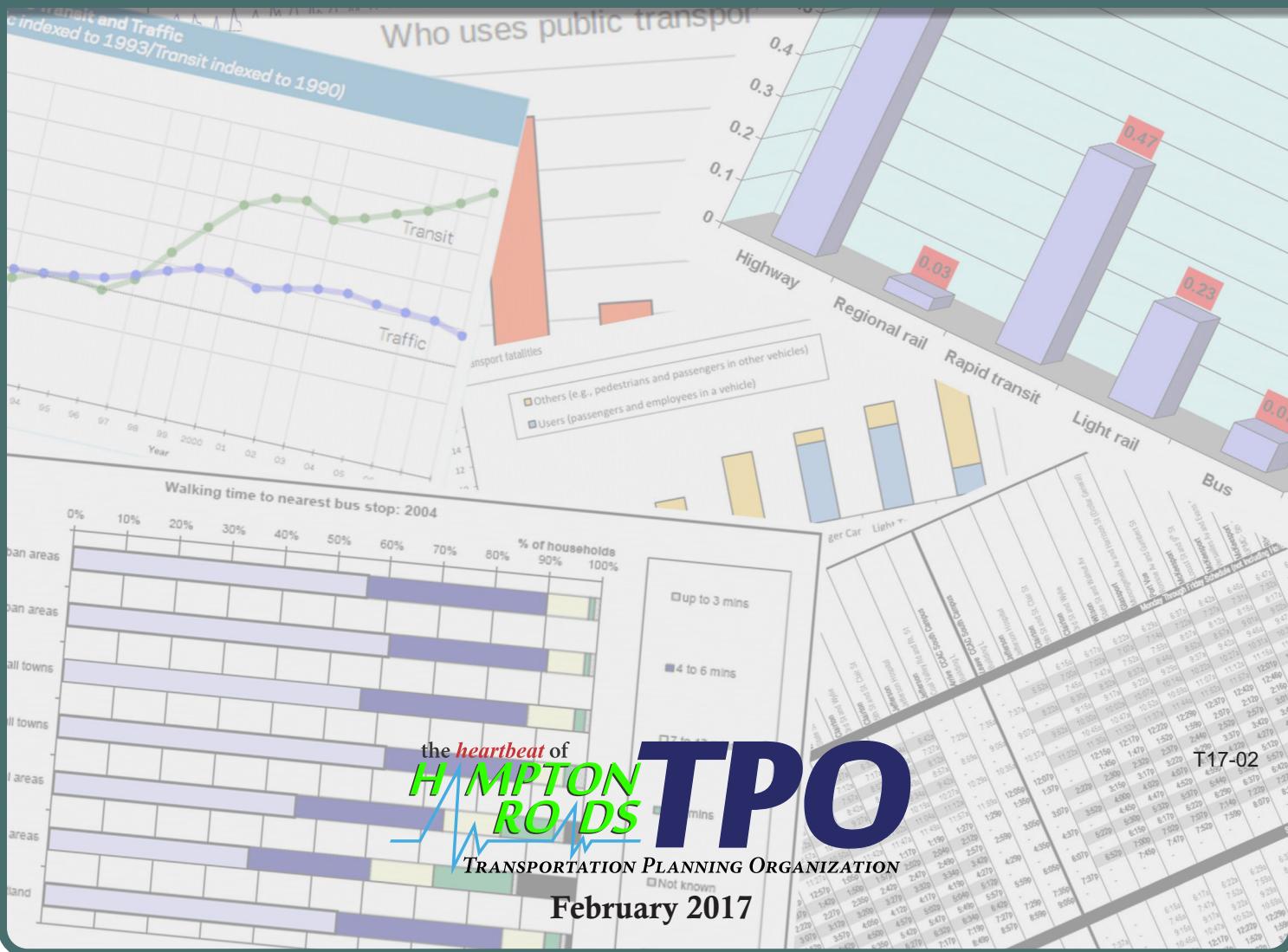


# HAMPTON ROADS REGIONAL TRANSIT BENCHMARKING



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## REPORT DOCUMENTATION

**TITLE**

Hampton Roads Regional Transit Benchmarking

**REPORT DATE**

February 2017

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**ABSTRACT**

The Hampton Roads Transportation Planning Organization (HRTPO) incorporated a Multimodal Mobility task into the HRTPO Unified Planning Work Program to focus on a variety of non-highway options for improving the movement of people and goods. The Regional Transit Benchmarking Study focuses on regional public transit planning and compares the performance of the transit agencies in Hampton Roads [Hampton Roads Transit (HRT), Williamsburg Area Transit Authority (WATA), and Suffolk Transit], to peer agencies nationwide and provides a baseline against which future performance could be measured.

**ACKNOWLEDGEMENTS**

This document was prepared by the Hampton Roads Transportation Planning Organization (HRTPO) in cooperation with the U.S. Department of Transportation (USDOT), Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Virginia Department of Transportation (VDOT), Virginia Department of Rail and Public Transportation (DRPT), Transportation District Commission of Hampton Roads (TDCHR), and Williamsburg Area Transit Authority (WATA). The contents of this report reflect the views of the HRTPO. The HRTPO staff is responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the FHWA, FTA, VDOT or DRPT. This report does not constitute a standard, specification, or regulation. FHWA, FTA, VDOT or DRPT acceptance of this report as evidence of fulfillment of the objectives of this program does not constitute endorsement/approval of the need for any recommended improvements nor does it constitute approval of their location and design or a commitment to fund any such improvements. Additional project level environmental impact assessments and/or studies of alternatives may be necessary.

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## Table of Contents

Introduction .....	1
Background & Literature Review .....	2
Other Benchmarking Studies .....	2
Transit Performance Measures.....	3
Hampton Roads Regional Transit Statistics (HRT, WATA, and Suffolk Transit) .....	5
Service Area Maps.....	6
Agency Comparisons.....	11
Introduction & Methodology .....	11
HRT At-A-Glance .....	13
HRT and Peer Agency Comparisons.....	14
Williamsburg Area Transit Authority – Peer Comparisons .....	20
WATA At-A-Glance .....	20
WATA and its Peer Agency Comparisons.....	21
Suffolk Transit – Peer Comparisons .....	27
Suffolk Transit At-A-Glance .....	27
Suffolk Transit and Peer Agency Comparisons .....	27
Regional Comparisons.....	35
Case Studies .....	35
Hampton Roads Transit – Peer Case Studies .....	36
Williamsburg Area Transit Authority – Peer Case Studies.....	41
Suffolk Transit – Peer Case Studies.....	47
Transit Operating Funds.....	53
Hampton Roads Transit and Peer Agencies: Breakdown of 2014 Operating Funds.....	53
WATA and Peer Agencies: Breakdown of 2014 Operating Funds .....	55
Suffolk Transit and Peer Agencies: Breakdown of 2014 Operating Funds .....	56
Observations and Topics for Future Research .....	57
Observations .....	57
Topics for Future Research .....	57
Appendix A: 2014 Profiles for Hampton Roads and Top-Ranked Peer Agencies.....	59
Appendix B: General Methods of Funding Transit.....	61
Appendix C: Public Comments .....	63

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## Introduction

A Multimodal Mobility task was incorporated into the HRTPO Unified Planning Work Program beginning in FY 2016 to focus some HRTPO staff resources on a variety of non-highway options for improving the movement of people and goods. One of the activities under the Multimodal Mobility task specifically focuses on Regional Public Transit Planning. This activity was envisioned as a series of studies to be conducted over the course of several years.

HRTPO staff coordinated with staff from the region's three public transit providers – Hampton Roads Transit (HRT), Williamsburg Area Transit Authority (WATA), and Suffolk Transit – to determine the best topic for the first study in the series. As a result of this coordinated effort, it was agreed that there was a need for a transit benchmarking study – the results of which would show how the performance of the transit agencies in Hampton Roads compares to peer agencies nationwide and provide a baseline against which future performance could be measured.

***The Hampton Roads Regional Transit Benchmarking Study*** compares each of the three public transit agencies in Hampton Roads to “peer” agencies across the Nation for the following measures:

- Ridership
- Riders per Revenue Hour
- Riders per Revenue Mile
- Operating Expenses per Rider
- Fare Revenue per Rider
- Farebox Recovery Ratio

A number of the top performing peer agencies have been selected for more in-depth analysis in order to identify likely reasons for their top-tier performance for the measures studied.

## Background & Literature Review

### Other Benchmarking Studies

HRTPO staff researched comparable transit agency practices, federal guidance documents, and a number of transit performance studies to determine the appropriate measures to best meet the purpose and scope of *The Hampton Roads Regional Transit Benchmarking Study*.

According to the American Bus Benchmarking group, of which Hampton Roads Transit (HRT) is a member), “Benchmarking is not merely a comparison of data or a creation of tables.”<sup>1</sup> The bus benchmarking process uses 35 Key Performance Indicators (KPIs), which measure the performance of an agency with respect to the following six categories:

- Asset utilization
- Efficiency
- Service quality
- Safety and security
- Environment
- Financial performance

These indicators are comprehensive and specific enough to be applied to a wide range of agencies effectively. The data that is used for the indicators is standardized by the group members on an annual basis. The comparisons may be used to identify high priority problems and to indicate strengths and weaknesses. Monitoring trends over a period of time is helpful in setting targets for improved performance in the future.

A benchmarking study conducted in 2014 by Sound Transit in Washington State, focused on six measures to monitor the effectiveness of the regional transit agency. It is important for agencies to maintain an efficient and effective operation while steadily seeking to improve the quality and delivery of core services in light of the issue of funding availability shortfalls. The measures that Sound Transit chose for the benchmarking study were designed to be as specific as possible while maintaining flexibility. The measures, referred to as “Service Standards,” are as follows:

- Routing and service span
- Schedule efficiency
- Multimodal integration
- Efficiencies of service
- Signature routes
- Passenger amenities

Capital Metro Transit in Austin Texas is a medium sized transit provider (service area population between 200k and 1 million) that has seen steady increases in ridership, service, and revenue since FY

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<sup>1</sup> American Bus Benchmarking Group,  
<http://www.apta.com/mc/annual/previous/2012/presentations/Presentations/BarronA-TrompetM-Transit-Benchmarking.pdf>

2010. The increases are due, in part, to the annual benchmarking process that is conducted by the agency. The performance measurement system allows the agency to “determine where opportunities for improvement exist and help pinpoint changes to continuously improve operations.”<sup>2</sup> The Capital Metro Performance Measurement Standards are categorized as a set of four goals with accompanying objectives and performance measures. The goals are:

- Provide a great customer experience
- Improve business practices
- Demonstrate the value of public transportation in an active community
- Be a regional leader

### **Transit Performance Measures**

The Florida Department of Transportation (FDOT) developed a study in 2014, *A Guidebook for Developing a Transit Performance-Measurement System*, to evaluate best practices in transit performance. FDOT utilized, among other sources, the Transit Cooperative Research Program (TCRP) Report 88, produced by The Transportation Research Board (TRB) and sponsored by the Federal Transit Administration (FTA) “to assist transit agencies that are looking to improve their decision-making processes in order to increase their effectiveness and efficiency.”<sup>3</sup> FDOT contracted with the consulting firms of CDM Smith and Kittleson and Associates to develop a survey to evaluate best practices in evaluating transit performance nationwide and within the State of Florida (29 transit agencies categorized as large, medium, and small sized). The results of the transit benchmark study were to inform transit agencies in Florida of measures utilized by other agencies nationally in evaluating transit performance.

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<sup>2</sup> Capital Metro, Austin Texas, [http://www.capmetro.org/uploadedFiles/Capmetroorg/Future\\_Plans/Strategic-Plan\\_Presentation-2014-2019.pdf](http://www.capmetro.org/uploadedFiles/Capmetroorg/Future_Plans/Strategic-Plan_Presentation-2014-2019.pdf)

<sup>3</sup> Florida DOT, <http://www.fdot.gov/transit/Pages/BestPracticesinEvaluatingTransitPerformanceFinalReport.pdf>

The TCRP report identifies and provides explicit detail regarding more than 400 transit performance measures that are then divided into the following ten categories:

- Availability
- Community
- Safety and security
- Economic
- Paratransit
- Service Delivery
- Travel time
- Maintenance and construction
- Capacity
- Comfort

The categories listed in the TCRP Report 88 Guidebook provided a basis for deriving a set of performance measures for ***the Hampton Roads Transit Benchmarking Study***. The study measures, State DOT guides, Federal guidance, and other agency benchmarking measures/KPIs are listed in Figure 1 below.

The ten general categories were used as a baseline to compare the measures of a sampling of other transit benchmarking initiatives. These categories of availability, service delivery, economic, and capacity were chosen for this study. The categories were selected because of the frequency with which they were utilized in other studies and because the data source inputs were of a consistent and reliable nature. The measures used for peer agency comparisons are shown in Figure 1.

Source		Measures and Key Performance Indicators (KPI) Comparison									
<b>Federal Guidance</b>	Transit Cooperative Research Program (TCRP) Guidebook (2003)	Availability	Service Delivery	Community	Travel Time	Safety & Security	Maintenance & Construction	Economic	Capacity	Paratransit	Comfort
<b>Study</b>	American Bus Benchmarking Group (HRT is a Member)	Growth & Learning	Customer Service	Environmental Concerns		Safety & Security		Financial Concerns	Internal Processes		
	Brookings Institute (May 2011) Missed Opportunity	Coverage	Service Frequency					Jobs Access			
	HRTPO Transit Benchmarking Study Measures*	X	X					X	X		
	Puget Sound MPO Benchmarking Study (2014)	Routing & Service Span & Headway & Bus Stop Spacing	Schedule Efficiency	Transfer Points & Rail-Bus Integration	Duplication of Service			Route Anchors & Route Terminals			Minimum Passenger Amenities
<b>State DOT Guides</b>	Colorado Department of Transportation (CDOT 2012)	Accessibility	Efficiency & Mobility	Environmental & Resource Conservation		Safety	System Preservation and Expansion	Economic Development			
	Florida Department of Transportation (FDOT 2014)		Customer Satisfaction	Service Efficiency		Safety	Asset Management	Service Effectiveness & Labor Utilization			
<b>Agency</b>	Capital Metro: Austin, TX	Grow Service Base and Area	Service Delivery Index	Increase Ridership in Target Markets		Safe Trips	State of Good Repair	Improve Business Practices			Passenger Satisfaction Survey
	Hampton Roads Transit (HRT): Peer Benchmarking Measures	Revenue Hours & Fleet Size	Service Hours								
	Lane Transit District: Eugene OR	Ensure Equitable Access	Provide Attractive Travel Options	Engage Regional Community		Maintain Safety & Security	Resource Sustainability	Enhance Economic Prosperity			
	Suffolk Transit: Peer Benchmarking Measures	Revenue Hours & Revenue Miles	Service Hours	Unlinked Passenger Trips				Farebox Revenue & Expenditures	Service Area & Population & Density		
	WATA: Peer Benchmarking Measures	Revenue Hours & Revenue Miles	Service Hours	Unlinked Passenger Trips				Farebox Revenue & Expenditures	Service Area & Population & Density		

