

ITEM 9 - Action
October 15, 2003

Release for Public Comment of
Draft Air Quality Conformity Analysis of the
2003 Update to the Constrained Long Range Plan (CLRP) and
FY 2004-2009 Transportation Improvement Program (TIP)

Staff

Recommendation: Approve release for public comment of draft air quality conformity analysis for the 2003 CLRP and FY 2004-2009 TIP, which is scheduled to be adopted on November 19, 2003.

Issues:

TPB adoption of the 2003 CLRP and FY 2004-2009 TIP cannot occur until the new MOBILE6-based emissions budgets, which are necessary for the TPB to make an air quality conformity determination, are approved by the Environmental Protection Agency (EPA). Since the EPA approval process which normally takes 90 days began on September 10, 2003, it is possible that EPA approval will not be received until after November 19. Under these circumstances, the TPB conformity determination for the CLRP and TIP will have to be postponed until EPA approval is received.

Background:

At the September 17 meeting, the Board was briefed on the status of the draft 2003 CLRP and FY 2004-2009 TIP documents and the associated conformity analysis.

A draft summary of the analysis results is attached. Copies of the draft analysis report will be available at the TPB meeting. This report is also available on the COG website at www.mwcog.org.

MEMORANDUM

October 8, 2003

To: Transportation Planning Board

From: Michael J. Clifford
Systems Planning Applications Director

Subject: Review of Draft Air Quality Conformity Assessment for the 2003 Update of the Constrained Long Range Plan (CLRP) and the FY2004-2009 Transportation Improvement Program (TIP)

INTRODUCTION

This memo transmits summary results of the air quality conformity assessment of the 2003 CLRP and the FY2004-2009 TIP. The results contained in this summary memo and in the October 15, 2003 draft technical report, Air Quality Conformity Determination Of The 2003 Constrained Long Range Plan And The FY2004-2009 Transportation Improvement Program For The Washington Metropolitan Region, are being forwarded to the TPB for the Board's release for public comment and interagency consultation.

Comments will be accepted through close of business November 14, 2003, with final action by the TPB scheduled for its November 19, 2003 meeting.

BACKGROUND

On May 21, 2003 the TPB approved the project submissions for inclusion in the conformity analysis, and on June 18, 2003 the Board approved the scope of work for the air quality conformity analysis for the year 2003 update of the CLRP and FY2004-2009 TIP. Key technical inputs to the analysis included: Round 6.3 Cooperative Forecasts; the Version 2.1C Travel Demand Model, utilizing the new project submissions and reflecting higher transit fares recently enacted by several transit operators in the region; EPA's Mobile6 Emissions Factor Model; and a Mobile Emissions Post-Processor, developed using latest travel demand and mobile emissions planning assumptions for specific use with the Version 2.1C and Mobile6 models.

Staff first applied the travel demand, emissions factor, and emissions post-processor models in the development of the region's 'severe area' ozone state air quality implementation plan (SIP), which was approved by the Metropolitan Washington Air Quality Committee in August 2003. District of Columbia, Maryland and Virginia air agencies subsequently submitted the SIP, and its associated mobile source emissions budgets, to EPA in fulfillment of air quality planning requirements for the Washington region. Since those submitted emissions budgets represent a key conformity evaluation criterion, EPA needs to determine that the budgets are adequate before the TPB can approve a conformity finding. Should this not occur by the November 19th TPB meeting, the Board action will need to be deferred.

Staff proceeded with the technical analyses described below to ascertain whether the draft plan and program would meet the specific conformity criteria.

WORK ACTIVITIES

Technical work activities for the conformity assessment of the 2003 CLRP and FY2004-2009 TIP included the preparation of volatile organic compound (VOC) and nitrogen oxide (NO_x) emissions inventories for specified forecast years associated with the plan and program (forecast years: 2005, 2015, 2025 and 2030). Wintertime carbon monoxide (CO) analysis for conformity, with near term forecast years of 2007 and 2016 consistent with SIP planning requirements, has also been conducted. In meeting the requirements for use of latest planning assumptions and methods, this effort marked the first production use in a conformity assessment of the updated travel demand, emissions factors, and emissions calculation methods referenced above. The work also utilized some recently developed methods and data which were applied in previous conformity assessments, such as airport passenger forecasts and transit capacity constraint procedures.

These inventories address a primary conformity assessment criterion to demonstrate that the plan and program adhere to mobile source emissions budgets. Such budgets were either previously established (in the case of wintertime CO) or are currently being established through EPA's SIP submission / conformity budget adequacy determination process (in the case of VOC and NO_x). In anticipation of possible emissions increases associated with implementation of the plan and program, staff (in conjunction with the TPB Technical Committee and its Travel Management Subcommittee) conducted parallel analyses of potential transportation emissions reduction measures (TERM)s. The objective of this work was to develop potential additional plan and program elements which could be utilized to mitigate any such increases. These results are described in the October 6, 2003 draft report, Analysis Of Potential Transportation Emission Reduction Measures (TERMs) For The 2003 Constrained Long Range Plan And The FY2004-2009 Transportation Improvement Program. Completion of the conformity analyses, however, showed that the plan and program emissions estimates were within the budget for each pollutant for all forecast years.

Today's memo presents a "bottom line" summary of results of the conformity analysis, as

follows.

Plan Amendments and Program Elements

There have been relatively few significant changes advanced for the CLRP / TIP in this year's approval cycle. Attachment A presents a listing of significant new projects since the 2002 CLRP and the FY2003-2008 TIP were approved by the Board on July 31, 2002.

Land Activity Forecasts

On March 12, 2003 COG's Metropolitan Development Policy Committee approved Round 6.3 Cooperative Forecasts to be used for testing purposes in analysis of the CLRP and TIP. Data at the traffic zone level for Round 6.3 was made available to COG/TPB staff on June 9, 2003. Accordingly, these forecasts, summarized in Attachment B, provided the land activity assumptions which were used in the conformity assessment. On October 8, 2003 the COG Board adopted the Round 6.3 Cooperative Forecasts.

Travel Modeling Process

Using the Version 2.1C model, COG/TPB staff prepared travel demand forecasts for each of the required forecast years. Exhibit 1 presents the geographic areas for modeling and for non-attainment reporting purposes. Exhibit 2 presents the resulting transit trips, vehicle trips, and vehicle miles traveled (VMT) results through time for each conformity analysis year. For 2005 the table also presents a comparison with travel demand results prepared for the severe area SIP, since that work is being used to set the mobile source emissions budgets to be used as part of the conformity assessment. This comparison reflects the combined effects of the following changes between the SIP and conformity analysis: higher transit fares, revised facilities, and land use changes. The model outputs show fewer transit trips, an increase in vehicle trips, and a slight decrease in VMT.

Changes in land activity inputs throughout the modeled area appear to have contributed significantly to the decline in VMT. The land activity input assumptions to the SIP work included the Round 6.2 Cooperative Forecasts factored to Round 6.3 control totals since traffic zone level data files specifically for Round 6.3 were not yet available for use in the modeling. This was done to reflect increases in land activity expected with Round 6.3, and to ensure that emissions were not understated. The conformity analysis is based upon the zone level Round 6.3 data, which reflect not only the forecast small area land use distributions throughout the Washington area, but also the latest planning assumptions for areas outside the Washington region. For example, the Baltimore land use input to Round 6.3 reflects the Baltimore Metropolitan Council's 'Round 5D' adopted figures, whereas their previous input to the COG Round 6.2 forecasts was their 'Round 5B' figures.

Attachment C documents this analysis on a jurisdictional basis, presenting tables comparing year 2005 households, jobs, vehicle trips, and VMT for the SIP and conformity cases. The most significant changes in the tables occur in Howard County, Maryland, in the Baltimore region. Between their Rounds 5B and 5D inputs, households drop by over 8,500 and jobs increase by nearly 27,000. In the travel modeling process, the fewer households and greater jobs / housing ratio result in fewer trips in the county overall (a drop of nearly 6,000 trips) and significantly less VMT in Howard County (a decrease of close to 500,000) and in Howard County trip interchange areas with Frederick, Montgomery, and Prince George's counties, and the District of Columbia.

The slight changes in transit, vehicle trips, and VMT (about one half of one percent throughout the MSA) are reasonable and appropriate in context of the overall transportation / land use planning perspective.

Emissions Factors

COG/DTP staff, in conjunction with COG Department of Environmental Programs staff and with the consultant assistance of E.H. Pechan and Associates, developed the motor vehicle emissions factors through the use of EPA's MOBILE6 emissions factor model (See Appendix D of the full technical report for model inputs and other details of the emissions factor development.) These rates for each pollutant, shown using District of Columbia data as an illustration in Exhibits 3 and 4 for VOC and NOx, respectively, were developed following execution of the model in 1 mph speed increments, by jurisdiction, for each analysis year. The charts show significantly reduced rates through time, primarily due to the impacts of having cleaner vehicles in the fleet.

Emissions Analyses

Mobile Emissions Inventories

Staff applied the Mobile6 emissions factors to the travel demand forecasts to prepare mobile source emissions inventories for each forecast year. These emissions results are summarized in Exhibit 5 and indicate VOC and NOx emissions for network and off-network components for each analysis year. The table shows dramatic reductions between 2005 and 2015, with emissions leveling off at about 40 tons per day for both pollutants. The results reflect the impact of the cleaner fleet and related programs between now and 2015, with continuing fleet turnover balanced against VMT growth (and slowing growth rates through time) thereafter. Net emissions for each forecast year are shown as the bottom line of the summary. Emissions are seen to be slightly less than the mobile budgets in 2005 and well within the mobile budgets thereafter. Exhibits 6 and 7 present these VOC and NOx results in a graphical format. In recognition of the fact that estimated emissions are within the mobile source budget for each pollutant, no additional transportation emissions reduction measures are required to be programmed to demonstrate conformity.

Net Emissions Analysis

The emissions inventory data contained in Exhibit 5 reflect total mobile source network and off-network emissions. However, there are also emissions benefits associated with certain transportation programs and projects. These benefits, estimated on an off-line basis, are also creditable in conformity analyses. Attachment D represents a summary table of these transportation emissions reduction measures, or TERMS, which have been previously planned or programmed by the TPB. They are arrayed in a ‘Tracking Sheet’ format to document the implementation status of each. The summary result of these measures, seen on the last page of the attachment, amounts to additional reductions in 2005 of 3.8 tons per day of VOC and 7.7 tons per day of NOx. Only those projects which have been affirmed by the implementing agency as having been completed, or are on a realistic schedule towards implementation, are being credited in this emissions analysis. (Documentation from the implementation agencies regarding the status of each project is contained in Appendix K of the full conformity report.)

SUMMARY

The analytical results described in this air quality assessment provide a basis for a determination by the TPB of conformity of the 2003 CLRP and the FY2004-2009 TIP.

Following: Exhibits 1-7
Attachments A-D

**Washington, D.C. - Maryland - Virginia
Modeled Area
and
Metropolitan Statistical Area**

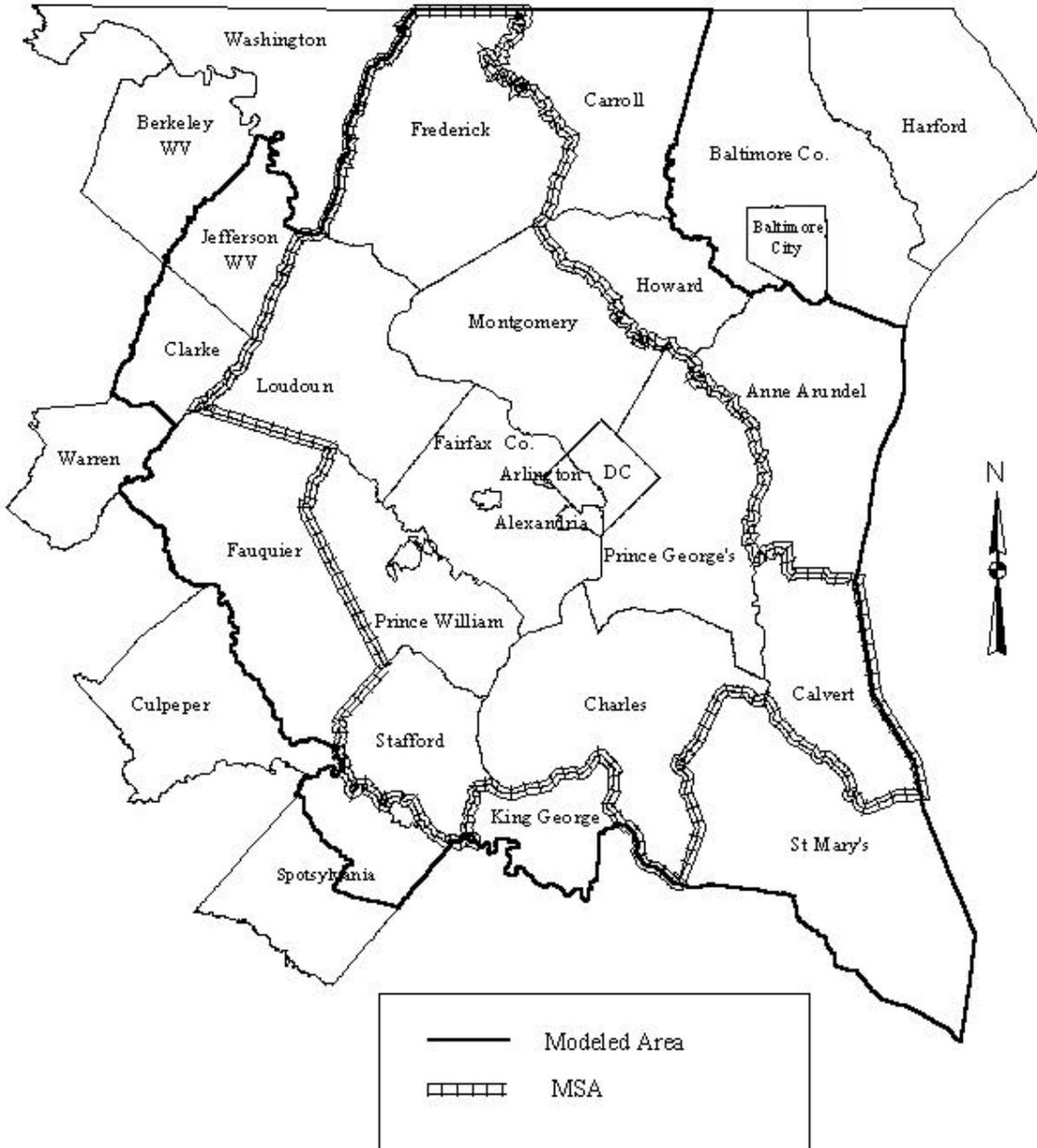


Exhibit 2
Travel Demand Summary
Modeled Area Trips and Vehicle Miles Traveled (000's)

