ITEM 11 - Information

September 21, 2005

Briefing on the Draft Air Quality Conformity Determination for the 2005 Constrained Long Range Plan (CLRP) and FY 2006-2011 Transportation Improvement Program (TIP)

Staff Recommendation: Receive briefing on the draft air quality conformity determination of the 2005 CLRP and FY 2006-2011 TIP, and on the draft 2005 CLRP and FY 2006-2011 TIP documents.

Issues: None

Background: At the July 20 meeting, the Board was briefed on the status of the draft 2005 CLRP and FY 2006-2011 TIP documents and on the revisions to the Draft Round 7.0 Forecasts approved by the MDPC for use in the associated air quality conformity analysis. These draft documents were released for public comment on September 15, 2005. The public comment period for these documents ends on October 15, 2005. The TPB is scheduled to act on these documents at its meeting on October 19, 2005.

National Capital Region Transportation Planning Board

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MEMORANDUM

September 12, 2005

To: Transportation Planning Board

From: Michael J. Clifford
Systems Planning Applications Director

Subject: Air Quality Conformity Assessment for the 2005 Update of the Constrained Long Range Plan (CLRP) and the FY2006-2011 Transportation Improvement Program (TIP)

INTRODUCTION

This memo documents summary results of the air quality conformity assessment of the 2005 CLRP and the FY2006-2011 TIP. The results are based upon the analysis contained in the September 15, 2005 draft technical report, Air Quality Conformity Determination Of The 2005 Constrained Long Range Plan And The FY2006-2011 Transportation Improvement Program For The Washington Metropolitan Region, and are being forwarded to the TPB Technical Committee for review and comment. According to the TPB's schedule for action on the plan, TIP, and conformity determination, the results will be released for public comment and interagency consultation on September 15, 2005, comments will be accepted through October 15, 2005, with action by the Board scheduled for the October 19, 2005 meeting.

BACKGROUND

On April 20, 2005 the TPB approved the scope of work and the project submissions for inclusion in the conformity analysis for the year 2005 update of the CLRP and FY2006-2011 TIP. Key technical inputs to the analysis included: Round 7 Cooperative Forecasts; the Version 2.1D #50 Travel Demand Model utilizing the new project submissions, and reflecting updated transit service and transit fares; EPA's Mobile6.2 Emissions Factor Model; and a refined Mobile Emissions Post-Processor using latest travel demand and mobile emissions planning assumptions for specific use with the Version 2.1D #50 and Mobile6 models.

The ozone precursor mobile emissions budgets used in this analysis are taken from the Metropolitan Washington Air Quality Committee's (MWAQC) Severe Area State Implementation Plan (SIP) document, *Plan to Improve Air Quality in the Washington, DC-MD-VA Region*, February 19, 2004.

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 2005 CLRP and FY2006-2011 TIP included the preparation of volatile organic compound (VOC) and nitrogen oxide (NOx) emissions inventories for specified forecast years associated with the plan and program (base year 2002 & forecast years: 2010, 2020 and 2030). Wintertime carbon monoxide (CO) analysis for conformity has also been conducted. In meeting the requirements for use of latest planning assumptions and methods, this year marked the use of the updated Round 7.0 land activity forecasts, and a modification of the transit capacity constraint input assumptions.

These inventories address a primary conformity assessment criterion to demonstrate that the plan and program adhere to the established mobile source emissions budgets. 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 committed and potential new transportation emissions reduction measures (TERM)s. These results are described in the July 20, 2005 draft report, *Transportation Emissions Reduction Measures (TERMs) Under Consideration for Conformity of the 2005 CLRP and FY 2006 - FY 2011 TIP*.

Today's memo presents a summary of results of the conformity analysis, as follows.

Plan Amendments and Program Elements

There have been a number of new projects and changes advanced for the CLRP / TIP in this year's approval cycle. Attachment A presents a listing of significant new projects since the 2004 CLRP and the FY2005-2010 TIP were approved by the Board on November 17, 2004.

Land Activity Forecasts

On July 13, 2005 COG's Metropolitan Development Policy Committee approved Round 7.0 Cooperative Forecast totals to be used for testing purposes in analysis of the CLRP and TIP. The Round 7.0 data 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 7.0 reflects the Baltimore Metropolitan Council's 'Round 6-A' adopted figures, whereas their previous input to the COG Round 6.4A forecasts was their 'Round 6' figures.

Travel Modeling Process

Using the Version 2.1D #50 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.

Emissions Factors

As with last year's conformity analysis, staff used motor vehicle emissions factors developed from EPA's MOBILE6.2 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 Fairfax County freeway data as an illustration in Exhibits 3 and 4 for VOC and NOx, respectively, were developed following execution of the model in one 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

Prior to calculation of mobile source emissions, the above (AAWDT) forecasts were first factored by seasonal adjustments (a 1.05 ozone season factor or a 0.97 winter season factor) to yield VMT appropriate to each season being analyzed. Staff then applied the Mobile6.2 emissions factors to the travel demand forecasts by season 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 2002 and 2020, and further reductions thereafter with emissions reaching about 38 tons per day for both pollutants in 2030. The results reflect the impact of the cleaner fleet (continuing fleet turnover) and related programs, with slowing VMT growth rates through time. Net emissions for each forecast year are shown as the bottom line of the summary table. Mobile source emissions are well within the mobile budgets for all forecast years.

Exhibits 6 and 7 present these VOC and NOx results in a graphical format, which perhaps illustrates even better the steady and significant downward trends occurring in both VOC and NOx emissions. Historical emissions reductions from the clean air act amendments 1990 base have been well documented in the past (especially VOC emissions which dropped from about 299 tons per day (T/D) to about 122 T/D, but NOx emissions have also dropped by nearly 100 T/D from 381 to 284 T/D). From 2002 to year 2010, VOC emissions will be cut further, nearly in half, from 122 T/D to 65 T/D. NOx emissions experience even greater reductions, from 284 T/D to 138 T/D. These reductions are largely attributable to Tier II vehicle standards, cleaner

fuels, and the heavy duty engine rule, and will continue to generate additional emissions reductions through time as fleet turnover replaces older vehicles and truck engines. 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 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 other transportation programs and projects. These benefits, estimated on an off-line basis, are also creditable in conformity analyses. Attachment C 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, shown as the bottom line of the 'TERM Tracking Sheet - Current Measures' table within the attachment, amounts to additional reductions in 2010 of 2.5 tons per day of VOC and 5.1 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 J of the full conformity report.) Combining the emissions results in Exhibit 5 with the additional reductions from TERMs would further improve the emissions budget margins for VOC and NOx.

SUMMARY

The analytical results described in this air quality assessment provide a basis for a determination by the TPB of conformity of the 2005 CLRP and the FY2006-2011 TIP.

Following: Exhibits 1-7
Attachments A-C

EXHIBIT 1

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

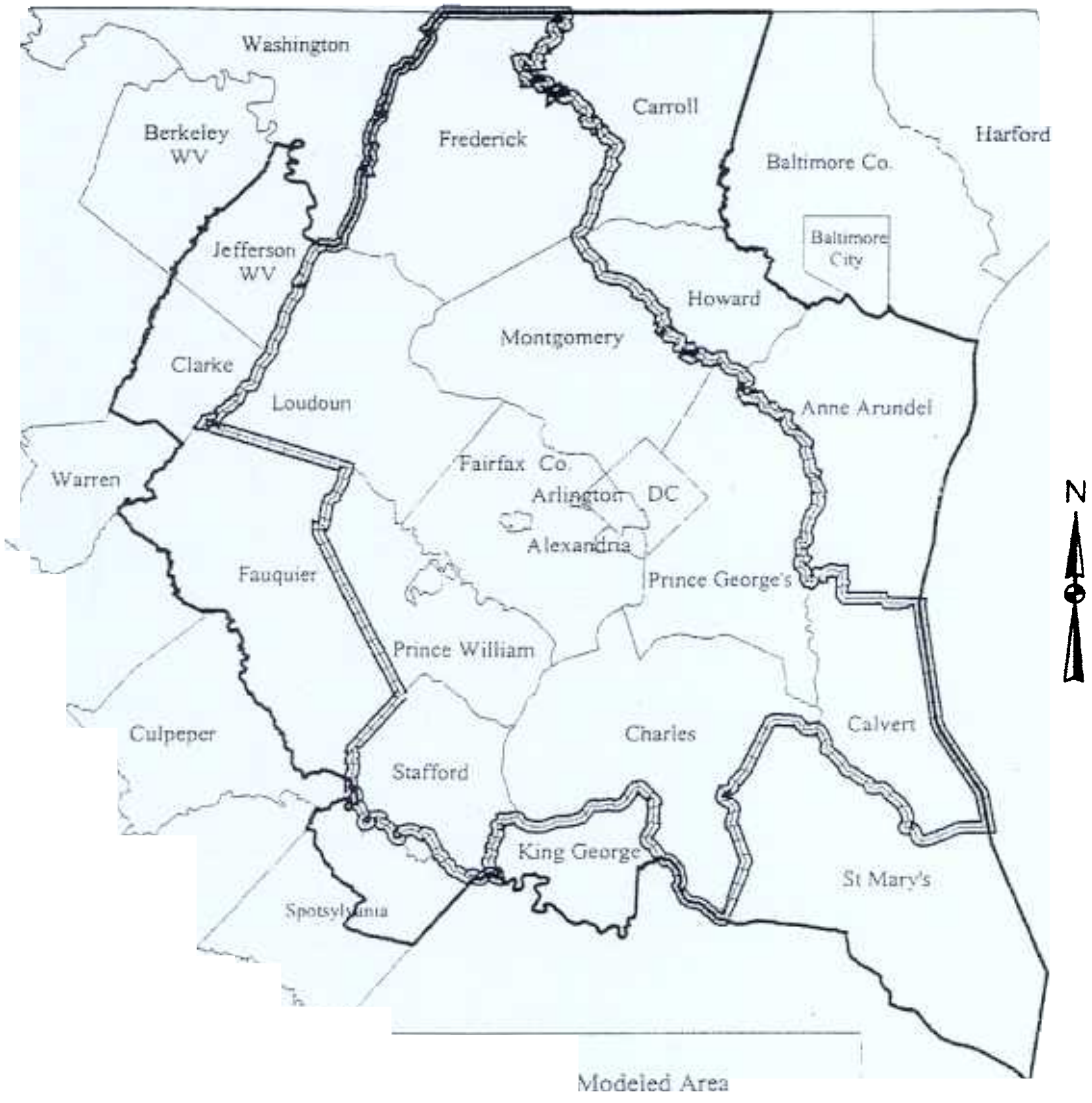


Exhibit 2
Travel Demand Summary
Modeled Area Trips and Vehicle Miles Traveled (000's)

	2002	2010	2020	2030
Transit Trips	895.0	1,024.8	1,241.7	1,346.4
Vehicle Trips	19,407.7	22,283.5	25,173.9	28,042.0
VMT	149,065.6	169,740.6	195,371.9	217,051.1