\*Measures Categories chosen for HRTPO Transit Benchmarking Study

**Figure 1: HRTPO Transit Benchmarking Study**

## Hampton Roads Regional Transit Statistics (HRT, WATA, and Suffolk Transit)

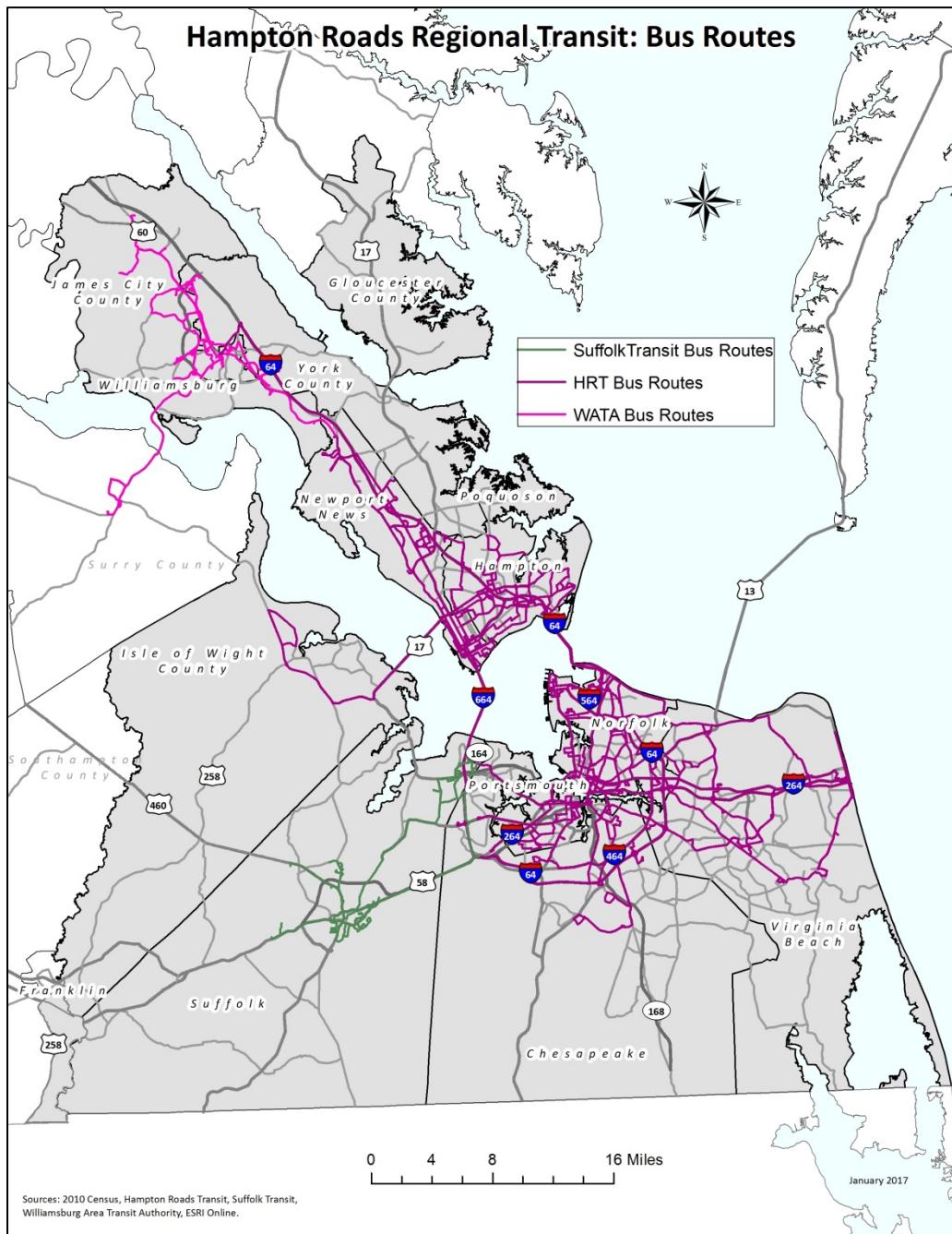
There are three transit agencies that serve the Hampton Roads region – each responsible for serving different localities. Hampton Roads Transit (HRT) serves Chesapeake, Hampton, Newport News, Norfolk, Portsmouth, and Virginia Beach. The Williamsburg Area Transit Authority (WATA) provides service to Williamsburg, the counties of James City and York and parts of Surry County. Suffolk Transit serves the City of Suffolk. All three agencies report data annually to the National Transit Database (NTD), the source of all data used for the analyses in this report (see Appendix A for top ranked agency profiles). The following figure shows summary statistics for these three agencies for directly-operated bus (not paratransit) for 2014.

	HRT	WATA	Suffolk Transit*
Service Area Population	1,134,343	57,000	66,465
Vehicles Operating in Maximum Service (VOMS)	233	23	5
Annual Vehicle Revenue Hours	778,904	85,361	13,004
Annual Ridership [Unlinked Passenger Trips (UPT)]	15,026,924	2,483,884	77,631
Fare Revenue	\$13,973,870	\$594,586	\$49,299
Vehicle Operating Expenses	\$70,334,896	\$6,316,436	\$819,252
	Source: NTD	Source: NTD	*Data available for 2015 only Source: City of Suffolk email

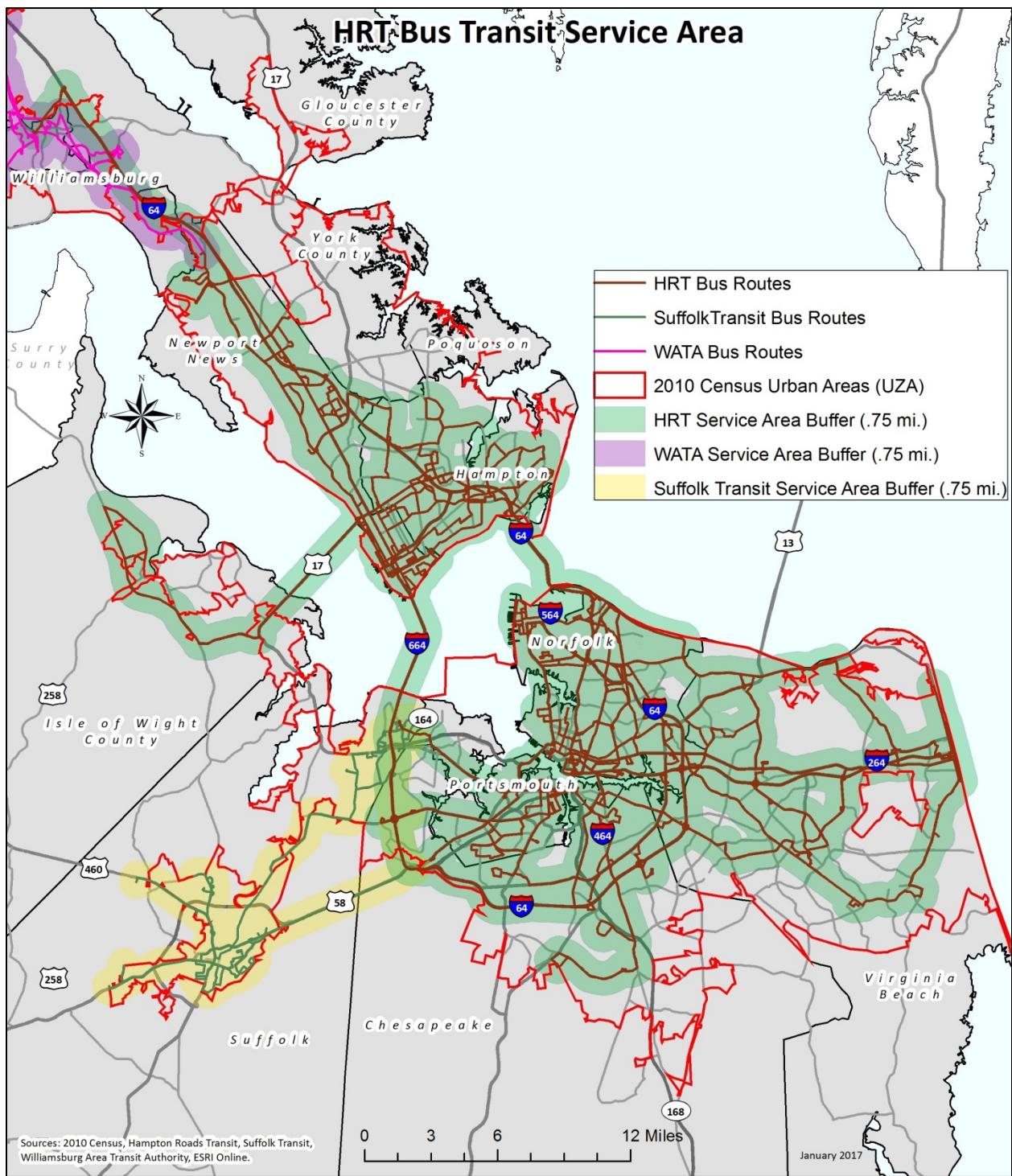
Figure 2: Descriptive Statistics of Transit Agencies in Hampton Roads

## Service Area Maps

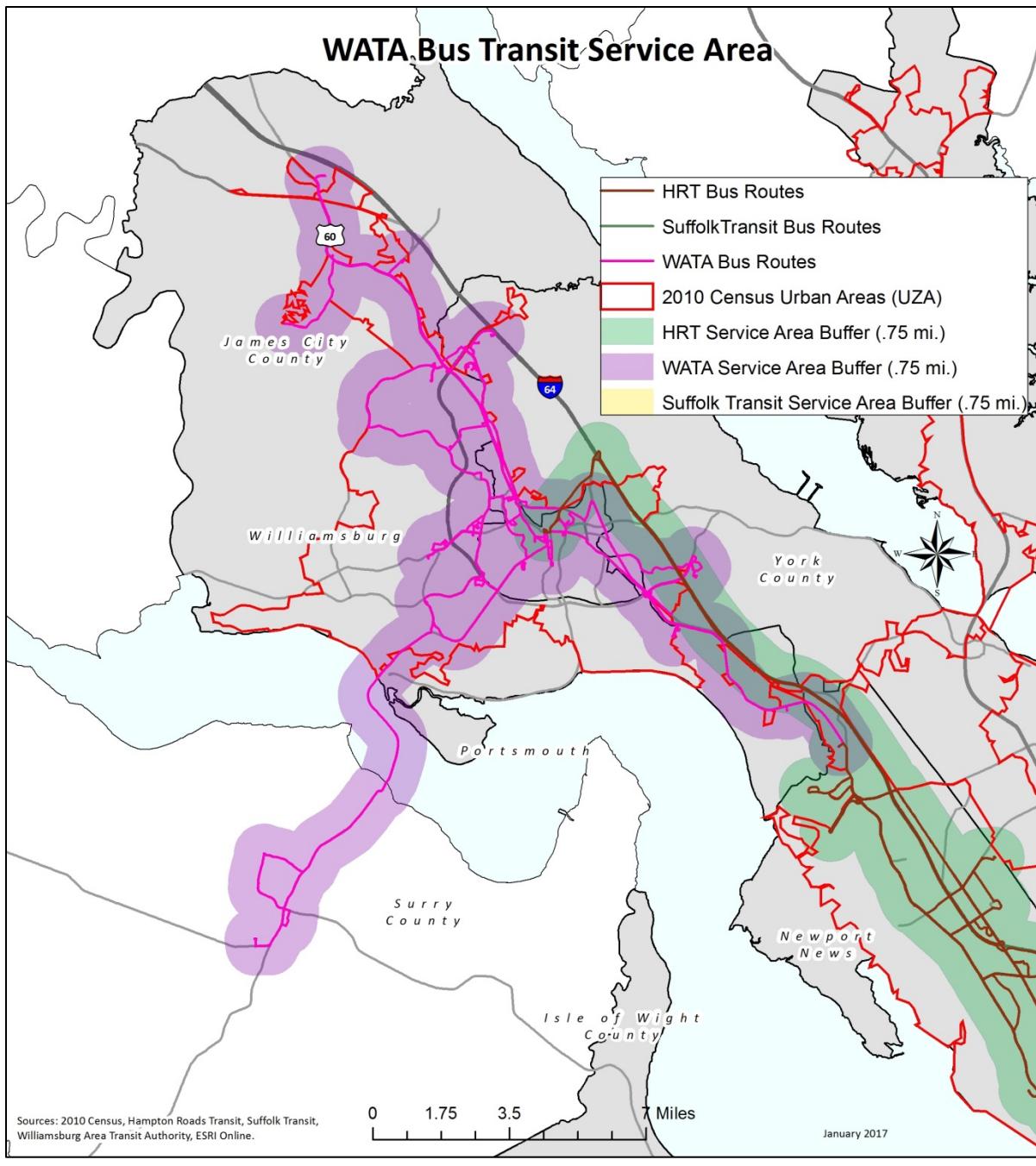
The three transit agencies in Hampton Roads have overlapping service areas. The areas of overlap are minimal and highlighted in **Maps 1-4**. The individual maps depict the Hampton Roads Regional, Hampton Roads Transit (HRT), Williamsburg Area Transit Authority (WATA), and Suffolk Transit service areas. The maps include the Americans with Disabilities Act (ADA) prescribed 0.75 mile buffer around transit routes, the 2010 Census Urban Area (UZA), and the bus route locations by agency.



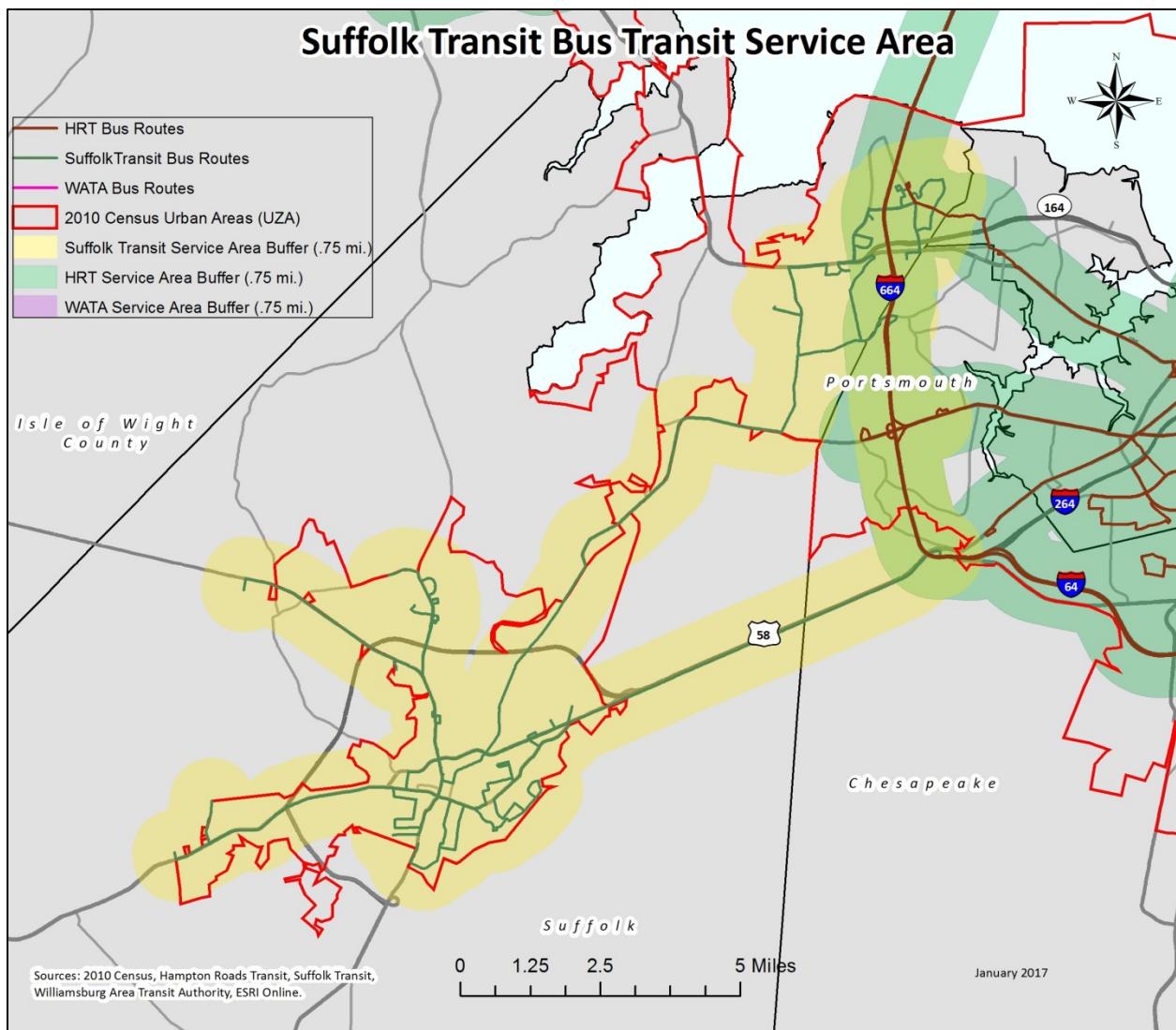
Map 1



Map 2



Map 3



Map 4

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## Agency Comparisons

### Introduction & Methodology

The dominant service provided by the three transit agencies in Hampton Roads is by bus. Although Hampton Roads Transit also operates ferry, express bus, and light rail, and all three agencies provide paratransit service, the focus of this study is on bus transit for consistency. This study compares each of the region's three transit agencies to other agencies nationwide that serve similar-sized service area populations, have similar vehicle revenue hours, and similar vehicles operated in maximum service (VOMS) levels. The next section describes how "peer" agencies were selected for each of Hampton Roads' three transit providers.

