Northern Virginia Transportation Commission

NVTC COMMISSION MEETING
THURSDAY, OCTOBER 4, 2007
NVTC CONFERENCE ROOM
8:00 P.M.

NOTE: A buffet supper will be provided for attendees.

AGENDA

1. Minutes of the NVTC Meeting of September 6, 2007.
Recommended Action: Approval.

2. VRE Items.

A. Report from the VRE Operations Board and VRE's CEO—Information Item.
B. Sale of Five Gallery Cars—Action Item/ Resolution #2077.
C. Continued Lease of Sounder Railcars—Action Item/ Resolution #2078.
D. Facilities Maintenance Option—Action Item/ Resolution #2079.
E. Closed Session on VRE's Insurance Plan—Section 2.2-3711A (7) of the Code of Virginia.

3. Ride Free (Code Orange/ Red) Program Evaluation and FY 2009 CMAQ Application.

NVTC is managing the program of free bus rides on forecast bad air days using regional CMAQ funds. A final evaluation report is pending but more CMAQ funding would be needed to continue the program next year and the deadline for applying is October 5th.

Recommended Action: Preliminary guidance from the commission on seeking additional CMAQ funds to continue the program pending completion of the final evaluation report by next month.

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4. Metro Items.

A. FY 2009 Budget and Fare Increase.
B. Status of Federal Dedicated Funding Bills.
C. Survey of Metrorail/Metrobus Customer Attitudes.
D. Metro Board Letter on the Dulles Rail Project.

Discussion Item.

5. Regional Transportation Items.

A. NVTA Administrative Actions.
B. "Cruising for Parking" Article.
C. I-95/395 Transit/ TDM Study Progress Report.
D. Texas Transportation Institute's Annual Congestion Report.
E. New Data on Slugging in the I-95 Corridor.
F. Earlier Commutes.
G. Media Coverage of NVTC's Mode Share Report.
H. Test of Vehicle Mile Fees.
I. William Euille Elected Vice-President of the Virginia Transit Association.

Discussion Item.

6. NVTC Financial Items for August, 2007.

Information Item.

Northern Virginia Transportation Commission

AGENDA ITEM #1

MINUTES
NVTC COMMISSION MEETING – SEPTEMBER 6, 2007
NVTC CONFERENCE ROOM – ARLINGTON, VIRGINIA

The meeting of the Northern Virginia Transportation Commission was called to order by Chairman Snyder at 8:24 P.M.

Members Present
David Albo
Sharon Bulova
Gerald Connolly
Jeannemarie Devolites Davis
Adam Ebbin
William D. Euille
Paul Ferguson
Jay Fisette
Catherine M. Hudgins
Dana Kauffman
Elaine McConnell
David F. Snyder
Matthew Tucker
Mary Margaret Whipple
Christopher Zimmerman

Members Absent
Eugene Delgaudio
Joe May
Thomas Rust
Scott Silverthorne
Paul Smedberg

Staff Present
Rhonda Gilchrest
Scott Kalkwarf
Greg McFarland
Adam McGavock
Elizabeth Rodgers
Kala Quintana
Andrew Ryder
Jennifer Straub (VRE)
Richard K. Taube
Dale Zehner (VRE)

Minutes of NVTC's Meeting of July 5, 2007

Mrs. Hudgins requested that the fourth sentence of the second paragraph on page five on the minutes be deleted. There were no objections. Mr. Connolly moved, with a second by Mrs. Bulova, to approve the amended minutes. The vote in favor was cast by commissioners Albo, Bulova, Connolly, Euille, Ferguson, Fisette, Hudgins, Kauffman, McConnell, Snyder, Tucker, Whipple and Zimmerman.

VTA Award

Linda McMinimy, Executive Director of the Virginia Transit Association (VTA), stated that she was honored to be at NVTC, which is an organization that over the decades has shown tremendous leadership in moving transit forward in Northern Virginia. This year, VTA recognizes the accomplishments of Dana Kauffman for his dedication to public service and his advocacy for public transit. She presented the VTA "Outstanding Contribution by a Public Official" Award to Mr. Kauffman. The commission congratulated Mr. Kauffman by giving him a standing ovation.

Mr. Connolly stated that he has had the privilege to serve with Mr. Kauffman for the past 12 years on the Fairfax County Board of Supervisors. Mr. Kaufman has been an outstanding public servant and has been a diligent, caring and committed member of the WMATA Board for many years. He is truly an honorable person. Chairman Snyder agreed and added that Mr. Kauffman is also a very patient person. Mr. Kauffman thanked VTA for the award.

Metro's Strategies for FY 2009

John Catoe, WMATA's General Manager, reported that Metro has already significantly reduced expenses and has worked to close the revenue operating gap for FY 2008. However, Metro has a $52 million operating gap for FY 2009. Conservatively, Metro has projected a one percent increase in ridership for FY 2009. Including the operating gap ($52 million), increases due to inflation ($80 million) and funds to address overcrowding ($41 million if the WMATA Board chooses to approve them), Metro is looking at an estimated $173 million increase in funding over its $1.2 billion budget. The options to cover these additional costs are increases to the jurisdictions' subsidies, a fare increase and/or other revenue sources, such as outsourcing parking, strategic real estate and service cuts.

Senator Devolites Davis and Delegate Ebbin arrived at 8:40 P.M.

In response to a question from Mr. Connolly, Mr. Catoe stated that federal appropriations can only be used for capital costs, not operating costs. Senator Whipple asked how much revenue would be generated for every 10-cents fare increase. Mr. Catoe responded that it would generate approximately $31 million per year.

Senator Devolites Davis observed that parking charges at Metro stations are already high and she asked if these revenues get included in the equation. Mr. Catoe explained that although parking brings in revenue, there are operating costs associated with the parking structure. In response to a question from Mr. Connolly, Mr. Catoe stated that jurisdictions pay for the construction of the parking structures, but don't receive any revenues. Mr. Kauffman clarified that there is a surcharge on parking for the revenue bonds issued by the jurisdictions. He stated that he has some concerns about parking outsourcing. Mr. Catoe stated that WMATA staff is looking into this issue, but is not making a recommendation at this time.

Delegate Albo observed that riders will understand the need for a fare increase due to cost of fuel and/or insurance costs, but they won't understand Metro spending $41 million to provide fringe services. Mr. Euille stated that it is important to remember that WMATA is a large organization with 10,000 employees and an increase of $41 million is not unreasonable. Mr. Zimmerman stated that it would be helpful to show how WMATA's personnel costs compare to other transit systems across the country. He stated that it is also important to be careful in evaluating the effectiveness of the system based on fare box recovery.

Chairman Snyder stated that as a day-to-day rider, he believes that service cuts and/or fare increases will spark a revolt among passengers in light of continued delays, unless riders can be assured that service will improve. Service on the Orange and Red Lines continues to be unreliable.

Mr. Tucker stated that with Metro's fare box recovery of 80 percent and record ridership, he was concerned regarding pulling back on service. Systemwide improvements do not happen overnight and require investment. Whether the region is building roads or improving transit, costs are increasing. Mr. Catoe stated that upgrades to the system will take time and money, so it is important to have a long-term philosophy and process.

Delegate Ebbin asked if Metro's advertising revenue is significant and if there is potential to increase that revenue. Mr. Catoe replied that the WMATA Board recently approved advertising expansion that would increase revenues to $38 million. Metro is looking at video advertising at stations in the future, which would also increase revenues.

Mr. Connolly stated that Fairfax County will have problems with a subsidy increase. The county is looking at zero percent growth of its FY 2009 school budget, as well as negative revenue growth in property tax and an estimated four percent decline in real estate values. A nine percent Metro subsidy increase to the county is not sustainable. Mr. Zimmerman agreed that subsidies can't keep increasing. He also observed that the statistics of fare box recovery can be misleading. It is important to look at the overall costs, including the service passengers are getting and what's being invested.

Mrs. Hudgins stated that the crux of the matter is how the region deals with a Metro budget that has a significant deficit, while service demands continue to increase. Subsidies can't carry all the costs. Riders are committed to riding Metro but have concerns about service reliability. She predicted that they won't revolt over a fare increase, but they will over reliability of service. Mr. Euille stated that Mr. Connolly's comments about Fairfax County are also relevant to the rest of the Northern Virginia jurisdictions. Increases to the jurisdictional subsidies cannot continue. However, Metro cannot just throw out a fare increase without providing a holistic picture or broad perspective of what riders will get for their investment.

Senator Devolites Davis suggested Metro do an analysis of how far the fare can increase before ridership drops. The public doesn't look at the complete costs associated with commuting by automobile. Chairman Snyder stated that in the past, analysis has been done that compared automobile vs. transit and it was shown that using transit costs less when all the costs are factored into the equation. He stated that this type of analysis would be helpful to inform the public.

Mr. Catoe stated that Metro is working on a process of what it will take to fix an issue, not just what it takes to plug a leak. It is important to develop short, medium and long-term strategies. Senator Whipple suggested doing some analysis on what would be the impact to Metro ridership if gasoline prices go up to the $4-5 per gallon range.

VRE Items

Report from the VRE Operations Board and VRE's Chief Executive Officer. Mrs. Bulova urged commissioners to read the minutes of the August 17h Operations Board meeting. Mr. Zehner reported that ridership between April and June increased 3.5 percent. On time performance was 94 percent on the Manassas Line and 88 percent on the Fredericksburg Line. Mr. Zehner visited the plant in Chicago to see progress on the 50-railcar purchase.

Mrs. Bulova observed that last year at this time VRE was suffering with on-time performance problems because of heat restrictions, but this summer there has been much improvement, due to a much improved relationship between VRE and the railroads, especially CSXT.

Update on Fauquier and Spotsylvania Counties' VRE Membership. Mrs. Bulova reported that the Fauquier Board is considering the alternative possibility of forming an independent "transportation district" (with newly legislated authority to levy a two percent motor fuels tax similar to that of PRTC and NVTC), and decided that consideration of PRTC/VRE membership was premature at this time. In response to a question from Delegate Albo, Mr. Zehner explained that the ground rules for entering into negotiations with other jurisdictions include the financial requirements for new jurisdictions to join, which has caused some of the problems with the negotiations.

Contract Award for Manassas Parking Garage. Mrs. Bulova stated that the commission is asked to approve Resolution #2072, which would authorize VRE's Chief Executive Officer to contract with Costello Construction of Maryland, Inc., to build a parking garage at the Manassas VRE station. The cost will not exceed $9,189,000 including a 10 percent contingency. VRE's CEO would also be authorized to execute any related documents. The new garage will contain 520 new spaces, which will be shared with the city of Manassas in a 60/40 ratio, as will the cost.

Mrs. Bulova moved, with a second by Mr. Zimmerman, to approve the resolution (copy attached). The vote in favor was cast by commissioners Albo, Bulova, Connolly, Devolites Davis, Ebbin, Euille, Ferguson, Fisette, Hudgins, Kauffman, McConnell, Snyder, Tucker, Whipple and Zimmerman.

Renewal of Manassas Warehouse Lease. Mrs. Bulova moved to approve Resolution #2073, which would authorize VRE's CEO to renew a contract with KAO Manassas Airport, LLC for warehouse space in an amount not to exceed $199,216 over three years. Mrs. McConnell seconded the motion. The vote in favor was cast by commissioners Albo, Bulova, Connolly, Devolites Davis, Ebbin, Euille, Ferguson, Fisette, Hudgins, Kauffman, McConnell, Snyder, Tucker, Whipple and Zimmerman.

Ratify Spotsylvania County Storm Water Agreement. Mrs. Bulova reported that the VRE Operations Board recommends approval of Resolution #2074, which would ratify the previous signatures of the NVTC and PRTC chairmen on a Storm Water Best Management Practices Agreement with Spotsylvania County. She explained that the county asked for the signatures of the chairmen instead of VRE's usual practice of having its CEO sign. The agreement covers construction of a new VRE maintenance facility at Crossroads Yard.

Mrs. Bulova moved, with a second by Mrs. McConnell, to approve the resolution.

In response to a question from Mr. Connolly, Mr. Zehner explained that since the property is owned by the commissions, Spotsylvania was very particular about who signed the document.

The commission then voted on the resolution (copy attached) and it passed. The vote in favor was cast by commissioners Albo, Bulova, Connolly, Devolites Davis, Ebbin, Euille, Ferguson, Fisette, Hudgins, Kauffman, McConnell, Snyder, Tucker, Whipple and Zimmerman.

Referral of the FY 2009 Preliminary VRE Budget. Mrs. Bulova stated that Resolution #2075 would refer VRE's FY 2009 preliminary budget to those NVTC jurisdictions participating and contributing to VRE. At this early stage VRE staff has presented two budget scenarios. One assumes receipt of $25 million of regional funds and the other does not. Local staff will meet next week to discuss the budget. NVTC will be asked to act on VRE's final budget at its January, 2008 meeting.

On a motion by Mrs. Bulova and a second by Mr. Zimmerman, the commission unanimously approved the resolution (copy attached). The vote in favor was cast by commissioners Albo, Bulova, Connolly, Devolites Davis, Ebbin, Euille, Ferguson, Fisette, Hudgins, Kauffman, McConnell, Snyder, Tucker, Whipple and Zimmerman.

Confirmation of CSXT's Status as Insured Under VRE's Liability Insurance Plan. Mrs. Bulova reported that Resolution #2076 (copy attached) would confirm that CSXT has been a named insured under both the self insured and commercial insurance portions of the Insurance Plan.

Mrs. Bulova moved with a second by Mr. Fisette to approve the resolution. Chairman Snyder abstained due to his working in the insurance industry. The vote passed with the following commissioners voting in favor of the motion: Albo, Bulova, Connolly, Devolites Davis, Ebbin, Euille, Ferguson, Fisette, Hudgins, Kauffman, McConnell, Tucker, Whipple and Zimmerman.

Preliminary FY 2009 NVTC Administrative Budget and Performance Objectives.

Mr. Taube explained that the commission is asked to authorize staff to forward the preliminary budget to NVTC's member jurisdictions for use in planning their own FY 2009 budgets. In response to a question from Mr. Connolly, Mr. Taube explained that although total local contributions are held constant at $310,000, individual jurisdiction's local shares vary based on shares of state grants and regional gas taxes received from NVTC. Those jurisdictions that receive more state funds pay more.

Mr. Taube reported that NVTC ended FY 2007 with an unappropriated surplus of over $100,000 (almost 10 percent of the administrative budget) and those funds are being used to help fund this proposed FY 2009 budget. The

overall level of expenditures would increase in FY 2009 by two percent compared to the approved budget for FY 2008. In FY 2009 salaries would be constant, including a reserve for performance-based increases but no cost of living increases.

Mr. Zimmerman moved, with a second by Mr. Euille, to authorize staff to forward the preliminary budget to NVTC's member jurisdictions. The vote in favor was cast by commissioners Albo, Bulova, Connolly, Devolites Davis, Ebbin, Euille, Ferguson, Fisette, Hudgins, Kauffman, McConnell, Snyder, Tucker, Whipple and Zimmerman.

Mode Shares in the I-395/Rt. 1 Corridor Inside the Beltway

Mr. Taube suggested that since commissioners were provided with a written report and because of the lateness of the hour, the commission forego the PowerPoint presentation. There were no objections.

Mr. Taube stated that the results of the I-395/Rt.1 corridor study show strong shares for transit and ridesharing. The analysis shows that two out of three people traveling inside the Beltway in the Rt. 1/I-395 corridor at a Glebe Road screenline are using transit or ridesharing. Chairman Snyder stated that this information needs to be widely circulated, including to the group working on the I-95/395 HOT lanes projects.

Mr. Zimmerman moved, with a second by Mr. Connolly, to authorize staff to issue a media release describing the results of the study, in cooperation with MWCOG and VDOT staff. The vote in favor was cast by commissioners Albo, Bulova, Connolly, Devolites Davis, Ebbin, Euille, Ferguson, Fisette, Hudgins, Kauffman, McConnell, Snyder, Tucker, Whipple and Zimmerman.

NVTC Projects

NVTC's Hydrogen Fuel Injector Bus Demonstration. The first prototype fuel injector has now been installed on a CUE bus with others to follow. Fuel savings and emissions reductions will be monitored for the next several months.

NVTC's Senior Mobility Project. An in-depth article on the project was a page one story in the American Public Transportation Associations' Passenger Transport.

Code Orange/Red Ride Free. Marketing and survey efforts have been completed and a final report is being prepared with recommendations for the future of the project.

Regional Transportation Items

Status of Request by the Fredericksburg Area Metropolitan Planning Organization. A draft letter from the Transportation Planning Board's Chair Catherine Hudgins to the Chairman of FAMPO would respond to its request, among others, to share in Metropolitan Washington's transit formula funds. TPB's draft letter suggests that FAMPO should participate in TPB's planning and programming process to advocate projects for Northern Stafford County that FAMPO believes are worthy of funding. The letter also points out that approximately 3,700 daily trips are taken on Metro by FAMPO residents, which requires about $590,000 in annual subsidy currently being paid by WMATA's jurisdictions without the financial participation of FAMPO jurisdictions.

Status of NVTA Administrative Actions. Progress continues as recruiting is underway for NVTA's executive director. NVTA also filed a bond validation suit on July 13th. It was heard in Arlington's Circuit Court on August 27 and 28, 2007 and the ruling was in favor of NVTA. Virginia's Attorney General and Governor as well as the Speaker of the House of Delegates intervened on the side of NVTA.

APTA's Public Transportation Fact Book. APTA's annual fact book has been released. It reports that 9.8 billion unlinked transit passenger trips were taken in transit in 2005, which was up 26 percent from 1995.

Former DRPT Director Karen Rae Now with NYDOT. Former NVTC Commissioner, Karen Rae, has joined the New York Department of Transportation as Deputy Commissioner of Policy and Strategy

I-95/I-395 HOT Lanes Project

Corey Hill of DRPT introduced Jay Evans of Cambridge Systematics, Inc., who gave a Power Point presentation briefing commissioners on the progress of the ongoing transit/transportation demand management study. Mr. Evans stated that currently, the consultants are in the process of testing the first round of tiered transit/TDM alternatives, which represent a 20-year program and include low alternatives ($250 million), medium alternatives ($500 million) and high alternatives (unconstrained).

Delegate Albo asked if the analysis will include how popular it would be to build a parking garage and have BRT on the HOT Lanes and whether it would be as popular as Metro. Mr. Evans stated that the survey does look at attitudes and preferences and includes questions about BRT. The results won't be known until after the surveys are completed and analyzed.

Mr. Zimmerman stated that the attractiveness of BRT would depend on the destination point. Currently, it is proposed that the HOT lanes will stop at Eads Street and wouldn't operate over the 14th Street Bridge. His opinion is that if the HOT Lane project is built, it would be essential to have the lanes continue into the District in order for the project to be a success. He asked when the general public will see the updated information and have the opportunity to ask

questions. Mr. Hill stated that the strategy is to complete the analysis and then go to public hearing in spring, 2008. Mr. Zimmerman urged them not to wait too long for public input and to get public comment before making any decisions. He also stated that analysis needs to be done to show how successful HOV and transit are in the corridor now and then look at the potential HOT lanes improvements to make sure that existing service is not degraded.

Mr. Tucker stated that it is important to look at it as a complete transportation corridor to find the best way to move people in the corridor. Mr. Hill stated that one thing that makes the study more complex is including analysis of how BRT would impact VRE ridership. Mr. Connolly stated that given the capacity of VRE, he would be surprised if it harms VRE. If the state wants to make it a seamless corridor, then the state needs to provide financial incentives to move beyond parochialism. Mr. Zimmerman stated that this type of unified system was part of the original private-sector HOT lanes proposal, which included a "BRT" component, which then got dropped, but not because the jurisdictions did not want it.

Delegate Ebbin left the meeting at 10:00 P.M.

Mr. Connolly stated that there's a distinction between the proposals for the Beltway HOT lanes and I-95/395 HOT lanes. There's a clear rationale for the HOT lanes on the Beltway, but for I-95/395 it would be taking over an existing public facility that that has already been paid for by the region. In order to sell that concept to the public, it will be important to show significant enhancement to transit.

In response to a question from Chairman Snyder, Mr. Hill stated that the deadline for comments from staff and commissioners on this phase of the transit/ TDM study is at the end of September. In response to a question from Senator Whipple, Mr. Evans stated that the analysis includes MWCOG's model assumptions of the price of gasoline. Gas is still cheaper compared to the inflation rate. Mr. Evans stated that the market research also has a price sensitivity component, which has an implied relationship to the cost of gas.

NVTC Financial Reports for June and July, 2007

The financial reports were provided to commissioners. There were no questions.

Closed Session

Mr. Euille moved, with a second by Mr. Zimmerman, the following motion:

> Pursuant to the Virginia Freedom of Information Act (Section 2.2-3711A(1) of the Code of Virginia), the Northern Virginia Transportation Commission authorizes discussion in closed session concerning a personnel item, pertaining to the annual performance review of NVTC's executive director.

The vote in favor was cast by commissioners Albo, Bulova, Connolly, Devolites Davis, Euille, Ferguson, Fisette, Hudgins, Kauffman, McConnell, Snyder, Tucker, Whipple and Zimmerman.

The commission entered into closed session at 10:05 P.M. At that time, Mrs. McConnell left the meeting and did not return. The commission returned to open session at 10:15 P.M.

Mr. Zimmerman moved, with a second by Mrs. Bulova, the following:

> The Northern Virginia Transportation Commission certifies that, to the best of each member's knowledge and with no individual member dissenting, at the just concluded closed session:
>
> 1) Only public business matters lawfully exempted from open meeting requirements under the Freedom of Information Act were discussed; and
>
> 2) Only such public business matters as were identified in the motion by which the closed session was convened were heard, discussed or considered.

The vote in favor was cast by commissioners Albo, Bulova, Connolly, Devolites Davis, Euille, Ferguson, Fisette, Hudgins, Kauffman, Snyder, Tucker, Whipple and Zimmerman.

Mr. Ferguson moved pursuant to the recommendation from NVTC's Executive committee, with a second by Mrs. Bulova, to increase the executive director's combined compensation (salary, Section 457 deferred compensation and bonus/travel allowance) by four percent.

Mr. Connolly requested the addition of a friendly amendment to express the commission's appreciation to Mr. Taube and the rest of the NVTC staff for their hard work. Mr. Ferguson and Mrs. Bulova agreed to accept this friendly amendment. The commission then voted on the amended motion and it passed. The vote in favor was cast by commissioners Albo, Bulova, Connolly, Devolites Davis, Euille, Ferguson, Fisette, Hudgins, Kauffman, Snyder, Tucker, Whipple and Zimmerman.

Adjournment

Mr. Euille moved, with a second by Mr. Zimmerman, to adjourn the meeting. Without objection, Chairman Snyder adjourned the meeting at 10:20 P.M.

Approved this fourth day of October, 2007.

_____
David F. Snyder
Chairman

_____
Christopher Zimmerman
Secretary-Treasurer

Northern Virginia Transportation Commission

NVTC

RESOLUTION # 2072

SUBJECT: Contract Award for Manassas Parking Garage.

WHEREAS: VRE and the city of Manassas have completed the design, relocated utilities and acquired property for a five-level parking garage in Old Town Manassas;

WHEREAS: In May, 2007 the VRE Board authorized issuance of an Invitation for Bids for construction; and

WHEREAS: On July 20, 2007 four bids were received and the lowest bidder was Costello Construction.

NOW, THEREFORE, BE IT RESOLVED THAT the Northern Virginia Transportation Commission authorizes the VRE Chief Executive Officer to enter into a contract with Costello Construction of Maryland, Inc. for the construction of a parking garage at the Manassas VRE Station in the amount of $8,354,000, with a contingency of $835,000, for a total amount not to exceed $9,189,000; and

BE IT FURTHER RESOLVED THAT NVTC authorizes the VRE Chief Executive Officer to execute any related documents necessary to implement the project.

Approved this 6th day of September, 2007.

David Snyder
Chairman

Christopher Zimmerman
Secretary-Treasurer

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Northern Virginia Transportation Commission

NVTC

RESOLUTION # 2073

SUBJECT: Renewal of Manassas Warehouse Lease.

WHEREAS: The current lease for the VRE Manassas warehouse expires on October 1, 2007;

WHEREAS: The current warehouse fully meets the needs of VRE's operations today and it is expected to be adequate to continue to handle those needs for the next three years; and

WHEREAS: Relocating all of the VRE operations and materials to another location is not cost effective.

NOW, THEREFORE, BE IT RESOLVED THAT the Northern Virginia Transportation Commission authorizes the VRE Chief Executive officer to renew a contract with KAO Manassas Airpark, LLC for warehouse space in an amount not to exceed $199,216 over a three-year term.

Approved this 6th day of September, 2007.

David Snyder
Chairman

Christopher Zimmerman
Secretary-Treasurer

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RESOLUTION# 2074

SUBJECT: Ratify Spotsylvania County Storm Water Agreement.

WHEREAS: In May, 2007 the commission authorized execution of a contract for the construction of a new maintenance facility at the Crossroads Yard;

WHEREAS: Related items such as storm water management plans have typically been treated as incidental to the construction project and have historically been executed by VRE's Chief Executive Officer; and

WHEREAS: Spotsylvania County has requested instead that the chairman of each commission execute the agreement and they have done so pending ratification of both commissions.

NOW, THEREFORE, BE IT RESOLVED THAT the Northern Virginia Transportation Commission ratifies the actions of the PRTC and NVTC chairmen in executing a Storm Water Best Management Practices Agreement with Spotsylvania County for VRE's Crossroads Yard Maintenance Facilities project.

Approved this 6th day of September, 2007.

David Snyder
Chairman

Christopher Zimmerman
Secretary-Treasurer

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NVTC

RESOLUTION #2075

SUBJECT: Referral of Preliminary FY 2009 VRE Budget.

WHEREAS: The VRE Master Agreement requires that the commissions be presented with a preliminary fiscal year budget for their consideration at their respective September meetings prior to the commencement of the subject fiscal year;

WHEREAS: VRE's Chief Executive Officer has provided the VRE Operations Board with the preliminary FY 2009 Operating and Capital Budget within the guidelines developed in concert with the jurisdictional Chief Administrative Officers; and

WHEREAS: Subject to the direction provided by the Operations Board, the budget will be updated with additional ridership and cost data and further refined through the CAO Budget Task Force review during the fall of 2007.

NOW, THEREFORE, BE IT RESOLVED THAT the Northern Virginia Transportation Commission hereby refers the preliminary FY 2009 VRE Operating and Capital Budget to its member jurisdictions for their review and comment.

Approved this 6th day of September, 2007.

Christopher Zimmerman
Secretary-Treasurer

David Snyder
Chairman

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NVTC

RESOLUTION #2076

SUBJECT: Confirmation of CSXT's Status as Insured Under VRE's Liability Insurance Plan.

WHEREAS: The Northern Virginia and Potomac and Rappahannock Transportation Commissions established the Commuter Rail Services Liability Insurance Plan ("Insurance Plan") in 1989, administered by the Commonwealth of Virginia's Division of Risk Management ("DRM"), to provide for the indemnification obligations accepted by the Commissions in each of their agreements with the railroads as a condition of gaining access to the railroads' rights of way;

WHEREAS: At the time the Insurance Plan was established, the railroads permitting commuter rail service were Norfolk Southern, Conrail, RF&P, and Amtrak;

WHEREAS: Since that time, CSXT became the successor in interest to the RF&P, and CSXT and Norfolk Southern became the successors in interest to Conrail; and

WHEREAS: Since the inception of the Insurance Plan, it has been the intent of the Commissions that successors and assigns of insureds named in the Insurance Plan would automatically become insureds, and it has been the Commissions' understanding since 1992 when CSXT acquired RF&P, that CSXT was an insured covered by the Insurance Plan.

NOW, THEREFORE, BE IT RESOLVED that the Northern Virginia Transportation Commission hereby confirms its understanding that CSXT has been a named insured under both the self insured and commercial insurance portions of the Plan since 1992 when CSXT acquired the interests of RF&P, and expresses the commission's intent that successors and assigns of named insureds in the Commissions' Insurance Plan automatically be included in the Insurance Plan.

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RESOLUTION #2076 cont'd

BE IT FURTHER RESOLVED that NVTC hereby approves amendments to the Insurance Plan clarifying the foregoing, in particular that CSXT has been a named insured in the Insurance Plan since 1992, and that successors and assigns of named insureds are automatically included in the Insurance Plan.

BE IT FURTHER RESOLVED that NVTC authorizes its Chairman and the VRE Chief Executive Officer to execute all documents as may be necessary to give effect to the foregoing amendments, including amendments to railroad operating access agreements that incorporate the Insurance Plan as amended.

Approved this 6th day of September, 2007.

William Euille
Vice-Chairman

Christopher Zimmerman
Secretary-Treasurer

Northern Virginia Transportation Commission

AGENDA ITEM #2

MEMORANDUM

TO: **Chairman Snyder and NVTC Commissioners**
FROM: **Rick Taube**
DATE: **September 27, 2007**
SUBJECT: **VRE Items**

A. Report from the VRE Operations Board and VRE's Chief Executive Officer—information Item.
B. Sale of Five Gallery Cars—Action Item/ Resolution #2077
C. Continued Lease of Sounder Railcars—Action Item/ Resolution #2078
D. Ratify Spotsylvania County Storm Water Agreement—Action Item/ Resolution # 2079
E. Closed Session on VRE's Insurance Plan—Section 2.2-3711A (7) of the Code of Virginia.

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ITEM #2A

Report from the VRE Operations Board and VRE's Chief Executive Officer

Copies of the minutes from the new VRE Operations Board's September 21, 2007 meeting are attached. Also attached are excerpts from the CEO's report, a resolution passed by the Fauquier County Board, an article describing plans for a new transportation authority in the Fredericksburg area, and a notice of VRE's ribbon-cutting on October 18th for the Manassas parking deck.

VIRGINIA RAILWAY EXPRESS

BOARD MEMBERS

DANA KAUFFMAN
CHAIRMAN

DOUG WALDRON
VICE CHAIRMAN

ELAINE MCCONNELL
SECRETARY

PAUL MILDE
TREASURER

MAUREEN CADDIGAN
WALLY COVINGTON
MARV DIXON
BOB GIBBONS
JOHN JENKINS
FRANK JONES
PAUL SMEDBERG
MATT TUCKER
CHRIS ZIMMERMAN

ALTERNATES

HILDA BARG
SHARON BULOVA
MARK DUDENHEFER
JAY FISETTE
MATT KELLY
TIMOTHY LOVAIN
MICHAEL MAY
MARTIN NOHE
KEVIN PAGE
HAL PARRISH
GEORGE SCHWARTZ

DALE ZEHNER
CHIEF EXECUTIVE OFFICER

1500 King Street, Suite 202
Alexandria, VA 22314-2730
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Web Site: www.vre.org

M I N U T E S

VRE OPERATIONS BOARD MEETING
PRTC HEADQUARTERS – PRINCE WILLIAM COUNTY, VIRGINIA
SEPTEMBER 21, 2007

MEMBERS PRESENT	JURISDICTION
Maureen Caddigan (PRTC)	Prince William County
Wally Covington (PRTC)	Prince William County
Marvin J. Dixon (PRTC)	City of Fredericksburg
Robert Gibbons (PRTC)	Stafford County
John D. Jenkins (PRTC)	Prince William County
Dana Kauffman (NVTC)	Fairfax County
Elaine McConnell (NVTC)	Fairfax County
Paul Milde (PRTC)	Stafford County
Paul Smedberg (NVTC)	City of Alexandria
Doug Waldron (PRTC)	City of Manassas

MEMBERS ABSENT	JURISDICTION
Frank C. Jones (PRTC)	City of Manassas Park
Matthew Tucker	DRPT
Christopher Zimmerman (NVTC)	Arlington County

ALTERNATES PRESENT	JURISDICTION
Hilda Barg (PRTC)	Prince William County
Sharon Bulova (NVTC)	Fairfax County
Kevin Page	DRPT

ALTERNATES ABSENT	JURISDICTION
L. Mark Dudenhefer (PRTC)	Stafford County
Jay Fisette (NVTC)	Arlington County
Matthew Kelly (PRTC)	City of Fredericksburg
Timothy Lovain (NVTC)	City of Alexandria
Michael C. May (PRTC)	Prince William County
Martin E. Nohe (PRTC)	Prince William County
Hal Parrish, II (PRTC)	City of Manassas
George H. Schwartz (PRTC)	Stafford County

STAFF AND GENERAL PUBLIC	
Steve Edwards – Sup. McConnell's staff	April Maguigad – VRE
Anna Gotthardt – VRE	Betsy Massie – PRTC staff
Al Harf – PRTC staff	Sirel Mouchantaf – VRE
Christine Hoeffner – VRE	Dick Peacock – citizen
Ann King – VRE	Mark Roeber – VRE
Mike Lake – Fairfax County	Jennifer Straub – VRE
Trinh Lam – VRE	Rick Taube – NVTC staff
Dennis Larson – VRE	Alan Tobias – HNTB
Bob Leibbrandt – Prince William County	Dale Zehner – VRE
Steve MacIsaac – VRE counsel	

** Delineates arrival following the commencement of the Board meeting. Notation of exact arrival time is included in the body of the minutes.

Chairman Kauffman called the meeting to order at 9:41 A.M. Following the Pledge of Allegiance, roll call was taken.

Approval of the Agenda – 3

Ms. Caddigan moved, with a second by Mr. Jenkins, to approve the agenda. The vote in favor was cast by Board Members Caddigan, Covington, Dixon, Gibbons, Jenkins, Kauffman, McConnell, Milde, Smedberg and Waldron.

Minutes of the August 17, 2007, VRE Operations Board Meeting – 4

Mr. Gibbons moved, with a second by Mr. Dixon, to approve the minutes. The vote in favor to approve the minutes was cast by Board Members Caddigan, Covington, Dixon, Gibbons, Jenkins, Kauffman, McConnell, Milde, Smedberg and Waldron.

Chairman's Comments – 5

Chairman Kauffman explained that Board Members have been provided with a wallet size card that lists contact information for Board Members and key personnel.

Chief Executive Officer's Report -- 6

Mr. Zehner announced that on October 18th, VRE and the City of Manassas will hold a ground-breaking ceremony to commemorate the initiation of the parking garage project. Board Members will be receiving invitations in the mail.

Mr. Zehner reported that system-wide ridership has increased 4.9 percent year-to-date from the previous year. The Fredericksburg Line ridership has increased by 5.1 percent and the Manassas Line by 4.6 percent. These increases can be attributed to improved on-time performance over the summer months, with only six days affected by heat restrictions. VRE is also watching the locomotives closely to prevent any major mechanical problems. Changes in maintenance procedures and processes at both Virginia yards have reduced the number of mechanical failures.

Mr. Zehner reported that VRE has initiated a new radio and print campaign. VRE is trying to attract a new demographic of young riders as VRE is experiencing the loss of some long-time riders due to retirement.

Mr. Zehner announced that he toured the rail plant in Chicago to see the progress being made on the railcars. So far there are 20 railcars that have left Japan and are on their way to Chicago where the interior work will be completed. VRE expects to start receiving five new gallery coaches per month starting in December 2007 and ending in

October 2008. By November 2008 all 50 new gallery coaches will be in service on peak period trains.

Mr. Zehner stated that the Clifton Betterment Association has contracted with VRE again this year to run excursion trains to and from the Clifton Day Antique, Arts & Crafts Festival on October 7, 2007. The excursion ride expenses have been paid for in advance by the Clifton Betterment Association and all proceeds from ticket sales will go to them.

Mr. Jenkins stated that it is impressive to see VRE's on-time performance improve dramatically from 54 percent in July 2006 to 91 percent in July 2007. Mr. Zehner and his staff should be commended for their hard work. Mr. Waldron asked if it would be appropriate for VRE to issue a press release conveying these facts. The Board discussed this and agreed that it would be a good idea. Mr. Kauffman also suggested adding information about the new railcars and Mr. Gibbons requested including information about the new locomotives.

VRE Riders' and Public Comment – 7

Mr. Peacock asked if the storage track work at L'Enfant has been completed. Mr. Zehner replied that he visited the site and it appears to be complete, but he will confirm it with CSXT. Mr. Peacock suggested that VRE's website include information on what VRE is doing to make its locomotive fleet more reliable. He reported that the City of Manassas sends its residents a city newsletter in their utility bill, which includes a page that is dedicated to community information. He suggested that the newsletter could include information promoting VRE. Mr. Waldron stated that he cannot make any commitment at this time without investigating it, but it does sound like a good idea.

Chairman Kauffman recognized Alan Tobias, who now works for HNTB.

Authorization to Sell Five Gallery Railcars – 8A

With the anticipation of the new railcar delivery, the Operations Board previously granted authority to the CEO to sell up to 25 railcars. Since that time, the equipment was posted on VRE's website for public sale and staff received a proposal from Dan Behr, Associates of Chicago, Illinois, to purchase five Gallery cars for $1.00 each. The sale would also include the buyer placing freight costs into an escrow account to ensure removal of all cars. VRE purchased these five cars for $1.00 each and invested no money in them. As such, there is no federal, state or local interest in these cars.

Mr. Gibbons moved, with a second by Ms. McConnell, to approve Resolution #8A-09-2007, which would recommend that the Commissions authorize the VRE CEO to sell the five Gallery railcars to Dan Behr Associates for $1.00 each. The vote in favor was

cast by Board Members Caddigan, Covington, Dixon, Gibbons, Jenkins, Kauffman, McConnell, Milde, Smedberg and Waldron.

Authorization to Issue a Task Order for Locomotive Top Deck Rebuild Work – 8B

Mr. Gibbons moved, with a second by Ms. Caddigan, to approve Resolution #8B-09-2007, which would authorize the VRE CEO to issue a task order to Transportation Technologies, Inc., (TTI) to perform top deck rebuild work on two locomotives in an amount not to exceed $450,000, plus a contingency of $45,000, for a total of $495,000. The vote in favor was cast by Board Members Caddigan, Covington, Dixon, Gibbons, Jenkins, Kauffman, McConnell, Milde, Smedberg and Waldron.

Authorization to Increase Sounder Authority – 8C

Mr. Zehner reported that the Board is being asked to recommend that the Commissions authorize him to increase the authorization limit by $500,000, from $8,226,000 to $8,726,000, for the continued lease of one set of high capacity rail cars from Sound Transit. Resolution #8C-09-2007 would accomplish this. VRE needs to retain possession of this set until several shipments of the new railcars arrive.

Mr. Gibbons moved, with a second by Ms. Caddigan, to approve the resolution. The vote in favor was cast by Board Members Caddigan, Covington, Dixon, Gibbons, Jenkins, Kauffman, McConnell, Milde, Smedberg and Waldron.

Authorization to Issue a Task Order for Locomotive Main Generator Bearing Repairs – 8D

Mr. Gibbons moved, with a second by Ms. McConnell, to approve Resolution #8D-09-2007, which would authorize the VRE CEO to issue a task order to Transportation Technologies, Inc., (TTI) to perform repairs to locomotive main generator bearings in an amount not to exceed $242,000. The vote in favor was cast by Board Members Caddigan, Covington, Dixon, Gibbons, Jenkins, Kauffman, McConnell, Milde, Smedberg and Waldron.

Authorization to Exercise Facilities Maintenance Services Contract Option – 8E

Mr. Zehner stated that the VRE Operations Board is being asked to recommend that the Commissions authorize the VRE Chief Executive Officer to exercise the third-year option of the facilities maintenance contract with NV Enterprises, Inc. in an amount not to exceed $2 million. Resolution #8E-09-2007 would accomplish this.

Mr. Gibbons moved, with a second by Mr. Covington, to approve the resolution. The vote in favor was cast by Board Members Caddigan, Covington, Dixon, Gibbons, Jenkins, Kauffman, McConnell, Milde, Smedberg and Waldron.

[Mr. Jenkins stepped out of the room at 9:54 A.M.]

Authorization to Extend Personal Service Contract for VRE Contract Employee – 8F

Mr. Zehner stated that Resolution #8F-09-2007 would authorize him to extend the term of a personal service contract with Terri Anomnachi to serve as the project engineer for the fare collection system and SmarTrip integration support for a period not to exceed three years. VRE is proceeding to upgrade its fare collection system software and hardware as an initial step towards SmarTrip integration. Ms. Anomnachi provides day-to-day oversight of the fare collection system maintenance contract. Her current contract is set to expire in November, 2007. No further funding is being requested to extend the agreement for three additional years, since only $148,242 has been spent from the authorized amount of $359,169.

Ms. Barg moved, with a second by Mr. Covington, to approve Resolution #8F-09-2007.

Mr. Waldron asked for a point of clarification on alternate members making motions. Ms. Barg explained that she only made the motion because Mr. Jenkins was out of the room and offered to withdraw her motion. Mr. MacIsaac stated that an alternate should serve in a member's place for the entire meeting instead of when members are shifting in and out of the room. In other words, if a member is present and steps out of the room, he is just absent for the vote. Ms. Barg withdrew her motion. Mr. Covington then made the motion to approve the resolution and Ms. Caddigan seconded. The Board then voted on the motion and it passed. The vote in favor was cast by Board Members Caddigan, Covington, Dixon, Gibbons, Kauffman, McConnell, Milde, Smedberg and Waldron.

[Mr. Jenkins returned to the meeting at 9:59 A.M.]

Closed Session – 9

Mr. Smedberg moved, with a second by Ms. Caddigan, the following motion:

> Pursuant to the Virginia Freedom of Information Act (Sections 2.2-3711A (7) of the Code of Virginia), the VRE Operations Board moved to convene a Closed Session for the purpose of discussing the cases of Moore vs. NVTC pending in the Prince William County Circuit Court and Bledsoe vs. CSXT pending in the District of Columbia Superior Court and one legal matter requiring consultation with counsel concerning the scope and applicability of the VRE Liability Insurance Plan.

The vote in favor was cast by Board Members Caddigan, Covington, Dixon, Gibbons, Jenkins, Kauffman, McConnell, Milde, Smedberg and Waldron. The Board entered into Closed Session at 9:56 A.M. and returned to Open Session at 10:21 A.M.

[At 10:05 A.M. Mr. Gibbons left the Closed Session meeting and did not return.]

Mr. Smedberg moved, with a second by Ms. Caddigan, the following certification:

> The VRE Operations Board certifies that, to the best of each member's knowledge and with no individual member dissenting, at the just concluded Closed Session:
>
> 1. Only public business matters lawfully exempted from open meeting requirements under the Freedom of Information Act were discussed; and
>
> 2. Only such public business matters as were identified in the motion by which the Closed Session was convened were heard, discussed or considered.

The vote in favor was cast by Board Members Caddigan, Covington, Dixon, Jenkins, Kauffman, McConnell, Milde, Smedberg and Waldron.

Adjournment

On a motion by Mr. Covington and a second by Mr. Dixon, the Board unanimously voted to adjourn. Chairman Kauffman adjourned the meeting at 10:27 A.M.

Approved this 19th day of October, 2007.

_____
Dana Kauffman
Chairman

_____
Elaine McConnell
Secretary

CERTIFICATION

This certification hereby acknowledges that the minutes for the September 21, 2007 Virginia Railway Express Operations Board Meeting have been recorded to the best of my ability.

Rhonda Gilchrest

Rhonda Gilchrest

Virginia Railway Express

CHIEF EXECUTIVE OFFICER'S REPORT

September 2007

MONTHLY DELAY SUMMARY

	May-07	June-07	July 07	August 07
System wide				
Total delays	56	65	53	99
Average length of delay (mins.)	22	18	21	23
Number over 30 minutes	11	10	15	26
Days with Heat Restrictions/Total days	3/22	5/21	3/21	3/23
On-Time Performance	91.20%	89.30%	91.3%	85.1%
Fredericksburg Line				
Total delays	32	38	33	51
Average length of delay (mins.)	26	20	23	26
Number over 30 minutes	7	7	11	12
On-Time Performance	88.8%	86%	87.90%	82.9%
Manassas Line				
Total delays	24	27	20	48
Average length of delay (mins.)	16	16	16	20
Number over 30 minutes	4	3	4	14
On-Time Performance	93.2%	91.90%	94%	86.9%

LAST YEAR COMPARED TO THIS YEAR – MONTH TO MONTH

Month	July-06	July-07	Aug-06	Aug-07
System wide				
Total delays	266	53	176	99
Average length of delay (mins.)	26	21	16	23
Number over 30 minutes	73	15	17	26
Days with heat restrictions/Total days	18/20	3/21	18/23	3/23
On-Time Performance	53.90%	91.30%	73.6%	85.1%
Fredericksburg Line				
Total delays	136	33	130	51
Average length of delay (mins.)	29	23	16.4	26
Number over 30 minutes	42	11	12	12
On-Time Performance	47.70%	87.90%	56.50%	82.9%
Manassas Line				
Total delays	130	20	46	48
Average length of delay (mins.)	22	16	15	20
Number over 30 minutes	31	4	5	14
On-Time Performance	59.40%	94.00%	87.5%	86.9%

SYSTEM RIDERSHIP

Ridership has increased 4.9% year-to-date from the previous year. In addition, we are experiencing a significant up tick in the first seven days of September with a 5% increase over the same period last year.

The gains can be attributed to the steady on-time performance (OTP) over the summer months. We are watching the locomotives closely to prevent any major mechanical problems. Changes in maintenance procedures and processes at both Virginia yards have reduced the number of mechanical failures. In addition, railroad switch, signal, and dispatching problems have been minor.

The OTP for August was down from July due to two major non-railroad incidents. First, the cutting of a control line by a gas company in the Alexandria area stopped all rail traffic for one hour. Second, a person committed suicide causing the shut down of the railroad for one hour and slowing service for an additional hour until the police investigation was complete.

We hope to continue to attract riders to VRE with a drive-time radio campaign starting September 17th. The campaign will run for six weeks. I anticipate further gains in ridership as a result of the campaign.

LOCOMOTIVE PROCUREMENT

The specification for procurement of new locomotives has been completed and a Request for Proposals (RFP) was posted on VRE's web site on August 20, 2007. Proposals are due October 22, 2007 and a recommendation for award is anticipated at the November Operations Board meeting.

GAINESVILLE/HAYMARKET

As part of a competitive procurement, VRE received proposals to conduct a Major Investment Study (MIS) for service to Gainesville and Haymarket. The study will focus on developing alternatives to improve the existing Norfolk Southern "B" line, starting just west of Manassas to Haymarket. The study will include site survey work as well as identify potential station locations and possibly a layover yard. The study will also identify issues associated with the expansion such as: environmental concerns, real estate, grade and water crossings. Once a contract is awarded, work is expected to take approximately 12 months to complete.

NEW RAIL CAR UPDATE

Ten more cars are floating towards Savannah. That makes a total of 20 cars that have left Japan and are on their way to Chicago where the interior work will be completed. We expect to start receiving five new gallery coaches per month starting in December 2007 and ending in October 2008. By November 2008, all 61 new gallery coaches will be in service on peak period trains.

MASTER AGREEMENT SURVEY

This year, the Master Agreement Survey will be held on October 3rd. Staff from PRTC and VRE along with jurisdictional staff members will assist in the station counts, the distribution and the collection of the annual survey. The survey results will be available by the December 21st VRE Operations Board meeting.

SMARTBENEFITS PROGRAM NOW STARTING

SmartBenefits is now available to VRE riders. This new program allows riders to use their transit benefits through a SmartBenefits personalized account. After they set up their SmartBenefits account with their employer and WMATA, riders can purchase VRE tickets through either an Arlington-based Commuter Store or a reoccurring mail-order account with CommuterDirect. If signed up through these agencies by the 15th of the month, VRE riders will be able to use their SmartBenefits personalized account to purchase their tickets for the following month.

Riders will still need to use VRE tickets to board our trains. And, while the value of the SmartBenefits will not be available on a SmarTrip card, this program allows riders to use electronic benefits while the regional SmarTrip system is planned and implemented. At that time, riders should be able to use their SmarTrip card as a form of purchase at our TVMs.

CROSSROADS MAINTENANCE FACILITY

Work to construct a new engine house, car wash and track in the Crossroads yard began on July 31. Currently, the site is being prepared to grade the area for a new track followed by foundation work for the buildings. Construction phasing and the overall design takes into account the ability to maintain ongoing maintenance efforts at the yard while constructing these major facilities. The project is expected to take 12 months to complete.

MANASSAS PARKING GARAGE

VRE received four bids to construct a 520 parking space garage on 7/20/2007. Costello Construction of Maryland was the lowest bidder and a contract has been awarded to perform the work. The project will take 12 months to complete. The first phase of the project will be to demolish existing buildings on the site. Once the site is cleared, excavation will begin to build the foundation for the new five level pre-cast concrete parking garage. Located along the tracks between Main and Battle Street, the new facility promotes safety and convenience to commuters at the Manassas station.

On October 18, VRE and the City of Manassas will hold a ground-breaking ceremony to commemorate the initiation of the project. All Board members are invited to attend.

CLIFTON DAY

The Clifton Betterment Association has contracted with VRE again this year to run excursion trains to and from the Clifton Day Antique, Arts & Crafts Festival on Sunday, October 7, 2007. Trains will run from Manassas and Rolling Road to Clifton, stopping at Manassas Park and Burke Centre along the way. Tickets for the return trip will be sold during the event at the caboose. The train ride to the event is free. The train schedule will be posted on the web site.

