75 | 104 | 1,612 |
| SUBTOTAL | 113 | 5,450 | 7,511 | 3,709 | 315 | 445 | 199 | 159 | 2,618 | 193 | 104 | 2,121 | 4,461 | 27,400 |
| % OF SUBTOTAL | 0.4% | 19.9% | 27.4% | 13.5% | 1.1% | 1.6% | 0.7% | 0.6% | 9.6% | 0.7% | 0.4% | 7.7% | 16.3% | 100.0% |
| TOTAL | 13,075 | | | 3,709 | 959 | | | 9,657 | | | | | | |
| % OF TOTAL | 48% | | | 14% | 4% | | | 35% | | | | | | |

**2005 VIN Basis**

**Table 2.2** 2025 NOX Emissions (by Vehicle Type and Vehicle Age) in tons/year

| | MOVES SourceUseType Vehicle Categories | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MC | PC | PT | LCT | IB | TB | SB | RT | SUSH | SULH | MH | CUSH | CULH | |
| Veh_Age | Motorcycle | Passenger Car | Passenger Truck | Light Commercial Truck | Intercity Bus | Transit Bus | School Bus | Refuse Truck | Single Unit Short-haul Truck | Single Unit Long-haul Truck | Motor Home | Combination Short-haul Truck | Combination Long-haul Truck | TOTAL |
| 0 | 28 | 170 | 365 | 196 | 5 | 13 | 1 | 19 | 300 | 17 | 4 | 246 | 670 | 2,033 |
| 1 | 18 | 211 | 520 | 282 | 6 | 15 | 8 | 9 | 188 | 11 | 3 | 122 | 320 | 1,714 |
| 2 | 17 | 214 | 489 | 266 | 6 | 15 | 4 | 9 | 138 | 8 | 2 | 112 | 318 | 1,599 |
| 3 | 12 | 219 | 483 | 257 | 6 | 14 | 6 | 6 | 131 | 8 | 3 | 80 | 215 | 1,440 |
| 4 | 9 | 304 | 505 | 264 | 8 | 14 | 8 | 12 | 188 | 12 | 4 | 145 | 327 | 1,800 |
| 5 | 6 | 325 | 445 | 236 | 12 | 22 | 6 | 13 | 207 | 13 | 4 | 176 | 411 | 1,878 |
| 6 | 4 | 324 | 487 | 252 | 3 | 6 | 10 | 9 | 175 | 12 | 4 | 110 | 252 | 1,648 |
| 7 | 3 | 290 | 397 | 196 | 9 | 17 | 7 | 9 | 149 | 10 | 4 | 111 | 268 | 1,469 |
| 8 | 3 | 330 | 390 | 192 | 15 | 30 | 4 | 8 | 129 | 9 | 3 | 100 | 255 | 1,467 |
| 9 | 2 | 278 | 318 | 153 | 2 | 3 | 6 | 3 | 72 | 5 | 2 | 45 | 108 | 996 |
| 10 | 2 | 325 | 255 | 125 | 4 | 8 | 12 | 4 | 96 | 7 | 4 | 51 | 119 | 1,011 |
| 11 | 2 | 260 | 202 | 97 | 3 | 6 | 6 | 3 | 56 | 4 | 2 | 35 | 91 | 766 |
| 12 | 1 | 210 | 141 | 67 | 2 | 4 | 5 | 2 | 45 | 3 | 2 | 27 | 74 | 584 |
| 13 | 1 | 170 | 98 | 47 | 4 | 8 | 5 | 1 | 35 | 3 | 2 | 13 | 25 | 413 |
| 14 | 1 | 137 | 82 | 39 | 3 | 5 | 4 | 1 | 30 | 2 | 2 | 13 | 28 | 347 |
| 15 | 0 | 132 | 76 | 36 | 2 | 3 | 5 | 2 | 41 | 3 | 3 | 18 | 42 | 364 |
| 16 | 0 | 104 | 91 | 47 | 17 | 25 | 19 | 4 | 53 | 5 | 3 | 46 | 67 | 481 |
| 17 | 0 | 82 | 91 | 46 | 24 | 35 | 8 | 4 | 57 | 5 | 3 | 53 | 83 | 490 |
| 18 | 0 | 67 | 77 | 37 | 12 | 18 | 14 | 3 | 48 | 4 | 3 | 37 | 56 | 376 |
| 19 | 0 | 56 | 66 | 34 | 2 | 3 | 12 | 3 | 45 | 4 | 3 | 41 | 52 | 322 |
| 20 | 0 | 42 | 44 | 27 | 8 | 10 | 6 | 2 | 36 | 3 | 3 | 31 | 39 | 251 |
| 21 | 0 | 34 | 42 | 27 | 3 | 3 | 7 | 1 | 22 | 2 | 2 | 13 | 15 | 172 |
| 22 | 0 | 39 | 45 | 21 | 1 | 1 | 6 | 0 | 4 | 0 | 0 | 2 | 3 | 123 |
| 23 | 0 | 24 | 28 | 13 | 2 | 2 | 4 | 0 | 6 | 1 | 1 | 6 | 8 | 95 |
| 24 | 0 | 14 | 20 | 10 | 3 | 3 | 2 | 0 | 8 | 1 | 1 | 6 | 5 | 72 |
| 25 | 0 | 7 | 16 | 7 | 3 | 3 | 2 | 1 | 17 | 2 | 2 | 13 | 11 | 85 |
| 26 | 0 | 5 | 16 | 7 | 4 | 4 | 1 | 0 | 8 | 1 | 1 | 7 | 7 | 61 |
| 27 | 0 | 4 | 18 | 7 | 6 | 5 | 1 | 1 | 13 | 1 | 1 | 6 | 5 | 69 |
| 28 | 0 | 3 | 18 | 7 | 9 | 8 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | 50 |
| 29 | 0 | 2 | 19 | 7 | 11 | 10 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 52 |
| 30 | 1 | 989 | 1,327 | 464 | 10 | 9 | 92 | 5 | 72 | 8 | 10 | 83 | 109 | 3,177 |
| SUBTOTAL | 112 | 5,370 | 7,170 | 3,465 | 204 | 324 | 271 | 137 | 2,371 | 165 | 81 | 1,750 | 3,985 | 25,406 |
| % OF SUBTOTAL | 0.4% | 21.1% | 28.2% | 13.6% | 0.8% | 1.3% | 1.1% | 0.5% | 9.3% | 0.6% | 0.3% | 6.9% | 15.7% | 100.0% |
| TOTAL | 12,652 | | | 3,465 | 799 | | | 8,489 | | | | | | |
| % OF TOTAL | 50% | | | 14% | 3% | | | 33% | | | | | | |

**Table 2.3** 2025 NOX Emissions Differences (by Vehicle Type and Vehicle Age) in tons/year

| | MOVES SourceUseType Vehicle Categories | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MC | PC | PT | LCT | IB | TB | SB | RT | SUSH | SULH | MH | CUSH | CULH | |
| Veh_Age | Motorcycle | Passenger Car | Passenger Truck | Light Commercial Truck | Intercity Bus | Transit Bus | School Bus | Refuse Truck | Single Unit Short-haul Truck | Single Unit Long-haul Truck | Motor Home | Combination Short-haul Truck | Combination Long-haul Truck | TOTAL |
| 0 | (19) | (51) | (105) | (59) | (2) | (4) | 3 | (12) | (182) | (10) | (2) | (169) | (470) | (1,084) |
| 1 | (11) | (35) | (201) | (118) | (0) | (1) | (7) | (5) | (107) | (6) | (2) | (62) | (159) | (714) |
| 2 | (3) | (67) | (294) | (163) | 1 | 2 | (1) | (3) | (40) | (2) | (1) | (41) | (121) | (733) |
| 3 | 0 | (49) | (161) | (83) | (1) | (2) | (2) | (1) | (23) | (1) | (1) | (19) | (52) | (395) |
| 4 | 4 | (22) | (57) | (33) | (2) | (4) | (3) | 6 | 89 | 6 | 2 | 81 | 177 | 244 |
| 5 | 5 | (57) | 2 | 5 | 1 | 1 | (2) | 0 | (3) | (0) | (0) | 7 | 19 | (22) |
| 6 | 4 | (26) | 85 | 42 | 9 | 19 | (8) | 4 | 68 | 4 | 1 | 78 | 190 | 472 |
| 7 | 4 | (4) | 152 | 90 | (2) | (3) | 1 | (1) | 13 | 1 | 1 | 1 | (7) | 246 |
| 8 | 4 | 24 | 177 | 91 | (8) | (17) | (1) | (1) | (14) | (1) | (0) | (4) | (14) | 236 |
| 9 | 3 | 51 | 198 | 100 | 7 | 13 | (0) | 2 | 33 | 2 | 1 | 23 | 58 | 491 |
| 10 | 2 | 7 | 191 | 92 | 5 | 10 | (7) | 2 | 28 | 2 | 0 | 36 | 103 | 473 |
| 11 | 1 | 73 | 168 | 85 | 8 | 15 | (1) | 3 | 71 | 5 | 3 | 48 | 120 | 600 |
| 12 | 1 | 52 | 159 | 80 | 2 | 4 | 1 | 2 | 45 | 3 | 2 | 27 | 63 | 442 |
| 13 | 1 | 47 | 126 | 58 | 3 | 5 | (2) | 2 | 33 | 3 | 1 | 30 | 78 | 386 |
| 14 | 1 | 43 | 114 | 57 | 6 | 10 | (2) | 1 | 20 | 2 | 1 | 21 | 56 | 328 |
| 15 | 1 | 19 | 75 | 33 | (0) | (0) | (4) | 0 | (9) | (1) | (1) | 5 | 20 | 139 |
| 16 | 0 | 48 | 19 | 11 | (12) | (18) | (15) | 2 | 27 | 2 | 2 | 26 | 40 | 133 |
| 17 | 0 | 37 | (5) | (1) | (18) | (27) | (3) | (0) | (11) | (1) | (1) | (3) | (3) | (37) |
| 18 | 0 | 24 | (17) | (7) | (9) | (13) | (12) | (1) | (14) | (1) | (1) | (7) | (9) | (67) |
| 19 | (0) | 26 | (19) | (10) | 7 | 9 | (8) | (0) | 1 | 0 | 0 | (1) | (3) | 3 |
| 20 | (0) | 25 | 3 | (0) | (2) | (3) | 2 | 1 | 4 | 0 | 0 | 8 | 12 | 51 |
| 21 | 0 | 32 | 13 | 8 | 3 | 4 | 4 | 2 | 31 | 3 | 2 | 26 | 33 | 161 |
| 22 | 0 | 51 | 83 | 36 | 16 | 19 | 5 | 3 | 34 | 3 | 2 | 34 | 49 | 334 |
| 23 | 0 | 48 | 95 | 41 | 23 | 26 | 2 | 4 | 41 | 4 | 3 | 60 | 80 | 427 |
| 24 | 0 | 43 | 133 | 55 | 19 | 21 | 0 | 5 | 46 | 4 | 3 | 77 | 107 | 514 |
| 25 | 0 | 30 | 177 | 68 | 15 | 17 | (0) | 3 | 32 | 3 | 2 | 47 | 63 | 457 |
| 26 | 0 | 29 | 54 | 23 | 12 | 12 | 0 | 2 | 24 | 3 | 3 | 22 | 23 | 206 |
| 27 | 0 | 33 | 23 | 8 | 11 | 8 | 0 | 0 | 5 | 1 | 1 | 7 | 8 | 106 |
| 28 | 0 | 25 | 12 | 5 | 9 | 8 | 0 | 1 | 14 | 2 | 2 | 11 | 11 | 100 |
| 29 | 0 | 14 | 7 | 3 | 4 | 4 | 0 | 1 | 9 | 1 | 1 | 8 | 8 | 61 |
| 30 | 2 | (390) | (868) | (273) | 7 | 6 | (14) | (1) | (17) | (2) | (3) | (7) | (4) | (1,564) |
| SUBTOTAL | 2 | 80 | 341 | 244 | 111 | 121 | (72) | 22 | 248 | 29 | 23 | 371 | 476 | 1,994 |
| % OF SUBTOTAL | 0.1% | 4.0% | 17.1% | 12.2% | 5.6% | 6.1% | -3.6% | 1.1% | 12.4% | 1.4% | 1.1% | 18.6% | 23.9% | 100.0% |
| TOTAL | 423 | | | 244 | 160 | | | 1,168 | | | | | | |
| % OF TOTAL | 21% | | | 12% | 8% | | | 59% | | | | | | |

**2011 VIN Basis**

**Table 2.4** 2025 PM2.5 Emissions (by Vehicle Type and Vehicle Age) in tons/year

| | MOVES SourceUseType Vehicle Categories | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MC | PC | PT | LCT | IB | TB | SB | RT | SUSH | SULH | MH | CUSH | CULH | |
| Veh_Age | Motorcycle | Passenger Car | Passenger Truck | Light Commercial Truck | Intercity Bus | Transit Bus | School Bus | Refuse Truck | Single Unit Short-haul Truck | Single Unit Long-haul Truck | Motor Home | Combination Short-haul Truck | Combination Long-haul Truck | TOTAL |
| 0 | 1 | 15 | 18 | 6 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 3 | 2 | 49 |
| 1 | 1 | 22 | 22 | 7 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | 59 |
| 2 | 1 | 19 | 14 | 4 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 3 | 2 | 46 |
| 3 | 1 | 21 | 23 | 7 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | 60 |
| 4 | 1 | 28 | 34 | 10 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 7 | 6 | 94 |
| 5 | 1 | 26 | 34 | 11 | 1 | 1 | 0 | 1 | 4 | 0 | 0 | 6 | 6 | 89 |
| 6 | 1 | 26 | 36 | 11 | 1 | 1 | 0 | 1 | 4 | 0 | 0 | 6 | 6 | 93 |
| 7 | 0 | 25 | 35 | 11 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 4 | 3 | 83 |
| 8 | 0 | 28 | 35 | 11 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 3 | 3 | 84 |
| 9 | 0 | 26 | 32 | 10 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | 75 |
| 10 | 0 | 27 | 29 | 9 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 3 | 3 | 76 |
| 11 | 0 | 27 | 24 | 8 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 3 | 3 | 69 |
| 12 | 0 | 21 | 20 | 6 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | 53 |
| 13 | 0 | 17 | 15 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 42 |
| 14 | 0 | 14 | 13 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 36 |
| 15 | 0 | 15 | 11 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 32 |
| 16 | 0 | 14 | 8 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 27 |
| 17 | 0 | 10 | 6 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 20 |
| 18 | 0 | 7 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 19 | 0 | 5 | 3 | 1 | 1 | 1 | 0 | 0 | 3 | 0 | 0 | 3 | 3 | 21 |
| 20 | 0 | 6 | 3 | 1 | 1 | 1 | 1 | 0 | 2 | 0 | 0 | 3 | 4 | 21 |
| 21 | 0 | 4 | 2 | 1 | 1 | 1 | 1 | 0 | 3 | 0 | 0 | 3 | 3 | 21 |
| 22 | 0 | 3 | 3 | 2 | 2 | 2 | 1 | 0 | 2 | 0 | 0 | 3 | 4 | 21 |
| 23 | 0 | 2 | 3 | 2 | 2 | 2 | 0 | 0 | 2 | 0 | 0 | 3 | 4 | 21 |
| 24 | 0 | 2 | 4 | 2 | 1 | 1 | 0 | 0 | 3 | 0 | 0 | 4 | 5 | 23 |
| 25 | 0 | 2 | 6 | 2 | 1 | 1 | 0 | 0 | 3 | 0 | 0 | 3 | 3 | 22 |
| 26 | 0 | 1 | 2 | 1 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 1 | 1 | 11 |
| 27 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 6 |
| 28 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 6 |
| 29 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 5 |
| 30 | 0 | 14 | 7 | 5 | 1 | 1 | 5 | 0 | 3 | 0 | 0 | 4 | 5 | 46 |
| SUBTOTAL | 8 | 430 | 445 | 147 | 19 | 19 | 12 | 8 | 64 | 5 | 2 | 82 | 82 | 1,322 |
| % OF SUBTOTAL | 0.6% | 32.5% | 33.7% | 11.1% | 1.4% | 1.4% | 0.9% | 0.6% | 4.8% | 0.4% | 0.2% | 6.2% | 6.2% | 100.0% |
| TOTAL | 882 | | | 147 | 50 | | | 243 | | | | | | |
| % OF TOTAL | 67% | | | 11% | 4% | | | 18% | | | | | | |

**2005 VIN Basis**

**Table 2.5** PM2.5 Emissions (by Vehicle Type and Vehicle Age) in tons/year

| | MOVES SourceUseType Vehicle Categories | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MC | PC | PT | LCT | IB | TB | SB | RT | SUSH | SULH | MH | CUSH | CULH | |
| Veh_Age | Motorcycle | Passenger Car | Passenger Truck | Light Commercial Truck | Intercity Bus | Transit Bus | School Bus | Refuse Truck | Single Unit Short-haul Truck | Single Unit Long-haul Truck | Motor Home | Combination Short-haul Truck | Combination Long-haul Truck | TOTAL |
| 0 | 2 | 20 | 26 | 8 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 9 | 8 | 81 |
| 1 | 1 | 26 | 36 | 12 | 0 | 1 | 0 | 0 | 4 | 0 | 0 | 5 | 4 | 89 |
| 2 | 1 | 26 | 34 | 11 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 4 | 4 | 85 |
| 3 | 1 | 26 | 34 | 11 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 3 | 3 | 81 |
| 4 | 1 | 29 | 38 | 12 | 0 | 1 | 0 | 1 | 4 | 0 | 0 | 5 | 4 | 94 |
| 5 | 0 | 31 | 33 | 11 | 1 | 1 | 0 | 1 | 4 | 0 | 0 | 6 | 5 | 93 |
| 6 | 0 | 28 | 31 | 10 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 4 | 3 | 80 |
| 7 | 0 | 25 | 25 | 8 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 4 | 3 | 69 |
| 8 | 0 | 25 | 24 | 7 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 3 | 3 | 69 |
| 9 | 0 | 21 | 20 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 52 |
| 10 | 0 | 26 | 17 | 5 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 2 | 2 | 54 |
| 11 | 0 | 21 | 13 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 42 |
| 12 | 0 | 16 | 9 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 32 |
| 13 | 0 | 13 | 6 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 24 |
| 14 | 0 | 11 | 5 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 20 |
| 15 | 0 | 13 | 6 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 23 |
| 16 | 0 | 9 | 6 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 20 |
| 17 | 0 | 7 | 6 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 18 |
| 18 | 0 | 5 | 5 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 14 |
| 19 | 0 | 4 | 4 | 2 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 3 | 4 | 21 |
| 20 | 0 | 3 | 2 | 1 | 1 | 1 | 1 | 0 | 2 | 0 | 0 | 3 | 3 | 17 |
| 21 | 0 | 2 | 2 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 10 |
| 22 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 23 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 24 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 4 |
| 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 28 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 29 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 30 | 0 | 23 | 20 | 11 | 1 | 0 | 6 | 0 | 4 | 0 | 0 | 5 | 6 | 76 |
| SUBTOTAL | 8 | 413 | 407 | 135 | 10 | 11 | 14 | 6 | 52 | 4 | 2 | 64 | 61 | 1,187 |
| % OF SUBTOTAL | 0.6% | 34.8% | 34.3% | 11.4% | 0.8% | 0.9% | 1.2% | 0.5% | 4.4% | 0.3% | 0.1% | 5.4% | 5.1% | 100.0% |
| TOTAL | 827 | | | 135 | 35 | | | 189 | | | | | | |
| % OF TOTAL | 70% | | | 11% | 3% | | | 16% | | | | | | |

**Table 2.6** 2025 PM2.5 Emissions Differences (by Vehicle Type and Vehicle Age) in tons/year

| | MOVES SourceUseType Vehicle Categories | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MC | PC | PT | LCT | IB | TB | SB | RT | SUSH | SULH | MH | CUSH | CULH | |
| Veh_Age | Motorcycle | Passenger Car | Passenger Truck | Light Commercial Truck | Intercity Bus | Transit Bus | School Bus | Refuse Truck | Single Unit Short-haul Truck | Single Unit Long-haul Truck | Motor Home | Combination Short-haul Truck | Combination Long-haul Truck | TOTAL |
| 0 | (1) | (5) | (7) | (2) | (0) | (0) | 0 | (1) | (3) | (0) | (0) | (6) | (6) | (33) |
| 1 | (1) | (3) | (14) | (5) | (0) | (0) | (0) | (0) | (2) | (0) | (0) | (2) | (2) | (30) |
| 2 | (0) | (7) | (21) | (7) | 0 | 0 | (0) | (0) | (1) | (0) | (0) | (2) | (1) | (39) |
| 3 | 0 | (5) | (11) | (3) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (1) | (1) | (22) |
| 4 | 0 | (1) | (4) | (2) | (0) | (0) | (0) | 0 | 2 | 0 | 0 | 3 | 2 | (0) |
| 5 | 0 | (5) | 0 | 0 | 0 | 0 | (0) | 0 | (0) | (0) | (0) | 0 | 0 | (3) |
| 6 | 0 | (1) | 5 | 2 | 0 | 1 | (0) | 0 | 1 | 0 | 0 | 3 | 2 | 13 |
| 7 | 0 | 0 | 9 | 3 | (0) | (0) | 0 | (0) | 0 | 0 | 0 | 0 | (0) | 14 |
| 8 | 0 | 3 | 11 | 4 | (0) | (1) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | 15 |
| 9 | 0 | 4 | 12 | 4 | 0 | 0 | (0) | 0 | 1 | 0 | 0 | 1 | 1 | 24 |
| 10 | 0 | 1 | 12 | 4 | 0 | 0 | (0) | 0 | 1 | 0 | 0 | 1 | 1 | 21 |
| 11 | 0 | 6 | 11 | 4 | 0 | 0 | (0) | 0 | 1 | 0 | 0 | 2 | 2 | 26 |
| 12 | 0 | 5 | 10 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 21 |
| 13 | 0 | 4 | 8 | 2 | 0 | 0 | (0) | 0 | 1 | 0 | 0 | 1 | 1 | 18 |
| 14 | 0 | 4 | 7 | 2 | 0 | 0 | (0) | 0 | 0 | 0 | 0 | 1 | 1 | 16 |
| 15 | 0 | 2 | 6 | 2 | (0) | (0) | (0) | 0 | (0) | (0) | (0) | 0 | 0 | 9 |
| 16 | 0 | 4 | 1 | 0 | (0) | (0) | (0) | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 17 | 0 | 3 | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | 2 |
| 18 | 0 | 2 | (1) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| 19 | (0) | 2 | (1) | (0) | 1 | 1 | (1) | (0) | 0 | 0 | 0 | (0) | (0) | 1 |
| 20 | (0) | 2 | 0 | (0) | (0) | (0) | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 4 |
| 21 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | 11 |
| 22 | 0 | 2 | 2 | 1 | 2 | 2 | 0 | 0 | 2 | 0 | 0 | 3 | 3 | 17 |
| 23 | 0 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 3 | 4 | 17 |
| 24 | 0 | 1 | 4 | 2 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 4 | 5 | 21 |
| 25 | 0 | 1 | 5 | 2 | 1 | 1 | (0) | 0 | 2 | 0 | 0 | 2 | 3 | 18 |
| 26 | 0 | 1 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 8 |
| 27 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 28 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 4 |
| 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| 30 | 0 | (9) | (13) | (7) | 0 | 0 | (1) | (0) | (1) | (0) | (0) | (0) | (0) | (30) |
| SUBTOTAL | 0 | 17 | 38 | 12 | 9 | 8 | (2) | 1 | 12 | 1 | 1 | 17 | 21 | 136 |
| % OF SUBTOTAL | 0.0% | 12.3% | 28.0% | 8.9% | 6.6% | 6.2% | -1.7% | 0.9% | 8.7% | 1.0% | 0.5% | 12.7% | 15.8% | 100.0% |
| TOTAL | 55 | | | 12 | 15 | | | 54 | | | | | | |
| % OF TOTAL | 40% | | | 9% | 11% | | | 40% | | | | | | |

**ITEM 7 – Action**
June 20, 2012

Approval of CY 2012 Projects for Funding Under the Job Access Reverse Commute (JARC) and New Freedom Programs of the Federal Transit Administration (FTA)

**Staff Recommendation:** Receive briefing on the solicitation and selection process and approve Resolution R17-2012 to approve CY 2012 projects for funding under the JARC and New Freedom Programs.

**Issues:** None

**Background:** In the Fall of 2006 the TPB became the designated recipient of the FTA JARC and New Freedom program funding for the Washington DC-VA-MD Urbanized Area. These funds are for improving mobility options of low-income commuters and persons with disabilities respectively. A project solicitation for JARC and New Freedom funds was conducted from February 16 through April 11. In April and May, a selection committee chaired by Mr. Wojahn reviewed the project applications and recommended projects to be presented to the TPB for funding approval. The next project solicitation is scheduled for early 2014.

**TPB R17-2012**
**June 20, 2012**

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

**RESOLUTION TO APPROVE NINE PROJECTS FOR FUNDING UNDER THE JOB ACCESS REVERSE COMMUTE (JARC) AND NEW FREEDOM PROGRAMS OF THE FEDERAL TRANSIT ADMINISTRATION FOR CY 2012**

**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 Safe, Accountable, Flexible and Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU) for developing and carrying out a continuing, cooperative and comprehensive transportation planning process for the Metropolitan Area; and

**WHEREAS**, under SAFETEA-LU, projects funded by three Federal Transit Administration (FTA) human services transportation programs: Elderly and Persons with Disabilities (Section 5310), Job Access and Reverse Commute (JARC) (Section 5316), and New Freedom (Section 5317) must be derived from a "locally developed, coordinated public transit-human services transportation plan" and JARC and New Freedom projects must be selected on a competitive basis; and

**WHEREAS**, in July 2006 the TPB established the Human Services Transportation Coordination Task Force to oversee the development of the Coordinated Human Services Transportation Plan and a competitive selection process for identifying projects for JARC and New Freedom funding in the National Capital Region; and

**WHEREAS**, the JARC program provides capital and operating funding for services that improve access to jobs for low-income persons; and

**WHEREAS**, the New Freedom program provides capital and operating funding for transit and paratransit services and improvements for persons with disabilities that are new and go beyond those required by the Americans with Disabilities Act; and

**WHEREAS**, in August 2006 the TPB was designated by the Mayor of the District of Columbia, the Governor of Maryland, and the Governor of Virginia as the recipient to administer the JARC and New Freedom programs in the Washington DC-VA-MD Urbanized Area; and

**WHEREAS**, the Coordinated Plan was developed under the guidance of the task force which included the active participation of representatives from public, private and non-profit transportation and human services providers, as well as participation by members of the public who provided insight into local transportation needs and strategies for improvement; and

**WHEREAS**, the Coordinated Plan also includes the selection criteria to be used in the competitive selection process of JARC and New Freedom projects and to inform the selection of Elderly and Disabled Individual Program (Section 5310) projects administered by the District of Columbia, Maryland and Virginia Departments of Transportation; and

**WHEREAS**, the Coordinated Plan, the selection criteria and the process for a competitive selection process were adopted by the TPB at its regular meeting on April 18, 2007 (R22-2007); and

**WHEREAS**, the TPB adopted an Update to the Coordinated Human Service Transportation Plan at its regular meeting on December 16, 2009 (R13-2010); and

**WHEREAS,** the TPB has approved fifty projects for funding under the Job Access Reverse Commute (JARC) and New Freedom Programs since 2007;

**WHEREAS**, a solicitation for JARC and New Freedom projects was conducted from February 16 through April 11, 2012, during which approximately 1,700 organizations and agencies received a brochure or email announcing the availability of transportation funds; and

**WHEREAS**, three pre-application conferences were conducted during the solicitation period for interested organizations and agencies to receive technical assistance on the application process and FTA requirements; and

**WHEREAS**, a selection committee comprised of local and national experts in transportation and human services familiar with special needs populations met twice in May to review the applications for completeness and evaluate them against the selection criteria; and

**WHEREAS**, the selection committee recommended nine projects for funding based on its review and evaluation; and

**WHEREAS**, the nine projects recommended for funding are described in the attached memorandum;

**NOW, THEREFORE, BE IT RESOLVED THAT** the NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD approves the nine projects described in the attached memorandum for funding under the Job Access Reverse Commute (JARC) and New Freedom Programs of the Federal Transit Administration.

# National Capital Region Transportation Planning Board

777 North Capitol Street, N.E., Suite 300, Washington, D.C. 20002-4290 (202) 962-3310 Fax: (202) 962-3202 TDD: (202) 962-3213


June 14, 2012

**To:** Transportation Planning Board

**From:** Patrick Wojahn, Selection Committee Chair
TPB Human Service Transportation Coordination Task Force Chair
Councilmember, City of College Park, MD

**Subject:** **Approval of Grant Recommendations for Funding Under the Job Access Reverse Commute (JARC) and New Freedom Programs**

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I am pleased to present to the TPB for approval nine endorsed grant recommendations for funding under the Job Access Reverse Commute (JARC) and New Freedom programs of the Federal Transit Administration (FTA). These grant recommendations are the result of a federally-mandated competitive selection process, described below, which I chaired. This year's solicitation was very competitive, with funding requests of twice the amount of federal funds available, and required the Selection Committee to make a number of difficult choices.

The TPB is the designated recipient for two Federal Transit Administration programs: 1) Job Access Reverse Commute, which provides funding for low-income workers to reach employment and employment training activities; and 2) New Freedom, which funds transportation services for persons with disabilities. The federal funds are required to be matched with other sources of funding provided by the grant recipients: 20 percent for capital projects and 50 percent for operating projects. As the designated recipient of these program funds, the TPB is able to fund projects to implement its Coordinated Human Service Transportation Plan ("Coordinated Plan"), which includes selection criteria for the federally-required competitive selection of projects. An Updated Coordinated Plan was approved by the TPB on December 16, 2009. The eight selection criteria from the Coordinated Plan are used to score and rank applications; a copy of the selection criteria is attached.

## Prior Year Solicitations

Since 2007, the TPB has awarded 50 grants totaling $17 million to support a range of projects such as travel training on how to use the bus and rail system, wheelchair-accessible taxis, low-interest car loan programs, reverse commute bus services and door through door transportation services. A complete list of the 50 grants awarded between 2007 and 2011 is available at http://www.mwcog.org/tpbcoordination/documents/JARCNF_2011_FundedProjects.pdf.
The solicitations have become more competitive. In earlier solicitation years, an average of 13 applications was received, and for most of those solicitations (2007, 2009-10), the funding requests did not exceed the available grant funds. In the past two solicitations, the average number of applications submitted increased to 20, and the requested funds were double or triple the amount of the available grant funds.

## 2011 Program and Grant Assessment

In 2011, an assessment of the TPB's JARC and New Freedom program and grants was conducted by an independent consulting firm, Nelson Nygaard. The final report, which was presented to the TPB on January 18, 2012, outlined recommendations for changes to the solicitation process, changes to strengthen the oversight of subgrants, and recommendations to provide additional technical assistance to grantees in the implementation of grants. Overall, the assessment found that no widespread changes to the TPB administrative and oversight process are called for. A major challenge confirmed by the Assessment is the difficulty that agencies have in identifying matching funds for the grants. The Assessment also found that none of the grant-funded projects has been sustained without additional JARC or New Freedom support.

Following the assessment's solicitation recommendations, resources on developing statements of need, sample budgets and project best practice examples were compiled and made available. Additionally, changes were made to the application itself that included requesting additional milestone information, past performance data, and more realistic estimates of the number of people to be served.

## 2012 Solicitation for JARC and New Freedom Projects

The TPB solicitation for JARC and New Freedom funds was conducted from February 16 through April 11, 2012. Approximately 1,700 organizations or agencies received a brochure or email announcing the availability of grant funds. TPB staff conducted three pre-application conferences to instruct interested organizations on the application process. Conferences were held in Maryland and Virginia in addition to D.C. and were attended by approximately 30 different organizations and agencies.

The Task Force identified five priorities for the 2012 solicitation. Applicants may also submit proposals for projects that are not priorities, and the priority projects do not receive extra points during the selection process.

- Rideshare or vanpool activities
- Low-interest, revolving car loan programs in areas not well served by transit
- Travel Training
- Door-through-door service
- Volunteer driver programs

The priorities were released for public comment via the TPB website in December 2011. No comments were received in response to the priorities.

As part of the Assessment report, project templates were developed for four project types: Travel Training; Volunteer Driver Programs; Rideshare/Vanpool Programs; and Low-Interest Auto Loan Programs. These templates were made available to applicants on the solicitation website, www.tpbcoordination.org. The resources include suggestions for sources of possible matching funds, but as previously noted, finding and obtaining the necessary matching funds is an ongoing challenge. Securing funds to sufficiently match the federal grant dollars is the applicants' responsibility, and the adequacy of those funds often factors into the feasibility determination of an application.

At the conclusion of the solicitation period, 18 complete applications were received: 9 applications for JARC funding and 9 applications for New Freedom funding.

## Selection Committee and Selection Process

I chaired the Selection Committee, which was comprised of five people from national and local organizations representing disability, workforce development, transit and private provider expertise. The Selection Committee members were:

1. Harold Morgan, Taxicab, Limousine & Paratransit Association
2. Jeanna Muhoro, Fairfax County Neighborhood & Community Services, Human Service Transportation
3. David Remick, Arlington/Alexandria Workforce Investment Board
4. Connie Spinner, University of the District of Columbia, Dean of Workforce Development & Lifelong Learning
5. Joyce Taylor, The Arc of Montgomery County, Disability Specialist

Each member reviewed and scored the applications using the TPB-approved selection criteria. The Selection Committee convened twice and, after a thoughtful and deliberative process, the Selection Committee recommended that 9 out of the 18 applications be funded. The following tables provide a summary of the applications and the recommended grant awards. Where applicable, the narrative includes the priorities met by each application.

The applicants whose proposals were not recommended for funding will receive letters explaining how their applications may be strengthened for the next solicitation. The chart at the back of the memo describes the applications that are not recommended for funding.

## Recommended projects

The following 9 projects were recommended for funding by the Selection Committee.

