Loudoun County
Transit Development Plan
Fiscal Years 2017-2022

Approved by Loudoun County
Board of Supervisors on June 23, **2016**

Prepared by

TranSystems

EXPERIENCE | Transportation

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Chapter 1: Overview of Loudoun County Transit

Loudoun County, Virginia is part of the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Area. The county population was estimated to be 374,000 in 2016, more than double the 2000 population, one of the fastest rates of population growth in the country. The population is forecast to increase to 415,000 by 2020.

History

Commuter Bus

Commuter bus operations were initiated in Loudoun County in 1974 with the Sterling Commuter Bus (SCB) service. This service was privately owned and operated, and carried passengers between eastern Loudoun County and destinations in Washington, D.C. Beginning in 1989, the county subsidized the operation with gasoline tax funds, and later the service was expanded to western Loudoun. In 1993, the service encountered significant financial difficulties that threatened continued operations, and in 1994 Loudoun County assumed responsibility for the operation.

From 1994 to 2003, the commuter bus service was operated entirely by contract to the county, with the contractor providing the equipment (buses), fuel, and personnel. Near the end of this time period, the contractor was operating a total of 17 buses with approximately 500 riders per day. As the system grew in size and complexity, the disadvantages of the fully contracted model became apparent, including but not limited to:

- Many contractors do not have the resources to purchase or secure leases for a fleet of the scale required by the county, and
- Contractors generally provide touring coaches to handle standees on the service, which cannot accommodate electronic fareboxes, and are not fully accessible to patrons with various disabilities.

In 2002, County staff members were directed to initiate and complete an analysis, using consultant services, in order to determine the most cost effective program structure for the commuter bus service. The study was completed in May, 2002 by the KFH Group, Inc., and defined an integrated and financially achievable program of transit improvements for a 10-year period. The analysis indicated that substantial savings could be achieved through an operating model where Loudoun County would purchase and own the buses, provide the fuel and storage, and the operation and maintenance functions would be contracted to a private transportation company, acquired through a competitive procurement process. This transit model at the time was successfully used by other regional jurisdictions including Fairfax and Arlington counties. Under the publicly-owned fleet model, it was determined that the county could achieve continuing program savings and advantages through the following:

- Access to State Capital and Operating Assistance grants to fund purchase of equipment, develop transit-supportive infrastructure, and subsidize operating costs;
- Lower financing costs for equipment purchases versus private contractors;
- No requirement to pay motor fuels tax for county-owned vehicles;
- Enhanced ridership potential through a “Loudoun County” brand identity; and

- A larger pool of potential contractors to bid on operations/maintenance of the service, resulting in more competitive proposals.

The study also made the following recommendations with respect to the delivery of transit service:

- Passenger fare collections should serve as an essential funding mechanism for operating costs;
- Commuter route recommendations should include the Loudoun-Fairfax connection (to West Falls Church Metrorail Station) and a reverse commute route from West Falls Church to eastern Loudoun employment sites; and
- The initial fixed-route service plan should include the establishment of five routes (Route 7 corridor, Leesburg, Ashburn/Dulles, Sterling and Countryside).

At the direction of the Board of Supervisors in 2003, the County adopted the current model to acquire and own the buses, and obtain fuel from county facilities. In FY 2002, Loudoun County's Office of Transportation Services (OTS) was established, incorporating some former components of the departments of Planning and General Services. An initial 22-bus purchase was funded through a combination of State transit grants and Lease/Purchase financing. The buses purchased were Motor Coach Industries (MCI) 45-foot coach models, with 55 seats, a restroom, a wheel-chair lift, reading lamps, reclining seats, illuminator signs and the LC Transit logo on the outside of the bus. The projected annual savings from purchasing the buses over long-term leases was projected to be approximately $15,000 per bus. County staff were given responsibility for route and schedule planning and schedule production, grants applications and administration, infrastructure planning, contract administration, budgeting and fare accounting, and all aspects of customer service and communications. A competitive procurement was conducted to select a professional transportation company to provide the service.

In 2003, Metro connection service was introduced from a proffered park and ride lot in Cascades to the West Falls Church Metro Station. Buses completed one trip to Metro before initiating a later trip from the Dulles North Transit Center (DNTC) to the District. Later in 2003, Reverse Commute Service was added which allowed buses returning from the West Falls Church Metro Station to bring riders to employment sites in Eastern Loudoun. In 2005, service was streamlined to shorten rider trip time by providing non-stop service directly from Purcellville and Leesburg into Rosslyn and the District. In 2007, staff applied for a demonstration grant to acquire seven dedicated buses and to commence service from a proffered 250-space park and ride lot in Dulles South. In response to parking capacity issues at the DNTC, in 2009, the Ashburn North Park and Ride lot was acquired, and the following year an agreement was developed with Christian Fellowship Church on Beaumeade Circle for the donation of additional parking.

In 2011, the Tysons Express Service was introduced as a strategy of Phase I of the Dulles Rail Project's Transportation Management Program (TMP). This service was implemented as a temporary service to reduce traffic congestion through and around the Tysons Corner area while rail was under construction. The service was 100 percent funded by the rail project until construction was completed in late July 2014. Once construction was completed, the agreement was to eliminate the Tysons Express Service and absorb the 4 MCI coaches into the existing Loudoun County commuter bus fleet, which occurred in August 2015.

In FY 2013, the Department of Transportation & Capital Infrastructure (DTCI) was established by merging the majority of the Capital Construction Division, formerly part of the Department of Construction and Waste Management, with the Office of Transportation Services. Currently, DTCI is responsible for matters relating to the County's intermodal transportation system, including road development,

pedestrian and bicycle accommodations, traffic improvement implementation, transit and commuter services planning and management, and capital infrastructure planning, design and construction. In November 2014, Loudoun County completed the construction and opened the Transit Maintenance and Operations Facility at the Government Support Center. The $12M facility was constructed with funds from the Commonwealth of Virginia and local funding. In 2014, the Board approved the purchase of three additional motor coach buses to address long haul commuter capacity issues.

With the opening of the Metrorail Silver Line in 2014, Silver Line Metro Connection service was started providing service from several park and ride lots to the new Wiehle-Reston East Metrorail station, the westernmost station on Phase I of the Dulles Rail Project. This new service included trips from Loudoun Station, a new park and ride lot on the site of the planned Ashburn Metrorail station, to be completed as part of Phase II of the Silver Line.

Local Bus

Prior to October 2013, local bus service in Loudoun was operated by Virginia Regional Transit (VRT). On February 1, 2013 the Virginia Department of Rail and Public Transportation (DRPT) confirmed that following the 2010 U.S. Census, Loudoun County fell partially within the Washington, D.C. urbanized area, and that effective October 1, 2013 most of the current Loudoun County and Leesburg transit routes operated by VRT would no longer qualify for Federal Transit Administration (FTA) 5311 funding for rural areas. Only the Purcellville Connector fixed route and the three rural on-demand routes (Ashburn, Middleburg, and Lovettsville) remained eligible for FTA rural funding. VRT's federal funding remained in place through the end of the federal fiscal year, September 30, 2013.

On October 1, 2013, Loudoun County assumed responsibility for the local fixed route service. On September 4, 2013 the Board authorized (9-0) the Purchasing Agent to award an emergency contract in the amount of $3 million for continuation of the local fixed route bus and Americans with Disabilities Act (ADA) paratransit service for nine months until a competitive bidding process could be completed.

The loss of federal funding in FY 2014 and the assumption of funding related responsibility prompted the County to conduct a comprehensive evaluation of local transit service. Furthermore, the beginning of Phase I operations of the Silver Line in 2014 was expected to affect the configuration of the County's transit service. Recognizing the complexity and urgency of the situation, DRPT agreed to fund a consultant led project to analyze the current local fixed route operations and make recommendations for service delivery in FY 2015 and beyond. The Town of Leesburg participated in the study as a stakeholder. The resulting *Loudoun County Transit Management Analysis Report* was presented to the Board on November 15, 2013. The study evaluated route coverage, ridership, operating costs, and user demographics. On December 4, 2013, the Board approved and endorsed the staff-proposed changes to the local fixed route and ADA paratransit and directed staff to forward those changes to DRPT for inclusion in the 2013 update to the TDP; develop the FY 2015 budget using the endorsed routes; and to proceed with the procurement of a contract to operate the local fixed route service for a minimum of three years beginning on July 1, 2014. The motion for approval was amended to include a directive for staff to study households in the area bounded by the Greenway to the North, Belmont Ridge Road to the West, Dulles Airport to the East and Prince William County to the South to determine the public's interest in additional local fixed transit services.

On May 21, 2014, the Board approved a Memorandum of Understanding (MOU) with the Town of Leesburg to determine the established baseline local transit routes, funding levels and performance levels of service within the Town limits. The parties to the MOU agreed to the following:

- A revised set of proposed Leesburg bus routes;
- Town funding plan to support the proposed Leesburg routes;
- Town endorsement of the single contract option covering both the County and the Town for the procurement of local fixed route transit service;
- County transit plans will establish the baseline of service;
- The County will be the designated recipient for all state grant funds in the future and that the FY 2015 state grant awards designate for the Town service were to be re-directed to the County;
- The FY 2015 comprehensive TDP update will plan for all County-managed services, inclusive of those routes operating within Leesburg;
- Responsibilities for ownership and maintenance of bus stop signs and shelters, and
- Town responsibility for the fiscal impact of weekend or unique service over and above the baseline recommended service.

Governance

Loudoun County Transit service is operated by Loudoun County, which is administered by an elected Board of Supervisors. The Loudoun County Board of Supervisors has a Chairman elected by the voters at large and eight other supervisors elected from eight county election districts. All nine members serve concurrent terms of four years. A new term began on January 1, 2016. The members of the Board of Supervisors for 2016-2019 are as follows:

- Phyllis J. Randall, Chair
- Ralph M. Buona, Vice Chair, Ashburn District
- Suzanne M. Volpe, Algonkian District
- Tony R. Buffington Jr., Blue Ridge District
- Ron A. Meyer Jr., Broad Run District
- Geary M. Higgins, Catoctin District
- Matthew F. Letourneau, Dulles District
- Kristen C. Umstattd, Leesburg District
- Koran T. Saines, Sterling District

The Board appoints a County Administrator who manages county operations; the Planning Commission, which serves in an advisory capacity on land use issues; and various other boards and commissions that provide recommendations to the Board of Supervisors to assist in its decision making.

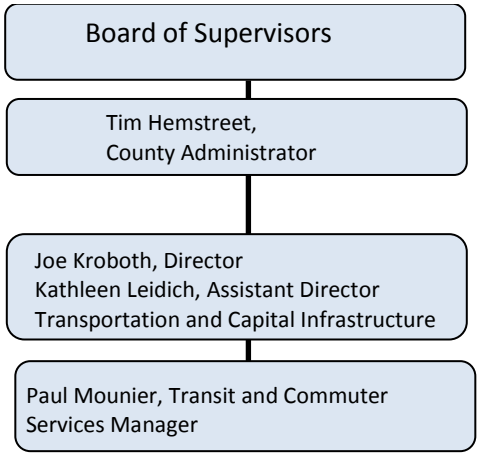
On September 16, 2015, the Board of Supervisors created a new Transit Advisory Board to replace the previous Commuter Bus Advisory Board. The TAB advises the county staff on matters related to transit service. The new TAB includes 15 voting members, nine (9) members appointed by the Board, one (1) member representing the Disabilities Services Board, one (1) member representing the Loudoun County Chamber of Commerce, one (1) member representing the Loudoun County Economic Development Advisory Commission and three (3) members recommended by staff representing each mode of the transit service (Long Haul-Commuter, Metro Connection, and Local Fixed Route).

Organizational Structure

Figure 1 illustrates an organizational chart for the commuter bus service. Funding decisions regarding Loudoun County Transit service are made by the County Board of Supervisors. The planning, day-to-

day oversight of operations and customer service functions are the responsibility of the Transportation Division, which is part of the Transportation and Capital Infrastructure Department (TCID).

Figure 1: Loudoun County Transit Organizational Reporting



County staff in the Transportation Division is responsible for route and schedule planning and schedule production, grants applications and administration, infrastructure planning, contract administration, budgeting and fare accounting, and all aspects of customer service and communications. County transportation employees are not represented by a union. A competitive procurement is used to select a professional transportation company to operate the service. In July 2014, the County awarded a contract to Veolia (now Transdev) to operate the commuter service. The general terms of the Transdev contract are as follows:

- The initial term of the contract ends on June 30, 2019;
- One five year renewal option is available;
- Upon the opening of Metrorail service in Loudoun County, the parties will mutually agree on a new service hourly rate for the bus operation;
- Customer demand may cause the addition of buses to be added to the fleet and additional buses will be incorporated at the agreed service hourly rate;
- The rate structure for the contract is shown in Table 1.

Table 1: Transdev Contract Rate Schedule

Fiscal Year	Commuter Bus per Service Hour	Shuttle Bus per Service Hour	Bus Lease Rate per Bus per Year	Commuter Bus Annual Increase	Shuttle Bus Annual Increase
2015	$122.13	$115.01	$29,279.25	n/a	n/a
2016	$129.56	$120.09	$29,280.25	6.1%	4.4%
2017	$133.38	$122.63	$29,281.25	2.9%	2.1%
2018	$137.93	$126.32	$29,282.25	3.4%	3.0%
2019	$142.90	$130.30	$29,283.25	3.6%	3.2%
2015-2019				17.0%	13.3%

Request for Proposal No. QQ-01845 was issued on February 12, 2014 for the Local Fixed Route Transit and ADA Compliant Paratransit Service. On June 18, 2014, the Board approved a contract to award the Local Fixed Route and ADA Compliant Paratransit Bus Service contract to MV Transportation, in the amount of $14,151,942. MV Transportation staff dedicated to the Loudoun Service consists of seven supervisory and administrative personnel, four mechanics, cleaners and utility staff, 54 full-time drivers and four part-time drivers. The general terms of the MV Transportation contract are as follows:

- MV Transportation provides the bus fleet under this contract (under a different model from the Commuter Bus Service contract).
- The proposed pricing included three separate scenarios: First, assuming the contract was to be administered by Loudoun County for both the County service areas and those within the Town of Leesburg. Second, assuming there would be two independent contracts individually and separately administered by the County and the Town of Leesburg; and finally, the third assuming a single contract covering only the County service area, and excluding the Town of Leesburg area. The first scenario was implemented by the Board.

The rate structure for the MV Transportation contract is summarized in Table 2.

Table 2: MV Transportation Contract Rate Structure

Fiscal Year	Local Bus per Service Hour	Paratransit per Service Hour	Local Bus Annual Change	Paratransit Annual Change
2015	$64.44	$74.05	n/a	n/a
2016	$62.77	$72.71	-3%	-2%
2017	$63.68	$74.02	1%	2%
2015-2017			-1%	0%

On September 1, 2014 MV Transportation initiated operations under the new service provider contract. The local fixed-route bus system provides fourteen routes, three of which are operated within the Town of Leesburg. The local bus system makes use of “hub” locations that allow for transfers between two or more routes. The County also operates the paratransit service, available to eligible riders taking trips with one end within three-quarters of a mile of a local fixed route. The paratransit program is fully compliant with the rules and regulations of the Americans with Disabilities Act (ADA).

Transit Services Provided and Areas Served

There are two transit operators providing service within Loudoun County. Loudoun County Transit operates commuter express routes and most local service. Virginia Regional Transit operates the Purcellville Connector fixed route and demand response in Western Loudoun. VRT is not the subject of this TDP, and its services are discussed only where they relate to Loudoun County Transit.

Local Service

Loudoun County Transit (LCT) provides local bus service in the eastern part of the county; specifically, in Sterling, Ashburn, and Leesburg. In 2015 LCT for the first time offered local service in South Riding, Brambleton, and Stone Ridge. Three of the local routes (83, 84, and 72) serve Wiehle-Reston East Metrorail station. Some funding is provided by the Town of Leesburg for routes within its jurisdiction. George Washington University contributes to the cost of service to its Loudoun campus. LCT also

provides ADA paratransit within ¾ of a mile of these routes for those unable to use fixed-route bus. Approximately 25 vehicles are used in peak service on these routes, including paratransit. As of September 2015, all local buses are equipped with bike racks.

LCT has an arrangement with the Town of Leesburg regarding the maintenance of bus stop signs and shelters. In 2014, LCT received a report proposing improvements to bus stops and guidelines for bus stop placement and design. Bus stop accessibility improvements are planned, as described in Chapter 6. Almost all local bus riders walk to and from transit stops. Streets in Leesburg and other urban areas generally have sidewalks. It is the county policy to provide sidewalks in urban areas. In some places, crossing streets can be difficult for pedestrians. For example, there is no safe crossing of Route 15 at Fort Evans Road in Leesburg, and for this reason the Safe-T-Ride shuttle is provided to connect shopping centers on either side of Route 15. In more recently developed areas such as Ashburn, minor intersections along parkways are generally controlled by stop signs rather than traffic signals, and it may be difficult for pedestrians to find a sufficient gap to cross the street.

Long Haul Commuter Service
LCT provides express commuter service from park and ride lots in Purcellville, Hamilton, Leesburg, Ashburn, Brambleton, and Stone Ridge to Arlington and downtown DC. The Long Haul routing and stops in Arlington and Washington, D.C. are shown in Figure 2. Approximately 55 vehicles are needed to provide this service. Because the service is express, peak-period commuter service, no separate ADA paratransit service is provided. The county policy is to provide pedestrian connections from park and ride lots to adjacent sidewalks in suburban areas and also to provide bus shelters and bike racks at park and rides. The commuter service does not stop at on-street bus stops.

Metro Connection Commuter Service
LCT provides Metro Connection commuter service from park and ride lots in Purcellville, Hamilton, Leesburg, Ashburn, Brambleton, and South Riding to Wiehle-Reston East Metrorail station, and also from park and ride lots in Potomac Falls to West Falls Church Metrorail station. Approximately 13 vehicles are required to operate this service. As with the Long Haul service, ADA paratransit is not provided and the routes only serve park and ride lots, not on-street stops.

All commuter service, Long Haul and Metro Connection, operates on weekdays only. The following sections provide a more detailed description of Loudoun County Transit routes.

Long Haul Routes

Ashburn North—DC (Route 100)
This route serves the Ashburn North, Telos, and Christian Fellowship Church park and ride lots (each trip serving either two or all three park and ride lots), with one trip beginning at the Dulles North Transit Center. There are 11 inbound trips in the morning, of which some include a stop in Rosslyn. Three of the 11 trips go to Crystal City and the other eight trips go into Washington, D.C. and serve the State Department, K Street and 14th Street. There are 11 scheduled trips from Washington, D.C. to Christian Fellowship Church and Ashburn North, with 9 of those trips also serving Telos in the afternoon peak period. Two of these trips begin in Crystal City. The other trips begin in Washington, D.C. Some trips include a stop at the Dulles North Transit Center before continuing to Christian Fellowship Church and Ashburn North. One additional early trip is also scheduled from Dulles North Transit Center.

		Number of Trips		
Ashburn North—DC	Span of Service	AM Peak	Midday	PM Peak
Weekday	5:00 – 9:00 AM 2:00 – 7:00 PM	11	1	11

Figure 2: Loudoun County Commuter Service Routing in Downtown D.C. and Arlington

Dulles North Transit Center—DC (Route 300)

The Dulles North Transit Center park and ride lot receives the highest level of commuter service. In the morning, there are 22 trips that operate from Dulles North, of which 18 operate into the central Washington, D.C. area. Ten of these 22 trips include a stop in Rosslyn. One morning trip goes to the Pentagon. The remaining trips go into Washington, D.C. and serve the State Department, K Street, 14th Street and Independence Avenue. In the afternoon, there are 26 scheduled peak period trips from Washington, D.C. (many of these trips continue from Dulles North to other park and ride lots). Some afternoon trips originate from the Crystal City-Pentagon area. Many of these trips also include a stop in Rosslyn. Late morning and late evening service is provided via Metro Connection trips departing from

Wiehle-Reston East Metro between 8:43 and 9:33 in the morning (from Dulles North) and between 7:15 and 8:40 in the evening from the Metrorail station.

		Number of Trips		
DNTC—DC	Span of Service	AM Peak	Midday	PM Peak
Weekday	5:20 – 10:00 AM 12:45 – 7:00 PM	22	1	30

Dulles South / Brambleton—DC (Route 200)

There are nine morning trips from Dulles South and three from Brambleton. One of the Dulles South morning trips serves Crystal City and the Pentagon only. The remaining trips go into Washington, D.C. and serve the State Department, K Street, 14th Street and Independence Avenue (not all trips serve all DC stops). Some trips also stop in Rosslyn. In the afternoon peak, there are 11 trips that serve Dulles South and five trips that serve Brambleton (one serves both park and rides, so the total number of evening trips is 14). Many of the evening trips include a stop at Dulles North before continuing on to Dulles South. One trip originates from Crystal City; the other trips originate from Washington, D.C. On Fridays only there is an early afternoon return trip to Dulles North with connecting shuttle service to Dulles South (but not to Brambleton).

		Number of Trips		
Dulles South / Brambleton—DC	Span of Service	AM Peak	Midday	PM Peak
Weekday	5:20 – 9:30 AM 3:00 – 7:15 PM	12	1 (Friday)	14

Purcellville, Hamilton, Leesburg—DC (Route 400)

There are 18 Long Haul morning trips from the Leesburg park and ride lot, of which one serves Crystal City and the Pentagon only and the remainder serve Washington, D.C. The five earliest morning trips originate at the Purcellville park and ride (currently at St Andrew Presbyterian Church). One of these five trips and four of the later trips originate at the Harmony park and ride in Hamilton. There are also two morning trips that originate at Harmony and do not serve Leesburg (for a total of seven morning trips from Harmony).

In the afternoon peak period, there are 22 trips from Washington, D.C. to these park and rides, of which three terminate at Leesburg and do not serve the other two lots, and of which one skips Leesburg and serves the other two. There is also one early afternoon trip that serves Leesburg and Harmony and continues to Purcellville on Fridays only.

		Number of Trips		
Leesburg—DC	Span of Service	AM Peak	Midday	PM Peak
Weekday	5:00 – 9:30 AM 3:15 – 9:20 PM	18	1	22

Metro Connection Routes

As of FY2016 there were eight Metro Connection routes, listed below. The routes that were added in 2015 use a two-digit number followed by and X. It is planned to adopt this system for numbering all of the Metro Connection routes. The other routes are listed below by their run numbers (which are different for inbound and outbound trips). The Metro Connection routes are mapped in Figure 3. (The map excludes route 990/991, which provides a small number of reverse peak trips to a variety of different offices.)

901/902 Potomac Falls—West Falls Church
This route offers nine morning trips from four park and ride lots in the Potomac Falls area to the Metrorail Orange Line at the West Falls Church Metrorail station. Each morning trip stops at three of the four park and rides on the route. All but three morning trips begin at Broad Run Farms (Galilee Methodist Church), and all trips stop at Community Lutheran Church. Seven trips serve Our Lady of Hope and seven trips serve Lowes Island (Great Falls Plaza). In the evening, all 10 trips serve each of the four park and ride lots.

		Number of Trips		
Potomac Falls	Span of Service	AM Peak	Midday	PM Peak
Weekday	5:10 – 8:45AM 3:45 – 8:00 PM	9	n/a	10

921/922 Harmony and Leesburg— Wiehle-Reston East
Six morning peak trips and 9 evening peak trips operate between the Harmony and Leesburg park and ride lots and Wiehle-Reston East Metro station. The three last trips, departing Wiehle at 7:45, 8:10, and 8:40, are operated as part of Route 925/926 and serve any of the Metro Connection park and ride lots as requested.

		Number of Trips		
Harmony & Leesburg	Span of Service	AM Peak	Midday	PM Peak
Weekday	4:46 – 9:00 AM 3:15 – 9:34 PM	6	n/a	9

923/924 Goose Creek Village and Broadlands— Wiehle-Reston East
Eight morning peak trips and 11 evening peak trips serve the Goose Creek Village and Broadlands 772 park and ride lots and end at the Wiehle-Reston East Metro station**.** The last three trips, departing Wiehle at 7:45, 8:10, and 8:40, serve DNTC, Loudoun Station, Broadlands, Goose Creek Village, Leesburg, Harmony, and St Andrews (skipping those not requested on a particular trip).

		Number of Trips		
Goose Creek Village & Broadlands	Span of Service	AM Peak	Midday	PM Peak
Weekday	5:00 – 8:40 AM 3:00 – 9:20 PM	8	n/a	11

925/926 Loudoun Station—Wiehle-Reston East

Twelve morning and 13 afternoon peak period trips operate between the Loudoun Station park and ride, located in Ashburn, and the Silver Line. The last three trips, departing Wiehle at 7:45, 8:10, and 8:40, serve DNTC, Loudoun Station, Broadlands, Goose Creek Village, Leesburg, Harmony, and St Andrews (skipping those not requested on a particular trip).

		Number of Trips		
Loudoun Station	Span of Service	AM Peak	Midday	PM Peak
Weekday	4:45 – 9:50 AM 3:30 – 8:30 PM	12	n/a	13

990/991 Wiehle-Reston East Metrorail —Loudoun (Reverse Commute)

There are eight morning trips from the Wiehle-Reston East Metrorail station. Route patterns vary greatly, and include service to Verizon, AOL, Raytheon, and Loudoun County Government Center. There are eight peak afternoon trips

		Number of Trips		
Reverse Commute	Span of Service	AM Peak	Midday	PM Peak
Weekday	6:15 – 9:45 AM 3:30 – 7:00 PM	8	n/a	6

87X: Dulles Town Center – Wiehle-Reston East Metrorail Station

This route operates between the Dulles Town Center park and ride lot and Wiehle-Reston East Metrorail station every 20 minutes during the peak on weekdays and all day on Saturdays. On weekdays, midday service is provided by local routes 83 and 84.

		Avg. Frequency (minutes)		
Dulles Town Center	Span of Service	AM Peak	Midday	PM Peak
Weekday	5:00 AM – 9:16 AM 4:00 PM – 8:01 PM	20	n/a	20
Saturday	8:05 AM – 9:29 PM	20	20	20

88X: East Gate – Wiehle-Reston East Metrorail Station

This route operates between the East Gate park and ride lot and Wiehle-Reston East Metrorail station every 30 minutes during peak periods only.

		Avg. Frequency (minutes)		
East Gate	Span of Service	AM Peak	Midday	PM Peak
Weekday	5:00 AM – 9:38 AM 3:35 PM – 8:03 PM	30	n/a	30

89X: Telos – Wiehle-Reston East Metrorail Station

This route operates between the Telos park and ride lot and the Wiehle-Reston East Metrorail station every 30 minutes during peak periods.

		Avg. Frequency (minutes)		
Telos	Span of Service	AM Peak	Midday	PM Peak
Weekday	5:00 AM – 10:30 AM 4:00 PM – 8:30 PM	30	n/a	30

Figure 3: Metro Connection Routes

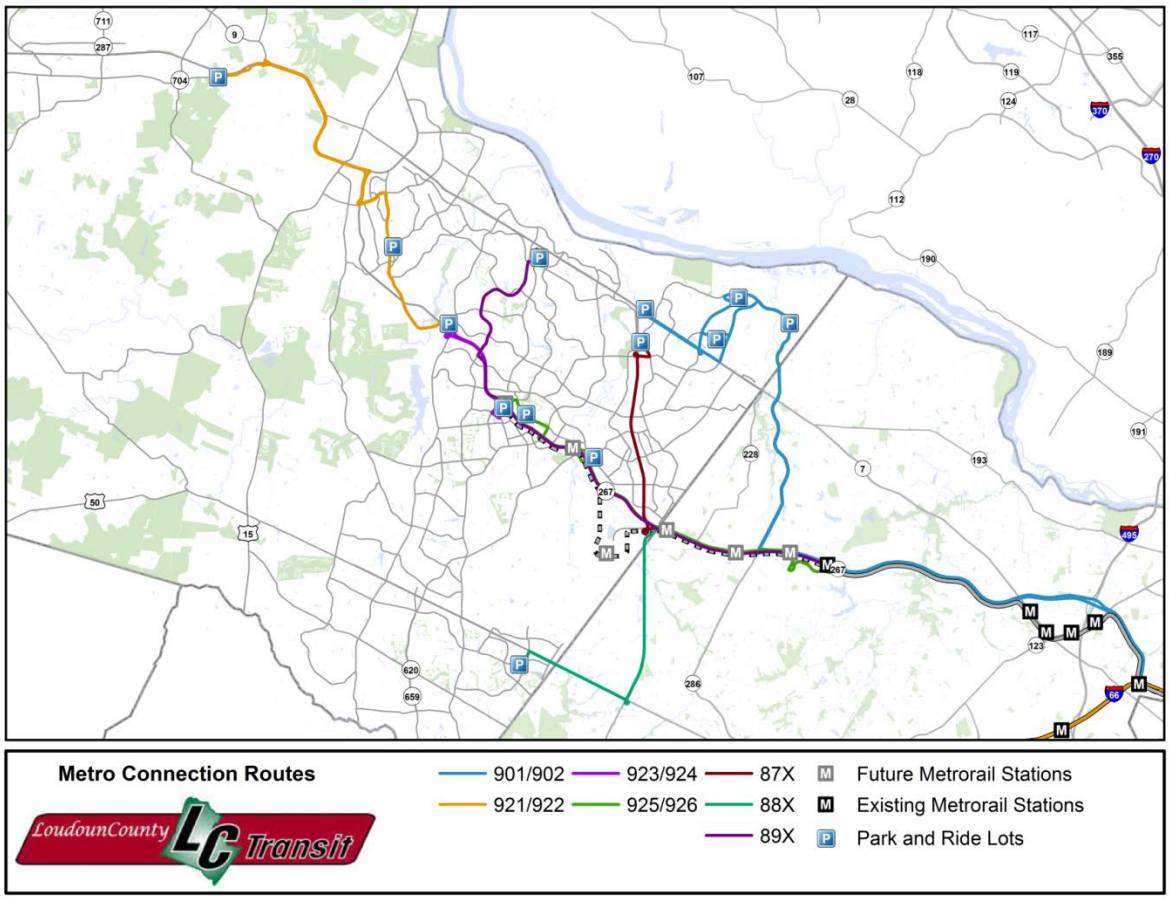
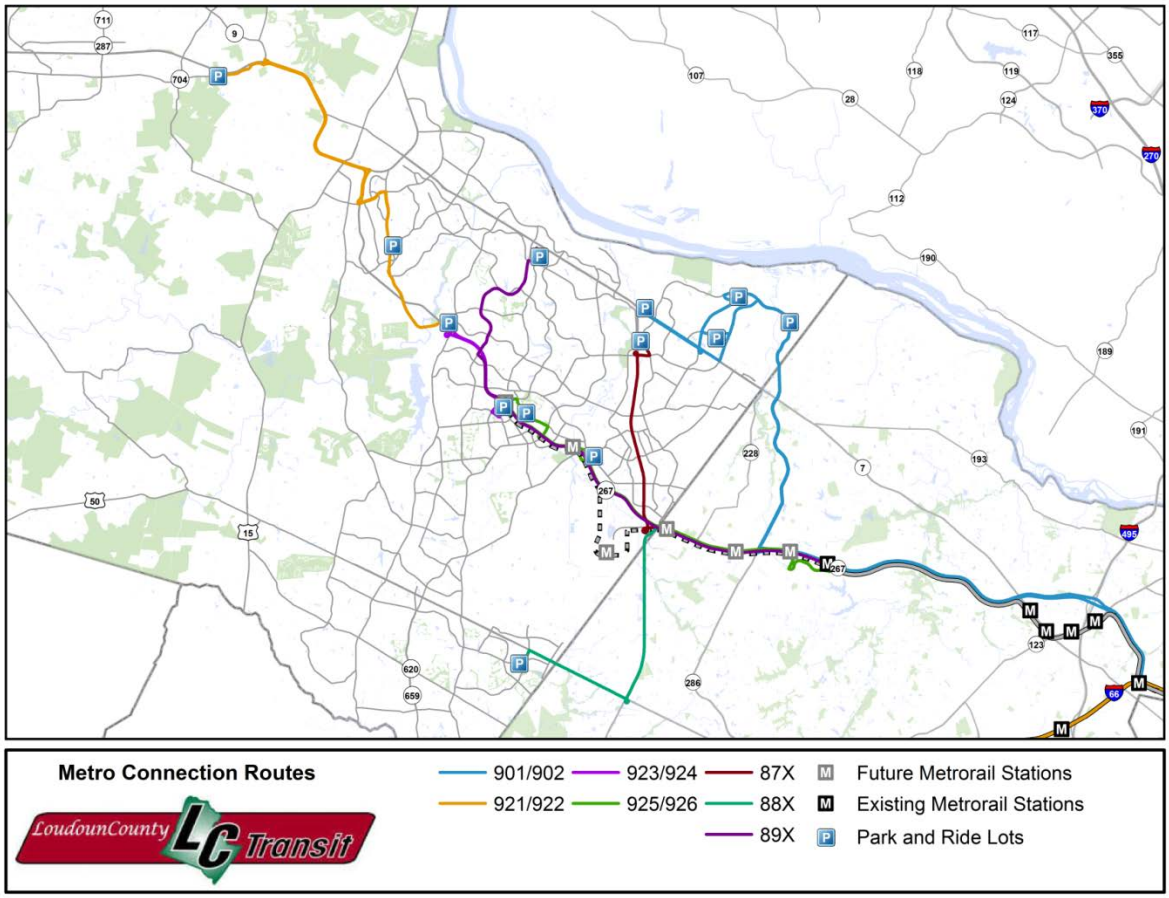


Figure 4: Metro Connection Routes



Local Routes

Loudoun County, through a contact with MV Transportation, provides all of the local fixed route bus transportation in the county except for Route 40, which is operated by VRT. The fixed route service is designed to facilitate route-to-route transfer opportunities among local Loudoun routes at hub locations in Leesburg, Dulles Town Center, and at Inova Loudoun Hospital. Connections are also provided to Fairfax County buses at the Wiehle-Reston East Metrorail station and Dranesville Town Center. The following paragraphs describe the local routes in Loudoun County as they were following changes implemented in August 2015. The weekday routes are mapped in Figure 4, excluding Route 86 (which is a commuter shuttle from remote parking to Dulles North Transit Center). The four routes that operate on Saturdays are mapped in Figure 5.

Route 40: Purcellville Connector (operated by VRT)
This route operates between Leesburg and Purcellville primarily along Route 7. Major stops include the Loudoun County Government Center, the community of Hamilton, Patrick Henry College, the Loudoun Valley Community Center, and Giant grocery store. The service operates hourly, weekdays only.

		Avg. Frequency (minutes)		
40: Purcellville Connector	Span of Service	Peak	Midday	Evening
Weekday	7:00 AM –7:00 PM	60	60	n/a

Route 54: Leesburg Safe-T-Ride
This route is a free shuttle service, funded by the Town of Leesburg and the county. It provides riders with a safe alternative to crossing the Route 15 Bypass on foot in the vicinity of Fort Evans and Edwards Ferry Roads.

		Avg. Frequency (minutes)		
54 Leesburg Safe-T-Ride	Span of Service	Peak	Midday	Evening
Weekday	7:00 AM –7:00 PM	20	20	20
Saturdays/Sundays	9:00 AM – 6:00 PM	20	20	20

Route 55: Exeter/Tuscora
This route runs between Exeter Apartments and Tuscora Apartments via the Loudoun County Government Center in Leesburg. Other major stops include the Madison House, Food Lion, the Leesburg Post Office, Paxton Campus special education center, and Southgate medical offices. Major streets served by the route include Market Street, Edwards Ferry Road, King Street, and Plaza Street.

		Avg. Frequency (minutes)		
55 Exeter/Tuscora	Span of Service	Peak	Midday	Evening
Weekday	7:00 AM – 7:00 PM	60	60	n/a

Route 56: Rust Library/Ida Lee/County Complex
This route runs between the Rust Library and the County Complex via the Loudoun County Government Center in Leesburg. Other major stops include Inova Loudoun Hospital (Leesburg) and Ida Lee Senior Park. Major streets served by the route include King Street, Market Street, Miller Drive, and Plaza Street.

		Avg. Frequency (minutes)		
56 Rust Library/Ida Lee/ County Complex	Span of Service	Peak	Midday	Evening
Weekday	7:00 AM – 7:00 PM	60	60	n/a

Route 57: Village at Leesburg/Wegman's

This route runs between the Loudoun County Government Center and Wegman's. Other major stops include the Leesburg Corner Premium Outlets, Potomac Station Marketplace, and the Shenandoah Building. Major streets served by the route include Market Street, Fort Evans Road, Butterfield Parkway, Potomac Station Drive, and River Creek Parkway.

		Avg. Frequency (minutes)		
57 Village at Leesburg/ Wegman's	Span of Service	Peak	Midday	Evening
Weekday	7:00 AM – 7:00 PM	60	60	n/a
Saturday	10:00 AM – 9:00 PM	60	60	60

Route 62: Ashburn Connector

Beginning at Inova Loudoun Hospital, this route generally follows Gloucester Parkway and Ashburn Village Boulevard to Ashby Ponds, with midday trips extended to the Ashburn Wegman's. Other major stops include the Ashburn Village Giant, Potomac Green, and Wingler House. Service is provided hourly on weekdays only.

		Avg. Frequency (minutes)		
62 Ashburn	Span of Service	Peak	Midday	Evening
Weekday	7:00 AM – 7:00 PM	60	60	n/a

Route 70: Leesburg-Sterling

This route operates in the Route 7 corridor between the Loudoun County Government Center in Leesburg and NVCC Loudoun Campus. Other major stops include Evans Ridge Apartments, Riverside Parkway, Inova Loudoun Hospital, George Washington University Virginia Graduate Campus (GWU), and Dulles Town Center. Weekday service is provided every 30 minutes on weekdays until 7:00 PM, and hourly between 7:00 PM and 10 PM. Saturday service is provided hourly; the Saturday route skips GWU and central Leesburg, and is truncated at the Shenandoah Building.

		Avg. Frequency (minutes)		
70 Leesburg-Sterling	Span of Service	Peak	Midday	Evening
Weekday	7:00 AM – 10:00 PM	30	30	60
Saturday	8:00 AM – 10:00 PM	60	60	60

Route 72: Wiehle Express

This route runs between Wiehle-Reston East Metrorail station and Inova Loudoun Hospital. Other major stops include George Washington University and One Loudoun. Service is provided on a variable headway, weekdays only, but generally buses arrive every 30 minutes during peak periods and 45 minutes during the midday.

		Avg. Frequency (minutes)		
72 Wiehle Express	Span of Service	Peak	Midday	Evening
Weekday	6:00 AM – 8:30 PM	30	45	n/a

Route 80: Sugarland Run Connector
This route runs between Enterprise and Maple (William Waters House) in Sterling and the Northern Virginia Community College (NVCC) Loundon campus. Other major stops include Cascade Village and the Dranesville Town Center, where riders can connect to Route 924, a Fairfax Connector route. Service is provided hourly, weekdays only.

		Avg. Frequency (minutes)		
80 Sugarland Run	Span of Service	Peak	Midday	Evening
Weekday	7:00 AM – 7:00 PM	60	60	n/a

Route 81: Countryside Connector
This route runs in a loop in Countryside via Atlantic Boulevard, Harry Byrd Highway, Winding Road, Sutherlin Place, Spotswood Road, McPherson Circle, Countryside Boulevard, Cromwell Road, Triple Seven Road, Pidgeon Hill Drive, and City Center Boulevard. Dulles Town Center, Regal Cinemas, and the Villas of Countryside are major stops on this route. Service is provided every 30 minutes on weekdays only.

		Avg. Frequency (minutes)		
81 Countryside	Span of Service	Peak	Midday	Evening
Weekday	7:00 AM – 7:00 PM	30	30	n/a

Route 82: Sterling Connector
This route runs between Dulles Town Center and William Waters House. Other major stops include the Orbital corporate campus, Wal-Mart and the DMV. Major streets served include Atlantic Boulevard, Holly Avenue, Magnolia Road, and Sterling Boulevard. Service is provided every 45 minutes on weekdays and hourly on Saturdays.

		Avg. Frequency (minutes)		
82 Sterling	Span of Service	Peak	Midday	Evening
Weekday	7:00 AM – 10:00 PM	45	45	45
Saturday	8:00 AM – 9:50 PM	60	60	60

Route 83: Pacific Connector
This route runs between Dulles Town Center and Wiehle-Reston East Metrorail Station. Other major stops include Dulles 28 Center, and corporate offices of Raytheon and AOL. The route makes local stops along Pacific Boulevard, and then runs express via the Dulles Toll Road. Service is provided every 90 minutes on weekdays only.

		Avg. Frequency (minutes)		
83 Pacific	Span of Service	Peak	Midday	Evening
Weekday	7:00 AM – 7:00 PM	90	90	n/a

Route 84: Atlantic Connector
This route runs between Dulles Town Center and Wiehle-Reston East Metro. Other major stops include Wal-Mart and the corporate offices of Orbital. The route makes local stops along Atlantic Boulevard, and then runs express via the Dulles Toll Road. Service is provided hourly on weekdays only.

		Avg. Frequency (minutes)		
84 Atlantic	Span of Service	Peak	Midday	Evening
Weekday	7:00 AM – 8:00 PM	60	60	n/a

Route 85: Dulles South Connector

This route provides local service between East Gate, South Riding, Stone Ridge, Brambleton and the Loudoun Station park and ride during morning and afternoon peak periods. Two trips in the midday are extended to the Wiehle-Reston East Metrorail Station via the Dulles Toll Road. Service is provided on a variable headway on weekdays only, but generally buses arrive every 45 minutes during peak periods.

		Avg. Frequency (minutes)		
85 Dulles South	Span of Service	Peak	Midday	Evening
Weekday	5:30 AM – 8:00 PM	40-50	2 trips	n/a

Route 86: Ashburn Link

This is a free shuttle that is intended to relieve parking constraints at the Dulles North Transit Center by providing shuttle service to remote parking lots in the Ashburn Farm area. The shuttle makes three stops along Ashburn Farm Parkway (the Shops at Ryan Park at Shellhorn Road; the Parkhurst Plaza shopping center at Summerwood Circle; and the Crossroads United Methodist Church at Crossroads Drive) and one additional stop at Claiborne Parkway & Belgreen Drive. Buses then travel along the Dulles Greenway to Dulles North Transit Center. Riders can park at Ashburn Farms and Crossroads United Methodist Church; the other stops are walk-up locations.

