# National Capital Region Transportation Planning Board

# Metropolitan Washington Council of Governments

## FY–2005 Network Documentation:
## Highway and Transit Network Development

DRAFT

**June 30, 2005**

**Item III A**
**From the FY-2005 Unified Planning Work Program**
**for Transportation Planning for**
**the Metropolitan Washington Region**

The preparation of this report was financially aided through grants from the District of Columbia Department of Public Works, the Maryland Department of Transportation, the Virginia Department of Transportation, and the U.S. Department of Transportation (Federal Highway Administration and Federal Transit Administration) under the Urban Mass Transit Act of 1964, as amended. The material herein does not necessarily reflect the views of the sponsoring agencies.

| Title | Date | June 30, 2005 |
|---|---|---|
| FY-2005 Network Documentation: Highway and Transit Network Development | **Number of pages** | XXX |
| | **Publication number** | XXXXX |
| | **Price** | $20.00 |

**Agency**

The Metropolitan Washington Council of Governments (COG) and the National Capital Region Transportation Planning Board (TPB).

COG serves as the regional planning organization for the Washington metropolitan area. COG works toward solutions to regional problems, especially those related to regional growth, transportation, housing, human services, and the environment. The TPB is the designated Metropolitan Planning Organization (MPO) for transportation planning in the Washington region. Members of the TPB include representatives of local governments; state transportation agencies; the Maryland and Virginia General Assemblies; the Washington Metropolitan Area Transit Authority; and non-voting members from the Metropolitan Washington Airports Authority and federal agencies.

**Credits**

| | |
|---|---|
| Program Administration: | James C. Hogan |
| Project Manager: | Robert Snead |
| Transportation Engineers: | Wanda Hamlin, John Bethea, Joseph Davis |
| Technical Assistance: | Ronald Milone, Martha Kile, Charlene Howard, Jane Posey, William Bacon, Meseret Seifu, Mark Moran |

**Abstract**

This report describes the development of highway and transit networks that represent the ground transportation system of the Washington, D.C. metropolitan area for the purposes of travel demand modeling. These networks are important inputs to the TPB Version 2.1 D #50 travel demand model. COG's Geographic Information System (GIS) has been employed to pre-process and manage network components, and is used to link the transportation network development process to other TPB planning activities, including Cooperative Forecasting, Corridor Studies, Models Development, Congestion Monitoring, and the Regional Transportation Data Clearinghouse. This work program represents a continuation of a multi-year networks and models development plan that was formulated in FY-93 under the direction of the Travel Forecasting Subcommittee, a subcommittee of the Transportation Planning Board's Technical Committee.



**Order copies from**

Metropolitan Washington Council of Governments
777 N. Capitol Street, N.E., Suite 300
Washington, D.C. 20002-4239
Tel. (202) 962-3200 (1-5 p.m.)
Order online at: www.mwcog.org

# FY-2005 Network Documentation: Highway and Transit Network Development

## Table of Contents



## Appendices

# FY-2005 Network Documentation: Highway and Transit Network Development

## List of Exhibits

## List of Exhibits (continued)

# 1 Introduction

This report documents work activities completed by COG/TPB staff in accordance with the transportation network development element identified in the *FY-2005 Unified Planning Work Program* (UPWP). Network development activities are designed to support the regional forecasting procedure known as the "Version 2.1 D #50" travel model. The model is an advanced four-step tool developed by COG/TPB's models development staff.[1] [2] It includes work and non-work mode choice models as well as time-of-day-specific traffic assignments: AM peak period, PM peak period, and the off-peak period. The networks developed this fiscal year are consistent with specifications documented in COG report entitled, "COG/TPB Travel Forecasting Model Version 2.1 D #50 User's Guide," November 17, 2004.

Network development activities primarily support transportation modeling that the TPB undertakes each year to ascertain how well the Transportation Improvement Plan (TIP) and Constrained Long Range Plan (CLRP) meet air quality objectives in accordance with federal requirements. This analysis is formally known as the Air Quality Conformity Determination. The upcoming conformity assessment will address the FY-2006-2011 TIP and 2005 CLRP. As part of these activities, base year transit and highway networks are updated with information provided by the regional transit providers and by state and local government highway agencies. After base year networks are refreshed, forecast year networks are subsequently developed from the refreshed base year files for specific horizon years, as specified in the requirements. During FY-2005 network files were prepared for the years 2010, 2020, and 2030.

The sections below describe general network development concerns, including an overview of the network development program, COG's transportation analysis zone (TAZ) system, and the network node numbering system. A review of the changes assumed in the FY2006-2011 TIP and 2005 CLRP is presented in Chapter 2. A detailed description of the network elements produced by the network development team is detailed in Chapter 3.

The network development process continues to be facilitated by improvements in communications technology and emerging software tools. Information transfer between agencies is increasingly being conducted in electronic form. There has been an increased reliance on using the Internet to obtain updated information in a timely manner. Staff has also been relying upon GIS-based databases at COG to develop network files in a more accurate and consistent manner.



[1] COG/TPB Travel Forecasting Model, Version 2.1 D #50, *Calibration Report*, November 17, 2004.
[2] COG/TPB Travel Forecasting Model, Version 2.1 D #50,*User's Guide*, November 17, 2004.

## *1.1 Transportation Network Files*

Transportation forecasting models are used to estimate vehicle and transit-person volumes through a process of finding equilibrium between demand and supply. Networks are used in the modeling process as abstractions of the regional highway and transit system. As such, they can be viewed as the 'supply-side' of the transportation model.

Highway networks are generally developed to conform to a pre-defined TAZ system. Therefore, network coding is finer for developed areas containing physically small zones and coarser for less-developed areas containing larger zones. The current study area for Washington, D.C., referred to as the 2,191-zone modeled area, is shown as Exhibit 1-1.

The cordon encompasses a land area of 6,800 square miles and is comprised of 22 jurisdictions[3], spanning the District of Columbia, Northern Virginia, suburban Maryland, and one county in West Virginia. A typical COG/TPB highway network consists of about 18,000 directional highway links. Roads can be classified into four major types: freeways, arterials, collectors, and locals. COG/TPB highway networks typically include all freeways and arterials, most collectors, and some local roads.

Beyond the design of the zone system, transportation networks are developed with two basic considerations: the requirements of the transportation model, and the requirements and/or constraints of the software used to apply the model. Networks are used to estimate service levels (e.g., travel times and costs) between TAZ's, which figure into the distribution of travel and the choice of mode. They are also necessary for determining the choice of route for the modeled modes and the development of travel volumes. The Version 2.1 D #50 model requires AM and off-peak transit and highway networks at zonal level for trip distribution and mode choice. A PM highway network is also required in the Version 2.1/TP+ process as a component of the traffic assignment process.

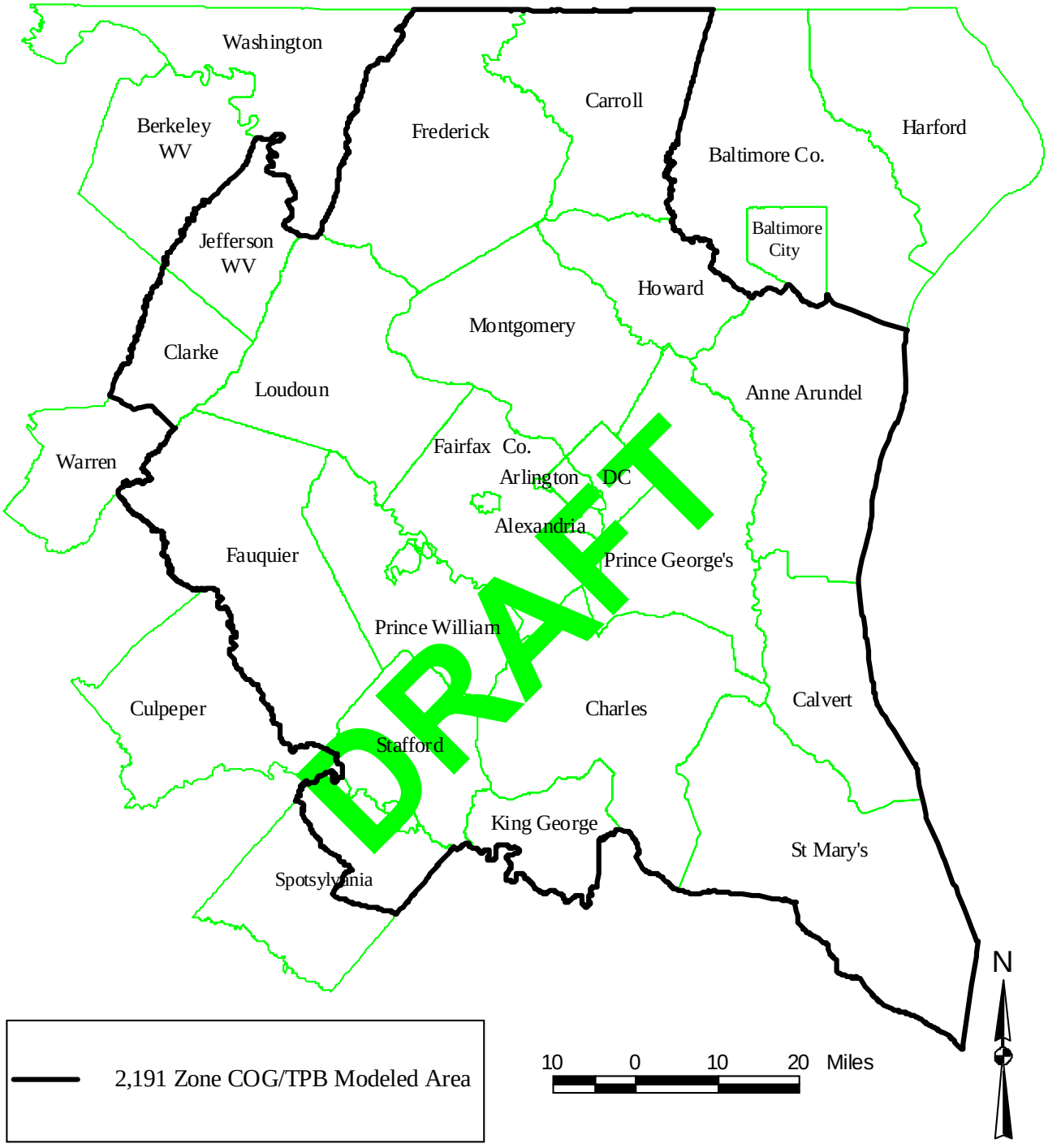
The files that result from the COG/TPB's network development process for the purposes of modeling are highway link files, transit line files, transit network support files such as rail (non-highway links) links and transfer links. Because the transit fare estimation used by COG/TPB models is derived from transit path-based information, transit fare development is implicitly considered as a component of the network building process. Therefore, files supporting the estimation of transit fares are also prepared in network development.

The files that support network building and the fare development processes of the Version 2.1 D #50 model are described in greater detail in Chapter 3.



[3] The expanded cordon bisects one of the 22 jurisdictions, Spotsylvania County. Its northern portion (approximately north of VA 606) is within the modeled area and the remaining area is outside. The expanded cordon includes all other jurisdictions in their entirety.

**Exhibit 1-1: 2,191-Zone COG/TPB Modeled Area**



## *1.2 Overview of Network Development*

Given the importance and regularity of the COG/TPB's annual air quality conformity studies, network development has evolved into a cycle of activities around this yearly event. During late summer and fall, transit and highway network summaries from the previous conformity study are evaluated and updated as per the latest transit schedules and the most recent TIP changes. A solicitation of transit data from the local providers is also made during the fall to ensure that the base-year transit files are verified (or refreshed) with the most recent data. During winter, the development of planned improvements for the next TIP cycle is formulated through the COG/TPB process. Network coding for the next conformity cycle normally occurs in March, in preparation for model executions commencing in May. During FY-2005, network files for use in the air quality conformity analysis of the FY-2006-2011 TIP and 2005 CLRP were prepared for the years 2010, 2020, and 2030.

Transportation network development is a lengthy process involving the collection of data from a number of agencies in the region and updating of existing data sets to the appropriate years. The process also entails the application of ArcInfo, SAS, and FORTRAN programs to update, build, and generate highway network files, to summarize files, and to check the integrity and accuracy of the files. Automated checking procedures insure that changes in network link attributes between years are reasonable. A number of intermediate development steps are not discussed in this report. Instead, the intention of this report is to provide information on the files that result at the end of the development process, which directly support travel modeling.



## *1.3 Overview of Version 2.1 D #50 Model Networks*

The Version 2.1 D #50 model is a four-step travel model, applied on the 2,191-zone modeled area. Three highway networks are required representing weekday operations occurring in the AM peak period (6:00-9:00 AM), the PM peak period (4:00-7:00 PM), and the off-peak period (comprised of the remaining 18 hours). Highway network coding reflects operational differences between the three periods. Examples of operational differences may include directionality changes (alternating one-way/two way operations), lane configuration changes, or vehicle prohibition changes (for example, facilities that are dedicated for HOV facilities during peak periods, but revert to general use operations during non-peak times).

The travel model requires zone-to-zone transit times and fares (known collectively as "skims") representing AM peak period conditions and off-peak conditions. The one-hour time period from 7:00 AM to 7:59 AM is used to represent peak period conditions. Off-peak period conditions are represented by a five-hour time period from 10:00 AM to 2:59 PM. Consequently, AM and off-peak transit networks are developed and are built over the highway networks. Transit paths are categorized into two access markets: walk-access and drive access.

The Version 2.1 D #50 model also explicitly utilizes a transit accessibility measure, which is derived using transit network times, as an input to the vehicle availability model. The vehicle availability model, in turn, affects the computation of trip generation.

## *1.4 New Developments*

This section summarizes the elements that distinguish the Version 2.1 D #50 model networks from those used in prior models. The FY-2005 updates that pertain to network development are summarized below:

- The network node numbering system for the highway and transit networks has been revised. The system now includes a highway node number range that is allocated for HOT (high occupancy toll) lanes and a range of transit nodes for Light Rail and Transitway systems that were modeled in the recent Regional Mobility and Accessibility Study networks.

- In 2005, tolls were increased on the Dulles Toll Road (VA 267). Network toll codes indicate the out-of-pocket costs charged for the use of specific highway links. The tolls are expressed in current year dollars. The Dulles Toll Road involves both access and egress tolls which vary by location. The entry charge at the eastern end of the facility was increased from 50 cents to 75 cents, levied in both directions. A toll charge of 50 cents is now charged at all west-bound off-ramps, east-bound on-ramps, and at the Sully Road (Route 28) exits. A toll charge of 25 to 35 cents was levied previously.

- HOT-Lanes on I-495 Capital Beltway in Virginia are added to the networks for 2010 and beyond. The facility is coded using an on/off ramp based approach where the link-based toll facility type variable (TOLLGRP) is used to access a lookup table of fixed fees and per-mile rates. As of this date, a toll structure has not been determined by the state.

- Procedures for coding bus priority lanes have been updated. Previously, priority lanes were specified with special "speeds" parameters coded in transit line files. Time savings that priority lanes provide are now reflected by changes in the "Runtime" parameter.

- VRE fare increases in the summer of 2005 precipitated an update of the bus fare matrix for use in the conformity analysis of the 2005 CLRP and FY-2006-2011 TIP.



## *1.5 Zone and Node Numbering Systems*

The current area system includes 2,191 TAZ's (transportation analysis zones). The area system includes both internal TAZ and external stations. Because the system provides for "spare" zones that may be utilized for future studies, the number of actual 'used' internal TAZs is 1,972. The TAZ's are numbered sequentially in ranges corresponding to the modeled jurisdictions.

An equivalence table indicating the relationship of TAZ ranges to jurisdictions is shown in Exhibit 1-2 (Note, the district area system shown in Exhibit 1-2 is not used in Version 2 models). The exhibit indicates that the TAZ range allocation for each jurisdiction is inclusive of both "existing" and "spare" zones. The exhibit also indicates that the area system contains 47 external stations, numbered from 2145 to 2191. The locations of external stations are shown in Exhibits 1-3 and 1-4.

Exhibit 1-2 : Equivalence Table for TAZ, Districts, and Jurisdictions for the Modeled Area

| | **Expanded Cordon 2,191 Zones / 487 Districts** | | | | | | |
|---|---|---|---|---|---|---|---|
| Jurisdiction | Juris. Code | Zone Range | No. of Zones | Unused Zones | District Range | No. of Districts | Unused Districts |
| District of Columbia | 0 | 1-319 | 319 | - | 1-35 | 35 | 36-40 |
| Montgomery Co., Md. | 1 | 320-627 | 308 | 628-639 | 41-75 | 35 | 76-80 |
| Prince Georges Co., Md. | 2 | 640-1020 | 381 | 1021-1029 | 81-124 | 44 | 125-129 |
| Arlington Co., Va. | 3 | 1230-1311 | 82 | 1312-1329 | 245-260 | 16 | 261-265 |
| City of Alexandria, Va. | 4 | 1330-1389 | 60 | 1390-1399 | 266-271 | 6 | 272-276 |
| Fairfax Co., Va. | 5 | 1400-1755 | 356 | 1756-1779 | 277-316 | 40 | 317-321 |
| Loudoun Co., Va. | 6 | 1780-1905 | 126 | 1906-1919 | 322-343 | 22 | 344-348 |
| Prince William Co., Va. | 7 | 1920-2061 | 142 | 2062-2069 | 349-368 | 20 | 369-373 |
| (Unused) | 8 | | | | | | |
| Frederick Co., Md. | 9 | 1030-1053 | 24 | 1054-1059 | 130-150 | 21 | 151-155 |
| Howard Co., Md. | 10 | 1080-1099 | 20 | 1100-1109 | 170-176 | 7 | 177-181 |
| Anne Arundel Co., Md. | 11 | 1110-1142 | 33 | 1143-1149 | 182-198 | 17 | 199-203 |
| Charles Co., Md. | 12 | 1200-1223 | 24 | 1224-1229 | 226-239 | 14 | 240-244 |
| (Unused) | 13 | | | | | | |
| Carroll Co., Md. | 14 | 1060-1073 | 14 | 1074-1079 | 156-164 | 9 | 165-169 |
| Calvert Co., Md. | 15 | 1150-1163 | 14 | 1164-1169 | 204-209 | 6 | 210-214 |
| St. Mary's Co., Md. | 16 | 1170-1190 | 21 | 1191-1199 | 215-220 | 6 | 221-225 |
| King George Co., Va. | 17 | 2070-2074 | 5 | 2075-2079 | 374-378 | 5 | 379-383 |
| City of Fredericksburg, Va. | 18 | 2100-2101 | 2 | 2102-2104 | 398 | 1 | 399-400 |
| Stafford Co., Va. | 19 | 2080-2093 | 14 | 2094-2099 | 384-392 | 9 | 393-397 |
| Spotsylvania Co., Va. | 20 | 2105-2110 | 6 | 2111-2114 | 401-404 | 4 | 405-409 |
| Fauquier Co., Va. | 21 | 2115-2125 | 11 | 2126-2129 | 410-418 | 9 | 419-423 |
| Clarke Co., Va. | 22 | 2130-2132 | 3 | 2133-2134 | 424-426 | 3 | 427-431 |
| Jefferson Co., W.Va. | 23 | 2135-2141 | 7 | 2142-2144 | 432-435 | 4 | 436-440 |
| **Total Internal Zones** | | | **1972** | | | **333** | |
| **External Stations** | | **2145-2191** | **47** | | **441-487** | **47** | |
| **Total Zones / Stations** | | | **2019** | | | **380** | |
| *(Total Used & Unused)* | | | *2191* | | | *487* | |

**Exhibit 1-3: Location of External Stations in the Modeled Area**
**Map 1 of 2**

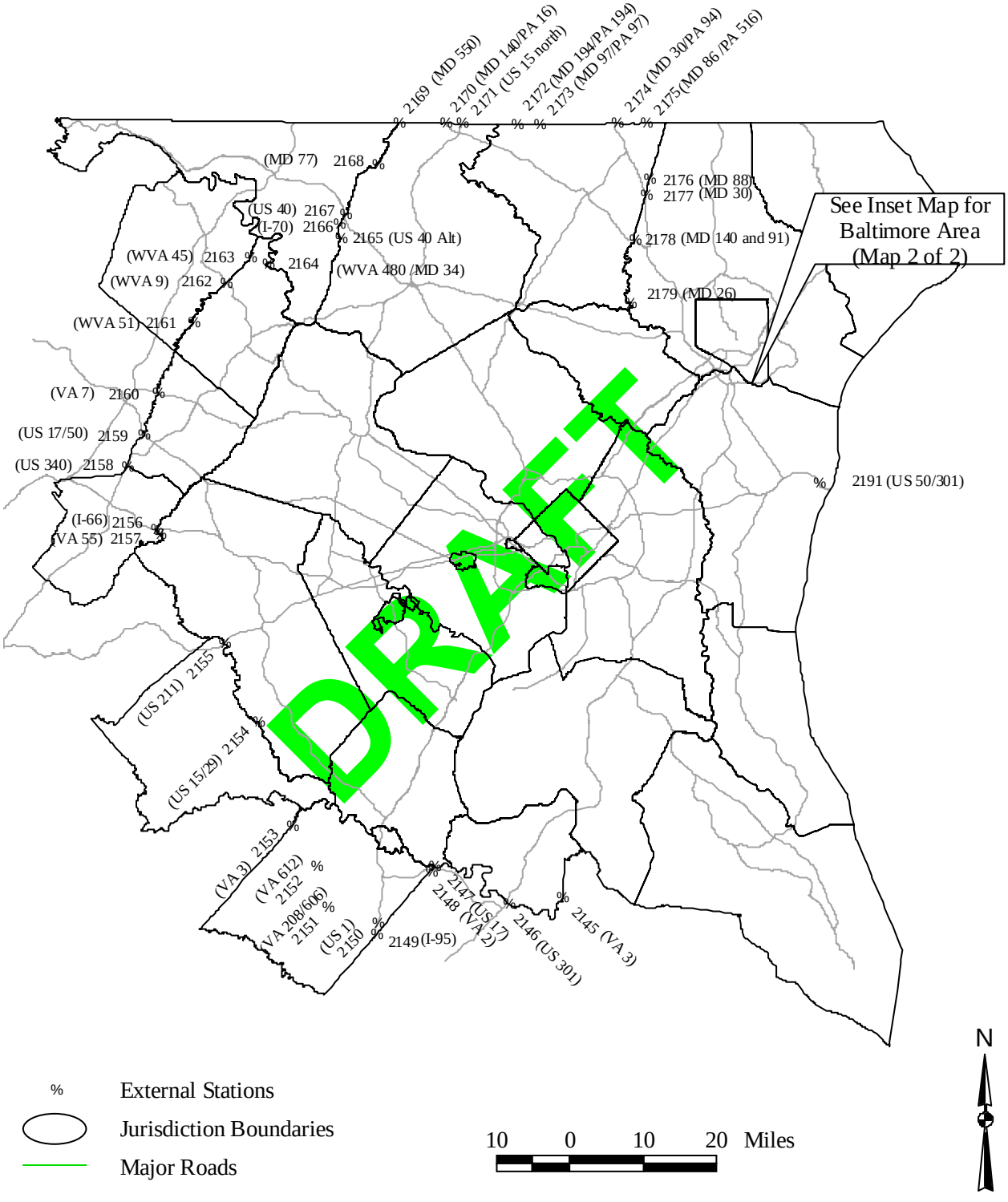
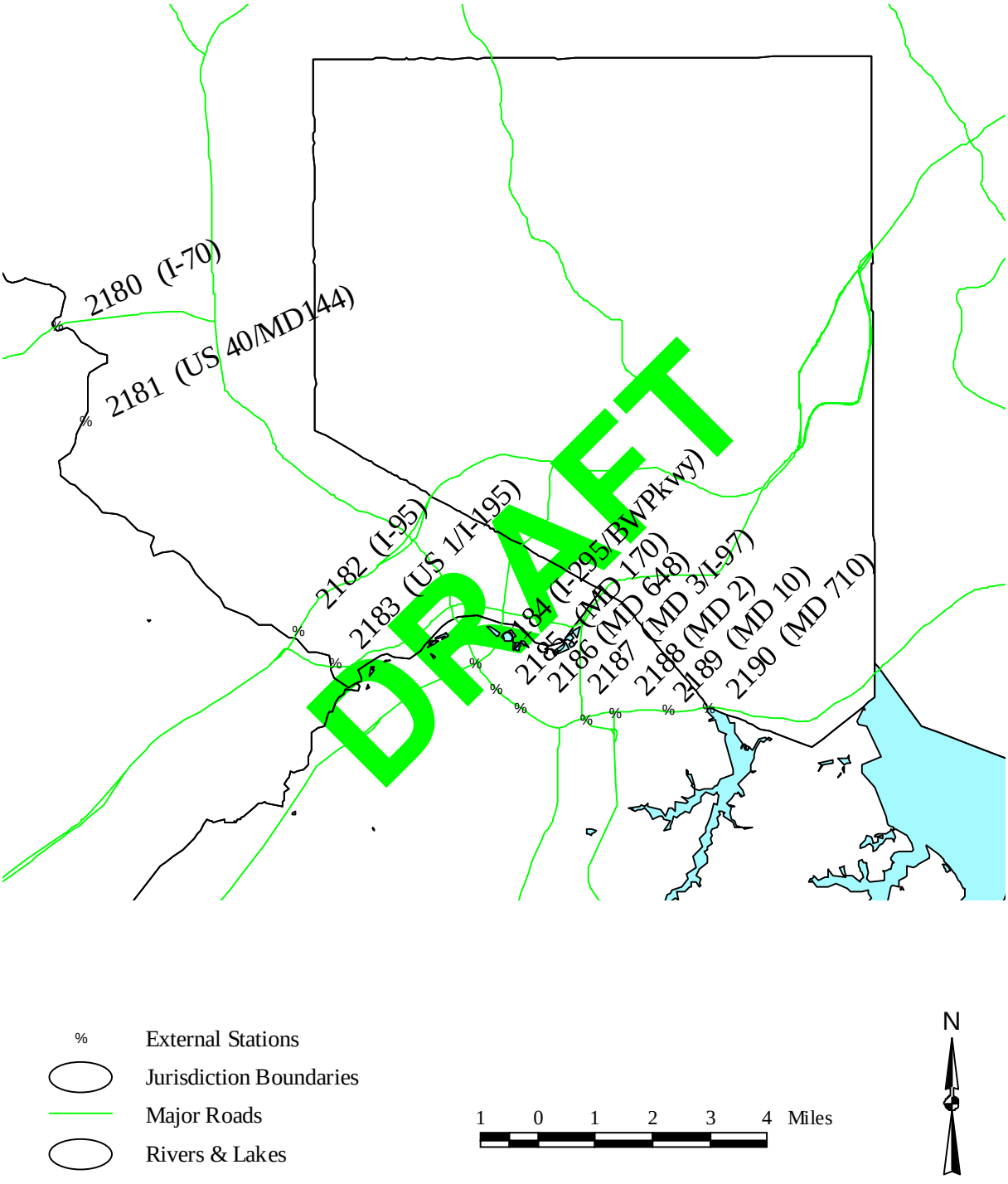


**Exhibit 1-4: Location of External Stations in the Modeled Area**
**(Inset Map for Baltimore Area)**
**Map 2 of 2**



A network node numbering system was established for the highway and transit networks in 1997 as a way to locate nodes and minimize the mistaken use of the same nodes in multiple locations. The node numbering system is revised yearly as nodes are added for network updates.

Highway node ranges have been developed by jurisdiction, and are further distinguished by general use facilities and special HOV facilities. This year the highway node range was expanded to include Virginia beltway HOT lane coding with a node range between 23,000 and 23,500.

Node ranges corresponding to transit network elements (rail stations nodes, parking lots nodes) were also expanded for the Regional Mobility and Accessibility Study. LRT (light rail transit) and transitway station node numbers have been allocated to a new range: 20,000 to 22,000. V2.1D#50 model's FORTRAN computer programs and TP+ scripts were updated to accommodate increased node ranges. The current highway and transit network node ranges are summarized in Exhibit 1-5.



**Exhibit 1-5: Node Ranges for the Modeled Area**

| | | | |
|---|---|---|---|
| **I. Zone Centroids** | | | |
| A. Zones | 1 | - | 2191 |
| **II. Highway Nodes: General Use (Non-HOV) Facilities** | | | |
| A. District of Columbia | 8400 | - | 9999 |
| B. Montgomery County | 3000 | - | 3999 |
| | 15000 | - | 15299 |
| C. Prince George's County | 4000 | - | 4999 |
| D. Arlington County | 5000 | - | 5499 |
| E. Alexandria | 5500 | - | 5999 |
| F. Fairfax County | 6000 | - | 6385 |
| | 6500 | - | 6899 |
| | 10501 | - | 10900 |
| G. Prince William County | 6386 | - | 6499 |
| | 7000 | - | 7100 |
| | 10151 | - | 10200 |
| | 10401 | - | 10450 |
| | 16000 | - | 16199 |
| H. Loudoun County | 6900 | - | 6999 |
| | 7101 | - | 7299 |
| | 15600 | - | 15799 |
| I. Frederick County | 13200 | - | 13499 |
| J. Carroll County | 13500 | - | 13599 |
| K. Howard County | 13600 | - | 13799 |
| L. Anne Arundel County | 13000 | - | 13199 |
| | 13800 | - | 13999 |
| M. Calvert County | 14000 | - | 14099 |
| N. Saint Mary's County | 14100 | - | 14199 |
| O. Charles County | 14200 | - | 14399 |
| P. King George County | 14400 | - | 14499 |
| Q. Stafford / City of Fredericksburg | 14500 | - | 14699 |
| R. Spotsylvania County | 14700 | - | 14799 |
| S. Fauquier County | 14800 | - | 14899 |
| T. Clarke County | 14900 | - | 14949 |
| U. Jefferson County | 14950 | - | 14999 |



Ref: NodeRangeFY05.xls

**Exhibit 1-5: Node Ranges for the Modeled Area**

| | | | |
|---|---|---|---|
| **III. Highway Nodes: HOV Facilities** | | | |
| A. I-95 Fairfax Co., - Outside the Beltway | 10000 | - | 10150 |
| B. I-95 Stafford Co. | 10201 | - | 10250 |
| C. I-66 Fairfax Co., - Outside the Beltway | 10251 | - | 10400 |
| D. I-66 Fauquier Co. | 10451 | - | 10500 |
| E. I-267 Dulles Toll Road | 10901 | - | 11550 |
| F. I-95 Prince William Co. | 11551 | - | 11650 |
| G. US 50 (MD) | 11651 | - | 11680 |
| H. MD 4 | 11681 | - | 11694 |
| I. US 50 (MD) | 11695 | - | 11700 |
| J. Maryland - HOV Alternatives | 11701 | - | 11709 |
| K. MD 210 | 11710 | - | 11753 |
| L. Maryland ICC | 11754 | - | 11835 |
| M. Franconia-Springfield Parkway | 11836 | - | 11843 |
| N. Virginia - HOV Alternatives | 11844 | - | 11884 |
| O. US 1 (VA) Outside Beltway | 11885 | - | 11893 |
| P. Virginia - HOV Alternatives | 11900 | - | 11999 |
| Q. I-66 Inside the Beltway | 12000 | - | 12099 |
| R. District of Columbia - HOV Alternatives | 12100 | - | 12200 |
| S. I-395 Fairfax Co. - Inside the Beltway | 12201 | - | 12300 |
| T. I-395 Alexandria - Inside the Beltway | 12301 | - | 12400 |
| U. I-395 Arlington - Inside the Beltway | 12401 | - | 12500 |
| V. I-270 (MD) | 12501 | - | 12700 |
| W. I-495 Capital Beltway | 12701 | - | 12882 |
| X. US 1 (VA) Inside Beltway | 12883 | - | 12899 |
| Y. Maryland ICC | 12900 | - | 12999 |
| Z. Maryland ICC | 15307 | - | 15449 |
| AA. I-270 (MD) | 15450 | - | 15475 |
| AB. Maryland ICC | 15476 | - | 15599 |
| AC. Fairfax Parkway | 15825 | - | 15860 |
| AD. Maryland ICC | 18500 | - | 18649 |
| **IV. Highway Nodes: Interchange Ramps** | | | |
| A. Montgomery County | 16500 | - | 16699 |
| B. Prince George's County | 16700 | - | 16899 |
| C. Frederick County | 16900 | - | 16999 |
| D. Calvert County | 17000 | - | 17099 |
| E. Charles County | 17100 | - | 17199 |
| F. Alexandria | 17200 | - | 17299 |
| G. Arlington County | 17300 | - | 17399 |
| H. Fairfax County | 17400 | - | 17599 |
| I. Prince William County | 17600 | - | 17799 |
| J. Loudoun County | 17800 | - | 17999 |
| K. Stafford / City of Fredericksburg | 18000 | - | 18199 |
| L. District of Columbia | 18200 | - | 18399 |



**Exhibit 1-5: Node Ranges for the Modeled Area**

| | | | |
|---|---|---|---|
| **V. Highway Nodes: VA Hot Lanes** | | | |
| A. Fairfax County | 23000 | - | 23500 |
| **VI. Highway Nodes: General-Use Facilities - Reserved for Future Alternatives** | | | |
| A. Maryland | 15450 | - | 15599 |
| | 18650 | - | 19500 |
| B. Virginia / West Virginia | 15861 | - | 15999 |
| | 19501 | - | 19699 |
| C. District of Columbia | 16200 | - | 16499 |
| **VII. Transit Nodes: Metrorail** | | | |
| A. Stations | 7301 | - | 7417 |
| B. Reserved for Future Stations | 7418 | - | 7449 |
| | 7470 | - | 7479 |
| C. Parking Lots | 7450 | - | 7469 |
| | 7500 | - | 7599 |
| D. Reserved for Future Parking Lots | 7480 | - | 7499 |
| **VIII. Transit Nodes: Commuter Rail** | | | |
| A. Stations | 7600 | - | 7655 |
| | 7700 | - | 7739 |
| B. Reserved for Future Stations | 7740 | - | 7759 |
| C. Parking Lots | 7800 | - | 7855 |
| | 7900 | - | 7939 |
| D. Reserved for Future Parking Lots | 7760 | - | 7799 |
| **IX. Transit Nodes: Light Rail** | | | |
| A. Stations | 7656 | - | 7699 |
| (This range also includes nodes for future Transitway, Busway, and Light Rail stations) | 20101 | - | 20999 |
| B. Parking Lots | 7856 | - | 7873 |
| | 8271 | - | 8298 |
| C. Reserved for Future Parking Lots | 7874 | - | 7899 |
| **X. Transit Nodes: Bus Park-and-Ride Lots** | | | |
| A. DC / MD | 8000 | - | 8050 |
| | 8100 | - | 8103 |
| B. Reserved for Future Parking Lots | 8051 | - | 8099 |
| | 8104 | - | 8199 |
| C. VA / WVA (Includes 17 MD lots) | 8200 | - | 8298 |
| D. Reserved for Future Parking Lots | 8299 | - | 8399 |

# 2 Overview of Facilities Coded in the Networks Representing the 2005 CLRP and the FY 2006-2011 TIP

The Constrained Long-Range Transportation Plan (CLRP) is the long-term plan for transportation projects in the Washington metropolitan region. The plan is financially constrained to include only those projects that can be funded by revenues that are "reasonably expected to be available" as required by federal law and regulations. The plan extends at least 20 years into the future.

The 2005 CLRP extends to horizon year 2030. The Transportation Improvement Program (TIP) is a six-year subset of the CLRP that represents the first six years of the CLRP. The current TIP represents fiscal years 2006 to 2011. The CLRP must be updated at least once every three years. Recently, the practice has been to update the CLRP annually, since the TIP is being updated annually and the TIP is a subset of the CLRP.

This fiscal year, work activities included the following tasks:

- Development of conformity documentation listings and data files of projects received from programming agencies,
- Update of the highway database and GIS highway network, and the generation of 2010, 2020, and 2030 highway networks by database filtering,
- Network reviews for accuracy and rebuilding networks for modeling,
- Updating and editing transit files to 2010, 2020, and 2030 conditions based on 2005 CLRP and FY2006-2011 TIP inputs and current 2004 transit network files, and
- Revising highway network toll assumptions and updating transit fares as necessary.



## *2.1 Highways*

At a minimum, the highway networks include all regionally significant roads, i.e., all freeways, interstates, and expressways in the modeled area, all arterials, most collectors, and some local roads. In many cases project inputs could not be coded into a regional network since such projects did not involve changes in capacity (e.g., highway rehabilitation, bridge reconstruction) or were too small to show up at the regional level (e.g., intersection improvements, improvements to a facility which is not contained in the regional networks).

The number of directional (one-way) links in the base-year (2000) network is about 18,000, which represents about 12,000 link miles and 19,000 lane miles.

Highway and rail network statistics for improvements coded in the 2005 CLRP and FY2006-2011 TIP and modeled networks for 2010, 2020, and 2030 are not available at this time because the final model runs have not yet been completed, but will be added to the final report. Exhibit 2-1 displays highway and rail network statistics for improvements coded in the 2004 CLRP and FY2005-2010 TIP and modeled networks for 2005, 2015, 2025, and 2030.

**Exhibit 2-1: Highway and Rail Network Statistics for Improvements Coded in the 2004 CLRP and the FY-2005-2010 TIP (modeled area)**

| | LOV LANE MILES TOTAL | HOV LANE MILES TOTAL | METRORAIL MILES TOTAL | MD/DC* NON-METRO RAIL MILES TOTAL | VA** NON-METRO RAIL MILES TOTAL |
|---|---|---|---|---|---|
| 2005 | 19,580 | 210 | 106 | 132 | 95 |
| 2015 | 21,230 | 345 | 131 | 142 | 95 |
| 2025 | 21,970 | 370 | 131 | 149 | 95 |
| 2030 | 21,980 | 370 | 131 | 149 | 95 |

* Includes MARC, Bi-County Transitway, and Corridor Cities Transitway in Maryland, and Anacostia Light Rail in the District of Columbia

** Includes VRE

Ref: c5exh2-1.xls



Significant changes for the 2005 CLRP as compared to the 2004 CLRP for projects inside the TPB planning area are shown in Exhibit 2-2. Projects outside the TPB planning area are displayed in Exhibit 2-3.

Exhibit 2-4 shows a sample of the major highway improvements (facility type 2 and above) coded in the networks representing the 2005 CLRP and the FY 2006-2011 TIP. The Exhibit is divided into four sections, one per network year. Please note that Exhibits 2-2 and 2-3 are a subset of Exhibit 2-4. The first section of Exhibit 2-4 is for the year 2000. The three projects listed are an example of those highway improvements that are included in the year 2000 highway network. For example, in 2000, the Dulles Greenway (Eastbound) had been widened between VA 772 (Exit 6) and VA 28 (Sully Road). Construction of the VA 234 (Manassas Bypass) was completed in 2001 and is modeled in highway networks for 2010.

In the 2010 section of the Exhibit, major highway improvements programmed for completion beyond those in the 2000 network are listed. Major highway improvements are also displayed for 2020 and 2030. A majority of the major projects are slated for completion in 2010 and 2020. A list of highway projects that were modeled in the analysis of the 2005 CLRP and the FY 2006-2011 TIP is shown in Appendix A.