1. JARC projects (4 projects):

**a. Skill Source Group, Inc. Road to Employment Project**: Funding to support the capital costs of purchasing a vehicle to provide transportation to and from job sites in Northern Virginia for low-income individuals re-entering the community after incarceration. The rideshare activity was a priority in this year's solicitation.

| Requested | | Recommended | |
|---|---|---|---|
| Requested JARC Funds | $26,000 | Recommended JARC Funds | $26,000 |
| Proposed Match | $ 6,500 | Required Match | $ 6,500 |
| Total Proposed Project | $32,500 | Revised Total Project | $32,500 |

**b. Northern Virginia Family Service Vehicles for Change Program:** Funding to continue the Vehicles for Change program, which provides donated vehicles to low-income working families for a program fee. The project operates throughout Northern Virginia and benefits families with limited access to transit. This project was a priority in this year's solicitation.

| Requested | | Recommended | |
|---|---|---|---|
| Requested JARC Funds | $ 822,486 | Recommended JARC Funds | $ 999,044 |
| Proposed Match | $ 309,861 | Required Match | $ 370,415 |
| Total Proposed Project | $1,132,347 | Revised Total Project | $1,369,459 |

**c.** **Year Up National Capital Region**: Year Up NCR provides a one-year, intensive training program that offers low-income adults, aged 18-24, with a combination of hands-on skill development, college credit and corporate internships to help bridge the opportunity divide. The funding would help the agency support the participants' program-related transportation costs, which include a vehicle purchase for ridesharing, mileage reimbursement and taxi vouchers. Internship placements are located throughout DC, Suburban Maryland, and Northern Virginia.

| Requested | | Recommended | |
|---|---|---|---|
| Requested JARC Funds | $117,682 | Recommended JARC Funds | $157,682 |
| Proposed Match | $ 76,082 | Required Match | $116,082 |
| Total Proposed Project | $193,764 | Revised Total Project | $273,764 |

**d.** **Boat People SOS**: Continuation of the Road to Independence through Savings and Education (RISE) Employment project, which prepares Vietnamese refugees and immigrants for employment by providing job skills and other training opportunities. Project also includes a taxi voucher component to assist clients in getting to jobs for the first four months after job placement.

| Requested | | Recommended | |
|---|---|---|---|
| Requested JARC Fund | $256,620 | Recommended JARC Funds | $256,620 |
| Proposed Match | $125,324 | Required Match | $125,324 |
| Total Proposed Project | $381,944 | Revised Total Project | $381,944 |

2. New Freedom projects (5 projects):

**a.** **Jewish Council for the Aging**: Funding to establish the Village Rides program, a coordinated volunteer transportation program in five aging-in-place communities in Montgomery County that matches volunteer drivers from the five villages with residents who need transportation to healthcare appointments, grocery stores or social outings. Volunteer driver programs were a priority in this year's solicitation.

| Requested | | Recommended | |
|---|---|---|---|
| Requested New Freedom Funds | $219,032 | Recommended New Freedom Funds | $219,032 |
| Proposed Match | $ 54,759 | Required Match | $ 54,759 |
| Total Proposed Project | $273,791 | Revised Total Project | $273,791 |

**b.** **Columbia Lighthouse for the Blind**: Funding to support continued travel training for low-vision, blind or deaf-blind individuals in the DC region and for the continuation of the Orientation & Mobility Specialist internship program. Funding will also support an innovative audio maps project for Metrorail stations in partnership with WMATA. The maps, which will

also be made available in Braille, will be recorded, downloadable descriptions of the physical features of Metrorail stations and Metrobus transit centers. Details will include the layout of stations and transit centers, navigational direction, names of entrances/exits, locations of stairs, escalators and station manager kiosks. The information will also include orientation information from exits to the immediate neighborhoods and surrounding points of interest.

| Requested | | Recommended | |
|---|---|---|---|
| Requested New Freedom Funds | $346,324 | Recommended New Freedom Funds | $442,324 |
| Proposed Match | $ 86,581 | Required Match | $110,581 |
| Total Proposed Project | $432,905 | Revised Total Project | $552,905 |

**c. Columbia Lighthouse for the Blind**: Funding for the continuation of a youth transportation program to transport blind and low-vision youth to the agency's recreational, community integration and career-focused programs.

| Requested | | Recommended | |
|---|---|---|---|
| Requested New Freedom Funds | $ 76,500 | Recommended New Freedom Funds | $ 66,500 |
| Proposed Match | $ 76,500 | Required Match | $ 66,500 |
| Total Proposed Project | $153,000 | Revised Total Project | $133,000 |

**d. Yellow Paratransit:** Funding for the expansion and continuation of rollDC, the wheelchair accessible taxicab pilot project in DC. The project was originally funded with a New Freedom grant in 2008. In the two and a half years the service has been available, the company has experienced a seven fold increase in the number of trips provided. Funding under this grant would support the purchase of seven additional wheelchair-accessible minivans and provide additional operating funds.

| Requested | | Recommended | |
|---|---|---|---|
| Requested New Freedom Funds | $398,120 | Recommended New Freedom Funds | $398,120 |
| Proposed Match | $208,340 | Required Match | $208,340 |
| Total Proposed Project | $606,460 | Revised Total Project | $606,460 |

**e. The Arc of Northern Virginia:** Funding to develop a Train the Travel Trainer curriculum to support travel training for young adults with intellectual and/or developmental disabilities in Northern Virginia. The program would partner with public schools and various disability provider agencies to deliver the training and expand the capacity of agencies to provide ongoing travel training.

| Requested | | Recommended | |
|---|---|---|---|
| Requested New Freedom Funds | $194,505 | Recommended New Freedom Funds | $194,505 |
| Proposed Match | $ 50,800 | Required Match | $ 50,800 |
| Total Proposed Project | $245,305 | Revised Total Project | $245,305 |

The selection committee is recommending that these 9 projects (4 JARC projects and 5 New Freedom projects) totaling $3,869,128 be funded. These projects would be provided with $2,759,828 in federal funding.

## Next Steps

If all 9 of the above recommended grants are funded, all but $751,258 in JARC funds and $256,078 in New Freedom funds will be expended. The remaining JARC funds would be carried over to the next solicitation. The Task Force will again be asked to provide priorities for JARC and New Freedom projects throughout the region.

The Assessment report referenced above also recommended conducting JARC and New Freedom solicitations every other year to create opportunities in off years to spend more time addressing coordinated human service transportation planning issues. The off years also give the Task Force time to develop and encourage larger regional projects – such as the Reach a Ride Clearinghouse and WMATA Bus Stop Improvement Project – that have the potential for greater impact, and to identify sponsors for those projects. The Task Force has indicated its support for a biennial solicitation process. The TPB will next solicit for applications in 2014, in the first quarter of the calendar year. It should be noted that the next transportation authorization bill may change the future program structures, requirements and future funds available.

| Applications Not Recommended for Funding | | | | Reason |
|---|---|---|---|---|
| Applicant | Project | Funding Requested | Program | Selection Committee Rationale |
| Prince George's County Dept of Public Works & Transportation | Branch Avenue Circulator | $1,367,193.00 (50 percent match) | JARC | Limited justification for number of low-income people served; lower-scoring application; low feasibility score |
| Prince George's County Dept of Public Works & Transportation | South County Demand Response /Fixed Route Hybrid Service | $911,462 (50 percent match) | JARC | Limited justification for number of low-income people served; lower-scoring application |
| Prince George's County Dept of Public Works & Transportation | UPS Shuttle | $349,498.00 (50 percent match) | JARC | Limited justification for number of low-income people served; lower-scoring application |
| Service Source | Ride Source | $254,771.00 (50 percent match) | JARC | Service not well-defined, lack of clarity about roles and functions in project |
| Family Matters of Greater Washington | Ways to Work Program | $419,654.55 (20 percent match) | JARC | Concerns about feasibility related to use of loan guarantee pool and money from loan repayments |
| National Children's Center | Train the Travel Trainer | $512,141.00 (20 percent match) | New Freedom | Little to no cash match; concerns about training delivery and availability in public domain; cost per person compared to The Arc of Northern Virginia application (same project) |
| University of Maryland | Evaluating Impacts of Zoning Strategy for ADA Paratransit Services | $178,155.00 (20 percent match) | New Freedom | Low feasibility score; not a good fit for New Freedom funding; better fit for TRB or TCRP |
| Matthews Center | Vehicle for After School Transportation | $104,868 (both 50 and 20 percent match) | New Freedom | No match lined up; better fit for 5310 funding |
| IT Curves | Accessible Taxi Regional Dispatch Center | $273,279 (20 percent match) | New Freedom | Low feasibility score, lack of implementation details and regional partners |

**Description of Selection Criteria**

| Criteria | Definition and Possible Score | Total Score |
|---|---|---|
| **1. To what extent does the project respond to the strategies identified in the Coordinated Plan?** | Projects that address multiple strategies will make better use of limited funding and will be weighted more heavily. This criterion considers two issues: how many strategies does the project address (there is a total of four), and how well does it address them? Each strategy addressed should be rated on a scale of 1 to 4, with the maximum of 16 points indicating the project would respond well to each of the four strategies.<br><br>**Maximum Possible Points: 16** | |
| **2. To what extent does the project demonstrate coordination among various entities?** | Service delivery is better where projects are developed and operated with the cooperation and coordination of jurisdictions, agencies, and interested stakeholder organizations. The criterion is defined by multiple jurisdictions, agencies, or stakeholder organizations involved in the project. A maximum score of 16 would be awarded for a project that has three or more partners each in program planning, operations, communications and funding.<br><br>**Maximum Possible Points: 16** | |
| **3. To what extent does the project demonstrate a new or innovative idea that can be replicated elsewhere in the region?** | Projects that comply with the spirit of SAFETEA-LU are those that combine new and innovative ideas, new technologies, and creative sources of financing to address currently unmet needs. Projects that succeed in meeting unmet needs and can be replicated in other jurisdictions are weighted higher. To the extent an existing program demonstrates innovation and replicability (by other jurisdictions or agencies) it would score well in this category. A score of 11 points would be awarded for a project that employs a new and innovative idea and demonstrates excellent prospects for feasibility of replication.<br><br>**Maximum Possible Points: 11** | |
| **4. To what extent does the project meet a regional transportation need?** | Jurisdictions may differ in the services they provide, but the need for programs that address the four strategies identified above is regional. “Regional” means that the project is not limited to single geographic area and ideally would serve the entire urbanized area. Programs that are focused regionally will be scored higher than those that are limited in geographic scope. Projects that are proposed as a pilot project should include narrative of how the proposed project serves a regional need. The maximum 11points would be awarded to projects that reveal both a comprehensive region-wide service area and distribution of trips provided.<br><br>**Maximum Possible Points: 11** | |

| Criteria | Definition and Possible Score | Total Score |
|---|---|---|
| **5. To what extent does the project involve the private sector?** | Cost-effectiveness is often accomplished with the involvement of the private sector and, as such, they are important partners in project planning and development. This criterion will consider the extent to which private sector is involved in the project – such as in service delivery or project sponsorship (i.e. employer-based van pools). A maximum of 10 points will be awarded for the most involvement by private sector partners.<br><br>**Maximum Possible Points: 10** | |
| **6. How many individuals with disabilities and/or with limited-incomes does the project propose to serve or benefit?** | Applicants will be asked to estimate how many individuals with disabilities and/or individuals with limited incomes the project proposes to serve in the first year. The number of individuals can be estimated in the project proposal, and usage statistics could also be asked for, such as the average number of monthly one-way trips the program hopes to provide. For an infrastructure improvement, an estimate of the number of people living around the improvement who are expected to use it could be provided. Points will be assigned based on the relative number of people to be served or trips expected to be provided.<br><br>**Maximum Possible Points: 11** | |
| **7. To what extent does the application identify reasonable strategies for on-going funding?** | The limited funding available under SAFETEA-LU requires that projects identify other sources of funding to sustain operations in future years. Projects that have identified reasonable strategies for sources of on-going funding after the first grant will be scored the highest.<br><br>**Maximum Possible Points: 11** | |
| **8. How feasible is the project?** | The criterion will explore the feasibility of a project in terms of budget, resources and institutional or administrative support. Does the proposal identify and secure the necessary financial, human and institutional capacity to make the project happen? The more feasible the project proposal, the higher the project will score with this criterion. Success is critical for the coordinated planning efforts and for future appropriations of JARC and New Freedom funds.<br><br>**Maximum Possible Points: 14** | |
| | **TOTAL POSSIBLE POINTS: 100** | |

**ITEM 8 – Action**
June 20, 2012

Approval of an Amendment to the FY 2011-2016 TIP that is Exempt from the Air Quality Conformity Requirement to Include Funding for the I-95/HOT Lanes Project as Requested by the Virginia Department of Transportation (VDOT)

**Staff Recommendation:** Adopt Resolution R18-2012 to amend the FY 2011-2018 TIP to update and include funding for the construction of the I-95 HOV/HOT Lanes project, as described in the attached materials.

**Issues:** None

**Background:** In the enclosed letter of June 12, VDOT has requested an amendment to the FY 2011-2016 TIP to update funding for the I-95 HOV/HOT Lanes construction project and to add two related projects: the I-95/I-395 Preliminary Engineering Studies project and the I-95 HOV/HOT Lanes Project PPTA Development and Management Oversight.

**TPB R18- 2012**
**June 20, 2012**

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

**RESOLUTION ON AN AMENDMENT TO**
**THE FY 2011- 2016 TRANSPORTATION IMPROVEMENT PROGRAM (TIP)**
**THAT IS EXEMPT FROM THE AIR QUALITY CONFORMITY REQUIREMENT**
**TO INCLUDE FUNDING FOR CONSTRUCTION OF THE I-95 HOV/HOT LANES, 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 Safe, Accountable, Flexible, and Efficient Transportation Equity Act - A Legacy for Users (SAFETEA-LU) 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 November 17, 2010 the TPB adopted the FY 2011-2016 TIP; and

**WHEREAS,** in the attached letter of June 12, 2012, VDOT has requested an amendment to the FY 2011-2016 TIP to add $289.9 million in GARVEE bonds and Advanced Construction funding (Private Equity, Private Activity Bonds, and TIFIA guaranteed funds) to the I-95 HOV/HOT Lanes Construction project, and to add the I-95 Preliminary Engineering Studies project with $29.6 million in Interstate Maintenance (IM), National Highway System (NH), Advanced Construction-IM and accounts receivable state funds, and to add the I-95 HOV/HOT Lanes Project PPTA Development & Management Oversight to the TIP with $94.2 million in NH and Advanced Construction funds, as described in the attached materials; and

**WHEREAS,** this project was previously included in the air quality conformity analysis of the 2011 CLRP*;*

**NOW, THEREFORE, BE IT RESOLVED THAT** the Transportation Planning Board amends the FY 2011-2016 TIP to add $289.9 million in GARVEE bonds and Advanced Construction funding (Private Equity, Private Activity Bonds, and TIFIA guaranteed funds) to the I-95 HOV/HOT Lanes construction project, and to add the I-95 Preliminary Engineering Studies project with $29.6 million in Interstate Maintenance (IM), National Highway System (NH), Advanced Construction-IM and accounts receivable state funds, and to add the I-95 HOV/HOT Lanes Project PPTA Development & Management Oversight to the TIP with $94.2 million in NH and Advanced Construction funds, as described in the attached materials.

# COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION
4975 Alliance Drive
Fairfax, VA 22030

GREGORY A. WHIRLEY
COMMISSIONER

June 12, 2012

The Honorable Todd Turner, 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 2011-2016 Transportation Improvement Program Amendment

Dear Chairman Turner:

The Virginia Department of Transportation (VDOT) is requesting the Transportation Planning Board (TPB) amend the FY 2011-2016 Transportation Improvement Program (TIP) to include additional and updated funding information for the I-95 HOV/HOT Lanes Project. This amendment will reflect the latest planned obligation of funds for all aspects of the project in the Statewide TIP to secure federal obligation of funds to close the financial terms and conditions with the private sector partner who will be building and operating the project.

The Federal Highway Administration (FHWA), the Commonwealth, and the private sector partners are working to reach financial closure on the project in July; therefore, amending the TIP in June is important to maintain this schedule. The proposed TIP amendment adds three line items to the FY 2011-2016 TIP as detailed below:

- I-95 HOV/HOT Lanes Construction (UPC#103106 / T11635). This element was amended in the TIP in February 2012 and is being updated. The February TIP Amendment proposed adding $641 million of the estimated construction project total of $931million. The current amendment proposes to add the remaining $290 million as outlined below and in the attached TIP table. Please note that the amount of public funds planned to be used for this project remains at an estimated $92 million with the balance of funding from a variety of sources, including private equity, private activity bonds, and TIFIA guaranteed funds.

  The anticipated source of public funding for the construction of the project is GARVEE bonds. The breakdown of the total project estimate of $931 million is: $621 million design/build; $70 million tolling system; $240million other, which includes debt service, financial reserve, contingency, operations center, start up costs, and project development costs. This TIP

amendment releases the earlier planned obligation of $6,246,614 in AC-Other funds for the preliminary engineering (PE) phase, and adds $92,000,000 in GARVEE Bonds and $204,145,507 in AC-Other funds for the construction phase in FY 2012.

- I-95 Preliminary Engineering Studies (UPC#70849). The TIP Amendment adds $13,669,708 in NH funds, $8,441,815 in IM funds, and $337,500 in AC-IM funds for the PE phase in FY 2012; adds $180,000 in accounts receivable state funds for the PE phase in FY 2012; and adds $337,500 in AC-Conversion for the PE phase in FY 2013.

- I-95 HOV/HOT Lanes Project PPTA Development and Management Oversight (UPC# 102711). The TIP amendment adds $14,783,562 in NH funds and $57,806,910 in AC-NH in FY 2012 for the construction phase; $11,626,125 in AC-Conversion for the construction phase FY 2013; and $10,000,000 in AC-Conversion for the construction phase in FY 2014.

The Board previously approved an amendment to the FY 2011-2016 TIP in February 2012 that included one of the line items--the construction element--that reflected part of the planned obligations. This amendment includes updates to the earlier funding plans and remaining amounts of the obligations needed for construction of the project. The amendment also adds the other two line items: preliminary engineering/studies, and project development and management oversight.

The I-95 HOV/HOT Lanes Project is part of the 2011 CLRP and the federally approved air quality conformity analysis for the 2011 CLRP. As such, the proposed TIP amendment will not affect the approved air quality conformity determination. Additionally the financial plan for the 2011 CLRP included the funding for the project; therefore, the proposed TIP amendment will not change the financial plan for the Virginia portion of the CLRP.

It is requested that this TIP Amendment be considered and acted on by the Transportation Planning Board at its meeting on June 20, 2012. Thank you for your consideration of this request.

Sincerely,

Garrett W. Moore

Garrett W. Moore, P.E.
District Administrator
Northern Virginia District

Attachment
Copy: Diane Mitchell, VDOT-PD, Richmond, VA
Dusty L. Holcombe, VDOT-OTP3, Richmond, VA
John Lynch, VDOT Megaprojects, Fairfax, VA
Renée N. Hamilton, VDOT –PIM, Fairfax, VA
Kanathur Srikanth, VDOT-Planning & Investment, Fairfax, VA

NORTHERN VIRGINIA
TRANSPORTATION IMPROVEMENT PROGRAM

**FY 2011 - 2016**

TIP Amendment - 6/20/2012

| | | Phase | Previous Funding | Funding Source | Funding Shares Fed | State | Local | FY11 | FY12 | FY13 | FY14 | FY15 | FY16 | Source Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VDOT- Interstate** | | | | | | | | | | | | | | |
| TIP ID: | Agency ID: 103106 | | | | Title:I-95 HOV/HOT Lanes construction | | | | | | | | Complete: | |
| Facility: | Interstate 95 | PE | | AC-Other | 0% | 0% | 100% | $0 | **$42,707** | $0 | $0 | $0 | $0 | **$42,707.00** |
| From: | Garrisonville Road | R/W | | | 0% | 0% | 0% | $0 | $0 | $0 | $0 | $0 | $0 | **$0.00** |
| To: | 1 mile North of Edsall Rd (28m) | CN | | AC-Other | $0 | $0 | 100% | $0 | **$92,000** | $0 | $0 | $0 | $0 | **$92,000.00** |
| | | CN | | AC-Other | $0 | $0 | 100% | | **$796,293** | $0 | $0 | $0 | $0 | **$796,293.00** |
| | | | | | | | | | | | | | **Total Funds:** | **$931,000.00** |
| Description: | The project involves the construction of a HOV lane and conversion of all HOV lanes into Bus/HOV/HOT lanes on I-95 between Garrisonville Road (Stafford County) and to a point on I 395 about one mile north of Edsall Road | | | | | | | | | | | | | |
| Jurisdiction: | Statewide | | | | | | | | | | | | | |
| Amendment: | TIP Amend.to release $6,246,614 AC-Other PE phase in FY12; to add $92,000,000 Garvee Bonds,$204,145,507 in AC-Other CN phase FY12..Includes UPC 102710,103019, 103020 Fund Sources Equity, PABS, TIFIA & Garvee bonds. | | | | | | | | | | | | | |
| Air Quality: | The project was included in the Air Quality Conformity analysis for the 2011 CLRP. | | | | | | | | | | | | | |
| TIP ID: | Agency ID: 70849 | | | | Title:I-95 Preliminary Engineering Studies | | | | | | | | Complete: | |
| Facility: | Interstate I-95 | PE | | Fed-IM | 90% | 10% | 0% | $0 | **$9,380** | $0 | $0 | $0 | $0 | **$9,380.00** |
| From: | 1 mile North of Edsall Rd | PE | | AC-IM | 90% | 10% | 0% | $0 | **$375** | $0 | $0 | $0 | $0 | **$375.00** |
| To: | Garrisonville Rd Int. -Stafford | PE | | Accts-Rec | 0% | 100% | 0% | $0 | **$180** | $0 | $0 | $0 | $0 | **$180.00** |
| | | PE | | Fed-NH | 80% | 20% | $0 | $0 | **$19,309** | $0 | $0 | $0 | $0 | **$19,309.00** |
| | | PE | | AC-Conv | 90% | 10% | 0% | $0 | | **$375** | $0 | $0 | $0 | **$375.00** |
| | | | | | | | | | | | | | **Total Funds:** | **$29,619.00** |
| Description: | The project corresponds to the Preliminary Engineering and Studies aspects of the I-95/395 HOV/HOT lanes project (UPC 103106). | | | | | | | | | | | | | |
| Jurisdiction: | Statewide | | | | | | | | | | | | | |
| Amendment: | TIP Amendment to add $13,669,708 om NH funds, add $8,441,815 in IM funds, add $337,500 in AC-IM funds, $180,000 Accts Rec State PE phase FY12; $337,500 AC-Conv FY13 PE phase ..includesUPC101557. | | | | | | | | | | | | | |
| Air Quality: | The PE phase of the project is exempt from air quality conformity consideration. | | | | | | | | | | | | | |
| TIP ID: | Agency ID:102711 | | | | Title:I-95 HOV/HOT Lanes Project PPTA Develop. & Mgmt Oversight | | | | | | | | Complete: | |
| Facility: | Interstrate I-95 | CN | | Fed-NH | 100% | 0% | 0% | $0 | **$14,784** | $0 | $0 | $0 | $0 | **$14,784.00** |
| From: | Garrisonville Road | CN | | AC-NH | 100% | 0% | 0% | $0 | **$57,807** | $0 | $0 | $0 | $0 | **$57,807.00** |
| To: | 1 mile N of Edsall Rd (28m) | CN | | AC-Conv | 100% | 0% | 0% | $0 | $0 | **$11,626** | $0 | $0 | $0 | **$11,626.00** |
| | | CN | | AC-Conv | 0% | 0% | 100% | $0 | $0 | $0 | **$10,000** | $0 | $0 | **$10,000.00** |
| | | | | | | | | | | | | | **Total Funds:** | **$94,217.00** |
| Description: | The project involves the project development, management and oversight of the construction and operations phase of the I 95/395 HOV/HOT lanes project (UPC 103106). | | | | | | | | | | | | | |
| Jurisdiction: | Statewide | | | | | | | | | | | | | |
| Amendment: | TIP Amendment to obligate $14,783,562 of NH funds & $57,806,910 in AC-NH funds CN phase FY12;$11,626,125 AC-Conversion FY13;$10,000,000 AC-Conversion FY14 CN phase. | | | | | | | | | | | | | |
| Air Quality: | The development, oversight and management activities by themselves do not affect regional air qulaity conformity considerations. The construction aspect fo the project was part of the approved air qulaity conformity analysis for the 2011 CLRP. | | | | | | | | | | | | | |

**ITEM 9 - Information**
June 20, 2012

Briefing on the Draft Air Quality Conformity Assessment of the 2012 CLRP and FY 2013-2018 TIP

**Recommendation:** Receive briefing on the conformity assessment. The TPB will be asked to adopt the plan, TIP and conformity assessment at its meeting on July 18.

**Issues:** None

**Background:** At the February 15 meeting, the Board approved the projects submitted for inclusion in the air quality conformity assessment for the 2012 CLRP and FY 2012-2018 TIP. On June 14 the draft plan and TIP together with a conformity assessment were released for public comment at the TPB Citizens Advisory Committee (CAC) meeting.

# *National Capital Region Transportation Planning Board*

777 North Capitol Street, N.E., Suite 300, Washington, D.C. 20002-4290 (202) 962-3310 Fax: (202) 962-3202


**MEMORANDUM**

**June 14, 2012**

**To:** **Transportation Planning Board**

**From:** **Jane Posey**
**Senior Transportation Engineer**

**Subject:** **Air Quality Conformity Assessment for the 2012 Constrained Long Range Plan (CLRP) and the FY2013-2018 Transportation Improvement Program (TIP)**

## INTRODUCTION

This memo documents summary results of the air quality conformity assessment of the 2012 CLRP and FY2013-2018 TIP with respect to the following pollutants:

- **Ozone Season Volatile Organic Compo unds (VOC) and Nitrogen Oxides (NOx).** Ozone season pollutants must not exceed EPA approved totals from the Metropolitan Washington Air Quality Committee's (MWAQC's) Motor Vehicle Emissions Budgets (MVEBs) from the 8-hour Ozone State Implementation Plan (SIP). MWAQC adopted the 8-hour ozone SIP in May, 2007, and on September 4, 2009, EPA found adequate the 2008 Reasonable Further Progress (RFP) budgets, and stated that the Metropolitan Washington region must use these budgets for future conformity determinations for the 8-hour ozone standard. The RFP budget for VOC is 70.8 tons/day, and for NOx is 159.8 tons/day. Ozone season pollutants will no longer be assessed against 1-hour ozone budgets.

- **Fine Particles ($PM_{2.5}$).** In 2008 MWAQC approved a SIP to achieve the 1997 National Ambient Air Quality Standards (NAAQS) for $PM_{2.5}$ that included mobile budgets. EPA never approved those budgets. On January 12, 2009, EPA determined that the region had attained the 1997 $PM_{2.5}$ NAAQS and issued a clean data determination for the area. In early 2012 Virginia, Maryland, and the District of Columbia withdrew the SIP updates, including the mobile budgets. The withdrawal letters are included as Attachment A. In the absence of approved mobile budgets, EPA allows for an assessment that shows emissions in forecast year scenarios are no greater than those in a 2002 base. This criterion was established and applied, with the concurrence of MWAQC, in prior $PM_{2.5}$ conformity assessments.

- **Wintertime Carbon Monoxide (CO).** The region is in maintenance for mobile source wintertime CO, and is required to show that pollutants do not exceed the approved budget of 1671.5 tons/day.

The analysis shows that mobile emissions are well within the mobile budgets for ozone season VOC and NOx, as well as wintertime CO, and are well below the 2002 base year levels for the PM2.5 pollutants.

The results, based upon analyses contained in the technical report, Air Quality Conformity Determination Of The 2012 Constrained Long Range Plan and FY2012-2018 Transportation Improvement Program For The Washington Metropolitan Region, were released for public comment and interagency consultation on June 14, 2012. The public comment period ended on July 14, 2012.

## BACKGROUND

The Transportation Planning Board (TPB) approved the scope of work and the project submissions for the 2012 CLRP and FY2013-2018 TIP air quality conformity analysis on February 15, 2012.

Key technical inputs to the analysis include:

- Round 8.1 Cooperative Land Activity Forecasts
- The Version 2.3 Travel Demand Model including a 3722 Transportation Analysis Zones (TAZ) area system and updated transit service
- New Project Submissions
- 2011 Vehicle Registration Data
- EPA's Mobile6.2 Emissions Factor Model.

## WORK ACTIVITIES

Staff prepared inventories for each pollutant for five forecast years (2007, 2017, 2020, 2030 and 2040). Ozone season pollutants (VOC and NOx) and wintertime CO are inventoried for average weekday conditions, and precursor NOx and direct $PM_{2.5}$ are inventoried to reflect emissions on a yearly total basis. Staff applied seasonal adjustment factors to convert daily travel (annual average weekday traffic or AAWDT) to annual values.

These inventories address a primary conformity assessment criterion to demonstrate that emissions associated with the plan do not exceed the approved budgets. In anticipation of possible emissions increases associated with implementation of the plan, staff (in conjunction with the TPB Technical Committee and its Travel Management Subcommittee) conducted parallel analyses of committed and potential new transportation emissions reduction measures (TERM)s, and documented emissions benefits for each analysis year.

### Plan Amendments

Attachment B lists the major changes to the conformity project inputs since the 2011 CLRP.

### Land Activity Forecasts

The COG Board approved the draft Round 8.1 Cooperative Forecasts for use in the air quality conformity analysis of the 2012 CLRP and FY2013-2018 TIP in February, 2012. The forecasts

reflect both the small area land use distributions throughout the Washington region, and also the latest planning assumptions for areas that are outside the Washington region. Attachment C shows a summary of the Round 8.1 data.

**Travel Modeling Process**

Staff prepared travel demand forecasts for each of the analysis years using the Version 2.3 travel demand model. Exhibit 1 presents the geographic areas for travel modeling and for emissions reporting for each pollutant. Exhibit 2 presents the resulting average weekday transit trips, vehicle trips, and vehicle miles traveled (VMT) results through time for each conformity analysis year, for the full modeled area.

**Emissions Factors**

Staff developed emissions factors using EPA's MOBILE6.2 emissions model. This year's rates include 2011 VIN data. Emissions rates for each pollutant – shown illustratively for Fairfax County in Exhibits 3 and 4 -- were developed following execution of the model in one mph speed increments, by jurisdiction, for each analysis year. The chart shows significantly reduced rates through time, primarily due to the impacts of having cleaner fuel and vehicles in the fleet. Exhibit 5 presents direct $PM_{2.5}$ emissions rates through time for each of the three seasons; data are arrayed in a bar chart since these emissions rates do not vary by vehicle speed.

**Mobile Emissions Inventories**

*Ozone Season and Wintertime CO – Daily Emissions*

The average annual weekday travel forecasts (AAWDT) generated by the travel demand model were adjusted, using a 1.03 ozone season factor or a 0.96 winter season factor, to develop seasonally appropriate VMT estimates. Staff then applied the appropriate Mobile6.2 emissions factors to the travel demand forecasts to prepare mobile source emissions inventories for each forecast year. These emissions results for ozone season pollutants are summarized in Exhibits 6 and 7 and indicate total VOC and NOx emissions for each analysis year. The charts show dramatic reductions throughout the period. Historical emissions reductions from the Clean Air Act amendments 1990 base have been well documented in the past. 2040 VOC and NOx emissions represent about 14 percent and 9 percent, respectively, of their 1990 levels. The results reflect the impact of the cleaner fuel / fleet and related programs.

*$PM_{2.5}$ – Yearly Emissions*

To develop the yearly total $PM_{2.5}$ emissions, travel and emissions were estimated by applying (three) seasonal factors to the primary travel data, followed by applying emissions rates for each of the seasons, and summarizing to obtain yearly totals. Direct $PM_{2.5}$ and precursor NOx emissions are shown in Exhibits 8 and 9. The emissions reductions through time are largely attributable to Tier II vehicle standards, cleaner fuels, and the heavy duty engine rule.

*2012 CLRP Emissions Inventories vs. Budgets*

Exhibits 6-9 display net emissions for each forecast year. The charts show that emissions are within the mobile budgets for ozone season pollutants, and are not greater than 2002 levels for fine particles pollutants, for all forecast years. Wintertime CO emissions (contained in a full technical report but not summarized here) are also within the CO emissions budget.

**Net Emissions Analysis**

The emissions inventory data contained in Exhibits 6-9 reflect total mobile source network and off-network emissions. However, there are also emissions benefits associated with certain other transportation programs and projects. These benefits, estimated on an off-line basis, are also creditable in conformity analyses. Attachment D represents a summary table of these transportation emissions reduction measures, or TERMs, which have been previously planned or programmed by the TPB. They are arrayed in a 'Tracking Sheet' format to document the implementation status of each, with part A of the table documenting ozone season and part B documenting $PM_{2.5}$ pollutants. The summary result of these measures, shown as the bottom line for each section of the table, amounts to additional reductions in each of the pollutants. Only those projects which have been affirmed by the implementing agency as having been completed, or are on a realistic schedule towards implementation, are being credited in this emissions analysis. Combining the emissions results in Exhibits 6-9 with the additional reductions from TERMs would further improve the emissions margins for each pollutant.

**SUMMARY**

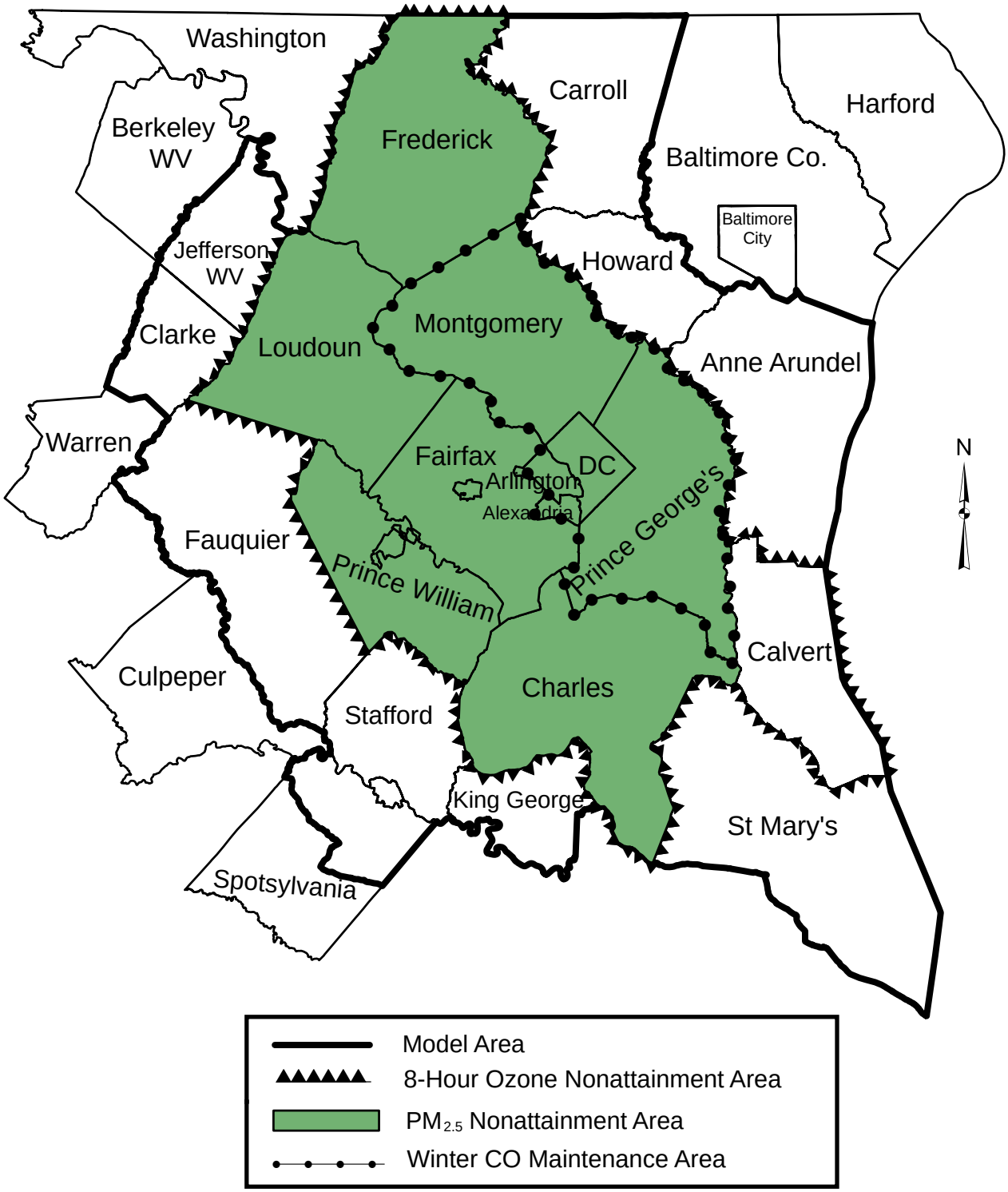
The analytical results described in this air quality assessment provide a basis for a determination by the TPB of conformity of the 2012 CLRP and FY2013-2018 TIP.

**COMPARISON WITH 2011 CLRP**

An evaluation of data for the 2012 CLRP conformity analysis revealed some interesting information. When comparing the 2012 CLRP to the 2011 CLRP for the forecast year 2020, in spite of a decrease in both vehicle trips and VMT (due to the economic slowdown reflected in the updated 8.1 land activity data, and modification of external travel into and out of the region to reflect updated count data), all pollutants increased, some significantly. To find an explanation for this, staff ran a sensitivity test, applying the 2008 VIN data that was used with the 2011 CLRP to the 2012 CLRP travel data, in place of the updated 2011 VIN data (which showed an older fleet than the 2008 data). The sensitivity test showed that had the 2008 VIN data been used for the 2012 CLRP rather than the 2011 VIN data, all pollutants would have decreased in line with the decrease in vehicle trips and VMT. The test shows that the impact on emissions of the aging vehicle fleet overwhelms that of the decrease in vehicle trips and VMT. A summary of these results is included as Attachment E.