Exhibit 3
TOTAL 2002-2030 VOC COMPOSITE MOBILE6.2 RUNNING EMISSION RATES FOR FAIRFAX COUNTY FREEWAY

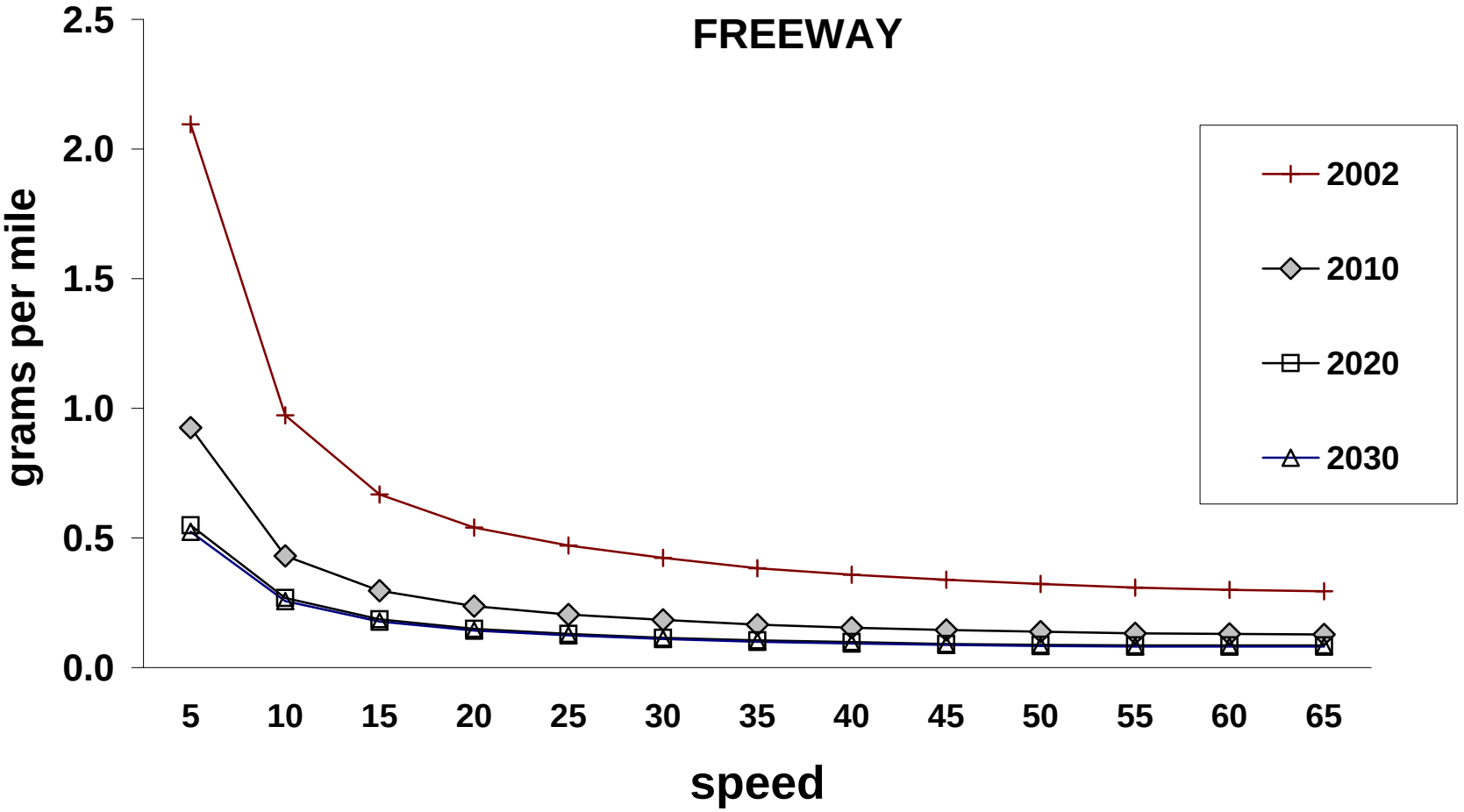


Exhibit 4
TOTAL 2002-2030 NOx COMPOSITE MOBILE6.2 RUNNING EMISSION RATES FOR FAIRFAX COUNTY
FREEWAY

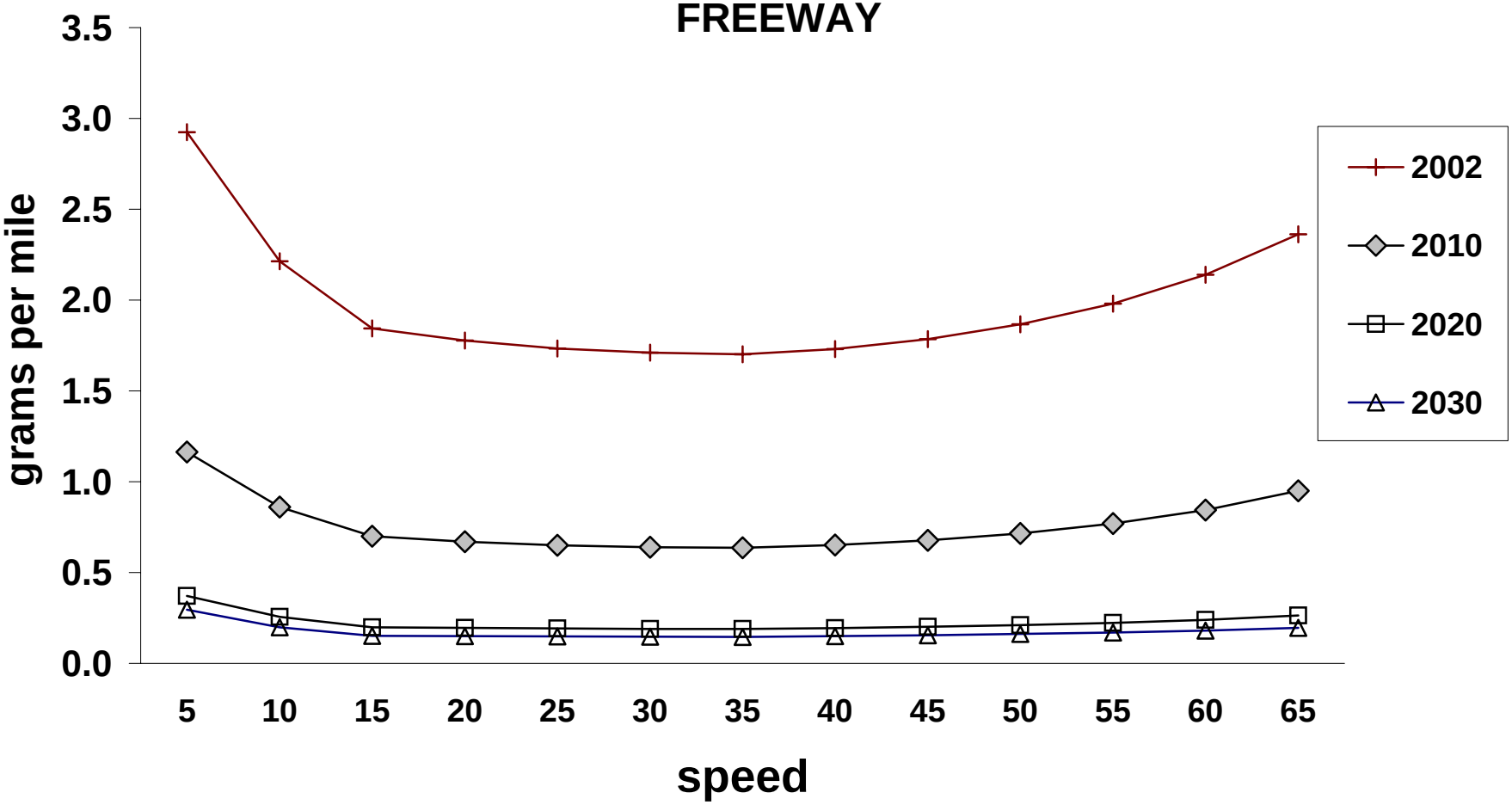


EXHIBIT 5

AIR QUALITY CONFORMITY

Summary Table - MSA (1-Hour Ozone Area)

Mobile Emissions Inventories

for 2005 CLRP and FY 2006-2011 TIP

(Tons/Day)

	2002		2010		2020		2030	
	VOC	NOx	VOC	NOx	VOC	NOx	VOC	NOx
I Network								
Start	25.95	14.17	11.20	6.93	7.09	3.18	6.85	2.54
Running	57.65	243.03	28.57	116.77	19.91	40.84	20.71	31.66
Soak	11.31	---------	9.72	---------	4.82	---------	4.16	----------
II Off-Network								
Diurnal	3.14	----------	2.07	----------	1.03	----------	0.75	----------
Resting Loss	12.32	----------	8.00	----------	3.21	----------	2.28	----------
Local Roads	9.63	12.24	4.76	6.42	3.21	2.82	3.28	2.47
School Buses	0.43	6.09	0.28	3.76	0.17	0.70	0.17	0.27
Transit Buses	0.38	6.57	0.12	3.86	0.12	0.92	0.12	0.25
Auto Access	1.37	1.70	0.69	0.86	0.46	0.44	0.45	0.39
Total	122.17	283.80	65.41	138.60	40.01	48.90	38.75	37.58

TCMs	-0.20	-0.49
Net Emissions	65.21	138.11
Mobile Emissions Budgets:	97.40	234.70
Budget Adherence Margin:	32.19	96.59

EXHIBIT 6
Mobile Source VOC Emissions
Metropolitan Statistical Area
2005 CLRP and FY 2006-2011 TIP

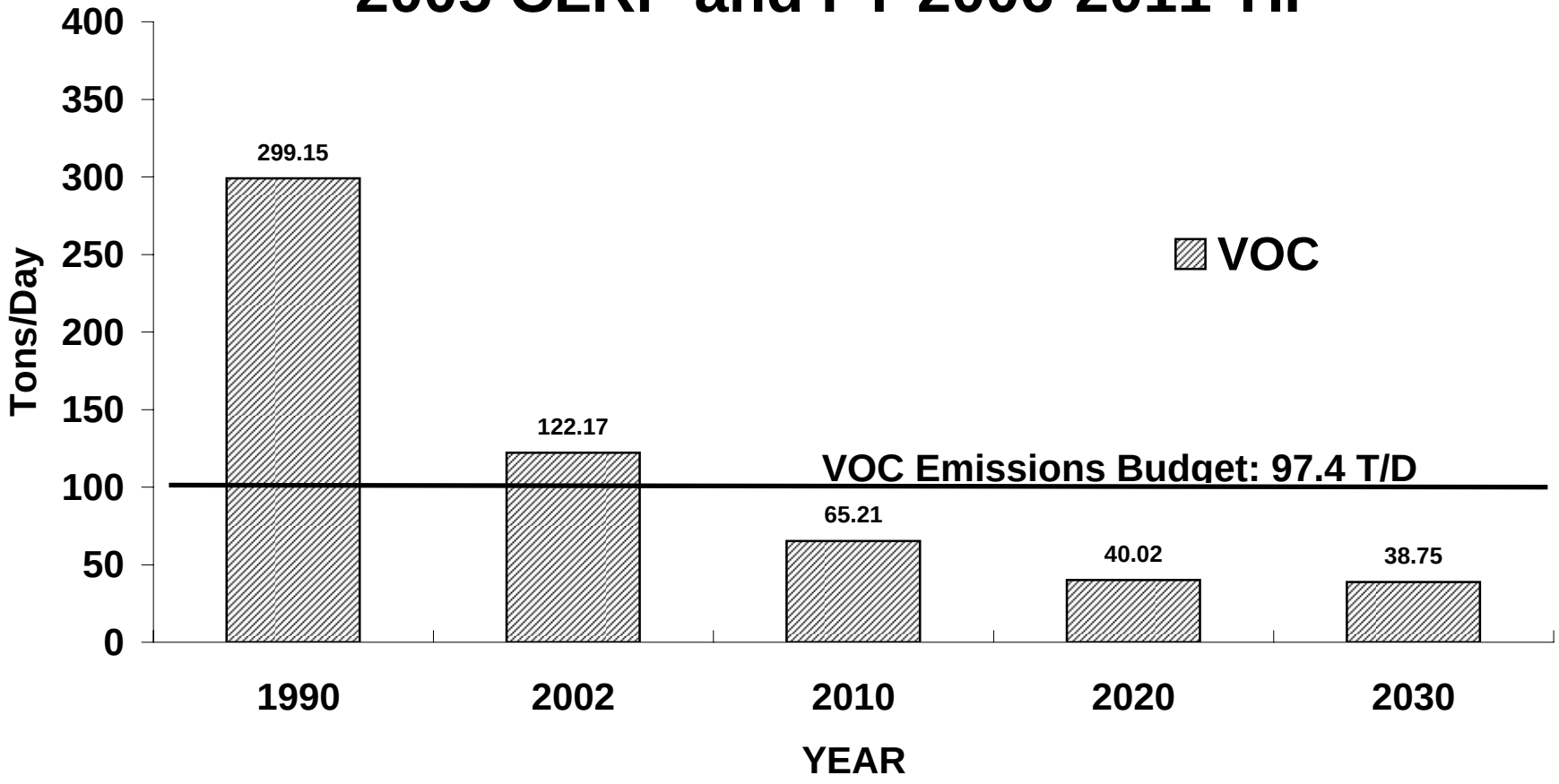
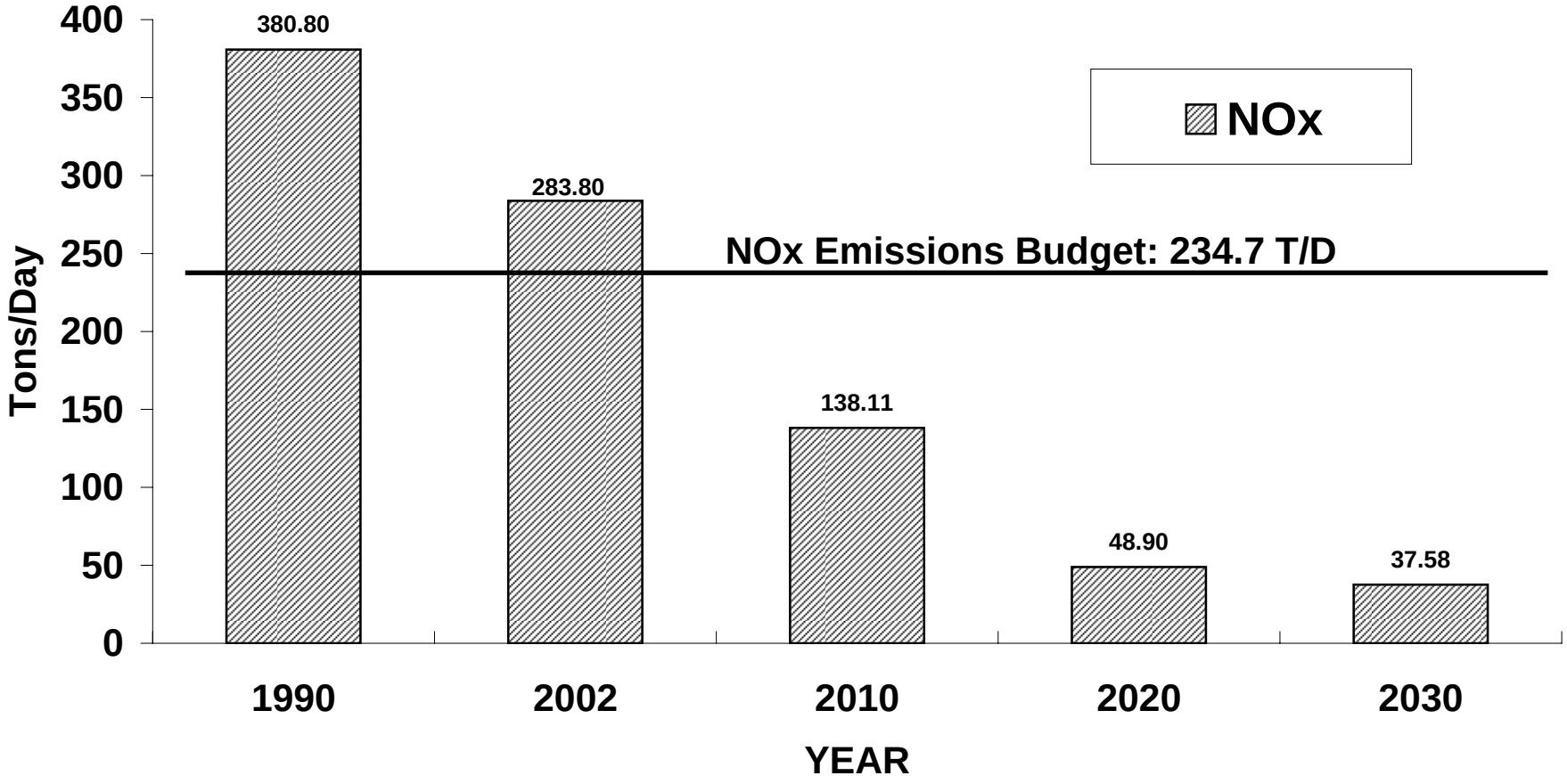


