



ARLINGTON COUNTY, VIRGINIA

**County Board Agenda Item
Meeting of December 11, 2010**

DATE: December 2, 2010

SUBJECT: Arlington County Transit Development Plan: Fiscal Years 2011 - 2016

C. M. RECOMMENDATION:

Accept the Transit Development Plan (TDP) for Fiscal Years 2011-2016, subject to annual revision based upon annual appropriation in the County Operating Budget and the bi-annual Capital Improvement Program.

ISSUES: The County is required by the Virginia Department of Rail and Public Transportation (DRPT) to have a TDP as a condition of eligibility for reimbursement of annual operating and capital expenditures. In order to meet DRPT requirements the plan must be accepted by the County Board.

SUMMARY: This draft Transit Development Plan (TDP) is structured as required by DRPT. Operating and capital projects are listed by fiscal year. All projects are subject to annual County appropriations. An update of the TDP must be submitted to DRPT on an annual basis.

BACKGROUND: According to the "Transit Development Plan Requirements," published by DRPT in November 2008, any public transit operator receiving state funding must prepare, approve, submit and annually update a six-year Transit Development Plan. DRPT hired consultants to develop TDPs over a three year period for each grant recipient. The Connetics Transportation Group, under subcontract to PBSJ, was funded by DRPT to develop this TDP in cooperation with the Transit Bureau of the Department of Environmental Services Transportation Division.

DISCUSSION: The TDP was developed in conjunction with the transit fleet and facilities components of the County's CIP. The plan references the County's Master Transportation Plan and the Transit Master Plan, and particularly the goals and objectives established in those adopted plans. The planning process for the TDP included stakeholder and community outreach meetings, as well as national and regional peer analyses of ART services. The analysis shows that ART performs within the mean of national peers and better than the mean of regional peers.

County Manager:

BMD/GA

County Attorney:

JAM

[Signature]

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Staff: Steve Yaffe, DES, Division of Transportation

The TDP is based primarily upon existing and anticipated demand for services. The main focus of the plan is on making improvements in the efficiency, frequency and span of existing services; however the TDP does include restructuring of some WMATA and ART routes, as well as a limited number of new routes in the out-years to address forecasted demand. In the TDP, FY 2011 numbers tie to the adopted budget; FY 2012- 2016 numbers do not tie, but rather are “fiscally unconstrained” in order to maximize flexibility for future state funding eligibility. The TDP draft has been presented to and received comment from the Transit Advisory Committee, Commission on Aging, Disability Advisory Commission (during the month of November, 2010), and the Transportation Commission on November 22, 2010.

FISCAL IMPACT: The operating and capital projects listed for Fiscal Year 2011 are consistent with previously adopted budgets; in the out years (FY 2012- 2016) projects included are “fiscally unconstrained” in order to maximize flexibility for future state funding eligibility and thus are higher than what has been included in the Adopted CIP. Operating services and capital projects to be implemented in Fiscal Years 2012 – 2016 are subject to the annual budgetary processes. Proposed changes to WMATA services are subject to the WMATA budget process.

Arlington County Transit Development Plan: Fiscal Years 2011-2016

Executive Summary

The Arlington County Transit Development Plan (TDP) was prepared with the assistance of the Virginia Department of Rail and Public Transportation (DRPT) and its consultants, the Connetics Transportation Group, under subcontract to PBSJ. According to the “Transit Development Plan Requirements”, published by DRPT in November 2008, any public transit operator receiving state funding must prepare, approve, submit and annually update a six-year Transit Development Plan. This TDP includes all transit services provided in the County – rail, bus (both ART and Metrobus), and Paratransit (both STAR and MetroAccess).

The six-year TDP is a plan for future services based primarily upon existing and anticipated needs or demand for service. While this plan is not fiscally constrained, it has been developed in coordination and within the limits of the Fleet and Facilities Plan in the County’s approved Capital Improvement Program. The TDP schedule for future services is subject to appropriation in the annual operating budget, and should be adjusted annually to reflect available resources for operating and capital programs.

The first chapter provides background information about the County’s transit services including:

- History
- Governance
- Organizational Structure & Staffing
- Services Provided
 - Service Area,
 - Routes and Schedules
 - Span of Service
 - Peak Vehicle Requirements
 - Pedestrian & Bicycle Connectivity
 - ADA Compliance
 - Bus Stop & Shelter Guidelines
 - Partnerships for Funding, Facilities, Resources or Services
- Fare Structure
- Fleet
- Facilities
- Transit Security Programs
- Public Outreach

Chapter 2 includes the transit system’s goals and objectives. Arlington’s goals and objectives have already been developed and adopted in the Transit Element to the Master Transportation Plan, which provides general guidance for Arlington’s transportation system through the year 2030.

The TDP development process began in January, 2009, with presentations followed by focused discussions with transit stakeholders and transit riders to gain their perspective

of transit services provided and needed in Arlington County. This was accompanied by a review of two recent on-board surveys of ART riders.

Integral to the TDP process is the Chapter 3 review of past performance measures and comparison with similar-size transit systems both locally and nationally. The national peer systems serve similarly-sized and populated areas, also connect to commuter rail, and operate a similar number of peak vehicles. The local peers are the local (non-Metrobus) public bus systems in this metropolitan area. Arlington County's commitment to transit is evident, with Metrorail, Metrobus and ART routes overlaid upon depictions of current and projected land use patterns, employment, population and demographic statistics. This lengthy section of the full report shows the exponential growth in ART, which is providing over two million rides annually. ART's current performance places the service mid-way in efficiency measures among its national peers and above average when compared to its local peers.

Chapter 4 of the TDP discusses every new bus route or major modification of transit services projected to occur within the next six years by projected year of implementation. Every new capital project is also included in the TDP. The TDP requires a concise description of the endeavor, along with operating and capital cost projections and additional fleet requirements. These plans are summarized separately by year in Operations and Capital projects sections (Chapters 5 and 6, respectively).

Chapter 7 contains the financial plan showing how the current and planned transit services can be funded in a sustainable manner. Modifications of the fare structure or other rules governing the provision of transit services do not require prior inclusion in the TDP. The last chapter (8) discusses the monitoring process showing success in adhering to the TDP plans and procedures to update the TDP on an annual basis, due by October 30th of the year following adoption of the TDP.

National Peer Review Excerpts

The peer analysis provides the means to compare various performance characteristics of a transit agency to transit systems of similar size. Transit agencies report such information to the Federal Transit Administration (FTA), which records the information annually in the National Transit Database (NTD). Agencies have strict requirements regarding the manner in which cost and service characteristics are reported to the NTD. The NTD database is updated annually by submissions from each transit system. This peer review includes NTD data from Fiscal Year 2008 from the peer systems – the last year available – and actual ART data from Fiscal Year 2010. Recent ART data reflects the current contract cost structure that became effective July 1, 2009. This allows a more accurate comparison of the current ART cost and productivity structure with its peers.

The transit systems selected as peers to ART were:

- Anaheim Transportation Network – ATN (Anaheim, CA)
- Culver City Municipal Bus Lines (Culver City, CA)
- City of Alexandria (Alexandria, VA)
- Norwalk Transit System (Norwalk, CA)
- Livermore /Amador Valley Transit Authority – LAVTA (Livermore, CA)
- Transit Services of Frederick County (Frederick, MD)
- Howard Transit (Laurel, MD)

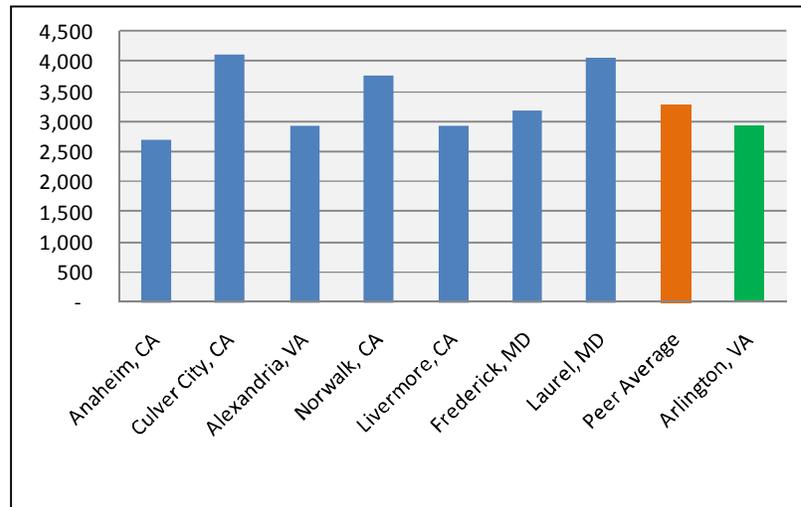
In general, ART’s service area, service, and financial characteristics were similar to the peer system averages, as summarized in Table 1.

Table 1: ART and Peer-Average Characteristics

Characteristic	Supplemental Peer Review	
	Peer Average	ART
Service Area		
Population	189,543	212,200
Square Miles	30	26
Population Density	7,037	8,162
Service		
Peak Buses	31	30
Passenger Trips	2,896,342	1,990,402
Revenue-Miles	1,223,540	779,573
Revenue-Hours	107,747	75,797
Financial		
Annual Operating Cost	\$ 9,340,000	\$ 6,600,000
Fare Revenue	\$ 1,774,600	\$ 1,187,856

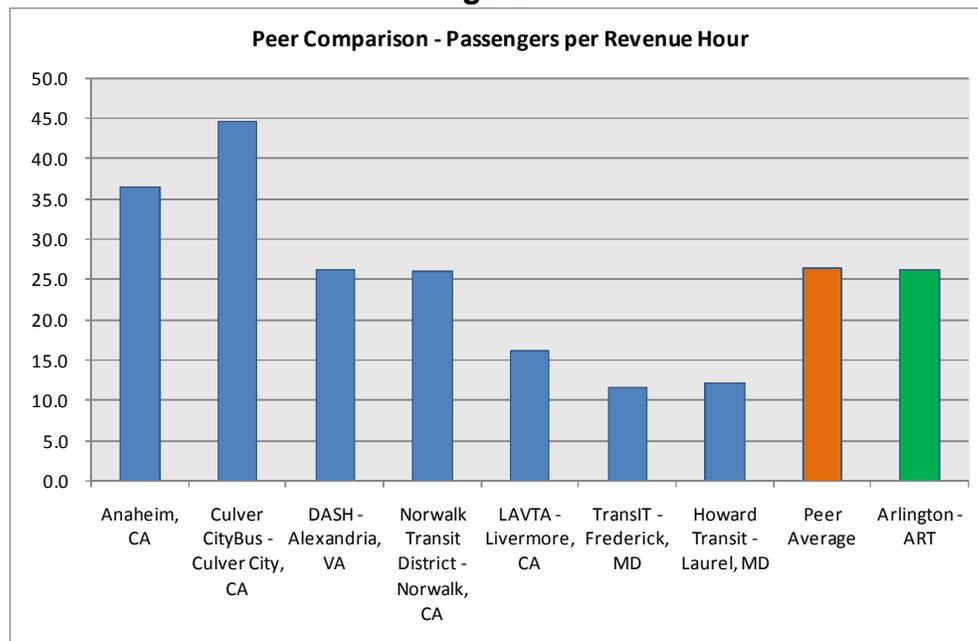
- Revenue-Hours per Peak Bus:** Figure 1 shows that the peer systems operated between 2,685 (Anaheim, CA) and 4,107 (Culver City, CA) revenue-hours per peak bus. At 2,915, ART operates 20 percent lower than the peer average of 3,265.

Figure 1: Peer Comparison – Revenue-Hours per Peak Bus



- Passenger Trips per Revenue-Hour:** Figure 2 shows that the peer systems generate between 12 (Frederick and Laurel, MD) and 45 (Culver City, CA) passenger trips for every revenue-hour of bus service. ART’s productivity of 26.3 passengers per revenue-hour is very close to the peer average of 26.5.