The excursion ride expenses have been paid for in advance, and all proceeds from ticket sales will go to the Clifton Betterment Association.

PEDESTRIAN CROSSING AT QUANTICO STATION

While numerous attempts to keep VRE passengers from darting out from behind VRE trains to cross the tracks at the Quantico station have been made, the situation continues. Effective August 8, 2007, VRE requested that Amtrak (VRE trains) completely block the highway and pedestrian crossings at Quantico when stopping to receive or discharge passengers. To date, this approach has worked. We have seen the number of violators reduced from 8-10 per train to zero.

OCTOBER SCHEDULE CHANGE

On October 29, 2007, VRE will have a slight schedule change. While the overall schedule will not be affected, the trains that are designated as "S" trains will change. As it stands, to maintain our current "S" schedule, we must operate one turn train on each line. When there is inclement weather, this type of schedule can be difficult to maintain. With this change, we will be able to eliminate the turns, keep the mid-day trains, and have more service in the latter part of the morning rush hour, which are more heavily used during periods of bad weather. The evening trains on the Fredericksburg line will change in an effort to be consistent with the rest of the "S" schedule and to alleviate to crew management issues.

NEW VARIABLE MESSAGE SIGNS

VRE started installing new Variable Message Signs (VMS) in April of this year. Currently we have installed the new VMS at Manassas Park, Alexandria, Quantico, Fredericksburg, L'Enfant, and Crystal City. The remaining VRE stations are scheduled to be completed by December 2007.

MONNTHLY PERFORMANCE MEASURES – AUGUST 2007

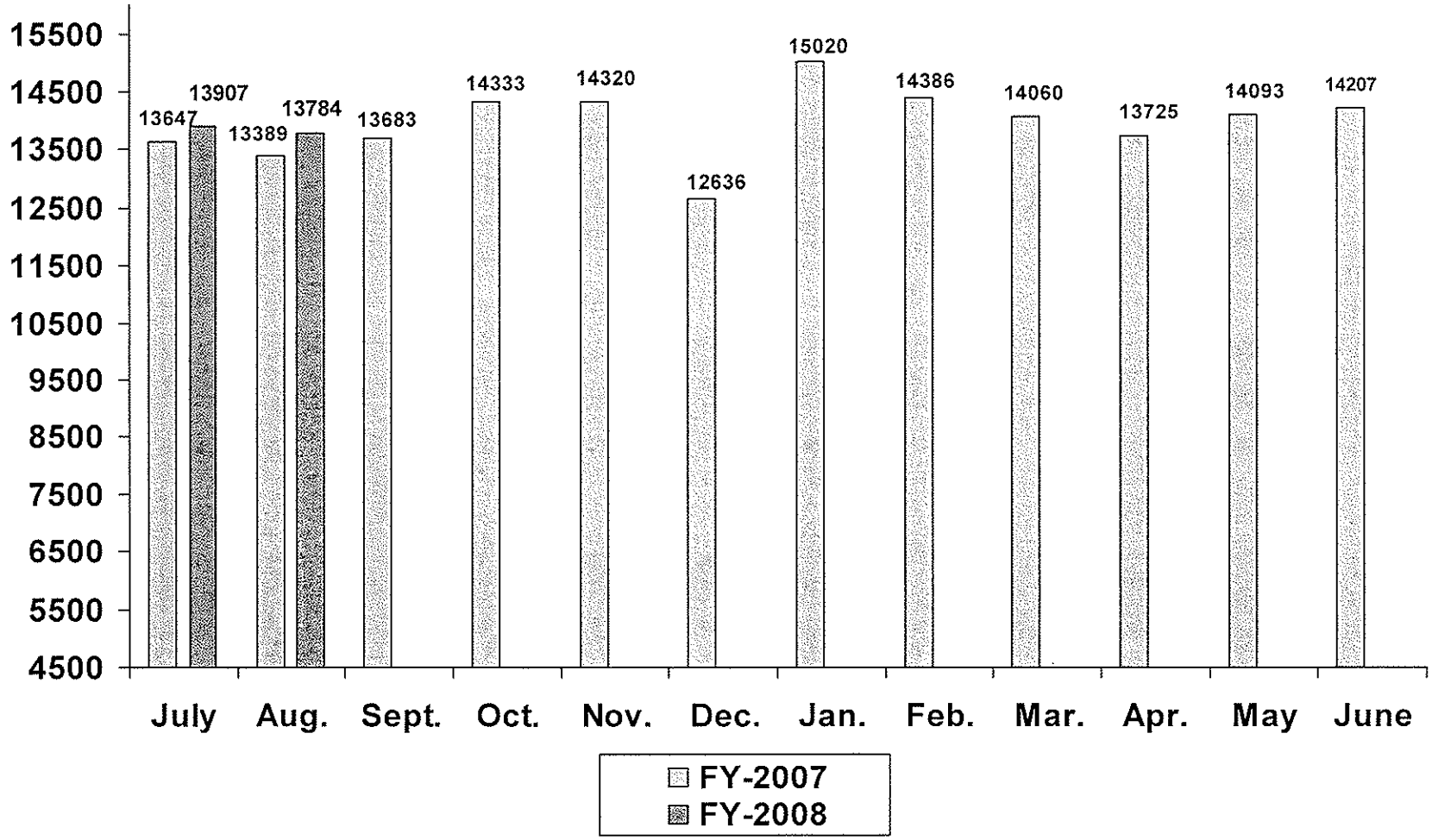
MONTHLY ON-TIME PERFORMANCE	ON-TIME PERCENTAGE
August Fredericksburg OTP Average	82.9%
August Manassas OTP Average	86.9%
VRE AUGUST OVERALL OTP AVERAGE	85.1%

RIDERSHIP YEAR TO DATE	RIDERSHIP
VRE FY 2008 Passenger Totals	609,078
VRE FY 2007 Passenger Totals	580,875
PERCENTAGE CHANGE	4.9%

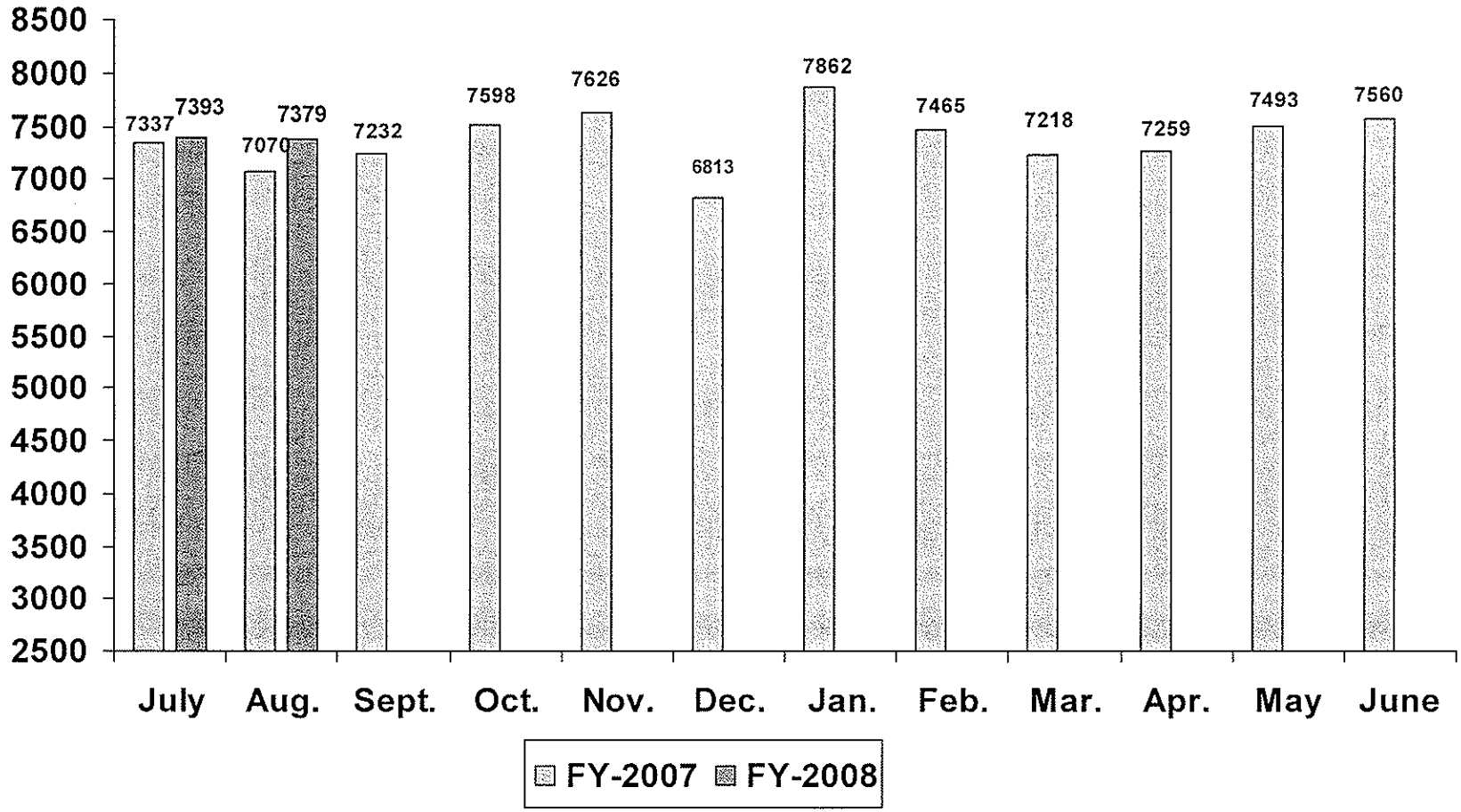
RIDERSHIP MONTH TO MONTH COMPARISON	
DESCRIPTION	MONTHLY RIDERSHIP
AUGUST 2007	317,035
AUGUST 2006	307,941
PERCENTAGE CHANGE	3%
SERVICE DAYS (CURRENT/PRIOR)	23/23

Due to year end, financials will be provided next month.

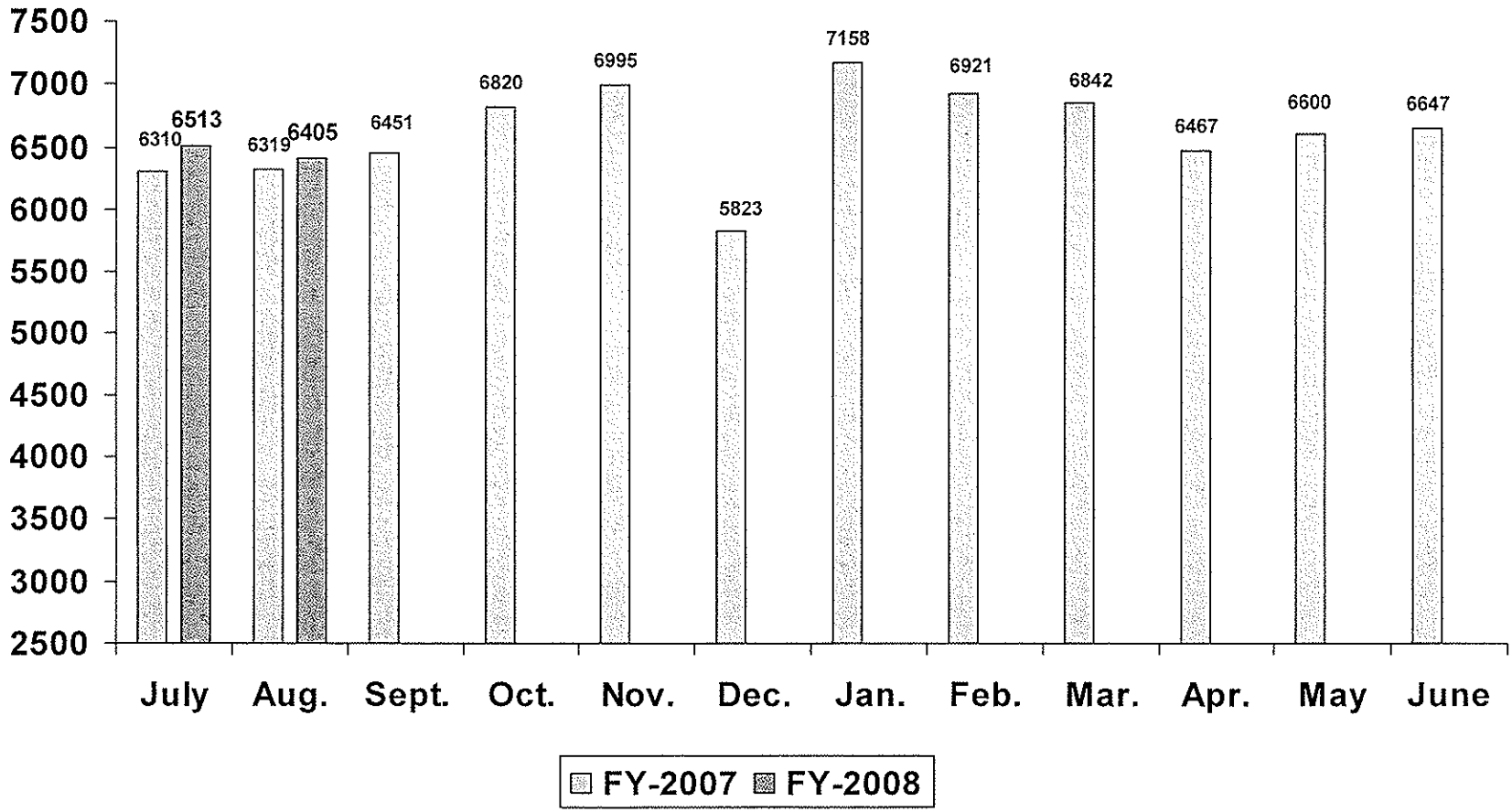
VRE Total Average Daily Ridership



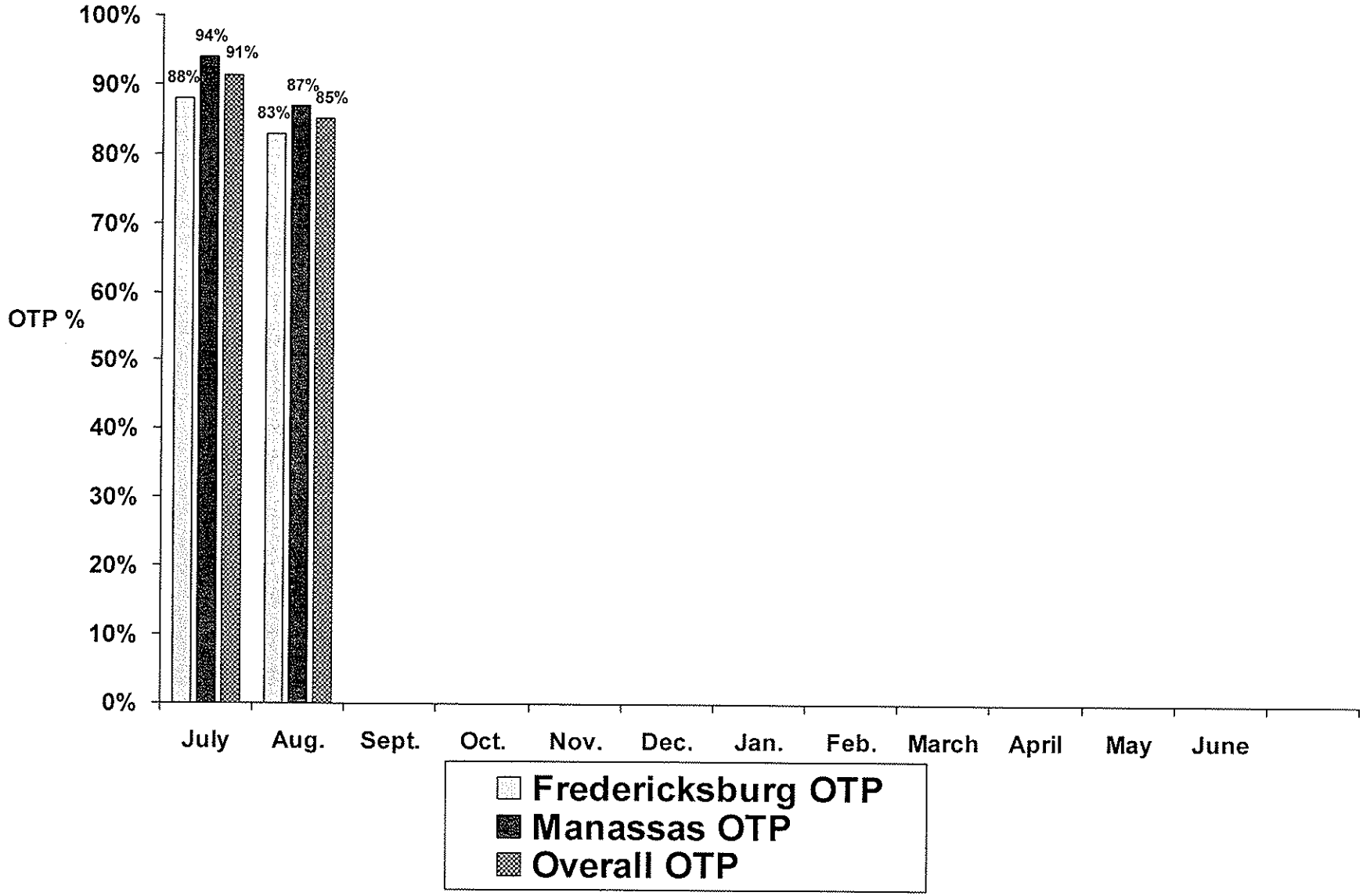
VRE Average Daily Ridership
Fredericksburg Line



VRE Average Daily Ridership
Manassas Line



Average On-Time Performance
FY-2008



RESOLUTION

A RESOLUTION EXPRESSING CONCERN OVER THE COUNTY'S ASSUMPTION OF TRANSPORTATION RESPONSIBILITIES TRADITIONALLY RELEGATED TO THE COMMONWEALTH, THE DESIRE FOR GREATER FLEXIBILITY FOR LOCALITIES WISHING TO PARTICIPATE IN REGIONAL TRANSPORTATION SOLUTIONS, AND APPRECIATION TO THE POTOMAC RAPPAHANNOCK TRANSPORTATION COMMISSION (PRTC) AND THE VIRGINIA RAILWAY EXPRESS (VRE)

WHEREAS, the Fauquier County Board of Supervisors is engaged in addressing the transportation needs of its citizens which were traditionally addressed by the Commonwealth of Virginia; and

WHEREAS, the achievement of long-term transportation solutions for the citizens of Fauquier County is made more challenging by the lack of adequate State funding for transportation; and

WHEREAS, much of the Commonwealth's traditional transportation responsibility to localities has effectively been shifted to counties; and

WHEREAS, the Commonwealth has not redirected revenue to Fauquier County to fund this shift in responsibility; and

WHEREAS, the Fauquier County Board of Supervisors is in engaged in a process of exploring several transportation options and identifying those which are most cost-effective for its taxpayers and most valuable to its citizens; and

WHEREAS, one of the options explored has been proposed membership in the Potomac Rappahannock Transportation Commission (PRTC) and the Virginia Railway Express (VRE); and

WHEREAS, the leadership and staff of PRTC and VRE have demonstrated the highest degree of professionalism, efficiency and patience in their dealings with Fauquier County; and

WHEREAS, at this time, the Board of Supervisors has determined that it will continue to explore membership in PRTC and VRE, but is concerned by the associated costs, the long delay in gaining rail service, and the differing needs amongst Fauquier County and the jurisdictions comprising Northern Virginia; and

WHEREAS, the Board of Supervisors will continue to explore other regional options as well, and would encourage the Commonwealth to be flexible and innovative in its consideration of any proposals developed by Fauquier County for this purpose; now, therefore, be it

RESOLVED by the Fauquier County Board of Supervisors this 13th day of September 2007, That the Board of Supervisors requests the Commonwealth of Virginia to redirect revenues to Fauquier County and other localities in such amounts necessary to

compensate them for the costs of assuming transportation responsibilities; and, be it

RESOLVED FURTHER, That the Fauquier County Board of Supervisors expresses its deep appreciation to the leadership and staff of PRTC and VRE for their patience and professional assistance during this process; and, be it

RESOLVED FURTHER, That the Fauquier County Board of Supervisors will continue to rigorously explore transportation options and identify those that are most cost-effective and valuable to its citizens; and, be it

RESOLVED FINALLY, That the Fauquier County Board of Supervisors requests that the Commonwealth of Virginia receive any future proposals as to regional transportation options for Fauquier County with a spirit of flexibility and innovation.

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fredericksburg.com

Print this Page

Return to story

Transportation authority concept gaining traction

September 15, 2007 12:35 am

By KELLY HANNON

Hampton Roads and Northern Virginia could raise $168 to $300 million a year for transportation projects through regional authorities.

With that money, they plan to build bridges and roads and improve bus and rail services.

Residents, businesses and tourists there will pay to finance the work. Taxes and fees will be tacked onto car rentals, hotel rooms, car inspections, registration and repairs, and home sales.

Fredericksburg-area officials will explore starting a regional transportation authority here. Localities would need permission from the Virginia General Assembly to create an authority, which would regionally levy taxes, fees or issue bonds for transportation projects.

Board members of the Fredericksburg Area Metropolitan Planning Organization will hear a presentation Monday on authorities.

Elected officials from Caroline, Fredericksburg, King George, Spotsylvania and Stafford will talk about support for an authority.

Timing is good because FAMPO is working on a list of the area's transportation needs for 2035 and the costs. The study also will estimate funding likely to come from state, federal and private sources through 2035.

"The current revenue amounts aren't going to touch what we need to do," said Matt Kelly, FAMPO chair and a Fredericksburg councilman.

Several area localities are considering new or improved Interstate 95 interchanges, and all have lists of road projects they'd like to accomplish. The tab will run into hundreds of millions of dollars.

An authority would be another way to raise money, and get the region to agree on a set of common priorities, Kelly said.

Increasingly, the state is encouraging local control and funding for transportation, he said.

However, a regional authority here is already running into opposition from state elected leaders and

candidates for election this fall.

At a House of Delegates forum this week, Speaker Bill Howell, R-Stafford, said he supports authorities in Hampton Roads and Northern Virginia, but that the tax base in the Fredericksburg area wouldn't generate enough money to make it worthwhile.

Challenger Clyde Matthews, a Fredericksburg Democrat, said the General Assembly's transportation package allowing for the two authorities amounted to "passing the buck" from state to local government.

Del. Mark Cole, R-Spotsylvania, agreed with Howell's stance on an authority here. Cole's opponent, Carlos Del Toro, a Stafford Democrat, also said he would not support an authority.

Kelly said lacking state financial support, the best solution is to take initiative locally. "We have a lot of people in the region who are going to say it's the state's responsibility and they should pay for it. Well, we can sit on our hands for the next 30 years and get nowhere," Kelly said.

Area residents would be more supportive of paying for improvements if there's a specific list of projects and when they'd be completed, said Lloyd Robinson, FAMPO's director of transportation planning.

"People are willing to invest in transportation across the United States, but I think they want to know how the money will be spent, and what the return will be," he said.

FAMPO's long-range plan for 2035 would answer that question. It would identify projects needed to move traffic in 30 years, and what the projects will cost.

Regional authorities in Virginia still face opposition where they exist.

An Arlington County Circuit Court upheld the legality of the authority's right to issue bonds, and pay off the debt with fees and taxes.

The decision is being appealed by opponents, including Del. Robert G. Marshall, R-Prince William.

Public sentiment will ultimately determine whether an authority in the Fredericksburg area succeeds or fails, Kelly said.

"It's the future of transportation that's on the table in this region."

Kelly Hannon: 540/374-5436
Email: khannon@freelancestar.com

NORTHERN VIRGINIA:

Nine localities including: Arlington, Fairfax, Loudoun and Prince William counties and the cities of Alexandria, Fairfax, Falls Church, Manassas and Manassas Park.

Created in 2002, anticipating passage of a sales tax initiative that would fund projects. The public voted the local tax down.

$300 million could be raised annually by issuing bonds and imposing seven taxes and fees.

Projects include widening the Prince William Parkway to six lanes between Hoadly Road and Old Bridge Road, the State Route 28 overpass in Manassas, a Fair Lakes/Monument interchange on the Fairfax County Parkway, intersection improvements at State Route 123 and Eaton Place, money for VRE locomotives, two Park & Ride lots, and bus rapid transit service, among other works.

HAMPTON ROADS:

Twelve localities including the cities of Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Williamsburg, Virginia Beach and Isle of Wight, James City and York counties

Created in 2007, after passage of Virginia General Assembly transportation package.

$168 million could be raised annually by issuing bonds and imposing taxes and fees.

Among the projects are construction of U.S. 460, the widening of Interstate 64 in Chesapeake and on the Peninsula, a new midtown tunnel and Martin Luther King Freeway, the Southeastern Parkway and Dominion Boulevard.

--Kelly Hannon

Nelson/Nygaard, a national transportation planning firm, helped FAMPO draft an outline of an authority's potential powers in the Fredericksburg area.

A regional authority:

Could oversee regional roads. This would include major corridors such as State Route 208 in Spotsylvania, but primary arteries such as U.S. 1, U.S. 17 and Interstate 95 would remain VDOT's responsibility.

Could operate transit, such as the FRED bus system.

Could initiate smart-growth land development. Projects would be still subject to city or county approval. Smart growth is defined as "environmentally sensitive land development that minimizes dependence on auto transportation, encourages use of alternative travel modes, and makes infrastructure more efficient," according to the report.

Could rely on funding from regional taxes and fees, as well as support from localities.

This proposal is just a starting point for discussion, Kelly stressed.

The Nelson/Nygaard presentation suggests having two elected officials represent their locality on the authority.

Voting would probably be structured in a way where population is considered, but not in a manner where two localities could dominate, or a minority could veto projects, Kelly and Robinson said.

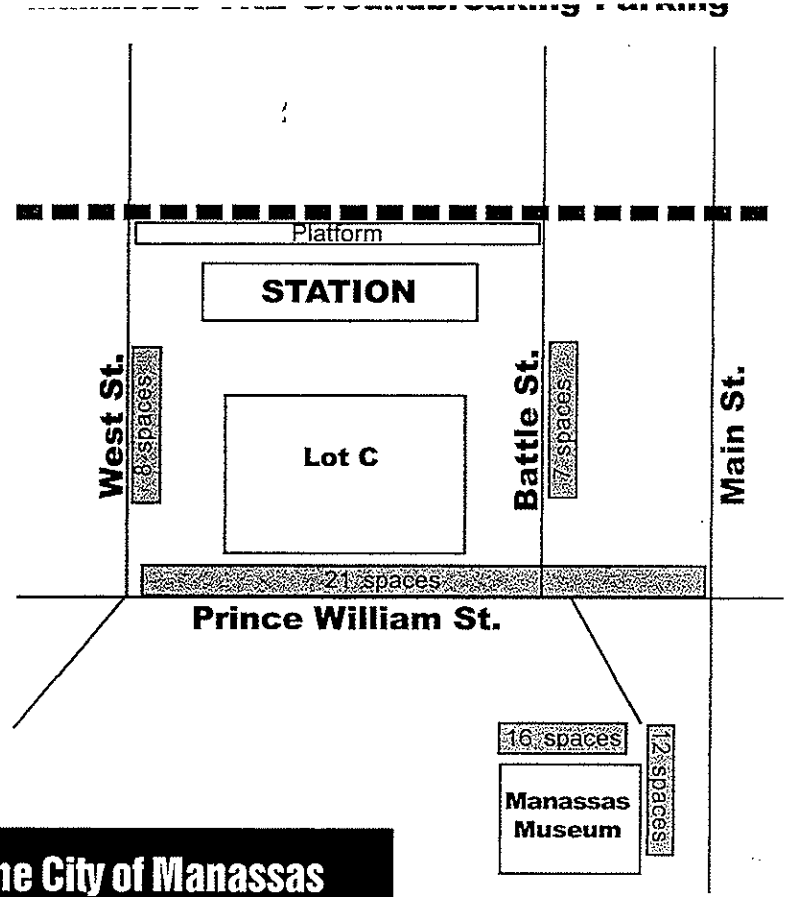
Thursday, October 18, 2007
at 10:30am

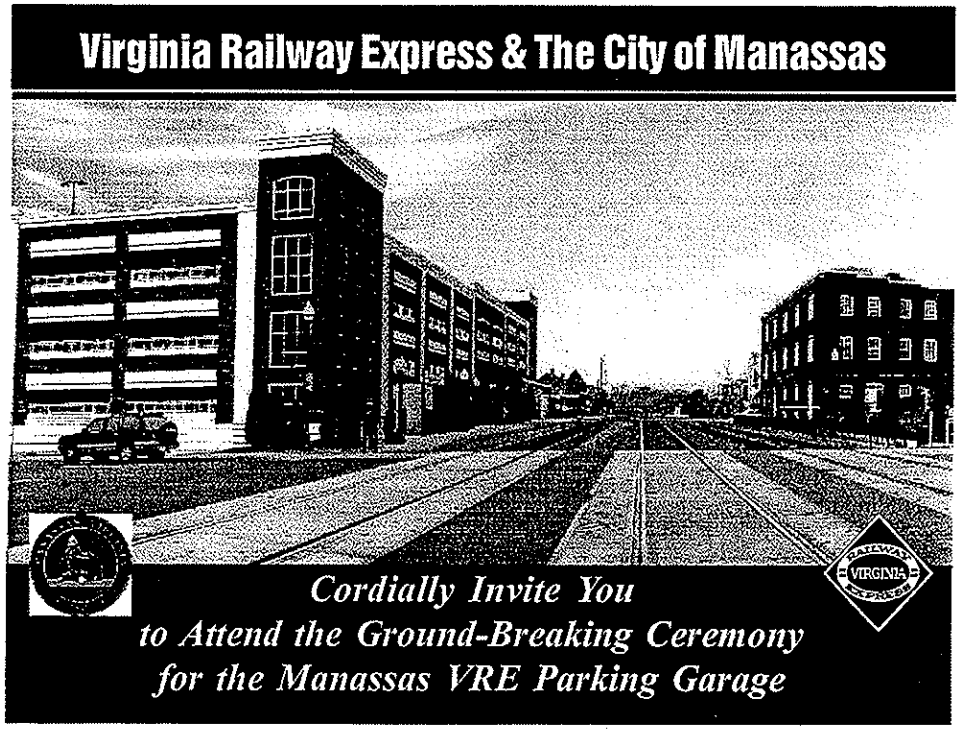
Location:
9425 Battle Street, Manassas, VA (next to VRE station)

Remarks by:
Hon. Douglas S. Waldron, Mayor
Hon. Dana Kauffman, Chairman VRE Operations Board

Light refreshments will be served

R.S.V.P. to Mark Roeber at 703-838-5416
or mroeber@vre.org by Oct. 12





ITEM # 2B

Sale of Five Gallery Cars

The VRE Operation Board recommends approval of Resolution # 2077. This resolution authorizes VRE's CEO to sell five Gallery cars to Dan Behr Associates for $1 each. That is the same piece paid by VRE with no additional VRE funds invested in them and no residual value.

Northern Virginia Transportation Commission

NVTC

Resolution # 2077

SUBJECT: Sale of Five Gallery Cars.

WHEREAS: In March, 2007 the Operations Board granted authority to sell up to 25 railcars in anticipation of the new railcar delivery beginning in December, 2007;

WHEREAS: VRE received an offer to purchase Gallery cars 8730, 8731, 8739, 8740, and 8742 for $1 each; and

WHEREAS: VRE staff and the VRE Operations Board have determined that this offer is acceptable.

NOW, THEREFORE, BE IT RESOLVED THAT the Northern Virginia Transportation Commission authorizes the Chief Executive Officer of VRE to sell five Gallery cars, numbers 8730, 8731, 8739, 8740, and 8742, to Dan Behr Associates for $1.00 each.

Approved this fourth day of October, 2007.

_____
David F. Snyder
Chairman

_____
Christopher Zimmerman
Secretary-Treasurer

AWARD WINNER NVTC APTA 1996

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Tel (703) 524-3322 • Fax (703) 524-1756 • TDD (800) 828-1120 • VA Relay Service
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Virginia Railway Express Operations Board

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Web Site: http://www.vre.org • E-Mail: gotrains@vre.org

AGENDA ITEM 8-A
ACTION ITEM

TO: CHAIRMAN KAUFFMAN AND THE VRE OPERATIONS BOARD

FROM: DALE ZEHNER

DATE: SEPTEMBER 21, 2007

RE: AUTHORIZATION TO SELL FIVE GALLERY CARS

RECOMMENDATION:

The VRE Operations Board is being asked to recommend that the Commissions authorize the Chief Executive Officer to sell five Gallery cars to Dan Behr Associates for $1 per car.

BACKGROUND:

In March 2007, the Operations Board granted authority to the CEO to sell up to 25 railcars in anticipation of the new railcar delivery beginning this December. Since that time, the equipment was posted on VRE's web site for public sale and staff received a proposal from Dan Behr Associates of Chicago, Illinois, to purchase five Gallery cars (car numbers 8730, 8731, 8739, 8740, and 8742) for $1 each. The sale also includes the buyer placing freight costs into an escrow account to ensure removal of all cars.

VRE purchased these five cars for $1 each and invested no money in them. As such, there is no federal, state, or local interest in these cars. By contrast, the remaining 20 Gallery cars do have a stated value which VRE will work to recoup as part of any sale. Some of these cars also have a residual federal interest which will need to be assumed or paid as part of any negotiated sale.

FISCAL IMPACT:

This additional revenue will be allocated to the restoration of the operating reserve as required by the bond indenture.

ITEM # 2C

Continued Lease of Sounder Railcars

The VRE Operations Board recommends approval of a Resolution #2078. This resolution authorizes VRE's CEO to increase the authorization limit for leasing rail cars from Sound Transit by $500,000. The limit would increase to $8,726,000 from $8,226,000. This will allow VRE to continue to lease one set of bi-level railcars through June 30, 2008. Funds are available in VRE's approved capital budget using a FY 2006 federal grant.

Northern Virginia Transportation Commission

NVTC

RESOLUTION #2078

SUBJECT: Continued Lease of Sounder Railcars.

WHEREAS: VRE currently has one remaining set of equipment in service under a lease agreement with Sound Transit;

WHEREAS: The commissions have authorized $8,226,000 for this lease, which will only pay for the current equipment through the end of 2007; and

WHEREAS: To sustain VRE's present seating capacity, it is necessary to retain this last train set until several sets of new cars are delivered to VRE and put into service.

NOW, THEREFORE, BE IT RESOLVED THAT the Northern Virginia Transportation Commission authorizes the VRE Chief Executive Officer to increase the authorization limit by $500,000, from $8,226,000 to $8,726,000, for the continued lease of one set of high capacity rail cars from Sound Transit.

Approved this fourth day of October, 2007.

David F. Snyder
Chairman

Christopher Zimmerman
Secretary-Treasurer

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AGENDA ITEM 8-C
ACTION ITEM

TO: CHAIRMAN KAUFFMAN AND THE VRE OPERATIONS BOARD

FROM: DALE ZEHNER

DATE: SEPTEMBER 21, 2007

RE: AUTHORIZATION TO INCREASE SOUNDER AUTHORITY

RECOMMENDATION:

The VRE Operations Board is being asked to recommend that the Commissions authorize the Chief Executive Officer to increase the authorization limit by $500,000 from $8,226,000 to $8,726,000 for the continued lease of one set of high capacity rail cars from Sound Transit.

BACKGROUND:

In 2001, VRE entered into a lease with Sound Transit for three sets of railcars. In 2005, VRE returned the first set of cars. Additional equipment was returned in 2006 and 2007, leaving only one six-car train set in service. Operations Board authority for this lease from 2001 through the present totals $8,226,000 and will only carry the current equipment through the end of 2007. VRE needs to retain possession of this set until several shipments of the new cars arrive. As such, VRE staff recommends the continuation of the lease through June 30, 2008 at a cost of $500,000.

FISCAL IMPACT:

Funding is available from the Sounder Lease project in the VRE capital budget. Funding is provided using a FY 2006 federal grant. Local match is being provided using state and local funds.

ITEM # 2D

Facilities Maintenance Option

The VRE Operations Board recommends approval of Resolution # 2079. This resolution authorizes VRE's CEO to exercise the third option year of a contract with NV Enterprises, Inc. for maintenance of VRE facilities. The cost will not exceed $2 million of budgeted funds.

Northern Virginia Transportation Commission

NVTC

RESOLUTION # 2079

SUBJECT: Facilities Maintenance Option.

WHEREAS: In June of 2004, the commissions approved a facilities maintenance contract (base year plus four one-year renewable options) with NV Enterprises for facilities maintenance services; and

WHEREAS: Since that time, two option years have been executed with the current year of the contract due to expire on October 31, 2007.

NOW, THEREFORE, BE IT RESOLVED THAT the Northern Virginia Transportation Commission authorizes the VRE Chief Executive Officer to exercise a third-year option of the facilities maintenance contract with NV Enterprises, Inc. in an amount not to exceed $2,000,000.

Approved this fourth day of October, 2007.

_____
David F. Snyder
Chairman

_____
Christopher Zimmerman
Secretary-Treasurer

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AGENDA ITEM 8-E
ACTION ITEM

TO: CHAIRMAN KAUFFMAN AND THE VRE OPERATIONS BOARD

FROM: DALE ZEHNER

DATE: AUGUST 21, 2007

RE: AUTHORIZATION TO EXERCISE FACILITIES MAINTENANCE SERVICES CONTRACT OPTION

RECOMMENDATION:

The VRE Operations Board is recommending that the Commissions authorize the VRE Chief Executive Officer to exercise the third-year option of the facilities maintenance contract with NV Enterprises, Inc. in an amount not to exceed $2,000,000.

BACKGROUND:

In June of 2004, the Operations Board approved a facilities maintenance contract (base year plus four one-year renewable options) with NV Enterprises for facilities maintenance services. Since that time, two option years have been executed with the current year of the contract to expire on October 31, 2007. This year, the total annual contract value is being reduced from $2,500,000 to $2,000,000. This reduction is being made in the task order work/elective projects, not general maintenance, and is being lowered to coincide with the current available budget. A 3.76 percent increase in general station work expenses is being added to the base contract.

The facilities budget is financed using both operating and capital funds. The FY 2007/2008 facilities maintenance budget which funds this contract includes $1.55 million in operating funds for general facilities repairs and maintenance. The remaining $443,000 is funded through specific capital projects and managed through task orders.

General facilities maintenance includes daily cleaning of the stations and some parking facilities, landscaping and repairs. Previous task order work includes rehabilitation of the Fredericksburg Station and station painting and installation of new communication cabinets at stations. Examples of upcoming task order work includes station painting, installation of windbreaks, lighting and communication improvements.

FISCAL IMPACT

This contract is funded through the facilities line item of the FY 2007 and FY 2008 VRE Operating budget and project specific grants in the VRE Capital Budget.

ITEM # 2E

Closed Session on VRE's Insurance Plan

To enter closed session:

Pursuant to the Virginia Freedom of Information Act (Section 2.2-3711A (7) of the Code of Virginia), the Northern Virginia Transportation Commission authorizes discussion in closed session regarding one legal matter pertaining to VRE's insurance plan.

To certify the closed session:

The Northern Virginia Transportation Commission certifies that, to the best of each member's knowledge and with no individual member dissenting, at the just concluded closed session:

1. Only public business matters lawfully exempted from open meeting requirements under the Freedom of Information Act were discussed; and

2. Only such public business matters as were identified in the motion by which the closed session was convened were heard, discussed or considered.

Northern Virginia Transportation Commission

AGENDA ITEM #3

TO: **Chairman Snyder and NVTC Commissioners**

FROM: **Rick Taube and Elizabeth Rodgers**

DATE: **September 27, 2007**

SUBJECT: **Ride Free (Code Orange/ Red) Program Evaluation and FY 2009 CMAQ Application**

NVTC staff is completing an evaluation report on the program of free bus fares on forecast bad air quality days (currently Code Orange and Code Red). An enhanced marketing program was undertaken this summer and on-board surveys performed. The report is still being reviewed by local staff but a decision is needed immediately on future funding for the program given deadlines for applying for federal funds through the Northern Virginia Transportation Authority.

Staff will discuss with the commission the tentative evaluation findings in the attached draft report and discuss several alternatives for the future of the program. The commission will be asked to authorize staff to apply for FY 2009 CMAQ funds and to seek additional funding for the summers of 2008 and 2009.

The final report and consensus staff recommendations are expected by NVTC's November 1st meeting. At that time the amount of CMAQ funds requested can be refined (or the entire application withdrawn). This approach will provide additional time to refine the program while remaining eligible for future funding.

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Evaluation of the "Ride Free" Program of Free Bus Rides in Northern Virginia on Forecast Code Orange and Red Air Quality Days

Preliminary Summary Report

DRAFT: September 27, 2007

Executive Summary

NVTC's Expanded Ride Free Program Lures Auto Drivers To Transit With Free Bus Rides on Forecast Bad Air Quality Days and Significantly Reduces Volatile Organic Compounds and NOx Emissions

Background

Since 1999, the Northern Virginia Transportation Commission (NVTC) has managed a "Ride Free" program offering free fares on Northern Virginia's bus systems on forecast Bad Air Quality days. NVTC compensates the participating transit systems for lost fare revenue.

By encouraging people to forgo the use of their personal vehicles and to use transit the region reduces air pollution levels. The program also serves as an excellent opportunity for commuters in Northern Virginia to experience transit for free with the hope that they will continue to use transit for their year-round commuting needs.

Through this program, Metrobus (Northern Virginia routes only), Fairfax Connector, Alexandria DASH, Arlington Transit, Loudoun County Transit, OmniRide, OmniLink, CUE, Virginia Regional Transportation Association and the Falls Church GEORGE Bus offer free bus rides on forecast Bad Air Quality days.

2007 Program Expansion

During the 2007 ozone season (May 1 to September 15), the "Ride Free" program was expanded to include forecast Code Orange Bad Air Quality days (only Code Red days were eligible previously) and featured eye-catching graphics that emphasized the message: *"Be Part of the Solution, Reduce Ozone Pollution."*

This pilot program included an extensive outreach and education initiative. All promotional materials were designed by NVTC staff. The outreach campaign specifically targeted Single Occupancy Vehicle commuters and used five educational tools:

- A unique, program-exclusive website with over 16,000 views (www.ridefreenova.org);
- Program-specific brochures (printed 15,000 in English and 5,000 in Spanish) sent to cooperating employers such as Navy

Federal Credit Union, George Mason University, ESI International, National Wildlife Federation, Freddie Mac, and Noblis;
- 500 wall posters;
- 50 exterior bus posters; and
- Press releases designed to generate free media coverage for each of the 16 Ride Free days in 2007.

All educational, advertising and collateral materials channeled commuters to the "Ride Free" website which provided comprehensive information about:

- Regional air quality;
- How the program works;
- Tips to take action and reduce air pollution;
- Contact information for participating transit agencies and regional partners; and
- The air quality forecast.

Measuring Success

Two separate on-board surveys were conducted on forecast Bad Air Quality "Ride Free" days. A total of 1,258 surveys were distributed with 744 returned. Initial results indicate that by the end of the summer approximately 71 percent of respondents were aware of the "Ride Free" program and nearly four percent of riders on forecast Bad Air days decided to leave their cars at home.

During the 16 forecast Code Orange Bad Air days in summer of 2007, 2,068,301 trips were taken free on Northern Virginia's buses. Calculated savings in Volatile Organic Compounds and Oxides of Nitrogen were approximately 1.3 to 1.8 tons. Savings were calculated by multiplying the number of survey determined bus riders who would otherwise have driven automobiles times their average trip length and comparing the bus emissions versus the auto emissions.

Savings in greenhouse gas CO_2 were more substantial, amounting to 745 to 807 tons (calculated using a factor from the American Public Transportation Association).

The following table summarizes several measures used to evaluate the program. The final table lists the alternatives considered for continuing the program in response to the evaluation. The NVTC staff recommendation is also listed on that final table.

SUMMARY OF 2007 PROGRAM RESULTS

Recorded Reimbursed Bus Passenger Trips:	
Average per Bad Air Day	119,316
Total for 16 Bad Air Days	1,909,063
Typical Bus Passenger Trips:	
Average per Bad Air Day	129,269
Total for 16 Bad Air Days	2,068,301
On Board Surveys:	
Forms Distributed	1,258
Forms Returned	744
Bus Passengers Diverted from Auto Drivers (3.9%) over 16 Bad Air Days:	
Recorded	74,453
Typical	80,664
Cost of Reimbursed Fares:	
Average per Bad Air Day	$104,062
Total for 16 Bad Air Days	$1,664,995
Average Reimbursement per Free Bus Rider	$0.80
Cost per Diverted Auto Driver (Recorded)	$22.36
Cost per Diverted Auto Driver (Typical)	$20.52
Tons of NOx Saved Over 16 Bad Air Days:	
Recorded	0.96
Typical	1.28
Tons of VOC Saved Over 16 Bad Air Days:	
Recorded	0.32
Typical	0.48
Tons of CO_2 Saved Over 16 Bad Air Days:	
Recorded	745
Typical	807
Cost per Combined NOx, VOC and CO_2 Tons Saved:	
Recorded	$2,231
Typical	$2,059

SUMMARY OF ALTERNATIVES CONSIDERED AND RECOMMENDED FOR CONTINUING THE PROGRAM IN 2008 AND BEYOND

ALTERNATIVES

1. Eliminate the program and use remaining funds for other air quality purposes.

2. Revise the program to offer free or reduced fares over an extended period during summers (not only on forecast Bad Air Quality days.)

3. Revise the program to offer reduced fares on forecast Bad Air Quality days.

4. Revise the program to offer reduced fare monthly regional “ozone bus passes” during summer months (since currently pass users get no benefit from Ride Free days).

5. Set aside a fixed amount of CMAQ funding and offer free fares on forecast Bad Air Quality days until these funds are exhausted.

6. Continue the program unchanged but with a greater emphasis on capturing funding from private sector partners who wish to be identified with environmentally friendly policies.

RECOMMENDATION

Alternative 3: Reduce Program Cost by Offering 50-Cent Fares on Forecast Bad Air Days; and for the future consider Alternative 4: Offer Reduced Fare Monthly Regional Ozone Bus Passes.

NVTC previously retained a group of consulting firms led by BMI-SG (now VHB) to evaluate the effectiveness of free bus fares on forecast Bad Air Quality Days. The consultants reported to NVTC in December, 2003 based on analysis that included a telephone survey and review of reported ridership and revenue on forecast Code Red days since program inception. Unfortunately the lack of subsequent forecast Code Red days prevented these consultants from conducting their on-board passenger surveys and the contract was closed by mutual agreement without the analysis being completed.

In the 2003 report, the consultants showed over the life of the program, fewer persons traveled by transit on forecast Code Red days than on comparable days without bad air alerts. However, this was attributed largely to inaccurate passenger counting by transit operators on Code Red days, and recent years did show increased ridership with better counting techniques. Costs per added rider for 2003 had dropped to $3.42.

For 2003, the costs for removing each combined ton of volatile organic compounds (VOC) and oxides of nitrogen (NOX) achieved from this program was $197,000 per ton. The average for MWCOG's Commuter Connections control measures for that year was $4, 900 per combined ton. But using national weighting techniques (with NOX valued at four times VOC), the free bus fares program cost dropped to $72,000 per ton, and this program fell in the top third of effectiveness among 139 strategies applied across the U.S.

Regarding awareness of the program, based on a telephone survey only half of respondents knew about the free bus fare program. Only 16% had used or considered using free buses on Code Red days, and of those only 24% (4% overall) reported free fares as the reason for this decision. Only 14% of commuters altered their behavior in any way on Code Red days.

While these results were inconclusive, they did suggest that the cost effectiveness of the program was steadily improving and that overall awareness needed to be boosted. Accordingly, the 2007 evaluation was undertaken.

Table of Contents

Program Description

Beginning in 1999, the Northern Virginia Transportation Commission (NVTC) has managed a program offering free bus fares on forecast Code Red air quality days. Code Red air quality days occur when pollution levels are harmful to all sensitive health groups and outdoor activity should be avoided. NVTC's program is designed to encourage travelers to use transit instead of their automobiles on forecast unhealthy air quality days.

Between 1999 and 2006, 31 Code Red days have been forecasted by the Metropolitan Washington Council of Governments (MWCOG). In 2003, the Environmental Protection Agency (EPA) began instituting a more stringent eight-hour air quality standard and ultimately revoked the one-hour standard in 2005. Under the new standard, the Washington Metropolitan region was officially designated by the EPA as a non-attainment area. Now Code Orange Days and worse (i.e., Red and Purple) are considered by MWCOG to be high pollution days exceeding the EPA's new health-based standards. See **Attachment 1** for descriptions of MWCOG's color- coded classifications of air quality.

Since the new standards were implemented, the Washington Metropolitan Region has been experiencing fewer forecast Code Red days. In fact, no forecast Code Red days occurred in 2004 and 2007, only one day in 2005 and two days in 2006. To determine if the Ride Free program is an effective method to reduce air pollution, the program was expanded to include forecast Code Orange in the 2007 ozone season. In addition to the expansion, a marketing campaign and a program evaluation were also added to the program. Please refer to **Attachment 2** for the number of forecast Code Orange and Red days from 2002-2006.