	<u>2005</u>				<u>2015</u>	<u>2025</u>	<u>2030</u>
	SIP	AQC	DIFFERENCE	% DIFF.			
Transit Trips	1,009.5	967.3	-42.2	-4.4	1,147.9	1,229.2	1,233.5
Vehicle Trips	20,259.5	20,374.8	115.3	0.6	23,224.4	25,565.5	26,405.2
VMT	167,332.5	166,547.6	-784.9	-0.5	194,121.7	218,164.7	228,502.3

Exhibit 3
TOTAL COMPOSITE MOBILE6 RUNNING EMISSION
FACTORS
DISTRICT OF COLUMBIA
FOR 2005, 2015, 2025 AND 2030
VOC Emission Rates

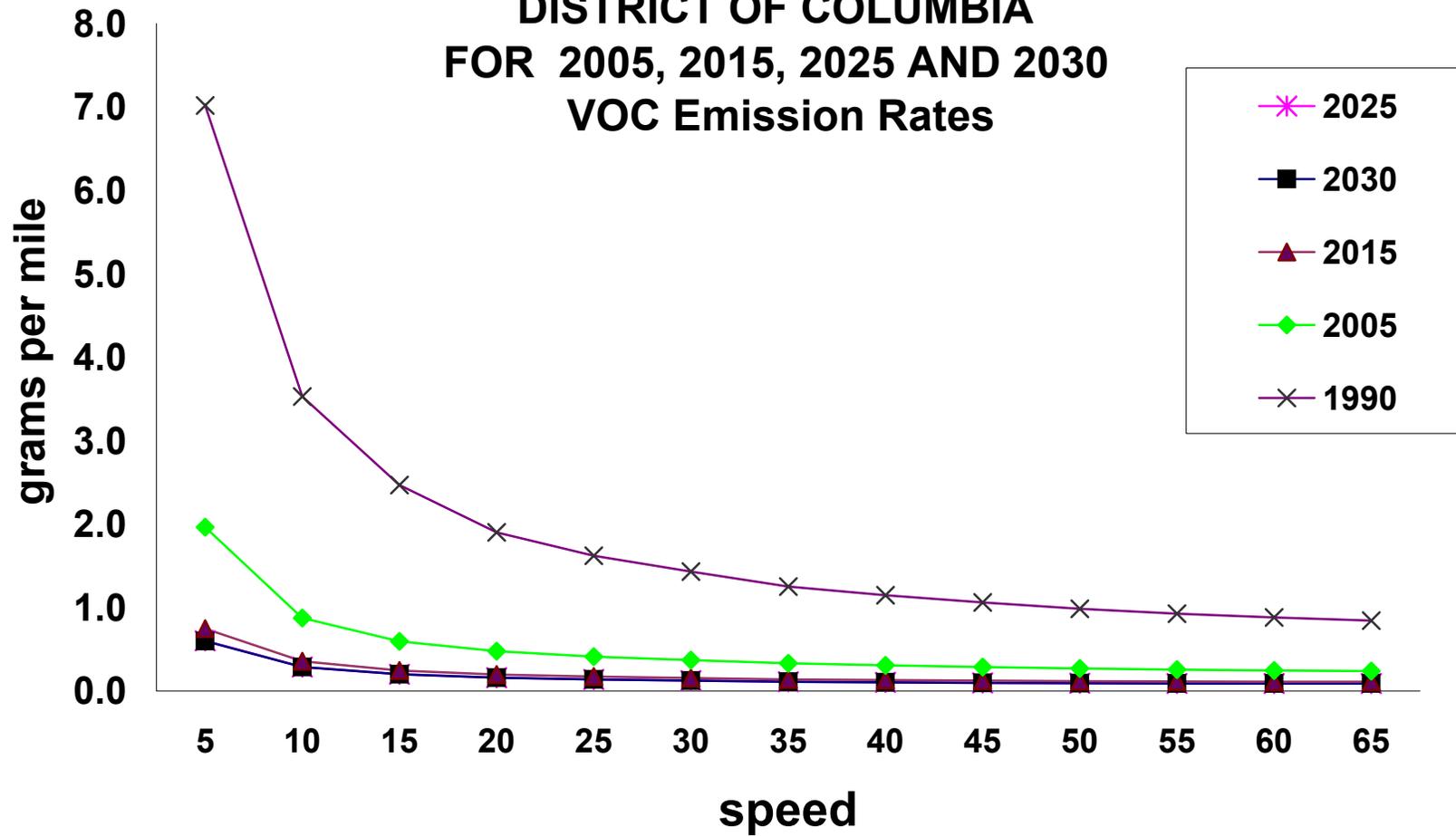


Exhibit 4
TOTAL COMPOSITE MOBILE6 RUNNING EMISSION
FACTORS
DISTRICT OF COLUMBIA
FOR 2005, 2015, 2025 AND 2030
NOx Emission Rates

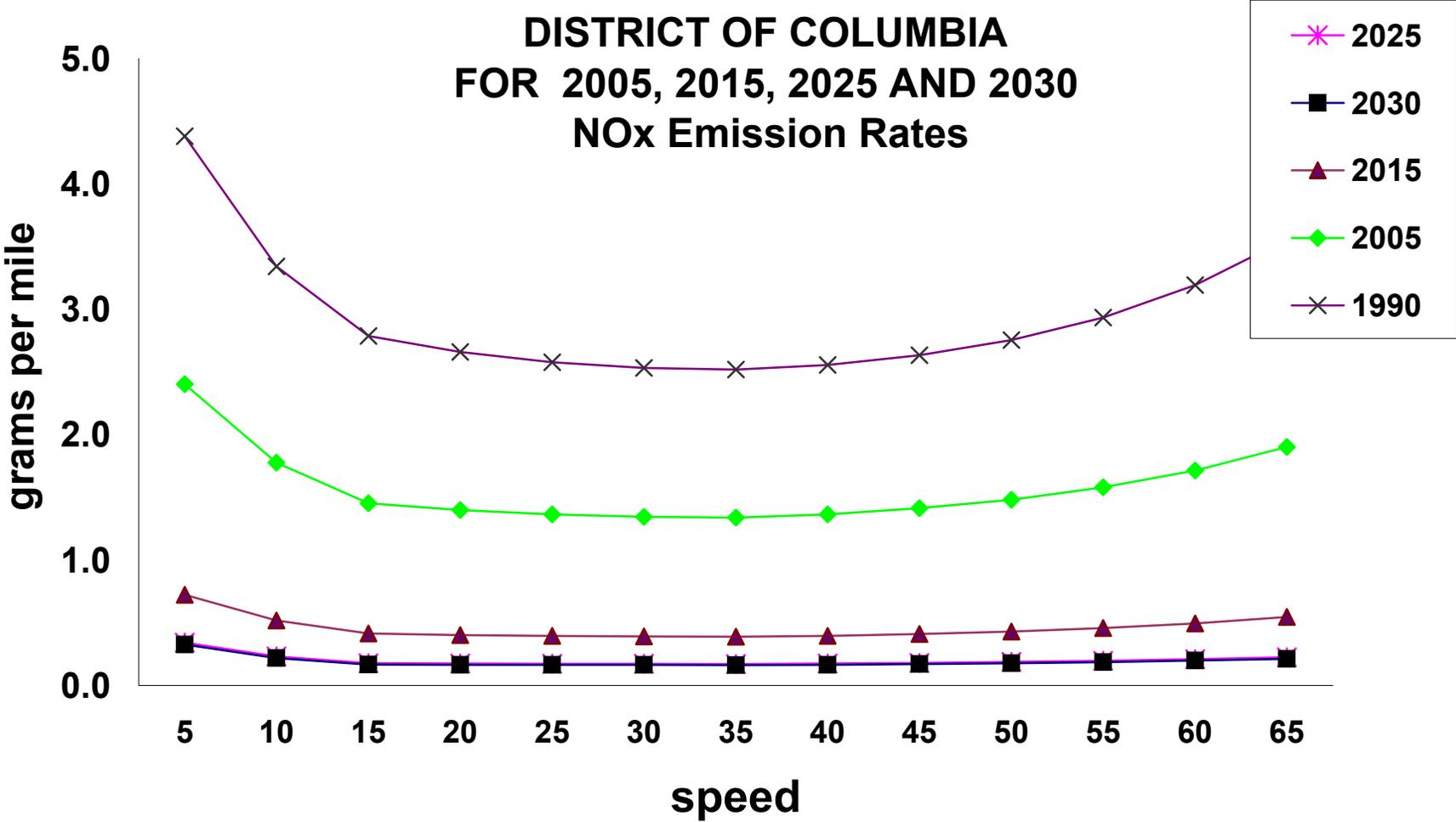


EXHIBIT 5
AIR QUALITY CONFORMITY
Summary Table
Mobile Emissions Inventories
for 2003 CLRP and FY 2004-2009 TIP
(Tons/Day)

	2005		2015		2025		2030	
	VOC	NOx	VOC	NOx	VOC	NOx	VOC	NOx
I Network								
Start	17.3	10.9	5.7	2.1	6.5	2.6	6.4	2.4
Running	46.8	202.1	19.2	28.7	21.7	34.3	22.6	32.7
Soak	11.2	-----	3.5	-----	3.8	-----	3.9	-----
II Off-Network								
Diurnal	2.8	-----	1.3	-----	0.7	-----	0.7	-----
Resting Loss	10.6	-----	4.6	-----	2.2	-----	2.3	-----
Local Roads	7.3	10.3	4.6	4.7	4.6	3.7	4.8	3.8
School Buses	0.4	5.5	0.2	1.8	0.2	0.3	0.2	0.3
Transit Buses	0.3	5.6	0.1	2.1	0.1	0.3	0.1	0.3
Auto Access	1.0	1.5	0.5	0.6	0.4	0.4	0.4	0.4
Total	97.7	235.8	39.7	40.0	40.2	41.6	41.4	39.8

Mobile Emissions Budgets: 98.1 237.4

Budget Adherence Margin: 0.4 1.6

EXHIBIT 6

Mobile Source VOC Emissions Metropolitan Statistical Area 2003 CLRP and FY 2004-2009 TIP