Following: Exhibits 1- 9
Attachments A - E

# EXHIBIT 1
# Washington, D.C.- Maryland - Virginia
# Planning Areas



## Exhibit 2

## Travel Demand Summary
## Modeled Area Trips and Vehicle Miles Traveled (000's)
## Average Weekday Traffic (AWDT)

| | 2002 | 2007 | 2017 | 2020 | 2030 | 2040 |
|---|---|---|---|---|---|---|
| **Transit Trips** | 1,092.5 | 1,158.5 | 1,361.8 | 1,425.7 | 1,542.0 | 1,628.4 |
| **Vehicle Trips** | 14,822.9 | 15,867.8 | 17,539.8 | 18,087.9 | 19,830.0 | 21,116.6 |
| **VMT** | 149,388.9 | 159,299.0 | 174,806.1 | 180,153.7 | 200,136.4 | 212,923.6 |

### Adjustment Factors to Convert AAWDT to Appropriate Season:

**Ozone Season AWDT: 1.03**

**Winter Season AWDT: 0.96**

**PM2.5 Annual:**

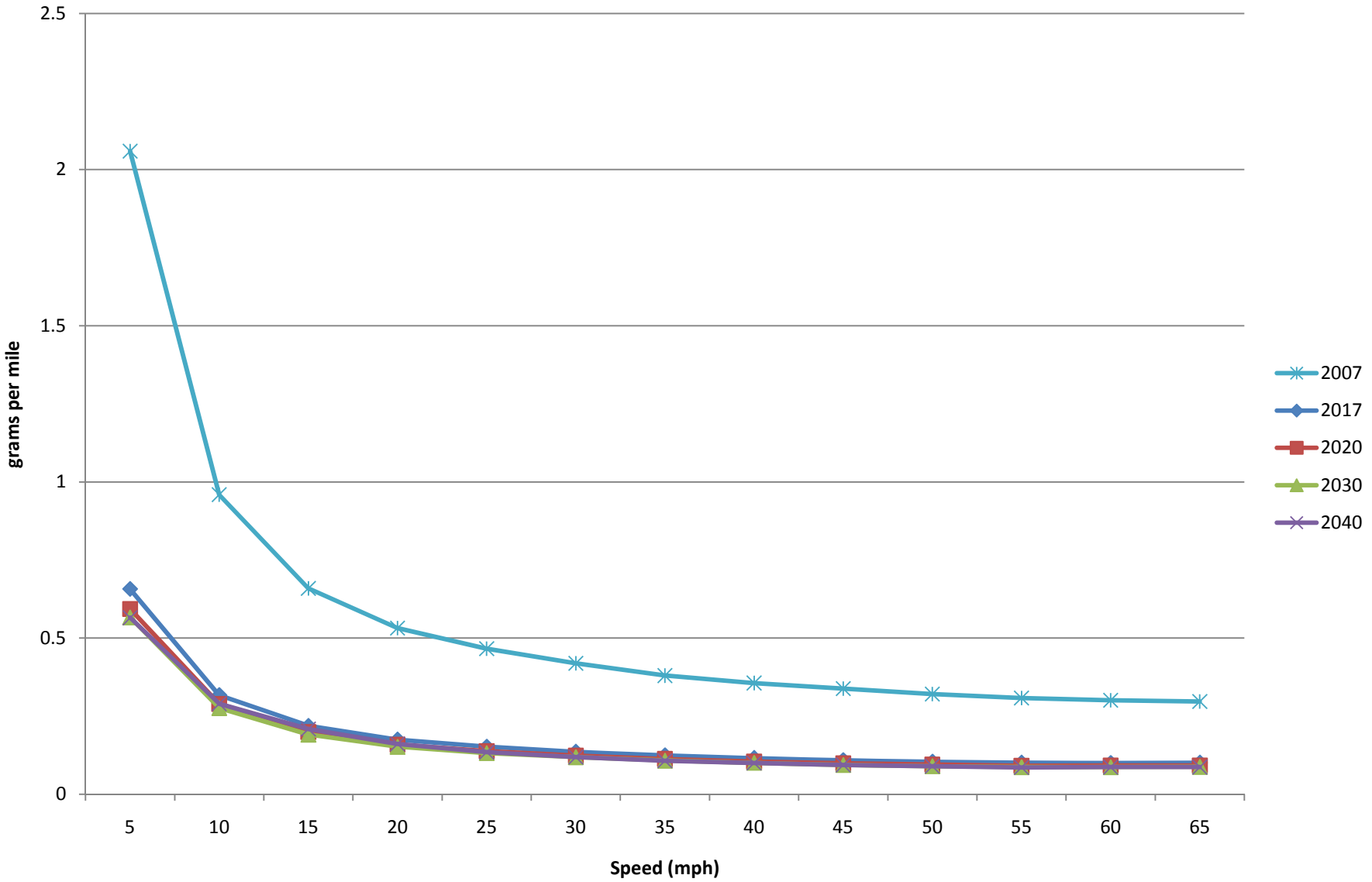
| Season (ADT) | Factor |
|---|---|
| Season 1 (Jan- Apr) | 0.9177 |
| Season 2 (May- Sept) | 0.9751 |
| Season 3 (Oct- Dec) | 0.9212 |

**NOTE:** AWDT reflects a five day average
ADT reflects a seven day average

# EXHIBIT 3

June, 2012

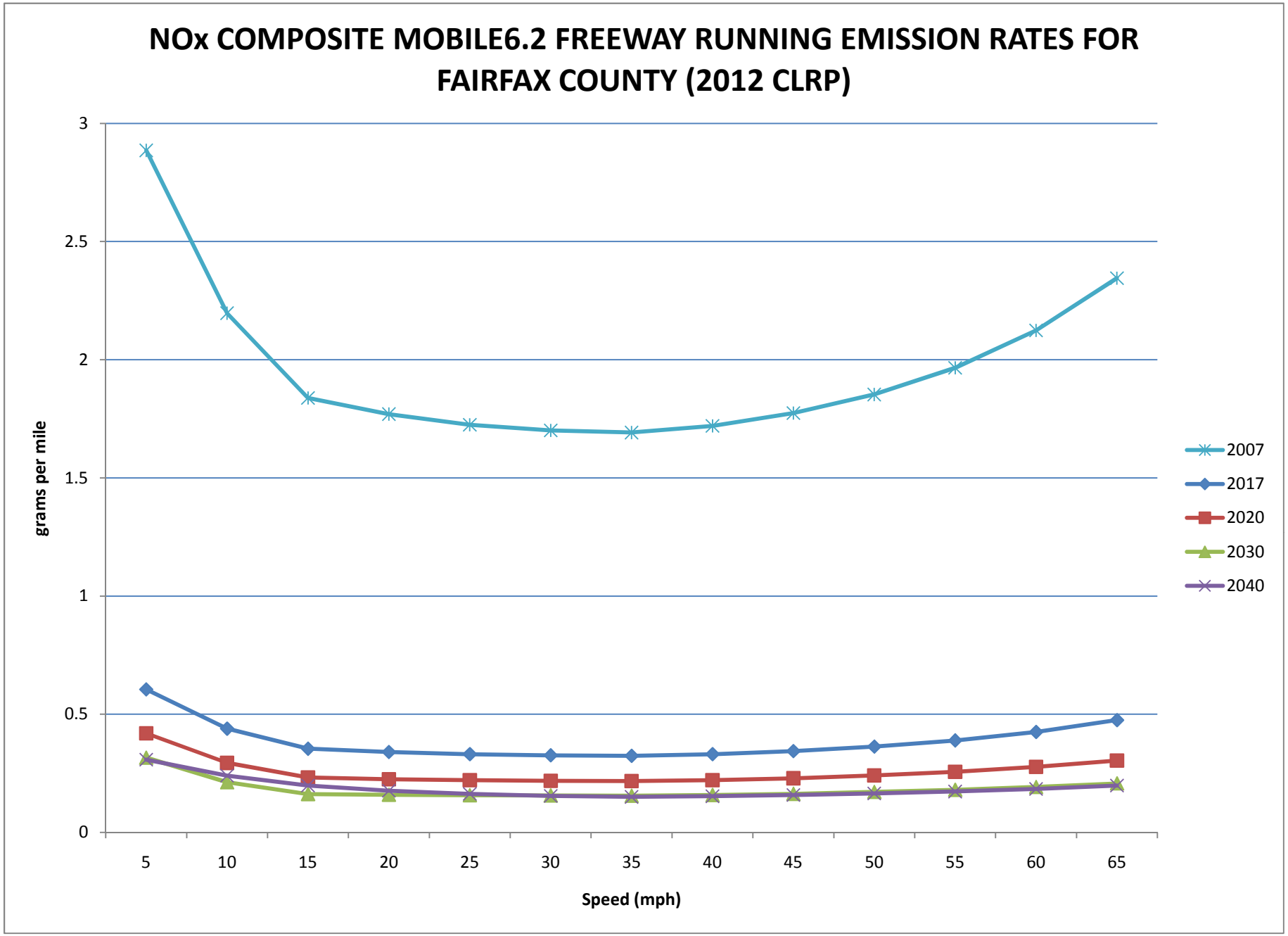
## VOC COMPOSITE MOBILE6.2 FREEWAY RUNNING EMISSION RATES FOR FAIRFAX COUNTY (2012 CLRP)






12CLRPEXH3S&4S VOC NOX RATES

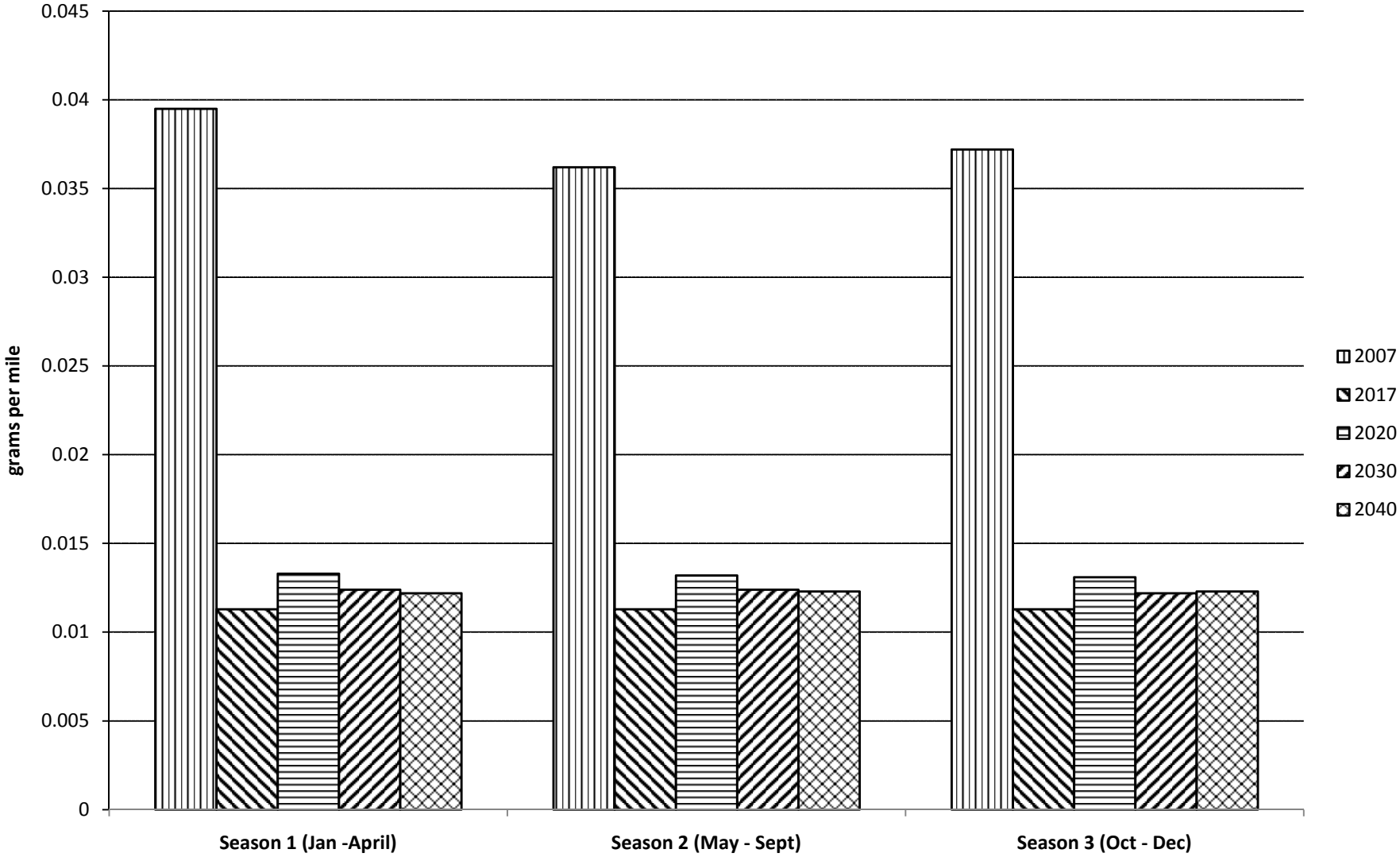
# EXHIBIT 4



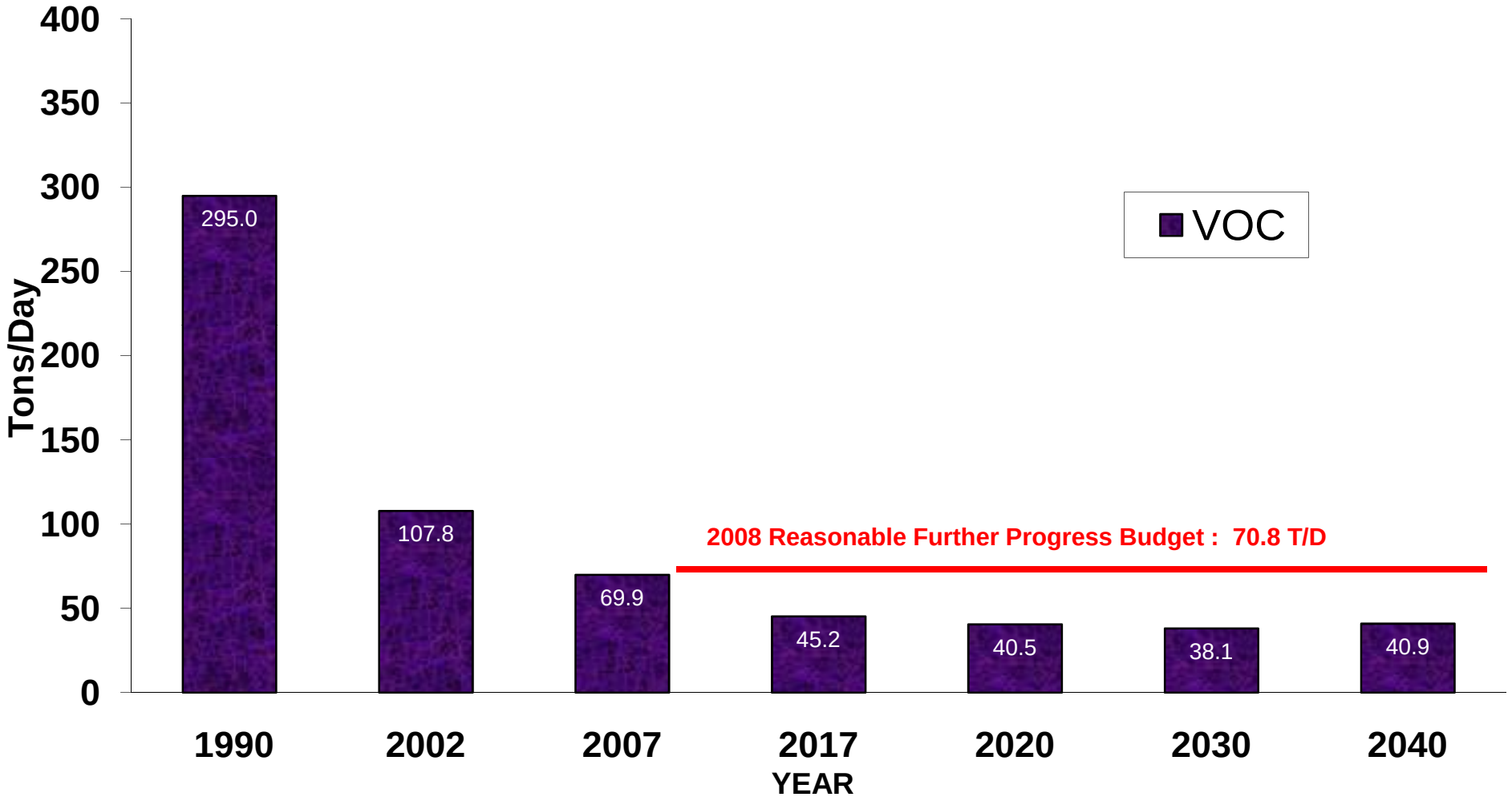



12CLRPEXH3S&4S VOC NOX RATES

# Exhibit 5
# DIRECT $PM_{2.5}$ EMISSION RATES FOR FAIRFAX COUNTY (MAJOR ROADS NETWORK)



# EXHIBIT 6
# Mobile Source VOC Emissions
# for the 8-Hour Ozone Nonattainment Area
# 2012 CLRP & FY 2013-2018 TIP

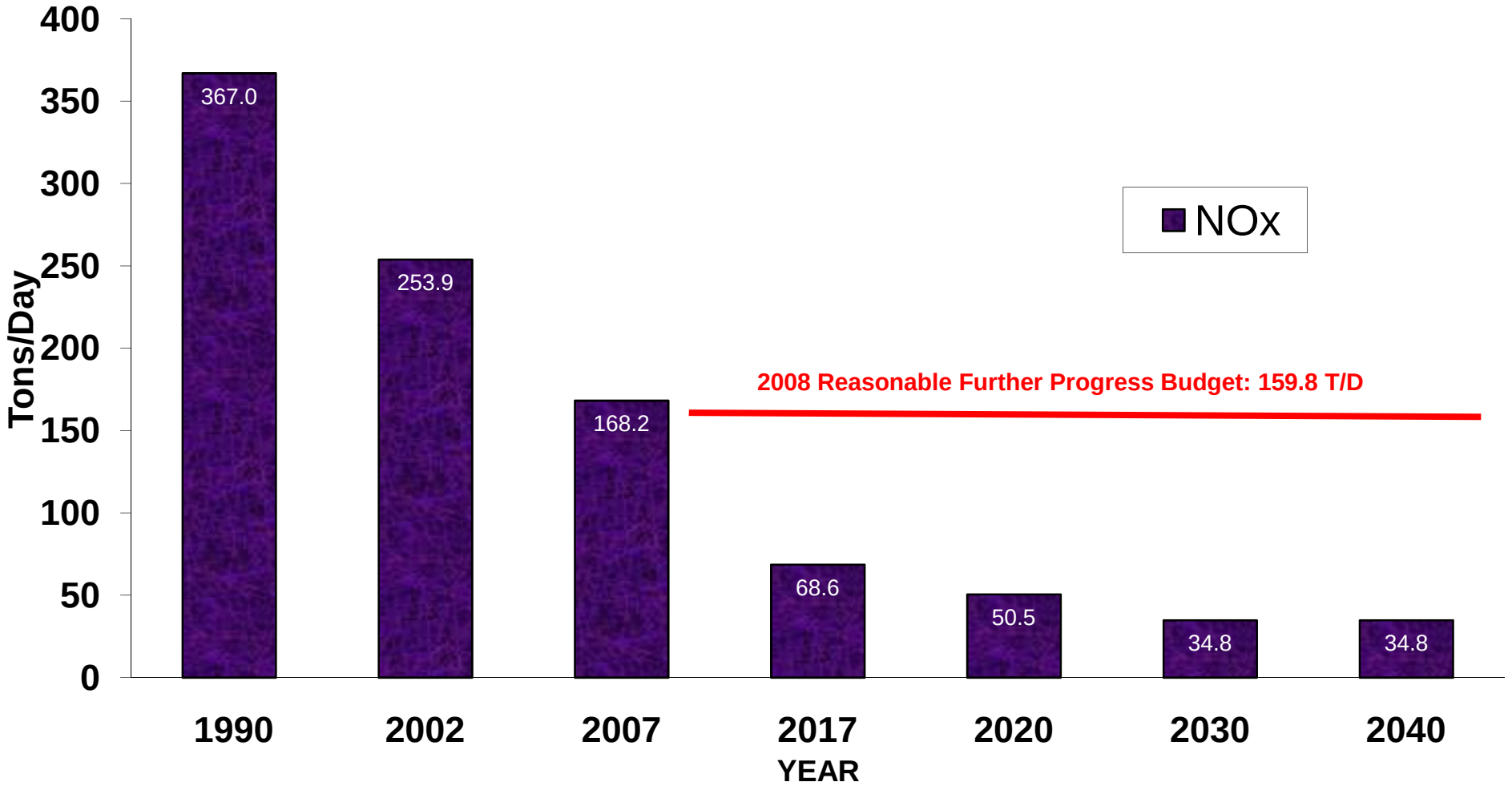



10



Values include TCMs, but not TERMs

# EXHIBIT 7
# Mobile Source NOx Emissions for the 8-Hour Ozone Nonattainment Area 2012 CLRP & FY2013-2018 TIP



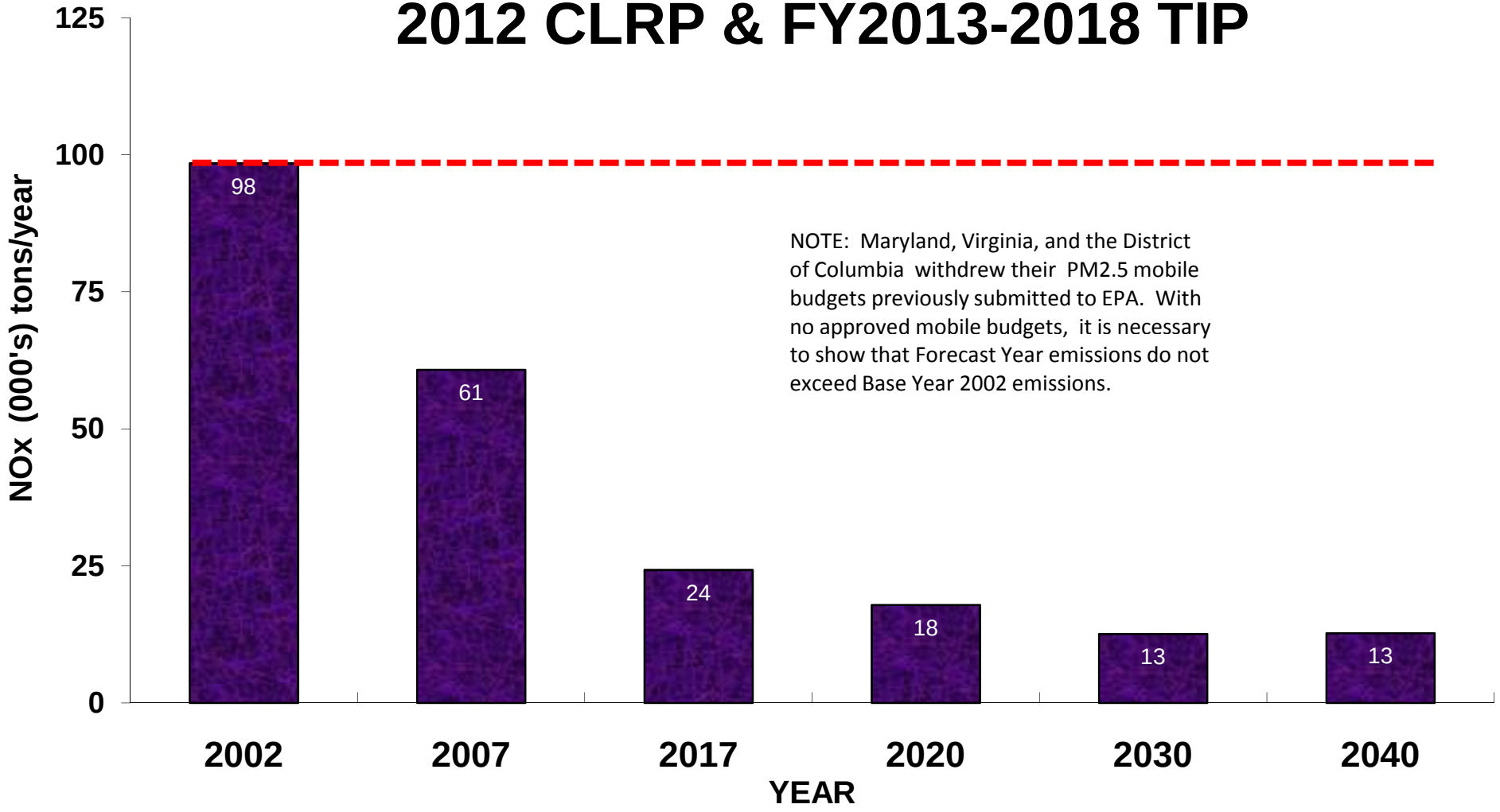




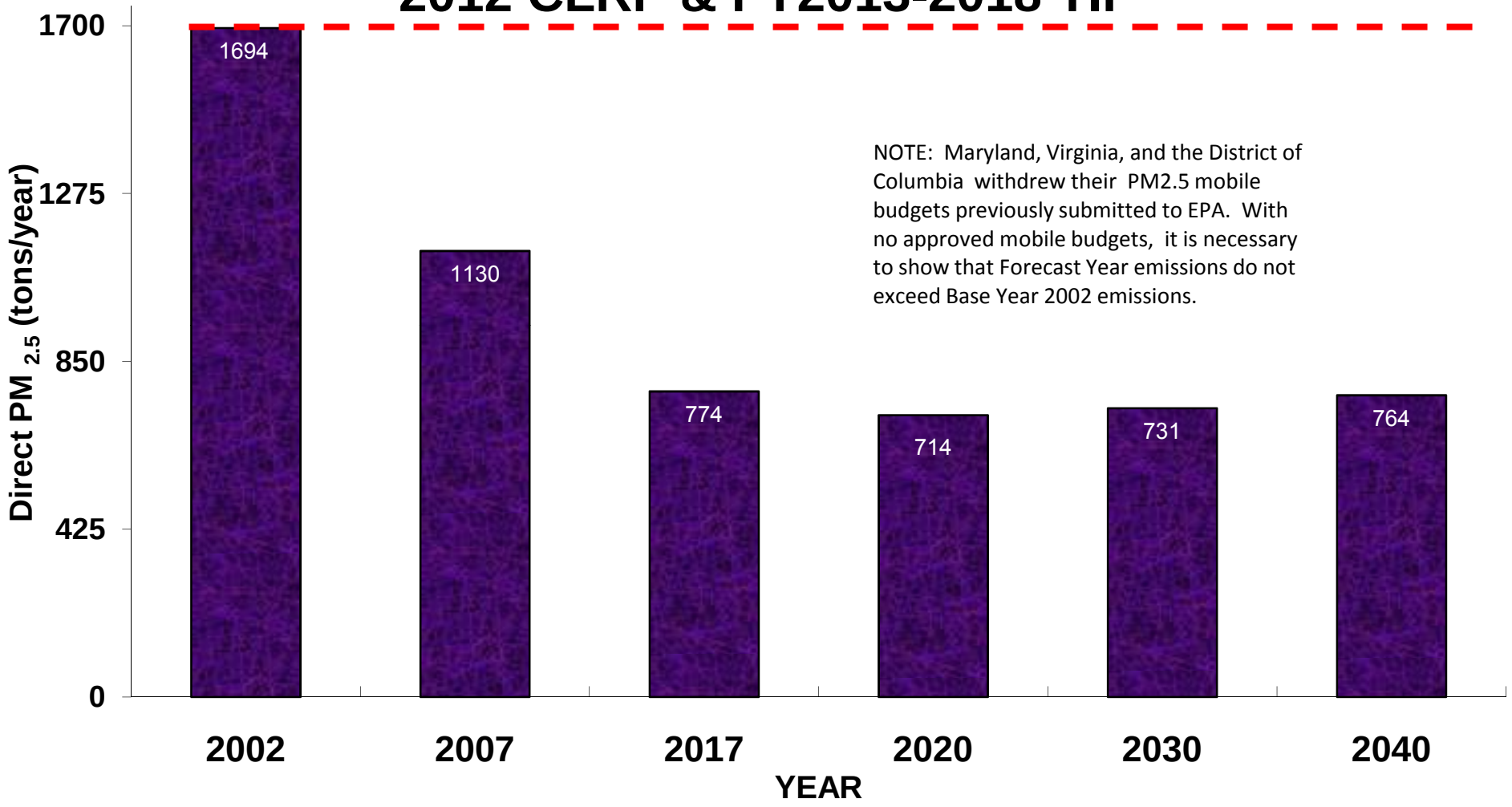



Values include TCMs, but not TERMs

# EXHIBIT 8
# Mobile Source Emissions
# $PM_{2.5}$ Precursor: NOx
## (tons/year in thousands)
# 2012 CLRP & FY2013-2018 TIP



# EXHIBIT 9
# Mobile Source Emissions
# Direct $PM_{2.5}$
# (tons/year)
# 2012 CLRP & FY2013-2018 TIP



# ATTACHMENT A

# COMMONWEALTH of VIRGINIA

*DEPARTMENT OF ENVIRONMENTAL QUALITY*

*Street address:* 629 East Main Street, Richmond, Virginia 23219
*Mailing address:* P.O. Box 1105, Richmond, Virginia 23218
Fax (804) 698-4500 TDD (804) 698-4021
www.deq.virginia.gov

Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482


JAN 23 2012

Ms. Diana Esher, Director
Air Protection Division (3AP00)
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Reference: Withdrawal of the Virginia Portion of 1997 $PM_{2.5}$ NAAQS Attainment SIP Revision for the Washington DC-MD-VA Nonattainment Area

Dear Ms. Esher:

On April 4, 2008, Virginia officially requested approval of a revision to the Commonwealth of Virginia State Implementation Plan (SIP). The revision demonstrated the improvements made to the air quality in the Washington DC-MD-VA Nonattainment Area and the efforts taken to achieve the 1997 national ambient air quality standards (NAAQS) for $PM_{2.5}$ by 2009. This SIP revision for the Washington DC-MD-VA area included (i) the attainment plan, (ii) analysis of reasonably available control measures, (iii) attainment demonstration, (iv) contingency plans for failure to attain the air quality standard, (v) mobile source budgets, and (vi) the base year 2002 air pollutant emissions inventory.

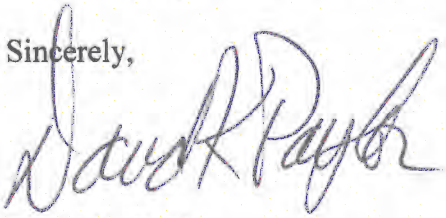
Air quality has significantly improved in the Washington DC-MD-VA area. On January 12, 2009 (74 FR 1146), EPA determined that the area had attained the NAAQS and issued a clean data determination for the area. This determination suspended the requirements for the Commonwealth to submit attainment demonstrations and associated reasonably available control measures, reasonable further progress plans, contingency measures, and other planning SIPs related to attainment of the NAAQS in the area. The purpose of this letter is to withdraw these portions of the April 4, 2008 submittal. Specifically, the Commonwealth hereby withdraws the (i) attainment plan, (ii) analysis of reasonably available control measures, (iii) attainment

demonstration, (iv) contingency plans for failure to attain the air quality standard, and (v) mobile source budgets, all of which were submitted on April 4, 2008. To ensure that Virginia has met the requirements of § 172(c)(3) regarding inventory submittals, the Commonwealth is not requesting the withdrawal of the base year 2002 air pollutant emissions inventory, which comprised Chapter 3 and Appendix B of the April 4, 2008 document

As a related matter, Virginia, in cooperation with the District of Columbia, Maryland, and the Metropolitan Washington Council of Governments, is developing a redesignation request and maintenance plan for the Washington DC-MD-VA area with respect to the 1997 $PM_{2.5}$ NAAQS. This request and plan, which will contain mobile vehicle emissions budgets developed using MOVES2010, is expected to be ready for final submittal to EPA in 2012.

If you have any questions or need additional information, please let us know.

Sincerely,



David K. Paylor

DKP\kgs

TEMPLATES\SIP-REG\REG00w
SIP\NONATTN PLANS\2012\NVAPMw-SIP.DOC

MDE
MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard • Baltimore MD 21230
410-537-3000 • 1-800-633-6101

Martin O'Malley
Governor

Anthony G. Brown
Lieutenant Governor

Robert M. Summers, Ph.D.
Secretary

FEB 2 9 2012

Mr. Shawn M. Garvin
Regional Administrator
U.S. Environmental Protection Agency, Region III
1650 Arch Street (3RA00)
Philadelphia, PA 19103-2029

Dear Mr. Garvin:

On April 3, 2008, Maryland officially requested EPA approval of the following state implementation plan (SIP) revision:

**Maryland State Implementation Plan (SIP) for Fine Particle ($PM_{2.5}$) Standard and 2002 Base Year Inventory for the Washington DC-MD-VA Nonattainment Area**

The plan revision demonstrated the improvements made to the air quality in the Washington DC-MD-VA Nonattainment Area ("the Area") and the efforts taken to achieve the 1997 national ambient air quality standard (NAAQS) for $PM_{2.5}$ by 2009. This SIP revision for the Washington DC-MD-VA area included: (i) the attainment plan; (ii) an analysis of reasonably available control measures; (iii) an attainment demonstration; (iv) contingency plans for failure to attain the air quality standard; (v) mobile source budgets; and (vi) the base year 2002 air pollutant emissions inventory.

Air quality has significantly improved in the Washington DC-MD-VA area. On January 12, 2009 (74 FR 1146), EPA determined that the Area had attained the NAAQS and issued a clean data determination for the Area. This determination suspended the requirements for Maryland to submit attainment demonstrations and associated reasonably available control measures, reasonable further progress plans, contingency measures, and other planning SIPs related to attainment of the NAAQS in the Area. The purpose of this letter is to withdraw these portions of the April 3, 2008 submittal.

Specifically, the State of Maryland hereby withdraws: (i) the attainment plan; (ii) the analysis of reasonably available control measures; (iii) the attainment demonstration; (iv) the contingency plans for failure to attain the air quality standard; and (v) the mobile source budgets, all of which were submitted on April 3, 2008. To ensure that Maryland has met the requirements of Section 172(c)(3) of the Clean Air Act regarding inventory submittals, the State is not requesting the withdrawal of the base year 2002 air pollutant emissions inventory, which comprises Chapter 3 and Appendix B of the original April 3, 2008 SIP submission.

On a related matter, Maryland, in cooperation with the District of Columbia, Virginia, and the Metropolitan Washington Council of Governments, is developing a redesignation request and maintenance plan for the Washington DC-MD-VA area with respect to the 1997 $PM_{2.5}$ NAAQS. This request and plan, which will contain mobile vehicle emissions budgets developed using MOVES2010, is expected to be ready for final submittal to EPA in 2012.

If you have any questions regarding these matters or require additional information, please contact Mr. George (Tad) S. Aburn, Jr., Director of the Air and Radiation Management Administration at 410-537-3255, or by email, at gaburn@mde.state.md.us.

Sincerely,

Secretary

cc: Diana Esher, Director, Air Protection Division, EPA Region III
George (Tad) S. Aburn, Jr., Director, Air and Radiation Management Administration

# ATTACHMENT B

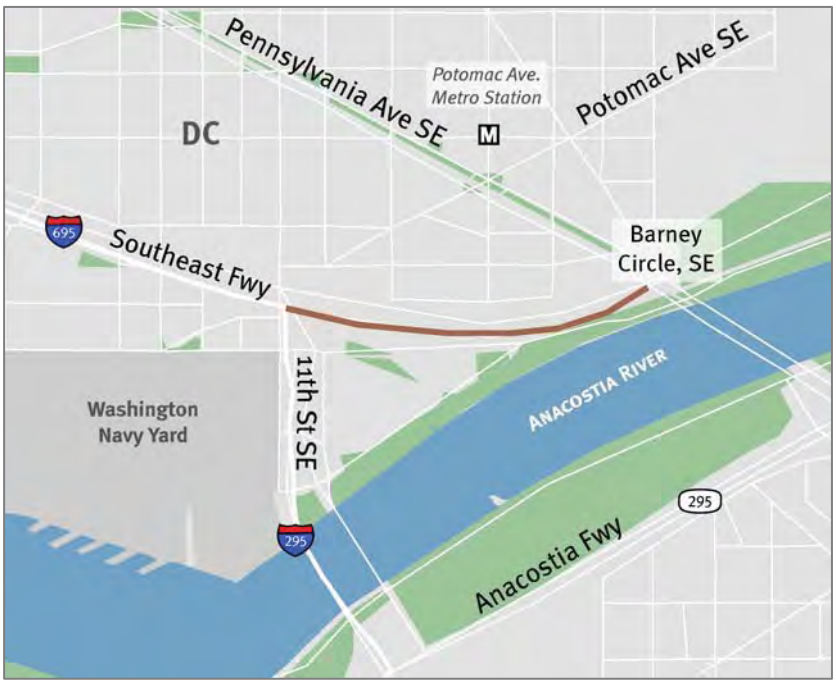
# Significant Additions and Changes to The 2012 Update to the Financially Constrained Long-Range Transportation Plan and the FY 2013-2018 Transportation Improvement Program


## Significant Additions and Changes to the CLRP and FY 2013-2018 TIP

1. Create Southeast Boulevard from 11th Street Bridge to Barney Circle
2. Bus Rapid Transit from Van Dorn Metro Station to Pentagon Metro Station
3. I-395 Auxiliary Lane, northbound from Duke Street to Seminary Road
4. Date Change on I-495 HOT Lanes Interchanges (~~2030~~ 2013)
5. Remove Widening of US 29 from US 50 to Eaton Place
6. Manassas National Battlefield Park Bypass

## 1. Create Southeast Boulevard from 11th Street Bridge to Barney Circle

Once the 11th Street SE Bridge fully connects I-695 (Southeast Freeway) and I-295 in both directions, the segment between 11th Street SE and Barney Circle/ Pennsylvania Avenue will become obsolete. This project proposes to convert that segment of the Southeast Freeway to an urban boulevard, connected to Barney Circle, with an at-grade intersection.