Under the Ride Free program, bus service providers in Northern Virginia suspend fare collection and offer free fare bus service on forecasted Code Orange, Red, and Purple days. Funding for this project is provided through a federal transportation grant obtained by the Virginia Department of Rail and Public Transportation (DRPT) for NVTC, using Congestion Mitigation and Air Quality funds. Please refer to **Attachment 3** for program funding and costs since 1999.

NVTC's method of reimbursement for participating transit operators is simply averaging the revenues from the previous three typical same days of the week (i.e. if the Code Orange or Red day fell on a Wednesday, the previous three typical Wednesdays would be used). If one of these three same days was not typical, (i.e. a holiday) then that week would be skipped and another same day would be used from the previous week. Transit operators submit this information to NVTC. Staff then combines all reimbursement requests into one and submits it to DRPT for payment. Please refer to **Attachment 4** to view a copy of the reimbursement form.

This preliminary summary report includes an overview of the marketing campaign, 2007 ridership data and costs, preliminary survey findings, analysis of the cost effectiveness of the program, alternatives for continuing the program and NVTC staff recommendations.

Marketing Campaign

The theme of the marketing campaign for the 2007 Ride Free program was:
"Be Part of the Solution, Reduce Ozone Pollution!"

All promotional materials were designed by NVTC staff and reviewed by technical experts from regional agencies and local governments. The campaign targeted those individuals normally commuting by automobiles and was based on five marketing tools. The total cost of the marketing campaign was $ 51,642.15.

- Website ($ 285.87)
  - www.ridefreenova.org
  - The website was designed to provide overall information about the program, tips to reduce air pollution, participating transit agencies' contact information, and the air quality forecast.
  - Over 8,300 visitors were counted from April 20 to September 15 and over 16,000 pages were loaded.

- Brochure ($4735.98- includes purchases of graphics)
    - The brochure was an educational tool provided to employers and the local jurisdictions for distribution.
    - The brochures mirrored the information provided on the website.
    - 15,000 brochures were printed in English and 5,000 brochures were printed in Spanish.
    - All printing was on FSC mixed sources paper which is produced from well-managed forests, controlled sources and recycled wood or fiber.

- Employer Outreach ($1,482.30)
    - The brochures along with a letter from the NVTC Chairman were sent to over 3,000 employers in Northern Virginia including Navy Federal Credit Union, George Mason University, ESI International, National Wildlife Federation, Freddie Mac, and Noblis.

- Wall Posters ($1,558.00)
    - 500 wall posters (24x36 inches) were printed and distributed to local businesses and jurisdictions.

- Exterior Bus Posters ($40,000.00 advertising and $3,580.00 printing)
    - 50 bus posters were placed on WMATA, Fairfax Connector, and PRTC buses in June and July. Ten posters were placed in August.

- Press Releases
    - The media were notified via press releases about every Ride Free day.
    - There was substantial press coverage in newspaper articles, online chats and newsletters.

Ride Free 2007 Ridership and Costs

There were a total of 16 forecast Code Orange days for the 2007 ozone season with an average cost of $120,000 per weekday for reimbursing transit systems for lost fare revenue. Costs were lower on the three weekend days averaging $33,344. The average overall for 16 days was under $ 105,000.

Forecast Code Orange Day	Day of the Week	Total Reported Northern Virginia Bus Ridership	Total Average Ridership on Three Previous Same Days	Cost for Reimbursed Bus Fares
5/31/200	Thursday	114,415	146,984	$ 110,136.16
6/1/2007	Friday	123,678	141,738	$ 107,510.12
6/18/200	Monday	129,003	151,279	$ 113,650.66
6/19/200	Tuesday	134,526	153,627	$ 119,357.81
6/27/200	Wednesday	119,161	153,840	$ 120,150.32
6/28/200	Thursday	136,097	153,866	$ 118,138.96
7/8/2007	Sunday	36,320	37,865	$ 18,058.26
7/9/2007	Monday	148,065	151,298	$ 113,816.86
7/10/200	Tuesday	151,773	145,595	$ 115,625.22
8/2/2007	Thursday	137,351	145,839	$ 130,079.77
8/3/2007	Friday	131,094	136,923	$ 117,477.78
8/4/2007	Saturday	62,294	65,685	$ 42,092.07
8/7/2007	Tuesday	143,071	142,497	$ 134,699.96
8/8/2007	Wednesday	143,207	144,058	$ 134,535.54
8/25/200	Saturday	57,003	62,645	$ 39,883.05
8/30/200	Thursday	142,005	134,562	$ 129,782.42
Grand Average	16 Days	119,316	129,269	$104,062
Grand Total	16 Days	1,909,063	2,068,301	$ 1,664,995

Please refer to **Attachment 5** for detailed ridership data.

As can be seen in Attachment 5, some transit systems experienced significant ridership gains. Dash ridership grew by 15% on one day and averaged 9% over all 16 days. Loudoun County Transit also was a consistent gainer, with a high of 14% on one day and 5% overall. During August, PRTC also reported significant gains of as much as 18%, with a more modest season long average increase of 1%. Virginia Regional Transit gained overall while the other transit systems reported consistent reductions in ridership.

Evaluation

NVTC contracted with MCV, Inc. to perform an evaluation of the Ride Free program. The evaluation included an onboard survey administered twice during the ozone season on forecast Code Orange days. The first survey was conducted on June 27th and June 28th. The second survey was conducted on August 30th. Since August 30th was the Thursday before the Labor Day weekend, only half of the bus routes were sampled as ridership was expected to be abnormally low. As it turned out, ridership actually was substantial.

Survey Findings

Please refer to **Attachment 6** for a copy of the onboard survey of which 1,258 forms were distributed on June 27th and 28th, with 744 responses for an excellent response rate of over 59%. Results of the August 30th survey are being compiled.

Among the key results:

- 71% were aware of the Ride Free program before boarding
- 46% knew that today was a Ride Free day and became aware by:
    - TV, Radio or Newspaper = 70%
    - Employer Alert = 6%
    - Website = 6%
    - Other = 19%

- The most important reason for choosing the bus:
    - Regular Rider = 73%
    - Help reduce air pollution = 4%
    - Because of the free fare = 3%
    - Avoid the heat = 2%
    - Do not have a car = 14%
    - Other = 6%

- How passengers would have typically made the same trip if full bus fare was charged:
    - Same bus = 82.66%
    - Driven an automobile = 3.90% (6,000 trips)
    - Passenger in an automobile = 2.02%
    - Walk or Bike = 2.15%
    - Ride other Transit = 3.76%
    - Would not have made trip = 1.88%
    - Other = 1.88%
    - No response = 1.75%

- If a small fare was charged would the passengers still ride:
  - 25 cents = 74% YES
  - 50 cents = 52% YES
  - ½ price = 69% YES

Analysis of Survey Results

The NVTC marketing campaign commenced the first week of May, 2007. The survey showed that 71 percent of surveyed Ride Free bus riders were aware of the program in late June compared to 67 percent in late August after several forecast Code Orange days. Thus, there is no measurable increase in awareness during the summer.

Another test of the effectiveness of the 2007 marketing program is to compare these survey results with the results of a telephone survey of the region's population conducted for NVTC in 2003. In the earlier survey, 59 percent of commuters and 49 percent of non-commuters knew about MWCOG's color-coded Bad Air quality forecasts. Fifty-three percent were aware that bus rides were free for those days. This suggests the value of NVTC's intense marketing effort in 2007 which boosted awareness and bodes well for the future as efforts continue to build on this base of awareness.

Also of significance is the 3.9 percent of bus riders on forecast Code Orange days that otherwise would have driven an automobile. It is likely that a portion of the 2.2 percent who would have been passengers in an automobile represent air quality savings too. This is because their auto drivers may not be making their trip and recognizing the free bus fares, the passengers may be diverted to transit. Also, a portion of the 1.75 percent not responding might also have been former drivers. Accordingly, it would not be unreasonable to deduce that about five percent of bus riders would have been driving. Those five percent represent 7,700 trips in Northern Virginia on an average forecast Code Orange day in 2007, or 123,200 trips over all 16 Ride Free days.

In the 2003 region-wide telephone survey, 14 percent said they would do something differently on forecast Bad Air days. Only seven respondents said they would take the bus (out of 212 answering the questions) or 3.3 percent. Thus, the on-board survey results in 2007 are quite close to the 2003 predictions regarding bus riders diverted from automobiles.

In the 2003 survey, 18 percent of all respondents would be willing to consider taking the free bus on Bad Air days. This suggests a potential market that could be increased substantially from the present with the proper outreach.

Other health benefits accrue to those who ride the bus rather than walking or biking on Bad Air days (during which persons should not engage in strenuous outdoor exercise). The 2007 survey showed 2.15% of respondents were diverted to the free bus from walking or biking or over 41,000 trips on Ride Free days over the entire summer ozone season.

While the factors just discussed tend to boost the effectiveness of the Ride Free program, the survey results could also be used to argue that the effectiveness is overstated. For example, some of those surveyed bus passengers who were diverted from other transit systems (3.8%) might otherwise have used Metrorail or VRE (which continue to charge regular fares on Bad Air Quality days). That lost transit revenue could be added to the overall program cost. This survey did not distinguish between bus and rail transit so the extent of any diversion is unknown.

As a means to reduce the cost of the program, the survey results show that 69 percent overall would continue to use the bus on forecast Code Orange days, if fares were cut in half rather than eliminated entirely. For persons diverted from their personal autos, that percentage is 42%. See **Attachment 7.**

As shown in Attachment 7, the program cost would be cut by about 40% while ridership would drop by 50%, if fares were cut to 50-cents. This would trim the costs of reimbursing the transit systems from the current average of 80-cents.

Cost Effectiveness

Please refer to **Attachment 8** for data on the cost effectiveness of the Ride Free program.

The survey results were used to determine the number of individuals that would have driven an automobile, but chose to ride the bus because it was a Ride Free day. The cost of the Ride Free program for 2007 per bus rider diverted (at 3.9%) was $22.36 pr reported ridership and $20.52 for average ridership.

Based on the average ridership of the same day of the week for the three previous days, the cost per ton of emission savings of oxides of nitrogen (NOx) and volatile organic compounds (VOC) was $1,175,904. Cost per ton based on reported ridership was $1,425,421. The latter is substantially more expensive because for the entire ozone season the reported ridership was 27,000 less than the average ridership.

It is believed that due to incomplete ridership counts by some transit operators, the reported ridership on forecast bad air days is lower than the ridership that actually occurred on these days. Consequently the cost per ton was also computed assuming actual ridership on Bad Air days with free fares was at least as great as on good air quality days when fares were charged.

The cost per ton was calculated by applying an average trip length for Northern Virginia commuters to the number of bus riders who usually drove on automobile (3.9 percent of the sample) and comparing emissions factors for bus versus automobile for those trips. The savings in pollution, measured in tons of NOx and VOC were then divided by the cost of reimbursing the free fares. The approach is based on the methodology described in detail in the December 2003 report to NVTC by BMI-SG titled Effectiveness of Free Bus Fares on Forecast Air Quality Code Red Days. This is available on-line at www.thinkoutsidethecar.org/research/completed_research.asp. See pages 46-54.

Attachments 9 and 10 show the cost per ton of some other actual and potential programs for reducing air pollution in this region. As can be seen, the calculated cost per ton of the Ride Free program is lower than such measures as parking impact fees and free off-peak bus service, but higher than many other alternatives. The 2003 NVTC report showed, however, that the costs of reducing NOx greatly exceed those of reducing VOC, so it is appropriate to weight the

results by type of pollution using a factor of four for NOx to one for VOC. Using this approach, the 2003 report calculated a cost per ton for the Ride Free program that was cut in half (e.g. to $496,835 per weighted ton in 2002 from $1,339,520 un-weighted). Applying this approach to the 2007 data decreases the cost per ton by 69% to $364,167.

In addition to savings of NOx and VOC, other clean air benefits accompany a switch to public transit from driving. In a September, 2007 report, the American Public Transportation Association showed that a commuter switching to public transit from driving can reduce a household's carbon emissions (CO_2) by up to 30%. This amounts to 20 pounds per day or 4,800 pounds per year. This switch can be up to 10 times more effective than other actions available to the typical household to reduce harmful greenhouse gas emissions.

The APTA factor of 20 pounds per day can be applied to the conservatively estimated 5,000 trips diverted from auto driving during the 2007 ozone season in Northern Virginia on an average Bad Air day. The savings amount to 50 tons per day or 800 tons over the 16 forecast Code Orange days. Thus, the cost per ton of removing CO_2 using this program is about $2,000 if the entire program cost is assigned to CO_2. If a third is assigned (with thirds also assigned to NOx and VOC removal), the cost per ton of CO_2 removed drops to about $667.

As was true in NVTC's 2003 evaluation study, on many Ride Free days transit ridership actually declined. This could either reflect measurement error (bus drivers failing to count because fares were not collected) or it could reflect actual declines in trip-making with the free fares cushioning the greater reduction on buses that would otherwise have occurred. Since an overall decline in travel on forecast Bad Air Quality days is beneficial to persons' health and regional air quality, even if bus ridership actually declined on forecast Bad Air Quality days, if that percentage decline is less than any decline in overall trip-making, the Ride Free program could be having the desired effect.

Examining in Attachment 5 those days on which bus ridership was reported to increase, the cost per additional rider was as low as $17.44 overall on one day. This is measured by dividing the total fares reimbursed for that day by the number of reported riders minus the average ridership on the three previous same days of the week. Some systems did much better. For example, for Virginia Regional Transit the average cost per additional rider was $6.64 and for the city of Fairfax CUE bus was $9.32. In the 2003 study such costs were as low as $3.45 for some transit systems, with the long-distance

suburban systems (OmniRide, LCT) costing more per rider given their higher fares. Metrobus, with its shorter trips, cost as little as $1.76 per added rider on some days in 2003.

Program Difficulties

In addition to the expense of the program, there are several administrative difficulties. Some bus drivers do not record ridership accurately. This leads to the result that some transit systems in Northern Virginia show sharp ridership gains on Ride Free days while others show significant declines, even though they are not serving distinctly different markets. NVTC and its partners worked hard to alert transit operators to their responsibility to accurately count ridership. Red bags placed over fareboxes on Ride Free days had the message “Record Ridership” printed on the side facing drivers. Staff visited bus garages to spread the word and supervisors were encouraged to contact drivers by radio throughout the day with reminders. Nonetheless, what had been regarded as a positive trend of increasing ridership in NVTC’s 2003 report (31,651 more riders over 12 forecast Code Red days in 2002 and 40,671 over two forecast Code Red days in 2003) was interrupted in 2007.

Also, occasionally some bus drivers insist on collecting fares on Ride Free days, thereby confusing riders and defeating the purpose of the program. Notifying the riders of the status of free fares cannot occur until after MWCOG releases its official forecast at 3:00 p.m. on the preceding day. Because MWCOG also makes unofficial multi-day predictions, some transit systems have mistakenly used unofficial forecasts that turned out to be incorrect. In this way free fares can be wrongly offered on days that are not officially forecast to be Bad Air days.

Finally, it is difficult to reserve the appropriate amount of CMAQ funding for this program, because the number of forecast Code Orange /Red/ Purple days cannot be predicted accurately two summers in advance. The cost of reimbursing free fares often changes in the meantime based on new fare levels and rising ridership.

Alternatives

Based on the factors described above, several alternative approaches were evaluated by NVTC staff and its local and regional Ride Free partners. These are:

1. Eliminate the program and use remaining funds for other air quality purposes.

2. Revise the program to offer free or reduced fares over an extended period during summers (not only on forecast Bad Air Quality days.)

3. Revise the program to offer reduced fares on forecast Bad Air Quality days.

4. Revise the program to offer reduced fare monthly regional "ozone bus passes" during summer months (since currently pass users get no benefit from Ride Free days).

5. Set aside a fixed amount of CMAQ funding and offer free fares on forecast Bad Air Quality days until these funds are exhausted.

6. Continue the program unchanged but with a greater emphasis on capturing funding from private sector partners who wish to be identified with environmentally friendly policies.

Alternative 1: Eliminate the Program

Viewing results pessimistically, counted bus ridership overall declined on Ride Free days compared to the average of the previous weeks. The percent and number of riders responding to the free fare program by leaving their automobiles, were modest and the calculated cost of the program per ton of pollutants removed was relatively high compared to other alternatives. Despite years of educational efforts by Ride Free sponsors, it is believed transit operators continue to miscount riders resulting in inaccurate measurement of program benefits. The $770,000 of CMAQ funds remaining in the program could be used to promote transit ridership in other ways or could be turned over to Clean Air Partners to support the regional effort.

Alternative 2: New Reduced Fare Program Not Directly Related to Forecast Bad Air Days

The free fares offered on 16 scattered days during the 2007 summer ozone season cost $1,664,995. That amount of funding could accomplish a two-week free fare period during which the benefits of transit could be heavily promoted. The expectation would be that repeat transit ridership throughout the summer would be strong and forecast Bad Air days could be staved off (rather than waiting for a forecast Bad Air day to offer the free fare benefit).

A related approach would be to offer discounted fares (say by half) which could extend the benefit period to a month (32 days) for the same amount of CMAQ funding.

Alternative 3: Reduce the Program Cost By Offering Reduced Fares on Forecast Ride Free Days.

Based on survey results, about 52 percent of those persons diverted from their private automobiles to transit on Ride Free days would continue to ride transit if 50-cent fares were changed. Accordingly, the program cost could be cut by about 40% (the average reimbursed fare is 80-cents).

The success of this approach depends on programming fareboxes to accommodate the 50-cent fares and educating drivers to avoid confusing customers. More accurate ridership counts would be expected on most transit systems.

Alternative 4: Offer Reduced Fare Monthly Regional Ozone Bus Passes

The current Ride Free program does not directly benefit transit pass users (who have already paid in advance). If the program were modified to offer a deep discount monthly pass (e.g. half the current level), customers would have the incentive to ride everyday and the transit system would receive more revenue up front while saving wear and tear on fare reading equipment. Again, fareboxes would have to be programmed to accept these new passes while the problem of uncounted riders on free fare days would be eliminated.

Because of the greater outlay of funds needed to purchase a pass, participation in the program might be skewed to regular commuters and higher-income persons. This unintended effect might be counteracted by offering a series of free-for-all days, co-sponsored by private sector firms.

Alternative 5: Set Aside a Fixed Amount of CMAQ Funding and Offer Free Fares on Bad Air Days Until the Funds Run Out.

This is the approach used in the San Francisco Bay Area. With scores of jurisdictions and participating transit systems, including the BART rail system, it costs $2,125,000 per day for a free fare day. For the summer of 2007 only four were offered.

In Northern Virginia, perhaps $2 million could be reserved annually for the Ride Free program. The public would be informed from the beginning about the level of funding and the expected total of forecast Bad Air days to be funded. With each forecast Bad Air day, a countdown would occur until the funds are exhausted. If funds remained at the end of the season, a “thank you” free fare day could be offered as a reward for a successful clean air season. Perhaps private-sector co-sponsors could join in funding such a final free fare day.

The period during which the Ride Free program is offered might also be shortened to conserve funds. In the past six years, with a total of 104 forecast Code Orange and Red days, only five forecast Code Orange days occurred in May and four in September. Otherwise, forecast Code Orange and Red days are relatively evenly distributed through late June, July and August. Thus, for administrative simplicity the program duration could be shortened to exclude May and September, but there would be no justification to shorten the period further (unless the start were delayed to June 15th).

Alternative 6: Continue the Program Unchanged But with Additional Funding from Private Sponsors.

The “no change” alternative would take the optimistic view that from 75,000 to 125,000 trips were diverted from private automobiles, that actual transit ridership is very likely much higher than reported ridership on Ride Free days, that the region has a lengthy track record of cooperation with the program since 1999, that public awareness of the program appears to be trending up, that the cost of the program per combined ton of VOC, NOx and CO_2 is only slightly more than $2,000 per ton or $1 per pound, that overall the region is enjoying success in its clean air campaign and there is no need to “upset the apple cart” by eliminating or revising the Ride Free program.

Applying this approach, for the 2008 ozone season about $1,500,000 of new carryover CMAQ funding could be reserved (along with $770,000 of unspent funds remaining at NVTC) with an understanding with the Northern Virginia Transportation Authority (NVTA) about the possible need for additional funds if more forecast Bad Air days occur than anticipated. Currently, FY 2009 CMAQ funds are being considered for allocation and about $2.5 million would be needed (again with a need for NVTA to advance funds since FY 2009 federal CMAQ funds would not be available in time for the summer 2009 ozone season).

To help relieve the financial burdens of the program, private-sector sponsors seeking to be aligned with environmentally friendly programs could be approached.

Even stronger efforts would be needed to require transit operators to accurately count riders, an annual marketing budget of as much as $50,000 is required and follow up passenger surveys should be undertaken.

Recommendation

After considering the information and alternatives described above, and consulting with NVTC's Management Advisory Committee and NVTA's Jurisdiction and Agency Advisory Committee, the following approach is recommended:

For 2008: Alternative 3: Reduce Program Cost by Offering 50-Cent Fares on Forecast Bad Air Days; and for the future consider Alternative 4: Offer Reduced Fare Monthly Regional Ozone Bus Passes.

For FY 2009 and beyond CMAQ funding would continue at about $2.5 million annually. Less than $1 million would support the 50-cent fare program. About $100,000 would be used for marketing and surveys. A target for private-sector fundraising would be set for at least $100,000 annually. The remaining funds (about $1.5 million) could be used to reimburse the transit systems for discounted monthly ozone passes in future years.

Successfully implementing this recommendation would require an immediate allocation of carry-over CMAQ funds for the 2008 ozone season and an application for FY2009 CMAQ funds with an advance for the summer of 2009. Alternatively, NVTA may choose to provide some funds from new regional revenues.

This approach also assumes that WMATA and its contractors will successfully complete upgrades to the regional SmarTrip farebox clearinghouse so that the passes could be accepted in the future and revenue cleared conveniently between transit systems.

Among the details to be worked out about the ozone pass in the future are:

- The following points assume that the pass will be an electronic pass that is loaded on to the SmarTrip card, as opposed to a paper pass product.

- The regional SmarTrip system needs to complete the development, testing, and installation of "piece 2" system operations. Piece 2 includes pass functionality. Currently, piece 2 should be available in the late spring of 2008, but that schedule could easily slip. One thing working in favor of this is that a number of agencies really need pass functionality to entice customers into using smartcards

(PRTC is the biggest example) and they are really pushing for piece 2 to be completed on time.

- The pass would need to provide either unlimited rides for a certain time period (time-based pass), or a certain number of rides valid for any time period (stored-ride pass product). The region is working on hybrid passes, but that will not happen within the next calendar year.

- If a time-based pass is chosen, the pass could be sold as a discounted monthly pass for July and for August, or it could be a discounted pass that is valid for the entire summer, from June 21 through September 21. If a pass that is valid for the entire summer is offered, the price would need to be reduced with each passing month, maybe $75 until July 21, $50 until August 21, and $25 until September 21. This could all be programmed into the farebox at the start of the summer.

- The pass could also be restricted based on time of day, say from 6:00am to 8:00pm, which would encourage transit use during the daylight hours (when car emissions are most dangerous) but still require fare payment at night, when car emissions are not such a problem. This is probably too complex, but worth considering.

- In terms of reimbursing the agencies, NVTC could provide matching funds to the regional customer service center/clearinghouse for each pass sold. The RCSC could then use this funding, along with the revenue from the pass sales, to reimburse the agencies based on the formula developed for reimbursing normal multi-agency passes (proportional share based on rides and fares). This would relieve NVTC of having to collect ridership data from and provide reimbursement to several different agencies. It would require some work in terms of setting up a reimbursement schedule and procedure with the RCSC.

- A different scenario would have the agencies sell the Ozone Pass from their fareboxes (i.e. at a cost of $75 for the whole summer) and get reimbursement from the RCSC for that $75. They could then apply to NVTC to get an additional "matching" payment to cover their costs, maybe $50.

- Ridership would be very easy to calculate, since the fareboxes would automatically register and record the use of the specific Ozone Pass.

The ongoing surveying would seek to determine:

- Diversion from auto to bus versus the severity of the forecast (Code Orange vs. Red);

- Differences in response for bus-only trips versus bus to Metrorail;

- Seasonal changes;
- Learning behavior (is the response different after several consecutive forecast Bad Air Quality days?);
- Impact on long-term transit use;
- Effectiveness of specific marketing techniques.

Additional marketing techniques that could be tested include:

- Banners on employers' buildings;
- Grocery cart ads;
- T-shirts;
- Clean Air Walk and other co-promotions with the environmental community;
- Require forms to qualify for passes to learn more about the users;
- Promotions tied to specific bus routes.

CLEAN AIR PARTNERS

AIR QUALITY ACTION GUIDE

Your "how to" guide for cleaner air

Air Quality Rating	Steps to Protect Your Health and Our Environment
GOOD 0-50	No Pollution – enjoy the great outdoors
MODERATE 51-100	Some Pollution – poses risk to the highly sensitive · Carpool, use public transit, bike, or walk · Limit driving, consolidate trips · Reduce car idling
UNHEALTHY for Sensitive Groups 101-150	Pollution levels harmful to children, the elderly, and anyone with respiratory or heart conditions – limit activity outdoors · Follow all action steps above · Refuel after dusk, use fuel-efficient vehicles · Avoid driving, use transit, telework · Avoid using aerosol products
UNHEALTHY 151-200	Pollution levels harmful to all – sensitive groups should avoid outdoor activities, others should limit outdoor exertion · Follow all action steps above · Avoid using any gas-powered equipment · Wait to paint until air quality improves
VERY UNHEALTHY 201-300	Pollution levels very unhealthy for everyone – avoid any physical activity outdoors

Forecast and Observed Air Quality 2002-2007

	Number of Forecast Code Orange Days	Number of Observed Code Orange Days	Number of Code Orange Forecasts Verified Orange or Above	Number of Forecast Code Red Days	Number of Observed Code Red Days	Number of Code Red Forecasts Verified Red or Above
2002	23	20	16	12	9	6
2003	9	4	4	2	2	2
2004	5	6	4	0	2	0
2005	17	19	10	1	0	0
2006	13	19	8	2	1	1
2007	17	14	7	0	1	0

Attachment #3

Ride Free Program Funding and Costs 1999-2007

	Funding	Program Costs	Balance
1999	$360,000	$297,159	$62,841
2000	$600,000	$20,931	$641,910
2001	$300,000	$341,572	$600,338
2002	$265,000	$660,847	$204,491
2003	$300,000	$199,536	$304,955
2004	$405,000	$17,630	$692,325
2005	$290,000	$22,239	$960,086
2006	$694,000	$216,826	$1,437,260
2007	$1,100,000	$1,766,637	$770,623
Total	$4,314,000	$3,543,377	$770,623

"Bad Air" (Code Orange and Code Red),
Ride Free Ridership Form
May 1 - September 15, 2007

System:	
Date of Ride Free Day:	
Day of Week:	

	Ridership	**Date**
Ridership on Ride Free Day:		
Ridership on Previous Typical* Same Day of Week (1):		
Ridership on Previous Typical Same Day of Week (2):		
Ridership on Previous Typical Same Day of Week (3):		
Average Ridership of Typical Days:		N/A

	Revenue	**Date**
Revenue on Previous Typical* Same Day of Week (1):		
Revenue on Previous Typical Same Day of Week (2):		
Revenue on Previous Typical Same Day of Week (3):		
Average Revenue of Typical Days:		N/A
Less Revenue Collected on Reported Ride Free Day:		
Net Amount Due for Reported Ride Free Day:		N/A

*i.e. do not include holidays, etc.

For the 2007 season, this form must be submitted to NVTC ASAP after the reported RIDE FREE day. Please submit this form via email or fax to the appropriate staff listed below

NVTC Fax (703) 524-1756
Attention: Colethia Quarles, NVTC
Colethia@nvtdc.org

Elizabeth Rodgers, NVTC
Elizabeth@nvtdc.org

Attachment #5

RIDE FREE Ridership Data

	METRO			ART			DASH			LCT		
RIDE FREE DAY	Reported Ridership	Average Ridership	% Change	Reported Ridership	Average Ridership	% Change	Reported Ridership	Average Ridership	% Change	Reported Ridership	Average Ridership	% Change
5/31/2007	50,207	79,252	-58%	3,763	3,847	-2%	14,538	13,391	8%	3,079	2,844	8%
6/1/2007	53,690	74,068	-38%	3,982	3,957	1%	15,343	13,093	15%	2,754	2,366	14%
6/18/2007	58,875	81,183	-38%	3,417	3,918	-15%	14,799	13,841	6%	3,075	2,942	4%
6/19/2007	60,797	82,168	-35%	3,545	3,986	-12%	15,603	13,823	11%	3,137	3,087	2%
6/27/2007	47,967	81,820	-71%	3,474	4,077	-17%	15,255	13,878	9%	3,048	3,011	1%
6/28/2007	63,821	81,629	-28%	3,636	4,237	-17%	15,274	13,881	9%	3,028	2,934	3%
7/8/2007	18,970	21,063	-11%	924	896	3%	4,847	4,744	2%	-	-	-
7/9/2007	78,894	80,872	-3%	3,508	3,550	-1%	15,184	13,942	8%	3,178	2,937	8%
7/10/2007	81,839	74,569	9%	3,339	3,706	-11%	14,662	13,928	5%	3,298	2,895	12%
8/2/2007	65,280	75,470	-16%	6,018	4,314	28%	15,642	13,999	11%	3,147	2,970	6%
8/3/2007	63,164	70,989	-12%	3,607	3,924	-9%	15,305	13,796	10%	2,659	2,490	6%
8/4/2007	36,060	37,571	-4%	1,424	1,668	-17%	8,612	7,393	14%	-	-	-
8/7/2007	68,751	71,585	-4%	4,295	4,120	4%	15,295	14,181	7%	3,249	3,149	3%
8/8/2007	69,682	71,321	-2%	3,467	3,753	-8%	15,682	14,296	9%	3,179	3,021	5%
8/25/2007	36,338	38,112	-5%				6,752	7,095	-5%	-	-	-
8/30/2007	84,934	78,535	8%				14,727	13,422	9%	2,750	2,952	-7%

	Fairfax Connector			CUE			PRTC			VRT		
RIDE FREE DAY	Reported Ridership	Average Ridership	% Change	Reported Ridership	Average Ridership	% Change	Reported Ridership	Average Ridership	% Change	Reported Ridership	Average Ridership	% Change
5/31/2007	26,190	31,935	-22%	3,248	3,438	-6%	12,125	11,159	8%	1,265	1,118	12%
6/1/2007	31,689	32,668	-3%	3,002	3,370	-12%	11,938	11,159	7%	1,280	1,057	17%
6/18/2007	33,627	33,489	0%	2,768	3,446	-24%	10,722	11,294	-5%	1,363	1,166	14%
6/19/2007	35,185	34,372	2%	3,431	3,377	2%	11,832	11,660	1%	1,302	1,154	11%
6/27/2007	34,398	34,891	-1%	2,436	3,523	-45%	10,504	11,530	-10%	1,390	1,110	20%
6/28/2007	35,709	35,579	0%	2,460	3,311	-35%	10,265	11,072	-8%	1,239	1,223	1%
7/8/2007	11,106	10,539	5%	473	623	-32%	-	-	-	-	-	-
7/9/2007	32,722	34,460	-5%	3,211	3,412	-6%	10,032	10,825	-8%	1,336	1,300	3%
7/10/2007	32,722	34,397	-5%	3,490	3,377	3%	10,992	11,445	-4%	1,431	1,278	11%
8/2/2007	31,890	33,497	-5%	3,397	3,578	-5%	10,720	10,687	0%	1,257	1,324	-5%
8/3/2007	30,917	31,618	-2%	3,276	3,056	7%	10,736	9,717	9%	1,430	1,333	7%
8/4/2007	13,508	16,344	-21%	1,156	1,288	-11%	1,450	1,275	12%	84	146	-74%
8/7/2007	34,250	33,851	1%	3,562	3,521	1%	12,324	10,782	13%	1,345	1,308	3%
8/8/2007	34,358	36,088	-5%	3,728	3,458	7%	11,740	10,839	8%	1,371	1,282	7%
8/25/2007	12,812	16,197	-26%	1,101	1,241	-13%	1605	1322	18%			
8/30/2007	35,268	36,079	-2%	4,326	3,574	17%	10239	10744	-5%			

	Average Ridership	Average Cost Per Day	Cost Per Average Ridership	Cost Per Diverted Trip
METRO	70,254	$39,427.91	$0.56	$14.07
ART	3,568	$4,477.99	$1.26	$32.17
DASH	12,728	$5,760.28	$0.45	$11.34
LCT	2,887	$14,280.33	$4.95	$126.82
Fairfax Connector	30,981	$18,347.92	$0.59	$15.03
CUE	3,056	$1,129.62	$0.37	$9.32
PRTC	10264.9231	$27,120.00	$2.64	$64.55
VRT	1138.35385	$340.87	$0.30	$6.64

Attachment #6

NVTC AIR QUALITY ACTION (BAD AIR) DAY SURVEY

Dear Rider:

The Northern Virginia Transportation Commission in cooperation with the transit agencies operating in Northern Virginia, is conducting this survey to learn more about your travel and how it is affected by the Air Quality Action (Bad Air) Day alerts. Please complete and return this card to the survey worker or fold and return free by mail. All responses will be kept confidential.

Thank you for your help!

AWARENESS

1.a. Prior to boarding the bus, were you aware that you could ride the bus free on Forecast Bad Air Days? ☐ Yes ☐ No

b. Prior to boarding the bus, were you aware that today is a BAD AIR DAY? ☐ Yes ☐ No

c. IF YES, how did you become aware of the BAD AIR DAY alert today? *(Please check only one.)*

☐ TV, Radio or Newspaper ☐ Employer Alert ☐ Website ☐ Other _____

REASON TO RIDE

2.a. What is the most important reason that you chose to ride the bus today? *(Please check only one.)*

☐ I am a regular rider
☐ I am riding because of the free fare
☐ I don't have a car available
☐ I wanted to help reduce air pollution
☐ I wanted to avoid the heat
☐ Other _____

b. How do you typically make this same trip (when the full bus fare is charged)?

☐ Same Bus ☐ Drive an automobile ☐ Passenger in an automobile ☐ Walk or Bike
☐ Ride other transit (What route _____) ☐ Would not have made trip
☐ Other _____

c. If you would have driven yourself, what type of vehicle would it be?

☐ Automobile ☐ "Green" Vehicle ☐ SUV or Van
☐ Pick-up Truck ☐ Diesel ☐ Other _____

d. Would you have taken the bus today if the fare was not free but: (Please check all that apply)

- 25 Cents ☐ Yes ☐ No
- 50 Cents ☐ Yes ☐ No
- ½ Price ☐ Yes ☐ No

e. Do you receive Metrochek/SmartBenefits? ☐ Yes ☐ No

REACHING THE BUS

3.a. Where did you COME FROM before you got on THIS BUS?

☐ Home ☐ Work ☐ Shopping ☐ School ☐ Other _____

b. What is the address of, or closest intersection to, the stop where you boarded the bus?

Address or Street _____ Nearest Intersection _____

c. How did you get from 3.a. to the bus? (Please check all that apply)

☐ Drive a car ☐ Passenger in a car ☐ Walk or Bike
☐ Ride other transit (what route _____) ☐ Other _____

DESTINATION

4.a. What is your final destination for this one-way bus ride?

☐ Home ☐ Work ☐ Shopping ☐ School ☐ Other _____

b. What is the address of, or closest intersection to your final destination?

Address or Street _____ Nearest Intersection _____

FREQUENCY OF TRAVEL

5. How often do you make this trip on the BUS?

☐ 5 or more days a week ☐ 2-4 days a week ☐ 1 or fewer days a week
☐ First time ☐ Only on Bad Air days ☐ Other _____

6. How often do you make this trip by AUTOMOBILE?

☐ 5 or more days a week ☐ 2-4 days a week ☐ 1 or fewer days a week
☐ Other _____

PLEASE TELL US ABOUT YOURSELF

7.a. Are you: ☐ Male ☐ Female

b. What is your age?

☐ Under 18 ☐ 18-24 ☐ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55-64
☐ 65-74 ☐ 75+

c. What is your approximate household income per year?

☐ Under $25,000 ☐ $25,000-49,999 ☐ $50,000- $74,999
☐ $75,000-$99,999 ☐ $100,000 and above

d. Are you currently employed?

☐ Yes ☐ No

e. Education completed:

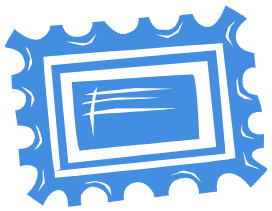
☐ Less than High School ☐ High School ☐ College Graduate ☐ Technical / Trade

f. Do you consider yourself:

☐ Asian ☐ Black or African American ☐ Hispanic or Latino
☐ White ☐ Other _____

Please return this card to the survey worker or fold/tape and return free by mail.

Thank you for your cooperation!



Northern Virginia Transportation Commission
ATTN: BAD AIR Survey
4350 N. Fairfax Drive, Suite 720
Arlington, VA 22203

Example: If $.50 Fare Charged Using 2007 ridership

RIDE FREE DAY	Average Ridership	52% Ridership	2007 Reimbursement	Revenue with $0.50 Fare	Reimbursement Cost with $0.50 Fare	Revenue with $0.50 Fare and 52% Ridership	Reimbrusement Cost with $0.50 and 52% Ridership
5/31/2007	146,984	76,431	$110,136.16	$73,491.80	$36,644.36	$57,270.80	$19,055.07
6/1/2007	141,738	73,704	$107,510.12	$70,869.15	$36,640.97	$55,905.26	$19,053.30
6/18/2007	151,279	78,665	$113,650.66	$75,639.65	$38,011.01	$59,098.34	$19,765.73
6/19/2007	153,627	79,886	$119,357.81	$76,813.35	$42,544.46	$62,066.06	$22,123.12
6/27/2007	153,840	79,997	$120,150.32	$76,920.00	$43,230.32	$62,478.17	$22,479.77
6/28/2007	153,866	80,010	$118,138.96	$76,932.85	$41,206.11	$61,432.26	$21,427.18
7/8/2007	37,865	19,690	$18,058.26	$18,932.50	($874.24)	$9,390.30	($454.60)
7/9/2007	151,298	78,675	$113,816.86	$75,649.00	$38,167.86	$59,184.77	$19,847.29
7/10/2007	145,595	75,709	$115,625.22	$72,797.50	$42,827.72	$60,125.11	$22,270.41
8/2/2007	145,839	75,836	$130,079.77	$72,919.50	$57,160.27	$67,641.48	$29,723.34
8/3/2007	136,923	71,200	$117,477.78	$68,461.35	$49,016.43	$61,088.45	$25,488.54
8/4/2007	65,685	34,156	$42,131.57	$32,842.65	$9,288.92	$21,908.42	$4,830.24
8/7/2007	142,497	74,099	$134,699.96	$71,248.65	$63,451.31	$70,043.98	$32,994.68
8/8/2007	144,058	74,910	$134,535.54	$72,028.85	$62,506.69	$69,958.48	$32,503.48
8/25/2007	63,967	33,263	$42,007.55	$31,983.50	$10,024.05	$21,843.93	$5,212.51
8/30/2007	145,306	75,559	$135,282.56	$72,653.00	$62,629.56	$70,346.93	$32,567.37
Totals:	**2,080,367**	**1,081,791**	**$1,672,659.10**	**$1,040,183.30**	**$632,475.80**	**$869,782.73**	**$328,887.41**

Attachment #7

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MEMORANDUM

TO: Elizabeth Rodgers

FROM: Joe Mehra, P.E.

SUBJECT: Code Orange

DATE: September 18, 2007 **JOB:** J-587

Based on the on-board survey conducted on June 27 and June 28, we have conducted the preliminary analysis of the effectiveness of the "Code Orange" program. The reported ridership on the two survey days and the average ridership prior to the survey days were obtained from you along with the cost of the program on the two code orange days. The cost-effectiveness of the program based on the average ridership data is as follows:

Bus System	AVERAGE RIDERSHIP	COST	NOX+VOC REDUCTIONS	COST PER TON
ART	4157	$5,322	0.00	N/A
CUE	3417	$882	0.00224	$394,273
DASH	13880	$6,878	0.00716	$961,001
FAIRFAX CONNECTOR	35235	$22,740	0.01161	$1,958,290
LOUDOUN	2973	$14,806	0.00556	$2,664,002
METRO	81724	$37,977	0.05073	$748,580
PRTC	11300	$30,251	0.02277	$1,328,510
VRT	1315	$292	0.00126	$231,827
TOTAL	154001	$119,145	0.10132	**$1,175,904**

Since several of the bus systems showed that the reported ridership is less than the average ridership, we also computed the cost-effectiveness of the program using the

reported ridership data. The cost-effectiveness of the program is as follows:

Bus System	REPORTED RIDERSHIP	COST	NOX+VOC REDUCTIONS	COST PER TON
ART	3555	$5,322	0.00	N/A
CUE	2448	$882	0.00160	$550,339
DASH	15265	$6,878	0.00787	$873,809
FAIRFAX CONNECTOR	35054	$22,740	0.01155	$1,968,401
LOUDOUN	3038	$14,806	0.00568	$2,607,003
METRO	55894	$37,977	0.03470	$1,094,517
PRTC	10385	$30,251	0.02093	$1,445,562
VRT	1315	$292	0.00126	$231,827
TOTAL	126954	$119,145	0.08359	**$1,425,421**

As noted, the cost-effectiveness of the program varied from $ 1, 176,000 to $ 1,425,000.

Please call me if you have any questions.

Bus System	AVERAGE RIDERSHIP	COST	NOX REDUCTIO	VOC REDUCTIO	COST PER TON - NOX	COST PER TON - VOC	COST PER TON - 4NOX-VOC
ART	4157	$5,322	0.00	0.00	N/A	N/A	N/A
CUE	3417	$882	0.00158	0.00066	$558,397	$1,341,430	$126,441
DASH	13880	$6,878	0.00501	0.00214	$1,371,957	$3,208,255	$309,862
FAIRFAX CONNECTOR	35235	$22,740	0.00872	0.00289	$2,606,381	$7,875,506	$601,804
LOUDOUN	2973	$14,806	0.00420	0.00136	$3,525,750	$10,899,474	$815,489
METRO	81724	$37,977	0.03778	0.01295	$1,005,107	$2,933,032	$231,448
PRTC	11300	$30,251	0.01715	0.00562	$1,763,876	$5,382,429	$407,577
VRT	1315	$292	0.00083	0.00042	$349,794	$687,415	$77,579
TOTAL	154001	$119,145	0.07528	0.02604	$1,582,628	$4,575,628	$364,167

Bus System	REPORTED RIDERSHIP	COST	NOX REDUCTIO	VOC REDUCTIO	COST PER TON - NOX	COST PER TON - VOC	COST PER TON - 4NOX-VOC
ART	3555	$5,322	0.00	0.00	N/A	N/A	N/A
CUE	2448	$882	0.00113	0.00047	$779,429	$1,872,413	$176,490
DASH	15265	$6,878	0.00551	0.00236	$1,247,479	$2,917,169	$281,748
FAIRFAX CONNECTOR	35054	$22,740	0.00868	0.00287	$2,619,839	$7,916,171	$604,911
LOUDOUN	3038	$14,806	0.00429	0.00139	$3,450,314	$10,666,272	$798,041
METRO	55894	$37,977	0.02584	0.00886	$1,469,591	$4,288,459	$338,406
PRTC	10385	$30,251	0.01576	0.00517	$1,919,287	$5,856,663	$443,488
VRT	1315	$292	0.00083	0.00042	$349,794	$687,415	$77,579
TOTAL	126954	$119,145	0.06205	0.02153	$1,920,090	$5,532,874	$441,701

TRAVEL DEMAND AND EMISSIONS REDUCTION FROM POTENTIAL TERMS UNDER CONSIDERATION FOR CONFORMITY OF THE 2006 CLRP & FY 2007-2012 TIP

Table - 9

Ozone Precursor NOx and VOC Emissions Estimate

Potential TERMs	VT (2010)	VMT (2010)	NOx (2010)	VOC (2010)	Cost Effectiveness		Project Category
			tons/day	tons/day	NOx ($/t)	VOC ($/t)	Category *
M-07A Voluntary Employer Parking Cash-Out Subsidy	16662	258261	0.1192	0.0741	5,379	8,655	C
M-24 Speed Limit Adherence (accelerated)		-	0.9167	-	26,618	-	TR
M-47c Employer Outreach for Private Sector Employers (expanded)	1323	20507	0.0095	0.0059	359,330	578,172	C
M-93 Improve Pedestrian Facilities Near Rail Stations	1428	22134	0.0102	0.0063	556,154	894,866	C
M-103 150 Taxicab Replacement Program - CNG (expanded)			0.2030	0.1307	14,300	22,210	SP
M-103a 150 Taxicab Replacement Program - conventional vehicles		-	0.1750	1,136	13,300	20,450	SP
M-110 10 Transit Stores in Maryland	2091	64989	0.0286	0.0151	17,320	32,850	C
M-111 Replace Traffic Signals with Lesser Controls		-	-	-	-	-	TR
M-113 6 Kiosks in Maryland	11	300	0.0001	0.0001	4,448,676	8,224,907	C
M-123 Employer Outreach for Public Sector Employers	10920	169260	0.0781	0.0485	41,827	67,301	C
M-132 Vanpool Incentive Program (expanded M-77b)	1785	111027	0.0478	0.0228	154,175	323,230	C
M-133 Metrorail Feeder Bus Service	0	6050	0.0025	0.0011	535,107	1,261,158	C
M-134 Implement Neighborhood Circulator Buses (10)	3000	46500	0.0215	0.0133	209,733	337,465	C
M-135 Construction of 1000 Parking Spaces at Metrorail Stations	0	20677	0.0087	0.0037	613,732	1,445,350	C
M-142E 100 CNG Buses in place of Old Diesel Buses	-	-	0.1720	0.0326	77,631	41,0051	SP
M-142F 100 Hybrid Buses in place of Old Diesel Buses	-	-	0.2095	0.0576	53,550	194,730	SP
M-142G 100 New Diesel Buses in place of Old Diesel Buses	-	-	0.1696	0.0556	40,250	122,900	SP
M-143 Real Time Bus Schedule Information	1232	19096	0.0088	0.0055	55,371	89,093	C
M-146 Purchase 185 WMATA buses (ridership growth)	18870	292485	0.1350	0.0839	108,400	174,400	C
M-148 WMATA Bus Information Displays with Maps (2000 cases)	2210	34255	0.0158	0.0098	25,348	40,785	C
M-150 Enhanced Commuter Services- (HOV Facilities)	0	51716	0.0217	0.0092	392,867	925,922	C
M-151 Enhanced Commuter Services-US 1 (Reverse Commute)	1916	29693	0.0137	0.0085	588,810	947,409	C
M-152 Enhanced Commuter Services- (Rail Relief)	0	73082	0.0307	0.0130	839,359	1,978,230	C
M-155 Expand Carsharing Program	290	4495	0.0021	0.0013	270,433	435,134	C
M-156 Free bus-to-rail/ rail-to-bus transfers (Similar to NYC pricing structure)	5100	79050	0.0365	0.0227	3,235,093	5,205,344	C
M-158 Free Bus Service Off-Peak (10:00 AM to 2:00 PM Mid-Day and Weekends)	4284	66402	0.0306	0.0190	2,282,683	3,672,893	C
M-159 W15-590 - Diesel Fuel Additive #	-	-	0.1330	-	2,700	-	H
M-160 Bose Automobile Anti-Air Pollutant and Energy Conservation System #	-	-	0.6100	-	1,000	-	H
M-161 Diesel Emulsion Fuel Additive (Non-road or Highway) **	-	-	0.1800	-	12,000	-	H
M-162 Early Engine Retirement (Pre-88) **	-	-	0.9000	-	2,200	-	H
M-163 Truck Idling (Truck Stops and Auxiliary Power Unit) **	-	-	0.4000	-	4,600	-	H
M-164 International Green Diesel Retrofit #	-	-	0.1400	-	141,000	-	H
M-165 Bike Stations at Rail Station	105	1628	0.0008	0.0005	905,260	1,456,714	C
M-144 Parking Impact Fees [1]	121836	1888453	0.8714	0.5415	1,818,865	2,926,599	C

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

** EPA Certified Technology available † Emission estimation under revision # No EPA certification Available [1] *This is a revenue generating TERM*

Commuter Connections Daily Program Impacts 2002 vs 2005

Measure	Reductions 2002	Reductions 2005
Vehicle Trips	111,413	128,973
Vehicle Miles of Travel	1,959,263	2,499,637
Nitrogen Oxides (NOx)	2.3 Tons	1.9 Tons
Volatile Organic Compounds (VOC)	1.22 Tons	0.9 Tons

7

Cost Effectiveness of Commuter Connections

- Cost per Vehicle Trip Reduced $0.15
- Cost per Vehicle Mile of Travel Reduced $0.01
- Cost per ton of NOx Reduced $10,000
- Cost per ton of VOC Reduced $20,000

8

Northern Virginia Transportation Commission

AGENDA ITEM #4

TO: **Chairman Snyder and NVTC Commissioners**

FROM: **Rick Taube**

DATE: **September 27, 2007**

SUBJECT: **Metro Items**

A. **FY 2009 Budget and Fare Increase.**

As explained by WMATA General Manager John Catoe at NVTC's September 6th meeting, Metro faces a significant budget shortfall in FY 2009 and he is proposing a fare increase to take effect in FY 2008 to help close the gap. (See attached articles for press coverage of NVTC's meeting).