## Exhibit 2-2: Significant Changes between the 2005 CLRP/FY2006-2011 TIP and its Predecessor Projects Inside the TPB Planning Area

| ID | Agency | Improvement | Facility | From/At | To | Completion Date | Fac. Type | | # Lanes | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | from | to | from | to |
| **MARYLAND** | | | | | | | | | | |
| 1 | MDOT | Construct | I-95/I-495/Arena Drive Interchange | MD 214 | MD 202 | 2010 | 1 | 1 | 8 | ***8+2*** ~~8~~ |
| ***2*** | ***MDOT*** | ***Widen*** | ***MD 27*** | ***MD 355*** | ***A 305*** | ***2006*** | ***2*** | ***2*** | ***4*** | ***6*** |
| **VIRGINIA** | | | | | | | | | | |
| 3a | VDOT | Widen/ Construct | ***I-495 HOT*** ~~I-495 HOV (peak)~~ | I-395 | S. of VA 193 (Georgetown Pike) | ***2010*** ~~2012~~ | 1 | 1 | 8 | ***8+4*** ~~10~~ |
| ***3b*** | ***VDOT*** | ***Construct*** | **I-495 HOT Lanes Interchange** | **Provides SB to WB, SB to EB, EB to SB, & NB to WB HOV to HOT or HOT to HOV** | **@ VA 267 (Dulles Toll Road)** | ***2010*** | ***1*** | ***1*** | ***--*** | ***--*** |
| ***3c*** | ***VDOT*** | ***Construct*** | **I-495 HOT Lanes Interchange** | **All movements** | **@ VA 123 (Chain Bridge Road)** | ***2010*** | ***1*** | ***1*** | ***--*** | ***--*** |
| ***3d*** | ***VDOT*** | ***Construct*** | **I-495 HOT Lanes Interchange** | **Provides SB to WB, WB to SB, EB to SB, NB to WB, & EB to NB HOV to HOT** | **@ I-66 HOV Lanes** | ***2010*** | ***1*** | ***1*** | ***--*** | ***--*** |
| ***3e*** | ***VDOT*** | ***Construct*** | **I-495 HOT Lanes Interchange** | **HOT movements to and from South Only** | **@ US 29** | ***2010*** | ***1*** | ***1*** | ***--*** | ***--*** |
| ***3f*** | ***VDOT*** | ***Construct*** | **I-495 HOT Lanes Interchange** | **All movements** | **@ VA 620 (Braddock Road)** | ***2010*** | ***1*** | ***1*** | ***--*** | ***--*** |
| ***3g*** | ***VDOT*** | ***Construct*** | ***Construct ramps connecting the existing I-95 / I-395 HOV lanes on Shirley Highway to proposed HOT lanes on the Capital Beltway.*** | ***From I-95 / I-395 HOV lanes to I-495 HOT lanes*** | | ***2010*** | ***1*** | ***1*** | ***--*** | ***--*** |
| ***4a*** | ***VDOT*** | ***Upgrade*** | ***VA 7900 (Franconia/Springfield Parkway)*** | ***VA 638 (Rolling Rd.)*** | ***VA 617 (Backlick Rd.)*** | ***2020*** | ***5*** | ***1*** | ***6+2*** | ***6+2*** |
| ***4b*** | ***VDOT*** | ***Construct*** | ***VA 7900 (Franconia/Springfield Parkway)*** | ***Interchange at Neuman Street*** | | ***2020*** | ***1*** | ***1*** | ***--*** | ***--*** |
| ***5a*** | ***Federal Lands*** | ***Close to thru traffic*** | ***US 29 and Buisness VA 234*** | ***Within the limits of the Manassas National Battlefield Park*** | | ***2021*** | ***2*** | ***--*** | ***2*** | ***0*** |
| ***5b*** | ***Federal Lands*** | ***Construct/ Widen*** | ***New Roadway*** | ***US 29 @ Luck Stone Quarry*** | ***I-66 @ VA 234 Bypass*** | ***2021*** | ***2*** | ***2*** | ***0/2*** | ***4*** |
| ***6a*** | ***Arlington County*** | ***Construct*** | ***Crystal City-Potomac Yards busway (2-lane) Segment 1*** | ***Vicinity of Glebe Rd. Extended*** | ***26th St.*** | ***2006*** | ***--*** | ***--*** | ***0*** | ***2*** |
| ***6b*** | ***Arlington County*** | ***Construct*** | ***Crystal City-Potomac Yards busway (2-lane) Segment 2*** | ***26th St.*** | ***Crystal City Metro Station*** | ***2008*** | ***--*** | ***--*** | ***0*** | ***2*** |
| ***6c*** | ***Arlington County*** | ***Upgrade*** | ***Crystal City-Potomac Yards busway to BRT*** | ***Vicinity of Glebe Rd. Extended*** | ***Crystal City Metro Station*** | ***2012*** | ***--*** | ***--*** | ***0*** | ***2*** |

Ref: 06sigchgs1.xls

Stricken items were in the 2004 CLRP and FY2005-2010 TIP

## Exhibit 2-3: Significant Changes between the 2005 CLRP/FY2006-2011 TIP and its Predecessor Projects Outside the TPB Planning Area

| ID | Agency | Improvement | Facility | From/At | To | Completion Date | Fac. Type | | # Lanes | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | from | to | from | to |
| **MARYLAND** | | | | | | | | | | |
| *1* | *MDOT* | *Construct* | *MD 2/4 at Lusby Southern Connector Rd.* | *MD 765* | *MD 2/4 at Lusby* | *2010* | *0* | *2* | *0* | *3* |

Ref: 06sigchgs1xls

Stricken items were in the 2004 CLRP and FY2005-2010 TIP

## Exhibit 2-4: Major Highway Improvements in the 2005 CLRP

| Network | Facility/Service | Improv. | From | To | Facil. Type | Lanes | Comp Year |
|---|---|---|---|---|---|---|---|
| **2000** | Dulles Greenway Eastbound | (existing) | VA 772 (Exit 6) | VA 28 | 1 | 5 | 2000 |
| | Middlebrook Road | (existing) | Great Seneca Highway | I-270 | 2 | 6 | 2000 |
| | MD 228 (Berry Road0 | Widen | W. of Mattawoman Creek | MD 210 (Indian Head Hwy.) | 2 | 4 | 2000 |
| **2010** | **Same as 2000, plus:** | | | | | | |
| | VA 234 (Manassas Bypass) | (existing) | VA 28 | VA 234/649 S. of Manassas | 5 | 4 | 2001 |
| | Dulles Greenway Westbound | (existing) | VA 28 | VA 772 (Exit 6) | 1 | 6 | 2001 |
| | VA 7100 (Fairfax County Parkway) | (existing) | VA 606 (Baron Cameron | VA 7 (Leesburg Pike) | 5 | 4 | 2001 |
| | VA 7100 (Fairfax County Parkway) | (existing) | VA 675 (Sunset Hills Road) | VA 606 (Baron Cameron Avenue) | 5 | 6 | 2001 |
| | VA 7100 (Fairfax County Parkway) | (existing) | VA 620 (Braddock Rd) | US 29/VA 608 (West Ox Rd) | 5 | 5 | 2001 |
| | VA 7 | (existing) | VA 28 | Algonkian Parkway | 1 | 6 | 2002 |
| | I-95/I-495 (Capital Beltway) | (existing) | Interchange at Ritchie Marlboro Road | | 1 | 8 | 2003 |
| | US 50 (John Hanson Highway) | (existing) | Columbia Park Road | | 1 | 3 | 2003 |
| | VA 267 (Dulles Toll Road) Ramps | Widen | I-495 Interchange | | 1 | 0 | 2004 |
| | I-95 interchange | Construct | at VA 627 | | 1 | 0 | 2004 |
| | I-270 (West Spur) Reconstr/Constr. | (Completed) | Interchanges at Democracy Blvd and Westlake Terrace | | 1 | 6 | 2004 |
| | I-270 (East Spur) Reconstr/Constr. | (Completed) | Rockledge Dr. Connector and MD 187 | | 1 | 6 | 2004 |
| | Dulles Greenway Interchanges | Construct | VA 653 | | 1 | 0 | 2005 |
| | MD 27 (Ridge Road) | Widen | MD 355 (Rockville Pike) | A-305 | 2 | 6 | 2006 |
| | MD 5 Relocated at Hughesville | Construct | End of divided highway south of Hughesville | End of divided highway north of Hughesville | 5 | 4 | 2007 |
| | VA 7100 (Fairfax County Parkway) | Construct | VA 4600 (Fullerton Road) | VA 7900 (Franconia-Springfield Parkway) | 1 | 6 | 2007 |
| | I-95/I-495 Woodrow Wilson Bridge | Widen | MD 210 Interchange | US 1 | 1 | 12 | 2009 |
| | I-95 (provide 4th lane) | Widen | Newington | VA 123 | 1 | 8 | 2009 |
| | I-495 HOT Lanes | Construct | I-395 | S. of VA 193 (Georgetown Pike) | 1 | 8+4 | 2010 |
| | I-495 HOT Lanes Interchange | Construct | Provides SB to WB, SB to EB, EB to SB, & NB to WB HOV to HOT or HOT to HOV | at VA 267 (Dulles Toll Road) | 1 | - | 2010 |
| | I-495 HOT Lanes Interchange | Construct | All movements | at VA 123 (Chain Bridge Road) | 1 | - | 2010 |
| | I-495 HOT Lanes Interchange | Construct | Provides SB to WB, WB to SB, EB to SB, NB to WB, & EB to NB HOV to HOT | at I-66 HOV LanesVA 267 (Dulles Toll Road) | 1 | - | 2010 |
| | I-495 HOT Lanes Interchange | Construct | HOT movements to and from South Only | at VA 29 (Lee Highway) | 1 | - | 2010 |
| | I-495 HOT Lanes Interchange | Construct | All movements | at VA 620 (Braddock Road) | 1 | - | 2010 |
| | Ramps connecting the existing I-93 / I-395 HOV lanes on Shirley Highway to proposed HOT lanes on the Capital Beltway | Construct | Form I-95 / I-395 HOV lanes to I-495 HOT lanes | | 1 | - | |
| | I-95/I-495 (Capital Beltway) | Construct | Arena Drive Interchange | | 1 | 8+2 | 2010 |
| | I-95/I-495 (Capital Beltway) | Construct | Branch Avenue Metro Access | | 1 | 8 | 2010 |
| | I-66 (HOV during AM peak 5 lanes EB) | Widen | US 29 (Gainesville) | VA 234 S. of Manassas | 1 | 9 | 2010 |
| | Dulles Airport Access Road | Widen | Dulles Airport | VA 123 | 1 | 6 | 2010 |
| | I-70 - Phases 2B,2C, 2D, 3, 4, & East Street Extension. | Widen | Mount Phillip Road | MD 144FA | 1 | 6 | 2010 |
| | ICC | Construct | I-270 | I-95 / US 1 | 1 | 6 | 2010 |
| | MD 4 | Widen | MD 223 | I-95/I-495 | 1 | 6 | 2010 |
| | MD 5 (Branch Avenue) | Upgrd/Widen | US 301 | North of Capital Beltway | 5 | 6 | 2010 |
| | MD 2/4 at Lusby Southern Connector Road | Construct | MD 765 | MD 2/4 at Lusby | 2 | 3 | 2010 |

Ref: FY0611Tip2005CLRPImprov.xls

## Exhibit 2-4: Major Highway Improvements in the 2005 CLRP (Continued)

| Network | Facility/Service | Improv. | From | To | Facil. Type | Lanes | Comp Year |
|---|---|---|---|---|---|---|---|
| 2020 | **Same as 2010, plus:** | | | | | | |
| | I-95 (Wilson Bridge and approaches) | Widen | VA 241 (Telegraph Rd.) | US 1 | 1 | 12 | 2011 |
| | VA 234 (Dumfries Road) | Widen | I-95 | US 1 | 5 | 6 | 2011 |
| | VA 234 (Manassas Bypass) | Construct | I-66 | Loudoun County Line | 1 | 6 | 2012 |
| | US 29 (Lee Highway) | Widen | WCL of City of Fairfax | Chain Bridge Road | 2 | 6 | 2012 |
| | I-66 Interchange | Reconstruct | @ I-495 (Capital Beltway) | | 1 | 0 | 2013 |
| | US 29 (Lee Highway) | Widen | Virginia Oaks Drive | I-66 | 5 | 6 | 2014 |
| | US 29 (Lee Highway) | Widen | Virginia Oaks Drive | I-66 | 5 | 6 | 2014 |
| | M-83 (Midcounty Highway) Extended | Construct | MD 27 (Ridge Road) | Middlebrook Road | 2 | 4-6 | 2015 |
| | I-95 | Construct | Contee Road Relocated w/ CD Roads | | 1 | 8+4 | 2015 |
| | VA 7 Bypass | Widen | VA 7 West | VA 7/US 15 East | 1 | 6 | 2015 |
| | VA 7 (New Interchanges) | Upgrade | VA 7/15 (Leesburg Bypass) | VA 28 | 1 | 6 | 2015 |
| | VA 28 & Interchanges) | Widen | I-66 | VA 7 | 1 | 8 | 2015 |
| | VA 28 Bypass (Tri-County Parkway) | Construct | VA 234 (Sudley Road) @ Godwin Drive | I-66 | 5 | 6 | 2015 |
| | US 50 (Arlington Blvd.) | Reconstruct | ARC/FFX Line | Washington Blvd. | 2 | 6 | 2015 |
| | US 50 (Arlington Blvd.) | Reconstruct | Pershing Dr. | Ft. Myer Dr. | 2 | 6 | 2015 |
| | VA 7100 (Fairfax County Parkway) | Widen | VA 123 (Ox Road) | I-66 | 5 | 6 | 2015 |
| | VA 7900 (Franconia/Springfield Pkwy.) | Upgrade | VA 638 (Rolling Road) | VA 617 (Backlick Road) | 1 | 6+2 | 2020 |
| | VA 7900 (Franconia/Springfield Pkwy.) | Construct | Interchange at Neuman Street | | 1 | 1 | 2020 |
| | US 29, Columbia Pike | Upgrade | Sligo Creek Parkway | South of MD 193 | 5 | 6 | 2020 |
| | US 29, Columbia Pike | Upgrade | North of MD 193 | South of MD 650 | 5 | 6 | 2020 |
| | US 29, Columbia Pike | Upgrade | North of MD 650 | Howard County Line | 5 | 6 | 2020 |
| | M-83 (Midcounty Highway) | Construct | Middlebrook Road | Montgomery Village Avenue | 2 | 4-6 | 2020 |
| | VA 234 (Manassas Bypass) | Widen/Upgrade | VA 234 S. of Manassas | I-66 | 1 | 6 | 2020 |
| | I-270 | Construct | Interchange at Watkins Mill Road Extended | | 1 | 8+2 | 2020 |
| | MD 450 Annapolis Road | Widen | Stonybrook Drive | West of MD 3 | 2 | 4 | 2020 |
| 2030 | **Same as 2020, plus:** | | | | | | |
| | US 29 and Business VA 234 | Close/thru traffic | Within Manassa National Battlefield Park | | 2 | 0 | 2021 |
| | New Roadway | Construct/Widen | US 29 at Luck Stone Quarry | I-66 at VA 234 Bypass | 2 | 4 | 2021 |
| | Baltimore-Washington Pkwy./MD 193 (Greenbelt Rd) | Construct | Ramp from MD 193 | | 5 | 4 | 2025 |
| | Suitland Pkwy. (Interchange) | Construct | at Rena/Forrestville Roads | | 5 | 1 | 2025 |
| | VA 28 (Centrevill Rd.) | Widen | N.City Limits of Manassas Pk. | Old Centreville Road | 2 | 6 | 2025 |
| | VA 3000 (Prince William Pkwy.) | Widen | VA 776 (Liberia Road) | VA 640 (Minnieville Road) | 2 | 6 | 2025 |
| | US. 1 (Jefferson Davis Hwy.) | Widen | VA 212 (Butler Road) | Princess Anne Street | 2 | 6 | 2030 |
| | US 301 (Crain Highway) | Upgrd/Widen | North of Mount Oak Road | US 50 | 5 | 6+2 | 2030 |
| | MD 3 (Robert Crain Highway) | Construct | US 50 | Anne Arundel County Line | 2 | 6 | 2030 |
| | MD 28 (Norbeck Rd) / MD 198 | Construct | MD 97 | I-95 | 2 | 4-6 | 2030 |
| | US 29 (Columbia Pike) | Widen | I-70 | MD 100 | 5 | 8 | 2030 |
| | MD 32 | Widen | I-70 | Carroll County | 2 | 4 | 2030 |

Ref: FY0611Tip2005CLRPImprov.xls



## *2.2 HOV Facilities*

Existing and planned HOV facilities assumed in the FY 2006-2011 TIP and 2005 CLRP are shown in Exhibit 2-5. The year 2000 network includes peak period HOV priority operations on I-95/I-395 from Route 234 to the Potomac River (exclusive right-of-way 3+ minimum occupancy requirement) and I-66 from Route 234 to the Potomac River (combination diamond lanes and exclusive right-of-way 2+ minimum occupancy requirement). Diamond HOV lane operations also exist on I-270 from MD 121 to the Capital Beltway, and on the Dulles Toll Road (VA267) from VA 28 to the Capital Beltway, both of which require a 2+ minimum occupancy.

The 2010 highway network includes a diamond lane HOV operation on US 50 in Maryland from US 301 to the Capital Beltway that began operation in 2003, with a 2+ minimum occupancy. Also in 2010, HOV lanes are extend on I-66 to US 29 Gainesville, HOV lanes on I-395 and I-95 are re-striped to a three lane capacity, and the operation of HOV lanes begin on VA 7100 (Fairfax Parkway) and VA 7900 (Franconia-Springfield Parkway).

It is important to note that the minimum occupancy requirement for all future HOV facilities will be 3+ beginning in 2010. A complete description of highway and HOV projects contained in the FY-2006-2011 TIP and 2005 CLRP is listed in Appendix A.

**Exhibit 2-5: HOV Facilities in the 2005 CLRP and the FY2006-2011 TIP**

| Network | Facility | Improvement | Limits | Occupancy Requirements | Comp. Year |
|---|---|---|---|---|---|
| **2000** | I-95/I-395 | (existing) | Potomac River to Springfield, VA | 3+ | |
| | I-95 | (existing) | Springfield to Quantico Creek | 3+ | |
| | I-66 | (existing) | Inside Beltway | 2+ | |
| | I-66 | (existing) | I-495 to US 50 | 2+ | |
| | I-66 | (existing) | US 50 to VA 234 | 2+ | |
| | I-270 | (existing) | Eastern Spur | 2+ | |
| | I-270 | (existing) | NB "Y" to I-370 | 2+ | |
| | I-270 | (existing) | I-370 to MD 121 | 2+ | |
| | I-270 | (existing) | Western Spur | 2+ | |
| | I-270 | (existing) | SB I-370 to "Y" | 2+ | |
| | US 1 | (existing) | Wilkes Street to Vernon Street | 2+ | |
| | Dulles Toll Road | (existing) | VA 28 to I-495 | 2+ | |
| **2010** | **Same as 2000 (except that all HOV facilities were tested as HOV 3+) Plus:** | | | | |
| | US 50 | (existing) | E. of US 301 / MD 3 to E. of I-95/I-495 | 3+ | 2003 |
| | I-66 | Construct | VA 234 (Business) to VA 234 (PW.Pkwy.) | 3+ | 2006 |
| | I-66 | Construct | US 29 to VA 234 | 3+ | 2010 |
| | I-395 | Re-Stripe | I-95 (Springfield to 14th Street Bridge) | 3+ | 2010 |
| | I-95 | Re-Stripe | I-495 to Quantico Creek (3 HOV lanes) | 3+ | 2010 |
| | VA 7100 (Fairfax County Pkwy.) | Widen | Rugby Road to US 50 | 3+ | 2010 |
| | VA 7100 (Fairfax County Pkwy.) | Upgrade/Widen | US 50 to Fair Lakes Pkwy. | 3+ | 2010 |
| | VA 7100 (Fairfax County Pkwy.) | Upgrade/Widen | Fair Lakes Pkwy. To I-66 | 3+ | 2010 |
| | VA 7900 (Fran./Sprfld. Pkwy.) | Construct | Fairfax County Pkwy. to Frontier Drive | 3+ | 2010 |
| **2020** | **Same as 2010 Plus:** | | | | |
| | I-95 | Construct | PW/Stafford Line to Route 610 | 3+ | 2011 |
| | I-66 | Construct | US 15 to US 29 (Gainesville) | 3+ | 2015 |
| | I-495 | Construct | S. of VA 193 Gtown Pike) to American Legion Bridge | 3+ | 2015 |
| | I-95 | Construct | Quantico Creek to PW/Stafford Line | 3+ | 2015 |
| | VA 7100 (Fairfax County Pkwy.) | Construct | Franconia/Springfield Pkwy. to VA 640 | 3+ | 2015 |
| | VA 7100 (Fairfax County Pkwy.) | Convert | VA 267 (Dulles Toll Rd.) to Sunrise Valley Dr. | 3+ | 2015 |
| | VA 7100 (Fairfax County Pkwy.) | Widen | Sunrise Valley Dr. to Rugby Road | 3+ | 2015 |
| | VA 7900 (Fran./Sprfld. Pkwy.) | Upgrade | VA 638 (Rolling Rd.) to VA 617 (Backlick Rd.) | 3+ | 2020 |
| | I-270 / US 15 Corridor | Construct | Shady Grove Metro to I-70 | 3+ | 2020 |
| **2030** | **Same as 2020 Plus:** | | | | |
| | No new projects modeled | | | | |

Ref: FY0611Tip2005CLRPImprov.xls



## *2.3 Transit Service*

The major transit facilities, services, and improvements coded in the 2005 CLRP and the FY 2006-2011 TIP transit networks are shown in Exhibit 2-6. The year 2000 network includes the full 103-mile Metrorail system, three MARC commuter rail lines in Maryland (Penn, Camden, and Brunswick Lines), and two VRE commuter rail lines in Virginia (Fredericksburg and Manassas Lines).

The 2010 transit network includes the Blue Line Metrorail extension from Addison Road to Largo, and the newly opened New York Avenue Station is on the Red Line in between Union Station and Rhode Island Avenue Stations. In the District of Columbia, light rail service begins operation between Pennsylvania Avenue SE. and South Capitol Street SE, and in the Dulles Corridor, existing express bus service is upgraded with elements of the BRT transit system. The network also contains an extension of MARC service from Point of Rocks to the City of Frederick Maryland (operations began in 2002) and the Cherry Hill VRE Commuter Rail Station.

**Exhibit 2-6: Major Transit Facilities, Services, and Improvements in the 2005 CLRP and the FY2006-2011 TIP**

| Network | Facility/Service | Improvement | Limits | Comp Year |
|---|---|---|---|---|
| **2000** | Metrorail | Construct | Complete 103-mile system | (Existing) |
| | MARC, Penn Line | Upgrade Service | Union Station to Perryville, MD | (Existing) |
| | MARC, Camden Line | Upgrade Service | Union Station to Camden Station (Balt.) | (Existing) |
| | MARC, Brunswick Line | Upgrade Service | Union Station to Martinsburg, WV | (Existing) |
| | VRE, Manassas Line | Upgrade Service | Union Station to Broad Run Airport | (Existing) |
| | VRE, Fredericksburg Line | Upgrade Service | Union Station to Fredericksburg, VA | (Existing) |
| | VRE, Fredericksburg Line | Construct | Franconia/Springfield Commuter Rail Station | (Existing) |
| | VRE, Fredericksburg Line | Construct | Lorton Commuter Rail Station | (Existing) |
| **2010** | **Same as 2000 base, plus the following:** | | | |
| | Metrorail, Blue Line | Construct | Addison Road to Largo | Completed |
| | MARC, City of Frederick Line | Construct | Frederick to Point of Rocks | Completed |
| | Metrorail, Red Line | Construct | NY Avenue Station | Completed |
| | Metrorail (Red) / MARC | Construct | Silver Spring Transit Center Phase I | Completed |
| | Bus, Dulles Corridor | Implement | Route 772 in Loudoun to East Falls Ch. Metro | Completed |
| | Light Rail (CSX Shepherd Br.) | Construct | Pennsylvania Ave., SE to South Capitol St. SW | 2005 |
| | Express Bus - BRT Elements | Upgrade Service | E. Falls Church Metrorail Sta. to VA 772 | 2005 |
| | PRTC/Omni Bus | Implement | Corridor Service Improvements | 2005 |
| | VRE, Fredericksburg Line | Construct | Cherry Hill Commuter Rail Station | 2006 |
| | Crystal C./Potomac Yard Busway | Construct | Vicinity of Glebe Rd. Ext. to 26th Street | 2006 |
| | Metrorail (Red) / MARC | Construct | Silver Spring Transit Center Phase II | 2007 |
| | Bus, K Street Busway | Reconstruct | Mt. Vernon Sq./ 7th St. NW to Wash.Circle NW | 2008 |
| | Crystal C./Potomac Yard Busway | Construct | 26th Street to Crystal City Metro Station | 2006 |
| | VRE Commuter Rail | Upgrade Service | Fredericksburg and Manassas Lines | 2010 |
| | Bus | Implement | ICC Corridor Service Improvements | 2010 |
| | Southern MD Commuter Bus | Upgrade Service | Corridor Bus Service Initiative | 2010 |
| | Bus, Randolph Rd. | Implement | Service Enhancement | 2010 |
| **2020** | **Same as 2010, plus the following:** | | | |
| | Dulles Corridor Rail | Construct | E. Falls Church Metrorail Sta. to Wiehle Ave. Sta. | 2011 |
| | Bi-County Transitway | Construct | Silver Spring to Bethesda | 2012 |
| | Corridor Cities Transitway | Construct | Shady Grove to Metropolitan Grove | 2012 |
| | Crystal C./Potomac Yard BRT | Upgrade Service | Glebe Rd. Extension to Crystal City Metro Station | 2012 |
| | Metrorail (Blue/Yel.) | Construct | Potomac Yards Station | 2015 |
| | Dulles Corridor Rail | Construct | Wiehle Ave. Sta. To VA 772 Station | 2015 |
| | Bus | Upgrade | Norbeck Road Enhancement | 2020 |
| | Bus, Viers Mill Rd. | Construct | Rockville to Wheaton (Enhancement) | 2020 |
| | Bus, University Blvd. | Construct | Kensington to Silver Spring (Enhancement) | 2020 |
| | Bus, Norbeck Rd. | Implement | Service Enhancement | 2020 |
| | Corridor Cities Transitway | Construct | Metropolitan Grove to COMSAT | 2020 |
| **2030** | **Same as 2020** | | | |
| | US 1 (bus\right-turn lanes) | Widening | Va 235 North to SCL Alex. (I-95 Capital Beltway) | 2025 |



The major transit improvements for the 2020 networks include the Potomac Yards Metrorail Station, the Bi-County Transit-way from Silver Spring to Bethesda, Dulles rail from East Falls Church Metrorail Station to Va. Route 772, and completion of Corridor Cities Transit-way in operation from the COMSAT Station to Shady Grove Metrorail Station in Montgomery County.

The 2030 transit network adds one item: the operation of bus lanes on Route 1 between Route 235 north and I-95 Capital Beltway in Virginia. A complete list of the transit projects included in the 2005 CLRP and the FY 2006-2011 TIP is shown in Appendix B.

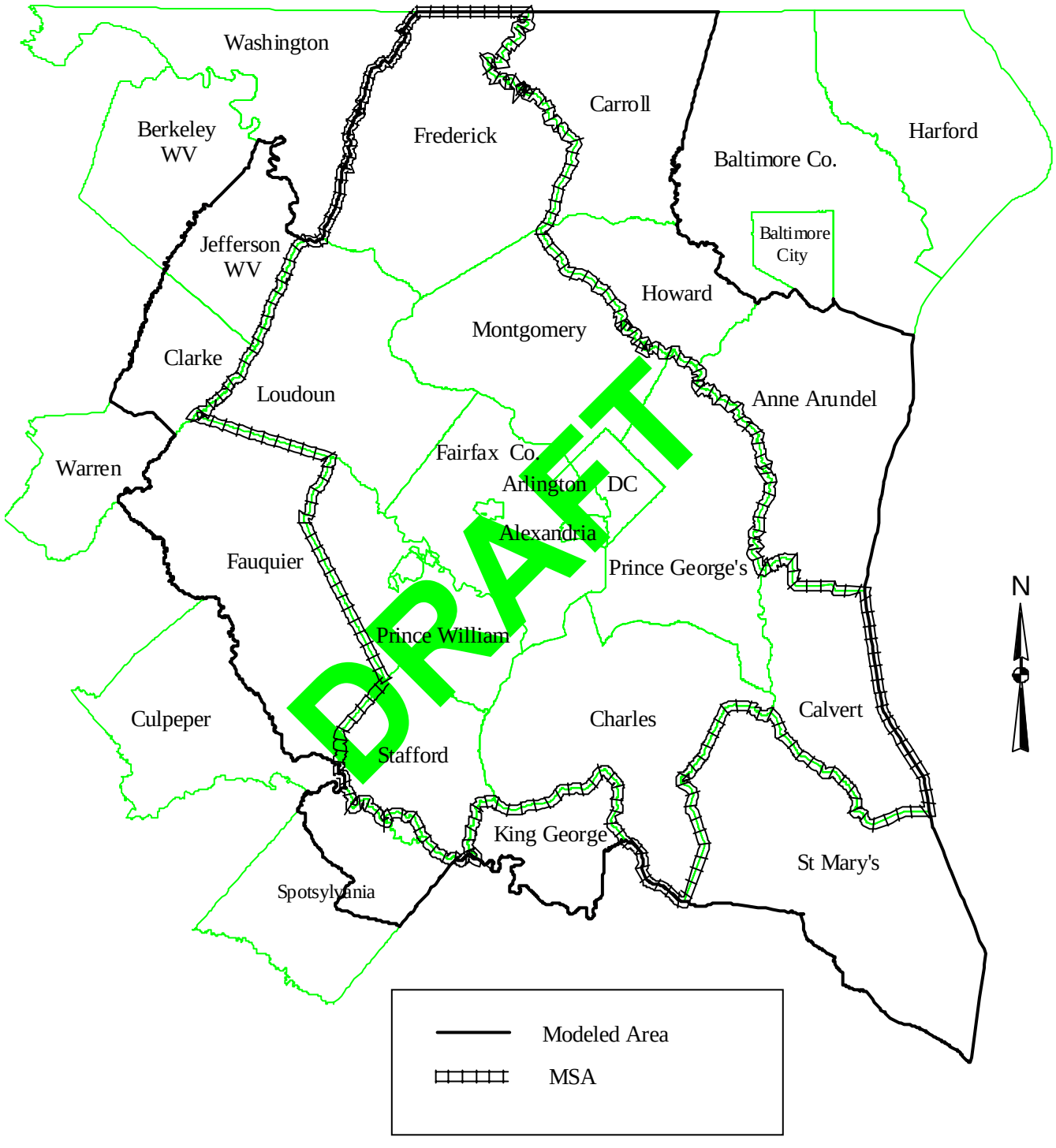
Exhibit 2-7 presents the geographic areas that are analyzed as a part of air quality conformity assessment. The map delineates the current COG/TPB modeled area, as well as the non-attainment or MSA area.

To enable better simulation results within Montgomery and Prince George's Counties, members of the Baltimore Metropolitan Council (BMC) planning region, Carroll, Howard, and Anne Arundel counties are included within the COG/TPB modeled area.

Transportation projects were included for these areas, provided through the coordination efforts of the Maryland Department of Transportation (MDOT) and the BMC. These counties are included within the travel demand at the MSA (non-attainment) level, but emissions within Carroll, Howard, and Anne Arundel counties are removed from the analysis.

Inputs from Charles County and Calvert County are also provided by MDOT and are included in the analysis. An analogous situation exists in Virginia with Clarke, Fauquier, Spotsylvania, and King George counties, and in West Virginia with Jefferson County.

**Exhibit 2-7: COG/TPB Modeled Area and Metropolitan Statistical Area**
**Washington, D.C. – Maryland – Virginia**



# 3. Version 2.1 D #50 Model Network Files

This chapter describes the files that support network building and fare development of the "Version 2.1 D #50" model in greater detail. The model requires the development of a single highway network containing attributes that represent three time periods: the AM peak period (6:00-9:00 AM), the PM peak period (4:00-7:00 PM), and the off-peak period (all remaining hours of the day). Two transit networks representing peak-period service and off-peak-period service are also required. Transit frequencies for the peak period are based on scheduled service occurring between 7 AM-7:59 AM[1]. The off-peak period frequencies are based on service occurring between 10:00 AM-2:59 PM. Zone-level transit fares for both the AM and off-peak time periods are developed and used in the mode choice process. The process ultimately produces four total fare files representing walk/drive-access transit fares for the AM peak period and walk/drive-access transit fares for the off-peak period.

The network and fare development process supporting the Version 2.1 D #50 model requires files, in text format, which support highway and transit network building/skimming and transit fare development. The following section describes the model's network building process and is followed by a section containing detailed format descriptions of each file.A list of the files and their associated network development steps is shown in Exhibit 3-1 and further discussion is provided in the Version 2.1 D #50 model User's Guide.



**Exhibit 3-1: List of Network Files Prepared for the Version 2.1 D #50 Model**

| Input Type | Filename | Description | Text or Binary |
|---|---|---|---|
| Land use | ZONE.ASC | Zonal Land Use | Text |
| Network, highway | LINK.ASC | Highway Links | Text |
| Network, highway | NODE.ASC | Highway Node File | Text |
| Network, transit | MODE1-9AM.TP | AM Mode 1-9 Transit Lines | Text |
| Network, transit | MODE1-9OP.TP | Off-Pk Mode 1-9 Transit Lines | Text |
| Network, transit | STA_TPP.BSE | Rail Station/PNR File | Text |
| Network, transit | RAIL_LNK.BSE | Rail Links | Text |
| Network, transit | GISWKAAM.ASC | GIS AM Zonal Transit Access File | Text |
| Network, transit | GISWKAOP.ASC | GIS Off-Peak Zonal Transit Access File | Text |
| Network, transit | GISWKLAM.ASC | GIS AM Walk Link File | Text |
| Network, transit | GISWKLOP.ASC | GIS Off-Peak Walk Link File | Text |
| Network, transit | TAZFRZN.ASC | TAZ/Bus Fare Zone Equivalency | Text |
| Network, transit | BUSFARAM.ASC | MFARE2 AM Bus Fare Zone Matrix | Text |
| Network, transit | BUSFAROP.ASC | MFARE2 Off-Peak Fare Zone Matrix | Text |

[1] In the case of express bus service, which generally originates in the outer reaches of the study area and begins much earlier than 7 AM, the AM peak period definition is relaxed to an earlier period for which service is most concentrated.

## 3.1 Highway Network Building Overview

The network building process for the Version 2.1 D #50 mode begins with the creation of a single binary highway network containing AM, PM, and off-peak highway network attributes that is developed from a single highway link attribute file, which includes directional link attributes that vary in accordance with the actual highway operations in effect for each time period. Network building also requires a node file containing the x/y coordinate units of each highway node (Maryland State Plane, NAD83, whole feet).

Highway link attribute and node files are generated simultaneously in highway network development process based in COG's GIS. The process allows network editing via ArcInfo menus and updating link attributes (number of lanes, facility type, and project completion year) using a list of CLRP/TIP projects, as shown in Exhibit 3-2. A project identifier (the link variable Proj_ID) is used to link the CLRP/TIP project list to highway network links. The process generates networks for any year specified by the user and can generate two scenarios per network year. Highway link distances are also calculated in the process in feet and are based on arcs contained in a TIGER centerline street base file.

Two important link attributes used to represent operational characteristics are the "lanes" and "limit" codes. Lanes describes the number of through lanes on each link and the limit code describes what types of vehicles may use the link (See discussion of limit codes below). Each link is assigned three lane codes and three limit codes, corresponding to each modeled time period. During network building, each appropriate lane and limit value is selected in the creation of the three files. The operational changes represented in the highway network are those of regional significance. These include facilities that convert from two-way to one-way operations and/or facilities that change in lane configuration during peak traffic periods.

Truck prohibitions on parkways and other designated facilities, special HOV facilities, (see Exhibits 3-3 and 3-4), and streets that are added to the networks to enable transit routes to be coded accurately relative to zonal activity centers are reflected using limit codes. There are numerous cases in the Washington region where through traffic is prohibited from entering into residential neighborhoods during peak periods. These types of prohibitions are typically not of regional significance, and therefore, are not explicitly coded in the highway network. The limit codes employed in Version 2.1 D #50 model highway networks are presented as follows:

| Limit Code | Vehicles Allowed | Vehicles Disallowed |
|---|---|---|
| 0 | All Vehicles | No Vehicles |
| 2 | HOV 2+ Occ. Vehicles | 1-Occ. Vehicles, Trucks |
| 3 | HOV 3+ Occ. Vehicles | 1, 2 Occ. Vehicles, Trucks |
| 4 | All Vehicles, other than trucks | Trucks |
| 5 | Airport Passenger Auto Driver Trips | All other Vehicles |
| 9 | Transit Only | All other Vehicles |

## Exhibit 3-2: Example of CLRP/TIP Project List

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility | | Lanes | | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | from | to | from | to | | | |
| VDOT | VP1f | Widen | Approved | US 1 (3la. NB - 4 la. SB) | Lorton Rd. | Telegraph Rd. | 2 | 2 | 4 | 7 | Yes | 2005 | no |
| VDOT | VP1fb | Widen | Approved | US 1 (as part of VP1f) | Armistead Rd. | Lorton Rd. | 2 | 2 | 4 | 6 | yes | 2005 | No |
| VDOT | VP1o | Widen | Approved | US 1 (Neabsco Creek Bridge) | VA 610 (Neabsco Road) | VA 638 (Neabsco Mills Road) | 2 | 2 | 4 | 6 | No | 2009 | yes |
| VDOT | VP1p | Widen | Pending | US 1 (part of 1/123 interchange) | Occoquan Rd. | Annapolis Way | 2 | 2 | 4 | 6 | No | 2008 | No |
| VDOT | nrs | Reconstruc | Pending | US 1 Interchange | @ Russell Road | | 1 | 1 | - | - | No | 2010 | No |
| VDOT | | Study | Pending | US 1 Location Study | Stafford County Line | SCL Alexandria (I-95 Capital Beltway) | 2 | 2 | 4/6 | 6/8 | No | not coded | No |
| VDOT | VP2s | Widen / Up | Pending | VA 7 | Route 9 | Market Street (Leesburg) | 2 | 1 | 4 | 6 | No | 2015 | Yes |
| VDOT | VP2j | Widen | Pending | VA 7 Bypass | VA 7 West | VA 7/US 15 East | 5 | 1 | 4 | 6 | No | 2015 | No |
| VDOT | VP2g | Upgrade | Pending | VA 7 (new interchanges) | VA 7/15 (Leesburg Bypass) | VA 28 | 2 | 1 | 6 | 6 | No | 2015 | No |
| VDOT | VP2ma | Widen | Pending | VA 7 | Rolling Holly Drive | Reston Parkway | 2 | 2 | 4 | 6 | No | 2009 | Yes |
| VDOT | VP2m | Widen | Pending | VA 7 | Reston Parkway | Dulles Toll Rd. | 2 | 2 | 4 | 6 | No | 2012 | Yes |
| VDOT | VP2l | Widen | Pending | VA 7 | Dulles Toll Rd. | I-495 | 2 | 2 | 6 | 8 | No | 2013 | No |
| VDOT | VP2b | Widen | Pending | VA 7 | Seven Corners | Bailey's Crossroads | 2 | 2 | 4 | 6 | No | 2020 | No |

**Exhibit 3-3: Truck Prohibited Links in 2000 Highway Network**

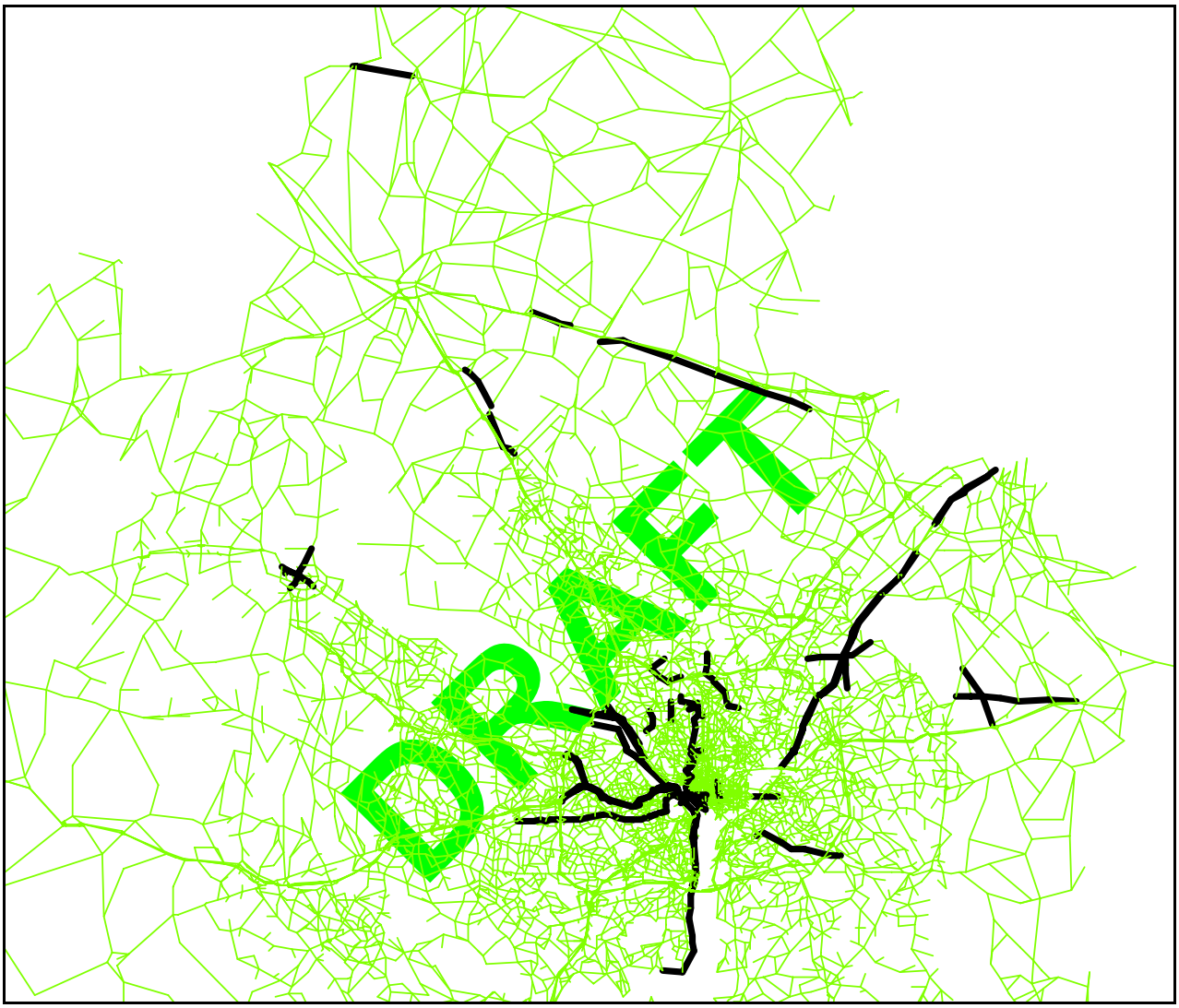
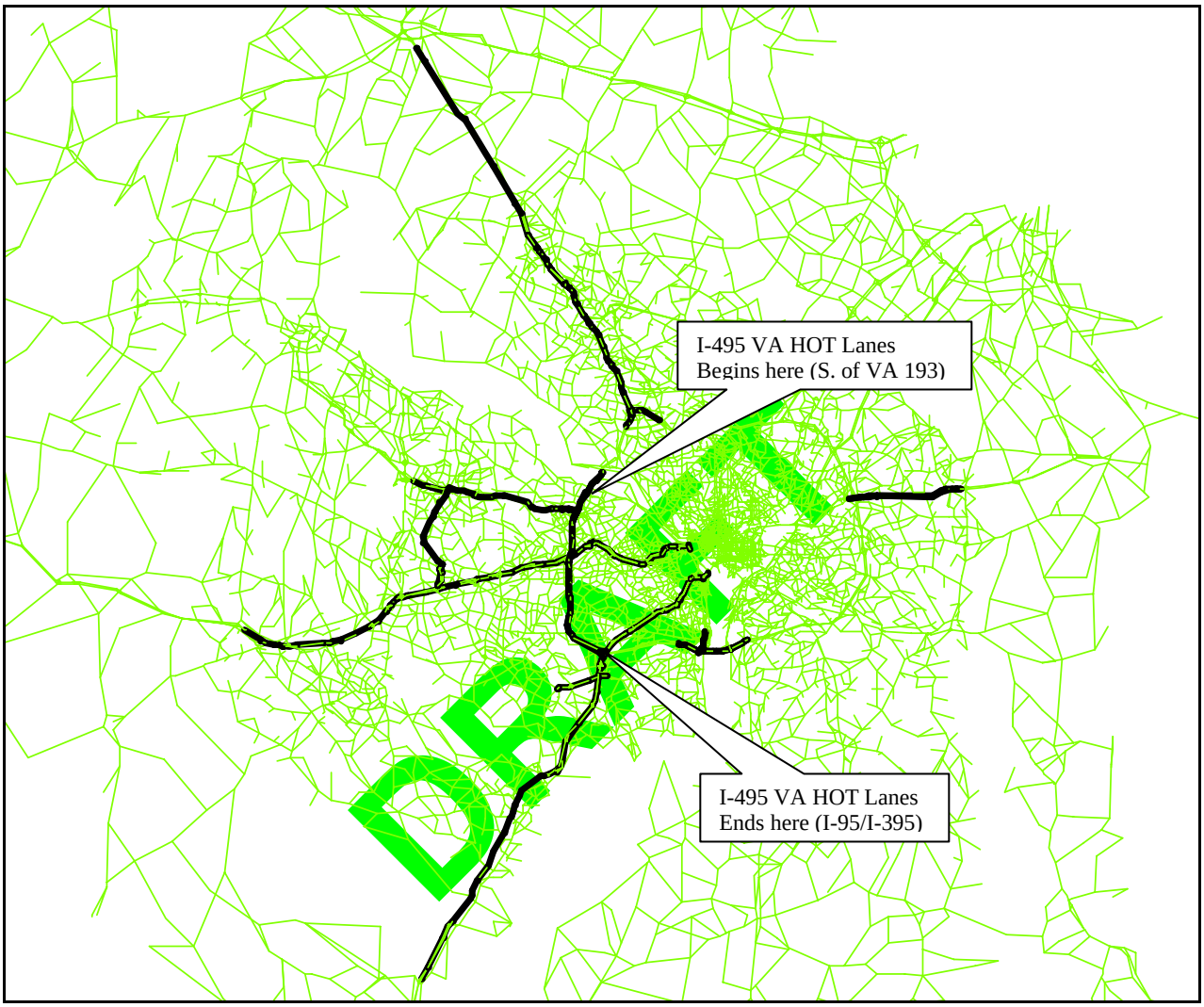


**Exhibit 3-4: HOV and HOT-Lane Facilities – 2030 AM Highway Network**



Special HOV facilities are coded based on their time-of-day operation. An example of highway network coding for the AM peak period is described below and a schematic diagram is provided in Exhibit 3-5.

In Exhibit 3-5, the I-66 segment from the Fairfax County Parkway to VA Route 645 Stringfellow Road provides 8 conventional lanes during non-peak periods. During the peak periods, the median lane operates as a concurrent HOV2 lane in the peak direction.

In the schematic diagram, link 15867-10299 operates 4 LOV lanes eastbound with a Limit Code 0 (all traffic permitted) and link 10294-10292 operates as 1 HOV lane and Limit Code 2 (HOV 2+ vehicles only). Westbound, link 10754-15866 operates with 4 LOV lanes and Limit Code 0 (all traffic permitted) and link 10291-10293 as 1 HOV lane and Limit Code 9 (all vehicles prohibited). Although transit service is permitted on links with Limit Code 9, transit service is not coded on I-66's westbound HOV links and this condition applies to all HOV facilities coded with a Limit Code 9 in the non-peak direction.

The link attributes "facility type" and "area type" are used to determine the free-flow speed and hourly capacity of each link. Facility type codes are based on 7 categories (0/centroid connectors, 1/freeways, 2/major arterials, 3/minor arterials, 4/ collectors, 5/expressways, and 6/freeway-arterial ramps) and are manually coded on a link-by-link basis.

The facility type 6 code for freeway-arterial ramps was added to networks in FY2003 to meet a Mobile6 model requirement for the calculation of ramp-specific emissions for higher facility types. Ramps linking one interstate to another, which are generally designed to allow a smooth flow (without much acceleration or deceleration), were not identified with the facility type 6 code, and thus were not included in the ramp VMT. The VMT from these interstate-to-interstate ramps are included as part of the total freeway VMT.

Free-flow speeds and hourly capacities are established during traffic assignments based upon facility type and area type codes. Area types are assigned during the network building process, on the basis of employment and population density of the TAZ centroid that is nearest to the link. Area type codes range in value from 1 to 7, as indicated in Exhibit 3-6.

The determination of the nearest TAZ, the density calculations, and subsequent area type value assignment are undertaken with a series of computer programs. Therefore, a zonal land use file containing land area and land activity information must be provided. A coordinate file is also necessary in order to enable graphical viewing of the network and to perform a number of other modeling tasks, which require information regarding network node positions.

