

# Status Report on the Bus Systems in the National Capital Region



Report of the Regional Bus Subcommittee  
to the  
National Capital Region Transportation Planning Board

February 20, 2008



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## **Executive Summary**

The Regional Bus Subcommittee of the TPB Technical Committee was established in January 2007, to provide a forum for regional bus planning and coordination. This report provides an overview of the Subcommittee's work to date, and highlights current operational issues and long-range planning needs which have been identified.

The bus services are important to the region's transportation system. The 13 bus transit operators in the region provide approximately 45% of both the region's transit trips and transit operating costs. Bus systems have a much greater reach than Metrorail, and provide lower-cost, flexible service that can be implemented quickly. Bus services complement the Metrorail system by providing feeder service to stations, as well as substitute for Metrorail in highly congested rail corridors. Like the Metrorail system, the region's bus operators are also experiencing financial challenges. Also like the Metrorail system, the ridership and operating costs of the region's bus systems are steadily increasing, and will continue to rise.

Many regional bus planning efforts have been undertaken in the past five years. The 2003 Regional Bus Study recommended service and capital improvements. The Regional Bus Summit in 2006 resulted in a series of recommendations, including the creation of a regional transit planning group to further the improvements described in the 2003 study. The TPB's Regional Bus Subcommittee is that regional planning group.

Since its creation, the Subcommittee has engaged in many planning activities. In the process of initiating long-range planning, the Subcommittee identified many short-term, operational needs that must be addressed in earnest before long-range planning can be effective. These real monetary and infrastructure needs, which affect all bus operators in the region, include increases in fleet sizes to support existing and new routes, and new maintenance and storage facilities for buses.

The Subcommittee will continue its long-range planning work in 2008. Among other activities, the Subcommittee will create a list of unfunded priority transit projects. The Subcommittee will present this list of regionally significant projects to the TPB and request that these projects be considered during the upcoming TIP and CLRP project selection process.

The Subcommittee recommends that the TPB help raise the profile of bus transit services in the Washington region. This can be accomplished by continuing to ensure that bus transit needs are addressed. The Subcommittee recommends it develop a brochure to highlight the major points of this report. This brochure would be delivered to decision makers and elected officials throughout the region, helping to raise their awareness of the importance and needs of bus transit services. The Subcommittee will continue to advise the TPB on ways to promote a regional perspective to bus planning, and help identify ways to improve fare and service coordination among the regional and local service providers.



## Introduction and Background

The Regional Bus Subcommittee of the TPB Technical Committee was established in January 2007. Since then, the Subcommittee has met monthly to provide a forum for regional bus planning and coordination. This report provides an overview of the Subcommittee's work to date, and highlights current operational issues and long-range planning needs which have been identified after review and discussion by the Subcommittee.

### *The Regional Bus Subcommittee*

The Regional Bus Subcommittee (RBS) of the TPB Technical Committee was established by TPB resolution R13-2007 on January 17, 2007. Its mission is to "provide a permanent process for the coordination of bus planning throughout the Washington region, and for incorporating regional bus plans into the Constrained Long Range Plan (CLRP) and Transportation Improvement Program (TIP)." The Subcommittee coordinates with and engages staff representing the following transit services:

Metrobus	Fairfax Connector
Montgomery County Ride On	Loudoun Commuter Transit
Prince George's County TheBus	PRTC Omni Ride
DC Circulator	MTA Commuter Bus
Alexandria Dash	Metrorail
Arlington Transit (ART)	Virginia Railway Express
Falls Church George	Maryland Commuter Rail
City of Fairfax CUE	DC Streetcar
Frederick County TransIT	Laurel Connect-a-Ride

The RBS also includes representatives of agencies that coordinate, plan and fund transit services, including the following:

District of Columbia DOT	Potomac and Rappahannock
Maryland DOT	Transportation Commission
Maryland Transit Administration	(PRTC)
Virginia DOT	Northern Virginia Transportation
Virginia Department of Rail and Public Transportation	Commission

Since its first meeting, agenda items considered by the RBS include:

- Establishing the Membership and Chairmanship of the Regional Bus Subcommittee
- Review of TPB FY 2007 Unified Planning Work Program Work Activity for Regional Bus Planning
- Discussion of the Draft Memorandum Of Understanding On Metropolitan Transportation Planning Responsibilities For The National Capital Region
- Round Table Discussion of Priority Activities for the Subcommittee
- Briefing on Management, Operations and Intelligent Transportation Systems (MOITS) Policy and Technical Task Forces

- Briefing on CLRP Travel Demand Model Bus Inputs and Bus Enhancements in Transit Scenarios from Regional Mobility and Accessibility Study
- Discussion of Costs of Congestion Analysis Specific to Bus Operations
- Briefing on Access for All Advisory Committee and Human Services Transportation Coordination Task Force
- Briefing on 2007 CLRP Travel Demand Model Bus Inputs And Round 7.0 Land Use Forecasts
- Discussion of Commuter Bus Layover Changes at Pentagon
- Discussion of FY 2008 Regional Bus Planning Activities
- Discussion of Mapping of the 2007 CLRP Travel Demand Bus Inputs (Bus Transit “Availability”) and Round 7.0 Land Use Forecasts
- Report on the TPB Public Transit Forum
- Presentation of the Draft TPB Participation Plan
- Presentation and Question and Answer Session with the new Chief Operations Officer of Metrobus
- Discussion of a proposed 2008 Regional Metrobus Onboard Passenger Survey and Potential Local Bus Operator Participation
- Roundtable Discussion of Current Issues Faced By Bus Operators in the Washington Region
- Briefing on Draft Congestion Management Process Elements for the 2007 CLRP
- Presentation on CO<sub>2</sub> Emissions from Cars, Trucks & Buses in the Metropolitan Washington Region
- Discussion on Streamlining the Data Transfer Process Between Operators and TPB Staff
- Discussion of the Draft Report of the Regional Bus Subcommittee

During a review of long-range planning topics, members of the Subcommittee raised several operational concerns which, unless addressed, would limit the ability of the region’s transit operators to support a long-term expansion of services. The Subcommittee members agreed that these shorter term planning and operational issues should be brought to the attention of the TPB Technical Committee and the TPB, to raise the profile of the regional bus transit systems and communicate their importance and pressing needs to regional decision makers. This report is the TPB Regional Bus Subcommittee’s first annual report intended to support that goal.