A Metro Board committee considered a reduced level of fare increases on September 27th. These proposals will be described in more detail.

B. **Status of Federal Dedicated Funding Bills.**

While no new action has occurred on either the House or Senate versions of the bills to provide up to $150 million annually of federal funding for 10 years, elected officials and business leaders in Virginia, Maryland and D.C. are attempting to achieve a consensus regional view to be shared with the congressional delegation. As discussed at previous NVTC meetings, the position of Virginia's participants is summarized in the attached principles.

C. **Survey of Metrorail and Metrobus Customer Attitudes.**

Earlier in 2007 Metro conducted two telephone surveys. One survey measures customer satisfaction, with 87% of Metrorail riders and 81% of Metrobus riders feeling satisfied. These results are little changed from previous annual surveys starting in 2004. Another survey finding is that 80% of Metrobus riders and 98% of Metrorail riders have one or more cars in their households.

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The second survey of 1,200 persons asked both Metro riders and non-riders what they think about transit. Fifty-six percent viewed Metrorail as an excellent way to travel, versus 42% who felt that way about private automobiles and 30% about Metrobus. Fifty percent viewed Metrorail as a "good value for the money" while 41% felt that way about Metrobus and 33% about private automobiles. The last previous survey of this type was performed in 2005 with similar results.

Please refer to the attached Metro Board presentation for further details.

D. **Metro Board Letter on the Dulles Rail Project**.

As was widely reported, local, state and federal officials gathered to announce that cost reductions have been achieved in the project and to urge FTA to act promptly and favorably. In the attached letter to the Metropolitan Washington Airports Authority, WMATA's General Manager accepts the proposed changes with two caveats. First, further refinements will be required during the final design process. Second, Metro is not in a position to verify the cost savings. A list of the cost saving opportunities related to Metro is attached to the letters.

washingtonpost.com

Metro Weighs Fare Increase of 45 Cents

Higher Rates Could Take Effect in January in Effort to Close Budget Gap

By Lena H. Sun
Washington Post Staff Writer
Saturday, September 8, 2007; A01

The cost of riding Metro would rise an average of 45 cents a trip next year under a proposal being considered by General Manager John B. Catoe Jr. as the transit agency seeks to close a $173 million shortfall and relieve overcrowded trains and buses, sources said.

Catoe is scheduled to propose plans to close the agency's projected budget gap at a meeting with board members Thursday. The shortfall has ballooned because of rising energy costs, expanded service and growing maintenance needs.

An average fare increase of 45 cents, which would raise $141 million and could be implemented as soon as January, would represent a 29 percent rise in the average cost of a ride on Metro's bus and rail services. It would be the first fare increase in four years.

Metrorail fares vary depending on the time of day and trip length, with a maximum rush-hour fare of $3.90. Bus riders pay a flat $1.25. The increased rates would vary for bus and rail passengers.

Any fare-increase structure would probably include raising Metrorail's current $1.35 minimum charge, the subway's distance-based charges and the cost of a bus ride, said Metro board members and other local and state officials who have been briefed by Catoe and his budget team in the past two weeks.

Metro managers, including Catoe, declined to discuss the plan except to say that they are working on the details.

Agency officials say that more money is needed because one of the biggest shortfalls in agency history is predicted -- $173 million -- in an operating budget of about $1.3 billion. The extra money would help pay for the increased costs of fuel, electricity and union-negotiated pay raises, officials said.

Additional funds are also needed to expand service -- including running more eight-car trains and more buses on some overcrowded routes -- and to improve maintenance on the 31-year-old system.

This year's budget gap is also large because in March, Metro managers shelved a controversial plan to raise fares this year in favor of trimming costs and laying off employees. Officials have been saying since then that a fare increase is likely next year.

The two biggest sources for Metro's operating budget are money from fare boxes and subsidies from local governments, which this year contributed about $500 million. Catoe is also considering seeking a

6.5 percent increase, or an additional $32 million, in the taxpayer contribution, sources said.

Catoe might also look to privatize Metro parking facilities, which would raise millions in capital funds for the agency but could possibly lead to higher rates for customers.

In an online chat on Metro's Web site yesterday, Catoe said that Metro will continue to look for ways to cut costs.

"We are now at a point where we must cut service [or] raise our fares," he said. "WE WILL NOT RECOMMEND OVERALL CUTS TO SERVICE," he wrote in capital letters. "I have said before that we are in the business of delivering service, so we must seriously consider fare increases."

Catoe also said that there are "no firm numbers available yet," and he told riders that "anything you read about potential fare increases is speculation."

Maryland board member Peter Benjamin said the outlook for next year is going to result in "tough medicine, no matter what we do. But typically, we start with a higher number and end up with a lower number."

Other major transit agencies, including those in Boston, Chicago and Los Angeles, have recently raised fares. The price of a rush-hour subway ride in Boston went from $1.25 to $2 in January, and the cost of a bus ride rose from 90 cents to $1.50.

Unlike other transit systems across the country, Metro has no source of dedicated funding. The agency relies on the federal government and subsidies from area jurisdictions to help pay a large share of its capital costs, and area jurisdictions and riders pay for most day-to-day operating costs.

Metro passengers pay a higher share of the cost of a ride than do transit riders in other cities. Metro said its bus and rail passengers pay 58 percent of the cost of their rides; the national average in 2005 was 33 percent, according to the Federal Transit Administration. When just Metro's rail system is considered, that figure rises to 79 percent, one of the highest in the nation.

Revenue from passengers has increased in recent years as the system has set ridership records, but the extra money has not offset rising costs.

In the past, fare increases have taken effect in July. But should the board decide to raise fares, Catoe told local transportation officials Thursday night that he would like those increases to be in place sooner, "as early as possible in calendar '08," so Metro would have sufficient funds going into the next fiscal year.

Catoe also plans to begin discussing a comprehensive policy that would peg fares to an economic indicator that reflects transportation costs, which are typically double the consumer price index. That way, there would be regularly scheduled increases that riders could expect, and it wouldn't be "an enormous tear-your-heart-out issue, should we have a fare increase," Benjamin said.

Catoe and board members said no discussion of fares can take place without addressing the underlying issue: service.

Randy Tamakloe, 25, who takes the heavily used Red and Orange lines from Twinbrook to Court House, said he could live with paying more if service were more reliable. "The trains are always breaking down," he said as he waited to board an Orange Line train at Metro Center yesterday.

Two weeks ago, smoke and fire incidents crippled train travel throughout much of the system for two nights, closing 11 of the 86 stations at one point. In June, a faulty piece of track circuitry knocked out power on the Green Line during the morning rush.

In his chat yesterday, Catoe said that Metro needs to do a better job.

"One thing that I want to stress is that whatever the increase is, you won't be paying more for the same quality of service," he said.

In the briefing for board members, Metro officials said the $173 million funding forecast breaks down like this: $52 million is needed for one-time actions taken this year, $80 million to keep the system running and $41 million for "everything from aging and deteriorating assets to service expansion and overcrowding relief."

A separate briefing was also presented Thursday to the Northern Virginia Transportation Commission.

The 45 cent fare increase is "one scenario," said Metro board member T. Dana Kauffman, a Fairfax County supervisor who represents Virginia on the Metro board. "This was not presented as holy writ."

Staff researcher Meg Smith contributed to this report.

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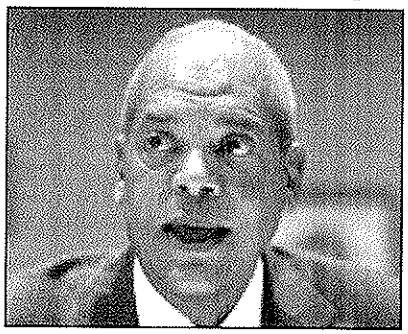
Local

Metro looks to higher fares to solve revenue shortfall



(Examiner file photo)
Metro GM John Catoe told a transportation group Thursday that Metro may be raising fares to cover a $173 million shortfall.

Joe Rogalsky, The Examiner
2007-09-07 18:21:00.0
Current rank: # **796** of 5,098

Washington DC -
Metro faces a $173 million revenue shortfall in the coming fiscal year, which will likely lead to higher fares, the system's general manager told the Northern Virginia Transportation Commission on Thursday night.

Increases in fuel costs, pay and benefits and other operating expenses account for much of the shortfall, John Catoe said, adding that relieving bus overcrowding, operating more eight-car trains and increased training and safety needs added to the funding gap.

"Those are very preliminary figures," John Catoe said. "These numbers could go up or down. They are a picture of where we are at this time. ...At some point in time, as we look at the cost increases this organization has had, we are going to have to raise our fares."

Catoe will lay out plans for a fare increase Thursday to the Washington Metropolitan Transit Authority's board of directors, which must approve any hikes. He plans to meet with his financial staff to finalize his proposal this week, but indicated Thursday night it would impact bus and rail passengers. The plans, he said, would raise the minimum amount rail riders pay plus the amount they are charged based on the length of their trip.

For every 10 cents Metro boosts fares, it expects to generate an additional $31 million in revenue. The next budget does not start until July 1, but higher fares are expected to take effect in early January.

"The amount of the increase is something I do not know yet," he said.

Commission members, who coordinate regional mass transit funding, were concerned that higher fares will drive people away from Metro.

"I hear far too much from people that the fare they pay and the amount they pay for parking at a Metro station is too much compared to the cost of gas and the fee they pay to park wherever they are parking," said Sen. Jeannemarie Devolites Davis, R-Vienna.

Catoe said spending reductions would erase part of the shortfall in the $1 billion budget but he does not plan to reduce existing service.

jrogalsky@dcexaminer.com

Examiner

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Local

Testy hearings are expected on Metro fare hikes

(Courtesy, City of Falls Church)
Falls Church City Councilman David Snyder (above) criticized Metro for bad service as the agency discusses a fare hike this week.

Joe Rogalsky, The Examiner
2007-09-10 07:00:00.0
Current rank: # **3,375** of 5,104

WASHINGTON -
The anticipated increase in Metro fares will not happen until riders have had several chances to voice their opinions.

Metro's governing rules requires the transit system to hold public hearings in the nine local jurisdictions it serves before increasing fares.

Judging by the reaction that Metro General Manager John Catoe has received from local officials recently, the hearings on higher fares will be testy.

"The notion of fare increases will spark an absolute revolt unless people can be assured that service disruptions will stop," Falls Church City Councilman David Snyder said. "Service is being reliably unreliable. That is a very bad state for a transit system to be in."

Catoe, who last week said Metro is facing a $173 million revenue shortfall next year, plans to unveil fare-increase proposals to the Washington Metropolitan Area Transit Authority's board of directors Thursday. After his presentation, he will ask board members to vote by the end of the month to let the system schedule the hearings.

If the request is approved this month, the hearings will be held in October or November. The board will then consider the comments at a December meeting, when members could vote on fare increases to take effect in January.

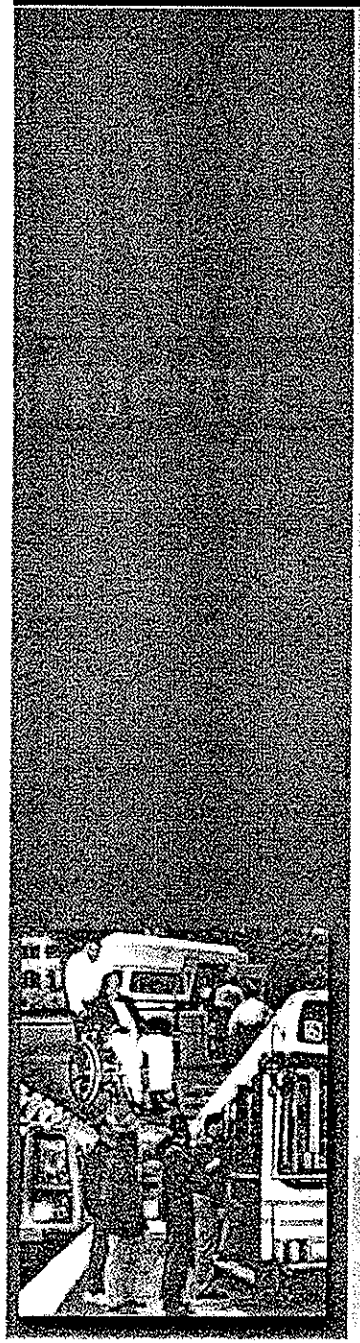
"We want the public to have plenty of chances to communicate with us," Catoe said.

Catoe and other Metro officials acknowledge that to overcome sentiments such as Snyder's, they need to eliminate or at least greatly reduce mechanical breakdowns that debilitate the system and strand passengers. Catoe is proposing to spend more money on maintaining Metro's infrastructure and replacing aging equipment, such as the sort of electric lines that caught fire last month and almost shut the system down in Northern Virginia and the District.

"People are not getting on the trains and saying 'the fare is way too high,' " said Catherine Hudgins, a Fairfax County supervisor and a member of Metro's board of directors. "People are looking for a dependable service. They won't revolt over the fares. They will revolt over the disruption of service."

jrogalsky@dcexaminer.com

Examiner



Detailed Review of FY09 Operating Budget Forecast Revenues and Expenses

Presented to the Board of Directors:

Finance, Administration and Oversight Committee

September 27, 2007

Forecast Summary

$ Millions	FY08 Budget	FY09 Forecast	
Operating Revenue	$654	$661	$8 1% Revenue Increase
Operating Expense	$1,194	$1,283	$89 7% Expense Increase
1-Time-Funding	($40)		
Net Expense	$1,154		
Subsidy	$500		

$89 less $8 = $81 million needed funding increase

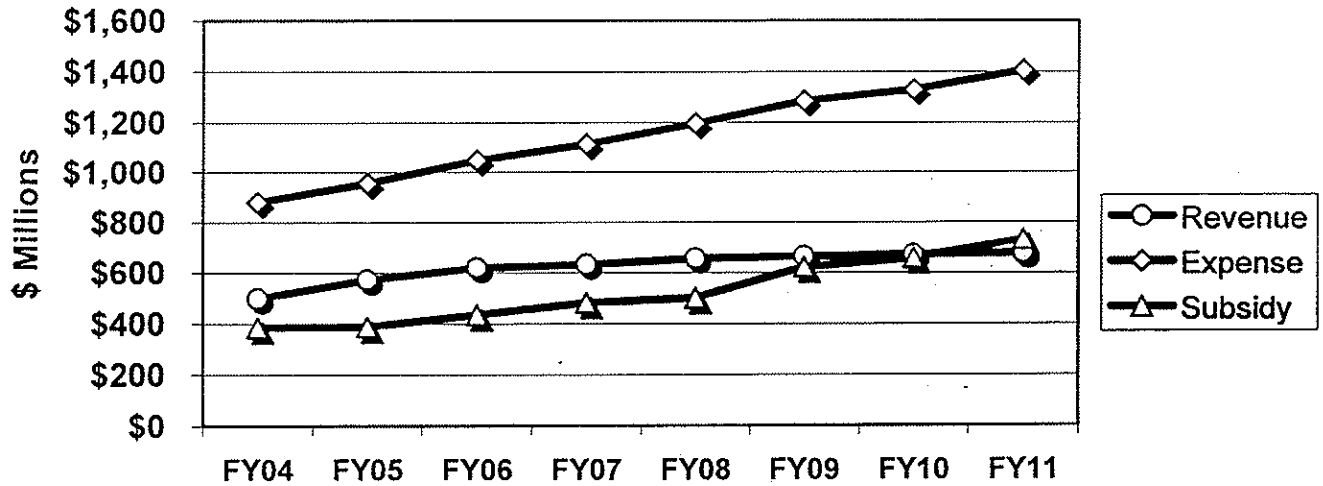
Key Forecast Assumptions:

- No fare increase
- No change in bus and rail service levels from FY08
- Continuation of all existing revenue streams and operating expenses from FY08

Forecast Summary

$ Millions	FY04 *Actual*	FY05 *Actual*	FY06 *Actual*	FY07 *Actual*	FY08 *Budget*	FY09 *Forecast*	FY10 *Forecast*	FY11 *Forecast*
Revenue	$496	$571	$617	$630	$654	$661	$670	$675
Expense	$880	$957	$1,049	$1,111	$1,194	$1,283	$1,328	$1,405
					($40)			
					$1,154			
Subsidy	$384	$385	$432	$481	$500	$621	$658	$731

Base Budget (Same-Level-Of-Service)	
Change in Revenue	**$8**
Change in Expense	**$89**
Funding Increase Needed	**$81**



Funding Needed

FY09 Increased Funding Needed for:

Same-Level-of-Services	$81
One-Time-Only in FY08	$40
Base Budget Subtotal.....	$121
~~Fund Added Service~~	~~$41~~
Minimal Added Service	$20
~~Fund the Reserve~~	~~$12~~
~~Pay Debt Service with Fares~~	~~$12~~
Funding Needed.....	$141
Assume 6.5% Subsidy Growth	$33
Net Funding Needed.....	$109

$ Millions

1. Payroll Expense

$ Millions	FY04 Actual	FY05 Actual	FY06 Actual	FY07 Actual	FY08 Budget	FY09 Forecast	FY10 Forecast	FY11 Forecast
Salaries	$148.3	$155.0	$167.2	$174.7	$179.1	$188.0	$197.3	$207.1
Wages	$375.5	$400.1	$424.8	$440.9	$459.1	$480.7	$503.3	$526.9
1. Payroll	**$523.8**	**$555.1**	**$592.0**	**$615.6**	**$638.3**	**$668.7**	**$700.6**	**$734.0**
Annual Change $		**$31.3**	**$36.9**	**$23.6**	**$22.6**	**$30.5**	**$31.9**	**$33.4**
Annual Change %		**6.0%**	**6.6%**	**4.0%**	**3.7%**	**4.8%**	**4.8%**	**4.8%**

254 positions abolished in FY08

Union Pay:

- 85% of pay controlled by collective bargaining
- All contracts open for negotiation during forecast period

Non-Union Pay:

	FY04	FY05	FY06	FY07	FY08	Cumulative
COLA's/Inflation Increases						
Average of Jurisdictions	2.2%	2.6%	2.8%	1.8%	2.6%	**12.0%**
Metro Salaries	**0%**	**0%**	**0%**	**5.0%**	**3.0%**	**8.0%**
(Non-Union)						
Steps/Merit Increases						
Average of Jurisdictions	2.9%	3.0%	2.6%	3.2%	2.9%	**14.6%**
Metro Salaries	**2.0%**	**1.5%**	**2.0%**	**0%**	**2.0%**	**7.5%**
(Non-Union)						

Consideration of Fare Policy

Recommendations

1. Implement a proportional fare increase
2. Adopt a policy of indexing future fare increases using the Metro transportation index and constant cost recovery index
3. Implement as soon as possible to allow for smallest possible fare increase

Consideration of Fare Proposals

- **Four different fare proposals**
- **Each proposal generates $109 million**
- **Variables – Implementation date and ridership loss assumptions**

Proposal A	Proposal B
January 2008 (18 months)	January 2008 (18 months)
Minimal Elasticity	Traditional Elasticity
Smallest Fare Increase	2nd Smallest

Proposal C	Proposal D
July 2008 (12 months)	July 2008 (12 months)
Minimal Elasticity	Traditional Elasticity
3rd smallest	Largest Fare Increase

			Current Fare	Fare Increase proposals: A	B	C	D
Rail	Peak	Boarding	$1.35	$0.20 15%	$0.25 19%	$0.35 26%	$0.40 30%
		Max Fare	$3.90	$0.60 15%	$0.60 15%	$1.10 28%	$1.25 32%
	Off-peak	Boarding	$1.35	$0.20 15%	$0.25 19%	$0.35 26%	$0.35 26%
		Max Fare	$2.35	$0.20 9%	$0.25 11%	$0.35 15%	$0.35 15%
Bus	Regular	Boarding	$1.25	$0.25 20%	$0.25 20%	$0.25 20%	$0.25 20%
	Express	Boarding	$3.00	$0.60 20%	$0.60 20%	$0.60 20%	$0.60 20%
	Passes	1-Day	$3.00	eliminate	eliminate	eliminate	eliminate
		Weekly	$11.00	$2.00 18%	$2.00 18%	$2.00 18%	$2.00 18%
Parking (most common)		Daily	$3.50	$0.50 14%	$0.50 14%	$0.50 14%	$0.50 14%
Assumed Ridership Loss (million annual trips)				(17) -2.3%	(22) -3.6%	(18) -3.7%	(22) -5.2%

Principles Related to Dedicated Federal Funding for Metro

B

1. Legislation should seek to establish a new partnership among the federal, state, and local governments of the region to sustain the Metro system that is so vital to the interests of all.

    - As noted in the 2004 report of the "Blue Ribbon Panel," the federal government is heavily dependent on Metro: About half the riders during peak times are federal workers; a substantial portion of the stations serve federal facilities; the system is vital to the functioning of Washington as a capital city, for both tourists and travelers who come to do business with the U.S. government.

2. Federal legislation should actually dedicate funds, not just mandate state/local dedication.

    - This means that there should be a federal revenue source (or sources) that will generate funds that can exclusively be used to fund a federal share of Metro capital and operating expenses. (Simply establishing a funding authorization level subject to annual appropriations does not constitute a federal match.)

3. Direct participation by the federal government in the governance of WMATA must be based on participation by the federal government as a funding partner.

    - As long as the federal government provides dedicated revenues for WMATA it should qualify for one board member. As it renews its funding, its vote on the board should also be renewed.

    - If the federal government agrees to participate as a full funding partner to the same extent as the current state and local partners, then the federal government should qualify for two voting members.

C

NEWS RELEASE

For Immediate Release
September 12, 2007

Contact:
Cathy Asato or
Lisa Farbstein
202-962-1051

Metro Makes a Good Impression

A new survey finds the vast majority riders like Metrorail and Metrobus, and almost all would recommend Metro to a friend or relative.

A second survey shows mass transit is largely competitive with the automobile as a preferred way to travel throughout the region.

Earlier this year, Metro conducted two surveys—one that measures the satisfaction of Metro riders and a second that gauges the perception of mass transit among Metro riders and non-Metro riders in the region—and now the transit agency is sharing the results.

Metro's Customer Satisfaction Measure (CSM), an ongoing survey of Metrobus and Metrorail riders, finds that 87 percent of Metrorail riders and 81 percent of Metrobus riders are satisfied with Metro service. The numbers have remained consistent since 2004 when Metro started the customer satisfaction survey. In addition, 96 percent of Metrobus riders and 98 percent of Metrorail riders said they would recommend Metro to a friend or relative.

The CSM surveys 200 Metro riders by telephone each month. It also collects demographic data about Metro riders. Survey data shows that 66 percent of Metrobus and 53 percent of Metrorail riders are female, 59 percent of Metrobus and 80 percent of Metrorail riders have college degrees, and about 80 percent of both bus and rail riders are employed. Also, most Metro riders have access to automobiles—80 percent of bus riders and 98 percent of rail riders have one or more cars in their households.

The second survey, Public Perceptions of Transit, questions both Metro riders and non-Metro riders to measure what area residents think about mass transit. The 2007 telephone survey included 1,201 individuals who live in areas served by Metro. Their responses indicate that Metro is competitive with the automobile as a travel mode of choice.

Of note, 56 percent of respondents perceived Metrorail as "an excellent way to travel in the Washington, D.C., area," compared to private automobiles (42 percent)

Washington Metropolitan Area Transit Authority

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MetroOpensDoors.com

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Washington, D.C. 20001

and Metrobus (30 percent). Half of the respondents rated Metrorail as a "good value for the money," while 41 percent rated Metrobus a good value and 33 percent rated private vehicles a good value.

The results of this year's study are largely consistent with the last survey, which was done in 2005. One area that showed a decline was the perception of safety. Though the overall perception of safety declined, Metrorail ranked safest of the three travel modes—13 percent rated private autos as "safe from accidents," 15 percent regarded Metrobus as safe and 52 percent rated Metrorail safe. When asked if the travel mode was "safe from crime," 33 percent scored Metrorail as safe from crime, compared with Metrobus (16 percent) and automobiles (20 percent).

"We're pleased that both Metro riders and non-Metro riders see Metro as a valuable service in the Washington metropolitan area. We are committed to providing our customers with safe, reliable and clean service, and we're confident that as our service improves, our customers' satisfaction will also improve," said Metro General Manager John Catoe.

###

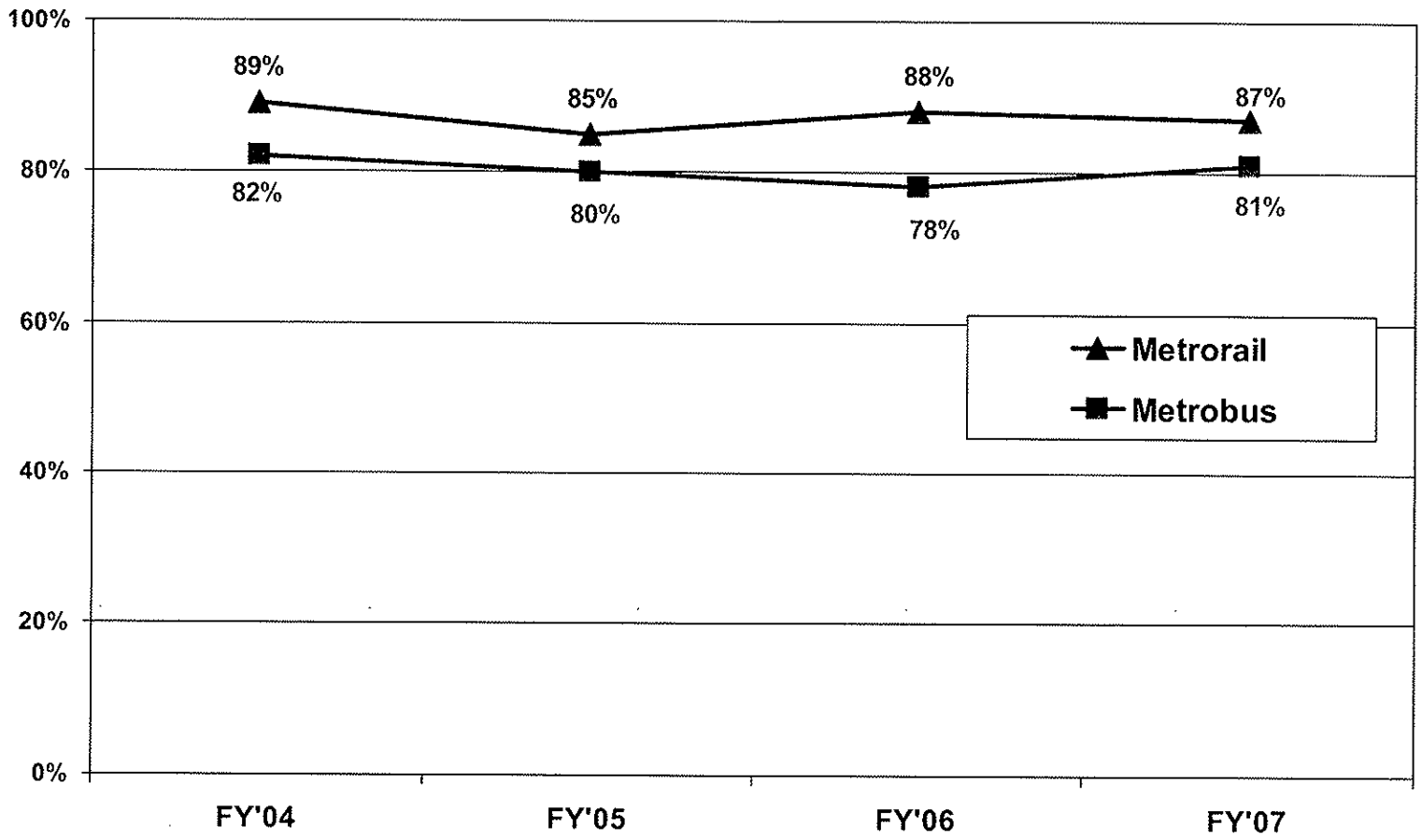
Customer Satisfaction & Public Perceptions

Presented to the Board of Directors:

Customer Service, Operations, and Safety Committee

September 13, 2007

Trend: Overall Satisfaction



Base=Total Sample , Q64, Margin of error: ±3.4% (Metrobus); ±2.5% (Metrorail)

Metro Performance

PERFORMANCE = IMPORTANCE/SATISFACTION

METROBUS	Importance	Satisfaction	Performance
Fares	82%	82%	100%
Ease of Access	87%	81%	93%
Customer Service	85%	77%	91%
Communications	88%	79%	90%
Safety	88%	77%	88%
Riding Experience	84%	73%	87%
Reliability	85%	71%	84%

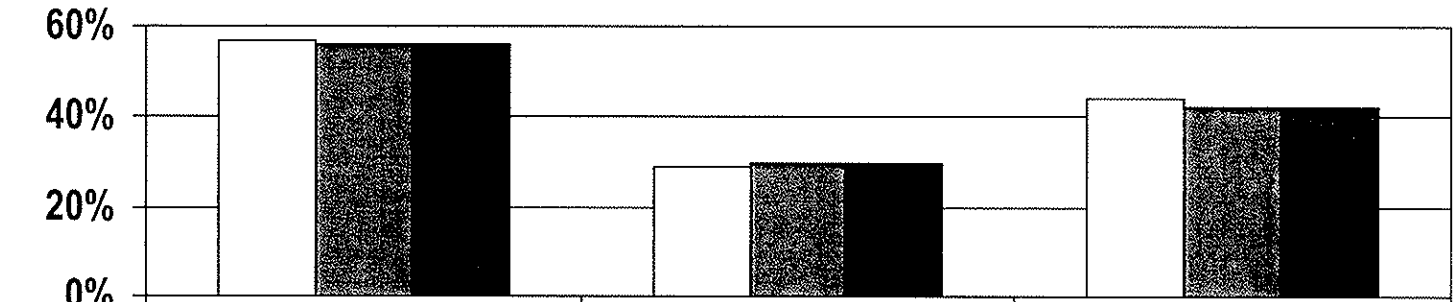
METRORAIL	Importance	Satisfaction	Performance
Fares	77%	74%	96%
Riding Experience	80%	76%	95%
Communications	83%	78%	94%
Safety	89%	79%	89%
Customer Service	83%	72%	87%
Reliability	78%	67%	86%

VERTICAL TRANSPORT	Importance	Satisfaction	Performance
Elevators	84%	73%	87%
Escalators	84%	64%	76%

Base= respondents answering, Note: Base sizes may vary

Public Perceptions of Transit

% OF SERVICE AREA RESIDENTS RATING MODE AS "AN EXCELLENT WAY TO TRAVEL IN THE WASHINGTON, DC AREA"



	METRORAIL	METROBUS	PRIVATE AUTO
2004	57%	29%	44%
2005	56%	30%	42%
2007	56%	30%	42%

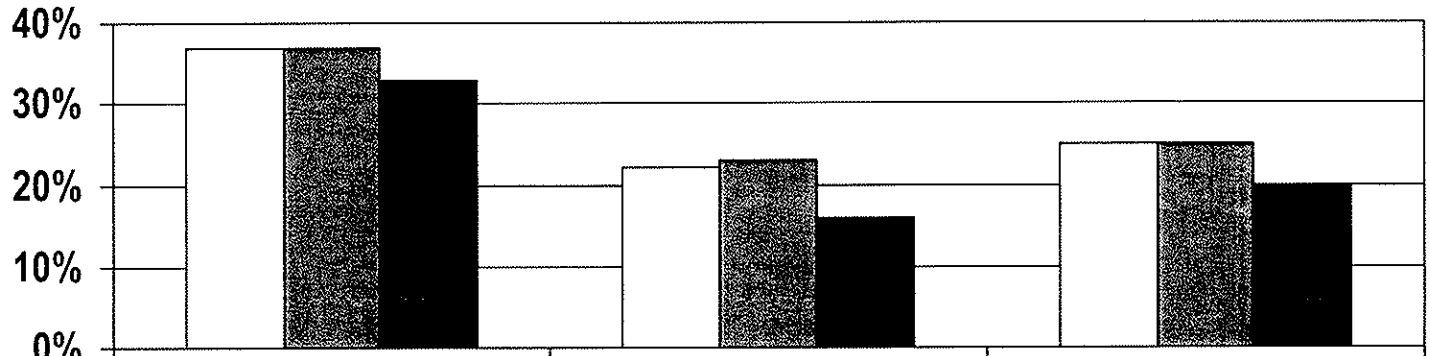
Public Perceptions

% OF SERVICE AREA RESIDENTS RATING MODE AS "SAFE FROM ACCIDENTS"

	METRORAIL	METROBUS	PRIVATE AUTO
2004	64%	25%	9%
2005	58%	27%	11%
2007	52%	17%	13%

Public Perceptions

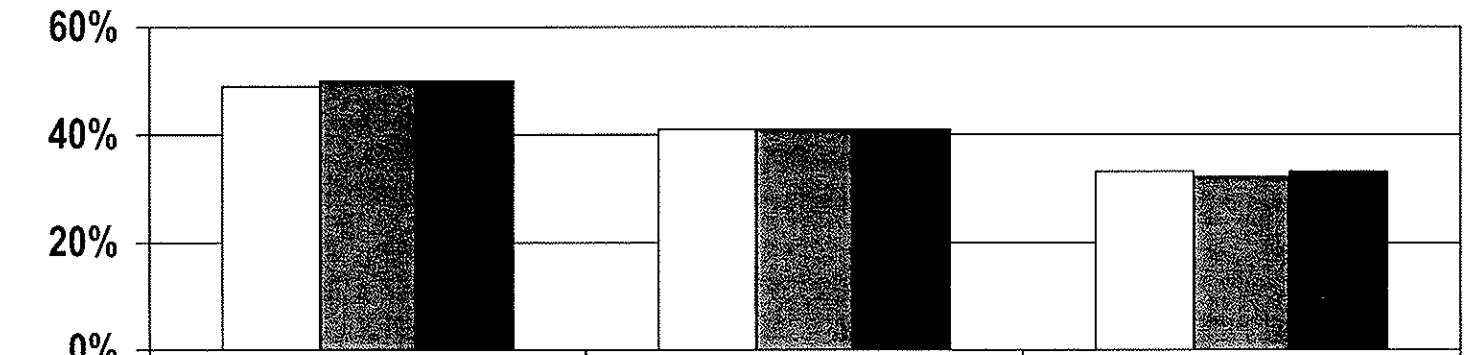
% OF SERVICE AREA RESIDENTS RATING MODE AS "SAFE FROM CRIME"



	METRORAIL	METROBUS	PRIVATE AUTO
2004	37%	22%	25%
2005	37%	23%	25%
2007	33%	16%	20%

Public Perceptions

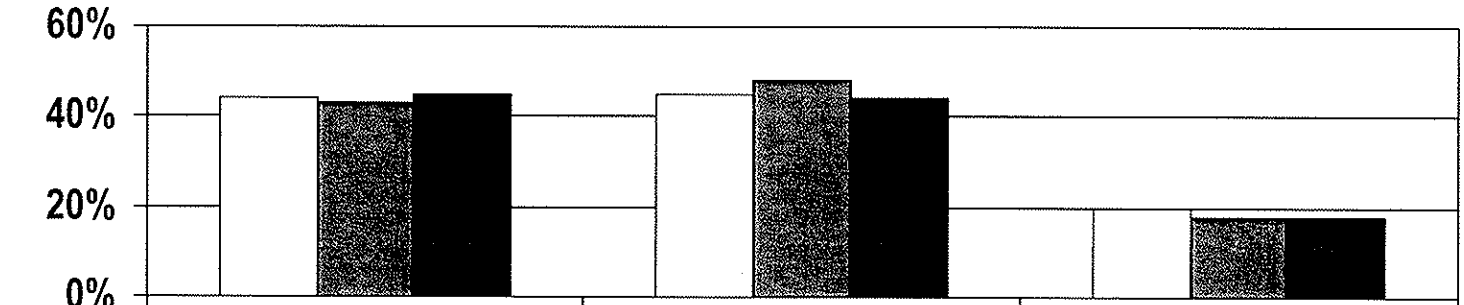
% OF SERVICE AREA RESIDENTS RATING MODE AS "OFFERS GOOD VALUE FOR THE MONEY"



	METRORAIL	METROBUS	PRIVATE AUTO
2004	49%	41%	33%
2005	50%	41%	32%
2007	50%	41%	33%

Public Perceptions

% OF SERVICE AREA RESIDENTS RATING MODE AS "LOW COST COMPARED TO OTHER MODES OF TRANSPORTATION"



	METRORAIL	METROBUS	PRIVATE AUTO
2004	44%	45%	20%
2005	43%	48%	18%
2007	45%	44%	18%

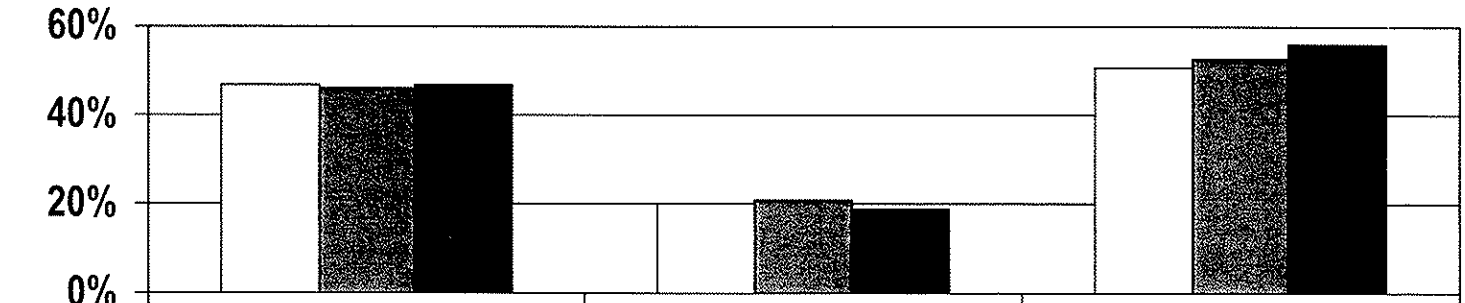
Public Perceptions

% OF SERVICE AREA RESIDENTS RATING MODE AS "EASY AND CONVENIENT TO USE"

	METRORAIL	METROBUS	PRIVATE AUTO
2004	49%	25%	73%
2005	49%	26%	72%
2007	50%	27%	71%

Public Perceptions

% OF SERVICE AREA RESIDENTS RATING MODE AS RELIABLE - "WOULD GET YOU TO YOUR DESTINATION ON TIME"



	METRORAIL	METROBUS	PRIVATE AUTO
2004	47%	20%	51%
2005	46%	21%	53%
2007	47%	19%	56%

Public Perceptions

- Perceptions of Metrobus, Metrorail and the private vehicle have remained relatively unchanged on most attributes.

- Both Metrorail and Metrobus experienced declines in ratings of perceptions of safety.
  - Bus and rail experienced significant declines in ratings for perceptions of safety from accidents, while rating for private auto improved.
  - All three modes experienced declines in ratings of perceptions of safety from crime.

Appendix

METROBUS RIDER PROFILE

METRORAIL RIDER PROFILE

RESULTS: RECOMMEND METRO TO A FRIEND/RELATIVE

CUSTOMER SATISFACTION MEASURES

Metrobus: Rider Profile

	Metrobus
Gender	
Female	66%
Male	34%
Education	
Some college or less	41%
College degree or more	59%
Employment	
Employed	77%
Not employed	23%
Household Vehicles	
None	20%
One	35%
Two	30%
Three or more	15%
Mean (# of vehicles)	*1.5*
Years Living in DC Area[1]	
Mean (# of years)	*14.4*

	Metrobus
Age	
18-35	24%
36-55	45%
56-75	27%
Over 75	3%
Mean (in years)	*46.9*
Race[2]	
White/Caucasion	47%
Net: Minority	53%
Hispanic/Latino	6%
Black/African-American	43%
Asian/Pacific Islander	4%
Income	
Less than $75,000	53%
$75,000 or more	47%
Mean	*$68,690*
Median	*$69,620*

Base=Metrobus respondents answering
[1]Base=Employed Metrobus respondents answering
Q147, Q148, Q151-Q153, Q155-157
[2]Multiple Responses Accepted, Top Mentions
Note: Base sizes may vary

Metrorail: Rider Profile

	Metrorail
Gender	
Female	53%
Male	47%
Education	
Some college or less	20%
College degree or more	80%
Employment	
Employed	82%
Not employed	18%
Household Vehicles	
None	2%
One	28%
Two	46%
Three or more	24%
Mean (# of vehicles)	*2.0*
Years Living in DC Area[1]	
Mean (# of years)	*14.6*

	Metrorail
Age	
18-35	21%
36-55	49%
56-75	27%
Over 75	3%
Mean (in years)	*47.8*
Race[2]	
White/Caucasian	74%
Net: Minority	26%
Hispanic/Latino	4%
Black/African-American	19%
Asian/Pacific Islander	3%
Income	
Less than $75,000	27%
$75,000 or more	73%
Mean	*$91,210*
Median	*$102,110*

Base=Metrorail respondents answering
[1]Base=Employed Metrorail respondents answering
Q147, Q148, Q151-Q153, Q155-157
[2]Multiple Responses Accepted, Top Mentions
Note: Base sizes may vary

Recommend Metro Services

WOULD YOU RECOMMEND METRO TO A FRIEND OR RELATIVE?

	Yes	No
Mode		
Metrobus (n=808)	96%	3%
Metrorail (n=1595)	98%	2%
Ridership Level		
Occasional (n=906)	98%	1%
Regular (n=628)	97%	2%
Frequent (n=861)	96%	3%

Base=Total Sample
Q146
Margin of error: ±1.4% (Metrobus); ±0.7% (Metrorail); ±0.9% (Occasional); ±1.3% (Regular); ±1.3% (Frequent)

Customer Satisfaction Measures

Fares

- Value of ride fare
- Satisfaction with cost of riding
- Process of purchasing fare cards and passes
- Process of obtaining refunds or replacement fare cards or passes
- Satisfaction with SmarTrip
- Cost of parking at Metrorail stations (METRORAIL survey ONLY)
- Satisfaction with paying for parking with SmarTrip (METRORAIL survey ONLY)
- Satisfaction with needing SmarTrip for parking at Metrorail stations (METRORAIL survey ONLY)

Riding Experience

- Cleanliness of rail cars/buses
- Cleanliness of rail stations/bus stops
- Cleanliness of parking facilities (METRORAIL survey ONLY)
- Comfort of the overall ride
- Smell of rail cars/buses
- Availability of seating when riding on the rail car/bus
- Number of bus stops that have shelters (METROBUS survey ONLY)
- Number of people on the Metrorail/Metrobus

Safety

- From accidents while riding
- From crime during daylight hours while riding
- From crime during nighttime hours while riding
- At bus stops/rail stations during daylight hours
- At bus stops/rail stations during nighttime hours
- In Metro parking lots during daylight hours (METRORAIL survey ONLY)
- In Metro parking lots during nighttime hours (METRORAIL survey ONLY)

Customer Satisfaction Measures

Reliability

- Rail cars/buses getting to the destination on time
- Stops were announced by rail car/bus operators
- Metrobus arriving more than 5 minutes early or late (METROBUS survey ONLY)
- Having to wait more than 20 minutes for the next train (METRORAIL survey ONLY)

Customer Service

- Satisfaction with helpfulness of bus operators (METROBUS survey ONLY)
- Satisfaction with the level of service of Metro personnel in rail stations (METRORAIL survey ONLY)
- Satisfaction with clarity of operator announcements at stops
- Satisfaction with schedule/route information availability

Ease of Access

- Distance of the nearest bus stop from home (METROBUS survey ONLY)
- Distance of the nearest bus stop from work (METROBUS survey ONLY)
- Frequency of buses from home to closest Metrorail station
- Number of transfers needed to get to final destination
- Availability of parking at rail station (METRORAIL survey ONLY)

Customer Satisfaction Measures

Communications

- Responsiveness of WMATA
- Timeliness of communication on schedule/route changes
- Schedule/route information availability
- Accuracy and advanced notice of delays
- Utility of digital displays (METRORAIL survey ONLY)
- Understandability of route/schedule information (METRORAIL survey ONLY)

Vertical Transportation

(METRORAIL survey ONLY)

- One or more elevators were not working at a rail station
- One or more escalators were not working at a rail station
- The escalator service at rail stations
- The elevators in the past three months

(D)

September 6, 2007

Mr. James E. Bennett
President and CEO
Metropolitan Washington Airports Authority
1 Aviation Circle
Washington DC 20001

Dear Mr. Bennett:

This is a follow up on the discussions that staff and I have had with you, your staff and consultants on the Dulles Corridor Metrorail Project. These discussions have focused on arriving at mutually acceptable strategies to achieve the Federal Transit Administration's (FTA) cost-effectiveness criteria so that the project can be advanced into the final design phase.

Please be assured that Metro is fully supportive of this project and appreciates the importance of securing FTA approval so final design can be initiated. I should also note, however, that the Metro Board has approved a scope for this project. In this context, I have to assure them that any changes are of a nature that do not alter Metro standards and/or increase downstream operating and maintenance costs that will have to be borne by all the Metro jurisdictions. As the future owner and operator of this significant and important extension, I have a responsibility to assure compliance with our standards and the conditions in our Board resolutions regarding this project.

As you are aware, there has been limited time to review the cost and background information we received from your consultants on the proposed changes. These will have to be refined during the final design phase. The changes that are outlined in the enclosure are acceptable to us with two caveats. First, we are agreeing to the nature of the proposed change; further refinements and specific definitions will not be possible until the project is in final design. Second, we are not in a position to verify the cost savings attributed to the change; rather, we are relying on the estimates that have been developed by the project consultants.

Washington
Metropolitan Area
Transit Authority

I trust that you will find this information helpful in your current activities and deliberations to advance this project. As noted earlier, I am committed to helping in this effort within the parameters of our standards and Board policies.

If you have any questions, please do not hesitate to contact me.

Sincerely,

John B. Catoe, Jr.
General Manager

Enclosure

cc: Pierce Homer, Secretary of Transportation
Anthony H. Griffin, County Executive, Fairfax County

DULLES CORRIDOR METRORAIL PROJECT
COSTS SAVINGS OPPORTUNITIES RELATED TO METRO ITEMS
SEPTEMBER 6, 2007

Redesign of improvements to West Falls Church Yard (A-1)	$23.0 million
Increase design headways for train control and traction power from 90 seconds to 135 seconds (D-2)	$17.2 million
Use prefabricated traction power substations and train control rooms (E-1 and E-2)	$12.6 million
Use microprocessor based train control design (E-3)	$3.2 million
Use a LAN/WAN TCP/IP communication system (E-4)	$1.7 million
Combined first phase and second phase rail car procurement (E-6)	$20.3 million
Separate non train control communication systems from the train control system (E-7)	$1.9 million
Reduce the quantity of maintenance vehicles and equipment (E-9)	$1.5 million
Implementation of revisions to features such as platform canopy redesign, use of precast concrete instead of build in place, handrail redesign and roofing revisions (E-14)	$13.9 million
Reduce the length of the platform canopies (E-15)	$7.3 million
TOTAL	**$102.6 million**

Note: dollar figures do not reflect any contingency adjustments

Northern Virginia Transportation Commission

AGENDA ITEM #5

TO: **Chairman Snyder and NVTC Commissioners**

FROM: **Rick Taube, Kala Quintana and Adam McGavock**

DATE: **September 27, 2007**

SUBJECT: **Regional Transportation Items.**

A. **NVTA Administrative Actions.**

NVTA will meet in the evening of September 27th. The next scheduled meeting is November 8th. Staff will be prepared to brief the commission on significant actions.

B. **"Cruising for Parking" Article.**

Donald Shoup, who has published extensively on his research regarding the costs of parking, has produced some startling estimates of the extent to which driving around looking for parking contributes to congestion. He makes reasonable assumptions (turnovers per space of 10 cars per day with three minutes of searching per car in a congested downtown). At 10 miles per hour, vehicle miles traveled is thus five VMT per space per day, on 1,825 per year, which is more than halfway across the U.S.

Based on observations in a congested Los Angeles neighborhood, cruising for parking there generated 950,000 excess VMT (equivalent to four trips to the moon), wasting 95,000 hours (11 years) and 47,000 gallons of gasoline and producing 730 tons of CO_2.

He suggests that curb parking prices should be gradually increased until an average about 85% of metered spaces are occupied.

Please refer to the attached article describing his research.