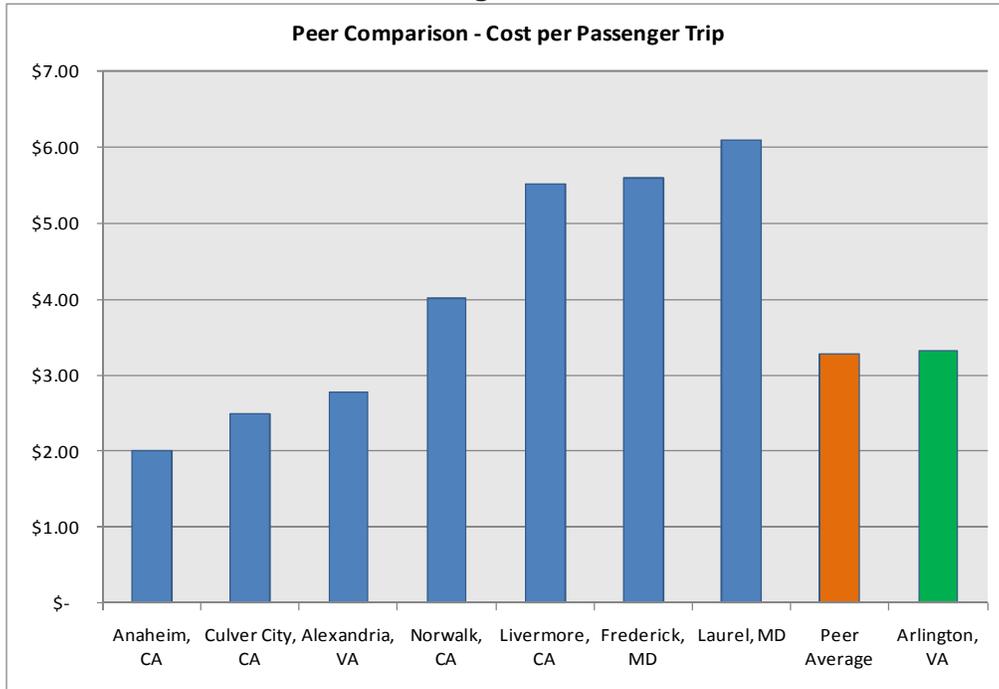
Figure 2:



- Operating Cost per Passenger Trip:** This performance measure provides an indication of how efficient a system is at balancing the cost of providing service with the number of patrons it serves. Peer system costs per passenger trip range from \$2.01 (Anaheim, CA) to \$6.09 (Laurel,

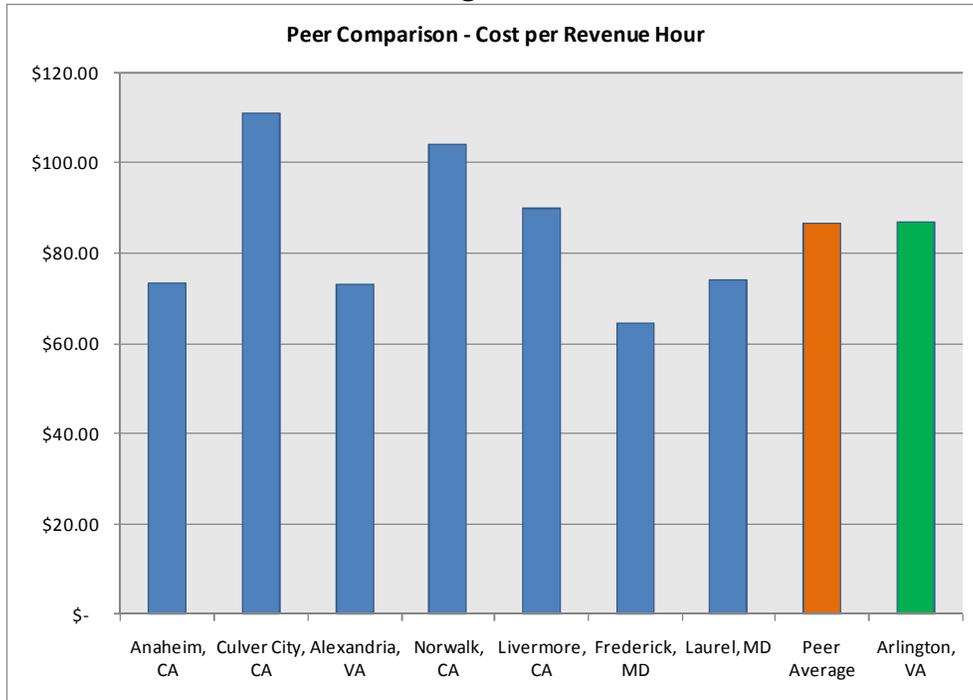
MD) with an average of \$3.27. ART's performance on this measure is \$3.32, which is slightly above the peer average at \$3.27.

Figure 3:



- Operating Cost per Revenue-Hour:** Figure 4 shows the peer systems' cost per revenue-hour range from \$64.57 (Frederick, MD) to \$110.90 (Culver City, CA), averaging at \$86.68. ART's operations cost of \$87.07 per revenue-hour is slightly above the peer average.

Figure 4:



Local Peer Review Excerpts

A limited peer review was conducted to compare the ART bus system to six suburban bus systems that all operate in the District of Columbia area. As with the primary peer review, this evaluation used the Federal Transit Administration’s 2008 NTD for five of the transit agencies (including one NTD report that was not in the included in the FTA’s database, but was provided by the agency) and FY 2010 data for ART. The bus systems selected as D.C.-area peers were:

- City of Fairfax - CUE (Fairfax, VA),
- City of Alexandria (Alexandria, VA),
- City of Falls Church (Falls Church, VA),
- Fairfax Connector Bus System (Fairfax County, VA),
- Ride-On Montgomery County Transit (Montgomery County, MD), and
- Prince George’s County Transit (Prince George’s County, MD).

Falls Church was the system for which NTD information was not available, but was obtained instead from the Virginia Transit Performance Report (FY 2002 – FY 2006).

Table 2: ART and D.C. Peer-Average Characteristics

Characteristic	Supplemental Peer Review	
	Peer Average	ART
Service Area		
Population	503,695	212,200
Square Miles	234	26
Population Density	3,889	8,162
Service		
Peak Buses	108	26
Passenger Trips	7,992,632	1,990,402
Revenue-Miles	4,053,493	779,573
Revenue-Hours	310,462	75,797
Financial		
Annual Operating Cost	\$ 29,315,247	\$ 6,600,000
Fare Revenue	\$ 1,124,819	\$ 1,187,856

- **Vehicle Utilization:** Figure 5 shows that the peer systems operated between 1,711 (Falls Church) and 4,325 (City of Fairfax) revenue-hours per peak bus. At 2,915, ART operates a very similar number of revenue-hours per peak bus as the peer average (2,884).

Figure 5: D.C. Peer Comparison – Revenue Vehicle-Hours per Peak Bus

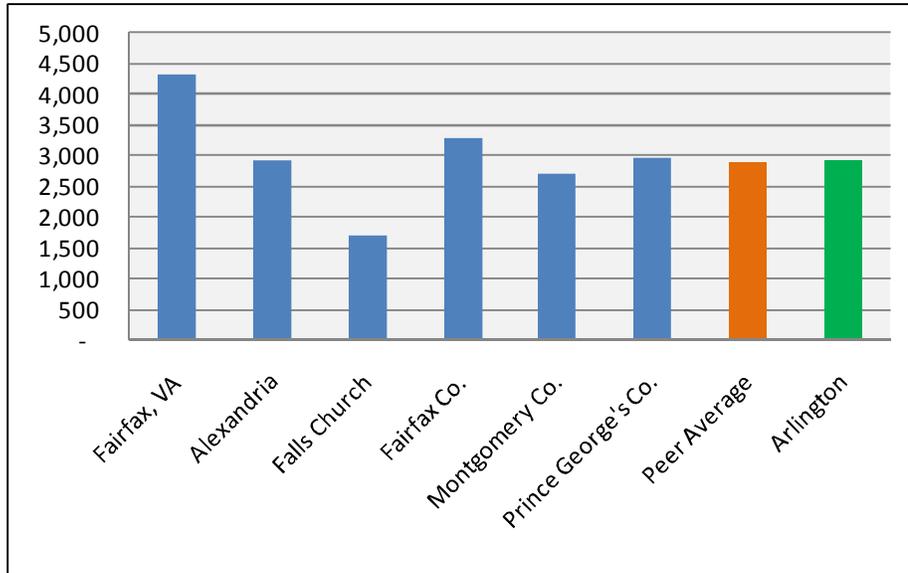
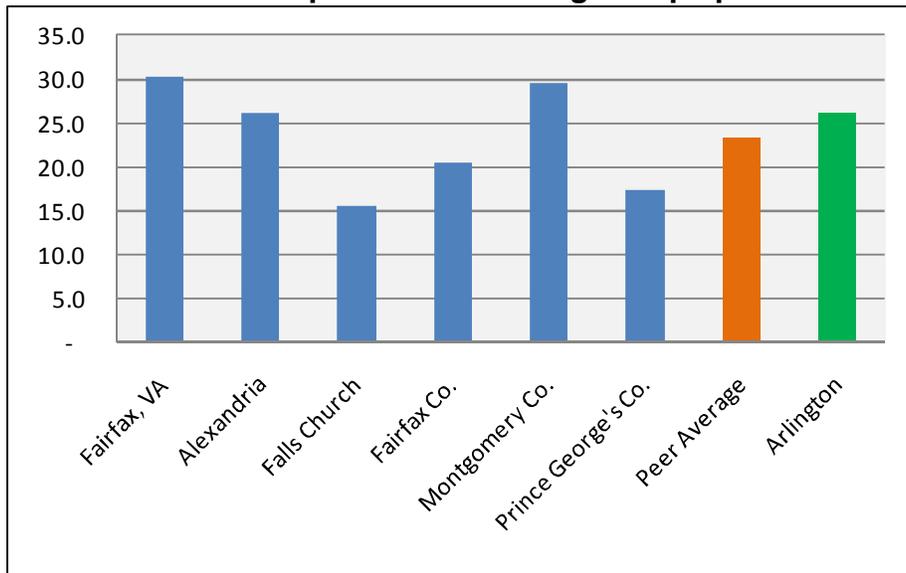


Figure 6 shows that the D.C.-area peer systems generate between 15.5 (Falls Church) and 30.3 (City of Fairfax) passenger trips for every revenue-hour of bus service. ART's productivity of 26.3 passengers per revenue-hour is better than the peer average of 23.3.

Figure 6: D.C. Peer Comparison – Passenger Trips per Revenue-Hour



- **Cost Efficiency:** ART's cost efficiency was better than the D.C. peer average when compared on a passenger trip basis and revenue-hour, and revenue-mile basis.

Figure 7 shows the D.C. peer systems' cost per passenger trip ranges from \$2.78 (Alexandria) to \$5.10 (Falls Church), averaging at \$3.97. On this performance measure, ART's cost of \$3.32 per passenger trip is lower than the peer average by 17%.