EXHIBIT 7
Mobile Source NOx Emissions
Metropolitan Statistical Area
2005 CLRP and FY 2006-2011 TIP



NOTE: TCM emissions benefits applied in 2010

ATTACHMENT A

Table A
Significant Changes
for the
Air Quality Conformity Analysis
of the
2005 CLRP and FY2006-2011 TIP
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, EB to NB, & NB to WB HOV to HOT or HOT to HOV movements**	**@ 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, NB to EB, & EB to NB HOV to HOT movements**	**@ 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	***Arlington County***	***Construct***	***Crystal City-Potomac Yards busway (2-lane) Segment 1***	***Vicinity of Glebe Rd. Extended***	***26th St.***	***2006***	*--*	*--*	*0*	*2*
5b	***Arlington County***	***Construct***	***Crystal City-Potomac Yards busway (2-lane) Segment 2***	***26th St.***	***Crystal City Metro Station***	***2008***	*--*	*--*	*0*	*2*
5c	***Arlington County***	***Upgrade***	***Crystal City-Potomac Yards busway to BRT***	***Vicinity of Glebe Rd. Extended***	***Crystal City Metro Station***	***2012***	*--*	*--*	*0*	*2*

Table B
Significant Changes
for the
Air Quality Conformity Analysis
of the
2005 CLRP and FY2006-2011 TIP
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*

ATTACHMENT B

HOUSEHOLD DATA

MSA:	2002	2010	2020	2030	2030/2010
D.C.	249809	265303	292904	317696	1.20
MONTGOMERY	330970	367410	405294	438630	1.19
PR.GEORGES	299108	324343	349480	380811	1.17
ARLINGTON	89000	99577	111455	119855	1.20
ALEXANDRIA	63662	70964	76661	86450	1.22
FAIRFAX	374148	426019	479308	500221	1.17
LOUDOUN	70953	112664	149709	170149	1.51
PR. WILLIAM	119778	159345	188652	212864	1.34
FREDERICK	73833	87708	104139	123125	1.40
CHARLES	44286	52228	63654	76880	1.47
STAFFORD	32626	40899	51927	68404	1.67
CALVERT	26570	31045	34331	36212	1.17
SUBTOTAL	1,774,743	2,037,505	2,307,514	2,531,297	1.24
ADDITIONAL COUNTIES:					
HOWARD	94549	108700	124700	128130	1.18
ANNE ARUNDEL	183445	201097	217599	226001	1.12
CARROLL	55308	63550	69516	71822	1.13
FREDERICKSBURG (VA)	8561	10448	12391	13944	1.33
JEFFERSON	17016	20427	25957	33075	1.62
N. SPOTSYLVANIA	26787	35135	44012	52981	1.51
FAUQUIER	21448	26872	35729	47506	1.77
CLARKE	5182	6142	6860	7770	1.27
K. GEORGE	6533	8319	9850	11446	1.38
ST. MARY'S	31801	36441	42604	48399	1.33
SUBTOTAL	450,630	517,131	589,218	641,074	1.24
TOTAL	2,225,373	2,554,636	2,896,732	3,172,371	1.24

SOURCE:
MWCOG Revised Round 7.0 Cooperative Forecasts
BMC Round 6-A Cooperative Forecasts

EMPLOYMENT DATA

MSA:	2002	2010	2020	2030	2030/2010
D.C.	744155	783606	830000	859991	1.10
MONTGOMERY	481693	542120	612065	666993	1.23
PR.GEORGES	349356	392866	463816	547696	1.39
ARLINGTON	187633	217836	254418	275798	1.27
ALEXANDRIA	95800	113251	132536	147957	1.31
FAIRFAX	624843	727012	827599	904191	1.24
LOUDOUN	103376	153736	212920	271159	1.76
PR. WILLIAM	127076	157719	190161	217764	1.38
FREDERICK	106647	142412	158278	167257	1.17
CHARLES	47700	62888	66797	69100	1.10
STAFFORD	33603	46140	59216	73394	1.59
CALVERT	25456	32897	34498	35599	1.08
SUBTOTAL	2,927,338	3,372,483	3,842,304	4,236,899	1.26
ADDITIONAL COUNTIES:					
HOWARD	141854	168878	194203	219539	1.30
ANNE ARUNDEL	260251	286363	311932	334723	1.17
CARROLL	56471	61603	64649	65465	1.06
FREDERICKSBURG (VA)	25892	40258	51666	62676	1.56
JEFFERSON	17008	21058	26113	30674	1.46
N. SPOTSYLVANIA	28045	36321	46660	56541	1.56
FAUQUIER	22320	27325	35767	43367	1.59
CLARKE	6079	6793	7685	8552	1.26
K. GEORGE	12084	16022	20557	34303	2.14
ST. MARY'S	48915	58165	61164	63139	1.09
SUBTOTAL	618,919	722,786	820,396	918,979	1.27
TOTAL	3,546,257	4,095,269	4,662,700	5,155,878	1.26

SOURCE:
MWCOG Revised Round 7.0 Cooperative Forecasts
BMC Round 6-A Cooperative Forecasts

NOTE: Includes Census Adjustment

ATTACHMENT C

TERM TRACKING SHEET - CURRENT MEASURES

IMPLEMENTATAION: YEAR 2000 AND LATER

Credits are taken in Air Quality Conformity Analysis FY 2005-2010

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

NOs	CREDIT TAKEN	TIP CREDITED	AGENCY	PROJECT	IMPLEMENTATION STATUS				ORIGINAL COMPLETION DATE	ACTUAL COMPLETION DATE	TONS/DAY REDUCTION CREDITED						Project Category *
					FULL	SCALED-BACK	UNDER-WAY	REM			2010		2020		2030		
											VOC	NOX	VOC	NOX	VOC	NOX	
9	X	1994-99	MDOT	Park & Ride Lot - MD 210/ MD 373	X				2000	2003	0.0006	0.0014	0.0004	0.0006	0.0004	0.0006	C
19	X	1994-99	PRTC	VRE Woodbridge Parking Expansion (add 500 spaces)	X					2002-2003	n/a	n/a	n/a	n/a	n/a	n/a	-
20	X	1994-99	ALEX	King St. Metrorail access improvements			X			2002, '04, '05	0.0011	0.0014	0.0007	0.0006	0.0008	0.0009	C
38	X	1995-00	MDOT	Signal Systems - MD 85 Executive Way to MD 355	X				1996	Pre 2000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	TR
39	X	1995-00	MDOT	Signal Systems - MD 355 ,I-70 ramps to Grove Rd.	X				1996	n/a	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	TR
44	X	1995-00	MDOT	Signal Systems - MD 410, 62nd Ave. to Riverdale Rd.	X				1996	2002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	TR
48	X	1995-00	MDOT	MARC Replacement Coaches	X				1999	2004	0.0006	0.0014	0.0004	0.0006	0.0012	0.0018	C (TCM)
49	X	1995-00	MDOT	MARC Expansion Coaches	X				1999	2004	0.0052	0.0133	0.0033	0.0055	0.0054	0.0145	C (TCM)
51	X	1995-00	VDOT	Alexandria Telecommuting Pilot Program	X					2000 & 2001	0.0000	0.0000					C
52	X	1995-00	VDOT	Fairfax County Bus Shelter (Fairfax Co. TDM program)			X		2000	2001	0.0000	0.0000					C
54	X	1995-00	VDOT	City of Fairfax Bus Shelters			X		1999	2004	0.0000	0.0005	0.0000	0.0002	0.0000	0.0000	C (TCM)
56	X	1995-00	VDOT	Cherry Hill VRE Access			X			2007	0.0040	0.0114	0.0026	0.0047	0.0023	0.0047	C (TCM)
58	X	1995-00	WMATA	Bus Replacement (172 buses)	X				1998	1998	0.0690	0.2520					SP (TCM)
59	X	1995-00	MCG	Shady Grove West Park and Ride			X		2010		0.0000	0.0000	0.0000	0.0000	0.0000	0.0030	C
60	X	1995-00	MCG	White Oak Park and Ride			X		2010		0.0000	0.0000	0.0000	0.0000	0.0000	0.0059	C
61	X	1995-00	MCG	Bicycle Facilities			X		FY99		0.0017	0.0009	0.0011	0.0004	0.0012	0.0006	C
62	X	1995-00	MCG	Pedestrian Facilities to Metrorail			X				0.0029	0.0038	0.0018	0.0016	0.0015	0.0021	C
63	X	1995-00	MDOT	MARC Replacement Coaches	X				1999	2004	0.0023	0.0057	0.0015	0.0024	0.0031	0.0059	C
64	X	1995-00	MDOT	MARC Expansion Coaches	X				1999	2004	0.0183	0.0493	0.0118	0.0205	0.0283	0.0482	C (TCM)
66	X	1995-00	VDOT	Commuter Lots - District Wide			X		varies	1995, 2000	0.0063	0.0156	0.0040	0.0065	0.0062	0.0157	C
67	X	1995-00	VDOT	I-66 and Stringfellow Rd. Park and Ride	X				2000	2000 end	0.0057	0.0095	0.0037	0.0039	0.0039	0.0059	C
68	X	1995-00	VDOT	Lake Ridge Park and Ride (now called Tacketts Mill lot)	X					1999/2000	0.0000	0.0047	0.0000	0.0020	0.0000	0.0030	C
69	X	1995-00	VDOT	Bicycle Trails and Facilities			X		varies	varies	0.0011	0.0081	0.0007	0.0034	0.0074	0.0053	C
70	X	1995-00	VDOT	Improved Acceess to Metrorail Stations			X		varies	2000-2010	0.0003	0.0005	0.0002	0.0002	0.0004	0.0006	C
71	X	1995-00	VDOT	I-66 HOV access at Monument Dr.	X					1997	0.0057	0.0095	0.0037	0.0039	0.0004	0.0059	C
72	X	1995-00	DC	Bicycle Facilities		X					0.0137	0.0095	0.0088	0.0039	0.0093	0.0065	C
73	X	1995-00	REGION	COG Regional Ridesharing Support	X					on-going	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	C

TERM TRACKING SHEET - CURRENT MEASURES

IMPLEMENTATAION: YEAR 2000 AND LATER

Credits are taken in Air Quality Conformity Analysis FY 2005-2010

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

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					FULL	SCALED-BACK	UNDER-WAY	REM			2010		2020		2030		
											VOC	NOX	VOC	NOX	VOC	NOX	
74	X	1995-00	REGION	M-47 Integrated Ridesharing	X					on-going	0.0264	0.0493	0.0165	0.0206	0.0139	0.0172	C
75	X	1995-00	REGION	M-92 Telecommuting Support	X					on-going	0.2069	0.3951	0.1763	0.2256	0.1889	0.2374	C
77		1996-01	VDOT	Duke Street Pedestrian Bridge					2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-
79	X	1996-01	VDOT	Fairfax County Bus Shelters (30 shelters with project #85)			X		1999	Summer 2001	0.0011	0.0014	0.0007	0.0006	0.0008	0.0009	C
81	X	1996-01	VDOT	Arlington County Metrocheck Program	X				1997	1997 Onwards	0.0011	0.0014	0.0007	0.0006	0.0004	0.0009	C
82	X	1996-01	VDOT	Old Dominion Drive Bike Trail			X		2000	2004	0.0006	0.0005	0.0004	0.0002	0.0004	0.0003	C
83	X	1996-01	WMATA	Bus Replacement (see line 58, above)	X					1998	Credit taken in line 58, above						SP
85	X	1996-01	VDOT	Fairfax County Bus Shelters (30 shelters with project #79)			X		1999	2001	0.0006	0.0005	0.0004	0.0002	0.0004	0.0009	C
90	X	1996-01	REGION	M-47c Employer Outreach / Guaranteed Ride Home	X					on-going	0.3460	0.5748	0.2209	0.2395	0.1777	0.1989	C
91	X	1996-01	REGION	M-70a Bicycle Parking			X		1999		0.0040	0.0033	0.0026	0.0014	0.0039	0.0030	C
92	X			M-92 Telecommuting Support [1]	Combined with item #75												C
95	X	1997-02	MCG	Germantown Transit Center			X		2004		0.0029	0.0090	0.0018	0.0038	0.0019	0.0053	C (TCM)
102	X	1997-02	PG	Prince George's County Bus Replacement	X				1998	1998	0.0030	0.0090					SP (TCM)
106	X	1997-02	VDOT	PRTC Employer Commuting Outreach Program	X					1977 on-going	0.0011	0.0002	0.0007	0.0001	0.0008	0.0000	C
107	X	1997-02	VDOT	PRTC Multimodal Strategic Marketing Implementation Plan	X					1977 on-going	0.0000	0.0002	0.0000	0.0001	0.0000	0.0003	C
108	X	1997-02	MDOT	M-103 Taxicab Replacement in Maryland [2]		X			1999	On-going	0.0797	0.2675	0.1340	0.1827	0.3120	0.4810	SP
109	X	1997-02	REGION	M-70b Employer Outreach for Bicycles	X				1998	on going	0.0007	0.0007	0.0005	0.0003	0.0003	0.0002	C
110		1997-02	VDOT	M-77b Vanpool Incentive Programs in Virginia			X		1999	delayed	n/a	n/a	n/a	n/a	n/a	n/a	C
111	X	1998-03	WMATA	Bus Replacement (108 buses)	X				1999	1999	0.0450	0.1617					SP
112	X	1998-03	MCG	Montgomery County Bus Replacement	X						0.0080	0.0270					SP
113	X	1998-03	PG	Prince George's County Bus Replacement	X				1998	1998	0.0010	0.0020					SP
114	X	1998-03	FDC	Frederick County Bus Replacement	X						0.0010	0.0000					SP
117	X	1998-03	VDOT	Arlington County Four Mile Run Bike Trail			X		1999	delayed	0.0006	0.0005	0.0004	0.0002	0.0004	0.0003	C
118	X	1998-03	VDOT	Northern Virginia Turn Bays	X				2000	1998	0.0006	0.0008	0.0004	0.0003	0.0008	0.0003	TR
119	X	1998-03	VDOT	Fairfax City Bus Replacement			X		2001	2003	n/a	n/a					SP
121	X	1998-03	WMATA	WMATA Bus Replacement (252 buses)	X				2001	2001	0.1060	0.3860					SP
122	X	97 & 98 TIP	REGION	M-101a Mass Marketing Campagin (Consumer)			X			Underway	0.1479	0.2237	0.0952	0.0973	0.0752	0.0807	C
123	X	1999-04	MDOT	Various Park and Ride Lots(I-270/MD124, 450 & I-170/MD-75, 54 spaces)	X				2001/1999	2001	0.0046	0.0171	0.0029	0.0071	0.0039	0.0136	C