#### ***Identification of Peer Agencies***

The following measures from the National Transit Database (NTD) were used to determine comparable agencies for each Hampton Roads' transit agency. All measures were obtained for direct-operated bus service for the reporting year 2014. Agencies that fell within + or - 50% for each of the following criteria, were selected for use as peer agencies:

- Service Area Population
- Vehicle Revenue Hours (VRH)
- Vehicles Operated in Maximum Service (VOMS)

The pie chart below shows the share of service area populations of the three transit agencies serving Hampton Roads. Generally, service area population includes people residing within 0.75 miles of a transit route. According to the NTD, 1,257,808 people in Hampton Roads live within a transit service area.

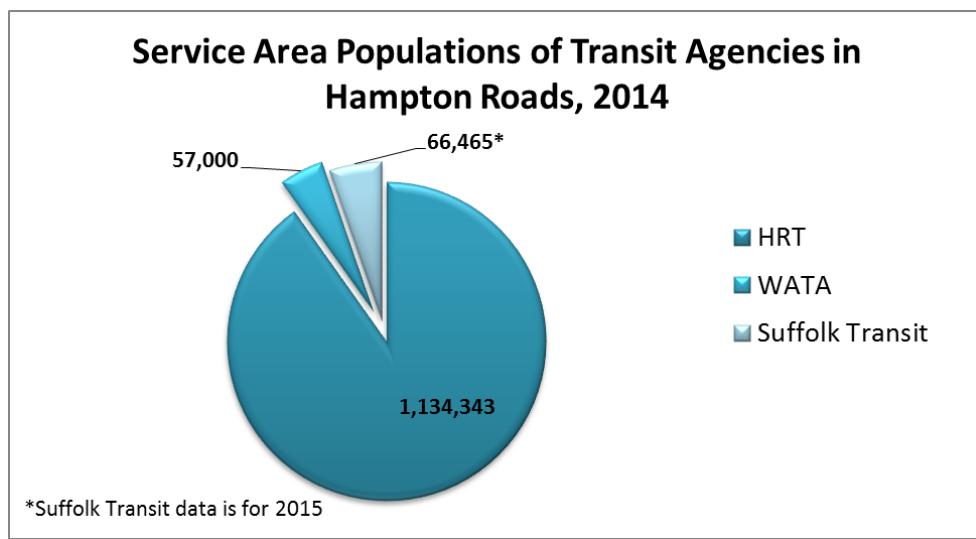


Figure 3 - Service Area Populations of Transit Agencies in Hampton Roads, 2014

As illustrated in the Figure 3, HRT serves 90% of the population in the region that resides within 0.75 miles of a transit route. WATA and Suffolk Transit each serve 5% of those residents.

Based on the measures above, 25 peer agencies were identified for comparison to HRT, 31 for WATA, and 30 for Suffolk Transit.

### ***Performance Measures***

The following measures were used to compare the performance of Hampton Roads' three regional transit agencies to their peer agencies:

- Ridership
- Riders per Revenue Hour
- Riders per Revenue Mile
- Operating Expenses per Rider
- Fare Revenue per Rider
- Farebox Recovery Ratio

The first three measures compare overall ridership, riders per hour and riders per mile, and indicate the performance of these agencies at attracting riders. The last three measures relate to each transit agency's financial performance and ability to minimize costs per rider and maximize revenues per rider.

## HRT At-A-Glance

Hampton Roads Transit (HRT) provides bus, express bus, light rail, ferry, ridesharing, and paratransit service in Chesapeake, Hampton, Newport News, Norfolk, Portsmouth and Virginia Beach. The agency was incorporated in 1999 through the merger of PenTran and Tidewater Regional Transit (TRT). HRT employs 1,087 staff and contracts with each city in its service area individually, with each city determining how much service is to be provided within its boundaries.

### Gas Prices Versus Bus Ridership

In an effort to determine whether there was a direct relationship between the price of gasoline and the use of public transportation, national average gas prices for the last ten years (adjusted to 2014 dollars) were compared to bus ridership during the same period. Figure 4 below shows this comparison for HRT and its peer agencies.

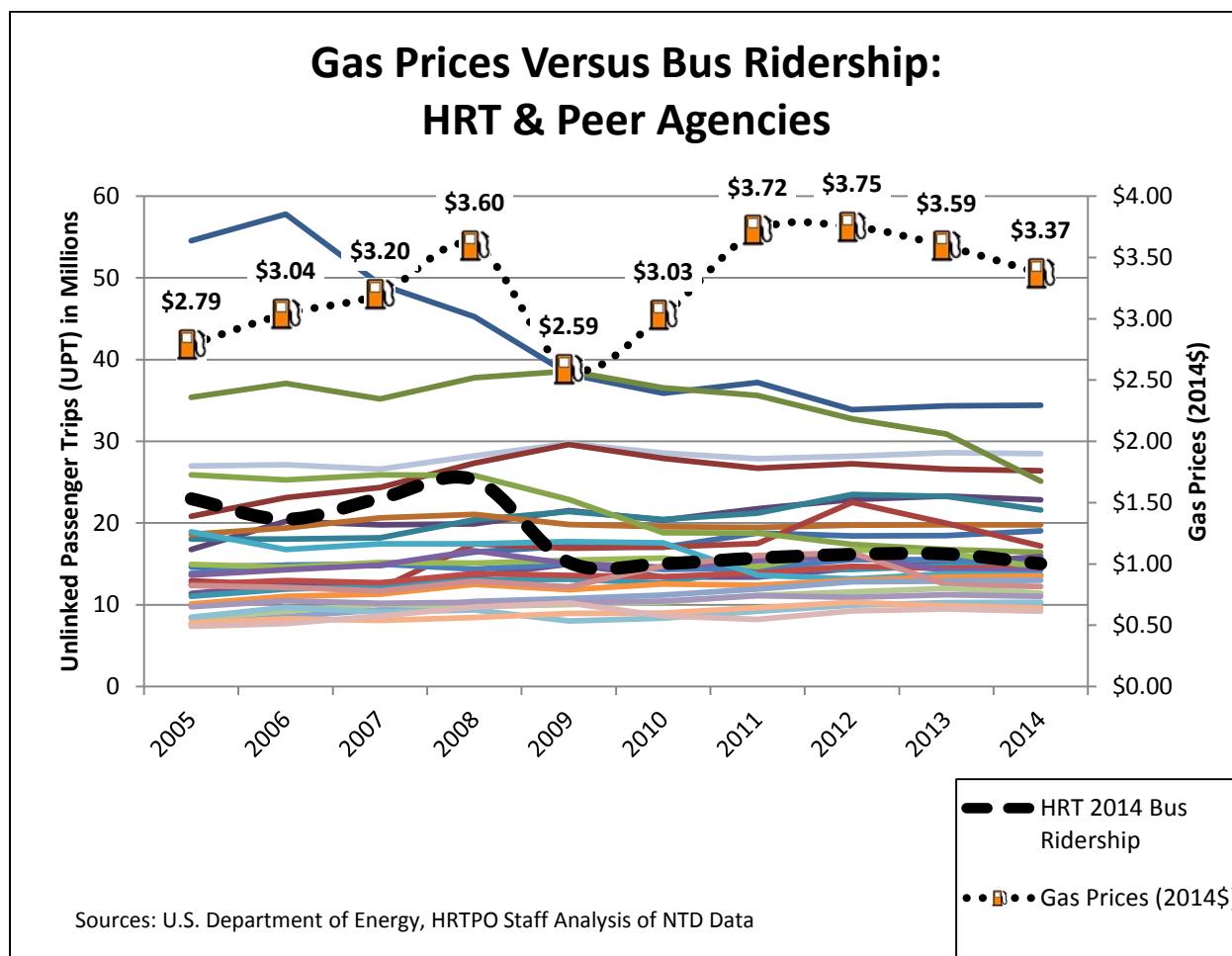
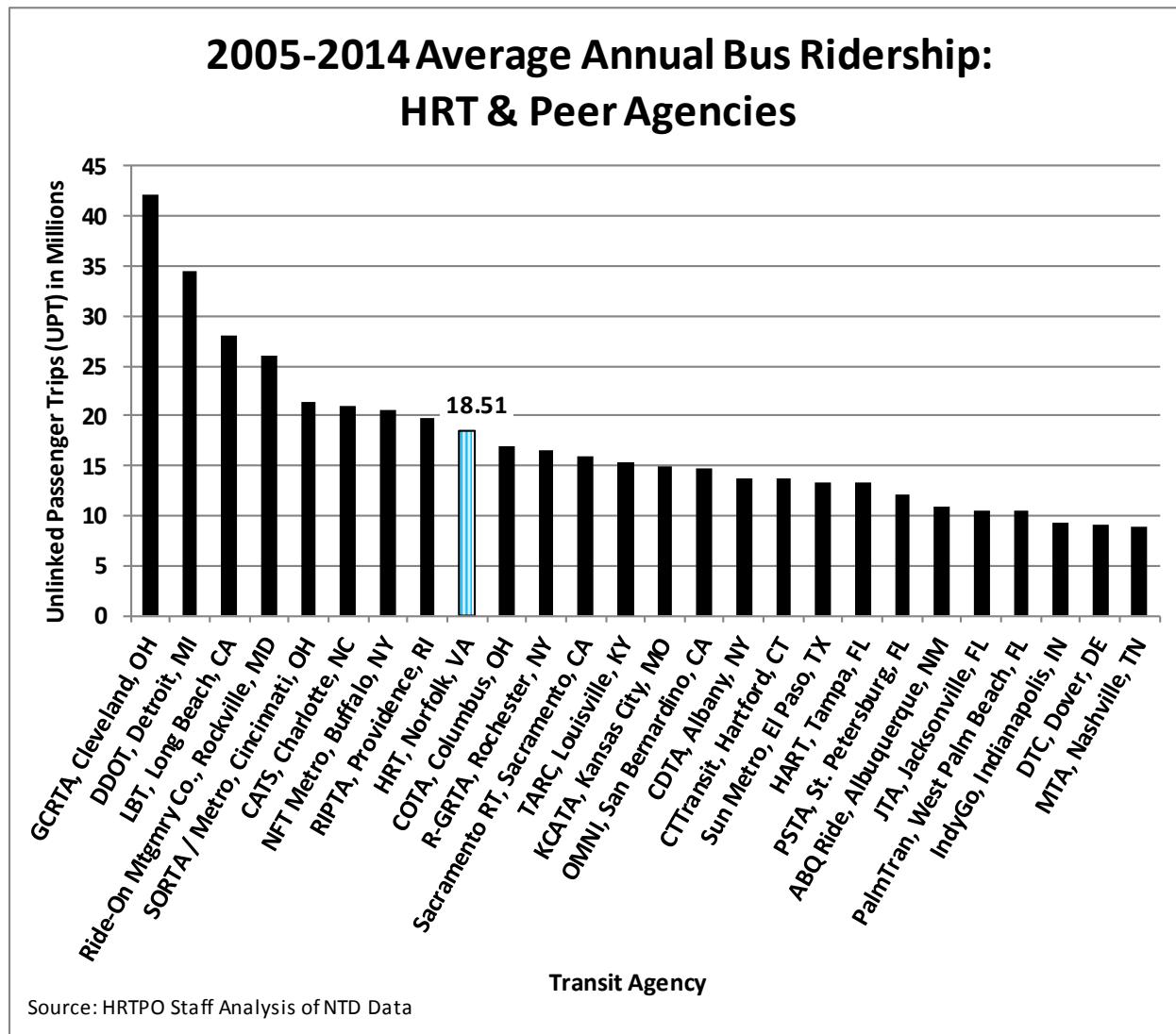


Figure 4 - Ridership and Gas Prices by Year, HRT and Peer Agencies, 2005-2014

## HRT and Peer Agency Comparisons

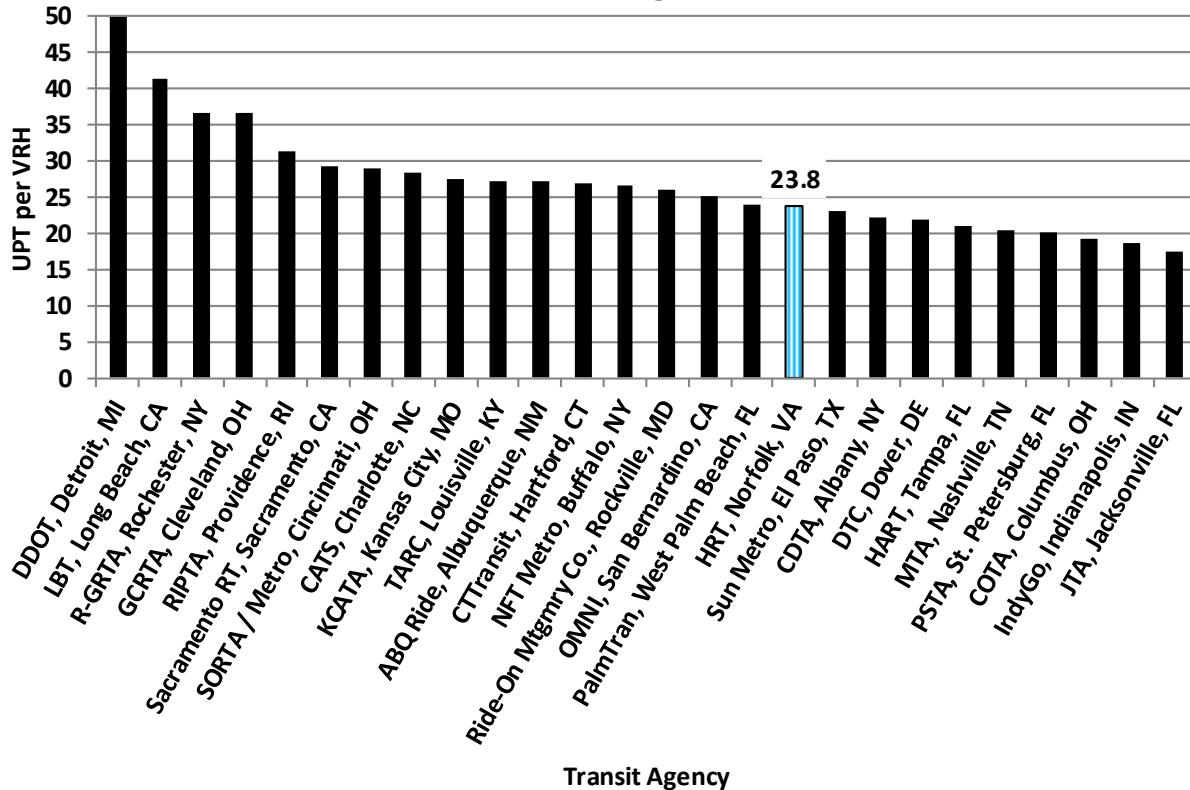
The following charts show performance measures of HRT and its 25 peer agencies.