Figure 7: D.C. Peer Comparison – Operating Cost per Passenger Trip

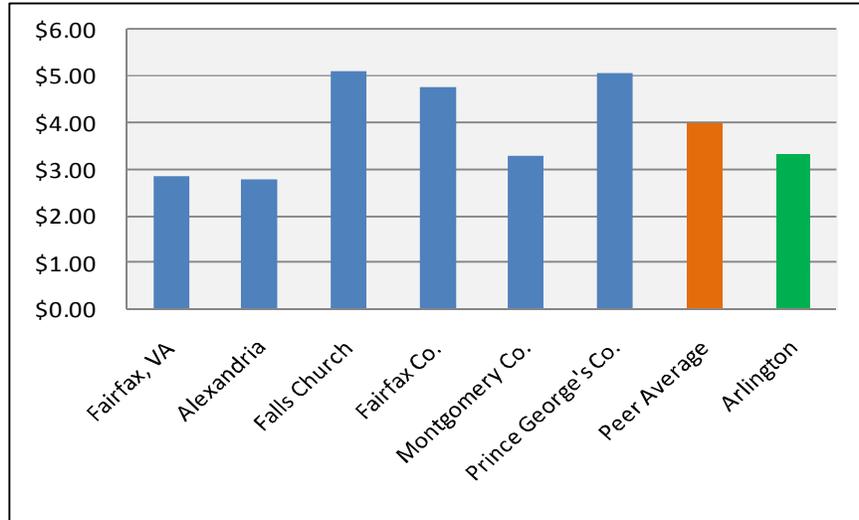
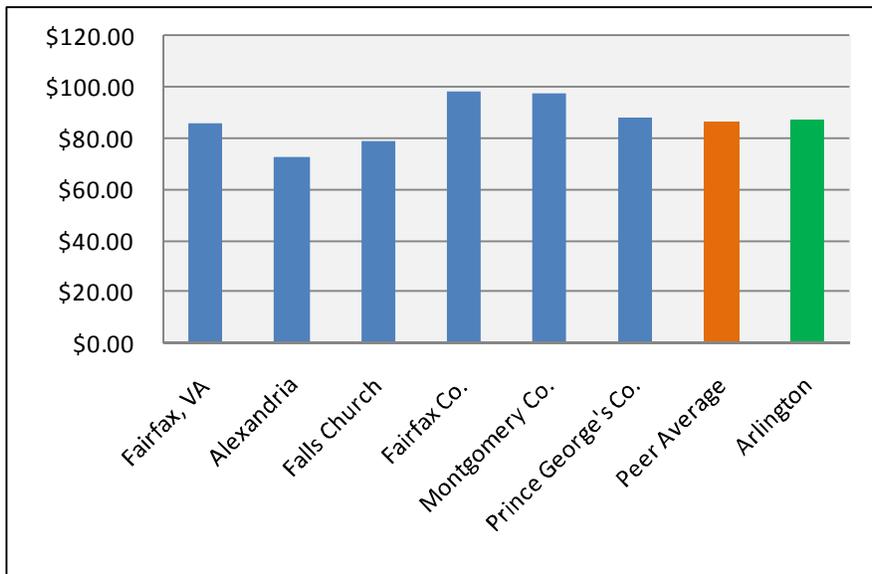


Figure 8 shows the D.C. peer systems' cost per revenue-hour ranges from \$72.96 (Alexandria) to \$98.26 (Fairfax County), averaging at \$87.00. On this performance measure, ART's costs are very close to the peer average at \$87.07 per revenue-hour.

Figure 8: D.C. Peer Comparison – Operating Cost per Revenue-Hour



Arlington County Transit Service Operational Needs

Arlington County transit service needs have been defined under the following seven categories:

- **Systemwide Connectivity** – connections between major activity centers / employment sites and higher density residential areas
- **Re-structured Fixed Route Service** – route alignment modifications, some of which promote connectivity, others enable improved on-time performance, and of course increased patronage.
- **On-Time Performance** – adjustments made to route running times to ensure high levels of on-time performance
- **Transit Service Levels** – service frequency, new service hours or service periods (e.g., midday service), days of service, service productivity related changes.
- **Project Specific** – transit service improvements and modifications required to accommodate a new transit investment or major development project.
- **Primary Transit Network Improvements** – Primary Transit Network (PTN) of high-frequency and quality transit services along major corridors to encourage a low-auto-usage lifestyle and higher all-day patronage. The PTN would extend beyond the established Metrorail corridors and include new surface transit services, such as streetcar and bus rapid transit. Transit services should operate at 15-minute intervals or better every day for about 18 hours.
- **Paratransit Services** – Grouped standing order paratransit services as well as Flex Route Services may offer those with disabilities a mobility option that better meets their needs in a manner that is less costly to the County than the current services, MetroAccess and Specialized Transit for Arlington Residents (STAR).

Systemwide Connectivity Transit Needs

- 1. Provide new connection between Columbia Pike and Rosslyn** – Route 45 was implemented on July 6, 2010. This new route provides this needed connection.
- 2. Improve connectivity between Crystal City and Arlington Hall** – This would establish a new route operating between Crystal City directly to Arlington Hall during peak periods only
- 3. Improve connectivity between Ballston, Shirlington and Pentagon City/Crystal City** – This would restructure existing service to provide regular frequencies with dependable on-time performance during weekdays, nights and weekends

4. **Enhanced Ballston-Rosslyn Corridor Service** – Due to overloading on the Orange Line, enhanced bus transit service is needed along the Orange Line Corridor between the Ballston and Rosslyn Metro Stations, possibly east into the District (e.g., Metrobus Route 38B).

Re-structured Fixed Route Service

1. **New ART Route 84 / Modified ART Route 74** – This route alignment change went into effect in the on June 21, 2010. A new route 84 serves the Douglas Park loop previously served by the Route 74. Route 84 serves the Nauck neighborhood as well as large apartment buildings along South Glebe Road at 24th Road South. The existing Route 74 continues to serve the Columbia Heights, Arlington Village and Arlington View communities. Each route connects to Pentagon City Metro every half-hour during peak periods only.
2. **Extend ART Route 75** – On September 27, 2010, this route was extended from the southern route end at South Dinwiddie Street and Chesterfield Road to the Shirlington Transit Station, and from the northern route end at Ballston Metro to Virginia Square Metro. These extensions connect a major retail and employment center in Shirlington and a major employment center and a George Mason University campus in Virginia Square, with a large concentration of affordable housing.
3. **Extend ART Route 51 North and South** – This route change would extend Route 51 north to the Langston Community Center via Lee Highway. Additionally, this route would be extended via Lee Highway to the Culpepper Garden Community Center.
4. **Extend ART Route 77 to Rosslyn** – This route change would extend the existing route 77 east to the Rosslyn Metro Station. This extension provides one seat rides between the Shirlington Transit Station and Rosslyn, connecting large employment centers with a direct cross-town route.
5. **Restructure ART Route 62 to improve efficiency and increase ridership** – This peak period route performs just at minimum standards.
6. **Extend Metrobus Route 3Y west to East Falls Church Station** – This route would be extended west along Lee Highway to the East Falls Church Metro Station during peak periods only.
7. **Modify Metrobus Route 23A Pattern Alignment** – Realign Metrobus 23 alignments to offer 10 minute peak and 15 minute off-peak service frequencies between Ballston Metro and the Shirlington Transit Station, 20 minute peak and 30 minute off peak service along the remainder of the route, and improve on-time performance along the entire length of the route.
8. **Modify Metrobus Route 10B in conjunction with ART Route 77 Frequency Improvements** – When ART Route 77 service frequency improvements are implemented, move Metrobus Route 10B from South Walter Reed Drive and 2nd Street to north-south on South Glebe Road to better coordinate and match service frequencies and coverage in the area to ridership demand. The ART Route 77 improvement is listed in the FY 2013 Transit Service Improvement Plan on p. 20 below, which anticipates improving peak service from 30 to 20 minute frequencies.
9. **Extend Route 9S to 12th Street** – As a means to serve Long Bridge Park, this route would be extended north to 12th Street.

10. Implement Route 1 Corridor Busway Service

11. Provide peak period “Blue with a View” transit service – supplement the Metrorail Blue Line connection between the Crystal City, Pentagon City, Pentagon, Rosslyn, and Court House Metrorail stations.

12. Extend the Blue with a View transit service to nights and weekends – for service to Long Bridge Park when the recreational facilities are fully developed.

13. New Aurora Highlands Circulator – Determine the feasibility of implementing a new circulator route in the Aurora Highlands neighborhood.

On-Time Performance

Weekdays

- ART Routes 51, 52 and 53 are experiencing on-time performance degradation resulting from traffic congestion and ridership volumes. Adjustments to running times on these routes combined with interlining them will result in the need for one additional bus to maintain existing service levels. Additionally, consideration will be given to swap the route 51 and 52 route alignments between the Ballston Metro Station and the Virginia Medical Center – Arlington on George Mason Drive. Consideration will also be given to providing weekend service on the ART 52 instead of the ART 51 to maintain the connection between Ballston Metro and Virginia Hospital Center while adding service to North Arlington.
- ART Route 41 also experiences on-time performance degradation resulting from traffic congestion and ridership volumes. Adjustments to running times will be made on this route with the addition of a fifth bus to create a consistent 15 minute frequency during peak and midday hours on weekdays and Saturdays (as noted above).
- Metrobus Route 23A is a very long route that is difficult to operate on schedule. By splitting the route in two, overlapping in the segment between Ballston Metro and Shirlington Station, the Primary Transit Network objective of fifteen-minute service levels in that segment should be achievable. The PTN then would include a square connecting three concentrations of urban development in Arlington County: Rosslyn-Ballston (Metrorail Orange Line); Ballston-Shirlington (Restructured Metrobus 10B and 23 as well as the ART 41 as far as Columbia Pike); Shirlington-Pentagon (Metrobus 7 and ART 87); and Pentagon-Rosslyn (Metrorail Blue Line).

Transit Service Levels

1. Weekday Service Frequency Improvements

Service frequency needs have generally been identified for the midday and evening service periods, when service frequencies on some routes presently operate every 60 minutes. ART’s eleven fixed routes generally operate 15 to 30 minute service frequencies during peak periods. Metrobus service frequencies vary by route. The following service frequency improvements have been identified for weekday service:

- ART Route 41 – Consistent 15 minute service frequencies all day
- ART Route 42 – improve midday service from 60 to 30 minute frequency

- ART Route 52 – improve midday service from 60 to 30 minute frequency
- ART Route 53 – improve midday service from 60 to 30 minute frequency
- ART Route 77 – improve peak period service from 30 to 20 minute frequency
- Metrobus Route 22A – in response to the BRAC 129 Re-alignment Study, improve service frequency between the Shirlington Transit Station and the Ballston Metro Station (some trips turned back at Shirlington Transit Station) from 20 to 10 minute frequency peak periods and from 40 to 20 minute frequency during off peak periods
- Metrobus Route 23A – improve service frequencies between Ballston Metro and the Shirlington Transit Station to 10 minute peak and 15 minute off-peak and 20 minute peak and 30 minute off-peak service along the remainder of the route

2. Weekend Service Frequency Improvements

Weekend service frequency improvements for routes currently operating on weekends include:

- ART Route 41 – Consistent 15 minute service frequencies (Saturday)
- ART Route 42 - Improve all day service from 60 to 30 minute frequency (Saturday)
- Metrobus Route 22A – in response to the BRAC Re-alignment Study, improve service frequency on Saturdays between the Shirlington Transit Station and the Ballston Metro Station from 40 to 20 minute frequency all day
- Metrobus Route 23 – Restructure to improve Ballston-Shirlington service frequencies and on-time performance

3. Service Hour Improvements

On weekdays ART service operates between the approximate hours of 5:00 a.m. and 10:00 p.m., with Route 51 operating until 12:30 a.m.. Saturday ART service operates the approximate hours of 7:00 a.m. and 10:00 p.m., again the Route 51 operates later until about 12:15 a.m.. Sunday ART service operates between the approximate hours of 8:00 a.m. and 9:00 p.m., with Route 51 operating until 10:25 p.m.. Much of the Metrobus service in Arlington County operates between 5:00 a.m. and 1:00 a.m. on weekdays and Saturdays, and between 6:00 a.m. and 12:00 a.m. on Sundays. As part of the service analysis performed in Chapter 3, the following span of service hour improvement needs have been identified for weekdays, Saturdays and Sundays:

Weekdays

- ART Route 41 – extend evening service until 12:30 a.m.
- ART Route 42 – extend evening service until 12:30 a.m.
- ART Route 75 – extend evening service until 12:30 a.m.
- ART Route 77 – extend evening service until 12:30 a.m.
- ART Route 87 – extend evening service until 12:30 a.m.
- Metrobus Route 9S – in conjunction with extension to 12th Street, extend service until 12:30 a.m.

Saturdays

- ART Route 41 – extend evening service until 12:30 a.m.
- ART Route 42 – extend evening service until 12:30 a.m.
- ART Route 77 – extend evening service until 12:30 a.m.
- ART Route 87 – extend evening service until 12:30 a.m.