### *The Bus Systems of the National Capital Region*

#### *Different Bus Systems for Different Needs*

The functions served by bus transit in the region have changed over the past 30 years. First, private operators provided local bus service to and around the regional core. Those services were then folded into Metrobus in 1973, which provided distributor services within the District and ran radial routes into the core from the suburban jurisdictions. The opening and gradual expansion of the Metrorail system between 1976 and 2001 resulted in the restructuring of many Metrobus lines to feed into the rail system. Over the past 20 years, local jurisdictions established their own transit agencies, providing local/circulator service to suburban downtowns as well as feeder service to Metrorail



stations. Commuter/express bus services are now operated from fast growing outer suburban areas, which provide direct access between park-and-ride lots and the regional core or Metrorail stations.

*Many Bus Transit Agencies*

The Washington Metropolitan Region is served by Metrobus and 13 local bus systems. These operators are listed in Table 1.

**Table 1: Bus Transit Operators in the TBP Planning Area**

<b>Jurisdiction</b>	<b>Transit Service</b>	<b>Type of Service</b>
WMATA Compact Area	Metrobus, TAGS	express, local/feeder
District of Columbia	DC Circulator	circulator
State of Maryland	MTA	express
Montgomery County	Ride-On	express, local/feeder
Prince George’s County	TheBus	express, local/feeder
Frederick County	TransIT	local/feeder
Laurel/Columbia MD	Connect-a-Ride <sup>1</sup>	local/feeder
Arlington County	ART	local/feeder
Fairfax County	Connector, RIBS	local/feeder
Loudoun County	LC Transit	express
Prince William	PRTC (OmniRide, OmniLink)	express, local/feeder
The City of Alexandria	Dash	local/feeder
The City of Fairfax	CUE	local/feeder
The City of Falls Church	George (WMATA)	local/feeder

In addition to fixed route transit, the Washington Metropolitan Region has many paratransit operators. TPB’s Human Services Transportation Coordination Task Force and the TPB’s Access For All Advisory Committee assist in overseeing the paratransit services in the region.

*Bus Services are Important to the Regional Transportation System*

The regional bus systems are a large component of the region’s transit system. According to the Year 2000 Regional Bus Survey<sup>2</sup>, buses provided 45% of the annual transit trips in the region. Of that total, 32% of the trips were provided by Metrobus, 12% by other local transit agencies, and 1% by commuter buses. The distribution of transit ridership in the Washington region is displayed in Figure 1.

Buses also account for 45% of the transit operating expenses in the region. Metrobus expenses account for 31% of the region’s annual transit operating expenses, with local bus accounting for 13% and express bus systems accounting for 3%. The distribution of transit costs in the Washington region is displayed in Figure 1.

<sup>1</sup> Connect-a-Ride ridership data was not available at the time of this writing.

<sup>2</sup> Regional Bus Conference White Paper, November 2006

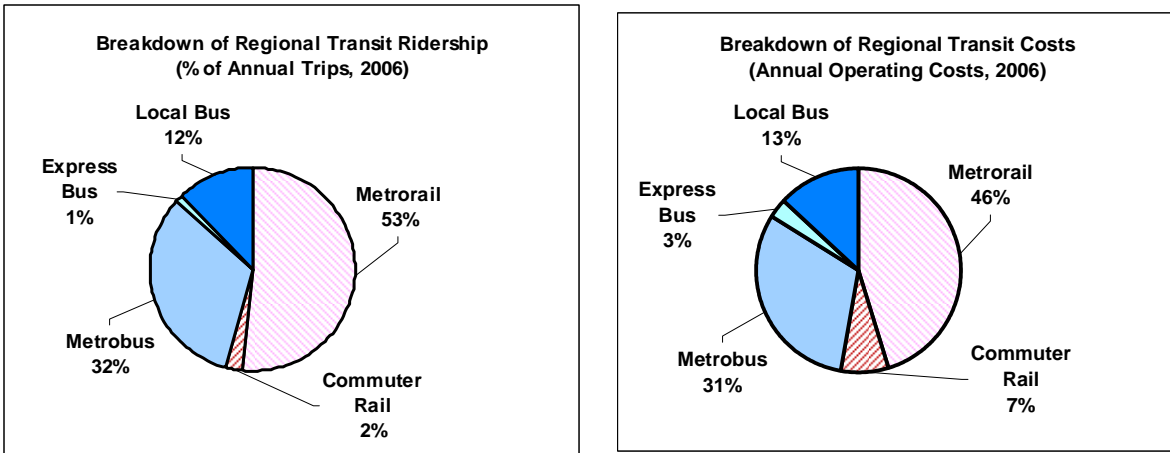


Figure 1: Breakdown of annual transit ridership and annual transit operating costs.

In addition to having a large share of the region’s transit market, bus systems in the Washington region have a much greater reach than the Metrorail system. The maps in Figure 2 illustrate the collective service area of the region’s local and express bus services compared to Metrorail. The first map shows the reach of the local bus systems, as determined by drawing a half-mile radius around local bus stops. The second map shows the reach of the express bus systems, as determined by drawing a one-mile radius around express bus stops (generally park-and-ride lots or transit stations). The bus stop data points were taken from bus transit inputs to the TPB regional travel demand model.

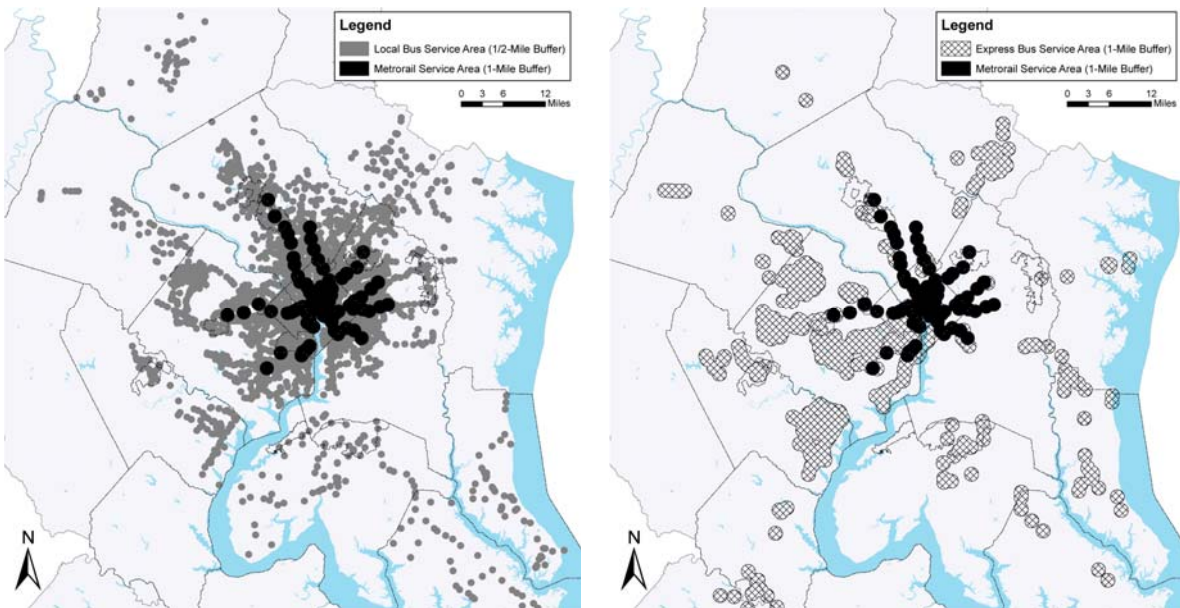


Figure 2: Comparison of the service area of regional bus service versus Metrorail.