AWARD WINNER NVTC APTA 1996

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E-mail nvtc@nvtdc.org • Website www.thinkoutsidethecar.org

C. I-95/ 395 Transit/ TDM Study Progress Report.

As described at NVTC's September 6th meeting, the technical advisory committee met at NVTC on September 18th to review progress. Initial top-line survey data were presented. The survey for I-95 corridor commuters was a 20-minute on-line instrument with a $5 Starbuck's coupon as an incentive. The targets of at least 200 respondents per mode were exceeded. Among the questions were: mode of travel, time of departure, length of commute, flexibility of schedules, awareness of the HOT Lane project, feelings about HOT Lane benefits and costs, possible use of the lanes and likelihood of using various transit improvements. The survey data are being refined and analyzed and will be available soon for examination.

New information was provided about the HOT Lanes project schedule. While the transit/TDM study should still be completed by December, 2007, it now appears that the agreement between Flour-Transurban and the commonwealth on the northern segment will not be completed until spring or summer of 2008. Thus, not only will the transit/ TDM study help guide input for constrained long range plans at TPB and FAMPO, but it could also play an important role in shaping the HOT Lanes forecasts and project agreement.

Attached for your information is a copy of the transit/TDM framework. More results should be available at the commission's November and December meetings. The next technical committee meeting is October 12th.

D. Texas Transportation Institute's 2007 Urban Mobility Report

The Wednesday September 19th edition of the *Washington Post* featured an article (attached) on the results of the recently released 2007 Urban Mobility Report. This annual report, produced by the Texas Transportation Institute, provides an easily understood analysis of congestion and mobility issues nationwide. The 2007 report, based on 2005 data collected from state and federal traffic agencies covering 437 urban areas, seeks to quantify congestion and mobility issues, and show the costs of congestion in terms of time and fuel. The report also provides consistent comparisons of congestion in very large, large, medium and small urban area

The *Post* article focused on the congestion statistics for the Washington Metropolitan area, pointing out that the average commuter in the Washington area spent 60 hours in congestion, at an annual cost of $1,094 per commuter. The report estimates over $2.3 billion in lost congestion costs for the region as a whole in 2005. The Washington area is now tied with Atlanta and the San Francisco Bay area for the second worst congestion nationwide. The report estimates that, in order to simply maintain *current* congestion levels, the Washington region would need to add 218 lane miles of road or 74 million transit trips each year!

Once again (as in the 2005 and 2006 report) the methodology behind the calculations in the report has been changed substantially. One major change affects the calculations of number of hours spent in congestion by commuters. The new calculations show the estimated amount of wasted hours to be slightly

lower the previous year's total, but the value of this time has been increased dramatically.

The 2005 Urban Mobility Report estimated that public transit saved the Washington Metropolitan area $997 million dollars annually, in terms of time and fuel costs. Because of changes to the report methodology, the 2007 report has reduced this number to $456 million. The authors of the report attribute the huge drop to the fact that their estimates of delay in large urban areas has dropped more than other areas, and thus the delay-savings due to transit decreases sharply since transit is most prevalent in those areas.

In order to make comparisons over time, the report provides revised calculations for congestion delay, cost, and transit savings for previous years, going back to 1982 in some cases (these tables are included with this packet). Looking at the revised data for transit savings, one can see a slight decline in the savings estimated for 2005 in comparison with 2004. The report attributes this decline to the effects of congestion on transit service, which has decreased the mobility benefits of transit while adding to the congestion cost for the region.

The report examined the benefits of HOV lanes. For the Washington region, an estimated 3.1 million hours of delay were saved for persons using 96 miles of HOV lanes in 2004. For 2005, that number has increased to 3.4 million hours.

In addition, the report evaluated several operational approaches to traffic congestion relief, and determined that ramp metering, incident management, signal coordination, and access management programs saved this region approximately 8.9 million hours and $162 million in 2005. This represents a slight increase from the 2004 totals of 8.8 million hours and $153 million in cost savings.

As mentioned in previous Mobility Reports, the Texas Transportation Institute intends to develop links with the systems operations databases of some of the larger transit agencies, and automatically collect information on travel time, speed, and passenger volume. This information will then be linked with roadway performance data in public transportation corridors to provide an even better estimate of the effects of public transportation.

Copies of the 2007 Urban Mobility Report can be downloaded from the Texas Transportation Institute website at http://mobility.tamu.edu/ums/. NVTC staff can also provide copies to any interested parties.

E. New Data on Slugging in the I-95 Corridor.

VDOT has shared 2006 data on slugging activity (informal carpooling). By far the most heavily used location is the Horner Road Park-and-Ride lot in Prince William County with 1,566 commuters per day out of 6,459 total slugging. Springfield Plaza tallied 770 for the second most popular site and several other

Fairfax County locations were also counted. Prince William County residents were 56% of the total with Fairfax County second at 22%. The most popular destination was the Pentagon (33%) with Rosslyn (13%) and Crystal City (10%) also significant Virginia destinations.

In 1999, VDOT estimated 3,085 slugs (versus 6,459 in 2006). VDOT estimates almost 22,000 HOV persons plus 5,036 slugs based on different samples in spring of 2006 at Newington.

Please refer to the attachments for more details.

F. Earlier Commutes.

USA Today has reported on census data confirming that commuters are leaving for work much earlier to avoid congestion. In 2000, one worker in nine left by 6 A.M., while in 2006 it increased to one in eight. This puts 207 million additional drivers on the road nationwide. As a result, businesses (such as fast-food restaurants) are altering their menus and business plans.

Please refer to the attached article for details.

G. Media Coverage of NVTC's Mode Share Report.

At NVTC's September 6th meeting, staff presented the results of a study (with 2006 data) counting traffic by mode in the I-395/ Route 1 corridor at Glebe Road inside the Beltway. Two-thirds of persons traveling in-bound each morning used transit and ridesharing. The attachments show some of the media coverage of those important results.

H. Test of Vehicle Miles Fees

As described in the attached article, researchers will attach GPS trackers in the vehicles of 2,700 volunteers in Austin, Baltimore, Boise, San Diego, Eastern Iowa and the Research Triangle region of North Carolina. The devices will measure miles driven and sample bills will be sent over the next two years each month. The volunteers can compare what they pay in gas taxes to the sample VMT bills. This study is similar to one completed in Oregon.

Congress is set to receive recommendations on future sources of funding for surface transportation improvements and this new study should help inform those decisions.

I. William Euille Elected Vice-President of the Virginia Transit Association.

NVTC Commissioner Bill Euille was elected VTA Vice-President by the VTA Board on September 17th. VTA Vice-President typically serve two years in that office and then move up to President for two years. NVTC Commissioner Chris Zimmerman has served as VTA President in the recent past.

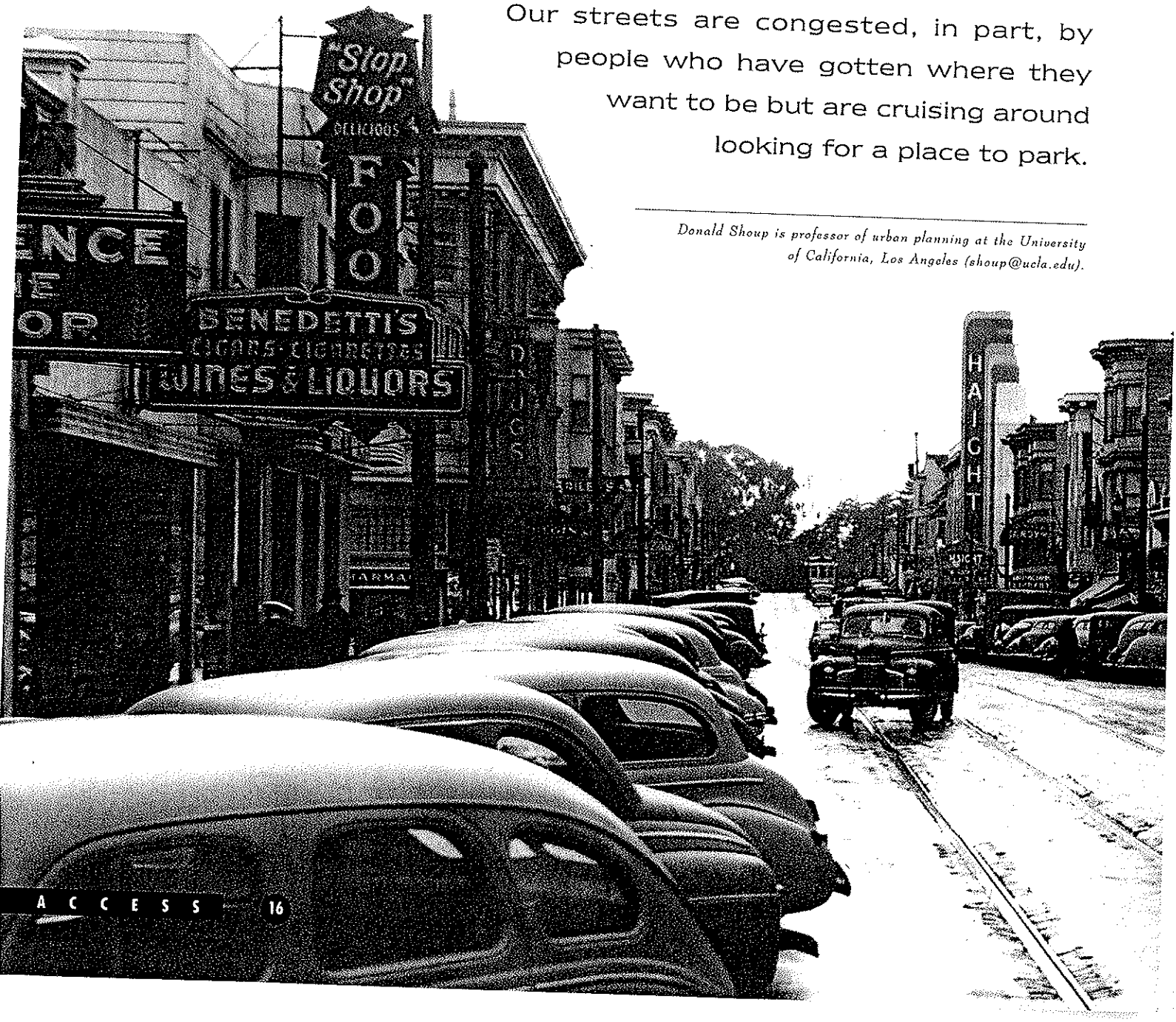
Cruising for Parking

BY DONALD SHOUP

My father didn't pay for parking, my mother, my brother, nobody. It's like going to a prostitute. Why should I pay when, if I apply myself, maybe I can get it for free?
—George Costanza

A surprising amount of traffic isn't caused by people who are on their way somewhere. Rather it is caused by people who have already arrived. Our streets are congested, in part, by people who have gotten where they want to be but are cruising around looking for a place to park.

Donald Shoup is professor of urban planning at the University of California, Los Angeles (shoup@ucla.edu).



Driving in Circles

Perhaps because cruising is a disguised source of congestion, most transportation planners and engineers have ignored it. Cruising creates a mobile queue of cars waiting for curb vacancies, but cruisers are mixed with traffic that is going somewhere, so no one can see how many cars are in the cruising queue. Nevertheless, a few researchers have analyzed cruising by videotaping traffic flows, interviewing drivers who park at the curb, or driving test cars to search for a curb space. Sixteen studies of cruising behavior were conducted between 1927 and 2001 in the central business districts of eleven cities on four continents (see Figure 1). The average time it took to find a curb space was eight minutes, and about thirty percent of the cars in the traffic flow were cruising for parking. The data varied widely around these averages, however; on some uncrowded streets no cars were cruising, while on some congested streets most of the cars were cruising.

Cities have changed since these observations were made, and the data are selective because researchers study cruising only where they expect to find it. Nevertheless, cruising itself has not changed, and the studies show that cruising for parking has wasted time and fuel for many decades.

Even a small search time per car can create a surprising amount of traffic. Consider a congested downtown where it takes three minutes to find a curb space and the parking turnover is ten cars per space per day. For each curb space, cruising thus results in thirty extra minutes of vehicle travel per day (3 minutes x 10 cars). If the average cruising speed is ten miles an hour, cruising creates five vehicle miles traveled per space per day (10 mph x 0.5 hour). Over a year, this driving in circles amounts to 1,825 VMT for each curb space (5 miles x 365 days), greater than half the distance across the United States. ➢

YEAR	CITY	SHARE OF TRAFFIC CRUISING	AVERAGE SEARCH TIME (minutes)
1927	Detroit (1)	19%	—
1927	Detroit (2)	34%	—
1933	Washington	—	8.0
1960	New Haven	17%	—
1965	London (1)	—	6.1
1965	London (2)	—	3.5
1965	London (3)	—	3.6
1977	Freiburg	74%	6.0
1984	Jerusalem	—	9.0
1985	Cambridge	30%	11.5
1993	Cape Town	—	12.2
1993	New York (1)	8%	7.9
1993	New York (2)	—	10.2
1993	New York (3)	—	13.9
1997	San Francisco	—	6.5
2001	Sydney	—	6.5
	AVERAGE	30%	8.1

FIGURE 1

Twentieth-century cruising

Note: The numbers in parentheses after Detroit, London, and New York refer to different locations within the same city.

Sources: Simpson (1927), Hogentogler, Willis, and Kelley (1934), Huber (1962), Inwood (1966), Bus + Bahn (1977), Salomon (1984), O'Malley (1985), Clark (1993), Falcocchio, Darsin, and Prassas (1995), Saltzman (1997), and Hensher (2001).

Choosing to Cruise

Suppose curb parking is free but all the spaces are occupied, so you have to cruise until you find a space being vacated by a departing car. Off-street parking is available but you have to pay the market price for it. How do you decide whether to cruise or to pay?

If off-street parking is expensive, many drivers will hunt for curb parking, an entirely rational response to prices. Thus, by underpricing their curb parking, cities create an economic incentive to cruise. To study this incentive, I collected data on the price of curb and off-street parking for an hour at noon at the same location—City Hall—in twenty cities throughout the United States. The average price of curb parking was only twenty percent of the price of parking in a garage. Cruising saved drivers the most money in New York, where the price of off-street parking was $14.38 for the first hour, but curb parking was only $1.50.

Consider the high price of off-street parking in downtown Boston ($11 for the first hour), which stems in part from the city's cap on the number of off-street parking spaces. This supply cap drives up the market price of off-street parking and produces an unintended outcome: the combination of low prices for curb parking and high prices for off-street parking increases the incentive to cruise. Boston limits the private off-street parking supply, but fails to charge the market price for its own public curb parking. A survey in 2006 found the average price for off-street parking in the Boston central business district was $31 a day. In contrast, Boston charges a flat rate ($1 an hour) for all metered parking spaces in the city.

Boston's off-street parking cap makes sense as a way to reduce congestion on routes *to* the city, but the failure to follow through with market prices for curb parking increases congestion *in* the city. Everyone would criticize off-street parking operators if long lines of cars regularly spilled into the streets and snarled traffic because the lots and garages were always full. Cities create the same result with underpriced curb parking, but the cruising cars are hidden in the general traffic flow.

Cruising in Los Angeles

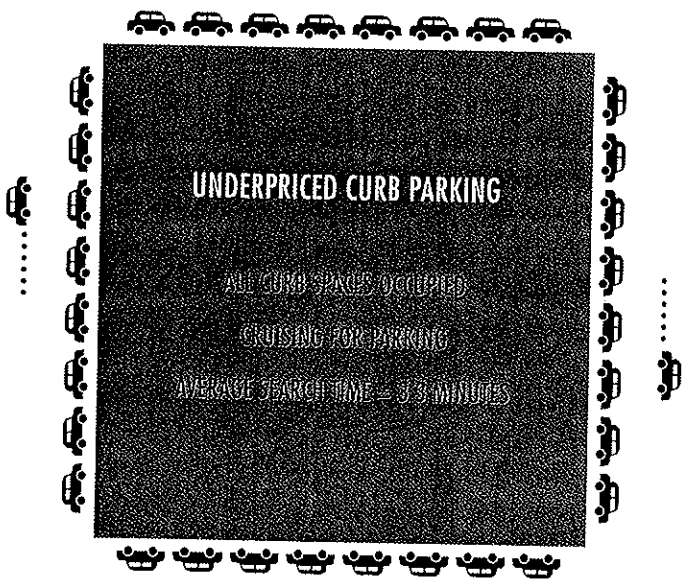
To learn more about cruising, my students and I made 240 observations of how long it takes to find a curb parking space at four sites in Westwood Village, a commercial district next to the UCLA campus. Curb parking in metered spaces was only fifty cents an hour during the day and free in the evening, while the cheapest off-street parking was $1 an hour. For each observation we drove to the site and then circled the block until we found a curb space. Because the curb spaces were occupied almost all the time, we rarely found a vacant space when we arrived. Instead, we usually searched until we found a parked car about to vacate a space, and then waited for it to leave.

Most drivers who are cruising for parking try to avoid following directly behind another car that appears to be cruising, so as to maximize the chance of being the first to see a vacant spot. Driving a car to measure cruising times may therefore influence the behavior being studied. To avoid this potential pitfall and to get some exercise, we decided to make most of the observations by bicycle. The average cruising speed by car in Westwood is only eight to ten miles an hour because every intersection has a stop sign or traffic light, so a cyclist can easily keep up with vehicle traffic. For the tests, we equipped each bicycle with a cyclometer to measure elapsed travel time, distance traveled, and average speed.

The average cruising time to find a curb space was 3.3 minutes, and the average cruising distance was half a mile (about 2.5 times around the block). The small distances cruised by individual drivers add up quickly, because the turnover rate for curb parking was seventeen cars per space per day. With 470 metered parking spaces in the Village, almost 8,000 cars park at the curb each day (17 x 470). Because so many cars park at the curb, a short cruising time for each driver creates an astonishing amount of traffic. Although the average driver cruises only half a mile before parking, cruising around the fifteen blocks in the Village creates almost 4,000 VMT every weekday (8,000 x 0.5). ➢

FIGURE 2

Curb parking prices and cruising



Over a year, cruising in Westwood Village creates 950,000 excess VMT—equivalent to 38 trips around the earth, or four trips to the moon. The obvious waste of time and fuel is even more appalling when we consider the low speed and fuel efficiency of cruising cars. Because drivers average about ten miles an hour in the Village, cruising 950,000 miles a year wastes about 95,000 hours (eleven *years*) of drivers' time every year. And here's another inconvenient truth about underpriced curb parking: cruising 950,000 miles wastes 47,000 gallons of gasoline and produces 730 tons of CO_2 emissions in a small business district.

The Right Price for Curb Parking

When drivers compare the prices of parking at the curb or in a garage, they usually decide the price of garage parking is too high, but instead the reverse is true. The price of curb parking is too *low*. Underpriced curb spaces are like rent-controlled apartments: they are hard to find, and once you find a space you'd be crazy to give it up. This makes curb spaces even harder to find, and increases the time cost (and therefore the congestion and pollution costs) of searching for them. Like rent-controlled apartments, curb spaces go to the lucky more than to the deserving. One person might find a curb space and park there for days, while others are left to circle the block.

The left panel of Figure 2 shows a typical commercial block in Westwood where curb parking is underpriced and all the curb spaces are occupied. The block has eight curb spaces on each side, the average cruising time to find a curb space is 3.3 minutes, and two cruisers are circling the block. In contrast, the right panel shows what happens if a city charges the lowest price that will produce a few vacant spaces. Drivers have no reason to cruise because they can always find a vacant curb space near their destination, search time is zero, and cruising cars do not add to traffic congestion.

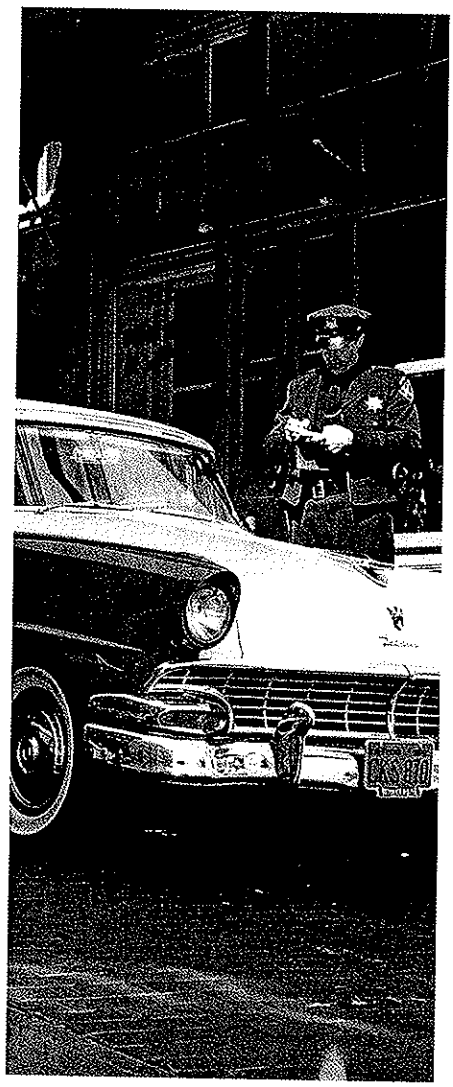
Only trial and error will reveal the right price for curb parking. Initially, if all the curb spaces are always occupied, a city might periodically raise the meter rate by 25-cent increments until occupancy at some hours is about 85 percent. If spaces are still full during other hours, the city could continue to nudge meter rates upward during those times until the occupancy is about 85 percent all day. We can call this balance between the varying demand for parking and the fixed supply of curb spaces the Goldilocks Principle of parking prices: the price is too high if too many spaces are vacant, and too low if no spaces are vacant. When only a few spaces are vacant, the price is just right, and everyone will see that curb parking is both well used and readily available.

Pricing curb parking to ensure a few vacancies does not mean that travel will become unaffordable. Drivers can use several strategies to economize on curb parking without reducing their travel. They can (1) drive at off-peak hours when curb parking is cheaper, (2) park where prices are lower and walk farther to their destinations, (3) park for a shorter time, (4) park off-street, (5) carpool and split the cost of parking, or (6) take public transit, ride a bike, or walk all the way to their destinations. Diverting some trips to carpools, public transit, cycling, and walking will reduce *vehicle* travel without reducing *human* travel, and all real travel is by people, not cars.

Cruising in New York

In 2006, surveyors interviewed drivers stopped at a traffic signal in the SoHo district of Manhattan, and 28 percent reported they were cruising for curb parking. A similar study in Brooklyn found that 45 percent of drivers were cruising. The same results might be found on many other streets in New York because off-street parking is generally far more expensive than on-street parking. In midtown Manhattan, for example, the price for the first hour of off-street parking is often about $20, while curb parking is only $1. Parking for an hour at the curb saves $19, but drivers first have to cruise to find a space on the street.

The high price of off-street parking in midtown Manhattan doesn't mean the right price for curb parking is also $20 an hour. Private operators can charge a disproportionately high price for short-term parking only because the curb spaces are always full. If the city charges the lowest price for curb parking that will yield a few vacant spaces everywhere, the price of short-term parking off-street will fall to compete with the curb rate.



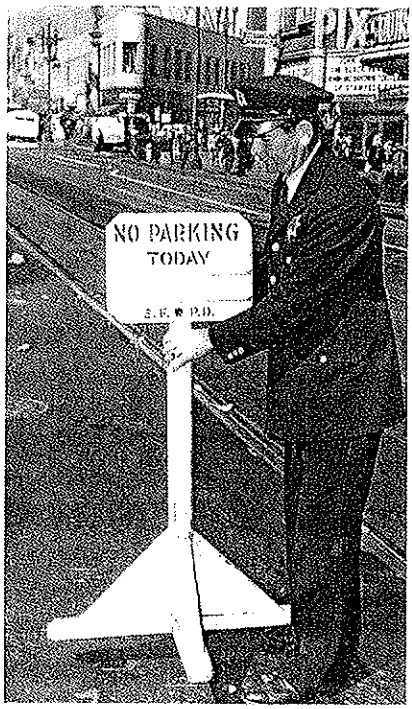
Local Revenue Return

In addition to its transportation and environmental benefits, right-priced curb parking can yield ample revenue. If a city returns some of this revenue to pay for added public services on the metered streets, residents and local merchants will be more likely to support charging the right price for curb parking. The added funds can pay to clean and maintain the sidewalks, plant trees, improve lighting, remove graffiti, bury overhead utility wires, and provide other public improvements.

Consider the case of a Business Improvement District (BID) in an older area where curb parking is free and customers complain about a parking shortage. Suppose the city installs meters and charges the lowest prices that will produce a few vacancies. Everyone who wants to shop in the district can park quickly, and the meter money pays to clean the sidewalks and provide security. These added public services make the business district a place where people want to be, rather than merely a place where anyone can park free after they cruise long enough to find a space. No one can say this policy will drive customers away if almost all the curb spaces are always occupied.

When meter revenue goes into a city's general fund rather than going back to the BID or neighborhood that generated it, the city can be careless about collecting it. In downtown San Francisco where the curb spaces always seem full, an audit in 2006 found that drivers paid for less than an hour a day per meter. A similar audit in Los Angeles in 2002 found that 96 percent of the vehicles parked at expired meters did not receive citations. If every BID received a share of the meter revenue it generated, business leaders would pay closer attention to enforcement. Consistent parking enforcement will create a culture of compliance with parking regulations.

Some cities have begun to charge performance-based prices for curb parking and return the meter revenue to its source. In Redwood City, California, for example, the city sets meter rates to achieve an 85 percent occupancy rate for curb parking downtown; the rates differ by location and time of day, depending on demand. The city returns the ➢



revenue for added public services in the metered district, and downtown Redwood City will receive an extra $1 million a year to pay for increased police protection and clean sidewalks. The merchants and property owners all supported the new policy when they learned the meter revenue would pay for added public services in the downtown business district, and the city council adopted it unanimously. Performance-based prices create a few curb vacancies so visitors can easily find a space, the added meter revenue pays to improve public services, and these public services create political support for the performance-based prices.

Most cities keep their meter rates constant throughout the day and let occupancy rates vary in response to demand. Instead, cities can charge different prices at different times of day to keep occupancy at about 85 percent. In Redwood City, the meter rates are higher in the central spaces because demand is higher there. The goal is to balance supply and demand everywhere, all the time.

Most cities also limit the length of stay at meters so long-term parkers won't monopolize the underpriced curb spaces. But after Redwood City adjusted meter rates to guarantee the availability of curb spaces, it removed the time limits at meters. This unlimited-time policy has turned out to be popular with some drivers, who can now park for as long as they are willing to pay. The demand-determined meter rates create turnover at convenient curb spaces, and most long-term parkers tend to choose cheaper spaces in off-street lots.

Parking Increment Finance

Most cities now put parking meter revenue into the city's general fund. How can a city return meter revenue to business districts without shortchanging the general fund? The city can keep all the *existing* meter revenue and return a share of the subsequent *increment* in meter revenue—above and beyond the current meter revenue—that arises from right-priced curb parking. We can call this arrangement *parking increment finance.* More meters, higher rates, longer hours of operation, and better enforcement will increase the parking revenue in business districts. The added public services paid for by increased parking revenue will promote business activity, and the increased demand for parking will further increase meter revenue.

Get the Prices Right

Where curb parking is underpriced, drivers cruise for a curb space rather than pay to park off-street. Charging the right price for curb parking can eliminate this cruising and all its harmful side effects. Because city governments set the prices for curb parking, they choose whether drivers will cruise.

Because its curb parking is underpriced, Westwood Village generates almost a million miles of cruising every year. And because its curb parking is value-priced, Redwood City will generate $1 million a year for added public services. Which is the better policy? If cities want to reduce congestion, clean the air, save energy, reduce greenhouse gas emissions, improve neighborhoods, and do all this quickly, they should charge the right price for curb parking and spend the resulting revenue to improve local public services. Getting the price of curb parking right will do a world of good. ◆

FURTHER READING

Richard Arnott and Eren Inci, "An Integrated Model of Downtown Parking and Traffic Congestion," *Journal of Urban Economics*, vol. 60, no. 3, 2006.

Douglas Kolozsvari and Donald Shoup, "Turning Small Change into Big Changes," *Access*, no. 23, Fall 2003. http://shoup.bol.ucla.edu/SmallChange.pdf

Schaller Consulting, "Curbing Cars: Shopping, Parking and Pedestrian Space in SoHo," Report prepared for Transportation Alternatives, New York City, 2006. http://transalt.org/campaigns/reclaiming/soho_curbing_cars.pdf

Donald Shoup, *The High Cost of Free Parking* (Chicago: Planners Press, 2005).

Donald Shoup, "Cruising for Parking," *Transport Policy*, vol. 13, no. 3, 2006. http://shoup.bol.ucla.edu/Cruising.pdf

I-95/I-395 Transit/TDM Study
Transit/TDM Alternative Framework

Goals for HOT Lane Transit/TDM Improvements

Goal #1 – Preserve transit and HOV ridership while implementing HOT lanes.
- ✓ Implement improvements to help maintain current market share for transit, carpools and vanpools.

Goal #2 – Utilize new HOT lane features to attract new transit and HOV riders.
- ✓ Use a corridor management approach to improve existing service and serve new markets.

First Round of Alternatives

Baseline
- ✓ Current transit/TDM service levels
- ✓ CLRP programmed projects (2030)
- ✓ Proposed HOT lane project improvements

Low Alternative ($250m)
- ✓ 100% increase in existing bus service, expanded VRE capacity

Definition- Baseline plus:
- Bus service modifications (frequency, routes)
- New Express Bus Routes
- VRE service improvements (eight car trains in the peak, expand four station platforms)
- Improved Shuttle Services, Transit Centers, Stations and Park-n-Ride Facilities
- TDM Program Improvements (marketing, signage, carpool/vanpool incentives, rideshare operational support)
- Park-n-Ride Improvements (# of new lots and spaces TBD)

Medium Alternative ($500m)
- ✓ 145% increase in existing bus service, BRT system and 45% increase in VRE service

Definition- Baseline and Low Alternative plus:
- Bus Rapid Transit System (including 5 in-line stations)
- Increase VRE/Amtrak Fredericksburg Line trains (14 to 20 trains and increase storage)
- Three new transit centers
- TDM Improvements (vanpool/telework financial assistance, rideshare program operational support)
- Park-n-Ride Improvements (# of new lots and spaces TBD)

High Alternative (unconstrained)
- ✓ 145% increase in existing bus service, 130% increase in VRE service and Metrorail extension

Definition- Baseline, Low and Medium Alternatives plus:
- Metrorail extension (Franconia-Springfield to Potomac Mills Mall)
- Increase VRE/Amtrak Fredericksburg Line trains (20-32 trains, 2 new stations, storage)
- New BRT Route
- TDM Improvements (vanpool financial assistance, statewide GRH program, pilot facilitated rideshare system)
- Park-n-Ride Improvements (# of new lots and spaces TBD)

For additional information, please contact: Tanya Husick, DRPT Project Manager: 703-934-4636

DRPT
Virginia Department of Rail and Public Transportation

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A Ranking Writ In Brake Lights: D.C. 2nd in Traffic

Area Nudges Up List as Drivers Spend 60 Hours a Year in Jams

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The spirit-sapping, schedule-scuttling congestion of the Washington area has grown so severe that the region is now in a tie for the second-worst traffic in the nation, a notch higher on an ignominious chart no city aims to top. Only drivers in freeway-filled Los Angeles endure rush-hour delays more brutal than Washingtonians, according to a national study released yesterday.

Washington and Atlanta pulled into a second-place tie with the San Francisco-Oakland region, which has held second place for years, according to a report on 2005 conditions by the Texas Transportation Institute. Drivers in all three areas sit in gridlock for an average of 60 hours a year, equivalent to a week and a half of work -- or vacation.

"We're the world's capital, with world-class gridlock," said John B. Townsend II, public and government affairs manager for AAA Mid-Atlantic.

The numbers for Washington area drivers are cringe-worthy: They sat through more than 127 million hours of delays at a cost of $1,094 per rush-hour traveler. They wasted nearly 91 million gallons of fuel. A projected 218 lane miles or 74 million transit trips would need to be added each year just to maintain current congestion levels.

"You feel helpless," said Robert Bisi, 37, who moved to Virginia 12 years ago from another traffic capital, the San Francisco area, and now drives between Rosslyn and his job at a nonprofit in downtown Washington. "It's very stressful. You can see people doing stupid things because they're getting frustrated. . . . I've seen the traffic here just steadily get worse. It very much reminds me" of California.

Although changes in the report's methodology resulted in Washingtonians spending fewer hours stuck in congestion than in previous studies, things are most assuredly not improving, the authors cautioned.

On the contrary, the new analysis shows a clearly worsening picture, with the area's delay figures and national rank climbing steadily since the report first came out in 1984. A generation ago, Washington area drivers sat through a paltry 16 hours of congestion, placing it at a perfectly respectable 18th in the nation. By 1985, the region had cracked the top 10, and by 1994 it was in the top five.

The Washington region is "afflicted with economic prosperity," said study co-author Timothy J. Lomax. "Booming economies almost always see rapid growth and congestion. . . . It's a lot easier to put up an office building or a subdivision or a shopping center than it is to put in the transportation system needed to serve all that travel."

Although increasingly difficult to thwart, the causes of congestion are not mysterious. The report cites large populations, shipping demands, slow construction of roads and transit and events such as crashes, breakdowns and weather that cause unpredictable delays.

Lomax said the delay figures account for all rush-hour travelers -- whether they are riding their bikes to the corner store or sitting in a bumper-to-bumper nightmare on the way to the office -- meaning that many area drivers easily exceed the 60-hour average.

The stress from such treks can sometimes get the best of people, such as Christi Bristol, a manager at a health insurance company, who said her commute to Washington from Laurel takes an hour and 10 minutes on average.

"Periodically, I find myself saying things I wouldn't normally say to the car in front of me," she said.

Overall, the study found a nation stuck in traffic jams. "Congestion . . . is getting worse in regions of all sizes," the study states, and it reports staggering figures at the national level: 4.2 billion hours of delays, up from 4 billion in 2004; 2.9 billion gallons of wasted fuel; and an annual cost of $710 per traveler, up from an inflation-adjusted $260 in 1982.

And traffic costs come in forms other than fuel.

Jeremy Scott, 31, a health-care lobbyist, said he, his wife and 2-year-old just moved from Woodbridge to Arlington County because the commute to the District -- which could take two hours on days when the couple couldn't carpool in high-occupancy vehicle lanes -- was too much to bear.

Now, "we also are paying through the nose for our [new] house," said Scott, whose new commute takes 20 minutes. "That's the trade-off."

Perhaps most discouragingly for the area, many of the solutions suggested in the report -- using mass transit and HOV lanes, telecommuting, building new roads and relieving choke points -- are already being done. Even with a new Woodrow Wilson Bridge and Springfield interchange and plans to expand Metrorail in Northern Virginia and build an 18-mile highway across the Maryland suburbs, there are simply too many people to move.

"We're not even close to keeping up, much less catching up," said Alan E. Pisarski, a traffic analyst from Fairfax County who has authored the "Commuting in America" series. "We've just got such a dramatic backlog of work to be done."

Good news was hard to find in the report. Even Atlanta's apparent improvement in certain categories isn't cause for celebration, experts said. Yearly congestion in the Georgia metropolis dropped from a revised 73 hours to 60 hours per traveler between 2000 and 2005. Although Lomax said that drop was partly due to an improved response to stalled vehicles and other blockages, experts cautioned that the figures are probably due to the expanding geography of the region into more rural areas and a rapid growth in population, both of which would water down per-capita averages.

"I wouldn't be looking to Atlanta as a model of the solution," Pisarski said.

The study is sponsored by the American Public Transportation Association, the American Road and Transportation Builders Association and the University Transportation Center for Mobility and is based on data on 437 urban areas compiled by state and federal traffic agencies. It compares traffic counts and

miles of road lanes to estimate congestion levels.

This year's report employs a number of methodological changes and includes data from more localities and revised population estimates. For the Washington region, it also incorporates new data from the Virginia Department of Transportation and the Maryland State Highway Administration, Lomax said.

Ronald F. Kirby, director of transportation planning at the Metropolitan Washington Council of Governments, said he hesitated to place too much weight on Washington's shifting rank given the changes in technique by the study's authors.

"I guess my question would be: Is the change in ranking real or a result of the different methodology?" Kirby said.

Kirby, whose organization has released a regional report based on aerial photographs since 1993, said that Washington congestion is worsening overall but that it is very time- and location-specific and has improved in some spots.

There is one cause for hope: Washington is still far from catching traffic champ Los Angeles, where drivers spend a whopping 72 hours a year mired in delays.

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Performance Measure Summary

There are several inventory and performance measures listed in the pages of this Urban Area Report for the years from 1982 to 2005. There is no single performance measure that experts agree "says it all." The best comparison of congestion levels and trends is done between regions of similar size, over several years, and with a few measures of congestion aspects. Examining a few measures over many years reduces the chance that data variations or the estimating procedures may have caused a "spike" in any single year. A few key points should be recognized by users of the Urban Mobility Report data.

Use the Trends – The multi-year performance measures are better indicators, in most cases, than any single year. (*5 years is 5 times better than 1 year*).

Use several measures – Each performance measure illustrates a different element of congestion. (*The view is more interesting from the top of a few measures*).

Compare to similar regions – Congestion analyses that compare areas with similar characteristics (for example population, growth rate, road and public transportation system design) are usually more insightful than comparisons of different regions. (*Los Angeles is not Peoria*).

Compare ranking changes and performance measure values – In some performance measures a small change in the value may cause a significant change in rank from one year to the next. This is the case when there are several regions with nearly the same value. (*15 hours is only 1 hour more than 14 hours*).

Consider the scope of improvement options – Any improvement project in a corridor within most of the regions will only have a modest effect on the regional congestion level. (*To have an effect on areawide congestion, there must be significant change in the system or service*).

Comparison of Several Key Mobility Performance Measures
Very Large Group – over 3 million population urban areas

Urban Area	Delay per Traveler	Travel Time Index	Total Delay	1982 to 2005	
				Delay per Traveler	Total Delay
New York-Newark, NY-NJ-CT	L	0	H+	0	F+
Los Angeles-Long Beach-Santa Ana, CA	H+	H+	H+	S	F+
Chicago, IL-IN	L	H+	H	0	F+
Miami, FL	L	0	L	0	0
Philadelphia, PA-NJ-DE-MD	L-	L-	L-	S-	S-
Dallas-Fort Worth-Arlington, TX	H	L	L	F+	F
Washington, DC-VA-MD	**H**	**0**	**L**	**F+**	**S-**
Atlanta, GA	H	L	L	0	S-
San Francisco-Oakland, CA	H	H	L	F	S-
Boston, MA-NH-RI	L	L-	L-	0	S-
Detroit, MI	0	L-	L-	S	S-
Houston, TX	H	0	L-	S	S-
Phoenix, AZ	L	L	L-	S-	S-
Seattle, WA	L-	L-	L-	0	S-

0 – Average congestion levels or average congestion growth
H Higher congestion; H+ Much higher congestion; F Faster congestion growth; F+ Much faster growth
L Lower congestion; L- Much lower congestion; S Slower congestion growth; S- Much slower growth

Performance Measures and Definition of Terms

Travel Time Index – A measure of congestion that focuses on each trip and each mile of travel. The ratio of travel time in the peak period to travel time in free-flow. A value of 1.30 indicates a 20-minute free-flow trip takes 26 minutes in the peak.

Peak Travelers – Number of travelers (using any travel mode) who begin a trip during the morning or evening peak travel periods (6 to 9 a.m. and 4 to 7 p.m.).

Annual Delay per Traveler – A yearly sum of all the per-trip delays. This measure illustrates the effect of the per-mile congestion as well as the length of each trip. The extra time required to travel in the peak period is divided by the number of travelers who begin a trip during the peak period (6 to 9 a.m. and 4 to 7 p.m.).

Total Delay – The overall size of the congestion problem. Measured by the total travel time above that needed to complete a trip at free-flow speeds. The ranking of total delay usually follows the population ranking (larger regions usually have more delay).

Free-Flow Speeds (60 mph on freeways and 35 mph on arterials) – These values are used as the national comparison thresholds. Other speed values may be appropriate for urban areas or sub-regions.

Excess Fuel Consumed – Increased fuel consumption due to travel in congested conditions rather than free-flow conditions.

Public Transportation – Regular route service from all public transportation providers in an urban area.

Operations Treatments – Freeway incident management, freeway ramp metering, arterial street signal coordination and arterial street access management.

Congestion Cost – Value of travel delay for 2005 (estimated at $14.60 per hour of person travel and $77.10 per hour of truck time) and excess fuel consumption (estimated using state average cost per gallon).

Annual Increase Needed to Maintain Constant Congestion Level – Number of lane-miles that must be added to the road system each year – or – the number of new transit riders or carpoolers that must be added to keep congestion levels the same as the previous year.

Urban Area – The developed area (population density more than 1,000 persons per square mile) within a metropolitan region. The urban area boundaries change frequently (every year for most growing areas). The annual change in miles traveled, therefore, includes both new travel due to growth and travel that previously occurred in areas designated as rural.

Number of Rush Hours – Time when system might have congestion

Key Mobility Performance Measure Labels

Note: Designation of an urban area congestion problem as "Much higher", "Much faster growth", etc. is determined using a general indicator of the accuracy of the congestion estimates. For regions with the same indicator label, there may be no difference in congestion levels. Different values are used for the indicators in regions over 1 million population and below 1 million population.

Measures	Differences Within These Values May Not Indicate a Difference in Congestion Level	
2005 Values	**Above 1M Population**	**Below 1M Population**
Delay per Traveler -	5 Hours	3 Hours
Travel Time Index -	5 Index Points	3 Index Points
Total Delay -	5 Hours x Average Population	3 Hours x Average Population
1982 to 2005 Trends		
Delay per Traveler -	5 Hours	3 Hours
Total Delay -	5 Hours x Average Population	3 Hours x Average Population

The Mobility Data for Washington, DC-VA-MD

Inventory Measures	2005	2004	2003	2002	2001	2000
Urban Area Information						
Population (1000s)	4,280	4,275	4,250	4,185	4,030	3,900
Rank	7	7	7	7	8	9
Urban Area (square miles)	1,310	1,310	1,305	1,270	1,230	1,200
Popn Density (persons/sq mile)	3,267	3,263	3,257	3,295	3,276	3,250
Peak Travelers (1000s)	2,131	2,120	2,100	2,072	1,999	1,938
Freeway						
Daily Vehicle-Miles of Travel (1000s)	38,580	38,200	37,815	36,200	35,770	34,535
Lane Miles	2,050	2,050	2,040	1,970	1,970	1,960
Arterial Streets						
Daily Vehicle-Miles of Travel (1000s)	41,195	40,960	40,395	38,385	36,000	35,395
Lane Miles	6,100	5,945	5,915	5,850	5,800	5,740
Public Transportation						
Annual Psgr-Miles of Travel (millions)	2,195	2,267	2,193	2,156	2,055	1,854
Annual Unlinked Psgr Trips (millions)	462	443	434	430	415	381
Cost Components						
Value of Time ($/hour)	14.60	14.10	13.75	13.45	13.25	12.85
Commercial Cost ($/hour)	77.10	74.60	72.65	71.05	69.95	68.00
Fuel Cost ($/gallon)	2.40	2.04	1.62	1.53	1.75	1.61
System Performance						
Congested Travel (% of peak VMT)	81	81	81	80	79	74
Congested System (% of lane-miles)	63	63	63	63	63	59
Congested Time (number of "Rush Hours")	8.0	8.0	7.8	7.8	7.8	7.6
Annual Increase Needed To Maintain Constant Congestion Level:						
Lane-Miles	218	219	204	152	94	82
Transit Riders or Carpoolers (millions)	74	75	70	51	30	26
Annual Excess Fuel Consumed						
Total Fuel (1000 gallons)	90,861	90,260	88,867	83,650	77,626	70,687
Rank	9	8	7	7	7	7
Fuel per Peak Traveler (gallons)	43	43	42	40	39	36
Rank	5	5	3	4	5	6
Annual Delay						
Total Delay (1000s of person-hours)	127,394	126,341	124,738	117,397	109,143	101,155
Rank	8	7	5	6	6	8
Delay per Peak Traveler (person-hrs)	60	60	59	57	55	52
Rank	2	3	3	4	5	6
Delay due to Incidents (percent)	51	50	50	50	50	50
Travel Time Index	1.37	1.37	1.37	1.36	1.35	1.33
Rank	7	5	4	4	3	4
Congestion Cost						
Total Cost ($ millions)	2,331	2,210	2,099	1,927	1,783	1,596
Rank	8	7	6	7	7	8
Cost per Peak Traveler ($)	1,094	1,042	1,000	930	892	823
Rank	4	4	3	5	5	7

Note: System Performance statistics for 2000 through 2005 data reflect the effects of operational treatments.

Note: Zeroes in the table reflect values less than 0.5.

The Mobility Data for Washington, DC-VA-MD, Continued

Inventory Measures	1999	1998	1997	1996	1995	1994
Urban Area Information						
Population (1000s)	3,885	3,800	3,660	3,570	3,510	3,480
Rank	9	10	10	10	9	9
Urban Area (square miles)	1,160	1,125	1,085	1,040	1,000	995
Popn Density (persons/sq mile)	3,349	3,378	3,373	3,433	3,510	3,497
Peak Travelers (1000s)	1,935	1,892	1,826	1,785	1,759	1,743
Freeway						
Daily Vehicle-Miles of Travel (1000s)	33,975	33,930	33,340	33,045	32,460	31,565
Lane Miles	1,950	1,935	1,930	1,925	1,920	1,915
Arterial Streets						
Daily Vehicle-Miles of Travel (1000s)	35,165	34,965	34,370	34,575	33,880	34,080
Lane Miles	5,665	5,600	5,550	5,440	5,385	5,270
Public Transportation						
Annual Psgr-Miles of Travel (millions)	1,703	1,679	1,499	1,435	1,701	1,595
Annual Unlinked Psgr Trips (millions)	387	369	323	318	370	343
Cost Components						
Value of Time ($/hour)	12.40	12.15	12.00	11.70	11.40	11.05
Commercial Cost ($/hour)	65.80	64.35	63.40	61.95	60.20	58.50
Fuel Cost ($/gallon)	1.10	1.11	1.21	1.32	1.24	1.10
System Performance						
Congested Travel (% of peak VMT)	73	71	73	73	71	70
Congested System (% of lane-miles)	59	59	59	59	58	61
Congested Time (number of "Rush Hours")	7.6	7.6	7.6	7.6	7.6	7.4
Annual Increase Needed To Maintain Constant Congestion Level:						
Lane-Miles	79	152	225	352	414	429
Transit Riders or Carpoolers (millions)	25	48	71	112	130	136
Annual Excess Fuel Consumed						
Total Fuel (1000 gallons)	72,603	67,625	68,790	68,992	63,690	61,371
Rank	6	6	5	5	5	5
Fuel per Peak Traveler (gallons)	38	36	38	39	36	35
Rank	6	6	6	4	4	5
Annual Delay						
Total Delay (1000s of person-hours)	106,382	97,902	100,519	100,555	93,939	91,314
Rank	6	7	4	5	5	5
Delay per Peak Traveler (person-hrs)	55	52	55	56	53	52
Rank	5	7	5	5	5	4
Delay due to Incidents (percent)	50	50	50	50	51	52
Travel Time Index	1.35	1.33	1.34	1.34	1.32	1.31
Rank	3	4	2	3	3	3
Congestion Cost						
Total Cost ($ millions)	1,585	1,440	1,467	1,441	1,306	1,223
Rank	7	7	5	5	6	5
Cost per Peak Traveler ($)	819	761	803	807	743	702
Rank	7	8	6	6	7	7

Note: System Performance statistics for 2000 through 2005 data reflect the effects of operational treatments.

Note: Zeroes in the table reflect values less than 0.5.

The Mobility Data for Washington, DC-VA-MD, Continued

Inventory Measures	1993	1992	1991	1990	1989	1988
Urban Area Information						
Population (1000s)	3,420	3,300	3,250	3,100	3,080	3,040
Rank	9	10	10	10	10	10
Urban Area (square miles)	975	925	920	840	835	830
Popn Density (persons/sq mile)	3,508	3,568	3,533	3,690	3,689	3,663
Peak Travelers (1000s)	1,717	1,660	1,638	1,566	1,540	1,505
Freeway						
Daily Vehicle-Miles of Travel (1000s)	29,320	27,985	26,000	25,080	24,590	23,455
Lane Miles	1,900	1,825	1,750	1,675	1,600	1,500
Arterial Streets						
Daily Vehicle-Miles of Travel (1000s)	33,035	30,420	27,525	25,305	24,530	24,045
Lane Miles	5,250	5,210	5,180	5,145	5,125	5,105
Public Transportation						
Annual Psgr-Miles of Travel (millions)	1,447	1,559	1,642	1,713	1,640	1,607
Annual Unlinked Psgr Trips (millions)	353	354	383	376	370	354
Cost Components						
Value of Time ($/hour)	10.75	10.50	10.25	10.00	9.25	8.80
Commercial Cost ($/hour)	57.05	55.40	53.80	51.60	48.95	46.70
Fuel Cost ($/gallon)	1.12	1.18	1.12	1.08	1.10	1.02
System Performance						
Congested Travel (% of peak VMT)	69	70	67	66	69	67
Congested System (% of lane-miles)	61	61	61	61	62	61
Congested Time (number of "Rush Hours")	7.2	7.2	6.8	6.6	6.8	6.8
Annual Increase Needed To Maintain Constant Congestion Level:						
Lane-Miles	400	335	269	300	383	442
Transit Riders or Carpoolers (millions)	121	96	72	77	97	110
Annual Excess Fuel Consumed						
Total Fuel (1000 gallons)	58,458	55,584	46,952	41,965	41,857	38,163
Rank	6	6	6	6	6	6
Fuel per Peak Traveler (gallons)	34	33	29	27	27	25
Rank	6	7	8	9	9	7
Annual Delay						
Total Delay (1000s of person-hours)	87,187	82,211	69,538	62,309	61,325	56,253
Rank	6	6	6	6	6	6
Delay per Peak Traveler (person-hrs)	51	50	42	40	40	37
Rank	7	6	8	9	9	8
Delay due to Incidents (percent)	52	52	52	52	53	53
Travel Time Index	1.31	1.31	1.29	1.27	1.28	1.26
Rank	3	3	4	5	4	5
Congestion Cost						
Total Cost ($ millions)	1,138	1,048	866	750	691	600
Rank	6	6	6	6	6	6
Cost per Peak Traveler ($)	663	631	529	479	449	399
Rank	6	7	8	11	9	9

Note: System Performance statistics for 2000 through 2005 data reflect the effects of operational treatments.