TERM TRACKING SHEET - CURRENT MEASURES

IMPLEMENTATAION: YEAR 2000 AND LATER

Credits are taken in Air Quality Conformity Analysis FY 2005-2010

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

NOs	CREDIT TAKEN	TIP CREDITED	AGENCY	PROJECT	IMPLEMENTATION STATUS				ORIGINAL COMPLETION DATE	ACTUAL COMPLETION DATE	TONS/DAY REDUCTION CREDITED						Project Category *
					FULL	SCALED-BACK	UNDER-WAY	REM			2010		2020		2030		
											VOC	NOX	VOC	NOX	VOC	NOX	
124	X	1999-04	MDOT	Signal Systems (197/MD-198, MD-382 TO US-301,US301)	X				2000	2002	0.0070	-0.0017	0.0047	-0.0008	0.0079	-0.0014	TR
125	X	1999-04	VDOT	Transit Center at 7 Corners	X				2002		0.0006	0.0009	0.0004	0.0004	0.0004	0.0006	C
126	X	1999-04	VDOT	Falls Church Clean Diesel Bus Service	X				2000	2003	0.0040	0.0050					SP
127	X	1999-04	VDOT	VA 234 Bike Trail			X		2001	2007	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	C
128	X	1999-04	VDOT	PRTC Ridesharing	X				on-going	2000 ongoing	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	C
130	X	1996-01	VDOT	M-14: I-66 Feeder Bus Fare Buy Down	X					1998 onward	0.0143	0.0261	0.0092	0.0109	0.0081	0.0124	C
131	X	2000-05	MDOT	Various park and Ride Lots	x				2002	2003	0.0040	0.0154	0.0025	0.0064	0.0038	0.0119	C
132	X	2000-05	MDOT	Signal Systems	X				Varies	on-going	0.0017	0.0000	0.1244	0.0000	0.0007	0.0000	TR
133	X	2000-05	VDOT	450 Spaces at Gambrill/Hooes Rds. Park and Ride			X		2002	2004	0.0040	0.0085	0.0026	0.0036	0.0021	0.0041	C
134	X	2000-05	VDOT	300 Spaces at Backlick Rd			X		2003	2006	0.0029	0.0062	0.0018	0.0026	0.0015	0.0030	C
135	X	2000-05	VDOT	Accotink-Gateway Connector Trail			X		2002	2005	0.0040	0.0047	0.0026	0.0020	0.0018	0.0020	C
136	X	2000-05	VDOT	Columbia Pike Trail			X		2000	2001, 2005	0.0034	0.0038	0.0022	0.0016	0.0014	0.0015	C
137	X	2000-05	VDOT	Lee Highway trail			X		2000	2005	0.0017	0.0019	0.0011	0.0008	0.0006	0.0008	C
138	X	2000-05	VDOT	Arlington Bus Shelter Improvements			X		2005	2005	0.0006	0.0005	0.0004	0.0002	0.0002	0.0002	C
139	X	2000-05	VDOT	Pentagon Metrostation Improvements	X					2003	0.0046	0.0081	0.0029	0.0034	0.0022	0.0033	C
140	X	2000-05	MDOT	East/West Intersection Improvements			X		2005	2005	0.0235	0.0119	0.0151	0.0049	0.0859	0.0337	C
141	X	2001-06	Feds	Federal Transit/Ridesharing subsidy	X				on-going		0.0584	0.0905	0.0375	0.0377	0.0286	0.0313	C
142	X	2002-07	WMATA	100 CNG buses	X				2002		0.0000	0.1358					SP (TCM)
143	X	2002-07	WMATA	ULSD with CRT filters			X		on-going		0.2100	0.0000	0.4300	0.0000	0.4300	0.0000	H (TCM)
144	X	2003-08	DC	Replace ~~23~~ 12 Taxicabs with CNG cabs			X		2005	2006	0.0089	0.0157					H
145	X	2003-08	DC	D.C.Incident Response & TrafficManagement System	X				2005	2004	0.0161	0.0414	0.0108	0.0206	0.0100	0.0168	TR
146	X	2003-08	DC	Bicycle Lane in D. C. (35 Mile)			X		2005	2006	0.0095	0.0085	0.0061	0.0035	0.0046	0.0029	C (TCM)
147	X	2003-08	DC	Bicycle Racks in D. C. (500)	X				2005	2004	0.0013	0.0009	0.0008	0.0004	0.0006	0.0003	C (TCM)
148	X	2003-08	DC	External Bicycle Racks on WMATA Buses in D. C. (600)	X				2005	2003	0.0020	0.0031	0.0013	0.0013	0.0010	0.0011	C (TCM)
149		2003-08	DC	CNG Rental Cars (18)				X	2005	Removed	0.0000	0.0002					SP
150	X	2003-08	DC	Sidewalks in D.C. ($ 5 million)	X				2005	2004	0.0358	0.0555	0.0230	0.0231	0.0182	0.0192	C
151	X	2003-08	DC	CNG Refuse Haulers (2)	X				2005	2004	0.0001	0.0020					H (TCM)
152	X	2003-08	DC	Circulator /Feeder Bus Routes	X				2005	2003	0.0131	0.0200	0.0084	0.0083	0.0066	0.0069	C

TERM TRACKING SHEET - CURRENT MEASURES

IMPLEMENTATAION: YEAR 2000 AND LATER

Credits are taken in Air Quality Conformity Analysis FY 2005-2010

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NOs	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	REM			2010		2020		2030		
											VOC	NOX	VOC	NOX	VOC	NOX	
153	X	2003-08	MDOT	Commuter Tax Credit			X		2005	n/a	0.0782	0.1223	0.0502	0.0509	0.0398	0.0422	C
155		2003-08	MDOT	Employer Vanpool Program (WWB)				X	2005	Removed	0.0018	0.0041					C
156	X	2003-08	MDOT	Green Line Link			X		2005	n/a	0.0026	0.0047	0.0016	0.0019	0.0013	0.0016	C
157	X	2003-08	MDOT	Park & Ride Lots - Southern Maryland			X		2005	2003/2005	0.0050	0.0109	0.0032	0.0045	0.0026	0.0038	C
158	X	2003-08	MDOT	Prince George's County- Bus Exp			X		2005	n/a	0.0359	0.0657	0.0230	0.0273	0.0186	0.0228	C
159	X	2003-08	MDOT	MTA - Bus Service Expansion			X		2005	n/a	0.0081	0.0157	0.0052	0.0065	0.0042	0.0054	C
160	X	2003-08	MDOT	Ride- On - Super Discount			X		2005	n/a	0.0009	0.0014	0.0006	0.0006	0.0005	0.0005	C
161	X	2003-08	Regional	Regional Traveler Information Systems			X		2005		0.1012	0.5401	0.0682	0.2686	0.0686	0.2195	TR
162	X	2003-08	MDOT	Universal Transportation Access (MD + WMATA)			X		2005	n/a	0.0161	0.0249	0.0103	0.0104	0.0082	0.0086	C
163	X	2003-08	MCG	Construction of 1300 additional Parking Spaces at Grosvenor Metro Garage	X				2004		0.0046	0.0104	0.0029	0.0044	0.0025	0.0036	C (TCM)
164	X	2003-08	MCG	Bethesda Shuttle Bus Services	X				2004		0.0031	0.0048	0.0020	0.0020	0.0016	0.0016	C
165	X	2003-08	MCG	External Bicycle Racks on Ride-On Buses in Montgomery County	X				2004		0.0006	0.0010	0.0004	0.0004	0.0003	0.0003	C
166	X	2003-08	MCG	New CNG Powered Light Duty Vehicle fleet in the County	X				2004		0.0000	0.0001					SP
167	X	2003-08	MCG	Free Bus Service on Selected Routes on I-270	X				2004		0.0011	0.0017	0.0007	0.0007	0.0005	0.0006	C
168	X	2003-08	MCG	Annual Sidewalk Program	X				2004		0.0171	0.0264	0.0110	0.0110	0.0087	0.0091	C
169	X	2003-08	MDOT	Bethesda Breeze/International Express Metrobus			X		2005	n/a	0.0037	0.0053	0.0024	0.0022	0.0019	0.0018	C
170	X	2003-08	MDOT	Bethesda-8, Silver Spring Downtown Dasher and Prince Georges Co. Shuttles at 3 PNR lot			X		2005	n/a	0.0088	0.0104	0.0057	0.0043	0.0043	0.0036	C
171		2003-08	MDOT	Proposed Transportation Management District in Montgomery County (Rockville and Gaithersburg)				X	2005	Removed	0.0057	0.0078	0.0037	0.0033	0.0029	0.0027	C
172	X	2003-08	MDOT	Sidewalks (Bikes/Pedestrian) at / near Rail Stations	X				2005	2002	0.0093	0.0147	0.0060	0.0061	0.0047	0.0051	C
173	X	2003-08	MDOT	Neighborhood Sidewalks Improvements (Bike/Pedestrian)	X				2005	2004	0.0032	0.0017	0.0021	0.0007	0.0015	0.0005	C
174	X	2003-08	MDOT	Neighborhood Conservation Program - Neighborhood Sidewalks Improvements (Bikes/Pedestrian)		X			2005	n/a	0.0028	0.0014	0.0018	0.0006	0.0013	0.0005	C
175	X	2003-08	MDOT	Maryland bus Transit Service Expansion	X				2005	2004	0.0141	0.0323	0.0091	0.0134	0.0076	0.0112	C
176	X	2003-08	VDOT	Universal Transportation Access Program			X		2005	2005	0.0012	0.0019	0.0008	0.0008	0.0006	0.0006	C
177	X	2003-08	VDOT	Interactive Rideshare & Kiosk Initiative			X		2005		0.0004	0.0007	0.0002	0.0003	0.0002	0.0002	C
178	X	2003-08	VDOT	Mobile Commuter Stores			X		2005		0.0021	0.0039	0.0014	0.0016	0.0011	0.0014	C
179	X	2003-08	VDOT	Telework Incentive Program (Telework VA)[1]	X				2005	2001	0.0007	0.0012	0.0005	0.0005	0.0004	0.0004	C
180	X	2003-08	VDOT	Commuter Choice			X		2005		0.0010	0.0014	0.0006	0.0006	0.0005	0.0005	C
181	X	2003-08	VDOT	Employer Shuttle Services			X		2005		0.0114	0.0166	0.0073	0.0069	0.0057	0.0057	C