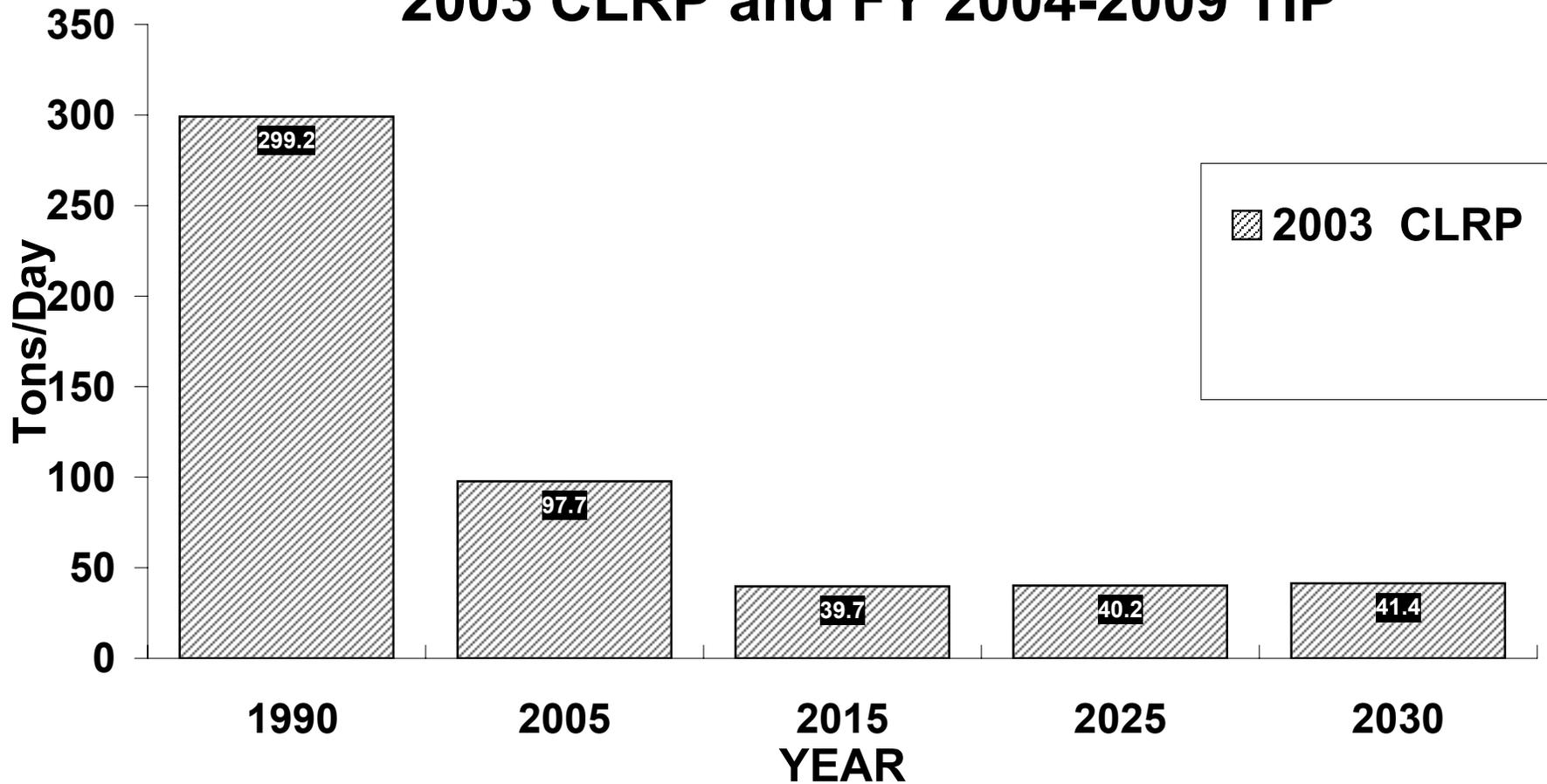
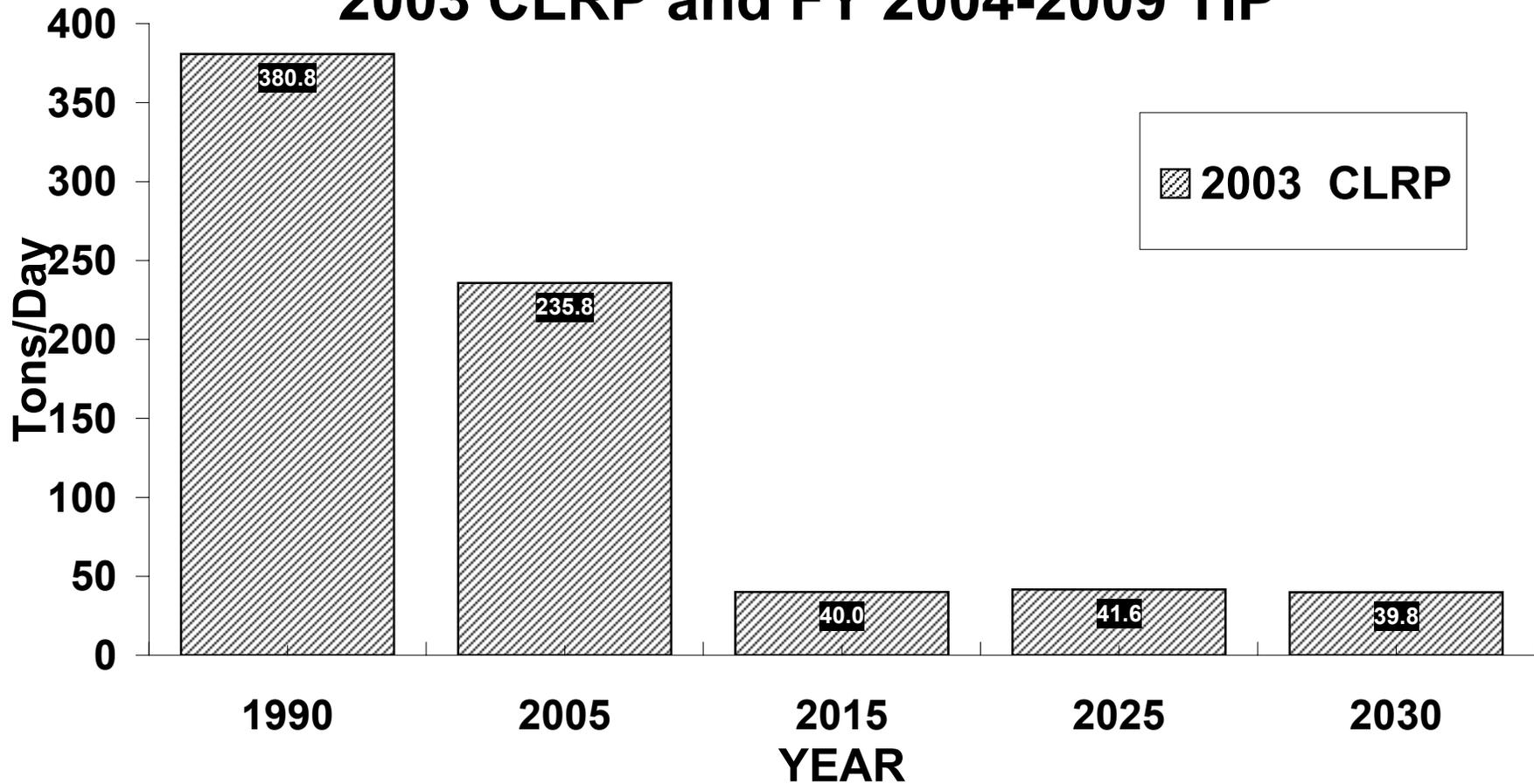


EXHIBIT 7

Mobile Source NOx Emissions Metropolitan Statistical Area 2003 CLRP and FY 2004-2009 TIP



ATTACHMENT A

Significant Changes For the 2003 CLRP and FY 2004 - 2009 TIP

ID	Agency	Facility	From/At	To	Complete Date	Improvement	Fac. Type		# Lanes	
							From	To	From	To
DISTRICT OF COLUMBIA										
1	DDOT	K Street Busway	Mount Vernon Square/7th Street NW	Washington Circle/23rd Street NW	2005	Reconstruct				
2	DDOT	Anacostia Light Rail	Pennsylvania Ave.	Bolling AFB	2004	Construct				

MARYLAND											
1	SHA	I-95/495	Interchange at Arena Drive		2010	Construct	1	1	8	8	
2	SHA	I-95/495	Interchange at Greenbelt Metro		2010	Construct	1	1	8	8	
3	SHA	University of Maryland Connector	I-95/495	UMD Campus	2025	Study					
4	SHA	US 15	at MD 26		2010	Construct	5	5	4	4	
5	SHA	East-West Link Improvements InterCounty Connector (ICC)	I-370	US 1	TBD	Study, Not Coded					
6	SHA	I-95/495	Branch Ave. Metro	MD 5 and I-95/495	2020	2010	1	1	8	8	
7	SHA	I-270	Interchange at Watkins Mill Road Extended		2040	2025	Construct	1	1	4	6+2
8	SHA	I-270/US 15 w/ HOV	Shady Grove Metro	Biggs Ford Road I-70	TBD	2025	Study Construct	1	1	varies	
9	SHA	MD 3	US 50	Anne Arundel County Line	TBD	2030	Study Widen	2	2	4	6
10	SHA	MD 28 / MD 198	MD 97	I-95	TBD	2025	Study Construct	2	2	2/4	4/6
11	SHA	MD 97 (Brookeville Bypass)	South of Brookeville	North of Brookeville	TBD	2015	Study Construct	0	2	0	2
12	SHA	MD 201 Extended, US 1	Sunnyside Avenue I-95/495	MD 198	2020		Construct Study, Not Coded	0	2	0	4
13	SHA	MD 201 (Kenilworth Avenue)	Rittenhouse Road	Pontiac Street	WITHDRAWN FROM PLAN			2	2	4	6
14	SHA	MD 210 (HOV)	MD 228	I-95/495	2007	2015	Widen- Reconstruct	2	2	6	6 +2
15	SHA	US 301	south of MD 5 at T.B.	US 50 Mount Oak Road	2020		Widen/Upgrade- Study, Not Coded	2	5	4/6	6+2
16	SHA	US 301	Mount Oak Road	US 50	2020	2030	Upgrade/Widen	2	5	4 to 6	6+2
17	SHA	MD 450	Stoneybrook Dr.	West of MD 3	2040	2025	Widen	2	2	2	4
18	Mont. Co.	Middlebrook Road Ext. Widening	MD 355	M-83	2020	2010	Widen	2	2	3	6
19	Mont. Co.	Father Hurley Blvd.	Wisteria	MD 118 Relocated	2020	2010	Construct		2		4
20	Mont. Co.	M-83 - Midcounty Highway Extended	MD 27 (Ridge Road)	Middlebrook Road	2025	2010	Construct		2	0	4-6
21		Bi-County Transitway									
22	MTA	Bi-County Transitway	Silver Spring	New Carrollton		2015	Study/PE, Not Coded				
23	MTA	Corridor Cities Transitway	Metropolitan Grove	COMSAT		2020	Construct				
24	MTA	Corridor Cities Transitway	Shady Grove	Metropolitan Grove		2012	Construct				

Strikeout - Deletion/Change

Bold - New/Change

Significant Changes For the 2003 CLRP and FY 2004 - 2009 TIP

DRAFT 10/08/03

ID	Agency	Facility	From/At	To	Complete Date	Improvement	Fac. Type		# Lanes					
							From	To	From	To				
VIRGINIA														
1	VDOT	Dulles Greenway	VA7/15 Bypass	Goose Creek Bridge		2006	Widen	1	1	4	6			
2	VDOT	Dulles Greenway	Goose Creek Bridge	VA 901 (Claiborne Parkway)		2004	Widen	1	1	4	6			
3	VDOT	I-395 HOV Connection	at Seminary Road			WITHDRAWN FROM PLAN								
4	VDOT	US 1 (HOV Lanes) w/ bus/right-turn lanes	Route 235 North	I-495		2025	Widen	2	2	6	8			
5	VDOT	US 29	VA 898 (Old Centerville Road)	WCL of Fairfax County		2003	2010	Study	Construct	2	2	4	6	
6	VDOT	US 50	Arlington County/Fairfax County Line	Washington Blvd.		2020	2015	Upgrade	Reconstruct	2	4	2	6	6
7	VDOT	US 50	Pershing Drive	Ft. Myer Drive		2020	2015	Upgrade	Reconstruct	2	4	2	6	6
8	VDOT	VA 7	Route 9	Market Street (Leesburg)		2004	2015	Study	Widen/Upgrade	2	1	4	4	6
9														
10	VDOT	VA 7 (King Street) - RR underpass	Commonwealth Ave.	Russell Rd.		WITHDRAWN FROM PLAN								
11	VDOT	VA 28 Bypass 411 (Tri-County Parkway)	I-66	VA 620@VA 613		2004	2020	Study	Construct	-	2	-	4	
12	VDOT	VA 641 (Old Bridge Rd.)	VA 3000 (Prince William Parkway)	VA 640 (Minnieville Rd.)		WITHDRAWN FROM PLAN								
13	VDOT	VA 7100 (Fairfax Co Pkwy HOV)	I-66	VA 7735 (Fair Lakes Pkwy)		2010		Upgrade /	Widen	2	5	6	6	6+2
14	VDOT	VA 7100 (Fairfax Co Pkwy HOV)	VA 7735 (Fair Lakes Pkwy)	US 50		2015	2010	Widen		5	5	4	6	4+2
15	VDOT	VA 7100 (Fairfax Co Pkwy HOV)	US 50	VA 5320 (Sunrise Valley Dr.)		2015	2010	Widen		5	5	4	6	4+2
16	VDOT	Proposed Metro and VRE Station(s)	@ Potomac Yards			2010	2015	Construct						
17	VDOT	Wilson Blvd.	N. Frederick	George Mason Drive		2010	2004	Widen	Reconstruct	2	2	4	6	4
18	VDOT	Wilson Blvd.	N. Quincy St.	Washington Blvd.		2020	2010	Widen	Reconstruct	2	2	4	6	4
19*	VDOT	US 50 (Middleburg Bypass)	.4 miles west of Middleburg west city limit	US 50 east of Middleburg		WITHDRAWN FROM PLAN								
20*	VDOT	US 50	Middleburg Bypass	VA 616 (Coshen Road)		WITHDRAWN FROM PLAN								
21	FAMPO	I-95 HOV Extension	Prince William County Line	VA 610		2015	Construct	2	1	4	2			

Strikeout - Correction/Deletion

Bold - New/Change

* This project was withdrawn from the CLRP by the TPB at their May 21, 2003 meeting.