**Exhibit 3-5: Year 2000 Highway Network (AM Peak Period)**

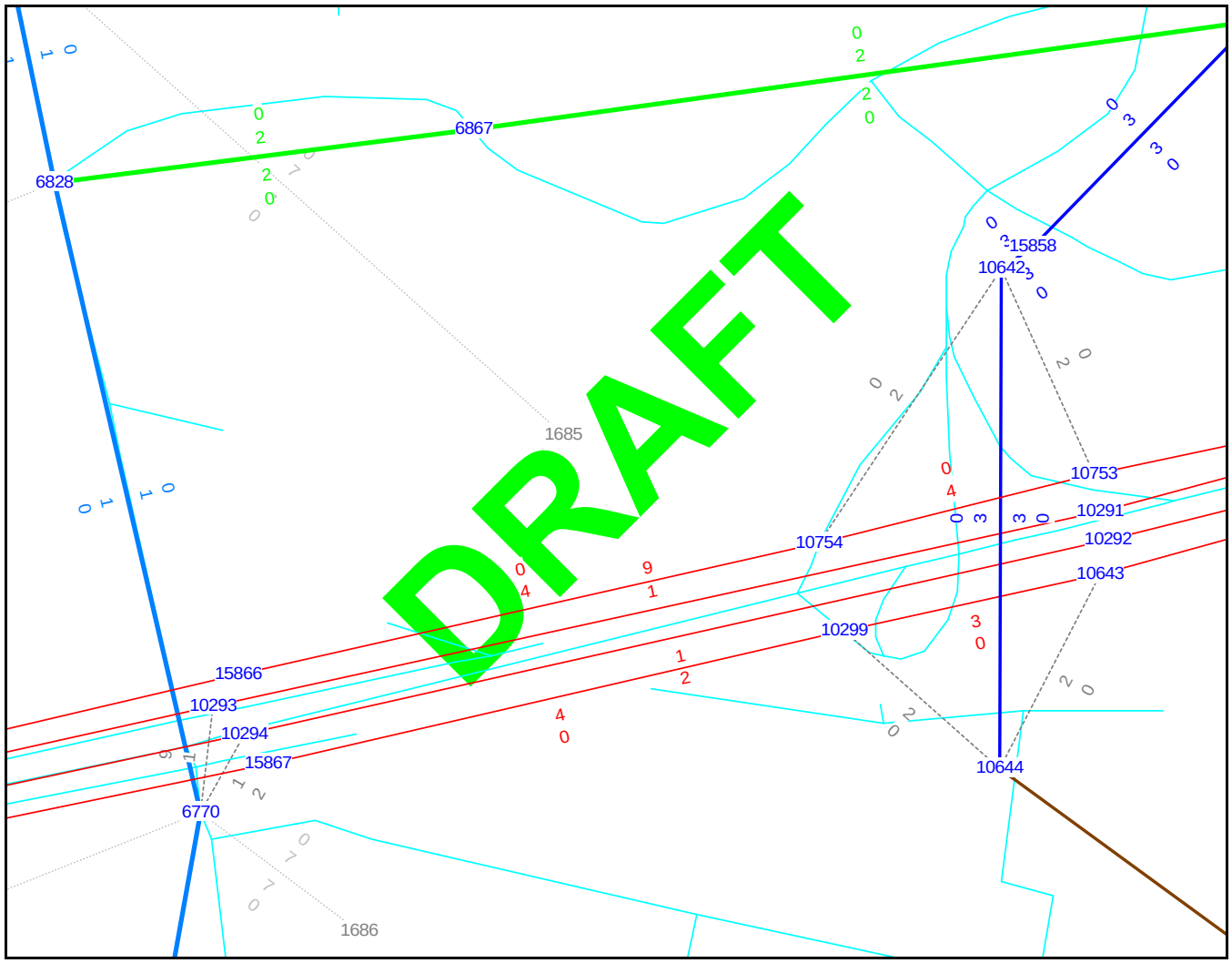


**Exhibit 3-6: Area Type Definitions**

| One-Mile 'Floating' Pop. Density (Pop/Sq mi.) | One-Mile 'Floating' Employment Density (Emp / Sq mi) | | | | | | |
|---|---|---|---|---|---|---|---|
| | 0-100 | 101-500 | 501-1,500 | 1,501-5,000 | 5,001-15,0000 | 15,001-35,000 | 35,001+ |
| **0-100** | 7 | 7 | 5 | 5 | 2 | 2 | 2 |
| **101-350** | 7 | 5 | 5 | 5 | 2 | 2 | 2 |
| **351-1,500** | 6 | 6 | 5 | 5 | 2 | 2 | 2 |
| **1,501-3,500** | 6 | 6 | 4 | 3 | 2 | 2 | 2 |
| **3,501-6,500** | 4 | 4 | 3 | 3 | 2 | 2 | 1 |
| **6,501-10,000** | 4 | 3 | 3 | 3 | 2 | 2 | 1 |
| **10,001+** | 3 | 3 | 3 | 2 | 2 | 2 | 1 |

In the Version 2.1 D#50 Model, monetary values of tolls are considered in the trip distribution, mode choice and traffic assignment steps. The capability involves converting monetary toll values to an equivalent time that is, in turn, added to the normal highway time, therefore affecting highway path-building. The network link file contains a toll value variable (TOLL) and a toll facility type variable (TOLLGRP) whereby tolls can be specified as a fixed fee or per-mile rate.

Three parameter files, TOLL.INC, TOLL.ESC, and TOLL.SKM are used to specify various toll policies. The TOLL.INC file is used in the trip distribution process and converts tolls on an I-J basis to equivalent minutes by income level. This file is generally unchanged by the user. The TOLL.ESC file is called in the highway network building program and is used to convert the link coded toll value from the current year costs to base-year 1994 costs. The file may optionally be used to specify per mile toll rates and/or time period adjustment rates if desired. The TOLL.SKM file is called in the highway assignment and highway skimming steps and is used to convert link specific tolls to equivalent minutes. These equivalent minutes are added to the highway time as part of the path-building routine. The file may optionally be used to specify toll adjustments by vehicle, time period, and toll group if desired.

Cost components in the Version 2.1 C model were previously developed in constant 1980 dollars. Alternatively, the #50 model requires costs to be expressed in 1994 dollars. 1994 was the base-year of the model calibration. These components include parking costs, highway tolls, and transit fares. Deflation factors in the model (i.e., in the highway building and transit fare building steps) are used to convert current-year costs into base-year 1994 costs.

Toll codes indicate the out-of-pocket costs charged for the use of specific highway links and are expressed in current-year dollars. Three tolled facilities are coded in the year 2000 highway network: the Dulles Toll Road (VA 267), the Dulles Greenway, and the Harry W. Nice Memorial Bridge (between Charles County, Maryland and King George County, Virginia).

Although a toll is levied on the Chesapeake Bay Bridge (Eastbound), no toll has been coded since the facility is located at an external station. In 2010 networks, two tolled facilities are added: the Inter-County Connector in Maryland and HOT-Lanes in Virginia on I-495 Capital Beltway.

The Dulles Toll Road involves both access and egress tolls which vary by location. In 2005, tolls were increased on the Dulles Toll Road (VA 267). The entry and exit charge at the Main Toll Plaza end of the facility is increased from 50 cents to 75 cents, levied in both directions. A toll charge of 50 (from 25 cents) cents is now charged at all west bound off-ramps and eastbound on-ramps and at the Sully Road (Route 28) Toll Plaza.

Dulles Greenway tolls are coded in COG networks based on the rates effective 4/17/00 and are actually the *average* of the cash rates and "SmarTag" rates. This assumes that the "SmarTag" market accounts for roughly half of all Greenway users.

The 14-mile Greenway connects to the Dulles Toll Road at Route 28 at the Dulles International Airport and extends west to Route 15 at Leesburg. The main toll facility is represented north of the Route 28 interchange with a toll of $1.88. This toll applies to cars only and represents an average of $2.00 cash and $1.75 for Smart Tag. A toll of $1.53 is used for all westbound and eastbound on-ramps at Routes 28, 606, and 607. A toll of $1.00 is coded for all westbound and eastbound on-ramps at Routes 772, 659, and Claiborne Parkway. Toll information is furnished by state DOT's.

A toll of $1.00 is coded on the Nice Bridge, in both directions. Exhibit 3-7 lists all highway network links where tolls are coded for base and forecast year networks.

Two facilities, the Inter-County Connector in Maryland and HOT-Lanes on I-495 Capital Beltway in Virginia, are added to the networks for 2010. For these facilities, the network link toll value (TOLL) is left blank and the toll facility type variable (TOLLGRP) is used to access a lookup table of fixed fees and per-mile rates. The ICC in Maryland is modeled as TOLLGRP 4 and HOT-Lanes in Virginia on I-495 Capital Beltway as TOLLGRP 2-9. The toll structure for the ICC is the same for some segments of the Virginia Hot Lanes. The remaining toll facilities in the region are modeled as TOLLGRP 1.

Exhibit 3-8 displays a toll structure that is being used in Scenario 5 of VA Beltway HOT Lane Project. Scenario 5 is one of the most recent scenarios tested for the HOT Lane Project. One very important thing to note is that the toll is 'not final' and is subject to change.

## Exhibit 3-7: Highway Network Toll Links

| Seg | Anode | Bnode | Facility | Limits | Direction | Operation | 2000 | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10701 | 10704 | Dulles Toll Road | Main Toll Plaza - Rt 684 Interchange | Inbound | LOV | 50 | 75 | 75 | 75 | 75 | 75 | 75 | |
| 2 | 10707 | 10700 | Dulles Toll Road | Main Toll Plaza - Rt 684 Interchange | Outbound | LOV | 50 | 75 | 75 | 75 | 75 | 75 | 75 | |
| 3 | 10917 | 10918 | Dulles Toll Road | Main Toll Plaza - Rt 684 Interchange | Inbound | HOV | 50 | 75 | 75 | 75 | 75 | 75 | 75 | |
| 4 | 11004 | 11006 | Dulles Toll Road | Main Toll Plaza - Rt 684 Interchange | Outbound | HOV | 50 | 75 | 75 | 75 | 75 | 75 | 75 | |
| 5 | 10701 | 10703 | Dulles Toll Road | Spring Hill Rd - Off Ramp | Inbound | LOV | 25 | 50 | 50 | 50 | 50 | 50 | 50 | |
| 6 | 10702 | 10700 | Dulles Toll Road | Spring Hill Rd - On Ramp | Outbound | LOV | 25 | 50 | 50 | 50 | 50 | 50 | 50 | |
| 7 | 10703 | 10704 | Dulles Toll Road | Spring Hill Rd - On Ramp | Inbound | LOV | 25 | 50 | 50 | 50 | 50 | 50 | 50 | |
| 8 | 10707 | 10702 | Dulles Toll Road | Spring Hill Rd - Off Ramp | Outbound | LOV | 25 | 50 | 50 | 50 | 50 | 50 | 50 | |
| 9 | 10667 | 10666 | Dulles Toll Road | Hunter Mill Rd - Off Ramp | Inbound | LOV | 25 | 50 | 50 | 50 | 50 | 50 | 50 | |
| 10 | 10765 | 10665 | Dulles Toll Road | Hunter Mill Rd - On Ramp | Outbound | LOV | 25 | 50 | 50 | 50 | 50 | 50 | 50 | |
| 11 | 10671 | 10670 | Dulles Toll Road | Wiehle Rd - On Ramp | Inbound | LOV | 25 | 50 | 50 | 50 | 50 | 50 | 50 | |
| 12 | 10767 | 10669 | Dulles Toll Road | Wiehle Rd - Off Ramp | Outbound | LOV | 25 | 50 | 50 | 50 | 50 | 50 | 50 | |
| 13 | 10675 | 10674 | Dulles Toll Road | Reston Pkwy - On Ramp | Inbound | LOV | 25 | 50 | 50 | 50 | 50 | 50 | 50 | |
| 14 | 10769 | 10673 | Dulles Toll Road | Reston Pkwy - Off Ramp | Outbound | LOV | 25 | 50 | 50 | 50 | 50 | 50 | 50 | |
| 15 | 10679 | 10678 | Dulles Toll Road | Centerville Rd - On Ramp | Inbound | LOV | 25 | 50 | 50 | 50 | 50 | 50 | 50 | |
| 16 | 10771 | 10677 | Dulles Toll Road | Centerville Rd - Off Ramp | Outbound | LOV | 25 | 50 | 50 | 50 | 50 | 50 | 50 | |
| 17 | 10862 | 10866 | Dulles Toll Road | Fairfax Pkwy - On Ramp | Inbound | LOV | 25 | 50 | 50 | 50 | 50 | 50 | 50 | |
| 18 | 10864 | 10861 | Dulles Toll Road | Fairfax Pkwy - Off Ramp | Outbound | LOV | 25 | 50 | 50 | 50 | 50 | 50 | 50 | |
| 19 | 6921 | 6913 | Dulles Toll Road | Rt 28 Toll Plaza - On Ramp | Inbound | LOV | 35 | 50 | 50 | 50 | 50 | 50 | 50 | |
| 20 | 6942 | 6914 | Dulles Toll Road | Rt 28 Toll Plaza - Off Ramp | Outbound | LOV | 35 | 50 | 50 | 50 | 50 | 50 | 50 | |
| 21 | 14400 | 14200 | Govenor Nice Bridge | Virginia - Maryland | Inbound | LOV | 100 | 100 | 100 | 100 | 100 | 100 | 100 | |
| 22 | 14200 | 14400 | Govenor Nice Bridge | Virginia - Maryland | Outbound | LOV | 100 | 100 | 100 | 100 | 100 | 100 | 100 | |
| 23 | 6942 | 6995 | Dulles Greenway | Rt 28 | Outbound | LOV | 188 | 188 | 188 | 188 | 188 | 188 | 188 | |
| 24 | 15601 | 6913 | Dulles Greenway | Rt 28 | Inbound | LOV | 188 | 188 | 188 | 188 | 188 | 188 | 188 | |
| 25 | 6939 | 6995 | Dulles Greenway | Dulles Greenway to Airport Ramp | Outbound | LOV | 153 | 153 | 153 | 153 | 153 | 153 | 153 | |
| 26 | 15601 | 6943 | Dulles Greenway | Airport to Dulles Greenway Ramp | Inbound | LOV | 153 | 153 | 153 | 153 | 153 | 153 | 153 | |
| 27 | 6961 | 6995 | Dulles Greenway | Rt 28 to Dulles Greenway On-Ramp | Outbound | LOV | 153 | 153 | 153 | 153 | 153 | 153 | 153 | |
| 28 | 15601 | 6961 | Dulles Greenway | Dulles Greenway to Rt 28 Off-Ramp | Inbound | LOV | 153 | 153 | 153 | 153 | 153 | 153 | 153 | |
| 29 | 6925 | 15606 | Dulles Greenway | Rt 606 On-Ramp | Outbound | LOV | 153 | 153 | 153 | 153 | 153 | 153 | 153 | |
| 30 | 15607 | 15608 | Dulles Greenway | Rt 606 Off-Ramp | Inbound | LOV | 153 | 153 | 153 | 153 | 153 | 153 | 153 | |
| 31 | 6962 | 15616 | Dulles Greenway | Rt 772 On-Ramp | Outbound | LOV | 100 | 100 | 100 | 100 | 100 | 100 | 100 | |
| 32 | 15617 | 15618 | Dulles Greenway | Rt 772 Off-Ramp | Inbound | LOV | 100 | 100 | 100 | 100 | 100 | 100 | 100 | |
| 33 | 15625 | 15626 | Dulles Greenway | Claiborn Pkwy On-Ramp | Outbound | LOV | 153 | 153 | 153 | 153 | 153 | 153 | 153 | |
| 34 | 6966 | 15624 | Dulles Greenway | Claiborn Pkwy Off-Ramp | Inbound | LOV | 153 | 153 | 153 | 153 | 153 | 153 | 153 | |
| 35 | 6967 | 15629 | Dulles Greenway | Belmont Rd On-Ramp | Outbound | LOV | 100 | 100 | 100 | 100 | 100 | 100 | 100 | |
| 36 | 15630 | 15631 | Dulles Greenway | Belmont Rd Off-Ramp | Inbound | LOV | 100 | 100 | 100 | 100 | 100 | 100 | 100 | |
| 37 | 6997 | 15611 | Dulles Greenway | Rt 607 (LDN Co Pkwy) On-Ramp | Outbound | LOV | - | 153 | 153 | 153 | 153 | 153 | 153 | VSL39 |
| 38 | 15612 | 15613 | Dulles Greenway | Rt 607 (LDN Co Pkwy) Off-Ramp | Inbound | LOV | - | 153 | 153 | 153 | 153 | 153 | 153 | VSL39 |
| 39 | 6969 | 15639 | Dulles Greenway | Battlefield Pkwy On-Ramp | Outbound | LOV | - | 100 | 100 | 100 | 100 | 100 | 100 | VP21b |
| 40 | 15640 | 15641 | Dulles Greenway | Battlefield Pkwy Off-Ramp | Inbound | LOV | - | 100 | 100 | 100 | 100 | 100 | 100 | VP21b |
| 41 | 6968 | 15634 | Dulles Greenway | Rt 653 (Shreve Mill Rd) On-Ramp | Inbound | LOV | - | 100 | 100 | 100 | 100 | 100 | 100 | VP21b |
| 42 | 15635 | 15636 | Dulles Greenway | Rt 653 (Shreve Mill Rd) Off-Ramp | Outbound | LOV | - | 100 | 100 | 100 | 100 | 100 | 100 | VP21b |

Ref: TOLLNK05.xls



## Exhibit 3-8: Draft Assignment of TOLLGROUP Variable and Toll in Year 2010 HOT Lane Project - AM/PM/Off Peak Tolls in 2010 Cents; On/Off Ramp based approach

| | | Scenario 5 | | | |
|---|---|---|---|---|---|
| | **Locations** | **Sbound** | **TOLLGRP** | **Nbound** | **TOLLGRP** |
| 1 | VA 193 - VA 267 | 20/20/15 | 4 | 20/60/15 | 9 |
| 2 | VA 267 - VA 123 | 20/20/15 | 4 | 20/90/15 | 3 |
| 3 | VA 123 - I-66 | 20/110/15 | 6 | 70/60/15 | 7 |
| 4 | I-66 - Lee Hwy | 20/40/15 | 2 | 20/40/15 | 2 |
| 5 | Lee Hwy - Braddock Rd. | 20/100/15 | 8 | 60/60/15 | 5 |
| 6 | Braddock Rd. - Springfield I.C. | 20/40/15 | 2 | 20/60/15 | 9 |

Highway link attributes include screen-line codes. Screen-lines are used for comparing trip and vehicle crossings during model calibration and validation purposes. The highway network includes 38 screen-lines throughout the modeled area and the current system of screen-line codes is shown as Exhibits 3-9 and Exhibit 3-10. Screen-lines 21 and 30 are not used.

An observed daily traffic count (coded in thousands) is also included as a link attribute. These traffic counts reflect average annual weekday travel.

**Exhibit 3-9: Highway Network Screen lines**

**Map 1 of 2**

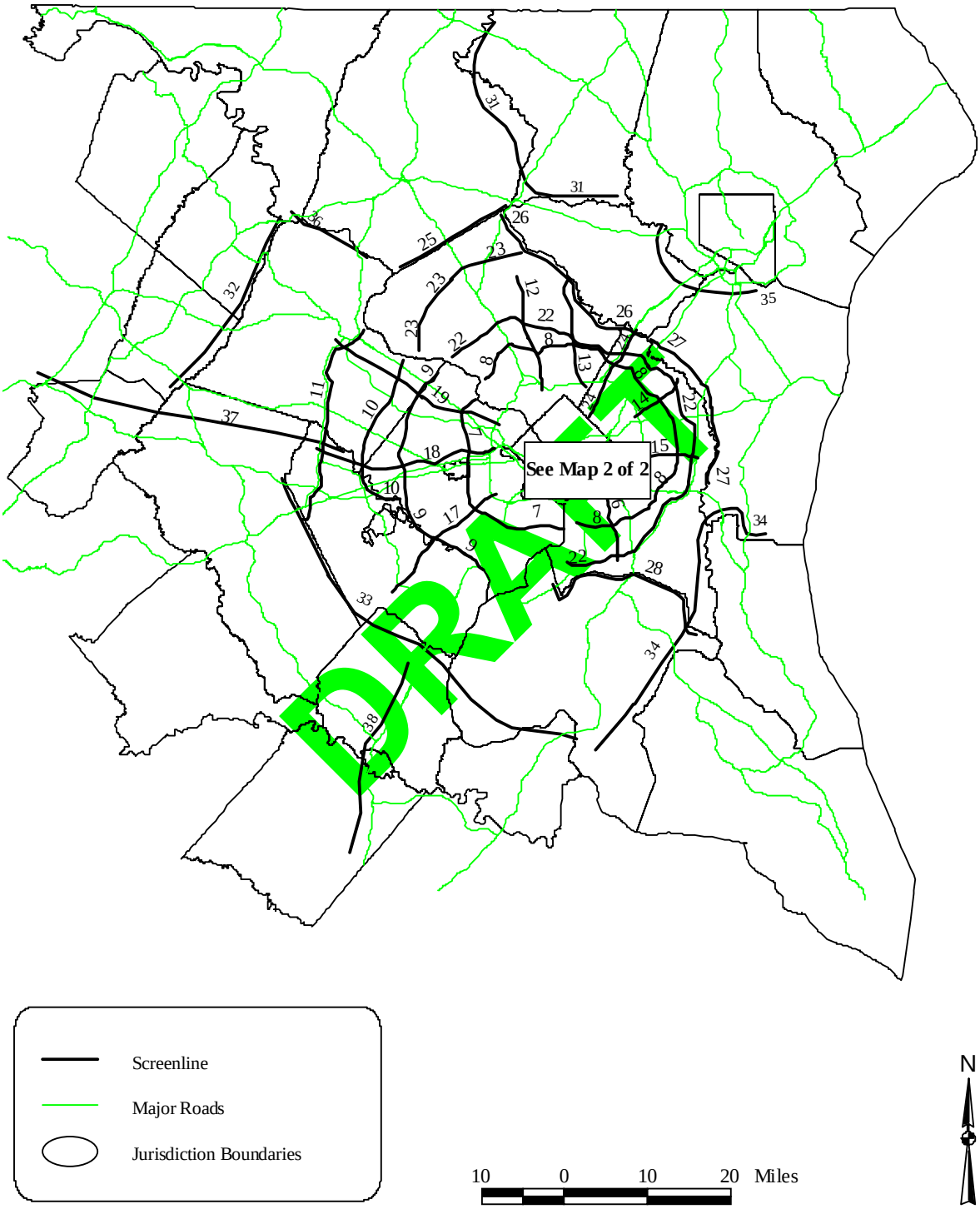
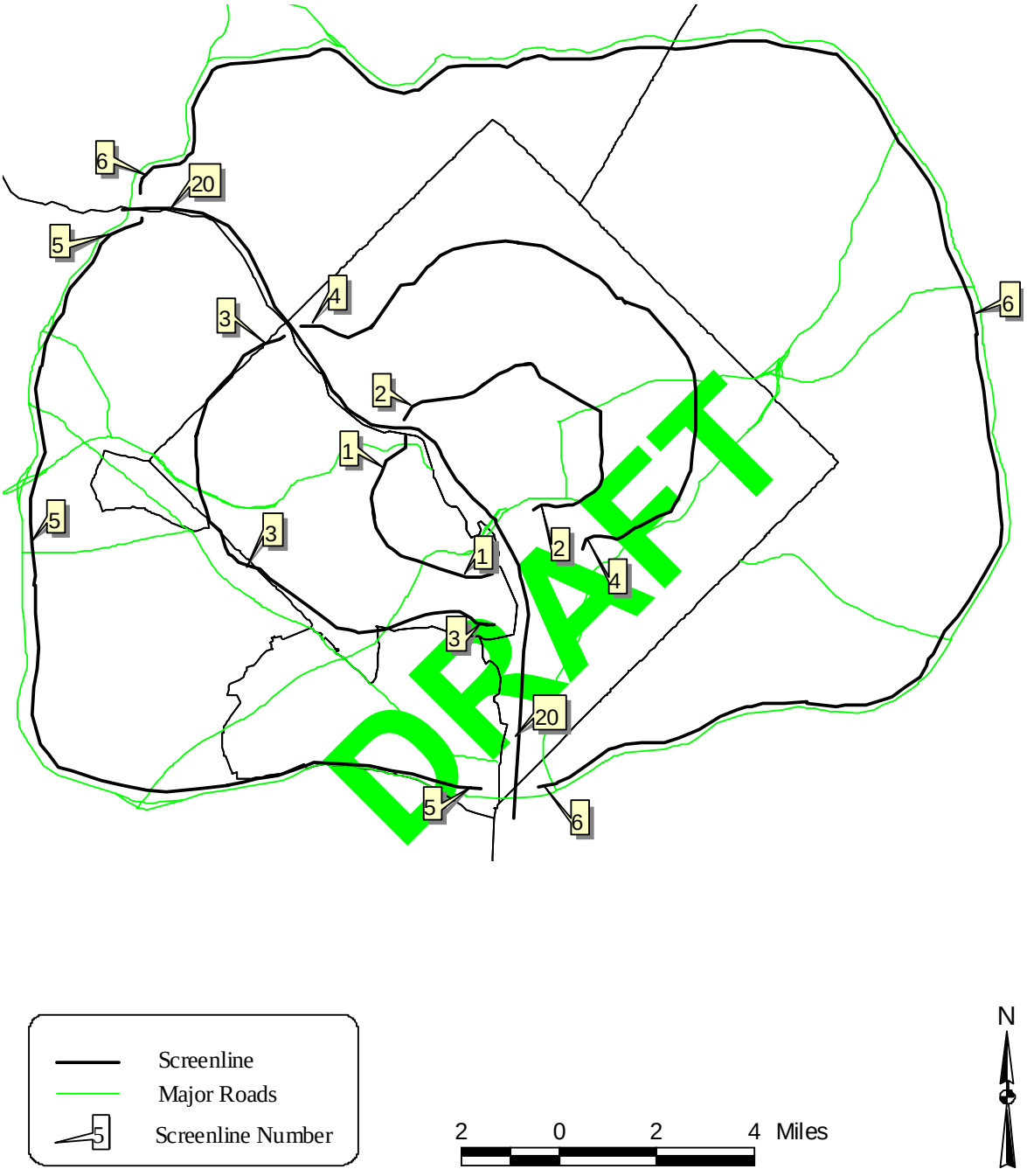


**Exhibit 3-10: Highway Network Screen lines (Inside the Capital Beltway)**
**Map 2 of 2**



## 3.2 Transit Network Building Overview

The AM and off-peak transit line files are established 'over' the AM and off-peak highway networks, respectively. The highway network contains some links that are coded below the grain of the TAZ system, so that the proximity of transit service to zonal activity centers can be more accurately represented[2]. In accordance with the requirements of the mode choice model, both 'walk access' and 'drive access' versions of both the AM and off-peak networks are prepared.

COG/TPB transit line files are developed using mode codes, which designate a specific provider (or provider group) and represent operations for twenty-two transit service providers. Transit operations and providers are allocated to nine mode codes: 1) local Metrobus routes, 2) Express Metrobus routes that use HOV lanes, 3) Metrorail lines, 4) Commuter Rail lines, 5) Light Rail and Transitway lines, 6) Primary local bus lines and 7) Primary express bus lines for the inner jurisdictions, and 8) Secondary local bus lines and 9) Secondary express commuter bus lines for the remaining outer ring areas. Exhibit 3-11 presents a summary of in-vehicle and out-of-vehicle mode conventions used in coding transit line files.

This year, local bus operations for Charles and St. Mary's Counties were added to COG/TPB transit networks and in April 2003, Maryland Transportation Administration (MTA) commuter bus routes were moved from mode 8 (other secondary – local bus) to mode 9 (other secondary – express bus). These routes originated in the outer counties and operate at higher speeds with limited stops.

Mode code "5" has been designated to represent light rail and transitway vehicle service at the request of local and state transportation agencies staffing the Regional Mobility and Accessibility Study. It must be noted that transit service coded as mode 5 are not modeled as premium rail (Metrorail and Commuter Rail). Exhibit 3-12 shows some of the operating characteristics for different transit modes that are used in cases where COG/TPB staff lack detailed coding instructions. However, in the COG/TPB travel model, each transit line is unique and independent, so there are different operating characteristics by transit line, not simply by transit mode. For example, we can have a transit network with two LRT lines that have maximum cruise speeds of 35 mph and a third LRT line with a maximum cruise speed of 65 mph. Or you could have an LRT line coded with exactly the same operating characteristics as a BRT line.



[2] The sub-zonal highway links used to more accurately reflect transit route alignments are disallowed from use during normal highway path building and highway assignments, however.

## Exhibit 3-11: Transit Network Mode Codes

| In-Vehicle Mode Codes | | | |
|---|---|---|---|
| **Mode No.** | **Mode Description** | **Abbreviation/ Prefix** | **Transit Service** |
| 1 | Local Metrobus | "1 - 97, A - Z" | WMATA (DC, Alex., Falls Church, & MTG, PG, ARL, FFX Counties) |
| 2 | Express Metrobus | "5 - 29" | WMATA (ARL, ALEX, FFX) |
| 3 | Metrorail | "MRED" | RED Line |
| | | "MBLU" | BLUE Line |
| | | "MGRN" | GREEN Line |
| | | "MORN" | ORANGE Line |
| | | "MYEL" | YELLOW Line |
| | | "MDULL" | DULLES Line |
| 4 | Commuter Rail | "FRED" | Frederick Line (VRE) |
| | | "MASS" | Manassas Line (VRE) |
| | | "MBRU" | Brunswick Line (MARC) |
| | | "MCAM" | Camden Line (MARC) |
| | | "MPENN" | Penn Line (MARC) |
| | | "MFRED" | Frederick City Line (MARC) |
| 5 | Light Rail | "MTGLRT" | Georgetown Branch Light Rail (MTA) |
| | | "LRTDC" | Anacostia Light Rail Line (DDOT / WMATA) |
| | | "CCTLRT" | Montgomery Co. Corridor Cities Light Rail Line (MTA) |
| | | "CCPY1" | Crystal City/Potomac Yard BRT Line - Arlington County |
| 6 | Other Primary - Local Bus | "ART" | Arlington County Bus |
| | | "DAT" | City of Alexandria Bus |
| | | "F" | Fairfax County Bus |
| | | "GO" | Prince Georges County Bus |
| | | "RO" | Montgomery Co. Ride On Bus |
| | | "SG" | Fairfax City Bus |
| | | "TYSL" | Tyson's Circulator |
| 7 | Other Primary - Express Bus | "DAT" | City of Alexandria Bus |
| | | "F" | Fairfax County Bus |
| 8 | Other Secondary - Local Bus | "CC" | Calvert County Bus |
| | | "FT" | Frederick County Bus |
| | | "HT" | Howard County Bus |
| | | "L" | City of Laurel Bus |
| | | "LT" | Loudoun County Local Bus |
| | | "OL" | OMNI-LINK (PrinceWilliam Co. Local) |
| | | "VG" | Charles County Bus (VanGO) |
| | | "STM" | St Mary's County Bus |
| 9 | Other Secondary - Express Bus | "LC" | Lee Coaches Commuter Bus |
| | | "LCS" | Loudoun Co. Commuter Bus |
| | | "LINK" | Washington Flyer- Dulles/WFC |
| | | "MT" | Maryland MTA Bus (Frederick, Howard, Anne Arundel, Calvert, St Mary's, & |
| | | | Charles Counties) |
| | | "OR" | OMNI-RIDE (Prince William Co. Commuter Bus) |
| | | "PQ" | Quicks Commuter Bus (Fredericksburg, Spotsylvania & Stafford Counties) |
| | | "SDC" | Nat'l Coach Commuter Bus (Fredericksburg, Spotsylvania & Stafford Co's) |
| **Out-of-Vehicle Mode Codes** | | | |
| 10 | (Unused) | | |
| 11 | Drive Access Links | | |
| 12 | Bus-toRail transfer Link | | |
| 13 | Walkinfg Link | | |
| 14 | (Unused) | | |
| 15 | PNR-to_Bus Stop | | |
| 16 | Zonal Access or Egress | | |

## Exhibit 3-12: Planning guidelines for transit vehicles, U.S. averages

| | Bus | BRT | Light Rail | Heavy Rail | Commuter Rail |
|---|---|---|---|---|---|
| **Speed, max. operational** | 65 mph | 65 mph | 50 to 60 mph | 55 to 65 mph | 70 to 125 mph |
| **Speed, average operating (stops included)** | 13 mph | Freeway:<br>* Non-stop: 40-50 mph<br>* All-stop: 25-35 mph<br>Arterial: 15 mph | 21 mph | 28 to 33 mph | 36 mph |
| **Acceleration rate** | 2.5 to 2.7 mph/s (2.9 to 4.0 ft/s$^2$ ) | 2.5 to 2.7 mph/s (2.9 to 4.0 ft/s$^2$ ) | 2.5 to 3.0 mph/s (2.9 to 4.3 ft/s$^2$ ) | 2.5 to 3.0 mph/s (2.9 to 4.3 ft/s$^2$ ) | 2.5 to 3.0 mph/s (2.9 to 4.3 ft/s$^2$ ) |
| **Deceleration rate** | 2.5 to 2.7 mph/s (2.9 to 4.0 ft/s$^2$ ) | 2.5 to 2.7 mph/s (2.9 to 4.0 ft/s$^2$ ) | 2.5 to 3.0 mph/s (2.9 to 4.3 ft/s$^2$ ) | 2.5 to 3.0 mph/s (2.9 to 4.3 ft/s$^2$ ) | 2.5 to 3.0 mph/s (2.9 to 4.3 ft/s$^2$ ) |
| **Vehicle capacity, crush (persons/vehicle)** | 60 to 85 | 60 to 130 | 100 to 175 | 175 to 187 | 132 to 255 |
| **Dwell time** | 35 to 45 s | 35 to 45 s | 35 to 45 s | 35 to 45 s | 35 to 45 s |
| **Capital costs: Total** | N/A | 21.2 million $/mi for a busway (4, 8) | 25.4 million $/mi (4, 9) | 158.8 million $/mi (4, 9) | N/A |
| **Theoretical line capacity (persons/hour)** | 60,600 per freeway lane (4, 10) | 60,600 per freeway lane (4, 10) | 36,000 (4, 10) | 69,000 (4, 10) | 46,000 (4, 10) |

Notes:

1. Dollar values are for 2002, unless otherwise stated.
2. N/A: Not applicable or not available.

Sources:

1. Light rail: The Urban Transportation Monitor, September 3, 2004.
2. Heavy rail: The Urban Transportation Monitor, January 23, 2004.
3. Commuter rail: The Urban Transportation Monitor, April 4, 2003.
4. Modal Master Table, The Urban Transportation Monitor, May 2, 2003.
5. Bus rapid transit: Bus Rapid Transit, Volume 1: Case Studies in Bus Rapid Transit, TCRP Report 90, Transportation Research Board, 2003.
6. Bus rapid transit: Characteristics of Bus Rapid Transit for Decision-Making, Roderick B. Diaz (editor), prepared for the Federal Transit Administration, August 2004.
7. Acceleration/deceleration rates: Transit Capacity and Quality of Service Manual, 2nd Edition, Transit Cooperative Research Program (TCRP) Report 100, Transportation Research Board, 2003. Part 4: Bus Transit Capacity (pp 4-39 to 4-53) and Part 5: Rail Transit Capacity (p 5-50).
8. Characteristics of Urban Transportation Systems, Federal Transit Administration, 1992.
9. Includes guideway elements, yards and shops systems, stations, vehicles, special conditions, right of way, soft costs. Source: No. 8 above.
10. Obtained by taking the minimum headway and the maximum seating/standing capacity into account. This capacity is generally not obtained in actual operations of buses. Assumes 6 cars per train for LRT, 10 for rapid rail, and 6 for commuter rail.

The prospect of manually coding the various access-to-transit and transfer links associated with transit networks is especially onerous, because of the size and complexity of the COG/TPB transit networks. To facilitate coding requirements, several automated procedures are used as part of the transit network building process, to enable automatic generation of auxiliary transit links, including walk-connect links, auto-connect links, transfer links, and downtown walk links.

As a result of the automatic link generation, the analyst must develop only two file types, transit line files and a single station/PNR file. The station/PNR file contains a list of all rail stations and park-and-ride lots (both existing and future) included in the transit network. It also contains an array of information that is associated with each station, including bus transfer nodes and the nearest TAZ. A description of the station/PNR file format can be found in Exhibit 3-33.

It is assumed that travelers access the transit system by either walking or driving an auto, so zone centroids are connected to the transit system via a series of walk-access links and drive-access links. If a traveler accesses the transit system by auto, the traveler must go via a designated park-and-ride (PNR) lot, so these drive-access links are also called PNR access links.

An automated procedure is used to generate drive-access links for both the peak and off-peak time periods. In the past, such as for the Version 2.0/TP+ model, we generated up to four drive-access links, for each zone, to the four "closest" rail or bus station's park-and-ride lot. However, using such a procedure ("best N stations") can lead to a phenomenon known as the "transit paradox," when one applies the procedure to multiple network scenarios (years). The classic example of the transit paradox is a case where a major rail extension is added to a network, but the extension results in a *loss* in transit trips for some zones, instead of the increase that would be expected. The paradox is caused by inconsistent coding of transit access links, usually drive-access links, where, instead of simply adding new drive-access links that are associated with the rail extension, the modeler both adds some drive-access links and removes some existing drive-access links. The removal of some links usually occurs at end-of-the-line stations that, because of the extension, are no longer end-of-the-line stations. Thus, in adding the new rail extension, some drive-access links that existed in the base scenario were removed by the modeler (or modeler's software) as the rail line is extended, instead of simply adding new drive-access links in addition to the existing ones. The result is that, for some interchanges, the drive-access transit travel time goes up and transit trips are reduced, despite the addition of the transit service.



To minimize the occurrence of the transit paradox, we developed a new routine for generating drive-access links that is based on one or more set distances from each zone. Specifically, two conditions apply:

1. The straight-line distance from a zone to a PNR lot must be: (1) within 4 miles for DC, Arlington Co., and Alexandria; (2) within 5 miles for Montgomery Co., Fairfax Co., and Prince George's Co.; and (3) within 8 miles for all remaining jurisdictions.
2. Zone to PNR connections will not cross the Potomac River, except for origin zones in Loudoun Co. and Jefferson Co., since the MARC commuter rail system in Maryland does serve commuters from those jurisdictions.

One other enhancement used in automated coding of drive-access links in the model involves the time and distance coded on drive-access links. Although drive-access links were always coded with a time and distance representing the over-the-road travel between the zone and the PNR, in the past, this time and distance were based on a lookup table of speeds. Now, however, the time and distance values are updated based on the output speeds from the initial "pump prime" traffic assignment. This means that the times and speeds on drive-access links should reflect the fact that they will congest as roadway links congest. Further details can be found in the Version 2.1D #50 model User's Guide, which discusses the automatic generation of both drive-access links and walk-access links.

Automated calculation of transit headways: The AM Peak and Off-Peak line files are text files containing information about transit lines, such as the headway, the run time, and the itinerary (i.e., the sequence of nodes taken by the transit vehicle as it travels its route).

Line files are time-of-day specific, so there is one set of line files for the AM peak period and one set for the off-peak period. "Headway" is the time between successive arrivals (or departures) of transit vehicles on a given route. "Run time" is the time in minutes that it takes for the transit vehicle to go from the start to the finish of its route and is a measure of the average speed of the vehicle on that route. In the past headways and run times were calculated manually from the paper timetables put out by the various transit agencies. Since 1999, however we have calculated headways and run times for WMATA bus routes and Ride On bus routes, which represent the lion's share of transit routes in a given transit network, in an automated manner using electronic files from the transit agencies and SAS programs developed at COG/TPB. This has ensured consistency of transit networks across network years for WMATA bus routes and Ride On bus routes, something that is very important for correct use of travel demand models. The headways and run times for the twenty remaining transit providers in the Metropolitan Washington region were calculated manually using published transit provider information.

Transit line data is shown for the Metrorail system in Exhibit 3-13. The information is displayed for 1994, 2000, and 2025. The exhibit displays a COG transit line identifier, the origin and destination stations, and headways, run-times, line distances, and average line speed for service during the AM peak hour and Off-peak period.

Commuter rail and light rail transit line data is shown in Exhibits 3-14 through 3-16. Rail line characteristics are displayed for 1994, 2000, 2010, 2020, and 2030. These exhibits also display transit line identifiers, origin and destination stations, and headways, run-times, line distances, and average line-speed for service during the AM peak hour and Off-peak period.

A file containing Metrorail and commuter rail links (see Exhibit 3-34) is required in the transit building process. These link attributes consist of simply the a-node, b-node, distance and average speed. Metrorail and commuter rail link data is supplied by the Washington Metropolitan Area Transit Authority (WMATA), Maryland Transit Administration (MTA), and Virginia Department of Rail and Public Transportation (VDRPT).