		Avg. Frequency (minutes)		
86 Ashburn Link	Span of Service	Peak	Midday	Evening
Weekday	5:00 AM – 8:00 AM 4:00 PM –8:00 PM	30	n/a	n/a

Figure 5: Local Bus Routes, Weekday

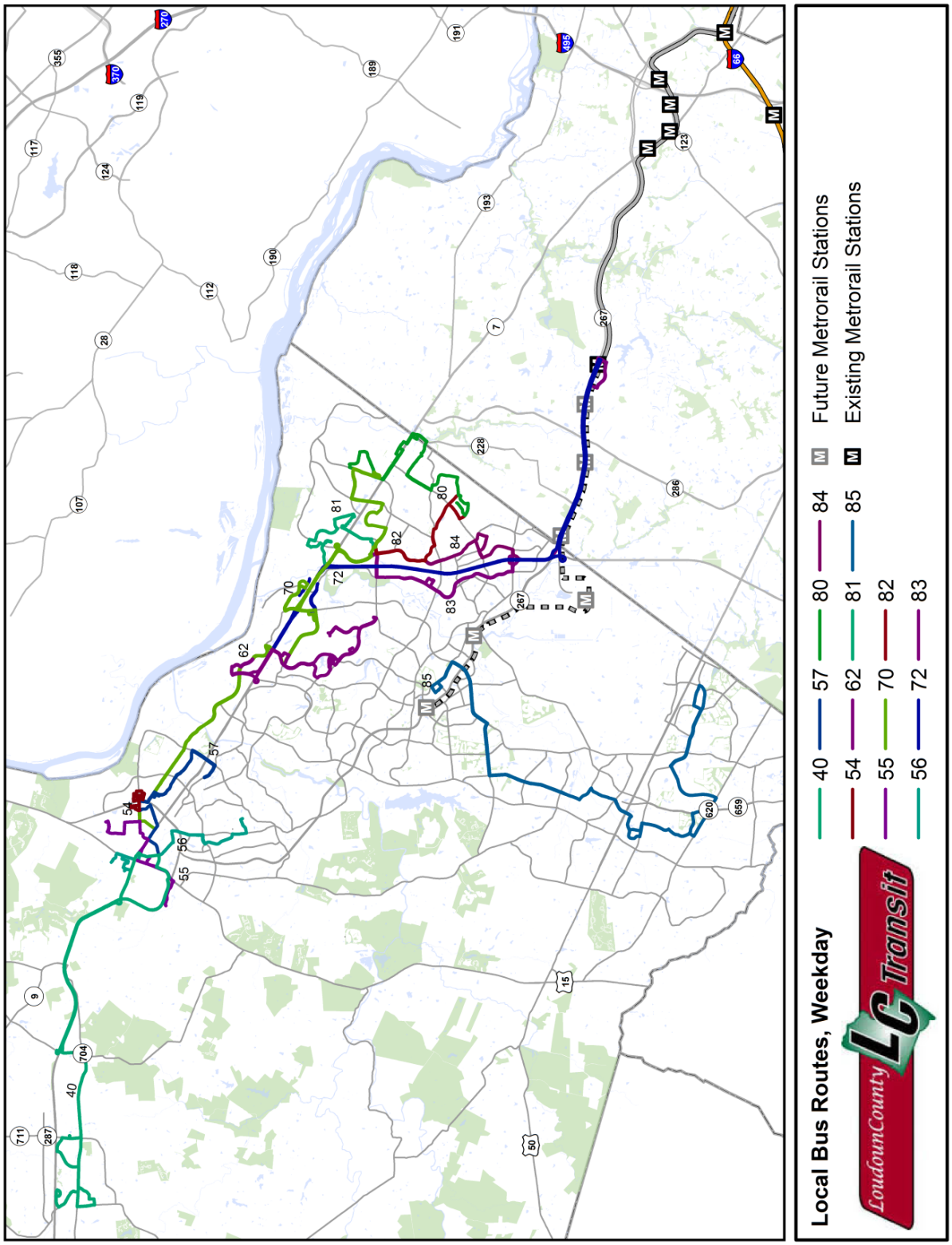
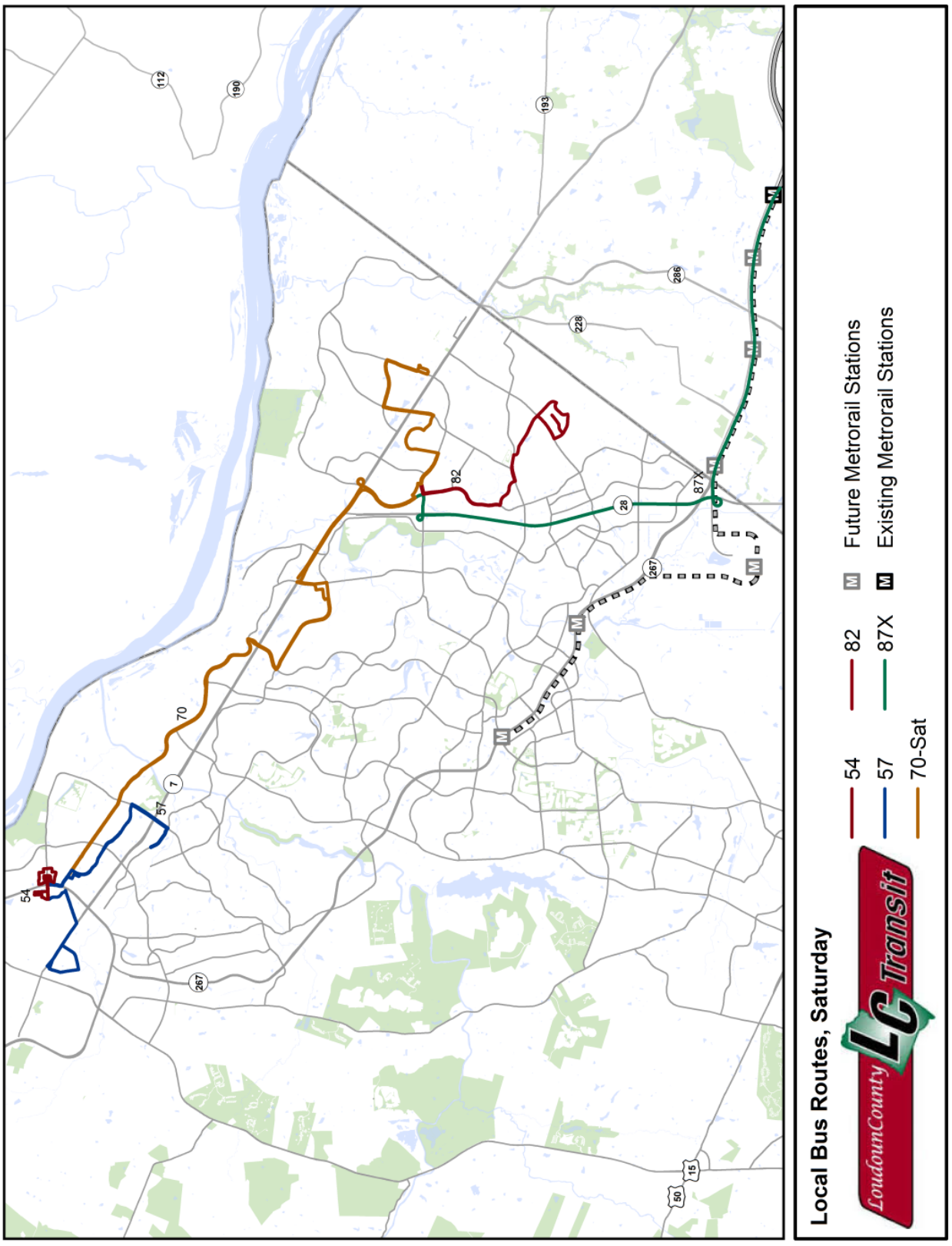


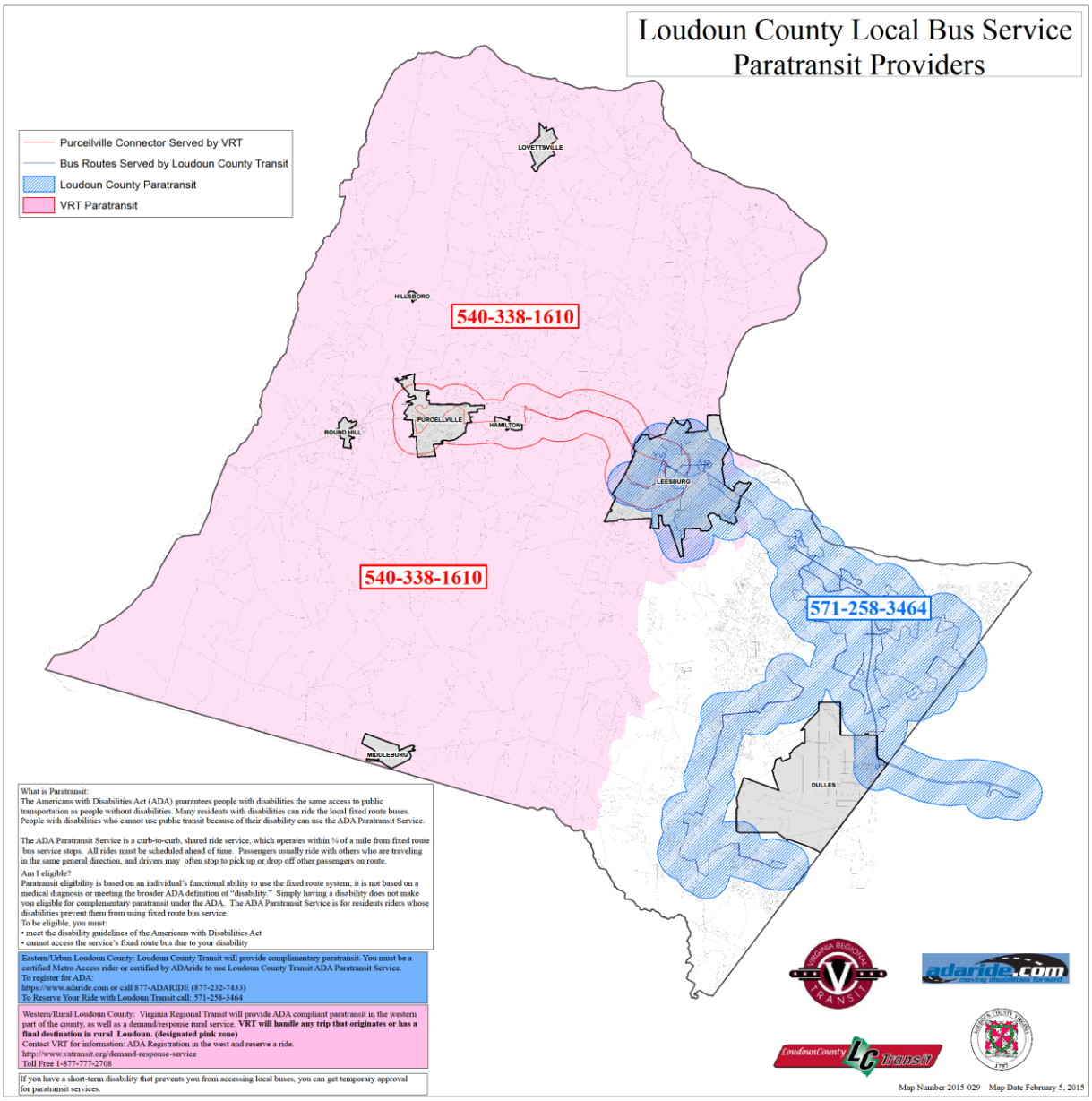
Figure 6: Local Bus Routes, Saturday



Paratransit and Demand-Response Services

LC Transit provides ADA paratransit in the urban half of the county, as shown in Figure 6. People who are unable to use fixed route bus services may complete an application to participate in Loudoun County's paratransit program. Service for those who are eligible is available for trips with an origin or destination within ¾-mile of a fixed route. Riders are required to schedule their paratransit trips 24 hours in advance. Paratransit offered by Loudoun County matches the service span of the fixed routes. The one-way fare on this service is $2.00. In the more rural parts of the county, VRT offers demand-response transit that is open to the general public, and also provides ADA paratransit service within a ¾ mile buffer of Route 40, the Purcellville Connector. This service also requires a 24-hour advance reservation. VRT does not record how many trips are made by each category, but they estimate that 85% of the trips are made by the general public, and 15% by those with ADA paratransit eligibility. Service hours for the VRT-operated paratransit and demand response are Monday through Friday from 7:00 AM until 7:00 PM.

Figure 7: ADA Paratransit and Demand Response Service Areas



Fare Structure

Loudoun County's commuter, local, and paratransit services have different fares, as described below and summarized in Table 3.

Commuter Routes

- The one-way fare between Loudoun and Rosslyn, Crystal City, Pentagon or downtown Washington, D.C. is $8.00 with a SmarTrip card or $9.00 in cash. The fare will increase by $1.00 as of July 2016.

- The fare to ride to or from West Falls Church on the Potomac Falls route is $1.50 one-way with a SmarTrip card or $2.00 in cash. Intra-county trips on this route are $1.00.
- The fare to ride to or from Wiehle-Reston Metrorail Station is $1.00 one-way with a SmarTrip card or $1.50 in cash. The East Gate, Telos and Dulles Town Center routes, currently operated using local buses without electronic fareboxes, have a $1.00 cash-only fare.

Local Routes
The local bus fare is $1.00 per boarding, cash only, with the following exceptions:

- Routes 72, 83, and 84 are $2.00 cash only, but the fare will be reduced to $1.00 as of July 2016. (Students and employees of GWU are eligible for free rides on Route 72 when they provide valid identification.)
- Route 54, Leesburg Safe-T-Ride, and Route 86, Ashburn Link, are free of charge.

Paratransit Routes
Paratransit fares are $2.00 in the urban (eastern) party of the county under LCT service. In the western portion, fares vary based on distance.
No passes or bulk discounts are offered for any of these services. A summary of the fares by route type is shown in Table 3.

Table 3: Summary of LCT Fares

Service Type	Fare per Boarding	Notes
Long Haul	$8.00	$1 cash surcharge. Will increase to $9 as of July 2016
Metro Connection Potomac Falls	$1.50	$0.50 cash surcharge
Metro Connection (all other routes)*	$1.00	$0.50 cash surcharge
Route 54 (Safe-T-Ride) and Route 86	free	
Local Routes 72, 83, 84	$2.00	cash only; will decrease to $1.00 as of July 2016
Local Routes (all other)	$1.00	cash only
Paratransit	$2.00	cash only
Routes 87X, 88X, and 89X accept cash only (no surcharge) .		

Vehicle Fleet

Loudoun County's commuter and local services are operated with different fleets. In 2003, Loudoun County purchased its own fleet for commuter bus service and contracted out bus storage, operation, and maintenance. In that year, the County applied for and received State Capital Assistance funds and Governor's Congestion Relief funds to combine with State Dulles Toll Road Set-Aside funds and lease/purchase financing to acquire 22 MCI D4500 commuter coaches. These buses, which began arriving in February 2004, are 45 feet long and accommodate 55 seated passengers with amenities such as reclining seats, restrooms, reading lights and LED destination signage. Since then, the County has continued to purchase commuter coaches, and now owns a fleet of 60 commuter buses. Table 4 summarizes the existing commuter route revenue fleet owned by the county. To supplement the buses owned by the county, nine coaches and three cutaways (the latter used for reverse commuter service) are leased from Transdev, as shown in Table 5. The lease rate as of FY15 was $2,919.92 per bus per month for the MCI coaches. For the shuttle buses, the hourly service rate includes the cost of the vehicles. The coaches owned by the county have a useful life of approximately 12-15 years. The 22

vehicles placed in service in 2004 are reaching the end of their useful life. As detailed in Chapter 6, the county expects to replace 40 of these buses gradually between FY2017 and FY2022.

Table 4: Revenue Fleet Owned by Loudoun County

#	Type	Vehicle ID	Year	Make	Seated Capacity	Model
22	45-ft coach	71001-22	2004	MCI	55	D4500
2	45-ft coach	71023-24	2005	MCI	55	D4500/J4500
7	45-ft coach	71025-31	2006	MCI	55	D4500/J4500
2	45-ft coach	71032-33	2007	MCI	55	D4500/J4500
2	45-ft coach	71034-35	2008	MCI	55	D4500
3	45-ft coach	71036-38	2009	MCI	55	D4500
7	45-ft coach	71039-45	2010	MCI	55	D4500
2	45-ft coach	71046-47	2011	MCI	55	D4500
3	45-ft coach	71048-50	2012	MCI	55	D4500
2	45-ft coach	71051-52	2013	MCI	55	D4500
3	45-ft coach	71053-55	2011	VanHool	55	C2045L
5	40-ft transit	73000-04	2014	Gillig	40	Low Floor
60	Total					

Table 5: Revenue Vehicles Leased from Transdev

#	Type	Make	Seating
3	cutaway	Ford F550	28
9	45-ft coach	MCI	55

The local bus fleet is both owned and operated by the contractor, MV Transportation. The fleet consists of 25-ft and 30-ft cutaway buses used for both fixed route and ADA paratransit service. As of September 2015, all local buses were equipped with bicycle racks. A summary of the MV fleet is shown in Table 6. The County is planning to purchase its own fleet of small buses to operate this service, as detailed in Chapter 6 of this TDP.

Table 6: Revenue Vehicle Fleet Owned by MV Transportation

Model Year	Make	Model	Wheelchair Places	Seats	Count
2013	International	4300	2	30	10
2014	Ford	E450	2	20	16
2013	Ford	E350	2	12	3
2006	Chevrolet	5500	2	28	1
2008	Chevrolet	5500	1	30	3
2008	Ford	E350	2	6	1
TOTAL					34

Existing Facilities

Commuter Bus Maintenance Facility

In 2014 Loudoun County opened a new large vehicle storage and maintenance facility for coach buses in Leesburg near Sycolin Road, operated by Transdev. The commuter bus maintenance facility is located at the end of Loudoun Center Place in Leesburg, VA, behind the County's Vehicle Maintenance Facility located at 42031 Loudoun Center Place, and consists of two buildings and two parking lots. The Administration building is a one-story building of approximately 9,000 sf that contains the HVAC and Electrical room, main I.T. room, offices, conference room, bus driver waiting/ready rooms, toilets, showers and locker rooms. There is a movable partition in this building as well as standard office finishes. The other building is a one-story Bus Maintenance building of approximately 21,000 sf that has five bays for commuter bus maintenance, plus a drive-through bus wash and detail bay, a tire room, parts counter, storage room, administrative offices, reclaim room, lube/compressor room, work bench areas, electrical, I.T. and HVAC room and mezzanine. One parking lot can accommodate up to 88 commuter buses; the other is an employee vehicle parking lot.

Local Bus and Paratransit Maintenance Facility

VRT's facility is located in Purcellville; vehicle storage, maintenance, operations, dispatch and administrative functions occur at this site for the fixed route, demand-response, and paratransit service. MV Transportation uses a vehicle storage and maintenance facilities in the Ashburn Technology Park 44200 Waxpool Road Suite 142, Ashburn VA 20147. This site is owned by MV Transportation, not the county.

Park and Ride Lots

As of August 2015 there were 20 park and ride lots served by Loudoun County Transit commuter buses with a total of 4,117 spaces, as shown in Table 7. Two of these lots opened in Summer 2015: East Gate in the southern part of the county with 218 spaces, and Dulles Town Center Park and Ride with 100 spaces. Loudoun County commuter service uses a variety of park-and-ride lots. Some are leased and donated lots, and others are proffered lots. The Dulles North Transit Center is maintained by VDOT on land owned by the Metropolitan Washington Airports Authority (MWAA). The County owns the Ashburn North park and ride lot, and designed and built the 250-space Harmony lot in Hamilton, near Route 7 on Colonial Highway; a 300-space lot in Ashburn called Loudoun Station, that will eventually serve the future Silver Line extension; and a 691-space lot in Leesburg on Sycolin Road, adjacent to Phillip Bolen Memorial Park. There is no charge to park in any of the designated park and ride spaces. Overnight parking is not permitted. The table below summarizes Loudoun County park and ride lot spaces by location; it excludes the few small lots that do not have commuter bus service.

Table 7: Park and Ride Lot Spaces by Bus Service Type

Name	Spaces	Local	Metro Connection	Long Haul
Ashburn North	190	X	X	X
Brambleton	100		X	X
Broad Run Farms	48		X	
Broadlands 772	160		X	
Broadlands Marketplace	75		X	
Cascades, Potomac Falls	55		X	
Christian Fellowship Church	300			X
Dulles North Transit Center	750		X	X
Dulles South	350	X		X
Dulles Town Center	100	X	X	
East Gate	218		X	
Goose Creek Village	83		X	
Harmony	250	X	X	X
Leesburg	691		X	X
Loudoun Station	300	X	X	
Lowes Island	65		X	
Our Lady of Hope	150		X	
St. Andrew's Presbyterian Church	68		X	X
Telos	164		X	X
TOTAL	4,117			

Bicycle Lockers

Bicycle lockers are available at the Dulles North Transit Center, the East Gate, Leesburg and Harmony park and ride lots. Permits to use lockers at Dulles North are managed by VDOT; lockers elsewhere are managed by Loudoun County Transit. The following table provides the number of lockers available:

Table 8: Bicycle Lockers at Park and Ride Lots

Park and Ride Lot	Bicycle Lockers
Leesburg	24
Harmony	2
East Gate	8
Dulles Town Center	12

Bus Stops

As of 2015, there were 303 bus stops served by one or more Loudoun County Transit local bus routes. Of these stops, 36 have bus shelters. There are two hubs where multiple bus routes meet to facilitate transfers:

- Government Center – Routes 40, 55, 56, 57, and 70

- Dulles Town Center Mall – Routes 70, 81, 82, 83, 84, 87X

In addition, both Routes 70 and 72 serve Inova Loudoun Hospital (although this portion of Route 72 is proposed to be moved to Route 89X as of July 2016).

Since the prior TDP, the county conducted a study of its transit services with regard to accessibility for people with disabilities. The final report, Assessment of Transit and Mobility Services for People with Disabilities, was completed in January 2014 and is **available on the county website**. The study identified the need for the County, as the entity responsible for fixed route and paratransit service, to develop a Program Access Plan, also known as a Transition Plan, for evaluating and bringing public transit service and facilities, specifically bus stops, into ADA compliance where necessary. The county has budgeted $200,000 to improve bus stops for FY2019.

Transit Security Program

Loudoun reviews the Emergency/Snow Plan schedule every fall for its commuter buses. A new plan for the winter is then created no later than October. Cameras have been installed on the commuter coaches in order to record accidents; they are tripped automatically when the G-Force on the bus increases, or manually by the driver. Passengers are not filmed, except incidentally. In the case of an incident, Transdev, the contractor operating the commuter buses, has an evacuation plan. The Loudoun County Sheriff's Office randomly patrols and performs checks in the County's park and ride lots. Customers are advised that parking is at their own risk and that Loudoun County is not liable for any theft, towing or vandalism that may occur. There are not currently security training programs in place for employees, nor public awareness campaigns in place on buses.

Intelligent Transportation Systems (ITS) Program

Loudoun County actively incorporates the latest Intelligent Transportation System (ITS) technologies into the commuter bus service. These ITS technologies allow DTCI staff to communicate with riders in multiple ways, collect and process fares electronically, and track the buses. The following is a list of these technologies and their uses:

Communications

The LC Transit website (www.loudoun.gov/transit) has complete schedule information for Long Haul Commuter Bus, Local Bus, Metro Connection, and Paratransit services. The website is updated regularly with special schedules (e.g. prior to holiday weekends) and changes to regular schedules.

Bus Biz

Bus Biz is an email group containing over 3,400 email addresses. Riders sign up for Bus Biz by sending DTCI an email address. Bus Biz is used to email important information to keep bus patrons informed on future schedule changes, temporary bus stop closures, park and ride lot updates, and proposed service changes.

LC Alert/SV Alert

LC Alert/SV Alert is a real-time text messaging system that is used when service is disrupted based on unanticipated road closures, detours or major traffic delays causing a bus to be more than ten minutes late. LC Alert is for commuter bus passengers, and SV Alert is for Silver Line Metro connection passengers. Over 4,300 users are signed up to receive these alerts.

Electronic Fare Collection
The Loudoun County commuter buses are equipped with GFI Odyssey electronic fareboxes that accept both cash and SmarTrip, the regional transit smart card in the Washington, DC area. The local buses have drop boxes that do not count cash or read cards.

Other ITS Applications
An ITS suite of applications, including CAD/AVL, Real Time, Mobile App, Real Time Website and Automated Vehicle Maintenance, is currently being deployed by Clever Devices on the commuter buses. The Maintenance Management System used is Dossier and is owned and maintained by Transdev. There are automatic passenger counters in use. The local bus service uses Geotab fleet management software and GPS vehicle tracking and uses Fleet Focus for Maintenance Management. This software is owned and maintained by MV Transportation. Loudoun will provide its schedule data in GTFS format and provide the feed to Google, which will permit the public to have trip planning information including LCT service. Loudoun County does not currently have traffic signal priority for transit vehicles or transit information displays.

Data Collection and Ridership and Revenue Reporting Methodology

Data collected by the electronic fareboxes on commuter buses is used for scheduling, budgeting, and park and ride lot capacity management. Local buses and paratransit vehicles do not have electronic fare collection. Passenger and fare data are collected on Excel spreadsheets, with Hummingbird reporting software extracting the data from the fareboxes. Odometer (hubometer) readings, payroll systems, and driver logs are collected by Transdev. Operating expense data is collected and reported from the county‘s accounting software, Oracle. Financial audits are performed by an external company, usually once a year. For local buses, all passenger and fare collection data is performed manually and recorded on an Excel spreadsheet. For both local and commuter service, scheduling is currently performed with Excel, although Loudoun is planning to procure scheduling software (see Chapter 6).

Commuter Bus Data
Passenger counts, extracted using Hummingbird reporting software, are collected from the GFI Odyssey fare boxes configured by Cubic Transportation for SmarTrip. Passenger and fare data are collected on Excel spreadsheets by Transdev. Odometer (hubometer) readings, payroll systems and driver logs are also collected and reported by Transdev. Operating expense data is collected and reported from the county’s accounting software, Oracle. Financial audits are performed by an external company, usually once a year. From a maintenance standpoint, the county’s fleet department has oversight regarding all PMs and repairs. Operational oversight of adherence to standards is done daily and operational meetings between the contractor and county are held at least monthly. There is currently no specialized scheduling software, other than Excel, in use, but the county has plans to consider purchasing new software. The buses equipped with the Clever Devices system have mobile data terminals; however these are not used for payroll.

Local Bus Data
All passenger and fare collection data is performed manually by bus drivers and then recorded on an Excel spreadsheet by MV Transportation. Operating expense data is collected and reported from the county’s accounting software, Oracle. Financial audits are performed by an external company, usually once a year. All of the buses on the local service are owned and maintained by the contractor, MV, so the county has no direct oversight of maintenance. Operational oversight of adherence to standards is done daily and operational meetings between the contractor and county are held at least monthly.

There is no scheduling software currently in use, other than Excel, but if the county purchases scheduling software it will be used for local bus as well.

Public Outreach

On March 10, 2014, the Board of Supervisors endorsed a structured approach for considering new bus routes and service enhancements proposed by staff, Board members, or the public. Following this endorsement, the county has created an annual process and window of opportunity to propose new routes and service changes with adequate time for staff to evaluate proposals, including complete cost and operational impacts. The schedule below provides the required timeframes for soliciting, vetting and incorporating new routes into the County and State budgeting processes:

- January-March: Solicit proposed new routes
- March-June: Vetting proposed routes by Staff
- June-July: Board endorsement of proposed routes
- August 1: Proposed routes finalized
- September 1: Proposed routes incorporated into Department of Transportation and Capital Infrastructure Operating Budget request
- December 1: Proposed routes incorporated into the Annual Update of the TDP submitted to the Department of Rail and Public Transportation (DRPT)
- February 1: State Capital/Operating grant applications due to DRPT
- July 1: State assistance available to purchase equipment and operate new routes

In spring 2015 the county solicited comments on proposed route changes, including the Metrorail station served by the Potomac Falls Metro Connection service and the proposed discontinuation of the Tysons Corner service. After numerous comments were received, and discussions with stakeholders, the county made some changes to the proposals, or in some cases delayed implementation. Route changes were made in July and August 2015, as described elsewhere in this document. In February 2016, the county posted a listing of proposed route and fare changes to the county website at **https://www.loudoun.gov/buschanges**. The county solicited comments or questions about the proposed changes by email or phone, through March 31, 2016.

The outreach conducted for this Transit Development Plan is described in Chapter 3.

Chapter 2: Goals, Objectives, and Standards

Loudoun's *Countywide Transportation Plan* (*CTP*) serves as a guide for future transportation infrastructure investment. The CTP addresses all modes and contains the County's long-range transit plan. Loudoun's Countywide Transportation Plan was developed in 1995, updated in 2001 and 2010. Although some road construction project descriptions have been updated through Comprehensive Plan Amendments as recently as November 2015, the public transit section has not changed since the 2010 plan. The CTP is a companion document to the *Revised General Plan* and falls under the umbrella of the County's Comprehensive Plan. These documents give policy guidance on land and infrastructure development and direction for new area plans. Policies presented in the CTP are intended to support the land use policies of the *Revised General Plan*.

Transportation Goals and Strategies

The 2010 CTP lists transportation goals and strategies in support of the County's vision for transportation. The plan specifically calls for a *multi-modal* transportation system and land use policy that supports it. The relevant portions of the 2010 CTP Goals and strategies are:

1. Provide a safe, affordable, convenient, efficient and environmentally sound multi-modal transportation system to serve Loudoun County.
    a. Complete the build-out of the major road network while ensuring integration with the local road network, encourage connectivity between developments to reduce the overall burden on the major road network and set tangible, achievable goals demonstrating incremental progress towards that end.
    b. Complete a multi-modal system to include rail, express buses, feeder buses, bicycle and pedestrian-friendly communities and ensure that all new projects or major reconstruction projects shall accommodate travel by vehicles, pedestrians, bicyclists and transit riders as integral elements of the County's transportation system.
    c. Work with the Virginia Department of Transportation to implement a multi-modal safety improvement program and multi-modal design standards.
    d. Identify priorities that will provide the greatest benefit.
    e. Employ intelligent transportation systems technologies in order to maximize the efficiency of the transportation network.
    f. Track overall system performance.
    g. Develop educational programs to promote and encourage the use of transit, bicycle and pedestrian improvements.

2. Ensure the transportation system supports all applicable County goals including but not limited to the Revised General Plan's goals for supporting vibrant communities and employment centers and protecting natural and heritage assets.
    a. Integrate transportation policy with land use policy.
    b. Locate improvements and facilities to complete gaps in the Suburban Policy Area transportation system and reduce trip lengths, travel times and automobile dependence.

3. Ensure that the character of and quality of life in the County are protected and maintained.

a. Work with the Virginia Department of Transportation to update standards within the context of a multi-modal network.
b. Employ context-sensitive design in order to respect historic and environmental features and community character.
c. Identify scenic by-ways and historic routes.
d. Respect and encourage shared use of rural roads by pedestrians, equestrians, farm vehicles, bicyclists and automobiles by making only those improvements necessary for the safety and utility of all users.
e. Support road designs within residential neighborhoods that are compatible with pedestrian and local residential use.

4. Ensure that planned land uses are supported by appropriate transportation planning with respect to the types, levels and timing of transportation improvements to serve the four Suburban Policy Area communities and employment centers, the Transition Policy Area towns and the Rural Policy Area.
    a. Link land use and transportation decisions.

5. Ensure the County's interests are addressed and that cooperation between neighboring jurisdictions is facilitated in regional and statewide plans.
    a. Fully participate in regional and statewide planning efforts.

6. Ensure that the maximum funding available is obtained for transportation improvements
    a. Comply with all applicable environmental regulations.
    b. Pursue proffers, special tax districts, business ventures, bonds, other funding sources, or a combination thereof as appropriate.
    c. Lobby state and federal officials.

Public Transit Policies

Chapter 3 of the *CTP* addresses the County's existing and proposed transit program and identifies travel demand management strategies that are intended to reduce single occupant travel or redistribute the demand for single occupant travel away from the peak travel periods. The transit plan portion of the *CTP* had an extensive stakeholder and public outreach process. Riders on existing local and commuter services were surveyed to determine rider service needs, public meetings were held, and a Transit Plan Advisory Committee (TPAC) was also assembled for input into the transit planning process and resulting recommendations. Transit-related plans and policies presented in this TDP are based on work completed in the *CTP*, and thus reflect input received through that transit planning process. Transit-related policies identified for Loudoun County in the *CTP* are as follows:

Guiding Principles

1. Branding: Transit services developed for Loudoun County will integrate commuter, fixed-route and demand-response systems under a common graphics theme readily identifiable to the public as the County's Public Transit System. The services should be recognizable and known by the public, reflecting the high level of expectations for Loudoun County services. Concepts include a recognizable name and logo at transit stops and the integration of customer service, trip planning, and system information in multi-lingual formats.

2. Partnerships: Public, business and community partnerships will be used to "get the word out" about the transit services available and to enhance awareness. Business and community partners should participate in marketing, outreach and development of services. Techniques may include advertising to riders and targeted focus group meetings.
3. Performance: Transit services in Loudoun County will be held to performance standards and will be monitored and adapted on an annual basis to ensure the services are effective and efficient. Ongoing tracking of performance indicators and periodic review and modification of routes will provide enhanced accountability to the riding public and a quantifiable measure of success for new routes and service changes.
4. Integration: Connectivity between activity centers within and outside Loudoun County will be improved with the objective that no more than one transfer is needed to reach major activity centers outside Loudoun County. Within Loudoun County, existing transfer hubs should be extensively integrated with surrounding developments.
5. Service Hours: As funding is available, Metro Connection service will be expanded to connect to Metrorail stations near the county and in the county when they are opened. Limited Saturday has been introduced on the most popular local routes, and should be expanded to Sunday service when feasible.
6. Transit-Supportive Policies: Greater transit use can be promoted by reducing or eliminating minimum parking requirements and allowing shared parking, and encouraging employers to offer tax-free transit benefits, parking "cash out", and guaranteed ride home. Bus stops and park and rides will be accessible to persons with disabilities.

Transit and Land Use

1. The County will direct new development to identified transit corridors and zones that are outlined in the *Revised General Plan* for economic, environmental, social and other reasons that will improve the viability and cost-effectiveness of the future transit services and reduce traffic congestion in the Suburban Policy Area where applicable. The County will require design features to improve transit accessibility and efficiency, such as grid street patterns and streetscapes that accommodate pedestrians and bus stops.
2. The *Revised General Plan's* land use map depicts two transit nodes located along the Dulles Greenway. Characteristics of these areas shall include:
    a. Cooperation of property owners with the public sector (the County, WMATA, MWAA, DRPT, etc.) to provide adequate transit facilities and connections for all modes to support maximum use of the transit system; and
    b. Major access roads will be located on or near the periphery of the Transit Nodes to avoid conflict with transit services and pedestrian traffic (e.g., Mooreview Parkway and Shellhorn Road).
    c. Reducing parking requirements for development near transit nodes once transit becomes available in order to encourage transit usage. Techniques to achieve reduction in parking requirements may include: pricing, shared parking, reduced or maximum on-site parking requirements, and on street parking counting toward on-site parking requirements.
    d. Strategies to remove barriers for pedestrian, bicycle and wheelchair access to the transit node from surrounding neighborhoods (such as limited access highways or arterials with inadequate pedestrian crossings). The transit node area and adjoining public spaces will be made accessible to persons with disabilities, to include provision of such improvements as audible pedestrian signals.

3. The County may permit interim development in transit corridors (Rt. 7, Rt. 50, Rt. 28 and the Dulles Greenway) at densities lower than those needed to support viable services. This will be limited to situations where there will be a tradeoff benefit (e.g., ongoing revenue stream to subsidize the service, analogous infusion of capital/in kind contribution, or combination) associated with the development, which promotes the viability of intended transit services.
4. Development of transit facilities and transit centers, defined as a fixed location where passengers transfer from one route to another, in the County's designated Urban Center is an integral part of the county transit plan; the designated Urban Center at Dulles Town Center is a critical origin, destination and transfer point of recommended transit services. Additional transit centers will be identified in the future through the Community Plan process and the land development application process.
5. The County anticipates that a minimum 10% mode split will be achieved through the land development application process for applications within the transit corridors. Mode split is defined as the proportion of people that use each of the various modes of transportation. Strategies to achieve this goal should be identified and an implementation plan defined as part of the application.
6. The County will assess applications related to transit nodes in terms of station access needs, circulation, improvements, pedestrian-friendly design and other key features related to transit-oriented development.

Public Transit Service

1. The County will take the lead to expand transit services that are responsive to growth, congestion and air quality demands on the region.
2. County involvement in transit will be implemented based on transit service recommendations detailed in Chapters 4 and 5 of this TDP. These recommendations include modifications to existing services, expansion of service hours and service days, and introduction of new routes and services. The County will continue to plan, coordinate, and manage service through contracts with private operators.
3. County financial assistances for transit programs will be based on the following objectives:
    a. The County will strive to maximize the cost effectiveness of all transit and rideshare programs subsidized by the County through review of route performance and costs. Underperforming routes (routes where ridership does not meet performance criteria) will be refined to maintain system efficiency. Where services are provided by contractors, these performance indicators will be provided by the contractors to the County for evaluation purposes.
    b. The County will promote the use of transit services as an alternative to the single occupancy vehicle, including routes connecting to Metrorail.
    c. The County will promote the use of transit services by those without access to an automobile through fare assistance and coordination of services with other transit providers within and adjoining Loudoun County.
    d. The County will promote the use of transit services with outreach efforts that may include public transit workshops and transit friendly user guides.
    e. The County will continue bus transit services when gasoline tax funding resources will be used to cover Loudoun's operating cost assessment once it is a member of the WMATA compact.

Dulles Corridor Metrorail (Silver Line Phase 2) Project Policies

1. The County will facilitate the implementation of rail service in the Dulles Greenway corridor. This service will serve Fairfax County locations in the corridor and extend to Loudoun County stations at Dulles Airport, Loudoun Gateway and Ashburn (Route 772).
2. The County, in partnership with VDOT, WMATA or other appropriate agencies, will ensure that land needed to provide planned transit improvements (e.g., Metrorail parking lots, separate rail rights-of-way, dedicated bus ways, etc.) is obtained or reserved prior to or during the process of reviewing land development applications which affect such land. Land acquisitions and reservations will take into consideration both the near term and ultimate transit system configurations.
3. Develop a fare structure to promote and incentivize the use of transit services connecting to the Silver Line, and move to a self-sustaining fare for Long Haul service by the time Silver Line stations open in Loudoun.[1]

Park and Ride Lot Policies

1. Park and ride lots in the towns and the Suburban Policy Area will be located along or at the intersection of arterial or major collector roads, near activity centers such as commercial or mixed-use centers, schools or other destinations, at transit stops, or in other safe and secure locations that provide convenient access. They should be connected by sidewalks or shared pathways to enable carpoolers and pedestrians to walk to the lot. These park and ride lots should receive priority consideration for the installation of bicycle lockers and racks.
2. Park and ride lots may be co-located with other complimentary uses, such as recycle centers, churches, parks and retail development areas.
3. Park and ride lots will be designated to provide convenient and safe bus access either within or adjoining the lot. Boarding locations for all transit and shuttle services at or near park and ride lots should be designated and signed. Schedules, service and fare information should be posted at boarding locations. All such areas need to be evaluated for provision of seating and weather protection. The relevant provisions of the Americans with Disabilities Act need to be incorporated in lot layout and boarding area design.
4. Regional park and ride lots will not be located within the inner core of the Transit Oriented Development (TOD) where pedestrian and bicycle access is given priority.

Bus Shelters and Amenities Standards

1. All park and ride facilities will be well lit and equipped with waste receptacles.
2. A 16-foot long bus shelter will be required to serve transfer points, commuter bus stops and other locations where high boarding concentrations are anticipated. A smaller 12-foot long bus shelter will be provided at locations with fewer passenger boardings.
3. Solar lighting will be provided inside bus shelters with both timer and motion detector options. Exceptions may be made when other sources of lighting are available, i.e., an adjacent street light.
4. Bus shelters that are erected on private property will be maintained by the property owner with the following guidelines: trash is to be removed at minimum twice a week, all graffiti to

[1]These goals were adopted by the Board of Supervisors on March 10, 2014. A self-sustaining fare for the long haul service is a stated goal in the county's Countywide Transportation Plan of 2010.

be removed immediately from shelter, landscaping, if applicable, will be kept neat surrounding the shelter, and lighting will be in working order.

5. All frames, side panels, roof panels, hardware and accessories associated with the bus shelters on private property will be the responsibility of the property owner to guarantee repair or replacement of worn-out or defective parts.
6. The County will supply appropriate schedules and brochures for placement in shelter display racks.
7. The County will seek a vendor to install and maintain bus shelters, to be funded by advertising revenue.

Performance Standards

Loudoun County Transportation Division regularly monitors bus on-time performance, park-and-ride lot utilization and bus passenger loads by bus trip. The Transit Advisory Board (described previously) also provides Transportation Division staff with rider input about service conditions. Service adjustments are made accordingly based on this monitoring. Loudoun County Transit has proposed the following route productivity metrics:

- Net cost (operating subsidy) per boarding
- Boardings per revenue hour
- Boardings per revenue mile

The proposed standard is that for each of the types of service (Long Haul, Metro Connection, and Local), any route that performs at less than ½ of the average for that type of service should be a candidate for adjustment or elimination. For example, a local route with fewer than half the average boardings per revenue hour of all local service (taken as a whole), or more than twice the average net cost per boarding, would require some type of intervention. Loudoun County has no performance standards with regard to span and frequency of service, service availability, crowding, or on-time performance.

Chapter 3: Service and System Evaluation

This chapter includes various analyses of the Loudoun County Transit system. Table 9 provides a summary overview of key systemwide statistics, specifically: service area population and density, service area square mileage, operating cost, number of vehicles in peak service, number of vehicles available for peak service, ridership (unlinked passenger trips, which is equivalent to total boardings), revenue hours, total hours, revenue miles, directional route miles, and passenger revenues. Commuter bus includes both Long Haul and Metro Connection service.

Table 9: Systemwide Summary Statistics, FY2014 Annual Totals

Measure	Commuter	Local	Total
Service Area Square Miles	517	517	517
Service Area Population	349,679	349,679	349,679
Service Area Pop/Sq Mi	676	676	676
Annual Operating Cost (000)	$10,795	$2,771	$13,566
Vehicles in Peak Service	63	21	84
Vehicles Available for Peak Service*	71	25	96
Annual Boardings (000)	1,402	355	1,757
Annual Revenue Hours (000)	51	42	93
Annual Total Hours (000)	110	50	160
Annual Revenue Miles (000)	1,732	690	2,422
Directional Route Miles	232	185	417
Annual Passenger Revenues (000)	$8,121	$380	$8,501
***Commuter total includes 9 buses leased from Transdev.**			

Retrospective Analysis of Performance

In October, 2013, the Commonwealth Transportation Board adopted performance measures to be used for the Performance Based Operating Assistance Allocation. These measures and their definitions are:

- *Net Cost per Passenger*: Total operating costs, less depreciation related to transit assets and any operating income derived from a source other than taxpayers, divided by boardings.
- *Customers per Revenue Hour*: Boardings divided by revenue hours
- *Customers per Revenue Mile*: Boardings divided by revenue miles

For this TDP these statistics were calculated using data reported to the National Transit Database by Loudoun County Transit. In FY2013 and FY2012, local service was operated by Virginia Regional Transit (VRT), so the data items for those years from the Rural NTD database were used for comparison purposes. The VRT data for 2014 is also shown in the table below because the LCT Local and VRT data for 2014 combined are comparable to the earlier VRT data.

Table 10: Calculation of Performance Measures for FY2012-FY2014.

	2014			2013		2012	
	Commuter	Local	VRT	Commuter	VRT*	Commuter	VRT*
Operating Cost (000)	$10,795	$2,771	$980	$10,157	$6,089	$9,832	$5,495
Boardings (000)	1,402	355	34	1,325	745	1,316	670
Revenue Hours (000)	51	42	12	51	83	50	77
Revenue Miles (000)	1,732	690	171	1,720	1,358	1,696	**
Fares Collected (000)	$8,121	$380	$34	$7,652	$356	$7,698	$350
Net Cost / Passenger	$1.91	$6.74	$27.69	$1.89	$7.70	$1.62	$7.68
Customers / Rev. Hour	27.7	8.5	2.8	26.0	9.0	26.5	8.7
Customers / 100 Rev. Mi.	81.0	51.4	20.0	77.1	54.8	77.6	n/a
Fare Rev. / Passenger	$5.79	$1.07	$0.98	$5.77	$0.48	$5.85	$0.52
MPH	34.2	16.4	13.9	33.7	16.4	34.1	n/a

Base data are annual totals. *VRT 2012 revenue hours and miles from OLGA (NTD is incorrect). **NTD and OLGA data are incorrect, no corrected figure available.

The commuter bus trend has been largely stable over this period. Fare revenue per passenger did not change. Productivity increased a bit in 2014 over 2013. Costs increased between 2012 and 2013 but were stable in 2014. There was little change in local bus service provided by VRT between 2012 and 2013, but there were major changes between 2013 and 2014 as LCT took over the service (except for Route 40 and three of the five ADA paratransit buses). Operating cost and ridership both dropped nearly in half. An analysis of the trends and policy changes that have led to these results is included in the following sections.

Peer Comparisons

Because of the very different nature of the service offered, separate peer analyses were conducted for local bus service and commuter bus service, as detailed in the following sections.

Commuter Bus Peer Analysis

A peer analysis was conducted for Loudoun's commuter bus service using National Transit Database data for 2013 to calculate comparative statistics. The 2013 NTD report provides, for the first time, data on *commuter bus* as a separate mode.[2] In the entire national database, there were a total of 36 commuter bus operations located in urbanized areas of 1 million or more with at least 15 vehicles operated in maximum service.[3] In a preliminary analysis, Loudoun commuter bus statistics were

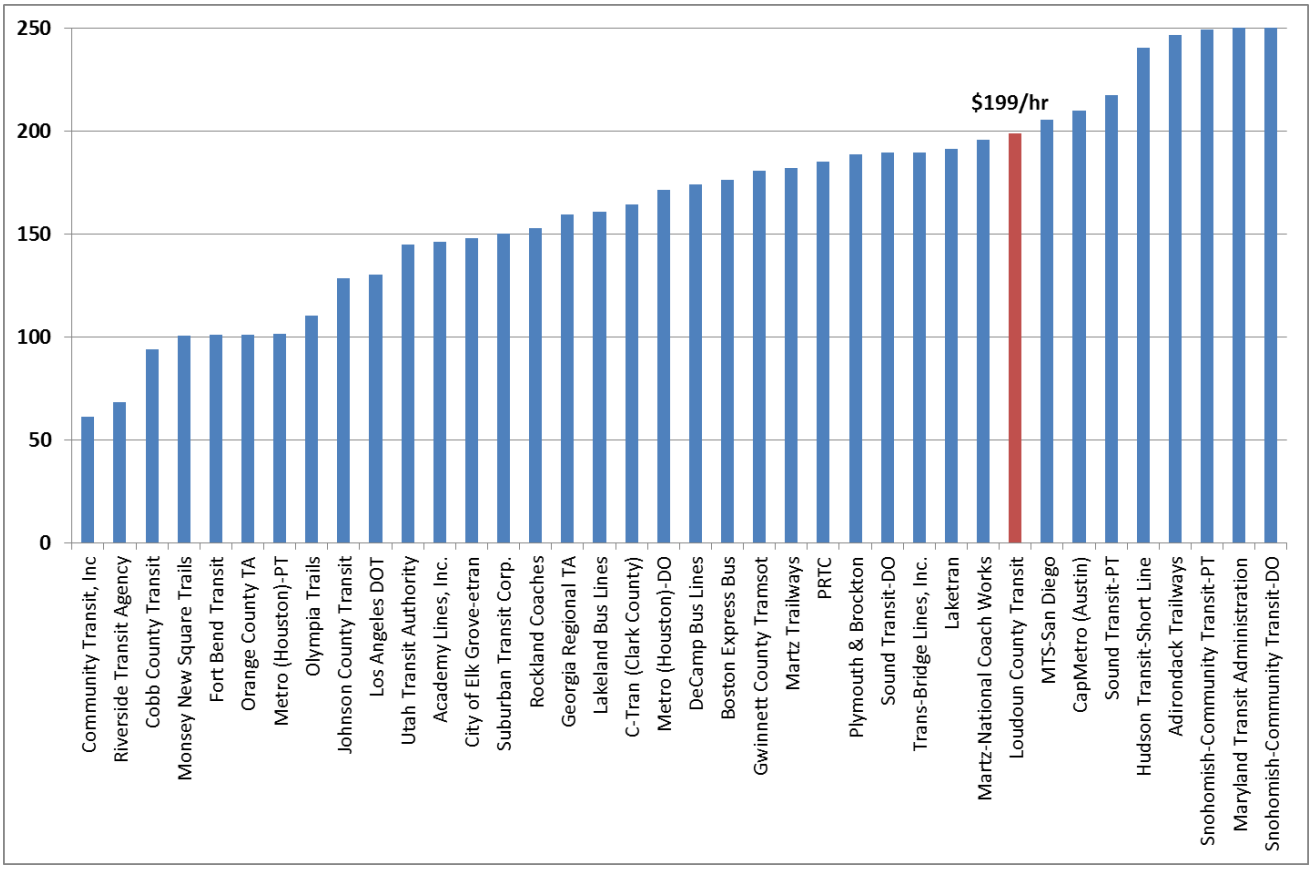
[2] The NTD gives this definition of *commuter bus*: "Fixed-route bus systems that are primarily connecting outlying areas with a central city through bus service that operates with at least five miles of continuous closed-door service. This service may operate motorcoaches (aka over-the-road buses), and usually features peak scheduling multiple-trip tickets and limited stops in the central city."

[3] Three of the transit agencies, MTA of Harris County (Houston Metro), Sound Transit (Central Puget Sound RTA), and Community Transit (Snohomish, WA) reported data for both purchased (PT) and directly operated (DO)

compared to all of these operators. Following this comparison to all similar operations in the nation, more detailed statistics are presented comparing Loudoun commuter bus service to the three similar operators in the D.C. area. (Note that the Loudoun data combines Long Haul service to Arlington and DC and Metro Connection routes.)

Unit costs were calculated as total operating expenses per bus revenue hour, which is an hour that a bus is operating in revenue service, that is, excluding time to get to the beginning of the route or from the end of the route when passengers are not on board. The LCT commuter bus cost per revenue hour of $199 was at the high end of the commuter bus peers. All but two of the operators with higher unit costs were transit authorities (the remaining two were private operators in the New York City area).
The NTD figure is considerably higher than the FY2015 contract price of $122 per bus service hour. The explanation for this discrepancy is that the contract rate is measured per bus *service* hour, not per bus *revenue* hour. There are fewer revenue hours than service hours because revenue hours exclude deadhead and break time between runs. Since the long haul routes generally make only one morning trip, deadhead back, and then make only one evening trip, the non-revenue hours can be significant. In fact, in 2013, Loudoun commuter buses reported twice as many total vehicle hours and 80% more total vehicle miles as they did hours and miles in revenue operation, due to the long deadheads.