### *Benefits and Challenges of the Region’s Bus Transit Systems*

The region’s bus transit operators provide benefit to the region. However, the systems are also experiencing challenges that threaten the continued delivery of those benefits.

### *Benefits of Bus Systems*

Bus transit systems have many benefits that reaffirm their importance to the region's transportation system. First, bus service is flexible and versatile, providing a wide range of services, from small shuttle and circulator systems to express bus and rapid bus transit systems. Secondly, due to its relatively low infrastructure needs, bus service can be implemented quickly. Bus service has relatively low capital costs, which further allow quick implementation of new bus services. Finally, buses work together with our existing Metrorail system. As mentioned above, buses complement the rail system by providing feeder and circulator services, transportation passengers to and from Metrorail stations. However, bus services can also substitute for rail services: Rail relief bus lines are being planned to relieve pressure from our congested Metrorail system.

Because bus systems are relatively inexpensive and quickly implemented, buses are in the unique position to provide solutions to the greater challenges currently experienced by the region. The current trends toward compact development, infill and revitalization of existing neighborhoods only expand the latent demand for bus services. High fuel prices, changing land-use patterns and growing concern about climate change are working together to increase the appeal of the transportation options provided by bus services.

### *Regional Bus Systems' Challenges*

The continued increase in Metrorail ridership has been well publicized. According to the National Transit Database, Metrorail ridership has increased by 42% between 1996 and 2006, or about 4% per year. WMATA announced on August 6, 2007, that Metrorail broke its all-time ridership record in July, carrying 19.2 million people during that month. According to a July 19, 2007, press release, five of Metrorail's Top 10 ridership days were in the year 2007. Metrorail's annual unlinked trip totals<sup>3</sup> from 1996 to 2006 are displayed in Figure 3.

This record-breaking usage is not without its drawbacks. Metrorail is swiftly reaching capacity along many of its lines. The cost of accommodating future Metrorail ridership is projected to exceed identified funding after 2010. As a result, the TPB travel demand model caps rail capacity at 2010 levels in the future, as no funding has been identified to increase capacity beyond that date.

What is less well known is that the region's bus systems are also swiftly reaching capacity due to rapid ridership growth. (The growth in bus ridership over the past ten years is discussed in detail below.) Many transit operators report problems with maintaining headways on current lines, let alone expanding service. These problems are resulting from limited resources for acquiring new buses and limited bus storage and maintenance space. These issues are discussed in more detail in the next section of this report.

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<sup>3</sup> Transit ridership in this document is expressed as unlinked trips. An unlinked trip is a segment of a transit trip, including one boarding and one alighting. Many transit trips include more or one segment, where a rider will transfer to another bus or to rail. Such a multi-segment trip (or linked trip) is considered multiple unlinked trips.

## Trends in Regional Bus Ridership

Ridership on the region's bus systems has been growing steadily over the past 10 years. However, most of the growth has been experienced by the local transit providers.

### Metrobus

Metrobus ridership between 1996 and 2006 has grown 21%, an average of about 2% annual growth. The Metrobus annual unlinked trip statistics were collected from WMATA monthly ridership reports. Due to two changes in reporting methodology over the time period of interest, the data points between 2000 and 2004 were artificially high and have been adjusted downward by 15%. This adjusted data is displayed in Figure 3. The Metrobus ridership data is compared against the ridership data from the non-WMATA local and commuter bus systems in Figure 4.

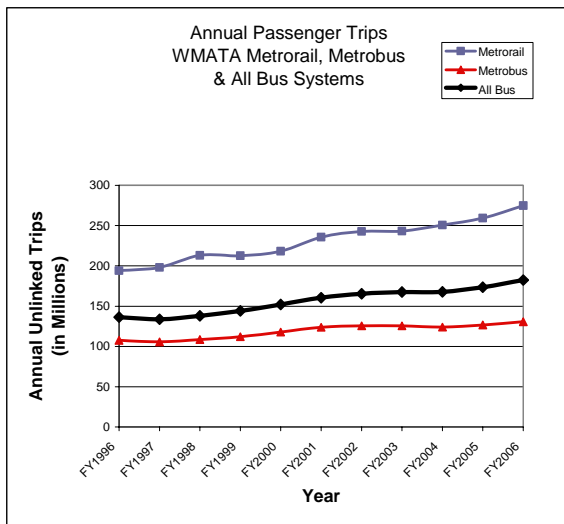


Figure 3: WMATA Metrorail and Metrobus annual unlinked trips, 1996 - 2006. *Source, National Transit Database.*

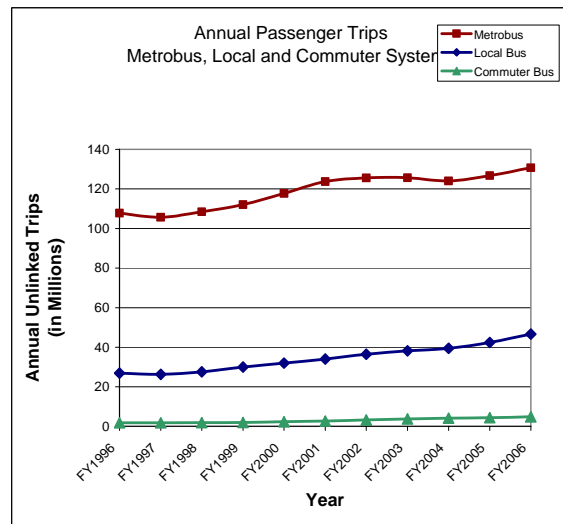


Figure 4: Comparison of ridership on Metrobus, local bus and commuter bus services. *Source, National Transit Database.*

### Local Feeder and Circulators Services

As mentioned above, the local bus transit systems represent the greatest growth in regional bus transit use. The local circulator and feeder systems in the region have experienced a steady growth rate of about 7% per year since 1996. Between 1996 and 2006, ridership on the local circulators/feeders has grown 74%. The collective annual ridership data grouped by Metrobus, circulator/feeder systems and commuter bus systems is graphed in Figure 4.