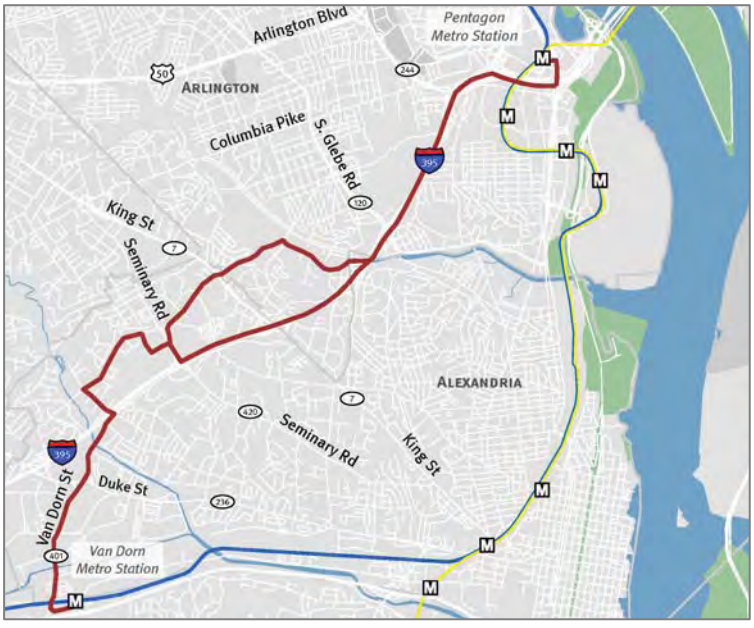

| | |
|---|---|
| Complete: | 2015 |
| Length: | 0.5 mile |
| Cost: | $80 million |
| Funding: | Federal, Local and Private |

See the project description in Attachment A for more information.

## 2. Bus Rapid Transit from the Van Dorn Metro Station to the Pentagon Metro Station

This project will construct and operate a Bus Rapid Transit (BRT) service that will connect the Van Dorn Metro Station to the Pentagon Metro Station via the Mark Center. The line will split into two spurs at the Mark Center. The BRT spur will continue north on Beauregard Street, serving the Northern Virginia Community College at Braddock Road, turn east on S. Arlington Mill Drive to serve the Shirlington Transit Center, then continue on I-395 to the Pentagon. A separate rapid bus spur will travel on the I-395 HOV lanes from the Mark Center directly to the Pentagon.

The BRT alignment will operate in dedicated lanes where possible, and may include additional elements such as pre-board payment, transit signal priority, improved bus shelters/stops, and branded vehicles. The rapid bus alignment will contain some of the same features as BRT but will operate in shared lanes. Buses will run every 7.5 minutes during peak periods.




| | |
|---|---|
| Complete: | 2016 |
| Length: | 6.5 miles |
| Cost: | $100 million |
| Funding: | Federal, Local and Private |

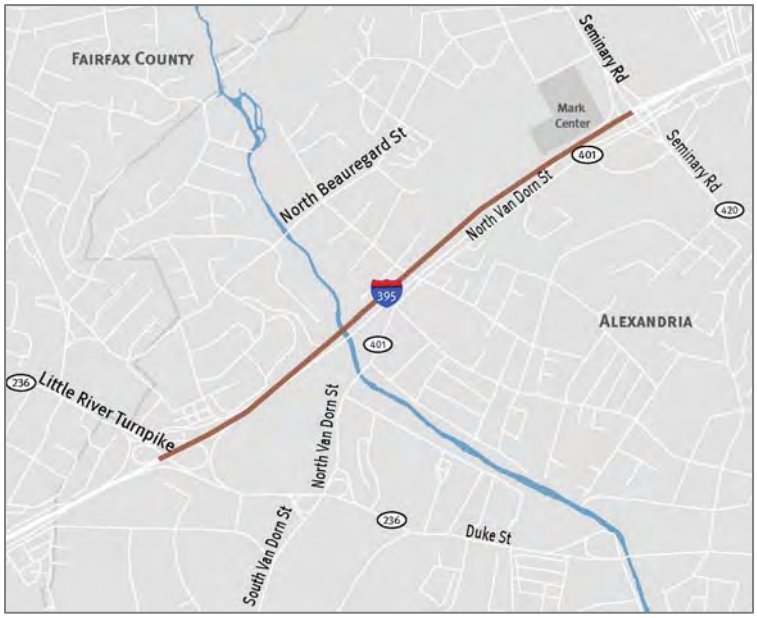
See the project description in Attachment A for more information.

### 3. I-395 Auxiliary Lane, Northbound from Duke Street to Seminary Road

This project will construct an auxiliary lane on northbound I-395 connecting the Duke Street on ramp to the off ramp at Seminary Road.

Complete: 2015
Length: 1 mile
Cost: $20 million
Funding: Federal and state

See the project description in Attachment A for more information.




### 4. Date Change on I-495 HOT Lanes Interchanges

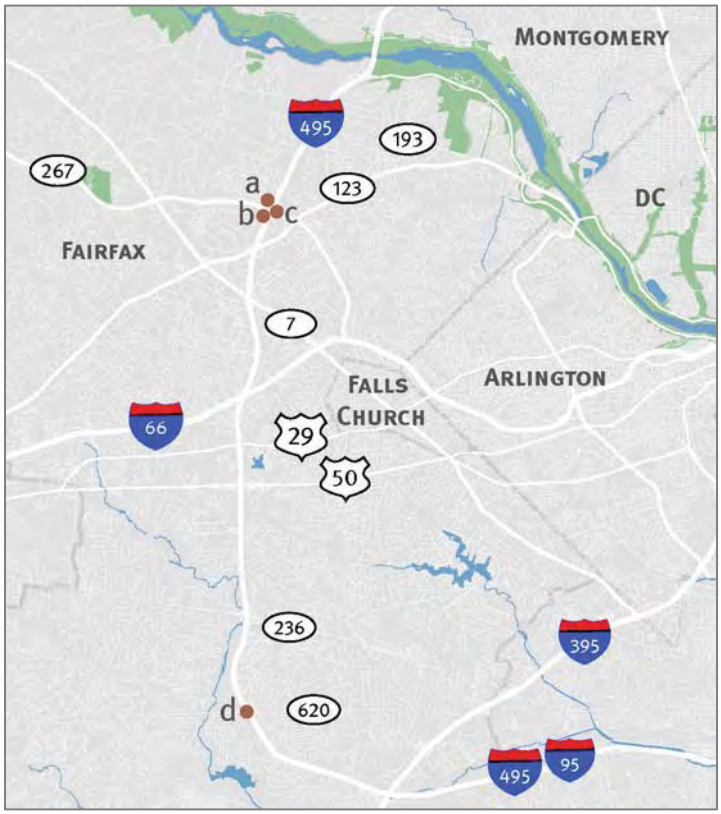
The 2011 CLRP includes the widening of the Capital Beltway to include a system of HOT lanes from the American Legion Bridge to the Backlick Road Underpass. As part of the larger I-495 HOT lanes project, VDOT is proposing to advance the completion dates of four interchanges from 2030 to 2013:

a & b: Two interchanges at VA-267 Dulles Toll Rd

c: One interchange at Dulles Airport Access Highway

d: One interchange at VA-620 (Braddock Rd)

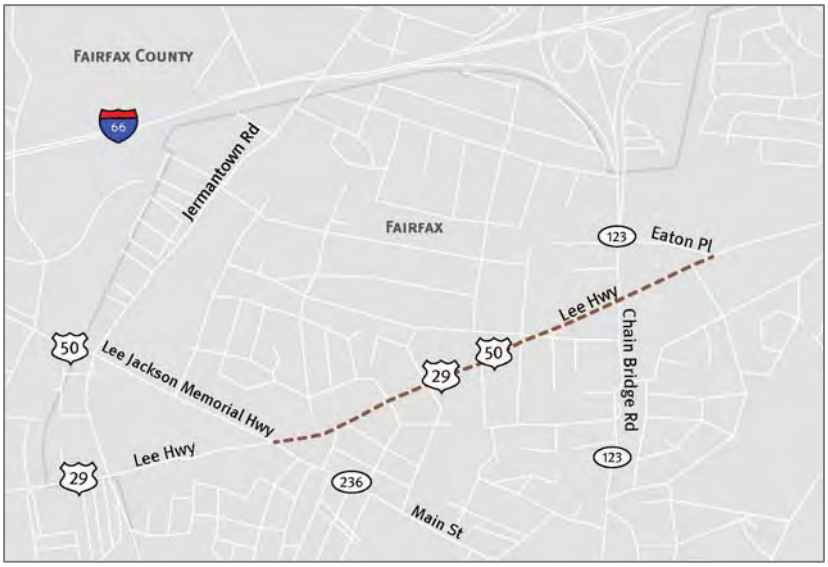
Complete: 2013



### 5. Remove Widening of US 29 from US 50 to Eaton Place

The 2011 CLRP includes the widening of US 29, Lee Highway from four to six lanes in the City of Fairfax between US 50 and Eaton Place. VDOT proposes to remove this project from the CLRP.

Complete: ~~2013, 2040~~
Cost: ~~$30.2 million~~

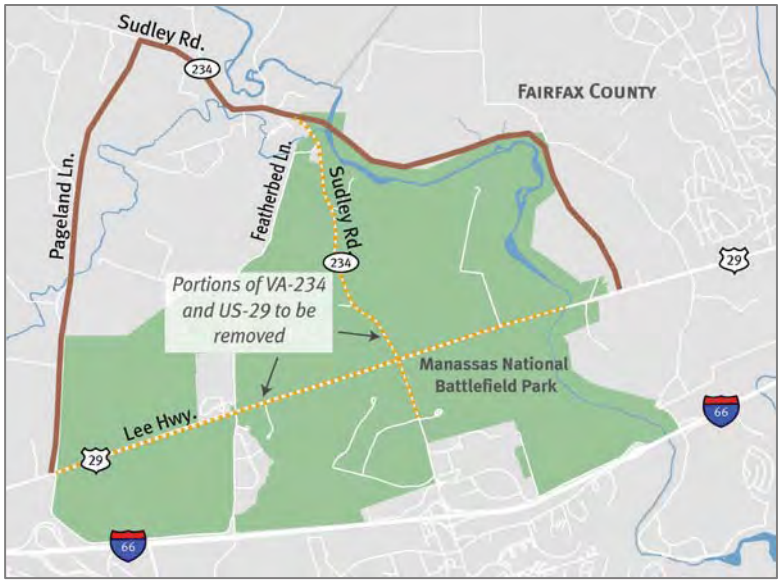



### 6. Manassas National Battlefield Park Bypass

This project will construct a four lane bypass for US 29 to the north of the Manassas National Battlefield Park. Two segments of the project are already included in the plan:

- a portion of the Tri-County Parkway (improvements to Pageland Lane),
- and widening of VA 234, Sudley Road.

The remaining portion will construct a new four lane facility from Sudley Road to east of the intersection of US 29 and Paddington Lane. Once the Bypass is complete, about four miles of US 29 and three miles of Sudley Road located inside the Park will be closed.




Complete: 2035
Length: 9 miles
Cost: $305 million
Funding: Federal and state

See the project description in Attachment A for more information.

# ATTACHMENT C

# HOUSEHOLD DATA

| MSA: | 2007 | 2017 | 2020 | 2030 | 2040 | 2040/2007 |
|---|---|---|---|---|---|---|
| | | | | | | |
| D.C. | 258726 | 291838 | 298115 | 318252 | 339889 | 1.31 |
| MONTGOMERY | 352913 | 384816 | 397237 | 436202 | 461469 | 1.31 |
| PR.GEORGES | 301540 | 328583 | 336404 | 359878 | 379317 | 1.26 |
| ARLINGTON | 94543 | 107838 | 111190 | 116788 | 119761 | 1.27 |
| ALEXANDRIA | 67041 | 73485 | 76426 | 83831 | 92155 | 1.37 |
| FAIRFAX | 393784 | 426728 | 440826 | 478759 | 500832 | 1.27 |
| LOUDOUN | 94321 | 123843 | 132843 | 154159 | 162971 | 1.73 |
| PR. WILLIAM | 140727 | 172975 | 183321 | 210450 | 229944 | 1.63 |
| FREDERICK | 81614 | 89590 | 92740 | 107686 | 119564 | 1.46 |
| CHARLES | 48845 | 60235 | 64299 | 75847 | 85901 | 1.76 |
| STAFFORD | 37504 | 52701 | 57388 | 73383 | 87679 | 2.34 |
| CALVERT | 30760 | 34991 | 36027 | 38348 | 40301 | 1.31 |
| SUBTOTAL | 1,902,318 | 2,147,623 | 2,226,816 | 2,453,583 | 2,619,783 | 1.38 |
| ADDITIONAL COUNTIES: | | | | | | |
| HOWARD | 103132 | 120864 | 125600 | 135486 | 137773 | 1.34 |
| ANNE ARUNDEL | 196402 | 213647 | 217782 | 229371 | 234332 | 1.19 |
| CARROLL | 60279 | 67260 | 69614 | 76111 | 81464 | 1.35 |
| FREDERICKSBURG (VA) &N. SPOTSYLVANIA | 40347 | 52447 | 56137 | 68763 | 79050 | 1.96 |
| CLARKE&JEFFERSON | 24873 | 30840 | 32679 | 40562 | 49835 | 2.00 |
| FAUQUIER | 24731 | 32882 | 35730 | 47502 | 63154 | 2.55 |
| K. GEORGE | 7912 | 10371 | 11228 | 14358 | 17125 | 2.16 |
| ST. MARY'S | 36573 | 46408 | 49352 | 58143 | 66509 | 1.82 |
| SUBTOTAL | 494,249 | 574,719 | 598,122 | 670,296 | 729,242 | 1.48 |
| TOTAL | 2,396,567 | 2,722,342 | 2,824,938 | 3,123,879 | 3,349,025 | 1.40 |

SOURCE:
MWCOG Round 8.1 Cooperative Forecasts
BMC Round 7-C Cooperative Forecasts
GWRC/FAMPO Regional Demographic Control Forecasts for 2035 CLRP, June 2008
Tri-County Council for Southern Maryland data for Calvert, Charles and St. Mary's

# EMPLOYMENT DATA

| MSA: | 2007 | 2017 | 2020 | 2030 | 2040 | 2040/2007 |
|---|---|---|---|---|---|---|
| | | | | | | |
| D.C. | 763530 | 834060 | 865726 | 929641 | 982647 | 1.29 |
| MONTGOMERY | 504045 | 559355 | 585363 | 684284 | 737364 | 1.46 |
| PR.GEORGES | 345777 | 365324 | 377879 | 427514 | 497652 | 1.44 |
| ARLINGTON | 206400 | 258626 | 275862 | 302588 | 308376 | 1.49 |
| ALEXANDRIA | 105870 | 118783 | 122551 | 142738 | 155012 | 1.46 |
| FAIRFAX | 655611 | 747569 | 785619 | 875216 | 935411 | 1.43 |
| LOUDOUN | 132849 | 183113 | 206465 | 257212 | 385449 | 2.90 |
| PR. WILLIAM | 141076 | 172538 | 186215 | 230047 | 278151 | 1.97 |
| FREDERICK | 86542 | 101182 | 103862 | 109755 | 114907 | 1.33 |
| CHARLES | 60039 | 69758 | 71731 | 77537 | 83138 | 1.38 |
| STAFFORD | 40114 | 54328 | 57505 | 70172 | 84144 | 2.10 |
| CALVERT | 33512 | 42422 | 44457 | 47159 | 48955 | 1.46 |
| SUBTOTAL | 3,075,365 | 3,507,058 | 3,683,235 | 4,153,863 | 4,611,206 | 1.50 |
| ADDITIONAL COUNTIES: | | | | | | |
| HOWARD | 155565 | 186679 | 194977 | 221168 | 231902 | 1.49 |
| ANNE ARUNDEL | 278707 | 317528 | 329042 | 358320 | 370904 | 1.33 |
| CARROLL | 63773 | 70099 | 70813 | 72456 | 74090 | 1.16 |
| FREDERICKSBURG (VA) &N. SPOTSYLVANIA | 61620 | 84827 | 89210 | 103673 | 119691 | 1.94 |
| CLARKE & JEFFERSON | 26062 | 32017 | 33800 | 39225 | 45298 | 1.74 |
| FAUQUIER | 25422 | 32604 | 35762 | 43360 | 52578 | 2.07 |
| K. GEORGE | 10519 | 18431 | 19370 | 22501 | 25740 | 2.45 |
| ST. MARY'S | 56173 | 65350 | 67268 | 71969 | 75862 | 1.35 |
| SUBTOTAL | 677,841 | 807,535 | 840,242 | 932,672 | 996,065 | 1.47 |
| TOTAL | 3,753,206 | 4,314,593 | 4,523,477 | 5,086,535 | 5,607,271 | 1.49 |

SOURCE:
MWCOG Round 8.1 Cooperative Forecasts
BMC Round 7-C Cooperative Forecasts
GWRC/FAMPO Regional Demographic Control Forecasts for 2035 CLRP, June 2008
Tri-County Council for Southern Maryland data for Calvert, Charles and St. Mary's

NOTE: Includes Census Adjustment

# ATTACHMENT D

**EXHIBIT 25**

# TERM TRACKING SHEET

## TRANSPORTATION EMISSION REDUCTION MEASURES

## Part A - Daily Ozone Precursor Emissions

***** Project Category: TR - Traffic Stream, C - Commute, H - Heavy Duty Vehicles (Engine Technology), SP- Specific Vehicle Type, TCM - Transportation Control Measures

| NOs | CREDIT TAKEN | TIP CREDITED | AGENCY | PROJECT | IMPLEMENTATION STATUS | | | | ORIGINAL COMPLETION DATE | ACTUAL COMPLETION DATE | 2017 | | 2020 | | 2030 | | 2040 | | Project Category * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | FULL | SCALED-BACK | UNDER-WAY | REM | | | VOC | NOX | VOC | NOX | VOC | NOX | VOC | NOX | |
| 9 | X | 1994-99 | MDOT | Park & Ride Lot - MD 210/ MD 373 | X | | | | 2000 | 2003 | 0.0004 | 0.0008 | 0.0003 | 0.0005 | 0.0003 | 0.0005 | 0.0003 | 0.0005 | C |
| 19 | X | 1994-99 | PRTC | VRE Woodbridge Parking Expansion (add 500 spaces) | X | | | | | 2002-2003 | n/a | n/a | n/a | n/a | n/a | n/a | | | - |
| 20 | X | 1994-99 | ALEX | King St. Metrorail access improvements | X | | | | | 2006 | 0.0008 | 0.0008 | 0.0007 | 0.0005 | 0.0006 | 0.0005 | 0.0006 | 0.0005 | C |
| 38 | X | 1995-00 | MDOT | Signal Systems - MD 85 Executive Way to MD 355 | X | | | | 1996 | Pre 2000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | TR |
| 39 | X | 1995-00 | MDOT | Signal Systems - MD 355 ,I-70 ramps to Grove Rd. | X | | | | 1996 | n/a | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | TR |
| 44 | X | 1995-00 | MDOT | Signal Systems - MD 410, 62nd Ave. to Riverdale Rd. | **x** | | | | 1996 | 2002 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | TR |
| 48 | X | 1995-00 | MDOT | MARC Replacement Coaches | X | | | | 1999 | 2004 | 0.0004 | 0.0008 | 0.0003 | 0.0005 | 0.0003 | 0.0005 | 0.0003 | 0.0005 | C (TCM) |
| 49 | X | 1995-00 | MDOT | MARC Expansion Coaches | X | | | | 1999 | 2004 | 0.0038 | 0.0072 | 0.0029 | 0.0051 | 0.0026 | 0.0042 | 0.0026 | 0.0042 | C (TCM) |
| 51 | X | 1995-00 | VDOT | Alexandria Telecommuting Pilot Program | X | | | | | 2000 & 2001 | 0.0000 | 0.0000 | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | C |
| 52 | X | 1995-00 | VDOT | Fairfax County Bus Shelter (Fairfax Co. TDM program) | | | X | | 2000 | 2001 | 0.0000 | 0.0000 | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | C |
| 54 | X | 1995-00 | VDOT | City of Fairfax Bus Shelters | X | | | | 1999 | 2004 | 0.0000 | 0.0003 | 0.0000 | 0.0002 | 0.0000 | 0.0002 | 0.0000 | 0.0002 | C (TCM) |
| 56 | X | 1995-00 | VDOT | Cherry Hill VRE Access | | | X | | | Jul-08 | 0.0029 | 0.0062 | 0.0023 | 0.0044 | 0.0020 | 0.0036 | 0.0020 | 0.0036 | C (TCM) |
| 58 | X | 1995-00 | WMATA | Bus Replacement (172 buses) | X | | | | 1998 | 1998 | 0.0488 | 0.1383 | | | | | 0.0000 | 0.0000 | SP (TCM) |
| 59 | X | 1995-00 | MCG | Shady Grove West Park and Ride | | | X | | 2010 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | C |
| 60 | X | 1995-00 | MCG | White Oak Park and Ride | | | X | | 2010 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | C |
| 61 | X | 1995-00 | MCG | Bicycle Facilities | | | X | | FY99 | | 0.0013 | 0.0005 | 0.0010 | 0.0004 | 0.0009 | 0.0003 | 0.0009 | 0.0003 | C |
| 62 | X | 1995-00 | MCG | Pedestrian Facilities to Metrorail | | | X | | | | 0.0021 | 0.0021 | 0.0016 | 0.0015 | 0.0015 | 0.0012 | 0.0015 | 0.0012 | C |
| 63 | X | 1995-00 | MDOT | MARC Replacement Coaches | X | | | | 1999 | 2004 | 0.0017 | 0.0031 | 0.0013 | 0.0022 | 0.0012 | 0.0018 | 0.0012 | 0.0018 | C |
| 64 | X | 1995-00 | MDOT | MARC Expansion Coaches | X | | | | 1999 | 2004 | 0.0133 | 0.0269 | 0.0104 | 0.0189 | 0.0094 | 0.0157 | 0.0093 | 0.0157 | C (TCM) |
| 66 | X | 1995-00 | VDOT | Commuter Lots - District Wide | X | | | | varies | 1995, 2001 | 0.0046 | 0.0085 | 0.0036 | 0.0060 | 0.0032 | 0.0050 | 0.0032 | 0.0050 | C |
| 67 | X | 1995-00 | VDOT | I-66 and Stringfellow Rd. Park and Ride | X | | | | 2000 | 2000 end | 0.0042 | 0.0052 | 0.0033 | 0.0036 | 0.0029 | 0.0030 | 0.0029 | 0.0030 | C |
| 68 | X | 1995-00 | VDOT | Lake Ridge Park and Ride (now called Tacketts Mill lot) | X | | | | | 1999/2000 | 0.0000 | 0.0026 | 0.0000 | 0.0018 | 0.0000 | 0.0015 | 0.0000 | 0.0015 | C |
| 69 | X | 1995-00 | VDOT | Bicycle Trails and Facilities (Arlington & Fairfax Co - 7 locations) | | | X | | varies | 2010-12 | 0.0008 | 0.0044 | 0.0007 | 0.0031 | 0.0006 | 0.0026 | 0.0006 | 0.0026 | C |
| 70 | X | 1995-00 | VDOT | Improved Acceess to Metrorail Stations (VRE 2 Stn) | | | X | | varies | 2000-2012 | 0.0002 | 0.0003 | 0.0002 | 0.0002 | 0.0001 | 0.0002 | 0.0001 | 0.0002 | C |
| 71 | X | 1995-00 | VDOT | I-66 HOV access at Monument Dr. | X | | | | | 1997 | 0.0021 | 0.0026 | 0.0033 | 0.0036 | 0.0029 | 0.0030 | 0.0029 | 0.0030 | C |
| 72 | X | 1995-00 | DC | Bicycle Facilities | X | | | | | | 0.0100 | 0.0052 | 0.0078 | 0.0036 | 0.0070 | 0.0030 | 0.0070 | 0.0030 | C |
| 73 | X | 1995-00 | REGION | COG Regional Ridesharing Support | X | | | | | on-going | **0.0315** | **0.0436** | **0.0249** | **0.0309** | **0.0227** | **0.0257** | **0.0225** | **0.0257** | C |
| 74 | X | 1995-00 | REGION | M-47 Integrated Ridesharing | X | | | | | on-going | **0.0089** | **0.0124** | **0.0071** | **0.0088** | **0.0064** | **0.0074** | **0.0064** | **0.0073** | C |
| 75 | X | 1995-00 | REGION | M-92 Telecommuting Support | X | | | | | on-going | **0.0472** | **0.0600** | **0.0371** | **0.0424** | **0.0334** | **0.0352** | **0.0332** | **0.0351** | C |
| 77 | | 1996-01 | VDOT | Duke Street Pedestrian Bridge | X | | | | 2005 | 2007 | n/a | n/a | n/a | n/a | n/a | n/a | | | - |
| 79 | X | 1996-01 | VDOT | Fairfax County Bus Shelters (30 shelters with project #85) | | | X | | 1999 | ummer 200 | 0.0008 | 0.0008 | 0.0007 | 0.0005 | 0.0006 | 0.0005 | 0.0006 | 0.0005 | C |
| 81 | X | 1996-01 | VDOT | Arlington County Metrocheck Program | X | | | | 1997 | 1997 Onwards | 0.0008 | 0.0008 | 0.0007 | 0.0005 | 0.0006 | 0.0005 | 0.0006 | 0.0005 | C |
| 82 | X | 1996-01 | VDOT | Old Dominion Drive Bike Trail | | | X | | 2000 | 2010-11 | 0.0004 | 0.0003 | 0.0003 | 0.0002 | 0.0003 | 0.0002 | 0.0003 | 0.0002 | C |
| 83 | X | 1996-01 | WMATA | Bus Replacement (see line 58, above) | X | | | | | 1998 | Credit taken in line 58, above | | | | | | | | SP |
| 85 | X | 1996-01 | VDOT | Fairfax County Bus Shelters (30 shelters with project #79) | X | | | | 1999 | 2001 | 0.0004 | 0.0003 | 0.0003 | 0.0002 | 0.0003 | 0.0002 | 0.0003 | 0.0002 | C |
| 90 | X | 1996-01 | REGION | M-47c Employer Outreach / Guaranteed Ride Home | X | | | | | on-going | **0.3666** | **0.4640** | **0.2878** | **0.3274** | **0.2594** | **0.2721** | **0.2578** | **0.2714** | C |
| 91 | X | 1996-01 | REGION | M-70a Bicycle Parking | | | X | | 1999 | | 0.0029 | 0.0018 | 0.0023 | 0.0013 | 0.0020 | 0.0011 | 0.0020 | 0.0011 | C |
| 92 | X | STADIUM ANALYSIS | | M-92 Telecommuting Support [1] | Combined with item #75 | | | | | | 0.0000 | 0.0000 | | | | | | | C |
| 95 | X | 1997-02 | MCG | Germantown Transit Center | X | | | | 2005 | | 0.0021 | 0.0049 | 0.0016 | 0.0035 | 0.0015 | 0.0029 | 0.0015 | 0.0029 | C (TCM) |
| 102 | X | 1997-02 | PG | Prince George's County Bus Replacement | X | | | | 1998 | 1998 | 0.0021 | 0.0049 | | | | | | | SP (TCM) |

**EXHIBIT 25**

# TERM TRACKING SHEET

## TRANSPORTATION EMISSION REDUCTION MEASURES

## Part A - Daily Ozone Precursor Emissions

***** Project Category: TR - Traffic Stream, C - Commute, H - Heavy Duty Vehicles (Engine Technology), SP- Specific Vehicle Type, TCM - Transportation Control Measures

| NOs | CREDIT TAKEN | TIP CREDITED | AGENCY | PROJECT | IMPLEMENTATION STATUS | | | | ORIGINAL COMPLETION DATE | ACTUAL COMPLETION DATE | 2017 | | 2020 | | 2030 | | 2040 | | Project Category * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | FULL | SCALED-BACK | UNDER-WAY | REM | | | VOC | NOX | VOC | NOX | VOC | NOX | VOC | NOX | |
| 106 | X | 1997-02 | VDOT | PRTC Employer Commuting Outreach Program | X | | | | | 1977 on-going | 0.0008 | 0.0001 | 0.0007 | 0.0001 | 0.0006 | 0.0001 | 0.0006 | 0.0001 | C |
| 107 | X | 1997-02 | VDOT | PRTC Multimodal Strategic Marketing Implementation Plan | X | | | | | 1977 on-going | 0.0000 | 0.0001 | 0.0000 | 0.0001 | 0.0000 | 0.0001 | 0.0000 | 0.0001 | C |
| 108 | X | 1997-02 | MDOT | M-103 Taxicab Replacement in Maryland [2] | **x** | | | | 2005 | Stopped | 0.0564 | 0.1468 | ~~0.1340~~ | ~~0.1827~~ | ~~0.3120~~ | ~~0.4810~~ | | | SP |
| 109 | X | 1997-02 | REGION | M-70b Employer Outreach for Bicycles | X | | | | 1998 | on going | **0.0004** | **0.0003** | **0.0003** | **0.0002** | **0.0002** | **0.0002** | **0.0002** | **0.0002** | C |
| 110 | | 1997-02 | VDOT | M-77b Vanpool Incentive Programs in Virginia | | | | **x** | 1999 | delayed | n/a | n/a | n/a | n/a | n/a | n/a | | | C |
| 111 | X | 1998-03 | WMATA | Bus Replacement (108 buses) | X | | | | 1999 | 1999 | 0.0318 | 0.0887 | | | | | | | SP |
| 112 | X | 1998-03 | MCG | Montgomery County Bus Replacement | X | | | | | Ongoing | 0.0057 | 0.0148 | | | | | | | SP |
| 113 | X | 1998-03 | PG | Prince George's County Bus Replacement | X | | | | 1998 | Ongoing | 0.0007 | 0.0011 | | | | | | | SP |
| 114 | X | 1998-03 | FDC | Frederick County Bus Replacement | X | | | | | | 0.0007 | 0.0000 | | | | | | | SP |
| 117 | X | 1998-03 | VDOT | Arlington County Four Mile Run Bike Trail | X | | | | 1999 | 2009 | 0.0004 | 0.0003 | 0.0003 | 0.0002 | 0.0003 | 0.0002 | 0.0003 | 0.0002 | C |
| 118 | X | 1998-03 | VDOT | Northern Virginia Turn Bays | X | | | | 2000 | 1998 | 0.0004 | 0.0005 | 0.0003 | 0.0003 | 0.0003 | 0.0002 | 0.0003 | 0.0002 | TR |
| 119 | X | 1998-03 | VDOT | Fairfax City Bus Replacement | X | | | | 2001 | 2003 | n/a | n/a | | | | | | | SP |
| 121 | X | 1998-03 | WMATA | WMATA Bus Replacement (252 buses) | X | | | | 2001 | 2001 | 0.0750 | 0.2118 | | | | | | | SP |
| 122 | X | 97 & 98 TIP | REGION | M-101a Mass Marketing Campagin (Consumer) | | | X | | | 2005 | **0.0187** | **0.0205** | **0.0145** | **0.0144** | **0.0129** | **0.0119** | **0.0128** | **0.0118** | C |
| 123 | X | 1999-04 | MDOT | Various Park and Ride Lots(I-270/MD124, 450 & I-170/MD-75, 54 spaces) | | X | | | 2001/1999 | 2001 | 0.0033 | 0.0093 | 0.0026 | 0.0066 | 0.0023 | 0.0054 | 0.0023 | 0.0054 | C |
| 124 | X | 1999-04 | MDOT | Signal Systems (197/MD-198, MD-382 TO US-301,US301) | X | | | | 2000 | 2002 | 0.0052 | -0.0010 | 0.0041 | -0.0005 | 0.0037 | -0.0004 | 0.0037 | -0.0003 | TR |
| 125 | X | 1999-04 | VDOT | Transit Center at 7 Corners | X | | | | 2002 | 2001 | 0.0004 | 0.0005 | 0.0003 | 0.0004 | 0.0003 | 0.0003 | 0.0003 | 0.0003 | C |
| 126 | X | 1999-04 | VDOT | Falls Church Clean Diesel Bus Service | X | | | | 2000 | 2003 | 0.0028 | 0.0027 | | | | | | | SP |
| 127 | X | 1999-04 | VDOT | VA 234 Bike Trail | | | X | | 2001 | **2010** | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | C |
| 128 | X | 1999-04 | VDOT | PRTC Ridesharing | X | | | | on-going | 2000 ongoing | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | C |
| 130 | X | 1996-01 | VDOT | M-14: I-66 Feeder Bus Fare Buy Down | X | | | | | 1998 onward | 0.0104 | 0.0142 | 0.0082 | 0.0100 | 0.0073 | 0.0083 | 0.0073 | 0.0083 | C |
| 131 | X | 2000-05 | MDOT | Various park and Ride Lots | x | | | | 2002 | 2003 | 0.0029 | 0.0084 | 0.0023 | 0.0059 | 0.0020 | 0.0049 | 0.0020 | 0.0049 | C |
| 132 | X | 2000-05 | MDOT | Signal Systems | X | | | | Varies | on-going | 0.0013 | 0.0000 | 0.0016 | 0.0000 | 0.0009 | 0.0000 | 0.0009 | 0.0000 | TR |
| 133 | X | 2000-05 | VDOT | 250 Spaces at Gambrill/Hooes Rds. Park and Ride | X | | | | 2002 | 2004 | 0.0029 | 0.0047 | 0.0023 | 0.0033 | 0.0020 | 0.0027 | 0.0020 | 0.0027 | C |
| 134 | X | 2000-05 | VDOT | 300 Spaces at Backlick Rd | X | | | | 2003 | 2007 | 0.0021 | 0.0034 | 0.0016 | 0.0024 | 0.0015 | 0.0020 | 0.0015 | 0.0020 | C |
| 135 | X | 2000-05 | VDOT | Accotink-Gateway Connector Trail | X | | | | 2002 | 2005 | 0.0029 | 0.0026 | 0.0023 | 0.0018 | 0.0020 | 0.0015 | 0.0020 | 0.0015 | C |
| 136 | X | 2000-05 | VDOT | Columbia Pike Trail | X | | | | 2000 | 2009 | 0.0025 | 0.0021 | 0.0020 | 0.0015 | 0.0018 | 0.0012 | 0.0017 | 0.0012 | C |
| 137 | X | 2000-05 | VDOT | Lee Highway trail | X | | | | 2000 | 2007 | 0.0013 | 0.0010 | 0.0010 | 0.0007 | 0.0009 | 0.0006 | 0.0009 | 0.0006 | C |
| 138 | X | 2000-05 | VDOT | Arlington Bus Shelter Improvements | X | | | | 2005 | 2005 | 0.0004 | 0.0003 | 0.0003 | 0.0002 | 0.0003 | 0.0002 | 0.0003 | 0.0002 | C |
| 139 | X | 2000-05 | VDOT | Pentagon Metrostation Improvements | X | | | | | 2003 | 0.0033 | 0.0044 | 0.0026 | 0.0031 | 0.0023 | 0.0026 | 0.0023 | 0.0026 | C |
| 140 | X | 2000-05 | MDOT | East/West Intersection Improvements | | | X | | 2005 | 2005 | 0.0171 | 0.0065 | 0.0134 | 0.0046 | 0.0120 | 0.0038 | 0.0119 | 0.0038 | C |
| 141 | X | 2001-06 | Feds | Federal Transit/Ridesharing subsidy | X | | | | on-going | | 0.0425 | 0.0494 | 0.0333 | 0.0348 | 0.0298 | 0.0288 | 0.0296 | 0.0288 | C |
| 142 | X | 2002-07 | WMATA | 100 CNG buses | X | | | | 2002 | | 0.0000 | 0.0745 | | | | | | | SP (TCM) |
| 143 | X | 2002-07 | WMATA | ULSD with CRT filters | X | | | | 2006 | Jun-06 | 0.1485 | 0.0000 | 0.4300 | 0.0000 | 0.4300 | 0.0000 | 0.4271 | 0.0000 | H (TCM) |
| 144 | | 2003-08 | DC | Replace ~~23~~ 12 Taxicabs with CNG cabs | | | | X | 2005 | 2006 | 0.0063 | 0.0086 | | | | | | | H |
| 145 | X | 2003-08 | DC | D.C.Incident Response & TrafficManagement System | X | | | | 2005 | 2004 | 0.0120 | 0.0209 | 0.0094 | 0.0130 | 0.0085 | 0.0089 | 0.0084 | 0.0089 | TR |
| 146 | X | 2003-08 | DC | Bicycle Lane in D. C. (35 Mile) | X | | | | 2005 | 2008 | 0.0069 | 0.0046 | 0.0054 | 0.0032 | 0.0049 | 0.0027 | 0.0048 | 0.0027 | C (TCM) |
| 147 | X | 2003-08 | DC | Bicycle Racks in D. C. (500) | X | | | | 2005 | 2004 | 0.0010 | 0.0005 | 0.0008 | 0.0004 | 0.0007 | 0.0003 | 0.0007 | 0.0003 | C (TCM) |
| 148 | X | 2003-08 | DC | External Bicycle Racks on WMATA Buses in D. C. (600) | X | | | | 2005 | 2003 | 0.0014 | 0.0017 | 0.0011 | 0.0012 | 0.0010 | 0.0010 | 0.0010 | 0.0010 | C (TCM) |
| 149 | | 2003-08 | DC | CNG Rental Cars (18) | | | | X | 2005 | | 0.0000 | 0.0001 | | | | | | | SP |