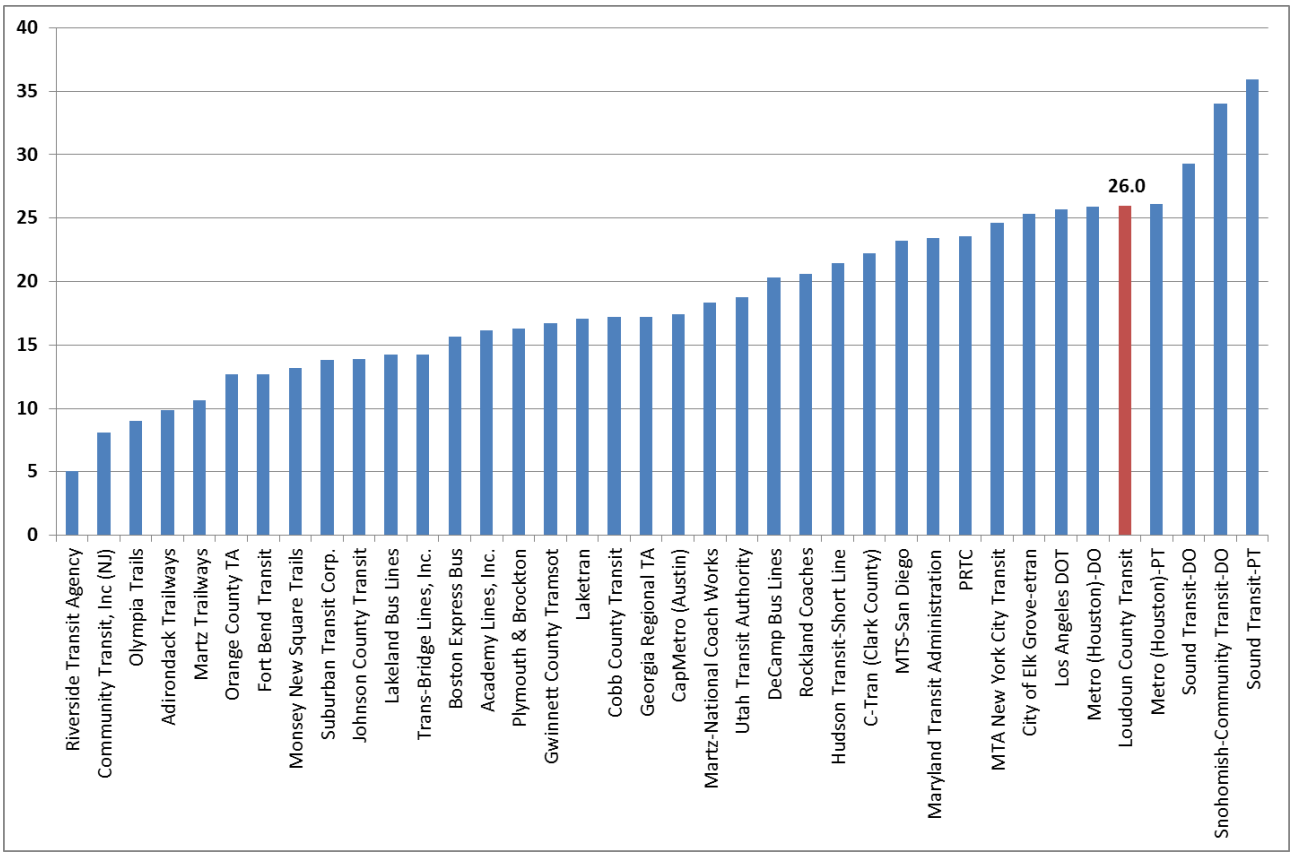
Figure 8: Commuter Bus Operating Cost per Vehicle Revenue Hour



services. Statistics for each of the two types of service provision for the three operators is reported separately in the charts that follow, giving a total of 39 data entries.

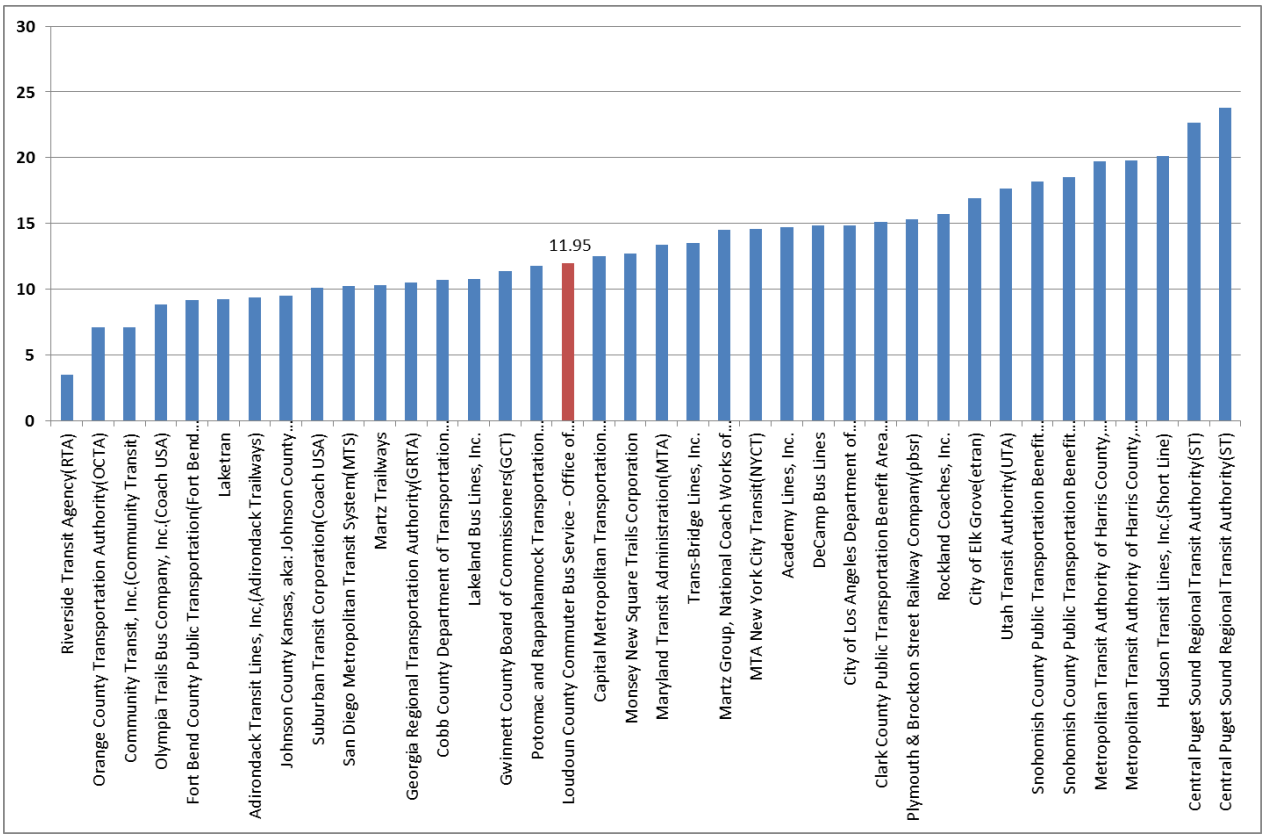
In addition to the cost of providing service, a key comparative metric is how well the service provided is used. Service productivity is measured as passenger trips per vehicle revenue hour. As shown in the following chart, Loudoun's figure of 26 riders per bus hour was exceeded by only two other agencies (both in the Seattle area).

Figure 9: Commuter Bus Unlinked Passenger Trips per Vehicle Revenue Hour



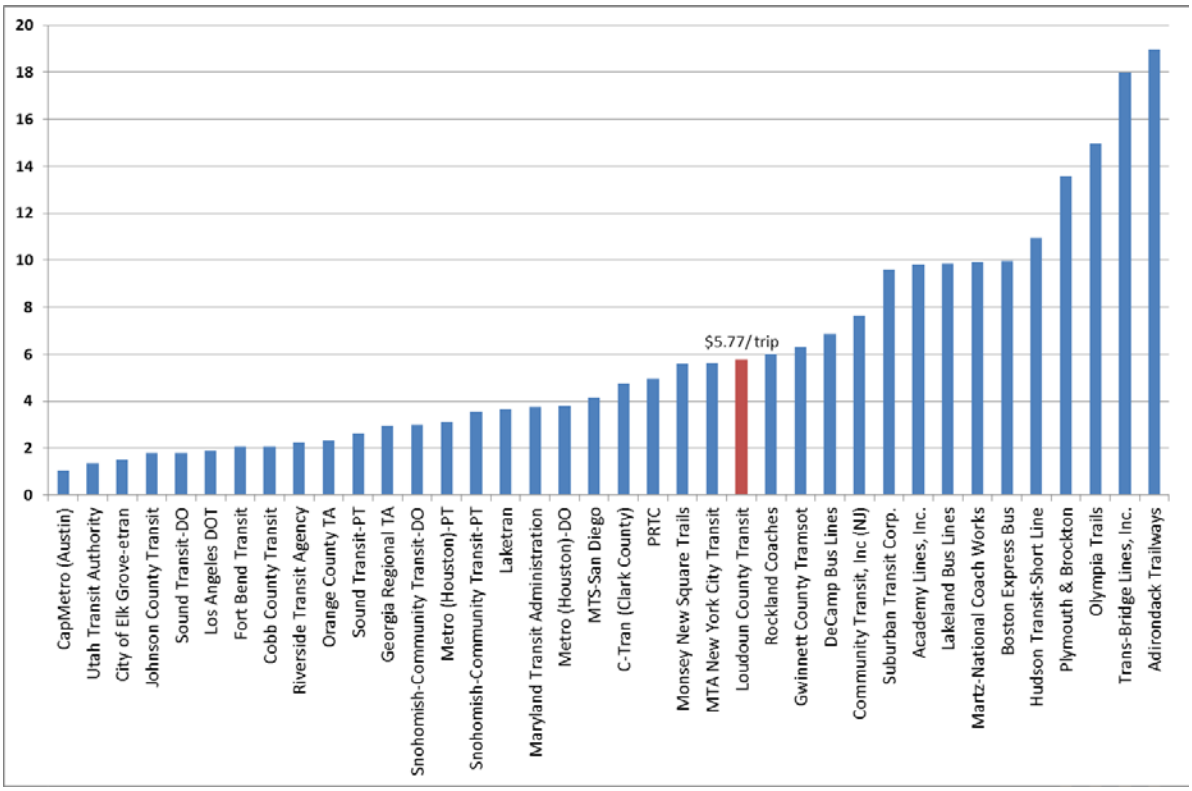
Although close to the top of the pack in terms of boardings per revenue hour, LCT is below average in terms of boardings per vehicle revenue mile. This reflects the high operating speeds (34 mph average) of the commuter service, which makes few stops and travels mostly on expressways, taking advantage of HOV lanes.

Figure 10: Commuter Bus Unlinked Passenger Trips per Vehicle Revenue Mile



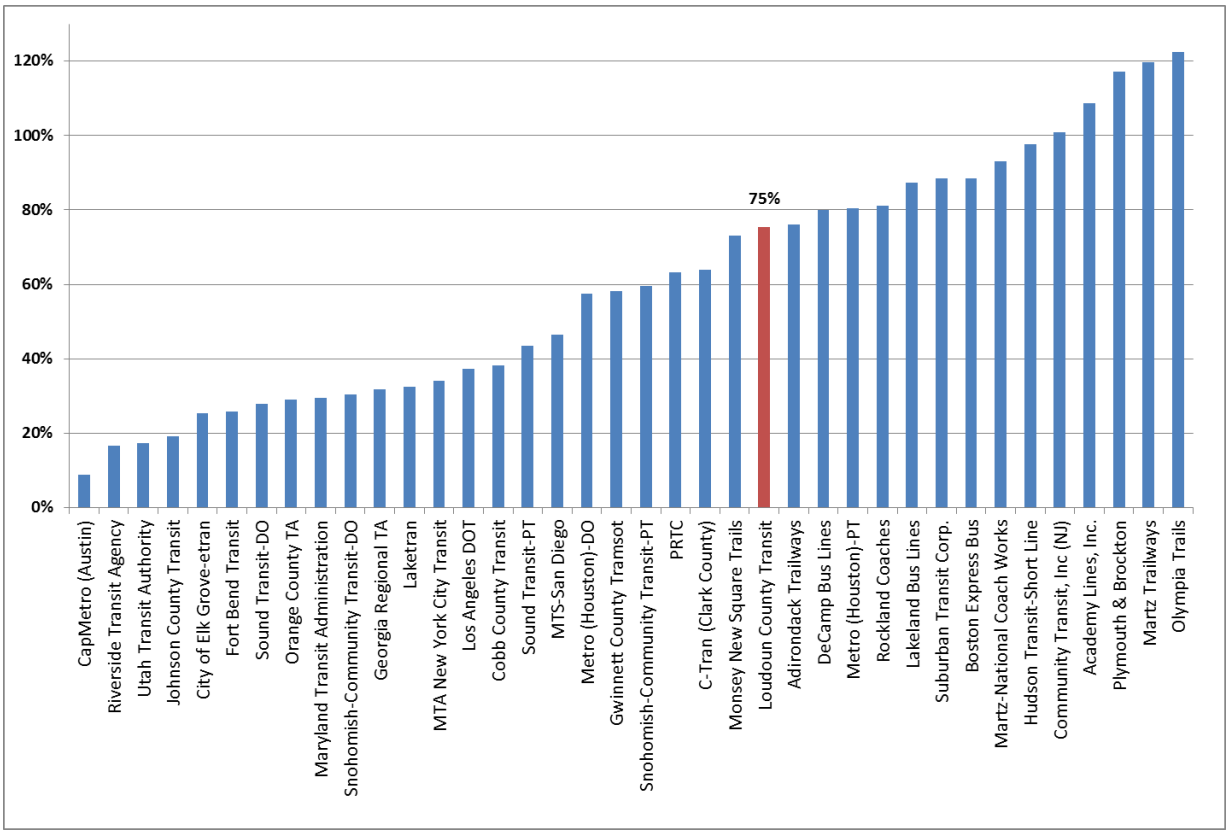
The following chart shows average fare, measured as passenger revenues divided by passenger trips. Loudoun averaged just under $6 per trip. The current average is higher because there was a fare increase in 2014. Also note that the reported average fare combines both long-haul trips to DC and the shorter Metro Connection and reverse commute trips, which charge a lower fare. There are many commuter bus operators that have lower average fares than Loudoun; however, there are many with significantly higher fares, all of which are private operators, except Gwinnett County Transit, which is only a little higher than LCT. (The four operators with average fares above $11 per trip have a significant amount of intercity service, which has higher fares than commuter service.)

Figure 11: Commuter Bus Passenger Revenues per Passenger Trip



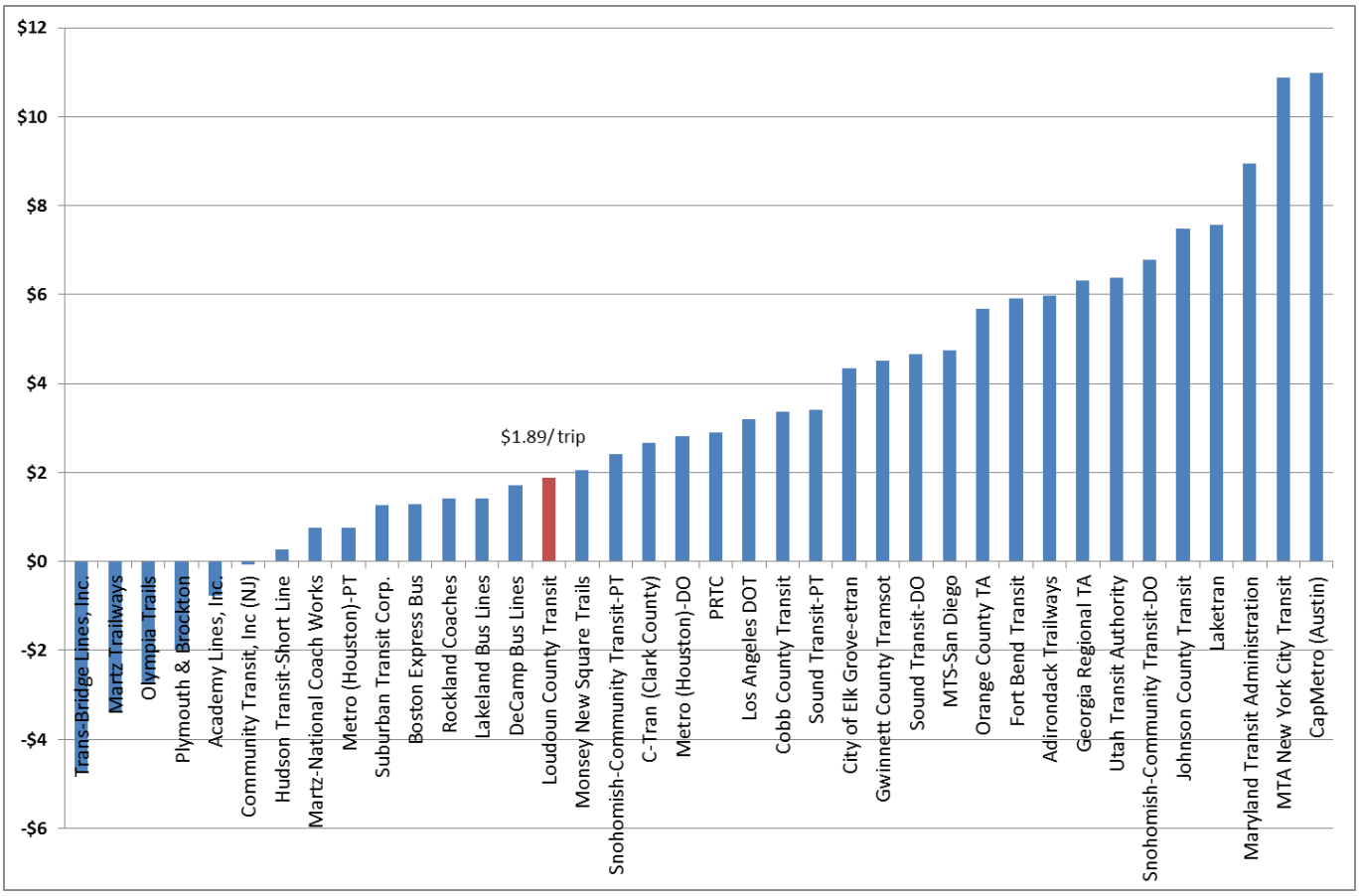
Farebox recovery is the share of operating costs covered by passenger fares, measured as passenger revenues divided by total operating costs. In 2013 LCT commuter bus had an average farebox recovery rate of 75%. This figure was higher than any other public operator except Houston, which had a farebox recovery of 80%, and was about the same as PRTC commuter bus (73%). Farebox recovery rates depend on the factors previously described: unit operating costs, service productivity, and average fares. Compared to other commuter bus operators, LCT has moderately high operating costs balanced by high productivity and moderately high fares.

Figure 12: Commuter Bus Farebox Recovery (Passenger Revenues as a % of Operating Costs)



The Commonwealth Transportation Board does not use farebox recovery as a measure of financial results to compare transit agencies, but instead uses *operating subsidy per boarding*. As shown in the following figure, the operating subsidy per boarding varies greatly among the commuter bus operators, from negative values (that is, operating surplus) for some of the for-profit operators to more than $10 per boarding for New York City Transit and CapMetro. All of the operators with an operating subsidy less than Loudoun's figure of $1.89 are for-profit entities, except for Houston Metro. Loudoun's figure represents a blend of Long Haul service, which requires little subsidy per boarding, and Metro Connection service, which requires a much larger subsidy per boarding.

Figure 13: Commuter Bus Operating Subsidy per Boarding



Commuter Bus Operators in the Washington, DC Region

Besides Loudoun County Transit, there are three other commuter bus operators in the Washington, DC metropolitan area. They are the focus of a more detailed peer group analysis because they serve the same metropolitan area and they represent all of the commuter bus operator types. Comparable data for these three and LCT from the 2013 National Transit Database are shown in Table 11. The subsequent two tables present measures calculated from the NTD data. The following section compares the three other DC-area operators to LCT using information from the data tables.

PRTC OmniRide

Like LCT, PRTC commuter buses are operated by a public entity using a private service contractor. Prince William County, the core of the PRTC service area, is adjacent to Loudoun and subject to the same state rules and policies. Unlike LCT, PRTC is a transit district that crosses local jurisdictional boundaries. PRTC offers 7 routes to DC and 3 "Metro Direct" routes that connect to Metrorail stations. PRTC has a somewhat bigger bus fleet but operates a similar amount of vehicle revenue miles. PRTC's average passenger trip distance (25 mi) is less than LCT's (32 mi). PRTC's service productivity is almost as high as LCT's, especially when compared per *total* vehicle hour (including deadhead time). PRTC's costs are very similar to LCT, and although its fares are lower per trip, they are just about identical per passenger mile. The net result is that PRTC has slightly lower farebox recovery (63% compared to LCT's 75%), and requires a higher subsidy per boarding.

National Coach Works

Martz Group, operating as *National Coach Works* (NCW), is a small private operator with only 18 buses operated in maximum service (compared to 53 for Loudoun). Passenger trips on NCW service are significantly longer than on LCT, and fares are significantly higher. NCW has fewer trips per hour of revenue service (lower productivity). Its operating cost per revenue vehicle hour is virtually identical to LCT. Given the higher fares and slightly lower productivity, NCW achieves a farebox recovery of 93% and requires a subsidy of only $0.75 per boarding.

Maryland Transit Administration

MTA is a statewide transit operator that has a large commuter bus operation, (in addition to local bus, Metro Subway, Light Rail, and MARC commuter rail). MTA has almost four times as many buses in maximum service as LCT. Like LCT and PRTC, MTA contracts with private vendors to operate the service. MTA has four commuter bus routes to Baltimore, one to Fort Meade, and one to BWI. Its DC service includes four routes that serve Metrorail stations and 20 routes that go directly to downtown DC. Passenger trips on MTA commuter buses average 42 miles, 10 more than on LCT, and comparable to Martz (the higher average trip distance reflects MTA's statewide service area). MTA fares are lower and operating expenses per revenue hour are by far the highest of all four operators. The net result is that MTA's farebox recovery is only 30%--much lower than any of the other DC-area commuter bus operators, and MTA's subsidy per boarding is almost $9.

Table 11: Commuter Bus Operators in the Washington, DC Area: Annual Service, Cost and Fare Data from the 2013 National Transit Database

Operator	VOMS	VAMS	Veh Mi	Veh Rev Mi	Veh Hrs	Veh Rev Hrs	UPT	Pass. Miles	Fare Rev	Oper Exp
Loudoun County Commuter Bus Service (LC Transit)	56	65	3,108	1,720	111	51	1,325	42,267	7,652	10,157
Potomac and Rappahannock Transportation Commission (PRTC)	83	93	3,119	1,805	150	75	1,767	44,449	8,754	13,862
Martz Group, National Coach Works of Virginia (NCW)	18	28	600	473	18	14	262	11,486	2,605	2,802
Maryland Transit Administration (MTA)	192	219	10,352	5,383	314	179	4,201	177,358	15,745	53,302

All figures except the first two columns in 1,000s. VOMS=vehicles operated in maximum service; VAMS=vehicles available for maximum service; UPT=unlinked passenger trips.

Table 12: Commuter Bus Operators in the Washington, DC Area: Calculated Service Metrics

Operator	Speed in Rev Svc (mph)	Pass Trip Distance (mi)	Pass Mi/ Veh Rev Mi	Pass Trip/ Veh Rev Mi	Pass Trip/ Veh Hr	Pass Trip/ Veh Rev Hr	Veh Rev Hr as % of Total Veh Hr
Loudoun County Commuter Bus Service (LC Transit)	33.7	31.9	24.6	0.8	12.0	26.0	46%
Potomac and Rappahannock Transportation Commission (PRTC)	24.1	25.2	24.6	1.0	11.8	23.6	50%
Martz Group, National Coach Works of Virginia (NCW)	33.1	43.8	24.3	0.6	14.5	18.3	79%
Maryland Transit Administration (MTA)	30.1	42.2	32.9	0.8	13.4	23.5	57%

Table 13: Commuter Bus Operators in the Washington, DC Area: Calculated Financial Metrics

Operator	Oper Exp / Veh Hr	Oper Exp/ Rev Veh Hr	Fare Rev / Boarding	Farebox Recovery	Subsidy per Boarding
Loudoun County Commuter Bus Service (LC Transit)	$92	$199	$5.77	75%	$1.89
Potomac and Rappahannock Transportation Commission (PRTC)	$92	$185	$4.95	63%	$2.89
Martz Group, National Coach Works of Virginia (NCW)	$155	$196	$9.94	93%	$0.75
Maryland Transit Administration (MTA)	$170	$298	$3.75	30%	$8.94

Local Bus Peer Analysis

The peer comparison group for local bus consists of eight bus transit operators: four in the Washington, DC metro area, two in New England, and two in the South. Like Loudoun, these peer systems are suburban-rural[4] and are all at the edge of a large metropolitan area. The eight peer systems operate between 56,000 and 109,000 bus-hours of service annually, compared to Loudoun's 56,000 hours, and have between 15 and 40 buses in maximum service, compared to Loudoun's 18 (however Loudoun local transit currently has more buses in maximum service).

[4] The two New England peers are anchored by small cities: MVRTA's central city is Lawrence, MA (population 76,000) and HART's central city is Danbury, CT (population 81,000); both are somewhat larger compared to Leesburg's population of 48,000.

As shown in the following table, Loudoun has lower average population density than all of the peer systems with the exception of Charles County, MD and Pasco County, FL. However, for Loudoun the entire county is used in this calculation, even though fixed-route bus service is provided only in the urbanized eastern part of the county (with the exception of the single Purcellville route). Loudoun has a higher median household income that any of the peer regions, although the other four systems in Virginia and Maryland are close behind. The Florida and Georgia peers have much lower median income. In addition to median income of the *county*, median income of the *central city or town* of the service area is provided. The median income in Leesburg (the central place in Loudoun) is equal to that of Columbia (the central place in Howard County) and is considerably higher than most of the peer central cities.

Table 14: Local Bus Peers, Area Characteristics

Agency	County / Area	UZA Name	UZA Pop.	Service Area (sq mi)	Service Area Pop.	Service Area Pop/ Sq Mi	County Income	City Income
LCT	Loudoun County, VA	Washington, DC	4,586,770	517	328,533	635	$122,238	$99,486
VanGo	Charles County. MD	Waldorf, MD	109,919	461	146,551	318	$93,160	$86,819
TransIT	Frederick County, MD	Frederick, MD	141,576	18	65,787	1,939	$84,570	$65,652
Howard Transit	Howard County, MD	Washington, DC	4,586,770	251	284,952	1,135	$109,865	$99,887
PRTC-Omnilink	Prince William, VA	Washington, DC	4,586,770	361	454,096	1,258	$98,071	$71,036
MVRTA	Merrimack Valley	Boston, MA	4,181,019	225	306,339	1,362	$67,311	$32,851
HART	Danbury Area	Danbury, CT	168,136	124	154,855	1,249	$82,283	$65,275
GCT	Gwinnett County	Atlanta, GA	4,515,419	351	805,321	2,294	$60,445	$43,494
PCPT	Pasco County	Tampa, FL	2,441,770	745	470,391	631	$43,888	$30,204

UZA= urbanized area. Income data is from the 2013 ACS 5-year estimates. County income is Fairfield County for HART and Essex County for MVRTA. City income is for the central city of the area: the cities used were Leesburg, Waldorf, Frederick, Columbia, Manassas, Lawrence, Danbury, Lawrenceville, and New Port Richey.

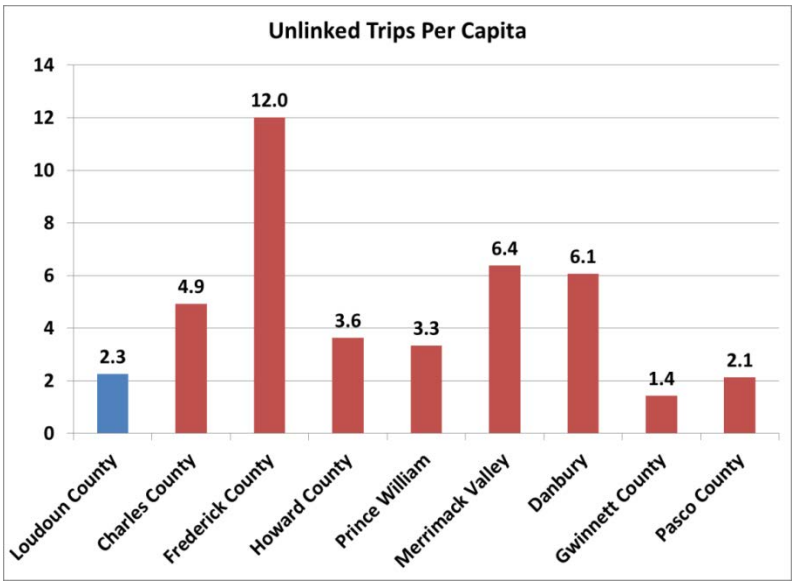
National Transit Database data was collected and summarized for the 2013 reporting year, the most recent available. The Loudoun data come from Virginia Regional Transit's Loudoun Region reports to the rural NTD database, which has somewhat different data items than the urban one. All of the peers were reported in the urban database. Key metrics of service use, productivity, and cost-effectiveness were calculated and are shown in the following charts.

Overall Use of Local Bus

Loudoun's overall local bus use, measured as annual trips per resident population, was lower than all of the peers except Gwinnett County, GA (near Atlanta) and Pasco County, FL (near Tampa). It is notable that the latter two, like Loudoun, have seen recent rapid growth that is predominantly automobile-dependent. Loudoun's lower transit productivity may also be in part due to higher household income compared to the peer communities. Loudoun is the highest-income county in the country, although Prince William and Howard, MD, included in the comparison, are not far behind. While the two southern

peers may have a similar urban environment to Loudoun, they also have much lower median household income.

Figure 14: Peer Local Bus Usage (Annual Passenger Trips per Service Area Population)



Service Effectiveness

Service effectiveness is measured as the number of passenger boardings per bus revenue hour or bus revenue mile. A bus revenue hour is an hour during which a bus is available to take passengers. Loudoun's productivity of 13 boardings per bus hour was somewhat lower than the peers, which averaged 15 boardings per bus hour. The difference was even greater when compared on a per-vehicle-mile basis, with Charles County similar to Loudoun but most of the remaining peers having about twice the number of boardings per vehicle mile. These statistics predate the fare increase of October 2013 and service changes of September 2013 that have led to significant declines in productivity as described in the Recent Changes section of this document.

Figure 15: Peer Local Bus Service Productivity (Boardings per Vehicle Revenue Hour)

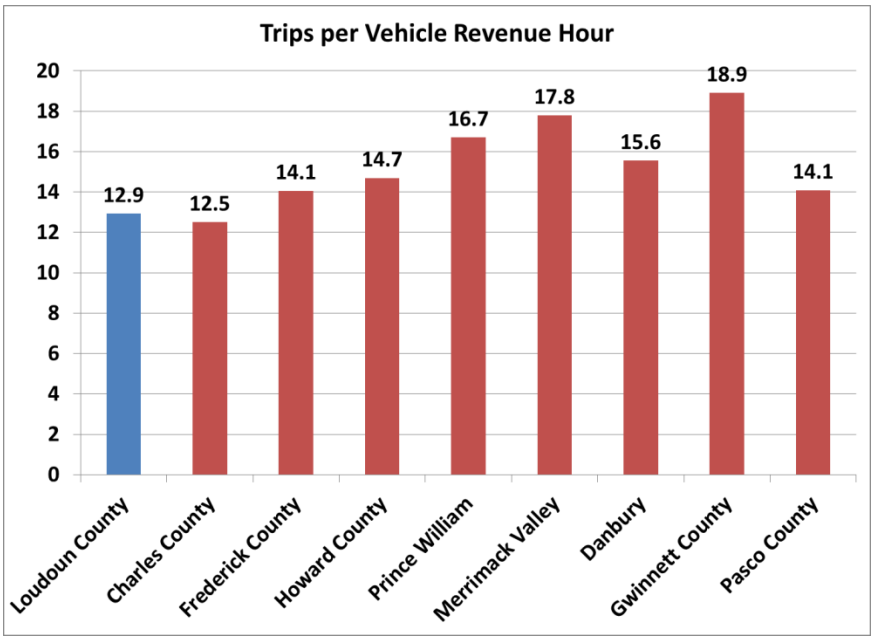
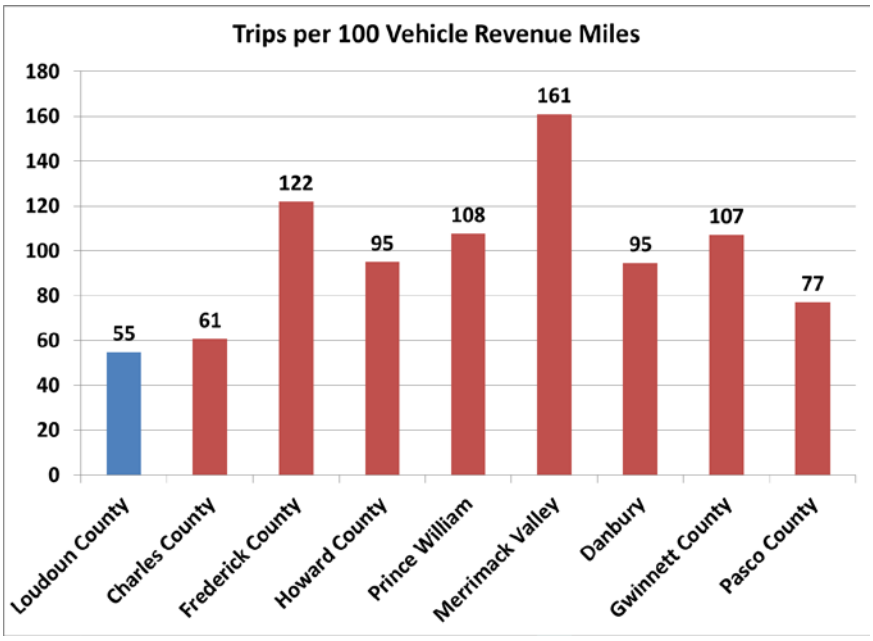


Figure 16: Peer Local Bus Service Productivity (Boardings per 100 Vehicle Revenue Miles)



Unit Cost

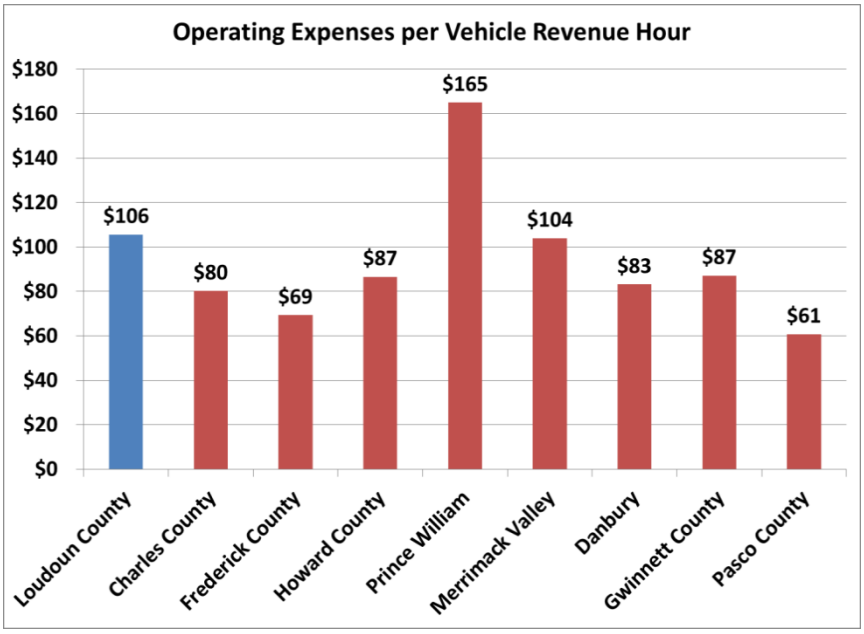
Based on the NTD filings from VRT, Loudoun local bus service in 2013 cost $106 per bus revenue hour. This rate is significantly higher than the current contract rate ($64 per bus service hour in FY15) for these reasons:

- VRT had a somewhat hourly higher rate than the current MV contract;

- The NTD calculation is per bus *revenue* hour, whereas the contract rate is based on bus *service* hours. The difference is that the latter *includes* any time spent when the bus is out of revenue service (e.g., deadheading to the beginning of a trip, or operator break time) after the bus begins its first scheduled trip for the day and before it returns to the garage. Vehicle revenue hours excludes this time (since the bus is not in revenue service during these times).

The unit cost of service was higher than all of the other peers except for PRTC, although almost identical to Merrimack Valley (MVRTA). However, Loudoun local bus unit costs have decreased since the time of this data report and are now at the low end of the peer operators.

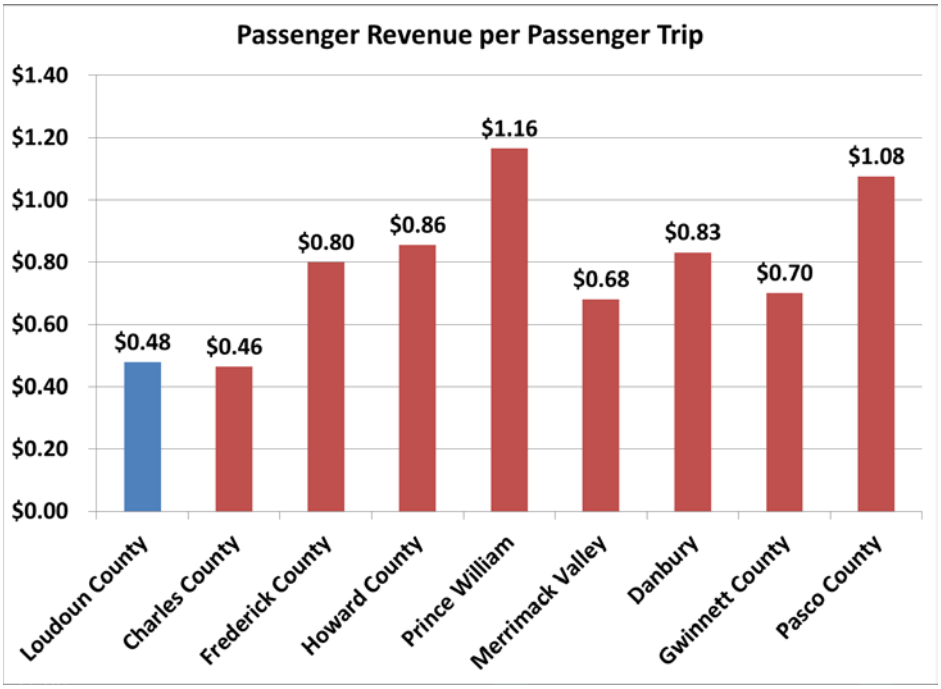
Figure 17: Peer Local Bus Unit Cost (Operating Expenses per Vehicle Revenue Hour)



Average Fares

Loudoun's average fare was $0.48, lower than the peer average of $0.82 and lower than all of the other peer operators except for Charles County. However, the average fare in Loudoun increased following the fare change of 2013 which both doubled the base fare and eliminated free transfers. As of March 2015, the average passenger revenue per passenger trip as reported by MV was $0.92, which is similar to the 2013 peer average.

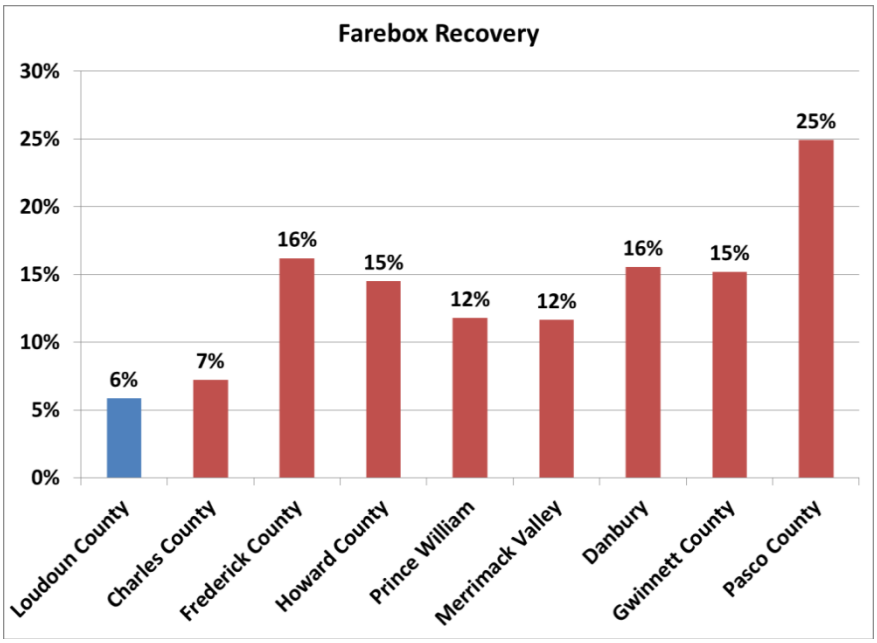
Figure 18: Peer Local Bus Average Fare (Passenger Revenue per Passenger Trip)



Farebox Recovery

Farebox recovery is defined as passenger revenues as a share of operating costs. In 2013, Loudoun's recovery rate of 6% was the lowest of all the peers, although very similar to Charles County. Farebox recovery does not generally include capital costs, but Loudoun's current local bus operating contract includes capital expenses: that is, the vendor supplies the buses. This may not be the case with peer systems. March 2015 data show that farebox recovery has increased to about 9%.

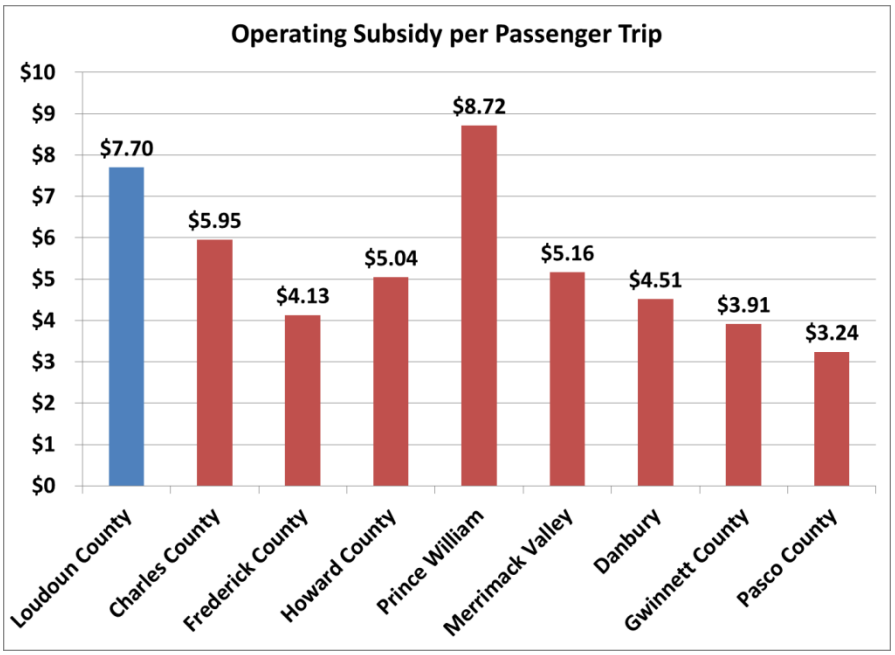
Figure 19: Peer Local Bus Farebox Recovery (Passenger Revenue as a Share of Operating Expenses)



Average Subsidy per Trip

The average subsidy per trip is defined as total operating expenses less passenger revenues, divided by passenger trips. The average for Loudoun, $7.70 per trip, was higher than any of the peers except for Prince William (PRTC). As of the 2013 comparison year, Loudoun's local bus service was still eligible for Federal rural operating subsidies, which accounted for 48% of the total operating budget (state subsidies accounted for 13% and county and town subsidies for 33%).

Figure 20: Peer Local Bus Average Subsidy (Non-Passenger Revenue per Passenger Trip)



Onboard Ridership Survey

In March 2015, ridership surveys were conducted on the local and commuter bus systems. The commuter bus surveys were distributed at park and ride lots during the morning. The local bus surveys were distributed by checkers riding buses throughout the day. There were several means of returning the survey: complete a paper questionnaire and return it by mail or to a member of the field staff; use the provided URL or QR code to complete the questionnaire over the Internet; or place a completed survey in an envelope on the bus (on commuter service only). In order to complete the survey online, riders were required to enter the identification number from the paper survey; this allowed for surveys to be traced back to their specific trip. A total of 758 local and 940 commuter surveys were collected, resulting in response rates of 36.7% and 31.9%, respectively. Complete results of the surveys are available in a separate report.

Commuter Bus Survey Highlights

Most commuter bus riders (91%) drive themselves to the Park & Ride lot where they board the bus. The majority (60%) alight in downtown Washington, DC, with the remainder alighting in either Arlington (19%) or Fairfax County (16%). After alighting their Loudoun County bus, about eight in ten (81%) walked directly to their final destination, while 17% transferred either to Metrorail (17%) or Metrobus (1%). The vast majority (92%) of customers who rode buses directly into Washington only used one bus, with most of these customers walking to their final destination. Among those taking a Metro connecting commuter bus, about one third (37%) took one bus to their final destination. Most (63%) transferred to another bus, or to Metrorail in order to complete their trip.

Virtually all commuter bus passengers (98%) use Loudoun County transit to make their return trip, with just a handful saying they would be using a different mode, or not making a return trip that day. Most people leave their destination during typical work hours, between 3 pm and 6 pm.

For most, commuter bus use is part of the everyday commute. In fact roughly three in five commuter bus passengers (63%) take the commuter bus every day of the work week. Additionally, about one in three (32%) take it three or four days a week, while just one in twenty (5%) take it two days a week or less. Notably, those with higher incomes tend to use the bus less often than those with lower incomes.

Commuter customers were divided as to how they would make their trip if Loudoun Transit were unavailable. Two in five (40%) said that they would drive to and park at a Metrorail station, and subsequently take Metrorail to their final destination. A similar proportion (35%) said that they would drive their vehicle directly to their final destination. When accounting for those who said they would drive, get driven, or carpool, 45% would take a private car of some kind to a Metrorail station, while 41% would take a private car directly to their final destination. Notably, 6% of passengers said that they would not take the trip at all if Loudoun County Transit service were not available.

Most commuter bus riders (93%) are satisfied with the bus service, with 60% being very satisfied. Yet, about four in ten (41%) said they would consider using Metrorail instead if it were available in Loudoun County (26% being very likely to consider it).

As shown in the table below, the likelihood of using Metrorail when it opens in Loudoun County is directly related to the current type of service used. Those on the Loudoun Station-Wiehle route, which is a shuttle to the current end of the Silver Line from the future terminus in Phase II, overwhelmingly said they would use Metrorail. Those currently using the Potomac Falls shuttle to Wiehle-Reston East station

also were very likely to say they would use Metrorail. However, only about ½ of those using the Tysons Corner route said they were likely to use Metorail (considering "somewhat" and "very" likely combined), and only 1/3 of those using the Long Haul routes said they were likely to use Metrorail. Since Long Haul routes account for about 80% of commuter bus ridership, a significant number of existing riders are unlikely to use Metrorail.

Table 15: Likelihood of Using Metrorail by Type of Existing Service Used

Route	Very Unlikely	Somewhat Unlikely	Neither Likely nor Unlikely	Somewhat Likely	Very Likely	Total
Long Haul DC	36.2%	18.9%	12.1%	16.5%	16.3%	100%
Tysons Corner	13.5%	22.2%	11.8%	17.4%	35.1%	100%
Loudoun Station-Wiehle	4.6%	2.5%	3.4%	1.8%	87.7%	100%
Potomac Falls-Wiehle	14.9%	14.6%	1.7%	10.9%	57.8%	100%
Reverse	0%	0%-	11.1%	88.9%	0%	100%
Total	30.6%	17.4%	11.0%	15.5%	25.5%	100%

Source: Tabulations from the Commuter Bus survey. Question 16 asked, "If metrorail were available in Loudoun County, how likely would you be to use it for this trip instead of this bus?"

If the commuter bus were unavailable, more than four in ten (45%) say they would drive or be driven to a Metro station and use Metrorail to get to their final destination, while a similar proportion (41%) would drive/be driven directly to their final destination. Notably, more than one-half those riding a bus directly to Washington, DC (52%) said they would drive or be driven to a Metrorail station, compared to about one in three among those riding to Fairfax (36%) or Arlington (36%). Conversely, more than one-half of those riding to Fairfax (54%) and Arlington (52%) said they would drive or be driven to their final destination, compared to about one in three among those riding to Washington (32%). Commuter bus riders are ethnically diverse, and more than ¼ speak a language other than English at home. Their median household income is $143,000, a bit higher than the county median.