**Figure 5 - Average Annual Bus Ridership: HRT and Peer Agencies, 2005-2014**

Bus Ridership was determined using Unlinked Passenger Trips (UPT), defined by the Federal Transit Administration (FTA) as the number of passengers who board public transportation vehicles. Passengers are counted each time they board vehicles no matter how many vehicles they use to travel from their origin to their destination. As shown in Figure 5, HRT averaged 18.5 million unlinked passenger trips per year. In this category, Greater Cleveland Regional Transit Authority (GCRTA) in Cleveland, OH had the highest ridership (42.1M per year), while Nashville, TN Metro had the lowest (8.8M per year).

## 2005-2014 Average Bus Riders per Revenue Hour: HRT & Peer Agencies

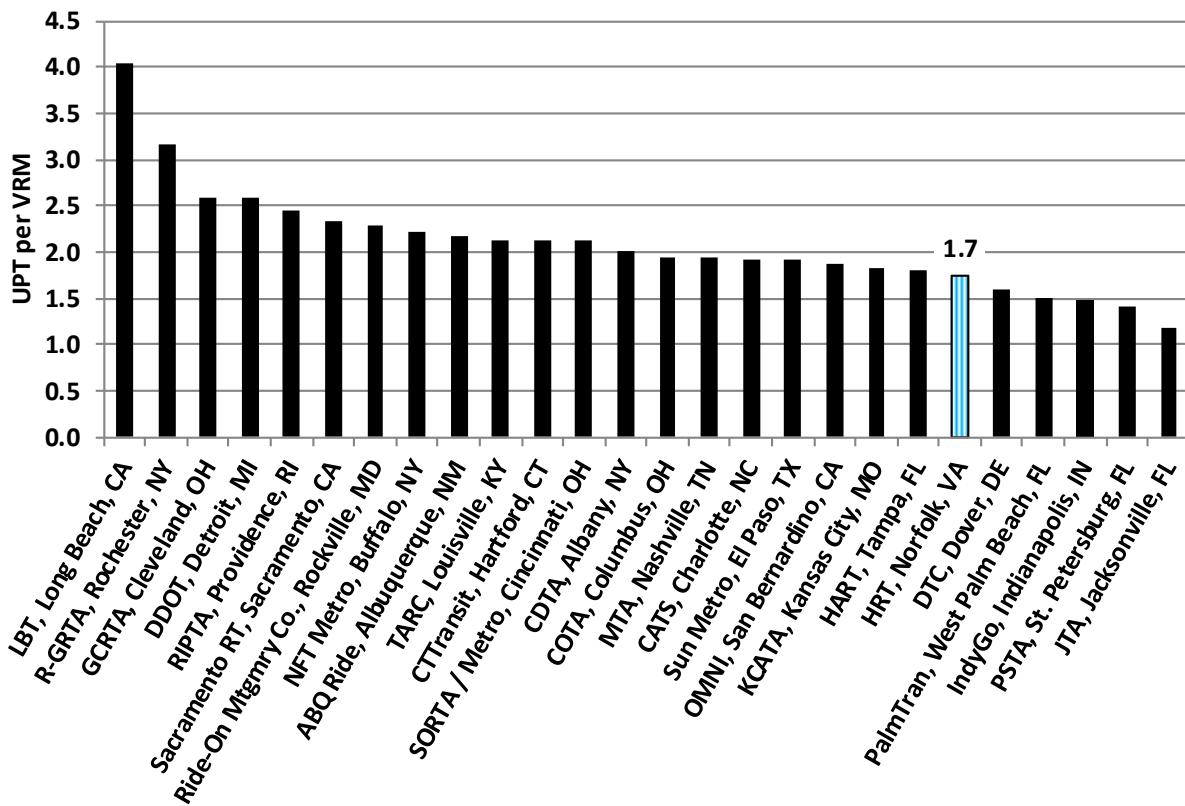


Source: HRTPO Staff Analysis of NTD Data

**Figure 6 - Average Bus Riders per Revenue Hour: HRT and Peer Agencies, 2005-2014**

Bus Riders per Revenue Hour was determined by dividing the number of unlinked passenger trips (UPT) by the amount of vehicle revenue hours (VRH), which is defined by the FTA as the hours that vehicles are scheduled to or actually travel while in revenue service. As shown in Figure 6, HRT bus riders per revenue hour averaged 23.8 UPT/VRH. Jacksonville Transportation Authority (JTA) in Jacksonville, FL, had the lowest UPT/VRH per hour at 17.3, while Detroit Department of Transportation (DDOT) had the highest at 50.0.

## 2005-2014 Average Bus Riders per Revenue Mile: HRT & Peer Agencies

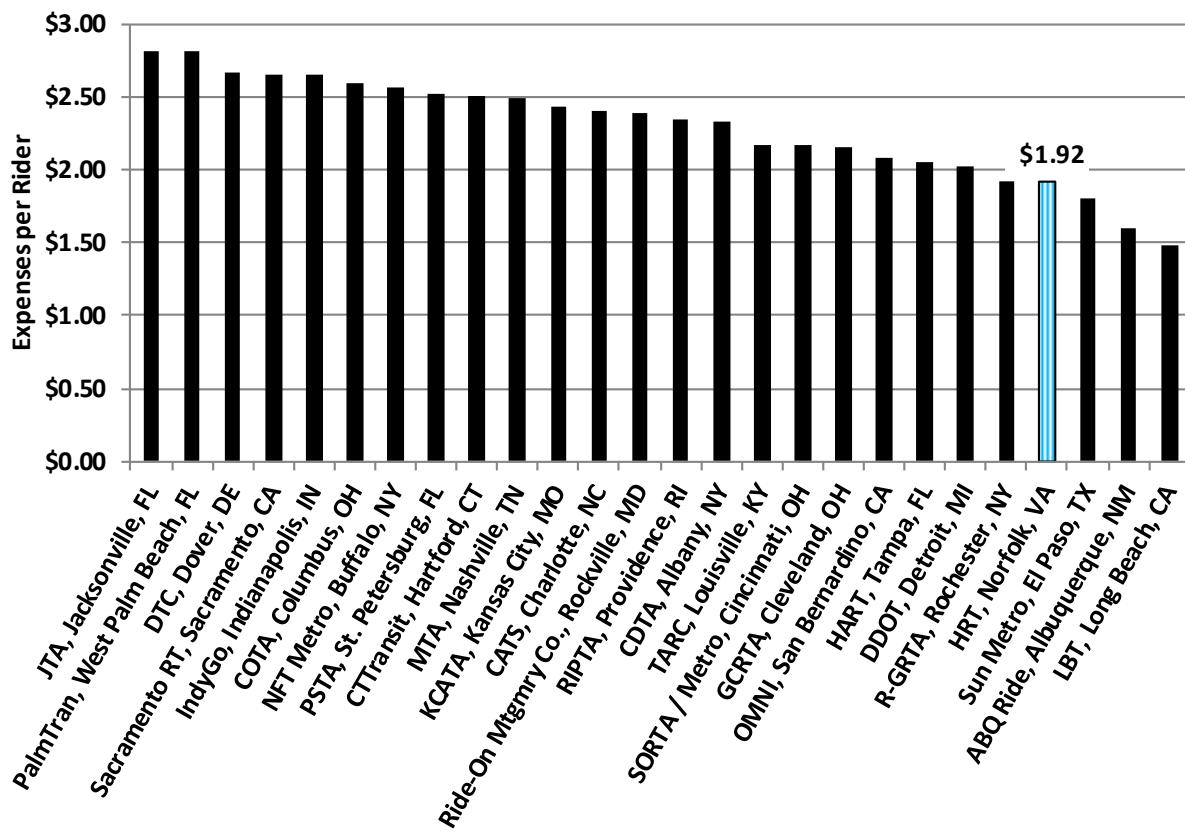


Source: HRTPO Staff Analysis of NTD Data

Figure 7 - Average Bus Riders per Revenue Mile: HRT and Peer Agencies, 2005-2014

Bus Riders per Revenue Mile was determined by dividing the number of unlinked passenger trips (UPT) by the amount of vehicle revenue miles (VRM), which is defined by the FTA as the miles that vehicles are scheduled to or actually travel while in revenue service. As shown in Figure 7, HRT averaged near the low end of this comparison with 1.7 UPT/VRM. Jacksonville Transportation Authority (JTA) in Jacksonville, FL, had the lowest UPT/VRM at 1.2, while Long Beach Transit (LBT) in Long Beach, CA had the highest at 4.0.

## 2005-2014 Average Bus Operating Expenses per Rider: HRT & Peer Agencies

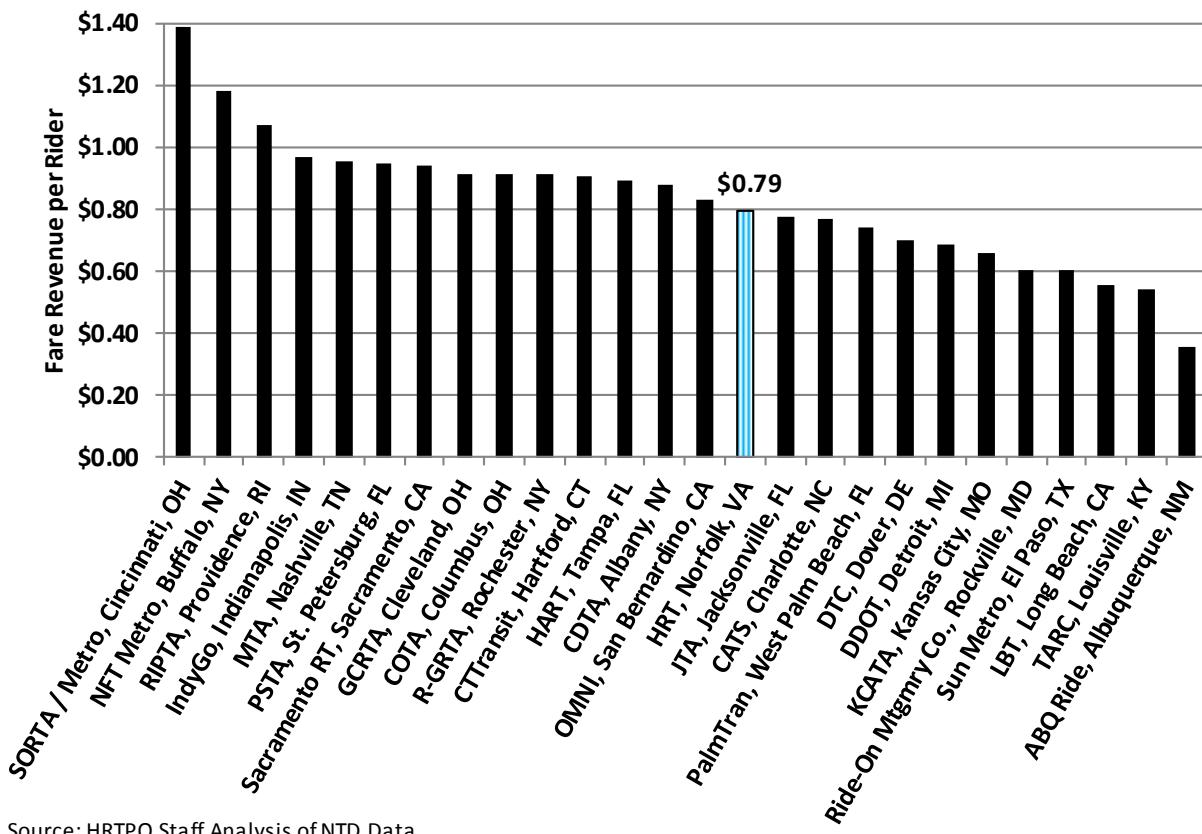


Source: HRTPO Staff Analysis of NTD Data

Figure 8 - Average Bus Operating Expenses per Rider: HRT and Peer Agencies, 2005-2014

Bus Operating Expenses per Rider was determined by dividing the amount of bus operating expenses (in dollars) by ridership (UPT). As shown in Figure 8, HRT averaged near the low end among peer transit agencies at \$1.92. Jacksonville Transportation Authority (JTA) in Jacksonville, FL, had the highest amount of average operating expenses per rider at \$2.82, while Long Beach Transit (LBT) in Long Beach, CA had the lowest at \$1.48.

## 2005-2014 Average Bus Fare Revenue per Rider: HRT & Peer Agencies

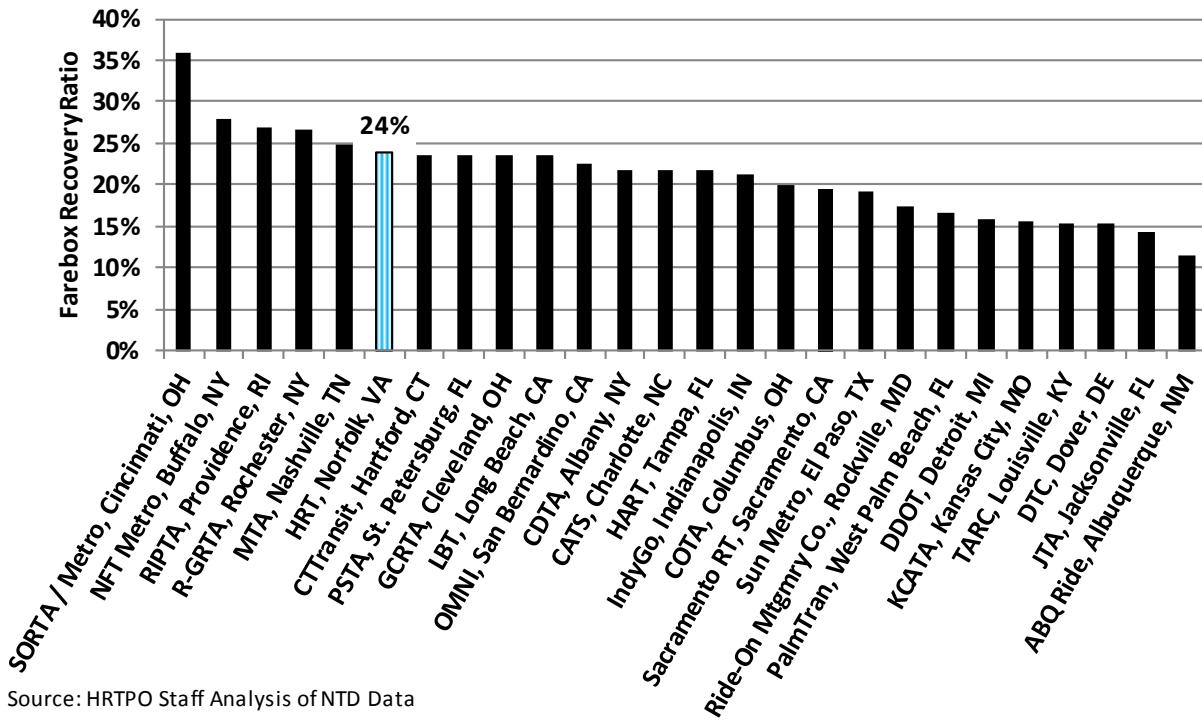


Source: HRTPO Staff Analysis of NTD Data

Figure 9 - Average Bus Fare Revenue per Rider: HRT and Peer Agencies, 2005-2014

Bus Fare Revenue per Rider was determined by dividing fare revenue (in dollars) by ridership (UPT). As shown in Figure 9, HRT averaged near the middle in this comparison at \$0.79. Southwest Ohio Regional Transit Authority (SORTA) Metro in Cincinnati, OH had the highest average fare revenue per rider at \$1.39, while Albuquerque (ABQ) Ride in Albuquerque, NM had the lowest at \$0.36.