Sundays

- Route 41 – begin morning service at 6:30 a.m., extend evening service until 10:30 p.m.
- Route 42 – extend evening service until 10:30 p.m.
- Route 87 – begin morning service at 6:30 a.m., extend evening service until 10:30 p.m.

4. New Service Periods

Of the eleven ART fixed routes that operate on weekdays, only seven routes operate during the midday service period and six on weeknights. Some of the peak period only routes are designed to serve work oriented trips (e.g., ART Routes 61, 62, 74 and the upcoming 84 as well as Metrobus Routes 3Y and 16Y). Midday and evening services are needed along routes that offer commuting options to those working non-traditional hours or routes that serve important retail and recreational centers.

Midday Service Needs

- ART Route 62
- ART Route 75 between Columbia Heights West and Shirlington

Weeknight Service Needs

- ART Route 75 – extend evening service until 10:30 p.m.

5. New Days of Service

As noted earlier, on weekdays ART operates 11 fixed routes, five routes on Saturdays, and only two routes on Sundays. The service analysis performed in Chapter 3 identified the need for expanded weekend service on the following routes:

Saturdays – 6:30 a.m. to 7:00 p.m.

- ART Route 52 between East Falls Church Metro and Virginia Hospital Center
- ART Route 53
- ART Route 75
- ART Route 77
- Metrobus Route 9S

Sundays – 6:30 a.m. to 7:00 p.m.

- ART Route 42
- ART Route 75
- ART Route 77
- ART Route 87
- Metrobus Route 9S

- Metrobus Route 22A

6. Service Productivity Related Changes

Proposed service level modifications also include the elimination of the following underperforming routes:

Saturdays

- Route 61 (effective March 27, 2010)

Project Specific

- 1. Providing new transit service connections to Long Bridge Park** – Provide transit route between Pentagon, Long Bridge Park and Crystal City from 2:00 p.m. to 11:00 p.m. on weekdays and Saturdays, and from 2:00 p.m. to 9:00 p.m. on Sundays.
- 2. Columbia Pike Streetcar (Primary Transit Network Corridor)** – Implementation of the Columbia Pike Streetcar service will require modification to the existing Metrobus Route 16 service as well as other routes serving and crossing the corridor. These route modifications are under development.
- 3. Crystal City Potomac Yard Transitway** – Implementation of this transitway project will require modifications to the existing Metrobus Route 9 service in the corridor including addition of weeknight and weekend service. These route modifications are under development.
- 4. Blue Line Bus Service** - In anticipation of the implementation of the Silver Line to Dulles Airport, every third peak period Metrorail Blue Line train will use the Yellow Line bridge, resulting in the need to provide enhanced bus service between Crystal City, Pentagon City, Rosslyn and Courthouse.
- 5. East Falls Church Area Plan – Circulator Routes** - The purpose of the East Falls Church Area Plan is to generate a land use and transportation vision for transit-oriented development in the East Falls Church Metro Station area of Arlington County and the City of Falls Church. There are two principal aspects to this study: land use vision development and transportation planning. Circulator route design is under study.

Primary Transit Network Improvements

Listed below are transit service improvements identified under each PTN corridor to implement the PTN network.

1. Wilson & Clarendon Boulevards – Ballston / Rosslyn / D.C.
 - a. Route 41 – running time adjustments resulting in consistent 15 minute frequency during peak and midday time periods on weekdays and Saturdays.
 - b. Route 42 – improve weekday midday service from 60 to 30 minute frequency, improve Saturday all day service from 60 to 30 minute frequency
 - c. Route 45 – new Columbia Pike to Rosslyn route operating on Weekdays at 30 minute frequencies peak and off-peak
 - d. Route 77 – improve weekday peak period service from 30 to 20 minute frequency, extend weekday service until 12:30 p.m., add new Saturday service until 12:30 p.m. and add Sunday service between 6:30 a.m. and 7:00 p.m.
 - e. In late August 2010, the D.C. Circulator (sponsored by the District of Columbia) was extended west from Georgetown to Rosslyn Metro Station on September 1, 2010
2. Parallel to Rte. 1 – Crystal City / Pentagon City / Pentagon
 - a. Metrobus Route 9S – in conjunction with extension to 12th Street, extend weekday service until 12:30 a.m.
3. Glebe Road – Potomac Avenue / Fairfax Drive
 - a. Route 41 – running time adjustments resulting in consistent 15 minute frequency during peak and midday time periods on weekdays and Saturdays.
 - b. Metrobus Route 23 A – Realign Metrobus 23 alignments to offer 10 minute peak and 15 minute off-peak service frequencies between Ballston Metro and the Shirlington Transit Station, 20 minute peak and 30 minute off-peak service along the remainder of the route, and improve on-time performance along the entire length of the route
4. Lee Highway – East Falls Church / Rosslyn / D.C.
 - a. Metrobus Route 3Y – extending route west along Lee Highway to the East Falls Church Station during weekday peak periods

Paratransit Services

1. MetroAccess is the regional paratransit service established by WMATA under provisions of the Americans with Disabilities Act. Demand and required subsidies for this service have increased substantially each year. WMATA has proposed changes in eligibility and coverage to encourage shifting of some demand to other modes of transportation. However, WMATA has not been successful in improving productivity – as measured by boardings per service hour – to transport more people without increasing driver and vehicle

requirements. One person is transported for each hour that a MetroAccess vehicle is in use (March, 2010).

2. STAR is Arlington County's local alternative to MetroAccess service. The STAR fare structure was revised in 2006 to discourage use of long trips. Trips within Arlington have the same fare as MetroAccess, currently \$3.00. Trips serving the District of Columbia and Northern Virginia inside the beltway have a \$4.00 fare. Longer trips in the metropolitan area have a \$8.50 fare. STAR serves over three quarters of the paratransit trips made by Arlington residents, even though over 70% of STAR trips have one trip end outside Arlington and consequently a higher fare than MetroAccess. STAR's scheduling productivity is somewhat better than MetroAccess, and is working to improve beyond 1.3 boardings per hour.
3. Arlington County has other options besides MetroAccess and STAR for residents who cannot use fixed route transit services due to a disability. Most MetroAccess and STAR riders use Paratransit because they cannot reach the bus stop. One option that Arlington County intends to explore is to offer very localized service – within specified zones or neighborhoods. Like STAR, this service would be curb-to-curb, picking up passengers in front of their residences. This service could be focused on two markets:
 - a. Seniors traveling midday in neighborhoods where substantial numbers are aging in place in their homes, outside congregate senior living complexes. Like ART, the vehicles would serve designated bus stops at medical facilities, grocery stores, senior centers, and where riders could transfer to and from high-frequency transit routes. However, the vehicle could deviate between stops to provide curb-side service. Service in two neighborhood zones would be considered as a pilot project, where midday service is offered two days each week.
 - b. Commuters with disabilities living near Metrorail stations or bus transit centers who could complete their commute on transit, if only they could reach that access point. Like ART, the vehicles would serve designated bus stops at Metrorail stations and bus transit centers. Morning rides would be pre-scheduled to offer curb-side pickups. Evening trips could be pre-scheduled or not – qualified riders could approach a vehicle every 30 minutes at a Metrorail station or bus transit center and request a ride home.
4. For those who need point-to-point Paratransit service, STAR or MetroAccess could improve the grouping of many rides. STAR or MetroAccess could negotiate with those riders who need the same trip at the same time between the same addresses on a daily or weekly basis. Pickup times could be adjusted to allow the same group of people to ride on the same vehicle with the same driver regularly. The cost per ride to the County (and possibly the consumer) could be reduced, while the dependability of the trip would be increased. This solution would be especially important to MetroAccess riders, as the consistency and quality of STAR services are highly evaluated by STAR riders.

Table 3
Arlington Transit Needs Plan
Operating Funding Requirements

Additional Service Need	Annual Bus-Hours / Buses	Provider / Route	Annual Cost Impact <i>(Fully Allocated; In Current Dollars)</i>	Service Start
Systemwide Connectivity Transit Needs				
1. Columbia Pike and Rosslyn <i>(completed 7/6/2010)</i>	6,500 2 peak buses	ART	\$489,600	FY 2011
2. Crystal City and Arlington Hall	3,000 2 peak buses	ART or Metrobus	\$226,000	FY 2013
3. Ballston, Shirlington & Pentagon City/Crystal City	TBD	ART or Metrobus	TBD	FY 2013
Re-Structured Fixed Route Service				
1. New Route 84 / Modified Route 74 <i>(completed 6/21/2010)</i>	750	ART	\$56,500	FY 2010
2. Extend Route 75 to Shirlington Transit Station <i>(completed 9/27/2010)</i>	1,875 1 peak bus	ART	\$141,200	FY 2011
3. Extend Route 51 north and south	6,550 1 peak bus	ART	\$493,400	FY 2015
4. Extend Route 77 to Rosslyn	4,838 1 peak bus	ART	\$364,400	FY 2016
5. Restructure Route 62	TBD	ART	TBD	FY 2012 *
6. Metrobus Route 10B - Modify alignment in conjunction with 77 freq. improvements	TBD	Metrobus	TBD	FY 2013
7. Metrobus Route 23 Improvements	TBD, 3 buses	Metrobus	TBD	FY 2012
8. Metrobus Route 22A - Shirlington to Ballston supplemental service (BRAC Re-alignment)	11,820 3 buses	Metrobus	\$1,193,800	FY 2012
9. Metrobus Route 9S - Extend to 12th Street, provide evening service	10,430 2 buses	Metrobus	\$1,090,300	FY 2013
10. Metrobus Route 3Y - Extend Route to East Falls Church Metro Station	510 1 bus	Metrobus	\$53,300	FY 2012
11. Metrobus – Route 1 Corridor Busway service	TBD	Metrobus	TBD	FY 2014
* Route is being studied in FY 2011 for implementation in FY 2012.				

Not Shown in Table – MetroRail Blue Line Service Modifications

Arlington County Transit Service Plan

This “TDP Six-Year Transit Service and Facility Plan” utilizes the transit service needs identified in Chapter 4 as a “Needs Plan” and identifies those priority transit service improvements, which are financially feasible within the six year timeframe of the TDP. Transit service initiatives have been selected from all seven types of transit service improvements. Following is a description of each transit service improvement by Fiscal Year (2011 – 2016). Table 4 presents a listing of bus-hours, bus requirements and annual O&M costs associated with each identified bus service improvement. Tables in Appendix E present service plan tables for each year of the six-year TDP time period.