Of the local systems, some showed moderate growth while others' ridership skyrocketed. For example, ridership on the City of Fairfax Cue system grew by 27% between 1996 and 2006. By contrast, ridership on PRTC's OmniLink and Arlington County's ART grew by 440% and 790% respectively over the same period. Growth in annual unlinked trips since 1996 for the individual locally operated bus systems is displayed in Figure 5 and Figure 6.

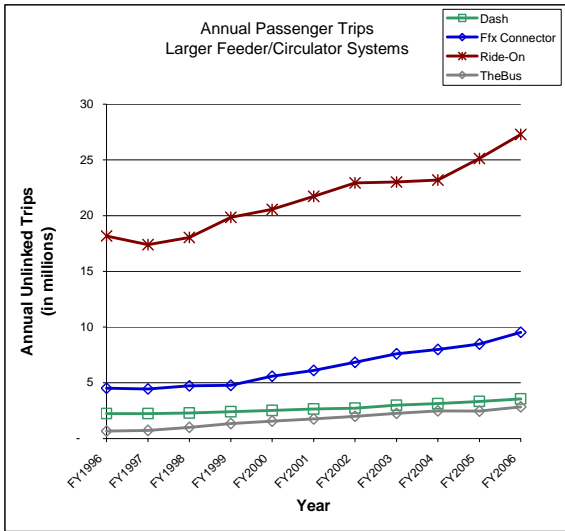


Figure 5: Annual unlinked trips, larger local feeder and circulator systems. *Source, National Transit Database*

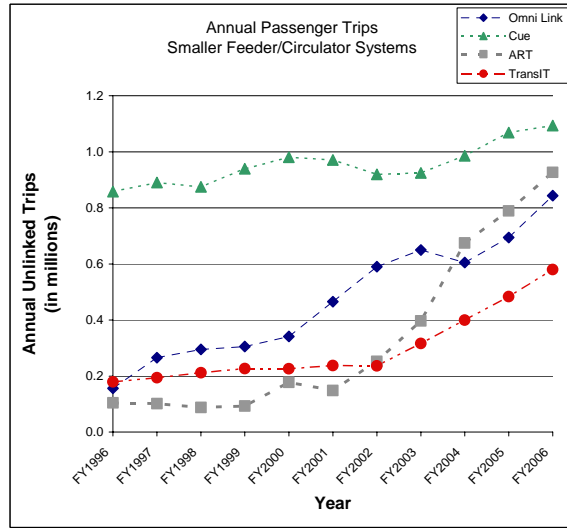


Figure 6: Annual unlinked trips, smaller local feeder and circulator systems. *Source, National Transit Database*

Commuter/Express Systems

Locally operated commuter bus services have seen the greatest growth in percentage terms in the past 10 years. MTA’s commuter bus service, LC Transit and OmniRide collectively have experienced 165% growth in that time period. Between 1996 and 2006, the locally run commuter bus systems experienced an average annual growth rate of 10%. The growth in ridership of the individual locally operated commuter/express bus systems between 1996 and 2006 is presented in Figure 8.

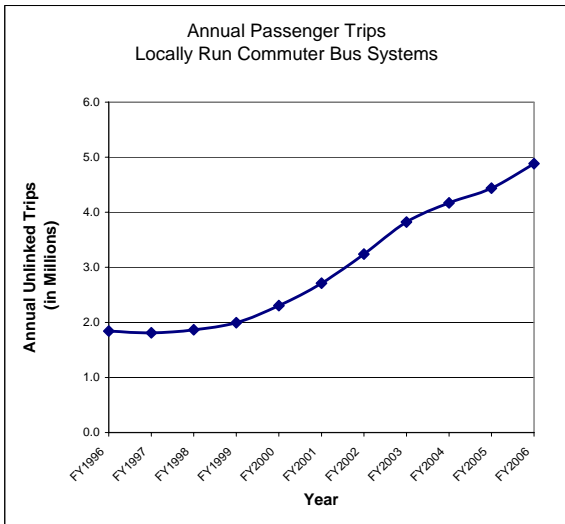


Figure 7: Locally Run Commuter Bus annual unlinked trips, 1996 - 2006. *Source, National Transit Database.*

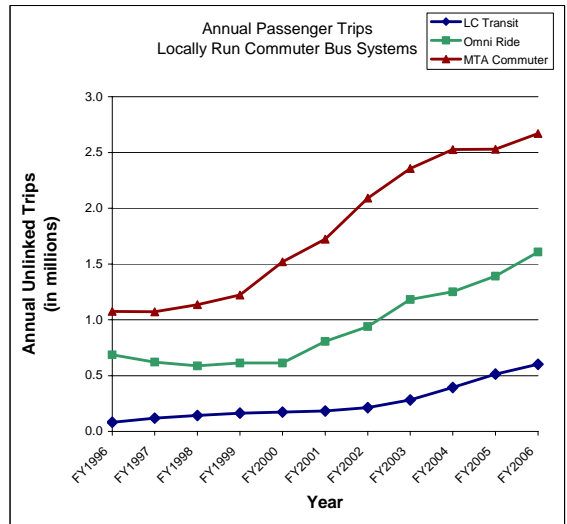


Figure 8: Annual unlinked trips by individual locally operated commuter/express bus systems. *Source, National Transit Database.*

### Trends in Regional Bus Costs

With increasing ridership comes increasing costs. The operating costs in both current and constant (2006) dollars of all the region’s transit operators have increased. The annual operating cost of Metrobus, in constant (2006) dollars, has increased 31% between 1996 and 2006. Metrorail’s operating costs in constant (2006) dollars over the same time period have increased 51%.

#### Metrobus

In real dollars, the annual operating costs of Metrobus have increased by 68% between 1996 and 2006. As mentioned above, this amounted to a 31% increase in constant (2006) dollars. This increase mirrors the percent increase in annual Metrobus ridership of 24% described in the previous section. A chart illustrating the growth in operating costs of Metrobus is presented in Figure 9.

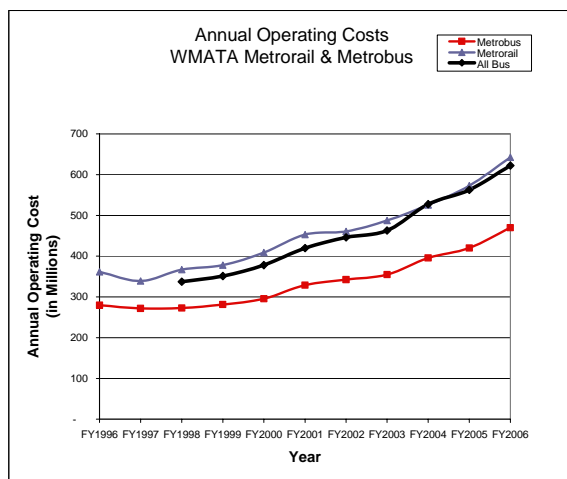


Figure 9: Operating costs of Metrobus and Metrorail, 1996 to 2006 in current dollars. Source, National Transit Database.