ATTACHMENT B

**Summary of Intermediate Employment Forecasts
Round 6.3 Cooperative Forecasts
(Thousands)**

JURISDICTION	1990	1995	2000	2005	2010	2015	2020	2025	2030	2000 to 2030		Regional Share
										Number	% Change	
District of Columbia	747.3	701.9	678.0	720.4	752.0	783.7	807.1	831.2	831.2	153.2	22.6%	11.7%
Arlington County	183.1	195.8	201.7	209.7	236.0	255.0	274.1	293.2	301.9	100.2	49.7%	7.6%
City of Alexandria	93.2	91.9	98.6	104.1	120.7	128.3	137.0	141.9	148.1	49.5	50.3%	3.8%
Central Jurisdictions	1,023.6	989.6	978.3	1,034.2	1,108.7	1,167.0	1,218.2	1,266.3	1,281.2	302.9	31.0%	23.1%
Montgomery County (1)	466.0	462.5	545.0	585.0	630.0	660.0	680.0	695.0	705.0	160.0	29.4%	12.2%
Rockville (2)	56.9	62.7	68.7	80.6	92.8	98.3	101.3	102.4	103.5	34.8	50.7%	2.7%
Prince George's County	310.4	301.3	327.5	357.9	399.9	426.4	465.0	516.8	550.0	222.5	67.9%	17.0%
Fairfax County (3)	403.7	459.6	532.8	595.0	653.2	678.4	708.5	736.5	758.9	226.1	42.4%	17.3%
City of Fairfax	26.9	29.7	32.9	33.1	33.9	33.9	33.9	33.8	33.8	0.9	2.7%	0.1%
City of Falls Church	9.2	9.3	9.4	9.5	10.0	10.3	10.5	10.6	10.7	1.3	13.8%	0.1%
Inner Suburbs	1,216.1	1,262.4	1,447.6	1,580.5	1,727.0	1,809.0	1,897.9	1,992.7	2,058.4	610.8	42.2%	46.6%
Loudoun County	39.3	53.2	87.0	109.9	137.1	166.2	195.3	224.0	253.6	166.6	191.5%	12.7%
Prince William County	68.8	78.0	91.6	106.3	124.0	139.4	152.8	164.4	173.5	81.9	89.4%	6.3%
City of Manassas	17.2	18.5	19.9	21.5	23.0	23.7	24.1	24.1	24.2	4.3	21.6%	0.3%
City of Manassas Park	2.3	2.5	2.7	3.0	4.7	4.9	5.1	5.2	5.2	2.5	92.6%	0.2%
Calvert County (4)	18.1	21.5	25.9	29.4	32.9	33.7	34.5	35.1	35.6	9.7	37.5%	0.7%
Charles County (4)	38.7	44.6	50.1	56.5	62.9	64.8	66.8	67.9	69.1	19.0	37.9%	1.5%
Frederick County	54.0	68.0	99.7	109.2	120.7	134.6	148.5	162.5	177.8	78.1	78.3%	6.0%
Stafford County (5)	11.0	13.9	25.3	31.8	38.4	43.8	49.2	54.5	59.7	34.4	136.0%	2.6%
Anne Arundel County (6)	249.4	258.3	291.7	302.0	312.0	317.5	322.0	326.0	330.1	38.4	13.2%	n/a
Howard County (6)	106.3	123.6	160.0	180.0	200.0	215.0	230.0	245.0	249.9	89.9	56.2%	n/a
Outer Suburbs (6)	249.4	300.2	402.2	467.6	543.7	611.1	676.3	737.7	798.7	396.5	98.6%	30.3%
Northern Virginia	854.7	952.4	1,101.9	1,223.9	1,381.0	1,483.9	1,590.5	1,688.2	1,769.6	667.7	60.6%	51.0%
Suburban Maryland (6)	887.1	897.9	1,048.2	1,138.0	1,246.4	1,319.5	1,394.8	1,477.3	1,537.5	489.3	46.7%	37.3%
REGIONAL TOTAL (6)	2,489.1	2,552.2	2,828.1	3,082.3	3,379.4	3,587.1	3,792.4	3,996.7	4,138.3	1,310.2	46.3%	100.0%

(1) Forecasts for years 2000 to 2030 include all of Takoma Park.

(2) Included in Montgomery County total.

(3) Totals for all years include Fairfax County Government employees working in the Massey Complex.

(4) Tri-County Council for Southern Maryland develops ten-year incremental population, housing unit and employment forecasts for Calvert County, Charles County and St. Mary's County.

(5) Source: Rappahannock Area Development Commission (RADCO), March 2003.

(6) Baltimore Metropolitan Council (BMC) Round 5-D Forecasts (2000 to 2025) for Anne Arundel and Howard counties are shown for reference purposes only and are not included in any other totals. Howard County and Anne Arundel County provided 2000 to 2025 projections and the Metropolitan Washington Council of Governments extrapolated their data to 2030. The official forecasts for Anne Arundel County for 2030 will not be available until January 2004.

**Summary of Intermediate Population Forecasts
Round 6.3 Cooperative Forecasts
(Thousands)**

JURISDICTION	1990	1995	2000	2005	2010	2015	2020	2025	2030	2000 to 2030		Regional Share
										Number	% Change	
District of Columbia (1)	606.9	554.3	572.1	607.0	627.0	673.7	688.1	702.4	702.4	130.3	22.8%	8.4%
Arlington County	170.9	187.9	189.5	197.4	202.5	209.1	215.5	219.5	221.9	32.4	17.1%	2.1%
City of Alexandria	111.2	117.3	128.3	136.5	142.9	145.9	147.8	150.0	151.7	23.4	18.2%	1.5%
Central Jurisdictions	889.0	859.4	889.9	940.9	972.4	1,028.7	1,051.4	1,071.9	1,076.0	186.1	20.9%	12.0%
Montgomery County (2)	757.0	810.0	873.3	925.0	975.0	1,020.0	1,050.0	1,070.0	1,080.0	206.7	23.7%	13.4%
Rockville (3)	44.8	47.0	47.4	53.7	60.4	62.8	63.3	63.5	64.4	17.0	35.9%	1.1%
Prince George's County	729.3	767.0	808.0	856.6	881.1	907.7	932.3	952.1	967.8	159.8	19.8%	10.3%
Fairfax County (4)	818.6	879.4	969.8	1,045.0	1,114.1	1,149.8	1,174.6	1,187.4	1,197.4	227.6	23.5%	14.7%
City of Fairfax	19.6	20.4	22.9	23.5	24.1	24.4	24.7	24.5	24.3	1.4	6.1%	0.1%
City of Falls Church	9.6	10.0	10.4	10.6	11.3	11.6	11.9	12.1	12.2	1.8	17.3%	0.1%
Inner Suburbs	2,334.1	2,486.8	2,684.4	2,860.7	3,005.6	3,113.5	3,193.5	3,246.1	3,281.7	597.3	22.3%	38.6%
Loudoun County	86.1	112.8	169.6	239.3	300.4	351.2	393.7	423.0	441.9	272.3	160.6%	17.6%
Prince William County	215.7	249.9	280.8	339.9	376.2	400.6	414.8	425.9	433.1	152.3	54.2%	9.8%
City of Manassas	28.0	32.0	35.1	36.2	36.9	37.0	37.1	37.4	37.5	2.4	6.8%	0.2%
City of Manassas Park	6.7	7.6	10.3	14.8	15.3	15.5	15.7	15.7	15.8	5.5	53.4%	0.4%
Calvert County (5)	51.4	63.9	74.6	80.6	86.6	91.1	95.6	100.0	104.4	29.8	39.9%	1.9%
Charles County (5)	101.2	111.1	120.5	134.0	147.4	165.2	183.0	194.0	205.0	84.5	70.1%	5.5%
Frederick County	150.2	174.2	195.3	216.6	238.3	260.0	281.9	299.6	324.6	129.3	66.2%	8.4%
Stafford County (6)	61.2	80.2	92.5	107.1	121.7	136.4	151.0	165.7	180.4	87.9	95.0%	5.7%
Anne Arundel County (7)	427.2	459.7	489.7	520.0	532.2	542.5	552.7	563.0	572.0	82.3	16.8%	n/a
Howard County (7)	187.3	220.0	250.7	261.7	274.2	286.2	294.6	296.8	292.1	41.4	16.5%	n/a
Outer Suburbs (7)	700.5	831.8	978.7	1,168.5	1,322.8	1,457.0	1,572.8	1,661.3	1,742.7	764.0	78.1%	49.4%
Northern Virginia	1,527.7	1,697.5	1,909.2	2,150.3	2,345.4	2,481.5	2,586.8	2,661.2	2,716.2	807.0	42.3%	52.2%
Suburban Maryland (7)	1,789.0	1,926.2	2,071.7	2,212.8	2,328.4	2,444.0	2,542.8	2,615.7	2,681.8	610.1	29.4%	39.4%
REGIONAL TOTAL (7)	3,923.6	4,178.0	4,553.0	4,970.1	5,300.8	5,599.2	5,817.7	5,979.3	6,100.4	1,547.4	34.0%	100.0%

- (1) The Round 6.3 population and household forecasts for the District of Columbia reflect Census 2000 counts which showed the city's population to be higher than estimated in Round 6.2.
- (2) Forecasts for years 2000 to 2030 include all of Takoma Park.
- (3) Included in Montgomery County total.
- (4) Includes Fairfax County group quarters population in the Massey Complex.
- (5) Tri-County Council for Southern Maryland develops ten-year incremental population, housing unit and employment forecasts for Calvert County, Charles County and St. Mary's County.
- (6) Source: Rappahanock Area Development Commission (RADCO), March 2003. The estimates for 2010, 2020 and 2030 are control totals provided by the Virginia Employment Commission (VEC) and should only be used for transportation planning purposes. Incremental five-year estimates (2005, 2015, and 2025) have been developed by MWCOC for the purpose of transportation modeling and air quality analysis.
- (7) Baltimore Metropolitan Council (BMC) Round 5-D Forecasts (2000 to 2025) for Anne Arundel and Howard counties are shown for reference purposes only and are not included in any other totals. Howard County and Anne Arundel County provided 2000 to 2025 projections and the Metropolitan Washington Council of Governments extrapolated their data to 2030. The official forecasts for Anne Arundel County for 2030 will not be available until January 2004.

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**Summary of Intermediate Household Forecasts
Round 6.3 Cooperative Forecasts
(Thousands)**

JURISDICTION	1990	1995	2000	2005	2010	2015	2020	2025	2030	2000 to 2030		Regional Share
										Number	% Change	
District of Columbia (1)	249.6	232.1	248.3	263.9	272.2	292.9	298.7	304.4	304.4	56.1	22.6%	8.7%
Arlington County	78.5	86.9	86.4	90.9	94.6	98.7	102.5	104.9	106.2	19.8	22.9%	3.1%
City of Alexandria	53.3	56.4	61.9	66.2	70.0	71.8	73.0	74.3	75.3	13.4	21.6%	2.1%
Central Jurisdictions	381.4	375.4	396.6	421.0	436.8	463.4	474.2	483.6	485.9	89.3	22.5%	13.9%
Montgomery County (2)	282.0	299.0	324.6	346.5	370.0	390.0	405.0	415.0	420.0	95.4	29.4%	14.9%
Rockville (3)	15.7	16.1	17.2	20.0	22.8	24.0	24.2	24.3	24.7	7.5	43.6%	1.2%
Prince George's County	258.0	278.1	288.6	304.5	319.0	333.6	346.7	359.6	369.8	81.2	28.1%	12.7%
Fairfax County	292.3	317.0	350.7	381.2	408.7	421.8	430.5	435.0	438.4	87.7	25.0%	13.7%
City of Fairfax	7.4	7.7	8.5	9.0	9.3	9.4	9.5	9.6	9.7	1.2	14.1%	0.2%
City of Falls Church	4.2	4.4	4.5	4.6	4.9	5.1	5.2	5.3	5.4	0.9	20.0%	0.1%
Inner Suburbs	843.9	906.2	976.9	1,045.8	1,111.9	1,159.9	1,196.9	1,224.5	1,243.3	266.4	27.3%	41.5%
Loudoun County	30.7	40.9	59.9	84.9	106.6	124.6	139.6	150.0	156.7	96.8	161.6%	15.1%
Prince William County	69.7	82.2	94.6	113.4	127.3	137.2	143.4	148.3	152.1	57.5	60.8%	9.0%
City of Manassas	9.5	13.4	11.8	12.3	12.7	13.1	13.2	13.5	13.6	1.8	15.3%	0.3%
City of Manassas Park	2.2	2.5	3.3	4.2	4.2	4.3	4.3	4.3	4.3	1.0	8.5%	0.2%
Calvert County (4)	17.0	21.1	25.4	27.3	29.1	31.0	33.0	34.8	36.6	11.2	44.1%	1.7%
Charles County (4)	33.0	36.3	41.7	46.5	51.3	58.9	66.4	71.3	76.1	34.4	82.5%	5.4%
Frederick County	52.6	62.4	70.1	76.2	84.7	93.2	101.7	110.1	120.2	50.1	71.5%	7.8%
Stafford County (5)	19.4	26.9	30.7	36.1	41.4	46.9	52.4	58.0	63.5	32.8	106.8%	5.1%
Anne Arundel County (6)	149.1	162.7	178.7	193.1	202.1	210.1	217.0	223.2	229.8	51.1	28.6%	n/a
Howard County (6)	68.3	81.2	91.0	100.0	107.5	115.0	121.0	121.7	121.7	30.7	33.7%	n/a
Outer Suburbs (6)	234.0	285.6	337.5	400.9	457.3	509.2	554.0	590.3	623.1	285.6	84.6%	44.5%
Northern Virginia	567.2	638.2	712.3	802.8	879.7	932.9	973.6	1,003.2	1,025.2	312.9	43.9%	48.8%
Suburban Maryland (6)	642.5	696.9	750.4	801.0	854.1	906.7	952.8	990.8	1,022.7	272.3	36.3%	42.5%
REGIONAL TOTAL (6)	1,459.3	1,567.2	1,711.0	1,867.7	2,006.0	2,132.5	2,225.1	2,298.4	2,352.3	641.3	37.5%	100.0%

(1) The Round 6.3 population and household forecasts for the District of Columbia reflect Census 2000 counts which showed the city's population to be higher than estimated in Round 6.2.