## 2005-2014 Average Bus Farebox Recovery Ratio: HRT & Peer Agencies



Source: HRTPO Staff Analysis of NTD Data

Figure 10 - Average Bus Farebox Recovery Ration: HRT and Peer Agencies, 2005-2014

According to the FTA, Farebox Recovery Ratio is the percentage of operating expenses that are covered by fares. As shown in Figure 10, HRT averaged among the highest of its peer agencies at 24%. Southwest Ohio Regional Transit Authority (SORTA) Metro in Cincinnati, OH had the highest average farebox recovery ratio at 36%, while, Albuquerque (ABQ) Ride in Albuquerque, NM had the lowest at 11%.

## Williamsburg Area Transit Authority – Peer Comparisons

### WATA At-A-Glance

Williamsburg Area Transit Authority (WATA) serves Williamsburg, James City County, York County, and portions of Surry County. In addition to regular fixed-route service of fully-accessible buses, a specialized service covering the regular bus service area for disabled persons is available.

#### Gas Prices Versus Bus Ridership

In an effort to determine whether there was a direct relationship between the price of gasoline and the use of public transportation, national average gas prices for the last ten years (adjusted to 2014 dollars) were compared to bus ridership during the same period. Figure 11 below shows this comparison for WATA and its peer agencies.

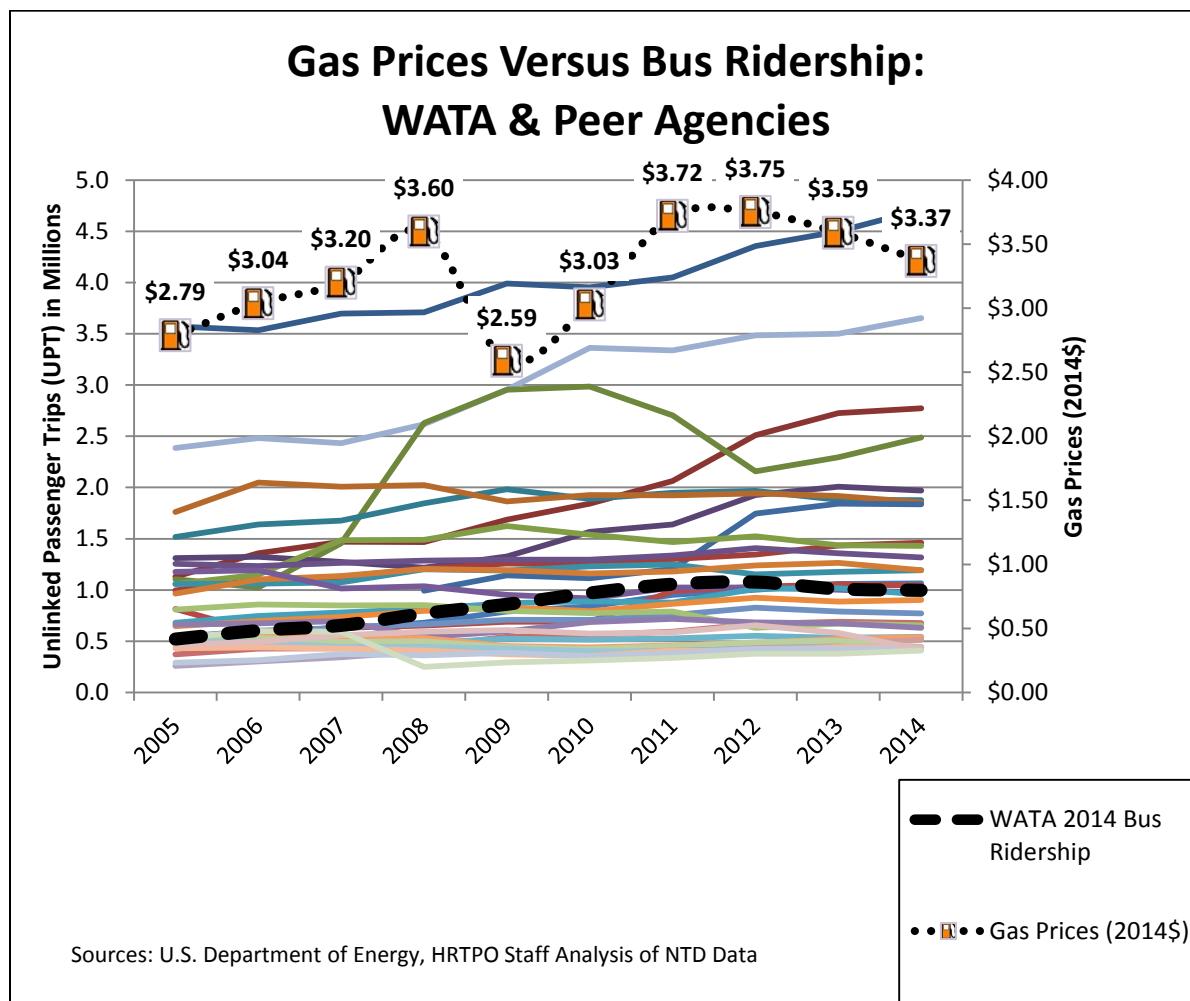
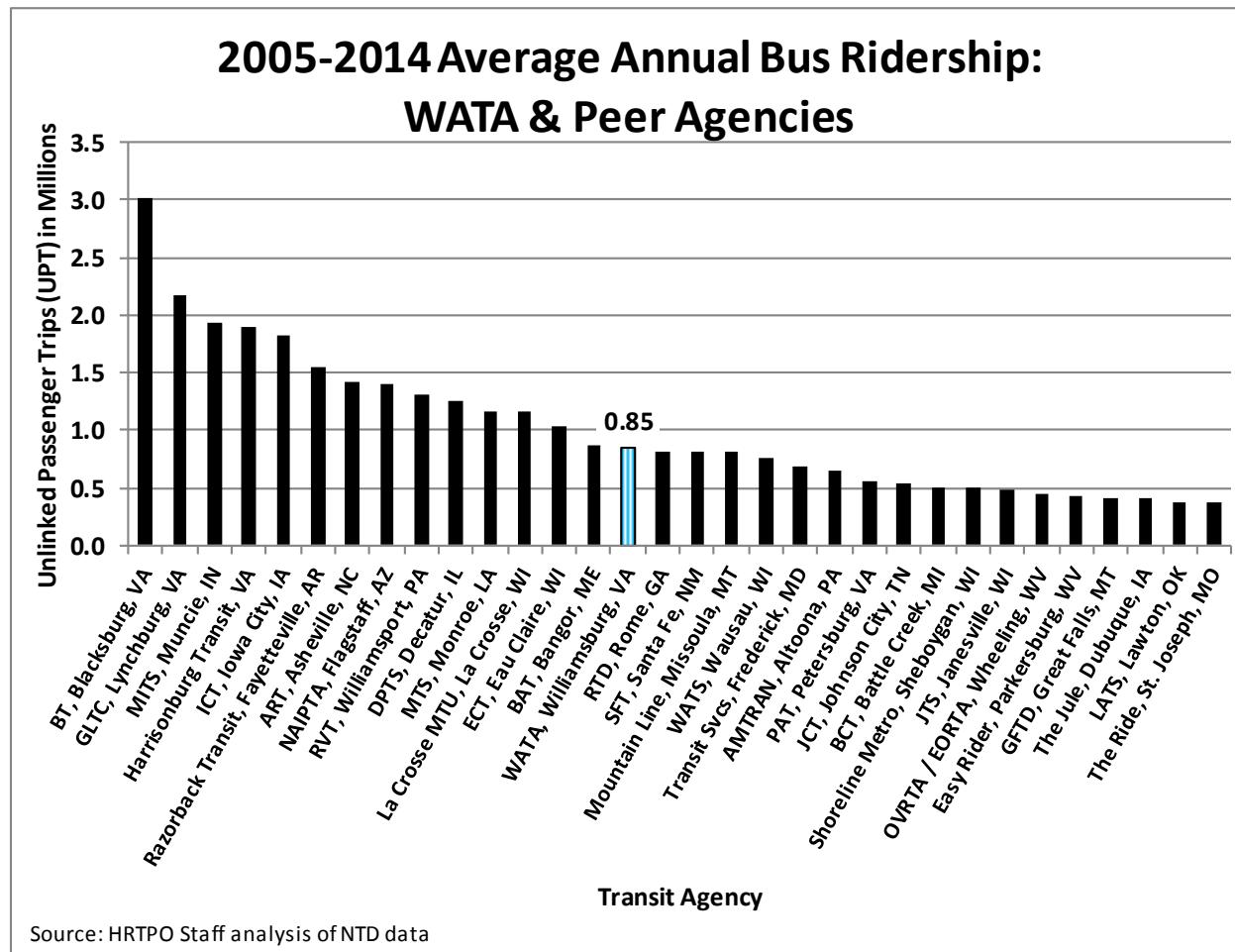


Figure 11 - Historical Bus Ridership: WATA and Peer Agencies Compared Gas Prices, 2005-2014

## WATA and its Peer Agency Comparisons

The following charts show performance measures of WATA and its 31 peer agencies.

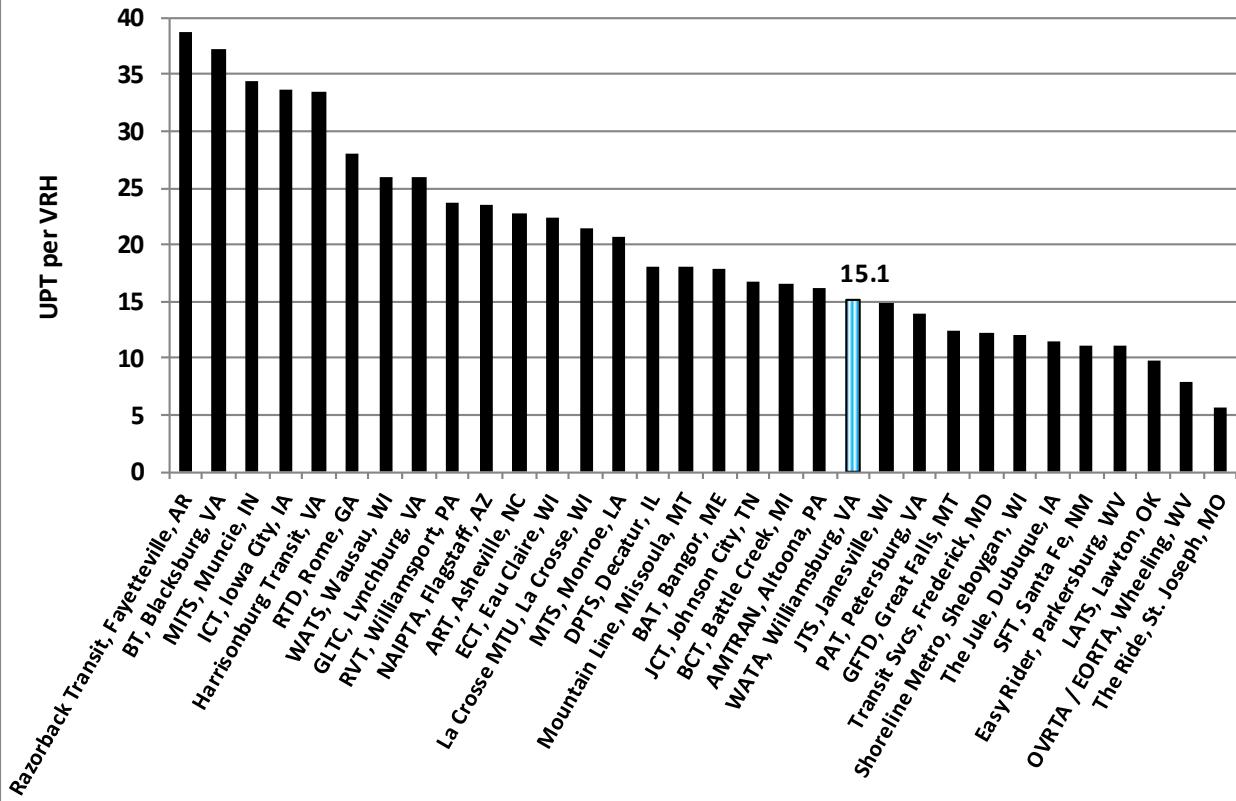


Source: HRTPO Staff analysis of NTD data

**Figure 12 - Average Annual Bus Ridership: WATA and Peer Agencies, 2005-2014**

Bus Ridership was determined using Unlinked Passenger Trips (UPT), defined by the FTA as the number of passengers who board public transportation vehicles. Passengers are counted each time they board vehicles no matter how many vehicles they use to travel from their origin to their destination. As shown in Figure 12, WATA averaged near the middle in this comparison, with 0.85 million UPT. Blacksburg Transit in Blacksburg, VA had the highest ridership with 3.0 million, while The Ride in St. Joseph, MO had the lowest at 0.37 million.