TERM TRACKING SHEET - CURRENT MEASURES

IMPLEMENTATAION: YEAR 2000 AND LATER

Credits are taken in Air Quality Conformity Analysis FY 2005-2010

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

NOs	CREDIT TAKEN	TIP CREDITED	AGENCY	PROJECT	IMPLEMENTATION STATUS				ORIGINAL COMPLETION DATE	ACTUAL COMPLETION DATE	TONS/DAY REDUCTION CREDITED						Project Category *
					FULL	SCALED-BACK	UNDER-WAY	REM			2010		2020		2030		
											VOC	NOX	VOC	NOX	VOC	NOX	
184	X	2003-08	VDOT	Van Start / Van Save			X		2005	till 2006	0.0014	0.0026					C
185	X	2003-08	VDOT	Metro Shuttle Bus			X		2005	1999-2005	0.0012	0.0026	0.0008	0.0011	0.0006	0.0009	C
187	X	2003-08	VDOT	VRE Mid-Day Train Service	X				2005	2002	0.0016	0.0029	0.0010	0.0012	0.0008	0.0010	C
190	X	2003-08	VDOT	Employer Vanpool Program (Bridge deck)			X		2005	2004 - 2008	0.0009	0.0019					C
191	X	2003-08	VDOT	Town of Leesburg P&R Lot			X		2005	2004	0.0019	0.0039	0.0012	0.0016	0.0010	0.0014	C
192	X	2003-08	VDOT	District-wide P&R Lots	X		X		2005	2001-2005	0.0113	0.0224	0.0072	0.0093	0.0059	0.0078	C
193	X	2003-08	VDOT	Additional Parking at 4 Metro stations			X		2005	2001, 2005	0.0145	0.0333	0.0093	0.0139	0.0078	0.0116	C
196	X	2003-08	WMATA	64 CNG Buses (Purchased in 2001)	X				2005	2004	0.0021	0.0870					SP (TCM)
197	X	2003-08	WMATA	250 CNG Buses (175 buses by Dec. 2004; 75 buses by mid 2006)			X		2005	2004-2006	0.0083	0.3400					SP
198	X	2003-08	WMATA	60 Engine Replacement (MY 1992 & 1993 MY buses)	X				2004	2004	0.0138	0.0755					SP
199	X	2003-08	WMATA	Car Sharing Program	X				2005	2004	0.0008	0.0018	0.0005	0.0008	0.0004	0.0006	C
200	X	2003-08	WMATA	Bikes Racks on WMATA Buses in VA (372 Bike Racks)	X				2005	2004	0.0012	0.0019	0.0008	0.0008	0.0006	0.0007	C (TCM)
202		2003-08	MDOT	Fleet Replacement (state auto fleet, gas to hybrid, 250 vehicles)				X	2005	Removed	0.0055	0.0133	0.0022	0.0031			SP
203	X	2003-08	MDOT	Replace 55 Montgomery County 10 yr. old buses w/ new CNG buses			X		2005	n/a	0.0000	0.2861	0.0000	0.0657			SP
204		2003-08	MDOT	Neighborhood Bus Shuttle (5 circulator routes)				X	2005	Removed	0.0075	0.0122	0.0048	0.0051	0.0038	0.0042	C
205	X	2003-08	MDOT	New Surface Parking at Transit Centers (500 spaces)			X		2005	n/a	0.0026	0.0060	0.0017	0.0025	0.0014	0.0021	C
206		2003-08	MDOT	Additional Bike Lockers at Metro-Stations				X	2005	Removed	0.0132	0.0209	0.0085	0.0087	0.0067	0.0072	C
207	X	2003-08	MDOT	Bike Facilities at PnR Lots or other similar location			X		2005	n/a	0.0093	0.0166	0.0060	0.0069	0.0048	0.0057	C
208		2003-08	MDOT	CNG Fueling Stations				X	2005	Removed	0.1270	0.1170					SP
209		2003-08	MDOT	Gas cap replacements (ROP Credit)				X	2005	Removed	N/A	N/A	N/A	N/A	N/A	N/A	SP
210		2003-08	MDOT	Gas can turnover (ROP Credit)				X	2005	Removed	N/A	N/A	N/A	N/A	N/A	N/A	SP
211	X	2003-08	MDOT	External Bicycle Racks on WMATA Buses (486 MD buses)	X				2005	2002	0.0014	0.0022	0.0009	0.0009	0.0007	0.0008	C (TCM)
212	X	2003-08	MDOT	Bike \ Pedestrian Trail - Anacostia River Walk			X		2005	n/a	0.0006	0.0005	0.0004	0.0002	0.0003	0.0002	C
213		2003-08	MDOT	Transit Prioritization - Queue Jumps				X	2005	Removed	0.0031	0.0037	0.0020	0.0016	0.0015	0.0013	C
214	X	2003-08	MDOT	Commuter Choice Benefit/Tax Credit - Marketing Expansion			X		2005	n/a	0.0546	0.0859	0.0351	0.0358	0.0278	0.0297	C
215	X	2003-08	MDOT	Improvements to Pedestrian Access in TOD areas (4 locations)			X		2005	n/a	0.0060	0.0087	0.0038	0.0036	0.0030	0.0030	C
216	X	2003-08	MDOT	Telecommuting Expansion[1]	X				2005	n/a	0.0645	0.1208	0.0414	0.0503	0.0336	0.0419	C
217		2003-08	MDOT	Replace older Diesel Engine in Public Sector vehicles				X	2005	Removed	0.0237	0.1300					H
218	X	2003-08	VDOT	MV-92 Telecommuting Program - Expanded[1]	X				2005	2003	0.0689	0.1291	0.0442	0.0537	0.0359	0.0447	C
219	X	2003-08	VDOT	MV-123 Employer Outreach for Public Sector Employees [2]	X				2005	2003	0.0153	0.0237	0.0098	0.0099	0.0078	0.0082	C
220	X	2003-08	REGION	Signal System Optimization			X		2005	2005	0.4272	0.1510	0.2879	0.0751	0.2896	0.0613	TR
										Available Emissions Credits	**2.467**	**5.072**	**1.826**	**1.436**	**1.689**	**1.319**	

TRANSPORTATION EMISSION REDUCTION MEASURES (CLRP Projects Only)

Credited in Air Quality Conformity Analyses (calendar years 1993-2004)
(TRACKING SHEET)

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

NOs	CREDIT TAKEN	TIP CREDITED	AGENCY	PROJECT	IMPLEMENTATION STATUS				PROJECTED COMPLETION DATE	ACTUAL COMPLETION DATE	TONS/DAY REDUCTION CREDITED						Project Category
					FULL	SCALED-BACK	UNDER-WAY	REM			2010		2020		2030		
											VOC	NOx	VOC	NOx	VOC	NOx	
221	X	1995-00 TIP	REGION	M-24 Speed Limit Adherence					2010		-0.0146	0.5364	-0.0042	0.2365	0.0010	0.0739	TR
222		1996-01 TIP	MGC	Rock Spring Park Pedestrian Amenities				X			0.0010	0.0040	0.0000	0.0000	0.0000	0.0000	-
223	X	1996-01 TIP	MGC	Olney Transit Center Park and Ride					2015		0.0020	0.0080	0.0009	0.0030	0.0003	0.0007	C
224	X	1996-01 TIP	MGC	Damascus Park and Ride						2003	0.0010	0.0040	0.0004	0.0015	0.0001	0.0003	C
225	X	1996-01 TIP	DC	M-103 Taxicab Replacement (DC)					2015		0.0000	0.0000	0.1745	0.3000	0.3490	0.6000	H
226	X	STADIUM ANALYSIS		M-103 Taxicab Replacement (MD)		X			2008		0.0000	0.0000	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	0.0100	0.0000	0.0038	0.0000	0.0009	C
228	X	1997-02 TIP	MGC	Olney Transit Center Park and Ride							0.0000	0.0000	0.0004	0.0012	0.0003	0.0007	C
229	X	1997-02 TIP	MGC	White Oak Park and Ride							0.0000	0.0200	0.0000	0.0076	0.0000	0.0017	C
230	X	1997-02 TIP	MGC	Damascus Park and Ride						2003	0.0000	0.0000	0.0002	0.0005	0.0001	0.0003	C
231	X	1997-02 TIP	MGC	Four Corners Transit Center					2015		0.0000	0.0010	0.0000	0.0004	0.0000	0.0001	C
232		1997-02 TIP	MGC	Burtonsville Transit Center				X			0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-
233	X	1997-02 TIP	MGC	Silver Spring Transit Access							0.0000	0.0010	0.0000	0.0003	0.0000	0.0002	C
234	X	1997-02 TIP	MGC	Shady Grove Parking Construction						2003	0.0050	0.0190	0.0021	0.0072	0.0007	0.0017	C
PLAN TOTAL											-0.0066	0.5994	0.1743	0.5621	0.3516	0.6804	
GRAND TOTAL (Current Measures + CLRP plan)											2.460	5.671	2.000	1.998	2.041	1.999	

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 J of Conformity Document). No credit has been taken for projects in which only some components of the measure have been implemented.

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

IMPLEMENTATION STATUS:

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

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

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

REMOVED = project no longer expected to be implemented or constructed

COMPLETION DATE:

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

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

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

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

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

National Capital Region Transportation Planning Board

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M E M O R A N D U M

September 15, 2005

TO: Transportation Planning Board

FROM: Ronald F. Kirby
Director of Transportation Planning

SUBJECT: Significant Changes for the 2005 CLRP and FY 2006-2011 TIP

Background

At its February 16, 2005 meeting, the Board was briefed on the submissions received from state, regional and local agencies for the 2005 CLRP and the FY 2006-2011 TIP. These submissions were released for public comment and agency review at the TPB Citizens Advisory Committee (CAC) meeting on February 10. Because additional information on the submissions was received after February 10, the Board decided that the pubic comment period should be extended by releasing the updated project submission information at the March 16 TPB meeting. On April 20 the TPB reviewed the public comments and approved the project submissions for inclusion in the air quality conformity analysis.

The attached document describes the final set of significant changes for the 2005 CLRP and the FY 2006-2011 TIP. Significant changes are those relating to facility types 1, 2 and 5 (interstates, principal arterials, and other limited access parkways and roadways). Table A lists the significant change projects that are inside the TPB planning area, and Table B lists a significant change project that is outside the TPB planning area but inside the MSA. Exhibit 1 maps the significant change projects that are inside the TPB planning area. Detailed description sheets for each of the projects are attached.

Beginning on page 23, are recently updated project description sheets and information provided by the Virginia Department of Rail and Public Transportation (VDRPT) regarding the costs and funding for Phase I of the Dulles Corridor Metrorail Project.

Two appendices to this memorandum are bound separately. Appendix A contains maps and summary descriptions of projects in the approved 2004 CLRP (as of November 17, 2004). Appendix B provides a table listing all projects to be included in

the air quality conformity analysis for the 2005 CLRP and FY 2006-2011 TIP, with shading to highlight proposed changes from the approved 2004 CLRP and FY 2005-2010 TIP.

Attachment

Exhibit 1
Proposed Significant Changes for the 2005 CLRP

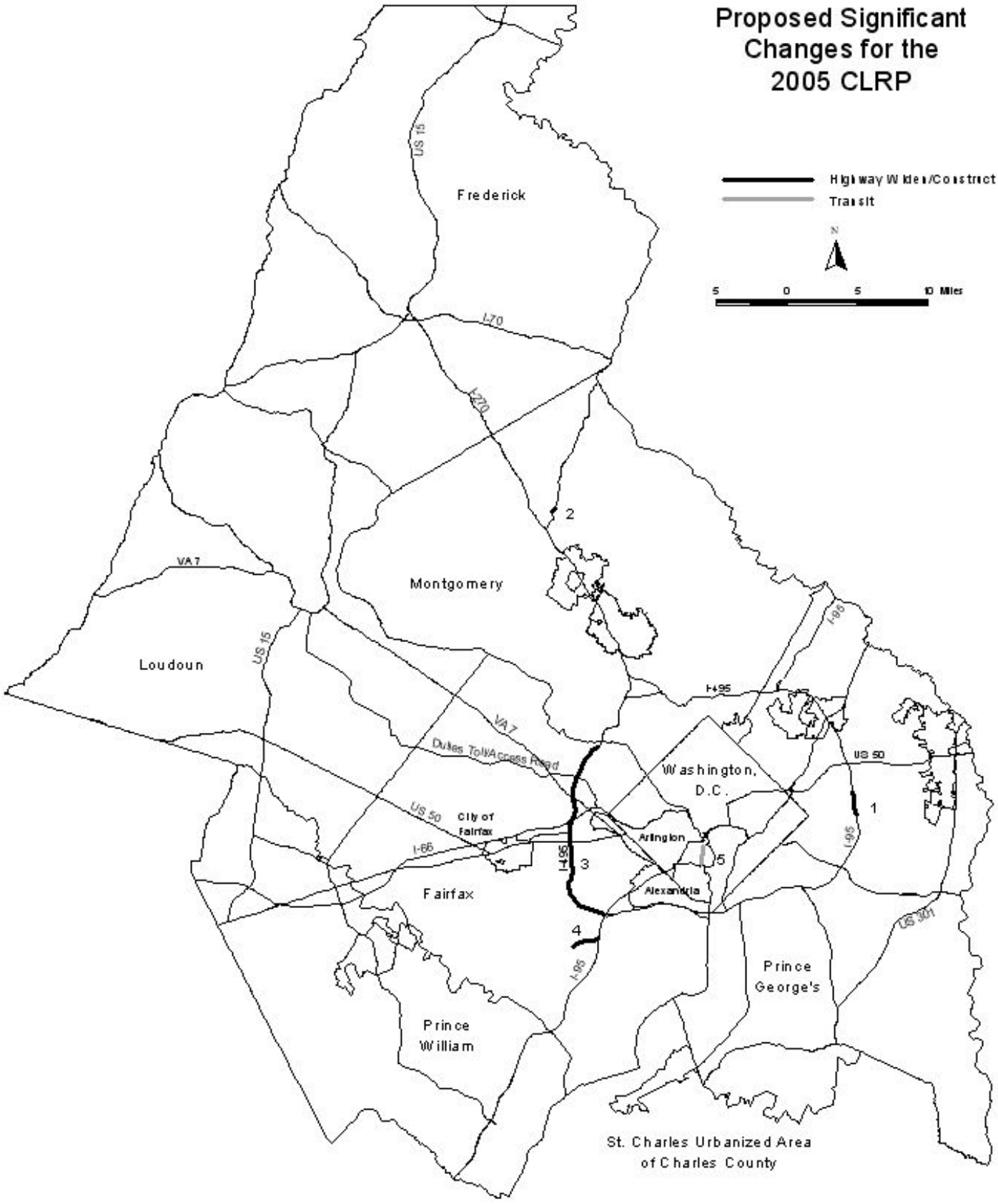

Table A
Significant Changes
for the
Air Quality Conformity Analysis
of the
2005 CLRP and FY2006-2011 TIP
Projects Inside the TPB Planning Area

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, EB to NB, & NB to WB HOV to HOT or HOT to HOV movements**	**@ 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, NB to EB, & EB to NB HOV to HOT movements**	**@ 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	***Arlington County***	***Construct***	***Crystal City-Potomac Yards busway (2-lane) Segment 1***	***Vicinity of Glebe Rd. Extended***	***26th St.***	***2006***	*--*	*--*	*0*	*2*
5b	***Arlington County***	***Construct***	***Crystal City-Potomac Yards busway (2-lane) Segment 2***	***26th St.***	***Crystal City Metro Station***	***2008***	*--*	*--*	*0*	*2*
5c	***Arlington County***	***Upgrade***	***Crystal City-Potomac Yards busway to BRT***	***Vicinity of Glebe Rd. Extended***	***Crystal City Metro Station***	***2012***	*--*	*--*	*0*	*2*

Table B
Significant Changes
for the
Air Quality Conformity Analysis
of the
2005 CLRP and FY2006-2011 TIP
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*

2005
CONSTRAINED LONG RANGE PLAN (CLRP)

#1

Proposed Project or Action Description Form

1. Location and Jurisdiction

Facility: **I-95/I-495/ Arena Drive Interchange Inter**
From/At: **MD 202**
To: **MD 214**
Jurisdiction: **Prince George's County**

2. Submitting Agency: **MDOT/State Highway Administration**
ProjectType: **Interstate**
Agency Project ID:
Last Modified On: **2/3/2005**

3. Project Type and Description

☑ Construction
☐ Transportation Emissions Reduction Measure (TERM)
☐ Study
☐ Maintenance and Operations
☐ Other Action/Strategy

Description of project or action:

Construct operational and safety improvements along I-95/I-495 from MD 214 to MD 202 including conversion of the I-95/I-495 interchange at Arena Drive from a part-time interchange to a full-time interchange to handle the existing and proposed growth in the vicinity of FedEx Field and the Largo Town Center Metro Station. Three through lanes and two local C/D (Collector Distributor) lanes along I-95/495 from south of Arena Drive Ram to North of Ramp to MD 202 will be constructed. In order to accommodate the creation of the local C/D lanes, the through lanes will be shifted onto new pavement in the existing median.