Local Bus Survey Highlights

Local bus customers were split on their origin location, with more than two in five (42%) coming from home, and about one-third (34%) coming from work or school. Other common origin locations include shopping or a meal (9%) and a personal trip, sightseeing, or recreation (5%). Customers most commonly arrived at their boarding stop by foot, with about two in three (66%) not using a vehicle to get to the bus stop. However, there was some dependence on other forms of public transportation, with 15% transferring from a bus of some kind, and 6% transferring from Metrorail.

Local bus customers were split on their destination location, with nearly one-half (46%) going to work or school, and about one-third (34%) going home. Other common destination locations include shopping or a meal (8%) and a personal trip, sightseeing, or recreation (7%). Much like their arrival at the bus stop, most customers (72%) walked from the bus to their final destination. Those younger than 35 years old were especially likely to walk to their final destination (78%). Among those who didn't walk, many took a bus (13%), either through Loudoun Transit (7%) or some other bus service (6%). Additionally, some customers took Metrorail (5%) or were picked up by someone (5%).

While the majority (61%) use only one bus (Loudoun Transit) to get to their destination, about four in ten (39%) transfer to another form of public transportation–a combination of other Loudoun Transit buses, Metrorail, and other transit systems. Almost one-half of all riders (46%) use the system at least five days a week. The ridership is more ethnically diverse than commuter bus, Only 36% of riders classified themselves as "white," and 43% do not speak English at home. The median household income of local bus riders was $24,000, which is much lower than the county median.

Only 17% of local bus riders said they had a car available to them on the day they completed the interview that they could have used instead of the local bus. Not surprisingly, the higher their household income, the more likely users are to have a car available. If Loudoun Transit local bus service was unavailable, riders would rely on getting a ride from someone else (29%), walking or biking (28%), or would not make the trip at all (16%).

Nearly one-half of all local bus users (46%) use the service five days per week or more. In particular, at least one-half of black or African American passengers (53%) and Asian/Asian American passengers (50%) use the service five or more days per week, compared to 37% of white users. Younger people generally use the service more often than seniors, with 80% of those under 35 and 75% of those 35 to 64 using the service three or more times per week, compared to 52% of seniors (65 or older).

Loudoun local bus service receives high levels of satisfaction, though its current hours of operation are something of a weakness. A large majority of riders (85%) report being satisfied with local bus service, with 53% being very satisfied. Riders are most satisfied with the professionalism of drivers (89% satisfied). Conversely, they are least satisfied with the hours of service (70% satisfied, 21% dissatisfied).

Stakeholder Outreach and Focus Groups

The first round of outreach for this TDP included distribution of a press release, posters on buses, a page on the county website, email distribution lists, and Facebook and Twitter. In addition there were meetings about the TDP with the Commuter Bus Advisory Board and a Stakeholders Working Group convened for this effort.

Two outreach sessions were conducted in conjunction with the Disability Service Board (DSB) on March 24, 2015 at the Transportation Fair held at the Cascades Senior Center; a total of 80 citizens attended. The primary purpose of the meeting was to disseminate information on the ADA and paratransit compliant services. Staff provided a summary of the TDP update process and received feedback on the update.

The Commuter Bus Advisory Board held a meeting about the TDP on March 16, 2015. Some of the points raised by members were:

- The TDP should consider where new road expansions will be in order to adequately plan for new and expanded Park and Ride lots and bus services. New road construction and road widening should include provision for bus lanes or bus-on-shoulder operation, including the planned widening of Route 606.
- Metro Connection service takes too long to reach Metrorail because of many stops at separate Park and Rides; reducing the number of stops per bus trip would improve the service.
- There should be design guidelines for Park and Ride lots: smaller lots should be served by smaller buses to Metrorail; larger lots by coaches providing direct service to DC. The larger lots should have bicycle parking and easier wheelchair access. Parking structures should be

considered for the larger lots. Improve bicycle and pedestrian access to park and rides, especially Leesburg and Dulles North.
- There should be weekday evening service, even before Silver Line Phase 2 opens, at least to Dulles North.
- Study if shuttle service to park and rides, such as the Ashburn Link, is feasible to connect to the Brambleton, Leesburg, and Purcellville lots.

The Stakeholders Working Group, created to advise the TDP, met on April 16, 2015. The members raised the following concerns:

- Keep long-haul commuter bus after Silver Line opens.
- The separate transit services provided by the county should be more of a unified system and easier to understand.
- The split of ADA paratransit service (as of September 2014) between MV and VRT has led to confusion for users and for agency staff working with clients. There should be a unified access point. Internet scheduling would also help, not just by telephone.
- MV says that they have only about 34 riders per day using ADA Paratransit. VRT charges less ($1) for their western paratransit service (compared to $2 for MV's eastern service).
- Seniors use the Senior Center shuttles, but are less aware of the fixed route local bus.
- Add bike parking to Loudoun Station and other park and rides.
- The new local route 85 (Dulles South) does not meet commuter bus departure times.
- Add weekend service on local bus, including to Purcellville, and start service at 6:00 AM on weekdays instead of 7:00. [Saturday service began in July 2015 for Routes 70 and 82.]
- Developers would like to know how they can support local bus service.

The public outreach event conducted during the first round of outreach consisted of afternoon and evening public workshops on March 25, 2015. There were comments received from commuter bus users, none of whom had also used the local bus, local bus users, and non-users of LCT transit. The suggestions received concerning commuter bus included:

- Maintain commuter bus service to DC after the Silver Line comes to Loudoun.
- Later weekday evening service, as late as 11 pm.
- Later weekday morning service after 8:30 am.
- Weekend bus service to Wiehle-Reston East to serve recreational trips to DC.
- Direct to DC service from Goose Creek Village park and ride.
- Safe pedestrian and bicycle access to transit park and rides and bus stops.
- Rework the Navy Yard routes, splitting them from the K-I Street section.
- Improve bus shelters.

There were also suggestions received concerning local bus, including:

- Provide weekend service for Route 70 [Saturday service began in July 2015].
- Route 56 weekend service.
- Purcellville Connector should have Park and Ride stops at LVCC and other locations.
- Add bus service to the Lucketts area on Route 15.
- Add downtown Leesburg to Middleburg route.
- Add downtown Leesburg to Leesburg Park and Ride route.
- Add a Purcellville to Brunswick route.

The county also received many specific comments and suggestions on line during the TDP outreach period.

Staff presented on April 7, 2015 at the Transportation Fair held at the Leesburg Senior Center, attended by 40 citizens. Staff distributed schedules for local and commuter bus service in the area of the event and also explained how the ADA program worked. Questions were fielded at the end of a brief presentation. Volunteers helped sign up ADA Paratransit applicants on portable laptops at the event.

The second round of outreach conducted in Spring 2016 included two more meetings of the Stakeholders Working Group, two Focus Group meetings, a pop-up information outreach at the Dulles Town Center Mall, and six Interactive Workshops at various locations around the county. A complete summary of the results of these outreach activities is available as a separate document.

Recent Changes in Patronage, Operating Costs, and Operating Revenue

Long Haul Commuter Bus

Commuter Bus ridership increased every year since Loudoun County put its own buses into service in 2003. Figure 20 shows annual commuter service ridership levels from FY 2009 through FY 2014 by service type. Commuter bus ridership grew rapidly from 2003 to 2011. Factors behind this growth were population growth in Loudoun, higher gas prices, higher Dulles Greenway tolls, and the increase in March 2009 of the maximum monthly non-taxable transit benefit (as defined by the IRS) from $125 to $230.5 However, between calendar years 2011 and 2014, commuter bus ridership grew only 10%. One factor behind this slow growth was the temporary return to $125 of monthly transit benefits in 2012 (although the level was retroactively increased to $245 for 2013). Beginning in January 2014, it was back to $125. In December 2015, the transit benefit was permanently set at the same level as the parking benefit: currently $255 per month (annually adjusted for inflation). Typically long haul riders have an out-of-pocket transit expense of $350 per month and thus can take advantage of the full benefit. Other factors include the decline in gas prices since July 2014 and the increase in the commuter bus fare in 2014 (from $7 to $8 for long haul riders using a SmarTrip card, as almost all do).

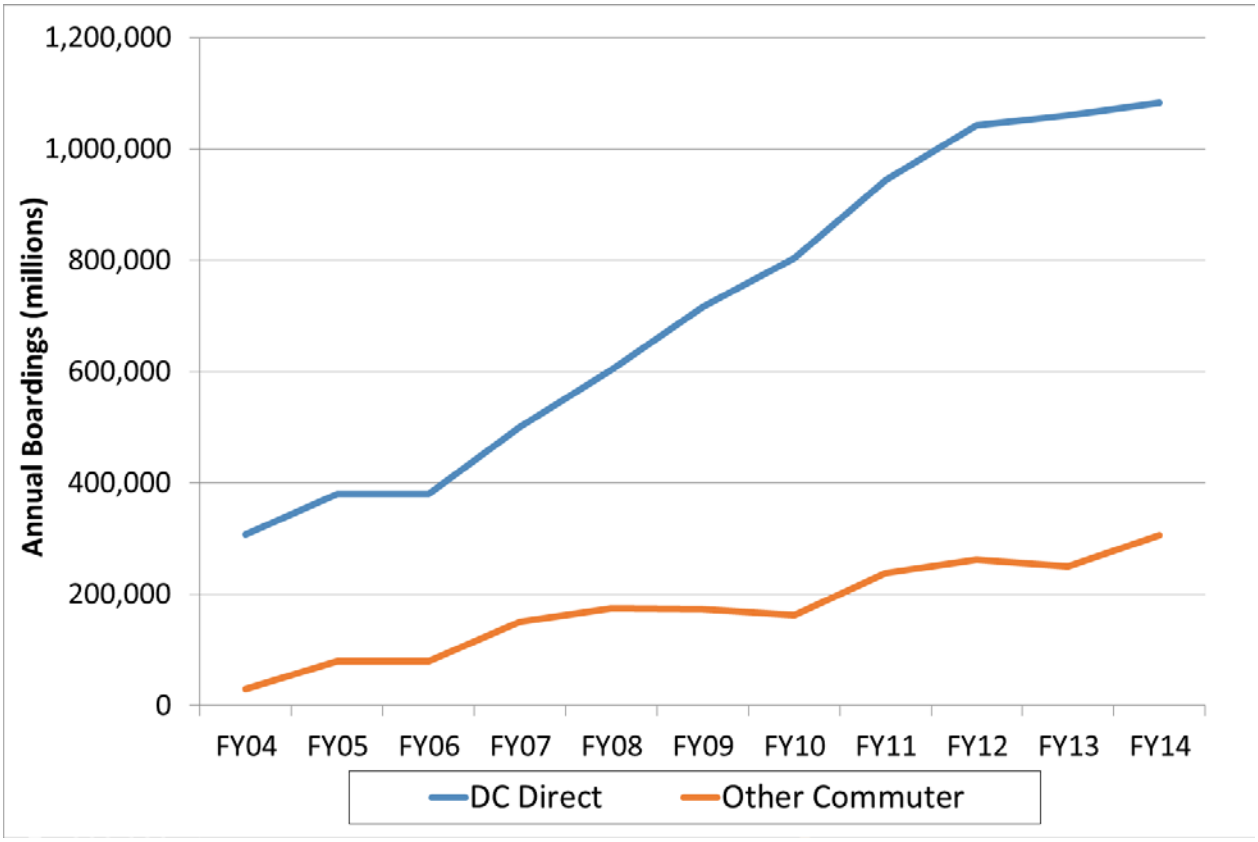
Metro Connection Bus

Ridership, including reverse commute trips to office parks in Loudoun, grew from a low base. Service from Potomac Falls, Cascades and other smaller park and ride lots to West Falls Church started in February 2009. Metro Connection ridership increased significantly with the June 2010 introduction of Tysons Express service, subsequently converted to Silver Line Connector service in July 2014. Service from Loudoun Station and Dulles North to Wiehle-Reston East Metrorail station was added in July 2014 with a fare of only $1.00 to encourage use. Service to Tysons Corner was discontinued in August 2015. Service from Dulles Town Center and East Gate park and rides to Wiehle-Reston East was added in July and August, 2015.

As with the long haul commuter routes, ridership growth has slowed since 2011, with only a 7% increase in calendar 2014 over calendar 2011. The same factors that have led to slow growth in the long haul service are also relevant: reduction in the monthly transit benefit, increase in transit fares (WMATA fares increased in July 2012 and June 2014), and a decrease in gas prices.

[5] This figure represents the maximum that can be paid for by an employer without having the fringe benefit count as taxable income and typically also represents the maximum free transit benefit given to government employees, who constitute more than half of the commuter bus ridership.

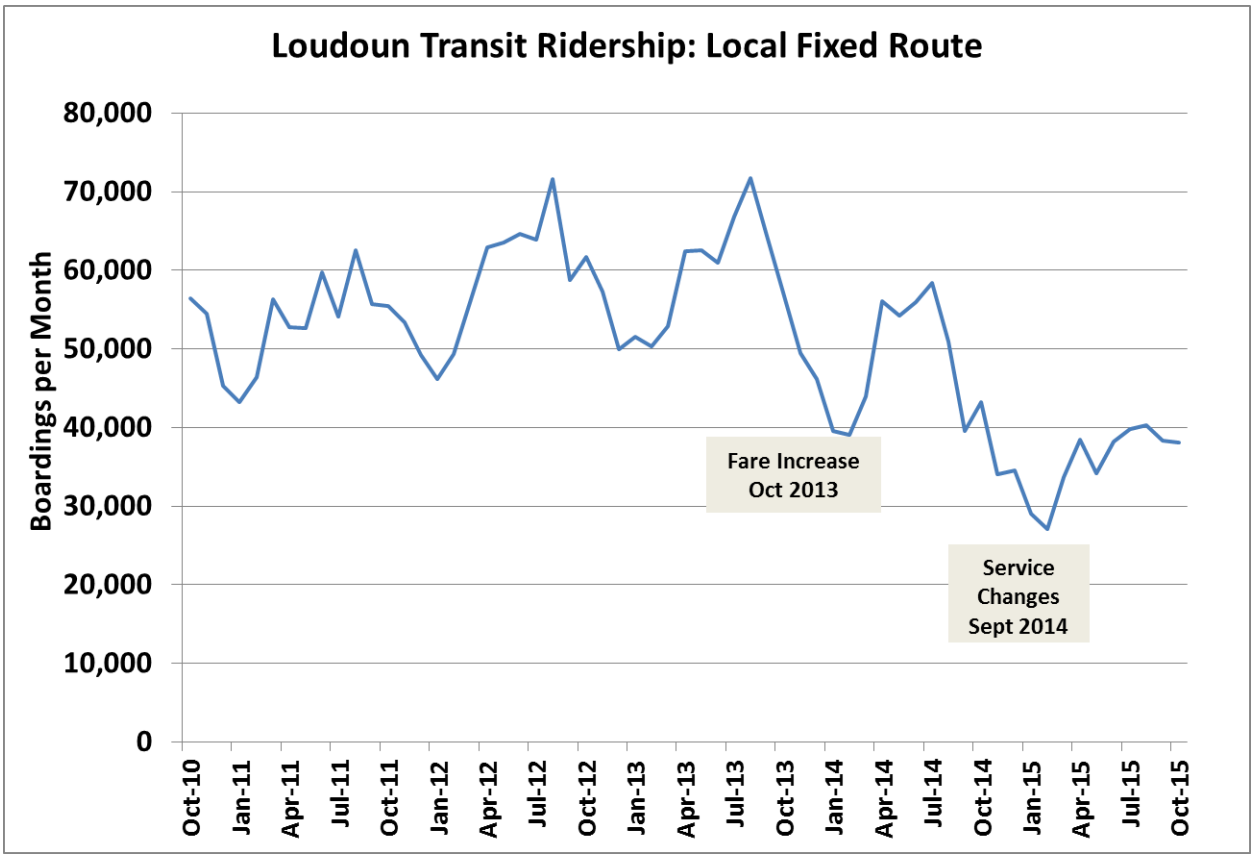
Figure 21: Trends in Commuter Bus Ridership (annual boardings)



Local Fixed Route Service

Loudoun County Transit, through a contract with MV Transportation, provides local fixed route bus service in Loudoun County, except for Route 40, Purcellville Connector, which is operated by VRT because it falls within the portion of the county that is still designated as rural. A profile of each route is included in Appendix A, which includes route history, recent ridership trends, running times, and stop by stop ons and offs. As shown in Figure 21, after growing steadily as service was initiated and increased between 2001 and 2009, local bus ridership has dropped considerably in the past few years. Monthly ridership decreased 36%, from about 53,000 in March 2013 to about 33,000 in March 2015. The October 2015 data show ridership rebounding to about 38,000 per month.

Figure 22: Trends in Local Bus Ridership (average boardings per weekday)



The factors behind the decline in ridership between March 2013 and March 2015 are shown in Table 16 along with their estimated share of the 36 percentage point decline. Considering the first three changes together, more than half of the total decrease (20 percentage points out of 36) is related to increased fares or elimination of free service. The local bus network is designed around coordinated transfers at pulse points (Leesburg Government Center, Inova, and Dulles Town Center), so that a significant amount of local trips may involve transfers. For customers needing to board two buses to complete a trip, the fare changes meant that a roundtrip increased from $1.00 to $4.00, a substantial increase for those using local bus, who tend to have much lower income than the county median. In addition, a portion of the decline related to the elimination of 84X Herndon-Monroe service is due to the higher fare on the replacement route. The remainder of the decrease is related to changes in service, including:

- Trips to the Air & Space Museum were eliminated (they were mostly tourist trips that did not involve travel to or from Loudoun).
- Route 72 was realigned to serve the Silver Line at Wiehle-Reston East instead of the Orange Line at West Falls Church. Scheduled bus travel time declined by 7 minutes as result of the change, but scheduled rail travel time to Metro Center increased by 19 minutes (from 22 minutes to 41 minutes). Also, the peak one-way rail fare increased by $1.80, from $4.10 to $5.90.
- The low-productivity Ashburn Village and Ashburn Farm routes were consolidated into the 62 Ashburn Connector route; the revised route has less service but still has low productivity.

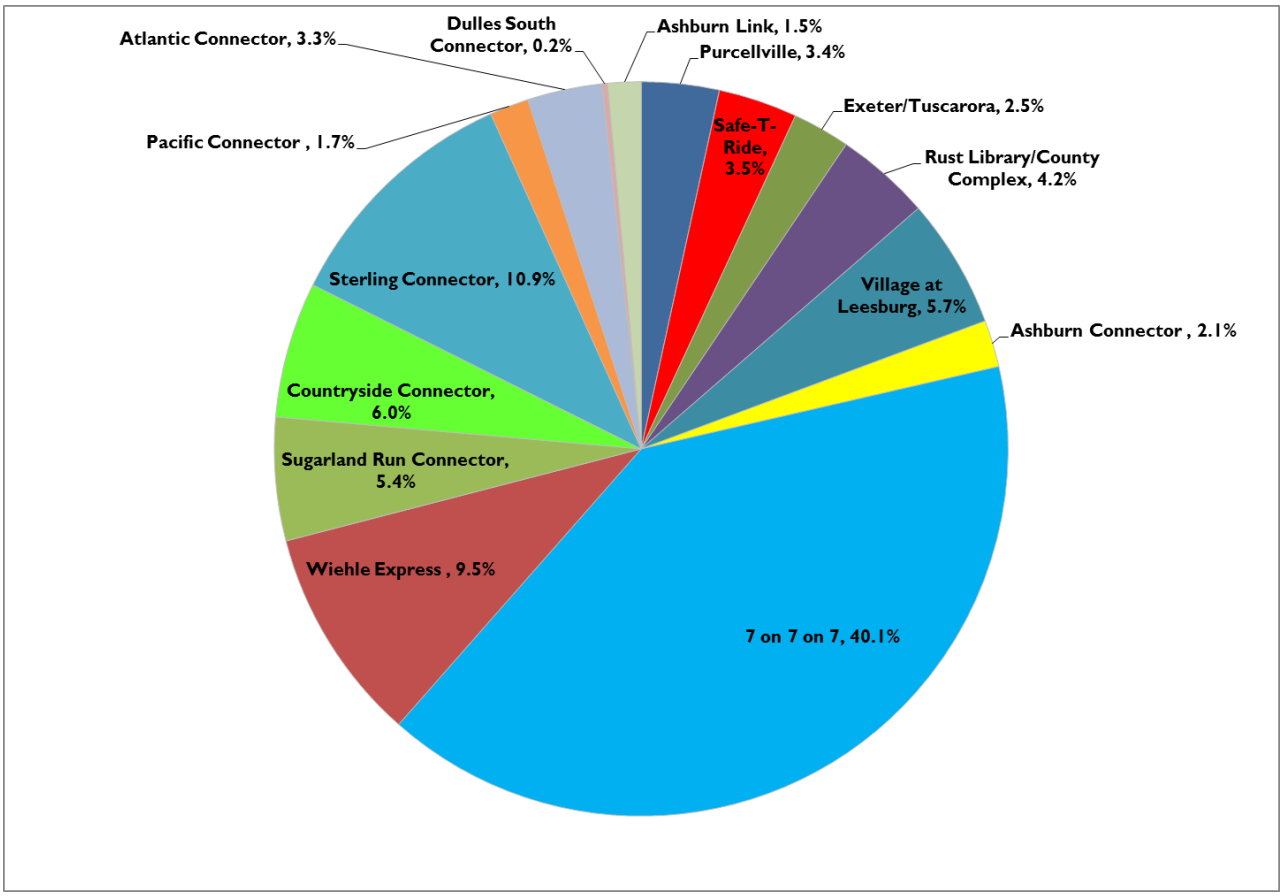
Table 16: Change in Local Bus Ridership, 2013-2014

Factor	Percentage points of decline
Fare increase from $0.50 to $1.00, elimination of free transfers, elimination of seniors free on Thursdays (all as of Oct 1, 2013)	12%
Conversion of $0.50 Leesburg Trolley to $1.00 Route 57-Village at Leesburg	2%
Truncation of free Safe-T-Ride	6%
Elimination of service to Air & Space Museum	5%
Replacement of 84X Herndon-Monroe route with stop on 83/84 Atlantic-Pacific Route and fare increase from $1 to $2	5%
Route 72 change from West Falls Church to Wiehle-Reston East	4%
Consolidation of Ashburn routes	2%
TOTAL DECLINE	36%

All changes except the first occurred in September 2014.

Figure 22 illustrates average daily weekday ridership by route for the local routes operating in Loudoun County. Route 70 has the highest level of ridership and accounts for over 40% of all local route ridership (the same as in 2010). Route 81- Sterling Connector is the second largest with about 11% of the total ridership. Route 72-Wiehle Express, which connects to the Silver Line, comes in third with about 10%. If the four local Leesburg routes were combined, they would come in second in percentage of riders with 16%. The newest route, Route 85-Dulles South Connector, has the lowest ridership.

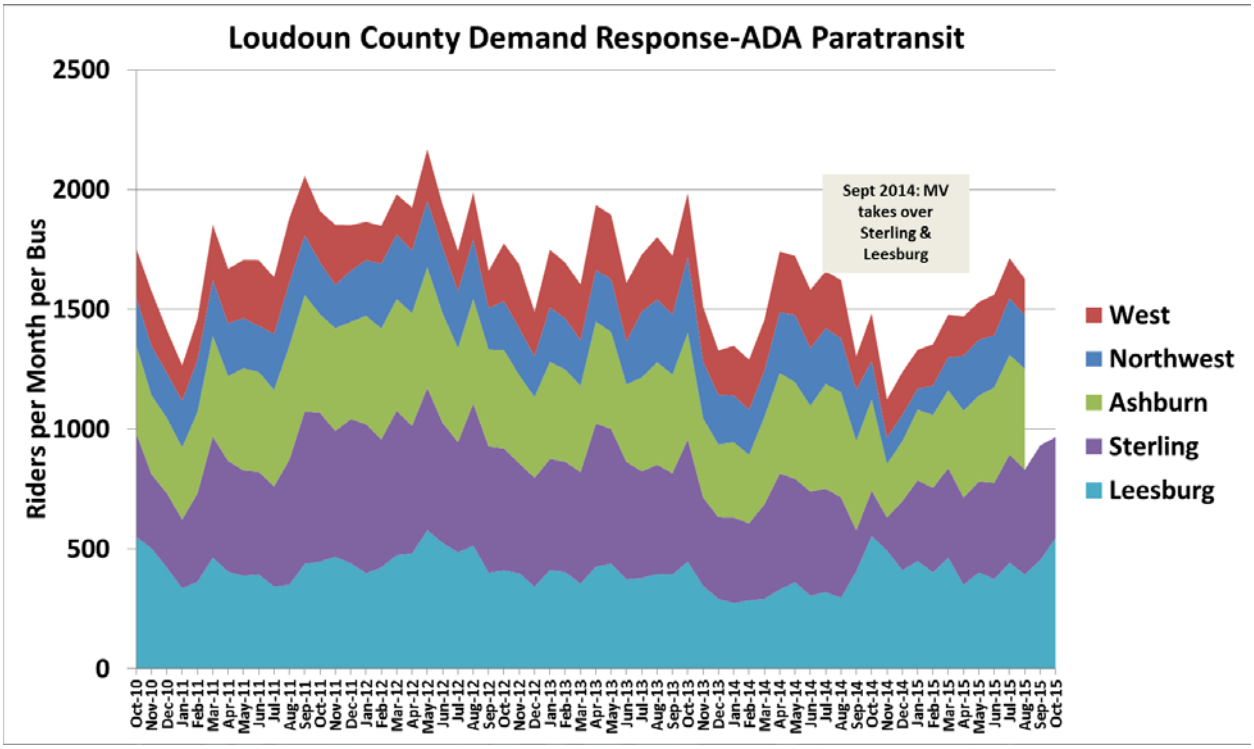
Figure 23: Local Loudoun County Local Routes Showing Percent of Total Ridership



ADA Paratransit and Demand Response

Prior to September 2014, VRT used five buses for ADA paratransit and demand-response trips: West Rural, Northwest Rural, Leesburg, Ashburn, and Sterling. Since that time, Loudoun County's contractor MV Transit took over ADA paratransit service for the eastern part of the county, while VRT retained service for the rural and western parts (using three buses, West Rural, Northwest Rural, and Ashburn). As shown in Figure 23, with the September 2014 changeover, ridership declined on the VRT rural (Northwest and West) and Ashburn routes but has since recovered. Ridership was also down on the MV routes, but they too have since recovered. These trends apparently reflect the customer confusion associated with the change, which took some time to resolve. Although the three urban routes have seen increased ridership since the lowest figures recorded immediately after the change, they operate below their historical peak usage. This suggests that there is spare capacity in the paratransit system. It is notable that the two rural routes have always been significantly less productive than the urban routes. This is likely an inevitable result of low-density operation, where trip distances are great and there are few opportunities to share trips.

Figure 24: Demand Response Service by Route



Land Use Plans Supporting Transit

The County's goals and objectives include transit-supportive land use policy, as detailed in the "Transit and Land Use" section of Chapter 2. Loudoun is currently planning for development in the vicinity of the Silver Line stations to be built in the county as part of Phase 2 of that project. In October 2013, the Loudoun County Board of Supervisors initiated a SilverLine/Metrorail Tax District Comprehensive Plan Amendment (CPAM) to evaluate the development potential of the Dulles Metrorail Service Districts which were previously adopted in December of 2012. The purpose of the CPAM is to evaluate the existing planned land uses around the future Metrorail stations with regard to generation of tax revenues to support future Metrorail operations, employment, and demands on transportation infrastructure.

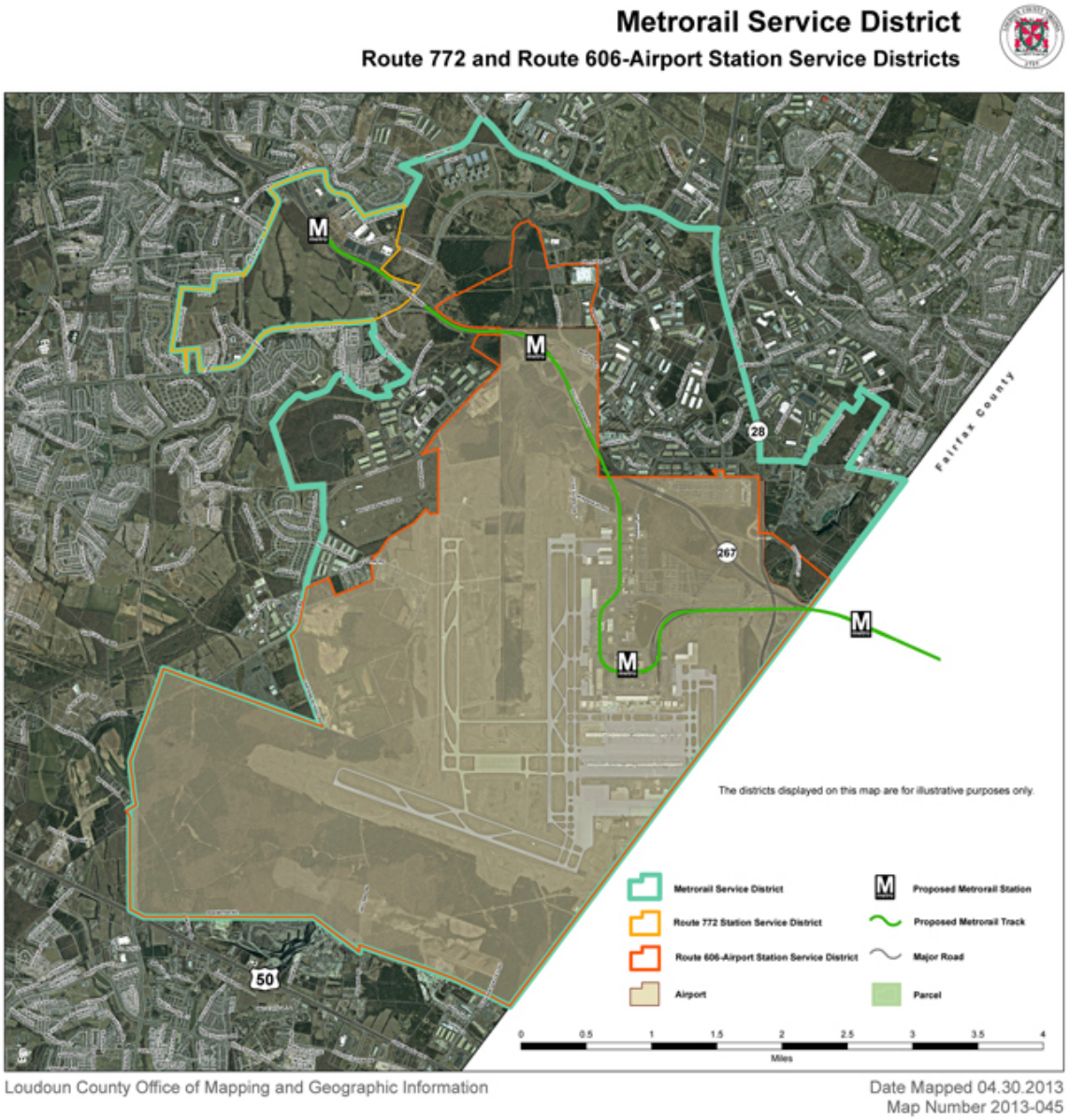
As shown in Figure 24, most of the acreage of the Metrorail Service District (which in total consists of 641 parcels and 14,328) consists of airport property. The focus of the planning studies is the Loudoun Gateway (Route 606) and Ashburn (Route 772) Stations Service Districts. The county has two classifications for transit-oriented development: Transit-Related Employment Center (TREC), which permits commercial development, and Transit Oriented Development (TOD), which permits a mix of uses. The area within a half-mile of Loudoun Gateway Station is a TREC zone, which allows up to 0.6 floor area ratio (FAR) of nonresidential development when road infrastructure is in place. A 2.0 FAR is permitted with rail service. Any development must minimize environmental impacts and provide access to Metro, including pedestrian connections. The TREC also allows Special Activity Uses such as stadiums, conference facilities, and theme parks, along with their ancillary uses. To date only one development

has been proposed near Loudoun Gateway: West Dulles Station, a 28-acre Planned Development-Industrial Park with 485,760 square feet of flexible and office uses, as well as 1,895 parking spaces.

The area within a half mile of the planned Ashburn Station is zoned for Transit Oriented Development. There is an inner core zone (¼ mile from the station) and an outer core zone (between ½ and ¼ mile from the station). Denser development is permitted in the inner core. With rail service, 50 residential dwelling units per acre are allowed and for non-residential uses, a FAR of 1.0 to 2.0 is permitted. Three development projects have so far been approved near Ashburn Station. The developments are all phased, so that lower density uses are constructed first, generally residential. One of the developments, Loudoun Station, includes a park and ride lot for the commuter bus service that will be used as parking for the Metrorail station. Considering Loudoun Station, Moorefield Station, and Dulles Parkway Center combined, 8,000 dwelling units and more than 12 million square feet of non-residential uses have been approved near the future Ashburn Metrorail station.

The Dulles World Center development on Route 28 near the planned Innovation Center Metrorail station was approved in March 2011, and subsequently changed in January 2014 to accelerate some residential development. The 82-acre project was rezoned as “Planned Development – Town Center.” A total of 4.1 million square feet of non-residential development and 1,265 residential units are contemplated.

Figure 25: Metrorail Service District



As part of this land use planning process for the new Metrorail stations the county conducted two studies:

- The Scenario Planning Study (February-October 2015) considered alternative growth scenarios, and conducted a series of public meetings.
- The Market Analysis and Best Practices Study developed case studies and analyzed trends in development near airports, consider airport compatibility issues, and identify potential anchor land uses.

The Market Analysis and Best Practices Study (**available on the county website**) made the following observations:

- "Development around the planned Ashburn Station has not yet realized its full potential in transit-oriented development. The Ashburn Station Area has undergone detailed County-led

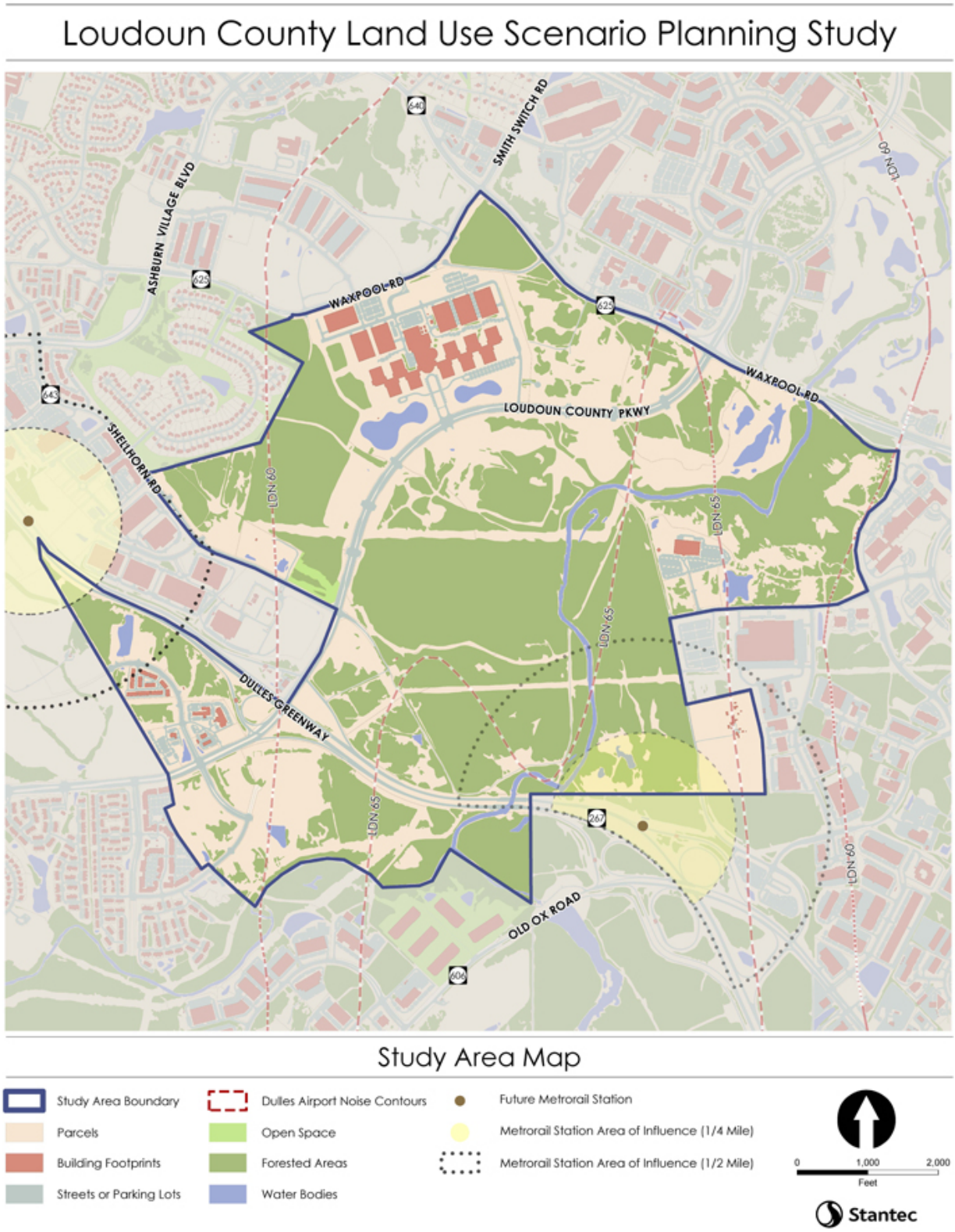
planning and was rezoned as Planned Development-Transit Related Center (PD-TRC) to facilitate TOD development. Plans for the Station Area were further refined in 2001 with the County's adoption of the Revised General Plan. Due to market conditions, only the residential components of projects that were originally approved as "mixed-use" have been completed and land dedicated to office remains vacant, creating an incomplete development pattern. Land-use policy around the Ashburn Station allows developers to build residential at higher densities once Metrorail opens, and the Team found that some residential developers with approvals already in place are waiting to build until the Ashburn Station has opened so that they can realize the value of their property at these higher densities."

- "Land surrounding the planned Loudoun Gateway Station is largely undeveloped or used for commuter parking. . . . With the opening of the station, there are plans to expand the commuter parking facilities to a total of approximately 2,750 spaces. . . . Land within a half-mile of the planned station is controlled by a small number of property owners, including nearly a third by the Metropolitan Washington Airports Authority (MWAA). Some light industrial uses are located in areas north of the Station, but a majority of the land remains unimproved and no development plans have been formally submitted to the County. Land use around the planned station is governed by two land use policies. The first is the PD-TREC zoning, which only allows commercial development within the area a half-mile from the planned station. The area around the Station is also part of the Airport Impact Overlay District, which includes noise contours of 60 – 65 LDN and prohibits residential development in areas of 65 LDN or higher.1 Given the Station's proximity to the Airport, the purpose of the zoned Overlay District is to encourage commercial development that could be affiliated with the Airport and protect Airport operations from potential conflict with residential development."

The study also made the following recommendations:

- "The HR&A Team recommends the County consider zoning flexibility that could encourage the development of a catalytic anchor use at the Loudoun Gateway Station to catalyze development and create a brand for the station, further increasing the overall economic activity in the Station Area. The HR&A Team's study analyzed six potential anchor uses, including a convention center with hotel, destination retail, entertainment and hotel, research center, tech incubator, sports and recreation facility, and a professional sports stadium.
- The HR&A Team recommends exploring a development partnership and agreement between MWAA and the County to position areas adjacent to Dulles Airport, including the Loudoun Gateway Station Area, as an "Airport City" that could attract airport-affiliated development and create economic benefits to both the County and MWAA.
- The HR&A Team recommends the County continue to pursue commercial office development at the Ashburn Station Area because it will complement the residential and retail uses that are currently being developed, achieve a premium over non-transit accessible locations, and help enhance the County's image as an attractive location to live, work, and do business.
- Loudoun County has established plan policies to promote high-density development in the Station Areas that will leverage the transit accessibility; however achieving high-density development may take several economic cycles. Thus, the HR&A Team recommends that the County allow additional uses on an interim basis by special exception in order to promote nearer-term economic activity in the Station Areas, create jobs, and generate tax revenues while preserving opportunities for the higher-density commercial development envisioned in the longer term."

Figure 26: Metrorail Station-Area Planning



Intelligent Transportation Systems

Fare Payment

Buses that use electronic fare collection will eventually transition to a New Electronic Payment Program (NEPP) system. In this system, customers will have multiple choices of fare media to use. In addition to the current version of the SmartTrip card, the NEPP system will accept many Government I.D. cards, contactless credit cards and smartphones. The NEPP system is currently undergoing a trial period on the WMATA system and will be phased in between 2017 and 2020.

CAD/AVL

Clever Devices was selected in 2013 to provide a complete integrated ITS package for 10 LC Transit commuter buses as part of a pilot program. The ITS package includes the following components:

- **Computer Aided Dispatching and Automatic Vehicle Location (CAD/AVL)** The GPS enabled monitoring system allows bus location and movements to be tracked at all times. This software provides the real-time ability to re-assign bus drivers and buses to insure delivery of transit service during unexpected events such as accidents, flat tires, or unexpected road blocks.
- **Real-Time Passenger Information (RTPI)**
  This application can be viewed on a computer or smart phone that allows riders to select their route and bus stop to see when buses are expected to arrive. This removes the need for commuters to wait unnecessarily in inclement weather and make it easier to plan their commute. With the Real Time Passenger Information program (Bus Tracker), they know when their bus should arrive.
- **Automated Vehicle Monitoring (AVM)**
  This automated system reads all faults and alarms generated by the bus onboard maintenance computer. These faults or alarms are then emailed to the maintenance staff. This early detection system allows the maintenance manager to pull buses to be serviced before major maintenance failures occur, limiting both bus downtime and maintenance costs.
- **Automated Vehicle Announcement (AVA)**
  This system uses GPS data to trigger an automated audible announcement of the upcoming bus stop via speakers on the buses, and also displays the upcoming stop on an internal display in the bus.

With the success of the pilot program, the remaining 50 buses in the commuter bus fleet are in the process of having this equipment installed by Clever Devices.

Deviations from Service Standards

Long Haul

Long Haul service is generally highly productive with high average loads. However, there are 16 scheduled trips that generally have average occupancy below 50% based on examining five months of ridership data. At the same time, there are at least 17 scheduled trips that consistently have loads exceeding 95%, resulting in standees and even pass-ups of waiting riders, especially on evening trips. Based on these findings, there is a recommendation in Chapter 5 to adjust the Long Haul schedules to shift trip times and places so that some of the underused trips can be used to relieve the overcrowded ones.

Metro Connection

As discussed in Chapter 2, Loudoun has proposed standards for bus route productivity. Table 17 shows a calculation of performance measures for the Metro Connection routes. The average cost per boarding for all Metro Connection routes was $3.76, much less than for the local routes, especially considering that the operating cost per service hour is almost twice as high as for the local routes. The benchmarks shown in the table are twice the subsidy per boarding and half the boardings per service hour. The Goose Creek Village-Broadlands route has an average subsidy just slightly higher than the benchmark. The Reverse Commute service stands out as exceeding twice the subsidy per boarding and having fewer than half the average boardings per service hour, both by a significant margin. Chapter 4 contains a recommendation to replace the separate Reverse Commute bus with reverse peak trips on other routes. That chapter also contains a recommendation to eliminate Metro Connection trips on all routes that average less than 15% occupancy.

Table 17: Metro Connection Route Productivity Analysis

Route	August Boardings	Monthly Service Hrs	Monthly Cost	Subsidy Per Boarding	Boardings Per Service Hr	Op Cost Recovery
Harmony/Leesburg	5334	154	$19,952	$2.74	34.6	27%
GCV/Broadlands	2039	136	$17,594	$7.63	15.0	12%
Reverse Commute	826	85	$10,172	$11.31	9.8	8%
Potomac Falls	5177	288	$37,274	$5.70	18.0	21%
Loudoun Station	9990	223	$28,931	$1.90	44.7	35%
TOTAL	23366	886	$113,923	$3.76	26.4	23%
Benchmark				$7.53	13.2	

Note: Text in red indicates that the item does not attain the benchmark level. Source: Loudoun County operating reports for August 2015.

Local Bus

Table 18 shows an analysis of the productivity of local bus routes, based on weekday service only. The average operating subsidy per boarding was $7.40. The highlighted routes are those that have average subsidy per boarding of more than twice the average. Similarly, the highlighted routes for boardings per revenue hour and mile are those that have less than half the average figures. The following routes fail to attain two or more of these benchmarks: 55, 62, 83, 85, 86, 89X. Chapter 4 discusses proposals to increase ridership on these routes or to redeploy service to more productive uses.

Table 18: Local Route Productivity Analysis

Route Number and Name	Subsidy per Passenger	Boardings per Revenue Hour	Boardings per 10 Revenue Miles
(54) Safe-T-Ride	$5.9	7.9	5.1
(55) Exeter/Tuscarora	$16.2	3.6	3.9
(56) Rust Library/County Complex	$11.5	5.0	4.6
(57) Village at Leesburg	$5.7	9.5	9.4
(62) Ashburn Connector	$17.8	3.3	2.1
(70) 7 on 7	$3.6	14.0	6.9
(72) Wiehle Express	$10.3	3.7	1.6
(80) Sugarland Run Connector	$5.5	9.8	6.7
(81) Countryside Connector	$6.5	8.3	6.2
(82) Sterling Connector	$3.7	13.8	11.2
(84) Atlantic Connector	$11.1	4.8	1.8
(83) Pacific Connector	$23.8	2.4	1.3
(85) Dulles South Connector	$132.2	0.5	0.2
(86) Ashburn Link	$24.7	2.5	3.1
(87X) Dulles Town Center	$10.7	5.4	n/a
(87X-Sat) Dulles Town Center	$9.4	6.2	n/a
(88X) East Gate	$6.1	8.9	n/a
(89X) Telos	$35.7	1.7	n/a
AVERAGE	$7.4	7.1	4.5
Benchmark	$14.74	3.6	2.3

Note: Text in red indicates that the item does not attain the benchmark level. Source: Loudoun County weekday operating reports for July-August 2015, except routes 87X-89X are for September 2015.

ADA Paratransit

The performance measures were also applied to the ADA paratransit buses, including both those operated by VRT and by LCT, as shown in Table 19. (Vehicle miles operated was not available by route for ADA service.) The Southeast route had no recorded boardings; however, the bus intended for this service is used as needed when the other two LCT paratransit buses are occupied. The two Saturday buses are little used and are the only other routes to fail the benchmark. There is a proposal in Chapter 4 to reduce Saturday ADA paratransit to a single vehicle. Even the best used ADA paratransit route costs $33 per trip in subsidy, which is more than twice the benchmark for fixed routes that are excessively costly. Although this cost per rider is high, it is in line with national averages for this type of service.

Table 19: Loudoun ADA Route Measures

Route	Subsidy per Boarding	Boardings per Revenue Hour
Leesburg	$33	2.1
Sterling (Northeast)	$44	1.6
Southeast	N/A	0
Sterling Evening	$81	0.9
Sterling Saturday	$230	0.3
Leesburg Saturday	$209	0.3
West*	$94	0.8
Northwest*	$58	1.2
Ashburn*	$47	1.5
TOTAL	$63	1.1
Benchmark	$126	0.6

*Operated by VRT; data from August 2015. Other data is from October 2015.