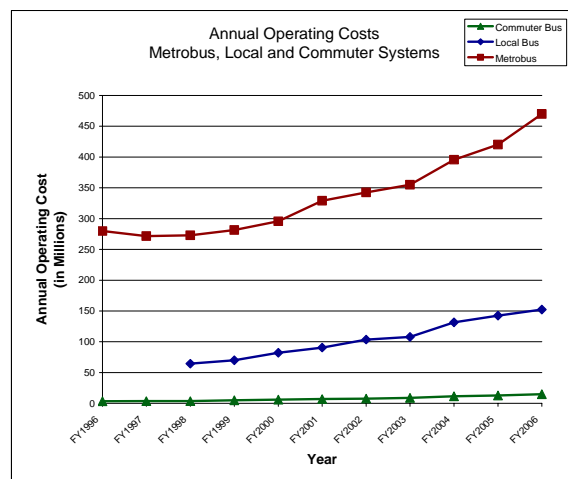


Figure 10: Operating costs of Metrobus versus Local (feeder and circulator) and Commuter bus systems. Source, National Transit Database.

#### Local Feeder and Circulators Services

The data currently available provide a complete picture of locally operated bus systems for 1998 through 2006.<sup>4</sup> Taken together, annual operating costs of these bus services in current dollars increased by 137% over the time period for which data were made available. Adjusting for inflation results in a 91% increase in annual operating costs. This figure is relatively on par with the 74% increase in ridership over the same period.

While all operators experienced increases in operating costs, not all experienced the same rate of increase over the period described above. For example, the Fairfax City CUE system experienced a 57% increase in annual operating costs while Prince George’s County’s TheBus experienced an 800% increase in operating expenses, both in current dollars. However, the increases in operating costs reflect similar increases in levels of service, which enabled the increased annual ridership described in the previous section.

<sup>4</sup> Data has not been supplied for DASH and Cue systems for 1996 or 1997, and Fairfax Connector data is missing for 1997. Arlington’s ART system began service in 1998.

Charts illustrating the change in annual operating expenses of the local feeder and circulator services are displayed in Figure 11 and Figure 12.

The above data reflect major investments made in bus transit by the local jurisdictions and transit operators. Many jurisdictions have established new transit services, and others have greatly expanded their coverage and levels of service. Additionally, many transit agencies, such as ART and the Fairfax Connector to name a few, have been assuming operation of Metrobus routes, expanding locally offered services while allowing Metrobus to focus on other routes.

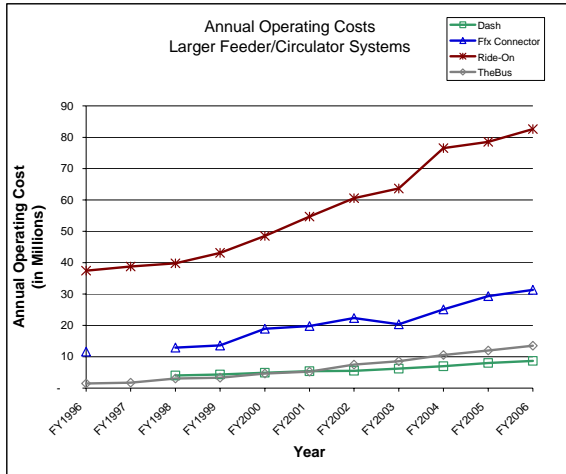


Figure 11: Operating costs of the larger local feeder/circulator systems, 1996 to 2006 in current dollars. Source: National Transit Database.

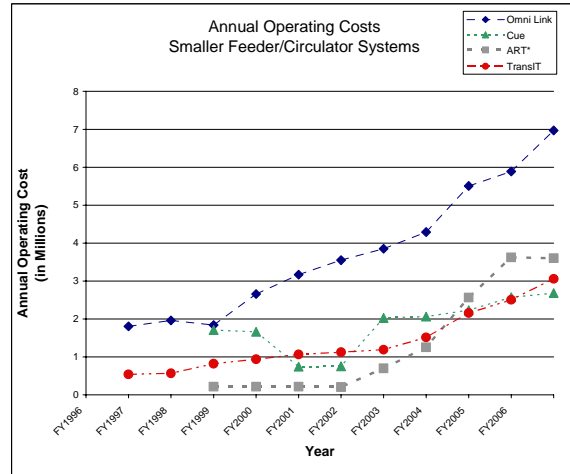


Figure 12: Operating costs of the smaller local feeder/circulator systems, 1996 to 2006 in current dollars. Source: National Transit Database.

### Commuter/Express Systems

The region's commuter bus systems also saw increases in annual operating costs. And as with the local bus systems described above, both systems for which data was available (OmniRide and LC Transit) experienced increases that mirrored increases in ridership. OmniRide experienced nearly 300% growth in operating expenses between 1996 and 2006, and LC Transit saw a 780% increase over the same period, both figures in current dollars. In constant (2006) dollars, the operators experienced 210% and 590% growth in operating expenses, respectively. A chart illustrating the growth in operating expenses of the commuter/express systems is presented in Figure 13.

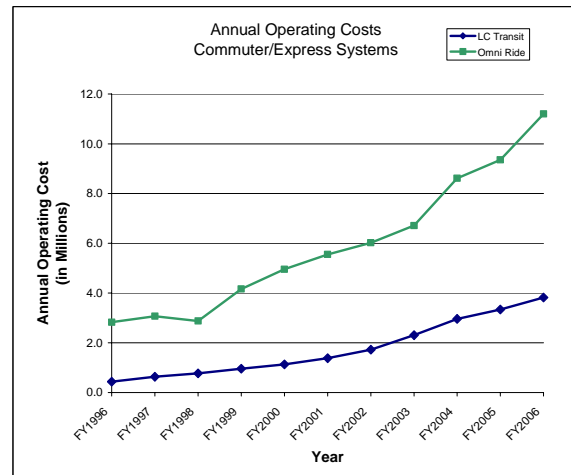


Figure 13: Operating costs of commuter/express systems, 1996 to 2006 in current dollars. Source: National Transit Database.