4. Project Phasing

Project ID	In TIP	Improvement	Facility	From	To	# Lane From	# Lane To	Completion Date
	☑	Construct	I-95/I-495/Arena Drive Interchange	MD 214	MD 202	8	8+2	2010

5. Purpose/contribution to regional goals

Relieve congestion at the adjacent Capital Beltway interchanges at MD 202 and MD 214 in the future so that planned economic development and the Largo Largo Town Center Metro Station can be better served.

6. Funding and Schedule Information

Cost (In Thousands): **$29,651**
Date of completion or implementation: **2010**
Source: **Federal, State,**
Cost and schedule remarks:

7. CMS Documentation

Is this a highway capacity-increasing project on a limited access or other principal arterial highway ☑ Yes ☐ No

If yes, does this project require a CMS Documentation form under the given criteria? ☐ Yes ☑ No

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

CONSTRAINED LONG RANGE PLAN (CLRP)

Proposed Project or Action Description Form

2

1. Location and Jurisdiction

Facility: **MD 27**
From/At: **MD 355**
To: **A-305**
Jurisdiction: **Montgomery County**

2. Submitting Agency: **MDOT/State Highway Administration**

Last Modified On: **9/15/2005**

3. Project Type and Description

☑ Construction
☐ Transportation Emissions Reduction Measure (TERM)
☐ Study
☐ Illustrative Project
☐ Other Action/Strategy

Description of project or action:
Reconstruction of MD 27 to support proposed development in Clarksburg from Brink Road to Skylark Road

4. Project Phasing

Project ID	In TIP	Improvement	Facility	From	To	# Lane From	# Lane To	Completion Date
	☐	Construct	MD 27	MD 355	A-305	4	6	2006

5. Purpose/contribution to regional goals

This project addresses Goal #2. It enhances the quality of life and promotes a strong and growing economy with a mix of housing and jobs in a walkable environment.

6. Funding and Schedule Information

Cost (In Thousands): **$0**

Date of completion or implementation: **2010**

Source: **Private,**

Cost and schedule remarks:
Road improvements will be funded by the developer.

7. CMS Documentation

Is this a highway capacity-increasing project on a limited access or other principal arterial highway? ☐ Yes ☑ No

If yes, does this project require a CMS Documentation form under the given criteria? ☐ Yes ☑ No

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

2005
CONSTRAINED LONG RANGE PLAN (CLRP)

#3

Proposed Project or Action Description Form

1. Location and Jurisdiction

Facility: **I-495 HOT Lanes**
From/At: **I-95/395/495 (Springfield) Interchange**
To: **South of VA 193 (Georgetown Pike)**
Jurisdiction: **Fairfax County,**

2. Submitting Agency: **VDOT**

ProjectType: **Interstate**
Agency Project ID: **00068805**
Last Modified On: **1/31/2005**

3. Project Type and Description

☑ Construction
☐ Transportation Emissions Reduction Measure (TERM)
☐ Study
☐ Maintenance and Operations
☐ Other Action/Strategy

Description of project or action:

Widen I-495 (Capital Beltway) to 12 lanes by adding four high-occupancy toll (HOT) lanes (two in each direction) between the Springfield Interchange and a point just south of VA 193 (Georgetown Pike). The HOT Lanes would connect (via construction of ramps as part of a separate project) to the I-95 / I-395 HOV lanes in the vicinity of the Springfield Interchange. This would permit HOT traffic to continue northward from I-95 to Georgetown Pike, and vice versa.

Intermediate access would be provided directly onto the HOT lanes by separate ramps at VA 620 (Braddock Road), US 29 (Lee Highway) (to and from the south only), I-66, VA 123 (Chain Bridge Road), and the VA 267(Dulles Airport Access and Toll Road). Although the existing interchanges within this segment of I-495 may be reconfigured, access to / from the general-purpose lanes from / to the interchanging arterials and freeways will be maintained by this project.

Access to the HOT lanes would be available to automobile, light truck, bus and transit vehicles only. The Commonwealth Transportation Board (CTB), or the Commissioner in the course of negotiating the Comprehensive Agreement, will determine the minimum number of occupants (not less than three) required to be in a vehicle for travel on the HOT lanes without payment of a toll. Any other vehicles not meeting the occupancy requirement would pay, using electronic toll collection equipment, a toll at a rate that would vary by time of day. Buses and other transit vehicles, and emergency response vehicles would operate on the HOT lanes for free.

This project will be financed under Virginia's Public-Private Transportation Act (PPTA) of 1995. Financing will be arranged by a private contractor and therefore will not make use of traditional funding sources. Operations are governed by Virginia HOT Lanes laws (§ 33.1-56.1 et seq. of the Code of Virginia).

Existing local MetroBus, Fairfax Connector, and OmniRide routes would make use of the Beltway HOT lanes. Additional routes would also be considered. Private bus operators Quick and Martz have stated that they would probably provide regular service from the south to Tysons Corner.

Bicycle/pedestrian accommodations included

4. Project Phasing

Project ID	In TIP	Improvement	Facility	From	To	# Lane From	# Lane To	Completion Date
	☑	Widen / Constr	I-495 HOT Lanes	I-95/395/495 (Springfield) Interchange	South of VA 193 (Georgetown Pike)	8/0	8/4	2010
	☐	Construct	I-495 HOT Lanes Interchange	@ VA 267 (Dulles Toll Road)	SB to WB, SB to EB, EB to SB, & NB to WB	-	-	2010
	☐	Construct	I-495 HOT Lanes Interchange	@ VA 123 (Chain Bridge Road)	All Movements	-	-	2010
	☑	Construct	I-495 HOT Lanes Interchange	@ I-66 HOV Lanes	SB to WB, WB to SB, EB to SB, NB to WB, & EB to NB	-	-	2010
	☐	Construct	I-495 HOT Lanes Interchange	@ US 29	To and from South Only	-	-	2010
	☐	Construct	I-495 HOT Lanes Interchange	@ VA 620 (Braddock Road)	All Movements	-	-	2010

5. Purpose/contribution to regional goals

Policy Goal 2, Strategy 4: When implemented, the Capital Beltway HOT lanes will support the regional activity centers located along I-495.

Goal 1, Objective 1, Strategy 1; Goal 2, Objectives 3 & 5, Strategies 4 & 5; Goal 4, Objective 1 & 2 , Strategies 2 & 3; and Goal 7, Objective 2.

When implemented, the Capital Beltway HOT lanes will:

1. **reduce reliance on low occupancy vehicles,**
2. **increase people moving capacity in the corridor,**
3. **encourage ridesharing,**
4. **provide opportunity for new transit services,**
5. **reduce fuel consumption,**
6. **improve system reliability,**
7. **likely to reduce emissions of certain pollutants, and**
8. **minimize impacts on natural resources.**

6. Funding and Schedule Information

Cost (In Thousands): **$899,000** Date of completion or implementation: **2010**

Source: **PPTA arranged funding**

Cost and schedule remarks:

The project is in development. The funding will be provided by a mix of non-recourse toll revenue bonds, a Federal TIFIA loan and private investors. Construction will begin in 2006 and will be completed in 2010.

Preliminary Engineering Costs: $73 million
Right-of-Way Costs: $8 million
Construction Costs: $818 million

- **Project finance will be arranged by a private contractor (PPTA) through issuances of non-recourse toll revenue bonds, a Federal TIFIA loan, and private investors.**
- **TIFIA is a federal loan designed to help innovative financing and does not count against the State's allocation of federal transportation funds.**
- **No local taxpayer funds are included in the local share. All local funds will be derived from non-recourse bonds backed by toll revenues and bonds from private investors.**

7. CMS Documentation

Is this a highway capacity-increasing project on a limited access or other principal arterial highway? ☑ Yes ☐ No

If yes, does this project require a CMS Documentation form under the given criteria? ☑ Yes ☐ No

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

Capital Beltway HOT Lane Project - Draft Financial Plan
Proposed For Inclusion in the 2005 CLRP

Project Cost (1000s of $):	**2006**	**2007**	**2008**	**2009**	**2010**	**TOTAL**
Capital Cost	$164.8	$259.7	$211.9	$159.9	$102.8	$899.0
Debt Service - Annual element	$0.0	$0.0	$9.7	$19.4	$19.4	$48.5
Debt Service - Fixed component	$175.0					$175.0
Total Capital Cost	$339.8	$259.7	$221.6	$179.3	$122.2	$1,122.5
Project Revenues (1000s of $):						
Non-recourse Bonds	$655.0					$655.0
TIFIA backed Bonds	$234.0					$234.0
Private Investments	$135.0					$135.0
Investment Earnings	$15.0	$33.0	$22.0	$11.0	$4.0	$85.0
Toll Revenues	$0.0				$20.6	$20.6
Total Revenue	$1,039.0	$33.0	$22.0	$11.0	$24.6	$1,129.6

Notes:

1. Capital Cost includes funding for preliminary engineering, right-of-way and construction.
2. Debt Service - Annual element refers to interest paid on Bonds
3. Debt Service - Fixed component includes: (a) additional bond proceeds borrowed to fund interest payments until project revenues can be generated; (b) moneys set aside to fund debt service payments in the event of a revenue shortfall; (c) financing costs such as fees for underwriters, attorneys, ratings, printing etc. similar to loan closing costs.
4. Non-recourse bonds issued on the basis of revenue generated from the HOT lane operations.
5. TIFIA is a federal loan guarantee on the basis of which public bonds can be issued to raise revenue.
6. Investment earnings refers to interest earned on revenues collected but not yet utilized for the project.

2005
CONSTRAINED LONG RANGE PLAN (CLRP) #3g

Proposed Project or Action Description Form

1. Location and Jurisdiction

Facility: **I-495 HOV (peak)**
From/At: **@ I-95/395/495 Interchange**
To: **Phase VIII (formerly listed w/ S'field Inte**
Jurisdiction: **Fairfax County,**

2. Submitting Agency: **VDOT**

ProjectType: **Interstate**
Agency Project ID: **00014682**
Last Modified On: **2/2/2005**

3. Project Type and Description

☑ Construction
☐ Transportation Emissions Reduction Measure (TERM)
☐ Study
☐ Maintenance and Operations
☐ Other Action/Strategy

Description of project or action:
Construct ramps connecting the existing I-95 / I-395 HOV lanes on Shirley Highway to proposed HOT lanes on the Capital Beltway.
No bicycle/pedestrian accommodations included

4. Project Phasing

Project ID	In TIP	Improvement	Facility	From	To	# Lane From	# Lane To	Completion Date
	☑	Construct	I-495 HOV (peak)	@ I-95/395/495 Interchange	Phase VIII (formerly listed w/ S'field Interch.)	-	-	2010

5. Purpose/contribution to regional goals

Policy Goal 2, Strategy 4: When implemented, the proposed HOV ramps will support the regional activity centers located along I-495.

Goal 1, Objective 1, Strategy 1; Goal 2, Objectives 3 & 5, Strategies 4 & 5; Goal 4, Objective 1 & 2 , Strategies 2 & 3; and Goal 7, Objective 2.

6. Funding and Schedule Information

Cost (In Thousands): **$84,400** Date of completion or implementation: **2010**
Source: **Federal, State, Private, Bonds,**
Cost and schedule remarks:
PE estimated at $6,549 K. CN estimated at $77,851 K.
Potential for this project to be funded / constructed as part of the I-495 / Capital Beltway HOT Lanes project.

7. CMS Documentation

Is this a highway capacity-increasing project on a limited access or other principal arterial highway? ☑ Yes ☐ No
If yes, does this project require a CMS Documentation form under the given criteria? ☑ Yes ☐ No
If not, please identify the criteria that exempt the project here:

2005
CONSTRAINED LONG RANGE PLAN (CLRP) #4

Proposed Project or Action Description Form

1. Location and Jurisdiction

Facility: **VA 7900 (Franconia-Springfield Parkwa**
From/At: **VA 7100 (Fairfax County Parkway)**
To: **VA 2677 (Frontier Drive)**
Jurisdiction: **Fairfax County,**

2. Submitting Agency: **VDOT**

ProjectType: **Secondary** **Fairfax County**
Agency Project ID: **VSF26**
Last Modified On: **2/2/2005**

3. Project Type and Description

☑ Construction
☑ Transportation Emissions Reduction Measure (TERM)
☐ Study
☐ Maintenance and Operations
☐ Other Action/Strategy

Description of project or action:

Upgrade to a freeway / Implement full control of access (elimination of at-grade connections (intersections and driveways)) from VA 638 (Rolling Road) to VA 617 (Backlick Road) by the construction of an interchange @ VA 1220 (Neuman Street) (replaces the existing signal-controlled intersection w/ Bonniemill Lane.)

Construct HOV lanes between VA 7100 (Fairfax County Parkway) and VA 2677 (Frontier Drive).

Implement safety and operational improvements, as necessary.

Reconstruct / replace bridges, as necessary.
Bicycle/pedestrian accommodations included

4. Project Phasing

Project ID	In TIP	Improvement	Facility	From	To	# Lane From	# Lane To	Completion Date
	☐	Construct	VA 7900 HOV (Franconia-Springfield Parkway)	VA 7100 (Fairfax County Parkway)	VA 2677 (Frontier Drive)	-	2	2010
	☐	Construct/Upg	VA 7900 (Franconia-Springfield Parkway) Interchange	@ VA 1220 (Neuman Street)	VA 638 (Rolling Road) to VA 617 (Backlick Road)	6	6	2020

5. Purpose/contribution to regional goals

Policy Goal 2, Strategy 4: Construction of additional lanes will support the Springfield regional activity center by providing improved traffic flow and relieving congestion to and from Springfield.
HOV lanes will relieve congestion on regular lanes and encourage carpooling by providing exclusive lanes for HOV users.