## Exhibit 3-13: Metrorail Network Data for 1994, 2000, 2010, 2020, and 2025

| | Year 1994 | | | | | | | Year 2000 | | | | | | | Year 2010 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Rail Network Data | | | | | | | Rail Network Data | | | | | | | Rail Network Data | | | | |
| Line | O-Sta. | D-Sta. | am hdwy | op hdwy | time (min) | dist (mi) | spd (mph) | O-Sta. | D-Sta. | am hdwy | op hdwy | time (min) | dist (mi) | spd (mph) | O-Sta. | D-Sta. | am hdwy | op hdwy | time (min) | dist (mi) | spd (mph) |
| Red-A | Shady Grove (1) | Wheaton (25) | 6 | 12 | 60 | 29.81 | 29.81 | Shady Grove (1) | Glenmont (26) | 6 | 12 | 64.2 | 31.58 | 29.51 | Shady Grove (1) | Glenmont (26) | 6 | 12 | 64.2 | 31.58 | 29.51 |
| Red-B | Grosvenor (5) | Silver Spring (23) | 10 | 14 | 42 | 19.33 | 27.61 | Grosvenor (5) | Silver Spring (23) | 6 | 12 | 42.2 | 19.33 | 27.48 | Grosvenor (5) | Silver Spring (23) | 3 | 12 | 42.2 | 19.33 | 27.48 |
| Red-C | Silver Spring (23) | Grosvenor (5) | 6 | 17 | 42 | 19.33 | 27.61 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Red-D | Shady Grove (1) | Silver Spring (23) | 30 | 60 | 53 | 26.52 | 30.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Red-E | Silver Spring (23) | Shady Grove (1) | -- | 43 | 53 | 26.52 | 30.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Grn-A | Fort Totten (21) | Greenbelt (27) | 6 | 12 | 11 | 7.65 | 41.73 | Greenbelt (27) | Anacostia (40) | 6 | 12 | 29.7 | 16.18 | 32.69 | Greenbelt (27) | Branch (45) | 6 | 12 | 40 | 22.88 | 34.32 |
| Grn-B | U St-Cardozo (33) | Anacostia (40) | 6 | 12 | 11 | 5.04 | 27.49 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Yel-A | Mt. Vn Sq.-UDC (35) | Huntington (48) | 6 | 12 | 24 | 10.62 | 26.55 | Mt. Vn Sq.-UDC (35) | Huntington (48) | 6 | 12 | 24.3 | 10.62 | 26.22 | Mt. Vn Sq.-UDC (35) | Huntington (48) | 7 | 12 | 24.3 | 10.62 | 26.22 |
| Blu-A | Vandorn St. (46) | Addison Rd. (83) | 12 | 12 | 52 | 23.31 | 26.9 | Franconia (47) | Addison Rd. (83) | 6 | 12 | 60 | 26.81 | 26.81 | Franconia (47) | Largo (87) | 14 | 12 | 60 | 29.69 | 29.69 |
| Blu-B | National Airport (52) | Addison Rd. (83) | 12 | -- | 40 | 15.79 | 23.69 | -- | -- | -- | -- | -- | -- | -- | Franconia (47) | Greenbelt (27) | 14 | -- | 66 | 28.72 | 26.1 |
| Oran-A | Vienna (57) | New Carrollton (80) | 6 | 12 | 57 | 26.15 | 27.53 | Vienna (57) | New Carrollton (80) | 6 | 12 | 59.4 | 26.15 | 26.41 | Vienna (57) | New Carrollton (80) | 7 | 12 | 59 | 26.15 | 26.59 |
| Oran-B | W. Falls Church (59) | New Carrollton (80) | 12 | 12 | 50 | 21.26 | 25.51 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Oran-C | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Vienna (57) | Largo (87) | 14 | -- | 59 | 26.15 | 26.59 |

| | 2020 | | | | | | | 2030 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Rail Network Data | | | | | | | Rail Network Data | | | | |
| Line | O-Sta. | D-Sta. | am hdwy | op hdwy | time (min) | dist (mi) | spd (mph) | O-Sta. | D-Sta. | am hdwy | op hdwy | time (min) | dist (mi) | spd (mph) |
| Red-A | Shady Grove (1) | Glenmont (26) | 2.5 | 6 | 64.2 | 31.58 | 29.51 | Shady Grove (1) | Glenmont (26) | 2.5 | 6 | 64.2 | 31.58 | 29.51 |
| Red-B | Grosvenor (5) | Silver Spring (23) | -- | -- | -- | -- | -- | Grosvenor (5) | Silver Spring (23) | -- | -- | -- | -- | -- |
| Red-C | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Red-D | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Red-E | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Grn-A | Greenbelt (27) | Branch (45) | 7 | 12 | 40 | 22.88 | 34.32 | Greenbelt (27) | Branch (45) | 7 | 12 | 40 | 22.88 | 34.32 |
| Grn-B | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Yel-A | Mt. Vn Sq.-UDC (35) | Huntington (48) | 7 | 12 | 24.3 | 10.62 | 26.22 | Mt. Vn Sq.-UDC (35) | Huntington (48) | 7 | 12 | 24.3 | 10.62 | 26.22 |
| Blu-A | Franconia (47) | Largo (87) | 14 | 12 | 60 | 29.69 | 29.69 | Franconia (47) | Largo (87) | 14 | 12 | 60 | 29.69 | 29.69 |
| Blu-B | Franconia (47) | Greenbelt (27) | 14 | -- | 66 | 28.72 | 26.1 | Franconia (47) | Greenbelt (27) | 14 | -- | 66 | 28.72 | 26.1 |
| Oran-A | Vienna (57) | New Carrollton (80) | 7 | 12 | 59 | 26.15 | 26.59 | Vienna (57) | New Carrollton (80) | 7 | 12 | 59 | 26.15 | 26.59 |
| Oran-B | Dulles GrnWay (98) | Stadium-Armory (75) | 7 | 12 | 38 | 23.28 | 36.76 | Dulles GrnWay (98) | Stadium-Armory (75) | 7 | 12 | 38 | 23.28 | 36.76 |
| Oran-C | Vienna (57) | Largo (87) | 14 | -- | 59 | 26.15 | 26.59 | Vienna (57) | Largo (87) | 14 | -- | 59 | 26.15 | 26.59 |



Ref: ralnwdat05.xls

## Exhibit 3-14: Commuter Rail and Light Rail Network Data for 1994 and 2000

| | | | *Year 1994* | | | | | | | *Year 2000* | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Line | O-Sta. | D-Sta. | am hdwy | op hdwy | amRT (min) | opRT (min) | dist (mi) | amspd (mph) | opspd (mph) | am hdwy | op hdwy | amRT (min) | opRT (min) | dist (mi) | amspd (mph) | opspd (mph) |
| MBRU1I | Duffields (16) | Union Station (01) | 60 | -- | 100 | -- | 58.62 | 35.17 | -- | 60 | -- | 93 | -- | 58.62 | 37.82 | -- |
| MBRU2O | Union Station (01) | Brunswick (14) | -- | 60 | -- | 80 | 47.02 | -- | 35.27 | -- | 60 | -- | 81 | 47.02 | -- | 34.83 |
| MBRU2I | Brunswick (14) | Union Station (01) | 20 | -- | 83 | -- | 47.02 | 33.99 | -- | 60 | -- | 86 | -- | 47.02 | 32.80 | -- |
| MBRU3I** | Brunswick (14) | Union Station (01) | -- | -- | -- | -- | 47.02 | -- | -- | 60 | -- | 82 | -- | 47.02 | 34.40 | -- |
| MBRU4I** | Brunswick (14) | Union Station (01) | -- | -- | -- | -- | -- | -- | -- | 60 | -- | 77 | -- | 47.02 | 36.64 | -- |
| MPEN1I | BWI Station (55) | Union Station (01) | 20 | 60 | 41 | 43 | 27.10 | 39.66 | 37.81 | 30 | 60 | 39 | 40 | 27.10 | 41.69 | 40.65 |
| MPEN2O | Union Station (01) | BWI Station (55) | 30 | 60 | 32 | 34 | 30.30 | 56.81 | 53.47 | 60 | 60 | 37 | 35 | 27.10 | 43.95 | 46.46 |
| MPEN3I * | BWI Station (55) | Union Station (01) | 60 | 60 | 31 | 39 | 27.10 | 52.45 | 41.69 | 60 | 60 | 28 | 38 | 27.10 | 58.07 | 42.79 |
| MPEN4O * | Union Station (01) | BWI Station (55) | -- | -- | -- | -- | -- | -- | -- | 60 | -- | 25 | -- | 27.10 | 65.04 | -- |
| MCAM1I | Elkridge (32) | Union Station (01) | 30 | -- | 55 | -- | 30.30 | 33.05 | -- | -- | -- | -- | -- | -- | -- | -- |
| MCAM1I | Dorsey (34) | Union Station (01) | -- | -- | -- | -- | -- | -- | -- | 60 | -- | 49 | -- | 33.30 | 40.78 | -- |
| MCAM1O** | Union Station (01) | Dorsey (34) | -- | -- | -- | -- | -- | -- | -- | 60 | -- | 39 | -- | 33.30 | 51.23 | -- |
| MCAM2I | Elkridge (32) | Union Station (01) | 60 | -- | 55 | -- | 30.30 | 33.05 | -- | -- | -- | -- | -- | -- | -- | -- |
| MCAM2I | Dorsey (34) | Union Station (01) | -- | -- | -- | -- | -- | -- | -- | 60 | -- | 47 | -- | 33.30 | 42.51 | -- |
| MCAM3I** | Dorsey (34) | Union Station (01) | -- | -- | -- | -- | -- | -- | -- | 60 | -- | 38 | -- | 33.30 | 52.58 | -- |
| MCAM1I | Elkridge (32) | Union Station (01) | -- | 60 | -- | 53 | 30.30 | -- | 34.30 | -- | -- | -- | -- | -- | -- | -- |
| MCAM3O | Union Station (01) | Elkridge (32) | 30 | -- | 38 | -- | 30.30 | 47.84 | -- | -- | -- | -- | -- | -- | -- | -- |
| MCAM3O** | Union Station (01) | Dorsey (34) | -- | -- | -- | -- | -- | -- | -- | -- | 60 | -- | 79 | 33.30 | -- | 25.29 |
| MCAM4O | Union Station (01) | Laurel Race Tk. (36) | -- | -- | -- | -- | -- | -- | -- | -- | 60 | -- | 49 | 18.70 | -- | 22.90 |
| FRED1I | Fredericksburg (7733) | Union Station (01) | 30 | -- | 81 | -- | 53.92 | 39.94 | -- | 30 | -- | 87 | -- | 53.92 | 37.19 | -- |
| FRED2I | Fredericksburg (7733) | Union Station (01) | 30 | -- | 70 | -- | 53.92 | 46.22 | -- | -- | 60 | -- | 74 | 53.92 | -- | 43.72 |
| FRED3O** | Union Station (01) | Fredericksburg (7733) | -- | -- | -- | -- | -- | -- | -- | 60 | 60 | 64 | 67 | 53.92 | 50.55 | 48.29 |
| FRED4O | Union Station (01) | Fredericksburg (7733) | -- | -- | -- | -- | -- | -- | -- | -- | 60 | -- | 70 | 53.92 | -- | 46.22 |
| MASS1I | Broad Run (7711) | Union Station (01) | 20 | -- | 74 | -- | 34.34 | 27.84 | -- | 30 | 60 | 74 | 75 | 34.34 | 27.84 | 27.47 |
| MASS1O | Union Station (01) | Broad Run (7711) | -- | -- | -- | -- | -- | -- | -- | 60 | 60 | 74 | 73 | 34.34 | 27.84 | 28.22 |
| MASS2O** | Union Station (01) | Broad Run (7711) | -- | -- | -- | -- | -- | -- | -- | 60 | -- | 69 | -- | 34.34 | 29.86 | -- |
| MFREDI | Frederick City (18) | Union Station (01) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **Light Rail** | | | | | | | | | | | | | | | | |
| LRTDC | Penn. Ave | Bolling AFB | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| CCTLRT | Metro Grove | Shady Grove | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| LRTMTG | Bethesda(70) | Silver Spring (73) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

*** Express**
**** Limited Stops**

## Exhibit 3-15: Commuter Rail and Light Rail Network Data for 2010 and 2020

| | | | *Year 2010* | | | | | | | *Year 2020* | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Line | O-Sta. | D-Sta. | am hdwy | op hdwy | amRT (min) | opRT (min) | dist (mi) | amspd (mph) | opspd (mph) | am hdwy | op hdwy | amRT (min) | opRT (min) | dist (mi) | amspd (mph) | opspd (mph) |
| MBRU1I | Brunswick (14) | Union Station (01) | 60 | -- | 87 | -- | 47.02 | 32.43 | -- | 60 | -- | 87 | -- | 47.02 | 32.43 | -- |
| MBRU1O | Union Station (01) | Brunswick (14) | -- | 60 | -- | 78 | 47.02 | -- | 36.20 | -- | 60 | -- | 78 | 47.02 | -- | 36.20 |
| MBRU2O | Union Station (01) | Brunswick (14) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MBRU2I** | Duffields (16) | Union Station (01) | 60 | -- | 99 | -- | 58.62 | 35.53 | -- | 60 | -- | 99 | -- | 58.62 | 35.53 | -- |
| MPEN1I | BWI Station (55) | Union Station (01) | 60 | 60 | 40 | 38 | 27.03 | 40.55 | 42.68 | 60 | 60 | 40 | 38 | 27.03 | 40.55 | 42.68 |
| MPEN1O | Union Station (01) | BWI Station (55) | 60 | 60 | 33 | 35 | 27.03 | 49.15 | 46.34 | 60 | 60 | 33 | 35 | 27.03 | 49.15 | 46.34 |
| MPEN2I | BWI Station (55) | Union Station (01) | 60 | | 30 | | 27.03 | 54.06 | -- | 60 | | 30 | | 27.03 | 54.06 | -- |
| MPEN2O | Union Station (01) | BWI Station (55) | 30 | | 26 | | 27.03 | 62.38 | -- | 30 | | 26 | | 27.03 | 62.38 | -- |
| MPEN3I * | BWI Station (55) | Union Station (01) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MPEN4O * | Union Station (01) | BWI Station (55) | 60 | -- | 25 | -- | 27.03 | 64.87 | -- | 60 | -- | 25 | -- | 27.03 | 64.87 | -- |
| MCAM1I | Dorsey (34) | Union Station (01) | 60 | -- | 55 | -- | 26.80 | 29.24 | -- | 60 | -- | 55 | -- | 26.80 | 29.24 | -- |
| MCAM1O | Union Station (01) | Dorsey (34) | 60 | -- | 39 | -- | 26.80 | 41.23 | -- | 60 | -- | 39 | -- | 26.80 | 41.23 | -- |
| MCAM2I** | Dorsey (34) | Union Station (01) | 60 | -- | 43 | -- | 26.80 | 37.40 | -- | 60 | -- | 43 | -- | 26.80 | 37.40 | -- |
| MCAM3I** | Dorsey (34) | Union Station (01) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MCAM3O** | Union Station (01) | Dorsey (34) | -- | 60 | -- | 80 | 26.80 | -- | 20.10 | -- | 60 | -- | 80 | 26.80 | -- | 20.10 |
| MCAM4O | Union Station (01) | Laurel Race Tk. (36) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MFREDI** | Frederick City (18) | Union Station (01) | 60 | -- | 95 | -- | 55.15 | 34.83 | -- | 60 | -- | 95 | -- | 55.15 | 34.83 | -- |
| FRED1I | Fredericksburg (7733) | Union Station (01) | 20 | -- | 88 | -- | 53.92 | 36.76 | | 20 | -- | 88 | -- | 53.92 | 36.76 | -- |
| FRED1O | Union Station (01) | Fredericksburg (7733) | -- | 60 | -- | 86 | 53.92 | -- | 37.62 | -- | 60 | -- | 86 | 53.92 | -- | 37.62 |
| AMTK1I** | Fredericksburg (7733) | Union Station (01) | 60 | -- | 75 | -- | 53.92 | 43.14 | | 60 | -- | 75 | -- | 53.92 | 43.14 | -- |
| AMTK1O** | Union Station (01) | Fredericksburg (7733) | 60 | 60 | 36 | 62 | 53.92 | 89.87 | 52.18 | 60 | 60 | 36 | 62 | 53.92 | 89.87 | 52.18 |
| AMTK2I** | Fredericksburg (7733) | Union Station (01) | -- | 60 | -- | 91 | 53.92 | -- | 35.55 | -- | 60 | -- | 91 | 53.92 | -- | 35.55 |
| AMTK2O** | Union Station (01) | Fredericksburg (7733) | -- | 60 | -- | 70 | 53.92 | -- | 46.22 | -- | 60 | -- | 70 | 53.92 | -- | 46.22 |
| MASS1I | Broad Run (7711) | Union Station (01) | 20 | 60 | 75 | 75 | 34.34 | 27.47 | 27.47 | 20 | 60 | 75 | 75 | 34.34 | 27.47 | 27.47 |
| MASS1O | Union Station (01) | Broad Run (7711) | -- | 60 | -- | 73 | 34.34 | -- | 28.22 | -- | 60 | -- | 73 | 34.34 | -- | 28.22 |
| MASS2O** | Union Station (01) | Broad Run (7711) | 60 | -- | 75 | -- | 34.34 | 27.47 | -- | 60 | -- | 75 | -- | 34.34 | 27.47 | -- |
| AMTK3O** | Union Station (01) | Manassas | -- | 60 | -- | 52 | 31.82 | | 36.72 | -- | 60 | -- | 52 | 31.82 | -- | 36.72 |
| **Light Rail** | | | | | | | | | | | | | | | | |
| LRTDC | Penn. Ave | Bolling AFB | 15 | 30 | 15 | 15 | 1.85 | 7.40 | 7.40 | 15 | 30 | 15 | 15 | 1.85 | 7.40 | 7.40 |
| CCTPY1 | Glebe Rd Ext. | Crystal City Metro | 6 | 12 | 10 | 10 | 1.21 | 7.26 | 7.26 | 6 | 12 | 10 | 10 | 1.21 | 7.26 | 7.26 |
| CCTLRT | Metro Grove | Shady Grove | -- | -- | -- | -- | -- | -- | -- | 6 | 10 | 40 | 40 | 13.3 | 19.95 | 19.95 |
| LRTMTG | Bethesda(70) | Silver Spring (73) | -- | -- | -- | -- | -- | -- | -- | 6 | 12 | 12 | 12 | 3.75 | 18.75 | 18.75 |

*** Express**
**** Limited Stops**

## Exhibit 3-16: Commuter Rail and Light Rail Network Data for 2030

| Line | O-Sta. | D-Sta. | *Year 2030* am hdwy | op hdwy | amRT (min) | opRT (min) | dist (mi) | amspd (mph) | opspd (mph) |
|---|---|---|---|---|---|---|---|---|---|
| MBRU1I | Brunswick (14) | Union Station (01) | 60 | -- | 87 | -- | 47.02 | 32.43 | -- |
| MBRU1O | Union Station (01) | Brunswick (14) | -- | 60 | -- | 78 | 47.02 | -- | 36.20 |
| MBRU2O | Union Station (01) | Brunswick (14) | -- | -- | -- | -- | -- | -- | -- |
| MBRU2I** | Duffields (16) | Union Station (01) | 60 | -- | 99 | -- | 58.62 | 35.53 | -- |
| MPEN1I | BWI Station (55) | Union Station (01) | 60 | 60 | 40 | 38 | 27.03 | 40.55 | 42.68 |
| MPEN1O | Union Station (01) | BWI Station (55) | 60 | 60 | 33 | 35 | 27.03 | 49.15 | 46.34 |
| MPEN2I | BWI Station (55) | Union Station (01) | 60 | -- | 30 | -- | 27.03 | 54.06 | -- |
| MPEN2O | Union Station (01) | BWI Station (55) | 30 | -- | 26 | -- | 27.03 | 62.38 | -- |
| MPEN3I * | BWI Station (55) | Union Station (01) | -- | -- | -- | -- | -- | -- | -- |
| MPEN4O * | Union Station (01) | BWI Station (55) | 60 | -- | 25 | -- | 27.03 | 64.87 | -- |
| MCAM1I | Dorsey (34) | Union Station (01) | 60 | -- | 55 | -- | 26.80 | 29.24 | -- |
| MCAM1O | Union Station (01) | Dorsey (34) | 60 | -- | 39 | -- | 26.80 | 41.23 | -- |
| MCAM2I** | Dorsey (34) | Union Station (01) | 60 | -- | 43 | -- | 26.80 | 37.40 | -- |
| MCAM3I** | Dorsey (34) | Union Station (01) | -- | -- | -- | -- | -- | -- | -- |
| MCAM3O** | Union Station (01) | Dorsey (34) | -- | 60 | -- | 80 | 26.80 | -- | 20.10 |
| MCAM4O | Union Station (01) | Laurel Race Tk. (36) | -- | -- | -- | -- | -- | -- | -- |
| MFREDI** | Frederick City (18) | Union Station (01) | 60 | -- | 95 | -- | 55.15 | 34.83 | -- |
| FRED1I | Fredericksburg (7733) | Union Station (01) | 20 | -- | 88 | -- | 53.92 | 36.76 | -- |
| FRED1O | Union Station (01) | Fredericksburg (7733) | -- | 60 | -- | 86 | 53.92 | -- | 37.62 |
| AMTK1I** | Fredericksburg (7733) | Union Station (01) | 60 | -- | 75 | -- | 53.92 | 43.14 | -- |
| AMTK1O** | Union Station (01) | Fredericksburg (7733) | 60 | 60 | 36 | 62 | 53.92 | 89.87 | 52.18 |
| AMTK2I** | Fredericksburg (7733) | Union Station (01) | -- | 60 | -- | 91 | 53.92 | -- | 35.55 |
| AMTK2O** | Union Station (01) | Fredericksburg (7733) | -- | 60 | -- | 70 | 53.92 | -- | 46.22 |
| MASS1I | Broad Run (7711) | Union Station (01) | 20 | 60 | 75 | 75 | 34.34 | 27.47 | 27.47 |
| MASS1O | Union Station (01) | Broad Run (7711) | -- | 60 | -- | 73 | 34.34 | -- | 28.22 |
| MASS2O** | Union Station (01) | Broad Run (7711) | 60 | -- | 75 | -- | 34.34 | 27.47 | -- |
| AMTK3O** | Union Station (01) | Manassas | -- | 60 | -- | 52 | 31.82 | -- | 36.72 |
| **Light Rail** | | | | | | | | | |
| LRTDC | Penn. Ave | Bolling AFB | 15 | 30 | 15 | 15 | 1.85 | 7.40 | 7.40 |
| CCTPY1 | Glebe Rd Ext. | Crystal City Metro | 6 | 12 | 10 | 10 | 1.21 | 7.26 | 7.26 |
| CCTLRT | Metro Grove | Shady Grove | 6 | 10 | 40 | 40 | 13.3 | 19.95 | 19.95 |
| LRTMTG | Bethesda(70) | Silver Spring (73) | 6 | 12 | 12 | 12 | 3.75 | 18.75 | 18.75 |

*** Express**
**** Limited Stops**



Ref: comraldat05.xls

### 3.3 Transit Fare Building Overview

Finally, a series of files is needed to support the fare building process. COG's transit fare process consists of two programs known as MFARE1 and MFARE2[3], which operate in sequence to estimate Metrorail station-to-station fares and to estimate total (bus and rail) fares between TAZ. A more rigorous description of the MFARE1/2 processes can be found in Chapter 6 of the Version 2.1 D #50 model User's Guide.

The files needed to support the fare building process include a transit walk percent file, a zone file indicating the equivalence between each TAZ and its associated bus fare district, a Metrorail network link file and coordinate file, and a bus fare matrix indicating fares between large pre-defined super districts(bus-fare-zone to bus-fare-zone fare matrix). Descriptions of fare assumptions that were employed in the development of bus-fare-zone-to-bus-fare-zone fare matrices are presented in the following pages.

Bus-fare-zone to bus-fare-zone fare matrices have been developed based on WMATA tariffs in effect for the survey year 1994, validation network year 2000, and forecast year networks for 2005 through 2030. The WMATA fare tariffs used for modeling are: for 1994 (Tariff #16, effective June 27, 1992), year 2000 (Tariff Number 19, effective June 1999), and years 2005 through 2030 (Tariff Number 23 effective June 2004). This year, the bus-fare-zone to bus-fare-zone matrix for Tariff Number 23 was modified to reflect the summer 2005 VRE fare increase. Exhibit 3-17 displays WMATA's current Metrorail and bus fare policy for the peak and off-peak periods and control parameters for the MFARE1/2 programs. The table arrays fare policy (Tariff Number 23 effective June 2004) as input to the MFARE1 and MFARE2 programs.



Fares for service outside the WMATA compact area are developed using passenger costs for transit available in each area. Fares for MARC, VRE, and other transit providers are the same for the peak and off-peak periods. The fares are provided in cents for the year that the Tariff was in effect. The least expensive fares available are used to reflect what the majority of regular work trip commuters would pay and are averaged for areas with multiple services and fare structures. Areas with multiple services and fare structures are represented as being in a primary and secondary fare zone. For example, in 1994, S.E. Fairfax County was served by Fairfax Connector (bus fare zone 2,2) and VRE commuter rail service (bus fare zone 3,4). Therefore in this area, each TAZ would have two bus fare zones (a primary and a secondary) listed in the TAZ/bus fare equivalence file. MFARE2 would calculate the cost of a trip from a TAZ in this area to downtown D.C. (bus fare zone 1,1) by averaging the cost of a trip from bus fare zone 2,2 to bus fare zone 1,1 with the cost of a trip from bus fare zone 3,4 to bus fare zone 1,1.

[3] *User's Guide for the MWCOG Fare Programs, Microcomputer Version* (Final). Originally prepared for the Maryland Department of Transportation by COMSIS Corporation, April 1991. Revised version prepared for the Metropolitan Washington Council of Governments, by William G. Allen, Jr., PE, June 1992.

## Exhibit 3-17: WMATA Metrorail and Bus Fare Policy* and MFARE1/2 Control Parameters

| Process | Time Period | Control | Name | Policy Variable | Tariff #16 6/27/1992 | Tariff #19 6/20/1999 | Tariff #23 6/28/2004 |
|---|---|---|---|---|---|---|---|
| MFARE1 | AM | MFARE1 | UPARMS (7) | Boarding Distance | 3 miles | 3 miles | 3 miles |
| | | | UPARMS (8) | Secondary Distance | 3 miles | 3 miles | 3 miles |
| | | | UPARMS (1) | Boarding Fare | $1.00 | $1.10 | $1.35 |
| | | | UPARMS (3) | Maximum Fare | $3.15 | $3.25 | $3.90 |
| | | | UPARMS (2) | Secondary Fare | $0.19 | $0.19 | $0.22 |
| | | | UPARMS (9) | Tertiary Fare | $0.17 | $0.165 | $0.195 |
| MFARE1 | OFF-PEAK | MFARE1OP | UPARMS (7) | Boarding Distance | 7 miles | 7 miles | 7 miles |
| | | | UPARMS (8) | Secondary Distance | 3 miles | 3 miles | 3 miles |
| | | | UPARMS (1) | Boarding Fare | $1.00 | $1.10 | $1.35 |
| | | | UPARMS (3) | Maximum Fare | $2.00 | $2.10 | $2.35 |
| | | | UPARMS (2) | Secondary Fare | $0.50 | $0.50 | $0.50 |
| | | | UPARMS (9) | Tertiary Fare | $0.50 | $0.50 | $0.50 |
| MFARE2 | AM/OFF-PEAK | MFARE2TP | UPARMS (2) | Deflator | | | |
| | | | UPARMS (4) | DC Rail-Bus Discount | $0.75 | $0.85 | $0.90 |
| | | | UPARMS (5) | MD Rail-Bus Discount | $0.00 | $0.85 | $0.90 |
| | | | UPARMS (6) | Va/1 Rail-Bus Discount | $0.25 | $0.85 | $0.90 |
| | | | UPARMS (7) | Va/2 Rail-Bus Discount | $0.25 | $0.85 | $0.90 |



Ref: WMATA FARE POLICYALLRJM.xls

From "Tariff of the Washington Metropolitan Area Transit Authority for Metrorail and Metrobus operations within the Washington Metropolitan Area. Tariff 16 (effective June 27, 1992), Tariff 19 (effective June 20, 1999), and Tariff 23 (effective June 28, 2004)

Since the development of the 1994 networks, the modeled area has been comprised bus fare zones that reflect transit service areas that are based on the WMATA tariffs and fores for MARC, VRE, and other transit providers in effect for that network year. Bus fare zones/service areas and fare matrices for Tariff #16 are described in Exhibits 3-18 through 3-21. WMATA's Tariff #19 information is shown in Exhibits 3-22 through 3-25, and Tariff #23 is shown in Exhibits 3-26 through 3-29.

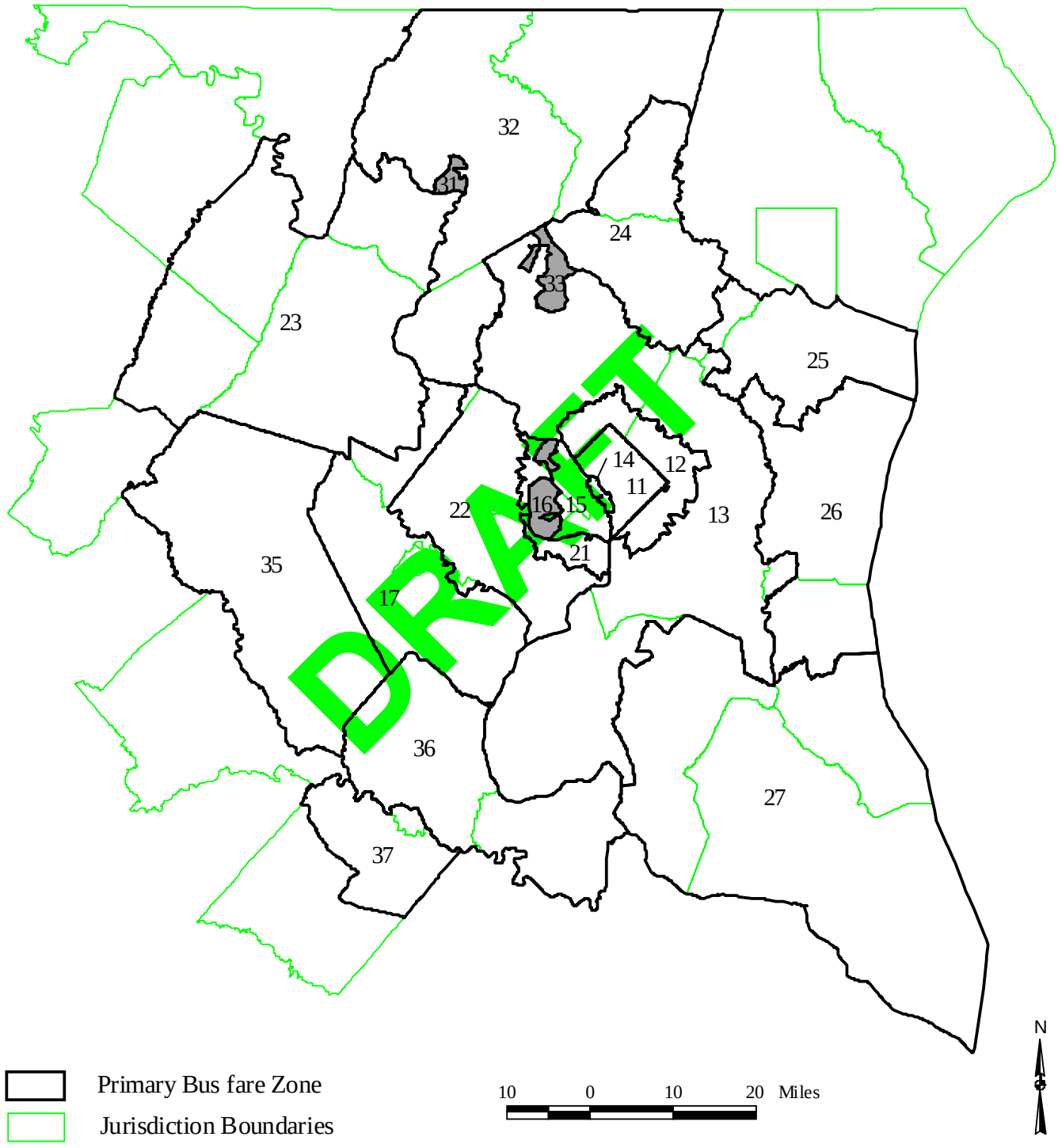
In 1994, the following modifications were made to the COG/TPB fare zone system to more accurately reflect conditions in respect to VRE fares:

1. Zone 2, 3 (Frederick Co. / MARC) was assumed to extend to cover western Loudoun County as well as Clark and Jefferson Counties. Much of what little transit use is generated from this area is heavily MARC oriented.
2. Zone 3, 4 fares were modified so that they reflected only the Lorton Station which actually opened during late 1994.
3. Fare zone 3, 5 was redeveloped based on fares from the Quantico, Woodbridge, and Rippon Stations.
4. Two additional fare zones were established to reflect commuter rail opportunities in areas beyond Prince William County.
5. Zone 3, 6 was used to reflect Stafford County stations, Brooke and Leeland Road (serving Stafford and King George Counties).
6. Zone 3, 7 was used to reflect the Fredericksburg station (serving Spotsylvania County and the City of Fredericksburg). It is important to note that, commuter bus fares for bus fare zones 3, 6 and 3, 7 are averaged. These bus fares are relevant to trips destined to DC (1,1) and Virginia core (1,4).
7. Fauquier County is assumed to be VRE oriented, i.e. using the Manassas station.

**Exhibit 3-18: Bus Fare Service Areas/Zones for WMATA Tariff #16**

| 1st Fare Zone | Bus Service | Approximate Service Area |
|---|---|---|
| Fare Zone 1, 1- | WMATA / DC | DC |
| Fare Zone 1, 2 - | WMATA / MD Zone 1 | "Inner" Maryland Suburbs |
| Fare Zone 1, 3 - | WMATA / MD Zone 2 | "Outer Maryland Suburbs |
| Fare Zone 1, 4 - | WMATA / VA Zone G | Virginia "Core" |
| Fare Zone 1, 5 - | WMATA / VA Zone 1 | "Inner" Virginia, beyond the Core |
| Fare Zone 1, 6 - | WMATA / VA Zone 2 | Virginia Suburbs, beyond Zone 1 |
| Fare Zone 1, 7 - | WMATA / VA Zone 3 | Virginia Suburbs, beyond Zone 2 |
| Fare Zone 2, 1 - | FFX Connector / Zone 1 | "Inner" Fairfax Co. |
| Fare Zone 2, 2 - | FFX Connector / Zone 2 | "Outer" Fairfax Co. |
| Fare Zone 2, 3 - | MARC Rail / Brunswick | Frederick County, near MARC rail |
| Fare Zone 2, 4 - | Howard Co. Commuter Bus | Howard Co. |
| Fare Zone 2, 5 - | MARC Penn, Camden Lines | E. Howard Co./N. Anne Arundel Co. |
| Fare Zone 2, 6 - | Ann Arundel Commuter Bus | Anne Arundel Co. |
| Fare Zone 2, 7 - | Charles Co., Commuter Bus | Charles Co. |
| Fare Zone 3, 1 - | Feeder Bus to MARC | Frederick to Pt. of Rocks Sta. |
| Fare Zone 3, 2 - | MTA Commuter Bus | N. Mtg.Co, FrederickCo.,Carroll Co. |
| Fare Zone 3, 3 - | MTA Commuter Bus | Upper Mtg. Co. |
| Fare Zone 3, 4 - | VRE | Fairfax Co. |
| Fare Zone 3, 5 - | VRE Rail Zones 5&6 | Prince William/Fauquier Counties |
| Fare Zone 3, 6 - | VRE Rail Zones 7&8 | Stafford/King George Counties |
| Fare Zone 3, 7 - | VRE Rail Zone 9 | City of Fredericksburg/Spotsylvania |

**Exhibit 3-19: Primary and Secondary Bus Fare Zone Map for Tariff #16**




Ref: p_s_busfrzn.wmf

WMATA's Tariff #16, effective June 27, 1992

## Exhibit 3-20: Regional AM Peak Bus Fare Matrix for 1994 Between MWCOG Fare Zones

| Origin Bus Fare Zone | WMATA | | | | | | | FFX/1 | FFX/2 | MARC/ Fred. | How. Comm. Bus | AA Comm. Bus | AA Comm. Bus | Chs Comm. Bus | Fred. Feeder | Mtg Comm. Bus | Mtg Comm. Bus | VRE/ Ffx. Co. | VRE PW Co. | VRE/ Staff Co. | VRE Spots.Co. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DC | MD/1 | MD/2 | VA/G | VA/1 | VA/2 | VA/3 | | | | | | | | | | | | | | |
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 31 | 32 | 33 | 34 | 35 | 36 | 37 |
| 11 | 100 | 165 | 190 | 118 | 153 | 205 | 240 | 205 | 240 | 345 | 270 | 245 | 288 | 250 | 373 | 277 | 275 | 287 | 322 | 332 | 339 |
| 12 | 165 | 100 | 100 | 215 | 190 | 230 | 255 | 230 | 255 | 345 | 435 | 245 | 453 | 415 | 373 | 277 | 185 | 452 | 487 | 497 | 504 |
| 13 | 190 | 100 | 100 | 225 | 265 | 340 | 375 | 340 | 375 | 345 | 460 | 245 | 100 | 440 | 373 | 277 | 85 | 477 | 512 | 522 | 529 |
| 14 | 118 | 215 | 225 | 100 | 135 | 170 | 205 | 170 | 205 | 463 | 388 | 363 | 406 | 368 | 491 | 395 | 310 | 264 | 299 | 298 | 304 |
| 15 | 153 | 190 | 265 | 135 | 100 | 135 | 170 | 135 | 170 | 498 | 423 | 398 | 441 | 403 | 526 | 430 | 350 | 264 | 299 | 298 | 304 |
| 16 | 205 | 230 | 340 | 170 | 135 | 100 | 135 | 100 | 135 | 550 | 475 | 450 | 493 | 455 | 578 | 482 | 425 | 492 | 527 | 537 | 544 |
| 17 | 240 | 255 | 375 | 205 | 170 | 135 | 100 | 135 | 100 | 585 | 510 | 485 | 528 | 490 | 613 | 517 | 460 | 527 | 562 | 572 | 579 |
| 21 | 205 | 230 | 340 | 170 | 135 | 100 | 135 | 50 | 50 | 550 | 475 | 450 | 493 | 455 | 578 | 482 | 425 | 50 | 158 | 216 | 240 |
| 22 | 240 | 255 | 375 | 205 | 170 | 135 | 100 | 50 | 50 | 585 | 510 | 485 | 528 | 490 | 613 | 517 | 460 | 50 | 158 | 216 | 240 |
| 23 | 345 | 345 | 345 | 463 | 498 | 550 | 585 | 550 | 585 | 185 | 615 | 552 | 633 | 595 | 85 | 209 | 370 | 575 | 610 | 620 | 627 |
| 24 | 270 | 435 | 460 | 388 | 423 | 475 | 510 | 475 | 510 | 615 | 130 | 515 | 558 | 520 | 643 | 547 | 373 | 557 | 592 | 602 | 609 |
| 25 | 245 | 245 | 245 | 363 | 398 | 450 | 485 | 450 | 485 | 552 | 515 | 185 | 533 | 495 | 675 | 522 | 520 | 494 | 529 | 539 | 546 |
| 26 | 288 | 453 | 100 | 406 | 441 | 493 | 528 | 493 | 528 | 633 | 558 | 533 | 288 | 538 | 661 | 567 | 563 | 575 | 610 | 620 | 627 |
| 27 | 250 | 415 | 440 | 368 | 403 | 455 | 490 | 455 | 490 | 595 | 520 | 495 | 538 | 250 | 623 | 527 | 525 | 537 | 572 | 582 | 589 |
| 31 | 373 | 373 | 373 | 491 | 526 | 578 | 613 | 578 | 613 | 85 | 643 | 675 | 661 | 623 | 85 | 294 | 558 | 660 | 695 | 705 | 712 |
| 32 | 277 | 277 | 277 | 395 | 430 | 482 | 517 | 482 | 517 | 209 | 547 | 522 | 565 | 527 | 294 | 185 | 462 | 514 | 549 | 559 | 566 |
| 33 | 275 | 185 | 85 | 310 | 350 | 425 | 460 | 425 | 460 | 370 | 373 | 520 | 563 | 525 | 558 | 462 | 85 | 562 | 597 | 607 | 614 |
| 34 | 287 | 452 | 477 | 264 | 264 | 492 | 527 | 50 | 50 | 575 | 557 | 494 | 575 | 537 | 660 | 514 | 562 | 50 | 158 | 550 | 597 |
| 35 | 322 | 487 | 512 | 299 | 299 | 527 | 562 | 158 | 158 | 610 | 592 | 529 | 610 | 572 | 695 | 549 | 597 | 158 | 134 | 363 | 409 |
| 36 | 332 | 497 | 522 | 298 | 298 | 537 | 572 | 216 | 216 | 620 | 602 | 539 | 620 | 582 | 705 | 559 | 607 | 550 | 363 | 146 | 146 |
| 37 | 339 | 504 | 529 | 304 | 304 | 544 | 579 | 240 | 240 | 627 | 609 | 546 | 627 | 589 | 712 | 566 | 614 | 597 | 409 | 146 | 146 |



**(Expressed in 1992 cents)**
Ref: TAR16AMBFMTX.XLS

WMATA fares are based on Tariff #16 effective 6/27/92.
Remaining transit provider fares are based on those in effect during 1994, deflated back to 1992

**Exhibit 3-21: Regional Off-Peak Bus Fare Matrix for 1994**
**Between MWCOG Fare Zones**

| Origin Bus Fare Zone | WMATA | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DC 11 | MD/1 12 | MD/2 13 | VA/G 14 | VA/1 15 | VA/2 16 | VA/3 17 | FFX/1 21 | FFX/2 22 | MARC/ Fred. 23 | How. Comm. Bus 24 | AA Comm. Bus 25 | AA Comm. Bus 26 | Chs Comm. Bus 27 | Fred. Feeder 31 | Mtg Comm. Bus 32 | Mtg Comm. Bus 33 | VRE/ Ffx. Co. 34 | VRE PW Co. 35 | VRE/ Staff Co. 36 | VRE Spots.Co. 37 |
| 11 | 100 | 165 | 190 | 118 | 153 | 135 | 135 | 135 | 135 | 345 | 270 | 245 | 288 | 250 | 373 | 277 | 275 | 287 | 322 | 332 | 339 |
| 12 | 165 | 100 | 100 | 215 | 190 | 230 | 255 | 230 | 255 | 345 | 435 | 245 | 453 | 415 | 373 | 277 | 185 | 452 | 487 | 497 | 504 |
| 13 | 190 | 100 | 100 | 225 | 265 | 340 | 375 | 340 | 375 | 345 | 460 | 245 | 100 | 440 | 373 | 277 | 85 | 477 | 512 | 522 | 529 |
| 14 | 118 | 215 | 225 | 100 | 100 | 100 | 205 | 170 | 205 | 463 | 388 | 363 | 406 | 368 | 491 | 395 | 310 | 264 | 299 | 298 | 304 |
| 15 | 153 | 190 | 265 | 100 | 100 | 100 | 170 | 135 | 170 | 498 | 423 | 398 | 441 | 403 | 526 | 430 | 350 | 264 | 299 | 298 | 304 |
| 16 | 205 | 230 | 340 | 100 | 100 | 100 | 100 | 100 | 135 | 550 | 475 | 450 | 493 | 455 | 578 | 482 | 425 | 492 | 527 | 537 | 544 |
| 17 | 240 | 255 | 375 | 100 | 100 | 100 | 100 | 135 | 100 | 585 | 510 | 485 | 528 | 490 | 613 | 517 | 460 | 527 | 562 | 572 | 579 |
| 21 | 205 | 230 | 340 | 170 | 135 | 100 | 135 | 50 | 50 | 550 | 475 | 450 | 493 | 455 | 578 | 482 | 425 | 50 | 158 | 216 | 240 |
| 22 | 240 | 255 | 375 | 205 | 170 | 135 | 100 | 50 | 50 | 585 | 510 | 485 | 528 | 490 | 613 | 517 | 460 | 50 | 158 | 216 | 240 |
| 23 | 345 | 345 | 345 | 463 | 498 | 550 | 585 | 550 | 585 | 185 | 615 | 552 | 633 | 595 | 85 | 209 | 370 | 575 | 610 | 620 | 627 |
| 24 | 270 | 435 | 460 | 388 | 423 | 475 | 510 | 475 | 510 | 615 | 130 | 515 | 558 | 520 | 643 | 547 | 373 | 557 | 592 | 602 | 609 |
| 25 | 245 | 245 | 245 | 363 | 398 | 450 | 485 | 450 | 485 | 552 | 515 | 185 | 533 | 495 | 675 | 522 | 520 | 494 | 529 | 539 | 546 |
| 26 | 288 | 453 | 100 | 406 | 441 | 493 | 528 | 493 | 528 | 633 | 558 | 533 | 288 | 538 | 661 | 567 | 563 | 575 | 610 | 620 | 627 |
| 27 | 250 | 415 | 440 | 368 | 403 | 455 | 490 | 455 | 490 | 595 | 520 | 495 | 538 | 250 | 623 | 527 | 525 | 537 | 572 | 582 | 589 |
| 31 | 373 | 373 | 373 | 491 | 526 | 578 | 613 | 578 | 613 | 85 | 643 | 675 | 661 | 623 | 85 | 294 | 558 | 660 | 695 | 705 | 712 |
| 32 | 277 | 277 | 277 | 395 | 430 | 482 | 517 | 482 | 517 | 209 | 547 | 522 | 565 | 527 | 294 | 185 | 462 | 514 | 549 | 559 | 566 |
| 33 | 275 | 185 | 85 | 310 | 350 | 425 | 460 | 425 | 460 | 370 | 373 | 520 | 563 | 525 | 558 | 462 | 85 | 562 | 597 | 607 | 614 |
| 34 | 286 | 452 | 477 | 264 | 264 | 492 | 527 | 50 | 50 | 575 | 557 | 494 | 575 | 537 | 660 | 514 | 562 | 50 | 158 | 550 | 597 |
| 35 | 322 | 487 | 512 | 299 | 299 | 527 | 562 | 158 | 158 | 610 | 592 | 529 | 610 | 572 | 695 | 549 | 597 | 158 | 134 | 363 | 409 |
| 36 | 331 | 497 | 522 | 298 | 298 | 537 | 572 | 216 | 216 | 620 | 602 | 539 | 620 | 582 | 705 | 559 | 607 | 550 | 363 | 146 | 146 |
| 37 | 339 | 504 | 529 | 304 | 304 | 544 | 579 | 240 | 240 | 627 | 609 | 546 | 627 | 589 | 712 | 566 | 614 | 597 | 409 | 146 | 146 |



(Expressed in 1992 cents)
Ref: TAR16OPBFMTX.XLS

WMATA fares are based on Tariff #16 effective 6/27/92.
Remaining transit provi0der fares are based on those in effect during 1994, deflated back to 1992

In June of 1999, the Washington Metropolitan Area Transit Authority published a new tariff #19 for Metrorail and Metrobus operations. The Metrobus fare structure was changed to integrate the Metrobus and Metrorail system and foster seamless travel with other local transit providers. A flat fare of $1.10 for Metrobus trips was created by eliminating all zone charges in Maryland and Virginia as well as eliminating interstate charges for trips traversing the regions major jurisdictions.

The new tariff also eliminated the 10-cent Metrobus transfer fee, reduced fares on regular and express Metrobus routes, cut most local bus fares, made transfers from Metrorail to Metrobus cost 25 cents, and honored Metrobus transfers on Montgomery County's Ride-On bus system, as well as other local bus systems such as DASH, Fairfax Connector, CUE, ART, Connect-A-Ride, and PRTC OmniRide.

The Metrorail fare structure features a regular fares and reduced fares by time-of-day, based on composite miles. Fares are provided in year 2000 cents (or the year that the tariff was in effect).

Fares for MARC, VRE and other transit providers are the same for the peak and off-peak. These fares are based on those in effect during 1999. The least expensive fares available were used to reflect what the majority of regular work trip commuters would pay. Fares were averaged for areas with multiple services. Exhibit 3-17 shows the basic peak and off-peak period fare policies addressed in the modeling procedures for tariff #19.

Bus fare zones/service areas were redesigned to reflect the new Metrobus fare tariff and changes in fares for the remaining transit providers in the modeled area. In addition to new bus fare zones/service areas, the new regional fare structure removed the need for separate matrices for peak period fares and off-peak period fares. This was made possible by creating a flat fare of $1.10 for Metrobus trips by eliminating all zone charges in Maryland and Virginia as well as eliminating interstate charges for trips traversing the regions major jurisdictions.

The redesigned transit service areas are shown in Exhibit 3-22. Regional bus fare zone maps showing primary and secondary fare zones are displayed in Exhibit 3-22 and Exhibit 3-23, respectively. The bus fare service areas/zones matrix is shown in Exhibit 3-24.