Equipment and Facility Deficiencies

Park and Ride Lots

Table 20 lists the park and ride lots served by commuter buses and compares capacity and usage in 2010 and 2015. In 2010, most Loudoun County lots were at or near capacity. All of the largest park and ride lots were completely full (with the exception of Dulles South, which was 85% full). By 2015, more than 1,000 more park and ride spaces were made available. The biggest changes were the construction of Loudoun Station with 300 additional spaces, and the more than doubling of capacity at the Christian Fellowship Church. Those changes helped relieve overcrowding at the Ashburn area park and ride lots.

Table 20: Park-and-Ride Lot Use

Park and Ride Lots	Capacity in 2010	Capacity in 2015	Percent of Capacity Used in 2010	Percent of Capacity Used in 2015
Ashburn North	190	190	65%	29%
Brambleton	-	100	n/a	90%
Broadlands 772	160	160	35%	81%
Broadlands Marketplace	75	75	90%	67%
Broad Run Farms	48	48	20%	6%
Cascades	55	55	75%	36%
Christian Fellowship Church	123	300	100%	90%
Dulles North	750	750	120%	89%
Dulles South	350	350	85%	94%
Dulles Town Center	-	100	n/a	n/a
East Gate	-	218	n/a	n/a
Goose Creek Village	-	83	n/a	13%
Great Falls Plaza	65	65	100%	54%

Harmony	-	250	n/a	70%
Leesburg	691	691	100%	71%
Loudoun Station	-	300	n/a	82%
Our Lady of Hope	100	150	65%	22%
Patrick Henry College	123	0	85%	n/a
St Andrews Presby. Church	68	68	85%	51%
Telos	0	164	n/a	89%
Total	**2,798**	**4,067**	**93%**	**71%**

Sources: Loudoun County 2012-2017 TDP; March 2015 park and ride lot counts conducted for this study.

The March counts showed that overall 71% of parking capacity was used. However, one can also compare operator boarding counts by park and ride lot to capacity (Table 21). Between March and June 2015, the ratio of boardings to parked cars increased from 76% to 96%. Some of this change may be seasonal. These figures suggest that the March counts did not represent the yearly peak, and that parking availability was a constraining factor. Several lots show boardings greatly in excess of the number of cars parked. The additional riders may be arriving on foot or on bicycle, dropped off, or may park in a nearby (possibly unauthorized) location.

There is a wide disparity in park and ride lot use, with lots closer to Dulles Airport served by commuter buses near capacity, and smaller, neighborhood lots with Metro Connection service only generally having many extra spaces available. The larger park and rides also have more frequent service, to more destinations, and with a greater span, making them more desirable. This is reflected in the usage rates: Brambleton, CFC, Dulles North, Dulles South, which all have long haul service, were at 90% or greater capacity in March (which is not the peak month). Much of the existing spare parking capacity is in smaller lots with only Metro Connection service such as Broad Run Farms, Goose Greek Village, and Our Lady of Hope. There are four additional lots planned; information about these facilities is included in Chapter 4.

Table 21: Parking Counts Compared to Boardings and Parking Capacity

		WBA Research Counts, March 2015			Operator Boarding Counts				
Park and Ride Name	**Capa-city**	**Cars Parked**	**Ridecheck Count**	**Ridecheck Percent**	**3/10/15 Count**	**3/10/15 Percent**	**6/10/15 Count**	**6/10/15 Percent**	
Telos	**164**	18	24	15%	21	13%	28	17%	*
Ashburn North	**190**	56	108	57%	87	46%	155	82%	
CFC	**300**	271	256	85%	200	67%	289	96%	
Dulles South	**350**	330	366	105%	364	104%	406	116%	
Dulles North	**750**	666	640	85%	647	86%	812	108%	
St Andrew	**78**	35	68	87%	82	105%	65	83%	
Harmony	**250**	177	209	84%	206	82%	222	89%	
Leesburg	**691**	490	632	91%	611	88%	742	107%	
Goose Creek Village	**83**	11	61	73%	53	64%	93	112%	
Brambleton	**100**	90	120	120%	124	124%	139	139%	
Broad Run Farms	**48**	3	3	6%	5	10%	15	31%	

		WBA Research Counts, March 2015			Operator Boarding Counts				
Park and Ride Name	**Capa-city**	**Cars Parked**	**Ridecheck Count**	**Ridecheck Percent**	**3/10/15 Count**	**3/10/15 Percent**	**6/10/15 Count**	**6/10/15 Percent**	
Cascades	**55**	20	39	71%	37	67%	76	138%	
Our Lady of Hope	**150**	33	52	35%	62	41%	99	66%	
Lowes Island	**65**	35	38	58%	61	94%	99	152%	
Broadlands	**235**	179	130	55%	101	43%	131	56%	
Loudoun Station	**300**	246	257	86%	252	84%	278	93%	*
Total	3,809	2,660	3,003	79%	2,913	76%	3,649	96%	

*count from May 19th instead of June 10th. Sources: WBA Ridechecks and Parking Counts; LCT Operations Reports from Transdev.

Rail Station Parking Garages

As part of Loudoun County's participation in Phase II of the Silver Line, the county is planning to develop of three parking garages, one at Loudoun Gateway Station and two at Ashburn Station. On January 15, 2014, the Board of Supervisors voted to notify the United States Department of Transportation (USDOT) that the county will finance and construct the station parking garages, provided that the USDOT provides Transportation Infrastructure Finance and Innovation Act (TIFIA) assistance for construction of the Dulles Corridor Metrorail Project. Either the county will negotiate an agreement with a private entity to deliver the garages or, should the County be unable to reach an acceptable agreement, the County will use its own resources to manage the design and construction process to deliver the parking garages before opening day of Phase 2. In June 2014, the county began negotiations for a comprehensive agreement with Comstock Partners for the design, construction and operation of a parking garage with at least 1,433 spaces at the Ashburn (Route 772) North Metro station in Loudoun, and in February 2015, the Board of Supervisors awarded an Interim Agreement for the 772 North Parking Garage to CLS Parking. The county also began negotiations for a comprehensive agreement with Nexus Properties for the design, construction and operation of a parking garage with at least 1,540 spaces at Ashburn (Route 772) South and a parking garage with at least 1,965 spaces that will serve the Loudoun Gateway (Route 606) Metro station.

Bus Fleet

To meet the expected increase in commuter bus demand, and replace vehicles reaching the end of their useful life, the Board of Supervisors approved replacement bus services. The County will also purchase additional buses for Metro Connection service. The County does not currently own the fleet of buses used for local service but would like to purchase small buses for thus purpose within the TDP period. Plans for the expansion and replacement of the fleet are discussed in Chapter 6.

Bus Maintenance Facilities

In 2014, the county opened a new transit maintenance and operations facility (TMOF) near Loudoun Center Place. The facility has two buildings, one for maintenance functions and one for operations and administrative staff. The parking area accommodates 80 45-foot buses, with potential for expansion.

The project achieved Substantial Completion on October 27, 2014 and final completion in December 2014. Transdev began operations from the new facility on November 3, 2014.

Title VI Program

Loudoun County's most recent Title VI Program submission, dated January 15, 2014, covers only Commuter Bus, since the county had not yet started operating local bus service directly. Since the county is now operating local bus and paratransit, a revised Title VI Program including these modes will be required by FTA. In addition, because Loudoun was not yet designated as within an urbanized area, it was not subject to the more detailed reporting, monitoring, and evaluation that is required of larger urban transit operators. (Specifically, the requirements are triggered for transit agencies that operate 50 or more fixed-route vehicles in peak service and are located in an urbanized area with a population of 200,000 or more.) Now that Loudoun falls into the category of a large urban operator, the Title VI Program will include the following additional elements:

- **Develop service standards and policies**
    - FTA requires standards specific to each fixed route mode of service (e.g., local bus, commuter bus)
    - Standards are required for loading, headways, on-time performance, service availability
    - FTA also requires policies on the distribution of transit amenities (seating, shelters, information, etc.) and on vehicle assignment (e.g. by age of vehicle)
- **Collect and report demographic data**
    - Maps of transit facilities overlaid with ACS data showing high minority population
    - Maps of new and planned transit facilities overlaid with ACS data showing minority population
    - Maps of transit facilities overlaid with ACS data showing low-income population
        - Demographic Ridership and Travel Patterns- Use on-board survey data to compare protected groups (minority and low-income) including trips taken and fare type used.
- **Monitor Transit Service**
    - Classify routes as "minority" or "non-minority" per FTA guidance
    - Compare the two types of routes based on the service standards and policies
    - Compare distribution of transit amenities
    - Adopt policy on determination of Disparate Impact or Disproportionate Burden (DIDB)
- **Service Equity Analysis**
    - Adopt a definition of "Major service change," "adverse effects," "disparate impact", and "disproportionate burden"
    - Assess impact of service changes (route by route) using either on-board survey data for existing routes or ACS data for new routes
    - Create maps showing changes and their impacts
    - Determine if there is a disparate impact and examine alternatives
- **Fare Equity Analysis**
    - Adopt a definition of "disparate impact", and "disproportionate burden" with regard to fare changes (DIDB)
    - Analyze fare categories (levels, media, etc.) to determine if they are more or less likely to be used by protected groups

- Determine if any fare change meets the adopted DIDB standard, and if it does not, examine alternatives and/or provide a legitimate justification

Loudoun is also required to conduct a passenger survey to determine fare type usage by demographics. However, the survey conducted as part of the current TDP update can be used for this purpose. A fresh survey is required every five years. A revised Title VI Program meeting these guidelines will be developed in conjunction with this TDP.

FTA Triennial Review

Loudoun County Transit has not yet been the subject of and FTA Triennial Review.

Chapter 4: Service Expansion and Improvement Project Descriptions

Overview of County Demographics

The following pages show thematic maps of Loudoun County illustrating key demographic attributes, specifically:

- Population Density
- Forecast Population Growth, 2015-2025
- Employment Density
- Forecast Employment Growth, 2015-2025
- Senior Citizen Population (percent 65 or older)
- Median Household Income
- Households Without a Motor Vehicle

The population and employment forecasts come from the Metropolitan Washington Council of Governments Cooperative Forecasts Round 8.2. The remaining data comes from the U.S. Census Bureau's American Community Survey five-year estimates from 2013.

As shown in Figure 26, Loudoun's population is heavily concentrated in the developed eastern part of the County in the area roughly bounded by Leesburg, the Potomac River, Fairfax County, and Dulles Airport. However the highest forecast increases, on a percentage basis, are in the remainder of the county that is currently less development, particularly the area just west of Dulles Airport and along Route 15 both north and south of Leesburg (Figure 27). As shown in Figure 28, employment is even more heavily concentrated in the eastern part of the county, which concentrations in and around Dulles Airport and in Leesburg and along Route 7. Forecast employment growth, shown in Figure 29, is projected to be heavy south and west of Dulles Airport and along highway routes 7 and 267.

Figures 29, 30, and 31 show that the rural eastern and northern parts of the county in general have lower income, a greater share of seniors in the population, and a greater share of households without a motor vehicle. However, there are portions of Eastern Loudoun that are higher than average in some or all of these factors, particularly in the southern parts of Leesburg and in certain areas along Route 7 where there are senior housing complexes.

Figure 27: Population Density (persons per square mile), 2015

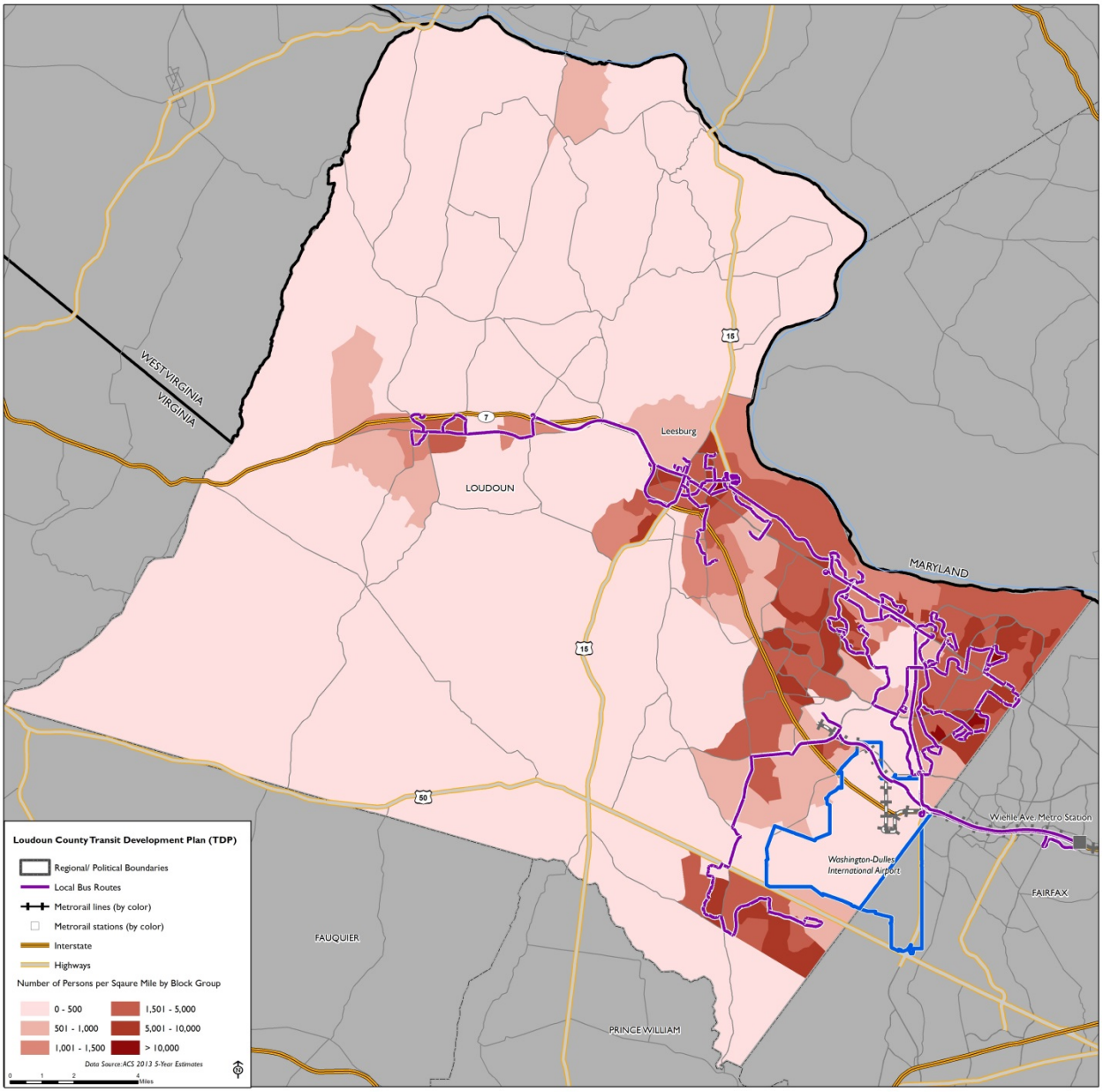


Figure 28: Forecast Population Growth, 2015-2025

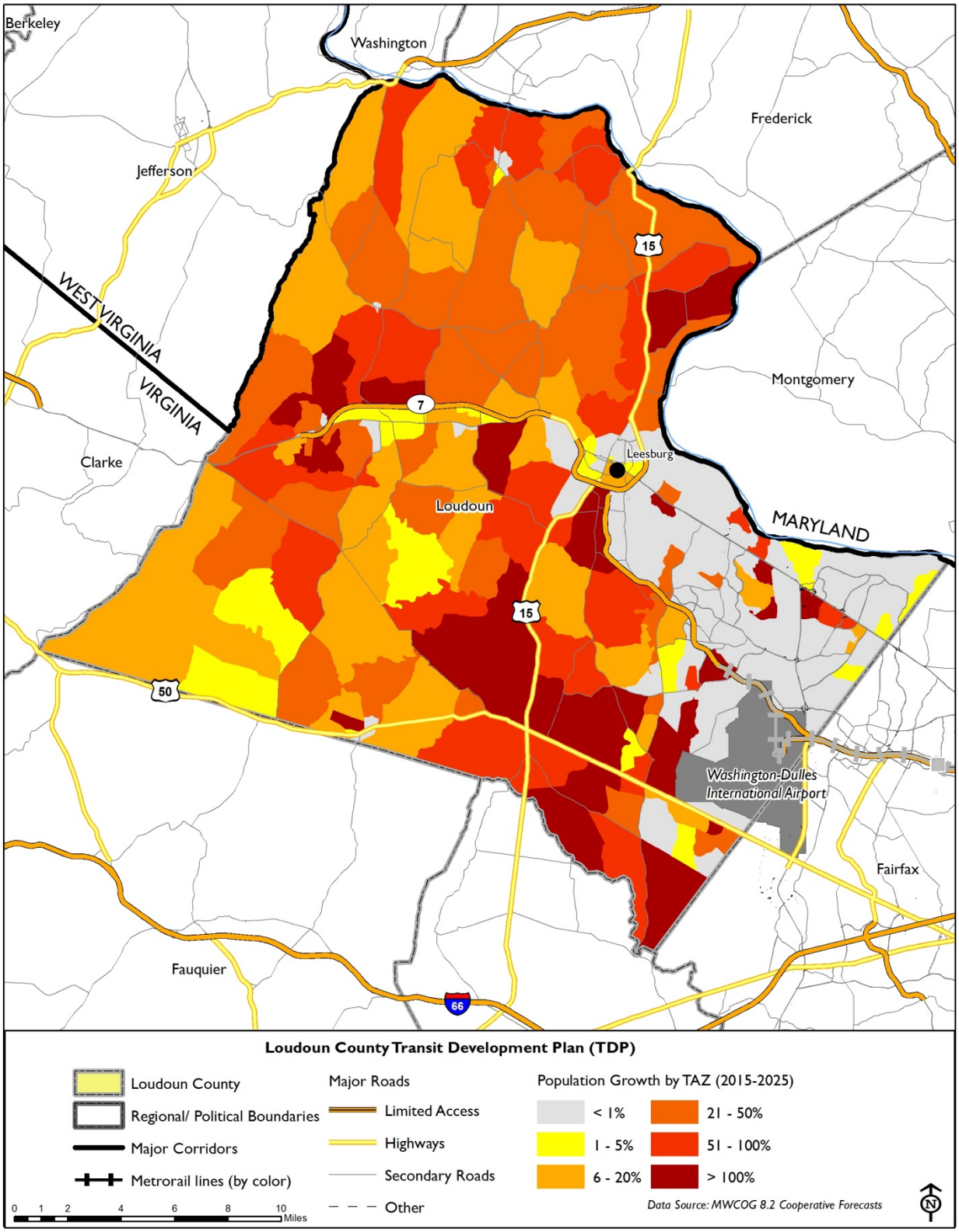


Figure 29: Employment Density (jobs per square mile), 2015

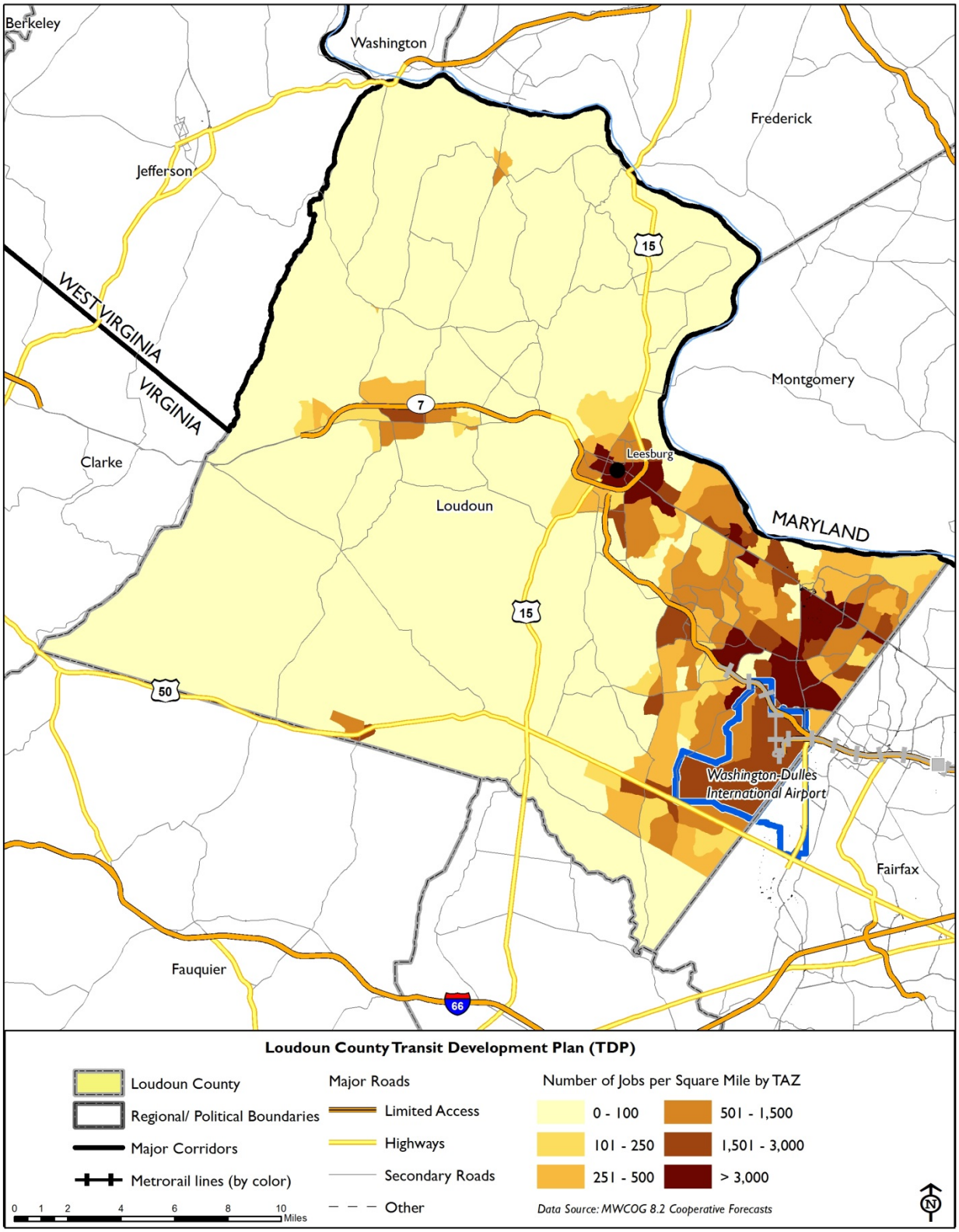


Figure 30: Forecast Employment Growth, 2015-2025

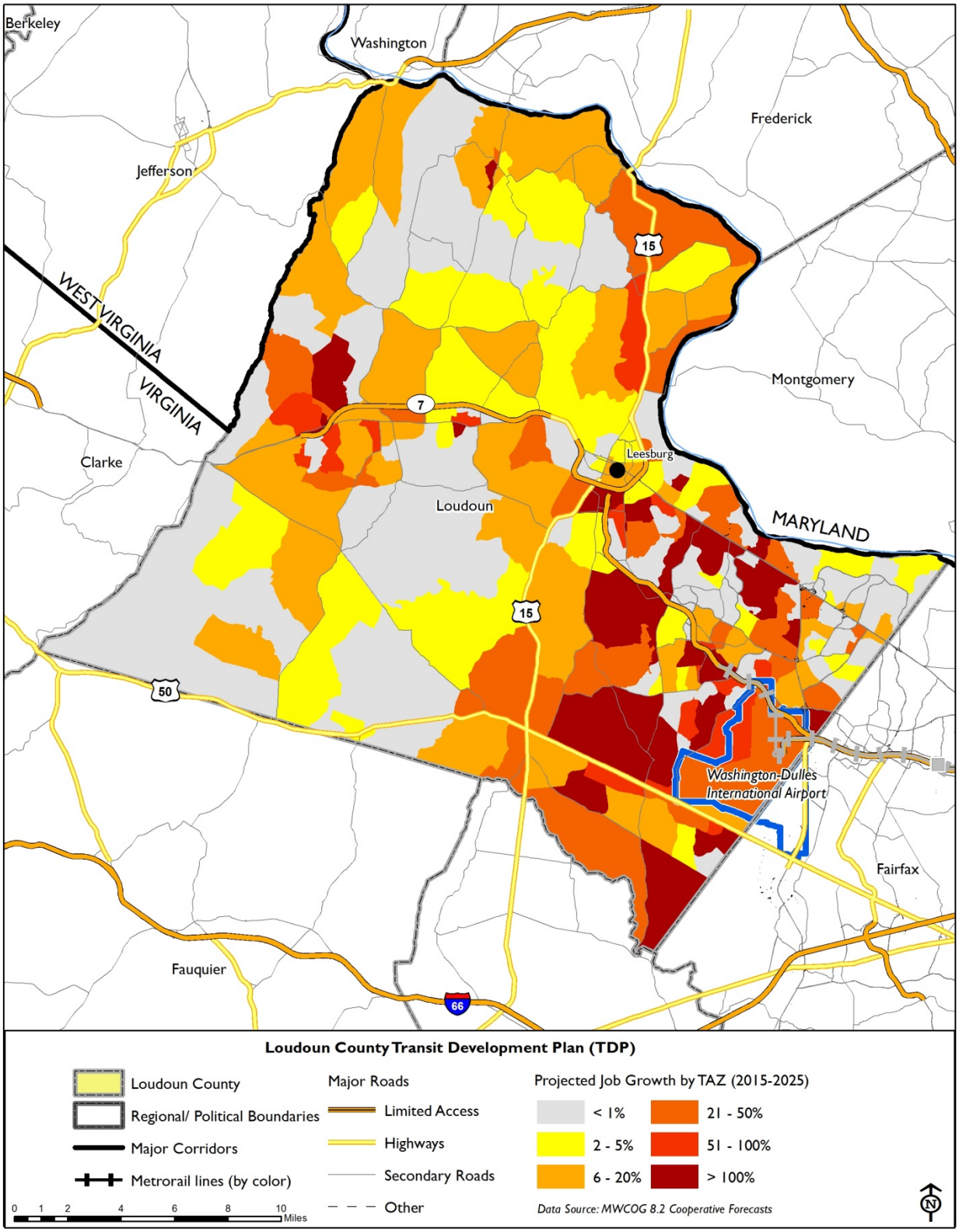


Figure 31: Percent of Population Age 65 or Older, 2013

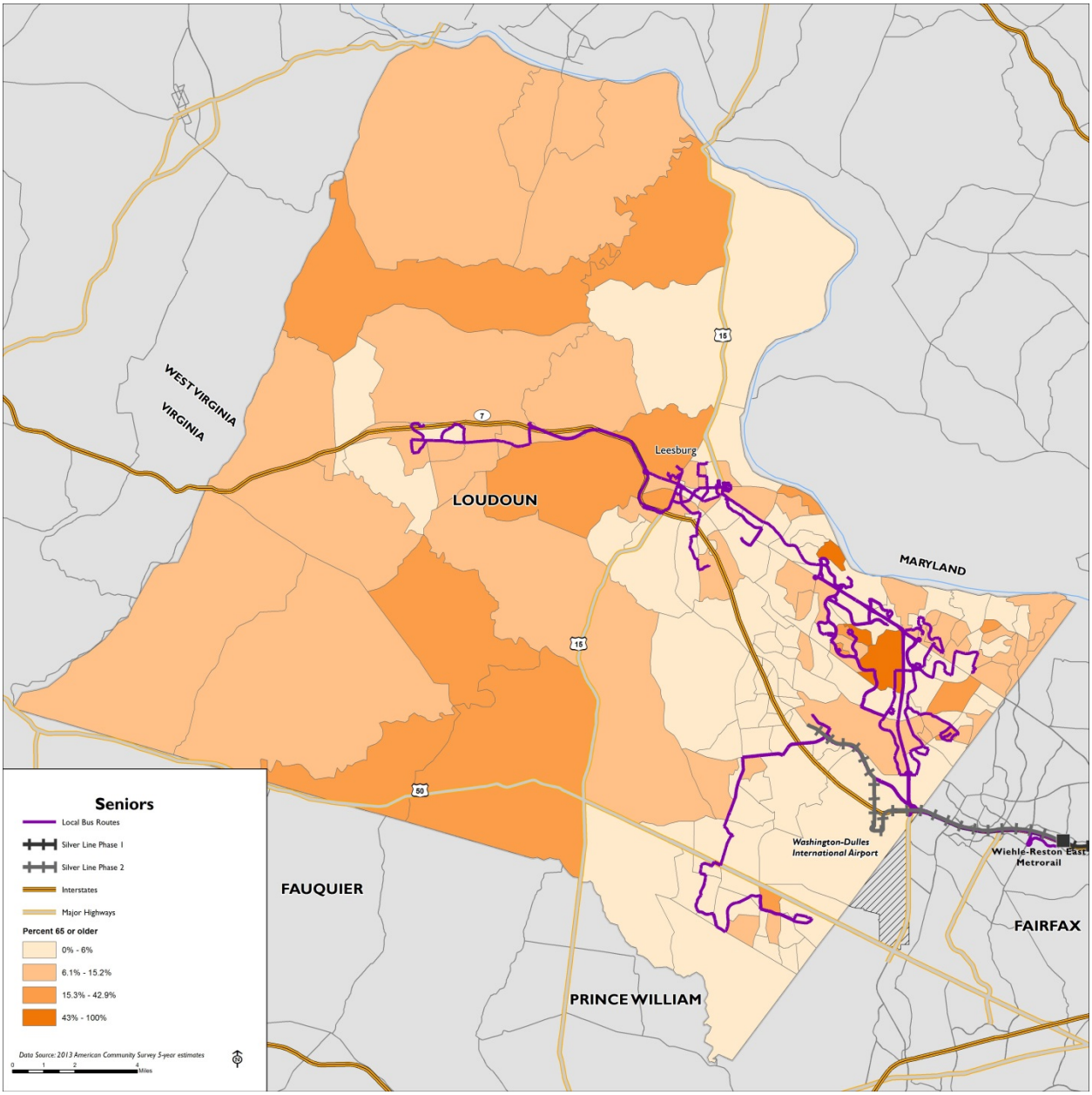


Figure 32: Median Household Income, 2013

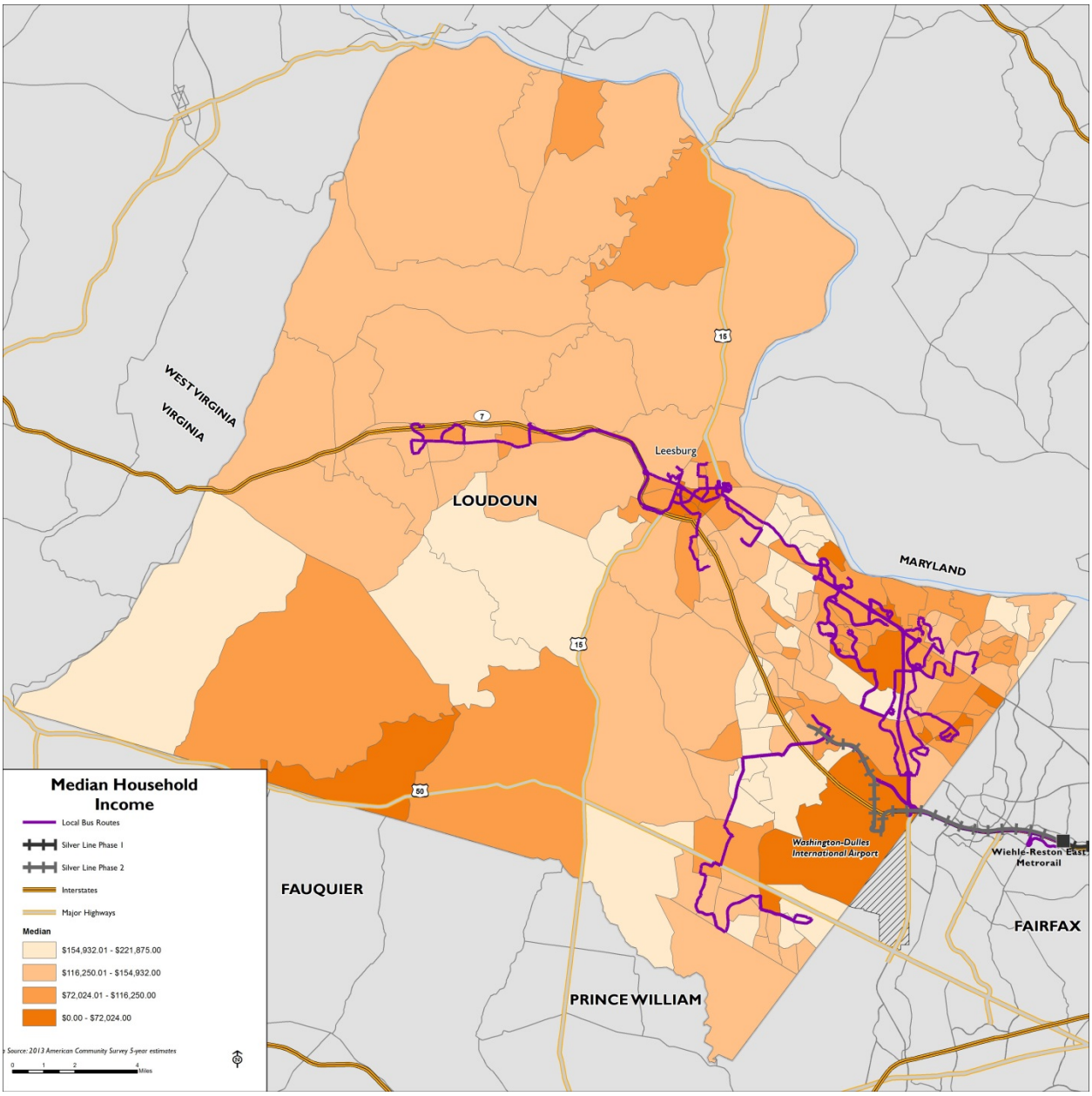
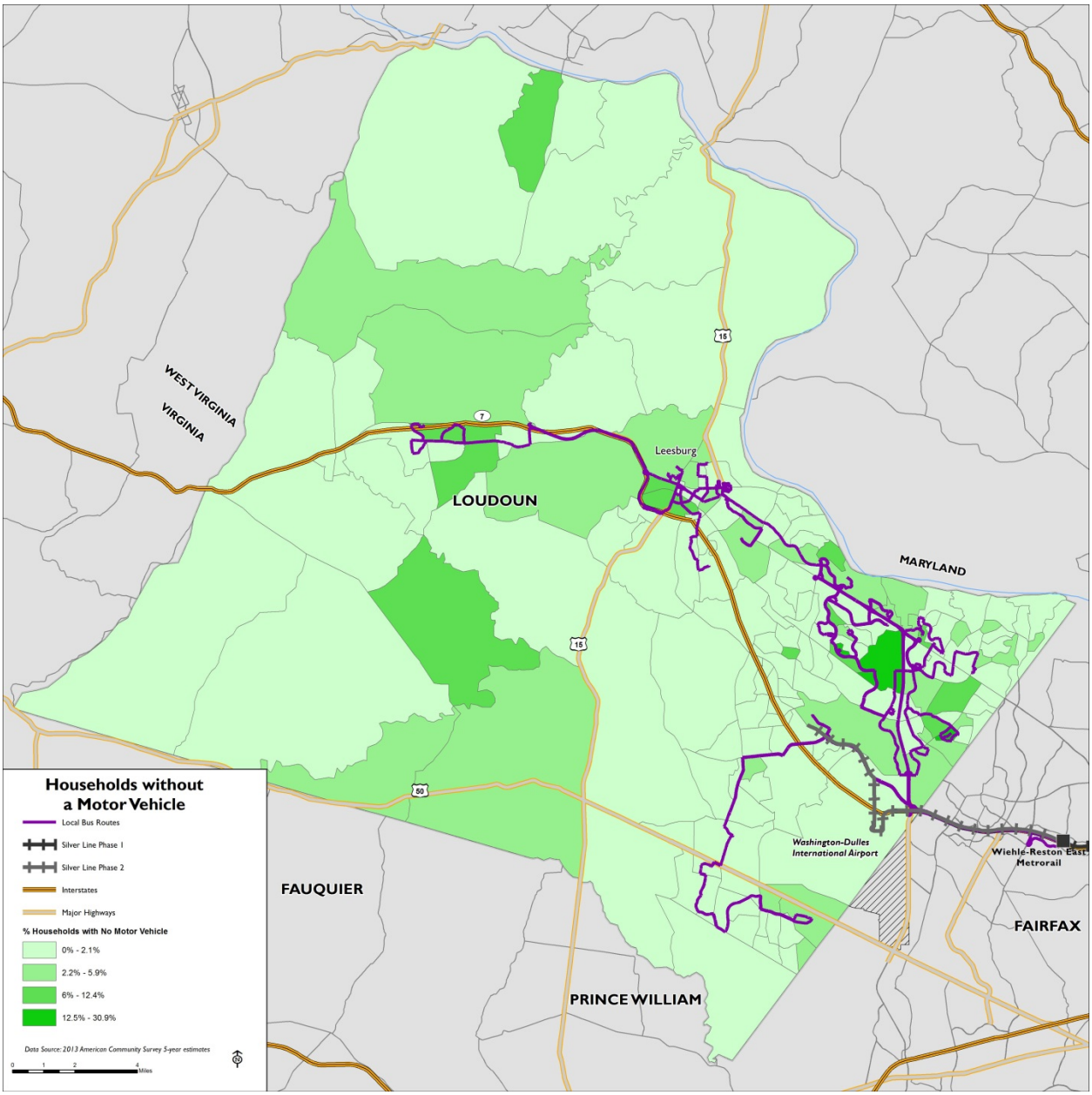


Figure 33: Households without a Motor Vehicle, 2013



Transit Service Expansion

This chapter identifies service expansion projects needed to meet anticipated future needs. Complimentary programs to adjust fares and improve the efficiency of existing transit service are described in Chapter 5. The major service expansion over the coming period will be the opening of the first Metrorail stations in Loudoun as part of the Silver Line Phase II project, which entails a significant commitment of resources on the part of the County as well as regional participants. In addition to contributing to capital and operating expenses, the County has committed to construct approximately 5,000 spaces in three garage structures at two of the new stations. Given the significance of this rail expansion project, the major focus of the County's transit plan is to provide connecting peak and off-peak service to the stations through a combination of re-routing existing Metro Connection and local routes and adding new routes serving the stations.

Loudoun County commuter bus service has grown robustly since its beginnings, but its growth has slowed recently. Although Loudoun's population is expected to grow steadily, the decline in gasoline prices may restrain the growth in transit use. In addition, Loudoun County is programming increases in Long Haul commuter bus fares in FY2017 and FY2019. These increases, plus the planned opening of the Silver Line in Loudoun in FY2020, may lead to a decline in Long Haul bus use, or at a minimum a slower growth rate. As discussed in Chapter 1, local bus service decreased significantly in the two years leading to the preparation of this TDP. Therefore the local bus strategy described below focuses on ways to increase ridership and productivity of existing service.

The projects and policies described below are grouped by service type: Systemwide, Silver Line Metrorail, Long Haul, Metro Connection, and Local. Ridership estimates are based on the number of riders per vehicle hour from existing Loudoun data for similar service. The largest bus service expansion project is the plan to add additional Metro Connection trips serving existing and planned park and ride lots. This service will use new 40-ft transit buses; additional vehicles will be used to replace local buses and commuter coaches. The purchase of 11 40-ft transit buses is included in the SYIP. However, none of the other expansion projects listed below, none of which involve additional capital investments[6], are included in the SYIP.

Funding Sources for Expansion Projects

The planned expansion projects will be funded from a variety of sources, as described in more detail in Chapter 7. The largest project, Silver Line Metrorail Phase 2, is primarily funded by the Dulles Toll Road, with additional funding coming from Virginia, MWAA, and the remainder shared between Fairfax and Loudoun Counties. Loudoun uses borrowing to fund large capital projects; in the case of Silver Line, Loudoun is participating in a Transportation Infrastructure Finance and Innovation Act (TIFIA) loan from the U.S. DOT. The county intends to apply for Virginia DRPT capital support for planned bus purchases to support expansion projects. The county also has access to its share of Virginia gasoline tax funding, which it will use to fund transit operating expenses.

Silver Line Metrorail

The expansion of Metrorail's Silver Line into Loudoun County is one of the most important developments in our area's transportation plans. The Dulles Corridor Metrorail Project is a 23-mile extension of the existing Metrorail system that is operated by the Washington Metropolitan Area Transit

[6]The exceptions are the increase in service on Route 82 and the addition of Route 70 express service, which will require additional peak vehicles. Currently vehicles are proved by the bus operator. However, the county is planning to purchase a fleet of vehicles for this service in lieu of using buses provided by the contractor. In that case there will be an additional peak period bus requirement due to these service changes. However, the proposed fleet of 34 replacement vehicles is sufficient to provide this service.

Authority (WMATA). This new line runs from East Falls Church through Tysons Corner and Reston, to Washington Dulles International Airport, and finally west to Ashburn. Construction is in two phases; Phase 1 opened in July 2014. The extension to Loudoun will result in three stations within the County: Loudoun Gateway (Route 606), Ashburn (Route 772), and Dulles Airport station. In addition, Innovation Center Station (Route 28) is in Fairfax County but adjacent to the Loudoun County line.

The Silver Line extension will change land use development in Loudoun County and alter how public transit is delivered in the County. A report sponsored by Loudoun County and completed by the Urban Land Institute recommends shifting from suburban land-use to walkable urban places through small area plans that "include a transportation map that outlines local and regional roads with transit, pedestrian, and bicycle routes and connections."[7] Loudoun County currently has a suburban land-use pattern that is generally not conducive to the provision of transit service. While the Silver Line Metrorail will be the centerpiece of the transit system in the County, there are other public transit needs that continue to be important. The local fixed-route and demand-responsive paratransit services need to be effective and efficient. Local bus customers are typically interested in intra-county transportation to worksites, medical offices, shopping, and county facilities. The opening of Metrorail service into Loudoun County will result in the need to restructure bus route service to feed the rail line.

Silver Line Phase 2

Phase 2 service to the Loudoun Gateway and Ashburn Stations is expected to begin service in 2020. Loudoun County will pay for more than 10 percent of the $2.778 billion extension of the Silver Line from Reston to Ashburn—or 4.8 percent of the $5.7 billion combined Phase 1 and Phase 2 projected total cost. The annual operating cost of Phase 2 was estimated as $30 million (in 2004 dollars) in the project Final Environmental Impact Statement. With this significant investment, Loudoun County has substantial motivation to ensure the success of the rail line. Transit can help facilitate this success by creating feeder bus routes that serve both takes resident commuters to the stations and also delivers workers from outside the County to work sites within the County.

The Federal Transit Administration, the Commonwealth of Virginia, Fairfax County, the Metropolitan Washington Airport Authority (Dulles Toll Road) and Loudoun County are funding the costs of the project. Loudoun County's contribution toward construction began in FY 2010. The County's share, $300 million, will be funded through lease revenue financing and a TIFIA loan provided by the U.S. Department of Transportation. One of the benefits to tax payers is the deferred principal and interest payments which allow the County to build cash reserves; pay project costs with cash and minimize future borrowings; thus, saving tax payers millions in interest. The TIFIA loan of $1.278 billion, jointly provided to MWAA, Fairfax County, and Loudoun County, is the largest TIFIA loan awarded by the federal government to date. On December 9, 2014, Loudoun County closed on its $195 million TIFIA loan for the construction of the Dulles Corridor Metrorail Project with an interest rate of 2.87% over a 32 year amortization period.

The County's share of operating costs is anticipated to total about $8 million during the first year of operation. The Loudoun County's share of gas tax revenues will cover most of this cost, which will not be incurred until the stations open in the county. This project is listed in the MWCOG TIP ID: 4272, Dulles Corridor Metrorail Project – Phase 2 and in the DRPT STIP as DUL0002. The 2015-18 funding is $533

[7] Harvesting the Value of Metrorail in Loudoun County, Virginia. Urban Land Institute. May 2014., p .14. Available at http://www.loudoun.gov/DocumentCenter/View/107409

million and the prior year funding is $2,537 million. The funding sources are TIFIA, $1,876 million, State $300 million, and Local $894 million.

Capital Cost: $2,778 million (Loudoun County portion, $274 million)
Sources of Funds: 52% MWAA Dulles Toll Road, 8% MWAA Aviation Funds, 19% Fairfax County, 10% Loudoun County, and 12% Commonwealth of Virginia
Additional Service Hours: n/a
Additional Operating Cost: $30 million per annum (2004 dollars, per FEIS, 2005), to be distributed among WMATA compact members
Estimated Loudoun Share of WMATA Operating Subsidy: $8 million
Additional Ridership: 30,200 in 2025 (per FEIS, 2005), of which 4,485 at Loudoun Gateway Station and 6,961 at Ashburn Station.

Long Haul Service

Add Long Haul Service to Dulles South (Stone Ridge) and East Gate (FY2017)

The planned delivery of 40-foot transit buses in December 2016 for Metro Connection service will make four 45-foot coaches available that are currently being used for that service. These will be used to add two trips per direction per day to serve the Dulles South (Stone Ridge) expansion park and ride lot. These trips will also stop at the East Gate Park and Ride that opened in 2015 and does not otherwise have Long Haul service direct to DC. The two remaining 45-foot coaches will be used as spares for Long Haul service.

Capital Cost: 0 [vehicles re-deployed from current Metro Connection service]
Additional Service Hours: 12 per day; 3,072 per year
Additional Operating Cost: $423,721 (contract cost only) per year
Additional Operating Revenue: $552,960 per year
Net Operating Subsidy: -$129,239 per year
Additional Ridership: 240 per day; 61,440 per year

Metro Connection

Add New or Expanded Metro Connection Routes (FY2018)

The proposed additional service consists of:

- **Route 921/922 MC Harmony-Leesburg-Purcellville**. This existing route would be extended to serve a new and larger park and ride lot in Purcellville. Most morning trips would travel non-stop from Purcellville, skipping Harmony and Leesburg. In the evening, most trips except those at the peak of the peak would stop at any of the three park and rides by request, in order to provide a wider span of service for evening trips.
- **Route 87X MC Dulles Town Center.** Two buses and 8 hours of service will be added to this existing route.
- **Route 88X MC Dulles South**. The Dulles South (Stone Ridge) expansion lot with 350 spaces is planned to be open for service in FY2018. At that time the existing Metro Connection service will be extended from the East Gate Park and Ride using four of the new transit buses. In the reverse

peak direction, the new route will serve the Stone Springs Hospital Center on U.S. Route 50 at Stone Springs Boulevard. This route will merge with the revised Route 85 (described in Chapter 5), and will therefore include midday service.

- **Route 89X MC Leesburg East.** Metro Connection service will be increased serving the existing Telos Park and Ride lot, which will later serve the new Leesburg East lot when it opens.

An additional two buses and 4 hours of service (8 hours total) per weekday is planned for each of these four routes, making a total of 32 service additional hours per weekday and eight additional buses. Including midday service on route 88X (formerly operated as Route 85), the total increase is 40 service hours per day. A summary of the planned additional service is shown in the following table. The alignments of these routes, including the new service to Purcellville and the extension of the 88X to Inova Hospital, are shown in Figure 33.