## **Regional Bus Planning**

### *Recent Bus Planning Efforts*

In 2003, WMATA and its consultant team released the final report of their Regional Bus Study. The Regional Bus Study was “initiated and conducted by WMATA in cooperation with the jurisdictions in its service area.” The study’s final report “presents a plan to address the short and long term requirements for both regional and non-regional bus services in the District of Columbia, Montgomery County and Prince George’s County in Maryland, Arlington, Fairfax and Loudoun Counties and the Cities of Alexandria, Fairfax and Falls Church in Virginia.”<sup>5</sup>

The Plan’s recommended improvements are organized into service improvements and capital improvements. Service improvements include strategies for providing new or improved services throughout the region. Capital improvements include upgrades to the region’s bus fleets and facilities and Intelligent Transportation Systems (ITS) implementations that are required to facilitate the service improvements. The service and capital improvements described in the plan are outlined in Figure 14.

The final section of the Regional Bus Study report reconfirms that the study’s recommendations are not financially constrained. While the study’s recommendations plot a clear course for enhancing the region’s bus transit systems, the funding sources needed to move the plan forward are not identified.

In November of 2006, WMATA hosted a regional bus summit that was attended by representatives of the bus community from around the region, with nearly 230 registered attendees. The conference was designed to seek broad local and state government support for increasing the quality of the bus services in the region:

- Improve traffic operations in congested bus corridors;
- Enhance the design and accessibility of bus stops;
- Coordinate the implementation of operating and capital projects to support a full range of bus services;
- Build on the success of fare simplification to make payment more convenient for customers and to reduce the impact and cost of revenue collection on service operations.

At the conference, WMATA and other attendees identified the following strategies for moving forward:

- Empanel a regional transit service planning group;
- Complete multi-year planning documents to guide implementation and ensure coordination between projects at WMATA and local providers;
- Establish funding need: this includes summarizing project budgets and available grant funding for operating and capital projects;
- Determine fleet size and design requirements;

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<sup>5</sup> WMATA Regional Bus Study, Final Report, September 2003



### **Recommendations from the WMATA Regional Bus Study**

- **Service Improvements**
  - Improvements to the Existing Routes
    - Increased Frequency
    - Increased Time-Span
    - Restructuring of Routes
  - New Routes
    - New Fixed Route Services
    - New/Improved Feeder Services
    - New Circulator Routes and Demand Responsive Services
    - New Cross-Regional Services (Radial and Reverse Commute)
  - High Performance Services
    - Rapid Bus: using Bus Rapid Transit (BRT) technologies and features to increase the level of service of long-haul bus lines.
    - Express Bus Services: premium commuter bus routes in corridors not served by Metrorail.
    - Rail Relief Services: express bus services intended to relieve crowded Metrorail corridors and provide downtown circulator services.
- **Capital Improvements**
  - Fleet
    - Provide new vehicles needed to implement the plan
  - Passenger Facility Amenities
    - Provide passengers with a seamless transit system; increased mobility; improved access and circulation; and reliable service and good information.
  - Running Way Treatments
    - Improve the level of bus service by: removing on-street parking during peak service hours; providing signal priority to transit vehicles; providing left-hand turn lanes; and providing bus-only lanes or queue jumpers
  - ITS Technology
    - Use technology to improve bus services through: enhanced communications; better scheduling, real-time traveler information (pre-trip, wayside and in-vehicle); transit signal priority;
  - Bus Maintenance and Storage Garages
    - Facilities to house and maintain the increased fleet of buses.

**Figure 14: Summary of recommendations from the 2003 Regional Bus Study**

- Prepare and maintain a prioritized five-year schedule of Metrobus services for review, development and deployment based on findings of the Regional Bus Study and Metrobus Network Evaluation;
- Recommend Premium Bus service corridors for development and deployment, and provide a tentative schedule for action;
- Document the critical garage needs to support these operating plans, including siting, design, acquisition of property, and initiation of construction;
- Recommend strategies to plan, fund and implement operating and capital projects.

The establishment of the Regional Bus Subcommittee was the most immediate outcome of the conference, and has opened the door for progress on the remaining strategies listed above

### *Current Long-Range Planning Activities*

#### *Activities of the Regional Bus Subcommittee*

The RBS is currently engaged in long-range planning activities as well as addressing the current operational challenges. TPB staff is working with the Subcommittee to develop mapping tools which portray current and future bus transit service from a regional perspective. Maps of future bus service are overlaid with land-use changes and regional activity clusters, identifying for long-range bus planning efforts where new routes and services may be needed.

The RBS also has expressed interest in gathering a set of regional bus transit level-of-service standards. These standards, based on land-use patterns, can then be compared against planned bus transit levels of service to spotlight areas in need of enhanced transit.

The RBS played a major role in developing the region-wide on-board bus survey to be conducted in the spring of 2008. After the chair brought to the attention of the Subcommittee a planned WMATA on-board bus survey, Subcommittee members discussed the unique opportunity that was presented: with a small increase in funding the survey could be expanded from only Metrobus riders to a survey of bus riders in the TPB Region. A regional bus survey of this magnitude has only been conducted twice in the past 35 years (1972 and 2000). The TPB identified the additional funding in the FY 2008 UPWP.

While the region's bus systems are under local control, they form a regional network. The aforementioned bus study provides an example of how the RBS facilitates coordination between the locally operated systems. In the following year, the RBS will continue to work on these and other issues pertaining to short- and long-term regional bus planning.

#### *Other TPB Planning Activities Involving Bus Transit*

In addition to the work of the Regional Bus Subcommittee, other planning activities in the Washington region involve bus transit.

The TPB's Regional Mobility and Accessibility Scenario Study (RMAS) incorporates transit enhancements (including Bus Rapid Transit) into packaged scenarios of transportation and land-use changes. These scenarios are then analyzed in an effort to answer the question, "What if the Washington Region grew differently?" These scenarios are intended to inform future land-use and transportation decisions throughout the region.

One of the RMAS scenarios is a network of Variably Priced Lanes (VPLs). VPLs are defined as tolled traffic lanes where the toll varies dynamically to ensure congestion-free travel for those willing to pay the toll. As part of the study of a Regional Network of Variably Priced Lanes, enhanced bus transit is added to the new lanes. In this scenario, buses use the congestion-free toll lanes and provide a higher level of service than currently possible, at costs less than new rail or BRT lines.

Since 9/11, the TPB and COG have coordinated several regional emergency preparedness planning activities. The transit operators have participated in this process and identified ways to use buses during regional emergencies plans. This is a natural extension of the role buses play in supporting the Metrorail system when stations are closed due to scheduled maintenance and emergency situations.

#### *Future Activities of the Subcommittee*

The Subcommittee is determining which planning activities it will undertake. These activities will include supporting the implementation of the Regional Bus Plan, mentioned above.