Note: Zeroes in the table reflect values less than 0.5.

The Mobility Data for Washington, DC-VA-MD, Continued

Inventory Measures	1987	1986	1985	1984	1983	1982
Urban Area Information						
Population (1000s)	2,980	2,920	2,860	2,810	2,780	2,700
Rank	10	9	9	9	9	9
Urban Area (square miles)	820	815	810	805	800	795
Popn Density (persons/sq mile)	3,634	3,583	3,531	3,491	3,475	3,396
Peak Travelers (1000s)	1,463	1,422	1,379	1,343	1,318	1,266
Freeway						
Daily Vehicle-Miles of Travel (1000s)	22,365	21,345	19,460	18,015	16,255	15,200
Lane Miles	1,425	1,345	1,290	1,285	1,260	1,230
Arterial Streets						
Daily Vehicle-Miles of Travel (1000s)	23,930	22,885	21,165	19,230	18,105	17,375
Lane Miles	5,065	5,015	4,960	4,940	4,900	4,850
Public Transportation						
Annual Psgr-Miles of Travel (millions)	1,456	1,360	1,258	1,163	1,163	1,163
Annual Unlinked Psgr Trips (millions)	354	328	311	309	309	309
Cost Components						
Value of Time ($/hour)	8.50	8.20	8.00	7.75	7.45	7.20
Commercial Cost ($/hour)	44.85	43.30	42.50	41.05	39.35	38.10
Fuel Cost ($/gallon)	1.02	0.99	1.30	1.31	1.34	1.41
System Performance						
Congested Travel (% of peak VMT)	63	63	55	48	40	36
Congested System (% of lane-miles)	56	56	55	50	45	44
Congested Time (number of "Rush Hours")	6.8	6.8	6.2	5.4	4.6	4.2
Annual Increase Needed To Maintain Constant Congestion Level:						
Lane-Miles	473	- -	- -	- -	- -	- -
Transit Riders or Carpoolers (millions)	117	- -	- -	- -	- -	- -
Annual Excess Fuel Consumed						
Total Fuel (1000 gallons)	34,104	30,957	24,811	19,479	14,294	12,373
Rank	5	7	7	7	8	9
Fuel per Peak Traveler (gallons)	23	22	18	15	11	10
Rank	5	6	7	11	16	15
Annual Delay						
Total Delay (1000s of person-hours)	51,164	46,325	38,635	30,651	23,043	20,011
Rank	6	7	7	7	8	9
Delay per Peak Traveler (person-hrs)	35	33	28	23	17	16
Rank	6	8	9	12	16	18
Delay due to Incidents (percent)	53	53	53	53	54	54
Travel Time Index	1.24	1.22	1.19	1.16	1.13	1.12
Rank	5	5	6	6	10	9
Congestion Cost						
Total Cost ($ millions)	530	464	385	297	215	182
Rank	6	7	7	7	8	10
Cost per Peak Traveler ($)	362	326	279	221	163	143
Rank	7	8	9	12	16	18

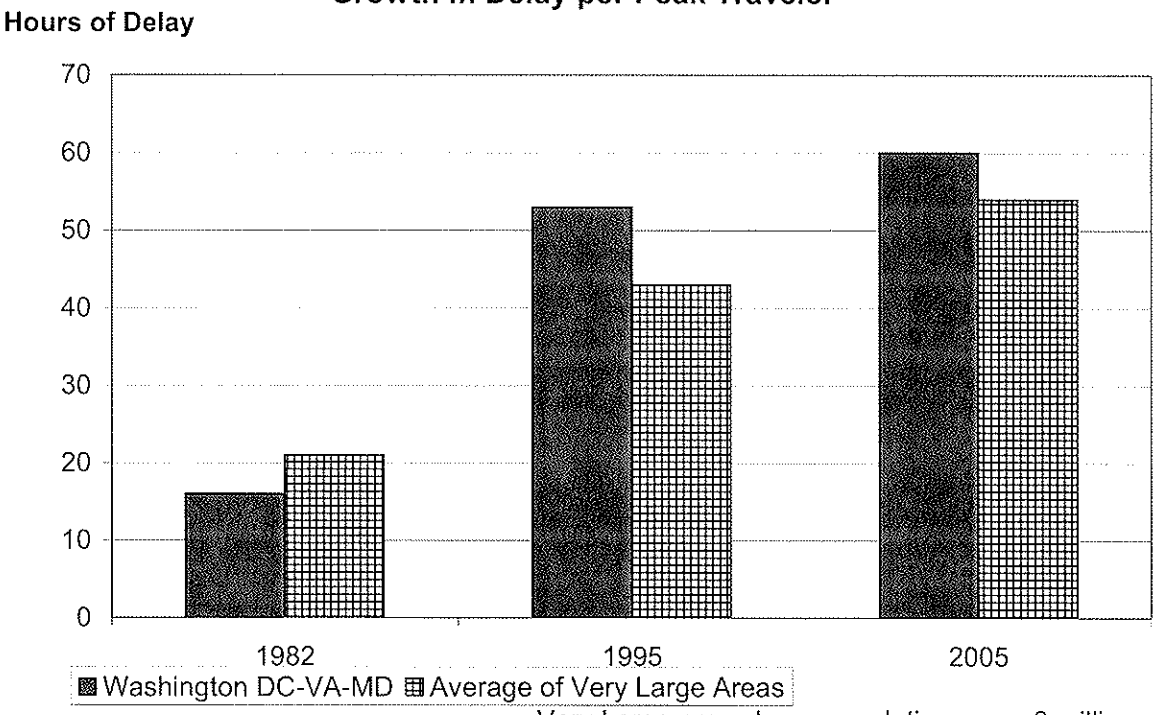
Note: System Performance statistics for 2000 through 2005 data reflect the effects of operational treatments.

Note: Zeroes in the table reflect values less than 0.5.

Benefits From Public Transportation Service and Operations Strategies for Washington, DC-VA-MD

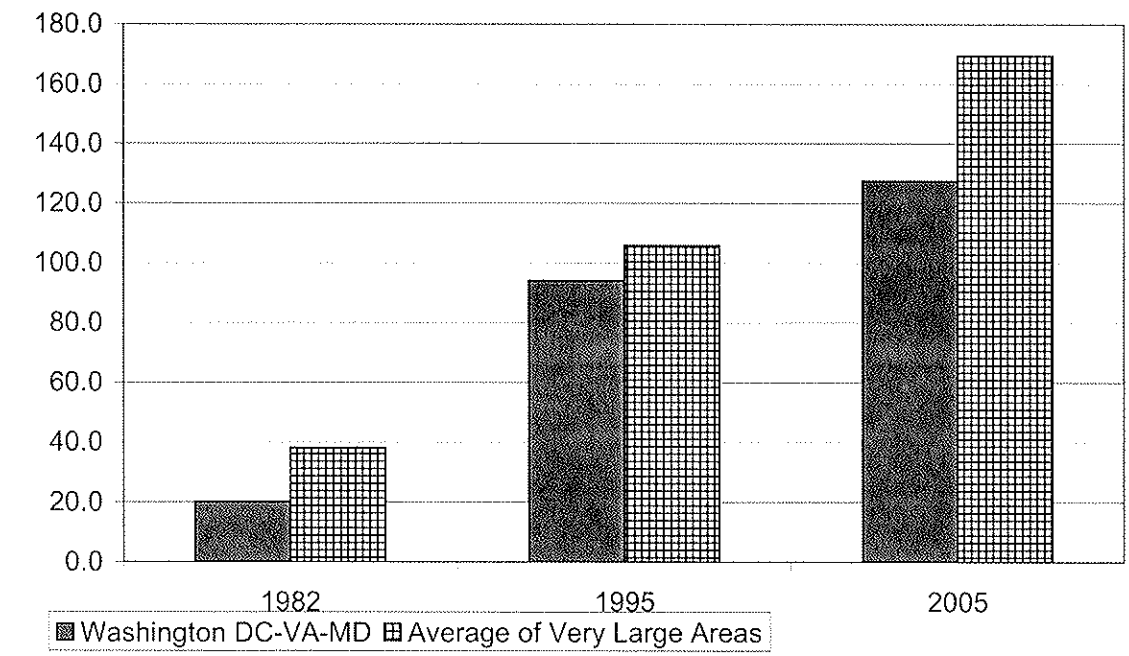
Operations Strategies	2005	2004	2003	2002	2001	2000
Freeway Ramp Metering						
Percent of Roadway Miles	6	6	6	6	6	6
Annual Delay Reduction (1000 hours)	112	116	97	93	141	139
Freeway Incident Management						
Cameras						
Percent of Roadway Miles	66	66	67	69	57	44
Service Patrols						
Percent of Roadway Miles	54	54	54	56	72	93
Annual Delay Reduction (1000 hours)	2,002	1,996	2,009	1,899	2,161	2,553
Arterial Signal Coordination						
Percent of Roadway Miles	54	56	48	46	46	45
Annual Delay Reduction (1000 hours)	785	768	589	619	626	467
Arterial Access Management						
Percent of Roadway Miles	34	35	36	34	31	27
Annual Delay Reduction (1000 hours)	2,660	2,801	2,638	2,188	2,174	1,499
HOV Lanes						
Daily Passenger-miles of Travel (1000s)	2,774	2,523	2,294	2,087	1,898	1,726
HOV User Delay Savings	3,384	3,135	2,777	2,461	2,003	1,696
Total Effect of Operations Treatments						
Annual Delay Reduction (1000 hours)	8,942	8,816	8,110	7,260	7,105	6,354
Annual Delay Saved per Peak Traveler (hours)	4	4	4	4	4	3
Annual Congestion Cost Savings ($million)	162.8	153.4	136.0	119.0	115.8	100.6
Travel Time Index with Strategies	1.367	1.369	1.369	1.365	1.351	1.325
Travel Time Index (Base)	1.397	1.398	1.396	1.390	1.376	1.347
Public Transportation Service						
Existing Service						
Annual Passenger-miles of Travel (million)	2,195	2,267	2,193	2,156	2,055	1,854
Unlinked Passenger Trips (million)	462	443	434	430	415	381
Travel Time Index (combined road and transit)	1.327	1.327	1.328	1.323	1.311	1.292
Condition if Public Transportation Service were Discontinued						
Travel Time Index	1.436	1.443	1.443	1.445	1.430	1.388
Annual Delay Increase (1000 hours)	25,655	27,551	26,565	27,996	25,685	20,371
Annual Delay Increase per Peak Traveler (hours)	12	13	13	14	13	11
Annual Congestion Cost Increase ($million)	456.4	471.4	436.5	451.6	411.6	313.1

Growth in Delay per Peak Traveler



Very Large areas have populations over 3 million

Growth in Total Delay



Very Large areas have populations over 3 million

I-95 Corridor
Dynamic Ridesharing Data

January, 2007

Rahul Trivedi, P.E.
Virginia Department of Transportation
Northern Virginia District Transportation Planning section

Virginia Department of Transportation

We Keep Virginia Moving

Purpose of Study

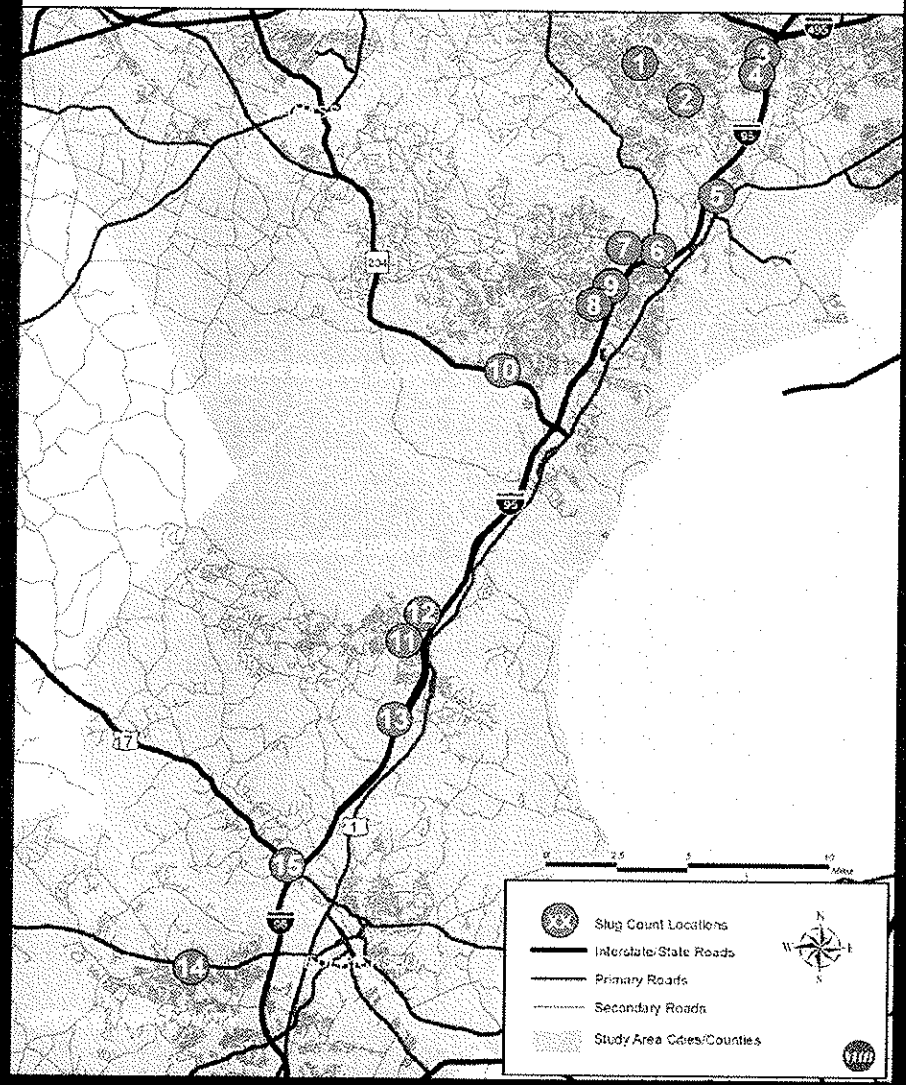
- Measure slug activity by site, jurisdiction and destination during the AM Peak Period
- Measure increase in slug activity since 1999

Methodology

- Identify major slug line locations in the I-95 corridor between Fredericksburg and Springfield
- Count of number of commuters:
  - waiting in the slug line
  - picking up passengers during the AM peak period (5:30 AM to 9:00 AM)
- Summarize the information

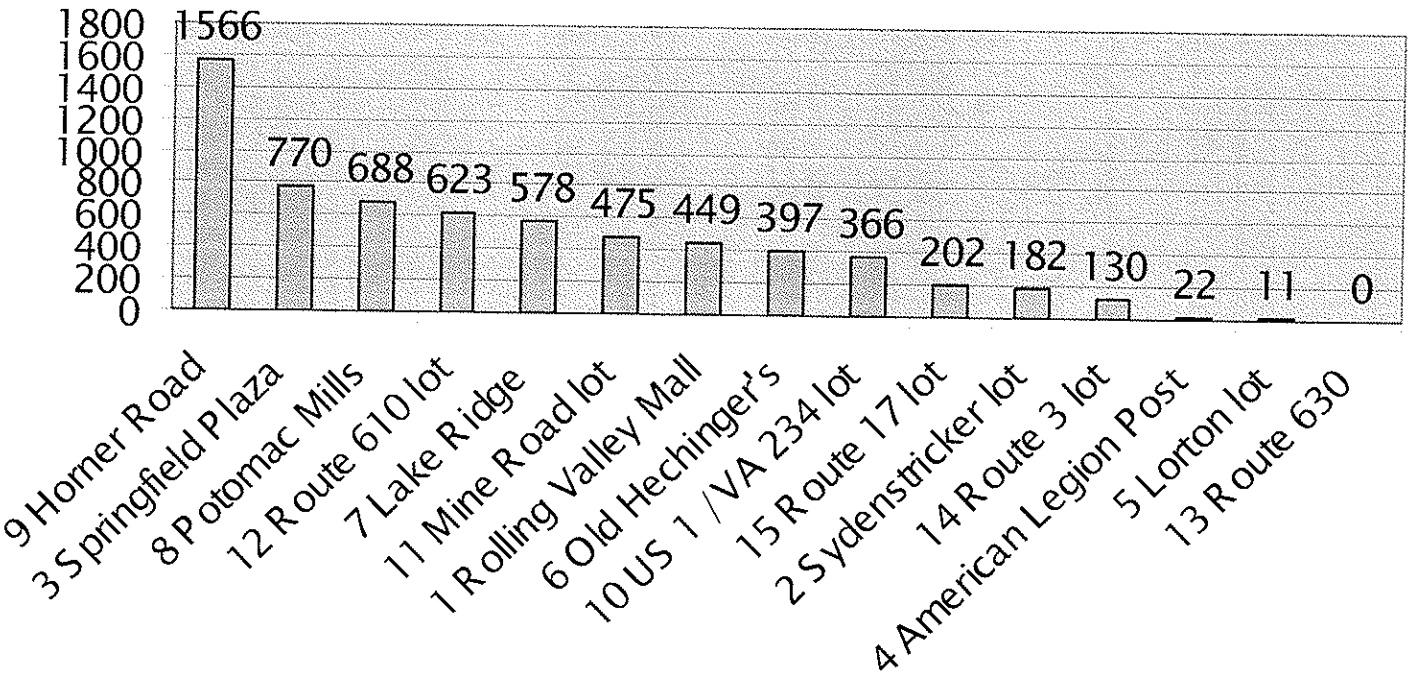
Figure 1

Northern Virginia Slug Line Locations



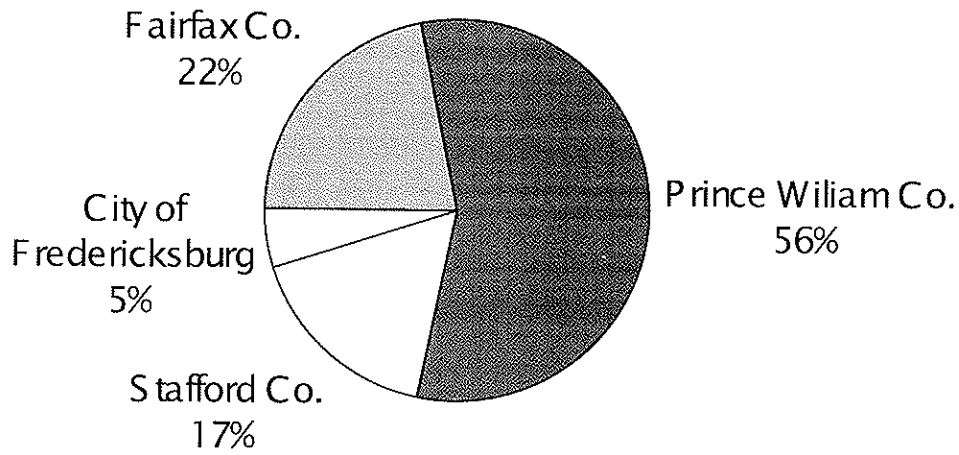
Summary

Number of commuters slugging by site 2006 data (Total 6,459)

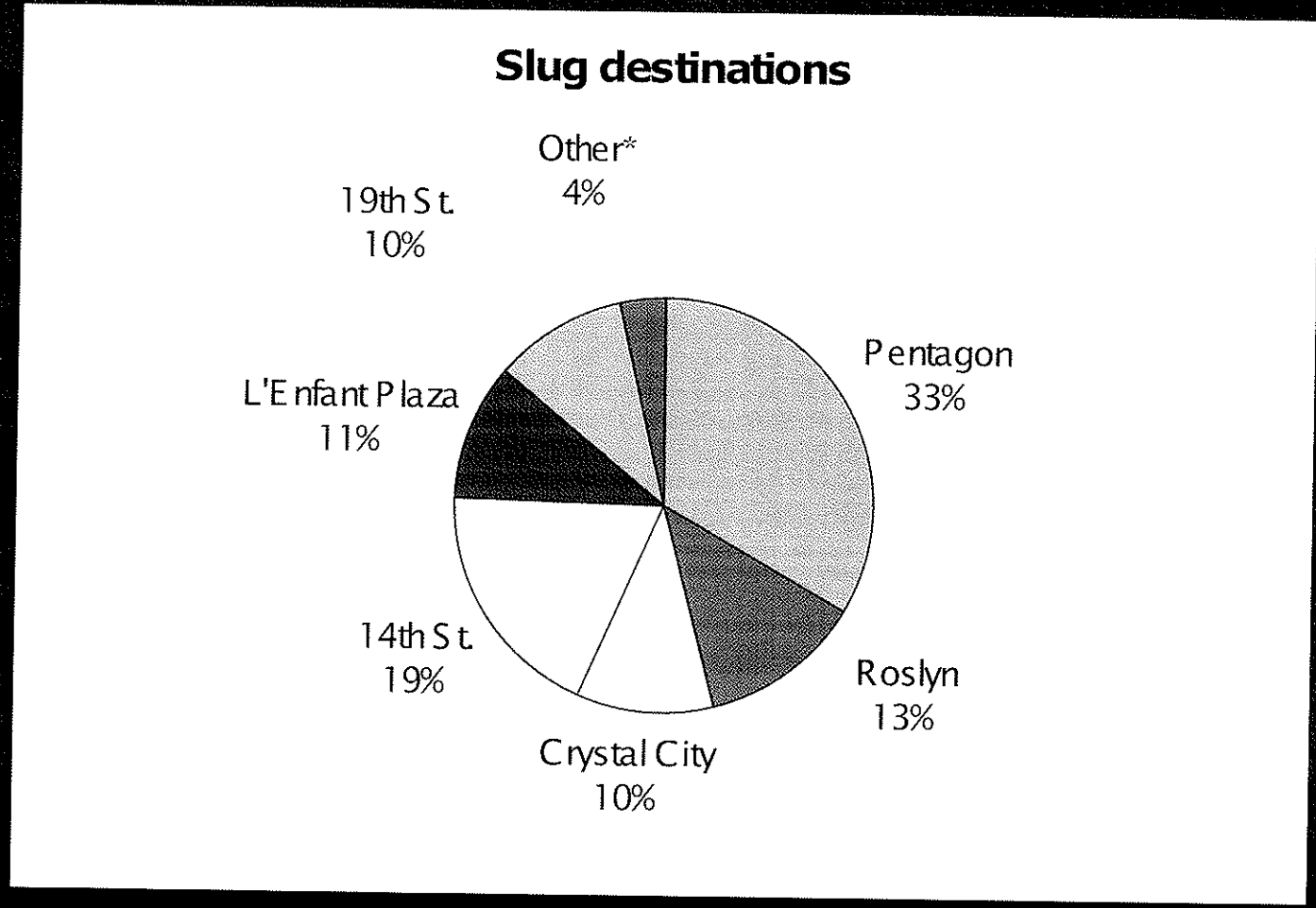


Summary (cont'd)

Jurisdiction of Origin of commuters slugging

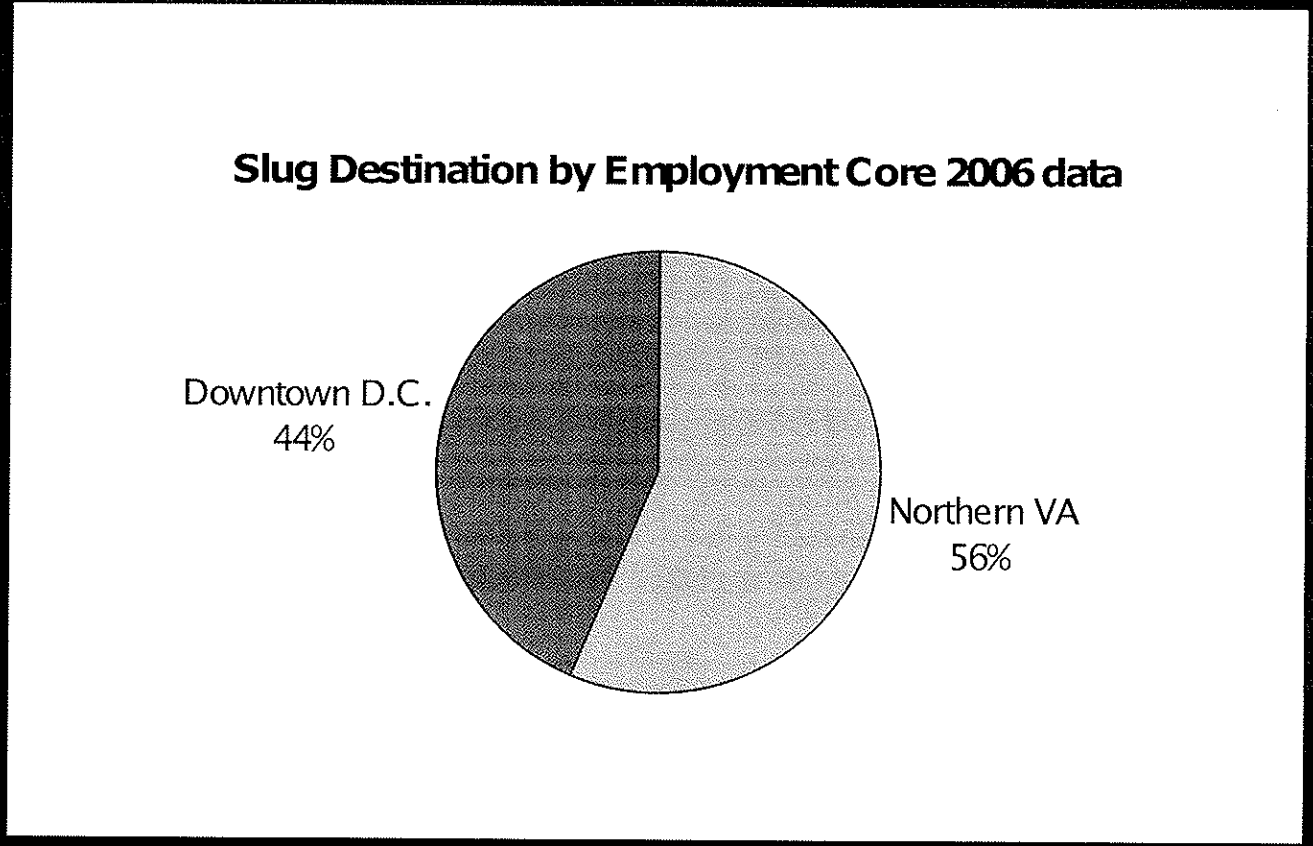


Summary (cont'd)

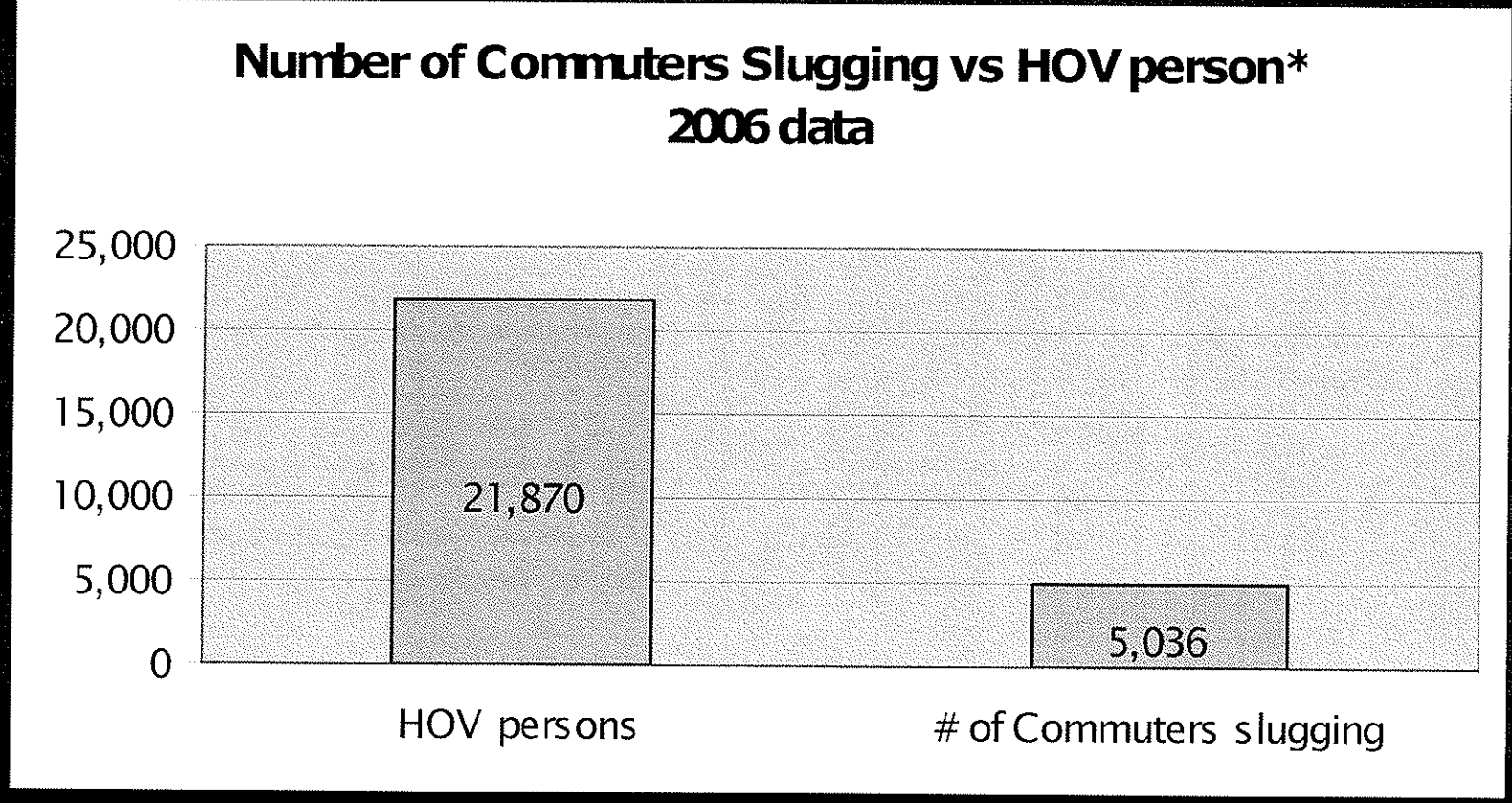


*Other – Includes Memorial Bridge, 23rd St and Navy Yard

Summary (cont'd)



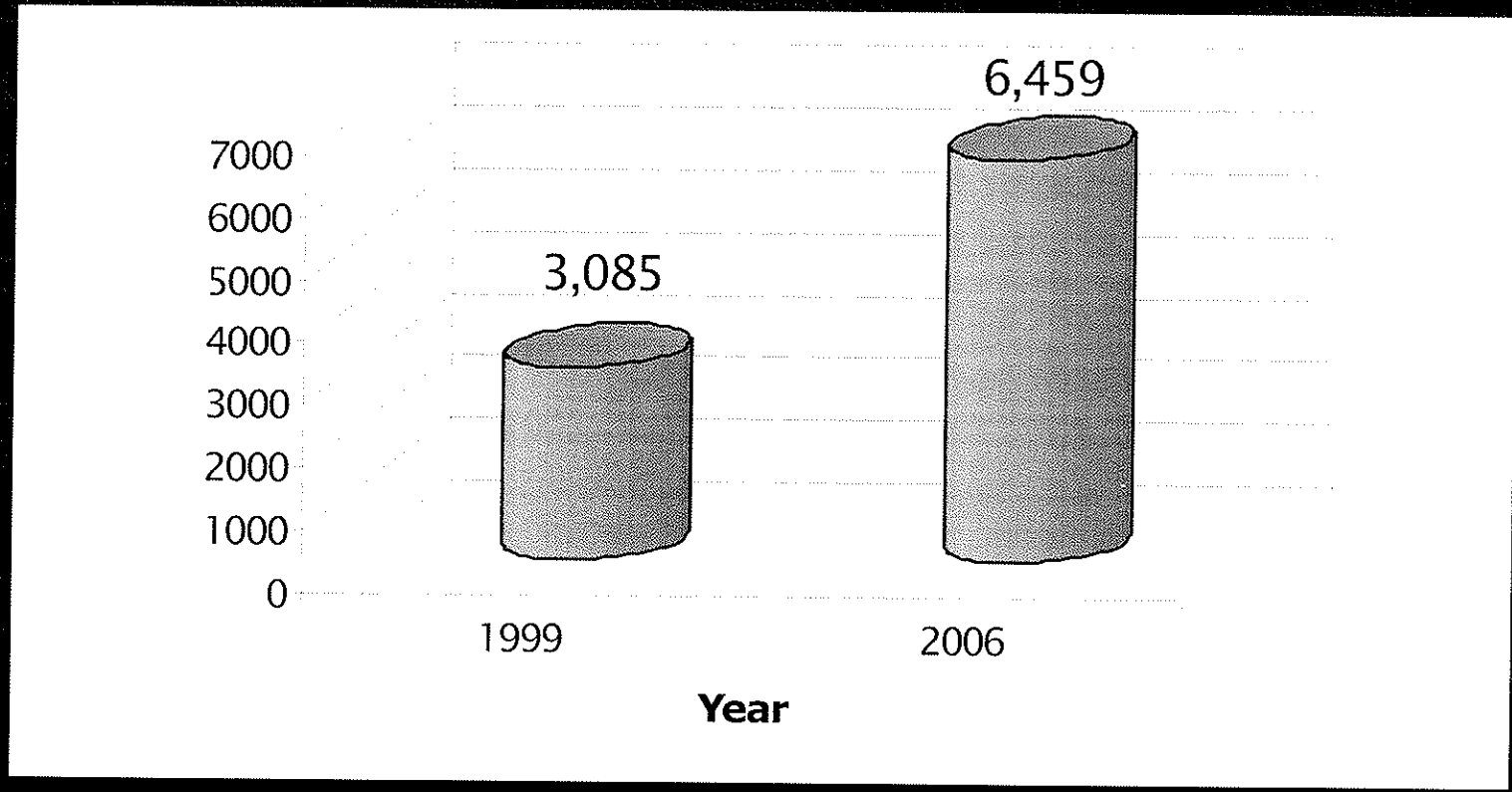
Summary (cont'd)



HOV Persons* – Data from COG's Spring 2006 HOV counts on I-95 at Newington
5036 – Number of commuters slugging upstream of the count location and includes locations 5 thru 15

Summary (cont'd)

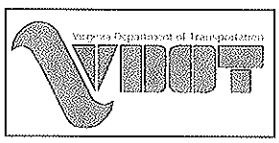
Number of commuters slugging – 1999* vs. 2006



* 1999 slug count data from the I-95 / I-395 HOV Restriction Study

Dynamic Ridesharing (Slugging) Data

Prepared For:



Prepared By:

VHB *Vanasse Hangen Brustlin, Inc.*
Transportation | Land Development | Environmental Services

June 15, 2006

Final Report

Dynamic Ridesharing (Slugging) Data

Executive Summary

The Virginia Department of Transportation (VDOT) commissioned a study in 1999 to estimate the number of "slugs" commuting in the I-95 corridor. It is hypothesized that in the ensuing seven years slugging activity has continued to grow, as is evident by the addition of numerous AM slug lines along the I-95 corridor and the establishment of PM lines in the commercially dominated inner suburbs of northern Virginia and Washington D.C. downtown area. Consequently, this study provides an estimate of the number of AM commuters slugging along the I-95 corridor in order to obtain a general order of magnitude update of the 1999 estimate.

Data gathered for this update includes AM peak counts at 15 slug line locations along the Virginia I-95 corridor. Slug lines in Fairfax and Prince William counties in the VDOT Northern Virginia District as well as locations in Stafford County and Fredericksburg in the VDOT Fredericksburg District were counted. The 1999 estimate was based on PM counts at four downtown Washington D.C. slug line locations. These counts were then combined with products obtained by calculating the difference in transit ridership between the AM and PM peak periods, theoretically accounting for commuters who slug in the AM peak period and use transit in the PM peak period.

AM peak hour slugs were inferred to be approximately 3,085 in 1999. According to the counts conducted for this study, AM slugs amounted to 6,459 for an approximate 109% increase, or doubling of slugging activity.

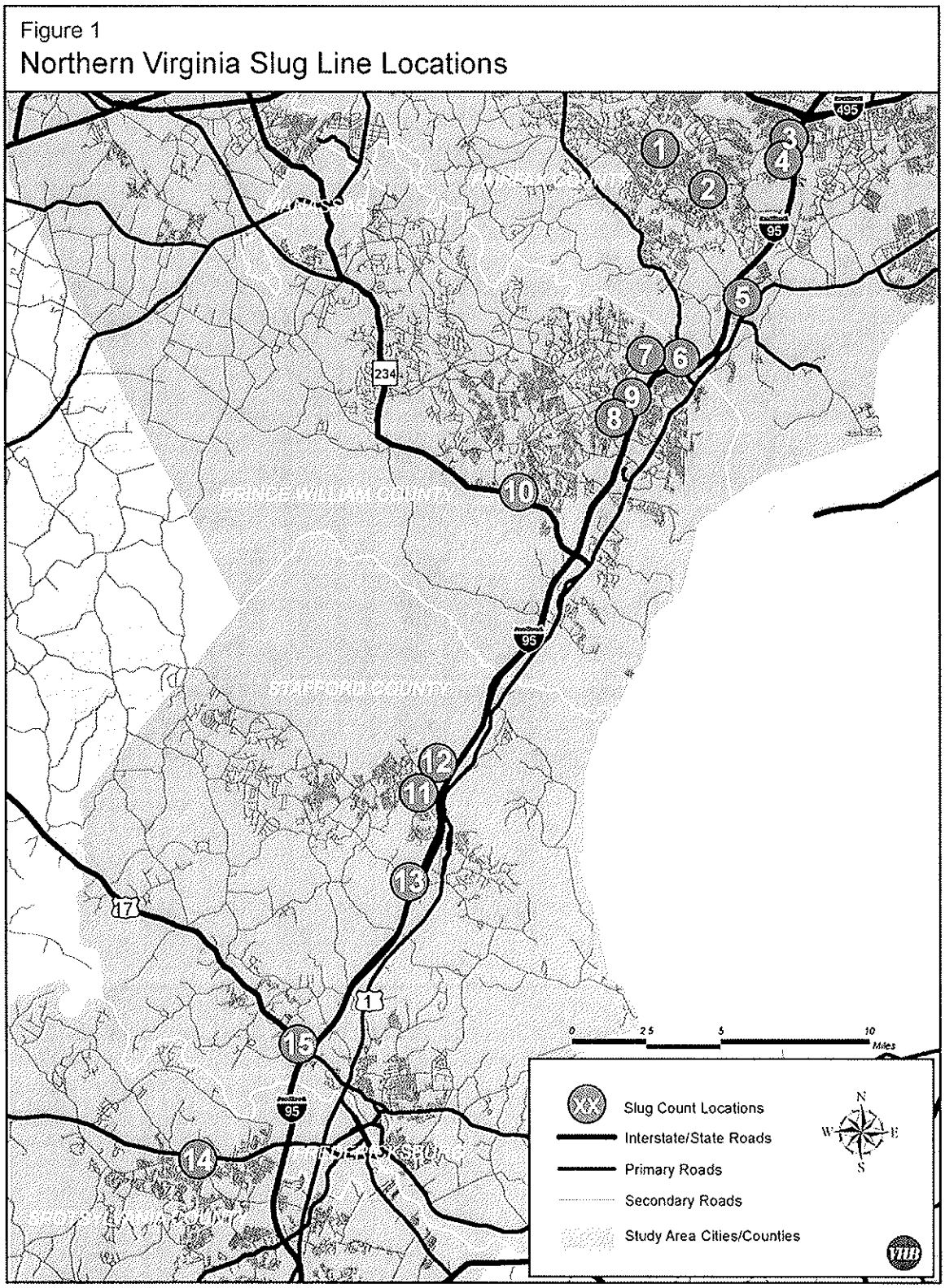
Background

"Slugging" is a colloquial term that has developed to describe the dynamic ridesharing activity occurring in the northern Virginia I-95 corridor. A "slug" describes an individual who seeks to ride as a passenger in a private auto traveling in the HOV lanes. Drivers seek these "slugs' so they may legally travel in the HOV lanes and are referred to as "bodysnatchers".

Slugging activity developed without explicit governmental action in the late 1970s and early 1980s shortly after the establishment of the bus/HOV restricted lanes on I-95/395. Vehicles that did not meet the required number of individuals to take advantage of HOV benefits would pick up additional passengers at bus stops in suburban areas by asking people waiting for the bus if they wanted a ride to Pentagon or downtown. Over time informal, but well known, locations developed where this activity became more structured. Eventually, a web site was developed (www.slug-lines.com) that identifies slug line locations, outlines behavior slugs and bodysnatchers are expected to follow and provides a message board for slugs to relay information.

The AM count locations are shown in Figure 1.

Figure 1 : Count locations



Methodology

Typically the AM peak period has a higher slugging volume than the PM peak period, an observation attributed to the hypothesis that commuters have obligations in the PM period (staying late at work, completing errands etc.) that are not replicated in the AM period. The 1999 study did not count AM lines, assuming the higher transit ridership in the PM was attributable to individuals slugging in the morning and riding transit in the PM. The difference between the AM and PM transit ridership was then combined with the PM counts to estimate the number of AM slugs in the 1999 study.

This study took a different approach. Counting all relevant 15 AM slug lines negated the need to estimate slug riders from transit numbers. Consequently, the change in methodology from estimating the AM slugging volume based on PM counts and transit ridership numbers to specifically counting all of the AM locations combined with growth in slugging origin and destination lines does not allow for a direct comparison in absolute terms between this study and the previous effort. It does, however, provide an opportunity for a general order of magnitude comparison between the overall slugging activity in the I-95 corridor.

Data Collection

Several sources of slug line location data were consulted when identifying slug line locations including the previous study, park and ride inventory data and www.slug-lines.com. A total of 21 AM slug line locations along the I-95 corridor were identified. Two of these lines were found to no longer be operational. Additionally, four neighborhood lines were deemed too minor in volume to warrant resource allocation as it was assumed they would not significantly impact the slugging estimate[1]. Counts were conducted over a five week period (April 3- May 9, 2006) and were scheduled to avoid slugging volume volatility due to spring break activity in the respective jurisdictions. The data collection locations and dates are shown in Table 1 below.

	Locations	Count Date	Spring Break
	Fairfax Lines		*April 10-14*
1	Rolling Valley Mall	April 18	
2	Sydenstricker	April 18	
3	Springfield Plaza (Bob's)	April 19	
4	American Legion Post	April 19	
5	Lorton	April 20	
	Prince William Lines		*April 10-14*
6	Old Hechinger's	April 25	
7	Lake Ridge	April 26	
8	Potomac Mills Mall	May 2	
9	Horner Road	May 3	
10	US 1/VA 234 (Dumfries)	April 25	
	Stafford Lines		*April 17-21*
11	Mine Road	April 27	
12	Route 610	April 11	
13	Route 630	Closed	
	Fredericksburg Lines		*April 17-21*
14	Route 3 (Gordon Road)	April 4	
15	Route 17	April 5	

[1] Email from Rahul Trivedi, P.E. VDOT 3/31/2006.

Counts began at approximately 5:30 AM and ended when slugging activity stopped, typically between 8:30 AM and 9:00 AM (as the HOV lanes become open for general use after 9:00 AM) and were completed in 15-minute intervals. Additional information gathered, by location, included:

- Estimated time slug parking reaches capacity
- Number of vehicles parked in lot
- Number of empty parking spaces
- Total number of slugs
- Number of slug lines at the lot
- Time slugging activity ends
- Maximum queue of both vehicles and slugs.

Table 2 below identifies the number of slugs in the AM peak period by jurisdiction and destination. The Pentagon was the most popular destination, totaling one out of every three slug pick-ups. The Prince William County lines combined to provide the highest aggregate number of slugs, generating 1 out of every 2 slug origins.

Table 2 Slugs in the AM Peak By Jurisdiction and Destination

Destination	Fairfax	Prince William County	Stafford	Fredericksburg	*Total*	*% of Total*
Pentagon	306	1,219	439	187	*2,151*	*33%*
Rosslyn	98	505	172	41	*816*	*13%*
Crystal City	34	443	159	33	*669*	*10%*
14th Street	286	773	128	33	*1,220*	*19%*
L'Enfant Plaza	334	199	135	30	*698*	*11%*
18th Street/Constitution	261	370	33	8	*672*	*10%*
Memorial Bridge	90	10	0	0	*100*	*2%*
23rd Street	25	21	0	0	*46*	*1%*
Washington Navy Yard	0	55	32	0	*87*	*1%*
Total	*1,434*	*3,595*	*1,098*	*332*	***6,459***	***100%***
% of Total	*22%*	*56%*	*17%*	*5%*	***100%***	

Table 3 enumerates the number of slugs in the AM peak period by pick up location and destination. Affirming the general pattern of slug origins and destinations obtained from Table 2 above, Table 3 data shows that the Pentagon is the most popular destination for all four pick up areas. The Newington and Lorton area lines were underutilized, while the lines in Dumfries, Dale City, Lake Ridge and Woodbridge accounted for the majority of slugging activity.

Table 3 Number of Slugs In The AM Peak Period By Pick-Up Location and Destination

Destination Area	*Pick-up Locations* Springfield, Rolling Valley	Newington, Lorton	Dumfries, Dale City, Lake Ridge, Woodbridge	Stafford, Aquia, Spotsylvania, Fredericksburg
Pentagon	295	11	1,219	626
Rosslyn	98	0	505	213
Crystal City	34	0	443	192
14th Street	286	0	773	161
L'Enfant Plaza	334	0	199	165
18th Street/Constitution	261	0	370	41
Memorial Bridge	90	0	10	0
23rd Street	25	0	21	0
Washington Navy Yard	0	0	55	32
Total	*1,423*	*11*	*3,595*	*1,430*
% of Total	*21%*	*1%*	*56%*	*22%*

Appendix A provides 15 minute count data for each of the fifteen AM peak count locations, including maximum queue length of both vehicles and slugs. In addition, descriptive statistics of the slug pick-up area is noted, including the time the slug lot reaches capacity, the total number of slugging vehicles parked in the lot, the approximate time slugging activity ends and number of slugs that did not get a ride.

Table 4 has been added to this study in order to detail some additional information regarding slug line characteristics that could be useful when designing or re-designing park and ride lots or other infrastructure for slug accommodations. 7 of the 15 parking lots that accommodated slug parking in this analysis were over capacity, resulting in vehicles parking in grass areas or other non-designated commuter spaces. Additionally, queue lengths for slugs were consistently higher than queue lengths for vehicles, reinforcing the general observation that more people slug than bodysnatch.

Table 4 Design Considerations By Lot Size

#	*Location*	Lot Size	Number of Slugs	Number of Slug Lines	Max Vehicle Queue	Max Slug Queue
9	Horner Road	2,363*	1,566	4	27	39
15	Route 17	1,006	202	1	9	20
8	Potomac Mills Mall	936	688	3	9	30
12	Route 610	740*	623	2	2	49
11	Mine Road	725*	475	2	4	31
1	Rolling Valley Mall	625	449	1	9	27
14	Route 3 (Gordon Road)	594	130	1	8	22
6	Old Hechinger's	578	397	1	9	22
7	Lake Ridge	572	578	2	14	14
10	US 1/VA 234 (Dumfries)	350*	366	1	11	66
3	Springfield Plaza (Bob's)	330*	771	2	17	30
2	Sydenstricker	170*	182	1	4	13
5	Lorton	166	11	1	1	3
4	American Legion Post**	100*	22	1	0	0

* Lots that are over capacity.
** Lot used as parking for the Bobs (#3) slug lines.