6. Funding and Schedule Information

Cost (In Thousands): **$16,000** Date of completion or implementation: **2010**

Source: **Bonds**

Cost and schedule remarks:

7. CMS Documentation

Is this a highway capacity-increasing project on a limited access or other principal arterial highway ☐ Yes ☑ No

If yes, does this project require a CMS Documentation form under the given criteria? ☐ Yes ☑ No

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

CONSTRAINED LONG RANGE PLAN (CLRP)

Proposed Project or Action Description Form

 # 5

1. Location and Jurisdiction

Facility: **Potomac Yard Transit**
From/At: **Braddock Road Metro Station**
To: **Crystal City**
Jurisdiction: **Alexandria, Arlington County,**

2. Submitting Agency: **VDOT**

Last Modified On: **8/23/2005**

3. Project Type and Description

- ☑ Construction
- ☐ Transportation Emissions Reduction Measure (TERM)
- ☑ Study
- ☐ Illustrative Project
- ☑ Other Action/Strategy

Description of project or action:

The Virginia Department of Rail and Public Transportation (VDRPT) conducted an in-depth study of the cost benefits of various transit alternatives in the Potomac Yard Corridor between Crystal City and the Monroe Avenue Bridge. The Phase I study is complete. It identified three potential transit options for the corridor.

Phase II will identify a recommended transit mode and design options, develop appropriate environmental documentation, perform major capital investment study, and develop funding proposals for the project. Bicycle/pedestrian accommodations included

4. Project Phasing

Project ID	In TIP	Improvement	Facility	From	To	# Lane From	# Lane To	Completion Date
	☑	Study	Crystal City - Potomac Yard Transit Analysis, Phase II	Planning, Design and Environmental Study of	Interim Transit Improvements	-	-	2005
	☑	Study	Crystal City - Potomac Yard Transit Analysis, Phase II	Environmental Documentation	City of Alexandria	-	-	2006
	☑	Construct	CC-PY Busway - Potomac Yard Segment 1	Arlington South Tract Development (vicinity of Glebe Road Extended)	26th Street	0	2	2006
	☐	Construct	CC-PY Busway - Crystal City Segment 2	26th Street	Crystal City Metro Station	0	2	2008
	☐	Upgrade	Jefferson Davis Corridor BRT (CC-PY Segment)	Arlington South Tract Development (vicinity of Glebe Road Extended)	Crystal City Metro Station	0	2	2012

5. Purpose/contribution to regional goals

Policy Goal 2, Objective 4: Plan and fund a truly integrated, multi-modal transportation system in the corridor to best meet the needs of the public. Improved internal mobility with reduced reliance on the automobile within this regional activity center. Reduce congestion and improve air quality in the region.

6. Funding and Schedule Information

Cost (In Thousands):

Date of completion or implementation: **2012**

Source: **Federal, State, Private,**

Cost and schedule remarks:

7. CMS Documentation

Is this a highway capacity-increasing project on a limited access or other principal arterial highway? ☐ Yes ☑ No

If yes, does this project require a CMS Documentation form under the given criteria? ☐ Yes ☑ No

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

2005
CONSTRAINED LONG RANGE PLAN (CLRP) #b1

Proposed Project or Action Description Form

1. Location and Jurisdiction

Facility: **MD 2/4 at Lusby Southern Connector R**
From/At: **MD 765**
To: **MD 2/4 at Lusby**
Jurisdiction: **Calvert County**

2. Submitting Agency: **MDOT/State Highway Administration**

ProjectType: **Primary**
Agency Project ID:
Last Modified On: **2/3/2005**

3. Project Type and Description

☑ Construction
☐ Transportation Emissions Reduction Measure (TERM)
☐ Study
☐ Maintenance and Operations
☐ Other Action/Strategy

Description of project or action:
Develop a new east-west roadway connection from MD 765 to MD 2/4 in Lusby (0.15 mile). This project will be developed in coordination with the County's "Southern Connector Road" which will be a new two-lane roadway between MD 765 and MD 760 built by the County..

4. Project Phasing

Project ID	In TIP	Improvement	Facility	From	To	# Lane From	# Lane To	Completion Date
	☐	Construct	MD 2/4 at Lusby Southern Connector Road	MD 765	MD 2/4 at Lusby	0	3	2010

5. Purpose/contribution to regional goals

This project would improve safety by providing greater intersection spacing along this portion of MD 214, a partially access-controlled roadway. It will also provide improved service to planned economic development.

6. Funding and Schedule Information

Cost (In Thousands): **$20,428**
Date of completion or implementation: **2010**
Source: **Federal, State**
Cost and schedule remarks:
Project is outside of MPO boundaries, but is included in CLRP for air quality confirmity purposes.

7. CMS Documentation

Is this a highway capacity-increasing project on a limited access or other principal arterial highway ☐ Yes ☑ No

If yes, does this project require a CMS Documentation form under the given criteria? ☐ Yes ☑ No

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

CONSTRAINED LONG RANGE PLAN (CLRP)

Proposed Project or Action Description Form

1. Location and Jurisdiction

Facility: **Intercounty Connector**
From/At: **I-270**
To: **I-95/US 1**
Jurisdiction: **Montgomery County, Prince George's County**

2. Submitting Agency: **MDOT/State Highway Administration**
Last Modified On: **02/07/200**

3. Project Type and Description

☑ Construction
☐ Transportation Emissions Reduction Measure (TERM)
☐ Study
☐ Illustrative Project
☐ Other Action/Strategy

Description of project or action:
Construct a new east-west, multi-modal highway in Montgomery and Prince George's counties between I-270 and I-95/US 1. The project will include managed lanes with express bus service connecting to Metrorail stations, and is currently undergoing a National Environmental Policy Act study which is considering two build corridors.

4. Project Phasing

Project ID	In TIP	Improvement	Facility	From	To	# Lane From	# Lane To	Completion Date
	☑	Construct	Intercounty Connector	I-270	I-95/US 1	0	6	2010
	☑	Construct	GARVEE Bond Repayment					2025

5. Purpose/contribution to regional goals

The purpose of the Intercounty Connector (ICC) project is to link existing and proposed developed areas between the I-270 and I-95/US 1 corridors within central and eastern Montgomery County and northwestern Prince George's County with a state-of-the-art, multi-modal, east-west highway that limits access and accommodates passenger and goods movement. This transportation project is intended to increase community mobility and safety; to facilitate the movement of goods and people to and from economic centers; to provide cost-effective transportation infrastructure to serve existing and future development patterns reflecting local land use planning objectives; to help restore the natural, human and cultural environments from past development impacts in the project area; and to advance homeland security.

6. Funding and Schedule Information

Cost (In Thousands): **$2,446,306**
Date of completion or implementation: **2010**
Source: **Federal, State, Bonds**
Cost and schedule remarks:
Project is in project planning and preliminary engineering phase. The current funding concept plan assumes the project will be paid for with a mix of Maryland Transportation Authority bonds, GARVEE bonds, State funds, and special federal funds. (See attached table.)
The cost shown in the table does not include the cost of financing.

7. CMS Documentation

Is this a highway capacity-increasing project on a limited access or other principal arterial highway? ☑ Yes ☐ No

If yes, does this project require a CMS Documentation form under the given criteria? ☑ Yes ☐ No

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

Transportation Improvement Program (TIP)

Proposed Project or Action Description Form

FY 2005-2010

1. Agency: **MDOT/State Highway Administration** Last Modified On: **02/07/200**

2. Location and Jurisdiction

Facility: **Intercounty Connector**
From/At: **I-270**
To: **I-95/US 1**
Jurisdiction: **Montgomery County, Prince George's County**

3. Description of Project or Action

Construct a new east-west, multi-modal highway in Montgomery and Prince George's counties between I-270 and I-95/US 1. The project will include managed lanes with express bus service connecting to Metrorail stations, and is currently undergoing a National Environmental Policy Act study which is considering two build corridors. Total costs to construct the ICC are shown on this line item. The debt service associated with the GARVEE funding source is shown for informational purposes on a separate line item.

4. Project Status

In previous TIP, proceeding as scheduled

5. Environmental Review

DEIS **Under preparation**

6. Funding and Schedule Information

Date of completion or implementation: **2010**

Source	FY	Amount ($1,000s)	Phase	% Fed/State/Loc		
GARVEE (AC)						
	2006	$400,000	R.O.W. Acquisition	100	0	
	2008	$400,000	Construction	100	0	
	2010	$200,000	Construction	100	0	
MdTA						
	2004	$3,207	R.O.W. Acquisition	0	100	
	2004	$36,793	P.E.	0	100	
	2005	$4,750	R.O.W. Acquisition	0	100	
	2005	$25,250	P.E.	0	100	
	2007	$190,059	Construction	0	100	
	2007	$14,941	R.O.W. Acquisition	0	100	
	2008	$130,000	Construction	0	100	
	2009	$572,000	Construction	0	100	
	2010	$180,000	Construction	0	100	
	2011	$90,000	Construction	0	100	
Special Fed.						
	2005	$250	R.O.W. Acquisition	100	0	
	2006	$9,750	R.O.W. Acquisition	100	0	
	2007	$10,000	Construction	100	0	
	2008	$10,000	Construction	100	0	
	2009	$10,000	Construction	100	0	
	2010	$10,000	Construction	100	0	
State						
	2006	$2,506	R.O.W. Acquisition	0	100	
	2006	$27,494	P.E.	0	100	
	2007	$17,487	R.O.W. Acquisition	0	100	
	2007	$12,513	P.E.	0	100	
	2008	$30,000	Construction	0	100	
	2009	$30,000	Construction	0	100	
	2010	$30,000	Construction	0	100	

Cost and schedule remarks:

Project is in project planning and preliminary engineering phase. The current funding concept plan assumes the project will be paid for with a mix of Maryland Transportation Authority bonds, GARVEE bonds, State funds, and special federal funds.
The cost shown does not include the cost of financing.

Transportation Improvement Program (TIP)

Proposed Project or Action Description Form

FY 2005-2010

1. Agency: **MDOT/State Highway Administration** Last Modified On: **02/07/200**

2. Location and Jurisdiction

Facility: **GARVEE Bond Repayment**
From/At:
To:
Jurisdiction:

3. Description of Project or Action

Repayment of GARVEE bond proceeds used for the Intercounty Connector Project. Debt service continues for 15 years following issuance.

4. Project Status

In previous TIP, proceeding as scheduled

5. Environmental Review

N/A

6. Funding and Schedule Information

Date of completion or implementation: **2025**

Source	FY	Amount ($1,000s)	Phase	% Fed/State/Loc	
NHS					
	2007	$40,000	R.O.W. Acquisition	100	0
	2008	$40,000	R.O.W. Acquisition	100	0
	2009	$40,000	Construction	100	0
	2009	$40,000	R.O.W. Acquisition	100	0
	2010	$40,000	Construction	100	0
	2010	$40,000	R.O.W. Acquisition	100	0
	2011	$40,000	R.O.W. Acquisition	100	0
	2011	$60,000	Construction	100	0

Cost and schedule remarks:

NHS funding levels will be accommodated with transfers from other funding sources (STP/IM/BR) as required.

ICC CONCEPTUAL FUNDING PLAN
($millions)

Components *(Funding Sources)*	**As Presented To Transportation Task Force** "Hellmann Commission" September 2003	**Current Range and Likely Scenario**	**Comments**
Total Cost	$1,700	$1,800 - $2,100 $300 $2,100 - $2,400	- Expressed in 2004 values - nearest $100 million - (Inflation adds approx. $100 million per year; approximately $300 million total) - Total - nearest $100 million; ($,2,400 is assumed for financial planning purposes.)
GARVEE Bonds *(Federal Funds)*	$900 - $1,000	$1,000	- Same as upper limit presented to Transportation Task Force - Future federal highway funds pay debt service - GARVEE bond term: 15 years - Maximum debt service is approx. $100 million per year. (Ramps up to maximum level over 5-6 years.) - $100 million is approx. 20% of expected average annual federal highway funding ($500 million + per year) - 20% cap on GARVEE debt service - (currently 13%) - MdTA issues GARVEES; no affect on State's or MDOT's debt affordability / caps
MdTA Bonds *(MdTA revenues)*	$400 - $600 *(ICC Tolls)* $100 - $350 *(MdTA bonding)*	$1,200	- ICC would be part of Maryland Transportation Authority's system of toll highways, bridges, tunnels. - Authority issues bonds backed solely by Authority revenues. - Toll revenues from all facilities are pooled, supporting the total system. - ICC tolls will assist in managing traffic as well as project financing. - ICC tolls expected to pay for approximately $400 - $600 million of project cost.
Pay-As -You Go *(MDOT - TTF)*	$50 - $300	$150	- Within range presented to Transportation Task Force
Pay-As-You-Go *(Special Fed. Funds)*	$10 - $50	$50	- No change from range presented to Transportation Task Force - Funds authorized or appropriated directly for ICC

MARYLAND
TRANSPORTATION
AUTHORITY

Robert L. Ehrlich, Jr.
Governor

Michael S. Steele
Lt. Governor

Robert L. Flanagan
Chairman

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Walter E. Woodford, Jr., P.E.
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February 4, 2005

The Honorable Phil Mendelson, Chairman
National Capital Region Transportation Planning Board
Metropolitan Washington Council of Governments
777 North Capitol Street, N.E.; Suite 300
Washington, D.C. 20002-4290

Attention: Mr. Ronald F. Kirby

Dear Sirs:

In addition to issuing GARVEES for the Intercounty Connector Project (ICC), the Maryland Transportation Authority (Authority) will fund approximately $1.24 billion of project costs (including $1.12 billion in the FY 2005 –FY 2010 period). This funding will be provided from Authority toll revenue bonds (and potentially cash), supported by Authority revenues (primarily toll revenues). The funding for the ICC is included in the Authority's FY 2005-2010 capital program, which includes an additional $1.61 billion in other Authority projects.