The Subcommittee will develop a list of unfunded priority project recommendations. These projects will come from the Regional Bus Study and its subsequent Bus Network Evaluation. This list will include regionally significant transit-specific projects, as well as infrastructure improvements that will be beneficial to bus transit operations. These infrastructure improvements could include providing relief of bottlenecks in the road network that impact buses operating in mixed traffic lanes, signal improvements or transit signal priority, dedicated bus lanes, or other roadway improvements that would benefit bus systems. Taking its lead from the TPB's Bicycle and Pedestrian Subcommittee, the Regional Bus Subcommittee will present this list to the TPB annually and recommend that the projects important to the regional bus operators are incorporated into the CLRP and TIP.

Other activities of the Subcommittee for 2008 include:

- Inform the upcoming Scenario Study planning activities
- Address cross-cutting regional planning issues
- Continue to raise awareness of the need for increased funding for bus transit's capital and operating needs

## Current Issues in Regional Bus Operations

The Regional Bus Study described above highlights mid- and long-range bus transit recommendations for the Washington region. However, there are current concerns: the existing systems must be maintained, and there are pressing demands for new services that must be addressed before focusing on long-range bus transit planning. These current needs and their causes are discussed in the following sections.

### *Real Monetary and Infrastructure Needs*

The regional bus systems have pressing monetary and infrastructure needs. The existing bus fleet is aging. Some of the older vehicles are not heavy-duty transit vehicles and also do not have sufficient seating capacity to meet demand. Funding is required to replace these older buses and enable their retirement from the fleet. The urgency of bus replacement is compounded as local governments struggle with local air pollution concerns and rising fuel costs, resulting in added pressure to replace an aging fleet of diesel-fuel buses with more fuel-efficient, low-emissions, and alternative-fuel vehicles.

Local transit agencies are also working to increase their bus fleet size. Transit agencies are purchasing buses to serve new bus lines and to reduce congestion or maintain headways on established lines.

Transit agencies are in need of new bus maintenance and storage garages. These locally undesirable facilities are hard to locate in our heavily developed urbanized area. An insufficient amount of land is zoned for compatible industrial-type uses. As a result, competition with other industries for sites that could be leased for bus garage use is heavy. Rental costs as well as land values for such sites continue to increase as demand far exceeds supply.

<b>Real Monetary Needs</b>	
How much do transit vehicles cost? <sup>6</sup>	
\$490,000	Small Hybrid Bus
\$390,000	Standard CNG Bus
\$540,000	Standard Hybrid Bus
\$460,000	Commuter Bus
\$600,000	Articulated Diesel Bus
\$800,000	Articulated Hybrid Bus

Finally, transit agencies are experiencing operational cost pressures. The January 2005 Report of the Metro Funding Panel discusses how “the level and ability of passenger fares to cover operating costs is dictated by two competing policy decisions: the desire to provide comprehensive service and the desire to limit fare increases so as to make that service affordable.”<sup>7</sup> As described above, regional bus operators have been providing greater levels of service and have been experiencing rising operating costs. However, operating costs are rising faster than ridership, and additional funding is required to cover the costs of this expanding service.

<sup>6</sup> Sources: WMATA, LC Transit, November 2007

<sup>7</sup> Report of the Metro Funding “Blue Ribbon” Panel, January 2005

House Resolution 3496, introduced by Rep. Tom Davis and other local representatives in Congress, proposes establishing a dedicated funding stream for WMATA, but this proposed funding stream only covers capital costs.

HR 3496 would help relieve cost pressures for Metrorail and Metrobus by covering capital costs. However, the Davis Bill does not provide any funding for local bus systems, which are considering seeking additional capital and operating funding through fare increases and/or greater local government subsidies.

### *Examples of Current Bus Systems' Needs*

Examples from local transit agencies illustrate the above factors resulting in increased needs for funding of bus transit systems.

#### *Needs for Maintenance of Current System:*

- ART is seeking funding for its new six-year plan which will replace and upgrade much of its fleet to heavy-duty vehicles, to improve the dependability of current service, relieve crush loads and reduce the proportion of spare vehicles needed.
- The City of Fairfax has identified the need for six new buses to replace vehicles in its existing fleet.
- Prince George's County has identified the need to replace 25 buses in the next year.
- Alexandria Transit (DASH) presently replaces approximately five buses per year.
- The Potomac and Rappahannock Transit Commission (PRTC), which operates the OmniRide commuter bus service, has identified the need for daytime parking facilities for commuter buses in the regional core to support ridership growth. PRTC reported its sixth straight year of double-digit ridership increases, and recently surpassed 10,000 passengers per day.
- As the region's bus systems mature, many career employees are nearing retirement. Many transit agencies have expressed an increase in the need to hire skilled bus maintenance personnel and operators.

#### *Needs to Support Short-Term Expansion:*

- Arlington Transit (ART) is unable to add new bus routes until a larger percentage of its fleet is replaced. Its new six-year plan, currently seeking funding, will expand the size of its fleet.
- WMATA has identified the need to expand bus service along selected corridors, implementing new Rapid bus routes which employ skip-stop operations and special vehicle branding. This expansion will require additional operating and capital funding.
- The District of Columbia Mass Transit Administration is responding to high demand for its Circulator service, and is seeking funding to add two new routes in the near future.

- Loudoun County's LC Transit commuter bus service is currently operating at crush loads. The county needs to increase its fleet size to accommodate the growing demand caused by increased development and congestion in Northern Virginia.
- Prince George's County has identified a great need county-wide for evening and weekend services. This expansion will require additional capital and operating funding. The county has also identified the need for high levels of transit service to the new National Harbor area.
- Alexandria Transit (DASH) has identified the need for an expansion of 70 buses by the year 2014 which will allow for additional frequency on existing routes as well as new routes throughout the City.
- Frederick County has identified the need to double its bus fleet and cut headways in half and seeks to secure funding to implement this fleet growth, as well as other aspects of its recently approved new transportation development plan.
- Montgomery County's RideOn has identified the need for new buses and routes to accommodate rapid ridership growth. The county has had monthly ridership increases for three straight years, resulting in an estimated 28.3 million trips in FY 2007.
- The Regional Bus Study identified the need for seven new bus garages throughout the region between 2002 and 2012, which would result in additional capacity for 900 buses.

### *Other Concerns*

The needs described above are in addition to other operating concerns that are already getting attention at local and regional levels. These concerns include:

- Providing quality bus stops and transit transfer centers;
- Implementation of BRT technologies such as signal priority and real-time bus information systems;
- Compliance with the Americans with Disabilities Act;
- Planning for the conversion of HOV lanes to HOT-lane facilities.