FY 2011 Transit Service Improvement Plan

ART Route 41 – Columbia Pike/Ballston/Court House Metro

- Weekdays – adjustments to running times will be made on this route with the addition of a fifth bus to create consistent 15 minute service frequencies. *

ART Route 42 – Ballston/Pentagon Metro

- Weekdays – improve midday service from 60 to 30 minute frequency. *

ART Route 45 – Columbia Pike/Rosslyn (New Route)

- This new route, implemented July 6, 2010, establishes new service between the Rosslyn Metrorail Station and Columbia Pike, operating on weekdays between approximately 6:30 a.m. and 7:30 p.m. at 30 minute service frequency. *

ART Route 61 – Rosslyn/Court House Metro Shuttle

- Due to underperformance, this route is eliminated on Saturdays (effective March 27, 2010) *

New ART Route 84 – Douglas Park / Modified Route 74 – Douglas Park/Arlington Village/Arlington View/Pentagon City Metro

- This route alignment change (effective June, 2010) establishes a new route 84 serving the Douglas Park loop formerly served by the existing Route 74. Route 84 also serves the Nauck neighborhood as well as large apartment buildings along South Glebe Road at 24th Road South. The existing Route 74 continues to serve the Columbia Heights, Arlington Village and Arlington View communities. Each route connects to Pentagon City Metro every half-hour during peak periods only. *

ART Route 75 – Wakefield H.S./Carlin Springs Road/Ballston Metro

- This route was modified on September 27, 2010. The route was extended south from its existing end of line at South Dinwiddie Street and Chesterfield Road to the Shirlington Transit Station. It was also extended north to the Virginia Square Metrorail Station. *

ART Route 77 – Shirlington/Lyon Park/Court House Metro

- Weekday - Extend service in evening by 3 hours until approximately 11:00 p.m. *

Table 4: ART TDP 6-Year Service Improvements and Costs

Proposed Year	Day of Route	Improvement Description	Wkdy	Wkdy	Sat.	Sat.	Sunday	Sunday	Annual	FY 2011 \$	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	
			Pk Bus	Rev.-Hrs.	Pk Bus	Rev.-Hrs.	Pk Bus	Rev.-Hrs.	Rev.-Hrs.	O&M Cost	O&M Costs	O&M Costs					
FY 2011	41	Wkdy	Consistent 15-min. Wkdy. frequency (requires 5th bus)							2,875	\$216,600	\$216,600	\$224,100	\$231,900	\$240,000	\$248,500	\$257,300
	42	Wkdy	Improve midday frequency to 30-minutes							1,500	\$113,000	\$113,000	\$116,900	\$121,000	\$125,200	\$129,600	\$134,200
	45	Wkdy	New Columbia Pike-Rosslyn route							6,500	\$489,600	\$489,600	\$506,600	\$524,300	\$542,700	\$561,800	\$581,600
	61	Sat	Eliminate 61 Saturday service			-1	-4.5			-257	-\$19,300	-\$19,300	-\$20,000	-\$20,700	-\$21,400	-\$22,200	-\$23,000
	74/84	Wkdy	New Route 84/Modified 74 alignment (pk only service)							750	\$56,500	\$56,500	\$58,500	\$60,500	\$62,600	\$64,800	\$67,100
	75	Wkdy	Extend service to Shirlington (pk only service)							1,875	\$141,200	\$141,200	\$146,100	\$151,200	\$156,500	\$162,100	\$167,800
	77	Wkdy	Extend Evening service by 3 hours							1,500	\$113,000	\$113,000	\$116,900	\$121,000	\$125,200	\$129,600	\$134,200
Forsythe Contract - Additional \$7,830 per month - Street Supervisor, over 100K Revenue Hours (starts FY 2012)												\$93,960	\$93,960	\$93,960	\$93,960	\$93,960	
FY 2011 Total			4	60.0	-1	-4.5	0	0.0	14,744	\$1,110,600	\$1,110,600	\$1,243,060	\$1,283,160	\$1,324,760	\$1,368,160	\$1,413,160	
FY 2012	41	Sat	Consistent 15-min. Sat. frequency (requires 5th bus)			1	9.8			559	\$42,100	\$43,500	\$45,100	\$46,600	\$48,300	\$50,000	
	42	Wkdy	Add 4th bus to peak period service			1	6.0			1,500	\$113,000	\$116,900	\$121,000	\$125,200	\$129,600	\$134,200	
	62	Wkdy	Restructure route alignment (assumed cost-neutral)			0	0.0			0	\$0	\$0	\$0	\$0	\$0	\$0	
	75	Wkdy	Add midday & evening service			0	27.5			6,875	\$517,900	\$535,900	\$554,500	\$574,000	\$594,200	\$615,200	
FY 2012 Total			1	33.5	1	9.8	0	0.0	8,934	\$673,000	\$696,300	\$720,600	\$745,800	\$772,100	\$799,400		
FY 2013	42	Sat	Improve Sat. frequency to 30-minutes			1	11.0			627	\$47,200		\$50,600	\$52,300	\$54,200	\$56,100	
	77	Sat	Start Saturday service on this route			2	25.0			1,425	\$107,300		\$114,900	\$119,000	\$123,200	\$127,500	
	77	Wkdy	Improve peak frequencies to 20-minutes			1	6.5			1,625	\$122,400		\$131,100	\$135,700	\$140,400	\$145,400	
	New	All	Pentagon/Long Bridge Park/Crystal City Metro			2	18.0	2	14.0	6,338	\$477,400		\$511,200	\$529,100	\$547,800	\$567,100	
	New	Wkdy	Crystal City/Arlington Hall route (pk only service)			2	12.0			3,000	\$226,000		\$242,000	\$250,500	\$259,300	\$268,500	
	New	Wkdy	Pentagon City/Crystal City/Rosslyn/Courthouse			2	28.0			7,000	\$527,300		\$564,600	\$584,400	\$605,000	\$626,400	
	Forsythe Contract, Bus Insurance fixed costs increase by \$458 per extra vehicle per month over 40 Fleet buses												\$32,976				
FY 2013 Total			7	64.5	5	54.0	2	14.0	20,015	\$1,507,600		\$1,647,376	\$1,671,000	\$1,729,900	\$1,791,000		
FY 2014	41	Wkdy	Improve wkdy evening frequencies to 15-minutes							2,000	\$150,700			\$167,000	\$172,900	\$179,000	
	42	Sun	Start Sunday service on this route					2	20.5	1,189	\$89,600			\$99,300	\$102,800	\$106,400	
Forsythe Contract, Bus Insurance fixed costs increase by \$458 per extra vehicle per month over 40 Fleet buses													\$32,976				
FY 2014 Total			0	8.0	0	0.0	2	20.5	3,189	\$240,300			\$299,276	\$275,700	\$285,400		
FY 2015	51	All	Extend north to Langston Com. Ctr. And south to Culpepper Com Ctr.			1	18.5	1	18.0	6,550	\$493,400				\$566,100	\$586,100	
	51/52/53	Wkdy	Add bus for running time adjustments / on-time performance			1	14.0			3,500	\$263,700				\$302,500	\$313,200	
	52/53	Sat	Start Saturday service on these routes					4	25.0	1,425	\$107,300				\$123,200	\$127,500	
Forsythe Contract, Bus Insurance fixed costs increase by \$458 per extra vehicle per month over 40 Fleet buses														\$49,464			
FY 2015 Total			2	32.5	5	43.0	1	15.5	7,975	\$600,700				\$1,041,264	\$1,026,800		
FY 2016	77	Wkdy	Extend route to Rosslyn			1	16.5			4,125	\$310,700					\$369,100	
	77	Sat	Extend route to Rosslyn					1	12.5	713	\$53,700					\$63,800	
	87	Wkdy	Extend evening service hours			0	6.0			1,500	\$113,000					\$134,200	
	87	Sat	Extend evening service hours					0	7.0	399	\$30,100					\$35,700	
Forsythe Contract, Bus Insurance fixed costs increase by \$458 per extra vehicle per month over 40 Fleet buses															\$54,960		
FY 2016 Total			1	22.5	1	19.5	0	0.0	6,737	\$507,500					\$657,760		
TOTAL BUSES, HOURS AND COSTS			15	221.0	11	121.8	5	50.0	63,343	\$4,771,550	\$1,110,600	\$1,939,360	\$3,651,136	\$4,040,836	\$5,187,124	\$5,973,520	

FY 2012 Transit Service Improvement Plan +

ART Route 41 – Columbia Pike/Ballston/Court House Metro

- Saturdays – adjustments to running times will be made on this route with the addition of a fifth bus to create consistent 15 minute service frequencies during midday and afternoon periods *

ART Route 42 – Ballston/Pentagon Metro

- Weekdays – Add a 4th bus in the peak periods to operate at consistent 20-minute frequencies

ART Route 62 – Court House Metro/Lorcom Lane/Ballston Metro

- Weekdays – This route, in conjunction with Route 61, is proposed for alignment restructuring to enhance service performance *

ART Route 75 – Shirlington/Wakefield H.S./Carlin Springs Road/Ballston Metro

- Weekdays – add midday service and extend evening service to approximately 10:30 p.m. at 30 minute service frequency *

New ART Route – Aurora Highlands Circulator

- Study feasibility of implementing new route in the Aurora Highlands neighborhood.

ART Route 45 – Columbia Pike/DHS/Rosslyn

- Study feasibility of realignment or extension

- * These projects complete implementation of the Arlington Transit (ART) Enhanced and New Services for FY 2010 & FY 2011 plan approved by the County Board on September 26, 2009.
- + These projects are dependent upon availability of annual County Board-approved appropriations.

FY 2013 Transit Service Improvement Plan +

ART Route 42 – Ballston/Pentagon Metro

- Saturdays - improve all day service from 60 to 30 minute frequency

ART Route 75 - Shirlington/Wakefield H.S./Carlin Springs Road/Ballston Metro

- Weekends – new Saturday from 6:30 a.m. to 10:30 p.m. at 30 minute frequency, and new Sunday service from 6:30 a.m. to 7:00 p.m. at 30 minute frequency

ART Route 77 – Shirlington/Lyon Park/Court House Metro

- Weekday – improve peak period service from 30 to 20 minute frequency
- Saturday – new service from 6:30 a.m. to 7:00 p.m. at 30 minute frequency

New ART Route – Pentagon/Long Bridge Park/Crystal City Metro

- Weekdays and Weekends – new transit service connecting the Pentagon Metro Station, Long Bridge Park and Crystal City Metro Station, operating at 30 minute service frequency in the afternoon and evening hours only

New ART or Metrobus Route – Crystal City/Arlington Hall

- Weekdays only - new transit service connecting the Arlington Hall and Crystal City Metro Station, operating at 30 minute service frequency in the peak periods only

New ART or Metrobus Route – Pentagon City/Crystal City/Rosslyn/Court House

- Weekdays only - new transit service connecting the Pentagon City Metro, Crystal City Metro, Rosslyn Metro and Court House Metro Stations, operating at 30 minute service frequency all day (14 hours)

- + These projects are dependent upon availability of annual County Board-approved appropriations.

FY 2014 Transit Service Improvement Plan +

ART Route 41 – Columbia Pike/Ballston/Court House Metro

- Weekdays – improve evening service from 30 to 15 minute frequency

ART Route 42 – Ballston/Pentagon Metro

- Sundays - new service from 6:30 a.m. to 7:00 p.m. at 30 minute frequency midday and 60 minute early morning and evening

- + These projects are dependent upon availability of annual County Board-approved appropriations.

FY 2015 Transit Service Improvement Plan +

ART Route 51 – Ballston Metro/Virginia Hospital Center

- Weekdays, Saturdays and Sundays – extend route alignment north to the Langston Community Center and south to Culpepper Community Center

ART Route 51 – Ballston Metro/Virginia Hospital Center

ART Route 52 – Ballston Metro/East Falls Church Metro

ART Route 53 – Ballston Metro/Glebe/East Falls Church Metro

- Weekdays – add bus to be shared over three routes for running time adjustments / on-time performance

ART Route 52 – Ballston Metro/East Falls Church Metro

- Saturday – new service from 6:30 a.m. to 7:00 p.m. at 60 minute frequency

ART Route 53 – Ballston Metro/Glebe/East Falls Church Metro

- Saturday – new service from 6:30 a.m. to 7:00 p.m. at 60 minute frequency

- + These projects are dependent upon availability of annual County Board-approved appropriations.

FY 2016 Transit Service Improvement Plan +

ART Route 77 – Shirlington/Lyon Park/Court House Metro

- Weekday and Saturday – extend route alignment to the Rosslyn Metro station

ART Route 87 – Pentagon Metro to Shirlington Station

- Weekday – extend evening service hours until 12:30 a.m.
- Saturday – extend evening service hours until 12:30 a.m.

- + These projects are dependent upon availability of annual County Board-approved appropriations.