With recent toll increases and a proven revenue stream, the Authority is able to undertake its capital program obligations including the ICC. Annual Authority revenues are projected to be $292 million in FY 2005 and $301 million in FY 2006. The Authority has been conservative in its use of debt and adheres to strict financial goals and standards, including those imposed in its trust agreement and bond indentures. The Authority's goal is to maintain cash reserves approximately equal to annual toll revenues, and a coverage factor of net revenues being two times annual debt service.

In 2004, the Authority received its highest-ever bond ratings, including Aa3 (Moody's Investors Service) and AA- (Fitch Ratings). The A+ rating from Standard and Poors was unchanged. These ratings took into consideration the Authority's intent to undertake the ICC project.

The Authority was established by the Maryland General Assembly as an independent state agency in 1971. It consists of six members appointed by the Governor with the advice and consent of the State Senate. Each member serves a three-year term. Maryland's Secretary of Transportation serves as the Authority's chairman.

Pursuant to the enabling legislation, the Authority is responsible for the construction, operation, maintenance and repair of revenue-producing transportation facilities projects. All existing highway toll facilities in

Maryland are owned, operated and maintained by the Authority, which has the exclusive right to levy tolls within the State. Current toll facilities include:

- John F. Kennedy Memorial Highway (I-95);
- Thomas Hatem Memorial Bridge (US 40);
- Fort McHenry Tunnel (I-95);
- Baltimore Harbor Tunnel (I-895);
- Francis Scott Key Bridge (MD 695);
- William Preston Lane Jr. Memorial (Bay) Bridge (US 50/301); and
- Governor Harry W. Nice Memorial Bridge (US 301).

The Intercounty Connector will be the Authority's eighth toll facility.

Acting on behalf of the Department, the Authority has various powers and duties relating to the supervision, financing, construction, operation, maintenance and repair of transportation facilities projects. In addition to its existing transportation facilities projects, the Authority may authorize the acquisition, financing, or construction of any other projects for transportation facilities, including airport, highway, port, rail and transit facilities, as "transportation facilities projects." The Authority is empowered to finance the cost of transportation facilities projects by the issuance and sale of revenue bonds, notes, or other obligations.

If additional information is needed, please do not hesitate to contact me.

Sincerely,

Trent M. Kittleman
Executive Secretary

CONSTRAINED LONG RANGE PLAN (CLRP)

Proposed Project or Action Description Form

1. Location and Jurisdiction

Facility: **Dulles Corridor Metrorail Project**
From/At: **East Falls Church Metrorail Station**
To: **Route 772 (Loudoun County)**
Jurisdiction: **Fairfax County, Loudoun County,**

2. Submitting Agency: **VDRPT**

Last Modified On: **9/8/2005**

3. Project Type and Description

- ☑ Construction
- ☐ Transportation Emissions Reduction Measure (TERM)
- ☑ Study
- ☐ Illustrative Project
- ☑ Other Action/Strategy

Description of project or action:

The project is a 23.1 mile extension of the existing Metrorail system from the Orange Line in Fairfax County through Tysons Corner to Washington Dulles International Airport and Route 772 in Loudoun County. Most of the extension would be constructed in the median of the Dulles Airport Access Road and Dulles Connector Road, but the alignment would also directly serve Tysons Corner and Dulles Airport. The extension would include 11 new Metrorail stations, a rail yard site on Dulles Airport property, and an expansion of the existing rail yard at West Falls Church. Four of the new stations would be located within Tysons Corner. Construction of the project would occur in two phases.

Bicycle/pedestrian accommodations included

4. Project Phasing

Project ID	In TIP	Improvement	Facility	From	To	# Lane From	# Lane To	Completion Date
	☐	Incorporate	Dulles Corridor - BRT Elements into the Express Bus Service in the Corridor	East Falls Church Metrorail Station	Route 772	-	-	2002
	☐	Study	Dulles Corridor Rapid Transit - NEPA	East Falls Church Metrorail Station	Route 772	-	-	2005
	☑	Construct	Dulles Corridor Metrorail Project - Phase 1	East Falls Church Metrorail Station	Wiehle Avenue	-	-	2011
	☐	Construct	Dulles Corridor Metrorail Project - Phase 2	Wiehle Avenue	Route 772	-	-	2015

5. Purpose/contribution to regional goals

This project contributes to all regional goals identified in the Policy Element of the Transportation Plan for the National Capital Region including: Transportation and Land Development objectives of concentrating development in transportation corridors and encouraging transit-friendly site design at subregional centers; Transportation, Environmental & Energy objectives of compliance with Clean Air Act amendments, reducing SOV travel, reducing congestion and improving traffic flow, reducing transit travel time; providing better access to regional opportunities for transit-dependent persons, and meeting ADA requirements. The project also contributes to interregional transportation and transportation system objectives by creating a multi-modal transportation link to Dulles International Airport, expanding enhancing cost-effective transit alternatives, developing intermodal facilities with Metrobus, local bus systems, and VRE, and providing park and ride facilities. This project contributes to the region's goal for congestion management by applying ITS technologies to an existing transportation system.

6. Funding and Schedule Information

Cost (In Thousands): **$3,704,100**

Date of completion or implementation: **2015**

Source: **Federal, State, Local,**

Cost and schedule remarks:

Phase 1: $1.84 Billion
Phase 2: $1.864 Billion
Total: $3.704 Billion

Sources of capital funding: Federal Transit Administration Section 5309 - $1,852 million (50%); Commonwealth of Virginia - $926 million (25%); Local (Fairfax County, Loudoun County, MWAA) - $926 million (25%)

***Phase 1 figures updated according to the "Dulles Corridor Metrorail Project: FY07 New Starts Update - Project Financial Plan and Supporting Documentation" released August 2005.**

7. CMS Documentation

Is this a highway capacity-increasing project on a limited access or other principal arterial highway? ☐ Yes ☑ No

If yes, does this project require a CMS Documentation form under the given criteria? ☐ Yes ☑ No

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

COMMONWEALTH of VIRGINIA

KAREN J. RAE
DIRECTOR

DEPARTMENT OF RAIL AND PUBLIC TRANSPORTATION
DULLES CORRIDOR METRORAIL PROJECT
1595 SPRING HILL ROAD, SUITE 600
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VIRGINIA RELAY CENTER
1-800-828-1120 (TDD)

September 6, 2005

Mr. Ronald Kirby
Director, Department of Transportation Planning
Metropolitan Washington Council of Governments
777 North Capitol Street NE, Suite 300
Washington, D.C. 20002

Subject: Dulles Corridor Metrorail Project
Updated Financial Plan

Letter No.: 11111-000-T05-GAMO-00094; WBS Nos. RT00.00.4.5 & RT00.00.7.1

Dear Mr. Kirby:

Attached for your information is a copy of the *Project Financial Plan and Supporting Documentation* for the Dulles Corridor Metrorail Project – Wiehle Avenue Extension recently submitted to the Federal Transit Administration as part of its annual review of New Starts projects.

The attached financial plan only addresses the initial phase of the Project (from the Orange Line to Wiehle Avenue) and is based on the current preliminary engineering cost estimate. The cost and schedule information included in this plan should be incorporated into future updates of the region's Constrained Long-Range Plan and Transportation Improvement Program. Updated cost and schedule information for the Project's second phase (from Wiehle Avenue to Route 772 in Loudoun County) will be available early next year.

If you have any questions, please contact me at (703) 288-5919 or Karl Rohrer at (703) 288-5924 or via e-mail at karl.rohrer@dullesmetro.com.

Sincerely,

Charles S. Carnaggio, P.E.
Dulles Corridor Metrorail Project
Project Director

KAR/CSS/kc

Enclosure

cc: B. Glenn, FTA Washington Metropolitan Office (w/o enclosure)
D. Weeks, FTA Headquarters (w/o enclosure)
P. Kampf, FTA Region III (w/o enclosure)
K. Rohrer, DRPT (w/o enclosure)
D. Korzym, WMATA (w/o enclosure)
T. Harrington, WMATA (w/o enclosure)

WIEHLE AVENUE EXTENSION

Preliminary Financial Plan

Prepared by

Virginia Department of Rail and Public Transportation

in cooperation with

Washington Metropolitan Area Transit Authority

and

Fairfax County, Virginia

August 2005

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1 INTRODUCTION

The Virginia Department of Rail and Public Transportation (DRPT), in cooperation with the Washington Metropolitan Area Transit Authority (WMATA) and local jurisdictions, is planning to construct a new rapid rail transit system in the fast growing Dulles Corridor located in Northern Virginia outside Washington, D.C. The Dulles Corridor Metrorail Project (the Project) consists of a 23.1-mile extension of the region's existing Metrorail system, 11 new stations, a rail yard site on Washington Dulles International Airport (Dulles Airport) property, and an expansion of the existing rail yard at West Falls Church.

Due to Federal funding limitations and the timing of local funding availability, DRPT intends to construct the Project in two major phases. The Wiehle Avenue Extension (Phase 1) would complete the first segment of the planned extension from the existing Metrorail Orange Line to Wiehle Avenue in Reston, Virginia. The Route 772/Dulles Airport Extension (Phase 2) would complete the remainder of the locally preferred alternative (LPA) to Route 772 in Loudoun County, Virginia.

Over the past three years, DRPT and its local funding partners have developed a workable, comprehensive financial plan for the Project. Funding sources for both the Project's capital and operating plans have been identified and initial funding commitments have been secured. Several administrative or legislative actions necessary to appropriate or program funding for the Project have also been completed.

This preliminary Financial Plan (Plan) describes the Project's ongoing financial planning activities and progress made to date in identifying the funding sources necessary to complete construction of Phase 1 of the Dulles Corridor Metrorail Project. The Plan has been prepared in accordance with the FTA's *Guidance for Transit Financial Plans* (June 2000). The remainder of this preliminary Financial Plan includes the following sections:

- An overview of the Project sponsors and funding partners; current Project status and planned implementation schedule; and a summary of the plan (Sections 1.2 – 1.4);
- Details on the Project's capital financing plan, including cost estimates, funding sources, cost allocation among the funding partners, and proposed financing techniques. (Chapter 2); and
- A description of the Project's operating funding plan, including estimated operating costs, operating subsidy funding sources and allocation, and an assessment of the long-term effects on the WMATA capital and operating budgets (Chapter 3).

1.1 PROJECT SPONSORS AND FUNDING PARTNERS

Two elements of the planned implementation approach for the Project are unique and affect the structure of the Financial Plan. As described in Section 1.2, different public agencies will be responsible for the two major elements of the Plan. DRPT will be the lead agency for capital funding and general oversight of the capital construction program. WMATA will operate the system and be the lead agency for ongoing operating and maintenance funding. Second, DRPT intends to use the Virginia Public-Private Transportation Act and a design-build approach to implement the Project. This financial structure is necessary because of the structure and policies of WMATA, the region's mass transit agency.

Table 2-1
CAPITAL COST ESTIMATE AND SCHEDULE –WIEHLE AVENUE EXTENSION (Thousands YOE Dollars)

FTA Standard Cost Category	Total	6/30/05 & Prior[1]	7/1/05 - 9/30/05	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Guideway and Track Elements	$405,118	-	-	$230	$70,662	$166,547	$135,679	$32,000	-	-	-	-
Stations, Stops, Terminals, Intermodal	$288,409	-	-	$11,312	$65,545	$87,929	$77,977	$45,646	-	-	-	-
Yards, Shops, Admin/Support Facilities	$12,040	-	-	-	$1,494	$4,096	$3,773	$1,759	$919	-	-	-
Sitework and Special Conditions	$106,375	-	-	$2,457	$24,140	$33,763	$31,151	$14,864	-	-	-	-
Systems	$159,564	-	-	$78,494	$81,070	-	-	-	-	-	-	-
ROW, Land, Existing Improvements	$265,513	-	-	$488	$12,871	$91,989	$94,629	$64,914	$622	-	-	-
Vehicles[2]	$198,336	-	-	-	$1,581	$23,713	$26,936	$22,336	$104,456	$12,831	$4,167	$2,316
Soft Costs[3]	$255,827	$24,115	$4,959	$72,304	$41,811	$30,945	$31,833	$32,747	$17,114	-	-	-
Contingency[4]	$93,692			$1,260	$15,192	$33,419	$29,844	$13,842	$134	-	-	-
Financing[5]	$55,234					-	$7,750	$12,746	$12,389	$11,632	$7,402	$3,316
Total Project Costs[6]	**$1,840,108**	**$24,115**	**$4,959**	**$166,544**	**$314,365**	**$472,402**	**$439,572**	**$240,852**	**$135,634**	**$24,463**	**$11,569**	**$5,632**

Notes:

1. Costs may differ from the 50% Preliminary Engineering cost estimate presented in the August 15, 2005 New Starts update. "6/30/05 & Prior" includes actual expenditures up to June 30, 2005, and "7/1/05 – 9/30/05" includes estimated expenditures for the remainder of FY 2005. Fiscal Year (FY) runs October 1 to September 30.
2. *Vehicles* costs in 2014 include projected expenditures in 2016, which include manufacturer withholding payments that are released upon final acceptance of vehicles. These funds would be obligated in FY 2014.
3. *Soft Costs* include preliminary engineering, final design, construction management, project management, owner administration, FTA and other agency coordination, insurance, and project start-up and testing.
4. *Contingency* costs are unallocated contingency, and include allowances for change orders.
5. Estimated financing costs include total interest charges on $265M in FRANs between FY09-FY14. Assumes an interest rate of 4.65% and 5% for underwriting fees and issuance costs.
6. Costs shown are preliminary and subject to change based on the results of Preliminary Engineering, design-build negotiations, federal approvals and funding availability. Internal totals may not equal due to rounding.