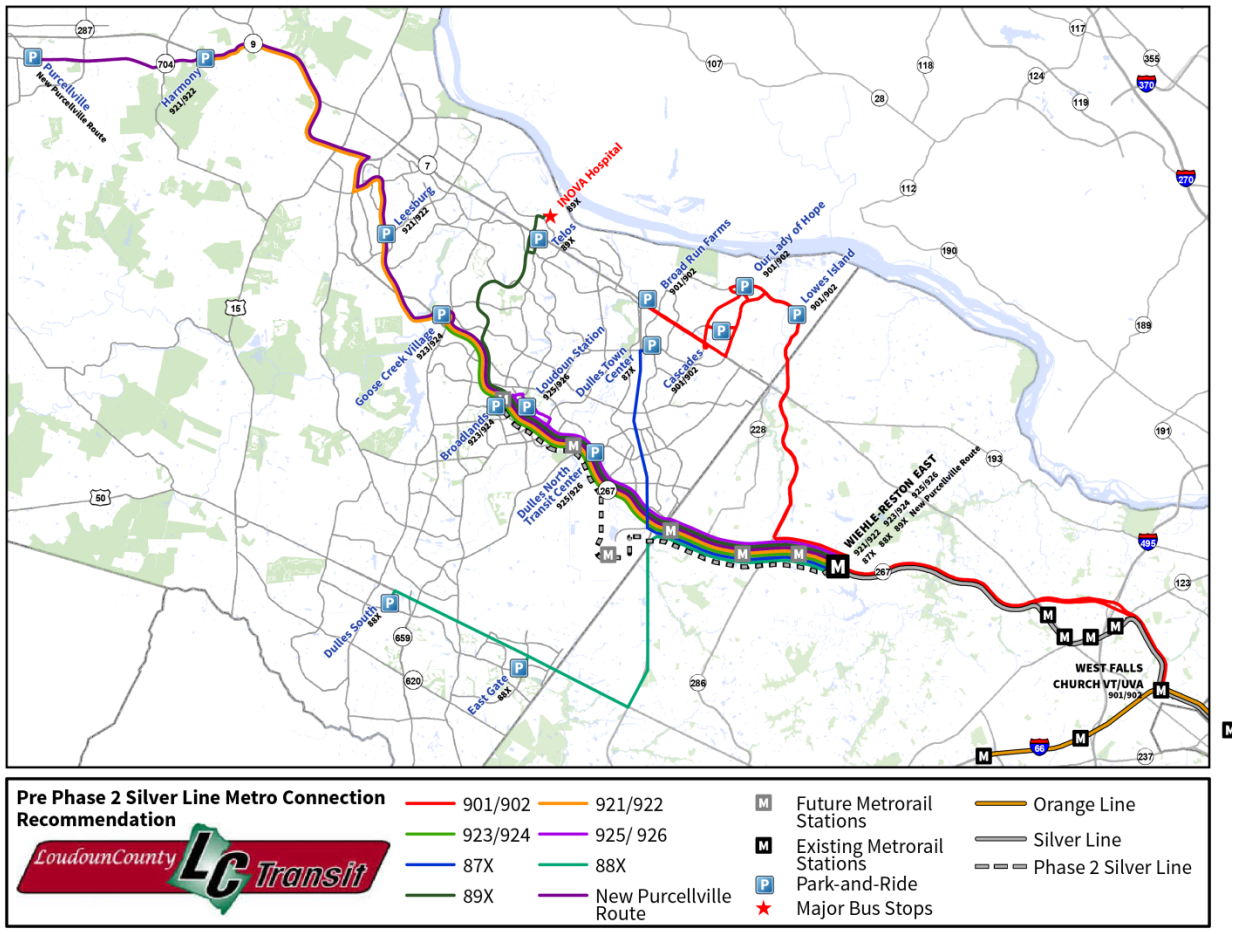
Capital Cost: $3.7 million for 8 buses
Sources of Capital Funds: 68% DRPT Capital Assistance, 32% County funds
Additional Service Hours: 40 per day; 10,240 per year
Additional Operating Cost: $1,412,403 per year
Additional Revenue: $92,160 per year
Additional Operating Subsidy: $1,320,243 per year
Additional Ridership: 360 per day; 92,160 per year

Inclusion in Existing Plans:
Six-Year Improvement Plan (SYIP): The FY2016 SYIP includes $5.5 million for eleven 40-ft transit buses, of which 60% is from state capital assistance for FY2016 and FY2016. The SYIP also includes an additional long-range capital need of $4.67 million for additional expansion buses between FY2017 and FY2021

Table 22: Additional Metro Connection Service, FY2018

Route Name	Service Change	Existing Service Hrs/Day	Proposed Service Hrs/Day	Existing Peak Vehicles	Proposed Peak Vehicles
921/922 Harmony-Leesburg - Purcellville	Add 2 buses (4 hrs/day/bus) to Purcellville P&R	14.1	23.1	2	4
87X Dulles Town Center	Add 2 buses (4 hrs/day/bus)	15.2	23.2	2	4
88X Dulles South	Add 2 buses (4/hrs/day/bus) to add service to Stone Ridge via East Gate. Combine with Route 85,	16.2	25.2	2	4
88X Dulles South - midday	Midday service (formerly Route 85).	0	6	0	0
89X Leesburg East	Service to new Leesburg East P&R	20	28	2	4
TOTAL		65.5	105.5	8	16

Figure 34: Proposed Metro Connection Routes in FY2018



Local Service

Increase Frequency of Route 82 (FY2018)

Route 82, Sterling Connector, is one of the most productive in the system. LCT will add an additional bus to the route on weekdays, doubling the frequency and reducing the headway from 45 minutes to 22.5 minutes.

Capital Cost: $120,000
Additional Service Hours: 15 per day; 3,840 per year
Additional Operating Cost: $254,312 per year
Additional Revenue: $17,280 per year
Additional Subsidy: $237,032 per year
Ridership: 90 per day; 23,040 per year

Add Sunday Service to Routes 70 and 82 (FY2019)

Currently there is no Loudoun local service on Sundays, except for the Safe-T-Ride shuttle. Riders have been using the Saturday service on routes 70 and 82 in reasonable numbers. Therefore, LCT will add Sunday service on Routes 70 and 82. These routes will provide connections to the Safe-T-Ride, Inova, and Dulles Town Center. The proposed Sunday schedules will be the same as the current Saturday schedule, 9 hours of service using one vehicle for each of the two routes.

Route 70:
Capital Cost: 0
Additional Service Hours: 18 hours per Sunday; 936 hours per year
Additional Operating Cost: $64,468 per year
Additional Revenue: $5,616 per year
Additional Subsidy: $58,852 per year
Ridership: 144 per Sunday; 7,488 per year

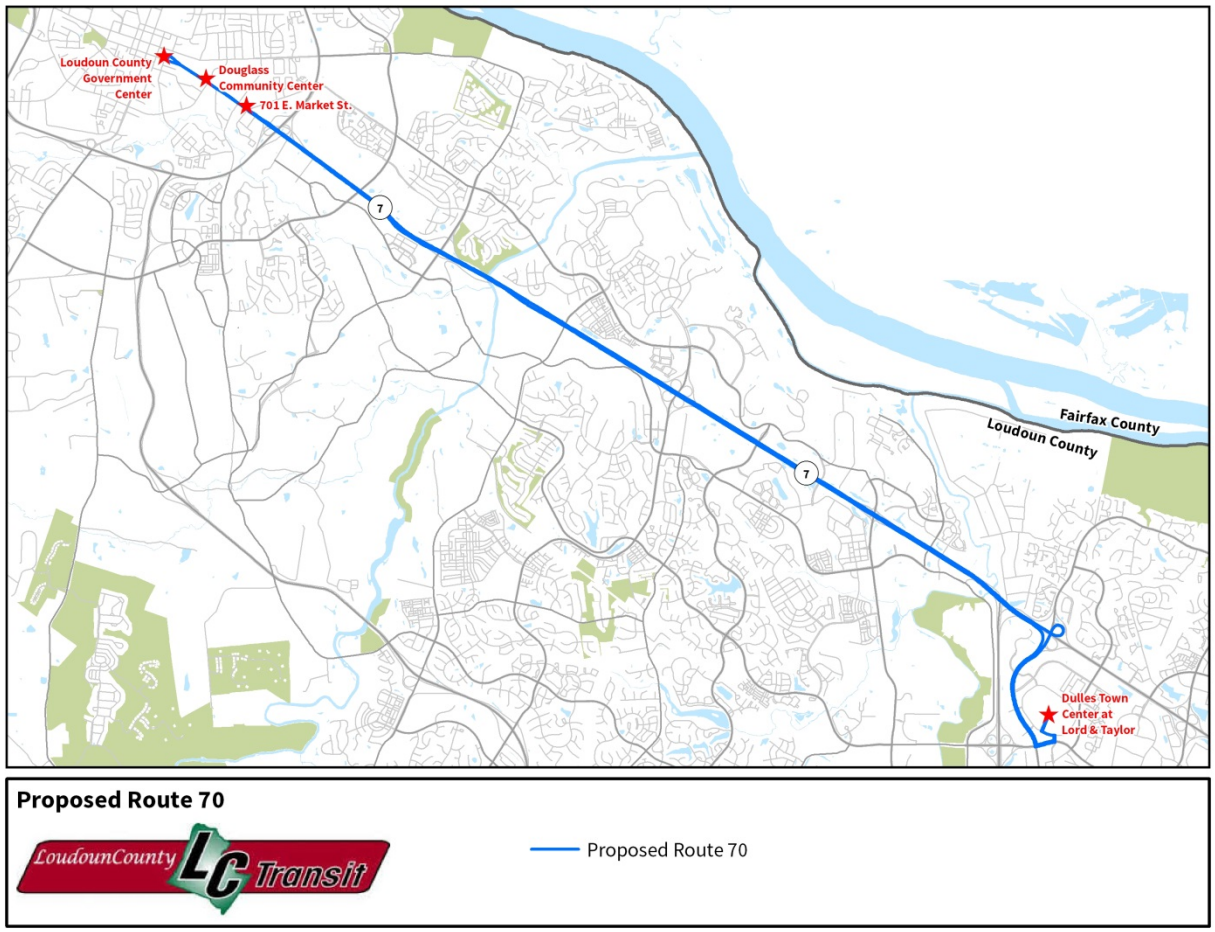
Route 82:
Capital Cost: 0
Additional Service Hours: 9 hours per Sunday; 468 hours per year
Additional Operating Cost: $32,234 per year
Additional Revenue: $2,457 per year
Additional Subsidy: $29,777 per year
Ridership: 63 per Sunday; 3,276 per year

Route 70 Express Service (FY2019)

In order to provide a faster trip during the peak period, LCT will add express trips via Route 7 between Dulles Town Center and Loudoun County Government Center. The routing is shown in Figure 34. The service will use one bus for two hours in the morning peak and two hours in the afternoon peak. The roundtrip cycle time is expected to be 60 minutes including recovery time. The one-way travel time of 20-30 minutes is expected to save riders about 15-25 minutes compared to the regular Route 70 service.

Capital Cost: $120,000
Additional Service Hours: 4 per day, 1,024 per year
Additional Operating Cost: $70,529 per year
Additional Revenue: $7,680 per year
Additional Subsidy: $62,849 per year
Ridership: 40 per day; 10,240 per year

Figure 35: Proposed Route 70 Express



New Route 63, Brambleton Circulator (FY2020)

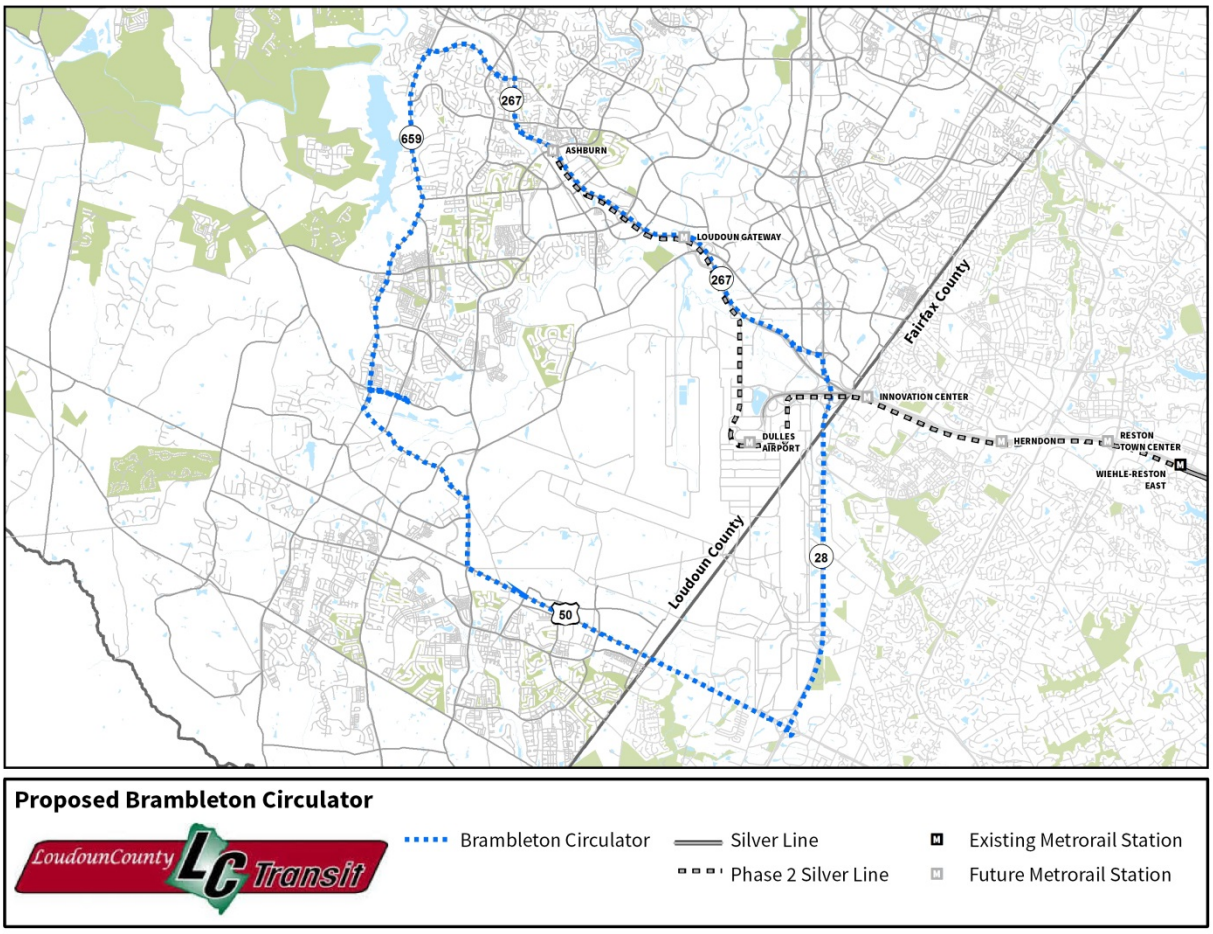
LCT will create a new Route 63 Brambleton circulator that will connect to the new Ashburn Metrorail station and also serve the following destinations:

- Brambleton Plaza
- Woods at Brambleton (Work Force Housing)

The proposed alignment is shown in Figure 35. The service will operate with one bus 12 hours per day. The route will run every 40 mins. Service will be provided from 7:00 AM to 8:00 PM.

Capital Cost: $120,000
Additional Service Hours: 12 per day; 3,072 per year
Additional Operating Cost: $220,051 per year
Additional Revenue: $9,216 per year
Additional Subsidy: $210,835 per year
Ridership: 48 per day; 12,288 per year

Figure 36: Proposed Route 63, Brambleton Circulator



New Route 41, Purcellville – Brunswick MARC Station

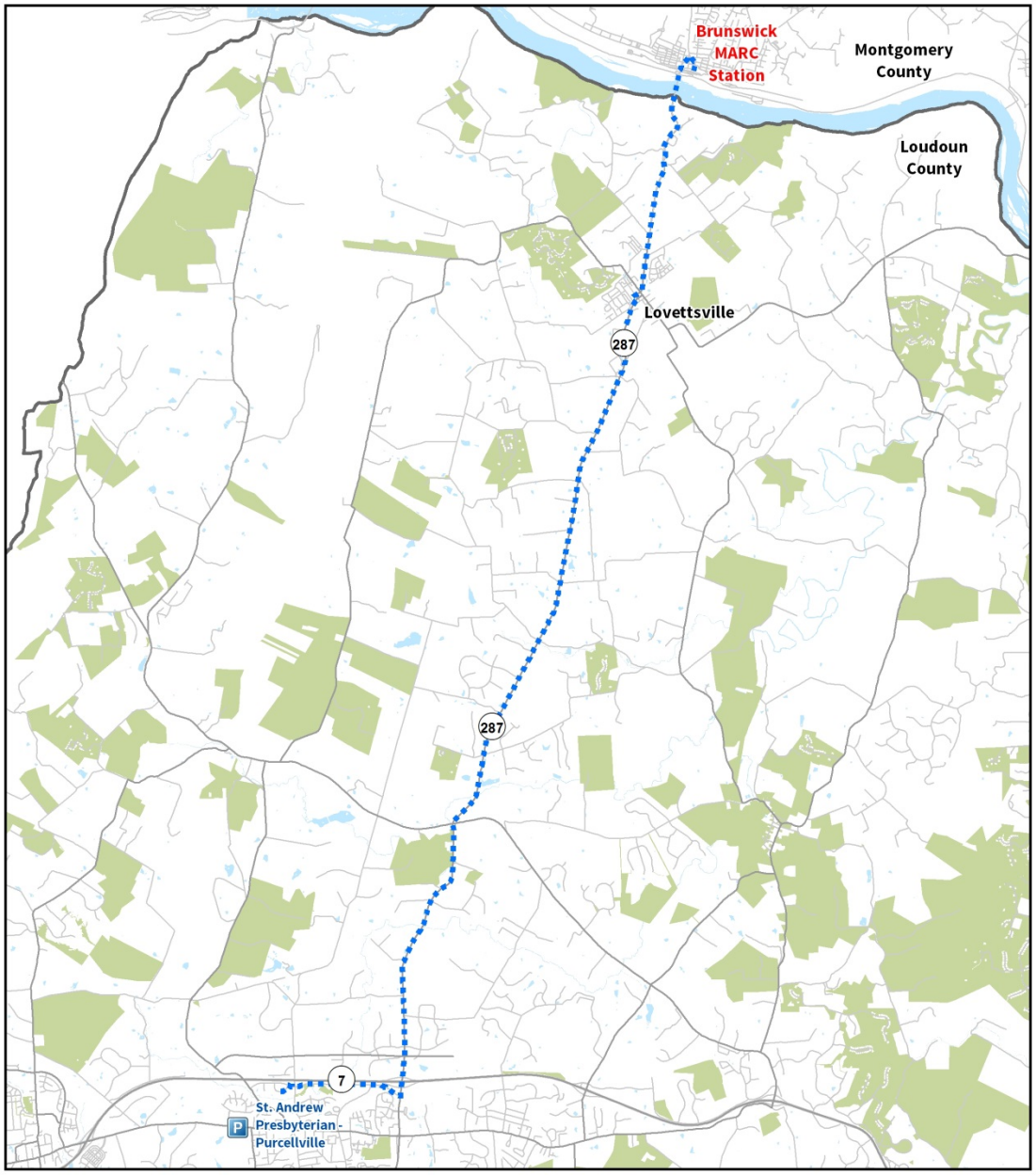
This new route would operate during peak periods between a park and ride lot in Purcellville and the MARC commuter rail station in Brunswick, Maryland via Lovettsville (see Figure 36). The towns of Purcellville and Lovettsville have both indicated their support for this route. The one-way trip distance is 14 miles and the one-way travel time is estimated as 20-25 minutes. The route will meet the MARC eastbound 6:05 and 7:05 AM departures and the westbound 4:51, 5:52, and 7:05 PM arrivals.[8] The service would be operated using small buses, either by LCT or by VRT. The operating cost assumes that the service would be operated at a rate similar to the MV local contract. There are 503 parking spaces in a lot that opened in 2008 at the Point of Rocks MARC station offered free of charge, and the lot is often full. The proposed frequency is 60 minutes and proposed span is 5:30 AM to 7:45 PM.

Capital Cost: $120,000 (one small bus)
Additional Service Hours: 14.25 per day; 3,648 per year
Additional Operating Cost: $261,311 per year
Additional Revenue: $21,504 per year

[8] The route could also meet the last morning eastbound departure at 7:45 AM but only starting from Lovettsville, since there would be insufficient time to make the round trip to Purcellville after meeting the 7:05 AM departure.

Additional Subsidy: $245,183 per year
Ridership: 84 per day; 21,504 per year

Figure 37: Proposed Route 41, Purcellville-Brunswick MARC Station



ADA Paratransit

Add Sunday ADA Paratransit (FY2019)

LCT will add Sunday paratransit service when Sunday service on Routes 70 and 82 begins. One vehicle will be in service for 8 hours.

Capital Cost: $0
Additional Service Hours: 9 per Sunday; 468 per year
Additional Operating Cost: $37,468 per year
Additional Revenue: $1,702 per year
Additional Subsidy: $35,766 per year
Ridership: 18 per Sunday; 936 per year

Summary of Expansion Projects

The chart on the following page summarizes the proposed expansion projects.

Table 23: Summary of Loudoun County Transit Expansion Projects

				Additional		Additional Annual					
FY	**Type**	**Number**	**Route**	**Vehicle Hrs/day**	**Peak Vehicles**	**Riders / Day**	**Riders**	**Operating Cost**	**Fare Revenue**	**Subsidy**	**Capital Cost**
17	LH	South-DC	South (Brambleton, Stone Ridge)	12	2	240	61,440	$423,721	$552,960	-$129,239	0
18	MC	89X	Leesburg East	8	2	72	18,432	$282,481	$18,432	$264,049	$928,530
18	MC	87X	Dulles Town Center	8	2	96	24,576	$282,481	$24,576	$257,905	$928,530
18	MC	921/922	Harmony-Leesburg-Purcellville	9	2	72	18,432	$317,791	$18,432	$299,359	$928,530
18	MC	88X	Dulles South	9	2	96	24,576	$317,791	$24,576	$293,215	$928,530
18	Local	82	Sterling Connector	15	1	90	23,040	$254,312	$17,280	$237,032	$120,000
19	Local	70X	Leesburg-Sterling Express	4	1	40	10,240	$70,529	$7,680	$62,849	$120,000
19	Local	70	Leesburg-Sterling Sunday	18	0	144	7,488	$64,468	$5,616	$58,852	0
19	Local	82	Sterling Connector Sunday	9	0	63	3,276	$32,234	$2,457	$29,777	0
19	Local	ADA	ADA Sunday	9	0	18	936	$37,468	$1,702	$35,766	0
20	Local	41	Brunswick MARC	14.25	1	84	21,504	$261,311	$16,128	$245,183	$120,000
20	Local	63	Brambleton Circulator	12	1	48	12,288	$220,051	$9,216	$210,835	$120,000

Note: LH=Long Haul, MC=Metro Connection.

Supportive Development Land Use Activities and Relevant Changes in Land Use Policy

The county has implemented land use policies to complement the planned Metrorail stations. The areas adjacent to the stations are zoned as Planned Development – Transit Related Employment Center or Transit Related Center. These designations require street grids, sidewalks, bike facilities, mixed uses, pedestrian amenities, and permit relaxed parking requirements.

The Loudoun County Zoning Code requires the inclusion of bus stops in three types of Planned Development zones: Transit Related Employment Center, Transit Related Center, and Active Adult/Age Restricted. Transportation Services will work with Loudoun County Planning and Zoning Department to consider zoning code revisions so that residential and commercial developments above particular size thresholds will be required to:

- Identify an existing, rerouting, or new bus route that will serve the proposed project.
- Identify the locations of the stops on this route.
- Identify the walking paths of travel from residences or from the entries to commercial buildings to the bus stop, including safe street crossings.

If these code revisions are adopted, the County will develop appropriate guidelines to implement these standards, including details about street widths and corner radii needed to accommodate buses, the need for a continuous bus path of travel through a development, and bus stop accessibility and design standards.

Chapter 5: Operations Plan

This chapter describes the fixed route and demand response services that Loudoun County Transit will provide over the FY2017-FY2022 TDP period. The chapter provides operating cost estimates for the service expansion recommendations discussed in Chapter 4 plus the existing service, including projects, detailed below, to improve service efficiency, adjust fares, and restructure underperforming routes. The projects are defined sufficiently to estimate peak vehicle requirements and operating costs. Additional details will be needed as these improvements progress towards implementation, and implementation dates may change. The cost of providing the services described in this chapter are based on the revenues that are reasonably expected, as detailed in Chapter 7.

Most of the planned transit service changes can be grouped into the following types of changes:

- Adding Metro Connection service to the new park and rides that are planned to open during this period (described in Chapter 4).
- Adding a new Metro Connection service to MARC in Brunswick, Maryland (in Chapter 4)
- Improving existing routes by increasing frequency or adding weekend service (also described in Chapter 4).
- Reducing or eliminating service that is not currently meeting performance standards;
- Reducing the fares of local buses (e.g. by offering a day pass) to boost ridership.
- Raising fares on Long Haul service to increase cost recovery.
- Restructuring underperforming routes.
- Making ADA paratransit more convenient to schedule and use.

Modes and Types of Transit Services

Metrorail

The second phase of the Metrorail Silver Line project, scheduled for completion in FY2020, includes the construction of three stations within the County:

Loudoun Gateway (Route 606)
This end-of-the-line station will have parking garages on both the north and south sides and bus bays on both sides. The parking garage will replace the existing Loudoun Station surface park and ride lot. Several Metro Connection and local bus routes will be redirected here instead of Wiehle-Reston East station.

Ashburn (Route 772)
This station will have a parking garage and bus bays on the north side only. The existing Dulles North Transportation Center surface lot is located adjacent to this site

Dulles Airport Station
No bus service from Loudoun connecting to the Airport Station is currently planned, and there will be no commuter parking. This station is not discussed further in this TDP.

Long Haul

LCT provides express commuter service from park and ride lots in Purcellville, Hamilton, Leesburg, Ashburn, Brambleton, and Stone Ridge to Arlington and downtown DC. Approximately 48 vehicles are needed to provide this service. ADA paratransit is not required for express, peak-period commuter service. The county policy is to provide connections from park and ride lots to adjacent sidewalks in suburban areas and also to provide bus shelters and bike racks at park and rides. The commuter service does not stop at on-street bus stops in the county.

Metro Connection

LCT provides express commuter service from park and ride lots in Purcellville, Hamilton, Leesburg, Ashburn, Brambleton, and South Riding to Wiehle-Reston East Metrorail station, and also from park and ride lots in Potomac Falls to West Falls Church Metrorail station. Approximately 12 vehicles are required to operate this service. In addition, two smaller vehicles are used to provide reverse commute service between Wiehle-Reston East and business in Loudoun (these are designated as "shuttle" vehicles.) As with the Long Haul service, ADA paratransit is not required and the routes generally serve park and ride lots, not on-street stops, in the county.

Local Bus

As described in Chapter 3, local bus is operated under contract to a vendor (currently MV Transportation) using a fleet of small buses owned and maintained by the vendor. There are four routes within Leesburg (Routes 54, 55, 56, and 57) and the remainder of the routes are in Eastern Loudoun, except that there is also one route serving Purcellville and Hamilton that is operated by VRT.

Metrorail Service Changes

There is currently no Metrorail service in the county. As described in Chapter 4, Metrorail Silver Line service will open in the county in FY2020.

Long Haul Service Changes

One service expansion project for Long Haul service was described in Chapter 4: in FY2017, it is proposed to add four trips per day to serve the expanded Dulles South (Stone Ridge) Park and Ride, routed via the East Gate Park and Ride, which would for the first time then have Long Haul service direct to DC. This service will require two additional 45-ft coaches, which will be redeployed from their current Metro Connection service when additional 40-ft transit buses are placed in service. In addition to this one expansion project, the following fare and service adjustments are proposed for Long Haul service:

Improve the Long Haul Public Schedules

The Long Haul service will become easier to understand by creating separate West, South, North, DNTC route names that would serve the following park and rides:

- West – Purcellville, Harmony, Leesburg
- North – Telos, CFC, Ashburn North
- South – Brambleton, Dulles South, East Gate
- DNTC – DNTC (schedule to include trips that also serve park and rides).

The following items will be added to the public schedules (both print and electronic versions):

- Add the Harmony-Leesburg Metro Connection trips to the West schedule;
- Add Ashburn North (Route 72) and Telos (Route 89X) trips to the North schedule;
- Add evening Metro Connection trips to the DNTC schedule.

Increase Long Haul Fares as Planned (FY2017 & FY2019)

Loudoun County Transit will increase the fares on Long Haul bus routes to the point that they cover 100% of the operating costs, including the cost of the vehicle replacement fund and park and ride leases. It is anticipated that this will required an increase from the current $8.00 one-way to $9.00 in FY2017 and $10 in FY2019.

Adjust Long Haul Trips so that Fewer Serve Both the East and West Loops (FY2017)

There are many Long Haul bus stops in Arlington and DC, although none of the scheduled trips make all stops. There are many different trips patterns that have evolved over time. In the District, most stops are either on the "West Loop" or the "East Loop." (There are also a few stops further south.) Most inbound (AM) trips serve the East Loop only after first serving the West Loop; most outbound (PM) trips serve the East Loop and then travel the entire West Loop before leaving the District. Currently there are only a handful of trips that serve the East Loop but not the West Loop or Arlington, as listed in the table below.

Table 24: Long Haul Trips Serving only East Loop

Loudoun Region Served	AM	PM
Dulles North and South	204E, 251E	703, 705
Leesburg and Western Loudoun	None	805

As can be seen from Table 25, trips 703 and 705 save about 15 minutes of scheduled travel time compared to the trips that make all the stops on the West Loop (704 and 706). Riders prefer the 703 and 705 compared to the other two, even though they have similar departure times, based on the much higher average occupancy. Increasing the number of trips that serve the East Loop and not the West would obviously benefit those on the East Loop, but it could also benefit riders on the West Loop because the buses that serve that route would start empty, and thus would be more likely to have space for those boarding at the last stops of the route. There would also be a benefit to those boarding late in the East Loop who currently must stand (or wait for the next bus). Therefore LCT will study adding more East Loop-only trips into the schedule, possibly a single trip at a time, by converting some trips that serve both East and West. The occupancy of the new trips, as well as the other trips, will be monitored to see if the change has the desired effect of better distributing passenger loads and reducing travel times.

Table 25: Travel Time and Occupancy on Selected PM Runs to Dulles North

Run Number	Leave Independence & 12th	Arrive Dulles North	Scheduled Travel Time	May 2015 Average Occupancy	May Trips with Standees (out of 20)
703	4:03	4:48	0:45	92%	11
704	4:14	5:11	0:57	61%	2
705	4:42	5:27	0:45	90%	6
706	4:54	5:53	0:59	66%	2

Adjust Long Haul Schedules to Reduce Crowding (FY2017)

There are a number of Long Haul trips that consistently have excess capacity, averaging under 50% occupancy. At the same time, there are a number of trips that consistently are overcrowded, averaging more than 90% occupancy. When a trip averages more than 90% occupancy over the course of the month, there is a high chance that a specific day's trip will have no seats left, thus forcing some passengers to stand or to wait for the next bus. If possible, the schedule will be adjusted to move resources from the under-used trips to the overcapacity trips. The easiest, but most costly way to improve the condition of the overcrowded trips is to add more service. However, it may be possible to reallocate some of the resources in the underused trips by modifying the schedule. In addition, as noted, the few trips that serve the East Loop only are all very crowded, and therefore providing more service that serves only the East Loop might alleviate that problem. There are limitations on what can be readily changed because some earlier Long Haul trips cycle back to become later trips. There are also other aspects of the schedule that are interdependent. Nevertheless, there are opportunities to redeploy resources in a way that would improve service.

Adjust Long Haul Service after Silver Line Phase 2 Opening (FY2020)

Long Haul ridership is likely to decline due to the planned fare increases and the diversion of passengers to the new Metrorail stations. After the opening of Silver Line Phase 2, Long Haul routes may no longer be able to use the largest park and ride lot in the system, the Dulles North Transit Center, with 750 spaces, which is owned by the Metropolitan Washington Airports Authority and managed by VDOT. If DNTC continues to be available for Long Haul bus service, LCT will:

- Install an integrated parking and fare payment system that will enable bus riders to pay the parking fee with SmarTrip (or its replacement fare system), and then be credited for some or all of the parking fee upon payment of the bus fare.
- Purchase the nine buses currently leased from Transdev.

If the DNTC is no longer available for Long Haul service after the Silver Line stations open, LCT will:

- Stop leasing the nine buses from Transdev;
- Reroute long-haul trips from DNTC to park and ride lots that currently have excess capacity or will be opened over the next few years: Telos (or Leesburg East if open), Dulles Town Center, East Gate, Ashburn North, Dulles South 1 & 2, and One Loudoun.

In either case, LCT will monitor bus ridership and reduce service as riders shift to Metrorail.

Summary of Long Haul Service

A summary of Long Haul service changes is shown in the following table.

Table 26: Summary of Long Haul Service Changes

Route Number	Route Name	Service Change	Existing Service Hrs/Day	Proposed Service Hrs/Day	Existing Peak Vehicles	Proposed Peak Vehicles	Change in Boardings / Day
South-DC	South (Brambleton, Stone Ridge)	Add 4 Long Haul trips to serve expanded Stone Ridge PnR, routed via Eastgate P&R*	45.7	57.7	13	15	240
West-DC	West (Purcellville, Hamilton, Leesburg)	Fewer late evening buses to Purcellville; show Metro Connection trips on schedule*	77.4	75.4	21	21	0
North-DC	North (CFC, Ashburn North, Telos)	Show Metro Connection & Local routes that serve the same PnRs on the schedule*	40.1	40.1	9	9	0
DNTC	DNTC only	No changes	15.7	15.7	5	5	0
TOTAL			178.9	188.9	48	50	240

Proposed Metro Connection Service Adjustments

In addition to the Metro Connection service expansion projects listed in Chapter 4, the following adjustments in Metro Connection service are planned during the TDP period:

Restructure Routes 72 and 89X (FY2017)

The Inova portion of Route 72 will be moved to Route 89X, which will continue to serve Telos and to use Claiborne Parkway to reach the Dulles Greenway (see Figure 37 and Figure 38).

- Service on Route 89X will be provided on a 40 minute headway using two buses between 5 AM and 9 AM and between 4 PM and 8 PM for a total of 16 service hours per day.
- Route 72 will continue to serve One Loudoun and Ashburn North, and will use the extension of Russell Branch Parkway to Route 28 when that road construction project is complete. The reduction in running time for Route 72 will be used to improve increase the number of trips. The net effect of the shorter route and more frequent service will be a reduction of two service hours per day. In addition, LCT will in consultation with GWU study the possibility of using reverse peak service on the Potomac Falls Metro Connection route to provide service to and from West Falls Church to GWU that could more efficiently substitute for Route 72 in the peak period.

Figure 38: Restructuring of Route 72

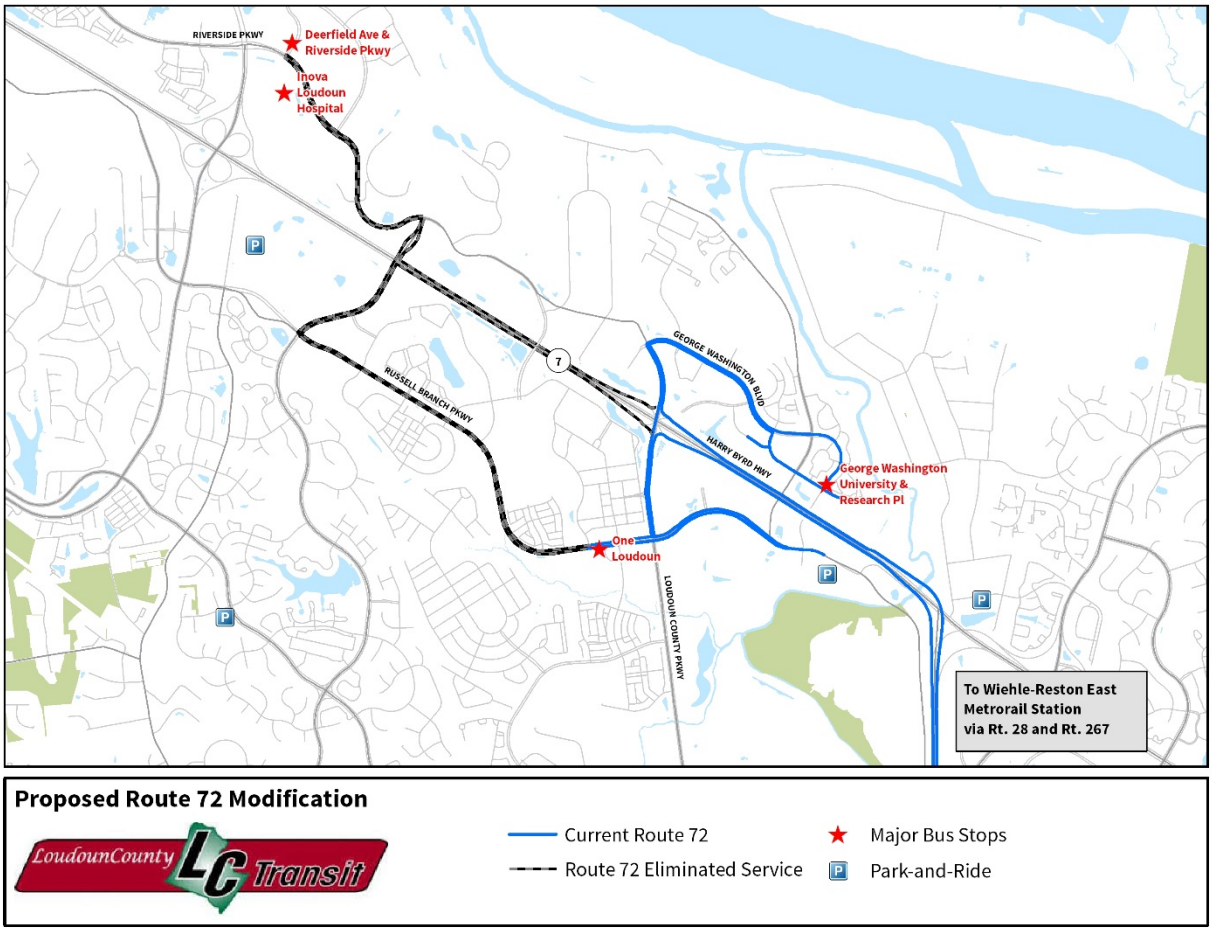
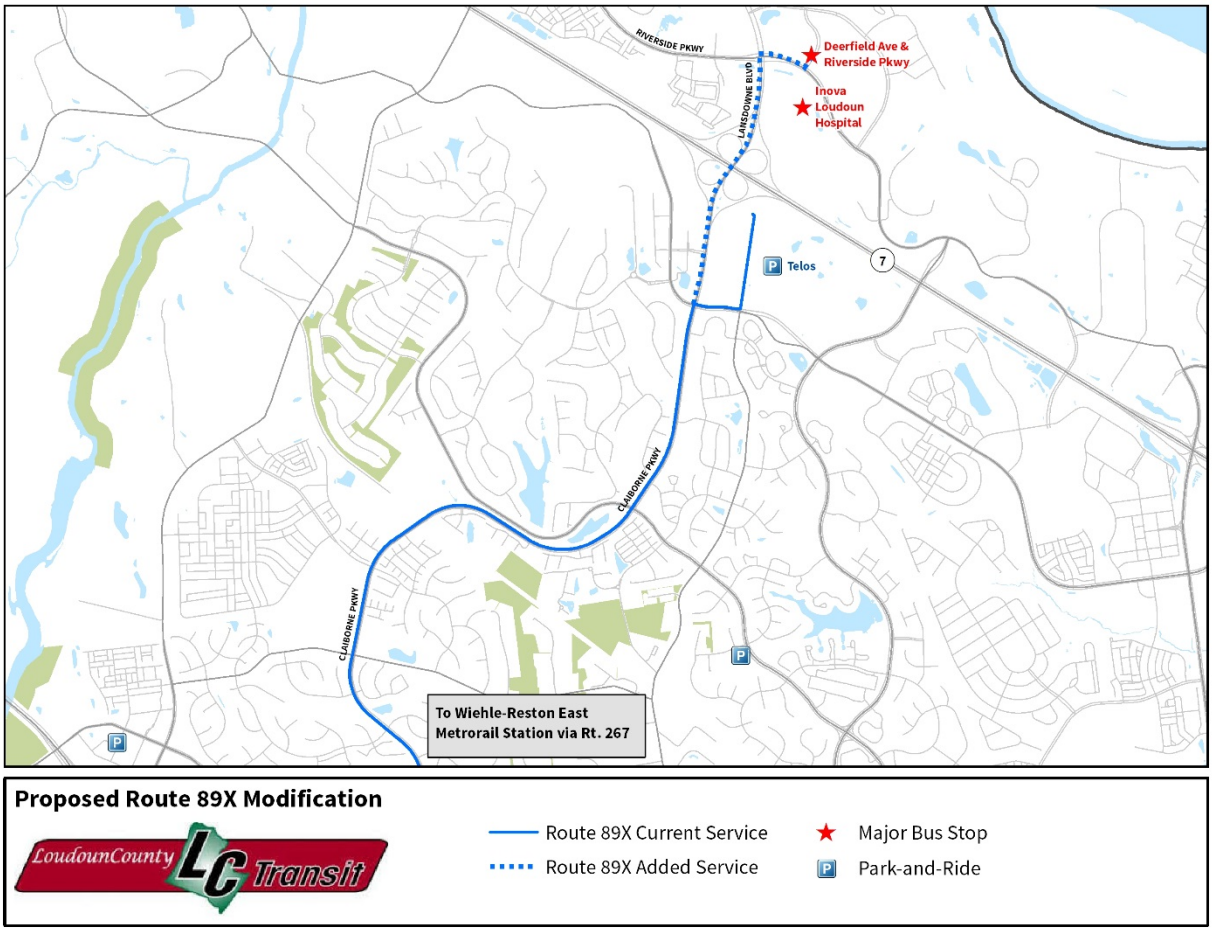


Figure 39: Restructuring of Route 89X



Trim Silver Line Metro Connection Service (FY2017)

Based on the analysis in Chapter 3, LCT will revise the Metro Connection schedules to improve efficiency by eliminating trips that average 15% or lower occupancy, which tend to be the earliest and latest trips of the morning and evening. The remaining trips can be readjusted so that the span of service is not reduced as much. After 6:30 pm, some trips can be consolidated so that they serve more than one park and ride (as already happens with trips 7:45 pm and later). These evening trips can bypass park and rides if there is no one on board wishing to exit at that stop.

Replace Designated Reverse Commute Buses with Trips on Other Routes (FY2017)

The current reverse commute trips have the lowest productivity of any Metro Connection service. LCT will replace the existing designated trips with reverse peak trips on other routes. Specifically:

- The existing five morning and five evening trips to serve Verizon, AOL, and Raytheon will be served by reverse-commute trips on Route 87X. This will require adding about 10 minutes to the 87X cycle time and slightly extending the existing 87X headways, which are currently 20 minutes.
- The existing single morning and single evening trip serving Loudoun County Government Center will be replaced with reverse-peak service on Route 921/922 Metro Connection – Leesburg-Harmony.

This may require a slight increase in running time and a small increase in the headway for trips that serve Loudoun County Government Center (currently averaging 45 minutes).

These changes are not expected to add any total service hours to the existing routes 87X and 921/922.

Switch East Gate and Dulles Town Center Routes to Commuter Contract (FY2017)

When the four new transit buses for these services (routes 87X and 88X) are delivered in April 2016, these routes will be switched from the local contract (currently held by MV Transportation) to the commuter contract (currently held by Transdev). This will result in an increase in operating costs based on the rate differential between the two contracts. Saturday service on route 87X will remain as part of the local contract.

Renegotiate Metro Connection Contract Rate

The Metro Connection service, which was only started and expanded in the last few years, is provided under the Commuter Contract, with a contractual rate based on the cost of Long Haul service, where the contract rate accounts for significant dead head time between trips. However, unlike Long Haul service, Metro Connection buses stay in service between trips and thus the share of dead head time is far lower. Despite this difference, the rate pad. The current Commuter contract rate is twice the current Local contract rate, even though the contractor provides the buses for local service but not for commuter service. LCT will seek a lower rate for Metro Connection service based on the difference in operating costs compared to Long Haul service. This differential will become more significant as Metro Connection service is expanded under the terms of this TDP.

Adjust Metro Connection Service with Silver Line Phase 2 (FY2020)

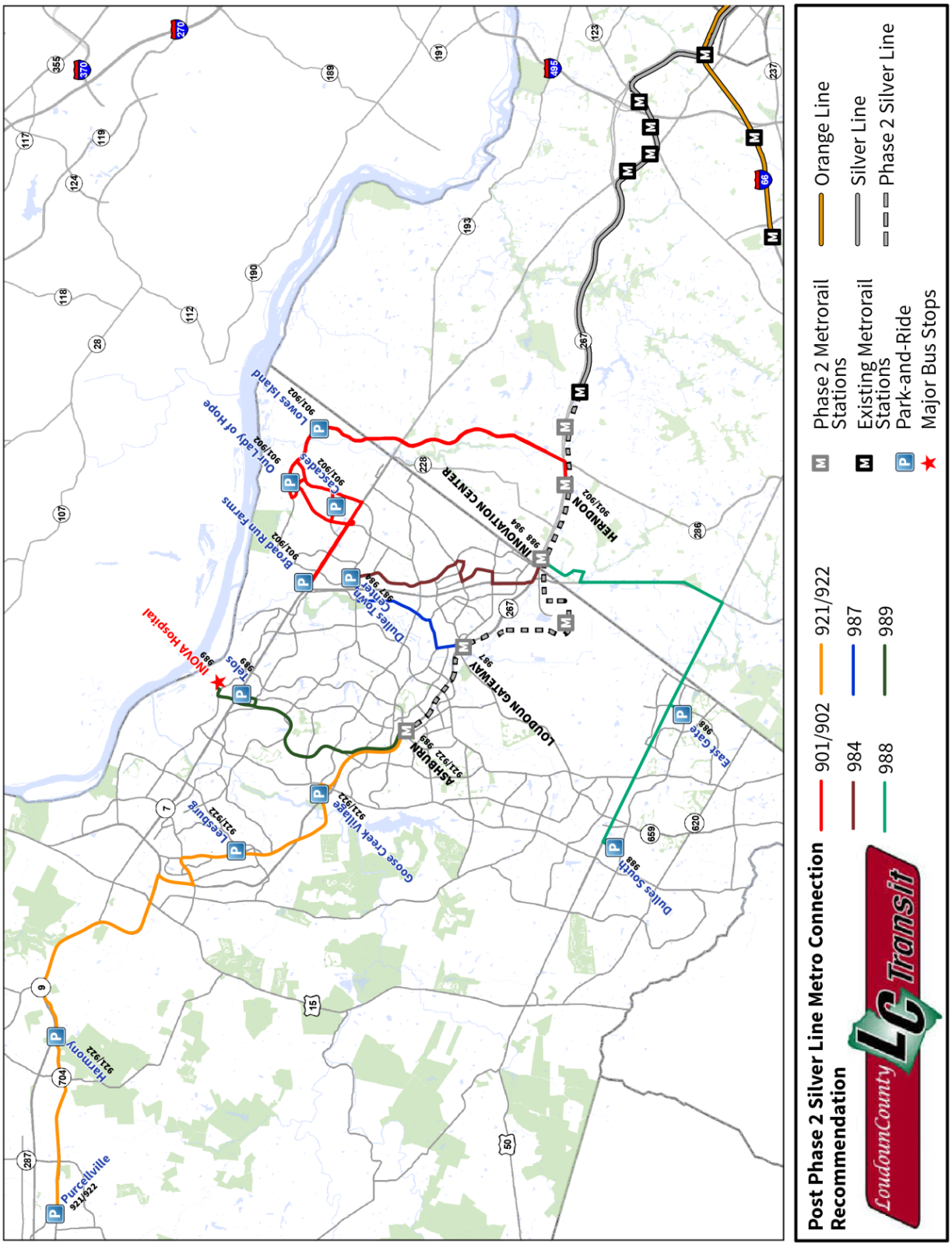
After Silver Line Phase 2 opens, Metro Connection service to Loudoun Station and Broadlands, adjacent to the planned Ashburn Metrorail station, will be eliminated, leading to the elimination of existing routes 923/924 and 925/926. However service to Goose Creek Village, currently part of the 923/924, and late evening trips, currently part of the 925/926, will be retained as part of the 921/922. The remaining existing routes will be redirected to one of the new stations as shown in Table 27. Travel time savings of up to 20 minutes per round trip are expected due to the shortened distance. The savings will be used to expand increase frequency for routes 901/902 and 88X and to add midday service for routes 921/922 and 89X. (Route 88X will already have midday service, and route 87X already has midday service operating as route 83/84). The planned service to be implemented in conjunction with the Silver Line Phase 2 opening is shown in Figure 39.