**EXHIBIT 25**

# TERM TRACKING SHEET

## TRANSPORTATION EMISSION REDUCTION MEASURES

## Part A - Daily Ozone Precursor Emissions

***** Project Category: TR - Traffic Stream, C - Commute, H - Heavy Duty Vehicles (Engine Technology), SP- Specific Vehicle Type, TCM - Transportation Control Measures

| NOs | CREDIT TAKEN | TIP CREDITED | AGENCY | PROJECT | IMPLEMENTATION STATUS | | | | ORIGINAL COMPLETION DATE | ACTUAL COMPLETION DATE | 2017 | | 2020 | | 2030 | | 2040 | | Project Category * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | FULL | SCALED-BACK | UNDER-WAY | REM | | | VOC | NOX | VOC | NOX | VOC | NOX | VOC | NOX | |
| 150 | X | 2003-08 | DC | Sidewalks in D.C. ($ 5 million) | X | | | | 2005 | 2004 | 0.0261 | 0.0303 | 0.0204 | 0.0213 | 0.0183 | 0.0177 | 0.0182 | 0.0176 | C |
| 151 | X | 2003-08 | DC | CNG Refuse Haulers (2) | X | | | | 2005 | 2004 | 0.0000 | 0.0011 | | | | | | | H (TCM) |
| 152 | X | 2003-08 | DC | Circulator /Feeder Bus Routes | X | | | | 2005 | 2003 | 0.0095 | 0.0109 | 0.0074 | 0.0077 | 0.0067 | 0.0064 | 0.0066 | 0.0064 | C |
| 153 | X | 2003-08 | MDOT | Commuter Tax Credit | X | | | | 2005 | n/a | 0.0569 | 0.0667 | 0.0445 | 0.0470 | 0.0399 | 0.0390 | 0.0397 | 0.0389 | C |
| 155 | | 2003-08 | MDOT | Employer Vanpool Program (WWB) | | | | X | 2005 | | 0.0013 | 0.0023 | | | | | | | C |
| 156 | X | 2003-08 | MDOT | Green Line Link | | | X | | 2005 | n/a | 0.0019 | 0.0026 | 0.0015 | 0.0018 | 0.0013 | 0.0015 | 0.0013 | 0.0015 | C |
| 157 | X | 2003-08 | MDOT | Park & Ride Lots - Southern Maryland | | | X | | 2005 | 2005 | 0.0036 | 0.0059 | 0.0028 | 0.0042 | 0.0025 | 0.0035 | 0.0025 | 0.0035 | C |
| 158 | X | 2003-08 | MDOT | Prince George's County- Bus Exp | | | X | | 2005 | n/a | 0.0261 | 0.0358 | 0.0204 | 0.0252 | 0.0183 | 0.0209 | 0.0182 | 0.0209 | C |
| 159 | X | 2003-08 | MDOT | MTA - Bus Service Expansion | | | X | | 2005 | n/a | 0.0059 | 0.0086 | 0.0046 | 0.0060 | 0.0041 | 0.0050 | 0.0041 | 0.0050 | C |
| 160 | X | 2003-08 | MDOT | Ride- On - Super Discount | | | X | | 2005 | n/a | 0.0007 | 0.0008 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0004 | C |
| 161 | X | 2003-08 | Regional | Regional Traveler Information Systems | | | X | | 2005 | A:2000 befo | 0.0750 | 0.3139 | 0.0594 | 0.1701 | 0.0533 | 0.1157 | 0.0530 | 0.1154 | TR |
| 162 | X | 2003-08 | MDOT | Universal Transportation Access (MD + WMATA) | | | X | | 2005 | n/a | 0.0117 | 0.0136 | 0.0091 | 0.0096 | 0.0082 | 0.0079 | 0.0081 | 0.0079 | C |
| 163 | X | 2003-08 | MCG | Construction of 1300 additional Parking Spaces at Grosvenor Metro Garage | X | | | | 2004 | | 0.0033 | 0.0057 | 0.0026 | 0.0040 | 0.0025 | 0.0036 | 0.0024 | 0.0036 | C (TCM) |
| 164 | X | 2003-08 | MCG | Bethesda Shuttle Bus Services | X | | | | 2004 | | 0.0023 | 0.0026 | 0.0018 | 0.0018 | 0.0016 | 0.0015 | 0.0016 | 0.0015 | C |
| 165 | X | 2003-08 | MCG | External Bicycle Racks on Ride-On Buses in Montgomery County | X | | | | 2004 | | 0.0004 | 0.0005 | 0.0003 | 0.0004 | 0.0003 | 0.0003 | 0.0003 | 0.0003 | C |
| 166 | X | 2003-08 | MCG | New CNG Powered Light Duty Vehicle fleet in the County | X | | | | 2004 | | 0.0000 | 0.0001 | | | | | | | SP |
| 167 | X | 2003-08 | MCG | Free Bus Service on Selected Routes on I-270 | X | | | | 2004 | | 0.0008 | 0.0009 | 0.0006 | 0.0006 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | C |
| 168 | X | 2003-08 | MCG | Annual Sidewalk Program | X | | | | 2004 | | 0.0124 | 0.0144 | 0.0097 | 0.0102 | 0.0087 | 0.0084 | 0.0087 | 0.0084 | C |
| 169 | | 2003-08 | MDOT | Bethesda Breeze/International Express Metrobus | | | | X | 2005 | Removed | 0.0027 | 0.0029 | 0.0021 | 0.0020 | 0.0019 | 0.0017 | 0.0019 | 0.0017 | C |
| 170 | | 2003-08 | MDOT | Bethesda-8, Silver Spring Downtown Dasher and Prince Georges Co. Shuttles at 3 PNR lot | | | | X | 2005 | Removed | 0.0064 | 0.0057 | 0.0050 | 0.0040 | 0.0045 | 0.0033 | 0.0045 | 0.0033 | C |
| 171 | | 2003-08 | MDOT | Proposed Transportation Management District in Montgomery County (Rockville and Gaithersburg) | | | | X | 2005 | Removed | 0.0042 | 0.0043 | 0.0033 | 0.0030 | 0.0029 | 0.0025 | 0.0029 | 0.0025 | C |
| 172 | X | 2003-08 | MDOT | Sidewalks (Bikes/Pedestrian) at / near Rail Stations | X | | | | 2005 | 2002 | 0.0068 | 0.0080 | 0.0053 | 0.0057 | 0.0048 | 0.0047 | 0.0047 | 0.0047 | C |
| 173 | X | 2003-08 | MDOT | Neighborhood Sidewalks Improvements (Bike/Pedestrian) | X | | | | 2005 | 2004 | 0.0024 | 0.0009 | 0.0018 | 0.0006 | 0.0017 | 0.0005 | 0.0016 | 0.0005 | C |
| 174 | X | 2003-08 | MDOT | Neighborhood Conservation Program - Neighborhood Sidewalks Improvements (Bikes/Pedestrian) | | X | | | 2005 | Ongoing | 0.0021 | 0.0008 | 0.0016 | 0.0006 | 0.0015 | 0.0005 | 0.0014 | 0.0005 | C |
| 175 | X | 2003-08 | MDOT | Maryland bus Transit Service Expansion | X | | | | 2005 | 2004 | 0.0103 | 0.0176 | 0.0080 | 0.0124 | 0.0072 | 0.0103 | 0.0072 | 0.0103 | C |
| 176 | X | 2003-08 | VDOT | Universal Transportation Access Program | X | | | | 2005 | 2005-07 | 0.0009 | 0.0010 | 0.0007 | 0.0007 | 0.0006 | 0.0006 | 0.0006 | 0.0006 | C |
| 177 | X | 2003-08 | VDOT | Interactive Rideshare & Kiosk Initiative | | | X | | 2008 onward | | 0.0003 | 0.0004 | 0.0002 | 0.0003 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | C |
| 178 | X | 2003-08 | VDOT | Mobile Commuter Stores | X | | | | 2005 | 2005 | 0.0016 | 0.0021 | 0.0012 | 0.0015 | 0.0011 | 0.0012 | 0.0011 | 0.0012 | C |
| 179 | X | 2003-08 | VDOT | Telework Incentive Program (Telework VA)[1] | **X** | | | | 2005 | Fall 2006 | 0.0005 | 0.0007 | 0.0004 | 0.0005 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | C |
| 180 | X | 2003-08 | VDOT | Commuter Choice | X | | | | 2005 | | 0.0007 | 0.0008 | 0.0005 | 0.0005 | 0.0005 | 0.0004 | 0.0005 | 0.0004 | C |
| 181 | X | 2003-08 | VDOT | Employer Shuttle Services | | | | **x** | 2005 | | 0.0083 | 0.0091 | 0.0065 | 0.0064 | 0.0058 | 0.0053 | 0.0058 | 0.0053 | C |
| 184 | X | 2003-08 | VDOT | Van Start / Van Save | X | | | | 2005 | till 2006 | 0.0010 | 0.0014 | | | | | | | C |
| 185 | X | 2003-08 | VDOT | Metro Shuttle Bus | | | X | | 2005 | 1999-2005 | 0.0009 | 0.0014 | 0.0007 | 0.0010 | 0.0006 | 0.0008 | 0.0006 | 0.0008 | C |
| 187 | X | 2003-08 | VDOT | VRE Mid-Day Train Service | X | | | | 2005 | 2002 | 0.0011 | 0.0016 | 0.0009 | 0.0011 | 0.0008 | 0.0009 | 0.0008 | 0.0009 | C |
| 190 | X | 2003-08 | VDOT | Employer Vanpool Program (Bridge deck) | X | | | | 2005 | 2004 - 2008 | 0.0000 | 0.0000 | | | | | | | C |
| 191 | X | 2003-08 | VDOT | Town of Leesburg P&R Lot | X | | | | 2005 | 2010 | 0.0014 | 0.0021 | 0.0011 | 0.0015 | 0.0010 | 0.0012 | 0.0010 | 0.0012 | C |
| 192 | X | 2003-08 | VDOT | District-wide P&R Lots | X | | | | 2005 | 2001-2005 | 0.0082 | 0.0122 | 0.0064 | 0.0086 | 0.0058 | 0.0071 | 0.0057 | 0.0071 | C |
| 193 | X | 2003-08 | VDOT | Additional Parking at 4 Metro stations | X | | | | 2005 | 2005 | 0.0106 | 0.0182 | 0.0083 | 0.0128 | 0.0074 | 0.0106 | 0.0074 | 0.0106 | C |
| 196 | X | 2003-08 | WMATA | 64 CNG Buses (Purchased in 2001) | X | | | | 2005 | 2004 | 0.0015 | 0.0478 | | | | | | | SP (TCM) |
| 197 | X | 2003-08 | WMATA | 250 CNG Buses (175 buses by Dec. 2004; 75 buses by mid 2006) | X | | | | 2005 | Jun-06 | 0.0058 | 0.1866 | | | | | | | SP |

**EXHIBIT 25**

# TERM TRACKING SHEET

## TRANSPORTATION EMISSION REDUCTION MEASURES

## Part A - Daily Ozone Precursor Emissions

***** Project Category: TR - Traffic Stream, C - Commute, H - Heavy Duty Vehicles (Engine Technology), SP- Specific Vehicle Type, TCM - Transportation Control Measures

| NOs | CREDIT TAKEN | TIP CREDITED | AGENCY | PROJECT | IMPLEMENTATION STATUS | | | | ORIGINAL COMPLETION DATE | ACTUAL COMPLETION DATE | 2017 | | 2020 | | 2030 | | 2040 | | Project Category * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | FULL | SCALED-BACK | UNDER-WAY | REM | | | VOC | NOX | VOC | NOX | VOC | NOX | VOC | NOX | |
| 198 | X | 2003-08 | WMATA | 60 Engine Replacement (MY 1992 & 1993 MY buses) | X | | | | 2004 | 2004 | 0.0098 | 0.0414 | | | | | | | SP |
| 199 | X | 2003-08 | WMATA | Car Sharing Program | X | | | | 2005 | 2004 | 0.0006 | 0.0010 | 0.0005 | 0.0007 | 0.0004 | 0.0006 | 0.0004 | 0.0006 | C |
| 200 | X | 2003-08 | WMATA | Bikes Racks on WMATA Buses in VA (372 Bike Racks) | X | | | | 2005 | 2004 | 0.0009 | 0.0010 | 0.0007 | 0.0007 | 0.0006 | 0.0007 | 0.0006 | 0.0007 | C (TCM) |
| 202 | | 2003-08 | MDOT | Fleet Replacement (state auto fleet, gas to hybrid, 250 vehicles) | | | | X | 2005 | | 0.004 | 0.007 | 0.0055 | 0.0133 | | | | | SP |
| 203 | X | 2003-08 | MDOT | Replace 55 Montgomery County 10 yr. old buses w/ new CNG buses | | | X | | 2005 | Ongoing | 0.0325 | 0.0893 | 0.0459 | 0.1628 | | | | | SP |
| 204 | | 2003-08 | MDOT | Neighborhood Bus Shuttle (5 circulator routes) | | | | X | 2005 | | 0.005 | 0.007 | 0.0043 | 0.0047 | 0.0038 | 0.0039 | 0.0038 | 0.0039 | C |
| 205 | X | 2003-08 | MDOT | New Surface Parking at Transit Centers (500 spaces) | | | X | | 2005 | 2005 | 0.0019 | 0.0033 | 0.0015 | 0.0023 | 0.0013 | 0.0019 | 0.0013 | 0.0019 | C |
| 206 | | 2003-08 | MDOT | Additional Bike Lockers at Metro-Stations | | | | X | 2005 | | 0.0096 | 0.0114 | 0.0075 | 0.0080 | 0.0067 | 0.0067 | 0.0067 | 0.0066 | C |
| 207 | X | 2003-08 | MDOT | Bike Facilities at PnR Lots or other similar location | | | X | | 2005 | 2005 | 0.0068 | 0.0090 | 0.0053 | 0.0064 | 0.0048 | 0.0053 | 0.0047 | 0.0053 | C |
| 208 | | 2003-08 | MDOT | CNG Fueling Stations | | | | X | 2005 | | 0.0898 | 0.0642 | | | | | | | SP |
| 209 | | 2003-08 | MDOT | Gas cap replacements (ROP Credit) | | | | X | 2005 | | N/A | N/A | N/A | N/A | N/A | N/A | | | SP |
| 210 | | 2003-08 | MDOT | Gas can turnover (ROP Credit) | | | | X | 2005 | | N/A | N/A | N/A | N/A | N/A | N/A | | | SP |
| 211 | X | 2003-08 | MDOT | External Bicycle Racks on WMATA Buses (486 MD buses) | X | | | | 2005 | 2002 | 0.0010 | 0.0012 | 0.0008 | 0.0008 | 0.0007 | 0.0007 | 0.0007 | 0.0007 | C (TCM) |
| 212 | X | 2003-08 | MDOT | Bike \ Pedestrian Trail - Anacostia River Walk | | | X | | 2005 | Ongoing | 0.0004 | 0.0003 | 0.0003 | 0.0002 | 0.0003 | 0.0001 | 0.0003 | 0.0001 | C |
| 213 | | 2003-08 | MDOT | Transit Prioritization - Queue Jumps | | | | X | 2005 | | 0.002 | 0.002 | 0.0018 | 0.0014 | 0.0016 | 0.0012 | 0.0016 | 0.0012 | C |
| 214 | X | 2003-08 | MDOT | Commuter Choice Benefit/Tax Credit - Marketing Expansion | X | | | | 2005 | Ongoing | 0.0398 | 0.0469 | 0.0311 | 0.0330 | 0.0279 | 0.0274 | 0.0277 | 0.0273 | C |
| 215 | X | 2003-08 | MDOT | Improvements to Pedestrian Access in TOD areas (4 locations) | | | X | | 2005 | Ongoing | 0.0043 | 0.0047 | 0.0034 | 0.0033 | 0.0030 | 0.0028 | 0.0030 | 0.0028 | C |
| 216 | X | 2003-08 | MDOT | Telecommuting Expansion[1] | **X** | | | | 2005 | Ongoing | 0.0470 | 0.0659 | 0.0367 | 0.0464 | 0.0330 | 0.0385 | 0.0327 | 0.0384 | C |
| 217 | | 2003-08 | MDOT | Replace older Diesel Engine in Public Sector vehicles | | | | X | 2005 | | 0.0168 | 0.0713 | | | | | | | H |
| 218 | X | 2003-08 | VDOT | MV-92 Telecommuting Program - Expanded[1] | **X** | | | | 2005 | 2005 | 0.0502 | 0.0704 | 0.0392 | 0.0496 | 0.0352 | 0.0411 | 0.0350 | 0.0410 | C |
| 219 | X | 2003-08 | VDOT | MV-123 Employer Outreach for Public Sector Employees [2] | **X** | | | | 2005 | 2003 | 0.0111 | 0.0129 | 0.0087 | 0.0091 | 0.0078 | 0.0076 | 0.0078 | 0.0075 | C |
| 220 | X | 2003-08 | REGION | Signal System Optimization | X | | | | 2005 | 2005 | 0.3174 | 0.0762 | 0.2509 | 0.0475 | 0.2252 | 0.0324 | 0.2194 | 0.0310 | TR |
| 221 | X | 2007-12 | MDOT | Two P & R Lots in Frederick County (99 spaces) | X | | | | 2007 | 2008 | 0.0006 | 0.0009 | 0.0005 | 0.0007 | 0.0005 | 0.0005 | 0.0004 | 0.0005 | C |
| 222 | X | 2007-12 | MDOT | MDOT P & R Lots at US 340 ( 66-99 spaces, Frederick Co.) | X | | | | 2007 | 2007 | Credits shown in TS 221 (for 99 spaces) | | | | | | | | |
| 223 | X | 2008-13 | MDOT | MCG/MDOT P & R Lots at US 340 & Mt Zion Rd. (37 speces) | X | | | | 2008 | 2008 | 0.0005 | 0.0007 | 0.0004 | 0.0005 | 0.0003 | 0.0004 | 0.0003 | 0.0004 | |
| 224 | X | 2008-13 | MDOT | MCG/MDOT P & R Lots at US 340 & Mt Zion Rd. - expansion (39 speces) | | | X | | 2011 | 2011 | Credits included in TS 224 (for 37+ 39 spaces) | | | | | | | | |
| 225 | X | 2008-13 | MDOT | MCG/MDOT P & R Lots at I 70 & MD 355 (100 speces) | | | X | | 2010 | 2010 | 0.0006 | 0.0009 | 0.0005 | 0.0007 | 0.0005 | 0.0006 | 0.0005 | 0.0006 | |
| 226 | X | 2008-13 | MDOT | MCG/MDOT P & R Lots at I 270 & MD 80 (164 speces) | X | | | | 2009 | 2009 | 0.0010 | 0.0015 | 0.0008 | 0.0011 | 0.0007 | 0.0009 | 0.0007 | 0.0009 | |
| 227 | X | 2008-13 | MDOT | MDOT Syglal System Reviewing | | | X | | 2010 | on-going | Credits shown in Regional signal TERM - TS 220 | | | | | | | | |
| 228 | X | 2008-13 | MDOT | MDOT Takoma Langely Transit Center | | | X | | 2012 | 2012 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| | | | | **Available Emissions Credits** | | | | | | | **1.810** | **2.707** | **1.483** | **1.167** | **1.335** | **0.800** | **1.322** | **0.796** | |

# TRANSPORTATION EMISSION REDUCTION MEASURES (CLRP Projects Only)

## Part A - Daily Ozone Precursor Emissions

Project Category: TR - Traffic Stream, C - Commute, H - Engine Technology (Heavy Dudy Vehicles), SP- Specific Vehicle Type

| NOs | CREDIT TAKEN | TIP CREDITED | AGENCY | PROJECT | IMPLEMENTATION STATUS | | | | PROJECTED COMPLETION DATE | ACTUAL COMPLETION DATE | TONS/DAY REDUCTION CREDITED | | | | | | | | Project Category |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | FULL | SCALED-BACK | UNDER-WAY | REM | | | 2017 | | 2020 | | 2030 | | 2040 | | |
| | | | | | | | | | | | VOC | NOx | VOC | NOx | VOC | NOx | VOC | NOx | |
| 221 | X | 1995-00 TIP | REGION | M-24 Speed Limit Adherence | X | | | | 2010 | | -0.0053 | 0.1501 | -0.0021 | 0.1206 | 0.0005 | 0.0377 | 0.0005 | 0.0376 | TR |
| 222 | | 1996-01 TIP | MGC | Rock Spring Park Pedestrian Amenities | | | | X | | | 0.0007 | 0.0022 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | - |
| 223 | X | 1996-01 TIP | MGC | Olney Transit Center Park and Ride | | | | | 2015 | | 0.0014 | 0.0044 | 0.0009 | 0.0030 | 0.0003 | 0.0007 | 0.0003 | 0.0007 | C |
| 224 | X | 1996-01 TIP | MGC | Damascus Park and Ride | | | | | | 2003 | 0.0007 | 0.0022 | 0.0004 | 0.0015 | 0.0001 | 0.0003 | 0.0001 | 0.0003 | C |
| 225 | X | 1996-01 TIP | DC | M-103 Taxicab Replacement (DC) | | | | X | 2015 | | 0.0000 | 0.0000 | 0.1745 | 0.3000 | 0.3490 | 0.6000 | 0.3467 | 0.5984 | H |
| 226 | X | STADIUM ANALYSIS | | M-103 Taxicab Replacement (MD) | | | | X | 2008 | | 0.0000 | 0.0000 | 0.1560 | 0.2400 | 0.1560 | 0.2400 | 0.1550 | 0.2394 | H |
| 227 | X | 1997-02 TIP | MDOT | Shady Grove West Transit Center Park and Ride | | | | X | | | 0.0000 | 0.0055 | 0.0000 | 0.0038 | 0.0000 | 0.0009 | 0.0000 | 0.0009 | C |
| 228 | X | 1997-02 TIP | MGC | Olney Transit Center Park and Ride | | | | | 2015 | | 0.0000 | 0.0000 | 0.0004 | 0.0012 | 0.0003 | 0.0007 | 0.0003 | 0.0007 | C |
| 229 | X | 1997-02 TIP | MGC | White Oak Park and Ride | | | | | 2008 | | 0.0000 | 0.0110 | 0.0000 | 0.0076 | 0.0000 | 0.0017 | 0.0000 | 0.0017 | C |
| 230 | X | 1997-02 TIP | MGC | Damascus Park and Ride | | | | | | 2003 | 0.0000 | 0.0000 | 0.0002 | 0.0005 | 0.0001 | 0.0003 | 0.0001 | 0.0003 | C |
| 231 | X | 1997-02 TIP | MGC | Four Corners Transit Center | | | | | 2015 | | 0.0000 | 0.0005 | 0.0000 | 0.0004 | 0.0000 | 0.0001 | 0.0000 | 0.0001 | C |
| 232 | | 1997-02 TIP | MGC | Burtonsville Transit Center | | | | X | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | - |
| 233 | X | 1997-02 TIP | MGC | Silver Spring Transit Access | | | | | | | 0.0000 | 0.0005 | 0.0000 | 0.0003 | 0.0000 | 0.0002 | 0.0000 | 0.0002 | C |
| 234 | X | 1997-02 TIP | MGC | Shady Grove Parking Construction | | | | | | 2003 | 0.0035 | 0.0104 | 0.0021 | 0.0072 | 0.0007 | 0.0017 | 0.0007 | 0.0017 | C |
| PLAN TOTAL | | | | | | | | | | | 0.0004 | 0.1792 | 0.0019 | 0.1424 | 0.0022 | 0.0434 | 0.0021 | 0.0432 | |
| GRAND TOTAL (Current Measures + CLRP plan) | | | | | | | | | | | 1.811 | 2.886 | 1.485 | 1.310 | 1.337 | 0.843 | 1.324 | 0.840 | |

DEFINITIONS: Project Numbers implemented fully prior to 2000 were removed from the TERM Tracking Sheet

CREDIT TAKEN ( X means emissions reduction credits taken):

TIP - Emissions credits are taken for projects being implemented, according to the progress reporting schedules provided by the implementing agencies (contained in Appendix J of Conformity Document ). No credit has been taken for projects in which only some components of the measure have been implemented.

CLRP - Credit is taken for each of these elements of the CLRP according to the schedule provided by the implementing agency.

IMPLEMENTATION STATUS:

FULL = project is completed as planned at the time of analysis.

SCALED BACK = project is completed, but at a different level than assumed at the time of analysis (i.e., purchased 50 buses instead of 100)

UNDERWAY = project is not complete, but is close enough that credit may be taken (i.e., under construction, NOT just out for bid)

REMOVED = project no longer expected to be implemented or constructed

COMPLETION DATE:

PROJECTED = project completion date originally expected (i.e., at time of emissions analysis)

ACTUAL = actual year project was open for use, or expected to be open for use if under construction

REMOVED projects Emissions credits are not counted in toal available emissions credits

1 Line items 218, 216, 179, 92 are all credited as part of M-92 Regional Telecommute Support TERM, line item # 75

2 Line item 108 & 219 credits are taken only for year 2010

**EXHIBIT 25**

# TERM TRACKING SHEET

## TRANSPORTATION EMISSION REDUCTION MEASURES

## Part B - Yearly $PM_{2.5}$ and Precursor NOx Emissions

***** Project Category: TR - Traffic Stream, C - Commute, H - Heavy Duty Vehicles (Engine Technology), SP- Specific Vehicle Type, TCM - Transportation Control Measures

| NOs | CREDIT TAKEN | TIP CREDITED | AGENCY | PROJECT | IMPLEMENTATION STATUS: FULL | SCALED-BACK | UNDER-WAY | REM | ORIGINAL COMPLETION DATE | ACTUAL COMPLETION DATE | 2017 PM2.6 | 2017 Precursor NOx | 2020 PM2.5 | 2020 Precursor NOx | 2030 PM2.5 | 2030 Precursor NOx | 2040 PM2.6 | 2040 Precursor NOx | Project Category * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | X | 1994-99 | MDOT | Park & Ride Lot - MD 210/ MD 373 | X | | | | 2000 | 2003 | 0.0095 | 0.1444 | 0.0095 | 0.1000 | 0.0095 | 0.0830 | 0.0095 | 0.0689 | C |
| 19 | X | 1994-99 | PRTC | VRE Woodbridge Parking Expansion (add 500 spaces) | X | | | | | 2002-2003 | n/a | n/a | n/a | n/a | n/a | n/a | | | - |
| 20 | X | 1994-99 | ALEX | King St. Metrorail access improvements | X | | | | | **2006** | 0.0095 | 0.1444 | 0.0095 | 0.1000 | 0.0095 | 0.0830 | 0.0095 | 0.0689 | C |
| 38 | X | 1995-00 | MDOT | Signal Systems - MD 85 Executive Way to MD 355 | X | | | | 1996 | Pre 2000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | TR |
| 39 | X | 1995-00 | MDOT | Signal Systems - MD 355 ,I-70 ramps to Grove Rd. | X | | | | 1996 | n/a | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | TR |
| 44 | X | 1995-00 | MDOT | Signal Systems - MD 410, 62nd Ave. to Riverdale Rd. | **X** | | | | 1996 | 2002 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | TR |
| 48 | X | 1995-00 | MDOT | MARC Replacement Coaches | X | | | | 1999 | 2004 | 0.0095 | 0.1444 | 0.0095 | 0.1000 | 0.0095 | 0.0830 | 0.0095 | 0.0689 | C (TCM) |
| 49 | X | 1995-00 | MDOT | MARC Expansion Coaches | X | | | | 1999 | 2004 | 0.0891 | 1.3479 | 0.0891 | 0.9332 | 0.0891 | 0.7745 | 0.0891 | 0.6428 | C (TCM) |
| 51 | X | 1995-00 | VDOT | Alexandria Telecommuting Pilot Program | X | | | | | 2000 & 2001 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | C |
| 52 | X | 1995-00 | VDOT | Fairfax County Bus Shelter (Fairfax Co. TDM program) | | | X | | 2000 | 2001 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | C |
| 54 | X | 1995-00 | VDOT | City of Fairfax Bus Shelters | X | | | | 1999 | 2004 | 0.0032 | 0.0481 | 0.0032 | 0.0333 | 0.0032 | 0.0277 | 0.0032 | 0.0230 | C (TCM) |
| 56 | X | 1995-00 | VDOT | Cherry Hill VRE Access | | | X | | | Jul-08 | 0.0764 | 1.1554 | 0.0764 | 0.7999 | 0.0764 | 0.6639 | 0.0764 | 0.5510 | C (TCM) |
| 58 | X | 1995-00 | WMATA | Bus Replacement (172 buses) | X | | | | 1998 | 1998 | | | | | | | | | SP (TCM) |
| 59 | X | 1995-00 | MCG | Shady Grove West Park and Ride | | | X | | 2010 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | C |
| 60 | X | 1995-00 | MCG | White Oak Park and Ride | | | X | | 2010 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | C |
| 61 | X | 1995-00 | MCG | Bicycle Facilities | | | X | | FY99 | | 0.0064 | 0.0963 | 0.0064 | 0.0667 | 0.0064 | 0.0553 | 0.0064 | 0.0459 | C |
| 62 | X | 1995-00 | MCG | Pedestrian Facilities to Metrorail | | | X | | | | 0.0255 | 0.3851 | 0.0255 | 0.2666 | 0.0255 | 0.2213 | 0.0255 | 0.1837 | C |
| 63 | X | 1995-00 | MDOT | MARC Replacement Coaches | X | | | | 1999 | 2004 | 0.0382 | 0.5777 | 0.0382 | 0.4000 | 0.0382 | 0.3319 | 0.0382 | 0.2755 | C |
| 64 | X | 1995-00 | MDOT | MARC Expansion Coaches | X | | | | 1999 | 2004 | 0.3309 | 5.0066 | 0.3309 | 3.4663 | 0.3309 | 2.8768 | 0.3309 | 2.3875 | C (TCM) |
| 66 | X | 1995-00 | VDOT | Commuter Lots - District Wide | | | X | | varies | 1995, 2001 | 0.1050 | 1.5886 | 0.1050 | 1.0999 | 0.1050 | 0.9128 | 0.1050 | 0.7576 | C |
| 67 | X | 1995-00 | VDOT | I-66 and Stringfellow Rd. Park and Ride | X | | | | 2000 | 2000 end | 0.0636 | 0.9628 | 0.0636 | 0.6666 | 0.0636 | 0.5532 | 0.0636 | 0.4591 | C |
| 68 | X | 1995-00 | VDOT | Lake Ridge Park and Ride (now called Tacketts Mill lot) | X | | | | | 1999/2000 | 0.0318 | 0.4814 | 0.0318 | 0.3333 | 0.0318 | 0.2766 | 0.0318 | 0.2296 | C |
| 69 | X | 1995-00 | VDOT | Bicycle Trails and Facilities (Arlington & Fairfax Co - 7 locations) | | | X | | varies | 2010-12 | 0.0541 | 0.8184 | 0.0541 | 0.5666 | 0.0541 | 0.4702 | 0.0541 | 0.3903 | C |
| 70 | X | 1995-00 | VDOT | Improved Acceess to Metrorail Stations (VRE 2 Stn) | | | X | | varies | 2000-2012 | 0.0032 | 0.0481 | 0.0032 | 0.0333 | 0.0032 | 0.0277 | 0.0032 | 0.0230 | C |
| 71 | X | 1995-00 | VDOT | I-66 HOV access at Monument Dr. | X | | | | | 1997 | 0.0636 | 0.9628 | 0.0636 | 0.6666 | 0.0636 | 0.5532 | 0.0636 | 0.4591 | C |
| 72 | X | 1995-00 | DC | Bicycle Facilities | X | | | | | | 0.0636 | 0.9628 | 0.0636 | 0.6666 | 0.0636 | 0.5532 | 0.0636 | 0.4591 | C |
| 73 | X | 1995-00 | REGION | COG Regional Ridesharing Support | X | | | | | on-going | **1.7913** | **8.0999** | **1.7913** | **5.6245** | **1.7913** | **4.6985** | **1.7913** | **3.8994** | C |
| 74 | X | 1995-00 | REGION | M-47 Integrated Ridesharing | X | | | | | on-going | **0.6199** | **2.3115** | **0.6199** | **1.6052** | **0.6199** | **1.3412** | **0.6199** | **1.1131** | C |
| 75 | X | 1995-00 | REGION | M-92 Telecommuting Support | X | | | | | on-going | **1.2883** | **11.1658** | **1.2883** | **7.7400** | **1.2883** | **6.4410** | **1.2883** | **5.3456** | C |
| 77 | | 1996-01 | VDOT | Duke Street Pedestrian Bridge | X | | | | 2005 | 2007 | n/a | n/a | n/a | n/a | n/a | n/a | | | - |
| 79 | X | 1996-01 | VDOT | Fairfax County Bus Shelters (30 shelters with project #85) | | | X | | 1999 | Summer 2001 | 0.0095 | 0.1444 | 0.0095 | 0.1000 | 0.0095 | 0.0830 | 0.0095 | 0.0689 | C |
| 81 | X | 1996-01 | VDOT | Arlington County Metrocheck Program | X | | | | 1997 | 1997 Onwards | 0.0095 | 0.1444 | 0.0095 | 0.1000 | 0.0095 | 0.0830 | 0.0095 | 0.0689 | C |
| 82 | X | 1996-01 | VDOT | Old Dominion Drive Bike Trail | | | X | | 2000 | 2010-11 | 0.0032 | 0.0481 | 0.0032 | 0.0333 | 0.0032 | 0.0277 | 0.0032 | 0.0230 | C |
| 83 | X | 1996-01 | WMATA | Bus Replacement (see line 58, above) | X | | | | | 1998 | Credit taken in line 58, above | | | | | | | | SP |
| 85 | X | 1996-01 | VDOT | Fairfax County Bus Shelters (30 shelters with project #79) | X | | | | 1999 | 2001 | 0.0032 | 0.0481 | 0.0032 | 0.0333 | 0.0032 | 0.0277 | 0.0032 | 0.0230 | C |
| 90 | X | 1996-01 | REGION | M-47c Employer Outreach / Guaranteed Ride Home | X | | | | | on-going | **3.7262** | **86.3012** | **3.7262** | **59.8168** | **3.7262** | **49.7675** | **3.7262** | **41.3035** | C |
| 91 | X | 1996-01 | REGION | M-70a Bicycle Parking | | | X | | 1999 | | 0.0223 | 0.3370 | 0.0223 | 0.2333 | 0.0223 | 0.1936 | 0.0223 | 0.1607 | C |
| 92 | X | STADIUM ANALYSIS | | M-92 Telecommuting Support [1] | Combined with item #75 | | | | | | | | | | | | | | C |
| 95 | X | 1997-02 | MCG | Germantown Transit Center | X | | | | 2005 | | 0.0605 | 0.9147 | 0.0605 | 0.6333 | 0.0605 | 0.5256 | 0.0605 | 0.4362 | C (TCM) |
| 102 | X | 1997-02 | PG | Prince George's County Bus Replacement | X | | | | 1998 | 1998 | | | | | | | | | SP (TCM) |