(2) Forecasts for years 2000 to 2030 include all of Takoma Park.

(3) Included in Montgomery County total.

(4) Tri-County Council for Southern Maryland develops ten-year incremental population, housing unit and employment forecasts for Calvert County, Charles County and St. Mary's County.

(5) Source: Rappahannock Area Development Commission (RADCO), March 2003.

(6) Baltimore Metropolitan Council (BMC) Round 5-D Forecasts (2000 to 2025) for Anne Arundel and Howard counties are shown for reference purposes only and are not included in any other totals. Howard County and Anne Arundel County provided 2000 to 2025 projections and the Metropolitan Washington Council of Governments extrapolated their data to 2030. The official forecasts for Anne Arundel County for 2030 will not be available until January 2004.

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ATTACHMENT C

Table 1. Comparison of HHs, Employment, Vehicle Trips and VMTs between '05 SIP and '05 Conformity (Part 1)
Version 2.1C Model; 2,191 Zones; LU 6.3 Preliminary for 05 SIP and LU 6.3 Final for 05 Conformity

Jurisdiction	Households				Employment			
	SIP	Conformity	Difference	% Difference	SIP	Conformity	Difference	% Difference
District of Columbia	263,937	263,937	0	0.00%	720,407	720,407	0	0.00%
Montgomery Co., MD	343,926	343,849	-77	-0.02%	581,558	581,429	-129	-0.02%
Prince George's Co., MD	307,163	307,143	-20	-0.01%	361,296	361,461	165	0.05%
Arlington Co., VA	90,900	90,871	-29	-0.03%	209,644	209,683	39	0.02%
City of Alexandria, VA	66,225	66,194	-31	-0.05%	104,094	104,057	-37	-0.04%
Fairfax Co., VA	394,273	395,433	1,160	0.29%	636,897	635,248	-1,649	-0.26%
Loudoun Co., VA	84,905	84,855	-50	-0.06%	109,878	109,926	48	0.04%
Prince William Co., VA	130,107	129,934	-173	-0.13%	130,106	130,846	740	0.57%
Frederick Co., MD	76,221	76,223	2	0.00%	109,206	109,206	0	0.00%
Howard Co., MD	108,600	99,950	-8,650	-7.97%	153,105	180,010	26,905	17.57%
Anne Arundel Co., MD	188,500	193,143	4,643	2.46%	289,796	301,990	12,194	4.21%
Charles Co., MD	51,975	46,497	-5,478	-10.54%	56,657	56,451	-206	-0.36%
Carroll Co., MD	58,201	57,450	-751	-1.29%	65,797	73,516	7,719	11.73%
Calvert Co., MD	29,498	27,258	-2,240	-7.59%	29,725	29,397	-328	-1.10%
St. Mary's Co., MD	32,926	33,542	616	1.87%	58,514	55,753	-2,761	-4.72%
King George Co., VA	5,830	7,338	1,508	25.87%	9,886	11,253	1,367	13.83%
City of Fredericksburg, VA	8,520	9,951	1,431	16.80%	28,757	26,645	-2,112	-7.34%
Stafford Co., VA	36,530	36,060	-470	-1.29%	28,957	31,838	2,881	9.95%
Spotsylvania Co., VA	18,880	29,684	10,804	57.22%	20,140	27,224	7,084	35.17%
Fauquier Co., VA	23,311	23,303	-8	-0.03%	19,722	19,722	0	0.00%
Clarke Co., VA	4,948	5,438	490	9.90%	4,722	4,722	0	0.00%
Jefferson Co., WVA	16,974	18,295	1,321	7.78%	14,769	14,769	0	0.00%

MSA

DC	263,937	263,937	0	0.00%	720,407	720,407	0	0.00%
VA	802,940	803,347	407	0.05%	1,219,576	1,221,598	2,022	0.17%
MD	808,783	800,970	-7,813	-0.97%	1,138,442	1,137,944	-498	-0.04%
MSA Total	1,875,660	1,868,254	-7,406	-0.39%	3,078,425	3,079,949	1,524	0.05%
Total	2,342,350	2,346,348	3,998	0.17%	3,743,633	3,795,553	51,920	1.39%

* The Compaq computer was used to execute '05 SIP model run while the HP Workstation was used to '05 Conformity run.

**Summarized from final trip tables (I2AM.VTT, I2PM.VTT & I2OP.VTT)

Table 1. Comparison of HHs, Employment, Vehicle Trips and VMTs between '05 SIP and '05 Conformity (Part 2)
Version 2.1C Model; 2,191 Zones; LU 6.3 Preliminary for 05 SIP and LU 6.3 Final for 05 Conformity

Jurisdiction	Vehicle Trips				VMTs (in 000s)			
	SIP	Conformity	Difference	% Difference	SIP	Conformity	Difference	% Difference
District of Columbia	1,491,709	1,499,152	7,443	0.50%	10,203,832	10,078,685	-125,147	-1.23%
Montgomery Co., MD	3,187,258	3,187,779	521	0.02%	22,905,207	22,881,162	-24,045	-0.10%
Prince George's Co., MD	2,450,236	2,418,810	-31,426	-1.28%	24,364,260	24,032,742	-331,518	-1.36%
Arlington Co., VA	712,409	724,344	11,935	1.68%	4,820,365	4,781,395	-38,970	-0.81%
City of Alexandria, VA	476,474	471,062	-5,412	-1.14%	2,432,012	2,406,335	-25,677	-1.06%
Fairfax Co., VA	3,746,030	3,681,948	-64,082	-1.71%	30,196,102	29,916,436	-279,666	-0.93%
Loudoun Co., VA	728,174	742,964	14,790	2.03%	6,466,164	6,452,091	-14,073	-0.22%
Prince William Co., VA	950,831	946,586	-4,245	-0.45%	8,640,213	8,636,545	-3,668	-0.04%
Frederick Co., MD	666,632	659,279	-7,353	-1.10%	8,783,793	8,738,423	-45,370	-0.52%
Howard Co., MD	744,169	738,271	-5,898	-0.79%	12,288,771	11,794,275	-494,496	-4.02%
Anne Arundel Co., MD	1,548,340	1,594,599	46,259	2.99%	14,941,340	15,252,348	311,008	2.08%
Charles Co., MD	421,880	406,570	-15,310	-3.63%	2,738,491	2,649,844	-88,647	-3.24%
Carroll Co., MD	425,806	427,746	1,940	0.46%	3,275,273	3,294,883	19,610	0.60%
Calvert Co., MD	245,920	236,666	-9,254	-3.76%	1,559,577	1,555,694	-3,883	-0.25%
St. Mary's Co., MD	309,088	304,100	-4,988	-1.61%	1,804,395	1,760,785	-43,610	-2.42%
King George Co., VA	48,943	55,365	6,422	13.12%	695,724	734,918	39,194	5.63%
City of Fredericksburg, VA	114,619	114,233	-386	-0.34%	362,796	385,752	22,956	6.33%
Stafford Co., VA	231,159	254,847	23,688	10.25%	4,130,106	4,324,263	194,157	4.70%
Spotsylvania Co., VA	166,245	240,245	74,000	44.51%	1,909,300	1,974,155	64,855	3.40%
Fauquier Co., VA	144,765	143,582	-1,183	-0.82%	2,736,651	2,796,087	59,436	2.17%
Clarke Co., VA	41,093	40,725	-368	-0.90%	815,488	831,513	16,025	1.97%
Jefferson Co., WVA	135,677	138,360	2,683	1.98%	1,262,614	1,269,232	6,618	0.52%

MSA

DC	1,491,709	1,499,152	7,443	0.50%	10,203,832	10,078,685	-125,147	-1.23%
VA	6,845,077	6,821,751	-23,326	-0.34%	56,684,962	56,517,065	-167,897	-0.30%
MD	6,971,926	6,909,104	-62,822	-0.90%	60,351,328	59,857,865	-493,463	-0.82%
MSA Total	15,308,712	15,230,007	-78,705	-0.51%	127,240,122	126,453,615	-786,507	-0.62%
Total	18,987,457	19,027,233	39,776	0.21%	167,332,474	166,547,563	-784,911	-0.47%

* The Compaq computer was used to execute '05 SIP model run while the HP Workstation was used to '05 Conformity run.

**Summarized from final trip tables (I2AM.VTT, I2PM.VTT & I2OP.VTT)

ATTACHMENT D

PREVIOUSLY IMPLEMENTED TERMS
TRANSPORTATION EMISSION REDUCTION MEASURES (TIP)
 Credited in Air Quality Conformity Analyses (calendar years 1993-2002)
 (TRACKING SHEET)