Table 27: Metrorail Connection Service for Silver Line Phase 2

Route #	Route Name	Metro-rail	Service Change	Park and Rides Served
901/902	Potomac Falls	Herndon	Improve headway to 10-20 min.	Broad Run Farms, Cascades, Our Lady of Hope, Lowes Island
921/922	Harmony, Leesburg, Purcellville	Ashburn	Improve peak headway to 20-30 min. Add Goose Creek Village. Add midday service every 90 min.	Goose Creek Village, Harmony, Leesburg, Purcellville
923/924	Goose Creek Village, Broadlands	n/a	Eliminate. (Service to Goose Creek Village added to 921/922).	n/a
925/926	Loudoun Station	n/a	Eliminate. Late evening trips will become part of 921/922 service.	n/a
87X	Dulles Town Center	Loudoun Gateway	Maintain span and frequency.	Dulles Town Center (Mall and Park and Ride)
88X	Dulles South & East Gate	Innov-ation Center	Improve peak headway to 15 min. Maintain 90 min midday headway.	East Gate, Dulles South
89X	Leesburg East	Ashburn	Add midday service every 90 min.	Leesburg East

.

Figure 40: Proposed Metro Connection Routes For Phase 2 Silver Line Completion



The Metro Connection service changes described above are summarized in Table 28 and the Metro Connection expansion projects described in Chapter 4 are summarized in the Table 29

Table 28: Summary of Metro Connection Service Adjustments, FY2017

Route Number	Route Name	Service Change	Existing Service Hrs/Day	Proposed Service Hrs/Day	Existing Peak Vehicles	Proposed Peak Vehicles	Change in Board-ings
901/902	Potomac Falls	Eliminate 5:05 AM, 9:00 AM, 4:10 PM, and 7:55 PM trips. Spread out remaining trips.	24.8	22.8	3	3	0
921/922	Harmony & Leesburg	Eliminate 4:46 AM, 5:30 AM, and 3:15 PM trips. The 6:45 PM trip will serve GCV by request (maybe start 5-10 min earlier). Add reverse peak trips to Loudoun Gov't Center.	15.1	14.1	2	2	0
923/924	Goose Creek Village & Broadlands	Eliminate 5:05 AM, 5:30 AM, 3:25 PM, 3:50 PM, 4:19 PM, and 6:32 PM trips. Trips 6:25 and later will be available on request via Loudoun Station route	13.3	11.3	2	2	0
925/926	Loudoun Station	Replace 4:40 AM & 5:17 AM trips with a 5:00 AM trip; Replace 3:30 PM & 3:55 PM trips with a 3:45 PM trip; Eliminate 8:40 PM trip. Trips 6:25 PM and later will stop at Broadlands by request.	20.0	18.0	3	3	0
990/991	Reverse Commute	Eliminate.	9.7	0	2	0	0
87X	Dulles Town Center	Change in operator. Reverse peak trips to serve Verizon, AOL, Raytheon	15.23	15.23	2	2	0
88X	East Gate	Change in operator only	16.2	16.2	2	2	0

Table 29: Summary of Metro Connection Expansion Projects

Route Number	Route Name	Service Change	Existing Service Hrs/Day	Proposed Service Hrs/Day	Existing Peak Vehicles	Proposed Peak Vehicles	Change in Boardings	Year
921/922	Harmony-Leesburg-Purcellville	Add 2 buses (4 hrs/day/bus) to Purcellville P&R	14.1	23.1	2	4	80	2018
87X	Dulles Town Center	Add 2 buses (4 hrs/day/bus) and add trips to new One Loudoun P&R	15.23	23.23	2	4	80	2018
88X	Dulles South	Add 2 buses (4/hrs/day/bus) to add service to Stone Ridge via East Gate	16.2	25.2	2	4	80	2018
89X	Leesburg East	to Telos and to new Leesburg East P&R	20	28	2	2	80	2018

Local Bus Service Changes

In addition to the local bus service expansion projects described in Chapter 4, the following fare and service adjustments are proposed:

Reduce Fares on Routes 83, 84, and 72 to $1 (FY2017)

Currently, there is a disparity in the price of some routes serving Metrorail Wiehle-Reston East station. The local bus and Metro Connection fare is generally $1 per trip. However, three routes: Route 72, Route 83 and Route 84 charge a $2 fare because they are local services that connect to the Metro. The other routes that serve Wiehle-Reston East station—Routes 87X, 88X, 89X, and all the Metro Connection routes except Potomac Falls—have a $1 fare. Therefore the fares on routes 83, 84, and 72 will be reduced to $1.00 as of July 2016. Although this fare cut will reduce passenger revenues, they represent only about 5% of operating costs on these routes and thus the change will not have much impact on the operating budget. In addition, GWU currently pays for a significant share of Route 72 service (and in exchange GWU students may use the route for free).

Offer a Transfer or Day Pass (FY2017)

The LCT local bus system is designed to encourage transfers at several hubs. However, there are no discounts offered for those who need to make a transfer. Thus a short trip involving a transfer between two bus routes within Leesburg, for example, is priced at $4 round trip while a 20 mile roundtrip on Route 70 is priced at only $2. Before the 2013 fare increase from $0.50 to $1.00, tokens were offered for free transfers between routes. LCT will either revive the transfer or offer a day pass. Day passes are less likely to be resold, since riders need to hold them until they make the last trip of the day. Even without a farebox, punch card day passes could be implemented by printing the days, months, and years of potential validity. On first boarding, the bus driver would make three punches for the day, month, and year. Day passes will be sold on board buses to make them universally available. However, there will be careful controls to prevent operators from illegally distributing them.

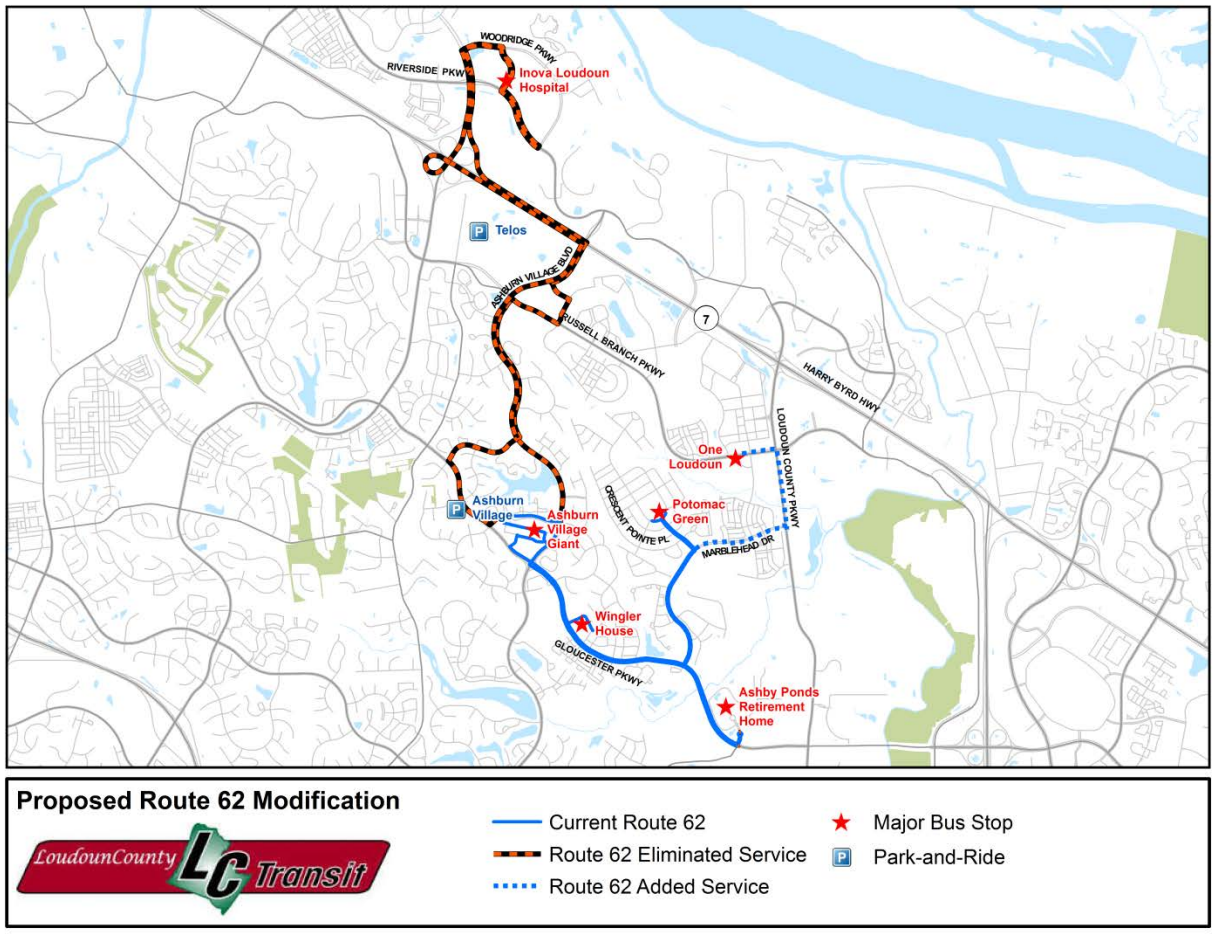
Develop a U-Pass Program

LCT will suggest to George Washington University expanding free rides for GWU students to all LCT local bus routes including Metro Connection (but not Long Haul routes) in exchange for a slightly higher contractual payment from GWU. LCT will also propose a similar U-Pass program to Northern Virginia Community College (NVCC). LCT could offer to bill GWU and NVCC for actual usage at a predetermined price per boarding, with a cap on the total amount.

Restructure Route 62

Route 62 has low productivity. LCT will convert it into a compact circulator south of Route 7 serving the following stops: Giant at Ashburn Village, Wingler House, Ashby Ponds, Potomac Green, and One Loudoun (see Figure 40). With the completion of the segment of Gloucester Parkway between Loudoun County Parkway and Nokes Boulevard, the route could be extended to Dulles Town Center. This restructured route will continue to use one bus 12 hours per day, and will operate on a headway of 50 minutes.

Figure 41: Proposed Restructuring of Route 62



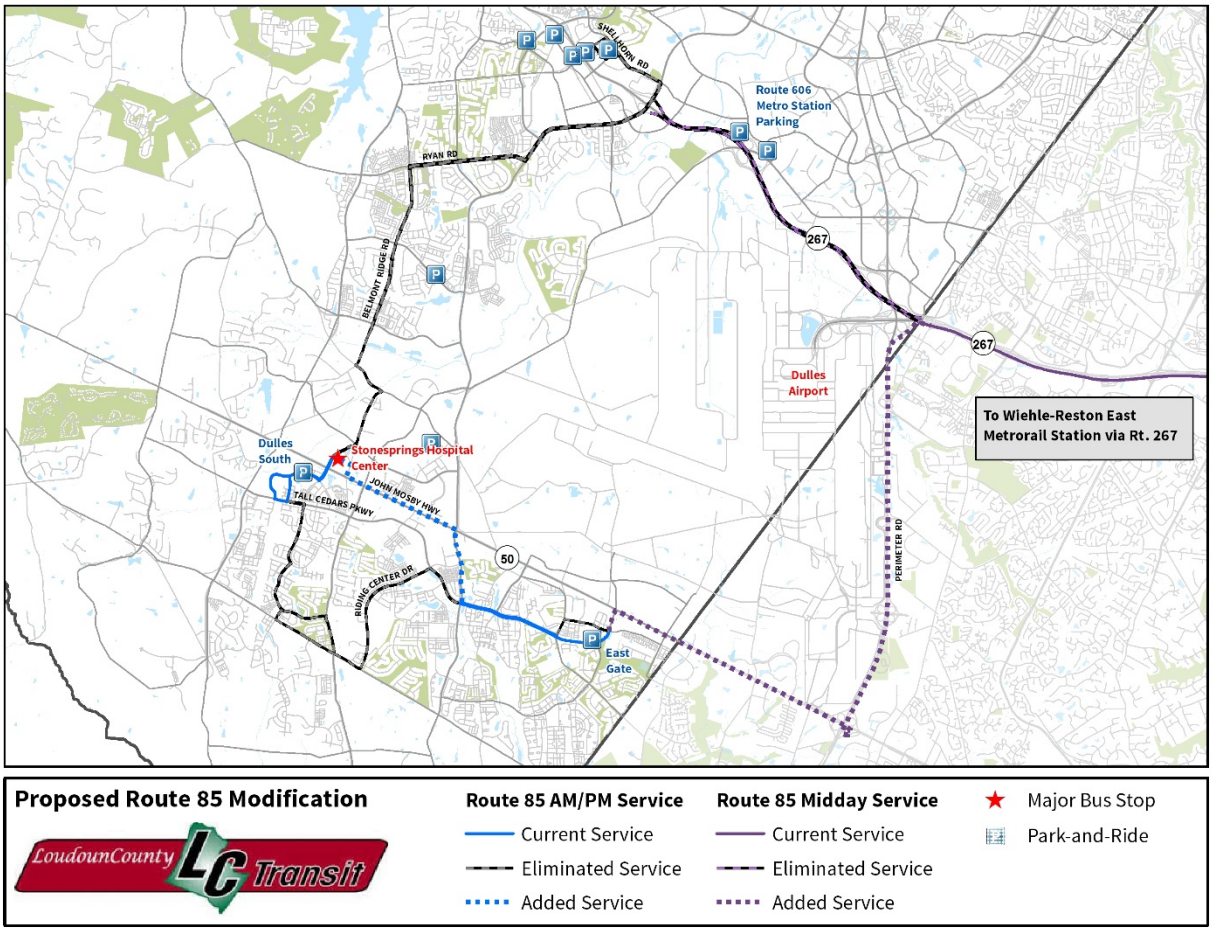
Restructure Route 85

Route 85 has very low productivity. LCT will restructure the route into a shorter circulator that will serve the following destinations:

- Dulles South Park and Ride
- HCA Hospital, Gum Springs
- Walmart (Route 50 and Route 606)

The proposed revised route is shown in Figure 41. The service will operate with one bus 12 hours per day instead of the current three buses. The proposed frequency is 40 in the peak and the midday, with a span of service from 7:00 AM to 7:00 PM. This route will be combined with the Metro Connection 88X route in FY2018.

Figure 42: Proposed Restructuring of Route 85



Adjust Route 82 Saturday Schedule (FY2017)

Adjust the Route 82 Saturday schedule to permit convenient transfers with Route 70. This will have no operating cost impact.

Reduce Saturday 87X Service (FY2017)

Saturday service on route 87X began in August 2015, and the existing boardings do not merit the resources used. Therefore, the headway will be lengthened from 20 minutes to 45 minutes, requiring no more than one vehicle.

Flex Evening Service on Routes 70 and 82 (FY2017)

The 7 to 10 pm service on these routes would flex within ¾ of a mile of the route for riders eligible for ADA paratransit services, with advance reservation. This change would mean that the existing evening ADA Paratransit vehicle would no longer be needed (see ADA Paratransit section).

Eliminate Route 86, Ashburn Link (FY2018)

This route provides a shuttle service to the Dulles North Transit Center. Due to very low ridership and not serving transit-dependent riders, LCT will eliminate this route and redeploy the resources.

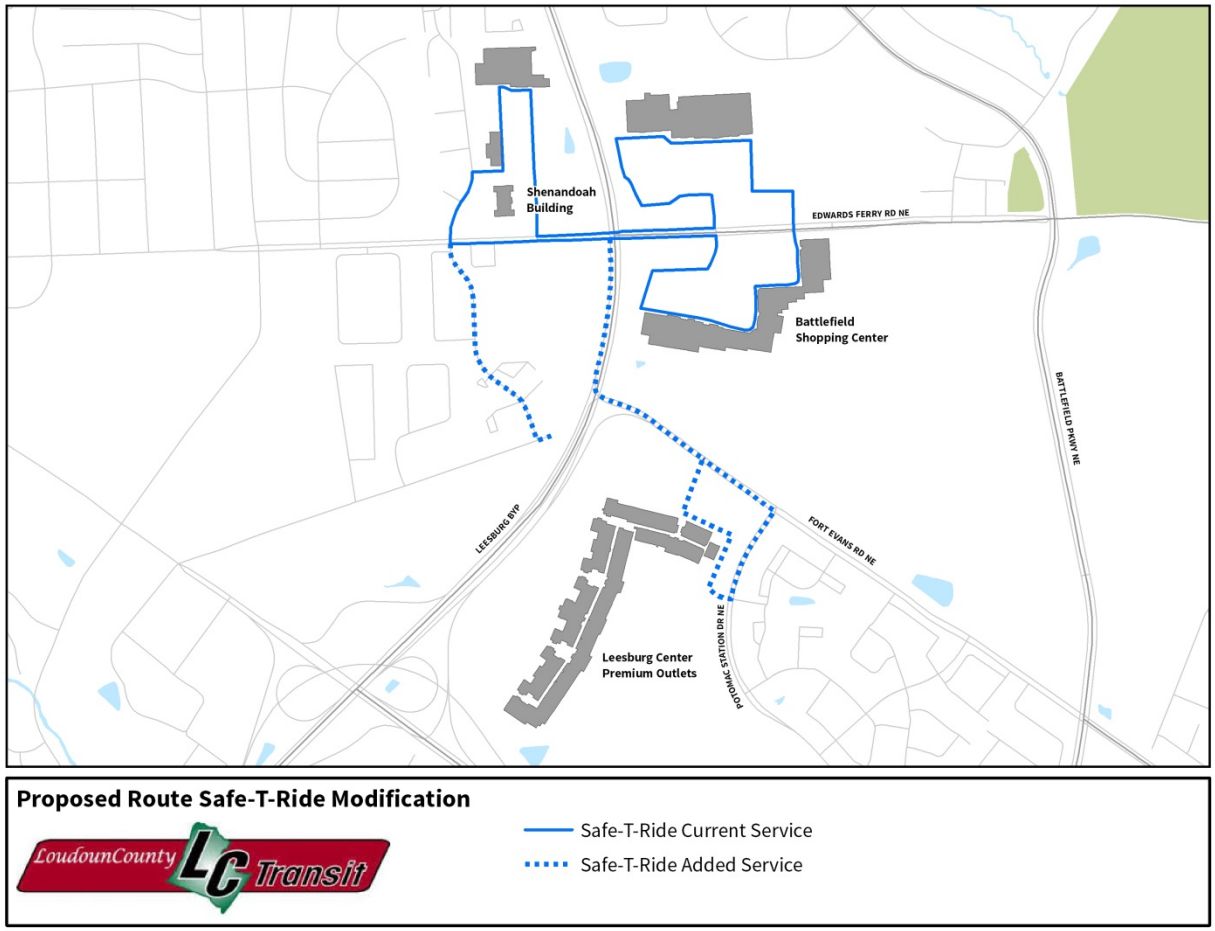
Restructure Routes 83 and 84 (FY2018)

Route 83 (Pacific) has very low productivity. Ridechecks show that most Route 83 riders travel the whole distance between Dulles Town Center and Wiehle-Reston East, and thus could alternatively use Routes 84 or 87X. Routes 83 and 84 will be combined into a single route with two variations (as had been previously operated). Trips will be alternated between Atlantic and Pacific Boulevards, providing a 120 minute headway on each of the two branches, and a combined 60 minute headway for service between Dulles Town Center and Metrorail (with additional service in the peak via Route 87X).

Route 54, Safe-T-Ride Extension (FY2017)

The Safe-T-Ride free shuttle route will be extended along Heritage Way and on the other end of the route to Leesburg Premium Outlets as shown in Figure 42. These additions will restore a portion of the route that was eliminated in 2014. In order to accommodate the additional route distance, the headway will be lengthened. The change will not affect route operating hours or operating costs.

Figure 43: Proposed Route 54, Safe-T-Ride Modification



Leesburg Route Adjustments (FY2018)

Route 56 is moderately productive and Route 55 currently has low productivity. The proposed day pass or transfer may help increase ridership on both these routes. LCT will study ways to adjust these two routes to improve productivity. If there is additional time in the schedule for some of these routes, LCT will consider offering deviation service by prior request. All changes to Leesburg routes will be reviewed and approved by the Town of Leesburg prior to implementation. These changes are not planned to affect service hours and therefore will have no impact on the operating budget.

The changes to local bus routes are summarized in the following tables.

Table 30: Weekday Local Bus Service Planned for 2016-2019

Route #	Route Name	Service Change	Existing Vehicle Hrs/Day	Proposed Vehicle Hrs/Day	Existing Vehicles	Proposed Vehicles	Implement-ation FY
40	Purcellville Connector	no changes	12	12	1	1	n/a
54	Safe-T-Ride	Extend on both ends, reduce frequency.	12	12	1	1	2017
55	Exeter/ Tuscarora	Restructure	11.87	11.87	1	1	2018
56	Rust Library/ County Complex	Restructure northern part	12	12	1	1	2018
57	Village at Leesburg		12	12	1	1	n/a
62	Ashburn Connector	Restructure	12	12	1	1	2017
70	Leesburg-Sterling	Flex service 7 PM onward (so no separate ADA bus).	54	54	4	4	2017
70X	Leesburg-Sterling Express	Express between Dulles Town Center & Govt Center	0	4	0	1	2019
72	GWU-Wiehle	Remove Inova Hospital. Improve frequency.	28.37	26	3	3	2017
80	Sugarland Run Connector	No changes	12	12	1	1	n/a
81	Countryside Connector	No changes	11.95	11.95	1	1	n/a
82	Sterling Connector	add bus, double frequency; Evening service: flex for ADA eligible.	15	30	1	2	2017 (eve flex); 2018
83/84	Pacific/ Atlantic Connector	Alternate trips between the 83 and 84 variants using 1 bus, reducing frequency to 120 min for each route, 60 min combined.	25.07	13.17	2	1	2018
85	Dulles South Connector	Shorten and increase frequency.	21.32	12	2	1	2017
86	Ashburn Link	Eliminate due to low ridership	9.05	0	1	0	2018

Table 31: Saturday Local Bus Service Planned for 2016-2019

Route Number	Route Name	Service Change	Existing Vehicle Hrs/Wk	Proposed Vehicle Hrs/Wk	FY of Change
54	Safe-T-Ride	Extend on both ends, reduce frequency.	9	9	2016
57	Village at Leesburg	No changes	11	11	n/a
70	7 on 7	No changes	26.7	26.7	n/a
82	Sterling Connector	Schedule change: shift all times ahead by 9 min to match Rt 70 at Dulles Town Center	13.78	13.78	2017
87X	Dulles Town Center to Wiehle	Reduce Sat svc to 1 bus 40 min headway	26	13	2017
TOTAL SATURDAY			86.48	73.48	

Table 32: Sunday Local Bus Service Planned for 2016-2019

Route Number	Route Name	Service Change	Existing Vehicle Hrs/Wk	Proposed Vehicle Hrs/Wk	FY of Change
54	Safe-T-Ride	Extend on both ends, reduce frequency.	9	9	2016
70	Leesburg-Sterling	Add Sunday service	0	18	2019
82	Sterling Connector	Add Sunday service	0	9	2019
	ADA Sunday	Add service to match hours of 70, 82 & 54	0	9	2019
TOTAL SUNDAY			9	36	

Reroute Local Routes to Serve Silver Line Phase 2 (FY2020)

With the opening of Silver Line stations in Loudoun, the local routes that currently serve Wiehle-Reston East, routes 72 and 83/84, will be rerouted to one of the new stations as shown in the table below. The proposed new Route 63, Brambleton Circulator, as described in Chapter 4, will also provide local service connecting with Metrorail when Phase 2 opens. Midday trips to Loudoun Government Center in Leesburg will be added as part of the 921/922 Leesburg Metro Connection service.

The other proposed local bus change for FY2020 is to add a new route serving the Brunswick MARC Station, as described in Chapter 4.

Table 33: Local Service for Silver Line Phase 2

Route Number	Route Name	Metrorail Station Served	Via	Park and Rides Served
63	Brambleton Circulator	Ashburn	Loudoun County Parkway	Brambleton
72	GWU	Loudoun Gateway	Pacific Blvd	One Loudoun, Ashburn North
83/84	Atlantic / Pacific	Innovation Center	Atlantic & Pacific Blvd	Dulles Town Center

ADA Paratransit

LCT provides ADA paratransit for trips starting or ending within ¾ of a mile of local bus routes for those unable to use fixed-route bus. In addition to providing Sunday ADA service as described in Chapter 4, the following service adjustments are proposed:

Adjust Paratransit Service Deployment

The analysis in Chapter 3 showed that the ADA paratransit bus currently deployed for Southeast Loudoun is not used there. Therefore, it should be made available for service anywhere served by LCT. Also, ADA paratransit use is very low on Saturdays and one vehicle is sufficient to meet the demand. Therefore only one vehicle will be in operation on Saturdays.

Expand ADA Paratransit Service Area

The portion of Loudoun eligible for ADA paratransit service provided by LCT will be expanded to include anywhere within the boundaries of the Town of Leesburg and also any area between the ¾ mile buffer from fixed route service and either the Fairfax County line or the Potomac River. The planned changes to Routes 62 and 85 will also affect the eligibility area.

Study Single Point of Contact

Currently ADA paratransit in Loudoun County is provided either by LCT or by VRT, depending on the origin and destination of the trip. The two providers have different phone numbers and websites and eligibility determinations. LCT will conduct a study to create a single point of contact for both services so that those seeking service need only make either one call or one click.

Evening Flex Route for 70 and 82

Routes 70 and 82 will deviate within ¾ of a mile from their established route by prior reservation from ADA paratransit-eligible customers. This service will replace the existing evening ADA paratransit bus, which is infrequently used.

Study Alternate Service Mechanisms and General Public Demand Response

Currently VRT allows the general public to use its demand-response service in rural areas of the county. Paratransit in the eastern part of the county is only available to those who are not able to use the fixed route service. However, there are times and places where no fixed route service is available, and there are times when there is excess capacity in the existing demand-response fleet. The County will study the

possibility of using the fleet for demand-response service open to the general public under specified conditions (e.g., with advance reservation, at a higher fare than fixed route service). The study will also consider the use of alternate providers such as taxi services, Uber, or other operators. The changes in ADA paratransit service are summarized in the following tables:

Table 34: Weekday ADA Paratransit Service 2017-2019

Route Name	Service Change	Existing Vehicle Hrs/Day	Proposed Vehicle Hrs/Day	Existing Peak Vehicles	Proposed Peak Vehicles	Implement-ation Fiscal Year
Central Loudoun ADA	No changes	12	12	1	1	n/a
Northeast Loudoun ADA	No changes	12	12	1	1	n/a
Northeast Loudoun ADA (evening)	Replace with evening flex service on Routes 70 & 82.	3	0	0	0	2017
Southeast Loudoun ADA	Redeploy elsewhere in the county	12	12	1	1	2017
TOTAL		39	36	3	3	

Table 35: Saturday ADA Paratransit Service 2017-2019

Route Name	Service Change	Existing Vehicle Hrs/Wk	Proposed Vehicle Hrs/Wk	FY of Change
Loudoun ADA	Evening service covered by flex bus	14	11	2017
Leesburg ADA	Eliminate	11	0	2017
TOTAL		25	11	

Table 36: Sunday ADA Paratransit Service 2017-2019

Route Name	Service Change	Existing Vehicle Hrs/Wk	Proposed Vehicle Hrs/Wk	FY of Change
ADA Sunday	Add service to match hours of 70 and 82	0	9	2019

Planned Service Changes in Response to the Most Recent Federal Title VI report and/or FTA Triennial Review

Loudoun County has not previously been the subject of an FTA Triennial Review. A Title VI program is being prepared in parallel with this TDP, which will be the first one submitted by Loudoun including the local bus network. The fare changes and major service changes recommended in the TDP will be the subject of equity analyses that will be included in the Title VI program report.

Planned Facility Improvements and Capital Projects to Improve Operations

The following capital improvements are planned during the TDP period:

- Four new park and ride lots;
- 20 40-ft transit buses;
- Bus stop improvements for accessibility and amenities;
- Purchase of new local bus fleet;
- Replacement of depreciated commuter buses;
- ITS equipment on commuter buses;
- Changes to fare collection equipment necessary to participate in WMATA's New Electronic Payments Program.

In addition, the County is contributing to the Silver Line Metrorail extension and sponsoring the construction of three parking garages at two of the new Metrorail stations. The timing and costs of these capital projects are described in the next chapter.

Modify the Standards for Park and Ride Lot Planning

The 2010 CTP contains standards for park and ride lots (see Chapter 2 of this TDP), include the following elements:

- "Park and ride lots in the towns and the Suburban Policy Area . . . should be connected by sidewalks or shared pathways to enable carpoolers and pedestrians to walk to the lot. These park and ride lots should receive priority consideration for the installation of bicycle lockers and racks."
- "Park and ride lots will be designated to provide convenient and safe bus access either within or adjoining the lot."

In addition to these existing standards, the following will be added to the park and ride standards in the CTP:

- Stand-alone (not shared use) park and ride lots will have at least 200 spaces, shelters, and will be served by Metro Connection and possibly Long Haul bus.
- Park and ride lots with fewer than 175 spaces will generally be served by Metro Connection bus but not Long Haul.
- Park and ride lots with fewer than 75 spaces will generally serve carpools and vanpools only.

Revise the Capital Needs Standard for Park and Ride Lots

The Capital Needs Assessment standard currently requires 1.15 commuter parking spaces per 100 residents for each of the county's subareas. This requirement translates into about 3,000 spaces at the current population, and 4,000 at the expected 2025 population. The standard explicitly excludes Metrorail parking, even though these serve the same need (express transit service to the District of Columbia and surrounding areas). The standard should be change to include Metrorail and to be measured at the county level instead of by subarea.

Review the Status of Commuter Parking in the Zoning Code

The County will continue to investigate the use of existing or newly developed parking as commuter parking during the day and to serve other uses on evenings and weekends. Churches, movie theaters, dining restaurants, recreational facilities, and larger shopping centers are potential candidates. Sharing an existing lot reduces construction costs and reduces the amount of impermeable surface. The Loudoun County Zoning Code permits commuter parking in a large number of different zones, although in some cases the size is restricted to 50 spaces, and in some cases it is permitted only as a special exception. In no case does the code permit commuter parking shared with code-mandated parking spaces. The county will study the revising the zoning code to permit commuter parking shared with parking designated for the primary use, with a special exception permit.

Study Parking Fees at Park and Ride Lots

Adding parking fees would encourage walk, bike, carpool, and drop-off access modes and thus reduce the demand for parking. Parking fees could also shift parking use from over-capacity lots to those with excess space. However, any parking program needs to cover its administrative costs. Recently some transit agencies such as the MBTA have contracted with providers who provide a smartphone app that enables “pay by plate” – users provide bankcard information and the license plate number. The vendor then uses video detection to monitor use. The cost of the program is covered by commissions on the parking fees paid. Generally parking fees will be considered for lots regularly reaching 90% or greater occupancy or more. These lots tend to be the largest and therefore have the best level of bus service in terms of span, frequency, and destinations served. In the case of a parking lot where spaces are leased by the county, any payment fee program would need to be negotiated with the owner. LCT may consider parking fees in lieu of fare increases.

Chapter 6: Capital Improvement Program

This chapter of the TDP describes capital programs required to carry out the recommended operations and services presented in Chapters 4 and 5.

Vehicle Fleet

Commuter Bus

As of FY2016, the county-owned commuter bus fleet consists of 60 buses, as shown in the table below. All of the buses are 45-foot motorcoaches, except for five Gillig transit buses that were delivered in 2014. Loudoun's oldest buses are the initial fleet of 22 that were purchased in 2004. In 2016, these buses will have reached their expected 12-year lifespan. The county plans to purchase an additional 20 transit buses for Metro Connection service expansion, as described below.

Table 37: Commuter Bus Fleet, FY2016

Manufacturer	Model	In-Service Date	Count	Odometer (average)
VANHOOL	C2045L	12/1/2014	3	395,871
MCI	D4500 COMMUTER	7/1/2004	22	551,964
MCI	D4500 COMMUTER	7/1/2005	2	502,537
MCI	D4500 COMMUTER	7/17/2006	7	466,209
MCI	D4500 COMMUTER	7/1/2007	2	446,202
MCI	D4500 COMMUTER	7/1/2008	2	368,027
MCI	D4500 COMMUTER	7/1/2009	3	333,652
MCI	D4500 COMMUTER	7/1/2010	7	237,867
MCI	D4500 COMMUTER	7/1/2011	2	234,498
MCI	D4500 COMMUTER	7/1/2012	3	167,571
MCI	D4500 COMMUTER	7/1/2013	2	100,452
GILLIG	LOW FLOOR	7/1/2014	5	29,817
	TOTAL		60	386,926

In October 2015, Mercury Consultants produced a study of the Loudoun commuter bus fleet that recommended replacing 40 buses within the FY2017-FY2022 period, and the remainder in subsequent years. The replacement schedule is shown in Table 38. All 45-foot coaches will be replaced with similar models, ordered in advance of the year of replacement, with the same seating and wheelchair capacity. The replacement vehicles will be equipped with ITS elements such as AVL/APC, Wi-Fi, cameras, and fare collection equipment complying with NEPP.

Loudoun is considering the use of CNG buses instead of diesels. The Mercury study estimates that CNG buses cost $124,000 more per bus than similar diesels. Although there is a CNG fueling facility at Dulles Airport that could be used on an interim basis, a conversion of the fleet to CNG would require the development of a dedicated CNG fueling facility, and possibly modifications to the existing maintenance and storage facilities. As of the date of completion of the TDP, the county had not yet made a decision on CNG conversion.

Table 38: Commuter Bus Fleet Replacement Schedule

Asset Number	VIN	Unit Designation	Model Year	Year to be Replaced	Length	Seats	Wheel-chairs	Propul-sion
71001	1M8PDMPA04P056298	115-394L	2004	2020	45 ft	55	2	Diesel*
71002	1M8PDMPA34P056330	115-426L	2004	2019	45 ft	55	2	Diesel*
71003	1M8PDMPA54P056331	115-425L	2004	2019	45 ft	55	2	Diesel*
71004	1M8PDMPA74P256332	115-424L	2004	2019	45 ft	55	2	Diesel*
71005	1M8PDMPA94P056333	115-423L	2004	2019	45 ft	55	2	Diesel*
71006	1M8PDMPA04P056334	115-422L	2004	2019	45 ft	55	2	Diesel*
71007	1M8PDMPA24P056335	115-421L	2004	2018	45 ft	55	2	Diesel
71008	1M8PDMPA44P056336	115-429L	2004	2018	45 ft	55	2	Diesel
71009	1M8PDMPA64P056337	115-428L	2004	2018	45 ft	55	2	Diesel
71010	1M8PDMPA84P056338	115-427L	2004	2018	45 ft	55	2	Diesel
71011	1M8PDMPAX4P056339	115-461L	2004	2018	45 ft	55	2	Diesel
71012	1M8PDMPA64P056340	115-460L	2004	2018	45 ft	55	2	Diesel
71013	1M8PDMPA84P056341	115-462L	2004	2018	45 ft	55	2	Diesel
71014	1M8PDMPAX4P056342	115-483L	2004	2018	45 ft	55	2	Diesel
71015	1M8PDMPA14P056343	115-482L	2004	2017	45 ft	55	2	Diesel
71016	1M8PDMPA34P056344	115-481L	2004	2017	45 ft	55	2	Diesel
71017	1M8PDMPA54P056345	115-480L	2004	2017	45 ft	55	2	Diesel
71018	1M8PDMPA74P056346	115-479L	2004	2017	45 ft	55	2	Diesel
71019	1M8PDMPA94P056347	115-478L	2004	2017	45 ft	55	2	Diesel
71020	1M8PDMPA04P056348	115-477L	2004	2017	45 ft	55	2	Diesel
71021	1M8PDMPA24P056349	115-467L	2004	2017	45 ft	55	2	Diesel
71022	1M8PDMPA94P056350	115-475L	2004	2017	45 ft	55	2	Diesel
71023	1M8PDMPA45P056712	107-446L	2005	2021	45 ft	55	2	Diesel*
71024	1M8PDMPA65P056713	107-443L	2005	2020	45 ft	55	2	Diesel*
71025	1M8PDMPA07P057410	135-659L	2006	2022	45 ft	55	2	Diesel*
71026	1M8PDMPA07P057411	135-660L	2006	2022	45 ft	55	2	Diesel*
71027	1M8PDMPA07P057412	135-661L	2006	2021	45 ft	55	2	Diesel*
71028	1M8PDMPA07P057413	135-662L	2006	2021	45 ft	55	2	Diesel*
71029	1M8PDMPA07P057414	135-663L	2006	2021	45 ft	55	2	Diesel*
71030	1M8PDMPA07P057415	135-664L	2006	2020	45 ft	55	2	Diesel*
71031	1M8PDMPA07P057416	135-665L	2006	2020	45 ft	55	2	Diesel*
71032	1M8PDMPA27P057876	141-959L	2007	After 2022	45 ft	55	2	Diesel*
71033	1M8PDMPA27P057877	141-960L	2007	After 2022	45 ft	55	2	Diesel*
71034	1M8PDMHA18P058534	145-070L	2008	2022	45 ft	55	2	Diesel*
71035	1M8PDMHA38P058535	145-071L	2008	2022	45 ft	55	2	Diesel*
71036	1M8PDMHAX9P058887	130-913L	2009	2021	45 ft	55	2	Diesel*
71037	1M8PDMHAX9P058888	130-912L	2009	2021	45 ft	55	2	Diesel*
71038	1M8PDMHAX9P058889	130-914L	2009	2021	45 ft	55	2	Diesel*
71039	1M8PDMHA3AP059346	158-353L	2010	After 2022	45 ft	55	2	Diesel*
71040	1M8PDMHA3AP059347	158-354L	2010	After 2022	45 ft	55	2	Diesel*

Asset Number	VIN	Unit Designation	Model Year	Year to be Replaced	Length	Seats	Wheel-chairs	Propul-sion
71041	1M8PDMHA3AP059348	158-355L	2010	After 2022	45 ft	55	2	Diesel*
71042	1M8PDMHA3AP059349	158-356L	2010	2022	45 ft	55	2	Diesel*
71043	1M8PDMHA3AP059350	158-357L	2010	2022	45 ft	55	2	Diesel*
71044	1M8PDMHA3AP059351	158-358L	2010	2022	45 ft	55	2	Diesel*
71045	1M8PDMHA3AP059352	158-359L	2010	2022	45 ft	55	2	Diesel*
71046	1M8PDMHA8BP059719	164-269L	2011	After 2022	45 ft	55	2	Diesel*
71047	1M8PDMHA4BP059720	164-270L	2011	After 2022	45 ft	55	2	Diesel*
71048	1M8PDMBAXCP012606	168-447L	2012	After 2022	45 ft	55	2	Diesel*
71049	1M8PDMBA1CP012607	168-448L	2012	After 2022	45 ft	55	2	Diesel*
71050	1M8PDMBA3CP012608	168-449L	2012	After 2022	45 ft	55	2	Diesel*
71051	1M8PDMBA8DP012959	176-238L	2013	After 2022	45 ft	55	2	Diesel*
71052	1M8PDMBA4DP012960	176-237L	2013	After 2022	45 ft	55	2	Diesel*
71053	YE2CC2AB0B2047736	184-301L	2011	After 2022	45 ft	55	2	Diesel*
71054	YE2CC2AB2B2047737	184-302L	2011	After 2022	45 ft	55	2	Diesel*
71055	YE2CC2AB4B2047738	184--303L	2011	After 2022	45 ft	55	2	Diesel*
73000	15GGD2716E1184125	178339L	2014	After 2022	40 ft	40	2	Diesel*
73001	15GGD2716E1184125	178340L	2014	After 2022	40 ft	40	2	Diesel*
73002	15GGD2718E1184126	178341L	2014	After 2022	40 ft	40	2	Diesel*
73003	15GGD271XE1184127	178342L	2014	After 2022	40 ft	40	2	Diesel*
73004	15GGD2711E1184128	178338L	2014	After 2022	40 ft	40	2	Diesel*

*Buses to be replaced after FY2018 might be CNG instead of diesel, pending a Board of Supervisors decision.

When Metrorail service opens in the county in 2020, a reduction in Long Haul bus service may be required. If so, LCT will end its lease of buses from Transdev. If further reductions in service are justified, LCT may remove buses from service and retire them instead of replacing them according to the schedule above.

Transit Bus Purchases (FY2017-FY2018)

Loudoun has nine 40-foot transit buses on order that are expected to be placed in service in FY2017 for use on four existing Metro Connection routes that are currently using other types of equipment (see Table 39). These will be Gillig low-floor models identical to the five currently in the fleet. The first four of the new buses will be used for Metro Connection service to the East Gate and Dulles Town Center Park and Rides, which since August 2015 have been served under the local bus contract on a temporary basis. The second group of four buses will arrive in December 2016 and will be used to replace 45-foot coaches on the Harmony/Leesburg and Goose Creek Village/Broadlands Metro Connection routes. Two of the freed-up 45-foot coaches will be used to provide additional Long Haul service from Dulles South, and the remaining two will be used as spares. Another 11 transit buses of the same type will be procured for use in FY2018. Eight of these buses will be assigned to Metro Connection routes serving the park and rides that are planned to open during this period. The remaining buses will be used as spares (bringing the total to five spares out of a total fleet of 25 transit buses, including the five currently in the fleet). The estimated cost per bus is $465,000. The FY2016 Loudoun County Capital Budget includes $8,860,000 for transit buses, of which $1,860,000 comes from NOVA Regional funds.

Table 39: Procurement of Transit Buses for Metro Connection Service

Year in Service	Number	Park and Rides Served	Route	Notes
FY2017	2	East Gate	88X	Replaces MV bus.
FY2017	2	Dulles Town Center	87X	Replaces MV bus.
FY2017	2	Harmony, Leesburg	921/922	Replaces 45 ft coaches.
FY2017	2	Goose Creek, Broadlands	923/924	Replaces 45 ft coaches.
FY2017	1	n/a	Spare	
FY2018	2	Leesburg East	89X	Replaces MV bus.
FY2018	2	Western Loudoun	921/922	New P&R in Purcellville.
FY2018	2	Dulles South, East Gate	88X	Improve frequency.
FY2018	2	Dulles Town Center, One Loudoun	87X	Improve frequency.
FY2018	3	n/a	spare	
Total	20			

Local Bus

The local bus operator, MV Transportation, owns a fleet of 34 body-on-chassis ("cutaway") minibuses exclusively for use in Loudoun County. As detailed in Table 40, there are 14 larger vehicles with a seating capacity of 30 people, 16 mid-size vehicles with a capacity of about 20 people, three smaller vans that seat 12 people, and one van with six seats. All of these vehicles can accommodate three people using wheelchairs, except for the three 2008 Chevrolet E550s, which can accommodate only one. Most of these vehicles are from the 2013 or 2014 model years, and are thus relatively new. Vehicles of this type have a minimum lifespan of 4 to 5 years per FTA guidelines, and are retired generally between 5 and 6 years of age. Replacing these vehicles is currently the sole responsibility of the contractor.

Table 40: Local Bus Fleet

Vehicle Number	Year	Make	Model	VIN Number	Wheelchair Capacity	Ambulatory Capacity
1400	2013	INTE	4300	5WEXWSKK9DH408993	2	30
1401	2013	INTE	4300	5WEXWSKK9DH409044	2	30
1402	2013	INTE	4300	5WEXWSKK1DH409278	2	30
1403	2013	INTE	4300	5WEXWSKKXDH409005	2	30
1404	2013	INTE	4300	5WEXWSKK3DH409041	2	30
1405	2013	INTE	4300	5WEXWSKK5DH409008	2	30
1406	2013	INTE	4300	5WEXWSKK3DH409282	2	30
1407	2013	INTE	4300	5WEXWSKK8DH409035	2	30
1408	2013	INTE	4300	5WEXWSKK6DH170827	2	30
1409	2013	INTE	4300	5WEXWSKK6KH409003	2	30
1410	2014	FORD	E450	1FDFE4FS4EDB18074	2	20
1411	2014	FORD	E450	1FDFE4FS6EDB18058	2	20
1412	2014	FORD	E450	1FDFE4FS4EDB18043	2	20
1413	2014	FORD	E450	1FDFE4FS6EDB18044	2	20

Vehicle Number	Year	Make	Model	VIN Number	Wheelchair Capacity	Ambulatory Capacity
1414	2014	FORD	E450	1FDFE4FS9EDB18068	2	20
1415	2014	FORD	E450	1FDFE4FS5EDB18049	2	20
1416	2014	FORD	E450	1FDFE4FS3EDB18065	2	20
1417	2014	FORD	E450	1FDFE4FSXEDB18046	2	20
1418	2014	FORD	E450	1FDFE4FS5EDB18035	2	20
1419	2014	FORD	E450	1FDFE4FS4EDB18057	2	20
1420	2014	FORD	E450	1FDFE4FS7EDB18036	2	20
1421	2014	FORD	E450	1FDFE4FS1EDB18047	2	20
1422	2014	FORD	E450	1FDFE4FS5EDB18052	2	20
1423	2014	FORD	E450	IFDFE4FS3EDB18051	2	20
1424	2014	FORD	E450	1FDFE4FS3EDB18048	2	20
1425	2014	FORD	E450	1FDFE4FS3EDB18034	2	20
1430	2013	FORD	E350	1FDEE3FL0DDB13189	2	12
1431	2013	FORD	E350	1FDEE3FL4DDB09761	2	12
1432	2013	FORD	E350	1FDEE3FL4DDB12787	2	12
1433	2006	CHEVY	5500	1GBE5V1979F4084029	2	28
1434	2008	CHEVY	5500	1GBE5V189XF403398	1	30
1435	2008	CHEVY	5500	1GBE5V1969F403190	1	30
1436	2008	CHEVY	5500	1GBE5V1949F403219	1	30
164	2008	Ford	E350	1FTDS34LO9DA15816	2	6

The County intends to purchase a fleet of new vehicles for local bus service. The vehicles will be approximately the same size and capacity as the current fleet. The new vehicles will have fare collection equipment compatible with WMATA's New Electronic Payment Program. Assuming an average purchase price of $120,000 per vehicle, replacing the local bus fleet with new vehicles will cost $4.5 million.