Table 5: ART OPERATING STATISTICS – FY 2016 PROPOSED SERVICE

Weekday

Rt. #	Route Name	Span of Service	Service Frequency				Average Weekday		Bus Requirements			
			AM Peak	Mid-day	PM Peak	Eve	Rev. Hrs.	Rev. Miles	AM Peak	Mid-day	PM Peak	Eve.
41	Columbia Pike-Ballston-Courthouse	6:00 am-11:17 pm	15	15	15	15	78.5	660.0	5.00	5.00	5.00	4.00
42	Ballston-Pentagon	5:50 am-7:22 pm	20	30	20	30	32.0	332.8	3.00	2.00	3.00	2.00
45	Columbia Pike-Rosslyn	6:30 am-7:30 pm	30	30	30	30	26.0	249.6	2.00	2.00	2.00	2.00
51	Culpepper-Ballston-Virginia Hospital Ctr.-Langston	6:04 am-12:30 am	30	30	30	30	37.0	303.4	2.00	2.00	2.00	2.00
52	Ballston Metro-East Falls Church Metro	6:20 am-8:45 pm	30	60	30	60	21.0	210.0	2.00	1.00	2.00	1.00
53	Ballston-Old Glebe-East Falls Church	6:00 am-9:25 pm	30	60	30	30	24.5	352.8	2.00	1.00	2.00	2.00
61	Rosslyn Court House Metro Shuttle	Peaks Only	22.5	n/a	22.5	n/a	13.0	105.0	2.00	0.00	2.00	0.00
62	Court House-Lorcom Lane-Ballston	Peaks Only	30	n/a	30	n/a	14.0	117.6	2.00	0.00	2.00	0.00
74	Arl. Village/View-Pentagon City	Peaks Only	30	n/a	30	n/a	7.5	111.0	1.00	0.00	1.00	0.00
75	Shirlington.-Carlin Springs Rd.-Ballston	6:00 am-10:30 pm	30	30	30	30	49.5	455.4	3.00	3.00	3.00	3.00
77	Shirlington-Lyon Park-Courthouse-Rosslyn	6:00 am-7:55 pm	20	30	20	30	56.0	481.9	4.00	3.00	4.00	3.00
84	Pentagon City-Douglas Park	Peaks Only	30	n/a	30	n/a	7.5	117.0	1.00	0.00	1.00	0.00
87	Pentagon-Army Navy Dr.-Shirlington	5:30 am-12:30 am	20	30	20	20	48.0	489.6	3.00	2.00	3.00	3.00
87a	Pentagon-Army Navy Dr.-26th/Troy	Peaks Only	20	n/a	20	n/a	1.2	22.4	1.00	0.00	1.00	0.00
New	Crystal City-Arlington Hall	Peaks Only	30	n/a	30	n/a	12.0	132.0	2.00	0.00	2.00	0.00
New	Rosslyn-Pentagon-Long Bridge Park	2:00 pm-11:00 pm	n/a	n/a	30	30	18.0	198.0	0.00	0.00	2.00	2.00
New	Pentagon/Crystal City/Rosslyn/Courthouse	All-Day	30	30	30	30	28.0	308.0	2.00	2.00	2.00	2.00
New	Running Time Adjustment Rte's 51/52/53	All-Day	60	60	60	60	14.0	151.2	1.00	1.00	1.00	1.00
							487.7	4,797.7	38.00	24.00	40.00	27.00

Saturday

Route	Route Name	Span of Service	Serv. Freq.			Average Saturday		Bus Requirements	
			AM	Mid/P M	Eve.	Rev. Hrs.	Rev. Miles	Midday	Eve.
41	Columbia Pike-Ballston-Courthouse	7:00 am-11:17 pm	30	15	30	62.8	520.0	5.00	2.00
42	Ballston-Pentagon	6:30 am-7:17 pm	30	30	60	24.0	249.6	2.00	1.00
51	Culpepper-Ballston-Virginia Hospital Ctr.-Langston	6:05 am-12:15 am	30	30	30	36.0	295.2	2.00	2.00
52	Ballston Metro-East Falls Church Metro	6:30 am-7:00 pm	60	60	60	12.5	125.0	1.00	1.00
53	Balston-Old Glebe-East Falls Church	6:30 am-7:00 pm	60	60	60	12.5	180.0	1.00	1.00
75	Shirlington.-Carlin Springs Rd.-Ballston	6:30 am-10:30 pm	30	30	30	48.0	441.6	3.00	3.00
77	Shirlington-Lyon Park-Courthouse-Rosslyn	6:30 am-7:00 pm	30	30	30	37.5	305.0	3.00	3.00
87	Pentagon-Army Navy Dr.-Shirlington	7:00 am-12:30 am	30	30	30	35.0	357.0	2.00	2.00
New	Rosslyn-Pentagon-Long Bridge Park	2:00 pm-11:00 pm	n/a	30	30	18.0	198.0	2.00	2.00
						286.3	2,671.4	21.00	17.00

Sunday

Route	Route Name	Span of Service	Serv. Freq.			Average Sunday		Bus Requirements	
			AM	Mid/PM	Eve.	Rev. Hrs.	Rev. Miles	Midday	Eve.
41	Columbia Pike-Ballston-Courthouse	8:00 am-8:36 pm	60	22	n/a	30.3	352.0	3.00	0.00
42	Ballston-Pentagon	6:30 am-7:00 pm	60	30	60	20.5	213.2	2.00	1.00
51	Culpepper-Ballston-Virginia Hospital Ctr.-Langston	6:45 am-10:25 pm	30	30	30	31.0	254.2	2.00	2.00
75	Shirlington.-Carlin Springs Rd.-Ballston	6:30 am-7:00 pm	30	30	30	37.5	345.0	3.00	3.00
New	Rosslyn-Pentagon-Long Bridge Park	2:00 pm-9:00 pm	n/a	30	30	14.0	154.0	2.00	2.00
						133.3	1,318.4	12.00	8.00

Summary Of FY 2016 Proposed Service Statistics

Statistic	Day	Daily Value	Annual Factor	Annual Value	Existing Value	Change from Exist	Percent Change
Annual	Weekdays	928	250	232,000	152,250	79,750	52.4%
Bus Trips	Saturdays	494	57	28,158	14,592	13,566	93.0%
	Sundays	236	58	13,688	6,786	6,902	101.7%
	Annual		365	273,846	173,628	100,218	57.7%
Annual Rev.	Weekdays	488	250	121,916	68,291	53,625	78.5%
Bus-Hours	Saturdays	286	57	16,316	6,641	9,676	145.7%
	Sundays	133	58	7,731	2,656	5,075	191.0%
	Annual		365	145,964	77,588	68,376	88.1%
Annual Rev.	Weekdays	4,798	250	1,199,425	710,000	489,425	68.9%
Bus-Miles	Saturdays	2,671	57	152,270	61,241	91,029	148.6%
	Sundays	1,318	58	76,467	28,687	47,780	166.6%
	Annual		365	1,428,162	799,928	628,234	78.5%
Peak Buses	Weekdays	40	n/a	40	26	14	53.8%
	Saturdays	21	n/a	21	9	12	133.3%
	Sundays	12	n/a	12	4	8	200.0%

Table 6
TDP Financial Plan for Annual O&M Costs (Costs in Year of Expenditure Dollars)

Service Statistic/Funding Category	Estimated FY 2010	Budget FY 2011	Project'd. FY 2012	Project'd. FY 2013	Project'd. FY 2014	Project'd. FY 2015	Project'd. FY 2016
ART Fixed Route Statistics							
Wkdy Peak Buses Req'd.	26	30	32	37	37	39	40
Sat. Peak Buses Req'd.	9	8	12	17	17	20	21
Sun. Peak Buses Req'd.	4	4	6	9	11	12	12
Fleet Buses	13	13	13	16	16	16	16
Annual Rev. Bus-Hrs.	77,588	92,332	106,602	124,563	127,752	139,227	145,964
STAR Paratransit Bus-Hrs.	43,705	43,705	43,705	43,705	43,705	43,705	43,705
PROJECTED O&M COSTS							
ART Fixed Route	\$6,596,252	\$7,791,600	\$9,132,400	\$10,525,800	\$10,773,200	\$11,663,400	\$12,186,100
STAR Paratransit	<u>\$2,948,956</u>	<u>\$2,836,900</u>	<u>\$2,922,000</u>	<u>\$3,009,700</u>	<u>\$3,100,000</u>	<u>\$3,193,000</u>	<u>\$3,288,800</u>
TOTAL COSTS	\$9,545,208	\$10,628,500	\$12,054,400	\$13,535,500	\$13,873,200	\$14,856,400	\$15,474,900
<i>Change from Prior Year</i>		\$1,083,292	\$1,425,900	\$1,481,100	\$337,700	\$983,200	\$618,500
Anticipated Funding Sources							
<u>ART Revenues</u>							
Farebox Revenues		\$1,572,200	\$1,815,200	\$2,121,000	\$2,175,300	\$2,370,700	\$2,485,400
Bus Contributions (51/52)		\$60,000	\$61,800	\$63,700	\$65,600	\$67,600	\$69,600
Bus Contributions (67)		\$211,000	\$217,300	\$223,800	\$230,500	\$237,400	\$244,500
State Transit Aid		<u>\$1,892,300</u>	<u>\$1,949,100</u>	<u>\$2,007,600</u>	<u>\$2,067,800</u>	<u>\$2,129,800</u>	<u>\$2,193,700</u>
ART General Fund Support		\$4,056,100	\$5,089,000	\$6,109,700	\$6,234,000	\$6,857,900	\$7,192,900
<i>Change from Prior Year</i>		\$4,056,100	\$1,032,900	\$1,020,700	\$124,300	\$623,900	\$335,000
<u>STAR Revenues</u>							
Farebox Revenues							
State Transit Aid							
STAR General Fund Support		<u>\$2,836,900</u>	<u>\$2,922,000</u>	<u>\$3,009,700</u>	<u>\$3,100,000</u>	<u>\$3,193,000</u>	<u>\$3,288,800</u>
<i>Change from Prior Year</i>		\$2,836,900	\$85,100	\$87,700	\$90,300	\$93,000	\$95,800
TOTAL PROJECTED REVENUES	\$0	\$10,628,500	\$12,054,400	\$13,535,500	\$13,873,200	\$14,856,400	\$15,474,900

Inflation rate 3.0%

Table 6 (Continued)

NOTES:

- 1 ART peak bus requirements and annual revenue bus-hours based on TDP-proposed service plans through FY 2016.
- 2 STAR scheduled trips assumed to grow 3%/year.
- 3 Projected ART costs for FY 2010 and budgeted FY 2011 costs obtained from Arlington County's FY 2011 budget.
- 4 STAR FY 2010 costs obtained from STAR FY 2010 Monthly Report spreadsheet.
- 5 STAR FY 2011 budget total obtained from Arlington County's FY 2011 budget.
- 6 STAR's annual O&M costs reflect a net cost to the County, after service providers have collected passenger cash fares.
- 7 Annual O&M costs for new ART service based on rate of \$75.32 per revenue bus-hour (FY 2011).
- 8 Assumed inflation rate for ART's hourly rate is 3%/year.
- 9 STAR annual O&M costs assumed to grow at same rate as scheduled trips (3%/year).
- 10 State transit aid in 2010 for ART and STAR provided by ART staff.
- 11 For FY 2011, VDRPT identified \$1.892 million for Arlington County for ART; \$0.946 million for STAR.
- 12 Future state aid assumed to grow at rate consistent with VDRPT SYIP, assumed to be split 79% ART/21% STAR.
- 13 Farebox revenues assumed to grow at same rate as service-hours.
- 14 Farebox revenues also assume a 20 cent fare increase in FY 2013 and FY 2015 (about 12% each year).
Bus contributions assumed to remain constant through TDP time period. FY 2011 amount obtained from Arlington County
- 15 budget.
- 16 STAR bucks revenues are about \$80,000 per year. A 3% increase per year is assumed for FY 2012-FY 2016.
General Fund Support based on anticipated costs, minus anticipated farebox revenues, STAR coupon sales, developer
- 17 contributions, & state aid.
- 18 TDM program costs and revenues not included in above table.

SIX-YEAR TRANSIT SERVICE AND FACILITY PLAN - CAPITAL IMPROVEMENTS PROGRAM

This plan identifies the cost-feasible transit service and capital needs that are recommended for inclusion in the TDP time period (FY 2011 through FY 2016). Recommended improvements presented in this chapter are financially constrained, based on anticipated funding availability during the TDP time period.

TDP capital improvement recommendations for FY 2011 through FY 2016 are consistent with capital improvement categories in the Arlington County Capital Improvement Program (CIP). Capital improvement recommendations are categorized into four types: vehicles, maintenance facility improvements, passenger facility improvements and Metro Matters (WMATA Federal-State-Local Partnership Capital Investment Program). Vehicle costs have been updated to reflect vehicle needs as identified in this TDP. Recommendations for the Six-Year TDP are identified by fiscal year below under each type of capital improvement.