Regional committees such as the TPB Access For All Advisory Committee, the TPB MOITS (Management, Operations and Intelligent Transportation Systems) Task Force, VDRPT's Transit Advisory Committee and WMATA's Bus Stop Task Force are working to address these issues.

### *Factors Creating Current Situation*

Many factors interact to create the current situation, including regional growth, changing development patterns, congestion and the growing ridership on the Metrorail system.

Increased demand for public transportation stems from the region's healthy growth rate. Regional employment and housing demand grow at a faster rate than the region's highway system, which result in greater congestion throughout the region. This traffic congestion motivates some travelers to switch modes to transit. Additionally, growth

patterns are shifting toward transit-oriented developments in or around regional activity centers. Many of these activity centers are not served by the Metrorail system and rely on bus transit to provide transportation alternatives.

Traffic congestion also increases the need for more buses. Travelers and commuters wishing to avoid sitting in traffic and driving in stop-and-go conditions may switch to transit. Additionally, buses are slowed by traffic congestion, and transit agencies must add additional buses to traffic-congested routes in order to maintain schedules and meet level of service goals.

Finally, the growing ridership on the Metrorail system has increased the need for expanded bus services in two ways. First, buses assist the rail system by providing feeder service to the rail lines: increases in rail ridership are accompanied by corresponding increases in feeder bus ridership. This relationship is further compounded by limited parking facilities at nearly all Metrorail stations. Secondly, growing rail ridership has brought the Metrorail system close to capacity along several corridors. WMATA is currently planning “rail relief” bus routes which aim to take pressure off of the congested rail system. This puts even greater strain on the regional bus systems, requiring even more new buses and new routes.

All of the factors described above work to greatly increase the fleet sizes of the region’s bus operators to satisfy the growing demand for bus transit service. And as bus operators’ fleets grow, so does the need for additional bus maintenance and storage facilities.

### *Recent Funding Successes*

While most of the region’s bus systems are experiencing budgetary challenges, some successes have been achieved. The two most recent successes are the funding of the Fairfax Connector Service’s Transit Development Plan, and the funding of the Recommendations from the I-95/395 Transit Demand Management Study.

The Fairfax Connector Service Transit Development Plan includes increased bus service, 76 new buses, bus stop access and safety improvements, and the expansion of a bus facility. The \$91.1 million transit project, part of a “groundbreaking, multimillion dollar regional transportation package”<sup>8</sup> is funded by local revenues being collected by the Northern Virginia Transportation Authority (NVTA). In 2007, the NVTA received the authority to impose taxes and fees to pay for local and regional needs. The Fairfax Connector service improvements were included in the NVTA’s first six-year plan, which was adopted on January 10, 2008. The plan has been proposed for inclusion in the 2008 CLRP, due to be adopted in July of 2008.

Another recent success is the funding of the recommendations of the I-95/395 HOT Lanes Travel Demand Management (TDM) Plan. The result of a one-year, cross-jurisdictional analysis, the TDM Plan recommends increases in bus and rail service in the

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<sup>8</sup> Transportation Package Nears Approval in Northern Virginia, *Washington Post*, April 6, 2007.

I-95/395 corridor. The \$195 million funding for these transit enhancements is planned to come from toll revenue generated by the new HOT lanes along I-95/395. The TDM Plan has been proposed for inclusion in the 2008 CLRP as a “significant change” to the I-95/395 HOT lanes project. The HOT lanes project was originally added to the CLRP in 2007.

The Regional Bus Subcommittee acknowledges the local, regional and state decision makers who worked to make possible these new bus transit projects, and urges the TPB to support their inclusion in the CLRP.

## **Summary**

Bus services and rail services have equal importance to our region. The region’s bus systems provide nearly as many trips annually as the Metrorail system. Approximately 20% of Metrorail riders reach Metrorail by bus. Just as with Metrorail, ridership on Metrobus and the 13 locally operated bus systems is rapidly increasing. Regional bus operators are challenged to serve this increasing demand, and are experiencing other challenges including increased congestion on the region’s roadways, deteriorating round-trip route travel times, and real monetary and infrastructure needed to maintain current levels of service and support short-term expansion.

Bus systems are flexible and can be easily tailored to different markets. Due to their relatively low cost and infrastructure needs, bus systems can be implemented quickly. The bus systems of the Washington region contribute to and enable regional growth, providing transportation options to both new communities and redeveloping neighborhoods. Buses can provide solutions to the region’s growth and development challenges.

The challenges facing the Metrorail system have been widely publicized and discussed among our region’s decision makers. However, the challenges facing the region’s bus systems go relatively unrecognized. The Regional Bus Subcommittee of the National Capital Region Transportation Planning Board wishes to raise the profile of the region’s bus systems in the hope that these issues can be explored, discussed, and addressed. These real monetary and infrastructure needs include:

- Replacing aging buses to increase capacity, reliability and fuel efficiency, and to improve local air quality;
- Increasing fleet sizes to expand and maintain service levels;
- Citing and constructing new bus garages and maintenance facilities;
- Locating daytime parking facilities for commuter buses.

Recommendations from the Subcommittee on how to raise the profile of the region’s bus systems are listed below.

The Regional Bus Subcommittee is also pursuing long-range planning for the region’s bus systems. However, long-range planning cannot be accomplished in earnest until the current operational challenges of the region’s bus systems have been met.



### **Continuing Actions of the Regional Bus Subcommittee:**

- As the report shows, the region's bus systems are an important part of the regional transportation system. The Subcommittee will continue to raise the profile of bus transit services, and continue to ensure that bus transit facilities, services and funding needs be addressed in the TPB annual transportation planning process.
- The subcommittee will develop a public-friendly, non-technical brochure, to profile the bus systems in the region and to highlight the major points of this report. This brochure would be distributed to the interested public and to elected officials and others who have a role in operating, planning or funding public transportation.
- While each of the region's many bus systems are locally owned and operated, they form a regional network. The Subcommittee will continue to promote a regional perspective to bus planning, and identify ways to improve fare and service coordination among the regional and local services.
- Coordination between regional and local providers is required to ensure that the region's bus systems perform as one united transit system. The Subcommittee will identify ways to improve fare and service coordination among the regional and local transit providers.

### **Recommendations to the TPB to Raise the Profile of Bus Transit:**

- Bus services require other infrastructure in order to operate efficiently, including roads, signal systems, and information technology. The TPB should continue to support bus transit by incorporating consideration of needs of bus systems in other committee work plans.
- Because of its ability to help manage travel demand, bus service should be an important component of any capacity-increasing highway project. The TPB should continue to inquire about the role of bus services when considering CLRP and TIP project submissions.
- TPB members, as representatives of local and state governments, should encourage early consideration of the role of bus transit during the development of local transportation projects and land-use plans.