Fleet Cost and Sources

As shown in Table 41, Loudoun expects approximately $44 M in total fleet expenditures during the TDP period. This includes the replacement of 40 commuter coaches, a contingency to cover the option of purchasing CNG buses beginning in FY2019, the purchase of 11 transit buses for Metro Connection service expansion, and the purchase of a fleet of 37 small buses to replace those currently provided by the contractor. The budget also includes the cost of leasing 9 coaches from Transdev through the end of the current contract period in FY2019. After that point it is assumed that the county will not need as many vehicles given the shift in riders to Metrorail and the potential loss of the DNTC for commuter bus purposes, and therefore the lease cost is eliminated.

Table 41: Vehicle Fleet Needs and Unit Costs

Fleet	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	TOTAL
Bus Replacements	8	8	5	4	7	8	40
Buses for Service Expansion	4	11	0	0	0	0	15
Cost per Replacement Bus (45' Coach)	$625,000	$650,000	$676,000	$703,040	$731,162	$760,408	-

Cost per Expansion Bus (40' Transit)	$464,265	$482,836					-
Cost per Local Bus (20 seat minibus)	$120,000	$124,800	$129,792	$134,984	$140,383	$145,998	-
CNG Premium for Replacement Buses	$124,000	$128,960	$134,118	$139,483	$145,062	$150,865	-

Table 42: Annual Vehicle Fleet Capital Costs

	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	TOTAL
Expansion Bus-Transit	$1,857,060	$5,311,192	$0	$0	$0	$0	$7,168,252
Local Bus Fleet-Cutaway (37)	$0	$0	$2,206,464	$2,294,723			$4,501,187
Bus Replacement-Coach	$5,000,000	$5,200,000	$3,380,000	$2,812,160	$5,118,131	$6,083,265	$27,593,556
Contingency for CNG Replacements	$0	$0	$670,592	$557,933	$1,015,437	$1,206,920	$3,450,881
Bus lease from Transdev	$315,351	$315,351	$315,351	$0	$0	$0	$3,784,212
TOTAL FLEET	$7,172,411	$10,826,543	$6,572,407	$5,664,815	$6,133,568	$7,290,184	$43,659,928

Loudoun County will seek DRPT grants for all vehicle capital expenses; the estimated amounts are shown in Chapter 7. The cost of replacing commuter buses not covered by DRPT grants will be funded from the Bus Replacement Fund, which currently has a balance of approximately $19 M, and receives approximately $2 M annually from farebox receipts.

Transit Maintenance and Operations Facility

A new transit maintenance and operations facility on Sycolin Road in Leesburg was completed in late 2014. This facility has sufficient capacity for the current bus fleet (excluding local transit buses) and for the proposed expansions during the TDP period.

Passenger Amenities

Metrorail Parking Garages

As part of the 2011 Memorandum of Agreement between Loudoun County, USDOT and the Phase 2 funding partners, it was agreed that removing the cost of the Metro parking garages from the Phase 2 Silver Line project budget would render Loudoun County eligible for TIFIA loan financing consideration by USDOT. The garages will be completed and ready for operation prior to the opening of Phase II Silver Line service. On September 5, 2012, the Board of Supervisors directed the County Administrator to proceed with a new Public Private Transportation Act (PPTA) solicitation to privately finance, design, build and operate the three Metrorail parking garages at the two Loudoun County-based Metrorail stations.

Loudoun County is negotiating with two development teams who are considering the County's proposal to build parking garages at the planned Loudoun Gateway and Ashburn Metrorail stations. The development costs will be recovered by parking use fees for the nearly 5,000 spaces. As described in Chapter 5, existing park and ride lots close to the garages will no longer be used for Metro Connection and Long Haul service. These include the two Broadlands lots, Loudoun Station, and Dulles North Transit Center. The Loudoun Capital Improvement Plan includes $130 million to cover the cost of the three planned station garages should it be necessary for the county to advance the entire construction cost of the project.

Bus Stop Improvements

The County is budgeting $200,000 for a program to improve accessibility of local bus stops. This program is expected to be funded in FY2019.

Park and Ride Lot Expansion

Four new Park and Ride lots are planned. A new Western Loudoun lot is planned to replace the small St Andrews lot. A new expansion lot is planned for Dulles South (Stone Ridge) with 300 spaces. The developers of One Loudoun in Ashburn have proferred a lot that will be available around 2019. Finally, the county is planning a Leesburg East lot in the vicinity of Crosstrail Boulevard and Russell Branch Parkway when that area is developed. This lot would replace the existing spaces leased from Telos Corporation. All of these lots will be served with both Long Haul and Metro Connection routes, as previously described. All four of these lots are included in the FY2016 Loudoun Capital Budget. The funding sources are $7.6 million CMAQ grants, $4.5 million cash proffers, $2.49 million NVTA Regional funds, $2 million gasoline tax funds, and $0.5 million commuter bus reserves.

Table 43: Planned New Park and Ride Lots

Name		Budget (mil)	Opening	Spaces	Location
Dulles South (Stone Ridge) Expansion		$3.500	FY2018	350	Aldie
Leesburg East (replaces Telos)		$4.683	TBD	200	Crosstrail Blvd, Ashburn
One Loudoun		$3.290	FY2019	200	Ashburn
Western Loudoun (replaces St Andrews)		$4.121	FY2019	250	Purcellville
TOTAL		$15.594		1,000	

The funding sources for the new park and ride lots are shown in the table below:
Table 44: Funding Sources of Planned New Park and Ride Lots

Name	Year	Bus Fees	Proffer	NVTA	Gas Tax	CMAQ	TOTAL
Dulles South (Stone Ridge) Expansion	2017	$500,000	$3,000,000				$3,500,000
Leesburg East	2018		$1,500,000	$2,490,000	$2,000,000		$5,990,000
One Loudoun	2018					$3,290,000	$3,290,000
Western Loudoun	2019					$4,121,000	$4,121,000
TOTAL		$500,000	$4,500,000	$2,490,000	$2,000,000	$7,411,000	$16,901,000

Tools, Equipment, and Technology Upgrades

LCT's deployment of Clever Devices' systems for CAD/AVL, Real Time, Mobile App, Real Time Website and Automated Vehicle Maintenance on all of the commuter buses is expected to be complete in FY2017. The FY2016 Six-Year Implementation Plan includes the following purchase items:

- Surveillance/Security Equipment: $30,000
- Vehicle Locator System: $225,000

- Transit Scheduling Software Package $100,000
- Fare Collection Equipment (Fareboxes): $60,000

LCT is planning to purchase Transit Scheduling Software in FY2017 and also is planning to complete the installation of a CAD/AVL system on the commuter bus fleet with an ITS Integration project in FY2017. LCT will purchase new fareboxes for local bus service, and will upgrade existing fareboxes as part of WMATA's New Electronic Payments Program. The county is budgeting $2 M for FY2019 for hardware and software costs to convert the fare collection system to be compatible with NEPP. The planned technology expenditures are shown in the table below.

Table 45: Technology Expenses

	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
NEPP and Fare Equipment Upgrades			$2,000,000			
Transit Scheduling Software	$100,000					
ITS Integration	$124,000					
TOTAL TECHNOLOGY	$224,000	$0	$2,000,000	$0	$0	$0

Transit System Expansion

As described in Chapter 4, the major new expansion planned during the TDP period is the introduction of Metrorail service to Loudoun. The Silver Line will be extended from its present terminus at Wiehle-Reston East to Dulles Airport and to two further stations in Loudoun: Loudoun Gateway and Ashburn. At that time, Metro Connection bus service will be rerouted from Wiehle-Reston East and West Falls Church to one of the stations on the extension, as will the local bus routes that serve Metrorail. Off-peak service to the stations will be added. Metro Connection service from park and rides very close to the new stations will be eliminated, and Long Haul service will likely be reduced as bus ridership declines.

The other major expansion of service will be additional Metro Connection service from four new park and ride lots. This expansion will require the purchase of new vehicles and an increase in the operating budget as these lots open between FY2018 and FY2019. When Silver Line Phase 2 stations open in FY2020, these routes will be cut back to the new stations instead of serving Wiehle-Reston East.

A restructuring of local bus service is planned to improve efficiency and improve connections to Metrorail, but the expansion in local bus service primarily consists of Sunday service on the two most well-used routes (70 and 82) and peak express service on the best-used route (Route 70).

Chapter 7: Financial Plan

This chapter identifies existing and anticipated funding requirements and sources for both operating expenditures (from Chapter 5) and capital expenditures (from Chapter 6). The chapter includes balance sheet tables that match funding against anticipated costs over a six-year planning horizon (FY 2017 through FY 2022).

Loudoun County currently provides transit service through two service contracts: a commuter services contract with Transdev and a Local-fixed route and paratransit services contract with MV Transportation. While there are two contracts, the budget is divided into four types: Long Haul, Metro Connection, Local Fixed Route, and ADA Paratransit.

The County has a stated objective that long-haul commuter bus service should be a self-sustaining service funded by long-haul commuter fares, advertising and state operating and capital assistance when Silver Line Phase 2 Metrorail service begins. The budget proposes an increase in the long-haul commuter fares from $8.00 to $9.00 per boarding for FY2017 as proposed in the *Loudoun County Transit Commuter Bus Fare Analysis* (April 2014). The FY2017 budget was the first one in which Long Haul service and equipment was separated from the Metro Connection budget.

Operating Budget

The annual operating budget assumes a 4% increase in operating costs for existing service, plus the fare and service changes discussed below. No allowance has been made in the budget for a potential cost reduction if Metro Connection unit costs are reduced through negotiations with the service provider (based on the difference in deadhead time between Long Haul and Metro Connection service). Where a change in service is proposed, the daily ridership estimate associated with each change (as shown in the tables below) was incorporated into the annual ridership and passenger revenue estimates. With the service efficiency improvements, passengers on low-ridership trips that will be eliminated are expected to change to other scheduled trips, so no drop in ridership is assumed.

FY2017 Service and Fare Changes and Ridership Estimates

The planned FY2017 budget reflects the following service and fare changes:

Add Long-Haul Service to Stone Ridge and East Gate

The four Gillig transit buses scheduled for delivery in December of 2016 will be used to operate Harmony-Leesburg Metro Connection service. The four coaches currently used for this service will be put into service to provide long haul trips from Stone Ridge and East Gate Park and Rides beginning in January 2017. Providing Long Haul service (instead of Metro Connection, as is currently the case) from East Gate will require an additional 16 daily service hours.

Shift East Gate and Dulles Town Center from Local to Metro Connection Contract

The FY2016 local contract includes 31.1 service hours of Metro Connection service for Route 87X, Dulles Town Center – Wiehle-Reston East and Route 88X, East Gate Park and Ride – Wiehle-Reston East. Four Gillig transit buses slated for delivery in April 2016 will be used to replace the cutaway vehicles currently used on these routes (a fifth new bus will be used as a spare), and at that time the service will be transferred from the local contract to the commuter contract. Because of the higher hourly rate of the latter, this will result in a net increase of $0.51 million annually (the local cost will decrease by $0.5 million but the commuter cost will increase by $1.1 million).

Service Efficiency Improvements

As described in Chapter 4, the service efficiency of the Commuter service will be improved by:

- Replacing separate Reverse Commute trips with modified reverse commute service on existing local route 87X (to be operated with Metro Connection buses) and Leesburg Metro Connection trips. This change will reduce costs by 15.6 service hours per week at the shuttle rate.
- On all four existing Metro Connection routes, trips with less than 15% occupancy will be eliminated or combined; these are generally the first or last trips of the peak periods. This will reduce costs by five service hours per day at the regular commuter bus rate.
- Currently many evening Long Haul trips go all the way to St Andrew's church in Purcellville. This aspect of the schedule is an artifact from the time when the bus garage was nearby, before the new facility opened. The schedule will be adjusted so that few trips go to the last stop, saving about two service hours per day.

Reduce Saturday 87X Service

Saturday service on route 87X will be reduced to one vehicle, which will reduce service hours by 13 hours per Saturday.

Flex Evening Service on Routes 70 and 82

The 7 to 10 pm service on these routes will flex within ¾ of a mile of the route for riders eligible for ADA paratransit services, so that the existing evening ADA Paratransit vehicle can be eliminated, reducing ADA service hours by 3 hours per day. The evening service on these two routes would also flex on Saturdays, and therefore Saturday ADA service would be reduced by 3 hours also.

Restructure Routes 72 and 89X

The Inova portion of Route 72 will be moved to Route 89X, which will continue to serve Telos and to use Claiborne Parkway to reach the Dulles Greenway. Service on Route 89X will be provided on a 40 minute headway using two buses between 5 AM and 9 AM and between 4 PM and 8 PM for a total of 16 service hours per day, representing a reduction of 1.8 hours compared to current Route 89X service hours.

Restructure Route 62

This shorter route will have increased service frequency and will continue to use one bus 12 hours per day, and thus there will be no budget impact.

Restructure Route 85

This new route to replace Route 85 will be a shorter circulator operating with one bus 12 hours per day. The change will reduce operating costs by 9.3 hours per day.

Fare Changes

The Long Haul fare will increase from $8.00 to $9.00 (the cash surcharge of $1.00 will remain in place, although very few riders use cash). Metro Connection fares will remain unchanged. Two changes are planned for local bus fares:

- A free transfer or punch card day pass will be offered for $2.00 as a way of reducing the cost for riders who need to transfer. The card could also be made available through social service agencies.

- The fare on routes 72, 83, and 84 will be reduced to $1.00 from the current $2.00, to be consistent with all other local bus routes and most Metro Connection service.

The service changes described above are summarized in the following three tables, which also provide ridership change estimates based on the changes in service hours and the type of change proposed. Note that the Metro Connection East Gate and Dulles Town Center services in Table 46 show a ridership gain, but this is not net new ridership to the system, it simply accounts for the transfer of riders from the local contract to the commuter contract.

Table 46: 2017 Metro Connection and Long Haul Route Changes and Ridership Impact

Route #	Route Name	Service Change	Existing Service Hrs/Day	Proposed Service Hrs/Day	Existing Peak Vehicles	Proposed Peak Vehicles	Change in Daily Riders
901/ 902	Potomac Falls	Eliminate 5:05 AM, 9:00 AM, 4:10 PM, and 7:55 PM trips. Spread out remaining trips.	24.8	22.8	3	3	0
921/ 922	Leesburg	Eliminate 4:46 AM, 5:30 AM, and 3:15 PM trips. The 6:45 PM trip will serve GCV by request (maybe start 5-10 min earlier). Add reverse peak trips to Loudoun Gov't Center.	15.1	14.1	2	2	0
923/ 924	Goose Creek Village & Broadlands	Eliminate 5:05 AM, 5:30 AM, 3:25 PM, 3:50 PM, 4:19 PM, and 6:32 PM trips. Trips 6:25 and later will be available on request via Loudoun Station route	13.3	11.3	2	2	0
925/ 926	Loudoun Station	Replace 4:40 AM & 5:17 AM trips with a 5:00 AM trip; Replace 3:30 PM & 3:55 PM trips with a 3:45 PM trip; Eliminate 8:40 PM trip. Trips 6:25 PM and later will stop at Broadlands by request.	20.0	18.0	3	3	0
990/ 991	Reverse Commute	Eliminate.	9.7	0	2	0	0
88X	East Gate	None.	0	16.2	0	2	147
87X	Dulles Town Center	Reverse peak trips to serve Verizon, AOL, Raytheon	0	15.23	0	2	80
South-DC	South (Brambleton, Stone Ridge)	Add 4 Long Haul trips to serve expanded Stone Ridge PnR, routed via Eastgate P&R	45.7	57.7	13	17	240
West-DC	West (Purcellville, Hamilton, Leesburg)	Fewer late evening buses to Purcellville; show Metro Connection trips on schedule	77.4	75.4	21	21	0
North-DC	North (CFC, Ashburn North, Telos)	Show Route 72 & 89X trips that serve the same PnRs on the schedule	40.1	40.1	9	9	0
DNTC	DNTC only	No changes	15.7	15.7	5	5	0
TOTAL Metro Connection			82.8	97.5	12.0	14.0	227
Total Long Haul			178.9	188.9	48	52	240

Table 47: 2017 Local Fixed and ADA Route Weekday Changes and Ridership Impact

Route #	Route Name	Service Change	Existing Vehicle Hrs/Day	Proposed Vehicle Hrs/Day	Existing Vehicles	Proposed Vehicles	Change in Daily Riders
62	Ashburn Connector	Restructure	12.0	12.0	1	1	20
70	Leesburg-Sterling	Flex service 7 PM onward (so no separate ADA bus).	54.0	54.0	4	4	3
72	GWU-Wiehle	Remove Inova Hospital. Improve frequency.	28.37	18	3	2	-60
82	Sterling Connector	Evening service: flex for ADA eligible.	15	15	1	2	
85	Dulles South Connector	Restructure	21.32	12	2	2	48
87X	Dulles Town Center to Wiehle	change to commuter contract	15.23	0	2	0	(not included in local ridership)
88X	Eastgate	change to commuter contract	15.87	0	2	0	
89X	Inova- Telos -Wiehle	Add Inova from Rt 72	17.77	20	2	0	106
	Northeast Loudoun ADA (evening)	Replace with eve flex service on 70 & 82.	3	0	0	0	-3
	Southeast Loudoun ADA	Redeploy elsewhere in the county	12	12	1	1	0
TOTAL FIXED ROUTE			179.6	131.0	17.0	13.0	118
TOTAL ADA PARATRANSIT			15	12	1	1	-3

Table 48: 2017 Local Fixed and ADA Route Saturday Changes and Ridership Impact

Route #	Route Name	Service Change	Existing Vehicle Hrs/Wk	Proposed Vehicle Hrs/Wk	Change in Saturday Riders
70	7 on 7	Flex evening service	26.7	26.7	2
82	Sterling Connector	Schedule change: shift all times ahead by 9 min to match Rt 70 at Dulles Town Center; flex evening service	13.78	13.78	0
87X	Dulles Town Center to Wiehle	Reduce Sat svc to 1 bus, 40 min headway	26	13	-10
	Loudoun ADA	Evening hours to be covered by flexing 70 & 82	14	11	-2
	Leesburg ADA	Eliminate.	11	0	0
TOTAL FIXED ROUTE			66.48	53.48	-8
TOTAL ADA PARATRANSIT			25	11	-2

FY2018 Service and Fare Changes and Ridership Estimates

The planned FY2018 budget reflects the following service changes:

Add Four New or Expanded Metro Connection Routes

New Metro Connection service will be started from the Dulles South (Stone Ridge) expansion lot and from the One Loudoun park and ride lot, as well as a new, larger park and ride lot in Purcellville. Two buses will be added to the following four routes:

- 89X - Leesburg East
- 87X - Dulles Town Center

- 991/992 - Harmony-Leesburg-Purcellville
- 88X - Dulles South and East Gate

An additional four hours of service per bus per weekday is planned, for a total of 32 additional service hours per weekday.

Eliminate Route 85

Route 85 service will be merged with Route 88X, which will provide equivalent service, including in the midday.

Eliminate Route 86, Ashburn Link

This route will be eliminated, saving 9 service hours per day.

Restructure Routes 83 and 84

Route 83 (Pacific Boulevard) will be eliminated, replaced with alternating trips on Route 84 and reverse peak service on Route 87X, saving 11.9 service hours per day.

Increase Frequency of Route 82

LCT will add an additional bus to Route 82 on weekdays. This will result in an increase of 15 service hours per day.

Route 55 and 56 Adjustments

Following a study and consultation with the Town of Leesburg, Routes 55 and 56 will be restructured. These changes are not planned to affect service hours and therefore will have no impact on the operating budget.

The planned changes to Metro Connection service for FY2018 are shown in Table 49, along with estimated ridership changes. There are no Long Haul route changes planned for FY2018. The planned changes to local fixed routes service are shown in Table 50, also with ridership changes. There are no ADA Paratransit changes planned for FY2018.

Table 49: 2018 Metro Connection Route Changes and Ridership Impact

Route #	Route Name	Service Change	Existing Service Hrs/Day	Proposed Service Hrs/Day	Existing Peak Vehicles	Proposed Peak Vehicles	Change in Daily Riders
89X	Leesburg East	Serve new Leesburg East P&R	20	28	2	4	80
87X	Dulles Town Center	Add 2 buses (4 hrs/day/bus) and add trips to One Loudoun P&R	15.23	23.23	2	4	80
921/ 922	Harmony-Leesburg-Purcellville	Add 2 buses (4 hrs/day/bus) to Purcellville P&R	14.1	22.1	2	4	80

88X	Dulles South	Add 2 buses (4/hrs/day/bus) to add service to Stone Ridge via East Gate and incorporate route 85 service	16.2	24.2	2	4	80
TOTAL			45.53	77.53	8	14	320

Table 50: 2018 Local Fixed Route Changes and Ridership Estimates

Route #	Route Name	Service Change	Existing Vehicle Hrs/Day	Proposed Vehicle Hrs/Day	Existing Vehicles	Proposed Vehicles	Change in Daily Boardings
55	Exeter/Tuscarora	Restructure	11.87	11.9	1	1	10
56	Rust Library/ County Complex	Restructure	12.0	12.0	1	1	10
82	Sterling Connector	Add bus, double frequency	15	30	1	2	90
83/84	Pacific/Atlantic Connector	Reduce frequency	25.07	13.17	2	1	-5
85	Dulles South Connector	Eliminate. Service to be provided by 88X.	12	0	1	0	n/a
86	Ashburn Link	Eliminate.	9.05	0	1	0	-32
TOTAL			85	67	7	5	73

FY2019 Service and Fare Changes and Ridership Estimates

The planned FY2019 budget reflects the following service and fare changes:

Long Haul Fares

Increase Long Haul fares from $9.00 to $10.00 per trip.

Add Sunday Service to Routes 70 and 82 and add Sunday ADA service

LCT will add Sunday service on Routes 70 and 82. This will result in an additional 36 hours per Sunday of service hours. In addition, LCT will provide ADA paratransit for the same service span, requiring an additional 9 hours per Sunday of ADA paratransit service.

Route 70 Express Service

LCT will add express trips via Route 7 between Dulles Town Center and Loudoun County Government Center. This will require 4 additional service hours per weekday.

These changes, along with their ridership impacts, are shown in the following two tables.

Table 51: 2019 Local Fixed Route Weekday Change and Ridership Estimate

Route #	Route Name	Service Change	Existing Vehicle Hrs/ Day	Proposed Vehicle Hrs/ Day	Existing Vehicles	Proposed Vehicles	Change in Daily Boardings
70X	Leesburg-Sterling Express	Express between Dulles Town Center & LC Gov't Center	0	4	0	1	40
TOTAL			0	4	0	1	40

Table 52: 2019 Local Fixed Route Sunday Change and Ridership Impact

Route #	Route Name	Service Change	Existing Vehicle Hrs/Wk	Proposed Vehicle Hrs/Wk	Change in Sunday Boardings
70	Leesburg-Sterling	Add Sunday service	0	18	144
82	Sterling Connector	Add Sunday service	0	9	63
	ADA Sunday	Add Sunday service	0	9	18
TOTAL FIXED ROUTE			0	27	207
TOTAL ADA PARATRANSIT			0	9	18

FY2020 Service and Fare Changes and Ridership Estimates

The planned FY2020 budget reflects the following service and fare changes:

Adjust Long Haul Service after Silver Line Phase 2 Opening

No reduction in Long Haul service is currently budgeted based on county policy to retain service. However, it is likely that boardings will decline as some riders switch to the new Metrorail stations, or are reduce their use of the bus due to the planned fare increase in FY2019. Moreover, if DNTC is no longer available for use by Long Haul trips, although there is expected to be additional capacity given the planned new park and ride lots, LCT may have trouble finding sufficient numbers of park and ride spaces to replace the 750 lost at DNTC. In any of these cases, it may be necessary to reduce Long Haul service.

Adjust Existing Metro Connection Service with Silver Line Phase 2

After Silver Line Phase 2 opens, Metro Connection service to Loudoun Station and Broadlands will be eliminated. The remaining existing routes will be redirected to the new stations, saving up to 20 minutes per round trip. Midday service to Loudoun Government Center in Leesburg will be added as part of the 921/922 Metro Connection route; midday service will also be added to Route 89X. The result will be a net decrease of 17 service hours per day and five peak vehicles.

Adjust Local Routes to Serve Silver Line Phase 2

The local routes that will be serving Wiehle-Reston East prior to the Phase 2 opening (72 and 83/84) will be rerouted to one of the new stations. The time savings from shortening the routes will be used to provide additional frequency of service.

Route 63, Brambleton Circulator

A new Brambleton circulator route is proposed that will connect with Metrorail at Ashburn Station. The route will require an additional 12 service hours per day.

Route 41, Purcellville-Brunswick MARC

A new route is proposed that will provide service from Purcellville and Lovettsville to the Brunswick, MD MARC Station. The route will use 1 bus and require an additional 14.25 service hours per day.

A summary of the FY2020 changes for local bus and Metro Connection service is shown in the following two tables.

Table 53: 2020 Metro Connection Route Changes and Ridership Impact

Route #	Route Name	Service Change	FY2019 Service Hrs/Day	Proposed Service Hrs/Day	FY2019 Peak Vehicles	Proposed Peak Vehicles	Change in Daily Riders
901/902	Potomac Falls	Reroute to Herndon Station	22.75	22.75	3	3	36
921/922	Harmony-Leesburg-Purcellville	Add GCV stop; reroute to Ashburn Station	23.1	23.1	4	4	28
921/922-Midday	Leesburg-Purcellville	Add midday service with 1 bus, 9:00 AM to 3:00 PM	0	6	0	0	20
923/924	Goose Creek Village & Broadlands	Eliminate. Add GCV to Leesburg route	11.3	0	2	0	-27
925/926	Loudoun Station	Eliminate	18.0	0	3	0	-41
87X	Dulles Town Center	Reroute to Loudoun Gateway	23.2	23.2	4	4	0
88X	Dulles South (Stone Ridge & East Gate)	Reroute to Innovation Center Station	25.2	25.2	4	4	0
89X Midday	Leesburg East	New midday service, Leesburg East (Village at Leesburg) to Ashburn Station	0	6	0	0	36
89X	Leesburg East	Reroute to Ashburn Station	28	28	2	2	40
TOTAL			152	134	24	19	100

Table 54: 2020 Local Fixed Route Weekday Change and Ridership Impact

Route #	Route Name	Service Change	FY2019 Service Hrs/Day	Proposed Service Hrs/Day	FY2019 Peak Vehicles	Proposed Peak Vehicles	Change in Daily Boardings
41	Purcellville-Brunswick MARC	New route	0	14.25	0	1	84
63	Brambleton Circulator	New route	0	12	0	1	48
72	GWU	Reroute to Loudoun Gateway Station	26	26	3	3	56
83/84	Pacific/Atlantic Connector	Reroute to Loudoun Gateway Station	13.17	14	1	1	28
TOTAL			39.2	66.3	4	6	216

FY2021-FY2022 Service and Fare Changes and Ridership Estimates

There are no service or fare adjustments currently planned for FY2021-FY2022. The change in budget for these years reflects assumed annual cost increases.

Operating Expenses by Service Type

The following tables show the FY2017-FY2022 detailed operating expense budgets by each of the service types, Local Fixed Route, ADA Paratransit, Metro Connection, and Long Haul. These budgets reflect the projects and ridership estimates listed above. An annual inflation rate of 4% has been assumed in the cost estimates. The commuter bus budgets do not include the bus replacement fund, which is a capital expense.

Table 55: Local Fixed Route Budgeted Operating Expenses, FY2017-FY2022

Local Fixed Route		Base (FY2016)	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Loudoun Fixed Route service hours per day	Weekday	225	224.6	206.7	210.7	237.8	237.8	237.8
Commuter Service under local contract		48.87	0.0	0.0	0.0	0.0	0.0	0.0
Loudoun Fixed Route service hours per day	Saturday	46.5	33.5	33.5	33.5	33.5	33.5	33.5
Loudoun Fixed Route service hours per day	Sunday	-9	-9	-9	18	18	18	18
Leesburg Fixed Route	Weekday	12	12	12	12	12	12	12
Leesburg Fixed Route	Saturday	20	20	20	20	20	20	20
Leesburg Fixed Route	Sunday	9	9	9	9	9	9	9
Local Fixed Route	Hours/yr	59,454	58,778	54,183	56,611	63,544	63,544	63,544
Leesburg Fixed Route	Hours/yr	4,580	4,580	4,580	4,580	4,580	4,580	4,580
Total Fixed Route	Hours/yr	64,034	63,358	58,763	61,191	68,124	68,124	68,124
Contract rate per service hour		$62.77	$63.68	$66.23	$68.88	$71.63	$74.50	$77.48
Total Fixed Route	$/year	$4,019,429	$4,034,653	$3,891,712	$4,214,612	$4,879,779	$5,074,970	$5,277,969
Total Leesburg	$/year	$329,077	$291,654	$303,321	$315,453	$328,072	$341,194	$354,842
Passengers/Svc Hour		7.1	8.5	9.3	9.3	9.1	9.1	9.1
Passengers (excludes 87X, 88X, 89X)		457,548	538,992	545,392	566,396	621,692	621,692	621,692
Revenue/Passenger		$0.89	$0.75	$0.75	$0.75	$0.75	$0.75	$0.75
Passenger Revenue		$407,319	$404,244	$409,044	$424,797	$466,269	$466,269	$466,269
Passenger Revenue Share of Total		10.1%	10.0%	10.5%	10.1%	9.6%	9.2%	8.8%

Table 56: ADA Paratransit Budgeted Operating Expenses, FY2017-FY2022

ADA Paratransit	Base (FY2016)	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Loudoun Weekday Hours	39	36	36	36	36	36	36
Loudoun Saturday Hours	14	11	11	11	11	11	11
Loudoun Sunday Hours	0	0	0	0	9	9	9
Leesburg Weekday Hours	0	0	0	0	0	0	0
Leesburg Saturday Hours	11	0	0	0	0	0	0
Leesburg Sunday Hours	0	0	0	0	0	0	0
Loudoun Hours/yr	10,712	9,788	9,788	9,788	10,256	10,256	10,256
Leesburg Hours/yr	572	0	0	0	0	0	0
Total ADA Paratransit Hours/yr	11,284	9,788	9,788	9,788	10,256	10,256	10,256
Contract rate per service hour	$72.71	$74.02	$76.98	$80.06	$83.26	$86.59	$90.06
Total ADA Paratransit $/year	$820,460	$724,508	$753,488	$783,628	$853,940	$888,097	$923,621
Passengers/Svc Hour	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Passengers	12,792	11,096	11,096	11,096	11,627	11,627	11,627
Revenue/Passenger	$1.82	$1.82	$1.82	$1.82	$1.82	$1.82	$1.82
Passenger Revenue	$23,256	$20,173	$20,173	$20,173	$21,137	$21,137	$21,137
Passenger Revenue Share of Total	2.8%	2.8%	2.7%	2.6%	2.5%	2.4%	2.3%

Table 57: Metro Connection Budgeted Operating Expenses, FY2017-FY2022

Metro Connection	Base (FY2016)	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Service hours per day (including Potomac Falls)	73.1	87.8	127.8	127.8	110.6	110.6	110.6
Shuttle hour/day	9.7	0	0	0	0	0	0
Potomac Falls service hours per day	24.8	22.8	22.8	22.8	22.8	22.8	22.8
Metro hours/yr	18,716	22,487	32,727	32,727	28,308	28,308	28,308
Shuttle hours/yr	2,483	0	0	0	0	0	0
Metro Hour rate	$129.56	$133.38	$137.93	$142.90	$148.62	$154.56	$160.74
Shuttle Hour rate	$120.09	$122.63	$126.32	$130.30	$135.51	$140.93	$146.57
Metro Service	$2,424,866	$2,999,321	$4,514,041	$4,676,694	$4,207,093	$4,375,377	$4,550,392
Shuttle Service	$298,207	$0	$0	$0	$0	$0	$0
Vehicle Maintenance	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000
Total Contract Amount	$2,783,073	$3,059,321	$4,574,041	$4,736,694	$4,267,093	$4,435,377	$4,610,392
Non-Contract Cost	$1,063,183	$1,063,183	$1,105,710	$1,149,938	$1,195,936	$1,243,773	$1,293,524
Total Cost	$3,846,256	$4,122,504	$5,679,750	$5,886,632	$5,463,029	$5,679,150	$5,903,916
Passenger Revenue Share of Total	8%	9%	8%	8%	8%	9%	9%
Boardings per Service Hour	13.4	15.2	13.3	14.1	16.3	17.8	17.8
Boardings - Wiehle Service	212,808	270,815	362,975	388,575	388,575	431,640	431,640
Boardings - WFC Service	72,408	72,408	72,408	72,408	72,408	72,408	72,408
Revenue per Boarding - Wiehle Service	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00
Revenue per Boarding - WFC Service	$1.50	$1.50	$1.50	$1.50	$1.00	$1.00	$1.00
Passenger Revenue - Wiehle	$212,808	$270,815	$362,975	$388,575	$388,575	$431,640	$431,640
Passenger Revenue - WFC	$108,612	$108,612	$108,612	$108,612	$72,408	$72,408	$72,408
Passenger Revenue - Total Metro Conn.	$321,420	$379,427	$471,587	$497,187	$460,983	$504,048	$504,048
Metro Connection Non-Contract Details							
Printing and Binding: 60634	$17,820	$17,820	$18,533	$19,274	$20,045	$20,847	$21,681
CS Telephone (at TMOF): 62030	$853	$853	$887	$922	$959	$998	$1,038

Metro Connection	Base (FY2016)	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
CS Capital Vehicle Fuel: 62230	$854,028	$854,028	$888,190	$923,717	$960,666	$999,093	$1,039,056
Telecommunications: 63130	$22,175	$22,175	$23,062	$23,984	$24,944	$25,941	$26,979
Motor Vehicle Insurance: 63223	$2,500	$2,500	$2,600	$2,704	$2,812	$2,925	$3,042
Conduct of Business (contingency): 63736	$63,966	$63,966	$66,524	$69,185	$71,953	$74,831	$77,824
Misc. Expenditures (farebox): 63799	$88,841	$88,841	$92,395	$96,090	$99,934	$103,931	$108,089
Park & Ride Lot leases	$13,000	$13,000	$13,520	$14,061	$14,623	$15,208	$15,816
Total Non-Contract	$1,063,183	$1,063,183	$1,105,710	$1,149,938	$1,195,936	$1,243,773	$1,293,524

Table 58: Long Haul Budgeted Operating Expenses, FY2017-FY2022

Long Haul	Base (FY2016)	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Boardings	1,062,636	1,099,336	1,099,336	1,076,413	1,076,413	1,076,413	1,076,413
Revenue per Boarding	$8.00	$9.00	$9.00	$10.00	$10.00	$10.00	$10.00
Passenger Revenue	$8,501,088	$9,894,028	$9,894,028	$10,764,135	$10,764,135	$10,764,135	$10,764,135
Contract rate per service hour	$133.38	$137.93	$142.90	$148.62	$154.56	$160.74	$167.17
Service Hours per Day, Mon-Thurs	178.77	188.77	188.77	188.77	188.77	188.77	188.77
Service Hours per Day, Fri	180.83	190.83	190.83	190.83	190.83	190.83	190.83
Total Service Hours per Year	45,872	48,432	48,432	48,432	48,432	48,432	48,432
Total Contract Cost	$6,118,439	$6,680,259	$6,920,967	$7,197,806	$7,485,718	$7,785,147	$8,096,553
Non-Contract Cost	$2,358,304	$2,468,304	$2,567,036	$2,669,717	$2,776,506	$2,887,566	$3,003,069
Total Cost	$8,476,743	$9,148,563	$9,488,003	$9,867,523	$10,262,224	$10,672,713	$11,099,621
Passenger Revenue Share of Total	100%	108%	104%	109%	105%	101%	97%
Boardings per Service Hour	23.2	22.7	22.7	22.2	22.2	22.2	22.2
Long Haul Non-Contract Cost Details							
Printing and Binding: 60634	$17,820	$17,820	$18,533	$19,274	$20,045	$20,847	$21,681
Other Prof. Services (Snow): 60699	$80,000	$80,000	$83,200	$86,528	$89,89X	$93,589	$97,332
CS Telephone (at TMOF): 62030	$1,547	$1,547	$1,609	$1,673	$1,740	$1,810	$1,882
CS Capital Vehicle Fuel: 62230	$1,549,222	$1,549,222	$1,611,190	$1,675,638	$1,742,664	$1,812,370	$1,884,865

Telecommunications: 63130	$40,225	$40,225	$41,834	$43,508	$45,248	$47,058	$48,940
Motor Vehicle Insurance: 63223	$25,000	$25,000	$26,000	$27,040	$28,122	$29,246	$30,416
Conduct of Business (contingency): 63736	$116,034	$116,034	$120,676	$125,503	$130,523	$135,744	$141,174
Misc. Expenditures (farebox): 63799	$161,159	$161,159	$167,605	$174,310	$181,282	$188,533	$196,075
XFER to 1410-Debt Service Fund: 91410	$242,008	$242,008	$251,688	$261,756	$272,226	$283,115	$294,440
Park & Ride Lot Leases	$125,288	$235,288	$244,700	$254,488	$264,667	$275,254	$286,264
Total Non-Contract Cost	$2,358,304	$2,468,304	$2,567,036	$2,669,717	$2,776,506	$2,887,566	$3,003,069

Total operating expenses by mode are summarized in the table below.

Table 59: Operating Expense Budget by Service Type, FY2017-FY2022

	Base (FY2016)	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Local	$4,019,429	$4,034,653	$3,891,712	$4,214,612	$4,879,779	$5,074,970	$5,277,969
ADA Paratransit	$820,460	$724,508	$753,488	$783,628	$853,940	$888,097	$923,621
Metro Connection	$3,846,256	$4,122,504	$5,679,750	$5,886,632	$5,463,029	$5,679,150	$5,903,916
Long Haul	$8,476,743	$9,148,563	$9,488,003	$9,867,523	$10,262,224	$10,672,713	$11,099,621
Total Operating Expense	$17,162,888	$18,030,227	$19,812,953	$20,752,395	$21,458,971	$22,314,930	$23,205,127

Operating Budget Funding Sources

Commonwealth Mass Transit Trust Fund

In 2013, the Virginia General Assembly passed Senate Bill 1140, which requires the Commonwealth Transportation Board (CTB) to allocate revenues generated for the Commonwealth Mass Transit Fund among operating, capital, and special projects in order to respond to the needs of the transit community, with the following specific requirements:

- At least 72 percent allocated to support operating costs of transit providers and distributed by the Commonwealth Transportation Board based on service delivery factors, based on effectiveness and efficiency, as established by the Commonwealth Transportation Board;
- No more than 3 percent for special programs (such as ridesharing and transportation demand management assistance);
- 25 percent of the funds shall be allocated and distributed utilizing a tiered approach evaluated by the Transit Service Delivery Advisory Committee along with the Director of DRPT and established by the Commonwealth Transportation Board for capital purposes based on asset need and anticipated state participation level and revenues;

In addition, the law permits the Commonwealth Transportation Board to consider the transfer of funds from capital and special projects to operating assistance in times of economic distress or statewide special need and also permits DRPT to reserve a balance of up to 5 percent of the Commonwealth Mass Transit Fund revenues in order to assure better stability in providing operating and capital funding to transit entities from year to year.

Passenger Revenues

For the two planned Long Haul fare increases, an elasticity of -0.2 was used to calculate the decrease in ridership. The proposed fares were multiplied by the forecast boardings to estimate passenger revenues. With local bus, the average revenue per passenger was assumed to decrease from the current $0.89 to $0.75, reflecting the planned Day Pass and the reduction in fares on routes 72, 83, and 84. An elasticity of -0.5 was used to estimate the increase in ridership due to this fare reduction. The elasticity is higher in the Long Haul case because local bus riders, having low incomes, are much more price sensitive the commuters to DC.

Northern Virginia Gasoline Sales Tax

The local gasoline tax is a 2.1 percent tax on gasoline distribution in Northern Virginia. The gas tax fund is administered by the Northern Virginia Transportation Commission (NVTC), which allocates the funds to member jurisdictions, most of which are members of the WMATA Compact. Gas tax revenue from those jurisdictions is distributed by NVTC to WMATA to cover the portion of Metrobus and Metrorail expenses that are apportioned to individual members, based on a formula which takes into account population and ridership among other factors. Loudoun County is not currently a member of the Compact and therefore uses its portion of gasoline sales tax revenues on other transportation purposes, which in the past have included roadway improvements and park and ride lots as well as Loudoun County Transit operating costs. The extension of Metrorail service into Loudoun County will trigger the requirement for Loudoun County to join the WMATA Compact as a paying member. At that time the county will use its portion of gasoline sales tax revenues to cover the County's share of Metrorail operating expenditures. Until then, gasoline tax revenues will continue to be used to fund portions of LC Transit operations.

Advertising

Loudoun County has a contract with a vendor that offers advertising on commuter buses in exchange for a payment to the county. In FY2015, the county received about $95,000 from this source.

Other Revenues

LCT receives contractual revenues from the Town of Leesburg and from George Washington University in support of additional Leesburg service and GWU commuter service. These contracts are assumed to remain in place and grow at rates consistent with inflation.

Summary of Operating Sources

A summary of the total operating budgets for FY2017-FY2022 is presented in Table 60 based on ridership and fare changes as previously discussed. The County Funds will primarily come from the Loudoun share of the gas tax prior to the requirement to use these funds for WMATA service; at that point they will be replaced with other county revenues.

Table 60: Operating Budget Sources of Funds

Source	Base (FY2016)	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
State Formula Grant	$2,269,711	$2,269,711	$2,360,499	$2,454,919	$2,553,116	$2,655,241	$2,761,450
Advertising	$100,000	$100,000	$104,000	$108,160	$112,486	$116,986	$121,665
Fare Revenue	$9,253,083	$10,697,872	$10,794,832	$11,706,292	$11,712,525	$11,755,589	$11,755,589
Leesburg Contribution	$286,147	$297,593	$309,497	$321,877	$334,752	$348,142	$362,068
GWU Contribution	$177,270	$184,361	$191,736	$199,405	$207,381	$215,677	$224,304
County Funds	$5,076,676	$4,480,689	$6,052,389	$5,961,741	$6,538,711	$7,223,295	$7,980,051
Total Sources	$17,162,888	$18,030,227	$19,812,953	$20,752,395	$21,458,971	$22,314,930	$23,205,127

Capital Budget Funding Sources

This section presents the projected sources of capital funds to match the estimated annual expenses. Amounts are presented in year-of-expenditure dollars that take into account assumed growth and inflation rates. The annual inflation rate is assumed to be 4.0% per DRPT requirements.

Vehicles and Technology

It is assumed that DRPT grants will cover 68% of the cost of new vehicles (as well as existing vehicle leases) and that the remainder will come from the county's Bus Replacement Fund. A portion of the commuter bus passenger revenues is designated for a bus replacement fund. As of October 2015, the

replacement fund had a balance of $19 million. DRPT grant funding with the same 32% local match is assumed for technology expenses.

Park and Rides

The source of funding for the planned Park and Rides are state capital assistance grants; Congestion Mitigation and Air Quality (CMAQ); proffers; and Northern Virginia Transportation Authority (NVTA) funds.

Summary of Capital Expenses

The following table summarizes the capital expenses that were itemized in Chapter 6, the Capital Improvement Plan.

Table 61: Summary of Capital Expenses

	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Vehicles	$7,172,411	$10,826,543	$6,572,407	$5,664,815	$6,133,568	$7,290,184
Technology	$224,000	$0	$2,000,000	$0	$0	$0
Facilities	$3,500,000	$9,280,000	$5,721,000	$0	$0	$0
TOTAL	$10,896,411	$20,106,543	$14,293,407	$5,664,815	$6,133,568	$7,290,184

Summary of Capital Sources

Table 62 presents the expected sources of funding for the capital expenses as listed in the previous table. They are shown in year of expenditure dollars. This budget includes expenses related to purchasing CNG buses beginning in FY2019 and for renovating the bus garage to provide CNG fueling, storage, and maintenance. If the county decides not to purchase CNG buses, the capital budget would decrease significantly beginning in FY2019.

Table 62: Sources of Capital Funds

	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
CMAQ		$3,290,000	$4,121,000			
DRPT Capital Assistance	$5,029,559	$7,362,049	$5,829,237	$3,852,074	$4,170,827	$4,957,325
NVTA		$2,490,000				
Gas Tax		$2,000,000				
Other County Funds	$672,592	$100,912	$3,261,570	$912,850	$324,940	$386,214
Bus Replacement Reserve	$2,194,259	$3,363,581	$1,081,600	$899,891	$1,637,802	$1,946,645
Proffers	$3,000,000	$1,500,000				
TOTAL FUNDING	$10,896,411	$20,106,543	$14,293,407	$5,664,815	$6,133,568	$7,290,184

Chapter 8: TDP Monitoring and Evaluation

The TDP is intended to be a dynamic document which reflects the changing values and priorities of Loudoun County residents and businesses. It helps to inform decision-makers, acting as a comprehensive source of baseline data and analysis. By summarizing Loudoun Connector's challenges and opportunities, and establishing clear and measurable performance standards, the TDP provides a framework which helps guide day-to-day decisions.

This chapter outlines the steps to be taken to ensure that the TDP remains coordinated with local, regional, and state goals. Information is also included on how Loudoun County Transit staff will monitor actual system performance relative to the standards and goals included in this TDP.

Key elements that have been addressed in this TDP include:

- Refinement of goals, objectives and potential performance standards that are to guide further development of Loudoun County commuter and express services, and the provision of local transit services;
- A detailed evaluation of existing Long Haul, Metro Connection, Local Fixed Route, and ADA Paratransit service;
- A peer agency review that compares both commuter bus and local bus service and financial characteristics to other similar systems;
- A summary of a rider survey conducted in March 2015 for this TDP;
- Recommended service improvements and adjustments identified by fiscal year of implementation;
- A listing of planned capital investments including new and replacement buses and park and ride lots;
- Funding requirements and sources for the recommended service and capital improvements.

In order to carry out the projects described in the TDP, it is important to coordinate the elements of this plan with other transportation and land use planning efforts, to monitor service performance, and to provide DRPT with annual updates regarding implementation of TDP service and facility improvements.

Coordination with Other Plans and Programs

Although the goals and objectives outlined in Chapter 2 are based on the 2010 Countywide Transportation Plan, the text of the CTP will be updated to be consistent with the goals, objectives, and strategies contained in this TDP.

On a regional scale, Loudoun County will continue to coordinate with MWCOG, the Northern Virginia Transportation Commission, and WMATA to ensure that the County's vision for public transit is reflected and supported by regional policies (as well as the reverse: regional goals are reflected in Loudoun's service). Internally, the TDP will be distributed among County Transportation and Planning staff to ensure that all work related to transit is informed by the TDP.

Service Performance Monitoring

Chapter 2 of this document outlines the specific metrics used to monitor service performance. Loudoun County Transit staff will periodically calculate these metrics and evaluate the service provided against the performance standards. Corrective measures will be taken if these monitoring efforts identify under-performing service. Changes could be made to route alignments, service span and frequency, or fare policy.

Annual TDP Update Letter

DRPT requires the submittal of an Annual Update Letter that provides the following information:

- A summary of ridership trends for the prior 12 months.
- A description of TDP goals and objectives that have been advanced over the past 12 months.
- A list of improvements (service and facility) that have been implemented in the past 12 months, including identification of those that were noted in this TDP.
- An update to the TDP's list of recommended service and facility improvements (e.g., identify service improvements that are being shifted to a new year, being eliminated, and/or being added). This update of recommended improvements should be extended one more fiscal year to maintain a six-year planning period.
- A summary of current year costs and funding sources.
- Updates to the financial plan tables presented in Chapter 7 of this TDP; these tables are to be extended one more fiscal year to maintain a six-year planning period.