## 2005-2014 Average Bus Riders per Revenue Hour: WATA & Peer Agencies

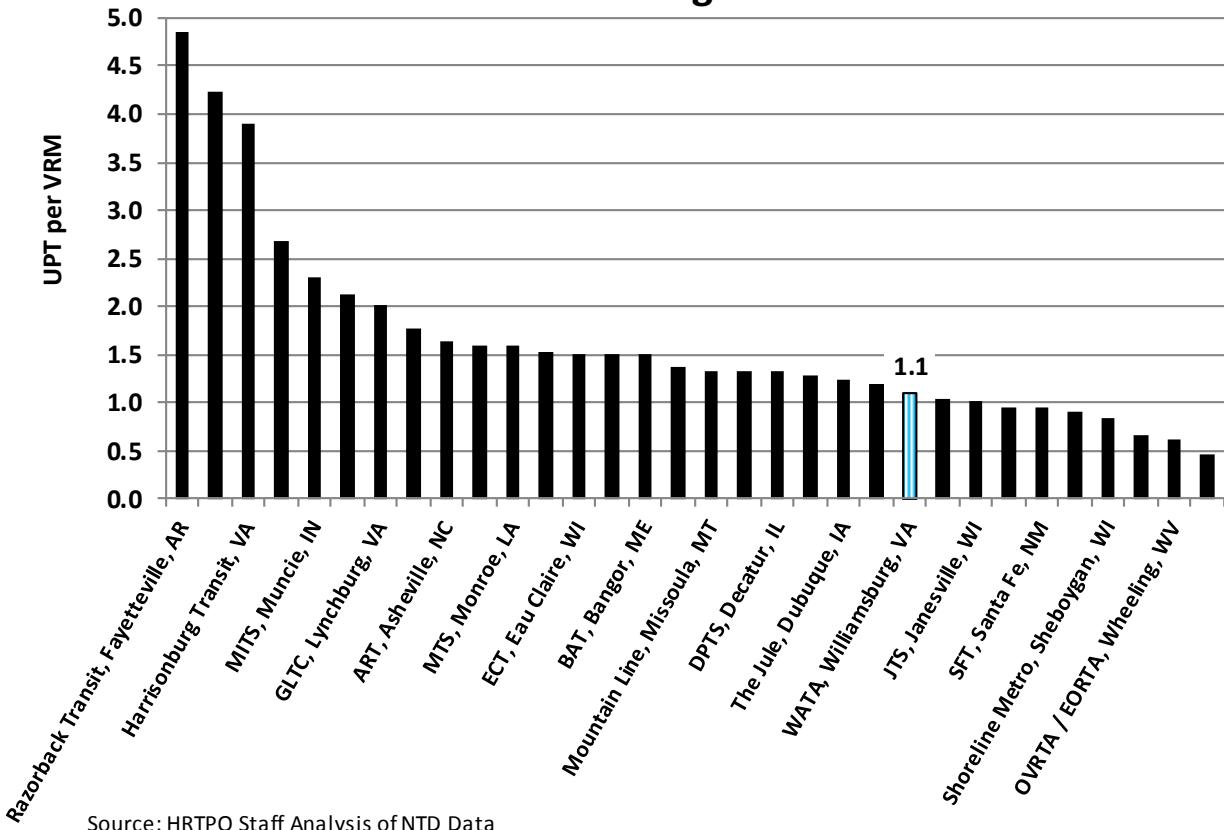


Source: HRTPO Staff Analysis of NTD Data

Figure 13 - Average Annual Bus Riders per Revenue Hour: WATA and Peer Agencies, 2005-2014

Bus Riders per Revenue Hour was determined by dividing the number of Unlinked Passenger Trips (UPT) by the amount of Vehicle Revenue Hours (VRH). As shown in Figure 13, WATA averaged slightly below the middle in this comparison at 15.1 UPT/VRH. Razorback Transit in Fayetteville, AR had the highest number of riders per hour at 38.8, while The Ride in St. Joseph, MO had the lowest at 5.7.

## 2005-2014 Average Bus Riders per Vehicle Revenue Mile: WATA & Peer Agencies

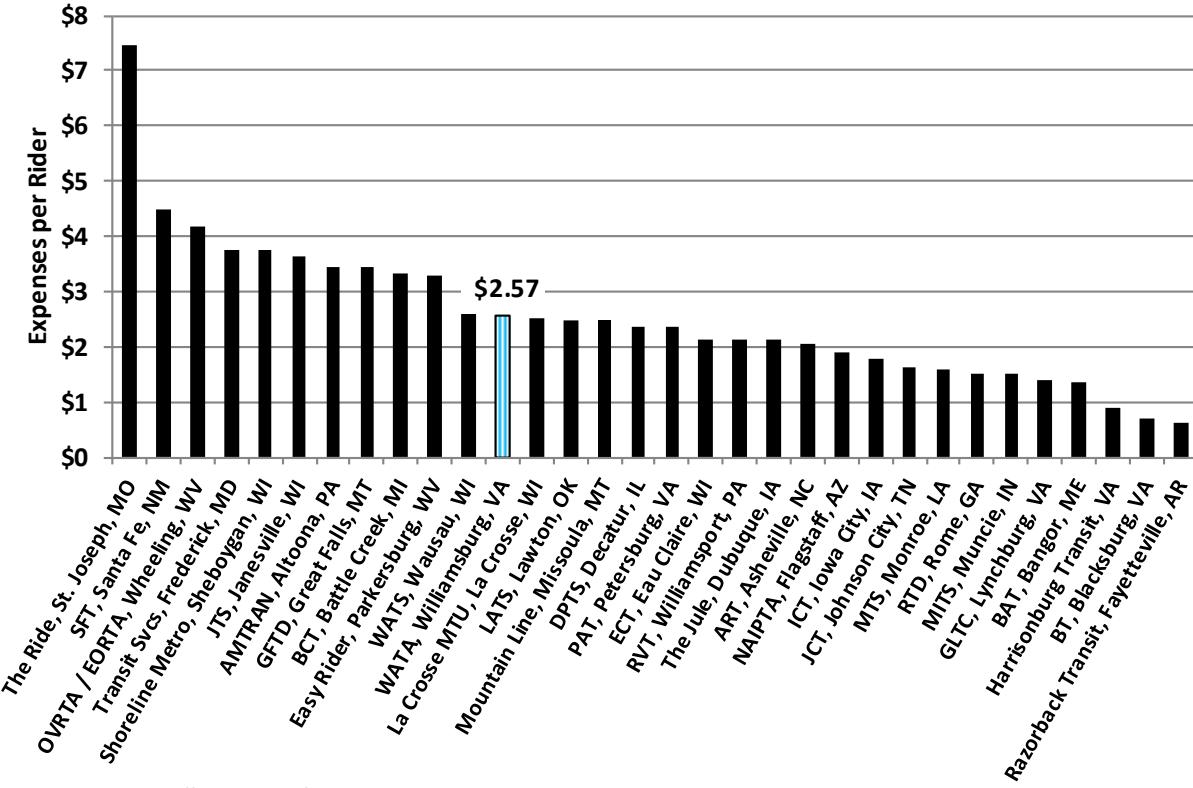


Source: HRTPO Staff Analysis of NTD Data

**Figure 14 - Average Bus Riders per Revenue Mile: WATA and Peer Agencies, 2005-2014**

Bus Riders per Revenue Mile was determined by dividing the number of Unlinked Passenger Trips (UPT) by the amount of Vehicle Revenue Miles (VRM). As shown in Figure 14, WATA averaged near the low end in this comparison at 1.1 UPT/VRM. The Ride in St. Joseph, MO had the lowest UPT/VRM at 0.5, while Razorback Transit in Fayetteville, AR had the highest number at 4.8.

## 2005-2014 Average Bus Operating Expenses per Rider: WATA & Peer Agencies

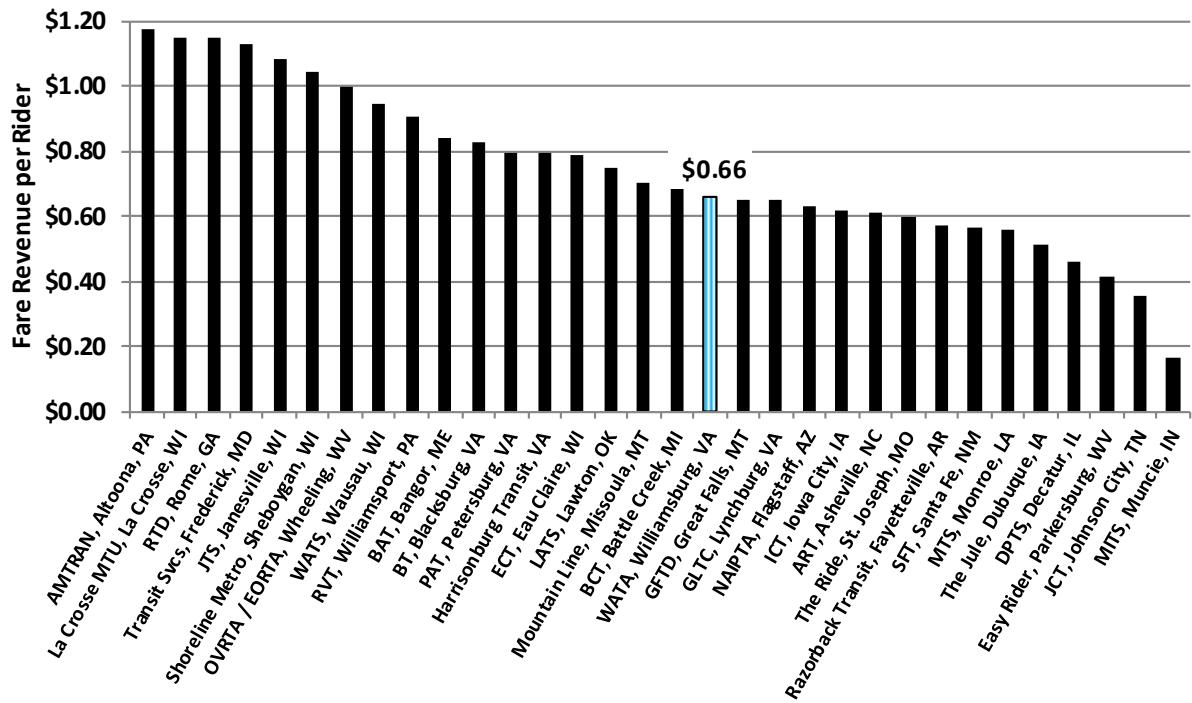


Source: HRTPO Staff Analysis of NTD Data

**Figure 15 - Average Bus Operating Expenses per Rider: WATA and Peer Agencies, 2005-2014**

Bus Operating Expenses per Rider was determined by dividing the amount of Bus Operating Expenses (in dollars) by Unlinked Passenger Trips (UPT). As shown in Figure 15, WATA averaged near the middle in this comparison at \$2.57. The Ride in St. Joseph, MO had the highest expenses per rider at \$7.46, while the Razorback Transit in Fayetteville, AR had the lowest at \$0.63.

## 2005-2014 Average Bus Fare Revenue per Rider: WATA & Peer Agencies

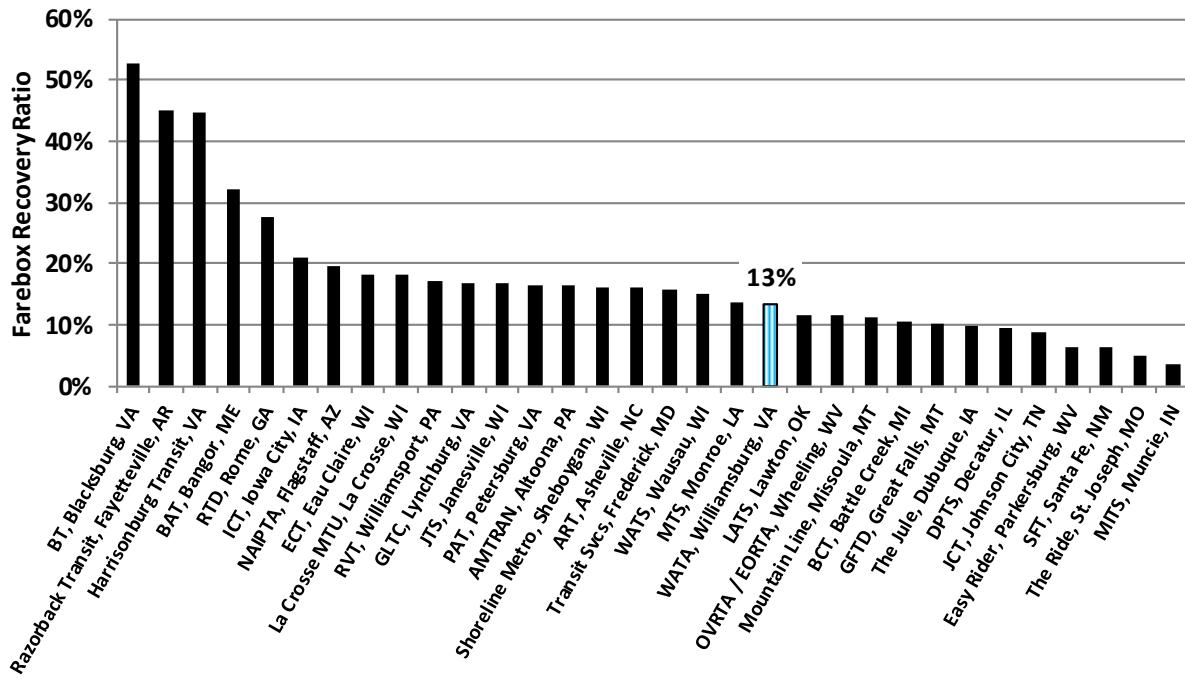


Source: HRTPO Staff Analysis of NTD Data

**Figure 16 - Average Bus Fare Revenue per Rider: WATA and Peer Agencies, 2005-2014**

Bus Fare Revenue per Rider was determined by dividing fare revenue (in dollars) by ridership (UPT). As shown in Figure 16, WATA averaged slightly below the middle in this comparison at \$0.66. Altoona Metro Transit (AMTRAN) in Altoona, PA had the highest of average fare revenue per rider at \$1.17, while Muncie Indiana Transit Systems (MITS) in Muncie, IN had the lowest at \$0.16.

## 2005-2014 Average Bus Farebox Recovery Ratio: WATA & Peer Agencies



Source: HRTPO Staff Analysis of NTD Data

Figure 17 - Average Bus Farebox Recovery Ratio: WATA and Peer Agencies, 2005-2014

As shown in Figure 17, WATA averaged slightly below the middle for the Farebox Recovery Ratio at 13%. Blacksburg Transit (BT) in Blacksburg, VA had the highest average farebox recovery ratio at 53%, while Muncie Indiana Transit Systems (MTTS) in Muncie, IN had the lowest amount at 4%.

## Suffolk Transit – Peer Comparisons

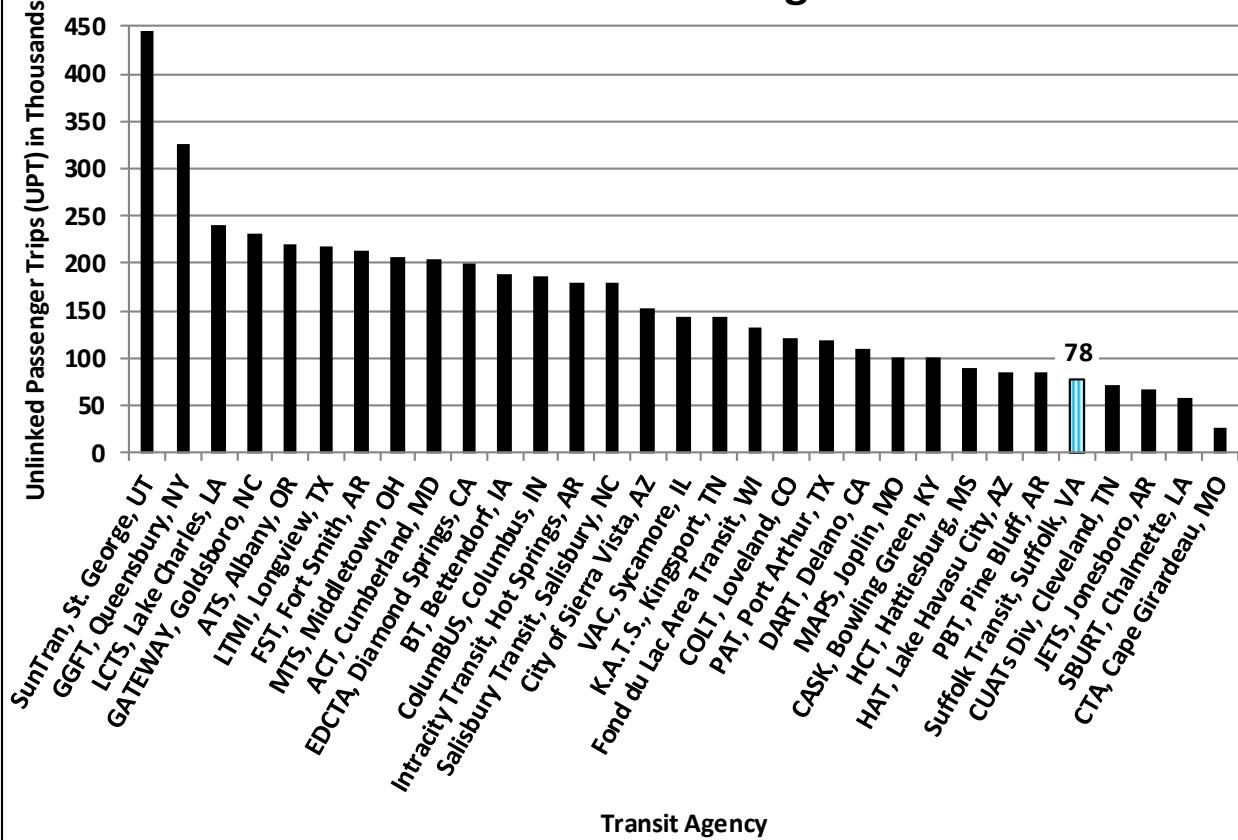
### Suffolk Transit At-A-Glance

As a division of the Department of Public Works, Suffolk Transit provides fixed route transit services to Suffolk's core downtown service area. Funded through the City of Suffolk's Transit Fund, fixed route and paratransit service is provided to the core downtown service area. In January 2012, Suffolk Transit was formed utilizing Virginia Regional Transit (VRT) as the City's service provider. As the City's partner and contractor, VRT provides the operational staff and support for the system. All buses are equipped with bicycle racks, seatbelts, and wheelchair lifts for handicapped or mobility impaired individuals. The City of Suffolk is currently in the process of becoming a designated recipient of Federal Transit Administration (FTA) funding for its transit service.