**EXHIBIT 25**

# TERM TRACKING SHEET

## TRANSPORTATION EMISSION REDUCTION MEASURES

## Part B - Yearly $PM_{2.5}$ and Precursor NOx Emissions

***** Project Category: TR - Traffic Stream, C - Commute, H - Heavy Duty Vehicles (Engine Technology), SP- Specific Vehicle Type, TCM - Transportation Control Measures

| NOs | CREDIT TAKEN | TIP CREDITED | AGENCY | PROJECT | IMPLEMENTATION STATUS | | | | ORIGINAL COMPLETION DATE | ACTUAL COMPLETION DATE | 2017 | | 2020 | | 2030 | | 2040 | | Project Category * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | FULL | SCALED-BACK | UNDER-WAY | REM | | | PM2.6 | Precursor NOx | PM2.5 | Precursor NOx | PM2.5 | Precursor NOx | PM2.6 | Precursor NOx | |
| 106 | X | 1997-02 | VDOT | PRTC Employer Commuting Outreach Program | X | | | | | 1977 on-going | 0.0016 | 0.0241 | 0.0016 | 0.0167 | 0.0016 | 0.0138 | 0.0016 | 0.0115 | C |
| 107 | X | 1997-02 | VDOT | PRTC Multimodal Strategic Marketing Implementation Plan | X | | | | | 1977 on-going | 0.0016 | 0.0241 | 0.0016 | 0.0167 | 0.0016 | 0.0138 | 0.0016 | 0.0115 | C |
| 108 | X | 1997-02 | MDOT | M-103 Taxicab Replacement in Maryland [2] | **x** | | | | 2005 | Stopped | | | | | | | | | SP |
| 109 | X | 1997-02 | REGION | M-70b Employer Outreach for Bicycles | X | | | | 1998 | on going | **0.0035** | **0.0591** | **0.0035** | **0.0406** | **0.0035** | **0.0331** | **0.0035** | **0.0274** | C |
| 110 | | 1997-02 | VDOT | M-77b Vanpool Incentive Programs in Virginia | | | | **x** | 1999 | delayed | n/a | n/a | n/a | n/a | n/a | n/a | | | C |
| 111 | X | 1998-03 | WMATA | Bus Replacement (108 buses) | X | | | | 1999 | 1999 | | | | | | | | | SP |
| 112 | X | 1998-03 | MCG | Montgomery County Bus Replacement | X | | | | | Ongoing | | | | | | | | | SP |
| 113 | X | 1998-03 | PG | Prince George's County Bus Replacement | X | | | | 1998 | Ongoing | | | | | | | | | SP |
| 114 | X | 1998-03 | FDC | Frederick County Bus Replacement | X | | | | | | | | | | | | | | SP |
| 117 | X | 1998-03 | VDOT | Arlington County Four Mile Run Bike Trail | X | | | | 1999 | 2009 | 0.0032 | 0.0481 | 0.0032 | 0.0333 | 0.0032 | 0.0277 | 0.0032 | 0.0230 | C |
| 118 | X | 1998-03 | VDOT | Northern Virginia Turn Bays | X | | | | 2000 | 1998 | 0.0056 | 0.0847 | 0.0056 | 0.0587 | 0.0056 | 0.0487 | 0.0056 | 0.0404 | TR |
| 119 | X | 1998-03 | VDOT | Fairfax City Bus Replacement | X | | | | 2001 | 2003 | | | | | | | | | SP |
| 121 | X | 1998-03 | WMATA | WMATA Bus Replacement (252 buses) | X | | | | 2001 | 2001 | | | | | | | | | SP |
| 122 | X | 97 & 98 TIP | REGION | M-101a Mass Marketing Campagin (Consumer) | | | X | | | 2005 | 0.2157 | **3.8259** | **0.2157** | **2.6432** | **0.2157** | **2.1831** | **0.2157** | **1.8119** | C |
| 123 | X | 1999-04 | MDOT | Various Park and Ride Lots(I-270/MD124, 450 & I-170/MD-75, 54 spaces) | | X | | | 2001/1999 | 2001 | 0.1146 | 1.7331 | 0.1146 | 1.1999 | 0.1146 | 0.9958 | 0.1146 | 0.8265 | C |
| 124 | X | 1999-04 | MDOT | Signal Systems (197/MD-198, MD-382 TO US-301,US301) | X | | | | 2000 | 2002 | -0.0112 | -0.1695 | -0.0112 | -0.1173 | -0.0112 | -0.0974 | -0.0112 | -0.0808 | TR |
| 125 | X | 1999-04 | VDOT | Transit Center at 7 Corners | X | | | | 2002 | 2001 | 0.0064 | 0.0963 | 0.0064 | 0.0667 | 0.0064 | 0.0553 | 0.0064 | 0.0459 | C |
| 126 | X | 1999-04 | VDOT | Falls Church Clean Diesel Bus Service | X | | | | 2000 | 2003 | | | | | | | | | SP |
| 127 | X | 1999-04 | VDOT | VA 234 Bike Trail | | | X | | 2001 | 2010 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | C |
| 128 | X | 1999-04 | VDOT | PRTC Ridesharing | X | | | | on-going | 2000 ongoing | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | C |
| 130 | X | 1996-01 | VDOT | M-14: I-66 Feeder Bus Fare Buy Down | X | | | | | 1998 onward | 0.1750 | 2.6477 | 0.1750 | 1.8331 | 0.1750 | 1.5214 | 0.1750 | 1.2626 | C |
| 131 | X | 2000-05 | MDOT | Various park and Ride Lots | x | | | | 2002 | 2003 | 0.1035 | 1.5651 | 0.1035 | 1.0836 | 0.1035 | 0.8993 | 0.1035 | 0.7464 | C |
| 132 | X | 2000-05 | MDOT | Signal Systems | X | | | | Varies | on-going | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | TR |
| 133 | X | 2000-05 | VDOT | 250 Spaces at Gambrill/Hooes Rds. Park and Ride | X | | | | 2002 | 2004 | 0.0573 | 0.8665 | 0.0573 | 0.5999 | 0.0573 | 0.4979 | 0.0573 | 0.4132 | C |
| 134 | X | 2000-05 | VDOT | 300 Spaces at Backlick Rd | X | | | | 2003 | 2007 | 0.0414 | 0.6258 | 0.0414 | 0.4333 | 0.0414 | 0.3596 | 0.0414 | 0.2984 | C |
| 135 | X | 2000-05 | VDOT | Accotink-Gateway Connector Trail | X | | | | 2002 | 2005 | 0.0318 | 0.4814 | 0.0318 | 0.3333 | 0.0318 | 0.2766 | 0.0318 | 0.2296 | C |
| 136 | X | 2000-05 | VDOT | Columbia Pike Trail | | | X | | 2000 | 2009 | 0.0255 | 0.3851 | 0.0255 | 0.2666 | 0.0255 | 0.2213 | 0.0255 | 0.1837 | C |
| 137 | X | 2000-05 | VDOT | Lee Highway trail | X | | | | 2000 | 2007 | 0.0127 | 0.1926 | 0.0127 | 0.1333 | 0.0127 | 0.1106 | 0.0127 | 0.0918 | C |
| 138 | X | 2000-05 | VDOT | Arlington Bus Shelter Improvements | X | | | | 2005 | 2005 | 0.0032 | 0.0481 | 0.0032 | 0.0333 | 0.0032 | 0.0277 | 0.0032 | 0.0230 | C |
| 139 | X | 2000-05 | VDOT | Pentagon Metrostation Improvements | X | | | | | 2003 | 0.0541 | 0.8184 | 0.0541 | 0.5666 | 0.0541 | 0.4702 | 0.0541 | 0.3903 | C |
| 140 | X | 2000-05 | MDOT | East/West Intersection Improvements | | | X | | 2005 | 2005 | 0.0795 | 1.2035 | 0.0795 | 0.8332 | 0.0795 | 0.6915 | 0.0795 | 0.5739 | C |
| 141 | X | 2001-06 | Feds | Federal Transit/Ridesharing subsidy | X | | | | on-going | | 0.6078 | 9.1949 | 0.6078 | 6.3660 | 0.6078 | 5.2833 | 0.6078 | 4.3848 | C |
| 142 | X | 2002-07 | WMATA | 100 CNG buses | X | | | | 2002 | | | | | | | | | | SP (TCM) |
| 143 | X | 2002-07 | WMATA | ULSD with CRT filters | X | | | | 2006 | Jun-06 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | H (TCM) |
| 144 | | 2003-08 | DC | Replace ~~23~~ 12 Taxicabs with CNG cabs | | | | X | 2005 | 2006 | | | | | | | | | H |
| 145 | X | 2003-08 | DC | D.C.Incident Response & TrafficManagement System | X | | | | 2005 | 2004 | 0.2761 | 4.1774 | 0.2761 | 2.8922 | 0.2761 | 2.4003 | 0.2761 | 1.9921 | TR |
| 146 | X | 2003-08 | DC | Bicycle Lane in D. C. (35 Mile) | X | | | | 2005 | 2008 | 0.0428 | 0.8824 | 0.0428 | 0.6134 | 0.0428 | 0.4896 | 0.0428 | 0.4064 | C (TCM) |
| 147 | X | 2003-08 | DC | Bicycle Racks in D. C. (500) | X | | | | 2005 | 2004 | 0.0040 | 0.1004 | 0.0040 | 0.0699 | 0.0040 | 0.0547 | 0.0040 | 0.0454 | C (TCM) |
| 148 | X | 2003-08 | DC | External Bicycle Racks on WMATA Buses in D. C. (600) | X | | | | 2005 | 2003 | 0.0206 | 0.3135 | 0.0206 | 0.2171 | 0.0206 | 0.1800 | 0.0206 | 0.1494 | C (TCM) |
| 149 | | 2003-08 | DC | CNG Rental Cars (18) | | | | X | 2005 | | | | | | | | | | SP |

**EXHIBIT 25**

# TERM TRACKING SHEET

## TRANSPORTATION EMISSION REDUCTION MEASURES

## Part B - Yearly $PM_{2.5}$ and Precursor NOx Emissions

***** Project Category: TR - Traffic Stream, C - Commute, H - Heavy Duty Vehicles (Engine Technology), SP- Specific Vehicle Type, TCM - Transportation Control Measures

| NOs | CREDIT TAKEN | TIP CREDITED | AGENCY | PROJECT | IMPLEMENTATION STATUS | | | | ORIGINAL COMPLETION DATE | ACTUAL COMPLETION DATE | 2017 | | 2020 | | 2030 | | 2040 | | Project Category * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | FULL | SCALED-BACK | UNDER-WAY | REM | | | PM2.6 | Precursor NOx | PM2.5 | Precursor NOx | PM2.5 | Precursor NOx | PM2.6 | Precursor NOx | |
| 150 | X | 2003-08 | DC | Sidewalks in D.C. ($ 5 million) | X | | | | 2005 | 2004 | 0.3688 | 5.6474 | 0.3688 | 3.9106 | 0.3688 | 3.2400 | 0.3688 | 2.6889 | C |
| 151 | X | 2003-08 | DC | CNG Refuse Haulers (2) | X | | | | 2005 | 2004 | | | | | | | | | H (TCM) |
| 152 | X | 2003-08 | DC | Circulator /Feeder Bus Routes | X | | | | 2005 | 2003 | 0.1325 | 2.0370 | 0.1325 | 1.4106 | 0.1325 | 1.1681 | 0.1325 | 0.9694 | C |
| 153 | X | 2003-08 | MDOT | Commuter Tax Credit | X | | | | 2005 | n/a | 0.8145 | 12.4326 | 0.8145 | 8.6087 | 0.8145 | 7.1356 | 0.8145 | 5.9220 | C |
| 155 | | 2003-08 | MDOT | Employer Vanpool Program (WWB) | | | | X | 2005 | | | | | | | | | | C |
| 156 | X | 2003-08 | MDOT | Green Line Link | | | X | | 2005 | n/a | 0.0326 | 0.4735 | 0.0326 | 0.3276 | 0.0326 | 0.2735 | 0.0326 | 0.2270 | C |
| 157 | X | 2003-08 | MDOT | Park & Ride Lots - Southern Maryland | | | X | | 2005 | 2005 | 0.0704 | 0.9732 | 0.0704 | 0.6728 | 0.0704 | 0.5660 | 0.0704 | 0.4697 | C |
| 158 | X | 2003-08 | MDOT | Prince George's County- Bus Exp | | | X | | 2005 | n/a | 0.4574 | 6.6401 | 0.4574 | 4.5942 | 0.4574 | 3.8360 | 0.4574 | 3.1836 | C |
| 159 | X | 2003-08 | MDOT | MTA - Bus Service Expansion | | | X | | 2005 | n/a | 0.1108 | 1.5837 | 0.1108 | 1.0955 | 0.1108 | 0.9168 | 0.1108 | 0.7609 | C |
| 160 | X | 2003-08 | MDOT | Ride- On - Super Discount | | | X | | 2005 | n/a | 0.0094 | 0.1437 | 0.0094 | 0.0995 | 0.0094 | 0.0824 | 0.0094 | 0.0684 | C |
| 161 | X | 2003-08 | Regional | Regional Traveler Information Systems | | | X | | 2005 | VA:2000 before | 3.6007 | 54.4758 | 3.6007 | 37.7158 | 3.6007 | 31.3014 | 3.6007 | 25.9780 | TR |
| 162 | X | 2003-08 | MDOT | Universal Transportation Access (MD + WMATA) | | | X | | 2005 | n/a | 0.1654 | 2.5321 | 0.1654 | 1.7534 | 0.1654 | 1.4527 | 0.1654 | 1.2056 | C |
| 163 | X | 2003-08 | MCG | Construction of 1300 additional Parking Spaces at Grosvenor Metro Garage | X | | | | 2004 | | 0.0765 | 1.0500 | 0.0765 | 0.7258 | 0.0765 | 0.6113 | 0.0765 | 0.5073 | C (TCM) |
| 164 | X | 2003-08 | MCG | Bethesda Shuttle Bus Services | X | | | | 2004 | | 0.0316 | 0.4855 | 0.0316 | 0.3362 | 0.0316 | 0.2784 | 0.0316 | 0.2310 | C |
| 165 | X | 2003-08 | MCG | External Bicycle Racks on Ride-On Buses in Montgomery County | X | | | | 2004 | | 0.0064 | 0.0978 | 0.0064 | 0.0677 | 0.0064 | 0.0561 | 0.0064 | 0.0466 | C |
| 166 | X | 2003-08 | MCG | New CNG Powered Light Duty Vehicle fleet in the County | X | | | | 2004 | | | | | | | | | | SP |
| 167 | X | 2003-08 | MCG | Free Bus Service on Selected Routes on I-270 | X | | | | 2004 | | 0.0110 | 0.1682 | 0.0110 | 0.1164 | 0.0110 | 0.0965 | 0.0110 | 0.0801 | C |
| 168 | X | 2003-08 | MCG | Annual Sidewalk Program | X | | | | 2004 | | 0.1756 | 2.6892 | 0.1756 | 1.8622 | 0.1756 | 1.5428 | 0.1756 | 1.2804 | C |
| 169 | | 2003-08 | MDOT | Bethesda Breeze/International Express Metrobus | | | | X | 2005 | Removed | 0.0345 | 0.5435 | 0.0345 | 0.3765 | 0.0345 | 0.3107 | 0.0345 | 0.2579 | C |
| 170 | | 2003-08 | MDOT | Bethesda-8, Silver Spring Downtown Dasher and Prince Georges Co. Shuttles at 3 PNR lot | | | | X | 2005 | Removed | 0.0623 | 1.0708 | 0.0623 | 0.7427 | 0.0623 | 0.6058 | 0.0623 | 0.5028 | C |
| 171 | | 2003-08 | MDOT | Proposed Transportation Management District in Montgomery County (Rockville and Gaithersburg) | | | | X | 2005 | Removed | 0.0496 | 0.7982 | 0.0496 | 0.5531 | 0.0496 | 0.4550 | 0.0496 | 0.3776 | C |
| 172 | X | 2003-08 | MDOT | Sidewalks (Bikes/Pedestrian) at / near Rail Stations | X | | | | 2005 | 2002 | 0.0983 | 1.4944 | 0.0983 | 1.0347 | 0.0983 | 0.8581 | 0.0983 | 0.7122 | C |
| 173 | X | 2003-08 | MDOT | Neighborhood Sidewalks Improvements (Bike/Pedestrian) | X | | | | 2005 | 2004 | 0.0038 | 0.1800 | 0.0038 | 0.1259 | 0.0038 | 0.0944 | 0.0038 | 0.0783 | C |
| 174 | X | 2003-08 | MDOT | Neighborhood Conservation Program - Neighborhood Sidewalks Improvements (Bikes/Pedestrian) | | X | | | 2005 | Ongoing | 0.0033 | 0.1575 | 0.0033 | 0.1102 | 0.0033 | 0.0826 | 0.0033 | 0.0685 | C |
| 175 | X | 2003-08 | MDOT | Maryland bus Transit Service Expansion | X | | | | 2005 | 2004 | 0.2366 | 3.2465 | 0.2366 | 2.2442 | 0.2366 | 1.8900 | 0.2366 | 1.5685 | C |
| 176 | X | 2003-08 | VDOT | Universal Transportation Access Program | X | | | | 2005 | 2005-07 | 0.0124 | 0.1899 | 0.0124 | 0.1315 | 0.0124 | 0.1090 | 0.0124 | 0.0904 | C |
| 177 | X | 2003-08 | VDOT | Interactive Rideshare & Kiosk Initiative | | | X | | 2008 onward | | 0.0049 | 0.0717 | 0.0049 | 0.0496 | 0.0049 | 0.0414 | 0.0049 | 0.0344 | C |
| 178 | X | 2003-08 | VDOT | Mobile Commuter Stores | X | | | | 2005 | 2005 | 0.0273 | 0.3966 | 0.0273 | 0.2744 | 0.0273 | 0.2291 | 0.0273 | 0.1901 | C |
| 179 | X | 2003-08 | VDOT | Telework Incentive Program (Telework VA)[1] | **x** | | | | 2005 | Fall 2006 | 0.0080 | 0.1212 | 0.0080 | 0.0839 | 0.0080 | 0.0696 | 0.0080 | 0.0578 | C |
| 180 | X | 2003-08 | VDOT | Commuter Choice | X | | | | 2005 | | 0.0091 | 0.1426 | 0.0091 | 0.0988 | 0.0091 | 0.0816 | 0.0091 | 0.0677 | C |
| 181 | X | 2003-08 | VDOT | Employer Shuttle Services | | | | **x** | 2005 | | 0.1081 | 1.6924 | 0.1081 | 1.1723 | 0.1081 | 0.9682 | 0.1081 | 0.8035 | C |
| 184 | X | 2003-08 | VDOT | Van Start / Van Save | X | | | | 2005 | till 2006 | | | | | | | | | C |
| 185 | X | 2003-08 | VDOT | Metro Shuttle Bus | | | X | | 2005 | 1999-2005 | 0.0188 | 0.2595 | 0.0188 | 0.1794 | 0.0188 | 0.1509 | 0.0188 | 0.1253 | C |
| 187 | X | 2003-08 | VDOT | VRE Mid-Day Train Service | X | | | | 2005 | 2002 | 0.0204 | 0.2948 | 0.0204 | 0.2040 | 0.0204 | 0.1704 | 0.0204 | 0.1414 | C |
| 190 | X | 2003-08 | VDOT | Employer Vanpool Program (Bridge deck) | X | | | | 2005 | 2004 - 2008 | | | | | | | | | C |
| 191 | X | 2003-08 | VDOT | Town of Leesburg P&R Lot | X | | | | 2005 | 2010 | 0.0280 | 0.3948 | 0.0280 | 0.2730 | 0.0280 | 0.2289 | 0.0280 | 0.1900 | C |
| 192 | X | 2003-08 | VDOT | District-wide P&R Lots | X | | | | 2005 | 2001-2005 | 0.1589 | 2.2560 | 0.1589 | 1.5604 | 0.1589 | 1.3072 | 0.1589 | 1.0848 | C |
| 193 | X | 2003-08 | VDOT | Additional Parking at 4 Metro stations | X | | | | 2005 | 2005 | 0.2440 | 3.3488 | 0.2440 | 2.3149 | 0.2440 | 1.9495 | 0.2440 | 1.6180 | C |
| 196 | X | 2003-08 | WMATA | 64 CNG Buses (Purchased in 2001) | X | | | | 2005 | 2004 | | | | | | | | | SP (TCM) |
| 197 | X | 2003-08 | WMATA | 250 CNG Buses (175 buses by Dec. 2004; 75 buses by mid 2006) | X | | | | 2005 | Jun-06 | | | | | | | | | SP |

**EXHIBIT 25**

# TERM TRACKING SHEET

**TRANSPORTATION EMISSION REDUCTION MEASURES**

## Part B - Yearly $PM_{2.5}$ and Precursor NOx Emissions

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | FULL | SCALED-BACK | UNDER-WAY | REM | | | PM2.6 | Precursor NOx | PM2.5 | Precursor NOx | PM2.5 | Precursor NOx | PM2.6 | Precursor NOx | |
| 198 | X | 2003-08 | WMATA | 60 Engine Replacement (MY 1992 & 1993 MY buses) | X | | | | 2004 | 2004 | | | | | | | | | SP |
| 199 | X | 2003-08 | WMATA | Car Sharing Program | X | | | | 2005 | 2004 | 0.0133 | 0.1821 | 0.0133 | 0.1259 | 0.0133 | 0.1060 | 0.0133 | 0.0880 | C |
| 200 | X | 2003-08 | WMATA | Bikes Racks on WMATA Buses in VA (372 Bike Racks) | X | | | | 2005 | 2004 | 0.0128 | 0.1949 | 0.0128 | 0.1350 | 0.0128 | 0.1119 | 0.0128 | 0.0929 | C (TCM) |
| 202 | | 2003-08 | MDOT | Fleet Replacement (state auto fleet, gas to hybrid, 250 vehicles) | | | | X | 2005 | | 0.0492 | 0.7446 | 0.0492 | 0.5155 | | | | | SP |
| 203 | X | 2003-08 | MDOT | Replace 55 Montgomery County 10 yr. old buses w/ new CNG buses | | | X | | 2005 | Ongoing | 0.6024 | 9.1145 | 0.6024 | 6.3103 | | | | | SP |
| 204 | | 2003-08 | MDOT | Neighborhood Bus Shuttle (5 circulator routes) | | | | X | 2005 | | 0.0824 | 1.2393 | 0.0824 | 0.8580 | 0.0824 | 0.7126 | 0.0824 | 0.5914 | C |
| 205 | X | 2003-08 | MDOT | New Surface Parking at Transit Centers (500 spaces) | | | X | | 2005 | 2005 | 0.0436 | 0.5993 | 0.0436 | 0.4143 | 0.0436 | 0.3488 | 0.0436 | 0.2895 | C |
| 206 | | 2003-08 | MDOT | Additional Bike Lockers at Metro-Stations | | | | X | 2005 | | 0.1395 | 2.1210 | 0.1395 | 1.4685 | 0.1395 | 1.2179 | 0.1395 | 1.0107 | C |
| 207 | X | 2003-08 | MDOT | Bike Facilities at PnR Lots or other similar location | | | X | | 2005 | 2005 | 0.1144 | 1.6752 | 0.1144 | 1.1592 | 0.1144 | 0.9667 | 0.1144 | 0.8023 | C |
| 208 | | 2003-08 | MDOT | CNG Fueling Stations | | | | X | 2005 | | | | | | | | | | SP |
| 209 | | 2003-08 | MDOT | Gas cap replacements (ROP Credit) | | | | X | 2005 | | N/A | N/A | N/A | N/A | N/A | N/A | | | SP |
| 210 | | 2003-08 | MDOT | Gas can turnover (ROP Credit) | | | | X | 2005 | | N/A | N/A | N/A | N/A | N/A | N/A | | | SP |
| 211 | X | 2003-08 | MDOT | External Bicycle Racks on WMATA Buses (486 MD buses) | X | | | | 2005 | 2002 | 0.0148 | 0.2247 | 0.0148 | 0.1556 | 0.0148 | 0.1290 | 0.0148 | 0.1071 | C (TCM) |
| 212 | X | 2003-08 | MDOT | Bike \ Pedestrian Trail - Anacostia River Walk | | | X | | 2005 | Ongoing | 0.0022 | 0.0487 | 0.0022 | 0.0339 | 0.0022 | 0.0268 | 0.0022 | 0.0223 | C |
| 213 | | 2003-08 | MDOT | Transit Prioritization - Queue Jumps | | | | X | 2005 | | 0.0225 | 0.3827 | 0.0225 | 0.2654 | 0.0225 | 0.2168 | 0.0225 | 0.1799 | C |
| 214 | X | 2003-08 | MDOT | Commuter Choice Benefit/Tax Credit - Marketing Expansion | X | | | | 2005 | Ongoing | 0.5732 | 8.7314 | 0.5732 | 6.0457 | 0.5732 | 5.0126 | 0.5732 | 4.1601 | C |
| 215 | X | 2003-08 | MDOT | Improvements to Pedestrian Access in TOD areas (4 locations) | | | X | | 2005 | Ongoing | 0.0567 | 0.8868 | 0.0567 | 0.6142 | 0.0567 | 0.5074 | 0.0567 | 0.4211 | C |
| 216 | X | 2003-08 | MDOT | Telecommuting Expansion[1] | **X** | | | | 2005 | Ongoing | 0.8466 | 12.2123 | 0.8466 | 8.4488 | 0.8466 | 7.0611 | 0.8466 | 5.8602 | C |
| 217 | | 2003-08 | MDOT | Replace older Diesel Engine in Public Sector vehicles | | | | X | 2005 | | | | | | | | | | H |
| 218 | X | 2003-08 | VDOT | MV-92 Telecommuting Program - Expanded[1] | **X** | | | | 2005 | 2005 | 0.9041 | 13.0421 | 0.9041 | 9.0228 | 0.9041 | 7.5408 | 0.9041 | 6.2584 | C |
| 219 | X | 2003-08 | VDOT | MV-123 Employer Outreach for Public Sector Employees [2] | **X** | | | | 2005 | 2003 | 0.1574 | 2.4102 | 0.1574 | 1.6690 | 0.1574 | 1.3828 | 0.1574 | 1.1476 | C |
| 220 | X | 2003-08 | REGION | Signal System Optimization | X | | | | 2005 | 2005 | 1.0065 | 15.2268 | 1.0065 | 10.5421 | 1.0065 | 8.7492 | 1.0065 | 7.2612 | TR |
| 221 | X | 2007-12 | MDOT | Two P & R Lots in Frederick County (99 spaces) | X | | | | 2007 | 2008 | 0.0121 | 0.1720 | 0.0086 | 0.0831 | 0.0086 | 0.0709 | 0.0086 | 0.0589 | C |
| 222 | X | 2007-12 | MDOT | MDOT P & R Lots at US 340 ( 66-99 spaces, Frederick Co.) | X | | | | 2007 | 2007 | | | | | | | | | |
| 223 | X | 2008-13 | MDOT | MCG/MDOT P & R Lots at US 340 & Mt Zion Rd. (37 speces) | X | | | | 2008 | 2008 | 0.0093 | 0.1321 | 0.0093 | 0.0913 | 0.0093 | 0.0765 | 0.0093 | 0.0635 | |
| 224 | X | 2008-13 | MDOT | MCG/MDOT P & R Lots at US 340 & Mt Zion Rd. - expansion (39 speces) | | | X | | 2011 | 2011 | | | | | | | | | |
| 225 | X | 2008-13 | MDOT | MCG/MDOT P & R Lots at I 70 & MD 355 (100 speces) | | | X | | 2010 | 2010 | 0.0123 | 0.1738 | 0.0123 | 0.1202 | 0.0123 | 0.1007 | 0.0123 | 0.0836 | |
| 226 | X | 2008-13 | MDOT | MCG/MDOT P & R Lots at I 270 & MD 80 (164 speces) | X | | | | 2009 | 2009 | 0.0201 | 0.2850 | 0.0201 | 0.1971 | 0.0201 | 0.1652 | 0.0201 | 0.1371 | |
| 227 | X | 2008-13 | MDOT | MDOT Syglal System Reviewing | | | X | | 2010 | on-going | | | | | | | | | |
| 228 | X | 2008-13 | MDOT | MDOT Takoma Langely Transit Center | | | X | | 2012 | 2012 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| | | | | **Available Emissions Credits** | | | | | | | **17.655** | **314.694** | **15.744** | **198.753** | **15.141** | **159.918** | **15.141** | **132.721** | |

**EXHIBIT 25**

**TRANSPORTATION EMISSION REDUCTION MEASURES (CLRP Projects Only)**
**Part B - Yearly PM 2.5 and Precursor NOx Emissions**

Project Category: TR - Traffic Stream, C - Commute, H - Engine Technology (Heavy Dudy Vehicles), SP- Specific Vehicle Type

| NOs | CREDIT | TIP | | | IMPLEMENTATION STATUS | | | | PROJECTED | ACTUAL | TONS/ANNUM REDUCTION CREDITED | | | | | | | | Project |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | SCALED- | UNDER- | | COMPLETION | COMPLETION | 2017 | | 2020 | | 2030 | | 2040 | | |
| | TAKEN | CREDITED | AGENCY | PROJECT | FULL | BACK | WAY | REM | DATE | DATE | PM2.5 | Precursor NOx | PM2.5 | Precursor NOx | PM2.5 | Precursor NOx | PM2.6 | Precursor NOx | Category |
| 221 | X | 1995-00 TIP | REGION | M-24 Speed Limit Adherence | | | | | 2010 | | 1.8471 | 27.9451 | 2.1072 | 22.0719 | 0.7941 | 6.9030 | 0.7941 | 5.7290 | TR |
| 222 | | 1996-01 TIP | MGC | Rock Spring Park Pedestrian Amenities | | | | X | | | 0.0270 | 0.4086 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | - |
| 223 | X | 1996-01 TIP | MGC | Olney Transit Center Park and Ride | | | | | 2015 | | 0.0540 | 0.8172 | 0.0531 | 0.5559 | 0.0147 | 0.1279 | 0.0147 | 0.1062 | C |
| 224 | X | 1996-01 TIP | MGC | Damascus Park and Ride | | | | | | 2003 | 0.0270 | 0.4086 | 0.0265 | 0.2780 | 0.0074 | 0.0640 | 0.0074 | 0.0531 | C |
| 225 | X | 1996-01 TIP | DC | M-103 Taxicab Replacement (DC) | | | | X | 2015 | | 0.0000 | 0.0000 | 5.2412 | 54.8984 | 12.6415 | 109.8936 | 12.6415 | 91.2039 | H |
| 226 | X | STADIUM ANALYSIS | | M-103 Taxicab Replacement (MD) | | | | X | 2008 | | 0.0000 | 0.0000 | 4.1929 | 43.9187 | 5.0566 | 43.9574 | 5.0566 | 36.4816 | H |
| 227 | X | 1997-02 TIP | MDOT | Shady Grove West Transit Center Park and Ride | | | | X | | | 0.0675 | 1.0215 | 0.0663 | 0.6949 | 0.0184 | 0.1599 | 0.0184 | 0.1327 | C |
| 228 | X | 1997-02 TIP | MGC | Olney Transit Center Park and Ride | | | | | 2015 | | 0.0000 | 0.0000 | 0.0218 | 0.2280 | 0.0147 | 0.1279 | 0.0147 | 0.1062 | C |
| 229 | X | 1997-02 TIP | MGC | White Oak Park and Ride | | | | | 2008 | | 0.1350 | 2.0430 | 0.1327 | 1.3898 | 0.0368 | 0.3199 | 0.0368 | 0.2655 | C |
| 230 | X | 1997-02 TIP | MGC | Damascus Park and Ride | | | | | | 2003 | 0.0000 | 0.0000 | 0.0082 | 0.0855 | 0.0055 | 0.0480 | 0.0055 | 0.0398 | C |
| 231 | X | 1997-02 TIP | MGC | Four Corners Transit Center | | | | | 2015 | | 0.0068 | 0.1022 | 0.0066 | 0.0695 | 0.0018 | 0.0160 | 0.0018 | 0.0133 | C |
| 232 | | 1997-02 TIP | MGC | Burtonsville Transit Center | | | | X | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | - |
| 233 | X | 1997-02 TIP | MGC | Silver Spring Transit Access | | | | | | | 0.0068 | 0.1022 | 0.0054 | 0.0570 | 0.0037 | 0.0320 | 0.0037 | 0.0265 | C |
| 234 | X | 1997-02 TIP | MGC | Shady Grove Parking Construction | | | | | | 2003 | 0.1283 | 1.9409 | 0.1261 | 1.3204 | 0.0350 | 0.3039 | 0.0350 | 0.2522 | C |
| | | | | PLAN TOTAL | | | | | | | 0.3579 | 33.3591 | 0.3804 | 26.0561 | 0.1196 | 7.9425 | 0.1196 | 6.5917 | |
| | | | | GRAND TOTAL (Current Measures + CLRP plan) | | | | | | | 18.013 | 348.053 | 16.124 | 224.809 | 15.261 | 167.861 | 15.261 | 139.313 | |

DEFINITIONS: Project Numbers implemented fully prior to 2000 were removed from the TERM Tracking Sheet

CREDIT TAKEN ( X means emissions reduction credits taken):
TIP - Emissions credits are taken for projects being implemented, according to the progress reporting schedules provided by the implementing agencies (contained in Appendix J of Conformity Document ). No credit has been taken for projects in which only some components of the measure have been implemented.
CLRP - Credit is taken for each of these elements of the CLRP according to the schedule provided by the implementing agency.

IMPLEMENTATION STATUS:
FULL = project is completed as planned at the time of analysis.
SCALED BACK = project is completed, but at a different level than assumed at the time of analysis (i.e., purchased 50 buses instead of 100)
UNDERWAY = project is not complete, but is close enough that credit may be taken (i.e., under construction, NOT just out for bid)
REMOVED = project no longer expected to be implemented or constructed

COMPLETION DATE:
PROJECTED = project completion date originally expected (i.e., at time of emissions analysis)
ACTUAL = actual year project was open for use, or expected to be open for use if under construction

REMOVED projects Emissions credits are not counted in toal available emissions credits

1 Line items 218, 216, 179, 92 are all credited as part of M-92 Regional Telecommute Support TERM, line item # 75

2 Line item 108 & 219 credits are taken only for year 2010

# ATTACHMENT E

# CHANGES FROM 2011 CLRP TO 2012 CLRP for Analysis Year 2020

## LAND ACTIVITY AND TRAVEL

| | | |
|---|---|---|
| Households | -0.5% | Round 8.1 Cooperative Forecasts Reflect Economic Slow Down |
| Employment | -0.4% | |
| Transit Trips | +3.0% | 1) Increased Employment in Arlington of 24,000 Jobs<br>2) No Increase in Transit Fares Between 2011 CLRP and 2012 CLRP |
| Vehicle Trips | -0.8% | 1) Round 8.1 Cooperative Forecasts<br>2) Externals (Trips In and Out of the Region) Decreased to reflect 2010 Count Data<br>3) BMC Highway Project Removal |
| VMT | -2.3% | |

## EMISSIONS *

| | |
|---|---|
| VOC | +12.8% |
| NOx | +15.7% |
| $PM_{2.5}$ | +1.5% |
| Pre NOx | +15.6% |

## * WHY DID EMISSIONS GO UP WHEN VEHICLE TRIPS AND VMT WENT DOWN?

The 2012 CLRP Emissions analysis used 2011 VIN data, which showed an older fleet than the 2008 VIN data used for the 2011 CLRP. Had the 2008 VIN data been retained for the 2012 CLRP analysis, emissions would have dropped for all pollutants in line with vehicle trips and VMT as follows:

| | |
|---|---|
| VOC | -.56% |
| NOx | -1.05% |
| $PM_{2.5}$ | -1.04% |
| Pre NOx | -1.12% |

**ITEM 10 - Information**
June 20, 2012

Briefing on the Draft 2012 CLRP and FY 2013-2018 TIP

**Staff Recommendation:** Receive briefing on the draft 2012 CLRP and FY 2013-2018 TIP.

**Issues:** None

**Background:** On June 14 the draft plan and TIP were released for public comment at the CAC meeting. After the 30-day comment period, the TPB will be asked to approve the 2012 CLRP and FY 2013-2018 TIP at its July 18 meeting.

# National Capital Region Transportation Planning Board

777 North Capitol Street, N.E., Suite 300, Washington, D.C. 20002-4290 (202) 962-3310 Fax: (202) 962-3202 TDD: (202) 962-3213


**MEMORANDUM**

June 14, 2012

To: Transportation Planning Board

From: Ronald F. Kirby
Director, Department of
Transportation Planning

Re: Briefing on the Draft 2012 Financially Constrained Long-Range Plan (CLRP) and FY 2013-2018 Transportation Improvement Program

On June 14, the draft 2012 CLRP and FY 2013-2018 TIP were released for public comment at a public forum held in conjunction with the Citizens Advisory Committee. Attendees were presented with information about the significant additions and changes to projects in the CLRP, the Air Quality Conformity Assessment that was performed on all projects included in the CLRP, and the financial summarization of the projects included in the TIP.

On June 20, the Board will be briefed on the significant changes and additions to the CLRP as well as the Air Quality Conformity Assessment. The Board will be asked to approve the CLRP, the TIP and the Air Quality Conformity Assessment at its meeting on July 18.