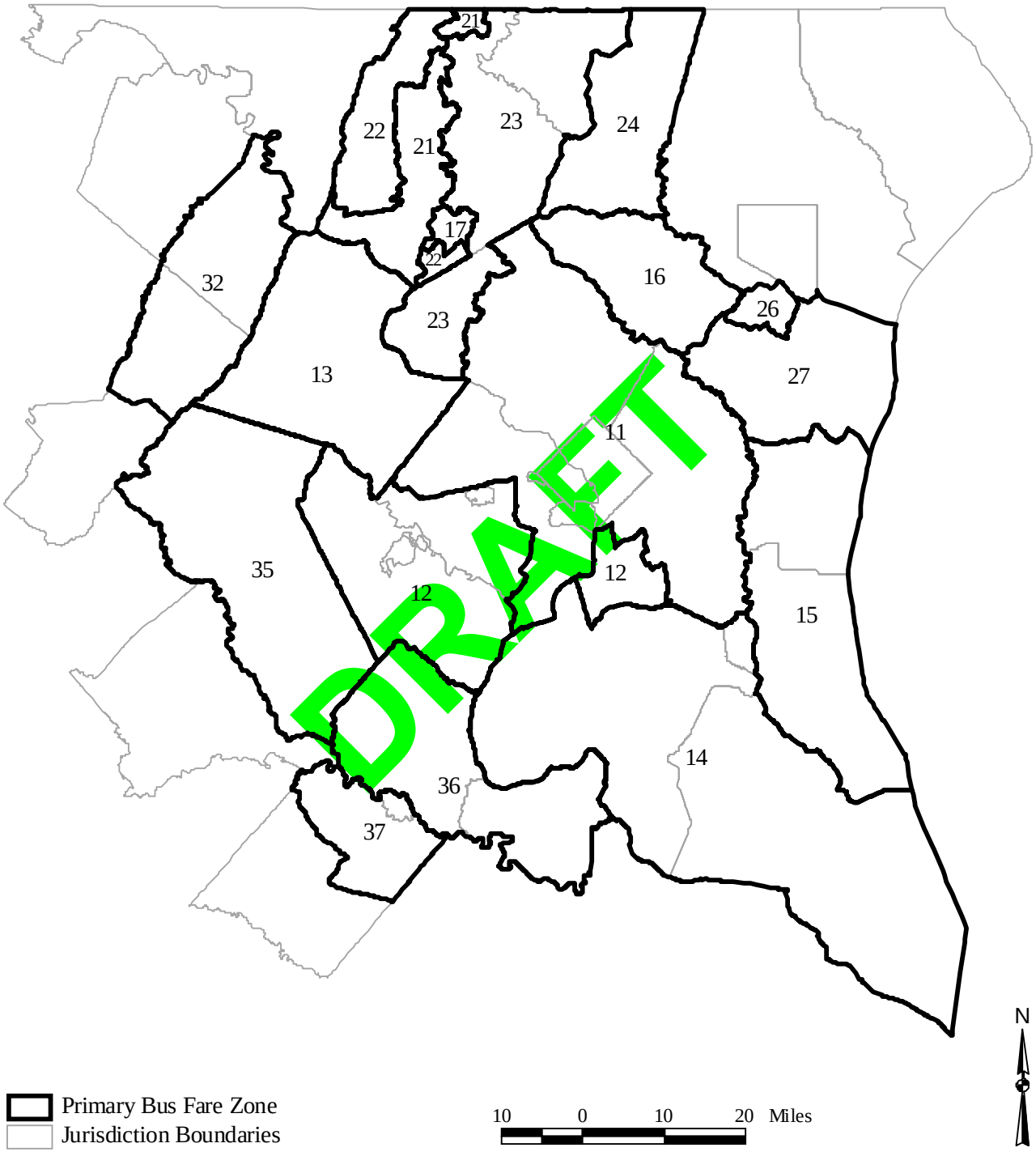
**Exhibit 3-22: Bus Fare Service Areas/Zones for WMATA Tariff #19**

| 1st Fare Zone | Bus/Rail Service[4] | Approximate Service Area |
|---|---|---|
| Fare Zone 1, 1 | WMATA Regular Service | DC, MTG, PG, ALEX, ARL, & FFX |
| Fare Zone 1, 2 | WMATA Express & Special Fare Service, & OMNI | Inner Maryland, Fairfax Suburbs, & Prince William County |
| Fare Zone 1, 3 | Loudoun Commuter Bus Service | Loudoun County |
| Fare Zone 1, 4 | MTA Commuter Bus | Charles / St Mary's Counties |
| Fare Zone 1, 5 | MTA Commuter Bus | S. Anne Arundel / Calvert Counties |
| Fare Zone 1, 6 | MTA Commuter Bus | Howard County |
| Fare Zone 1, 7 | MTA Commuter Bus | Frederick County |
| Fare Zone 2, 1 | Frederick Co Local Bus | Frederick County |
| Fare Zone 2, 2 | MARC Rail / Brunswick Line | W. Frederick / N. Loudoun Counties |
| Fare Zone 2, 3 | MARC Rail / Brunswick Line | MTG. Co. (Ring 8) / E. Frederick & W. Carroll Co. |
| Fare Zone 2, 4 | MARC Rail / Brunswick Line | MTG. Co. (Mid County) / W. Howard Co.& E. Carroll Co. |
| Fare Zone 2, 5 | MARC Rail / Brunswick Line | Montgomery Co. (Inner County) |
| Fare Zone 2, 6 | MARC / Penn, Camden Lines | NE. Howard /NW Anne Arundel Co. |
| Fare Zone 2, 7 | MARC / Penn, Camden Lines | SE. Howard/Anne Arundel Co. & NE. Prince Georges Co. |
| Fare Zone 3, 1 | MARC / Penn, Camden Lines | N. Central Prince Georges Co. & SW. Anne Arundel Co. |
| Fare Zone 3, 2 | MARC/Brunswick Line | Jefferson W.VA. & Clarke Co. VA. |
| Fare Zone 3, 3 | VRE Rail Zones 1&2 | Inside Beltway |
| Fare Zone 3, 4 | VRE Rail Zones 3&4 | Fairfax & Prince William Counties |
| Fare Zone 3, 5 | VRE Rail Zones 5&6 | Prince William & Fauquier Counties |
| Fare Zone 3, 6 | VRE Rail Zones 7&8 | Stafford & King George Counties |
| Fare Zone 3, 7 | VRE Rail Zone 9 | City of Fredericksburg & Spotsylvania Co. |



[4]This rail service includes MARC and VRE. Metrorail is not included, but is modeled in the RPFARE1 process.

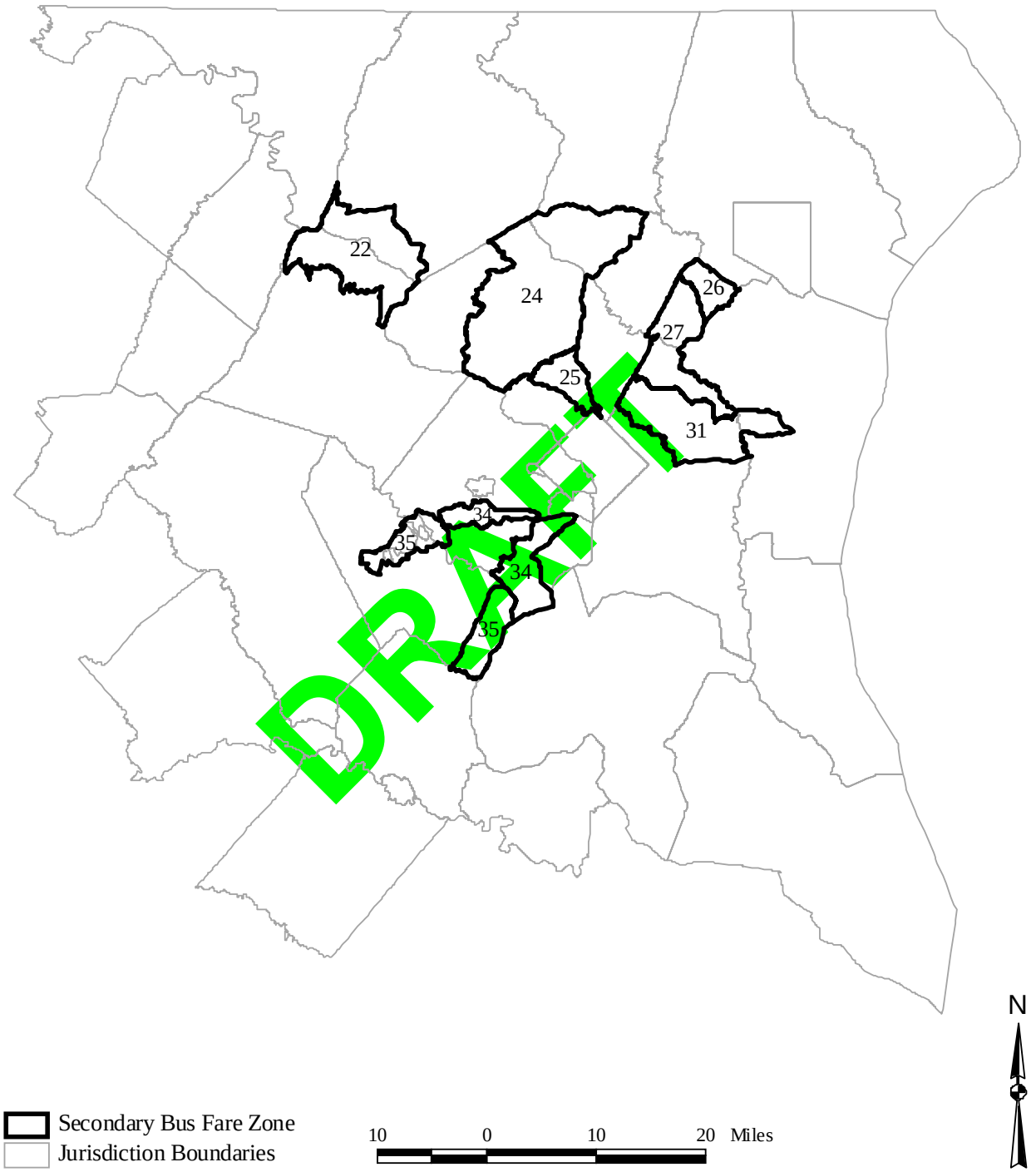
**Exhibit 3-23: Primary Bus Fare Zone Map for Tariff #19**




Ref: 19_pbusfarzn.wmf

WMATA's Tariff Number 19 (effective June 1999)

**Exhibit 3-24: Secondary Bus Fare Zone Map for Tariff #19**




Ref: 19_sbusfarzn.wmf

WMATA's Tariff Number 19 (effective June 1999)

## Exhibit 3-25: Regional AM Peak and Off-Peak Bus Fare Matrix for 2000 Between MWCOG Fare Zones (Expressed in 1999 cents)

| | WMATA Regular Service | WMATA Express Ser.&Internal Metrobus Special Fare Service | Loudoun Com. Bus | Charles&St. Mary's Com. Bus (MTA) | Calvert & Southern AA Com. Bus (MTA) | Howard Com. Bus (MTA) | Frederick Com. Bus (MTA) | Frederick Internal Bus | MARC Rail Brunswick (Frederick) | MARC Rail Brunswick (Mont. R8) | MARC Rail Brunswick (Mid Mont.) | MARC Rail Brunswick (Inner) | MARC Rail Penn/ Camden (Outer) | MARC Rail Penn/Camden (Mid) | MARC Rail Penn/Camden (Inner) | MARC Rail Brunswick (WVA&Clark Auto Conn.) | VRE Zones 1&2 (Inside Beltway) | VRE Zones 3&4 (FFX &PW) | VRE Zones 5&6 (PW& Fauq Auto Conn.) | VRE Zones 7&8 (Staff&KG Auto Conn.) | VRE Zone 9 (Spots.&Fred.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zones | 1,1 | 1,2 | 1,3 | 1,4 | 1,5 | 1,6 | 1,7 | 2,1 | 2,2 | 2,3 | 2,4 | 2,5 | 2,6 | 2,7 | 3,1 | 3,2 | 3,3 | 3,4 | 3,5 | 3,6 | 3,7 |
| 1,1 | 110 | 200 | 400 | 278 | 276 | 259 | 279 | 433 | 349 | 279 | 234 | 186 | 280 | 234 | 186 | 434 | 248 | 285 | 344 | 372 | 379 |
| 1,2 | 200 | 50 | 600 | 478 | 476 | 459 | 479 | 633 | 549 | 479 | 434 | 386 | 480 | 434 | 386 | 634 | 448 | 485 | 544 | 572 | 579 |
| 1,3 | 400 | 600 | 100 | 678 | 676 | 629 | 679 | 833 | 749 | 679 | 634 | 586 | 680 | 634 | 586 | 834 | 648 | 685 | 744 | 772 | 779 |
| 1,4 | 278 | 478 | 678 | 278 | 554 | 537 | 557 | 711 | 627 | 557 | 512 | 464 | 558 | 512 | 464 | 712 | 526 | 563 | 622 | 650 | 657 |
| 1,5 | 276 | 476 | 676 | 554 | 276 | 535 | 555 | 709 | 625 | 555 | 510 | 462 | 556 | 510 | 462 | 710 | 524 | 561 | 620 | 648 | 655 |
| 1,6 | 259 | 459 | 629 | 537 | 535 | 259 | 538 | 692 | 608 | 538 | 493 | 445 | 539 | 493 | 445 | 693 | 507 | 544 | 603 | 631 | 638 |
| 1,7 | 279 | 479 | 679 | 557 | 555 | 538 | 204 | 204 | 204 | 204 | 204 | 234 | 559 | 513 | 465 | 713 | 527 | 564 | 623 | 651 | 658 |
| 2,1 | 433 | 633 | 833 | 711 | 709 | 692 | 204 | 84 | 84 | 294 | 341 | 619 | 713 | 667 | 619 | 867 | 681 | 718 | 777 | 805 | 812 |
| 2,2 | 349 | 549 | 749 | 627 | 625 | 608 | 204 | 84 | 186 | 210 | 257 | 303 | 629 | 583 | 535 | 210 | 597 | 634 | 693 | 721 | 728 |
| 2,3 | 279 | 479 | 679 | 557 | 555 | 538 | 204 | 294 | 210 | 186 | 186 | 234 | 559 | 513 | 465 | 294 | 527 | 564 | 623 | 651 | 658 |
| 2,4 | 234 | 434 | 634 | 512 | 510 | 493 | 204 | 341 | 257 | 186 | 186 | 420 | 514 | 468 | 420 | 340 | 482 | 519 | 578 | 606 | 613 |
| 2,5 | 186 | 386 | 586 | 464 | 462 | 445 | 234 | 619 | 303 | 234 | 420 | 186 | 466 | 420 | 372 | 373 | 434 | 471 | 530 | 558 | 565 |
| 2,6 | 280 | 480 | 680 | 558 | 556 | 539 | 559 | 713 | 629 | 559 | 514 | 466 | 186 | 186 | 234 | 714 | 528 | 565 | 624 | 652 | 659 |
| 2,7 | 234 | 434 | 634 | 512 | 510 | 493 | 513 | 667 | 583 | 513 | 468 | 420 | 186 | 186 | 420 | 668 | 482 | 519 | 578 | 606 | 613 |
| 3,1 | 186 | 386 | 586 | 464 | 462 | 445 | 465 | 619 | 535 | 465 | 420 | 372 | 234 | 420 | 186 | 620 | 434 | 471 | 530 | 558 | 565 |
| 3,2 | 434 | 634 | 834 | 712 | 710 | 693 | 713 | 867 | 210 | 294 | 340 | 373 | 714 | 668 | 620 | 186 | 682 | 719 | 778 | 806 | 813 |
| 3,3 | 248 | 448 | 648 | 526 | 524 | 507 | 527 | 681 | 597 | 527 | 482 | 434 | 528 | 482 | 434 | 682 | 248 | 285 | 285 | 372 | 379 |
| 3,4 | 285 | 485 | 685 | 563 | 561 | 544 | 564 | 718 | 634 | 564 | 519 | 471 | 565 | 519 | 471 | 719 | 285 | 147 | 187 | 239 | 278 |
| 3,5 | 344 | 544 | 744 | 622 | 620 | 603 | 623 | 777 | 693 | 623 | 578 | 530 | 624 | 578 | 530 | 778 | 285 | 187 | 144 | 187 | 226 |
| 3,6 | 372 | 572 | 772 | 650 | 648 | 631 | 651 | 805 | 721 | 651 | 606 | 558 | 652 | 606 | 558 | 806 | 372 | 239 | 187 | 148 | 174 |
| 3,7 | 379 | 579 | 779 | 657 | 655 | 638 | 658 | 812 | 728 | 658 | 613 | 565 | 659 | 613 | 565 | 813 | 379 | 278 | 226 | 174 | 148 |



(Expressed in 2000 cents)
Ref: BF19MTX.XLS

WMATA fares are based on Tariff #19 effective 6/20/99.
Remaining transit provider fares are based on 2000 information.

In June of 2004, the Washington Metropolitan Area Transit Authority published a new tariff #23 for Metrorail and Metrobus operations. The new fare structure increased the base fare for Metrorail, from $1.20 to $1.35, a 5-cent increase for Metrobus from $1.20 to $1.25 and a 10-cent increase from $2.40 to $2.50 for MetroAccess. Other service providers increased fares at this time, and the increases are reflected in the fare matrix. VRE fare increases in the summer of 2005 precipitated an update of the bus fare matrix for use in the conformity analysis of the 2005 CLRP and FY-2006-2011 TIP.

When calculating fares for each cell of the matrix the least expensive fares available were used to reflect what the majority of regular work trip commuters would pay. Fares were averaged for areas with multiple services. The basic peak and off-peak period fare policies addressed in the modeling procedures are shown in Exhibit 3-16.

Future transit improvements in Montgomery County have been reflected in the COG fare zone system. Fare zone 1,7 now represents the addition of the Corridor Cities Transit-way and, rail and bus fares in that corridor. The bus fare matrix remains comprised of 21 fare zones that are described in Exhibit 3-26. Regional bus fare zone maps showing primary and secondary fare zones are displayed in Exhibits 3-27 and 3-28. The bus fare matrix for WMATA Tariff #23 is shown in Exhibit 29. Fares are provided in year 2004 cents (or the year that the tariff was in effect).

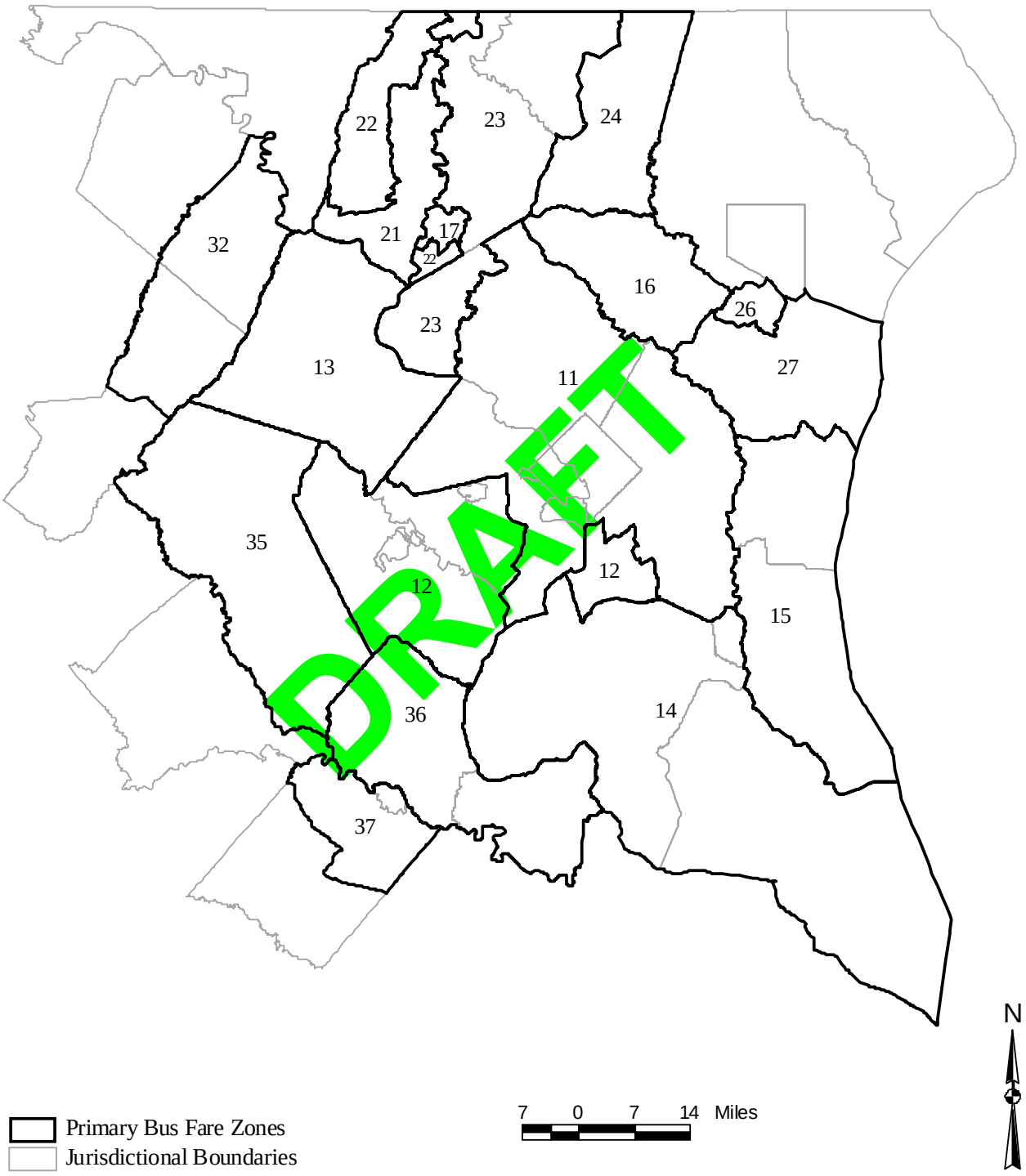
**Exhibit 3-26: Bus Fare Service Areas/Zones for WMATA Tariff #23 (modified)**

| 1st Fare Zone | Bus/Rail Service[5] | Approximate Service Area |
|---|---|---|
| Fare Zone 1, 1 | WMATA Regular Service | DC, MTG, PG, ALEX, ARL, & FFX |
| Fare Zone 1, 2 | WMATA Express & Special Fare Service, & OMNI | Inner Maryland, Fairfax Suburbs, & Prince William County |
| Fare Zone 1, 3 | Loudoun Commuter Bus Service | Loudoun County |
| Fare Zone 1, 4 | MTA Commuter Bus | Charles / St Mary's Counties |
| Fare Zone 1, 5 | MTA Commuter Bus | S. Anne Arundel / Calvert Counties |
| Fare Zone 1, 6 | MTA Commuter Bus | Howard County |
| Fare Zone 1, 7 | Corridor Cities Transit-way | Montgomery County |
| Fare Zone 2, 1 | Frederick Co Local Bus | Frederick County |
| Fare Zone 2, 2 | MARC Rail / Brunswick Line | W. Frederick / N. Loudoun Counties |
| Fare Zone 2, 3 | MARC Rail / Brunswick Line | MTG. Co. (Ring 8) / E. Frederick & W. Carroll Co. |
| Fare Zone 2, 4 | MARC Rail / Brunswick Line | MTG. Co. (Mid County) / W. Howard Co.& E. Carroll Co. |
| Fare Zone 2, 5 | MARC Rail / Brunswick Line | Montgomery Co. (Inner County) |
| Fare Zone 2, 6 | MARC / Penn, Camden Lines | NE. Howard /NW Anne Arundel Co. |
| Fare Zone 2, 7 | MARC / Penn, Camden Lines | SE. Howard/Anne Arundel Co. & NE. Prince Georges Co. |
| Fare Zone 3, 1 | MARC / Penn, Camden Lines | N. Central Prince Georges Co. & SW. Anne Arundel Co. |
| Fare Zone 3, 2 | MARC/Brunswick Line | Jefferson W.VA. & Clarke Co. VA. |
| Fare Zone 3, 3 | VRE Rail Zones 1&2 | Inside Beltway |
| Fare Zone 3, 4 | VRE Rail Zones 3&4 | Fairfax & Prince William Counties |
| Fare Zone 3, 5 | VRE Rail Zones 5&6 | Prince William & Fauquier Counties |
| Fare Zone 3, 6 | VRE Rail Zones 7&8 | Stafford & King George Counties |
| Fare Zone 3, 7 | VRE Rail Zone 9 | City of Fredericksburg & Spotsylvania Co. |



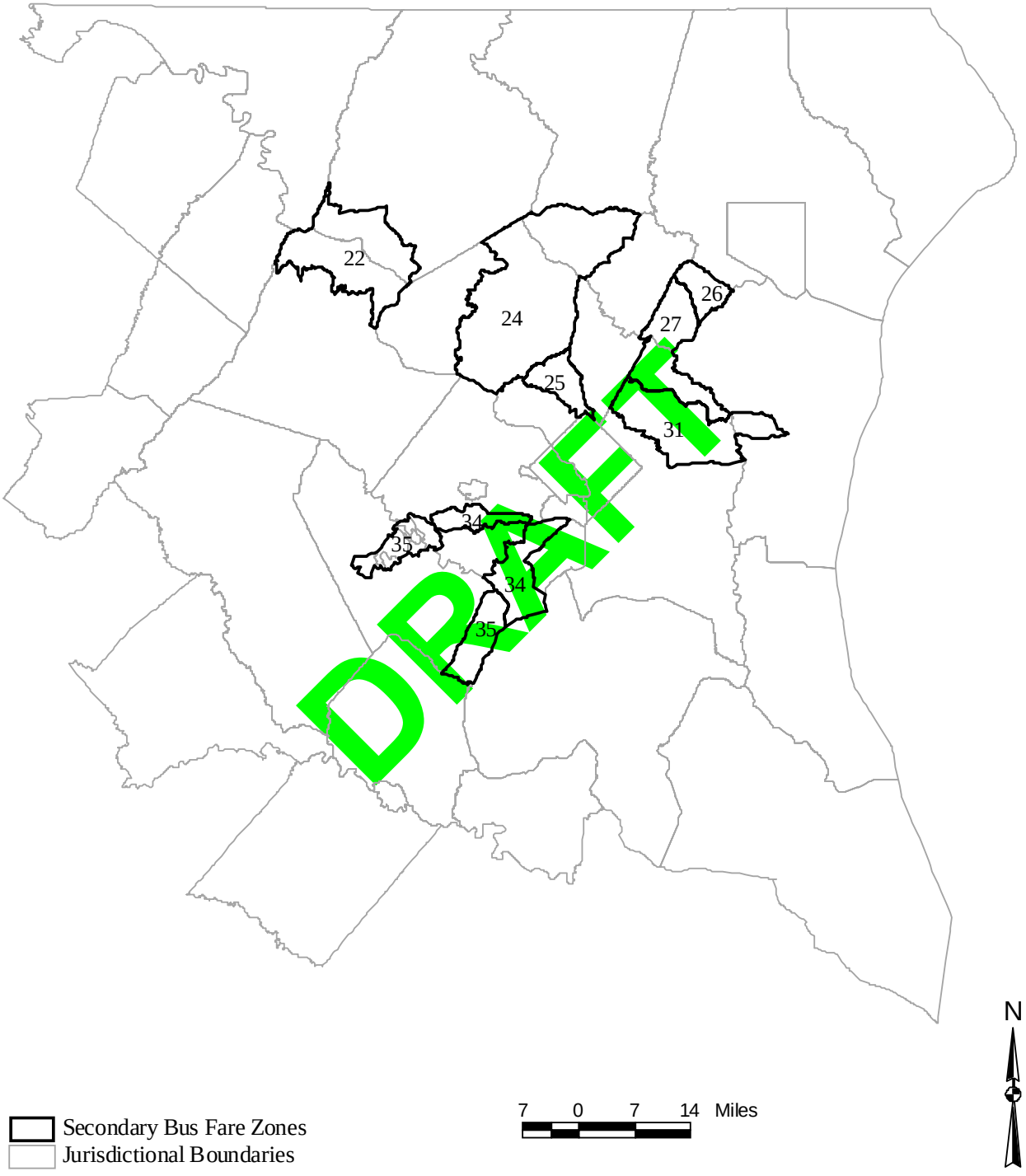
[5]This rail service includes MARC and VRE. Metrorail is not included, but is modeled in the RPFARE1 process.

**Exhibit 3-27: Regional Primary Bus Fare Zone Map for Tariff #23 (modified)**




WMATA's Tariff Number 23 (effective June 2004)

**Exhibit 3-28: Regional Secondary Bus Fare Zone Map for Tariff #23 (modified)**




WMATA's Tariff Number 23 (effective June 2004)
Ref: 19_sbusfarzn.wmf

## Exhibit 3-29: Regional AM Peak and Off-Peak Bus Fare Matrix for 2005 Between MWCOG Fare Zones (Expressed in 2005 cents)

| | WMATA Regular Service | WMATA Express Ser. & Internal Metrobus Special Fare Service | Loudoun Comm. Bus | Charles & St. Mary's Comm. Bus (MTA) | Calvert and Southern AA Comm Bus (MTA) | Howard Comm. Bus (MTA) | Corridor Cities Transitway (Mont. Co) | Frederick Internal Bus | MARC Rail Brunswick (Frederick) | MARC Rail Brunswick (Mont. R8) | MARC Rail Brunswick (Mid. Mont) | MARC Rail Brunswick (Inner) | MARC Rail Penn/ Camden (Outer) | MARC Rail Penn/ Camden (Mid) | MARC Rail Penn/ Camden (Inner) | MARC Rail Brunswick (W.VA and Clark auto Connect) | VRE Zones 1 & 2 (Inside Beltway) | VRE Zones 3 & 4 (FFX and PW) | VRE Zones 5 & 6 (PW & FAUQ Auto Connect) | VRE Zones 7 & 8 (Staff. & KG Auto Connect) | VRE Zone 9 (Spots. & Fred'brg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Zones** | **1,1** | **1,2** | **1,3** | **1,4** | **1,5** | **1,6** | **1,7** | **2,1** | **2,2** | **2,3** | **2,4** | **2,5** | **2,6** | **2,7** | **3,1** | **3,2** | **3,3** | **3,4** | **3,5** | **3,6** | **3,7** |
| **1,1** | 135 | 317 | 500 | 347 | 328 | 328 | 414 | 529 | 427 | 341 | 284 | 227 | 341 | 284 | 227 | 511 | 281 | 346 | 411 | 476 | 524 |
| **1,2** | 317 | 118 | 817 | 664 | 645 | 645 | 731 | 846 | 744 | 658 | 601 | 544 | 658 | 601 | 544 | 828 | 495 | 317 | 100 | 300 | 349 |
| **1,3** | 500 | 817 | 75 | 847 | 828 | 828 | 914 | 1029 | 927 | 841 | 784 | 727 | 841 | 784 | 727 | 1011 | 781 | 846 | 911 | 976 | 1024 |
| **1,4** | 347 | 664 | 847 | 100 | 675 | 675 | 761 | 876 | 774 | 688 | 631 | 574 | 688 | 631 | 574 | 858 | 628 | 693 | 758 | 823 | 871 |
| **1,5** | 328 | 645 | 828 | 675 | 357 | 656 | 740 | 857 | 755 | 669 | 612 | 555 | 669 | 612 | 555 | 839 | 609 | 674 | 739 | 804 | 852 |
| **1,6** | 328 | 645 | 828 | 675 | 656 | 299 | 742 | 857 | 755 | 669 | 612 | 555 | 669 | 612 | 555 | 839 | 609 | 674 | 739 | 804 | 852 |
| **1,7** | 414 | 731 | 914 | 761 | 740 | 742 | 130 | 667 | 557 | 471 | 130 | 414 | 755 | 698 | 641 | 641 | 695 | 760 | 825 | 890 | 938 |
| **2,1** | 529 | 846 | 1029 | 876 | 857 | 857 | 667 | 102 | 102 | 529 | 639 | 529 | 870 | 813 | 756 | 1040 | 810 | 875 | 940 | 1005 | 1053 |
| **2,2** | 427 | 744 | 927 | 774 | 755 | 755 | 557 | 102 | 400 | 427 | 427 | 427 | 768 | 711 | 654 | 400 | 708 | 773 | 838 | 903 | 951 |
| **2,3** | 341 | 658 | 841 | 688 | 669 | 669 | 471 | 529 | 427 | 341 | 341 | 341 | 682 | 625 | 568 | 341 | 622 | 687 | 752 | 817 | 865 |
| **2,4** | 284 | 601 | 784 | 631 | 612 | 612 | 130 | 639 | 427 | 341 | 284 | 284 | 625 | 568 | 511 | 511 | 565 | 630 | 695 | 760 | 808 |
| **2,5** | 227 | 544 | 727 | 574 | 555 | 555 | 414 | 529 | 427 | 341 | 284 | 227 | 568 | 511 | 454 | 511 | 508 | 573 | 638 | 703 | 751 |
| **2,6** | 341 | 658 | 841 | 688 | 669 | 669 | 755 | 870 | 768 | 682 | 625 | 568 | 341 | 341 | 341 | 852 | 622 | 687 | 752 | 817 | 865 |
| **2,7** | 284 | 601 | 784 | 631 | 612 | 612 | 698 | 813 | 711 | 625 | 568 | 511 | 341 | 284 | 284 | 795 | 565 | 630 | 695 | 760 | 808 |
| **3,1** | 227 | 544 | 727 | 574 | 555 | 555 | 641 | 756 | 654 | 568 | 511 | 454 | 341 | 284 | 227 | 738 | 508 | 573 | 638 | 703 | 751 |
| **3,2** | 511 | 828 | 1011 | 858 | 839 | 839 | 641 | 1040 | 400 | 341 | 511 | 511 | 852 | 795 | 738 | 400 | 732 | 857 | 922 | 987 | 1035 |
| **3,3** | 281 | 495 | 781 | 628 | 609 | 609 | 695 | 810 | 708 | 622 | 565 | 508 | 622 | 565 | 508 | 732 | 281 | 330 | 395 | 459 | 508 |
| **3,4** | 346 | 317 | 846 | 693 | 674 | 674 | 760 | 875 | 773 | 687 | 630 | 573 | 687 | 630 | 573 | 857 | 330 | 158 | 200 | 265 | 314 |
| **3,5** | 411 | 100 | 911 | 758 | 739 | 739 | 825 | 940 | 838 | 752 | 695 | 638 | 752 | 695 | 638 | 922 | 395 | 200 | 152 | 200 | 249 |
| **3,6** | 476 | 300 | 976 | 823 | 804 | 804 | 890 | 1005 | 903 | 817 | 760 | 703 | 817 | 760 | 703 | 987 | 459 | 265 | 200 | 152 | 184 |
| **3,7** | 524 | 349 | 1024 | 871 | 852 | 852 | 938 | 1053 | 951 | 865 | 808 | 751 | 865 | 808 | 751 | 1035 | 508 | 314 | 249 | 184 | 152 |



(Expressed in 2005 cents)
Ref: TAR23BFMTX.XLS

WMATA fares are based on Tariff #23 effective 6/27/04.
Remaining transit provider fares are based on 2005 information.

## 3.4 File Format Descriptions of the Version 2.1 D #50 Network Files

The file format descriptions are shown as Exhibit 3-30 to Exhibit 3-39. Finally, listings of network files that have been produced this fiscal year are shown in Exhibit 3-40. Note that the filenames on the list are generically named for each year. Therefore, it is the subdirectory, rather than the filename itself, that establishes the year or alternative that a given file represents. The user should reference chapter 1 of the Version 2.1 D #50 model User's Guide for more detail on subdirectory and filename specifications required in the model application.

**Exhibit 3-30: File Format Description of the Land Use File**

| Columns | Format | Field Description |
|---|---|---|
| 1- 4 | I4 | TAZ (1-2191) |
| 8- 15 | I8 | Households |
| 16- 23 | I8 | Household Population |
| 24- 31 | I8 | Grouped Quarters Population |
| 32- 39 | I8 | Total Population |
| 40- 47 | I8 | Total Employment |
| 48- 55 | I8 | Industrial Employment |
| 56- 63 | I8 | Retail Employment |
| 64- 71 | I8 | Office Employment |
| 72- 79 | I8 | Other Employment |
| 80- 81 | I2 | Jurisdiction Code (0-23)<br>*0/dc, 1/mtg, 2/pg, 3/alr/, 4/alx,5, ffx, 6/ldn, 7/ pw, 8/(unused), 9/ frd, 10/how, 11/aa, 12/chs, 13/(unused), 14/car, 15/cal, 16/stm, 17/ kg, 18/fbg, 19/stf, 20/spts, 21/fau, 22/clk, 23/jef* |
| 83- 92 | F10.4 | Gross Land Area (in sq. miles) |
| 94- 95 | I2 | Ratio of zonal HH median income to regional median HH income in tenths (e.g., a value of *10* indicates a ratio of 1.0), based on the 1990 CTPP. |
| 97- 98 | I2 | Airline distance from the TAZ centroid to the nearest external station in whole miles. |



**Exhibit 3-31: File Format Description of the Node Coordinate File**

| Columns | Format | Field Description |
|---|---|---|
| 1-6 | I6 | Highway Node Number |
| 7-14 | I8 | X-Coordinate (NAD 83) in whole feet |
| 15-22 | I8 | Y-Coordinate (NAD 83) in whole feet |

**Exhibit 3-32: File Format Description of Highway Network Link File**

| Columns | Format | Field Description |
|---|---|---|
| 1-5 | I5 | A node |
| 6-10 | I5 | B node |
| 13-17 | I5 | Link Distance in whole miles (XX.XX) |
| 30-33 | I4 | Observed Traffic Count in thousands (Yr 2000 AAWDT) |
| 35-35 | I1 | Reverse Code (not used) |
| 39-40 | I2 | Jurisdiction Code (0-23) |
| 51-52 | I2 | Screenline Code (1-38) (21 and 30 not used) |
| 54-55 | I2 | Link Facility Type Code (0-6) |
| 61-64 | I4 | Toll Value (Current year in cents) |
| 67-67 | I1 | Toll Group Code (1-9) |
| 81-82 | I2 | AM Peak No. of Lanes |
| 84-85 | I2 | AM Peak Limit Code (0-9) |
| 87-88 | I2 | PM Peak No. of Lanes |
| 90-91 | I2 | PM Peak Limit Code (0-9) |
| 93-94 | I2 | Off-Peak No. of Lanes |
| 96-97 | I2 | Off-Peak Limit Code (0-9) |
| 107-116 | A10 | Project ID (From TIP and CLRP) |

**Exhibit 3-33: Rail Station/PNR Lot File Format Description**

| Columns | Format | Field Description |
|---|---|---|
| 1-5 | I5 | Sequence Number |
| 10 | A1 | Mode Code (M/Metrorail, C/Commuter Rail, B/Bus) |
| 15 | A1 | Parking Available? (Y/N) |
| 18 | A1 | Station Active? (Y/N) |
| 21-44 | A24 | Station Name/PNR lot name |
| 45-50 | I6 | Rail Station Network Centroid (2251-2500) |
| 51-55 | I5 | Rail Station/PNR TAZ location (1-2191) |
| 56-60 | I5 | Rail Station Node (7301-7399, 7600-7733) |
| 61-65 | I5 | Parking lot node |
| 66-70 | I5 | 1st Bus Node |
| 71-75 | I5 | 2nd Bus Node |
| 76-80 | I5 | 3rd Bus Node |
| 81-85 | I5 | 4th Bus Node |
| 94-100 | I7 | X Coordinate of Station / PNR lot (NAD 83) |
| 105-110 | I6 | Y Coordinate of Station / PNR lot (NAD 83) |
| 141-145 | I5 | Year of Station/PNR lot Opening |

**Exhibit 3-34: Rail Link File Format Description**

| Columns | Format | Field Description |
|---|---|---|
| 1-5 | I5 | A Node |
| 6-10 | I5 | B Node |
| 15-19 | I5 | Distance in 1/100ths of miles |
| 21-25 | F5.2 | Speed (mph) |
| 37-37 | I1 | Rail Mode Number (3-5) |

**Exhibit 3-35: Zonal Walk Percentage File Format Description**

| Columns | Format | Field Description |
|---|---|---|
| 4-8 | I5 | TAZ Number |
| 9-17 | I9 | Total Land Area |
| 24-30 | I7 | 'short' walk area to rail (Metrorail, commuter rail) |
| 36-42 | I7 | 'long' walk area to rail (Metrorail, commuter rail) |
| 49-55 | I7 | 'short' walk area to non-rail transit |
| 61-67 | I7 | 'long' walk area to non-rail transit |
| 73-81 | I9 | Non-walking area to ANY transit |
| 85-91 | I7 | Avg. 'Short' Walk Distance to Metrorail (in miles) |
| 95-101 | I7 | Avg. 'Long' Walk Distance to Metrorail (in miles) |
| 106-112 | I7 | Avg. 'Short' Walk Distance to Commuter Rail (in miles) |
| 116-122 | I7 | Avg. 'Long' Walk Distance to Commuter Rail (in miles) |
| 127-133 | I7 | Avg. 'Short' Walk Distance to Bus (in miles) |
| 137-143 | I7 | Avg. 'Long' Walk Distance to Bus (in miles) |
| 149-155 | I7 | Avg. 'Short' Walk Distance to ANY Transit (in miles) |
| 161-167 | I7 | Avg. 'Long' Walk Distance to ANY Transit (in miles) |
| 170-174 | I5 | Nearest Rail Station (Metrorail or Commuter Rail) w/in 1.0 mi |
| 176-180 | I5 | Nearest Bus Stop Node w/in 1.0 mi |

*Note: area measurements are in square miles and do not include major bodies of water;*
*'Short' references below are defined as within 1/3 mile;*
*'Long' walk areas are those beyond 1/3 of a mile and within 1.0 mile*



**Exhibit 3-36: GIS-Walk Link File**

| Columns | Format | Field Description |
|---|---|---|
| 1-5 | I5 | TAZ Number |
| 6-10 | I5 | Transit Stop nodes within 1.0 mile |
| 11-15 | F5.2 | Distance from TAZ centroid to stop node in miles |

**Exhibit 3-37: MFARE2 TAZ/Bus Fare Zone Equivalency File Format Description**

| Columns | Format | Field Description |
|---|---|---|
| *Zonal data* | | |
| 1-4 | I4 | TAZ Number (or Station No.) |
| 5-8 | I4 | Bus fare zone, 1st zone, 1st digit |
| 9-12 | I4 | Bus fare zone, 1st zone, 2nd digit |
| 13-16 | I4 | Bus fare zone, 2nd zone, 1st digit |
| 17-20 | I4 | Bus fare zone, 2nd zone, 2nd digit |
| 45-48 | I4 | Special transit service fare (cents) |
| 49-50 | I2 | Jurisdiction Code (0/DC, 1/MD, 2/VA Area 1 (Fairfax Co.), 3/ VA Area 2 (non-Fairfax Co.) |
| *Station data* | | |
| 29-32 | I4 | Station Bus Fare Code 1st zone, 1st digit |
| 33-36 | I4 | Station Bus Fare Code 1st zone, 2nd digit |
| 37-40 | I4 | Station Bus Fare Code 2nd zone, 1st digit |
| 41-44 | I4 | Station Bus Fare Code 2nd zone, 2nd digit |
| | | |

**Exhibit 3-38: MFARE1 A1 Station File**

| Columns | Format | Field Description |
|---|---|---|
| 1-6 | I6 | Station Number (1-150) |
| 7-12 | I6 | Station X Coordinate |
| 13-18 | I6 | Station Y Coordinate |



**Exhibit 3-39: Bus Fare Matrix File Format Description**

| Columns | Format | Field Description |
|---|---|---|
| 1-4 | I4 | Origin Bus Fare zone, 1st zone, 1st digit |
| 5-8 | I4 | Origin Bus Fare zone, 1st zone, 2nd digit |
| 9-12 | I4 | Destination Bus Fare zone, 1st zone, 1st digit |
| 13-16 | I4 | Bus Fare from Origin Bus Fare Zone 11 to Destination zone, 11 |
| 17-20 | I4 | Bus Fare from Origin Bus Fare Zone 11 to Destination Zone 12 |
| … | …. | … |
| 37-40 | I4 | Bus Fare from Origin Bus Fare Zone 11 to Destination Zone 17 |

**Exhibit 3-40: Summary of Version 2.1 D #50 model/TP+ Network Filenames by Year**

| ***Highway Network / SubDirectory: CGV2_1D50*** | **2010** | **2020** | **2030** |
|---|---|---|---|
| | | | |
| Zone Net | Link.ASC | Link.ASC | Link.ASC |
| Zone Xys | Node.ASC | Node.ASC | Node.ASC |
| ***Transit Networks*** AM Peak Line Files (Mode) | | | |
| 1 | mode1am.tp | mode1am.tp | mode1am.tp |
| 2 | mode2am.tp | mode2am.tp | mode2am.tp |
| 3 | mode3am.tp | mode3am.tp | mode3am.tp |
| 4 | mode4am.tp | mode4am.tp | mode4am.tp |
| 5 | mode5am.tp | mode5am.tp | mode5am.tp |
| 6 | mode6am.tp | mode6am.tp | mode6am.tp |
| 7 | mode7am.tp | mode7am.tp | mode7am.tp |
| 8 | mode8am.tp | mode8am.tp | mode8am.tp |
| 9 | mode9am.tp | mode9am.tp | mode9am.tp |
| Off Peak Line Files (Mode) | | | |
| 1 | mode1op.tp | mode1op.tp | mode1op.tp |
| 2 | mode2op.tp | mode2op.tp | mode2op.tp |
| 3 | mode3op.tp | mode3op.tp | mode3op.tp |
| 4 | mode4op.tp | mode4op.tp | mode4op.tp |
| 5 | mode5op.tp | mode5op.tp | mode5op.tp |
| 6 | mode6op.tp | mode6op.tp | mode6op.tp |
| 7 | mode7op.tp | mode7op.tp | mode7op.tp |
| 8 | mode8op.tp | mode8op.tp | mode8op.tp |
| 9 | mode9op.tp | mode9op.tp | mode9op.tp |
| Station File | STA_TPP.BSE | STA_TPP.BSE | STA_TPP.BSE |
| Rail Link File | RAIL_LNK.BSE | RAIL_LNK.BSE | RAIL_LNK.BSE |
| ***FARES*** **Bus Fares (MFARE2)** | | | |
| TAZ/Bus Fare Equivalency | TAZFRZN.ASC. | TAZFRZN.ASC. | TAZFRZN.ASC. |
| Bus Fare Matrix - AM | BUSFARAM.ASC | BUSFARAM.ASC | BUSFARAM.ASC |
| Bus Fare Matrix - OP | BUSFAROP.ASC | BUSFAROP.ASC | BUSFAROP.ASC |