### Suffolk Transit and Peer Agency Comparisons

The following figures show performance measures of Suffolk Transit and its 30 peer agencies. Performance measures for Suffolk Transit were obtained from 2015 since that was the only year in which the agency has data.

## 2005-2014 Average Annual Bus Ridership: Suffolk Transit & Peer Agencies

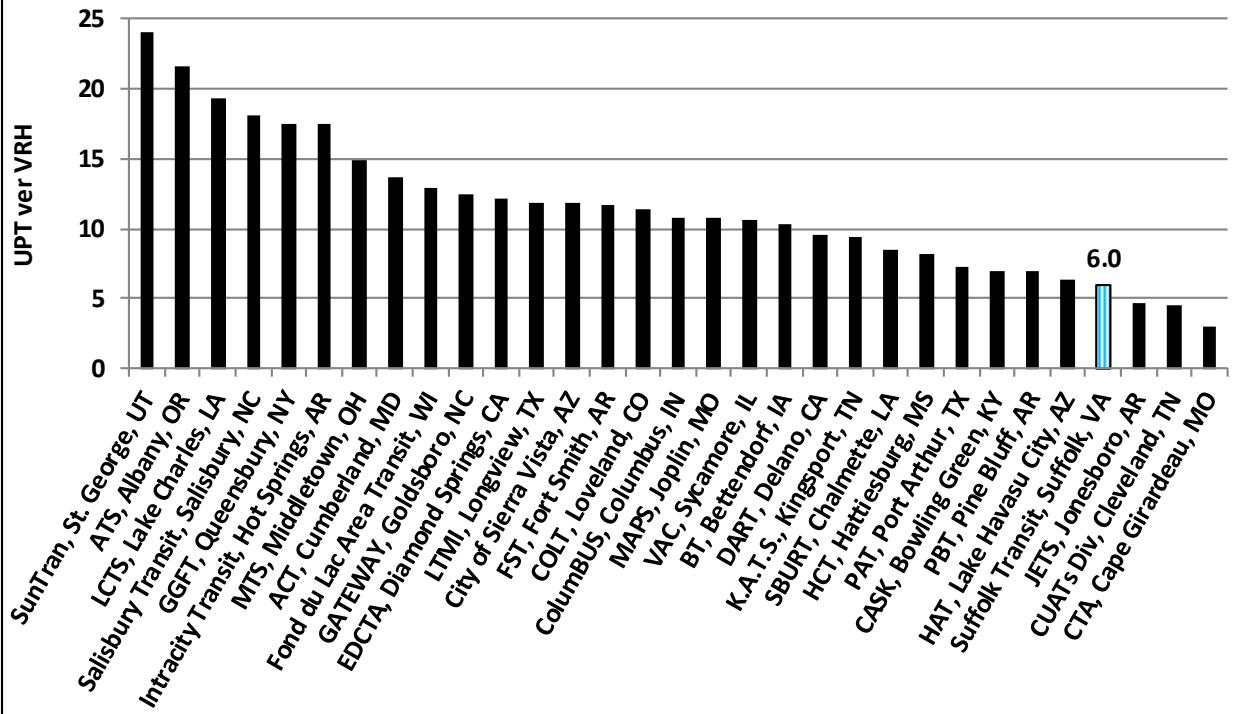


Source: HRTPO Staff Analysis of NTD Data

Figure 18 - Average Annual Bus Ridership: Suffolk Transit and Peer Agencies, 2005-2014

Bus Ridership was determined using Unlinked Passenger Trips (UPT), defined by the FTA as the number of passengers who board public transportation vehicles. Passengers are counted each time they board vehicles no matter how many vehicles they use to travel from their origin to their destination. As shown in Figure 18, Suffolk Transit's figure was near the low end in this comparison with 77,631 UPT. SunTran Public Transit System in St. George, UT had the highest ridership at 444,412 per year, while Cape Girardeau County Transit Authority (CTA) in Cape Girardeau, MO had the lowest at 25,924.

## 2005-2014 Average Bus Riders per Revenue Hour: Suffolk Transit & Peer Agencies

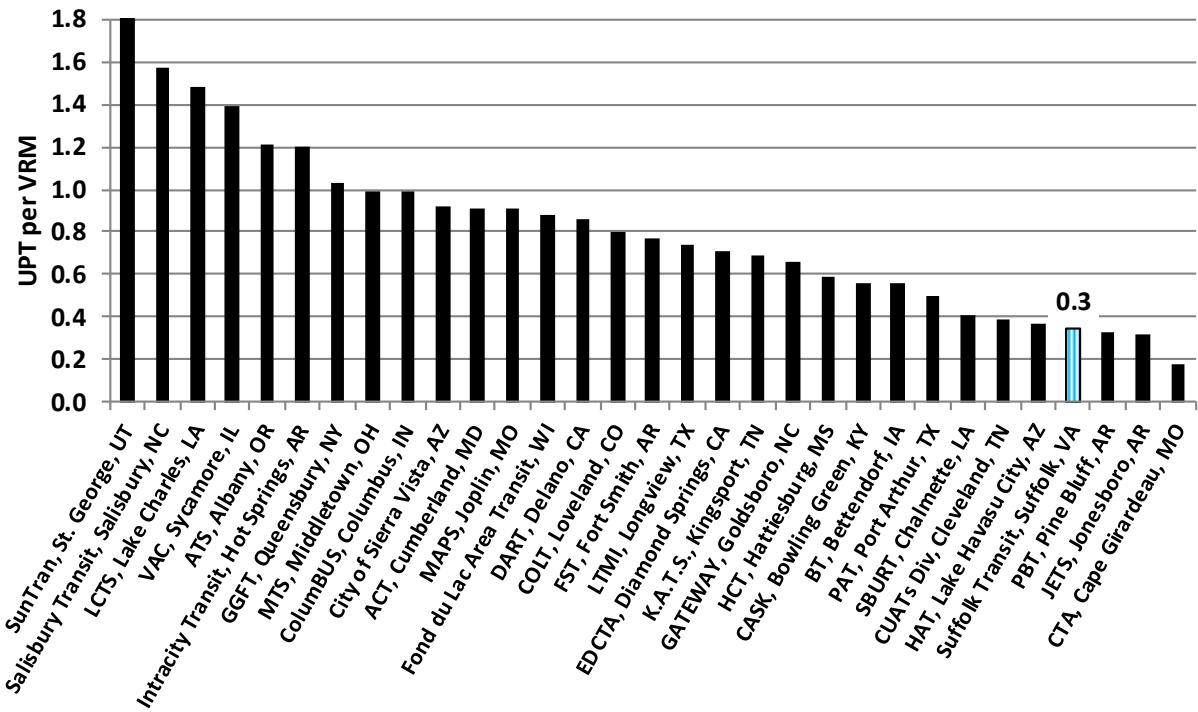


Source: HRTPO Staff Analysis of NTD Data

**Figure 19 - Average Bus Riders per Revenue Hour: Suffolk Transit and Peer Agencies, 2005-2014**

Bus Riders per Revenue Hour was determined by dividing the number of Unlinked Passenger Trips (UPT) by the amount of Vehicle Revenue Hours (VRH). As shown in Figure 19, Suffolk Transit's figure was near the low end in this comparison at 6.0 UPT/VRH. SunTran Public Transit System in St. George, UT had the highest riders per hour at 24.0, while Cape Girardeau County Transit Authority (CTA) in Cape Girardeau, MO had the lowest number at 2.9.

## 2005-2014 Average Bus Riders per Revenue Mile: Suffolk Transit & Peer Agencies

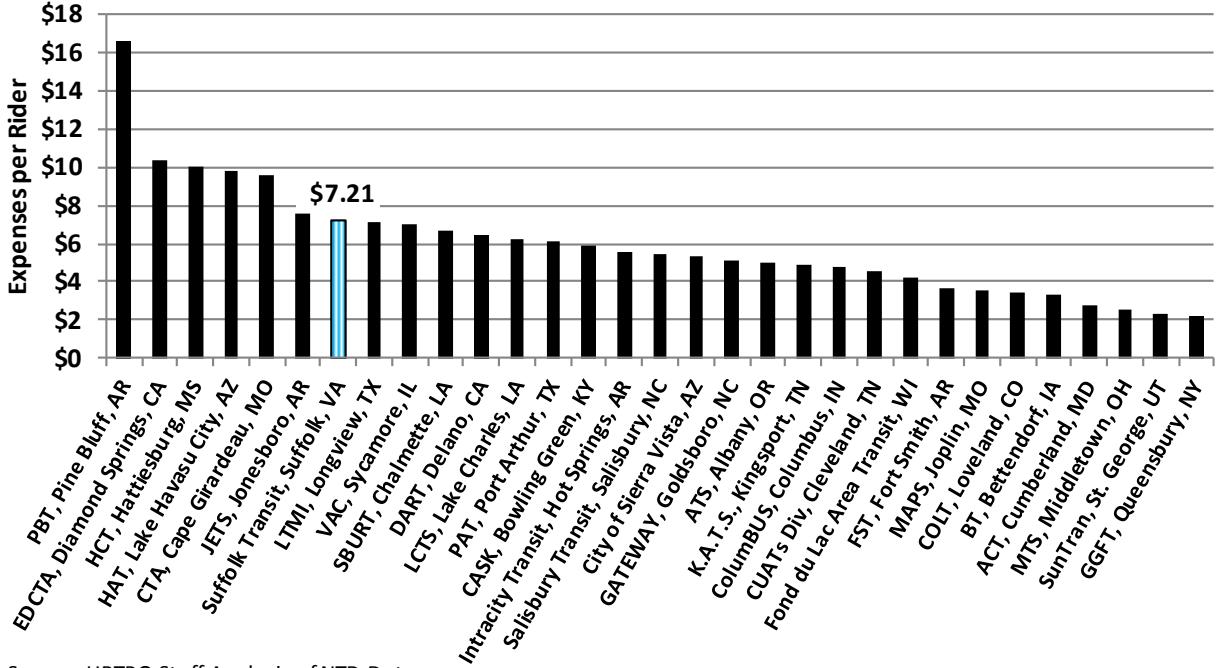


Source: HRTPO Staff Analysis of NTD Data

Figure 20 - Average Bus Riders per Revenue Mile: Suffolk Transit and Peer Agencies, 2005-2014

Bus Riders per Revenue Mile was determined by dividing the number of Unlinked Passenger Trips (UPT) by the amount of Vehicle Revenue Miles (VRM). Figure 20 shows that Suffolk Transit's figure was near the bottom in this comparison 0.3 UPT/VRM. SunTran Public Transit System had the highest number of riders per mile in 2014 at 1.8 UPT/VRM, while Cape Girardeau County Transit Authority (CTA) in Cape Girardeau, MO had the lowest number at 0.2.

## 2005-2014 Average Bus Operating Expenses per Rider: Suffolk Transit & Peer Agencies

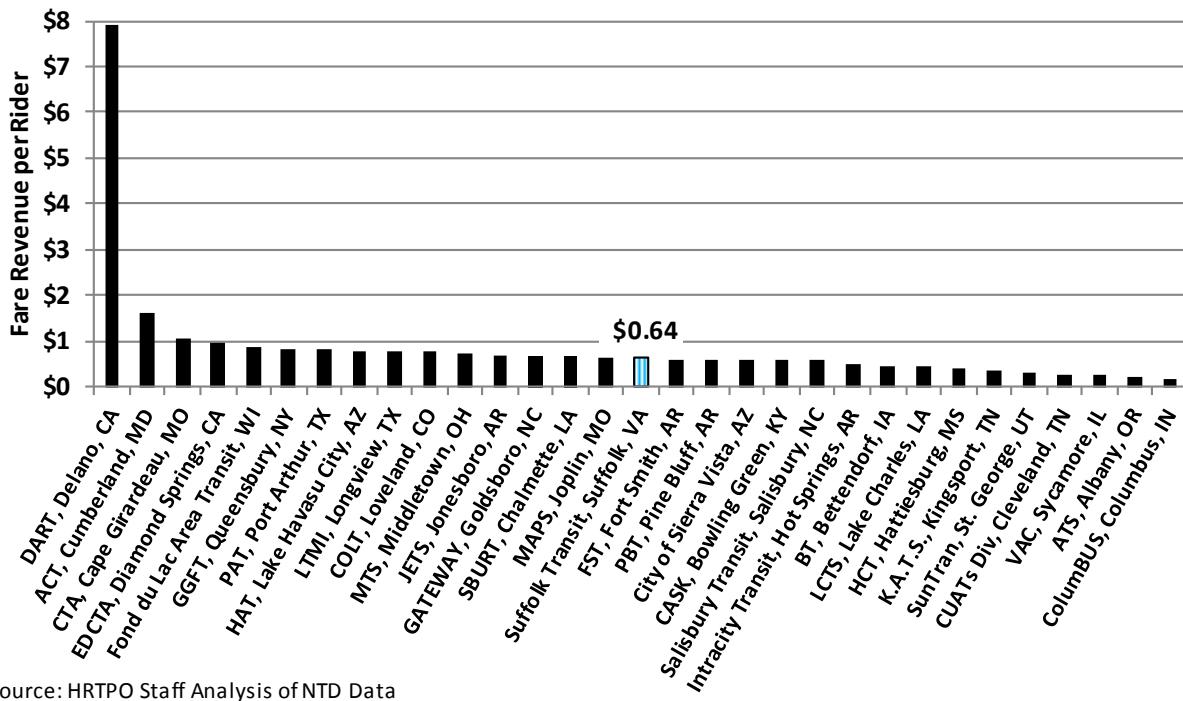


Source: HRTPO Staff Analysis of NTD Data

**Figure 21 - Average Bus Operating Expenses per Rider: Suffolk Transit and Peer Agencies, 2005-2014**

Bus Operating Expenses per rider was determined by dividing the amount of Bus Operating Expenses (in dollars) by ridership (UPT). In Figure 21, Suffolk Transit's figure was near the high end at \$7.21 UPT. Pine Bluff Transit (PBT) in Pine Bluff, AR had the highest expenses per rider in 2014 at \$16.61 per trip, while Greater Glens Falls Transit (GGFT) in Queensbury, NY had the lowest number in 2014 at \$2.25. For many agencies in this category, bus operating expense data was not available for the years 2005-2013; therefore, only 2014 data was used.