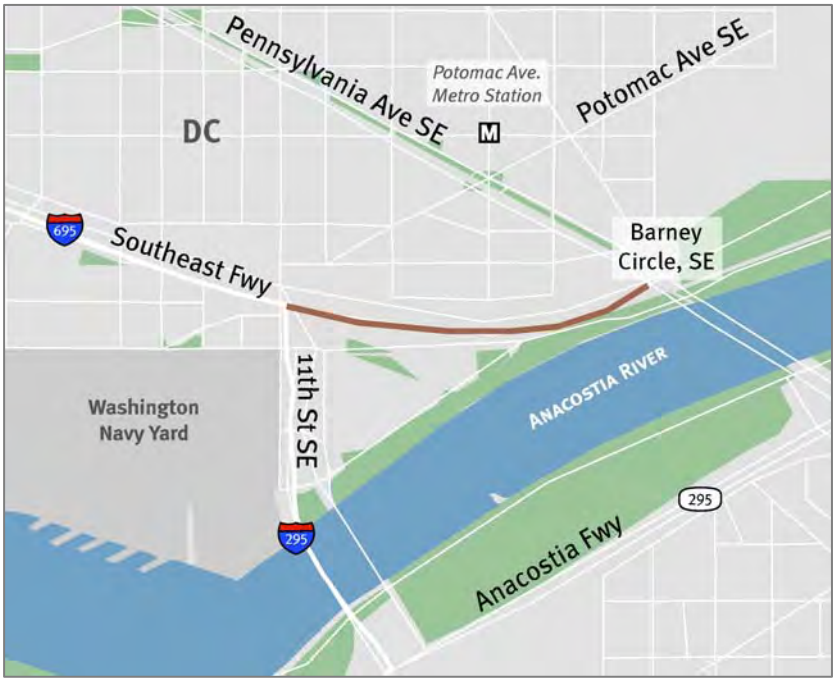
The following pages detail the significant additions and changes proposed for inclusion in the 2012 CLRP and the FY 2013-2018 TIP. A full listing of all project inputs for the Plan can be found in Appendix B of the Draft Air Quality Conformity Assessment. Complete documentation of the Plan and the TIP are available online at mwcog.org/clrp, including a searchable project database. Comments may be submitted and reviewed online at mwcog.org/tpbpubliccomment. The public comment period will end on July 14, 2012.


## Significant Additions and Changes to the CLRP and FY 2013-2018 TIP

1. Create Southeast Boulevard from 11th Street Bridge to Barney Circle
2. Bus Rapid Transit from Van Dorn Metro Station to Pentagon Metro Station
3. I-395 Auxiliary Lane, northbound from Duke Street to Seminary Road
4. Date Change on I-495 HOT Lanes Interchanges (~~2030~~ 2013)
5. Remove Widening of US 29 from US 50 to Eaton Place
6. Manassas National Battlefield Park Bypass

## 1. Create Southeast Boulevard from 11th Street Bridge to Barney Circle

Once the 11th Street SE Bridge fully connects I-695 (Southeast Freeway) and I-295 in both directions, the segment between 11th Street SE and Barney Circle/ Pennsylvania Avenue will become obsolete. This project proposes to convert that segment of the Southeast Freeway to an urban boulevard, connected to Barney Circle, with an at-grade intersection.



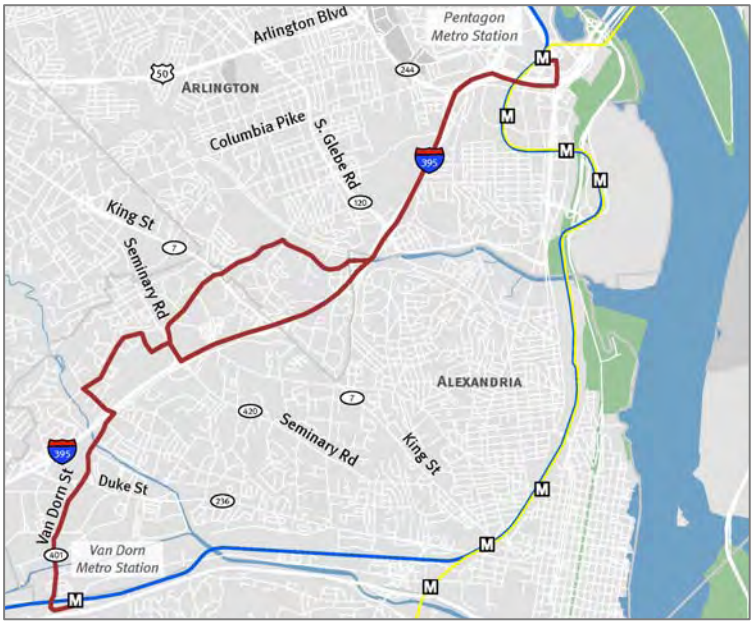

Complete: 2015
Length: 0.5 mile
Cost: $80 million
Funding: Federal, Local and Private

See the project description in Attachment A for more information.

## 2. Bus Rapid Transit from the Van Dorn Metro Station to the Pentagon Metro Station

This project will construct and operate a Bus Rapid Transit (BRT) service that will connect the Van Dorn Metro Station to the Pentagon Metro Station via the Mark Center. The line will split into two spurs at the Mark Center. The BRT spur will continue north on Beauregard Street, serving the Northern Virginia Community College at Braddock Road, turn east on S. Arlington Mill Drive to serve the Shirlington Transit Center, then continue on I-395 to the Pentagon. A separate rapid bus spur will travel on the I-395 HOV lanes from the Mark Center directly to the Pentagon.

The BRT alignment will operate in dedicated lanes where possible, and may include additional elements such as pre-board payment, transit signal priority, improved bus shelters/stops, and branded vehicles. The rapid bus alignment will contain some of the same features as BRT but will operate in shared lanes. Buses will run every 7.5 minutes during peak periods.




Complete: 2016
Length: 6.5 miles
Cost: $100 million
Funding: Federal, Local and Private

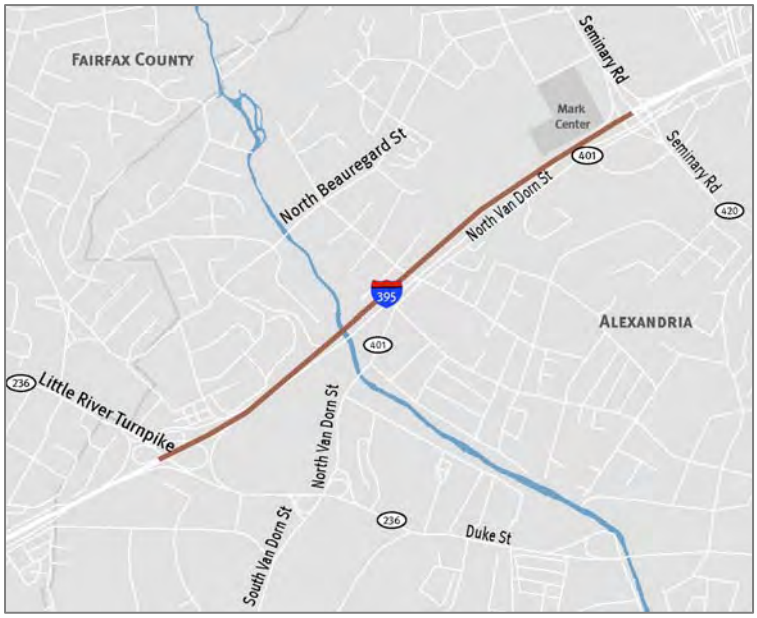
See the project description in Attachment A for more information.

### 3. I-395 Auxiliary Lane, Northbound from Duke Street to Seminary Road

This project will construct an auxiliary lane on northbound I-395 connecting the Duke Street on ramp to the off ramp at Seminary Road.

Complete: 2015
Length: 1 mile
Cost: $20 million
Funding: Federal and state

See the project description in Attachment A for more information.




### 4. Date Change on I-495 HOT Lanes Interchanges

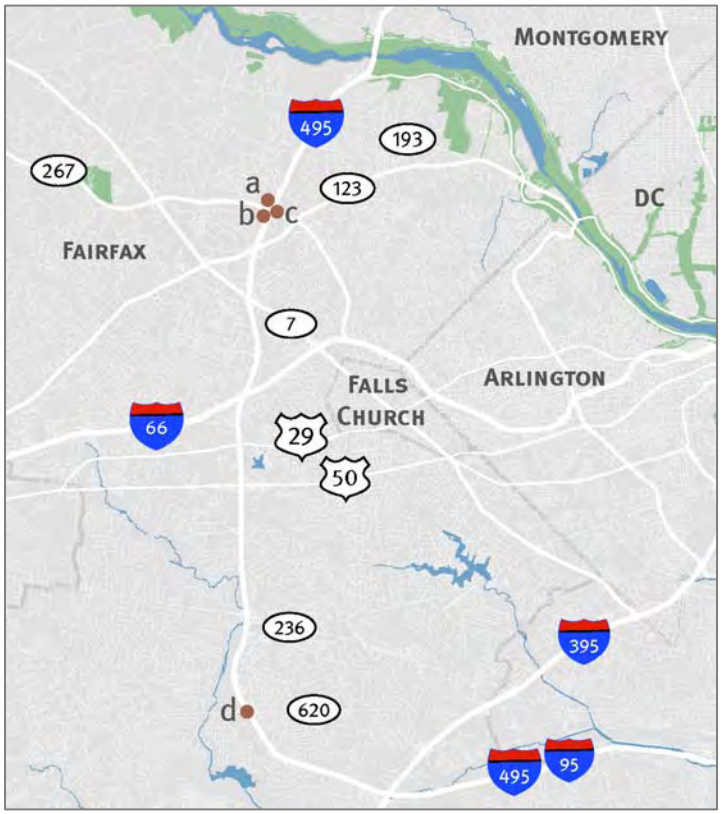
The 2011 CLRP includes the widening of the Capital Beltway to include a system of HOT lanes from the American Legion Bridge to the Backlick Road Underpass. As part of the larger I-495 HOT lanes project, VDOT is proposing to advance the completion dates of four interchanges from 2030 to 2013:

a & b: Two interchanges at VA-267 Dulles Toll Rd

c: One interchange at Dulles Airport Access Highway

d: One interchange at VA-620 (Braddock Rd)

Complete: 2013



### 5. Remove Widening of US 29 from US 50 to Eaton Place

The 2011 CLRP includes the widening of US 29, Lee Highway from four to six lanes in the City of Fairfax between US 50 and Eaton Place. VDOT proposes to remove this project from the CLRP.

Complete: ~~2013, 2040~~
Cost: ~~$30.2 million~~


### 6. Manassas National Battlefield Park Bypass

This project will construct a four lane bypass for US 29 to the north of the Manassas National Battlefield Park. Two segments of the project are already included in the plan:

- a portion of the Tri-County Parkway (improvements to Pageland Lane),
- and widening of VA 234, Sudley Road.

The remaining portion will construct a new four lane facility from Sudley Road to east of the intersection of US 29 and Paddington Lane. Once the Bypass is complete, about four miles of US 29 and three miles of Sudley Road located inside the Park will be closed.


Complete: 2035
Length: 9 miles
Cost: $305 million
Funding: Federal and state

See the project description in Attachment A for more information.

# Attachment A: CLRP Project Descriptions

## 1. Create Southeast Boulevard from 11th Street Bridge to Barney Circle

**BASIC PROJECT INFORMATION**

1. Submitting Agency: DDOT
2. Secondary Agency:
3. Agency Project ID: New DC 4
4. Project Type: _ Interstate X Primary _ Secondary _ Urban _Bridge _ Bike/Ped _Transit _ CMAQ _ ITS _ Enhancement _ Other _ Federal Lands Highways Program _ Human Service Transportation Coordination _ TERMs
5. Category: _ System Expansion; _ System Maintenance; _ Operational Program; _Study; _Other

6. Project Name: Barney Circle and Southeast Boulevard

| | Prefix | Route | Name | Modifier |
|---|---|---|---|---|
| 7. Facility: | | | | |
| 8. From (_ at): | | | 11th Street SE | |
| 9. To: | | | Pennsylvania Avenue | |

10. Description: Reuse of excess right-of-way when 11th Street Bridge connection to I-295 makes the SE/SW Freeway obsolete and reduces traffic from 11th Street to Barney Circle. Project reconfigures Barney Circle to L'Enfant vision with an at-grade intersection and converts SE/SW Freeway to an urban boulevard.

11. Projected Completion Date: 2015
12. Project Manager: Ravi Ganvir
13. Project Manager E-Mail: ravi.ganvir@dc.gov
14. Project Information URL: N/A
15. Total Miles: Less than 1 mile
16. Schematic: See below

17. Documentation: N/A
18. Bicycle or Pedestrian Accommodations: _ Not Included; X Included; _ Primarily a Bike/Ped Project; _ N/A
19. Jurisdictions: Washington DC
20. Total cost (in Thousands): 80,000
21. Remaining cost (in Thousands): 80,000
22. Funding Sources: x Federal; _ State; x Local; x Private; _ Bonds; _ Other

**SAFETEA-LU PLANNING FACTORS**

23. Please identify any and all planning factors that are addressed by this project:
    a. X Support the **economic vitality** of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
    b. X Increase the **safety** of the transportation system for all motorized and non-motorized users.
       i. Is this project being proposed specifically to address a safety issue? _ Yes; X No
       ii. If yes, briefly describe (in quantifiable terms, where possible) the nature of the safety problem:

    c. _ Increase the ability of the transportation system to support **homeland security** and to safeguard the personal security of all motorized and non-motorized users.
    d. X Increase **accessibility and mobility** of people.
    e. _ Increase accessibility and mobility of **freight.**
    f. _ Protect and enhance the **environment**, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.
    g. _ Enhance the **integration and connectivity** of the transportation system, across and between modes, for people and freight.
    h. _ Promote efficient system **management and operation**.
    i. _Emphasize the **preservation** of the existing transportation system.

**ENVIRONMENTAL MITIGATION**

24. Have any potential mitigation activities been identified for this project? _Yes; X No
    a. If yes, what types of mitigation activities have been identified?
       _ Air Quality; _ Floodplains; _ Socioeconomics; _ Geology, Soils and Groundwater; Vibrations;
       _ Energy; _ Noise; _ Surface Water; _ Hazardous and Contaminated Materials; _ Wetlands

**CONGESTION MANAGEMENT INFORMATION**

25. Congested Conditions
    a. Do traffic congestion conditions necessitate the proposed project or program? X Yes; _ No
    b. If so, is the congestion recurring or non-recurring? X Recurring; _ Non-recurring
    c. If the congestion is on another facility, please identify it:
26. Capacity
    a. Is this a capacity-increasing project on a limited access highway or other principal arterial? _ Yes; X No
    b. If the answer to Question 26.a was "yes", are any of the following exemption criteria true about the project? (Choose one, or indicate that none of the exemption criteria apply):

       _ None of the exemption criteria apply to this project – a Congestion Management Documentation Form is required
       _ The project will not use federal funds in any phase of development or construction (100% state, local, and/or private funding)

_ The number of lane-miles added to the highway system by the project totals less than one lane-mile

_ The project is an intersection reconstruction or other traffic engineering improvement, including replacement of an at-grade intersection with an interchange

_ The project, such as a transit, bicycle or pedestrian facility, will not allow private single-occupant motor vehicles

_ The project consists of preliminary studies or engineering only, and is not funded for construction

_ The construction costs for the project are less than $10 million.

c. If the project is not exempt and requires a Congestion Management Documentation Form, click here to open a blank Congestion Management Documentation Form.

**INTELLIGENT TRANSPORTATION SYSTEMS**

27. Is this an Intelligent Transportation Systems (ITS) project as defined in federal law and regulation, and therefore subject to Federal Rule 940 Requirements? _ Yes; X No

a. If yes, what is the status of the systems engineering analysis compliant with Federal Rule 940 for the project? _ Not Started; _ Ongoing, not complete; _ Complete

b. Under which Architecture:

_ DC, Maryland or Virginia State Architecture

_ WMATA Architecture

_ COG/TPB Regional ITS Architecture

_ Other, please specify:

2. Bus Rapid Transit from Van Dorn Metrorail Station to Pentagon Metrorail Station

**BASIC PROJECT INFORMATION**

1. Submitting Agency: City of Alexandria
2. Secondary Agency:
3. Agency Project ID:
4. Project Type: _ Interstate _ Primary _ Secondary _ Urban _ Bridge _ Bike/Ped X_ Transit _ CMAQ _ ITS _ Enhancement _ Other _ Federal Lands Highways Program _ Human Service Transportation Coordination _ TERMs
5. Category: X_ System Expansion; _ System Maintenance; _ Operational Program; _ Study; _ Other

6. Project Name: Van Dorn-Pentagon BRT

| | Prefix | Route | Name | Modifier |
|---|---|---|---|---|
| 7. Facility: | | | Van Dorn-Pentagon BRT | |
| 8. From (_ at): | | | Van Dorn Metrorail Station | |
| 9. To: | | | Pentagon Metrorail Station | |

10. Description: This would build a bus rapid transit service from the Van Dorn Metrorail Station to the Pentagon Metrorail Station using Van Dorn, Sanger, Beauregard, Mark Center Drive, Southern Towers Drive, Beauregard, Walter Reed, Arlington Mill, and I-395. This service will initially have 7.5 minute peak hour headways and 15 minute off-peak headways. The preliminary alignment and amount of dedicated lanes were determined in a study which was ratified by the Alexandria City Council on September 17, 2011. This project was awarded $800,000 of FTA Section 5339 funds and $200,000 of local matching funds to perform an Alternatives Analysis study of the alignment. This project has been assigned funds from the 2.2 cent property tax increment adopted by Alexandria City Council in May, 2011 to fund transportation improvements. These funds, together with developer contributions should fund this new service.

11. Projected Completion Date: 2016
12. Project Manager: Jim Maslanka
13. Project Manager E-Mail: Jim.Maslanka@alexandriava.gov
14. Project Information URL:
15. Total Miles: 6.5
16. Schematic:
17. Documentation: City's Master Transportation Plan
18. Bicycle or Pedestrian Accommodations: _ Not Included; X_ Included; _ Primarily a Bike/Ped Project; _ N/A
19. Jurisdictions: City of Alexandria
20. Total cost (in Thousands): $100,000
21. Remaining cost (in Thousands): $38.500
22. Funding Sources: _X Federal; _ State; _X Local; _X Private; _ Bonds; _ Other

The City will provide $17.700 million from a 2.2 cent property tax increment for transportation improvements. We are also receiving $44.0 from private developers to cover construction and right-of-way acquisition. The City will request $38.5 million from the FTA's Section 5309 (Small Starts of

## SAFETEA-LU PLANNING FACTORS

23. Please identify any and all planning factors that are addressed by this project:

_ Support the **economic vitality** of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.

_ Increase the **safety** of the transportation system for all motorized and non-motorized users.

a. Is this project being proposed specifically to address a safety issue? _ Yes; _ No

b. If yes, briefly describe (in quantifiable terms, where possible) the nature of the safety problem:

_ Increase the ability of the transportation system to support **homeland security** and to safeguard the personal security of all motorized and non-motorized users.

X_ Increase **accessibility and mobility** of people and freight.

X_ Protect and enhance the **environment**, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.

_ Enhance the **integration and connectivity** of the transportation system, across and between modes, for people and freight.

_ Promote efficient system **management and operation**.

_ Emphasize the **preservation** of the existing transportation system.

## ENVIRONMENTAL MITIGATION

24. Have any potential mitigation activities been identified for this project? _ Yes; X_No

a. If yes, what types of mitigation activities have been identified?

_ Air Quality; _ Floodplains; _ Socioeconomics; _ Geology, Soils and Groundwater; Vibrations;

_ Energy; _ Noise; _ Surface Water; _ Hazardous and Contaminated Materials; _ Wetlands

## CONGESTION MANAGEMENT INFORMATION

25. Do traffic congestion conditions necessitate the proposed project? X Yes; _ No

a. If so, is the congestion recurring or non-recurring? X Recurring; _ Non-recurring

b. If the congestion is on another facility, please identify it:

c. What is the measured or estimated Level of Service on this facility? ___ ; _ Measured; _ Estimated

26. Is this a capacity-increasing project on a limited access highway or other arterial highway of a functional class higher than minor arterial? _ Yes; X No

a. If yes, does this project require a Congestion Management Documentation form under the given criteria (see *Call for Projects* document)? _ Yes; _ No

b. If not, please identify the criteria that exempt the project here:

_ The number of lane-miles added to the highway system by the project totals less than 1 lane-mile

_ The project is an intersection reconstruction or other traffic engineering improvement, including replacement of an at-grade intersection with an interchange

_ The project, such as a transit, bicycle or pedestrian facility, will not allow private single-occupant motor vehicles.

_ The project consists of preliminary studies or engineering only, and is not funded for construction

_ The project will not use federal funds in any phase of development or construction (100% state, local and/or private funding).

_ The construction costs for the project are less than $10 million.

# FINANCIALLY CONSTRAINED LONG-RANGE TRANSPORTATION PLAN FOR 2040
# PROJECT DESCRIPTION FORM

## 3. I-395 Auxiliary Lane, Northbound from Duke Street to Seminary Road

12/16/11 Draft

**BASIC PROJECT INFORMATION**

1. Agency Project ID: New  Secondary Agency:
2. Project Type: X System Expansion; _ System Maintenance; _ Operational Program; _ Study; _ Other
   (check all that apply) X Freeway; _ Primary; _ Secondary; _ Urban; _ Bridge; _ Bike/Ped; _ Transit; _ CMAQ; _ ITS; _ Enhancement; _ Other
3. Project Title: NB I-395 Auxiliary Lane (Duke St. to Seminary Road) UPC 102437

| | Prefix | Route | Name | Modifier |
|---|---|---|---|---|
| 4. Facility: | | I-395 | Shirley Memorial Highway | |
| 5. From (_ at): | | 236 | Duke Street | |
| 6. To: | | 420 | Seminary Road | |

7. Jurisdiction(s): City of Alexandria
8. Description: Provide final design and construction of auxiliary lane and noise walls (if required) on northbound I-395 between northbound Duke Street on ramp and Seminary Road off ramp.

9. Bicycle or Pedestrian Accommodations: X Not Included; _ Included; _ Primarily a Bike/Ped Project; _ N/A
10. Total Miles: 1.1 miles
11. Project Manager: Susan Shaw  12. E-Mail:
13. Project Information URL:
14. Projected Completion Year: 2015
15. Actual Completion Year:  _ Project is ongoing. Year refers to implementation.
16. _ This project is being withdrawn from the Plan as of:
17. Total cost (in Thousands): $20,000,000
18. Remaining cost (in Thousands): $20,000,000
19. Funding Sources: X Federal; X State; _ Local; _ Private; _ Bonds; _ Other

**CONGESTION MANAGEMENT INFORMATION**

20. Do traffic congestion conditions necessitate the proposed project? X Yes; _ No
21. If so, describe those conditions: X Recurring congestion; _ Non-site specific congestion; _ Frequent incident-related, non-recurring congestion; _ Other
22. Is this a capacity-increasing project on a limited access highway or other arterial highway of a functional class higher than minor arterial? X Yes; _ No
23. If yes, does this project require a Congestion Management Documentation form under the given criteria (see *Call for Projects* document)? X Yes; _ No
24. If not, please identify the criteria that exempt the project here:
    _ The number of lane-miles added to the highway system by the project totals less than 1 lane-mile
    _ The project is an intersection reconstruction or other traffic engineering improvement, including replacement of an at-grade intersection with an interchange

_ The project will not allow motor vehicles, such as a bicycle or pedestrian facility

_ The project consists of preliminary studies or engineering only, and is not funded for construction

_ The project received NEPA approval on or before April 6, 1992

_ The project was already under construction on or before September 30, 1997, or construction funds were already committed in the FY98-03 TIP.

_ The construction costs for the project are less than $5 million.

**SAFETEA-LU PLANNING FACTORS**

25. Please identify any and all planning factors that are addressed by this project:

X Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.

X Increase the safety of the transportation system for all motorized and non-motorized users.

a. Is this project being proposed specifically to address a safety issue? _ Yes; X No

b. Please identify issues: _ High accident location; _ Pedestrian safety; _ Other
_ Truck or freight safety; _ Engineer-identified problem

c. Briefly describe (in quantifiable terms, where possible) the nature of the safety problem:

_ Increase the ability of the transportation system to support homeland security and to safeguard the personal security of all motorized and non-motorized users.

_ Increase accessibility and mobility of people and freight.

_ Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.

_ Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.

_ Promote efficient system management and operation.

_ Emphasize the preservation of the existing transportation system.

**ENVIRONMENTAL MITIGATION**

26. Have any potential mitigation activities been identified for this project? TBD

27. If yes, what types of mitigation activities have been identified? TBD

_ Air Quality; _ Floodplains; _ Socioeconomics; _ Geology, Soils and Groundwater; Vibrations;

_ Energy; _ Noise; _ Surface Water; _ Hazardous and Contaminated Materials; _ Wetlands

**INTELLIGENT TRANSPORTATION SYSTEMS**

28. Is this an Intelligent Transportation Systems (ITS) project as defined in federal law and regulation, and therefore subject to Federal Rule 940 Requirements? _ Yes; X No

29. If yes, what is the status of the systems engineering analysis compliant with Federal Rule 940 for the project? _ Not Started; _ Ongoing, not complete; _ Complete

30. Under which Architecture:

_ DC, Maryland or Virginia State Architecture

_ WMATA Architecture

_ COG/TPB Regional ITS Architecture

_ Other, please specify:

31. Other Comments: This project was identified as a potential mitigation improvement within the I-95 HOT lanes Interchange Justification Report

# FINANCIALLY CONSTRAINED LONG-RANGE TRANSPORTATION PLAN FOR 2040
# PROJECT DESCRIPTION FORM

1/10/12 Draft

## 6. Manassas National Battlefield Park Bypass

**BASIC PROJECT INFORMATION**

1. Submitting Agency: National Park Service — Agency Project ID: New
   Secondary Agency: Federal Highway Administration

2. Project Type: (check all that apply)
   **X** System Expansion; _ System Maintenance; _ Operational Program; _ Study; _ Other
   _ Freeway; **X** Primary; _ Secondary; _ Urban; _ Bridge; _ Bike/Ped; _ Transit; _ CMAQ;
   _ ITS; _ Enhancement; _ Other

3. Project Title: **Manassas National Battlefield Park Bypass**

| | Prefix | Route | Name | Modifier |
|---|---|---|---|---|
| 4. Facility: | | | Manassas Battlefield Bypass | |
| 5. From (_ at): | US | 29 | Intersection with Rte. 705 (Pageland La.) | |
| 6. To: | US | 29 | East of intersection with Paddington La. | |

7. Jurisdiction(s): Prince William and Fairfax Counties

8. Description:

The proposed Manassas Battlefield Bypass (MBB) project includes the construction of a new 4-lane facility between the above limits and the closure of portions of two 2-lane facilities, Route 29 and Route 234.

The proposed roadway would begin at the western edge of the Manassas Battlefield Park in Fairfax County, at the intersection of US 29 and Pageland Lane, travel north along Pageland La. to the intersection with Rte, 234 (Sudley Rd.) at Catharpin where the Battlefield Bypass would turn east and be co-located with an existing section of Route 234 that would be improved till Sudley Springs. The Battlefield Bypass would then continue east as new roadway between Sudley Springs and its terminus with US 29 at the eastern end of the Battlefield Park, to the east of the US 29 and Paddington La. intersection (west of Lucky Stone Quarry). The first segment of the Battlefield Bypass, between US 29/Pageland La. and Rte. 234 at Catharpin will be collocated with the Commonwealth's Tri County Parkway (aka Rte. 234 Bypass Extension) – which is already in the MPO's CLRP (2011).

With the construction of the Battlefield Bypass, there will be a closure of about 4 miles of Route 29, from Pageland Lane west of the park to the bridge over Bull Run and the closure of about 3 miles of Route 234 from the southern Park boundary to the area known as Sudley Springs north of the park.

The proposed roadway is the outcome of an environmental study (Draft Environmental Impact Statement, DEIS) completed by the FHWA's Eastern Federal Lands Division at the direction of the US Congress (US Congress' Manassas National Battlefield Park Amendments of 1988). The US Congress mandated study was to develop alternatives that would allow for the closure of the portions of US Route 29 and VA Route 234, which currently transect the Manassas National Battlefield Park and to provide alternatives for traffic currently traveling through the park. The US Congress required this study due to the negative effects of the heavy traffic congestion within the Battlefield from non-park related traffic on historic preservation, park interpretation, visitor experience, and park management. The heavy volumes of non-park related traffic impede access to historic sites and create public safety conflict. The FHWA and NPS are currently working on developing the Final EIS for the project. The NEPA requires the FEIS project be included in a regionally conforming long range plan (CLRP) before it can be approved. Including the above project in the TPB's 2012 CLRP and the air quality conformity analysis for the 2012 CLRP will facilitate the completion of the FEIS and assist in developing the project for construction.

There are several major transportation investments that are being considered by the state and the counties in the vicinity of the project including the construction of the Tri County Parkway (aka Rte. 234 Bypass Extension), improvements to I 66 and the I 66/US 29 interchange at Gainesville.

The DEIS evaluated land use changes associated with the construction of the Battlefield Bypass. The Final EIS for in anticipated to include aspects that will the Park from any adverse impacts of development in the vicinity. Additionally the National Park Service has been working with VDOT and other stakeholders as part work on the Tri-County Parkway on this issue. VDOT has agreed to work toward the purchase of conservation easements on properties within the Tri-County Parkway corridor as mitigation for the construction of the Tri-County Parkway. The NPS has also been working with other stakeholders such as the Piedmont Environmental Council, the Coalition for Smarter Growth, the National Parks Conservation Association, and the National Trust for Historic Preservation and the Civil War Trust to keep them abreast of the status of the Manassas Battlefield Bypass and the NPS involvement in the Tri-County Parkway.

9. Bicycle or Pedestrian Accommodations: _ Not Included; **X**_ Included; _ Primarily a Bike/Ped Project; _ N/A
10. Total Miles: 8.9 miles
11. Project Manager: Ed Clark 12. E-Mail: ed_w_clark@nps.gov
13. Project Information URL: http://parkplanning.nps.gov/mnbb
14. Projected Completion Year: 2035
15. Actual Completion Year:
16. _ This project is being withdrawn from the Plan as of:
17. Total cost: $305 million
    While the cost estimate for the entire project is $305M, about a third of this project (Battlefield Bypass) is collocated with Virginia's Tri County parkway project which is already in the CLRP. The cost of the collocated portion of the project is about $122M and as such the cost estimate for the balance portion of the Battlefield Bypass is $183M.
18. Remaining cost (in Thousands):
19. Funding Sources: **X**_ Federal; **X** State; _ Local; _ Private; _ Bonds; _ Other
    - Federal Share $183M
    - Non-Federal $122M (towards Tri County Parkway).

    In November 1988 the US Congress passed into law the Manassas National Battlefield Park Amendments of 1988 (herein referred to as Public Law 100-647). A copy of the public law document is provided as attachment B. This public law mandated (Sec. 10004.(a), (d) the provision of funds and the conduct of an environmental study for the Battlefield Bypass project including the closure of Rte. 29 and Rte. 234 within the limits of the park. The Public law also mandated the US Congress to provide part of the funds for the construction of the project. Specifically the law states: (Sec. 10004.(c)) *"The Secretary shall provide funds to the appropriate construction agency for the construction and improvement of the highways to be used for the rerouting of traffic now utilizing highways (known as routes 29 and 234) to be closed pursuant to subsection (b) if the construction and improvement of such alternatives are deemed by the Secretary to be in the interest of protecting the integrity of the park."* The DEIS has identified the proposed Bypass as the preferred alternative implying that the project is in the best interest of protecting the integrity of the park. Completing the Final EIS and securing its approval will allow the Secretary to formalize this finding and seek apportionment of the construction funding provided by Public Law 100-647.

    The Law also states that no more than 75% of the total cost shall be provided by the Secretary of the Interior, with the balance funding derived from other non-federal sources. With the current planning level cost estimate ($305M) this amounts to about $228M in federal funds. The Collocation of the Battlefield Bypass with the Tri County Parkway means that some of the total cost will be borne by the Tri County Parkway. This is currently estimated to be about $122M. This leaves a balance of $183M needed to complete the Battlefield Parkway which is less that the amount authorized by Public law 100-647. Additionally it is likely that some construction funds could be acquired through a public /

private partnership.

**CONGESTION MANAGEMENT INFORMATION**

20. Do traffic congestion conditions necessitate the proposed project? **X** Yes; _ No
21. If so, describe those conditions: **X** Recurring congestion; _ Non-site specific congestion;
    _ Frequent incident-related, non-recurring congestion; _ Other
22. Is this a capacity-increasing project on a limited access highway or other arterial highway of a functional class higher than minor arterial? _ Yes; _**X** No

    The Battlefield Bypass will be a new 4-lane facility that will be replacing portions of two 2-lane facilities, Route 29 and Route 234 which will be closed to non-park traffic – and as such will not be adding new capacity. The closure will include about 4 miles of Route 29, from the bridge over Bull Run to Pageland Lane west of the park and over 3 miles of Route 234 from the southern Park boundary to the area known as Sudley Springs north of the park.
23. If yes, does this project require a Congestion Management Documentation form under the given criteria (see *Call for Projects* document)? _ Yes; _ No
24. If not, please identify the criteria that exempt the project here:
    _ The number of lane-miles added to the highway system by the project totals less than 1 lane-mile
    _ The project is an intersection reconstruction or other traffic engineering improvement, including replacement of an at-grade intersection with an interchange
    _ The project will not allow motor vehicles, such as a bicycle or pedestrian facility
    _ The project consists of preliminary studies or engineering only, and is not funded for construction
    _ The project received NEPA approval on or before April 6, 1992
    _ The project was already under construction on or before September 30, 1997, or construction funds were already committed in the FY98-03 TIP.
    _ The construction costs for the project are less than $5 million.

**SAFETEA-LU PLANNING FACTORS**

25. Please identify any and all planning factors that are addressed by this project:
    _ Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
    **X** Increase the safety of the transportation system for all motorized and non-motorized users.

    a. Is this project being proposed specifically to address a safety issue? _ Yes; **X** No
    b. Please identify issues: _ High accident location; _ Pedestrian safety; _ Other
    _ Truck or freight safety; _ Engineer-identified problem

    c. Briefly describe (in quantifiable terms, where possible) the nature of the safety problem:

    _ Increase the ability of the transportation system to support homeland security and to safeguard the personal security of all motorized and non-motorized users.
    **X** Increase accessibility and mobility of people and freight.
    **X** Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.
    _ Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.
    _ Promote efficient system management and operation.
    _ Emphasize the preservation of the existing transportation system.

## ENVIRONMENTAL MITIGATION

26. Have any potential mitigation activities been identified for this project? **X** Yes; _No
In January 2005, a FHWA approved Draft Environmental Impact Statement (DEIS) was issued that identified five Candidate Build Alternatives with a modified version of Alternative D which was selected as the preferred alternative. In late 2005, the Boards of Supervisors in Prince William and Fairfax Counties voted to endorse Alternative D and in June 2006, Commonwealth Transportation Board (CTB) passed a resolution approving the location of the proposed bypass along the Modified Alternative D corridor. In 2008, the General Management Plan for Manassas was published which included the Battlefield Bypass as part of the preferred alternative. Preliminary mitigation measures have been identified for the areas listed Q 27.

The NPS will be working toward completing the Final Environmental Impact Statement (FEIS) over the next 12 months. The FEIS will undertake and complete a detailed analysis of the mitigation measures. The formal approval of the FEIS culminating with the issuance of a Record of Decision will be based on commitments made to implement any mitigation actions deemed necessary in the FEIS.

27. If yes, what types of mitigation activities have been identified?

**X** Air Quality; **X** Floodplains; **X** Socioeconomics; **X** Geology, Soils and Groundwater; Vibrations;

_ Energy; **X** Noise; **X** Surface Water; **X** Hazardous and Contaminated Materials; **X** Wetlands

**X Historic Preservation**

With the completion of the FEIS, Section 4(f) and NHPA Section 106 the NPS will be further developing and finalizing measures to mitigate impacts associated with the construction of the Battlefield Bypass.