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

ID	CREDIT TAKEN	TIP CREDITED	AGENCY	PROJECT	IMPLEMENTATION STATUS				ORIGINAL COMPLETION DATE	ACTUAL COMPLETION DATE	TONS/DAY REDUCTION CREDITED								Project Category *
					FULL	SCALED-BACK	UNDER-WAY	REMOVED			2005		2015		2025		2030		
											VOC	NOX	VOC	NOX	VOC	NOX	VOC	NOX	
1	X	1994-99 TIP	MDOT	Signal Systems - MD 3, MD 450 to Waugh Chapel	X				1994	1996	0.000	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	TR
2	X	1994-99 TIP	MDOT	Signal Systems - MD 450, 56th to MD 564	X				1994	1998	0.003	-0.003	0.0014	-0.0014	0.0012	-0.0008	0.0012	-0.0007	TR
3	X	1994-99 TIP	MDOT	Signal Systems - MD 193, Rhode Island to Hanover	X				1994	1998	0.002	-0.003	0.0009	-0.0014	0.0008	-0.0004	0.0008	-0.0003	TR
4	X	1994-99 TIP	MDOT	Signal Systems - MD 197, S. Laurel to Clubhouse	X				1994	1998	0.002	-0.002	0.0005	-0.0007	0.0000	-0.0004	0.0000	-0.0003	TR
5	X	1994-99 TIP	MDOT	Signal Systems - MD 5, 15th to Metzertott	X				1994	1997	0.002	-0.002	0.0009	-0.0007	0.0008	-0.0004	0.0008	-0.0003	TR
6	X	1994-99 TIP	MDOT	Signal Systems - Marlow Heights to MD 637	X				1994	1998	0.001	-0.002	0.0005	-0.0007	0.0004	-0.0004	0.0004	-0.0003	TR
7		1994-99 TIP	MDOT	Safety and Geometric Improvements				X	1994	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
8		1994-99 TIP	MDOT	Park & Ride Lot - MD 355/ MD 187				X	1993	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
9	X	1994-99 TIP	MDOT	Park & Ride Lot - MD 210/ MD 373				X	2000	2003	0.001	0.003	0.0005	0.0013	0.0004	0.0006	0.0004	0.0006	C
11		1994-99 TIP	MDOT	Germantown Garage Parking Exp. (add 1000 spaces)				X			n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
12	X	1994-99 TIP	VDOT	Signal Systems	X				1994	97-00	0.437	-0.322	0.2074	-0.1357	0.1551	-0.0722	0.1525	-0.0655	TR
14	X	1994-99 TIP	VDOT	Ridesharing (Regional & PRTC)				X		ongoing	0.061	0.141	0.0289	0.0672	0.0217	0.0424	0.0213	0.0402	C
15	X	1994-99 TIP	LOUD	VA 28 Corridor Park & Ride Lot (add 100 spaces)	X				1995	1995	0.001	0.003	0.0005	0.0013	0.0004	0.0009	0.0004	0.0009	C
16	X	1994-99 TIP	PRTC	VRE Signalization	X					Summer 97	0.007	0.021	0.0033	0.0099	0.0024	0.0069	0.0023	0.0065	C
17	X	1994-99 TIP	PRTC	VRE Locomotive Purchase (2)	X				1994	1995	0.018	0.048	0.0084	0.0233	0.0063	0.0159	0.0062	0.0151	C
18	X	1994-99 TIP	PRTC	PRTC Feeder Vehicle Purchase	X				1994	1994	0.009	0.017	0.0042	0.0081	0.0031	0.0056	0.0031	0.0053	C
19		1994-99 TIP	PRTC	VRE Woodbridge Parking Expansion (add 500 spaces)				X			n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
20	X	1994-99 TIP	ALEX	King St. Metrorail access improvements				X			n/a	0.002	0.003	0.0009	0.0013	0.0008	0.0009	0.0008	C
21	X	1994-99 TIP	WMATA	WMATA Bus Replacement (45 buses)	X				1995	1995	0.017	0.065	0.000	0.000	0.000	0.000	0.0000	0.0000	SP
22		1995-00 TIP	MDOT	Park & Ride Lot - I-70 at Walser Dr. (new, 900+ spaces)				X	1997	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
23		1995-00 TIP	MDOT	Park & Ride Lot - MD 117/ MD 118 (new, 75 spaces)				X	1996	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
24		1995-00 TIP	MDOT	Park & Ride Lot - I-270/ MD 80 (add 100 spaces)				X	1996	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
25	X	1995-00 TIP	MDOT	Park & Ride Lot - Brunswick MARC (add 300 spaces)	X					1999	0.010	0.029	0.0047	0.0143	0.0031	0.0090	0.0031	0.0290	C
26	X	1995-00 TIP	MDOT	Signal Systems - MD 202, 57th Ave. to Fire House Rd.	X				1995	1996									TR
27	X	1995-00 TIP	MDOT	Signal Systems - MD 4, Forestville Rd. to Shadyside Dr.	X				1995	1998									TR
28	X	1995-00 TIP	MDOT	Signal Systems - US 1, Ritz Way to Murkirk Rd.	X				1995	1997									TR
29	X	1995-00 TIP	MDOT	Signal Systems - MD 193, Hanover Pkwy to Prospect Hill Rd.	X				1995	1996									TR
30	X	1995-00 TIP	MDOT	Signal Systems - MD 212, Cherry Hill Rd. to Old Gunpdr. Rd.	X				1995	1996									TR
31	X	1995-00 TIP	MDOT	Signal Systems - MD 198, Van Dusen Rd. to US 1	X				1995	1998									TR
32		1995-00 TIP	MDOT	Signal Systems - MD 450, MD 197 to Race Track Rd.	X				1995	2000									TR
33		1995-00 TIP	MDOT	Signal Systems - MD 450, MD 564 to Carter Ave.				X	1995	n/a							n/a	n/a	-
34		1995-00 TIP	MDOT	Signal Systems - MD 450, US 1 Alt. to MD 202				X	1995	n/a							0.0000	0.0000	TR
35		1995-00 TIP	MDOT	Signal Systems - MD 458, MD 414 to Walker Mill Rd.				X	1995	n/a							n/a	n/a	-
36	X	1995-00 TIP	MDOT	Signal Systems - MD 214, MD 193 to Campus Way	X				1996	1996									TR
37		1995-00 TIP	MDOT	Signal Systems - MD 223, Steed Rd. to Dangerfield Rd.				X	1996	n/a									TR
38	X	1995-00 TIP	MDOT	Signal Systems - MD 85 Executive Way to MD 355				X	1996	n/a									TR
39	X	1995-00 TIP	MDOT	Signal Systems - MD 355, I-70 ramps to Grove Rd.				X	1996	n/a									TR
40	X	1995-00 TIP	MDOT	Signal Systems - US 301, Excalibur Rd. to Governor Bridge	X				1996	1996									TR
41	X	1995-00 TIP	MDOT	Signal Systems - US 301, MD 382 to Rosaryville Rd.	X				1996	1996									TR
42		1995-00 TIP	MDOT	Signal Systems - MD 650, Sheridan St. to Metzertott Rd.				X	1996	n/a							n/a	n/a	-
43		1995-00 TIP	MDOT	Signal Systems - MD 410, MD 212, to Taylor Ave.				X	1996	n/a							n/a	n/a	-
44		1995-00 TIP	MDOT	Signal Systems - MD 410, 62nd Ave. to Riverdale Rd.				X	1996	n/a							0.0000	0.0000	TR
45	X	1995-00 TIP	MDOT	Signal Systems - MD 202, Campus Way to Whitehouse Rd.	X				1996	n/a							0.0000	0.0000	TR
46	X	1995-00 TIP	MDOT	Signal Systems - TOTAL CREDITED PROJECTS	X				see above	see above	0.01838	-0.02119	0.0089	-0.0083	0.00643	-0.003	0.0063	-0.003	TR
47		1995-00 TIP	MDOT	Geometric Improvements				X	1995	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
48	X	1995-00 TIP	MDOT	MARC Replacement Coaches				X	1999		0.001	0.003	0.0009	0.0027	0.0012	0.0019	0.0012	0.0018	C
49	X	1995-00 TIP	MDOT	MARC Expansion Coaches				X	1999		0.008	0.024	0.0074	0.0242	0.0055	0.0153	0.0054	0.0145	C
50	X	1995-00 TIP	VDOT	Park & Ride Facilities - PRTC Public Transit Support - 1 year	X					1995				0.0000	0.0000	0.0000	0.0000	0.0000	C

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					FULL	SCALED-BACK	UNDER-WAY	REMOVED			2005		2015		2025		2030			
											VOC	NOX	VOC	NOX	VOC	NOX	VOC	NOX		
51	X	1995-00 TIP	VDOT	Alexandria Telecommuting Pilot Program			X			2001								0.0000	0.0000	C
52	X	1995-00 TIP	VDOT	Fairfax Co. TDM program expansion - 1 year program				X	2000	2001								0.0000	0.0000	C
53	X	1995-00 TIP	VDOT	Alexandria Bus Access Improvements	X					1998	0.001	0.001	0.0005	0.0004	0.0004	0.0000	0.0004	0.0000	0.0000	C
54	X	1995-00 TIP	VDOT	City of Fairfax Bus Shelters			X		1999	2001	0.000	0.001	0.000	0.000	0.000	0.000	0.0000	0.0000	0.0000	C
55	X	1995-00 TIP	VDOT	Lorton VRE Access	X					1995	0.005	0.012	0.0023	0.0058	0.0016	0.0037	0.0015	0.0035	C	
56	X	1995-00 TIP	VDOT	Cherry Hill VRE Access			X			n/a	0.006	0.021	0.0033	0.009	0.00236	0.005	0.0023	0.0047	C	
57	X	1995-00 TIP	DC	Right Turn on Red			X				0.041	0.050	0.0202	0.022	0.01647	0.011	0.0162	0.0102	TR	
58	X	1995-00 TIP	WMATA	Bus Replacement (172 buses)	X				1998	1998	0.069	0.252	0	0	0	0	0.0000	0.0000	SP	
59	X	1995-00 TIP	MCG	Shady Grove West Park and Ride			X		2010		0.0000	0.0000	0.0000	0.0045	0.0000	0.0031	0.0000	0.0030	C	
60	X	1995-00 TIP	MCG	White Oak Park and Ride			X		2010		0.0000	0.0000	0.0000	0.0090	0.0000	0.0062	0.0000	0.0059	C	
61	X	1995-00 TIP	MCG	Bicycle Facilities			X		FY99		0.003	0.002	0.0014	0.0009	0.00118	0.0006	0.0012	0.0006	C	
62	X	1995-00 TIP	MCG	Pedestrian Facilities to Metrorail			X				0.005	0.007	0.0019	0.0031	0.00157	0.0022	0.0015	0.0021	C	
63	X	1995-00 TIP	MDOT	MARC Replacement Coaches			X		1999	2000	0.004	0.010	0.0033	0.0099	0.00315	0.0062	0.0031	0.0059	C	
64	X	1995-00 TIP	MDOT	MARC Expansion Coaches			X		1999	2000	0.030	0.089	0.0284	0.0636	0.02874	0.0508	0.0283	0.0482	C	
65	X	1995-00 TIP	VDOT	VRE Park and Ride Expansion - 3800 spaces	X					1999	0.044	0.132	0.0200	0.0618	0.0154	0.0383	0.0151	0.0363	C	
66	X	1995-00 TIP	VDOT	Commuter Lots - District Wide			X		varies	varies	0.010	0.028	0.0065	0.0193	0.0063	0.0165	0.0062	0.0157	C	
67	X	1995-00 TIP	VDOT	I-66 and Stringfellow Rd. Park and Ride	X				2000	2000 end	0.009	0.017	0.0047	0.009	0.00394	0.0062	0.0039	0.0059	C	
68	X	1995-00 TIP	VDOT	Lake Ridge Park and Ride (now called Tacketts Mill lot)	X					1999/2000	0.000	0.009	0	0.0045	0	0.0031	0.0000	0.0030	C	
69	X	1995-00 TIP	VDOT	Bicycle Trails and Facilities			X		varies	varies	0.002	0.015	0.0093	0.0076	0.0075	0.0056	0.0074	0.0053	C	
70	X	1995-00 TIP	VDOT	Pedestrian Facilities to Metrorail					varies		0.000	0.001	0.0005	0.0009	0.00039	0.0006	0.0004	0.0006	C	
71	X	1995-00 TIP	VDOT	I-66 HOV access at Monument Dr.	X					1997	0.009	0.017	0.0047	0.0090	0.0004	0.0062	0.0004	0.0059	C	
72		1995-00 TIP	DC	Bicycle Facilities		X					0.022	0.017	0.0116	0.0094	0.00945	0.0069	0.0093	0.0065	C	
73	X	1995-00 TIP	REGION	COG Regional Ridesharing Support	X					on-going	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000	0.0000	C	
74	X	1995-00 TIP	REGION	M-47 Integrated Ridesharing	X					on-going	0.043	0.090	0.018	0.030	0.014	0.018	0.0139	0.0172	C	
75	X	1995-00 TIP	REGION	M-92 Telecommuting Support	X					on-going	0.316	0.744	0.131	0.243	0.105	0.150	0.1037	0.1426	C	
76		1996-01 TIP	MDOT	MD 5 / MD 373 Park and Ride				X	1999	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-	
77		1996-01 TIP	VDOT	Alexandria Landmark Transit Center					Delayed	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-	
78	X	1996-01 TIP	VDOT	Tysons Westpark Transit Center	X					1999	0.001	0.005	0.0005	0.0027	0.0004	0.0019	0.0004	0.0018	C	
79	X	1996-01 TIP	VDOT	Fairfax County Bus Shelters (30 shelters with project #85)			X		1999	Summer 2001	0.002	0.003	0.0009	0.0013	0.00079	0.0009	0.0008	0.0009	C	
80	X	1996-01 TIP	VDOT	Loudoun County Bus Shelters (4 shelters)		X			2000	Late 2001	0.001	0.003	0.0005	0.0018	0.00039	0.0012	0.0004	0.0012	C	
81	X	1996-01 TIP	VDOT	Arlington County Metrocheck Program	X				1997	Continue indefinitely	0.002	0.003	0.001	0.003	0.001	0.003	0.0004	0.0009	C	
82	X	1996-01 TIP	VDOT	Old Dominion Drive Bike Trail			X		2000	2003	0.001	0.001	0.0005	0.0004	0.00039	0.0003	0.0004	0.0003	C	
83	X	1996-01 TIP	WMATA	Bus Replacement (see line 58, above)	X					1998	credit taken in line 58, above						n/a	n/a	SP	
84		1996-01 TIP	MGC	Stamp Out Bad Bus Stops				X	1999	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-	
85	X	1996-01 TIP	VDOT	Fairfax County Bus Shelters (30 shelters with project #79)			X		1999	2001	0.001	0.001	0.0005	0.0013	0.00039	0.0009	0.0004	0.0009	C	
86	X	1996-01 TIP	VDOT	Tacketts Mill Park and Ride	X					1996	0.011	0.028	0.0051	0.0143	0.0039	0.0100	0.0039	0.0095	C	
87	X	1996-01 TIP	VDOT	Reston Bus Replacement	X					1994	0.002	0.009	0	0	0	n/a	n/a	SP		
88	X	1996-01 TIP	VDOT	Construct Left Turn Bays			X		varies		0.003	0.002	0.0014	0.0007	0.0012	0.0004	0.0012	0.0003	TR	
90	X	1996-01 TIP	REGION	M-47c Employer Outreach / Guaranteed Ride Home	X					on-going	0.560	1.043	0.2347	0.345	0.1807	0.2095	0.1777	0.1989	C	
91	X	1996-01 TIP	REGION	M-70a Bicycle Parking			X		1999		0.006	0.006	0.0047	0.0045	0.00394	0.0031	0.0039	0.0030	C	
92	X	STADIUM ANALYSIS		M-92 Telecommuting Support	combined with item #75													0.0000	0.0000	C
93	X	1997-02 TIP	PRTC	PRTC Omnlink Bus Service	X					1996	0.000	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	C	
94	X	1997-02 TIP	MCG	Lake Forest Transit Center	X				1997	1996	0.001	0.003	0.0005	0.0013	0.0004	0.0009	0.0004	0.0009	C	
95	X	1997-02 TIP	MCG	Germantown Transit Center			X		2004		0.005	0.016	0.0023	0.0085	0.00197	0.0056	0.0019	0.0053	C	
96	X	1997-02 TIP	MCG	Tulagi Pl. Park and Ride	X				1997	1995	0.001	0.003	0.0005	0.0013	0.0004	0.0009	0.0004	0.0009	C	
97	X	1997-02 TIP	MDOT	MD 5 Rel./MD 205 Park and Ride Construction	X				1999	1998	0.004	0.013	0.0014	0.0063	0.0012	0.0044	0.0012	0.0041	C	
98	X	1997-02 TIP	MDOT	I-270 / MD 80 P&R Expansion (2 lots -> 289 + 301 spaces)	X				1996	um 1999/Fall2000	0.002	0.010	0.0009	0.0049	0.0008	0.0031	0.0008	0.0030	C	