Ref: EXH3-35V2.1D50.xls

# Appendix A: Highway / HOV Inputs for the 2005 CLRP and FY 2006-2011 TIP Air Quality Conformity Networks

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***District of Columbia*** | | | | | | | | | | | | | |
| DCDOT | | | | New York Avenue | Bladensburg Road | | | | | | | beyond 2010 | Yes |
| DCDOT | | | | New York Avenue | Florida Avenue | | | | | | | beyond 2010 | Yes |
| DCDOT | | Study | | South Capitol Street | Independence Avenue | Frederick Douglass Memorial Bridge | | | | | | not coded | Yes |
| DCDOT | | | | Southeast/Southwest Frwy Reversible Lanes | 14th Street Bridges | Pennsylvania Ave. SE | | | | | | | Yes |
| DCDOT | nrs | Study | | Southern Avenue | Naylor Road | Erie Street | | | | | | not coded | Yes |
| DCDOT | | Construct | | Foxhall Road, N.W. | W Place | Calvert Street | | | | | | 2003 | Yes |
| DCDOT | | Construct | | Klingle Road Reconstruction | Porter Street | Woodley Road | | | | | | 2007 | Yes |
| DCDOT | | Construct | | Minnesota Ave. NE ext. | Sheriff Rd | Meade St. N.E. | | | | | | 2009 | Yes |
| DCDOT | | Study | | Whitehurst Fwy/Roosevelt Bridge | Porter Street | Woodley Road | | | | | | not coded | Yes |
| ***Maryland*** | | | | | | | | | | | | | |
| ***MDOT Freeway*** | | | | | | | | | | | | | |
| MDSHA | MI2r | Reconstruc | Approved | I-270 | Interchange at MD 117 including park and ride lot | | 1 | 1 | 8 | 8 | Completed | 2004 | Yes |
| MDSHA | MI2q | Construct | Approved | I-270 | Interchange at Watkins Mill Road Extended | | 1 | 1 | 8 | 8+2 | No | 2020 | Yes |
| MDSHA | MI2n | Recon/Con | Approved | I-270 (East Spur) | Rockledge Dr. Connector and MD 187 | | 1 | 1 | 6 | 6 | Completed | 2004 | Yes |
| MDSHA | MI2l | Recon/Con | Approved | I-270 (West Spur) | Interchanges at Democracy Blvd and Westlake Terrace | | 1 | 1 | 6 | 6 | Completed | 2004 | Yes |
| MDSHA | MI2SHOV MI2S | Construct | Pending | I-270/US 15 Corridor | Shady Grove Metro | I-70 | 1 | 1 | varies | | No | 2020 | Yes |
| MDSHA | MI4 | Widen | Approved | I-70 - Phases 2B, 2C, 2D, 3, 4, and East St. Extension | Mount Phillip Road | MD 144FA | 1 | 1 | 4 | 6 | No | 2010 | Yes |
| MDSHA | MI4c | Construct | Approved | I-70 (Phase IIA) | MD 85 Extended/MD 355 | | 2 | 2 | 0 | 4 | Completed | 2005 | Yes |
| MDSHA | MI1f | Construct | Pending | I-95 | Contee Road Relocated w/ CD Roads | | 1 | 1 | 8 | 8+4 | No | 2020 | Yes |
| MDSHA | MI1k | Construct | Approved | I-95/I-495 (Capital Beltway) | Branch Avenue Metro Access | | 1 | 1 | 8 | 8 | No | 2010 | Yes |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MDSHA | MI1p | Construct | Pending | I-95/I-495 (Capital Beltway) | Interchange at Greenbelt Metro | | 1 | 1 | 8 | 8+2 | No | 2010 | Yes |
| MDSHA | VA | Widen | Approved | I-95/I-495 Woodrow Wilson Bridge | MD 210 Interchange | Virginia Line | 1 | 1 | 6 | 12 | Yes | 2008 | Yes |
| MDSHA | MI1m | Construct | Pending | I-95/I-495/Arena Drive Interchange | MD 214 | MD 202 | 1 | 1 | 8 | 8+2 | No | 2010 | Yes |
| MDSHA | MI1a | Study | Pending | I-95/I-495 (Capital Beltway) | American Legion Bridge | Woodrow Wilson Bridge | 1 | 1 | 6 | 6+4 | No | not coded | Yes |
| MDSHA | MP12 | Construct | Pending | Intercounty Connector | I-270 | I-95 / US 1 | 0 | 1 | 0 | 6 | No | 2010 | Yes |
| ***MDOT Primary*** | | | | | | | | | | | | | |
| MDSHA | MP10a | Reconstruc | pending | US 1 (Baltimore Avenue) | College Avenue | Cherry Hill Road | 2 | 2 | 4 | 4 | No | 2020 | Yes |
| MDSHA | MP10b | Widen | pending | US 1, Baltimore Avenue | Cherry Hill Road | I-95/I-495 | 2 | 2 | 4 | 6 | No | 2010 | Yes |
| MDSHA | MP9b | Construct | Pending | MD 2/4 at Lusby Southern Conn. Rd. | MD 765 | MD 2/4 at Lusby | 0 | 2 | 0 | 3 | No | 2010 | No |
| MDSHA | MP9c | Construct | Pending | MD 2/4 | MD 231 Intersection Improvs. | | 2 | 2 | 4 | 6+2 | No | 2010 | No |
| MDSHA | MP2c | Construct | pending | MD 3 (Robert Crain Highway) | US 50 | Anne Arundel County Line | 2 | 2 | 4 | 6 | No | 2030 | Yes |
| MDSHA | | Construct | Approved | MD 4 (Pennsylvania Avenue) | Interchanges at Westphalia Rd., Suitland Pkwy., Dower | | 2 | 5 | 4 | 6 | No | 2010 | Yes |
| MDSHA | MP3a | Upgrade/W | Approved | MD 4 | MD 223 | I-95/I-495 | 2 | 5 | 4 | 6 | No | 2010 | No |
| MDSHA | | Construct | Approved | MD 5 (Branch Avenue) | Interchange at Earnshaw/Burch Hill Roads | | 2 | 5 | 4 | 6 | No | 2010 | No |
| MDSHA | MP4f | Upgrade/W | Approved | MD 5 (Branch Avenue) | US 301 at T.B. | North of the Capital Beltway | 2 | 5 | 4 | 6 | No | 2010 | No |
| MDSHA | | Construct | Approved | MD 5 (Branch Avenue) | Interchange at MD 373/Brandywine Road Rel. | | 2 | 5 | 4 | 6 | No | 2010 | No |
| MDSHA | | Construct | Approved | MD 5 (Branch Avenue) | Interchange at Surratts Road | | 2 | 5 | 4 | 6 | No | 2010 | No |
| MDSHA | MP4k | Construct | Approved | MD 5 Relocated at Hughesville | End of divided highway south of Hughesville | Hughesville | 0 | 5 | 0 | 4 | No | 2007 | No |
| MDSHA | | Construct | pending | US 15 Catoctin Mountain Highway | MD 26 Liberty Road | | 2 | 2 | 4 | 4 | No | 2010 | Yes |
| MDSHA | | Upgrade | Approved | US 29 (Columbia Pike) | Musgrove/Fairland Road | | 2 | 5 | 6 | 6 | No | 2010 | Yes |
| MDSHA | | Upgrade | approved | US 29 (Columbia Pike) | MD 198 | | 2 | 5 | 6 | 6 | Yes | 2005 | Yes |

Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MDSHA | | Upgrade | approved | US 29 (Columbia Pike) | Briggs Chaney Road | | 2 | 5 | 6 | 6 | Yes | 2006 | Yes |
| MDSHA | | Upgrade | Approved | US 29 (Columbia Pike) | Randolph Road | | 2 | 5 | 6 | 6 | Yes | 2005 | Yes |
| MDSHA | | Upgrade | Approved | US 29 (Columbia Pike) | Stewart Lane, Tech Rd., Greencastle Road, and Blackburn Road | | 2 | 5 | 6 | 6 | No | 2020 | Yes |
| MDSHA | MP5a | Upgrade | Approved | US 29 (Columbia Pike) | Sligo Creek Parkway | south of MD 193 | 2 | 5 | 6 | 6 | No | 2020 | No |
| MDSHA | MP5c | Upgrade | Approved | US 29 (Columbia Pike) | north of MD 193 | south of MD 650 | 2 | 5 | 6 | 6 | No | 2020 | No |
| MDSHA | MP5e | Upgrade | Approved | US 29, Columbia Pike | north of MD 650 | Howard County Line | 2 | 5 | 6 | 6 | No | 2020 | No |
| MDSHA | | Construct | pending | MD 75 Relocated | MD 80 | | 0 | 3 | 0 | 4 | No | 2010 | Yes |
| MDSHA | FP1B | Construct | N/A | MD 80/MD 355 Relocated | South of Urbana | North of Urbana | 0 | 2 | 0 | 4 | Yes | 2005 | No |
| MDSHA | FP2 | Widen | pending | MD 85 (Buckeystown Pike) | English Muffin Way | north of Grove Road | 2 | 2 | 2/4 | 4/6 | No | 2020 | Yes |
| MDSHA | MP12c | Construct | Approved | MD 97 (Brookeville Bypass) | South of Brookeville | North of Brookeville | 0 | 2 | 0 | 2 | No | 2015 | Yes |
| MDSHA | | Upgrade | pending | MD 97 (Georgia Avenue) | MD 28 (Norbeck Road) | | 2 | 2 | 6 | 6 | No | 2010 | Yes |
| MDSHA | | Upgrade | Approved | MD 97 (Georgia Avenue) | Randolph Road | | 2 | 2 | 6 | 6 | No | 2010 | Yes |
| MDSHA | MP14 | Reconstruc | Pending | MD 202 (Largo Town Ctr. Metro Access Improvs. ) | north of Brightseat Rd | South of Technology Way | 2 | 2 | 6 | 6+2 | No | 2010 | Yes |
| MDSHA | MP6d | Upgrade | Pending | MD 210 (Indian Head Highway) | MD 228 | Capital Beltway | 2 | 2 | 6 | 6 | No | 2020 | Yes |
| MDSHA | MP8e | Widen | pending | US 301 | North of Mount Oak Road | US 50 | 2 | 5 | 4/6 | 6+2 | No | 2030 | Yes |
| MDSHA | MP8a | Study | pending | US 301 South Corridor Transportation Study | South of La Plata | Mount Oak Road | 2 | 5 | 4 | 4/6 | No | not coded | Yes |
| MDSHA | | Construct | Approved | MD 355 | Montrose/Randolph Rds. | CSX RR | 2 | 2 | 6 | 6 | No | 2010 | Yes |
| ***MDOT Secondary*** | | | | | | | | | | | | | |
| MDSHA | | Widen | N/A | MD 27 | MD 355 | A 305 | 2 | 2 | 4 | 6 | Yes | 2006 | |
| MDSHA | MS3d | Widen | Approved | MD 28 (Darnestown Road) | Riffle Ford Road | Great Seneca Highway (MD 119) | 3 | 3 | 2 | 4/6 | Yes | 2004 | Yes |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MDSHA | | Construct | Approved | MD 28/Rockville Twn. Ctr. Interchanges | MD 586/MD 911 | | 3 | 3 | 2 | 4 | No | 2030 | Yes |
| MDSHA | MS2f | Construct | | MD 28 (Norbeck Road) / MD 198 (Spencerville Road) | MD 97 | I-95 | 2 | 2 | 2/4 | 4/6 | No | 2030 | Yes |
| MDSHA | MS32 | Widen | Approved | MD 117 | I-270 | Seneca Creek State Park | 2 | 2 | 2 | 4 | No | 2010 | Yes |
| MDSHA | MS6b | Widen | Approved | MD 124 (Woodfield Road) | Midcounty Highway | S. of Airpark Dr. | 2 | 2 | 2 | 6 | No | 2015 | Yes |
| MDSHA | MS6c | Widen | Approved | MD 124 (Woodfield Road) | S. of Airpark Dr. | N. of Fieldcrest Rd. | 2 | 2 | 2 | 6 | No | 2010 | Yes |
| MDSHA | MS6d | Widen | Approved | MD 124 (Woodfield Road) | N. of Fieldcrest Rd. | Warfield Road | 2 | 2 | 2 | 6 | No | 2015 | Yes |
| MDSHA | MS10a | Study | Pending | MD 201 Extended / US 1 | I-95/I-495 | MD 198 | 0 | 2 | 0 | 4-6 | No | not coded | Yes |
| MDSHA | PGS6 | Construct | Approved | MD 212 Relocated (Ammendale/Virginia Manor | US 1 | I-95 | 3 | 2 | 2 | 4 | Yes | 2005 | Yes |
| MDSHA | MS30 | Widen/Con | Approved | MD 414 Extended | MD 210 | I-295 | 0 | 2 | 0 | 4 | Yes | 2008 | Yes |
| MDSHA | MS18d | Widen | Approved | MD 450 (Annapolis Road) | Stonybrook Drive | West of MD 3 | 2 | 2 | 2 | 4 | No | 2020 | No |
| MDSHA | MS18i | Widen | Approved | MD 450 (Annapolis Road) | Whitfield Chapel Road | Seabrook Road | 2 | 2 | 2 | 5 | Yes | 2005 | Yes |
| MDSHA | MS18h | Widen | Approved | MD 450 (Annapolis Road) | MD 193 | Stonybrook Drive | 2 | 2 | 2 | 4/6 | Yes | 2005 | Yes |
| MDSHA | MS20c | Construct | Approved | MD 475 (East Street Extended) | South Street | proposed Monocacy Boulevard | 0 | 3 | 0 | 4 | No | 2010 | Yes |
| MDSHA | | Study | Pending | UM Connector | I-95/I-495 Interchange | University of Maryland campus | 0 | 0 | 0 | 0 | No | not coded | Yes |
| ***Montgomery County*** | | | | | | | | | | | | | |
| Mont.Co. | MC11b | Construct | N/A | A-305 - MidCounty Highway Extended | Stringtown Road | MD 27 (Ridge Road) | 0 | 3 | 0 | 4 | No | 2015 | No |
| Mont.Co. | MC11c | Construct | N/A | A-305 - MidCounty Highway Extended | MD 355 | Stringtown Road | 0 | 3 | 0 | 2 | No | 2015 | No |
| Mont.Co. | nrs | Construct | | Burtonsville Access Rd. | MD 198 | School Success Rd. | 0 | 4 | 0 | 2 | | 2008 | Yes |
| Mont.Co. | | | | Century Blvd./Crystal Rock Loop | existing Century Blvd. | Crystal Rock Drive | | 3 | | 4 | No | 2010 | No |
| Mont.Co. | | Construct | | Chapman Avenue | Randolph Road | Old Georgetown Road | 0 | 3 | 0 | 2 | No | 2010 | No |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mont.Co. | MC38a | Construct | | Citadel Avenue Extended | dead end of existing road south of Marinelli Road | Nicholson Lane | 0 | 4 | 0 | 2 | No | 2006 | Yes |
| Mont.Co. | MC5d | Construct | | Father Hurley Blvd. | Wisteria | MD 118 Relocated | 0 | 2 | 0 | 4 | no | 2010 | Yes |
| Mont.Co. | MC5c | Widen | | Father Hurley/ Ridge Rd. | I-270 | existing MD 27 | 2 | 2 | 4 | 6 | no | 2010 | No |
| Mont.Co. | MC7a | Widen | | Goshen Rd. Fac. Planning | Odenhal Avenue. | Warfield Road | 3 | 3 | 2 | 4 | no | 2010 | No |
| Mont.Co. | MC7b | Construct | | Goshen Rd. Fac. Planning | Warfield Road | Brink Road | 0 | 3 | 0 | 2 | no | 2012 | No |
| Mont.Co. | | Construct | | I-4 Bridge over I-270 | Century Boulevard | Milestone Center Drive | 0 | 3 | 0 | 4 | No | 2015 | No |
| Mont.Co. | MC41 | Widen | | Longdraft Road | MD 124 | MD 117 | 3 | 3 | 2 | 4 | No | 2010 | No |
| Mont.Co. | | Study | | M-83 (with MD 118 Ext. and Middlebrook Rd. Ext. widening projects below) | MD 27 (Ridge Road) | Montgomery Village Avenue | 0 | 2 | 0 | 4-6 | No | 2006 for study | No |
| Mont.Co. | MC11a | Construct | | M-83 - Midcounty Highway Extended | MD 27 (Ridge Road) | Middlebrook Road | 0 | 2 | 0 | 4-6 | No | 2015 | No |
| Mont.Co. | MC11d | Construct | | M-83 - Midcounty Highway Extended | Middlebrook Road | Montgomery Village Avenue | 0 | 2 | 0 | 4-6 | No | 2020 | No |
| Mont.Co. | MC12f | Widen | | MD 118 Ext (Grmntwn. Rd.) | MD 355 | M-83/Watkins Mill Rd. | 2 | 2 | 3 | 6 | No | 2015 | No |
| Mont.Co. | MC14g | Widen | | Middlebrook Road Ext. Widening | MD 355 | M-83 | 2 | 2 | 3 | 6 | No | 2015 | No |
| Mont.Co. | MC15b | Construct | | Montrose Parkway East Fac. Planning | Parklawn Drive | MD 586 - Veirs Mill Road | 0 | 2 | 0 | 4 | No | 2015 | No |
| Mont.Co. | MC15 | Construct | N/A | Montrose Parkway West | Montrose Road (Tower Oaks Blvd.) | old' Old Georgetown Road | 0 | 2 | 0 | 4 | No | 2009 | No |
| Mont.Co. | MC30 | Construct | | Nebel St Extended | Randolph Rd | Bou Ave/Chapman Ave | 0 | 3 | 0 | 4 | | 2007 | Yes |
| Mont.Co. | MC18a | Widen | N/A | Norbeck Rd. Ext. | MD 28 | MD 198 | 3 | 3 | 2 | 4 | No | 2020 | No |
| Mont.Co. | | Construct | | Observation Drive Extended | existing terminus | MD 355 Bypass | 0 | 3 | 0 | 2 | No | 2012 | No |
| Mont.Co. | MC42 | Construct | | Randolph Road | Parklawn Drive | Rock Creek Park | 2 | 2 | 4 | 5 | No | 2015 | No |
| Mont.Co. | MC34 | Widen | | Snouffer School Rd. Fac. Planning | Goshen Rd. | MD 124 | 3 | 3 | 2 | 4 | No | 2015 | No |
| Mont.Co. | MC28a | Widen | N/A | Stringtown Rd. Ext. | MD 355 | Piedmont Road | 3 | 3 | 2 | 4 | No | 2015 | No |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mont.Co. | MC28 | Construct | N/A | Stringtown Rd. Ext. | I270/ MD 121 int. | existing Stringtown Rd. @ MD 355 | 0 | 3 | 0 | 4 | No | 2007 | Yes |
| Mont.Co. | MC22 | Construct | | Valley Park Dr. | e.of MD 27 | exist. Valley Park Dr. | 0 | 3 | 0 | 2 | | 2006 | Yes |
| Mont.Co. | MC23a | Construct | | Watkins Mill Rd. ext. | Md 117 | MD 355 | 0 | 3 | 0 | 4 | No | 2015 | No |
| Mont.Co. | MC13 | Construct | | Woodfield Rd.( MD 124 Ext.) | 1200' North of MD 108 | MD 27 | 0 | 2 | 0 | 2 | | 2007 | Yes |
| ***Prince Georges County*** | | | | | | | | | | | | | |
| PG Co. | PGS3a | Widen | N/A | Addison Road | MD 214 | Walker Mill Road | 3 | 3 | 2 | 4 | Yes | 2012 | No |
| PG Co. | PGS5 | Construct | N/A | Allentown Road Relocated | Indian Head Highway (MD 210) | Brinkley Road | 0 | 3 | 0 | 4 | No | 2025 | No |
| PG Co. | PGS6 | Widen | N/A | Ammendale/Virginia Manor Road | I-95 | west of US 1 | 3 | 3 | 2 | 6 | Yes | 2007 | Yes |
| PG Co. | PGS73 | widen | N/A | Ardwick-Ardmore Road | MD 704 | 91st Ave. | 4 | 4 | 2 | 4 | Yes | 2015 | No |
| PG Co. | PGP4a | Construct | N/A | Baltimore Washington Pkwy/Greenbelt Rd (MD 193) | ramp to southbound Baltimore Washington Pkwy | | 0 | 5 | 0 | 4 | No | 2025 | No |
| PG Co. | PGS74a | Widen | N/A | Bell Station Road | Glenn Dale Road (MD 193) | Annapolis Road (MD 450) | 4 | 4 | 2 | 4 | Complete | 2002 | Yes |
| PG Co. | PGS74b | Construct | N/A | Bell Station Road | Annapolis Road (MD 450) | Church Road | 0 | 4 | 0 | 4 | Yes | 2006 | No |
| PG Co. | PGS75 | Widen | N/A | Berry Road | Livingston Road | Accokeek Road (MD 373) | 4 | 4 | 2 | 4 | No | 2010 | No |
| PG Co. | PGS9b | Widen | N/A | Bowie Race Track Road | Laurel-Bowie Road (MD 197) | Old Chapel Road | 4 | 4 | 2 | 4 | No | 2015 | No |
| PG Co. | PGS9a | Widen | N/A | Bowie Race Track Road | Annapolis Road (MD 450) | Old Chapel Road | 4 | 4 | 2 | 4 | No | 2015 | No |
| PG Co. | PGS10 | Widen | N/A | Brandywine Road | north of Piscataway Road (MD 223) | Thrift Road | 4 | 4 | 2 | 4 | No | 2020 | No |
| PG Co. | PGS76 | Widen | N/A | Briggs Chaney Road | Montgomery County line | Old Gunpowder Road | 4 | 4 | 2 | 4 | Yes | 2010 | No |
| PG Co. | PGS11 | Widen | N/A | Brightseat Road | Sheriff road | MD 214 | 4 | 4 | 2 | 4 | Yes | 2004 | Yes |
| PG Co. | PGS12 | Widen | N/A | Brinkley Road | St. Barnabas Road (MD 414) | Allentown Road (MD 337) | 3 | 3 | 4 | 6 | No | 2015 | no |
| PG Co. | PGS13 | Construct | N/A | Brooks Drive Extended | Marlboro Pike | Rollins Avenue | 0 | 3 | 0 | 4 | No | 2020 | No |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PG Co. | PGS14 | Widen | N/A | Cabin Branch Drive | Columbia Park Road | north of Sheriff Road | 4 | 4 | 2 | 4 | No | 2015 | No |
| PG Co. | PGS16a | Construct | N/A | Campus Way North | Lake Arbor Way | south of Lottsford Road | 0 | 4 | 0 | 4 | No | 2004 | No |
| PG Co. | PGS16b | Construct | N/A | Campus Way North Extended | south of Lottsford Road | Evarts Drive | 0 | 4 | 0 | 4 | No | 2010 | No |
| PG Co. | PGS17 | Widen | N/A | Cherry Hill Road | Montgomery County line | Baltimore Avenue (US 1) | 3 | 3 | 2 | 4 | No | 2012 | Yes |
| PG Co. | PGS18 | Widen | N/A | Church Road | Oak Grove Road | Annapolis Road (MD 450) | 4 | 4 | 2 | 4 | No | 2005 | No |
| PG Co. | PGS20a | Widen | N/A | Columbia Park Road | Cabin Branch Road | Columbia Terrace | 4 | 4 | 2 | 4 | No | 2015 | No |
| PG Co. | PGS20b | Widen | N/A | Columbia Park Road | US 50 | Cabin Branch Road | 4 | 4 | 2 | 4 | No | 2015 | No |
| PG Co. | PGS21a | widen/cons | N/A | Contee Road | US 1 | Van Dusen Road | 3 | 3 | 2 | 3 | Yes | 2004 | Yes |
| PG Co. | PGS21b | Widen | N/A | Contee Road | Briarwood Drive | US 1 | 4 | 4 | 2 | 4 | No | 2000 | Yes |
| PG Co. | PGS22 | Widen | N/A | Dangerfield Road | Cheltenham Avenue | Woodyard Road (MD 223) | 4 | 4 | 2 | 4 | No | 2015 | No |
| PG Co. | PGS24a | Widen | N/A | Dower House Road | Woodyard Road (MD 223) | Foxley Road | 4 | 4 | 2 | 4 | No | 2025 | No |
| PG Co. | PGS24b | Widen | N/A | Dower House Road | Foxley Road | Pennsylvania Avenue (MD 4) | 4 | 4 | 2 | 6 | No | 2015 | No |
| PG Co. | PGS25 | Widen | N/A | Fisher road | Brinkley Road | Holton Lane | 4 | 4 | 2 | 4 | No | 2012 | No |
| PG Co. | PGS26 | Construct | N/A | Forbes Boulevard Extended | south of Amtrak | Greenbelt Road (MD 193) | 0 | 4 | 0 | 4 | No | 2015 | No |
| PG Co. | PGS27 | Widen | N/A | Forestville Road | Allentown Road (MD 337) | Pennsylvania Avenue (MD 4) | 4 | 4 | 2 | 4 | No | 2012 | Yes |
| PG Co. | PGS29 | Widen | N/A | Fort Washington Road | Riverview road | Indian Head Highway (MD 210) | 4 | 4 | 2 | 4 | No | 2015 | No |
| PG Co. | PGS30a | Widen | N/A | Good Luck Road | east of Kenliworth Avenue (MD 201) | Cipriano Road | 4 | 4 | 2 | 4 | No | 2020 | No |
| PG Co. | PGS30b | Widen | N/A | Good Luck Road | Cipriano Road | Greenbelt Road (MD 193) | 4 | 4 | 2 | 4 | No | 2015 | No |
| PG Co. | PGS87 | Widen | N/A | Governor Bridge Road | US301 | Anne arundel County | 4 | 4 | 2 | 4 | No | 2012 | No |
| PG Co. | PGS34a | Widen | N/A | Hill Road | Central Avenue (MD 214) | ML King Jr Highway (MD 704) | 4 | 4 | 2 | 4 | No | 2013 | Yes |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PG Co. | PGS34b | Construct | N/A | Hill Road | ML King Jr Highway (MD 704) | Sheriff Road | 0 | 4 | 0 | 2 | No | 2015 | No |
| PG Co. | PGS88 | Construct | N/A | Iverson St. Extended | Wheeler Road | 19th Avenue | 0 | 4 | 0 | 4 | No | 2010 | No |
| PG Co. | PGS35 | Widen | N/A | Karen Boulevard | Walker Mill Road | Central Avenue (MD 214) | 4 | 4 | 2 | 4 | No | 2020 | No |
| PG Co. | PGS38a | Widen | N/A | Livingston Road | Indian Head Highway (MD 210) at Eastover | Kerby Hill Rd. | 4 | 3/4 | 2 | 4 | No | 2015 | No |
| PG Co. | PGS38b | Widen | N/A | Livingston Road | Piscataway Creek | Farmington Road | 4 | 4 | 2 | 4 | No | 2020 | No |
| PG Co. | PGS40a | Widen | N/A | Lottsford Road | Archer Lane | Enterprise Road (MD 193) | 3 | 3 | 2 | 4 | No | 2011 | Yes |
| PG Co. | PGS39b | Widen | N/A | Lottsford Vista Road | ML King Jr Highway (MD 704) | Ardwick-Ardmore Road/Relocated | 4 | 4 | 2 | 4 | No | 2020 | No |
| PG Co. | PGS44b | Widen | N/A | Metzerott Road | Adelphi Road | University Boulevard (MD 193) | 4 | 4 | 2 | 4 | No | 2020 | No |
| PG Co. | PGS44a | Widen | N/A | Metzerott Road | New Hampshire Avenue (MD 650) | Adelphi Road | 4 | 4 | 2 | 4 | No | 2020 | No |
| PG Co. | PGS45 | Widen | N/A | Mitchellville Road | Mount Oak Road | Collington Road (MD 197) | 4 | 4 | 2 | 6 | Yes | 2000 | No |
| PG Co. | PGS89 | Widen | N/A | Mt. Oak | Church Road | Mitchellville Road | 3 | 3 | 2 | 4 | No | 2015 | No |
| PG Co. | PGS46 | Widen | N/A | Murkirk Road | west of Baltimore Avenue (US 1) | Odell Road | 4 | 4 | 2 | 4 | No | 2020 | No |
| PG Co. | | Construct | N/A | National Harbor Main Circulation Roads | I-95/I-295 Interchange | Waterfront Parcel, National Harbor | 0 | 4 | 0 | 4/6 | | 2008 | Yes |
| PG Co. | PGS47 | Widen | N/A | Oak Grove and Leeland Roads | Watkins Park Road (MD 193) | Robert Crain Highway (US 301) | 4 | 4 | 2 | 4 | No | 2005 | No |
| PG Co. | PGS48 | Widen | N/A | Old Alexandria Ferry Road | Woodyard Road (MD 223) | Branch Avenue (MD 5) | 4 | 4 | 2 | 4 | No | 2015 | No |
| PG Co. | PGS80 | Construct | N/A | Old Baltimore Pike Extended | Muirkirk Road | Contee Road | 0 | 4 | 0 | 2 | Yes | 2020 | No |
| PG Co. | PGS50 | Widen | N/A | Old Branch Avenue | north of Piscataway Road (MD 223) | Allentown Road (MD 337) | 4 | 4 | 2 | 4 | Yes | 2015 | No |
| PG Co. | PGS51a | Widen | N/A | Old Gunpowder Road | Powder Mill Road | Greencastle Road | 3 | 3 | 2 | 4 | No | 2015 | No |
| PG Co. | PGS52 | Widen | N/A | Oxon Hill Road | Fort Foote Rd - North | MD 210 | 4 | 4 | 2 | 4 | No | 2010 | Yes |
| PG Co. | PGS81 | Construct | N/A | Presidential Parkway | Suitland Parkway | Melwood Road | 0 | 3 | 0 | 6 | No | 2025 | No |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PG Co. | | Construct | | Regency Parkway/ Regency Lane | Regency Lane | Hil-Mar Drive | 0 | 4 | 0 | 4 | | 2007 | Yes |
| PG Co. | PGS54 | Widen | N/A | Rhode Island Avenue | University Boulevard (MD 193) | Baltimore Avenue (US 1) | 4 | 4 | 2 | 4 | No | 2015 | No |
| PG Co. | PGS55a | Widen | N/A | Ritchie Marlboro Road | Ritchie Rd | White House Road | 3 | 3 | 2 | 4 | No | 2003 | Yes |
| PG Co. | PGS56a | Widen | Approved | Ritchie Road/Forestville Road | Alberta Drive | MD 4 Pennsylvania Avenue | 4 | 4 | 2 | 4 | Yes | 2009 | Yes |
| PG Co. | PGS56e | Widen | N/A | Ritchie Road/Forestville Road | Alberta Drive | Edgeworth Drive | 4 | 4 | 2 | 4 | No | 2004 | Yes |
| PG Co. | PGS57 | Widen | N/A | Rollins Avenue | Central Avenue (MD 214) | Walker Mill Road | 4 | 4 | 2 | 4 | No | 2020 | No |
| PG Co. | PGS58 | Widen | N/A | Rosaryville Road | Robert Crain Highway (US 301) | Woodyard Road (MD 223) | 4 | 4 | 2 | 4 | No | 2020 | No |
| PG Co. | PGS60b | Widen | N/A | Spine Road | Branch Avenue (MD 5)/US 301 | Brandywine Road (MD 381) | 3 | 3 | 2 | 6 | No | 2015 | No |
| PG Co. | PGS61 | Widen | N/A | Springfield Road | Lanham-Severn Road (MD 546) | Good Luck Road | 4 | 4 | 2 | 4 | No | 2015 | No |
| PG Co. | PGS82 | Construct | N/A | St. Joseph's Drive | MD 202 | Ardwick-Ardmore Road | 0 | 4 | 0 | 4 | No | 2015 | No |
| PG Co. | PGP2 | Construct | N/A | Suitland Parkway | interchange at Rena/Forestville Roads | | 5 | 5 | 0 | 0 | No | 2025 | No |
| PG Co. | PGS62a | Widen | N/A | Suitland Road | Allentown Road (MD 337) | Suitland Parkway | 3 | 3 | 2 | 4 | No | 2009 | Yes |
| PG Co. | PGS62b | Widen | N/A | Suitland Road | Suitland Parkway | Silver Hill Road (MD 458) | 3 | 3 | 2 | 4 | No | 2015 | No |
| PG Co. | PGS63 | Widen | N/A | Sunnyside Avenue | Baltimore Avenue (US 1) | Kenliworth Avenue (MD 201) | 4 | 4 | 2 | 4 | No | 2015 | No |
| PG Co. | PGS64 | Widen | N/A | Surratts Road | Beverly Avenue | Brandywine Road | 4 | 4 | 2 | 4 | No | 2005 | Yes |
| PG Co. | PGS65 | Widen | N/A | Temple Hill Road | Piscataway Road (MD 223) | St. Barnabas Road (MD 414) | 4 | 4 | 2 | 4 | No | 2015 | No |
| PG Co. | PGP5a | Construct | N/A | US 50/Columbia Park Road Ramp | westbound ramp to Columbia Park Road | | 5 | 5 | 1 | 1 | No | 2025 | No |
| PG Co. | PGP5b | Construct | N/A | US 50/Columbia Park Road Ramp | eastbound ramp Cheverly vicinity | | 5 | 5 | 1 | 1 | Yes | 2003 | No |
| PG Co. | PGS67a | Widen | N/A | Van Dusen Road | Contee Road | Sandy Springs Road (MD 198) | 3 | 3 | 2 | 4 | No | 2020 | No |
| PG Co. | PGS67b | Construct | N/A | Van Dusen Road Interchange | @Contee Road | | 0 | 0 | 0 | 0 | No | 2025 | No |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PG Co. | PGS68 | Widen | N/A | Virginia Manor Road | Muirkirk Road | Contee Road | 4 | 4 | 2 | 4 | No | 2015 | No |
| PG Co. | PGS69a | Widen | N/A | Walker Mill Road | Silver Hill Road | I-95 | 3 | 3 | 2 | 4 | No | 2015 | No |
| PG Co. | PGS70 | Widen | N/A | Wheeler Road | St. Barnabas Road (MD 414) | District of Columbia limits | 4 | 4 | 2 | 4 | No | 2020 | No |
| PG Co. | PGS71 | Widen | N/A | White House Road | Ritchie-Marlboro Road | Largo-Landover Road (MD 202) | 3 | 3 | 2 | 6 | Yes | 2015 | No |
| PG Co. | PGS72 | Widen | N/A | Whitfield Chapel Road | Annapolis Road (MD 450) | Ardwick-Ardmore Road | 4 | 4 | 2 | 4 | No | 2020 | No |
| PG Co. | PGS40b | Construct | N/A | Woodmore Road | Enterprise Road (MD 193) | Church Road | | 3 | | 4 | No | 2015 | No |
| PG Co. | PGS42 | Widen | N/A | Woodyard Road (MD 223) | Rosaryville Road | Dower House Road | 2 | 2 | 2 | 4 | No | 2007 | No |
| PG Co. | PGS42b | Construct | N/A | Woodyard Road Relocated (MD 223) | Piscataway Creek | Livingston Road | 0 | 3 | 0 | 2 | No | 2010 | No |
| PG Co. | PGS42c | Widen | N/A | Woodyard Road Relocated (MD 223) | Piscataway Creek | Livingston Road | 3 | 3 | 2 | 4 | No | 2020 | No |
| ***Frederick County*** | | | | | | | | | | | | | |
| Fred.Co. | FS2 | Construct | N/A | Monocacy Blvd | Hughes Ford Rd. | Gas House Pike | 0 | 3 | 0 | 4 | Yes | 2009 | No |
| ***Anne Arundel County*** | | | | | | | | | | | | | |
| BMC | AA1d | Widen | N/A | I-97 | US 50/301 | MD 32/3 | 1 | 1 | 4 | 6 | | 2020 | |
| BMC | nrs | Reconstruc | N/A | Jennifer Rd (ramps) | @ US 50/MD (2 Interchange) | | | | - | 5 | | 2004 | |
| BMC | nrs | Widen | N/A | MD 174 | MD 174 (Bridge at I-97) | | | 3 | 2 | 6 | | 2004 | |
| BMC | AA6e | Widen | N/A | MD 100 | Howard Co. Line | MD 2 | | 5/1 | 4/6 | 6/8 | | 2020 | |
| BMC | nrs | Reconstruc | N/A | MD 100 (full interchange) | @ MD 10 | | | 1 | - | - | | 2020 | |
| BMC | AA7 | Widen | N/A | MD 170 | MD 175 | MD 100 | | 2 | 2 | 4 | | 2015 | |
| BMC | AA8a | Widen | N/A | MD 175 | MD 170 | BW Parkway | | 2 | 2 | 4 | | 2010 | |
| BMC | AA29 | Widen | N/A | MD 177 | MD 100 | South Carolina Avenue | - | 2 | 3/2 | 5 | | 2020 | |
| BMC | AA30 | Widen | N/A | MD 198 | MD 32 | BW Parkway | - | 2 | 2 | 4 | | 2025 | |

Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BMC | AA30a | Widen | N/A | MD 198 | PG line | BW Parkway | 2 | 2 | 4 | 6 | | 2025 | |
| BMC | AA3e | Widen | N/A | MD 2 | US 50 | MD 100 | | 2 | 4/5 | 6 | | 2020 | |
| BMC | AA3c | Widen | N/A | MD 2 | Virginia Avenue | MD 214 | | 2 | 2/4 | 4/6 | | 2003 | |
| BMC | AA15a | Widen | N/A | MD 295 | I-695 | MD 100 | | 1 | 4 | 6 | | 2020 | |
| BMC | AA4e | Widen | N/A | MD 3 | MD 32 | Prince George Co. Line | | 2 | 4 | 6 | | 2010 | |
| BMC | AA5c | Widen | N/A | MD 32 | BW Parkway | Howard County Line | | 1 | 4 | 8 | | 2020 | |
| BMC | nrs | Construct | N/A | MD 32 (2 new interchange) | @Airfield Rd and MD 198 | | | 1 | - | - | | 2003 | |
| BMC | nrs | Construct | N/A | MD 32 (new interchange) | @ Canine Rd | | | 1 | - | - | | 2003 | |
| BMC | nrs | Construct | N/A | MD 32 (new interchange) | @ Samford Rd | | | 1 | - | - | | 2003 | |
| BMC | nrs | Widen | N/A | MD 607 | Woods Rd. | MD 173 | | | 2 | 4 | | 2025 | |
| BMC | nrs | Construct | N/A | Medical Blvd | Jennifer Road | Bestgate Rd | | | 0 | 4 | | 2005 | |
| BMC | nrs | Construct | N/A | National Business Park-Brock Bridge Road | Guilford Road Extended | Brock Bridge Road | | | 0 | 2 | | 2005 | |
| BMC | nrs | Reconstruc | N/A | US 50/301 (ramp) | Northbound MD 2 | Westbound US 50 | | 1 | - | - | | 2005 | |
| BMC | nrs | Reconstruc | N/A | MD 2 (partial interchange) | @ MD 450 | | | 2 | - | - | | 2015 | |
| ***Carroll County*** | | | | | | | | | | | | | |
| BMC | CA3A | Construct | N/A | Hampstead Bypass (MD 30) | Wolf Hill Dr | Brodbeck Rd | | 2 | 0 | 2 | | 2007 | |
| BMC | CA1B | Widen | N/A | MD 140 | MD 31 | Market St. | | 1 | 4/6 | 8 | | 2020 | |
| BMC | nrs | Reconstruc | N/A | MD 140 (reconstruct bridge) | MD 97 (north) | MD 27 | | 1 | | | | 2006 | |
| BMC | nrs | Construct | N/A | MD 140 (3 new interchange) | @ MD 97S, Center St. & Englar Rd | | | 1 | - | - | | 2020 | |
| BMC | CA2 | Widen | N/A | MD 26 | MD 32 | MD 97 | | 2 | 2 | 4 | | 2015 | |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BMC | CA2a | Widen | N/A | MD 26 | MD 32 | Liberty Reservoir | | 2 | 4/5 | 6 | | 2015 | |
| BMC | in base | Widen | N/A | MD 32 | MD 26 | Howard County Line | | 2 | 2 | 4 | | 2020 | |
| BMC | CA5 | Widen | N/A | MD 97 | MD 140 | Pleasant Valley Rd | | 2 | 2 | 4 | | 2020 | |
| BMC | nrs | Construct | N/A | Shepherd's Mill Road | MD 32 | Arnold/Old Westminster Pike | | | 0 | 2 | | 2002 | |
| ***Howard County*** | | | | | | | | | | | | | |
| BMC | HW20 | Widen | N/A | Dorsey Run Rd | MD 175 | MD 32 | | 4 | 2 | 4 | | 2010 | |
| BMC | nrs | Construct | N/A | Dorsey Run Rd | MD 103 | MD 175 | | 4 | 0 | 2 | | 2010 | |
| BMC | nrs | Widen | N/A | Dorsey Run Rd | Guilford Road | Henkels Ln and ramps at MD 32 and Dorsey Run Rd | | 4 | 3 | 6 | | 2004 | |
| BMC | nrs | Construct | N/A | Dorsey Run Rd | Extension | Guilford Road | | 4 | 0 | 4 | | 2005 | |
| BMC | HW16C | Widen | N/A | Gorman Road | Stephens Road | US 1 | | 3 | 2 | 3 | | 2025 | |
| BMC | HW21 | Widen | N/A | Guilford Road | Dorsey Run Road | US 1 | | | 2 | 4 | | 2005 | |
| BMC | nrs | Widen | N/A | Guilford Road | National Business Parkway | Dorsey Run Road | | | 2 | 5 | | 2004 | |
| BMC | HW1b | Widen | N/A | I-70 | US 29 | US 40 | 1 | 1 | 4 | 6 | | 2030 | |
| BMC | HW1c | Widen | N/A | I-70 | US 29 | Baltimore County Line | 1 | 1 | 6 | 8 | | 2025 | |
| BMC | HW1a | Reconstruc | N/A | I-70 (partial to full interchange) | @ Marriotsville Road | | 1 | 1 | | | | 2020 | |
| BMC | HW17a | Widen | N/A | Johns Hopkins Road | US 29 | Sanner Road | | 4 | 2 | 4 | | 2005 | |
| BMC | nrs | Construct | N/A | Loop Road | MD 216/Leishear Rd | All Saints Road | | | 0 | 4 | | 2005 | |
| BMC | nrs | Construct | N/A | Loop Road (new interchange) | @ MD 216 West | | | | | | | 2006 | |
| BMC | nrs | Construct | N/A | Loop Road (new interchange) | @ MD 216 East | | | | | | | 2006 | |
| BMC | HW18a | Widen | N/A | Marriottsville Road | MD 99 | MD 144 | | 3 | 2 | 4 | | 2015 | |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BMC | HW5f | Widen | N/A | MD 100 | I-95 | Anne Arundel County Line | | 5 | 4/6 | 6/8 | | 2025 | |
| BMC | ?? | Reconstruc | N/A | MD 100 | US 29 | Long Gate Parkway | | 1 | - | 4 | | 2002 | |
| BMC | ?? | Widen | N/A | MD 100 | Long Gate Parkway | MD 104 | | 1 | 4 | 6 | | 2002 | |
| BMC | ?? | Reconstruc | N/A | MD 100 | MD 104 | I-95 | | 1 | - | 6 | | 2002 | |
| BMC | ?? | Reconstruc | N/A | MD 100 (new interchange) | @ Snowden River Pkwy | | | 1 | | | | 2002 | |
| BMC | ?? | Reconstruc | N/A | MD 100 (new interchange) | @ MD 104 | | | 1 | | | | 2002 | |
| BMC | ?? | Reconstruc | N/A | MD 100 (new interchange) | @ Centre Park Drive and Executive Park Drive | | | 1 | | | | 2002 | |
| BMC | ?? | Reconstruc | N/A | MD 100 (new interchange) | @ MD 103 | | | 1 | | | | 2002 | |
| BMC | HW6b | Widen | N/A | MD 108 | MD 104 | MD 175 | | 2 | 2 | 4 | | 2020 | |
| BMC | HW6c | Widen | N/A | MD 108 | Trotter Road | MD 32 | | 2 | 2 | 4 | | 2025 | |
| BMC | HW7b | Widen | N/A | MD 175 | Snowden River Parkway | Dobbin Road | | 3 | 4 | 6 | | 2005 | |
| BMC | ?? | Reconstruc | N/A | MD 175 (new interchange) | @ Snowden River Parkway | | | 3 | | | | 2002 | |
| BMC | HW8b | Widen | N/A | MD 216 | West of US 29 | Sanner Road | | 3 | 2 | 4 | | 2020 | |
| BMC | HW8c | Relocate | N/A | MD 216 | West of I-95 | West of US 29 | | 3 | 4 | 6 | | 2005 | |
| BMC | HW3c | Widen | N/A | MD 32 | Cedar Lane | Anne Arundel County Line | | 1 | 4/6 | 8 | | 2015 | |
| BMC | HW3b | Widen | N/A | MD 32 | MD 108 | I-70 | | 1 | 2 | 4 | | 2015 | |
| BMC | HW3d | Widen | N/A | MD 32 | I-70 | Carroll County Line | | 2 | 2 | 4 | | 2030 | |
| BMC | ?? | Reconstruc | N/A | MD 32 (full interchange) | @ I-70 | | | 2 | | | | 2020 | |
| BMC | ?? | Reconstruc | N/A | MD 32 (full interchange) | @ Burntwoods Rd | | | 1 | | | | 2020 | |
| BMC | ?? | Reconstruc | N/A | MD 32 (full interchange) | @ MD 144 | | | 1 | | | | 2020 | |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BMC | nrs | Construct | N/A | North Ridge Road | Carts Court | Rogers Ave and Town&County Blvd to US 40 | | | - | 2 | | 2010 | |
| BMC | nrs | Widen | N/A | Patuxent Range Road | US 1 | Dorsey Run Road | | | 2 | 4 | | 2015 | |
| BMC | HW11b | Widen | N/A | Rodgers Avenue | US 40 | Courthouse Drive | | 3 | 2 | 4 | | 2010 | |
| BMC | HW13a | Construct | N/A | Sanner Road South | Johns Hopkins Road | MD 216 | | 3 | 0 | 4 | | 2015 | |
| BMC | HW13b | Widen | N/A | Sanner Road North | Johns Hopkins Road | Pindell School Road | | 3 | 2 | 4 | | 2015 | |
| BMC | HW14c | Widen | N/A | Snowden River Parkway | MD 100 | Broken Land Parkway | | 3 | 4 | 6 | | 2020 | |
| BMC | HW14a | Reconstruc | N/A | Snowden River Parkway | Tamar Drive | MD 100 | | 3 | - | 4 | | 2002 | |
| BMC | HW9a | Widen | N/A | US 1 | Ducketts Lane | MD 32 | | 2 | 4 | 6 | | 2015 | |
| BMC | ?? | Widen | N/A | US 1 | Deep Run | Business Parkway | | 2 | 4 | 5 | | 2002 | |
| BMC | nrs | Widen | N/A | US 1 | Crestmount Road | South of Cherry Tree Business Park | | 2 | 4 | 5 | | 2002 | |
| BMC | ?? | Widen | N/A | US 29 | I-70 | MD 100 | | 5 | 6/8 | 8/10 | | 2015 | |
| BMC | HW10d | Widen | N/A | US 29 | I-70 | MD 100 | | 5 | 4/6 | 8 | | 2030 | |
| BMC | HW10b | Widen | N/A | US 29 NB | MD 175 | Montgomery County Line | | 5 | 4 | 6 | | 2010 | |
| BMC | ?? | Reconstruc | N/A | US 29 ( full interchange) | @ Rivers Edge Road | | | 5 | | | | 2025 | |
| BMC | HW10c | Reconstruc | N/A | US 29 (new interchange) | @ Hopkins/Gorman Road | | | 5 | | | | 2003 | |
| BMC | ?? | Widen | N/A | MD 100 | Long Gate Parkway | US 29 | | 1 | 4 | 6 | | 2005 | |
| ***Federal Lands*** | | | | | | | | | | | | | |
| Fed. Lands | | Widen | | Old Mill Rd. | US 1 | Pole Rd. | 4 | 2 | 4 | 4 | | 2009 | |
| Fed. Lands | | Construct | | Old Mill Rd. | Pole Rd. | Telegraph Rd. | 0 | 0 | 4 | 4 | | 2009 | |
| ***Virginia*** | | | | | | | | | | | | | |
| ***VDOT Freeway*** | | | | | | | | | | | | | |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDOT | VI3b | Restripe | PCE-1 | I-395 HOV (3 lanes total) | I-95 | DC | 1 | 1 | 2 | 3 | No | 2010 | No |
| VDOT | VI13c | Study | PCE-1 | I-395 HOV ramp connections | HOV access in Alexandria | | 1 | 1 | - | - | No | not coded | No |
| VDOT | VI4i | Construct | EA-2 | I-495 HOT (peak) | I-395 | S. of VA 193 (Georgetown Pike) | 1 | 1 | 8 | 8+4 | No | 2010 | Yes |
| VDOT | | Construct | Pending | I-495 HOT Lanes Interchange | Provides SB to WB, SB to EB, EB to SB, & NB to WB HOV to HOT or HOT to HOV movements | @ VA 267 (Dulles Toll Road) | 1 | 1 | - | - | No | 2010 | No |
| VDOT | | Construct | Pending | I-495 HOT Lanes Interchange | All movements | @ VA 123 (Chain Bridge Road) | 1 | 1 | - | - | No | 2010 | Yes |
| VDOT | | Construct | Pending | I-495 HOT Lanes Interchange | Provides SB to WB, WB to SB, EB to SB, NB to WB, & EB to NB HOV to HOT | @ I-66 HOV Lanes | 1 | 1 | - | - | No | 2010 | No |
| VDOT | | Construct | Pending | I-495 HOT Lanes Interchange | HOT movements to and from South Only | @ US 29 | 1 | 1 | - | - | No | 2010 | No |
| VDOT | | Construct | Pending | I-495 HOT Lanes Interchange | All movements | @ VA 620 (Braddock Road) | 1 | 1 | - | - | No | 2010 | No |
| VDOT | | Construct | Pending | Construct ramps connecting the existing I-95 / I-395 HOV lanes on Shirley Highway to proposed HOT lanes on the Capital Beltway. | From I-95 / I-395 HOV lanes to I-495 HOT lanes | | 1 | 1 | - | - | No | 2010 | Yes |
| VDOT | VI4k | Construct | EA-2 | I-495 HOV (peak) | S. of VA 193 (Georgetown Pike) | Am. Leg. Bridge | 1 | 1 | 8 | 10 | No | 2015 | No |
| VDOT | VI1w | Widen | CE-1 | I-66 HOV during peak | US 15 (includes intch. reconst.) | US 29 (Gainesville) | 1 | 1 | 4 | 6 | No | 2015 | No |
| VDOT | VI1z | Reconstruc | Pending | I-66 Interchange | @ US 29 (Gainesville) | | 1 | 1 | - | - | No | 2014 | No |
| VDOT | VI1c | Widen | CE-4 | I-66 HOV during peak | VA 234 (Prince Wm. Pkwy) | VA 234 Business (Sudley Rd.) | 1 | 1 | 4 | 8 | yes | 2006 | No |
| VDOT | VI1ca | Widen | CE-4 | I-66 HOV during peak (5 lanes eb) | US 29 (Gainesville) | VA 234 (Prince William Parkway) | 1 | 1 | 4 | 9 | no | 2010 | Yes |
| VDOT | VI1aa | Reconstruc | Pending | I-66 Interchange | @ I-495 (Capital Beltway) | | 1 | 1 | - | - | No | 2013 | Yes |
| VDOT | | Study | Pending | I-66 Location Study (inclu. Rail Alternatives) | US 15 (@ Haymarket) | I-495 (Capital Beltway) | 1 | 1 | 4/6 | 6/8 | No | not coded | No |
| VDOT | VI1l | Study | PCE-1 | I-66 ramp | EB on-ramp from US 29 (Arlington) | | 1 | 1 | - | - | no | not coded | No |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDOT | | Study | PCE-1 | I-66 WB | Rosslyn | Dulles Airport Access Rd. | 1 | 1 | 4 | 5 | no | not coded | Yes |
| VDOT | VI2p | Widen | CE-1 | I-95 (provide 4th lane) | Newington | VA 123 | 1 | 1 | 6 | 8 | No | 2009 | Yes |
| VDOT | VI2ka | Widen | SEIS-2 | I-95 (Wilson Bridge and approaches) | VA 241 (Telegraph Rd.) | US 1 | 1 | 1 | 6 | 12 | yes | 2011 | Yes |
| VDOT | VI2k | Widen | SEIS-2 | I-95 (Wilson Bridge and approaches) | US 1 | MD 210 | 1 | 1 | 6 | 12 | yes | 2009 | Yes |
| VDOT | VI2l | Restripe | PCE-1 | I-95 HOV (3 total) | Quantico Creek | I-495 | 1 | 1 | 2 | 3 | no | 2010 | No |
| VDOT | VI2i | Construct | CE-1 | I-95 HOV (peak) | Stafford Co./PW Line to | Quantico Cr. | - | 1 | - | 2 | No | 2015 | No |
| VDOT | VI2d | Construct | Pending | I-95 Interchange | @ VA 7900 (Franconia-Springfield Parkway) | LOV Access to & from West/from & to North | - | 1 | - | - | No | 2015 | No |
| VDOT | VI2ac | Reconstruc | Pending | I-95 Interchange | @ VA 613 (Van Dorn Street) | | 1 | 1 | - | - | No | 2015 | No |
| VDOT | VI2ab | Reconstruc | Pending | I-95 Interchange | @ VA 642 (Lorton Road) | | 1 | 1 | - | - | No | 2010 | No |
| VDOT | VI2c | Reconstruc | approved | I-95/395/495 Interchange | | | 1 | 1 | - | - | Yes | 2007 | Yes |
| VDOT | VI2ca | Construct | approved | I-495 access ramps (formerly Phase VIII of I-95/394/495 Interchange) | I-95/395/495 interchange to/from I-495 HOV lanes | | 1 | 1 | - | - | No | 2015 | No |
| VDOT | | Reconstruc | N/A | VA 267 (Dulles Toll Road) Interchange | @ VA 674 (Hunter Mill Road) | | - | - | - | - | No | 2012 | No |
| VDOT | VP15g | Widen | N/A | VA 267 (Dulles Toll Road) Ramps | @ I-495 Interchange | | 1 | 1 | - | - | yes | 2005 | No |
| VDOT | | | N/A | Dulles Corridor Slip Ramps | Dulles Corridor Park & Ride Lots | Dulles Toll Road | | | | | complete | 2002 | No |
| VDOT | MW1 | Widen | Pending | Dulles Airport Access Road | Dulles Airport | VA 123 | 1 | 1 | 4 | 6 | No | 2010 | No |
| VDOT | VP21d | Widen | N/A | Dulles Greenway | Goose Creek Bridge | VA 901 (Claiborne Parkway) | 1 | 1 | 4 | 6 | No | 2005 | No |
| VDOT | VP21e | Widen | N/A | Dulles Greenway | VA7/15 Bypass | Goose Creek Bridge | 1 | 1 | 4 | 6 | No | 2006 | No |
| VDOT | VP21b | Construct | N/A | Dulles Greenway Interchanges | @ VA 653 & @ Battlefield Parkway | | 1 | 1 | - | - | No | 2005 | No |
| ***VDOT Primary*** | | | | | | | | | | | | | |
| VDOT | VP26 | Study | N/A | Techway | Dulles Toll Road | MD State Line | - | - | - | - | No | not coded | Yes |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility | | Lanes | | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | from | to | from | to | | | |
| VDOT | VP1a | Widen | Pending | US 1 | Stafford County Line | VA 235 South | 2 | 2 | 4 | 6 | No | 2015 | No |
| VDOT | VP1u | Widen | Pending | US 1 | VA 235 South | VA 235 North | 2 | 2 | 4 | 6 | No | 2015 | No |
| VDOT | VP1t | Widen | Pending | US 1 (bus/right-turn lanes) | VA 235 North | SCL Alexandria (I-95 Capital Beltway) | 2 | 2 | 6 | 8 | No | 2025 | No |
| VDOT | nrs | Reconstruc | Pending | US 1 | @ VA 619 (Joplin Road) | USMC HERITAGE CENTER ACCESS | - | - | - | - | No | 2008 | Yes |
| VDOT | VP1f | Widen | Approved | US 1 (3la. NB - 4 la. SB) | Lorton Rd. | Telegraph Rd. | 2 | 2 | 4 | 7 | Yes | 2005 | no |
| VDOT | VP1fb | Widen | Approved | US 1 (as part of VP1f) | Armistead Rd. | Lorton Rd. | 2 | 2 | 4 | 6 | yes | 2005 | No |
| VDOT | VP1o | Widen | Approved | US 1 (Neabsco Creek Bridge) | VA 610 (Neabsco Road) | VA 638 (Neabsco Mills Road) | 2 | 2 | 4 | 6 | No | 2009 | yes |
| VDOT | VP1p | Widen | Pending | US 1 (part of 1/123 interchange) | Occoquan Rd. | Annapolis Way | 2 | 2 | 4 | 6 | No | 2008 | No |
| VDOT | nrs | Reconstruc | Pending | US 1 Interchange | @ Russell Road | | 1 | 1 | - | - | No | 2010 | No |
| VDOT | | Study | Pending | US 1 Location Study | Stafford County Line | SCL Alexandria (I-95 Capital Beltway) | 2 | 2 | 4/6 | 6/8 | No | not coded | No |
| VDOT | VP2s | Widen / Up | Pending | VA 7 | Route 9 | Market Street (Leesburg) | 2 | 1 | 4 | 6 | No | 2015 | Yes |
| VDOT | VP2j | Widen | Pending | VA 7 Bypass | VA 7 West | VA 7/US 15 East | 5 | 1 | 4 | 6 | No | 2015 | No |
| VDOT | VP2g | Upgrade | Pending | VA 7 (new interchanges) | VA 7/15 (Leesburg Bypass) | VA 28 | 2 | 1 | 6 | 6 | No | 2015 | No |
| VDOT | VP2ma | Widen | Pending | VA 7 | Rolling Holly Drive | Reston Parkway | 2 | 2 | 4 | 6 | No | 2009 | Yes |
| VDOT | VP2m | Widen | Pending | VA 7 | Reston Parkway | Dulles Toll Rd. | 2 | 2 | 4 | 6 | No | 2012 | Yes |
| VDOT | VP2l | Widen | Pending | VA 7 | Dulles Toll Rd. | I-495 | 2 | 2 | 6 | 8 | No | 2013 | No |
| VDOT | VP2b | Widen | Pending | VA 7 | Seven Corners | Bailey's Crossroads | 2 | 2 | 4 | 6 | No | 2020 | No |
| VDOT | nrs | Reconstruc | Pending | VA 7 | @ VA 606 (Baron Cameron Ave.) | | - | - | - | - | No | 2005 | Yes |
| VDOT | VP2t | Construct | Pending | VA 7 interchange | @ Claiborne Pkwy./West Spine Rd. | | - | 1 | - | - | No | 2006 | No |
| VDOT | nrs | Reconstruc | Pending | VA 7 | @ VA 711 (Williams Gap Road) | | 2 | 2 | 4 | 4 | No | 2006 | Yes |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDOT | VP3b | Study | Pending | VA 9 | West Virginia State Line | VA 7 | 2 | 2 | 2 | 4 | No | not coded | No |
| VDOT | nrs | Reconstruc | Pending | VA 9 | @ VA 662 (Clarks Gap Road) | | 3 | 3 | - | - | No | 2006 | Yes |
| VDOT | VP4e | Widen | Pending | US 15 (James Madison Highway) | US 29 | I-66 | 2 | 2 | 2 | 4 | No | 2020 | No |
| VDOT | VP4fa | Widen | N/A | US 15 (James Madison Highway) | I-66 | VA 234 | 2 | 2 | 2 | 4 | No | 2008 | Yes |
| VDOT | VP4fb | Widen | N/A | US 15 (James Madison Highway) | VA 234 | Loudoun County Line | 2 | 2 | 2 | 4 | No | 2020 | No |
| VDOT | nrs | Reconstruc | N/A | US 15 (James Monroe Highway) | Whites Ferry Rd. | Lucketts Road | 3 | 3 | 2 | 2 | No | 2007 | Yes |
| VDOT | nrs | Reconstruc | N/A | US 15 (James Monroe Highway) | Lucketts Road | Maryland State Line | 3 | 3 | 2 | 2 | No | 2008 | No |
| VDOT | nrs | Reconstruc | N/A | US 15 (James Monroe Highway) | Village of Lucketts | Vicinity of VA 662 | 3 | 3 | 2 | 2 | No | 2006 | No |
| VDOT | nrs | Reconstruc | Pending | VA 27 Interchange | @ VA 244 (Columbia Pike) | | - | - | - | - | No | 2011 | No |
| VDOT | VP6h | Widen | Pending | VA 28 | Fauquier County Line | VA 215 (Vint Hill Road) | 3 | 3 | 2 | 4 | No | 2020 | No |
| VDOT | VP6ka | Widen | Pending | VA 28 | VA 215 (Vint Hill Road) | Residency Road | 3 | 3 | 2 | 4 | No | 2010 | No |
| VDOT | VP6k | Widen | Pending | VA 28 | VA 215 (Vint Hill Road) | VA 234 Bypass | 3 | 2 | 4 | 6 | No | 2015 | No |
| VDOT | nrs | Recons/Wi | Pending | VA 28 | Bridge over Broad Run | Replace / Widen to ultimate width | 3 | 3 | 2 | 6 | No | 2007 | Yes |
| VDOT | VP6b | Widen | Pending | VA 28 (Centreville Road) | N. City Limits of Manassas Park | Old Centreville Rd. | 2 | 2 | 4 | 6 | No | 2025 | No |
| VDOT | VP6e | Widen/Upg | N/A | VA 28 PPTA (Phase II) | I-66 | VA 7 | 2 | 1 | 6 | 8 | No | 2015 | No |
| VDOT | VP6ea | Widen/Upg | N/A | VA 28 | Dulles Toll Rd. | VA 606 (Old Ox Rd.) | 2 | 1 | 6 | 6 | No | 2008 | No |
| VDOT | VP6eb | Construct | | VA 28 Interchange | @ VA 209 (Innovation Ave.) | | - | - | - | - | No | 2008 | No |
| VDOT | | Reconst. | | VA 28 Interchange | @ New Braddock Rd. | | - | - | - | - | No | 2007 | Yes |
| VDOT | VP6u | Upgrade | N/A | VA 28 PPTA (Phase I) | US 50 Interchange | Barnsfield (SASM) Interchange | 2 | 1 | 6 | 6 | Yes | 2006 | No |
| VDOT | VP6v | Construct/U | N/A | VA 28 PPTA (Phase I) Interchange | @ VA 668 (McLearen Road) | SASM Interchange to VA 668 upgrade | 2 | 1 | 6 | 6 | No | 2006 | No |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDOT | VP6w | Construct/U | N/A | VA 28 PPTA (Phase I) Interchange | @ Sterling Boulevard | VA 606 to VA 625 upgrade | 2 | 1 | 6 | 6 | Yes | 2006 | No |
| VDOT | VP6x | Construct | N/A | VA 28 PPTA (Phase I) Interchange | @ VA 625 (Church & Waxpool Rds.) | | 2 | 2 | 6 | 6 | Yes | 2005 | No |
| VDOT | VP6y | Construct | N/A | VA 28 PPTA (Phase I) Interchange | @ Westfields Boulevard | | - | - | - | - | No | 2005 | No |
| VDOT | VP6z | Construct | N/A | VA 28 PPTA (Phase I) Interchange | @ VA 606 (Old Ox Rd.) | | - | - | - | - | complete | 2004 | No |
| VDOT | VP7ae | Construct | Pending | US 29 Interchange | @ VA 55/VA 619 | | - | - | - | - | No | 2014 | No |
| VDOT | VP7r | Widen | Pending | US 29 | Virginia Oaks Drive | I-66 | 2 | 5 | 4 | 6 | No | 2014 | No |
| VDOT | VP7s | Widen | Pending | US 29 (add NB lane) | I-66 | Entrance to Conway Robinson MSF | 3 | 2 | 4 | 5 | No | 2014 | No |
| VDOT | VP7ad | Construct | Pending | US 29 | VA 898 (Old Centreville Road) | WCL of Fairfax | 2 | 2 | 4 | 6 | No | 2011 | No |
| VDOT | VP7aa | Widen | Pending | US 29 | ECL City of Fairfax (vic. Nutley St.) | Espana Court | 2 | 2 | 4 | 6 | No | 2020 | No |
| VDOT | VP7ab | Widen | Pending | US 29 | Espana Court | I-495 | 2 | 2 | 4 | 6 | No | 2015 | No |
| VDOT | VP7n | Study | Pending | US 29 | Pleasant Valley Drive | VA 28 | 2 | 2 | 4 | 6 | No | not coded | No |
| VDOT | VP7g | Study | Pending | US 29 | Fauquier County Line | I-66 (Gainesville) | 2 | 2 | 4 | 6 | No | not coded | No |
| VDOT | VSP57a | Construct | Pending | Route 29 (Parallel) | US 29 (Lee Highway) (near US 15) | Sommerset Crossing Drive | 0 | 4 | 0 | 4 | No | 2025 | No |
| VDOT | nrs | Construct | Pending | US 50 Traffic Circle | @ US 15 (Gilbert's Corner) | | - | - | - | - | No | 2010 | Yes |
| VDOT | VP8q | Widen | Pending | US 50 | VA 659 Relocated | VA 742 (Poland Rd.) | 2 | 2 | 4/5 | 6 | No | 2010 | No |
| VDOT | VP8c | Widen | Pending | US 50 | VA 742 (Poland Rd.) | VA 661 (Lee Rd.) | 2 | 2 | 4/5 | 6 | No | 2012 | Yes |
| VDOT | nrs | Reconstruc | Pending | US 50 | Waples Mill Rd (intersection Improvements) | 2nd EB to NB left turn lane | 0 | 0 | 0 | 0 | No | 2005 | No |
| VDOT | VP8n | Widen | Pending | US 50 (WBL) | I-66 | Waples Mill Road | 2 | 2 | 2 | 3 | No | 2020 | No |
| VDOT | VP8g | Widen | Pending | US 50 | I-66 | WCL Fairfax City | 2 | 2 | 6 | 8 | No | 2020 | No |
| VDOT | VP8h | Widen | Pending | US 50 | ECL City of Fairfax | Arlington County Line | 2 | 2 | 4 | 6 | No | 2020 | No |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDOT | AR2e | Reconstruc | Pending | US 50 (Arlington Blvd.) | ARC/FFX Line | Washington Blvd. | 2 | 2 | 6 | 6 | No | 2015 | No |
| VDOT | AR2f | Reconstruc | Pending | US 50 (Arlington Blvd.) | Pershing Dr. | Ft. Myer Dr. | 2 | 2 | 6 | 6 | No | 2015 | No |
| VDOT | nrs | Reconstruc | Pending | US 50 Interchange | @Jaguar Trail | | 2 | 2 | - | - | No | 2007 | Yes |
| VDOT | nrs | Reconstruc | Pending | US 50 Interchange | @ VA 120 (Glebe Road) | | - | - | - | - | No | 2010 | No |
| VDOT | nrs | Reconstruc | Pending | US 50 Interchange | @ VA 27 (Washington Blvd.) | | - | - | - | - | No | 2010 | No |
| VDOT | VP8o | Reconstruc | Pending | US 50 Interchange | @ Courthouse Road / 10th Street | | - | - | - | - | No | 2008 | Yes |
| VDOT | nrs | Reconstruc | Pending | US 50 Interchange | @ VA 110 (N. Scott St.) | | 1 | 1 | - | - | No | 2020 | No |
| VDOT | VP23a | Widen | Pending | VA 55 (John Marshall Highway) | Gainesville UM Church | US 29 @ VA 619 | 3 | 3 | 2 | 4 | No | 2014 | No |
| VDOT | nrs | Reconstruc | Approved | VA 120 (Glebe Road) | @ VA 244 (Columbia Pike) | | - | - | - | - | No | 2004 | Yes |
| VDOT | nrs | Reconstruc | Approved | VA 120 (Glebe Road) | @ Arlington Ridge Rd. | left turn lanes | - | - | - | - | No | 2005 | Yes |
| VDOT | nrs | Reconstruc | Pending | VA 120 (Glebe Road) | Military Rd. | DC line | 2 | 2 | 2 | 2 | No | 2020 | No |
| VDOT | nrs | Reconstruc | N/A | VA 120 (Glebe Road) | Quebec St. | 2nd St. | 2 | 2 | - | - | No | 2006 | Yes |
| VDOT | nrs | Reconstruc | Pending | VA 120 (Glebe Road) | W. Glebe Rd. | 24th Rd. | 2 | 2 | 4 | 4 | No | 2010 | No |
| VDOT | VP10j | Widen | Pending | VA 123 | VA 7 | I-495 | 2 | 2 | 6 | 8 | No | 2013 | No |
| VDOT | VP10ob | Widen | Pending | VA 123 (Dolley Madison Blvd.) | DTR Ramps | VA 694 (Great Falls St.) | 2 | 2 | 4 | 6 | No | 2010 | No |
| VDOT | nrs | Construct | Approved | VA 123 Interchange | @ US 1 | | - | - | - | - | No | 2008 | Yes |
| VDOT | VP10g | Widen | Pending | VA 123 | Route 1 | Horner Road | 2 | 2 | 4 | 6 | No | 2008 | No |
| VDOT | VP10s | Widen | Approved | VA 123 | Horner Road | Devil's Reach Road | 2 | 2 | 4 | 6 | No | 2015 | No |
| VDOT | VP10eb | Widen | Approved | VA 123 (Ox Road) | Hooes Rd. | Lee Chapel Rd. | 2 | 2 | 2 | 4 | complete | 2004 | No |
| VDOT | VP10q | Widen | Approved | VA 123 (Ox Road) | Lee Chapel Rd. | Burke Lake Rd. | 2 | 2 | 2 | 4 | complete | 2004 | No |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDOT | VP10ea | Widen | Pending | VA 123 (Ox Road) | VA 722 North | Hooes Rd. | 2 | 2 | 2 | 6 | Yes | 2006 | Yes |
| VDOT | VP10h | Widen | Approved | VA 123 (Ox Road) | Hooes Rd. | Fairfax Co. Parkway | 2 | 2 | 4 | 6 | No | 2015 | No |
| VDOT | VP10f | Widen | Pending | VA 123 (Ox Road) | Fairfax Co. Parkway | Burke Center Parkway | 2 | 2 | 4 | 6 | No | 2015 | No |
| VDOT | VP10r | Widen | Pending | VA 123 | Burke Center Parkway | Braddock Road | 2 | 2 | 4 | 6 | No | 2020 | No |
| VDOT | nrs | Reconstruc | Pending | VA 123 | @ VA 620 (Braddock Road) | | 2 | 2 | - | - | No | 2005 | Yes |
| VDOT | VP10l | Widen | Pending | VA 123 (Occoquan River Bridge) | South Approach | VA 722 North | 2 | 2 | 2 | 6 | yes | 2006 | Yes |
| VDOT | nrs | Reconstruc | Pending | VA 193 | @ Riverbend Road & | @ Nethercliff Hall Road | 3 | 3 | 2 | 2 | No | 2007 | Yes |
| VDOT | VP24a | Relocate/ Widen | Approved | VA 215 | 0.5 mi. west of VA 28 intersection | VA 28 | 3 | 3 | 2 | 4 | No | 2011 | No |
| VDOT | nrs | Construct | Pending | VA 234 Interchange | @ US 1 | | - | 1 | - | - | No | 2011 | No |
| VDOT | VP12d | Widen/Upg | Pending | VA 234 (Dumfries Road) | I-95 | US 1 | 2 | 5 | 2 | 6 | No | 2011 | No |
| VDOT | VP12b | Widen | Approved | VA 234 (Dumfries Road) | Country Club Dr. | Eclipse Dr. | 2 | 2 | 2 | 4 | Yes | 2007 | Yes |
| VDOT | VP12a | Widen | Pending | VA 234 (Dumfries Road) | Eclipse Dr. | Snowfall Dr. | 2 | 2 | 2 | 4 | Yes | 2006 | Yes |
| VDOT | VP12ea | Widen | Approved | VA 234 (Dumfries Road) | Snowfall Dr. | Purcell Rd. | 2 | 2 | 2 | 4 | complete | 2003 | No |
| VDOT | VP12l | Widen | Approved | VA 234 (Dumfries Road) | VA 234 Bypass (at Limstrong, VA 649) | SCL of Manassas | | 2 | 2 | 4 | No | 2010 | No |
| VDOT | VP12k | Widen/upg | Approved | VA 234 (Manassas Bypass) | VA 234 S. of Manassas | I-66 | 5 | 1 | 4 | 6 | No | 2020 | No |
| VDOT | VP12o | Construct | Pending | VA 234 (Manassas Bypass) | I-66 | Loudoun County Line | - | 2 | - | 4 | No | 2012 | No |
| VDOT | VP13a | Widen | Pending | VA 236 | Pickett Road | I-395 | 2 | 2 | 4 | 6 | No | 2020 | No |
| VDOT | nrs | Reconstruc | Pending | VA 236 (intersection/spot improvements) | Pickett Road | Lake Drive | 2 | 2 | 4 | 4 | No | 2008 | Yes |
| VDOT | nrs | Reconstruc | Pending | VA 236 EB | @ VA 620 (Braddock Road) | | - | - | - | - | No | 2006 | Yes |
| VDOT | nrs | Reconstruc | Pending | VA 236 WB | @ VA 620 (Braddock Road) | | - | - | - | - | No | 2006 | Yes |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDOT | VP26a | Construct | Pending | VA 411 (Tri-County Parkway) (nee VA 28 Bypass) | VA 234 (Sudley Road) @ Godwin Drive | I-66 | 0 | 5 | 0 | 6 | No | 2015 | No |
| VDOT | VP26b | Construct | Pending | VA 411 (Tri-County Parkway) (nee VA 28 Bypass) | I-66 | VA 620 (Braddock Road) @ VA 613 | 0 | 2 | 0 | 4 | No | 2020 | No |
| VDOT | VP26c | Study | Pending | VA 411 (Tri-County Parkway) (nee VA 28 Bypass) | VA 234 (Sudley Road) @ Godwin Drive | VA 620 | 0 | 5/2 | 0 | 6/4 | Yes | not coded | No |
| ***VDOT Urban*** | | | | | | | | | | | | | |
| VDOT | VU28b | Construct | Developer | Battlefield Parkway | US 15 south of Leesburg | Dulles Greenway | 0 | 2 | 0 | 4 | No | 2005 | No |
| VDOT | VU28c | Construct | Developer | Battlefield Parkway | Dulles Greenway | Sycolin Road | 0 | 2 | 0 | 4 | No | 2006 | No |
| VDOT | VU28d | Widen/upg | Pending | Battlefield Parkway / Lawson Rd. | Sycolin Road | Kincaid Boulevard | 4 | 2 | 2 | 4 | No | 2010 | Yes |
| VDOT | VU28da | Construct | Pending | Battlefield Parkway | Kincaid Boulevard | Route 7 | 0 | 2 | 0 | 4 | No | 2010 | Yes |
| VDOT | VU28e | Construct | Developer | Battlefield Parkway | Route 7 | Fort Evans Road | 0 | 2 | 0 | 4 | No | 2005 | No |
| VDOT | VU28f | Construct | Pending | Battlefield Parkway | Fort Evans Road | Edwards Ferry Road | 0 | 2 | 0 | 4 | No | 2010 | No |
| VDOT | VU28g | Construct | N/A | Battlefield Parkway | Edwards Ferry Road | Cattail Branch | 0 | 2 | 0 | 4 | complete | 2003 | No |
| VDOT | VU28a | Study | Pending | Battlefield Parkway | US 15 south of Leesburg | US 15 Bypass North | 0 | 2 | 0 | 4/6 | not coded | 2010 | No |
| VDOT | VU13a | Widen | Approved | Catoctin Circle | South Street | King Street | 4 | 4 | 2 | 4 | complete | 2002 | No |
| VDOT | VU2b | Construct | Approved | Clermont Ave. | Eisenhower Ave. | Duke St. | - | 3 | - | 4 | no | 2014 | Yes |
| VDOT | VU56 | Construct | N/A | Digital Drive/West Carondelet Drive | Manassas Drive | Blackhawk Court | - | 3 | - | 2 | complete | 2003 | Yes |
| VDOT | nrs | Reconstruct | | Duke St. | Fairfax County Line | Washington St. | 2 | 2 | 4/6 | 4/6 | | 2005 | No |
| VDOT | VU30f | Widen | Pending | East Elden Street | Herndon Parkway East | Fairfax County Parkway | 3 | 3 | 4 | 6 | No | 2012 | No |
| VDOT | VU52 | Widen | Pending | Eisenhower Ave. | Stovall St. | Holland Lane | 3 | 3 | 4 | 6 | No | 2013 | No |
| VDOT | VSP26 | Widen | Approved | Fairview Ave. | Nagle Street | Liberia Avenue | 3 | 3 | 2 | 4 | complete | 2003 | No |
| VDOT | nrs | Construct | Pending | George Mason Blvd. | Univer. Dr @ Armstrong St. | Univ. Dr. @ Parking Entr. | 0 | 4 | 0 | 2 | No | 2009 | Yes |
| VDOT | VU35b | Construct | N/A | Mill Road Extension | Telegraph Rd. | DMV complex | - | 3 | - | 2 | No | 2010 | Yes |

Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDOT | VU51a | Study | Pending | Potomac Yard Spine Road | US Route 1 | G.W. Parkway | 0 | 0 | 0 | 4 | No | not coded | No |
| VDOT | VU26b | Widen | Approved | Richmond Ave. | Dumfries Road | Ellicott Lane | 3 | 3 | 2 | 4 | yes | 2005 | No |
| VDOT | VU30a | Widen | Pending | South Elden Street/Centreville Road | Worldgate Drive | Herndon Parkway | 2 | 2 | 4 | 6 | No | 2006 | Yes |
| VDOT | VU10b | Widen | Pending | Spring Street | Herndon Parkway East | Fairfax County Parkway | 3 | 3 | 4 | 6 | No | 2011 | No |
| VDOT | VU33 | Widen | Pending | Sycolin Road | VA 7/US 15 Bypass | SCL of Leesburg | 3 | 3 | 2 | 4 | No | 2007 | No |
| VDOT | VU32 | Widen | Pending | US 15 (South King Street) | Evergreen Mill Road | SCL of Leesburg | 3 | 2 | 2 | 4 | No | 2007 | Yes |
| VDOT | nrs | Construct | Approved | VA 28 Overpass & Interchg. | Overpass Norfolk-Southern RR B line | Interchange w/Wellington Rd. | 2 | 2 | 4 | 4 | No | 2008 | Yes |
| VDOT | VU40 | Widen | Pending | US 29 (Lee Highway) | WCL of City of Fairfax | Chain Bridge Road | 2 | 2 | 4 | 6 | No | 2012 | Yes |
| VDOT | VU6b | Widen | Approved | US 29 (Lee Highway) | Chain Bridge Road | Eaton Place | 2 | 2 | 4 | 6 | No | 2010 | Yes |
| VDOT | VU29 | Construct | Approved | VA 123 (Chain Bridge Road) | US 50 | I-66 | 2 | 2 | 5 | 6 | No | 2010 | Yes |
| VDOT | VU45 | Widen | Approved | VA 234 (Dumfries Road) | South Corporate Limits | Hastings Drive | 3 | 3 | 2 | 4 | No | 2010 | No |
| VDOT | nrs | Widen | N/A | VA 234 (Sudley Road) 3rd NB lane | Dorsey Circle | Godwin Dr. | 2 | 2 | 4 | 5 | No | 2006 | No |
| VDOT | VU31 | Widen | Approved | VA 7 (East Market Street) | Loudoun Street | Sycolin Road | 3 | 3 | 2 | 4 | complete | 2003 | No |
| VDOT | VU48b | Widen | Pending | Wellington Road | Godwin Drive | VA 28 (Nokesville Road) | 3 | 3 | 2 | 4 | No | 2008 | Yes |
| VDOT | AR17a | Widen | Pending | VA 237 (Washington Blvd.) | Wilson | Kirkwood | 3 | 3 | 3 | 4 | No | 2015 | No |
| ***Arlington Secondary*** | | | | | | | | | | | | | |
| VDOT | nrs | Construct | N/A | Glebe Rd. Extended | US 1 | Potomac Avenue | - | 3 | - | 4 | No | 2004 | No |
| VDOT | nrs | Construct | N/A | Potomac Avenue | Four Mile Run | Crystal Drive | - | 3 | - | 4 | No | 2005 | No |
| VDOT | AR26 | Widen | Pending | N. Pershing Dr. | George Mason Dr. | VA 120 | 3 | 3 | 2 | 4 | No | 2010 | No |
| VDOT | AR28b | Widen | N/A | N. Quincy St. | Wilson Blvd. | VA 237 | 3 | 3 | 2 | 4 | No | 2007 | No |
| VDOT | AR5a | Reconstruc | Pending | VA 244 (Columbia Pike) | Oakland St. | Washington Blvd. | 2 | 2 | 4 | 4 | No | 2010 | No |

Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDOT | AR19c | Reconstruc | Pending | Wilson Blvd. | N. Quincy | Washington Blvd. | 2 | 2 | 4 | 4 | No | 2010 | No |
| VDOT | AR19a | Reconstruc | Pending | Wilson Blvd. | N. Frederick | George Mason Dr. | 2 | 2 | 4 | 4 | No | 2004 | Yes |
| ***Fairfax Secondary*** | | | | | | | | | | | | | |
| VDOT | FFX2a | Construct | Pending | VA 602 (Reston Pkwy.) | VA 5320 (Sunrise Valley Dr.) | VA 606 (Baron Cameron Avenue) | 3 | 3 | 4 | 6 | No | 2015 | No |
| VDOT | FFX3c | Study | Pending | VA 608 (Frying Pan Rd.) | VA 28 | VA 657 (Centreville Rd.) | 3 | 3 | 2/4 | 6 | No | not coded | No |
| VDOT | VSF2c | Widen | Pending | VA 608 (West Ox Road) | VA 6985 (Ox Trail) | VA 602 (Lawyers Road) | 3 | 3 | 2 | 4 | yes | 2005 | No |
| VDOT | VSF2a | Widen | Pending | VA 608 (West Ox Road) | VA 6558 (Penderbrook Drive) | VA 6985 (Ox Trail) | 3 | 3 | 2 | 4 | No | 2008 | Yes |
| VDOT | FFX4 | Study | Pending | VA 609 (Pleasant Valley Road) | US 29 | US 50 | 3 | 3 | 2/4 | 4 | No | not coded | No |
| VDOT | VSF4f | Study | Pending | VA 611 (Furnace Road) | VA 123 (Ox Road) | VA 642 (Lorton Road) | 3 | 3 | 2 | 4 | No | not coded | No |
| VDOT | VSF4c | Widen | Pending | VA 611 (Telegraph Road) | VA 613 (Beulah St.) | VA 635 (Hayfield Road) | 3 | 3 | 2 | 4 | No | 2015 | Yes |
| VDOT | VSF4i | Widen | Pending | VA 611 (Telegraph Road) | VA 635 (Hayfield Road) | VA 633 (S. Kings Hwy.) | 3 | 3 | 2 | 4 | No | 2015 | Yes |
| VDOT | VSF4h | Widen | Pending | VA 611 (Telegraph Road) | VA 633 (S. Kings Hwy.) | VA 644 (Franconia Road) | 3 | 3 | 2 | 4 | No | 2015 | No |
| VDOT | VSF5a | Widen | Approved | VA 613 (Beulah Street) | VA 644 (Franconia Road) | VA 7900 (Franconia-Springfield Pkwy) | 3 | 3 | 2 | 4 | Complete | 2004 | No |
| VDOT | FFX5d | Construct | Pending | VA 613 (S. Van Dorn St.) | Kingstowne Blvd. | VA 611 | 0 | 3 | 0 | 4 | yes | 2004 | No |
| VDOT | FFX5c | Study | Approved | VA 613 (S. Van Dorn St.) | VA 644 | Kingstowne Village Pkwy. | 3 | 3 | 4 | 6 | No | not coded | No |
| VDOT | VSF15b | Construct | Pending | VA 613 (Van Dorn Street) | @ VA 644 (Franconia Road) | interchange | 0 | 0 | 0 | 0 | No | 2013 | Yes |
| VDOT | VSF7 | Widen | Pending | VA 618 (Woodlawn Road) | US 1 (Richmond Highway) | VA 613 (Beulah Road) | 3 | 3 | 2 | 4 | No | 2015 | No |
| VDOT | VSF8g | Widen | Pending | VA 620 (Braddock Rd) | VA 7100 (Fairfax Co. Pkwy.) | VA 123 (Ox Road) | 3 | 3 | 4 | 6 | No | 2015 | No |
| VDOT | VSF8l | Study | Pending | VA 620 (Braddock Road) | VA 609 (Pleasant Valley Road) | Flat Lick Branch | 4 | 3 | 2 | 2 | No | not coded | No |
| VDOT | VSF8d | Study | Pending | VA 620 (Braddock Road) | VA 645 (Burke Lake Road) | VA 651 (Guinea Road) | 3 | 3 | 4 | 6 | No | not coded | No |
| VDOT | VSF8c | Study | Pending | VA 620 (Braddock Road) (HOV) | I-495 | VA 645 (Burke Lake Road) | 0 | 0 | 0 | 2 | No | not coded | No |

Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDOT | VSF8j | Construct/V | Pending | VA 620 (New Braddock Rd.) | VA 28 | US 29 @ VA 662 (Stone Rd.) | 0/4 | 3 | 0/2 | 4 | No | 2015 | No |
| VDOT | VSF10c | Widen | Pending | VA 638 (Pohick Road) | US 1 | I-95 | 3 | 3 | 2 | 4 | No | 2015 | No |
| VDOT | VSF10e | Widen | Pending | VA 638 (Rolling Road) | VA 5297 (Delong Dr.) | VA 6922 (Odell Street) / Fairfax County Parkway | 3 | 3 | 2 | 4 | No | 2010 | No |
| VDOT | VSF10a | Widen | Approved | VA 638 (Rolling Road) | VA 7100 (Fairfax County Parkway) | VA 644 (Old Keene Mill Road) | 3 | 3 | 2 | 4 | No | 2012 | Yes |
| VDOT | VSF10g | Construct | Pending | VA 638 (Rolling Road) | connection to VA 4600 (Fullerton Road) | | 0 | 3 | 0 | 2 | Complete | 2003 | Yes |
| VDOT | FFX8 | Study | Pending | VA 640 (Sydenstricker Rd.) | VA 644 (Old Keene Mill Rd) | VA 7100 (Fairfax County Parkway) | 3 | 3 | 2 | 4 | No | not coded | No |
| VDOT | VSF13e | Widen | Pending | VA 642 (Lorton Road) | VA 600 (Silverbrook Road) | US 1 (Richmond Highway) | 3 | 3 | 2 | 6 | yes | 2006 | Yes |
| VDOT | VSF13d | Widen | Pending | VA 642 (Lorton Road) | VA 611 (Furnace Road) | VA 600 (Silverbrook Road) | 3 | 3 | 2 | 4 | No | 2015 | No |
| VDOT | FFX9a | Study | Pending | VA 643 (Lee Chapel Rd.) | VA 123 (Ox Road) | VA 7100 (Fairfax County Parkway) | 3 | 3 | 2 | 4 | No | not coded | No |
| VDOT | VSF14b | Widen | Approved | VA 643 (Lee Chapel Road) | VA 7100 (Fairfax County Parkway) | VA 644 (Old Keene Mill Road) | 3 | 3 | 2 | 4 | Complete | 2002 | No |
| VDOT | VSF15 | Widen | Pending | VA 644 (Franconia Road) | VA 3290 (Craft Road) | VA 611 (Telegraph Road) | 3 | 3 | 2 | 4 | No | 2015 | No |
| VDOT | FFX10 | Study | Pending | VA 644 (Old Keene Mill) | VA 643 | VA 7100 (Fairfax County Parkway) | 3 | 3 | 2 | 4 | No | not coded | No |
| VDOT | VSF16a | Widen | Approved | VA 645 (Burke Lake Road) | VA 643 (Lee Chapel Road) | VA 7100 (Fairfax County Parkway) | 3 | 3 | 2 | 4 | yes | 2005 | Yes |
| VDOT | VSF36 | Construct | N/A | VA 645 (Clifton Road) | VA 620 (Braddock Road) | US 29 (Lee Highway) | 3 | 3 | 2 | 4 | No | 2005 | No |
| VDOT | FFX11a | Widen | Pending | VA 645 (Stringfellow Rd.) | US 50 | VA 7100 (Fairfax County Parkway) | 3 | 3 | 2 | 4 | No | 2010 | No |
| VDOT | VSF16g | Widen | Pending | VA 645 (Stringfellow Road) | VA 7735 (Fair Lakes Blvd.) | US 50 | 3 | 3 | 2 | 4 | No | 2012 | Yes |
| VDOT | VSF37 | Widen | Pending | VA 650 (Gallows Road) | Gatehouse Road | Prescott Drive | 3 | 3 | 4 | 6 | No | 2012 | No |
| VDOT | VSF33d | Widen | Pending | VA 651 (Guinea Road) | VA 620 (Braddock Road) | VA 2430 (Braeburn Road) | 3 | 3 | 2 | 4 | No | 2015 | No |
| VDOT | VSF33a | Widen | Pending | VA 651 (Guinea Road) | VA 6197 (Roberts Parkway) | VA 4807 (Pommeroy Drive) | 3 | 3 | 2 | 4 | No | 2015 | No |
| VDOT | FFX12a | Construct | Pending | VA 651 (New Guinea Rd.) | VA 123 (Ox Road) | Roberts Rd. | 0 | 3 | 0 | 4 | No | 2015 | No |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDOT | VSF17b | Construct | Pending | VA 655 (Shirley Gate Road) | VA 7100 (Fairfax County Parkway) | VA 620 (Braddock Road) | 0 | 3 | 0 | 4 | No | 2015 | No |
| VDOT | VSF18c | Widen | N/A | VA 657 (Centreville Road) | VA 8390 (Metrotech Dr.) | VA 668 (McLearen Road) | 3 | 3 | 4 | 6 | No | 2020 | No |
| VDOT | VSF18b | Widen | N/A | VA 657 (Centreville Road) | VA 8390 (Metrotech Dr.) | VA 668 (McLearen Road) | 3 | 3 | 2 | 4 | No | 2007 | No |
| VDOT | VSF18e | Study | Pending | VA 657 (Centreville Road) | VA 668 (McLearen Rd) | VA 608 (Frying Pan Rd) | 3 | 3 | 4 | 6 | No | not coded | No |
| VDOT | VSF18h | Widen | Pending | VA 657 (Centreville Road) | VA 608 (West Ox Rd) | VA 608 (Frying Pan Rd) | 3 | 3 | 2 | 4 | No | 2009 | Yes |
| VDOT | FFX14 | Study | Pending | VA 657 (Walney Rd.) | VA 662 (Poplar Tree) | Westfields. Blvd. | 3 | 3 | 2 | 4 | No | not coded | No |
| VDOT | FFX15a | Study | Pending | VA 662 (Poplar Tree Rd.) | VA 645 (Stringfellow Rd.) | Westfields. Blvd. | 3 | 3 | 2 | 4 | No | not coded | No |
| VDOT | VSF35b | Study | Pending | VA 662 (Stone Rd/Poplar Tree Rd) | VA 620 (Braddock Road) | VA 8460 (Stonecroft Blvd.) | 3 | 3 |  | 4 | No | not coded | No |
| VDOT | FFX16a | Study | Pending | VA 665 (Fox Mill Rd.) | VA 602 (Reston Pkwy) | VA 7100 (Fairfax County Parkway) | 3 | 3 | 2 | 4 | No | not coded | No |
| VDOT | FFX17a | Study | Pending | VA 666 (Monroe St.) | VA 608 (W. Ox Rd.) | VA 665 (Fox Mill) | 3 | 3 | 2 | 4 | No | not coded | No |
| VDOT | FFX17b | Widen | Pending | VA 666 (Monroe St.) | VA 665 (Fox Mill) | Herndon | 3 | 3 | 2 | 6 | No | 2010 | No |
| VDOT | FFX18 | Widen | Pending | VA 668 (McLearen Rd.) | VA 28 | VA 657 (Centreville Rd.) | 3 | 3 | 2/4 | 6 | No | 2020 | No |
| VDOT | VSf21c | Construct | Approved | VA 673 (McLearen Rd) | VA 608 | VA 602/Interchange at Fairfax Co. Parkway | 0 | 3 | 0 | 4 | No | 2015 | No |
| VDOT | VSF21b | Widen | Approved | VA 673 (McLearen Rd) | VA 657 (Centreville Road) | VA 608 | 3 | 3 | 2 | 4 | No | 2015 | No |
| VDOT | FFX20b | Widen | Pending | VA 674 (Hunter Mill Rd.) | VA 673 (Vale Rd.) | VA 123 (Chain Bridge Road) | 3 | 3 | 2 | 4 | No | 2012 | No |
| VDOT | VSF22e | Widen | N/A | VA 674 (Hunter Mill Road) | VA 267 (Dulles Toll Road) | Crowell Road | 3 | 3 | 2 | 4 | No | 2012 | No |
| VDOT | VSF36 | Relocate | N/A | VA 675 (Sunset Hills Rd.) | West of Edlin School | VA 675 (Crowell Road) | 3 | 3 | 4 | 4 | No | 2012 | No |
| VDOT | FFX21b | Study | Pending | VA 675 (Sunset Hills Rd.) | VA 828 (Wiehle Ave.) | VA 7100 (Fairfax County Parkway) | 3 | 3 | 4 | 6 | No | not coded | No |
| VDOT | VSF24 | Widen | N/A | VA 684 (Spring Hill Road) | VA 7 (Leesburg Pike) | VA 6034 (International Drive) | 3 | 3 | 2 | 4 | No | 2007 | Yes |
| VDOT | FFX22b | Construct | Pending | VA 828 (Wiehle Ave.) | VA 7100 (Fairfax County Parkway) | VA 228 (Dranesville Road) | 0 | 3 | 0 | 4 | Complete | 2002 | No |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDOT | FFX22c | Study | Pending | VA 828 (Wiehle Ave.) | VA 228 (Dranesville Road) | Loudoun Co. Line | 0 | 3 | 0 | 4 | No | not coded | No |
| VDOT | VSF25aa | Convert | Pending | VA 7100 (Fairfax Co Pkwy HOV) | VA 267 (Dulles Toll Road) | Sunrise Valley Dr. | 2 | 2 | 6 | 4+2 | No | 2015 | No |
| VDOT | VSF25ea | Widen | Pending | VA 7100 (Fairfax Co Pkwy HOV) | Sunrise Valley | Rugby Rd. | 2 | 2 | 4 | 4+2 | No | 2015 | No |
| VDOT | VSF25e | Widen | Pending | VA 7100 (Fairfax Co Pkwy HOV) | Rugby Rd. | US 50 | 2 | 2 | 4 | 4+2 | No | 2010 | No |
| VDOT | VSF25y | Upgrade/W | Pending | VA 7100 (Fairfax Co Pkwy HOV) | US 50 | VA 7735 (Fair Lakes Pkwy) | 2 | 5 | 4 | 4+2 | No | 2010 | No |
| VDOT | VSF25z | Upgrade/W | Pending | VA 7100 (Fairfax Co Pkwy HOV) | VA 7735 (Fair Lakes Pkwy) | I-66 | 2 | 5 | 6 | 6+2 | No | 2010 | No |
| VDOT | VSF25g | Widen | Approved | VA 7100 (Fairfax Co Pkwy) | I-66 | VA 123 (Ox Road) | 5 | 5 | 4 | 6 | No | 2015 | No |
| VDOT | VSF25j | Widen | Approved | VA 7100 (Fairfax County Parkway) | VA 636 (Hooes Road) | VA 640 (Sydenstricker Road) | 2 | 2 | 4 | 6 | No | 2015 | No |
| VDOT | VSF25l | Construct | Pending | VA 7100 (Fairfax Co Pkwy HOV) | VA 640 (Sydenstricker Road) | VA 7900 (Franconia-Springfield Parkway) | 0 | 2 | 0 | 2 | No | 2015 | No |
| VDOT | VSF25n | Construct | Approved | VA 7100 (Fairfax County Parkway) | VA 4600 (Fullerton Road) | VA 7900 (Franconia-Springfield Parkway) | 0 | 1 | 0 | 6 | No | 2007 | Yes |
| VDOT | | Construct | Pending | VA 7100 Interchange | @ VA 7735 (Fair Lakes Pkwy) & | Monument Drive | 2 | 5 | - | - | No | 2010 | Yes |
| VDOT | VSF39 | Widen | Pending | VA 7735 (Fair Lakes Pkwy) (3rd EB Lane) | VA 7100 | Fair Lakes Circle | 3 | 3 | 4 | 5 | No | 2010 | No |
| VDOT | VSF26 | Construct | Pending | VA 7900 HOV (Franconia-Springfield Parkway) | VA 7100 (Fairfax County Parkway) | VA 2677 (Frontier Drive) | 5 | 5 | - | 2 | No | 2010 | No |
| VDOT | VSF26a | Construct | Pending | VA 7900 HOV (Franconia-Springfield Parkway) | Interchange @ Neuman St. | | 1 | 1 | - | - | No | 2020 | No |
| VDOT | VSF26b | Upgrade | Pending | VA 7900 HOV (Franconia-Springfield Parkway) | VA 638 (Rolling Rd.) | VA 617 (Backlick Rd.) | 5 | 1 | 6+2 | 6+2 | No | 2020 | No |
| VDOT | FFX24c | Widen | Pending | VA 8460 (Stonecroft Blvd.) | VA 661 (Old Lee Rd.) | Willard Rd. | 3 | 3 | 4 | 6 | No | 2010 | No |
| FHWA/VDOT | | Convert to Centroid Connector | | Woodlawn Rd., Beulah St., Kingman Rd. | Woodlawn and Beulah from US 1 to Telegraph | Kingman from Beulah to Telegraph | 0 | 0 | 0 | 0 | Complete | 2005 | No |
| FHWA/VDOT | FED2 | Widen | Pending | Old Mill Rd. | US 1 | Pole Rd | 4 | 4 | 2 | 4 | No | 2009 | Yes |
| FHWA/VDOT | FED3 | Construct | Pending | Old Mill Rd. extended | Pole Rd. | Telegraph | 0 | 3 | 0 | 4 | No | 2009 | Yes |
| ***Loudoun Secondary*** | | | | | | | | | | | | | |
| VDOT | VSL51 | Construct | Pending | Atlantic Boulevard | VA 625 (Church Road) | VA 7 | - | 3 | - | 4 | No | 2008 | No |

Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDOT | VSL39 | Construct | N/A | Broadlands Boulevard (Ryan Bypass) | VA 659 | VA 625 | 0 | 3 | 0 | 4 | No | 2005 | No |
| VDOT | VSL1b | Widen/Upgrade | Pending | VA 606 (Ldn Co. Pkwy) (nee Old Ox Rd.) | VA 634 | VA 621 | 4 | 3 | 2 | 4 | No | 2015 | No |
| VDOT | | Widen | N/A | VA 606 (Dulles Greenway Interchange) | within Greenway R/W | | 1 | 1 | 2 | 6 | No | 2004 | No |
| VDOT | VSL10c | Construct | Pending | VA 607 (Loudoun County Pkwy) | VA 606 / VA 842 | VA 772 / VA 607 | - | 3 | - | 4 | No | 2010 | No |
| VDOT | | widen/ Constr. | N/A | VA 607 (Loudoun County Pkwy) (nee VA 28 Bypass) | VA 620 @ VA 613 | Edgewater St. | | 3 | | 4 | No | 2007 | No |
| VDOT | | Construct | N/A | VA 607 (Loudoun County Pkwy) (nee VA 28 Bypass) | Edgewater St. | US 50 | - | 3 | - | 4 | Complete | 2004 | No |
| VDOT | VSL10ba | Widen | Pending | VA 607 (Loudoun County Pkwy) | VA 625 (Waxpool Road) | W&OD Trail | 3 | 3 | 4 | 6 | No | 2010 | No |
| VDOT | VSL10bb | Widen/Upgrade | Pending | VA 607 (Loudoun County Pkwy) | W&OD Trail | Redskin Park Drive | 4 | 3 | 2 | 6 | No | 2010 | No |
| VDOT | VSL10bf | Widen/Upgrade | Pending | VA 607 (Loudoun County Pkwy) (dirt road) | Redskin Park Drive | Gloucester Parkway | 4 | 3 | 2 | 4 | No | 2005 | No |
| VDOT | VSL10bc | Widen | Pending | VA 607 (Loudoun County Pkwy) | Redskin Park Drive | Gloucester Parkway | 3 | 3 | 4 | 6 | No | 2015 | No |
| VDOT | VSL10bd | Widen/Upgrade | Pending | VA 607 (Loudoun County Pkwy) | Gloucester Parkway | VA 7 | 4 | 3 | 2 | 4 | No | 2005 | No |
| VDOT | VSL12 | Widen | Pending | VA 625 (Church Rd.) | VA 28 | VA 637 | 3 | 3 | 2 | 4 | Yes | 2006 | Yes |
| VDOT | VSL12b | Widen | Pending | VA 625 (Waxpool Rd.) | Loudoun County Parkway | Broad Run | 3 | 3 | 4 | 6 | Yes | 2005 | Yes |
| VDOT | VSL12c | Widen | Pending | VA 625 (Waxpool Rd.) | Broad Run | VA 28 | 3 | 3 | 4 | 6 | Yes | 2005 | No |
| VDOT | VSL42 | Widen/Upgrade | Approved | VA 634 (Lockridge/Moran Road) | VA 606 (Old Ox Road) | Randolph Drive | 4 | 3 | 2 | 4 | No | 2010 | No |
| VDOT | VSL45 | Widen/Upgrade | Pending | VA 643 (Sycolin Road) Phase II | Leesburg Town Limits | VA 659 (Belmont Ridge Road) | 4 | 3 | 2 | 4 | No | 2010 | No |
| VDOT | VSL4a | Widen/Upgrade | Pending | VA 659 (Belmont Ridge Rd.) | National Rec. & Park Ent. | Dulles Greenway | 4 | 3 | 2 | 4 | No | 2010 | No |
| VDOT | VSL4ab | Widen/Upgrade | Pending | VA 659 (Belmont Ridge Road)/VA 659 Relocated | Dulles Greenway | VA 7 | 4 | 3 | 2 | 4 | No | 2015 | Yes |
| VDOT | VSL4d | Widen/Upgrade | Pending | VA 659 (Belmont RidgeRoad) | VA 659 Relocated | National Rec. & Park Ent. | 4 | 3 | 2 | 4 | No | 2010 | No |
| VDOT | VSL4e | Widen/Upgrade | N/A | VA 659 (Gum Spring Rd.) | VA 620 (Braddock Road) | US 50 | 4 | 3 | 2 | 4 | No | 2006 | No |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDOT | VSL4f | Widen/Upgrade | Pending | VA 659 (Gum Spring Rd.) | Prince William County Line | VA 620 (Braddock Road) | 4 | 3 | 2 | 4 | No | 2010 | No |
| VDOT | VSL4c | Construct | Pending | VA 659 Relocated | PWCL / VA 234 Bypass | US 50 | 0 | 3 | 0 | 4 | No | 2015 | No |
| VDOT | VSL4b | Construct | Pending | VA 659 Relocated | US 50 | VA 659 (Belmont Ridge Rd.) | 0 | 3 | 0 | 4 | No | 2012 | No |
| VDOT | VSL44 | Widen/Upgrade | N/A | VA 772 (Ryan Road) | VA 659 (Belmont Ridge Rd.) | Dulles Greenway @ exit #6 | 4 | 3 | 2 | 6 | Yes | 2004 | No |
| VDOT | VSL40a | Widen | N/A | VA 901 (Claiborne Parkway) | VA 640 (Ashburn Farm Road) | W&OD Trail | 4 | 3 | 2 | 4 | No | 2007 | No |
| VDOT | VSL40b | Construct | N/A | VA 901 (Claiborne Parkway) | W&OD Trail | VA 7 | 0 | 3 | 0 | 4 | No | 2010 | No |
| VDOT | nrs | Construct | Pending | VA 868 (Davis Dr.) | VA 606 (Old Ox Road) | VA 625 (Church Road) | - | 4 | - | 4 | No | 2007 | Yes |
| VDOT | VSL46 | Construct | Pending | VA 1036 (Pacific Boulevard) | VA 606 (Old Ox Road) | Gloucester Parkway | - | 3 | - | 4 | No | 2010 | Yes |
| VDOT | VSL47 | Widen/Upgrade | N/A | River Creek Parkway | Riverside Parkway | VA 773 (Edwards Ferry Road) | 4 | 3 | 2 | 4 | No | 2007 | No |
| VDOT | VSL48 | Construct | N/A | Riverside Parkway | River Creek Parkway | Ashburn Village Blvd. | - | 3 | - | 4 | No | 2007 | No |
| VDOT | VSL49 | Construct | Pending | Russell Branch Parkway | VA 659 (Belmont Ridge Road) | Loudoun County Parkway | - | 3 | - | 4 | No | 2015 | No |
| VDOT | VSL50 | Widen/Upgrade | Pending | VA 773 (Fort Evans Road) | Leesburg Town Limits | River Creek Parkway | 4 | 3 | 2 | 4 | No | 2007 | No |
| ***Prince William Secondary*** | | | | | | | | | | | | | |
| VDOT | VSP49b | Construct | Pending | Heathcote Boulevard | VA 676 (Catharpin Road) | US 15 (James Madison Highway) | 0 | 3 | 0 | 4 | No | 2010 | No |
| VDOT | VSP49 | Construct | Pending | Heathcote Boulevard | US 29 | VA 676 (Catharpin Road) | 0 | 3 | 0 | 4 | No | 2010 | No |
| VDOT | VSP54 | Construct | N/A | North/South Road at Innovation | VA 840 (University Blvd.) | VA 674 (Wellington Road)/VA 660 (Bethlehem Road) | 0 | 3 | 0 | 4 | No | 2010 | Yes |
| VDOT | VSP59 | Construct | N/A | Peaks Mill (Purcell Road east) | Route 643 (Purcell Road ) | Route 3000 (Prince William Parkway) | 0 | 4 | 0 | 2 | No | 2025 | No |
| VDOT | VSP39 | Widen | Pending | Russell Road | I-95 | Dunlap Avenue | 4 | 3 | 2 | 4 | No | 2010 | No |
| VDOT | VSP46b | Construct | Pending | VA 1566 (Sudley Manor Drive Extension) | VA 619 (Linton Hall Road) | VA 234 Bypass | 0 | 4 | 0 | 4 | No | 2006 | Yes |
| VDOT | VSP46 | Construct | Pending | VA 1566 (Sudley Manor Drive Extension) | VA 234 Bypass | Chatsworth Drive | 0 | 4 | 0 | 4 | No | 2006 | Yes |
| VDOT | VSP24 | Construct | Pending | VA 1596 (Williamson Blvd) | Sudley Manor Dr. | Portsmouth Rd. | 0 | 4 | 0 | 4 | No | 2020 | No |

Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility | | Lanes | | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | from | to | from | to | | | |
| VDOT | VSP21c | Widen | N/A | VA 1600 (Ashton Ave.) | Coverstone Dr. | VA 621 (Balls Ford Rd.) | 3 | 3 | 2 | 4 | No | 2010 | No |
| VDOT | VSP25b | Widen | Pending | VA 1781 (NewTelegraph Rd/Summit School Road) | VA 849 (Caton Hill Road) | VA 640 (Minnieville Rd.) | 4 | 4 | 2 | 4 | No | 2015 | No |
| VDOT | VSP25c | Widen | Pending | VA 1781 (Telegraph Rd.) | VA 3000 (Prince William Parkway) | VA 849 (Caton Hill Rd.) | 4 | 4 | 2 | 4 | No | 2015 | No |
| VDOT | VSP25d | Construct | Pending | VA 2480 (Benita Fitzgerald Drive, Extended) | VA 610 (Cardinal Drive) | VA 2480 (Benita Fitzgerald Drive) | 0 | 3 | 0 | 4 | No | 2006 | Yes |
| VDOT | VSP23f | Construct | Pending | VA 3000 (Prince William Parkway) | I-95 | US 1 at Longview Drive | 0 | 2 | 0 | 4 | Yes | 2005 | Yes |
| VDOT | VSP23d | Widen | Pending | VA 3000 (Prince William Pkwy.) | VA 776 (Liberia Ave.) | VA 640 (Minnieville Rd.) | 2 | 2 | 4 | 6 | No | 2025 | No |
| VDOT | VSP2a | Widen/Upgrade | Approved | VA 619 (Linton Hall Road) | US 29 (Lee Highway) | VA 675 (Glenkirk Road) | 4 | 3 | 2 | 6 | No | 2007 | Yes |
| VDOT | VSP2b | Widen/Upgrade | Approved | VA 619 (Linton Hall Road) | VA 675 (Glenkirk Road) | VA 621 (Devlin Road) | 4 | 3 | 2 | 4 | Yes | 2007 | Yes |
| VDOT | VSP2e | Widen/Upgrade | Approved | VA 619 (Linton Hall Road) | VA 621 (Devlin Road) | VA 1566 (Sudley Manor Dr.) | 4 | 3 | 2 | 4 | No | 2006 | Yes |
| VDOT | VSP2ea | Widen/Upgrade | Approved | VA 619 (Linton Hall Road) | VA 1566 (Sudley Manor Dr.) | VA 28 (Nokesville Road) | 4 | 3 | 2 | 4 | No | 2014 | yes |
| VDOT | VSP2h | Widen | Pending | VA 619 (Joplin Rd.) add right turn lane | I-95 exit Ramp | US 1 | 4 | 4 | 4 | 5 | No | 2006 | yes |
| VDOT | VSP3a | Widen/Upgrade | N/A | VA 621 (Balls Ford Road) | VA 234 (Sudley Road) | Bethlehem Road | 4 | 3 | 2 | 4 | No | 2015 | No |
| VDOT | VSP3b | Widen/Upgrade | N/A | VA 621 (Balls Ford Road) | Bethlehem Road | VA 234 Bypass | 4 | 3 | 2 | 4 | No | 2015 | No |
| VDOT | VSP3d | Widen | Pending | VA 621 (Devlin Road) | Route 674 (Wellington Road) | Route 619 (Linton Hall Road) | 3 | 3 | 2 | 4 | No | 2025 | No |
| VDOT | VSP40a | Construct | Pending | VA 635 (Cherry Hill VRE Access Road) | US 1 | Future VRE Station site | 0 | 4 | 0 | 2 | No | 2008 | Yes |
| VDOT | VSP5d | Widen | Pending | VA 640 (Minnieville Road) | VA 610 (Cardinal Drive) | VA 643 (Spriggs Road) | 3 | 3 | 2 | 4 | No | 2007 | Yes |
| VDOT | VSP5e | Widen | Pending | VA 640 (Minnieville Road) | VA 643 (Spriggs Road) | VA 234 | 3 | 3 | 2 | 4 | No | 2020 | No |
| VDOT | VSP15c | Widen | Pending | VA 640 (Minnieville Road) | VA 849 (Caton Hill Road) | VA 641 (Old Bridge Road) | 3 | 3 | 2 | 4 | No | 2007 | Yes |
| VDOT | VSP8a | Widen | Pending | VA 643 (Purcell Rd.) | VA 234 (Dumfries Rd.) | VA 642 (Hoadly Rd.) | 3 | 3 | 2 | 4 | No | 2020 | No |
| VDOT | VSP12a | Widen | Pending | VA 643 (Spriggs Rd.) | VA 234 (Dumfries Rd)) | VA 642 (Hoadly Road) | 3 | 3 | 2 | 4 | yes | 2007 | Yes |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDOT | VSP9 | Widen | Pending | VA 660 (Hornbaker Road) | VA 28 (Nokesville Rd.) | VA 840 (University Boulevard Extended) | 3 | 3 | 2 | 4 | complete | 2005 | Yes |
| VDOT | VSP17b | Widen | Approved | VA 674 (Wellington Rd.) | VA 621 (Devlin Road) | VA 668 (Rixlew Lane) | 3 | 3 | 2 | 4 | No | 2012 | No |
| VDOT | VSP17c | Widen | Pending | VA 674 (Wellington Rd.) | VA 619 (Relocated Linton Hall Rd) | VA 621 (Devlin Road) | 3 | 3 | 2 | 4 | No | 2006 | Yes |
| VDOT | VSP18 | Widen | Pending | VA 676 (Catharpin Rd.) | VA 55 (John Marshall Highway) | Heathcote Blvd. | 3 | 3 | 2 | 4 | No | 2020 | No |
| VDOT | VSP20b | Widen | Pending | VA 784 (Dale Blvd.) | I-95 | VA 640 (Minnieville Rd.) | | 3 | 4 | 6 | No | 2020 | No |
| VDOT | Widen/Upgrade | Widen | Pending | VA 784 (Rippon Boulevard Extension) | US 1 (Jefferson Davis Highway) | Rippon VRE Station | 4 | 3 | 2 | 4 | No | 2010 | No |
| VDOT | VSP47c | Construct | Pending | VA 840 (University Blvd.) | VA 660 (Hornbaker Rd.) | VA 234 Bypass | 0 | 3 | 0 | 4 | complete | 2004 | No |
| VDOT | VSP47d | Construct | Pending | VA 840 (University Blvd.) (nee East-West Connector) | Route 660 (Hornbaker Road) | VA 674 (Wellington Rd.) | 0 | 3 | 0 | 4 | No | 2025 | No |
| VDOT | VSP56a | Construct | Pending | VA 840 (University Blvd.) | VA 674 (Wellington Road) | US 29 @ Ent. to Conway Robinson MSF | 0 | 3 | 0 | 4 | Yes | 2006 | Yes |
| VDOT | VSP45 | Construct | N/A | VA 861 (Clover Hill Road Extended) | VA 234 Bypass | Manassas Airport | 0 | 4 | 0 | 2 | Yes | 2006 | Yes |
| ***FAMPO*** | | | | | | | | | | | | | |
| FAMPO | FAI1a | Construct | EA Compl. | I-95 interchange | at VA 627 | | 1 | 1 | 0 | 0 | No | 2004 | Yes |
| FAMPO | FAI1e | Reconst/ Constr. | EA Compl. | I-95 interchange w/CD lanes (Phase II constr.) | at VA 627 | | | | | | Yes | 2025 | **Yes** |
| FAMPO | | Recon-struct | EA Compl. | I-95 interchange | at VA 630 | | 1 | 1 | 0 | 0 | No | 2015 | Yes |
| FAMPO | FAI1d | Study | EIS in procs | I-95 interchange | at Spotsy Pkwy / 17 Bypass / US 1 | | 1 | 1 | 0 | 0 | No | not coded | Yes |
| FAMPO | FAI1c | Construct | | I-95 HOV Extension | PW Co. line | Route 610 | 0 | 1 | 0 | 2 | No | 2011 | No |
| FAMPO | FAP5h | Widen | | US 1 | Rt 212 | Princess Anne Street | 2 | 2 | 4 | 6 | No | 2030 | No |
| FAMPO | FAP5b | Widen | | US 1 | Princess Anne St. | VA 3 Interchange | 2 | 2 | 4 | 6 | No | 2015 | No |
| FAMPO | FAP5 | Widen | | US 1 | VA 3 interchange | SCL | 3 | 3 | 4 | 6 | No | 2025 | No |
| FAMPO | FAP5e | Widen | | US 1 | SCL Frederickburg | I-95 | 2 | 2 | 4 | 6 | No | 2020 | No |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FAMPO | FAP5d | Widen | | US 1 | I-95 | 1 mile so. Of US 17 Bypass | 2 | 2 | 4 | 6 | No | 2010 | No |
| FAMPO | FAP5f | Widen | | US 1 | 1.5 miles n. of Rt 637 N | Rt 610 | 2 | 2 | 4 | 6 | No | 2025 | No |
| FAMPO | FAP5g | Widen | | US 1 | Rt 610 | Rt 630 | 2 | 2 | 4 | 6 | No | 2025 | No |
| FAMPO | FAP6a | Widen | | US 17 Bypass | VA 1 | VA 2 | 2 | 2 | 2 | 4 | No | 2025 | No |
| FAMPO | FAP6c | Widen | | US 17 Bypass | I-95 | Village Parkway | 2 | 2 | 4 | 6 | No | 2010 | No |
| FAMPO | FAP2 | realign | Compl. | VA 218 / VA 212 | VA 212 | VA 218 | 0 | 3 | 0 | 4 | Yes | 2004 | Yes |
| FAMPO | FAP7 | Widen | | VA 212 (Butler Rd) | US 1 | VA 212 / VA 218 Connection | 4 | 4 | 2 | 4 | No | 2025 | No |
| FAMPO | FAP4d | Study | EIS in procs | Outer Connector SWQ (Spots | VA 3 | US 17 Bypass | 0 | 3 | 0 | 4 | No | not coded | Yes |
| FAMPO | FAS23a | Construct | Pending | VA 208 Bypass (Spotsylvania) | West of Ta River | East of Po River | 0 | 3 | 0 | 2 | ROW | 2009 | Yes |
| FAMPO | FAS23b | Construct | Pending | VA 208 Bypass (Spotsylvania) | East of Po River | West of Ni River | 0 | 3 | 0 | 4 | ROW | 2007 | Yes |
| FAMPO | nrs | Realign | EA compt | VA 208 | Po River | Ta River | | | 2 | 2 | Yes | 2015 | Yes |
| FAMPO | nrs | Realign & Widen | EA compt | VA 208 | Ni River | Po River | | | 2 | 4 | Yes | 2010 | Yes |
| ***STAFFORD COUNTY SECONDARY*** | | | | | | | | | | | | | |
| FAMPO | FAS7a | Widen | Compl. | VA 607 | VA 626 | VA 218 | 4 | 4 | 2 | 4 | Yes | 2006 | Yes |
| FAMPO | FAS7b | Recon-struct | Compl. | VA 607 | VA 218 | VA 3 | 4 | 4 | 2 | 4 | Yes | 2003 | Yes |
| FAMPO | FAS3c | Widen | | VA 610 (Garrisonville Rd.) | VA 610 (existing 4 lane sectio | VA 643 | 4 | 4 | 2 | 4 | Yes | 2008 | Yes |
| FAMPO | FAS3da | Widen | | VA 610 (Garrisonville Rd.) | US 1 | VA 684 (Mine Rd.) | 4 | 3 | 6 | 8 | No | 2008 | Yes |
| FAMPO | FAS3d | Widen | | VA 610 (Garrisonville Rd.) | VA 684 (Mine Rd.) | VA 641 | 4 | 3 | 4 | 6 | No | 2005 | Yes |
| FAMPO | FAS3e | Widen | | VA 610 (Garrisonville Rd.) | VA 641 | VA 648 | 4 | 3 | 4 | 6 | No | 2025 | No |
| FAMPO | FAS8 | Recon-struct | | VA 624 | US 1 | VA 626 | 4 | 4 | 2 | 4 | No | 2010 | No |
| FAMPO | FAS29 | Widen | | VA 626 (Leeland Rd.) | new conn. With VA 624 | VA 607 | 4 | 4 | 2 | 4 | No | 2015 | No |

Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FAMPO | FAS9 | Widen | | VA 627 | Existing VA 627 | proposed I-95/VA 627 int. | 4 | 4 | 2 | 4 | No | 2004 | |
| FAMPO | FAS5b | Widen | | VA 630 (Courthouse Rd) | I-95 | VA 648 | 4 | 4 | 2 | 4 | No | 2010 | yes |
| FAMPO | FAS13 | Recon-struct | | VA 648 (Shelton Shop Rd.) | VA 610 | VA 627 | 4 | 4 | 2 | 4 | No | 2015 | No |
| FAMPO | FAS11 | Construct | | VA 684 Extension | VA 610 | US 17 | 0 | 4 | 0 | 4 | No | 2015 | No |
| ***CITY OF FREDERICKSBURG*** | | | | | | | | | | | | | |
| FAMPO | FAS16 | Widen | | VA 3 (William St.) (fredericksb | Mahone Dr. | US 1 | 3 | 3 | 4 | 6 | No | 2015 | No |
| FAMPO | FAS25 | Widen | | Princess Anne St. | US 1 | Herndon St. | 3 | 3 | 2 | 4 | No | 2015 | No |
| ***SPOTSYLVANIA COUNTY SECONDARY*** | | | | | | | | | | | | | |
| FAMPO | FAS22 | Widen | | VA 3 (Spotsylvania) | VA 1112 | VA 626 | 2 | 2 | 4 | 6 | No | 2010 | No |
| FAMPO | FAS26a | Widen | | VA 606 (Mudd Tavern Rd.) | US 1 | Caroline County Line | 3 | 3 | 2 | 4 | No | 2025 | No |
| FAMPO | FAS26b | Widen | | VA 606 (Morris Rd) | US 1 | VA 208 | 3 | 3 | 2 | 4 | No | 2025 | No |
| FAMPO | FAS27 | Widen | | VA 608 (Massaponax Church | VA 628 | US 1 | 3 | 3 | 2 | 4 | No | 2025 | No |
| FAMPO | FAS7a | Widen | Compl. | VA 607 (Deacon Rd)** | VA 218 | VA 626 | 4 | 4 | 2 | 4 | Yes | 2004 | Yes |
| FAMPO | FAS17 | Widen | | VA 612 (Spotsylvania) | Ni River Reservoir | VA 610 | 4 | 4 | 2 | 4 | No | 2025 | No |
| FAMPO | FAS18a | Widen | | VA 620 (Harrison Rd) | VA 639 | I-95 | 4 | 4 | 2 | 4 | No | 2012 | Yes |
| FAMPO | FAS18b | Widen | | VA 620 (Harrison Rd) | I-95 | US 1 Business | | | 2 | 4 | No | 2010 | Yes |
| FAMPO | FAS9b | Widen | | VA 627 (Gordon Rd.) | VA 628 | VA 620 | 4 | 4 | 2 | 4 | No | 2015 | No |
| FAMPO | FAS9c | Widen | | VA 627 (Spotsylvania) | VA 610 | VA 620 | 4 | 4 | 2 | 4 | Yes | 2000 | Yes |
| FAMPO | FAS28 | Widen | | VA 628 (Smith Station Rd) | VA 608 | VA 627 | 4 | 4 | 2 | 4 | No | 2015 | No |
| FAMPO | FAS19 | Widen | | VA 636 (Hood Dr.) | US 1 | VA 208 | 4 | 4 | 2 | 4 | No | 2010 | |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-A
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
**(Highway and HOV)**

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Facility from | Facility to | Lanes from | Lanes to | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FAMPO | FAS19b | Widen | | VA 636 (Mine Rd.) | US 1 | VA 638 | 4 | 4 | 2 | 4 | No | 2015 | No |
| FAMPO | FAS20a | Widen | Pending | VA 639 (Leavells Rd.) | VA 620 | VA 208 | 4 | 4 | 2 | 4 | Yes | 2004 | Yes |
| FAMPO | FAS20b | Widen | | VA 639 (Leavells Rd.) | VA 208 | VA 628 | 4 | 4 | 2 | 4 | Yes | 2025 | No |
| FAMPO | FAS20c | Widen | | VA 639 (Bragg Rd.) | VA 618 | VA 3 | 4 | 4 | 2 | 4 | No | 2008 | Yes |
| FAMPO | FAS21 | Construct | | Parallel Facility to I-95 (Spotsy | US 1 | VA 620 | 0 | 4 | 0 | 4 | No | 2020 | No |





Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix B: Transit Inputs for the 2005 CLRP and FY 2006-2011 TIP Air Quality Conformity Networks

# Appendix-B
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
## (Transit)

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|
| ***Washington Metropolitan Area Transit Authority*** | | | | | | | | | |
| WMATA | | | | Fair Lakes Shuttle | | | | 2006 | Yes |
| WMATA | | Constru | Approved | SEP-Largo Extension and Parking | Addison Road | Largo | Complete | 2005 | Yes |
| WMATA | | Constru | Approved | SEP-New York Avenue Station | | | Complete | 2005 | Yes |
| WMATA | | Modify | | Revised Metrorail Operating Plan | | | | 2010 | |
| WMATA | | Modify | | Revised Metrorail Operating Plan | | | | 2011 | |
| WMATA | | Modify | | Revised Metrorail Operating Plan | | | | 2015 | |
| ***District of Columbia*** | | | | | | | | | |
| DCDOT | | | Pending | CSX Shepherd Branch (formerly Anacostia Rail Line) | Pennsylvania Ave., SE | South Capitol St. SW | | 2005 | Yes |
| DCDOT | | Study | | Downtown Circulator Bus System | Implementation Study | | | not coded | Yes |
| DCDOT | | Reconstruct | | K St. Busway | Mt. Vernon Sq./7th St. NW | Wash.Circle / 23rd St. NW | | 2008 | |
| ***Maryland*** | | | | | | | | | |
| MTA | | Construct | | Bi-County Transitway | Bethesda | Silver Spring | | 2012 | Yes |
| MTA | | Study | | Bi-County Transitway | Silver Spring | New Carrollton | | not coded | Yes |
| MTA | | Construct | | Silver Spring Transit Center | Phase II | | | 2007 | Yes |
| MTA | | Construct | | Corridor Cities Transitway | Shady Grove | Metropolitan Grove | | 2012 | Yes |
| MTA | | Construct | | Corridor Cities Transitway | Metropolitan Grove | COMSAT | | 2020 | Yes |
| MTA | | Construct | | Southern MD Commuter Bus Initiative | Park-and-Ride lots and increase bus service | in the MD 5 corridor (La Plata) | | 2010 | Yes |
| MDOT | | Implement | | ICC Corridor Bus Service Improvements | | | | 2010 | |
| ***Montgomery County*** | | | | | | | | | |
| Mont.Co. | | | | Clarksburg Transit Center | Clarksburg | | | 2015 | No |
| Mont.Co. | MCT4 | Constru | N/A | Four Corners Transit Center | US 29/MD 193 | | No | 2015 | No |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-B
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
## (Transit)

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|
| Mont.Co. | | | Pending | Georgetown Branch Trolley/Trail | Silver Spring | Bethesda (along CSX Metro Branch ROW) | Yes | 2012 | No |
| Mont.Co. | MCT24 | Constru | N/A | Grovesnor Metro Parking Garage | Grosvenor Metrorail Station | | Complete | 2004 | Yes |
| Mont.Co. | | | | Metropolitan Grove Transit Center | Vicinity of Watkins Mill Road and MD 117 | | | 2015 | No |
| Mont.Co. | MCT16 | | | NIH Naval Medical Transportation Management | Bethesda | | | | No |
| Mont.Co. | | | | Norbeck Road Bus Enhancement | | | | 2020 | No |
| Mont.Co. | | | | Norbeck Road Park and Ride | Norbeck Road at Georgia Avenue | | | 2015 | Yes |
| Mont.Co. | MCT7 | Constru | N/A | Olney Transit Center | adjacent to or north of MD 108 | | No | 2015 | No |
| Mont.Co. | | | | Randolph Road Bus Enhancement | | | | 2010 | No |
| Mont.Co. | | Construct | | University Blvd Bus Enhancement | Kensington | Silver Spring | No | 2020 | No |
| Mont.Co. | MCT22 | Construct | | Veirs Mill Road Bus Enhancement | Rockville | Wheaton | No | 2020 | No |
| ***Prince Georges County*** | | | | | | | | | |
| PG Co. | | Constru | N/A | Accokeek Fringe Parking Lot | | | Complete | 2003 | Yes |
| ***Virginia*** | | | | | | | | | |
| ~~VDOT~~ | | ~~Constru~~ | ~~Pending~~ | ~~Park-and-Ride~~ | ~~I-95 Springfield Interchange Congestion Mitigation~~ | ~~@ Backlick South~~ | ~~No~~ | ~~2005~~ | ~~No~~ |
| VDOT | | Widen | Pending | US 1 (bus/right-turn lanes) | VA 235 North | SCL Alexandria (I-95 Capital Beltway) | No | 2025 | No |
| VDOT | | Implem | N/A | VA 244 (Columbia Pike) Signal Prioritization | Fairfax County Line | Pentagon | No | 2004 | Yes |
| VDOT | | Study | Pending | Circumferential Metro Rail | Dunn Loring | American Legion Bridge | No | not coded | No |
| Arlington Co. | | Constru | Pending | Crystal City / Potomac Yard Busway (2-lane) Segment 1 | Vicinity of Glebe Rd. Ext. | 26th St. | No | 2006 | Yes |
| Arlington Co. | | Constru | Pending | Crystal City / Potomac Yard Busway (2-lane) Segment 2 | 26th St. | Crystal City Metro Station | No | 2008 | No |
| Arlington Co. | | Upgrad | Pending | Crystal City / Potomac Yard Busway to BRT | Vicinity of Glebe Rd. Ext. | Crystal City Metro Station | No | 2012 | No |
| VDOT | | Study | Pending | Potomac Yard Transit | Monroe Ave. Bridge | Crystal City | No | not coded | No |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-B
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
## (Transit)

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|
| VDOT | | Study | Pending | US 1 Corridor Light Rail | King Street Metro Station | Potomac Yard | No | not coded | No |
| VDOT | | Study | Pending | US 1 Corridor Light Rail | Potomac Yard | Pentagon | No | not coded | No |
| VDOT | | Study | Pending | US 1 Priority Bus | SCL Alexandria (I-95 Capital Beltway) | King Street Metro Station | No | not coded | No |
| VDOT | | Study | Pending | US 1 Priority Bus | Stafford County | SCL Alexandria (I-95 Capital Beltway) | No | not coded | No |
| VDOT | | Impleme | Pending | US 1 Transit Improvements | Gunston Road | Huntington Avenue | No | 2005 | Yes |
| VDOT | | Study | | US 1 Transit Service Improvements | Stafford County Line | Pentagon | | not coded | No |
| VDOT | | Study | Pending | I-495 Transit Improvements | Woodrow Wilson Bridge | American Legion Bridge | No | not coded | No |
| VDOT | | Study | PCE-1 | I-66 & I-95 corridors | Location /FeasIbility Studies for Addl. PnR Lots | | Yes | not coded | No |
| VDOT | | Study | Pending | I-66 Transit Service Improvements | Metro Stations inside I-495 | Underserved locations inside I-495 | No | not coded | No |
| VDOT | | Study | Pending | I-66 Transit Service Improvements | Fauquier County Line | Vienna | No | not coded | No |
| VDOT | | Study | Pending | I-95 Corridor Metro Rail Extension | Lorton/Fort Belvoir | Potomac Mills Mall | No | not coded | No |
| VDOT | | Study | Pending | I-95 Corridor Metro Rail Extension | Franconia-Springfield | Lorton/Fort Belvoir | No | not coded | No |
| VDOT | | Study | Pending | Light Rail | Manassas | Dulles Airport | No | not coded | No |
| VDOT | | Constru | Pending | Metro Station (Proposed) | @ Potomac Yards | | No | 2015 | No |
| VDOT | | Constru | Pending | Park-and-Ride Lot | Springfield CBD | vic. I-95 & Old Keene Mill Road | No | 2005 | Yes |
| VDOT | | Relocat | Pending | Park-and-Ride Lot (Leesburg) | Relocate to vic. of Leesburg Bypass | VA 7, and / or the Dulles Greenway | No | 2007 | Yes |
| VDOT | | Study | Pending | Proposed EPG People Mover | Fort Belvoir | Franconia/Springfield | No | not coded | No |
| VDOT | | Study | Pending | US 50 Transit Service Improvements | Eastern Loudoun County | Arlington County | No | not coded | No |
| VDOT | | Study | Pending | VA 236 Priority Bus | City of Fairfax | City of Alexandria | No | not coded | No |
| VDOT | | Study | Pending | VA 244 (Columbia Pike) Transit Service Improvements | Baileys Crossroads | Pentagon | No | not coded | No |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-B
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
## (Transit)

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|
| VDOT | | Study | Pending | VA 7 Transit Service Improvements | Tysons Corner | Baileys Crossroads | No | not coded | No |
| VDOT | | Study | Pending | VA 7100 Priority Bus | US 1 | VA 7 | No | not coded | No |
| VDOT | | | N/A | Dulles Corridor Slip Ramps | Dulles Corridor Park & Ride Lots | Dulles Toll Road | Complete | 2003 | No |
| VDOT | | Constru | Pending | Park-and-Ride Lot | Reston East Parking Structure | @ Reston East Park-and-Ride Lot | No | 2011 | Yes |
| VDOT | | Constru | Pending | Park-and-Ride Lot | VA 7900 (F-S Pkwy.) PnR | @ Gambrill Road Location | Yes | 2005 | Yes |
| VDOT | | Constru | N/A | Park-and-Ride Lot | Dulles Corridor Park-and-Ride Lots | Reston East at Wiehle Ave & Herndon-Monroe P & R Lots | Yes | 2003 | Yes |
| VDOT | | Constru | Pending | Park-and-Ride Lot | VA 7900 (F-S Pkwy.) PnR | @ Backlick Road North | No | 2006 | Yes |
| VDOT | | Recons | N/A | Park-and-Ride Lot Enhancements | @ Reston, Centreville, West Springfield | | No | 2004 | Yes |
| VDOT | | Constru | Pending | Transit Center (Reston) | Reston Town Center | @Explorer Dr. & Bluemont Way | No | 2004 | Yes |
| VDOT | | Constru | Pending | Transit Center (Bradlee Shopping Center) | King St. and Braddock Rd. | | No | 2008 | Yes |
| VDOT | | Constru | Pending | Transit Center (Seven Corners) | Seven Corners Shopping Center | | No | 2004 | Yes |
| VDOT | | Constru | Pending | Park-and-Ride Lot | Purcellville | 100-space park-and-ride lot. | No | 2007 | Yes |
| VDOT | | Construct | | Town of Leesburg -Harrison St & Catoctin Circle | Loudoun County Commuter Bus Service. | 400 Space Park & Ride Lot | | 2007 | No |
| VDOT | | Construct | | VA 772 (Ryan) Station | Loudoun County Commuter Bus Service. | 300 Space Park & Ride Lot | | 2008 | No |
| PRTC | | Bus service | | Omni Service Improvements | | | | 2005 | |
| VDRPT | | Incorpo | Pending | DCRTP - BRT Elements into the Express Bus Service in | East Falls Church Metrorail Station | Route 772 | Ongoing | 2005 | Yes |
| VDRPT | | Constru | Pending | Dulles Corridor Rapid Transit Project | East Falls Church Metrorail Station | Wiehle Ave. Station | No | 2011 | Yes |
| VDRPT | | Constru | Pending | Dulles Corridor Rapid Transit Project | Wiehle Ave. Station | Route 772 | No | 2015 | Yes |
| VRE | | Constru | Pending | VRE - Cherry Hill Commuter Rail Station | Cherry Hill | Prince William County | No | 2006 | Yes |
| VRE | | Implem | Pending | Service Improvements (Reduce Headways) | Fredericksburg and Manassas lines | | No | 2010 | No |



Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP

# Appendix-B
# 2005 CLRP AND FY2006-2011 TIP AIR QUALITY CONFORMITY INPUTS
## (Transit)

| Agency | Project ID | Improv. | Environ. Review | Facility | From | To | Under Const. or ROW acquired? | Complt. Date or Status | In TIP? |
|---|---|---|---|---|---|---|---|---|---|
| | | Implement | | Beltway HOT lanes transit service | | | No | 2010 | |
| | | Implement | | Beltway HOT lanes transit service | | | No | 2020 | |





Note: Shaded areas represent changes from the FY2005-2010 TIP / 2004 CLRP