Vehicle Recommendations

Arlington Transit owns and operates a fleet of 35 transit buses for fixed-route revenue service. Model years for these vehicles range from 2002 to 2008. Table 7 identifies Arlington Transit's fleet composition and proposed fleet replacement and expansion plan. ART intends to retire 15 vehicles in Fiscal Years 2011 and 2012. These will be replaced with twelve (12) 30-foot heavy-duty low-floor buses powered by compressed natural gas (CNG) in the summer of 2010. An additional five buses will be needed in 2012 (of which three are replacements), nine new buses in FY 2013, 3 new buses in FY 2015 and one new bus in FY 2016. Thus, a total of 30 bus purchases are reflected in this six-year TDP. These buses will maintain a 20% spare ratio and expand the fleet to accommodate future service changes / expansion plans (described earlier in this section). Due to the age and condition of the 2002 and 2003 Ford E-450 buses in the fleet, the Transit Bureau is proceeding to identify and procure suitable low-floor narrow-width wheelchair-accessible replacement buses powered by compressed natural gas. These would be used to serve neighborhood streets that can not accommodate standard-width transit buses.

Table 7
Arlington Transit Fleet Replacement and Expansion Schedule

		Transit Development Plan Period						
		Vehicle Fleet						
Year	Make	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
2002	Ford E450	6						
2003	Ford E450	2						
2004	SPC Ambassador	1						
2004	GLV MB55	1						
2006	Ford E450	5	3					
2007	Nabi 35LFW	8	8	8	8	8	8	8
2008	Nabi 35LFW	12	12	12	12	12	12	12
2011	30 Foot CNG		12	12	12	12	12	12
2012	30 Foot CNG			2	2	2	2	2
2012	35 Foot CNG			3	3	3	3	3
2013	30 Foot CNG				4	4	4	4
2013	35 Foot CNG				5	5	5	5
2015	35 Foot CNG						3	3
2016	35 Foot CNG							1
Fleet Size		35	35	37	46	46	49	50
Peak Buses		26	30	31	38	38	40	41
Spare Buses		9	5	6	8	8	9	9
Spare %		35%	17%	19%	21%	21%	23%	22%

The funding proposed for fleet replacement and enhancement is as shown in Table 8 below. This is an update to what is reflected in Arlington's current CIP, for this table reflects bus replacement/expansion needs identified above in Table 6. Most of the ART fleet program will be funded by Transportation Investment Funds and state capital reimbursement grants.

Table 8
ART Fleet Replacement and Expansion Funding in FY 2011 Capital Improvements Program

Program	FY 2011 (000s)	FY 2012 (000s)	FY 2013 (000s)	FY 2014 (000s)	FY 2015 (000s)	FY 2016 (000s)	Total for FY 2011- 16 (000s)
ART Fleet Replacement	5,995	1,375	0	0	0	0	7,370
ART Fleet Expansion		917	4,249	0	1,503	516	7,185
Total Costs	5,995	2,292	4,249	0	1,503	516	14,555

Maintenance Facility Recommendations

ART House (bus maintenance facility and CNG fueling facility) – The ART House site includes a CNG fueling facility, and a maintenance garage for the ART bus services and fleet with the administrative and operations offices across the street. The development of the ART House facilities will be completed in phases. The initial phase will include site improvements on 2900 Jefferson Davis Highway, utilities, a CNG fueling station and a bus wash facility. Subsequent phases will include the

maintenance facility. Work is underway to develop permanent offices for administration and operations at 2900 S. Eads Street. Total Phase 1 Project Cost is estimated to be \$6.0 million.

The funding proposed in the FY 2011 CIP for the ART facility improvements is as shown in Table 8 below. The capital costs for the six year period in the FY 2011 CIP are estimated to be \$13.25 million. This is an ongoing program and future phases will require funding of an additional \$6.75 million. Most of the ART House program will be funded by Transportation Investment Funds and state capital reimbursement grants.

Table 8
ART House Funding in FY 2011 Capital Improvements Program

Program	FY 2011 (000s)	FY 2012 (000s)	FY 2013 (000s)	FY 2014 (000s)	FY 2015 (000s)	FY 2016 (000s)	Total for FY 2011- 16 (000s)	Future Funds Require d (000s)	Total Projec t Cost (000s)
ART House	3,750	7,000	2,500	0	0	0	13,250	6,750	20,000

Passenger Amenities & Access Improvements

Arlington’s Transit Capital Program includes projects to upgrade station facilities and access to the Metrorail system and passenger amenities specific to Columbia Pike as well as systemwide. Implementation of the transit capital improvement plan will provide the necessary new and improved infrastructure to support the goals and objectives of the Transit Element in the Master Transportation Plan (MTP). Below are brief descriptions of needed passenger amenities and access improvements.

Rosslyn Station Access Improvements – This project includes the design and construction of three new high speed, high-capacity elevators, a mezzanine with fare gates and kiosk, emergency stairs, and related infrastructure for the Rosslyn Metrorail Station. Total project cost is estimated to be \$44 million.

Ballston-MU Station West Entrance – This project includes a new entrance at the west end of the station to provide easier access from the Glebe Road area and growing development in the western part of Ballston; this entrance will be located at the intersection of North Fairfax Drive and North Vermont Street and will include two street level elevators and escalators connecting to an underground passageway and new mezzanine with stairs and elevators to the train platform. Total project cost is estimated to be approximately \$62 million, assuming the project is constructed in coordination with redevelopment of the adjacent privately-owned site.

Fairfax Drive Sidewalk and Bus Stop Improvements (Ballston Station Multimodal Improvements) – This project improvements are anticipated to include reconstructed bus bays, new bus shelters and amenities, passenger information systems and services, bicycle parking, and expanded pedestrian plaza, landscaping, and revised curb utilization. The Total Project Cost is estimated to be \$6.4 million.

Bus Stop and Shelter Program – This project will provide bus shelters, concrete area pads, benches, other amenities, improved safety and accessibility with better pedestrian connections at stops along bus routes that form the Secondary Transit Network (STN) connecting neighborhoods,

community facilities, and urban centers, with the Primary Transit Network (PTN). Total Project Cost is estimated to be \$1.8 million.

Transportation Infrastructure Maintenance Capital – Bus stops and shelters require continual repairs and upgrades to keep them safe, accessible, and attractive, which is an important factor in encouraging greater transit use. Some shelters in the County have been in place for over 30 years, compared to a 20-year useful life. The ongoing capital maintenance program also provides for new bus stop shelters to existing stops when vandalism or other damage requires immediate replacement. The average cost of a shelter replacement is \$7,000. The goal of the bus stop shelter program is to replace 10 of the 215 bus shelters each year. Total Project Cost is estimated at \$0.42 million (\$70,000 per year for six years).

Columbia Pike Superstops – Super Stops are larger, architect-designed bus shelters with the following proposed passenger amenities: electronic and printed information, maps for bus routes and areas; wireless access to information such as cell, PDA, web “Hot Zone”; ample seating, enhanced lighting and new security features; vendor corrals, improved landscaping, sidewalks, curb and gutter. The initial project will build three prototype Super Stops. Ultimately a total of 22 Super Stops shelters at 11 locations along Columbia Pike have been identified. Construction on the three prototype stops is scheduled to begin before the end of CY 2010 and be completed by late summer, 2011¹, at a project cost of \$2.6 million². Total project cost for the 22 Super Stops is estimated to be \$12.1 million³.

Pentagon City Pedestrian Tunnel Restoration – The subject entryway consists of stairs at the northeast corner of the intersection of S. Hayes Street and 12th Street South going down to a pedestrian tunnel constructed under South Hayes Street and connecting through glass doors to the mezzanine level of the Pentagon City Metro Station. Repairs will address deteriorated lighting and electrical systems, an ineffective drainage system, leaking concrete expansion joints, deteriorated doors and gates, and damaged floor tiles, handrails, and ceiling panels. Improved signage, security cameras and an emergency call box in the tunnel will be installed. Total Project Cost is estimated to be \$0.80 million.

Pentagon City Station Elevator – The Pentagon City Metrorail station is among the most heavily utilized in Arlington County; currently there is one street-level elevator entrance located on the east side of Hayes Street. This project will result in a second elevator entrance to the Pentagon City Metrorail station from the street level to the mezzanine level of the station. The elevator will be located on the west side of South Hayes Street near the existing west side escalator. Total Project Cost is estimated to be \$8 million.

Crystal City Station Access Improvements – In 2002 WMATA completed a study identifying a need for a second entrance to the Crystal City Metrorail Station and additional internal circulation capacity improvements. The recent Crystal City Sector Plan update reinforced the need for an additional entrance located near the intersection of Crystal Drive and 18th Street South. The entrance would consist of elevators and stairs or escalators, a new tunnel connecting to the train room, station

¹ The first 3-4 stops will be constructed by early 2011. Construction of the remaining 19 Superstops will be phased over several years.

² Approximately \$600k for planning and preliminary design and \$2M for construction + WMATA costs

³ 19 remaining stops at \$500k each, assuming built by County, = \$9.5M

mezzanine reconfiguration, and additional stairs between the mezzanine and platform. Total project cost is estimated to be \$36 million⁴. Construction may occur in phases.

Court House Station Access Improvements – In 2004 WMATA completed a study that concluded an additional entrance to the Court House Metrorail Station was needed to meet forecast demand and improve reliability of elevator access. Subsequent public input has confirmed the demand for a new access point or at a minimum an additional elevator. Total project cost is estimated to be \$36 million⁵ for a new entrance or \$9 million⁶ for a new elevator.

Crystal City Multimodal Transportation Center – As part of the Crystal City Sector Plan update, the need for a multimodal transportation center in Crystal City was identified. This center would provide transfers among bicycles, buses, streetcar, and Metrorail, and would be constructed as part of private redevelopment. Total project cost is estimated to be \$6 million⁷.

WALKArlington Program – The WALKArlington program makes physical enhancements to Arlington's sidewalk and street infrastructure including transit-access improvements and stand-alone safety and accessibility upgrades. Total Project Cost: The six-year cost for this on-going program is expected to be \$9.2 million.

Special Transit Projects

Columbia Pike Streetcar (from Pentagon to County Line) – This project involves the construction of a streetcar line between Pentagon City and Skyline in Bailey's Crossroads area of Fairfax County along the Columbia Pike Corridor. The project includes the construction of streetcar railway primarily in the curb lanes in each direction, power control and communication systems, and a maintenance facility. This project includes the purchase of 11 streetcars. Total Project Cost is estimated to be \$138 million for the portion of the project within Arlington County.

Route 1 Streetcar – This project will implement a streetcar system with primarily dedicated transit lanes and improved stations from Arlington's Potomac Yard through Crystal City and into Pentagon City. Ultimately the Route 1 streetcar system will be part of a coordinated streetcar system extending from the Pentagon and Pentagon City Metrorail stations in Arlington via the Columbia Pike Streetcar network to Skyline in the Baileys Crossroads area. The environmental clearance process is slated to begin in early 2011, with construction beginning in early 2015. Total Project Cost is estimated to be \$140 million.

ITS Program Planning & Implementation – The envisioned ITS system will establish a wireless network for communications among transit vehicles, traffic signals and control centers to improve performance and reliability as well as safety. Arlington Transit is currently developing a proof of concept Intelligent Transportation System on the Columbia Pike Corridor. This program would provide for the extension of that technology to the Secondary Transit Network through deployment in the ART fleet and bus shelters. The same ITS technology will be extended throughout the Primary

⁴ Estimate from the 2002 WMATA study, adjusted by the CPI for Transportation to 2010 dollars

⁵ Estimate from the 2004 WMATA study, adjusted by the CPI for Transportation to 2010 dollars

⁶ A bit higher than Pentagon City due to additional depth. About double the estimate for the street elevator hoistway and emergency stair from the 2004 study.

⁷ Estimated at 500 ft long by 40 ft wide at \$200/SF = \$4M (just about what was spent on Shirlington Station). Escalated by 50% to include engineering, financing, and contingency.