Table 5 displays the approximate time slugging ends at each study lot, as well as the destination of AM slugs by lot (either downtown Washington D.C. or the Northern Virginia area including Rosslyn, Crystal City and Pentagon), stratified by distance from Washington D.C. For example, the closest slug line to the District is Bob's (#3). Slugging activity at this lot ended at approximately 9:00 AM (when the HOV restrictions are lifted) and the vast majority of slugs were destined for downtown Washington D.C. locations. Horner Road has the largest number of slugs and a fairly even split between slugs traveling to downtown Washington D.C. and those traveling to Northern Virginia. In general, the further from Washington D.C., the earlier in the morning slugging activity begins and ends.

Table 5 Slug Lot Statistics By Distance From Downtown

#	*Location*	Slug Activity Ends	Number of Slugs Destined for Downtown	Number of Slugs Destined for N. Virginia	Total Slugs
3	Springfield Plaza (Bob's)	9:00 AM	759	12	771
4	American Legion Post	9:00 AM	22	-	22
1	Rolling Valley Mall	8:50 AM	238	211	449
2	Sydenstricker	8:15 AM	-	182	182
5	Lorton	7:40 AM	11	-	11
6	Old Hechinger's	8:50 AM	393	4	397
7	Lake Ridge	9:00 AM	-	578	578
9	Horner Road	8:15 AM	732	834	1,566
8	Potomac Mills Mall	9:00 AM	197	491	688
10	US 1/VA 234 (Dumfries)	8:30 AM	106	260	366
12	Route 610	8:40 AM	87	536	623
11	Mine Road	8:30 AM	241	234	475
15	Route 17	8:05 AM	45	157	202
14	Route 3 (Gordon Road)	7:45 AM	26	104	130

Observations

The I-395 and I-95 reversible lane HOV restrictions are in effect from 6:00 AM to 9:00 AM Monday through Friday and stretch from Route 234 in Prince William County to Washington, D.C. Generally speaking, slugging activity begins and ends earlier at the southern lines.

For example, both lines in Fredericksburg (Route 3 and Route 17) are approximately a 20-25 minute drive south of the HOV lane infrastructure. Slugs would begin forming at approximately 5:15 AM and the first bodysnatchers would appear around 5:30 AM. Due to the length of the commute and amount of time required to travel from the slug lot to the HOV infrastructure, including navigating approximately 20 miles of general purpose lanes, slugging activity essentially ended by 7:30 AM as a perceived time benefit was no longer provided. Alternatively, slugging activity began at approximately 6:00 AM at lines closer to the Beltway (such as Springfield Plaza), with activity ending anywhere between 8:00 AM at Horner Road (due to a full parking lot) to 9:00 AM at Springfield Plaza.

Regardless of geographical location, it was typical to observe a glut of slugs early in the commuting period, while later in the commuting period the trend reversed and there would be a glut of vehicles. When slugging activity no longer provided time savings benefits and lines became functionally obsolete, "stranded" slugs were never observed waiting for a ride; however, vehicles would often be waiting for late arriving slugs until finally giving up and driving in the general purpose lanes.

Observations of each slug line are provided in the notes section of the 15 minute count sheets in Appendix A.

Conclusions

Due to the change in methodology and subsequent change in data reported in the tables, direct comparisons between the 1999 study and this update are hard to make in absolute terms, as the original study only counted PM lines, while this update only counted AM lines. However, it is possible to assume a general order of magnitude difference in slugging activity.

AM peak hour slugs were inferred to be approximately 3,085 in 1999. AM slugs counted for this study amounted to 6,459 for an approximate 109% increase, or doubling of the slugging activity.

One quantifiable measure of an increase in activity is the greater number of slug line locations. There are currently 18 active lines along the I-95 corridor operating in the AM peak period and 13 PM peak locations operating in the downtown/northern Virginia area. The exact number of AM peak lines was not specifically identified in the 1999 study, but 4 PM peak line locations were identified in the downtown area. Comparing only PM peak line locations, there has been an approximately 225% increase in line formation over the past 6 years.

Data gathered for this study revealed that slugging has doubled in the I-95 corridor in the last seven years. As congestion in the I-95 corridor is expected to increase due in part to continuing development in the I-95 corridor and job growth within the Northern Virginia and Washington D.C. downtown area, expansion of slugging activity is expected to continue. Therefore, it would be advantageous to conduct future updates every 3-5 years. Additionally, studies should be conducted when new park and ride lots are constructed, more capacity is added to either the general purpose lanes or the HOV lanes, policy changes to HOV requirements are considered or implemented, or congestion increases dramatically for either the general purpose lanes or in the HOV lanes along the corridor.

Appendix A

Slug line name Rolling Valley Mall
Location number 1

Date 4/18/2006 *Counter* SMK *Time begin* 5:45 AM *Time end* 9:00 AM

Time lot fills 8:15 AM *Time slug activity ends* 8:50 AM
Vehicles in lot 457 *Commuters left behind* not applicable
Open parking spaces 168
Parking % occupted 73%

Total slugs 449

notes: Slug line is located adjacent to regional bus stop, so some slugs (especially toward the end when less cars were arriving) would abandon slug line if bus arrived (most popular were Pentagon route 18P and Metro). Aside for the "normal" destinations, also heard stops called for 12th Street and 20th Street. Counted those as 14th Street and 18th Street respectably.

To: / Time period:			Pentagon	Rosslyn	Crystal City	14th Street	L'Enfant Plaza	18th Street/Constitution	Memorial Bridge	23rd Street	Washington Navy Yard	Total	Max queue - vehicles	Max queue - people
from	5:30 AM	5:45 AM										0		
from	5:45 AM	6:00 AM	5	2	4		2	1				14	0	12
from	6:00 AM	6:15 AM	12	5	3	1		4				25	0	20
from	6:15 AM	6:30 AM	9	5	5	3	5					27	2	22
from	6:30 AM	6:45 AM	15	5	2	9	13	7				51	4	14
from	6:45 AM	7:00 AM	7	7	4	12	12	7				49	5	12
from	7:00 AM	7:15 AM	9	7	3	11	7	5				42	8	18
from	7:15 AM	7:30 AM	10	9	4	8	6	6				43	9	15
from	7:30 AM	7:45 AM	10	8	3	10	7	6				44	4	27
from	7:45 AM	8:00 AM	5	6	1	13	10	9				44	4	22
from	8:00 AM	8:15 AM	8	5	2	8	7	11				41	9	14
from	8:15 AM	8:30 AM	8	8	3	9	6	8				42	9	7
from	8:30 AM	8:45 AM	6	3		4	3	2				18	5	9
from	8:45 AM	9:00 AM	3				4	2				9	0	7
Total by Destination			107	70	34	88	82	68	0	0	0	449		
Max Queue													9	27

Slug line name Sydenstricker
Location number 2

Date 4/18/2006 *Counter* Barry *Time begin* 5:45 AM
Time end 9:00 AM

Time lot fills 8:15 AM *Time slug activity ends* 8:15 AM
Vehicles in lot 170 *Commuters left behind* not applicable
Open parking spaces -10
Parking % occupted 106%
Total slugs 182

notes: Slug line is not very busy, but lot fills by 8:30am.

To: / Time period:			Pentagon	Rosslyn	Crystal City	14th Street	L'Enfant Plaza	18th Street/Constitution	Memorial Bridge	23rd Street	Washington Navy Yard	Total	Max queue - vehicles	Max queue - people
from	5:30 AM	5:45 AM										0		
from	5:45 AM	6:00 AM										0		
from	6:00 AM	6:15 AM	7	3								10	2	5
from	6:15 AM	6:30 AM	17	4								21	1	4
from	6:30 AM	6:45 AM	31	5								36	1	8
from	6:45 AM	7:00 AM	25	1								26		12
from	7:00 AM	7:15 AM	26	3								29		13
from	7:15 AM	7:30 AM	31									31	4	4
from	7:30 AM	7:45 AM	12									12	3	
from	7:45 AM	8:00 AM	10									10	1	4
from	8:00 AM	8:15 AM	7									7	1	
from	8:15 AM	8:30 AM										0		
from	8:30 AM	8:45 AM										0		
from	8:45 AM	9:00 AM										0		
Total by Destination			166	16	0	0	0	0	0	0	0	182		
Max Queue													4	13

Slug line name Bobs
Location number 3

Date 4/19/2006 *Counter* SMK *Time begin* 5:30 AM
Time end 9:00 AM

Time lot fills 8:45 AM *Time slug activity ends* 9:00 AM
Vehicles in lot 345 *Commuters left behind* not applicable
Open parking spaces -15
Parking % occupted 105%
Total slugs 770

notes: The slugging activity takes place across Old Keene Mill Road from the park and ride lot in Springfield Plaza, creating a VERY unsafe environment as slugs must cross the 8 lane divded Old Keene Mill. The park and ride lot has 260 striped blue spaces, with an additional 70 spaces that are identified by a sign as park and ride spaces. Slugs also park at the American Legion Post lot.

2nd line

2nd line

To: / Time period:			Pentagon	Rosslyn	Crystal City	14th Street	L'Enfant Plaza	18th Street/Constitution	Memorial Bridge	23rd Street	Washington Navy Yard	Total	Max queue - vehicles	Max queue - people	Max queue - vehicles	Max queue - people
from	5:30 AM	5:45 AM										0				
from	5:45 AM	6:00 AM										0	1	8		
from	6:00 AM	6:15 AM				2	11	8	3	1		25		6	6	12
from	6:15 AM	6:30 AM		2		9	11	3	2			27	1	6	6	17
from	6:30 AM	6:45 AM		5		24	16	17	6	3		71	2	8	8	18
from	6:45 AM	7:00 AM		2		20	12	17	6	2		59	2	8	8	30
from	7:00 AM	7:15 AM		1		19	46	19	13	6		104	3	9	9	28
from	7:15 AM	7:30 AM		2		26	47	31	18	4		128	3	11	11	27
from	7:30 AM	7:45 AM				31	33	24	10	4		102	7	10	10	17
from	7:45 AM	8:00 AM				14	30	21	7	1		73	6	8	8	12
from	8:00 AM	8:15 AM				15	21	21	14	3		74	17	4	4	10
from	8:15 AM	8:30 AM				20	14	22	7			63	12	7	7	7
from	8:30 AM	8:45 AM				13	8	7	4	1		33	6	6	6	8
from	8:45 AM	9:00 AM				5	3	3				11	6	1	1	6
Total by Destination			0	12	0	198	252	193	90	25	0	770				
Max Queue													17	11	11	30

Slug line name American Legion Post
Location number 4

Date 4/19/2006 *Counter* Barry *Time begin* 5:45 AM
Time end 9:00 AM

Time lot fills 8:30 AM
Vehicles in lot 100
Open parking spaces -14
Parking % occupted 116%

Total slugs 22

Time slug activity ends 8:00 AM
Commuters left behind not applicable
notes: The slugging activity is very limited from this lot. Slugs use the lot to park and walk around to the Bobs lines located on the other side of the abandoned Circit City structure, which are very busy lines. Slugs that did use this lot had pre-determined pick up times with the drivers. Slugs would simply park and jump into a waiting car or only have to wait a few minutes till their ride showed up.

To: / Time period:			Pentagon	Rosslyn	Crystal City	14th Street	L'Enfant Plaza	18th Street/Constitution	Memorial Bridge	23rd Street	Washington Navy Yard	Total	Max queue - vehicles	Max queue - people
from	5:30 AM	5:45 AM										0		
from	5:45 AM	6:00 AM										0		
from	6:00 AM	6:15 AM										0		
from	6:15 AM	6:30 AM	8									8		
from	6:30 AM	6:45 AM										0		
from	6:45 AM	7:00 AM										0		
from	7:00 AM	7:15 AM	2									2		
from	7:15 AM	7:30 AM	2									2		
from	7:30 AM	7:45 AM	5									5		
from	7:45 AM	8:00 AM	5									5		
from	8:00 AM	8:15 AM										0		
from	8:15 AM	8:30 AM										0		
from	8:30 AM	8:45 AM										0		
from	8:45 AM	9:00 AM										0		
Total by Destination			22	0	0	0	0	0	0	0	0	22		
Max Queue													0	0

Slug line name Lorton
Location number 5

Date 4/20/2006 *Counter* SMK *Time begin* 5:45 AM
Time end 9:00 AM

Time lot fills n/a *Time slug activity ends* 7:40 AM
Vehicles in lot 36 *Commuters left behind* not applicable
Open parking spaces 130
Parking % occupted 22%

Total slugs 11

notes: The park and ride lot was VERY underused. Mostly construction workers parking and getting rides from other construction workers to the work site. No slugging activity to speak of...think all of the construction along Lorton Road might have something to do with such low slug numbers. Suggest re-counting after construction has been completed.

To: / Time period:			Pentagon	Rosslyn	Crystal City	14th Street	L'Enfant Plaza	18th Street/Constitution	Memorial Bridge	23rd Street	Washington Navy Yard	Total	Max queue - vehicles	Max queue - people
from	5:30 AM	5:45 AM										0		
from	5:45 AM	6:00 AM	1									1		
from	6:00 AM	6:15 AM	2									2	1	
from	6:15 AM	6:30 AM										0		
from	6:30 AM	6:45 AM	3									3	1	2
from	6:45 AM	7:00 AM	3									3		3
from	7:00 AM	7:15 AM										0		
from	7:15 AM	7:30 AM										0		
from	7:30 AM	7:45 AM	2									2		2
from	7:45 AM	8:00 AM										0		
from	8:00 AM	8:15 AM										0		
from	8:15 AM	8:30 AM										0		
from	8:30 AM	8:45 AM										0		
from	8:45 AM	9:00 AM										0		
Total by Destination			11	0	0	0	0	0	0	0	0	11		
Max Queue													1	3

Slug line name Old Hechingers
Location number 6

Date 4/25/2006 *Counter* SMK *Time begin* 5:45 AM *Time end* 9:00 AM

Time lot fills n/a
Vehicles in lot 501
Open parking spaces 77
Parking % occupted 87%
Total slugs 397

Time slug activity ends 8:50 AM
Commuters left behind not applicable
notes: There are 2 large shelters slugs wait in for rides, but there is only 1 line. Martz has a route that serves the lot, as well as some regional bus lines. Line of vehicles waiting for slugs to show up in the morning, and slugging does not really get going until approximatley 7. Lot did not fill up.

To: / Time period:			Pentagon	Rossiyn	Crystal City	14th Street	L'Enfant Plaza	18th Street/Constitution	Memorial Bridge	23rd Street	Washington Navy Yard	Total	Max queue - vehicles	Max queue - people
from	5:30 AM	5:45 AM										0		
from	5:45 AM	6:00 AM				3						3		3
from	6:00 AM	6:15 AM				7	2	2				11	1	5
from	6:15 AM	6:30 AM				6	2	7				15	5	3
from	6:30 AM	6:45 AM				13	4	8				25	9	
from	6:45 AM	7:00 AM				18	5	11				34	8	4
from	7:00 AM	7:15 AM		3	1	19		12				35	5	9
from	7:15 AM	7:30 AM				33	1	11				45	5	10
from	7:30 AM	7:45 AM				34		11				45	7	12
from	7:45 AM	8:00 AM				23		25				48	7	20
from	8:00 AM	8:15 AM				37	4	13				54	6	22
from	8:15 AM	8:30 AM				29		13				42	8	18
from	8:30 AM	8:45 AM				14		16				30	5	12
from	8:45 AM	9:00 AM				6		4				10	2	6
Total by Destination			0	3	1	242	18	133	0	0	0	397		
Max Queue													9	22

Slug line name Lake Ridge
Location number 7

Date 4/26/2006 *Counter* SMK Barry *Time begin* 5:30 AM *Time end* 9:00 AM

Time lot fills 8:30 AM *Time slug activity ends* 9:00 AM
Vehicles in lot 546 *Commuters left behind* not applicable
Open parking spaces 26
Parking % occupted 95% *notes*: Line by the McDonalds (the old Tacketts Mill line), is no longer operational...people going to that lot were waiting for the bus.
Total slugs 578 The slug line has moved to the park and ride lot, where there are now two lines operating.

2nd line

2nd line

To: / Time period:			Pentagon	Rosslyn	Crystal City	14th Street	L'Enfant Plaza	18th Street/Constitution	Memorial Bridge	23rd Street	Washington Navy Yard	Total	Max queue - vehicles	Max queue - people	Max queue - vehicles	Max queue - people
from	5:30 AM	5:45 AM	14									14		4		
from	5:45 AM	6:00 AM	7									7		10	3	2
from	6:00 AM	6:15 AM	28	5	7							40	2	12	2	5
from	6:15 AM	6:30 AM	24	4	3							31	3	4	3	6
from	6:30 AM	6:45 AM	43	7	7							57	5	5	7	8
from	6:45 AM	7:00 AM	27	10	13							50		12	4	9
from	7:00 AM	7:15 AM	36	12	20							68		13	4	11
from	7:15 AM	7:30 AM	45	7	9							61	3	8	3	5
from	7:30 AM	7:45 AM	30	23	21							74	8		2	14
from	7:45 AM	8:00 AM	39	12	14							65	14		5	7
from	8:00 AM	8:15 AM	31	5	7							43	12		3	6
from	8:15 AM	8:30 AM	19	6	11							36	8		5	5
from	8:30 AM	8:45 AM	18	6	5							29	6		4	5
from	8:45 AM	9:00 AM	1	1	1							3	1		2	
Total by Destination			362	98	118	0	0	0	0	0	0	578				
Max Queue													14	13	7	14

Slug line name Potomac Mills
Location number 8

Joe Pops
SMK

Date 5/2/2006 *Counter* Barry *Time begin* 5:30 AM *Time end* 9:00 AM

Time lot fills 8:30 AM *Time slug activity ends* 9:00 AM
Vehicles in lot 936 *Commuters left behind* not applicable
Open parking spaces 75
Parking % occupted 93%
Total slugs 688

notes: 3 lines at this location. Did not get going until 6AM. Omni Bus buses serve the park and ride lot. Vehicles parked outside of the designated park and ride spaces within the mall parking lot, as those spaces became full.

			3rd line			2nd line									2nd line		3rd line	
To:																		
Time period:			Pentagon	Rosslyn	Crystal City	14th Street	L'Enfant Plaza	18th Street/Constitution	Memorial Bridge	23rd Street	Washington Navy Yard	Total	Max queue - vehicles	Max queue - people	Max queue - vehicles	Max queue - people	Max queue - vehicles	Max queue - people
from	5:30 AM	5:45 AM										0						
from	5:45 AM	6:00 AM										0						
from	6:00 AM	6:15 AM		4	1							5	2	4				
from	6:15 AM	6:30 AM	7	5	7	1						20	1	4		2	3	4
from	6:30 AM	6:45 AM	20	9	3	4		2				38	2	6		5		12
from	6:45 AM	7:00 AM	27	13	15	8	2	3				68	3	10	1	5	5	12
from	7:00 AM	7:15 AM	22	18	14	8		12			2	76	5	9	2	7	6	
from	7:15 AM	7:30 AM	24	24	10	10		2				70	5	4	1	13	8	
from	7:30 AM	7:45 AM	39	14	11	26		7				97	2	16	5	15	9	1
from	7:45 AM	8:00 AM	21	32	9	16	2	15				95	2	19	6	28	3	3
from	8:00 AM	8:15 AM	23	30	10	25		7				95	6	11	2	30		14
from	8:15 AM	8:30 AM	32	13	8	16	2	15				86	7		4	23		11
from	8:30 AM	8:45 AM	14	7	3	6		5				35	3	3		6	2	4
from	8:45 AM	9:00 AM	2			1						3			1		1	
Total by Destination			231	169	91	121	6	68	0	0	2	688						
Max Queue													7	19	6	30	9	14

Slug line name Horner Road
Location number 9

SMK
Joe Pops
SMK

Date 5/3/2006 *Counter* Barry *Time begin* 5:30 AM
Time end 9:00 AM

Time lot fills 8:00 AM *Time slug activity ends* 8:15 AM
Vehicles in lot 2363 *Commuters left behind* not applicable
Open parking spaces -39
Parking % occupied 102%
Total slugs 1566

notes: 4 lines at this location. Omni Bus buses serve the park and ride lot. Sluging activity basically over around 8 as lot got full, but a few individuals did get picked up after that.

			3rd line	2nd line				4th line					2nd line				3rd line		4th line	
To:																				
Time period:			Pentagon	Rosslyn	Crystal City	14th Street	L'Enfant Plaza	18th Street/Constitution	Memorial Bridge	23rd Street	Washington Navy Yard	Total	Max queue - vehicles	Max queue - people	Max queue - vehicles	Max queue - people	Max queue - vehicles	Max queue people	Max queue - vehicles	Max queue - people
from	5:30 AM	5:45 AM										0								
from	5:45 AM	6:00 AM	19	1	3	4		3				30	13	7		32		16		1
from	6:00 AM	6:15 AM	55	34	19	17	12	7			6	150	22	8		30		12		8
from	6:15 AM	6:30 AM	79	28	25	24	15	12		4	4	191	21	10		37	2	13		11
from	6:30 AM	6:45 AM	73	40	33	44	24	16		4	8	244	27	24		39		12		12
from	6:45 AM	7:00 AM	39	38	31	57	19	17	3		6	210	18	4		26		35		25
from	7:00 AM	7:15 AM	73	30	39	58	25	33	4	7	9	278	18	6	4	28		27		31
from	7:15 AM	7:30 AM	42	25	22	52	28	36	3	3	16	227	5	6	3	24		20		19
from	7:30 AM	7:45 AM	24	5	10	34	16	28		3	4	124		6	5	24	3		1	8
from	7:45 AM	8:00 AM	19	6	4	32	12	8				81	2		3	18	3		2	4
from	8:00 AM	8:15 AM	4	1		4						9	2		5		6			
from	8:15 AM	8:30 AM	4		1	4		2				11	2		4		4			2
from	8:30 AM	8:45 AM	4			3						7	3		4		4			
from	8:45 AM	9:00 AM	4									4					5			
Total by Destination			439	208	187	333	151	164	10	21	53	1566								
Max Queue													27	24	5	39	6	35	2	31

Slug line name Dumfries
Location number 10

Date 4/25/2006 *Counter* Barry *Time begin* 5:30 AM
Time end 8:30 AM

Time lot fills n/a *Time slug activity ends* 8:30 AM
Vehicles in lot 370 *Commuters left behind* not applicable
Open parking spaces -19
Parking % occupted 105%
Total slugs 366

notes: Lot filled rather early, as slugging was heavy early on and then subsided.

To: / Time period:			Pentagon	Rossiyn	Crystal City	14th Street	L'Enfant Plaza	18th Street/Constitution	Memorial Bridge	23rd Street	Washington Navy Yard	Total	Max queue - vehicles	Max queue - people
from	5:30 AM	5:45 AM	27	3	5	19	2	3				59		37
from	5:45 AM	6:00 AM	13	3	4	12	3	2				37		41
from	6:00 AM	6:15 AM	37	7	8	8	5					65		66
from	6:15 AM	6:30 AM	44	9	16	15	5					89	9	54
from	6:30 AM	6:45 AM	12	3	3	7	5					30	11	6
from	6:45 AM	7:00 AM	10	1	3	4	2					20	6	2
from	7:00 AM	7:15 AM	8	1	5	3	1					18	9	2
from	7:15 AM	7:30 AM	10		2	4						16	7	
from	7:30 AM	7:45 AM	12			1	1					14	5	
from	7:45 AM	8:00 AM	9			2						11	2	1
from	8:00 AM	8:15 AM	2			2						4	3	
from	8:15 AM	8:30 AM	3									3	2	
from	8:30 AM	8:45 AM										0		
from	8:45 AM	9:00 AM										0		
Total by Destination			187	27	46	77	24	5	0	0	0	366		
Max Queue													11	66

Slug line name Mine Road
Location number 11

Date 4/27/2006 / 4/12/2006

Counter SMK / Barry

Time begin 5:30 AM
Time end 9:00 AM

Time lot fills 8:30 AM
Vehicles in lot 747
Open parking spaces -21
Parking % occupted 103%
Total slugs 475

Time slug activity ends
Commuters left behind not applicable
notes: 2 lines at this location. Both Fredericksburg Transit and Martz buses serve the park and ride lot. The majority of the parking lot was full by 8:15, but vehicles parked along the side of the roads and in non-designated spaces including grass areas. Slugs asked me to increase number of parking spaces and disallow Hybred cars in the HOV lane...they started their own "I hate Hybreds" club.

				2nd line											2nd line	
To: / Time period:			Pentagon	Rosslyn	Crystal City	14th Street	L'Enfant Plaza	18th Street/Constitution	Memorial Bridge	23rd Street	Washington Navy Yard	Total	Max queue - vehicles	Max queue - people	Max queue - vehicles	Max queue - people
from	5:30 AM	5:45 AM	24			10	8					42	2	26		14
from	5:45 AM	6:00 AM	23		2	17	13					55	0	28		18
from	6:00 AM	6:15 AM	23		5	10	10					48	0	31	2	12
from	6:15 AM	6:30 AM	45		7	7	7	6				72	0	30	2	22
from	6:30 AM	6:45 AM	24		3	12	17	2			2	60	0	31		24
from	6:45 AM	7:00 AM	30		5	14	8	9			2	68	1	23		22
from	7:00 AM	7:15 AM	11		2	3	11					27	0	16		20
from	7:15 AM	7:30 AM	8		4	6	11	3				32	1	10		24
from	7:30 AM	7:45 AM	6			9	13	4				32	1	4		12
from	7:45 AM	8:00 AM	3			6	6	4				19	4	0	3	8
from	8:00 AM	8:15 AM	1			2	3	1				7	4	0	4	0
from	8:15 AM	8:30 AM	7	1		3	2					13	3	0	4	0
from	8:30 AM	8:45 AM										0				
from	8:45 AM	9:00 AM										0				
Total by Destination			205	1	28	99	109	29	0	0	4	475				
Max Queue													4	31	4	24

Slug line name Route 610 -Stafford
Location number 12

Date 4/11/2006 *Counter* SMK Barry *Time begin* 5:30 AM *Time end* 9:00 AM

Time lot fills 8:15 AM
Vehicles in lot 846
Open parking spaces -106
Parking % occupted 114%
Total slugs 623

Time slug activity ends 8:40 AM
Commuters left behind not applicable
notes: 2 lines at this location. One line VERY busy the entire time and slugs ALWAYS outnumbered the drivers. The second line (in yellow below) is much slower after initial morning rush. Both Fredericksburg Transit and Martz buses serve the park and ride lot. The majority of the parking lot was full by 8:15, but vehicles parked along the side of the roads and in non-designated spaces.

To: / Time period:			Pentagon	Rosslyn	Crystal City	14th Street	L'Enfant Plaza	18th Street/Constitution	Memorial Bridge	23rd Street	Washington Navy Yard	Total	Max queue - vehicles	Max queue - people	2nd line Max queue - vehicles	2nd line Max queue - people
from	5:30 AM	5:45 AM	4	2	2	4	4				2	18	0	43		27
from	5:45 AM	6:00 AM	19	19	6	17	7				3	71	0	48		18
from	6:00 AM	6:15 AM	26	18	12	3	10	4			11	84	0	42		8
from	6:15 AM	6:30 AM	19	14	23	4	3				3	66	0	43	2	6
from	6:30 AM	6:45 AM	32	32	14		2				5	85	0	49	1	2
from	6:45 AM	7:00 AM	23	20	10							53	0	37		
from	7:00 AM	7:15 AM	34	21	21	1					4	81	0	38		
from	7:15 AM	7:30 AM	26	12	9							47	0	27		
from	7:30 AM	7:45 AM	21	11	16							48	0	28		
from	7:45 AM	8:00 AM	13	7	3							23	2	10		
from	8:00 AM	8:15 AM	8	11	8							27	2	6		
from	8:15 AM	8:30 AM	9	4	4							17	2	4		
from	8:30 AM	8:45 AM			3							3	2	2		
from	8:45 AM	9:00 AM										0				
Total by Destination			234	171	131	29	26	4	0	0	28	623				
Max Queue													2	49	2	27

Slug line name Route 3 - Gordon Road
Location number 14

Date 4/4/2006 *Counter* SMK *Time begin* 5:30 AM
Time end 8:30 AM

Time lot fills not full *Time slug activity ends* 7:35 AM
Vehicles in lot 414 *Commuters left behind* not applicable
Open parking spaces 180
Parking % occupted 70%
Total slugs 130

notes: Very busy in the early morning, but slug activity basically finished by 7AM. Had a few between 7-7:30 with last ones at 7:35 AM. One vehicle showed up at 8:10 AM, waited a few minutes then left.

To: / Time period:			Pentagon	Rosslyn	Crystal City	14th Street	L'Enfant Plaza	18th Street/Constitution	Memorial Bridge	23rd Street	Washington Navy Yard	Total	Max queue - vehicles	Max queue - people
from	5:30 AM	5:45 AM	14	4	4	1	2					25	0	22
from	5:45 AM	6:00 AM	13	3	4	4	3					27	0	14
from	6:00 AM	6:15 AM	8	2	4	2	5					21	8	0
from	6:15 AM	6:30 AM	9	1	2		1					13	2	2
from	6:30 AM	6:45 AM	11	1	3	1	3					19	2	9
from	6:45 AM	7:00 AM	6			2						8	2	1
from	7:00 AM	7:15 AM	7		3	2						12	0	5
from	7:15 AM	7:30 AM	3									3	0	3
from	7:30 AM	7:45 AM	2									2	0	2
from	7:45 AM	8:00 AM										0		
from	8:00 AM	8:15 AM										0	1	
from	8:15 AM	8:30 AM										0		
from	8:30 AM	8:45 AM										0		
from	8:45 AM	9:00 AM										0		
Total by Destination			73	11	20	12	14	0	0	0	0	130		
Max Queue													8	22

Slug line name Route 17
Location number 15

Date 4/5/2006 *Counter* Barry *Time begin* 5:30 AM
Time end 8:30 AM

Time lot fills not full *Time slug activity ends* 8:05 AM
Vehicles in lot 654 *Commuters left behind* not applicable
Open parking spaces 352
Parking % occupied 65%
Total slugs 202

notes: Very busy in the early morning, but slug activity basically finished by 745AM. Glut of slugs in early morning with few drivers, reversed in late morning with glut of drivers and few slugs. Huge parking lot with plenty of spaces left open.

To:			Pentagon	Rosslyn	Crystal City	14th Street	L'Enfant Plaza	18th Street/Constitution	Memorial Bridge	23rd Street	Washington Navy Yard	Total	Max queue - vehicles	Max queue - people
Time period:														
from	5:30 AM	5:45 AM	5									5	0	15
from	5:45 AM	6:00 AM	6				3					9	0	8
from	6:00 AM	6:15 AM	15	5	4		9					33	0	20
from	6:15 AM	6:30 AM	24	3	2	4						33	0	14
from	6:30 AM	6:45 AM	21	3	2	6	2	2				36	2	7
from	6:45 AM	7:00 AM	11	9	3	3		2				28	5	3
from	7:00 AM	7:15 AM	15	5				4				24	5	5
from	7:15 AM	7:30 AM	5	2		6	1					14	9	3
from	7:30 AM	7:45 AM	6	3		2	1					12	7	0
from	7:45 AM	8:00 AM	3		2							5	4	0
from	8:00 AM	8:15 AM	3									3	2	0
from	8:15 AM	8:30 AM										0	0	0
from	8:30 AM	8:45 AM										0		
from	8:45 AM	9:00 AM										0		
Total by Destination			114	30	13	21	16	8	0	0	0	202		
Max Queue													9	20

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As commutes begin earlier, new daily routines emerge

By Larry Copeland, Haya El Nasser and Paul Overberg, USA TODAY

SMYRNA, Ga. — Harold Shaw leaves his home in suburban Atlanta at 5:30 a.m. to drive the 34 miles to his job at a fiber-optics cable plant. He gets there early enough to eat breakfast and read the newspaper.

"The traffic is not as busy this time of day," Shaw, 60, says after whipping into a QuikTrip store Monday to use the ATM and get a drink. "It's not as stressful if you don't have to deal with a lot of congestion."

But Shaw's reliable pre-dawn commute forces sacrifices in his personal life. He used to turn in after catching the first few minutes of the 11 o'clock news. He'd walk or jog in the mornings. Now, he goes to bed at 9 p.m. and rolls out at 4:30 a.m. "If I leave home after 6 and there's an accident," he says, "I'm late for work."

Americans are leaving home earlier and earlier to beat the rush and get to work on time. Census data released today document the ever-lengthening commutes: In 2000, 1 worker in 9 was out the door by 6 a.m., the new data says; by 2006, it was 1 in 8. That might not seem like a big change, but it has put more than 2.7 million additional drivers — for a total of 15 million — on pre-dawn patrol.

YOUR STORY: How bad is your commute? How early are you out the door, and how does it impact the rest of your day?

This "commuting creep" is changing the lives of tens of millions of Americans. It affects everything from the breakfast-food industry to television viewership trends, from traffic-signal timing to newspaper delivery times, from carpooling patterns to personal fitness routines. Increasingly early commutes also are altering workers' relationships with their families.

"What we're seeing now is this tremendous amount of traffic even before 5 a.m. It seems there's a big lifestyle change here," says Alan Pisarski, author of a wide-ranging study on commuting in the USA.

For Martha Perry of Wyandotte, Mich., the need to get to work early — and stay late — to avoid traffic means 13-hour workdays and less time with her daughter Isabella, 2.

Perry, 34, is late if she's not on metro Detroit's Interstate 75 by 6 a.m. It's a 45-mile commute to Auburn Hills, where she manages transportation operations for Insight Network Transportation. "I want to be walking in the door between 7 and 7:30," she says.

She stays at work until 6 p.m. or later to avoid heavy traffic going home. Her parents and in-laws live nearby and help care for Isabella. The lifestyle seems to work, but Perry and her husband, Scott, 30, are unsure about having more children. "It's still tough to find the time to care for one," she says.

Perry says she and Scott have built the long days into their lifestyle. "We just try and make it work," she says. "He's very supportive of my career. He's offered to move close to my workplace, but I just really enjoy where we live."

Elliot Bloom has a different take on pre-dawn commuting. He leaves his Denville, N.J., home at 5:15 a.m. to beat the traffic into Manhattan. His commute takes about 45 minutes — compared with at least 90 minutes during rush hour. Bloom, 51 and a marathon runner, spends the early morning training in Central Park and working out at the gym, then gets to his job as chief communications officer for Travelport by 9 a.m.

"I could've chosen the path of 'woe is me' and fight the traffic and let it destroy my life," he says. "Instead, I've turned it around and made it a positive for my health and a hobby I enjoy greatly."

Going nowhere fast

American drivers spend 3.7 billion hours a year stuck in traffic delays, the Texas Transportation Institute found in its 2005 study of congestion in 85 metropolitan areas. Much of the gridlock is caused by unexpected incidents for which drivers cannot plan.

"Because the roadways are not as reliable as most commuters would like, they have to build in an extra amount of time to ensure they get to work on time," says David Schrank, co-author of the Texas Transportation Institute's Urban Mobility Report. "Sometimes that means they're there 20 to 30 minutes early. Sometimes it means they're just in time."

G.H. Caldwell of this Atlanta suburb is another commuter whose sleep habits have been affected by the need to get on the road earlier. He goes to bed about 10 p.m. so he can get out of the house by 6:15 a.m. It's critical that he hits Interstate 285 by 6:30. "If I make it, it takes me 30 to 45 minutes to get to work," says Caldwell, 57, a facilities engineer who runs a data center. "If I don't, it takes me an hour to an hour and a half."

Lawrence Gilligan, who teaches math at the University of Cincinnati, requests 8 a.m. classes "so I can beat the rush."

Gilligan has sacrificed his late nights watching David Letterman to get to bed by 10 p.m. His commute takes about 40 minutes on good days, a lot longer on bad days.

Once, he says, traffic was so heavy a man in front of him pulled onto the shoulder, got out and strolled to a portable toilet alongside Interstate 71. When he returned, traffic had moved just two car lengths. "I wanted to get out and give the guy a high-five," says Gilligan, 59.

Part of "commuting creep," of course, stems from the USA's booming population. The nation reached 300 million last fall and is on pace to hit 400 million by 2040.

As housing prices soared in many areas in recent years, people sought cheaper homes and found them where land is cheaper: farther out. Sprawl and more cars on the road worsened congestion and lengthened commutes even for those who hadn't moved to far-flung locales.

In addition, more companies are allowing — even encouraging — employees to work flexible hours, from 6 a.m. to 3 p.m., for example. That expands heavy traffic to once-light periods of the day.

The road warriors of the wee hours aren't all commuters. Pisarski says some travel surveys have found that up to 40% of early-morning drivers aren't commuters. They're students, people doing things associated with work such as picking up laundry, retirees running errands and others.

Early-bird marketing

The wave of pre-dawn commuters has created marketing challenges and opportunities.

Fast-food chains and coffee chains are battling to cater to bleary-eyed drivers by opening earlier. TV morning news shows have pushed up their starting times and now air at dawn or earlier. Newspaper publishers struggle to get their editions on doorsteps before people leave.

"Lengthening commute times of Americans has had a major impact on not only when and how Americans consume the news but what kind of news they consume and whether they consume it at all," says Tom Rosenstiel, director of The Project for Excellence in Journalism in Washington, D.C.

There is ample evidence that longer commutes are the main reason audiences for the three broadcast network evening newscasts are half what they once were, he says: "People are not home at 6:30" p.m.

Now they're increasingly not home at 6:30 a.m. either, when many newspaper carriers hit their routes.

"There's a tension between making the paper as complete as the Internet might be and getting it to them in the middle of the night as opposed to the beginning of the morning," Rosenstiel says. "For much of the last decade, the growth area in news (has been) early-morning television. These people who are waking up very, very early, in the dark, were turning on the television to

watch local news and traffic and weather."

Local stations have gone from airing news at 6:30 a.m., before the network shows come on, to 6 a.m., then 5:30 a.m. and now 5 a.m.

This "time creep" has perhaps reached its limit, Rosenstiel says. After years of gains, that segment stopped gaining viewers last year. "It may be that the audience just has so many other ways to get this information or they just may be too sleepy to want it," he says.

If they're sleepy, they may need coffee and food. At a conference of McDonald's restaurant managers in Las Vegas this summer, company executives encouraged the managers to push their 5-7 a.m. business because Americans are driving to work earlier.

The breakfast rush, which used to start at 6 a.m., essentially has moved up an hour. About 75% of McDonald's 16,700 U.S. restaurants now open by 5 a.m.; the company would like all of them to adopt early hours. About 30% of the company's U.S. restaurants are open 24 hours at least some days, spokeswoman Danya Proud says.

Several competitors are trying to capture this fast-growing segment as the 24-7 economy expands well beyond 9-to-5 work shifts. Burger King has begun offering a $1 Breakfast Value Menu. Starbucks serves warm egg-and-muffin sandwiches. New breakfast menus are on the way at thousands of Wendy's restaurants.

Michael Silverstein, senior vice president at Boston Consulting Group, a consumer marketing firm in Chicago, lives in Winnetka, a northern suburb. He gets up at 4:30 a.m. and sees lights flick on in neighbors' houses about 5 a.m.

"Instead of doing exercise in the morning," he says, "they're getting in their car" in a race to beat traffic.

Earlier commutes affect not only people's sleep but their relationships with their families, says Stephanie Coontz, director of research and public education at the Council on Contemporary Families.

"It's a real strain on the family in a lot of ways," she says. "I know some couples who end up staying in different rooms."

Coontz says that and different schedules "cut in to communication and non-communicative closeness" between husbands and wives, parents and children.

When teenagers are in the house, things get even more complicated and tense because teens have different body clocks. They stay up late and sleep in.

'Stressful' start to the workday

Families who have younger children face challenges, too. The burden of getting the kids off to school is on one parent's shoulders because the other parent is already on the road.

"It's a very stressful way to start the workday," says Coontz, professor of history and family studies at The Evergreen State College in Olympia, Wash.

There can be an upside to an early commute if it means getting home earlier to take the kids to soccer practice, help them with homework and have dinner together.

That's the case with Dan and Tina Ahlgren. They used to commute separately from their home on the north side of Indianapolis to jobs near downtown — she's a math teacher; he works for a shopping center developer.

Rising gasoline prices and Dan's frustration over spending 45-60 minutes making the 19-mile, one-way trip made them adjust their schedules so they could ride to work together.

The change has cut nearly an hour off Dan's daily round-trip commute and allows them to reduce vehicle wear and tear, slice their gas costs nearly in half and spend more time together.

"There really isn't a downside," says Tina Ahlgren, 24.

"Now we both get home by about 4:30 or 5 and Dan isn't stressed out or tense from having to spend so much time in traffic. Moving his commute an hour has made an incredible difference in our marriage. We love it," she says.

There may be another positive in one commuting pattern that's on the rise: carpooling. After declining the first part of this decade, the percentage of workers who shared a ride began rising in 2005 as gas prices soared. They made up 11.2% of all workers in 2006.

Ever-earlier auto commuting hasn't affected public transit use. About 6.7 million workers regularly used it in 2006, or 4.5% of workers who labor outside the home. That's relatively unchanged from the 4.9% level in 2000.

Men are more likely to carpool than women — 11.7% vs. 10.6% — and Coontz says that's good. Spending time with other men on the road is a form of male bonding that many men don't find in the office or on the racquetball court. Unlike women, "talking time" is not something men go out of their way to schedule, but they still need it, she says.

Coontz's husband carpooled before he retired from the airlines and misses the time he spent with car buddies, she says.

In the meantime, commuters such as Barbara Jackson keep hitting the road early. She leaves home in her Atlanta suburb at 5:30 every morning for the drive to the train station and her job as an information technology business analyst.

She goes to bed at 10 p.m. "when *24* ends. That's all I care about." She makes it to work by 6:30 a.m.

"I love it," says Jackson, 64. "I'm at work before everybody else gets there. I like the traffic at this hour, too. It's real peaceful."

Copeland reported from Atlanta; El Nasser and Overberg from McLean, Va. Contributing: Laura Bruno of the Daily Record in Morristown, N.J., Tim Evans of the Indianapolis Star, Ben Schmitt of the Detroit Free Press and Lori Kurtzman of The Cincinnati Enquirer

READERS: How bad is your commute? How early are you out the door, and how does this time impact the rest of your daily life?

Find this article at:
http://www.usatoday.com/news/nation/census/2007-09-12-commute-routine_N.htm?loc=interstitialskip

G

Many More People Commuting Along I-395/Route 1 Corridor Inside The Beltway Are Using HOV And Transit Than Driving Alone

Commuter Counting Program Measures Transit & HOV Usage --

65% of Inbound Commuters Are Using HOV or Transit in The

6:15 a.m. – 9:15 a.m. Peak Period

PRESS RELEASE

For Release:

September 10, 2007

Contact: Kala Quintana

703/ 524-3322 ext. 104

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Arlington, VA – Most area commuters and transportation planners have long thought that the best way to travel the I-395/Route 1 corridor inside Virginia's portion of the Beltway was to use transit and High Occupancy Vehicles (HOV). A new study confirms that two-thirds of commuters are taking advantage of the extensive transit and HOV opportunities in this corridor.

This is the second in a series of corridor surveys that the Northern Virginia Transportation Commission (NVTC) requested to measure the usage of various commuting modes. The first study, released last year at this time, addressed transit, HOV and Single Occupant Vehicles (SOV) shares in the I-66 corridor at a Glebe Road screenline. This second study measures traffic inside the Beltway on I-395/Route 1, also at a Glebe Road screenline (see Figure 1).

The Virginia Department of Transportation (VDOT) provided the funding, and the Metropolitan Washington Council of Governments (MWCOG) performed the study. NVTC provided the transit data for the corridor. Data were collected over several days in September, 2006.

The study of the I-395/Route 1 corridor inside the Beltway showed that on an average work day during the peak commuter period of 6:15 am to 9:15 am approximately 94,300 people traveled inbound in this corridor on roads and transit routes, measured at Glebe Road.

During this time period:

- People traveling in shared use modes (transit or HOV 2+) accounted for about 65 percent (roughly 61,000 people) of the total inbound travel;
- Thirty-four percent of commuters rode transit (roughly 32,000 people);
- Thirty-one percent used HOV 2+ (roughly 29,000 people); and
- Thirty-five percent (roughly 33,000 people) drove alone.

During the peak hour (7:30 – 8:30 am) almost 40% of total peak period travel occurs. In that hour transit's share increased to 36% with HOV 2+ at 30% and SOV at 34%.

Transit options in this corridor include Metrorail's Yellow and Blue Line, the Virginia Railway Express, and commuter and local buses (PRTC OmniRide and MetroDirect, Alexandria DASH, Fairfax Connector, and WMATA's Metrobus). During the morning peak period, Metrorail carried 57%, or 18,100, of the total transit trips in this corridor. VRE carried 12%, or 3,900 of the transit trips and the commuter and local buses carried the remaining 31% or 10,000 people.

The HOV 2+ trips across the screenline are comprised of 25% HOV-2 and 75% HOV 3+. Over 90% of the HOV 3's are on the Shirley Highway HOV lanes.

Including bus passengers, the HOV lanes on I-395 inside the Beltway carry an average of 5,100 persons per lane per hour compared to only 1,500 on the I-395 general purpose lanes during the restricted period (6:30 am – 9:00 am). Thus, the HOV lanes carry 3.5 times as many people per lane. Transit shares were also noteworthy on roads in the corridor other than I-395, including US Route 1 (12%) and Columbia Pike (29%).

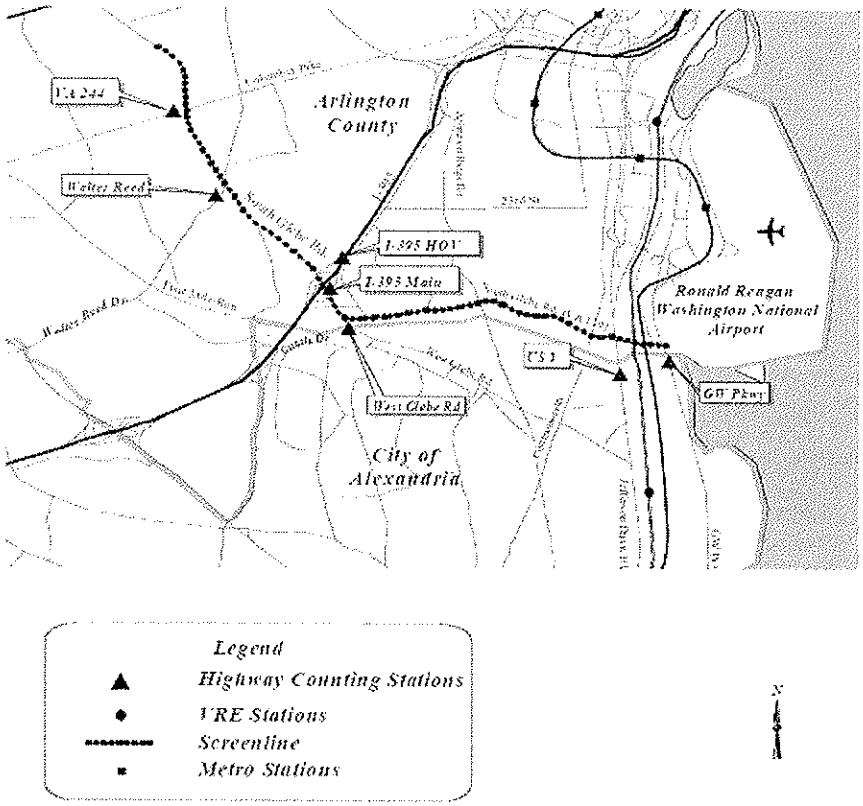
"Clearly, Northern Virginians are making the right move to transit and ride sharing. The fact that two-thirds of all commuters in this corridor are using these facilities and services is proof that smart investments in our transportation infrastructure pay off," said NVTC Chairman David Snyder. "Our hope is that this series of studies will help guide future transit investments and encourage the necessary funding for the balanced transportation system that Virginians deserve," said Snyder.

The findings for I-395/Route 1 are remarkably similar to those for I-66 in last year's study. For I-66 inside the Beltway at Glebe Road, transit carried 37% of peak period commuters and HOV carried 26% for a combined total of almost two-thirds.

Data collection for NVTC's third corridor study is set for this fall, also in the I-95/I-395 corridor, but at a screenline outside the Beltway. The commission and its partners anticipate the findings will help inform the region's governments as they evaluate the proposed HOT lane project in that corridor.

For more information contact the Northern Virginia Transportation Commission by going to www.thinkoutsidethecar.org. For a copy of the complete study go to: http://www.thinkoutsidethecar.org/research/completed_research.asp.

Figure 1
Northern Virginia I-95 / I-395 Corridor
Inner Area (South Glebe Road) Screenline



Potomac News.com

Mass transit should be funding priority

The Lane Ranger

Potomac News
Monday, September 10, 2007

Mass transit works.

More than half of the commuters who drive toward the District of Columbia carpool, ride a bus or take the Metro.

The region's bus and Metro systems are being utilized by more commuters than those who drive on highways in single-occupant vehicles, according to the Northern Virginia Transportation Commission.

Commuting alone in a car isn't progressive anymore and it certainly isn't worth the time, money or pollution.

The state's transportation funding should, of course, fix badly deteriorated and clogged surface roads, while also ensuring that bridges and culverts are safe.

But most of the money spent in Northern Virginia should focus on upgrading and expanding our transit system.