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				FULL	SCALED-BACK	UNDER-WAY	REMOVED			2005		2015		2025		2030			
										VOC	NOX	VOC	NOX	VOC	NOX	VOC	NOX		
99	X	1997-02 TIP	MDOT	Hagerstown Telework Center (Wash. MSA Benefits)	X				1997	1997	0.001	0.007	0.0005	0.0031	0.0004	0.0022	0.0004	0.0021	C
100	X	1997-02 TIP	PG	Anacostia Bicycle Trail	X				1999	1998	0.007	0.001	0.0037	0.0004	0.0031	0.0003	0.0031	0.0003	C
101	X	1997-02 TIP	MCG	Montgomery County Bus Replacement	X						0.003	0.011	0	0	0	0	0.0000	0.0000	SP
102	X	1997-02 TIP	PG	Prince George's County Bus Replacement	X				1998	1998	0.003	0.009	0	0	0	0	0.0000	0.0000	SP
103	X	1997-02 TIP	PG	Prince George's County Bus Service				X	1998	1998	0.004	0.009	0.0014	0.0040	0.0012	0.0028	0.0012	0.0027	C
104	X	1997-02 TIP	VDOT	I-66 Park and Ride at VA 234 / Portsmouth	X				1996	1996	0.009	0.024	0.0061	0.0179	0.0067	0.0159	0.0066	0.0151	C
105	X	1997-02 TIP	VDOT	Arl. Co. Transit Ridership Develop. Initiative Program	X				1998	1998	0.019	0.039	0.0088	0.0170	0.0071	0.0109	0.0070	0.0103	C
106	X	1997-02 TIP	VDOT	PRTC Employer Commuting Outreach Program	X					on going	0.002	0.000	0.001	0.000	0.001	0.000	0.001	0.000	C
107	X	1997-02 TIP	VDOT	PRTC Multimodal Strategic Marketing Implementation Plan	X					on going	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	C
108	X	1997-02 TIP	MDOT	M-103 Taxicab Replacement in Maryland				X	1999	on-going	0.080	0.268	0.145	0.215	0.123	0.150	0.312	0.481	SP
109	X	1997-02 TIP	REGION	M-70b Employer Outreach for Bicycles	X				1998	on going	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000	C
110	X	1997-02 TIP	VDOT	M-77b Vanpool Incentive Programs in Virginia				X	1999	delayed	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	C
111	X	1998-03	WMATA	Bus Replacement (108 buses)	X				1999	1999	0.045	0.162	0.000	0.000	0.000	0.000	0.0000	0.0000	SP
112	X	1998-03 TIP	MCG	Montgomery County Bus Replacement	X						0.008	0.027	0.002	0.007	0.000	0.000	0.0000	0.0000	SP
113	X	1998-03 TIP	PG	Prince George's County Bus Replacement	X				1998	1998	0.001	0.002	0.000	0.000	0.000	0.000	0.0000	0.0000	SP
114	X	1998-03 TIP	FDC	Frederick County Bus Replacement	X						0.001	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000	SP
115	X	1998-03 TIP	FDC	Frederick County Shuttles	X						0.000	0.001	0.0000	0.0004	0.0000	0.0003	0.0000	0.0003	C
116	X	1998-03 TIP	VDOT	PRTC Ridesharing	X					on-going	0.000	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	C
117	X	1998-03 TIP	VDOT	Arlington County Four Mile Run Bike Trail				X	1999		0.001	0.001	0.0005	0.0004	0.00039	0.0003	0.0004	0.0003	C
118	X	1998-03 TIP	VDOT	Northern Virginia Turn Bays				X	2000		0.001	0.002	0.0009	0.0007	0.0008	0.0004	0.0008	0.0003	TR
119	X	1998-03 TIP	VDOT	Fairfax City Bus Replacement				X	2001		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	SP
120	X	1998-03 TIP	VDOT	Alternative Fueled Vehicles		X			1999	1998	0.001	0.001	0.001	0.001	0.001	0.001	0.0010	0.0010	H
121	X	1998-03 TIP	VDOT	WMATA Bus Replacement (252 buses)	X				2001	2001	0.106	0.386	0.090	0.342	0.000	0.000	0.0000	0.0000	SP
122	X	97 & 98 TIP	REGION	M-101a Mass Marketing Campagin (Consumer)						ongoing	0.119	0.212	0.102	0.159	0.098	0.107	0.0752	0.0807	C
123	X	1999-04 TIP	MDOT	Various Park and Ride Lots(I-270/MD124, 450 & I-170/MD-75, 54 spa	X				2001/1999	2001	0.007	0.031	0.0047	0.0188	0.00394	0.0143	0.0039	0.0136	C
124	X	1999-04 TIP	MDOT	Signal Systems (197/MD-198, MD-382 TO US-301,US301)	x				2000	2002	0.011	-0.003	0.0061	-0.0021	0.00803	-0.002	0.0079	-0.0014	TR
125	X	1999-04 TIP	VDOT	Transit Center at 7 Corners					2002		0.001	0.002	0.0005	0.0009	0.00039	0.0006	0.0004	0.0006	C
126	X	1999-04 TIP	VDOT	Falls Church Clean Diesel Bus Service					2000		0.004	0.005	0.000	0.000	0.000	0.000	0.0000	0.0000	SP
127	X	1999-04 TIP	VDOT	VA 234 Bike Trail					2001		0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000	C
128	X	1999-04 TIP	VDOT	PRTC Ridesharing	X				on-going	on-going	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000	C
129		2000-05 TIP	MDOT	MD 202, MD 85, US 301 Signal Systemization				X	2001		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
130	X	1996-01 TIP	VDOT	M-14: I-66 Feeder Bus Fare Buy Down	X						0.023	0.047	0.0102	0.0206	0.00827	0.0131	0.0081	0.0124	C
131	X	2000-05 TIP	MDOT	Various park and Ride Lots	x				2002	2003	0.006	0.028	0.0043	0.0175	0.0038	0.0140	0.0038	0.0119	C
132	X	2000-05TIP	MDOT	Signal Systems	X				Varies	on-going	0.003	0.000	0.0012	0.0000	0.0007	0.0000	0.0007	0.0000	TR
133	X	2000-05TIP	VDOT	450 Spaces at Gambrill/Hooes Rds. Park and Ride				X	2002		0.006	0.015	0.0028	0.0069	0.00217	0.0043	0.0021	0.0041	C
134	X	2000-05TIP	VDOT	300 Spaces at Backlick Rd				X	2003		0.005	0.011	0.0021	0.0049	0.00148	0.0031	0.0015	0.0030	C
135	X	2000-05TIP	VDOT	Accotink-Gateway Connector Trail				X	2002		0.006	0.009	0.0028	0.0038	0.00185	0.0021	0.0018	0.0020	C
136	X	2000-05TIP	VDOT	Columbia Pike Trail				X	2000		0.006	0.007	0.0023	0.0029	0.00146	0.0016	0.0014	0.0015	C
137	X	2000-05TIP	VDOT	Lee Highway trail				X	2000		0.003	0.003	0.0012	0.0016	0.00061	0.0008	0.0006	0.0008	C
138	X	2000-05TIP	VDOT	Arlington Bus Shelter Improvements				X	2005		0.001	0.001	0.0005	0.0004	0.00024	0.0002	0.0002	0.0002	C
139	X	2000-05TIP	VDOT	Pentagon Metrostation Improvements	X					n/a	0.007	0.015	0.0033	0.0063	0.00224	0.0035	0.0022	0.0033	C
140	X	2000-05TIP	MDOT	East/West Intersection Improvements				x	2005		0.038	0.021	0.064	0.0327	0.08741	0.0355	0.0859	0.0337	C
141	X	2001-06TIP	Feds	Federal Transit/Ridesharing subsidy	X				on-going		0.094	0.164	0.0386	0.0555	0.02914	0.033	0.0286	0.0313	C
142	X	2002-07TIP	WMATA	100 CNG buses				X	2002		0.000	0.136	0.00	0.136			0.0000	0.0000	SP
143	X	2002-07TIP	WMATA	ULSD with CRT filters				X	on-going		0.210	0.000	0.43	0.000	0.43	0.000	0.4300	0.0000	H
144	X	2003-08 TIP	DC	Replace 23 Taxicabs with CNG cabs					2005		0.0177	0.031	-	-	-	-	-	-	H
145	X	2003-08 TIP	DC	D.C.Incident Response & TrafficManagement System					2005		0.0254	0.075	-	0.034	-	0.019	-	0.0168	TR
146	X	2003-08 TIP	DC	Bicycle Lane in D. C. (35 Mile) *					2005		0.0154	0.015	0.01	0.005	0.00	0.003	0.0046	0.0029	C

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				FULL	SCALED-BACK	UNDER-WAY	REMOVED			2005		2015		2025		2030			
										VOC	NOX	VOC	NOX	VOC	NOX	VOC	NOX		
147	X	2003-08 TIP	DC	Bicycle Racks in D. C. (500) *					2005		0.0021	0.002	0.00	0.001	0.00	0.000	0.0006	0.0003	C
148	X	2003-08 TIP	DC	External Bicycle Racks on WMATA Buses in D. C. (600) *					2005		0.0031	0.006	0.00	0.002	0.00	0.001	0.0010	0.0011	C
149	X	2003-08 TIP	DC	CNG Rental Cars (18) *					2005		0.00003	0.0002	-	-	-	-	-	-	SP
150	X	2003-08 TIP	DC	Sidewalks in D.C. (\$ 5 million)					2005		0.0578	0.101	0.02	0.033	0.02	0.020	0.0182	0.0192	C
151	X	2003-08 TIP	DC	CNG Refuse Haulers (2) *					2005		0.0001	0.002	0.00	0.002	-	-	-	-	H
152	X	2003-08 TIP	DC	Circulator /Feeder Bus Routes					2005		0.0211	0.036	0.01	0.012	0.01	0.007	0.0066	0.0069	C
153	X	2003-08 TIP	MDOT	Commuter Tax Credit				x	2005	n/a	0.1262	0.2219	0.05	0.074	0.04		0.0398		C
155		2003-08 TIP	MDOT	Employer Vanpool Program (WWB)				x	2005		0.0030	0.0075	0.00	0.002	0.00				C
156	X	2003-08 TIP	MDOT	Green Line Link				x	2005	n/a	0.0041	0.0085	0.00	0.003	0.00	0.002	0.0013	0.0016	C
157	X	2003-08 TIP	MDOT	Park & Ride Lots - Southern Maryland *				x	2005	2003	0.0080	0.0197	0.00	0.006	0.00	0.004	0.0026	0.0038	C
158	X	2003-08 TIP	MDOT	Prince George's County- Bus Exp				x	2005	n/a	0.0578	0.1191	0.02	0.039	0.02	0.024	0.0186	0.0228	C
159	X	2003-08 TIP	MDOT	MTA - Bus Service Expansion				x	2005	n/a	0.0131	0.0285	0.01	0.009	0.00	0.006	0.0042	0.0054	C
160	X	2003-08 TIP	MDOT	Ride- On - Super Discount				x	2005	n/a	0.0015	0.0026	0.00	0.001	0.00	0.001	0.0005	0.0005	C
161	X	2003-08 TIP	Regional	Regional Traveler Information Systems					2005		0.1596	0.9730	0.08	0.445	0.07	0.242	0.0686	0.2195	TR
162	X	2003-08 TIP	MDOT	Universal Transportation Access (MD + WMATA) *D37				x	2005	n/a	0.0259	0.0452	0.01	0.015	0.01	0.009	0.0082	0.0086	C
163	X	2003-08 TIP	MCG	Construction of 1300 additional Parking Spaces at Grosvenor Metro Garage					2005		0.0074	0.0189	0.00	0.006	0.00	0.004	0.0025	0.0036	C
164	X	2003-08 TIP	MCG	Bethesda Shuttle Bus Services					2005		0.0050	0.0087	0.00	0.003	0.00	0.002	0.0016	0.0016	C
165	X	2003-08 TIP	MCG	External Bicycle Racks on Ride-On Buses in Montgomery County					2005		0.0010	0.0017	0.00	0.001	0.00	0.000	0.0003	0.0003	C
166	X	2003-08 TIP	MCG	New CNG Powered Light Duty Vehicle fleet in the County					2005		0.00002	0.0001	-	-	-	0.000	-	-	SP
167	X	2003-08 TIP	MCG	Free Bus Service on Selected Routes on I-270					2005		0.0017	0.0030	0.00	0.001	0.00	0.001	0.0005	0.0006	C
168	X	2003-08 TIP	MCG	Annual Sidewalk Program					2005		0.0275	0.0480	0.01	0.016	0.01	0.010	0.0087	0.0091	C
169	X	2003-08 TIP	MDOT	Bethesda Breeze/International Express Metrobus				x	2005	n/a	0.0060	0.0097	0.003	0.003	0.002	0.002	0.0019	0.0018	C
170	X	2003-08 TIP	MDOT	Bethesda-8, Silver Spring Downtown Dasher and Prince Georges Co. Shuttles at 3 PNR lot				x	2005	n/a	0.0142	0.0189	0.006	0.006	0.004	0.004	0.0043	0.0036	C
171	X	2003-08 TIP	MDOT	Proposed Transportation Management District in Montgomery County (Rockville and Gaithersburg)				x	2005	n/a	0.0093	0.0142	0.004	0.005	0.003	0.003	0.0029	0.0027	C
172	X	2003-08 TIP	MDOT	Sidewalks (Bikes/Pedestrian) at / near Rail Stations	x				2005	2002	0.0150	0.0267	0.006	0.009	0.005	0.005	0.0047	0.0051	C
173	X	2003-08 TIP	MDOT	Neighborhood Sidewalks Improvements (Bike/Pedestrian)				x	2005	n/a	0.0052	0.0030	0.002	0.001	0.002	0.001	0.0015	0.0005	C
174	X	2003-08 TIP	MDOT	Neighborhood Conservation Program - Neighborhood Sidewalks Improvements (Bikes/Pedestrian)				x	2005	n/a	0.0046	0.0026	0.002	0.001	0.001	0.001	0.0013	0.0005	C
175	X	2003-08 TIP	MDOT	Maryland bus Transit Service Expansion				x	2005	n/a	0.0228	0.0586	0.009	0.019	0.008	0.012	0.0076	0.0112	C
176	X	2003-08 TIP	VDOT	Universal Transportation Access Program					2005		0.0019	0.0034	0.0008	0.001	0.00	0.001	0.0006	0.0006	C
177	X	2003-08 TIP	VDOT	Interactive Rideshare & Kiosk Initiative					2005		0.0006	0.0013	0.0003	0.000	0.00	0.000	0.0002	0.0002	C
178	X	2003-08 TIP	VDOT	Mobile Commuter Stores					2005		0.0035	0.0071	0.0014	0.002	0.00	0.001	0.0011	0.0014	C
179	X	2003-08 TIP	VDOT	Telework Incentive Program					2005		0.0012	0.0022	0.0005	0.001	0.00	0.000	0.0004	0.0004	C
180	X	2003-08 TIP	VDOT	Commuter Choice					2005		0.0015	0.0025	0.0007	0.001	0.00	0.001	0.0005	0.0005	C
181	X	2003-08 TIP	VDOT	Employer Shuttle Services					2005		0.0184	0.0301	0.0077	0.010	0.01	0.006	0.0057	0.0057	C
183	X	2003-08 TIP	VDOT	Park-and-Ride Lots					2005		0.0175	0.0382	0.0073	0.013	0.01	0.008	0.0057	0.0073	C
184	X	2003-08 TIP	VDOT	Van Start / Van Save					2005		0.0022	0.0047	0.0009	0.002	0.00	0.001	0.0007	0.0009	C
185	X	2003-08 TIP	VDOT	Metro Shuttle Bus					2005		0.0019	0.0047	0.0008	0.002	0.00	0.001	0.0006	0.0009	C
186	X	2003-08 TIP	VDOT	VRE Early (PM) Train Service					2005		0.0133	0.0277	0.0056	0.009	0.00	0.006	0.0043	0.0053	C
187	X	2003-08 TIP	VDOT	VRE Mid-Day Train Service					2005		0.0025	0.0053	0.0011	0.002	0.00	0.001	0.0008	0.0010	C
188	X	2003-08 TIP	VDOT	PRTC Express Bus Service					2005		0.0007	0.0015	0.0003	0.000	0.00	0.000	0.0002	0.0003	C
190	X	2003-08 TIP	VDOT	Employer Vanpool Program (VA)					2005		0.0015	0.0034	0.0006		0.00		0.0000		C
191	X	2003-08 TIP	VDOT	Town of Leesburg P&R Lot					2005		0.0031	0.0071	0.0013	0.002	0.00	0.001	0.0010	0.0014	C
192	X	2003-08 TIP	VDOT	District-wide P&R Lots					2005		0.0182	0.0406	0.0076	0.013	0.01	0.008	0.0059	0.0078	C
193	X	2003-08 TIP	VDOT	Additional Parking at 4 Metro stations					2005		0.0235	0.0604	0.0097	0.020	0.01	0.012	0.0078	0.0116	C