Transit Network as part of the Complete Streets arterial program and through deployment in Metro and ART buses and shelters. Total Project Cost is estimated to be \$0.4 million.

Columbia Pike ITS – The project will design and deploy a high speed transit bus communications system utilizing mobile and stationary sources along the Columbia Pike. The communications network will be connected to a transit operations control center, co-hosted with the County’s signal control center. The communications system will be used to provide real time traveler information to customers, to control signal systems, and transit operations. Implementation will begin in August 2010 with the testing period continuing until December 2011. Total Project Cost is estimated to be \$0.5 million.

Commuter Information Systems – Develop and maintain multiple channels of real time arrival information for the commuting community. Systems currently in place include desktop mapping with arrival predictions and mobile phone web based arrival system. Future projects include numbering all ART stops with a unique identifier allowing the commuter to obtain arrival information via smart phone at the stop and an Interactive Voice Response (IVR) phone system for direct dial in arrival times. Total Project Cost is estimated to be \$0.5 million.

East Falls Church Area Study – This project supports the County goals of promoting transit-oriented development as well as improving access to transit stations, particularly for pedestrians and bicyclists. The East Falls Church station area is an emerging hub of development in Arlington County and the City of Falls Church. The Virginia Department of Rail and Public Transportation is exploring expanding bus service along Interstate 66, potentially including a bus rapid transit system. East Falls Church would be an important station along such a system. The East Falls Church Station will be the westernmost transfer point between the Orange and Silver Metrorail Lines, beginning in 2013. Therefore, this station is expected to serve high volumes of transferring passengers and additional originating passengers traveling to Tysons Corner and the Dulles area, necessitating capacity improvements. It is anticipated the project would include improvements to arterial streets and intersections near the East Falls Church Metrorail Station to increase safety and convenience for pedestrians and bicyclists accessing the station. It is also anticipated that a new station entrance would be constructed at the west end of the platform, connecting to Washington Boulevard. As part of site redevelopment, reconfiguring and enhancing bus bays and the Kiss and Ride facilities would be included. Total Project Cost: the planning and engineering costs is estimated to be \$0.5 million.

North County ART bus storage and fueling facility – As the ART fleet grows and service is added in the northern part of the County, a second storage facility will be needed. In addition, existing CNG fueling facilities are all located in the southern, low-lying portions of the County that have increased flooding risk. Total project cost for a new storage and fueling facility is \$15 million⁸.

Metro Matters, WMATA Capital Program

The Washington Metropolitan Area Transit Authority (WMATA/Metro) is a unique federal-state-local partnership formed to provide mass transit service to the Washington Metropolitan region. Since 2004, WMATA has utilized a multi-year funding strategy, the Metro Matters Agreement, to fund its capital improvements. This agreement expired June 30, 2010 and a new agreement is currently being negotiated. The 6-year recommendation is an estimate of Arlington County’s contribution. County funding of Metro’s capital program supports the rehabilitation of the 30 plus year old system infrastructure. Total Program Cost is estimated to be \$85.8 million over the six years of this TDP.

⁸ 4 acre site (2x ART House) @ \$1M/acre purchase; all paved or landscaped at \$20/SF; plus 20,000 SF wash and fueling @\$200/SF; plus 50% engineering, finance, and contingency on construction cost.

Funding Requirements

Operating and capital cost estimates were estimated for the service and facility needs identified above. Table 6 above identifies ART's Service Needs Plan, identifying service needs by service change category, additional annual bus hours to supply the service, and estimated annual operating and maintenance (O&M) costs associated with each service initiative.

Tables 9 and 10 identify ART's capital improvement program needs categorized under vehicle needs, passenger amenities and access improvements, special transit projects and maintenance facility needs.

Table 9: Passenger Facilities in FY 2011 Capital Improvements Program

Program	Previous Funding (000s)	FY 2011 (000s)	FY 2012 (000s)	FY 2013 (000s)	FY 2014 (000s)	FY 2015 (000s)	FY 2016 (000s)	Total for FY 2011-16 (000s)	Future Funds Req'd. (000s)	Total Project Cost (000s)
Bus Replacements		5,995	2,292	4,249		1,503	516			
WALK Arlington	1,225	2,050	1,550	2,100	1,000	1,500	1,000	9,200		10,425
Rosslyn Metro Station Access	36,942	3,500	3,975	0	0	0	0	7,475		44,417
Columbia Pike Streetcar	3,764	1,500	0	22,500	43,750	46,250	20,236	134,236		138,000
Fairfax Dr Pedestrian & Bus Stop Improvements	400	500	2,050	0	0	0	0	2,550		2,950
Bus Stop and Shelter Program	1,034	75	125	75	75	75	75	500		1,534
Columbia Pike SuperStops	4,150	0	0	0	0	0	0	0		4,150
Transit ITS and Plan	138	31	31	31	31	31	31	186		324
Pentagon City Pedestrian Tunnel	660	140	0	0	0	0	0	140		800
Pentagon City Elevator	5,085	0	0	0	0	0	0	0		5,085
EFC Metro Study	0	0	0	0	0	0	313	313	187	500
Ballston West Entrance	0	150	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Crystal City East Entrance	0	200	200	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Crystal City Streetcar Planning, Infrastructure & Environmental Clearance	0	0	700	700	18,000	32,500	17,580	69,480	70,520	140,000
CCPY transitway	17,319	0	0	0	0	0	0	0		17,319

Transit capital investments funded under previous CIPs and still on-going are:

- Crystal City Potomac Yard Transitway
- Pentagon City Station Elevator
- Columbia Pike Superstops

**Table 10
TDP Financial Plan for Capital Costs (Year of Expenditure Dollars)**

Service Statistic/Funding Category	Budget FY 2011	Project'd. FY 2012	Project'd. FY 2013	Project'd. FY 2014	Project'd. FY 2015	Project'd. FY 2016	6-Year Total
Bus Replacements	\$5,955,000	\$2,292,000	\$4,249,000		\$1,503,000	\$516,000	\$14,515,000
# of buses	12 buses	5 buses	9 buses		3 buses	1 bus	
Transportation Investment Fund	\$4,764,000	\$1,834,000	\$3,399,000		\$1,202,000	\$413,000	\$11,612,000
State Funding	\$1,191,000	\$458,000	\$850,000		\$301,000	\$103,000	\$2,903,000
WALKArlington	\$2,050,000	\$1,550,000	\$2,100,000	\$1,000,000	\$1,500,000	\$1,000,000	\$9,200,000
Transportation Investment Fund	\$200,000	\$200,000	\$250,000	\$250,000	\$250,000	\$250,000	\$1,400,000
Federal Funding	\$1,000,000	\$1,000,000	\$1,000,000	\$400,000	\$400,000	\$400,000	\$4,200,000
State Funding	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$2,100,000
County Funding	\$500,000		\$500,000		\$500,000		\$1,500,000
ART House Funding	\$3,750,000	\$7,000,000	\$2,500,000				\$13,250,000
Transportation Investment Fund	\$3,000,000	\$5,600,000	\$2,000,000				\$10,600,000
State Funding	\$750,000	\$1,400,000	\$500,000				\$2,650,000
Rosslyn Metro Station Access	\$3,500,000	\$3,975,000					\$7,475,000
Transportation Investment Fund	\$2,000,000	\$3,180,000					\$5,180,000
Federal Funding	\$1,000,000						\$1,000,000
State Funding	\$500,000	\$795,000					\$1,295,000
Columbia Pike Streetcar	\$1,500,000		\$22,500,000	\$43,750,000	\$46,250,000	\$20,236,000	\$134,236,000
Transportation Investment Fund	\$1,200,000		\$10,000,000	\$23,000,000	\$25,000,000	\$16,189,000	\$75,389,000
Federal Funding			\$10,000,000	\$15,000,000	\$15,000,000		\$40,000,000
State Funding	\$300,000		\$2,500,000	\$5,750,000	\$6,250,000	\$4,047,000	\$18,847,000
Fairfax Dr. Improvements	\$500,000	\$2,050,000					\$2,550,000
Transportation Investment Fund	\$400,000	\$1,640,000					\$2,040,000
State Funding	\$100,000	\$410,000					\$510,000
Bus Stop and Shelter Program	\$75,000	\$125,000	\$75,000	\$75,000	\$75,000	\$75,000	\$500,000
Transportation Investment Fund		\$40,000					\$40,000
County Funding	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$360,000
State Funding	\$15,000	\$25,000	\$15,000	\$15,000	\$15,000	\$15,000	\$100,000
Transit ITS and Plan	\$31,000	\$31,000	\$31,000	\$31,000	\$31,000	\$31,000	\$186,000
Transportation Investment Fund	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$150,000
State Funding	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$36,000
Pentagon City Ped. Tunnel (Costs TBD)	\$0						\$0
Transportation Investment Fund	\$0						\$0
State Funding	\$0						\$0
EFC Metro Study						\$313,000	\$313,000
Transportation Investment Fund						\$250,000	\$250,000
State Funding						\$63,000	\$63,000
Columbia Pike SuperStops (Costs TBD)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transportation Investment Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0
State Funding							
Pentagon City Elevator	\$630,000	\$2,105,000	\$2,300,193	\$0	\$0	\$0	\$5,035,193
Transportation Investment Fund							
FTA Funding	\$630,000	\$1,505,000	\$2,300,193				\$4,435,193
State Funding		\$600,000					\$600,000

Table 11 (Continued)
TDP Financial Plan for Capital Costs
(Year of Expenditure Dollars)

Service Statistic/Funding Category	Budget FY 2011	Project'd. FY 2012	Project'd. FY 2013	Project'd. FY 2014	Project'd. FY 2015	Project'd. FY 2016	6-Year Total
Ballston West Entrance	\$150,000	\$0	\$0	\$0	\$0	\$0	\$150,000
Transportation Investment Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0
County Funding	\$150,000	\$0	\$0	\$0	\$0	\$0	\$150,000
State Funding							
Crystal City East Entrance	\$200,000	\$200,000	\$0	\$0	\$0	\$0	\$400,000
Transportation Investment Fund	\$200,000	\$200,000	\$0	\$0	\$0	\$0	\$400,000
State Funding							
Crystal City Streetcar Planning, Infrastructure & Environmental Clearance	\$0	\$700,000	\$700,000	\$18,000,000	\$32,500,000	\$17,580,000	\$69,480,000
Transportation Investment Fund	\$0	\$700,000	\$700,000	\$18,000,000	\$32,500,000	\$17,580,000	\$69,480,000
State Funding							
CCPY transitway (Costs TBD)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transportation Investment Fund							
State Funding							
TOTAL COSTS FOR PROJECTS	\$18,341,000	\$20,028,000	\$34,455,193	\$62,856,000	\$81,859,000	\$39,751,000	\$257,290,193
TOTAL FUNDING SOURCES							
Transportation Investment Fund	\$11,789,000	\$13,419,000	\$16,374,000	\$41,275,000	\$58,977,000	\$34,707,000	\$176,541,000
County Funding	\$710,000	\$60,000	\$560,000	\$60,000	\$560,000	\$60,000	\$2,010,000
Federal Funding	\$2,630,000	\$2,505,000	\$13,300,193	\$15,400,000	\$15,400,000	\$400,000	\$49,635,193
State Funding	<u>\$3,212,000</u>	<u>\$4,044,000</u>	<u>\$4,221,000</u>	<u>\$6,121,000</u>	<u>\$6,922,000</u>	<u>\$4,584,000</u>	<u>\$29,104,000</u>
Total Funding Sources	\$18,341,000	\$20,028,000	\$34,455,193	\$62,856,000	\$81,859,000	\$39,751,000	\$257,290,193

NOTES:

- # of buses needed during TDP time period based on TDP bus replacement/expansion table (Table 5-1).
- Bus costs assume \$650,000 for 3 buses in FY 2011 for Design Lines buses, and \$445,000 for all other buses (in FY 2011 dollars).
- A 80/20 state/local match assumed for bus purchases.
- An inflation rate of 3%/year assumed for future year bus purchases (FY 2012 through FY 2016).
- Costs and funding sources for all other transit program capital projects obtained from Arlington County CIP document.