Tonight the Potomac and Rappahannock Transportation Commission is receiving comments on its long-range plan for the next 23 years of bus service from Prince William County. One of the proposals for the future of PRTC includes sending buses to Tysons Corner, Bailey's Crossroads and Eisenhower Avenue.

Soon, the Northern Virginia Transportation Authority will begin to commit its first ever contribution to the aging, over capacity, budget-strapped Metro rail system.

This is an unprecedented $50 million investment. Kudos to the Virginia General Assembly for finally making this decision. It's better late than never.

Now for the problems outside the Capital Beltway.

Interstate 95 is expected to be a broken highway in a few decades if no capacity improvements are made and if the region continues to grow as expected.

Gasoline-powered vehicles, especially ones sitting in gridlock with single passengers, contribute to global warming, something our region and our world can't afford. Getting workers out of cars and into mass transit could cut the region's carbon emissions greatly.

That's an investment the General Assembly should begin discussing next.

This year is key for making change in our region's priorities: it's an election year, when every delegate and senator in Virginia trying to keep his or her job.

The funding won't shift to accommodate an expanded mass transit system in Northern Virginia if politicians don't push it there.

This saying proves true in the suburbs of our nation's capital: if you build it, they will come.

Now the question remains: if you haven't built it, why should you be in office?

Send signal questions or report an issue to the Virginia Department of Transportation's Smart Traffic Center: call 703-383-VDOT, write NOVAinfo@VDOT.virginia.gov or visit virginiadot.org/travel/citizen.asp

For the latest road conditions, call 511 from any telephone in Virginia.

> The construction will add another major disruption to Northern Virginia's highways, whose commuters recently celebrated the end of an eight-year overhaul of the Springfield interchange, the most ambitious and gridlock-spawning road construction project in Virginia history.

Happy travels, Virginians!

In related Virginia transportation news, about two-thirds of commuters are using public transit and high-occupancy vehicle lanes in the I-395 and Route 1 corridors. That's according to a new study released late last week by the **Northern Virginia Transportation Commission**.

The study contains some interesting statistics:
During the morning travel period surveyed, 6:15 a.m.-9:15 a.m. ...
» About 65 percent of people traveled through the corridor via public transit or rode in shared vehicles via HOV lanes.
» 34 percent of commuters used transit.
» 31 percent used HOV +2 lanes.
» Peak morning travel is between 7:30 a.m. and 8:30 a.m.

Additionally ...
» During the morning peak period, 57 percent of those using transit did so via **Metrorail**.
» **Virginia Rail Express** carried 12 percent of transit trips.
» Thirty-one percent of transit trips were with commuter and local buses.

» "Va. HOT Lane Project to Start Early Next Year" [WaPo]
» "Analysis of AM Peak Period Travel in Northern Virginia's I-95/I-395 Corridor. (August, 2007)" [NVTC]
» **EARLIER:** "Ambitious Construction Projects Merging to Create Traffic Nightmare" [WaPo]

Photo by Michael Robinson-Chavez/The Washington Post

Posted by Michael Grass at 9:07 AM on September 10, 2007
Tagged in Fairfax County , Free Ride , News , Top Stories , Transit , Tysons Corner , Virginia

Comments (0)

Post a Comment

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Comments: (you may use HTML tags for style)

Potomac News.com

Study: More commuters carpooling

By LILLIAN KAFKA
lkafka@potomacnews.com
Monday, September 10, 2007

High Occupancy Vehicle lanes on Interstate 395 carry three and a half times more passengers than do regular single occupancy lanes inside the Capital Beltway.

That's according to a recent study conducted by the Northern Virginia Transportation Commission that analyzed morning rush hour traffic in September 2006.

Study results show that two-thirds of commuters inside the Beltway are using mass transit and HOV lanes to get to work.

"Our hope is that this series of studies will help guide future transit investments and encourage the necessary funding for the balanced transportation system that Virginians deserve," said NVTC Chairman David Snyder in a news release.

The Metropolitan Washington Council of Governments performed this study, "Analysis of AM Peak Period Travel In Northern Virginia's I-95/I-395 Corridor," with funding from the Virginia Department of Transportation. NVTC also provided data for the study.

MCOG counted vehicles and occupants last September and October between 6:15 a.m. and 9:15 a.m. at South Glebe Road in Arlington.

During that time, an estimated 94,300 people traveled toward the District on roads and on transit routes as measured at Glebe Road, according to the study.

Of these people, 61,000 used transit or HOV 2 or more; 34 percent rode transit, 31 percent used HOV 2 or more and 35 percent drove alone.

During the peak morning travel hour between 7:30 and 8:30 a.m., transit carried an increased 36 percent of all commuters.

The study considered transit as Yellow and Blue lines on Metro, Virginia Railway Express, OmniRide and MetroDirect buses, Alexandria DASH, Fairfax Connector and Metro buses.

Metro carries the most commuters with 57 percent of total transit ridership.

VRE carries 12 percent of the commuters during the morning rush. Commuter bus systems carry a total of 31 percent of commuters.

Drivers test paying by mile instead of gas tax

By Larry Copeland, USA TODAY

Beginning early next year, drivers in six states will begin testing a new way to pay for roads and transit: Commuters will be charged for the miles they drive rather than paying taxes on gasoline purchased.

Researchers from the University of Iowa Public Policy Center will install computers and satellite equipment in the vehicles of 2,700 volunteers — 450 each from Austin, Baltimore, Boise, San Diego, eastern Iowa and the Research Triangle region of North Carolina.

Over the next two years, the drivers will get sample monthly bills for the number of miles they've driven. They can compare what they now pay in gasoline taxes with what they would have paid in per-mile fees.

"We want to assess the public's attitudes and acceptance toward a system like this," says Jon Kuhl, principal investigator on the $16.5 million Road User Charge Study and chairman of the University of Iowa Department of Electrical and Computer Engineering.

The nation is reassessing the way it pays for roads and transit. Since 1956, the Highway Trust Fund, financed by the federal tax on gasoline, has been a primary source of money for highway projects. But the National Governors Association and other groups and planners involved in road building have concluded that this method, supplemented by state gasoline taxes, no longer is adequate.

Americans are driving cars that get better mileage, and more are driving vehicles that use fuels taxed at lower rates than gasoline, such as ethanol, or making their own fuel and not being taxed. That means gas tax revenue isn't growing nearly as fast as the number of miles driven.

In addition, the costs of road construction materials have skyrocketed because of heavy demand from India and China. Congress and many state legislatures are reluctant to increase gas taxes, especially at a time of high prices at the pump. The federal gas tax of 18.4 cents a gallon has not been increased since 1993; 24 states have not raised their gas taxes since 1997, according to the American Road & Transportation Builders Association.

That has made a mileage fee more attractive to some agencies. The University of Iowa study is funded by the Federal Highway Administration and 15 state departments of transportation.

Elsewhere:

•**Oregon** this year finished a year-long experiment that tested a "virtual tollway" system that could eventually replace the state gas tax with a road-user fee. Volunteers drove vehicles equipped with state-installed Global Positioning System (GPS) devices and odometers that kept track of the miles they drove. When they gassed up, the drivers paid for their gas as well as 1.2 cents for each mile driven since their last fill-up;

they did not pay the 24-cents-a-gallon state gas tax.

•**Minnesota** Gov. Tim Pawlenty says part of his state's plan for dealing with declining gas tax revenues is a mileage tax or fee. He wants a test project this year.

•**Colorado** Gov. Bill Ritter appointed a 32-member commission in March to explore long-term options, including mileage fees.

Some transportation experts believe that mileage fees will replace the gas tax within the next 15-20 years. "At some point, in some metro areas, market-based pricing using the latest technology will supplant the fuel tax revenues," says Joseph Giglio, a professor at Northeastern University who has written extensively on transportation financing.

Privacy advocates worry about the use of satellite navigation technology to track drivers' movements. "Where you go is something that, for the most part, people consider private," says Lee Tien, an attorney who specializes in privacy issues for the San Francisco-based Electronic Frontier Foundation. "The second point is, it's the sort of thing we do to the bad guys. Where do you hear a lot about GPS tracking? It's for prisoners or people who are out on probation."

James Whitty, who headed the Oregon experiment, says some of the 260 volunteers initially had privacy concerns, but those worries faded. He says that 91% of those surveyed said they would pay a mileage fee if the program were expanded statewide.

Leroy Younglove, a participant in the Oregon study, says he had no privacy concerns and that the mileage fee is fairer than the gas tax. "I thought it was an interesting alternative to the method we have now and one that might have ways of obtaining tax revenues as different types of fuel options become available," says Younglove, 63, who manages real estate.

"It's not a question of if this is viable," says Iowa's Kuhl. "It's a question of when it becomes politically and socially viable to make such a large-scale shift."

Find this article at:
http://www.usatoday.com/news/nation/2007-09-20-roads_N.htm

Northern Virginia Transportation Commission

AGENDA ITEM #6

MEMORANDUM

TO: **Chairman Snyder and NVTC Commissioners**

FROM: **Scott Kalkwarf and Colethia Quarles**

DATE: **September 27, 2007**

SUBJECT: **NVTC Financial Report for August, 2007**

The NVTC financial report for August, 2007 is attached for your information.

AWARD WINNER NVTC APTA 1996

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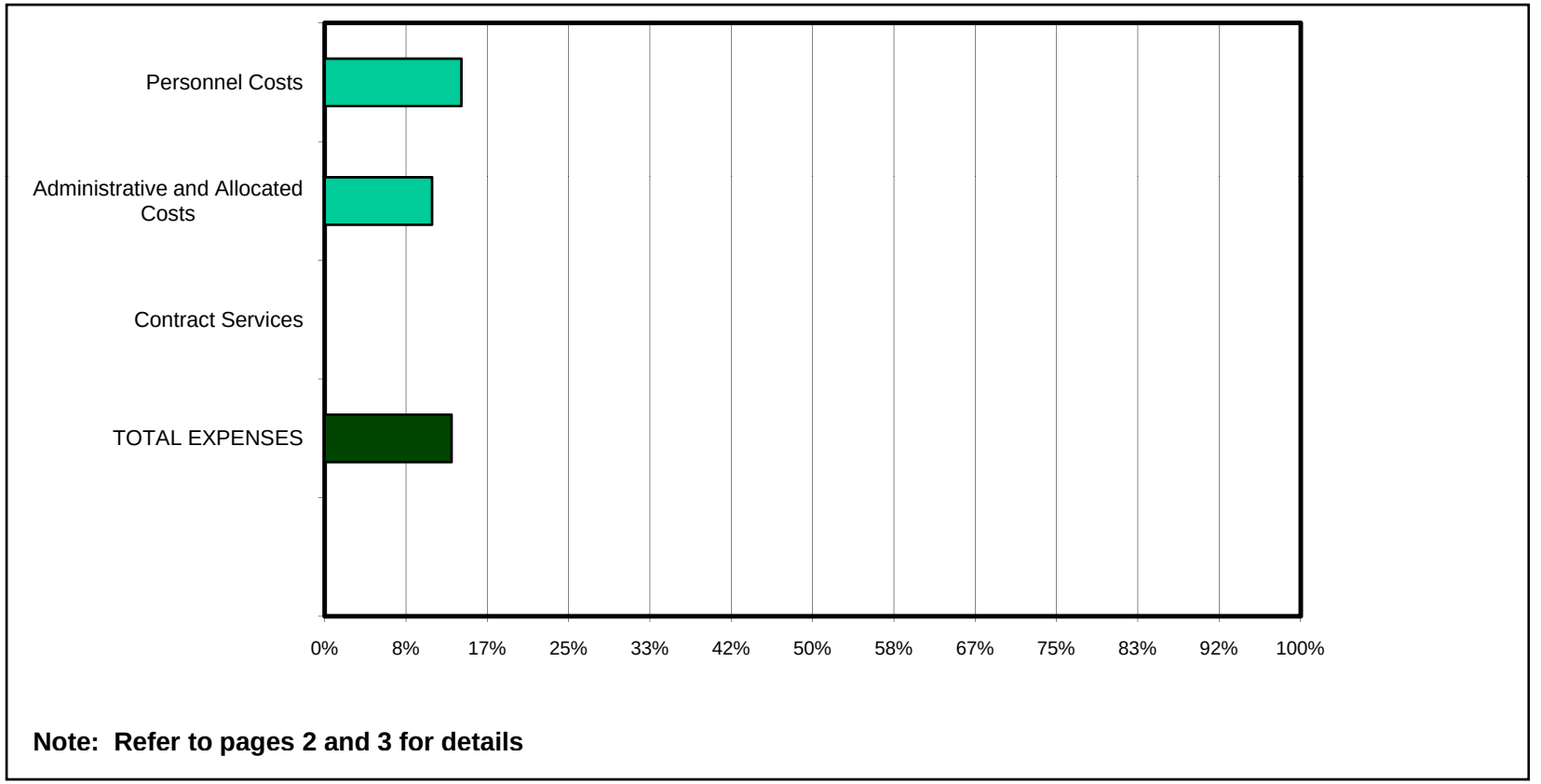
E-mail nvtc@nvtdc.org ● Website www.thinkoutsidethecar.org

Northern Virginia Transportation Commission

Financial Reports

August, 2007

Percentage of FY 2008 NVTC Administrative Budget Used
August, 2007
(Target 16.67% or less)



Note: Refer to pages 2 and 3 for details

NORTHERN VIRGINIA TRANSPORTATION COMMISSION
G&A BUDGET VARIANCE REPORT
August, 2007

	Current Month	Year To Date	Annual Budget	Balance Available	Balance %
Personnel Costs					
Salaries	$ 42,661.15	$ 99,231.81	$ 701,400.00	$ 602,168.19	85.9%
Temporary Employee Services	-	-	1,000.00	1,000.00	100.0%
Total Personnel Costs	42,661.15	99,231.81	702,400.00	603,168.19	85.9%
Benefits					
Employer's Contributions:					
FICA	3,734.28	7,457.85	48,900.00	41,442.15	84.7%
Group Health Insurance	2,754.80	7,853.29	65,750.00	57,896.71	88.1%
Retirement	4,045.00	8,090.00	56,200.00	48,110.00	85.6%
Workmans & Unemployment Compensation	1,263.15	1,483.87	3,400.00	1,916.13	56.4%
Life Insurance	237.52	475.04	3,750.00	3,274.96	87.3%
Long Term Disability Insurance	256.64	509.32	4,450.00	3,940.68	88.6%
Total Benefit Costs	12,291.39	25,869.37	182,450.00	156,580.63	85.8%
Administrative Costs					
Commissioners Per Diem	400.00	1,150.00	18,400.00	17,250.00	93.8%
Rents:	*14,344.21*	*28,635.92*	*184,950.00*	*156,314.08*	*84.5%*
Office Rent	13,714.21	27,375.92	173,050.00	145,674.08	84.2%
Parking	630.00	1,260.00	11,900.00	10,640.00	89.4%
Insurance:	-	*250.00*	*4,400.00*	*4,150.00*	*94.3%*
Public Official Bonds	-	250.00	2,600.00	2,350.00	90.4%
Liability and Property	-	-	1,800.00	1,800.00	100.0%
Travel:	-	*113.04*	*16,200.00*	*16,086.96*	*99.3%*
Conference Registration	-	-	2,000.00	2,000.00	100.0%
Conference Travel	-	-	4,500.00	4,500.00	100.0%
Local Meetings & Related Expenses	-	113.04	6,200.00	6,086.96	98.2%
Training & Professional Development	-	-	3,500.00	3,500.00	100.0%
Communication:	*436.52*	*933.97*	*11,600.00*	*10,666.03*	*91.9%*
Postage	-	-	4,600.00	4,600.00	100.0%
Telephone - LD	20.08	111.05	1,200.00	1,088.95	90.7%
Telephone - Local	416.44	822.92	5,800.00	4,977.08	85.8%
Publications & Supplies	*476.49*	*1,635.98*	*23,800.00*	*22,164.02*	*93.1%*
Office Supplies	87.47	487.61	4,500.00	4,012.39	89.2%
Duplication	389.02	1,148.37	9,300.00	8,151.63	87.7%
Public Information	-	-	10,000.00	10,000.00	100.0%

NORTHERN VIRGINIA TRANSPORTATION COMMISSION
G&A BUDGET VARIANCE REPORT
August, 2007

	Current Month	Year To Date	Annual Budget	Balance Available	Balance %
Operations:	*79.95*	*796.88*	*25,650.00*	*24,853.12*	*96.9%*
Furniture and Equipment	-	-	12,650.00	12,650.00	100.0%
Repairs and Maintenance	-	-	1,000.00	1,000.00	100.0%
Computers	79.95	796.88	12,000.00	11,203.12	93.4%
Other General and Administrative	*225.35*	*1,364.54*	*6,800.00*	*5,435.46*	*79.9%*
Subscriptions	-	-	400.00	400.00	100.0%
Memberships	-	966.00	1,700.00	734.00	43.2%
Fees and Miscellaneous	225.35	398.54	2,900.00	2,501.46	86.3%
Advertising (Personnel/Procurement)	-	-	1,800.00	1,800.00	100.0%
40th Anniversary	-	-	-	-	0
Total Administrative Costs	15,962.52	34,880.33	291,800.00	256,919.67	88.0%
Contracting Services					
Auditing	-	-	19,700.00	19,700.00	100.0%
Consultants - Technical	-	-	1,000.00	1,000.00	100.0%
Legal	-	-	1,000.00	1,000.00	100.0%
Total Contract Services	-	-	21,700.00	21,700.00	100.0%
Total Gross G&A Expenses	$ 70,915.06	$ 159,981.51	$ 1,198,350.00	$ 1,038,368.49	86.6%

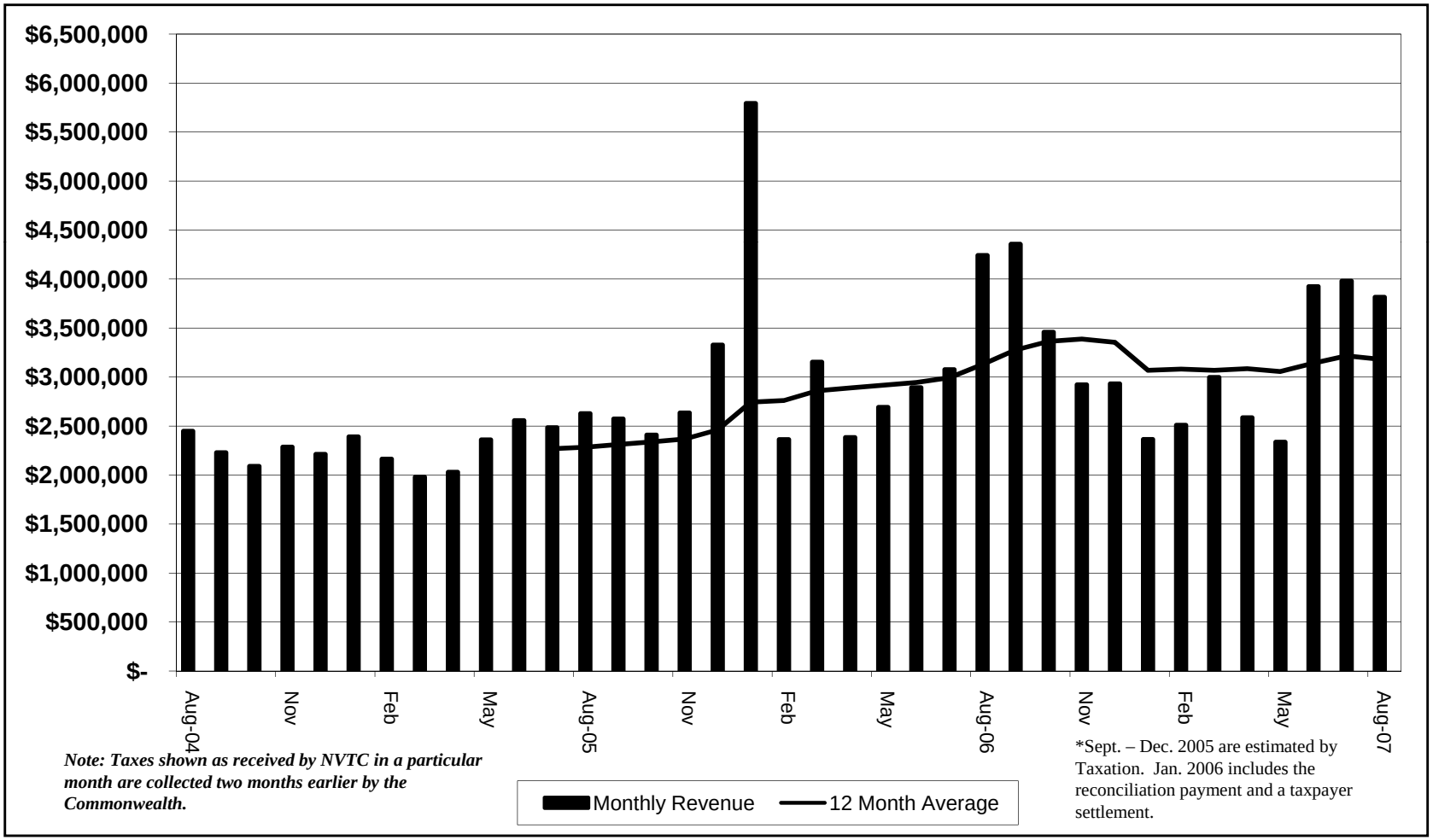
NVTC
RECEIPTS and DISBURSEMENTS
August, 2007

Date	Payer/ Payee	Purpose	Wachovia (Checking)	Wachovia (Savings)	VA LGIP G&A / Project	VA LGIP Trusts
	RECEIPTS					
8	VRE	Staff support		$ 7,891.14		
14	Dept. of Taxation	Motor Vehicle Fuels Sales Tax receipt				$ 3,815,718.22
16	DRPT	FTM/Admin grant receipt			718,350.00	3,629,343.00
17	DRPT	SmarTrip grant receipt			6,574.00	
17	DRPT	FTM/Admin grant receipt				4,347,693.00
17	City of Fairfax	G&A contribution		3,428.50		
20	DRPT	Code red grant receipt			90,307.00	
20	DRPT	FTM/Admin grant receipt				111,728.00
24	DRPT	Code red grant receipt			224,844.00	
24	DRPT	Code red grant receipt			24,956.00	
28	DRPT	Code red grant receipt			290,000.00	
31	DRPT	Capital grant receipt				2,903.00
31	Banks	August interest		933.57	2,883.88	329,291.06
			-	12,253.21	1,357,914.88	12,236,676.28
	DISBURSEMENTS					
1-31	Various	NVTC project and administration	(64,242.71)			
1	Stantec	Consulting - bus data	(9,196.70)			
10	Fairfax County	Other capital	(9,196.70)			(14,000.00)
16	IBI Group	Consulting - SmarTrip	(6,573.88)			
17	CBS	Public information - code red	(20,000.00)			
17	MCV	Consulting - code red	(10,510.40)			
18	Loudoun County	Code red cost incurred			(28,922.00)	
18	Fairfax County	Code red cost incurred			(50,875.00)	
23	Loudoun County	Code red cost incurred			(14,670.00)	
23	Arlington County	Code red cost incurred			(30,713.33)	
23	WMATA	Code red cost incurred			(77,231.20)	
23	PRTC	Code red cost incurred			(29,761.00)	
23	Fairfax County	Code red cost incurred			(57,993.00)	
23	City of Fairfax	Other operating				(130,020.76)
24	City of Alexandria	Code red cost incurred			(15,786.73)	
24	VRT	Code red cost incurred	(2,653.52)			
31	City of Alexandria	Code red cost incurred			(13,755.09)	
31	Loudoun County	Code red cost incurred			(44,962.00)	
31	WMATA	Code red cost incurred			(75,953.65)	
31	PRTC	Code red cost incurred			(91,413.00)	
31	Fairfax County	Code red cost incurred			(64,907.09)	
31	Wachovia Bank	August service fees	(34.67)	(5.83)		
			(122,408.58)	(5.83)	(596,943.09)	(144,020.76)
	TRANSFERS					
16	Transfer	From LGIP to checking	60,000.00		(60,000.00)	
17	Transfer	From savings to checking	30,000.00	(30,000.00)		
23	Transfer	From LGIP to checking	30,000.00		(30,000.00)	
			120,000.00	(30,000.00)	(90,000.00)	-
	NET INCREASE (DECREASE) FOR MONTH		$ (2,408.58)	$ (17,752.62)	$ 670,971.79	$ 12,092,655.52

NVTC
INVESTMENT REPORT
August, 2007

Type	Rate	Balance 7/31/2007	Increase (Decrease)	Balance 8/31/2007	NVTC G&A/Project	Jurisdictions Trust Fund	Loudoun Trust Fund
Cash Deposits							
Wachovia: NVTC Checking	N/A	$ 38,866.88	$ (2,408.58)	$ 36,458.30	$ 36,458.30	$ -	$ -
Wachovia: NVTC Savings	4.38%	263,102.71	(17,752.62)	245,350.09	245,350.09	-	-
Investments - State Pool							
Nations Bank - LGIP	5.32%	67,000,590.81	12,763,627.31	79,764,218.12	933,674.69	50,234,235.60	28,596,307.83
		$ 67,302,560.40	$ 13,414,437.90	$ 80,046,026.51	$ 1,215,483.08	$ 50,234,235.60	$ 28,596,307.83

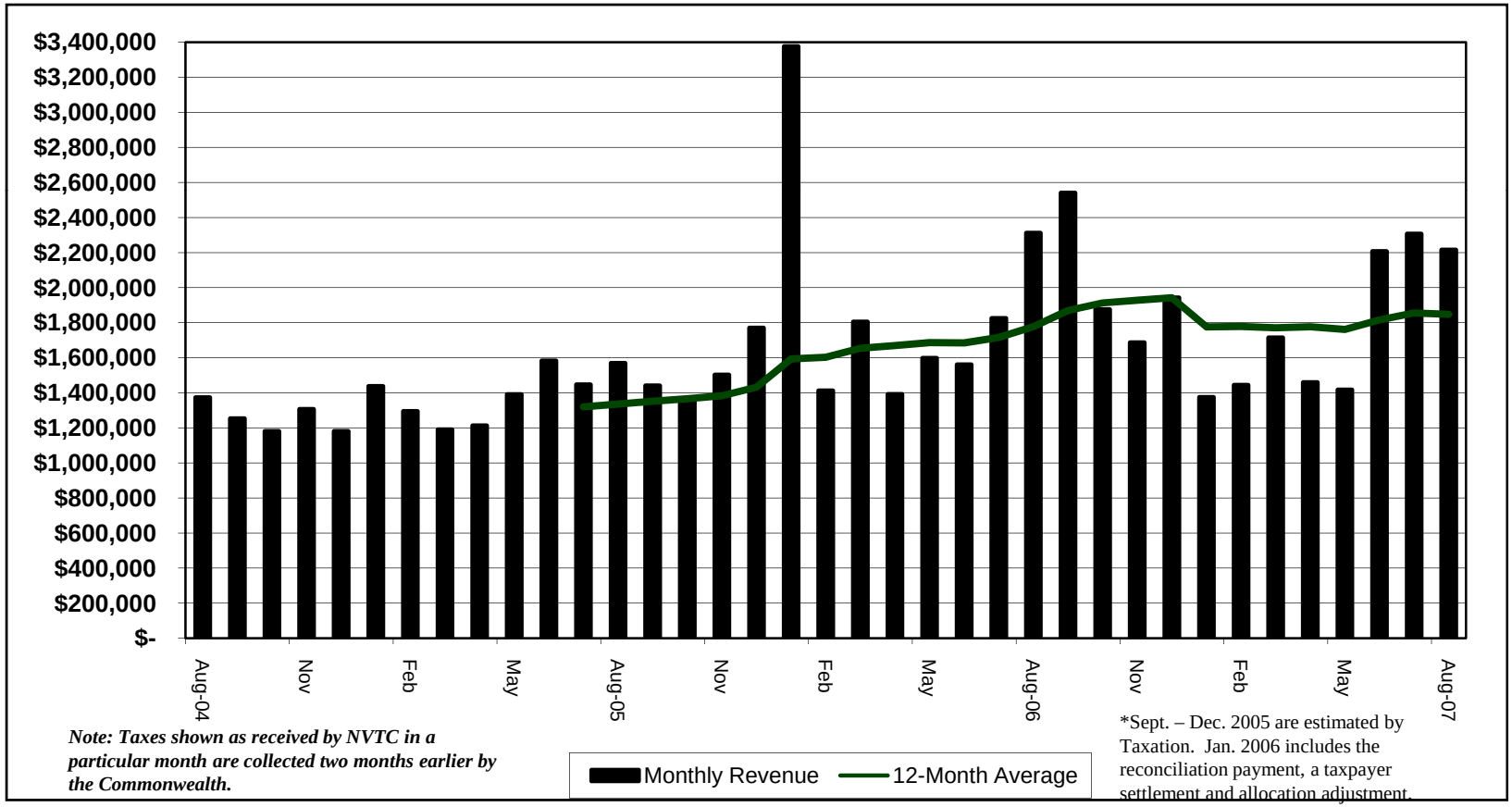
NVTC MONTHLY GAS TAX REVENUE
ALL JURISDICTIONS
FISCAL YEARS 2005-2008



Note: Taxes shown as received by NVTC in a particular month are collected two months earlier by the Commonwealth.

*Sept. – Dec. 2005 are estimated by Taxation. Jan. 2006 includes the reconciliation payment and a taxpayer settlement.

NVTC MONTHLY GAS TAX REVENUE
FAIRFAX COUNTY
FISCAL YEARS 2005-2008



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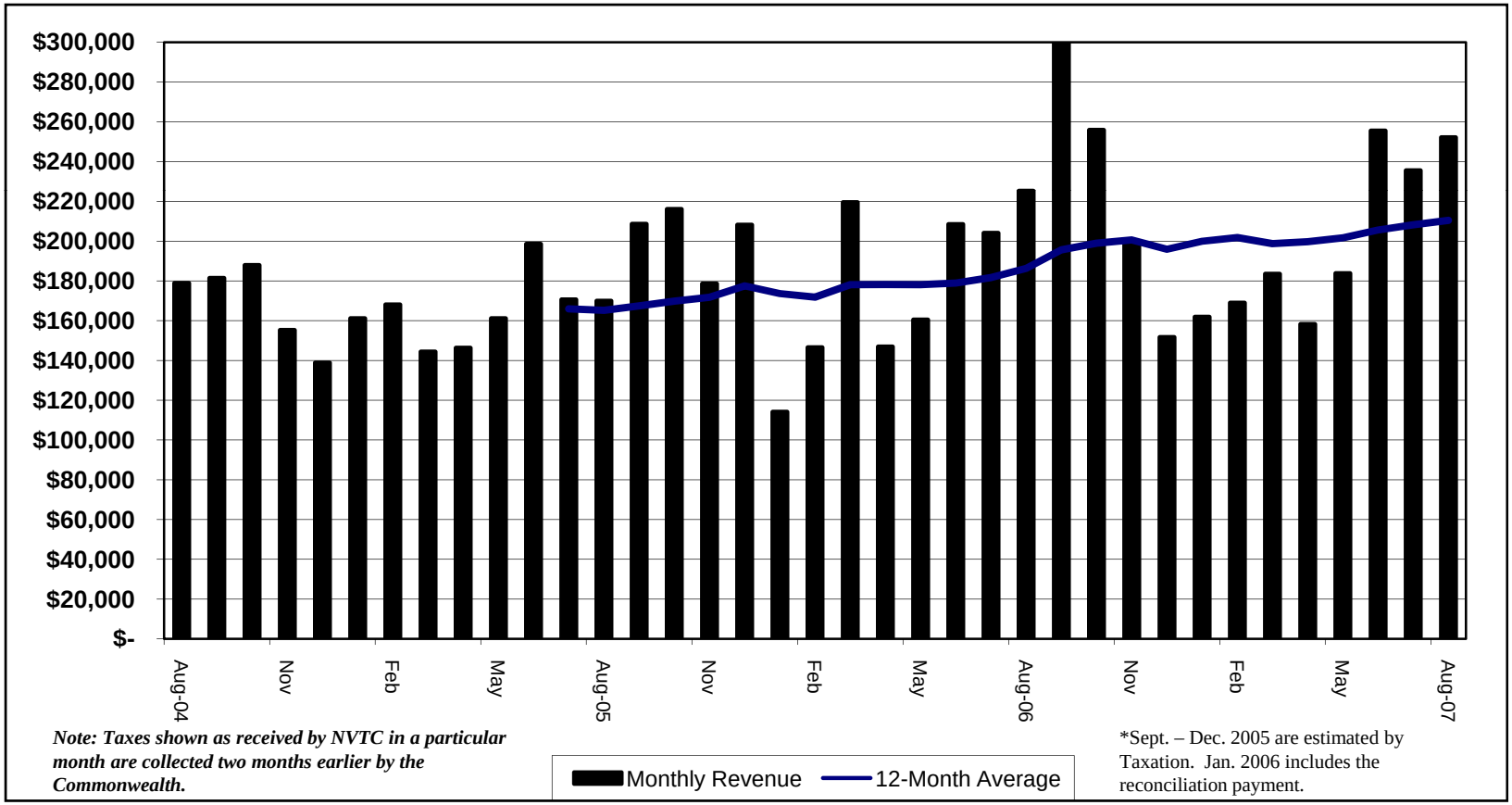
NVTC MONTHLY GAS TAX REVENUE
CITY OF ALEXANDRIA
FISCAL YEARS 2005-2008



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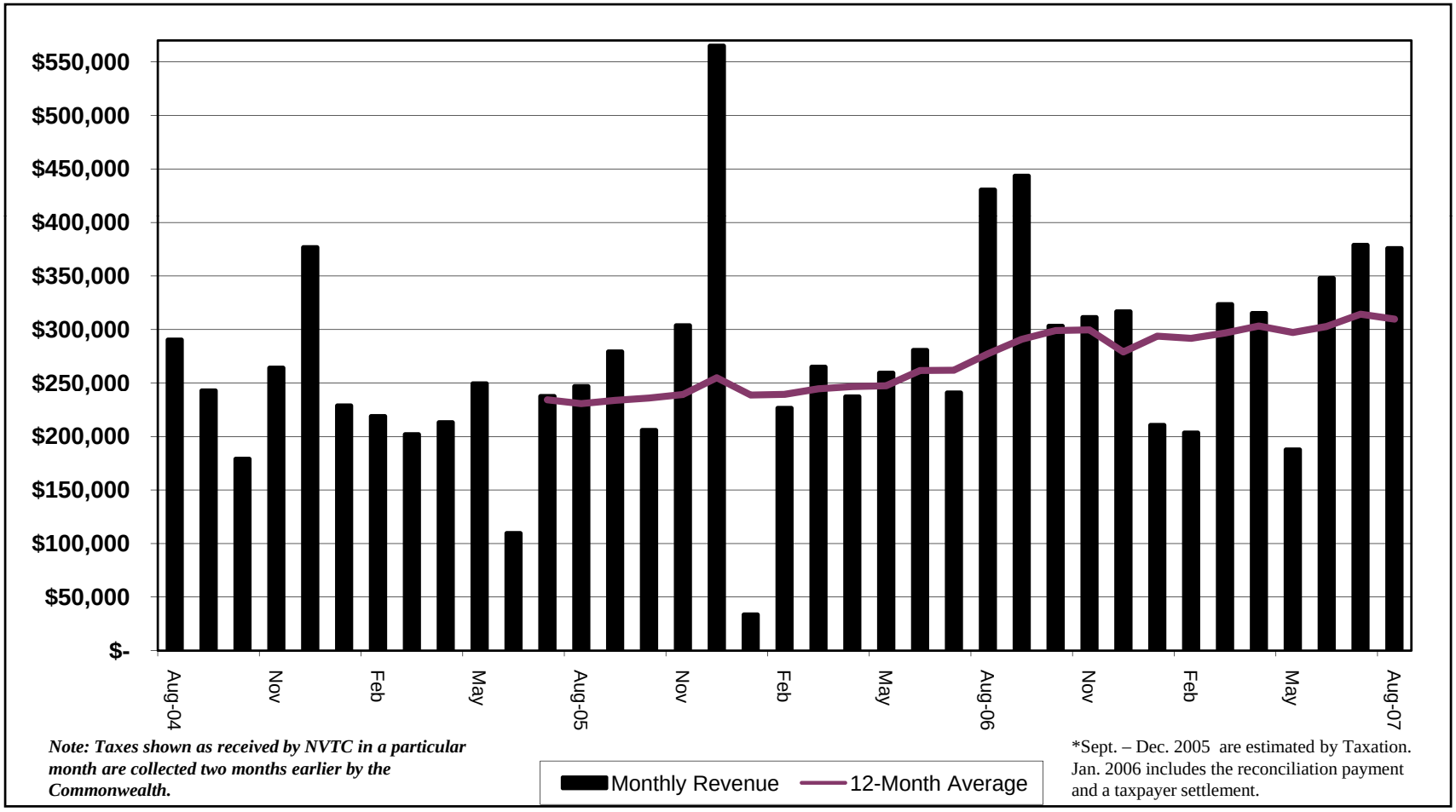
NVTC MONTHLY GAS TAX REVENUE
ARLINGTON COUNTY
FISCAL YEARS 2005-2008



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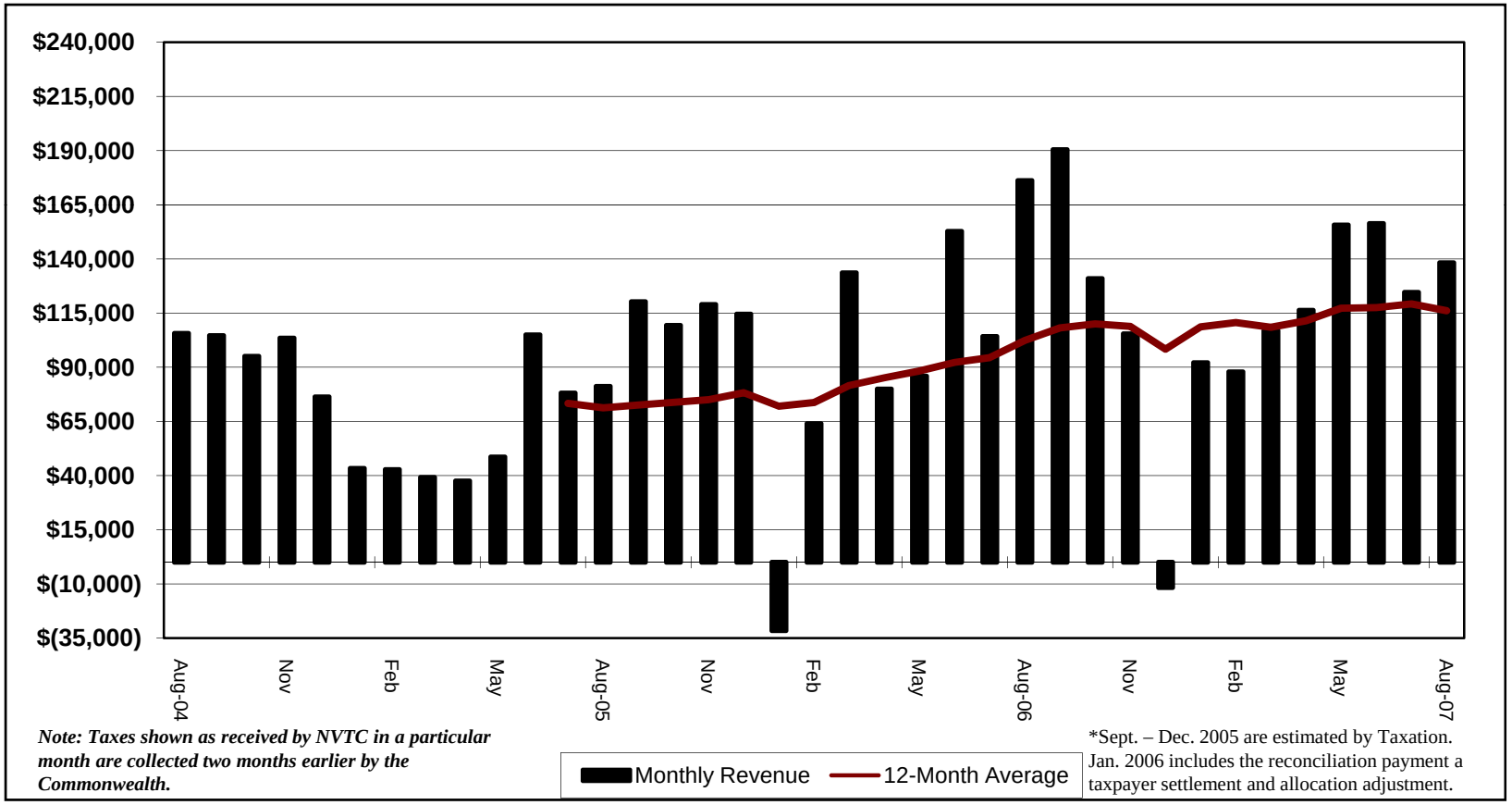
NVTC MONTHLY GAS TAX REVENUE
CITY OF FAIRFAX
FISCAL YEARS 2005-2008



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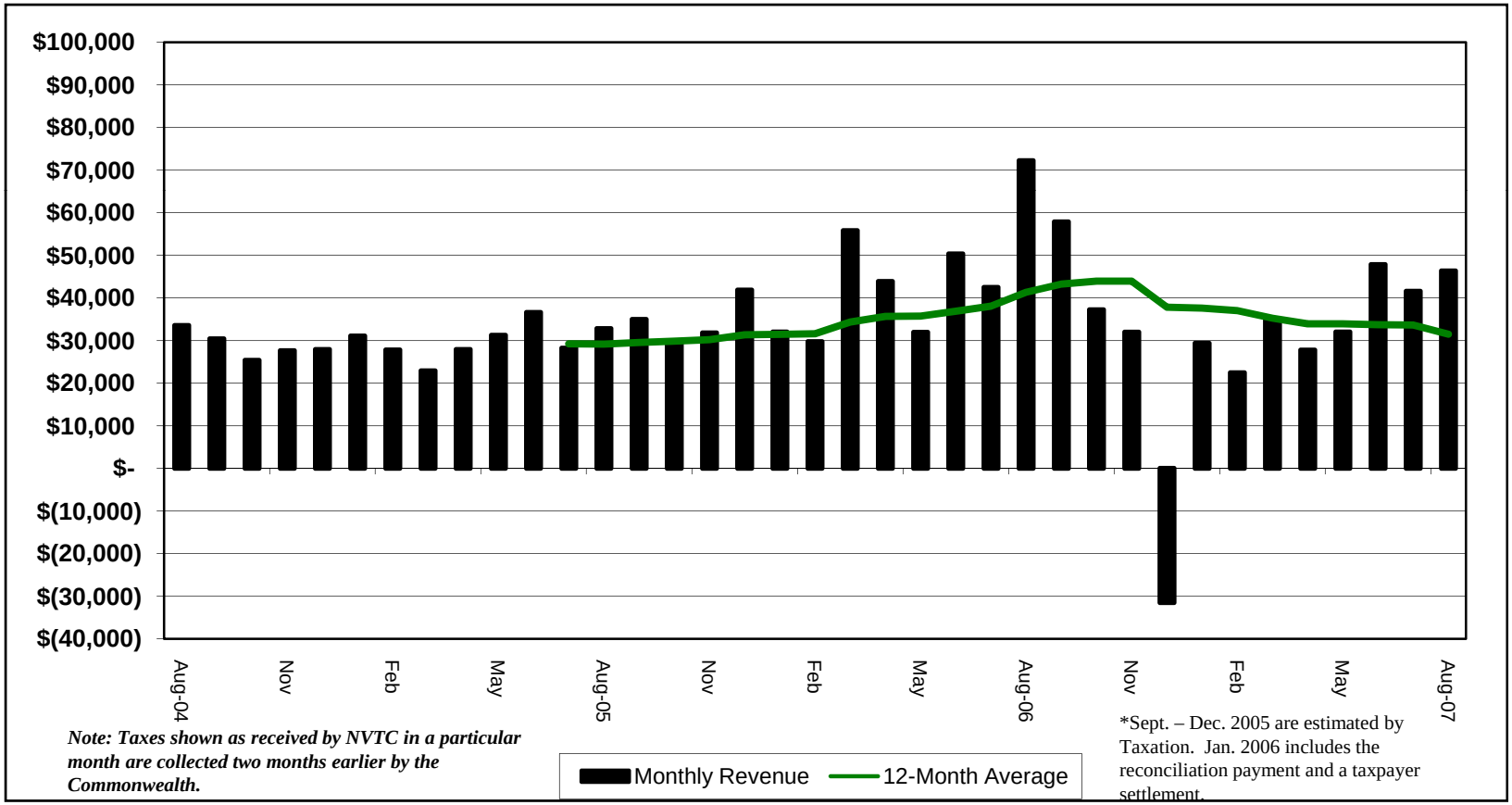
NVTC MONTHLY GAS TAX REVENUE
CITY OF FALLS CHURCH
FISCAL YEARS 2005-2008



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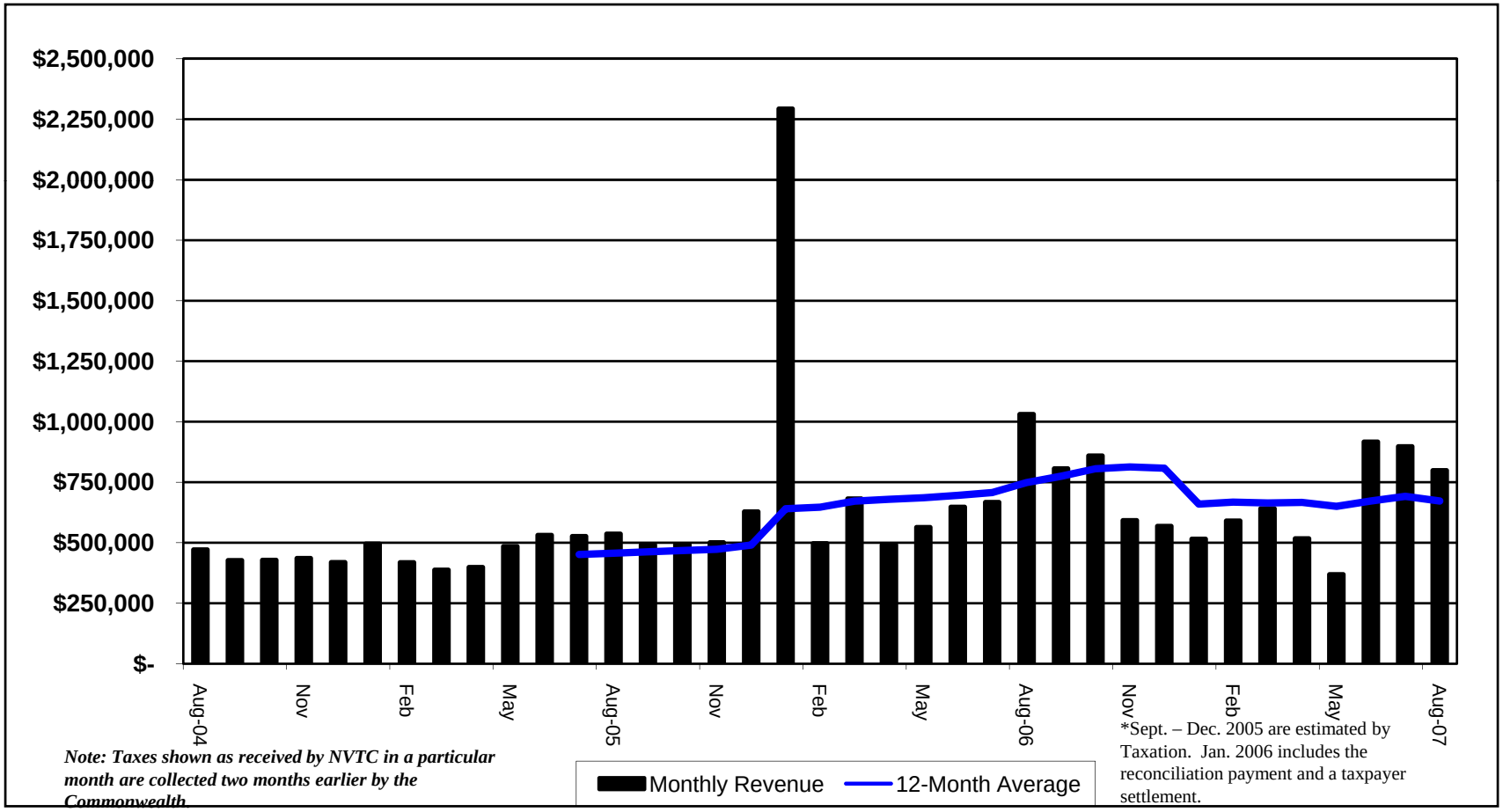
NVTC MONTHLY GAS TAX REVENUE
LOUDOUN COUNTY
FISCAL YEARS 2005-2008



Note: Taxes shown as received by NVTC in a particular month are collected two months earlier by the Commonwealth.

*Sept. – Dec. 2005 are estimated by Taxation. Jan. 2006 includes the reconciliation payment and a taxpayer settlement.