PREVIOUSLY IMPLEMENTED TERMS
TRANSPORTATION EMISSION REDUCTION MEASURES (TIP)
 Credited in Air Quality Conformity Analyses (calendar years 1993-2002)
 (TRACKING SHEET)

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

ID	CREDIT TAKEN	TIP CREDITED	AGENCY	PROJECT	IMPLEMENTATION STATUS				ORIGINAL COMPLETION DATE	ACTUAL COMPLETION DATE	TONS/DAY REDUCTION CREDITED								Project Category *
					FULL	SCALED-BACK	UNDER-WAY	REMOVED			2005		2015		2025		2030		
											VOC	NOX	VOC	NOX	VOC	NOX	VOC	NOX	
194	X	2003-08 TIP	VDOT	Loudoun County Transit Service					2005		0.022	0.0037	0.0009	0.001	0.00	0.001	0.0007	0.0007	C
195		2003-08 TIP	VDOT	VDOT - Travel Management System							-	-	-	-	-	-	-	-	C
196	X	2003-08 TIP	WMATA	64 CNG Buses (Purchased in 2001)					2005		0.0021	0.0870	0.0021	0.087	-	-	-	-	SP
197	X	2003-08 TIP	WMATA	250 CNG Buses (To be purchased in 2002)					2005		0.0083	0.3400	0.0083	0.340	-	-	-	-	SP
198	X	2003-08 TIP	WMATA	100 Engine Replacement (58 MY 1992&42 1993 MY buses)					2005		0.0230	0.1258	0.0230	0.126	-	-	-	-	SP
199	X	2003-08 TIP	WMATA	Car Sharing Program					2005		0.0013	0.0033	0.0005	0.001	0.0004	0.001	0.0004	0.0006	C
200	X	2003-08 TIP	WMATA	Bikes Racks on WMATA Buses in VA (372 Bike Racks)					2005		0.0020	0.0035	0.0008	0.001	0.0006	0.001	0.0006	0.0007	C
202		2003-08 TIP	MDOT	Fleet Replacement (state auto fleet, gas to hybrid, 250 vehicles)				x	2005		0.0055	0.013	0.0055	0.013		-	-	-	SP
203	X	2003-08 TIP	MDOT	Replace 55 Montgomery County 10 yr. old buses w/ new CNG buses				x	2005			0.286		0.286					SP
204		2003-08 TIP	MDOT	Neighborhood Bus Shuttle (5 circulator routes)				x	2005		0.0121	0.0221	0.0051	0.007	0.00	0.004	0.0038	0.0042	C
205	X	2003-08 TIP	MDOT	New Surface Parking at Transit Centers (500 spaces)				x	2005		0.0042	0.0108	0.0017	0.004	0.00	0.002	0.0014	0.0021	C
206	X	2003-08 TIP	MDOT	Additional Bike Lockers at Metro-Stations				x	2005		0.0213	0.0379	0.0090	0.013	0.01	0.008	0.0067	0.0072	C
207	X	2003-08 TIP	MDOT	Bike Facilities at PnR Lots or other similar location				x	2005		0.0150	0.0300	0.0063	0.010	0.00	0.006	0.0048	0.0057	C
208	X	2003-08 TIP	MDOT	CNG Fueling Stations				x	2005		0.1270	0.1170		-			-	-	SP
209		2003-08 TIP	MDOT	Gas cap replacements (ROP Credit)				x	2005		N/A	N/A		-		-	-	-	SP
210		2003-08 TIP	MDOT	Gas can turnover (ROP Credit)				x	2005		N/A	N/A		-		-	-	-	SP
211	X	2003-08 TIP	MDOT	External Bicycle Racks on WMATA Buses (486 MD buses)	x				2005	2002	0.0023	0.0040	0.0009	0.001	0.001	0.001	0.0007	0.0008	C
212	X	2003-08 TIP	MDOT	Bike \ Pedestrian Trail - Anacostia River Walk					2005	n/a	0.0009	0.0008	0.0004	0.000	0.000	0.000	0.0003	0.0002	C
213		2003-08 TIP	MDOT	Transit Prioritization - Queue Jumps				x	2005		0.0050	0.0068	0.0021	0.002	0.002	0.001	0.0015	0.0013	C
214	X	2003-08 TIP	MDOT	Commuter Choice Benefit/Tax Credit - Marketing Expansion				x	2005	n/a	0.0881	0.1559	0.0370	0.052	0.028	0.031	0.0278	0.0297	C
215	X	2003-08 TIP	MDOT	Improvements to Pedestrian Access in TOD areas (4 locations)				x	2005	n/a	0.0096	0.0158	0.0040	0.005	0.003	0.003	0.0030	0.0030	C
216	X	2003-08 TIP	MDOT	Telecommuting Expansion				x	2005	n/a	0.1041	0.2192	0.0435	0.072	0.034	0.044	0.0336	0.0419	C
217	X	2003-08 TIP	MDOT	Replace older Diesel Engine in Public Sector vehicles				x	2005	n/a	0.0237	0.130	0.0237	0.130		-			H
218	X	2003-08 TIP	VDOT	MV-92 Telecommuting Program - Expanded ¹					2005		0.1112	0.2341	0.05	0.077	0.036	0.047	0.0359	0.0447	C
219	X	2003-08 TIP	VDOT	MV-123 Employer Outreach for Public Sector Employees ¹					2005		0.0247	0.0430	0.01	0.014	0.008	0.009	0.0078	0.0082	C
220	X	2003-08 TIP	REGION	Signal System Optimization					2005		0.674	0.272	0.3447	0.1244	0.29446	0.0676	0.2896	0.0613	TR
											Total (Excluding Removed Projects)								
											4.714	8.550	2.651	4.144	2.140	1.659	2.280	1.893	
											0.882	0.802	0.366	0.160	0.272	0.131	0.267	0.141	
											3.833	7.749	2.285	3.984	1.868	1.528	2.013	1.752	

Actual TCM Budget 0.300 0.700

TRANSPORTATION EMISSION REDUCTION MEASURES (CLRP Projects Only)

Credited in Air Quality Conformity Analyses (calendar years 1993-2000)
(TRACKING SHEET)

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

	CREDIT TAKEN	TIP CREDITED	AGENCY	PROJECT	IMPLEMENTATION STATUS				PROJECTED	ACTUAL	TONS/DAY REDUCTION CREDITED						Project Category
					FULL	SCALED-BACK	UNDER-WAY	REMOVED	COMPLETION	COMPLETION	2015		2025		2030		
									DATE	DATE	VOC	NOX	VOC	NOX	VOC	NOX	
221	X	1995-00 TIP	REGION	M-24 Speed Limit Adherence							0.1129	0.8376	0.1285	0.5905	0.0495	0.1828	TR
222		1996-01 TIP	MGC	Rock Spring Park Pedestrian Amenities				X			0.0010	0.0040	n/a	n/a	n/a	n/a	-
223	X	1996-01 TIP	MGC	Olney Transit Center Park and Ride							0.0009	0.0036	0.0008	0.0025	0.0003	0.0007	C
224	X	1996-01 TIP	MGC	Damascus Park and Ride							0.0005	0.0018	0.0004	0.0012	0.0001	0.0003	C
225	X	1996-01 TIP	DC	M-103 Taxicab Replacement									0.3490	0.6000	0.3490	0.6000	H
226	X	STADIUM ANALYSIS		Taxicab Replacement									0.1560	0.2400	0.1560	0.2400	H
227	X	1997-02 TIP	MDOT	Shady Grove West Transit Center Park and Ride							0.0000	0.0045	0.0000	0.0031	0.0000	0.0009	C
228	X	1997-02 TIP	MGC	Olney Transit Center Park and Ride									0.0008	0.0025	0.0003	0.0007	C
229	X	1997-02 TIP	MGC	White Oak Park and Ride							0.0000	0.0090	0.0000	0.0062	0.0000	0.0017	C
230	X	1997-02 TIP	MGC	Damascus Park and Ride									0.0004	0.0009	0.0001	0.0003	C
231	X	1997-02 TIP	MGC	Four Corners Transit Center							0.0000	0.0004	0.0000	0.0003	0.0000	0.0001	C
232		1997-02 TIP	MGC	Burtonsville Transit Center				X					n/a	n/a	n/a	n/a	-
233	X	1997-02 TIP	MGC	Silver Spring Transit Access										0.0006		0.0002	C
234	X	1997-02 TIP	MGC	Shady Grove Parking Construction							0.0023	0.0085	0.0020	0.0059	0.0007	0.0017	C

PLAN TOTAL											0.117	0.865	0.638	1.454	0.556	1.029
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GRAND TOTAL (program past 2000 + plan)											2.402	4.850	2.506	2.982	2.570	2.781
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DEFINITIONS:

CREDIT TAKEN (X means emissions reduction credits taken):

TIP - Emissions credits are taken for projects being implemented, according to the progress reporting schedules provided by the implementing agencies (contained in Appendix L). No credit has been taken for projects in which only some components of the measure have been implemented. (The status of these projects will be reassessed next year).
CLRP - Credit is taken for each of these elements of the CLRP, according to the schedule provided by the implementing agency.

IMPLEMENTATION STATUS:

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

COMPLETION DATE:

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

Reflects instances where emissions reductions previously credited are no longer appropriate to the indicated forecast year, due to schedule slippage.
Delayed - Project Delayed