## INTELLIGENT TRANSPORTATION SYSTEMS

28. Is this an Intelligent Transportation Systems (ITS) project as defined in federal law and regulation, and therefore subject to Federal Rule 940 Requirements? _ Yes; **X** No

29. If yes, what is the status of the systems engineering analysis compliant with Federal Rule 940 for the project? _ Not Started; _ Ongoing, not complete; _ Complete

30. Under which Architecture:

_ DC, Maryland or Virginia State Architecture

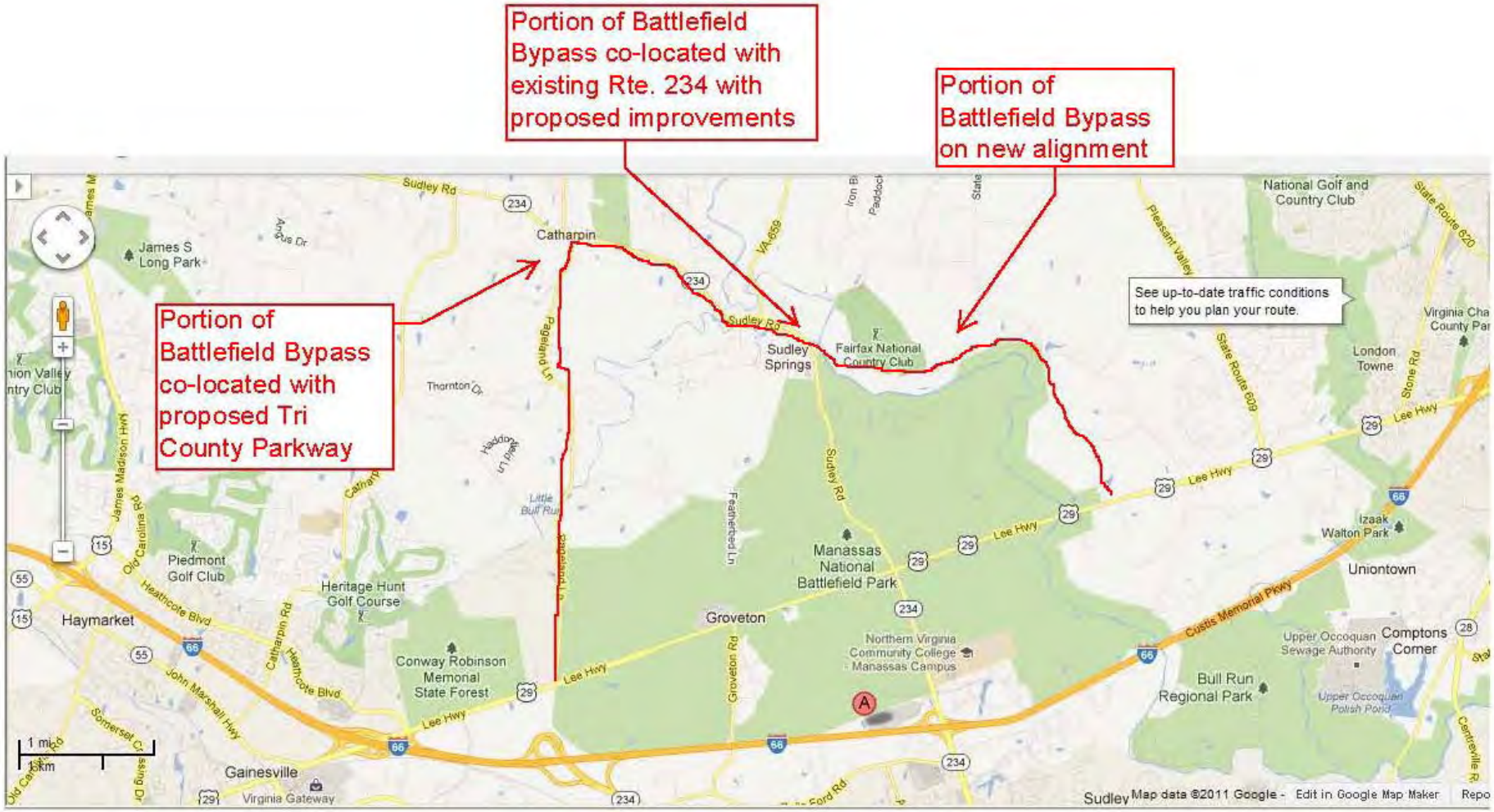
_ WMATA Architecture

_ COG/TPB Regional ITS Architecture

_ Other, please specify:

31. Other Comments:

**Attachment A – DEIS Proposed Alignment For Manassas Battlefield Bypass**



(21) Item 907.69 (relating to sodium tartrate).
(22) Item 907.76 (relating to lactulose).
(23) Item 910.00 (relating to diamond tool and drill blanks).
(24) Item 911.50 (relating to unwrought lead).
(25) Item 912.13 (relating to certain power-driven flat knitting machines and parts thereof).

(b) OTHER EXTENSIONS.—

(1) Item 907.00 (relating to p-hydroxybenzoic acid) is amended by striking out "9/30/85" and inserting in lieu thereof "12/31/88".

(2) Item 907.22 (relating to caffeine) is amended by striking out "On or before 12/31/87" and inserting in lieu thereof "On or before the earlier of 12/31/92 or the date on which the rate of duty imposed by the European Communities on articles described in item 437.02 exceeds the rate of duty imposed by the United States on such articles that was in effect on 6/30/88"

# TITLE X—MANASSAS NATIONAL BATTLEFIELD PARK

Manassas National Battlefield Park Amendments of 1988.
Virginia.
Conservation.
16 USC 429b note.

## SEC. 10001. SHORT TITLE.

This title may be cited as the "Manassas National Battlefield Park Amendments of 1988".

## SEC. 10002. ADDITION TO MANASSAS NATIONAL BATTLEFIELD PARK.

The first section of the Act entitled "An act to preserve within Manassas National Battlefield Park, Virginia, the most important historic properties relating to the battle of Manassas, and for other purposes", approved April 17, 1954 (16 U.S.C. 429b), is amended—

(1) by inserting "(a)" after "That"; and

(2) by adding at the end thereof the following:

"(b)(1) In addition to subsection (a), the boundaries of the park shall include the area, comprising approximately 600 acres, which is south of U.S. Route 29, north of Interstate Route 66, east of Route 705, and west of Route 622. Such area shall hereafter in this Act be referred to as the 'Addition'.

Real property.

"(2)(A) Notwithstanding any other provision of law, effective on the date of enactment of the Manassas National Battlefield Park Amendments of 1988, there is hereby vested in the United States all right, title, and interest in and to, and the right to immediate possession of, all the real property within the Addition.

"(B) The United States shall pay just compensation to the owners of any property taken pursuant to this paragraph and the full faith and credit of the United States is hereby pledged to the payment of any judgment entered against the United States with respect to the taking of such property. Payment shall be in the amount of the agreed negotiated value of such property or the valuation of such property awarded by judgment and shall be made from the permanent judgment appropriation established pursuant to 31 U.S.C. 1304. Such payment shall include interest on the value of such property which shall be compounded quarterly and computed at the rate applicable for the period involved, as determined by the Secretary of the Treasury on the basis of the current average market yield on outstanding marketable obligations of the United States of comparable maturities from the date of enactment of the Manassas

National Battlefield Park Amendments of 1988 to the last day of the month preceding the date on which payment is made.

"(C) In the absence of a negotiated settlement, or an action by the owner, within 1 year after the date of enactment of the Manassas National Battlefield Park Amendments of 1988, the Secretary may initiate a proceeding at anytime seeking in a court of competent jurisdiction a determination of just compensation with respect to the taking of such property.

"(3) Not later than 6 months after the date of enactment of the Manassas National Battlefield Park Amendments of 1988, the Secretary shall publish in the Federal Register a detailed description and map depicting the boundaries of the Addition. The map shall be on file and available for public inspection in the offices of the National Park Service, Department of the Interior.

Federal Register, publication.

Public information.

"(c) The Secretary shall not allow any unauthorized use of the Addition after the enactment of the Manassas National Battlefield Park Amendments of 1988, except that the Secretary may permit the orderly termination of all operations on the Addition and the removal of equipment, facilities, and personal property from the Addition.".

SEC. 1003. VISUAL PROTECTION.

Section 2(a) of the Act entitled "An Act to preserve within Manassas National Battlefield Park, Virginia, the most important historic properties relating to the battle of Manassas, and for other purposes", approved April 17, 1954 (16 U.S.C. 429b–1), is amended—

(1) by inserting "(1)" after "(a)"; and

(2) by adding at the end thereof the following:

"(2) The Secretary shall cooperate with the Commonwealth of Virginia, the political subdivisions thereof, and other parties as designated by the Commonwealth or its political subdivisions in order to promote and achieve scenic preservation of views from within the park through zoning and such other means as the parties determine feasible.".

SEC. 1004. HIGHWAY RELOCATION.

16 USC 429b note.

(a) STUDY.—The Secretary of the Interior (hereafter in this section referred to as the "Secretary"), in consultation and consensus with the Commonwealth of Virginia, the Federal Highway Administration, and Prince William County, shall conduct a study regarding the relocation of highways (known as routes 29 and 234) in, and in the vicinity of, the Manassas National Battlefield Park (hereinafter in this section referred to as the "park"). The study shall include an assessment of the available alternatives, together with cost estimates and recommendations regarding preferred options. The study shall specifically consider and develop plans for the closing of those public highways (known as routes 29 and 234) that transect the park and shall include analysis of the timing and method of such closures and of means to provide alternative routes for traffic now transecting the park. The Secretary shall provide for extensive public involvement in the preparation of the study.

(b) DETERMINATION.—Within 1 year after the enactment of this Act, the Secretary shall complete the study under subsection (a). The study shall determine when and how the highways (known as routes 29 and 234) should be closed.

(c) ASSISTANCE.—The Secretary shall provide funds to the appropriate construction agency for the construction and improvement of

the highways to be used for the rerouting of traffic now utilizing highways (known as routes 29 and 234) to be closed pursuant to subsection (b) if the construction and improvement of such alternatives are deemed by the Secretary to be in the interest of protecting the integrity of the park. Not more than 75 percent of the costs of such construction and improvement shall be provided by the Secretary and at least 25 percent shall be provided by State or local governments from any source other than Federal funds. Such construction and improvement shall be approved by the Secretary of Transportation.

State and local governments.

(d) AUTHORIZATION.—There is authorized to be appropriated to the Secretary not to exceed $30,000,000 to prepare the study required by subsection (a) and to provide the funding described in subsection (c).

Approved November 10, 1988.

LEGISLATIVE HISTORY—H.R. 4333 (S. 2238):

HOUSE REPORTS: No. 100-795 (Comm. on Ways and Means) and No. 100-1104 (Comm. of Conference).
SENATE REPORTS: No. 100-445 accompanying S. 2238 (Comm. on Finance).
CONGRESSIONAL RECORD, Vol. 134 (1988):
Aug. 4, considered and passed House.
Oct. 6, 7, S. 2238 considered in Senate.
Oct. 11, H.R. 4333 considered and passed Senate, amended.
Oct. 21, House and Senate agreed to conference report.

**INTELLIGENT TRANSPORTATION SYSTEMS**

27. Is this an Intelligent Transportation Systems (ITS) project as defined in federal law and regulation, and therefore subject to Federal Rule 940 Requirements? _ Yes; _ No
28. If yes, what is the status of the systems engineering analysis compliant with Federal Rule 940 for the project? _ Not Started; _ Ongoing, not complete; _ Complete
29. Under which Architecture:
    _ DC, Maryland or Virginia State Architecture
    _ WMATA Architecture
    _ COG/TPB Regional ITS Architecture
    _ Other, please specify:

**ITEM 11 - Information**
June 20, 2012

Briefing on the Montgomery County Executive's Task Force Report and Recommendations on Implementing a Rapid Transit System

**Staff Recommendation:** Receive briefing on the proposed rapid transit system and potential funding strategies.

**Issues:** None

**Background:** In May, a task force appointed by the Montgomery County Executive released its report and recommendations for implementing a 160 mile rapid transit vehicle (RTV) system utilizing sophisticated, surface level bus-type technology.

# Montgomery County Council

*From the Office of Councilmember Marc Elrich* May 22, 2012

**Contact:** 240-777-7966

NEWS RELEASE

## Montgomery Transit Task Force Recommends 160-mile County Rapid Transit System

*Councilmember Marc Elrich Welcomes Plan Based on His Original Rapid Transit Proposal*

ROCKVILLE, Md., May 22, 2012—Montgomery County Councilmember Marc Elrich today welcomed the report of the County's Transit Task Force (TTF) that calls for a "comprehensive transit network" across Montgomery County. The report, which was presented to County Executive Isiah Leggett today, largely reflects a transit plan for which Councilmember Elrich has advocated for more than four years. Councilmember Elrich said the plan the TTF recommends is "the most practical, efficient and cost effective way to develop a world-class transit system to deal with the challenges of mounting congestion and declining mobility."

*The complete text of Councilmember Elrich's statement on today's release of the Transit Task Force report:*

Today, in a report to the County Executive, the Transit Task Force (TTF) called for a "comprehensive transit network" across our County.

The Rapid Transit proposal being advanced today represents the refinement of my original proposal to construct a 120-mile rapid transit system that I first advanced four years ago. I continue to believe that it is the most practical, efficient and cost effective way to develop a world-class transit system to deal with the challenges of mounting congestion and declining mobility. Unless we address these challenges, economic development projects that are critical to our County's future will be stalled and our residents will experience worsening gridlock as well as more environmental degradation.

This proposal, when implemented, will connect the County's residential communities to its job centers and offers significant service improvements that will make it possible for far more residents to choose transit over continued use of single-occupant autos for the daily commute. And as the report highlights, there are creative and reasonable solutions to the financial and logistical challenges in implementing this system.

I was pleased to serve on the TTF, and I applaud the work of the task force members who were drawn from the civic, business, environmental and transit advocate communities. It is almost unprecedented in our County for leaders for these four groups to find common ground and unite behind a common approach for addressing our County's greatest challenge. That alone speaks volumes about the broad recognition that the solutions we need will require us to think differently.

This report gives us a plan of action that is sustainable and affordable. When a rapid transit system is done well, people will want to leave their cars behind and use public transit. I continue to believe that a countywide rapid transit system is the only reasonable solution for the positive future of our county. I now join the other members of the task force in calling for a Rapid Transit Vehicle (RTV) system, a concept that has evolved from the bus rapid transit (BRT) system I originally envisioned.

I would like to highlight some of the major points from the report that I believe are absolutely critical. First, the system's vehicles must have dedicated right-of-way. Put differently, the vehicles cannot travel in the same clogged lanes of traffic with cars and trucks. The report recommends a system with true station stops with real time electronic passenger information; off-vehicle, Metro-like fare collection; stylish, high-quality and accessible vehicles; and frequent, reliably fast service. It will be like a light rail experience with vehicles on tires instead of steel wheels, but at a quarter of the cost.

Additionally, as the report discusses, we can find creative and reasonable solutions to the financial and logistical challenges in implementing this system. I was pleased to serve on the TTF, and I applaud the work of the people with whom I worked. The members of the task force included an array of business, residential, governmental, and transit advocate representatives who worked diligently to offer reasonable, well-researched alternatives to some of the thorny questions of implementation. I encourage you to read this very detailed report (or at least the executive summary).

I understand that some residents may be wary of how an RTV system will impact their nearby roads and as the report points out, this system cannot be a one-size fits all design. Community specifics will have to be a part of the design of each route.

With the recent announcement by Governor O'Malley that the Corridor Cities Transitway (CCT) should be a BRT route (rather than light rail), we have the opportunity to use it to showcase a first phase of a world-class system. The report proposes a first phase of more than 80 miles of RTV network to include the CCT. The

CCT together with the other routes can provide the essential connections to move around the County.

Some of the financing scenarios include special taxes or taxing districts that would make this system a reality for less than a dollar per day for households and businesses. For a price that is less than a cup of coffee per day, we could transform our transportation system to one that is sustainable and consistent with the high quality of life of we have come to expect in our County. If we don't do this, then what else can we do to reduce congestion, accommodate growth, encourage economic development and mitigate environmental degradation?

We can choose a future in this County where new businesses choose to locate in our smart-growth centers and where our residents have meaningful transit- and environmentally-friendly options for travel. With an RTV system, we can serve current residents, businesses and visitors. We can also accommodate our share of future growth and development as allowed through the master plan process—in a manner that does not exacerbate the current clogged condition of our roadways.

We need to begin this now. We can have functioning, gold-standard routes in a relatively short time period—that is the beauty of an RTV system.

It may be difficult to imagine a system that would be better than anything we have now in the United States, but this report makes it clear that we understand what is needed and it gives us a clear path for how to get there. Now we must commit to it for the future of a healthy, green Montgomery County.

# # # #

# ITEM 12 - Information

June 20, 2012

Update on the Development of the TPB Regional Transportation Priorities Plan (RTPP)

**Staff Recommendation:** Receive briefing on the outcomes of listening sessions and a June 2 citizen focus group conducted to assess how best to communicate proposed regional challenges and strategies to the general public. Proposed future public outreach activities for the development of the priorities plan will also be presented.

**Issues:** None

**Background:** The TPB Regional Transportation Priorities Plan (RTPP) is being developed to identify near and long term regional strategies that offer the greatest potential contributions toward addressing regional challenges.

National Capital Region Transportation Planning Board
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# Memorandum

TO: Transportation Planning Board

FROM: Ronald F. Kirby, Director
Department of Transportation Planning

SUBJECT: Update on the Development of the TPB Regional Transportation Priorities Plan (RTPP)

DATE: June 14, 2012

This memorandum provides an update on the development of the Regional Transportation Priorities Plan (RTPP). The RTPP is being developed to identify regional strategies that offer the greatest potential contributions toward addressing regional challenges. This memorandum summarizes lessons learned from two recent public outreach activities: 1) listening sessions with regional stakeholders and 2) a June 2 citizen forum.

**Background**

RTPP Purpose

As growth in our region continues to place heavier demands on our transportation network, and as funding becomes more limited, decision-makers will be challenged to make critical improvements to roads, public transportation and pedestrian and bicycle facilities.

In response to these challenges, and at the request of the TPB's Citizens Advisory Committee, the TPB is embarking on a process to develop a Regional Transportation Priorities Plan (RTPP). The purpose of the RTPP is to identify those transportation strategies that best promote the TPB's goals for economic opportunity, transportation choices, system safety and efficiency, quality of life and environmental stewardship. Ultimately, it is envisioned that 10 to 15 strategies will be identified that the region can agree are the top priorities for addressing the most pressing regional challenges that the region faces in meeting the TPB's goals.

Schedule

The RTPP development process began in July 2011, when the TPB approved the scope of work for the RTPP. The scope of work acknowledged the importance of public support for the RTPP, and called for extensive public outreach throughout the process. In January and February 2012, TPB staff conducted a series of listening sessions with regional stakeholders representing a variety of interests throughout the region as well as citizen groups. More recently, the TPB hosted a citizen forum comprised of a

representative sample of citizens from throughout the region. These two public outreach events provided TPB staff with valuable feedback that is helping to ensure that the RTPP process and products are meaningful to the residents of the region. These two major public outreach efforts are described in greater detail below. The RTPP, expected to be complete in mid-2013, will continue to rely heavily on public input throughout the coming year.

**Listening Sessions**

Design and Conduct of Listening Sessions

Between January and February 2012, five regional stakeholder and citizen listening sessions were convened to provide feedback on the initial set of performance measures, challenges, and strategies. The listening sessions were also intended to provide guidance and input on framing identified challenges for the public during subsequent outreach phases.

In preparation for the listening sessions with regional stakeholders and citizen groups, TPB staff developed a list of performance measures to help identify regional challenges and measure progress toward meeting the challenges. Performance measures included things such as daily VMT per capita, job accessibility within 45 minutes, mode share, lane miles of congestion, Metro escalator availability, and bus stop accessibility.

The listening sessions included the following stakeholder and citizen groups:

- Citizens Advisory Committee (CAC) - January 12
- Air and Climate Public Advisory Committee (ACPAC) - January 23
- Regional Stakeholder Group 1, which included representatives from the Coalition for Smarter Growth, Action Committee for Transit, Amalgamated Transit Union Local 689, Sierra Club, Urban Land Institute, and UMD/National Center for Smart Growth
- Access for All Committee (AFA) - February 23
- Regional Stakeholder Group 2, which included representatives from the Northern Virginia Transportation Alliance, Greater Washington Board of Trade, AAA Mid-Atlantic, Suburban Maryland Transportation Alliance, DC BID Council, Buchanan Partners, and Washington Airports Task Force

Each listening session began with a presentation of possible performance measures and some example challenges based on the performance measures. When time allowed, a discussion of strategies followed this discussion.

Lessons learned

TPB staff gleaned two main lessons in moving forward with the RTPP:

First, TPB staff found that greater emphasis should be placed on the use of narrative, simple charts, and pictures to describe challenges and potential strategies to address them. Both stakeholders and citizen groups found many of the performance measures somewhat confusing. In general, listening session participants found the performance measures too technical and did not understand their significance for identifying regional challenges. It seemed clear that these performance measures would be just as confusing to the general public in future stages of the RTPP.

Second, regional disaggregation of challenges is often necessary. While some challenges are best presented at the regional level (such as air quality), other challenges are more meaningful if shown in a more locally-specific form (such as congestion and access to jobs).

Staff spent March thru May rethinking and reframing how to communicate the RTPP for the next round of public outreach.

**June 2 Forum**

Design and Conduct of the Forum

TPB staff conducted a citizen forum on Saturday, June 2, 2012 to test the new approach to communicating the RTPP.

The purpose of the forum was twofold. The first objective was to assess how best to communicate goals, challenges, and strategies to the general public. Additionally, the forum sought to assess whether the challenges and strategies presented were meaningful to the general public, and if there were any additional challenges or strategies that participants could suggest.

The format of the forum utilized a public outreach model called a deliberative forum. A deliberative forum allows citizens to learn about issues, share their thoughts via small group discussions and real-time polling, and hear from their peers. TPB staff contracted with America*Speaks*, a non-profit public outreach organization that specializes in the deliberative forum format, to help develop content, assist with logistics, and facilitate the June 2 forum.

Forum participants were carefully selected to ensure a sample that was fairly representative of the region in terms of home jurisdiction, race/ethnicity, gender, and other important characteristics. A group of 50 participants was sought, and 41 people ultimately participated in the forum. Participants were provided with a $100 stipend for their time.

The forum took place in the COG Training Center, and lasted for 5 hours. The morning was dedicated to an introduction to the RTPP, including an in-depth explanation and discussion of the regional goals and challenges using PowerPoint presentations and a printed Discussion Guide. Participants were given the opportunity to discuss the challenges, vote on how significant they thought the challenges were to achieving regional goals, and identify and vote on additional important challenges that they developed amongst themselves. The afternoon was spent on presentation, discussion and polling on strategies.

Here, the participants were encouraged to discuss pros and cons of each of six sample strategies, vote on the importance of pursuing these six strategies, and propose and vote on additional strategies that they developed.

Evaluation Results Concerning Communication of Goals, Challenges and Strategies

Because a major objective of the forum was to determine if the RTPP concepts were effectively communicated to the general public, a combination of evaluation forms, keypad polling questions, and debrief meetings with discussion facilitators were used to gather information about communication.

In response to the question, "Overall, do you feel that we are on the right track in clearly communicating regional transportation goals and challenges to the general public?", 37% of participants answered "Yes", an additional 55% of participants answered "Almost right, but needs a little tweaking", and only 8% said "No: the level of detail and presentation is too confusing".

Some specific "tweaks" that were suggested from participant evaluation forms include:

- **Use simplified goal language**
  Some goal language should be simpler and less technical. For example, Goal 4, "Maximize operational effectiveness and safety of the transportation system" could be changed to "Get the most out of the existing transportation system".
- **Use examples whenever possible to describe challenges**
  A few challenges sounded vague at first, but the use of examples helped participants understand the issue at hand. For example, participants were initially confused by the concept of bottlenecks on the freight network, but responded well to a picture of the Virginia Avenue tunnel.
- **All strategies must be explained thoroughly and at the appropriate level of specificity**
  Some strategies that TPB staff thought were self-evident, such as bikesharing, were not universally understood. Circumferential transit was felt to be too general; more specificity on which radial corridors would be connected would help, as for the example of the Purple Line.

Overall, the feedback was positive, and it appears that we are generally on the right track to effectively communicating the RTPP.

**Next Steps**

The listening sessions and forum that took place over the last several months have provided important feedback and recommendations for how best to communicate the principles and concepts of the RTPP to the public. A more comprehensive write-up of these activities and their outcomes will be included in Interim Report #2, to be presented at the July 18, 2012 meeting.

Refinement of RTPP Presentation and Materials

In the coming months, TPB staff will apply the lessons learned from the June 2 forum in preparation for future RTPP public outreach events. In refining RTPP presentations and materials, the following big picture points will be kept in mind:

- **The general public has some fresh concepts that could be included in the RTPP**
  Participants identified some important new themes, including the importance of agency transparency and accountability to ensure that existing and any possible additional future funds are spent effectively.
- **Continue to emphasize the importance of articulating regional challenges to provide a context for developing strategies**
  There is a tendency to bring up strategies without connecting them to regional challenges. RTPP materials and outreach tools should make it clear that strategies should be designed to respond to one or more identified challenges.
- **Suggest potential funding mechanisms along with strategies**
  Likely project costs and potential funding mechanisms should be suggested for each strategy. Participants had difficulty in evaluating strategies without some information on how much they would cost and where funding might come from.
- **Be even more concise in explaining the RTPP**
  Although the materials presented at the June 2 forum were an improvement over previous iterations, they are still quite lengthy. The next version of the materials ideally should be shorter and easier to understand.

Future Public Outreach Schedule

The next major RTPP public outreach event is scheduled to take place in the fall, when TPB staff hopes to utilize a web-based tool to help communicate the latest iteration of the RTPP goals, challenges, and strategies. The web-based tool will allow TPB staff to reach a larger segment of the general public, perhaps a sample of 600 individuals who represent the region, in addition to regional stakeholders and the TPB's citizen committees.

It is expected that the fall public outreach event will inform a further public outreach event in spring 2013, during which a number of public outreach tools will be utilized, possibly including another version of web-based polling, additional deliberative forums, and mobile kiosks. The purpose of these efforts would be to inform the selection of priority strategies from a longer list of strategies under discussion.

The ultimate goal of these public outreach efforts is to provide information to the TPB on priority strategies that are widely understood and could garner broad-based public support.

**ITEM 13 - Information**
June 20, 2012

Briefing on the Possible Addition of Tolling on I-95 in Virginia

**Staff Recommendation:** Receive briefing on an overview of preliminary results of the recent traffic and revenue study and planned next steps.

**Issues:** None

**Background:** The Virginia Department of Transportation (VDOT) is pursuing the possible addition of tolling on the I-95 corridor (south of the City of Fredericksburg at mile marker 126) through the Federal Highway Administration's Interstate System Reconstruction and Rehabilitation Pilot Program (ISRRPP). At the April 18 meeting, the Board was briefed on an overview of the I-95 Corridor Improvement Program and how toll revenue may possibly offset safety, mobility, and system preservation needs in the corridor.

VDOT
Virginia Department of Transportation

# Interstate 95 Corridor Improvement Program

June 20, 2012

VDOT

## Virginia's Interstate 95

- Opened to Traffic in the 1950's
- 178 Miles from NC to DC
- Crosses 17 Jurisdictions
- 427 Structures
- 40% of the Interstate Traffic in Virginia
- Some of the Worst Congestion in the US
- 67 Fatal Crashes from 2008 to 2010

# I-95 is a Critical Link for Virginia's Economy

- Serves 45% of Population
- Links 1.7 Million Jobs
- Connects Virginians to the World's Largest Regional Economy
- Links 8 Million Square Feet of Warehouse/Distribution Facilities
- Access to 3 International Airports
- Serves Richmond and Norfolk Ports



# I-95 Needs

**80%** Mainline Bridges Over 40 Years Old

**67%** Portion of I-95 at or above Capacity by 2035

**72%** Mainline Pavement in Need of Maintenance

**40%** Projected Increase in Travel Time by 2035

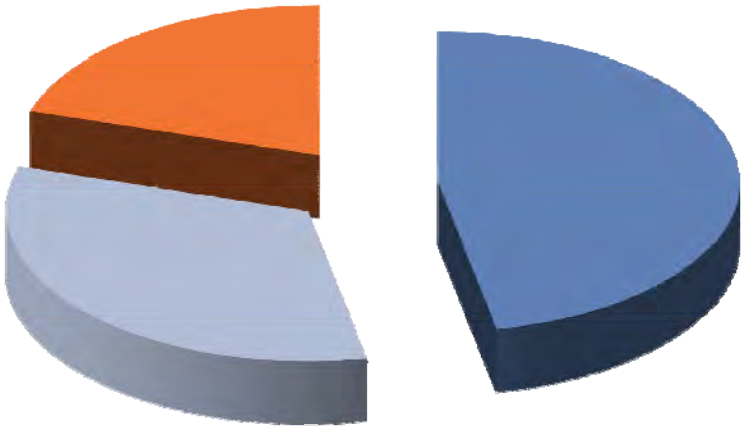
**$12.1B** Projected 25-Year Need

**$ 2.5B** Projected 25-Year Funding at Current Levels

**($ 9.6B)** Funding Gap

# Balanced Use of Funding

**VDOT is committed to a balanced funding approach to advancing I-95 projects.**



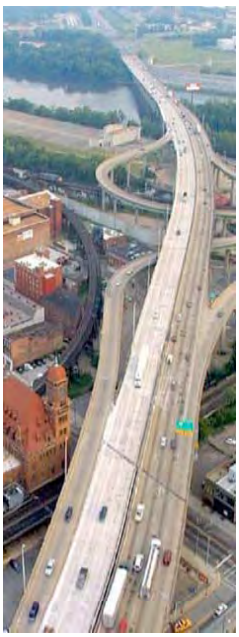
**I-95 Funding Sources**

- Six Year Improvement Program
- Operations & Maintenance
- Toll Revenue



# Tolling Proposal Background

- **FHWA's Interstate System Reconstruction and Rehabilitation Pilot Program (ISRRPP) permits a state to toll an interstate facility**
  - **Limited to three facilities in three different states**
- **April 2010: VDOT submitted a proposal to toll I-95**
- **January 2011: VDOT submitted an expression of interest**
- **September 2011: FHWA granted conditional provisional approval**
- **The toll revenue will be used to make pavement, structural, operational, capacity, and safety improvements throughout the corridor**



# Outreach & Coordination

- Outreach & Coordination (MPOs/PDCs/Local Governments)
  - Kick-off (February 8th Winter meeting)
  - Individual meetings with MPO & PDC staff
  - Environmental coordination letters
  - MPO Policy Board meetings
  - Regional workshops
- Business Stakeholders
  - Virginia Trucking Association (Briefing June 14th)
  - Virginia Chamber of Commerce
  - Others
- Continued Outreach - Public Meetings (Fall 2012)
  - Residents
  - Businesses



# Outreach & Coordination

| MPO Policy Board Briefings (elected officials) | Process, Scenarios, etc. | Traffic & Revenue, Tolling strategies, etc. |
|---|---|---|
| Richmond Area | April 12th | June 14th |
| Tri-Cities | April 12th | June 14th |
| Fredericksburg Area | April 16th | June 18th |
| National Capital Region | April 18th | June 20th |

| MPO/Local Government Staff Workshops | Date |
|---|---|
| Southern Workshop (Petersburg) | June 4th |
| Northern Workshop (Fredericksburg) | June 6th |
| Richmond Area MPO Transportation Advisory Committee | June12th |

# What Toll Rates to Employ?

- **If Virginia attempted to fund the entire $9.6 B gap over 25 years by tolls alone, the toll rate required would be:**
  - Utilizing two collection points, one north of Richmond and one south of Petersburg, the toll rate would be ~ **$0.53 per mile***
  - Using a barrier system with 6 collection points, the toll rate would be ~ **$0.27 per mile***
  - Using a closed system where all trips were charged based on actual miles traveled, the toll rate would be ~ **$0.14 per mile**
- **VDOT analyzed rates from $0.02 to $0.15 per mile**
- **VDOT is requesting approval to initiate tolling at a reduced rate of ~ $0.02 per mile**

*** Note that diversion would be extremely high with rates of $0.27 to $0.53 per mile under these scenarios.**



# Toll Scenarios Analysis

**Potential Locations:**

- **A1: 1 Gantry System (tolling both directions)**
- **A2: 2 Gantry System (one toll northbound; one toll southbound)**
- **A3: 2 Gantry System (tolling both directions)**
- **B: 6 Gantry System (tolling both directions at ~ 20 mile intervals)**
- **C: Closed System (tolling at every interchange – ramps)**
- **D: Hybrid System (mainline tolling + ramp tolling)**
- **E: Closed System (tolling between every interchange)**

# How to toll?
# (location and # of gantries)

**Factors to consider (location):**

- **Traffic Characteristics**
  - Local vs long-distance
  - Truck %
- **Diversion**
  - Availability of routes for local trips
  - Ability to reduce diversion (i.e. capacity for ramp tolling)
  - Number and types of businesses in area (i.e. truck services, lodging, food services, etc.)

**Factors to consider (# of gantries):**

- **Implementation (ease and timeliness of construction, etc.)**
- **Cost effectiveness of up-front capital costs**
- **Operations and maintenance implications**



# Option A-1: One Gantry System
# (tolling both directions)

**Current Condition**

- ADT 36,000
- 15% trucks
- 48% of traffic continues through mile marker 100
- Low commuter traffic
- Low local trucks
- High long-haul trucks

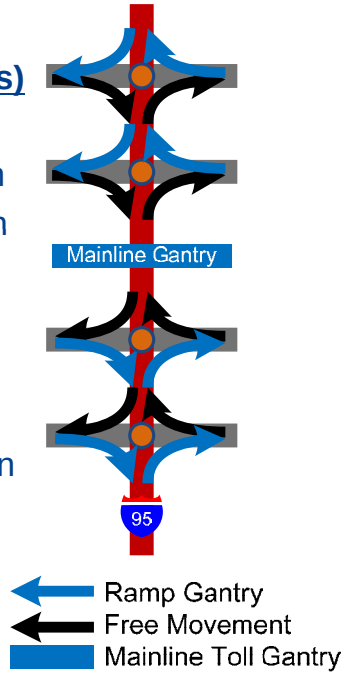
**Items Under Further Review**

- Diversion
- Toll Rate vs Revenue
- Economic Review

# Option A-1: One Gantry System (tolling both directions)

**A-1: One Gantry System (tolling both directions)**

- **Location:** Gantry Between MP 20 and MP 24
  Ramp Gantries to Minimize Diversion
- **Method:** Open Road Tolling & Cash Collection
- **Rate:** $4.00 2-Axle Mainline (~$0.02/mile)
  $2.00 2-Axle Ramp
  5-Axle Vehicle: 3X Base Rate
- **Duration:** >30 Yrs
- **Operator:** VDOT will own, operate, and maintain (option to contract)
- **Congestion Pricing:** None, Fixed Rates
- **Rate Changes:** Indexed to Inflation






# Benefits of Tolling Revenue

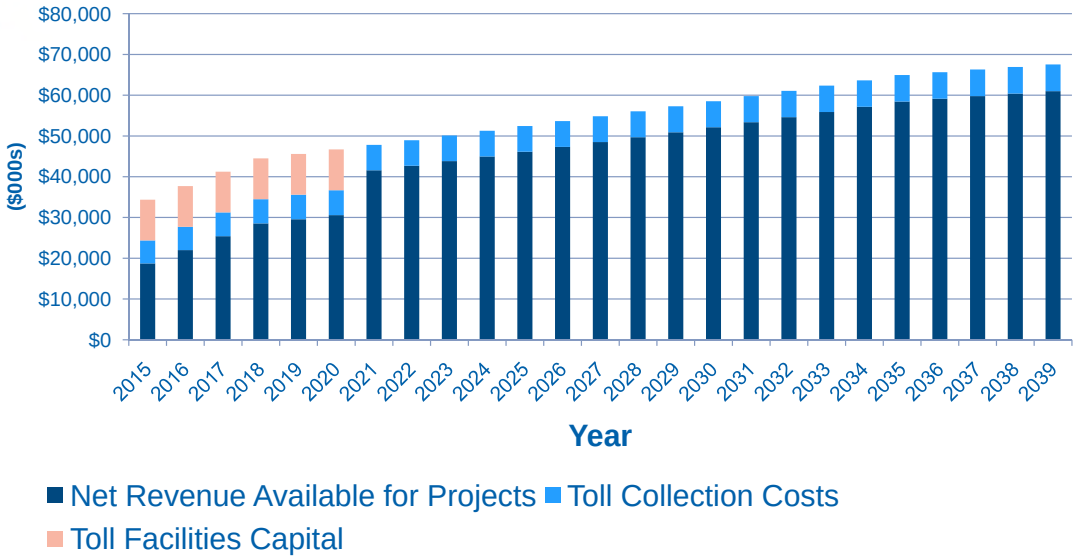
**Gross Revenue Projections:**

- **Scenario A-1** **~ $35M - $40M/year (gross)**
- **Other Scenarios** **~ $55M - $160M/year (gross)**

**Acceleration of an identified need (SYIP, CLRP, STP, and other priorities) – Potential uses of Scenario A-1 six year revenue:**

- **Safety**
  - **I-95/I-64 Overlap Study – Short Term Improvements**
- **Mobility/Economic Vitality**
  - **I-95/I-85/460 Interchange upgrades**
- **System Maintenance & Preservation**
  - **Pavement Reconstruction (~ 35 Lane Miles)**
  - **Bridge Reconstruction (~ 4 Bridges)**

# Preliminary Revenue Projections
# Scenario A-1






# Preliminary Schedule

- **Jan – April 2012** — **Data Collection/Analysis**
- **Feb 2012** — **Vision Plan**
- **April 2012** — **MPO/Locality Briefings**
- **May 2012** — **Preliminary Traffic & Revenue Forecasts, tolling scenario analysis, etc.**
- **June 2012** — **MPO/PDC/Locality Workshops**
- **Summer 2012** — **Submit ISRRPP application to FHWA**
- **Fall 2012** — **Public Hearings**
- **Winter 2012** — **Execute Tolling Agreement**