## 2005-2014 Average Bus Fare Revenue per Rider: Suffolk Transit & Peer Agencies

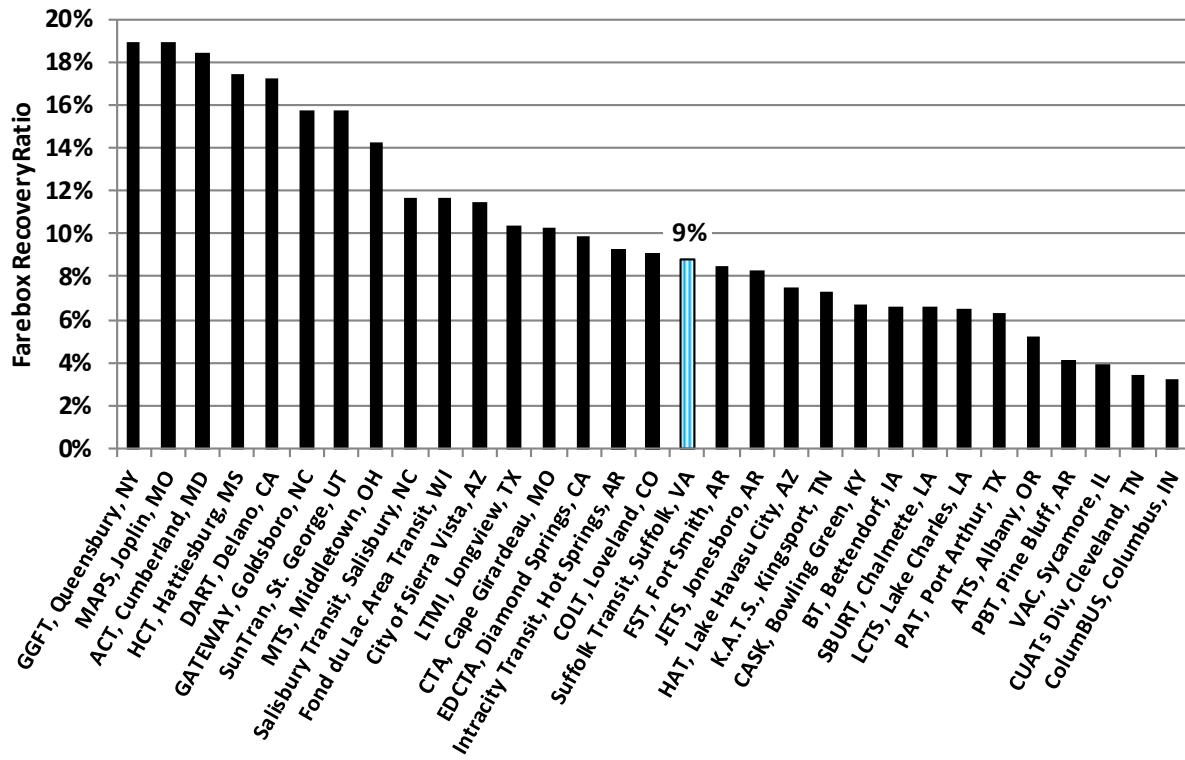


Source: HRTPO Staff Analysis of NTD Data

Figure 22 - Average Bus Fare Revenue per Rider: Suffolk Transit and Peer Agencies, 2005-2014

Bus fare revenue per rider was determined by dividing fare revenue (in dollars) by ridership (UPT). As shown in Figure 22, Suffolk Transit's figure fell in the middle for this comparison at \$0.64 per rider in 2014. Delano Area Rapid Transit (DART) in Delano, CA had the highest bus fare revenue per rider at \$7.92, while, ColumBUS in Columbus, IN had the lowest number at \$0.16.

## 2005-2014 Average Bus Farebox Recovery Ratio: Suffolk Transit & Peer Agencies



Source: HRTPO Staff Analysis of NTD Data

Figure 23 - Average Bus Farebox Recovery Ratio: Suffolk Transit and Peer Agencies, 2005-2014

As shown in Figure 23, Suffolk Transit's bus farebox recovery ratio fell slightly below the middle in this comparison at 9% in 2014. Greater Glens Falls Transit (GGFT) in Queensbury, NY had the highest bus farebox recovery ratio at 19%, while ColumBUS in Columbus, IN had the lowest at 3%.

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## Regional Comparisons

A Brookings Institute Metropolitan Policy Program study conducted in 2011 examined 100 of the largest metropolitan transit regions in the U.S. to determine best practices on three primary metrics. The first of these metrics studied was coverage area. Coverage is, “the share of working age residents living in block groups that are considered to be ‘served by transit’ (i.e., block groups with access to at least one transit stop within three-quarters mile of their population weighted centroid).”

Service frequency was the next metric that was examined in the Brookings Institute study. Service frequency can also be referred to as “headway” or wait time. The last metric and the main focus of the regional comparisons was the category of job access. Job access is determined by the share of regional jobs that can be accessed by transit within a 90 minute time frame. In addition, the analysis considered the share of low, middle, and high skill jobs accessible via transit.

***The Hampton Roads Transit Benchmarking Study*** incorporates the service coverage and frequency metrics into the data analysis. The Hampton Roads area ranked 96th out of 100 in terms of jobs accessible by transit within 90 minutes (15.4%) which places it at the low end of the spectrum. The job access metric could be an integral part of a future HRTPO study on this subject.

## Case Studies

The results of the data analysis of the six performance measures utilized for ***The Hampton Roads Transit Benchmarking Study*** are incorporated into peer agency rankings (see figures 24-26). The three Hampton Roads transit agencies are ranked alongside their peer agencies in each of the performance measure categories. The numerical ranking in each category is summed up by agency resulting in an overall composite score. The agencies are ranked from lowest composite score to highest.

Three of the top five peer agencies for each of the three local transit agencies were selected case studies. The nine case studies were evaluated utilizing six potential contributing factors selected by HRTPO staff on the basis of available and pertinent data from the US Census Bureau – American Community Survey (2014), agency websites, and phone interviews with agency personnel. The potential contributing factors selected:

- Zero car Households (HH) %
- Number of park-n-ride facilities
- Poverty rate %
- Transit as mode to work %
- Local funding source %
- State/Federal funding source %

## Hampton Roads Transit – Peer Case Studies

Hampton Roads Transit (HRT) was ranked in relation to its peer agencies on each of the following measures:

- Total Annual Bus Ridership (2005-2014 average)
- Bus Riders per Revenue Hour (2005-2014 average)
- Bus Riders per Revenue Mile (2005-2014 average)
- Bus Operating Expenses per Rider (2005-2014 average)
- Bus Fare Revenue per Rider (2005-2014 average)
- Bus Farebox Recovery Ratio (2005-2014 average)

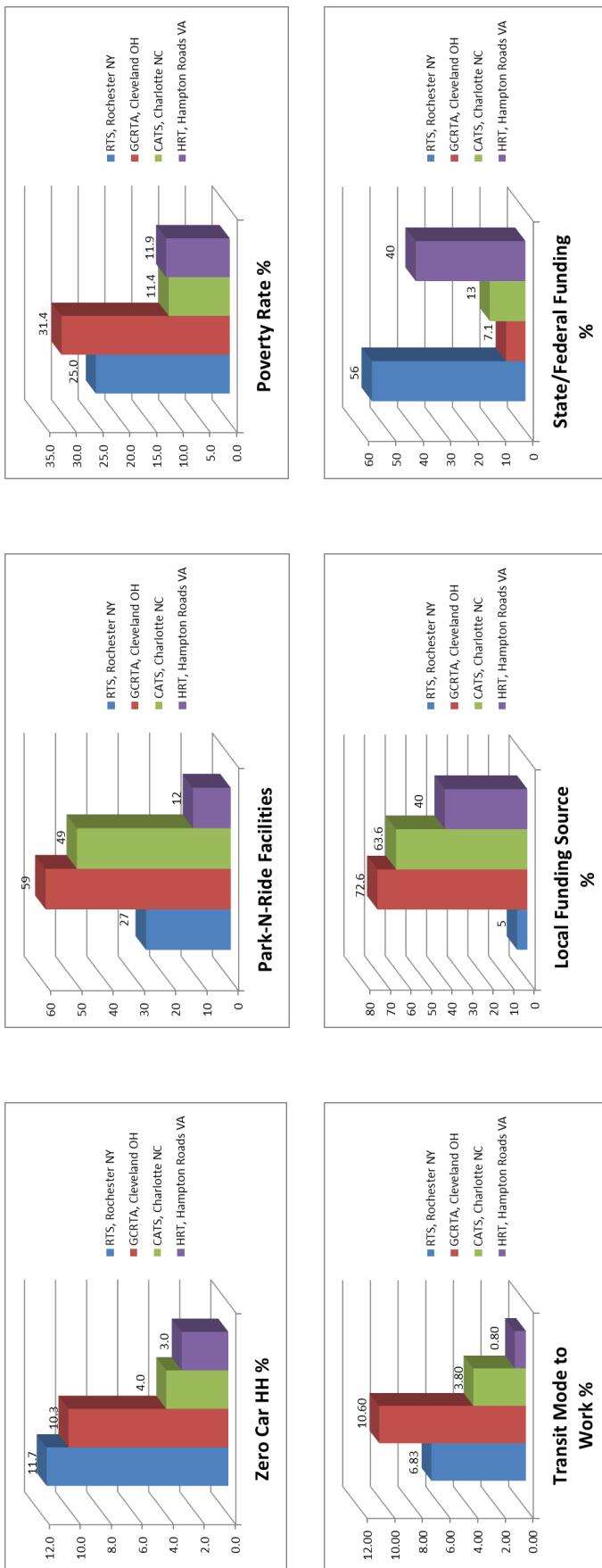
Figure 24 shows the results of the comparison of peer agency rankings in each measures category:

Transit Agency	2005-2014 (avg.) Total Annual Bus Ridership	2005-2014 (avg.) Bus Riders per Revenue Hour	2005-2014 (avg.) Bus Riders per Revenue Mile	2005-2014 (avg.) Bus Operating Expenses per Rider	2005-2014 (avg.) Bus Fare Revenue per Rider	2005-2014 (avg.) Bus Farebox Recovery Ratio	Composite Score	Final Rank
<i>Greater Cleveland Regional Transit Authority, OH</i>	1	4	3	9	8	9	34	<b>1</b>
<i>Regional Transit Service and Lift Line, Inc., Rochester NY</i>	11	3	2	5	10	4	35	<b>2</b>
<i>Southwest Ohio Regional Transit Authority, Cincinnati OH</i>	5	7	12	10	1	1	36	<b>3</b>
<i>Rhode Island Public Transit Authority, Providence RI</i>	8	5	5	13	3	3	37	<b>4</b>
<i>Charlotte Area Transit System, Charlotte NC</i>	6	8	16	15	17	13	41	<b>5</b>
<i>Long Beach Transit, CA</i>	3	2	1	1	24	10	41	<b>5</b>
<i>Niagara Frontier Transportation Authority, Buffalo NY</i>	7	13	8	20	2	2	52	<b>7</b>
<i>City of Detroit Department of Transportation, MI</i>	2	1	4	6	20	21	54	<b>8</b>
<i>Sacramento Regional Transit District, CA</i>	12	6	6	23	7	17	71	<b>9</b>
<i>Hampton Roads Transit - HRT Hampton Roads, VA</i>	9	17	21	4	15	6	72	<b>10</b>
<i>CTTRANSIT - Hartford Division, CT</i>	17	12	11	18	11	7	76	<b>11</b>
<i>Ride-On Montgomery County Transit, MD</i>	4	14	7	14	22	19	80	<b>12</b>
<i>Omnitrans, Riverside CA</i>	15	15	18	8	14	11	81	<b>13</b>
<i>Capital District Transportation Authority, Albany NY</i>	16	19	13	12	13	12	85	<b>14</b>
<i>Metropolitan Transit Authority, Nashville TN</i>	26	22	15	17	5	5	90	<b>15</b>
<i>Transit Authority of River City, Lou. KY</i>	13	10	10	11	25	23	92	<b>16</b>
<i>Hillsborough Area Regional Transit Authority, Tampa FL</i>	19	21	20	7	12	14	93	<b>17</b>
<i>Central Ohio Transit Authority, Columbus OH</i>	10	24	14	21	9	16	94	<b>18</b>
<i>City of Albuquerque Transit Department, NM</i>	21	11	9	2	26	26	95	<b>19</b>
<i>Mass Transit Department - City of El Paso, TX</i>	18	18	17	3	23	18	97	<b>20</b>
<i>Pinellas Suncoast Transit Authority, St. Pete FL</i>	20	23	25	19	6	8	101	<b>21</b>
<i>Kansas City Area Transportation Authority, MO</i>	14	9	19	16	21	22	101	<b>21</b>
<i>Indianapolis and Marion County Public Transportation, IN</i>	24	25	24	22	4	15	114	<b>23</b>
<i>PalmTran, Inc., Palm Beach FL</i>	23	16	23	25	18	20	125	<b>24</b>
<i>Delaware Transit Corporation, Dover DE</i>	25	20	22	24	19	24	134	<b>25</b>
<i>Jacksonville Transportation Authority, FL</i>	22	26	26	26	16	25	141	<b>26</b>

\*Rankings are calculated by the lowest composite score = top ranking. Top ranked and local agencies selected for case studies are highlighted in purple.

Figure 24 - HRT and Peer Agency Rankings

## HRT Case Studies – Top Ranked Peer Agencies: Potential Contributing Factors



	Zero Car HH %	Park-N-Ride Facilities	Poverty Rate %	Transit Mode to Work %	Local Funding Source %	State/Federal Funding %
<b>RTS, Rochester NY</b>	11.7	27	25.0	6.83	5	56
<b>GCRTA, Cleveland OH</b>	10.3	59	31.4	10.60	72.6	7.1
<b>CATS, Charlotte NC</b>	4.0	49	11.4	3.80	63.6	13
<b>HRT, Hampton Roads VA</b>	3.0	12	11.9	0.80	40	40

## HRT Case Study 1: Greater Cleveland Regional Transit Authority (GCRTA)

- The **Greater Cleveland Regional Transit Authority (GCRTA)** in Cleveland, OH is the number one ranked comparable agency for HRT with a composite score of **34**. GCRTA ranked in the top ten for all measures in this section of the study (see Figure 24). In addition, GCRTA is the number one ranked transit agency in the HRT group in terms of total annual bus ridership.
- Potential contributing factors to the success of GCRTA are shown on page 37. Generally, a higher level of Zero Car Households (HH), Park-n-ride facilities, Poverty Rate, and Transit Mode to Work % appears to result in increased ridership of the transit system. GCRTA ranked near the top in these categories.
- GCRTA received 72% of their funding from local sources and a much smaller share from state/federal sources (7%). The remaining funding (21%) was directly generated from fare revenue and other sources.
- When RTA was formed, Cuyahoga County voters approved a 1% county-wide sales tax, which constitutes about 70% of its operating revenue.
- GCRTA provides bus rapid transit service to all stops along the GCRTA's Healthline.



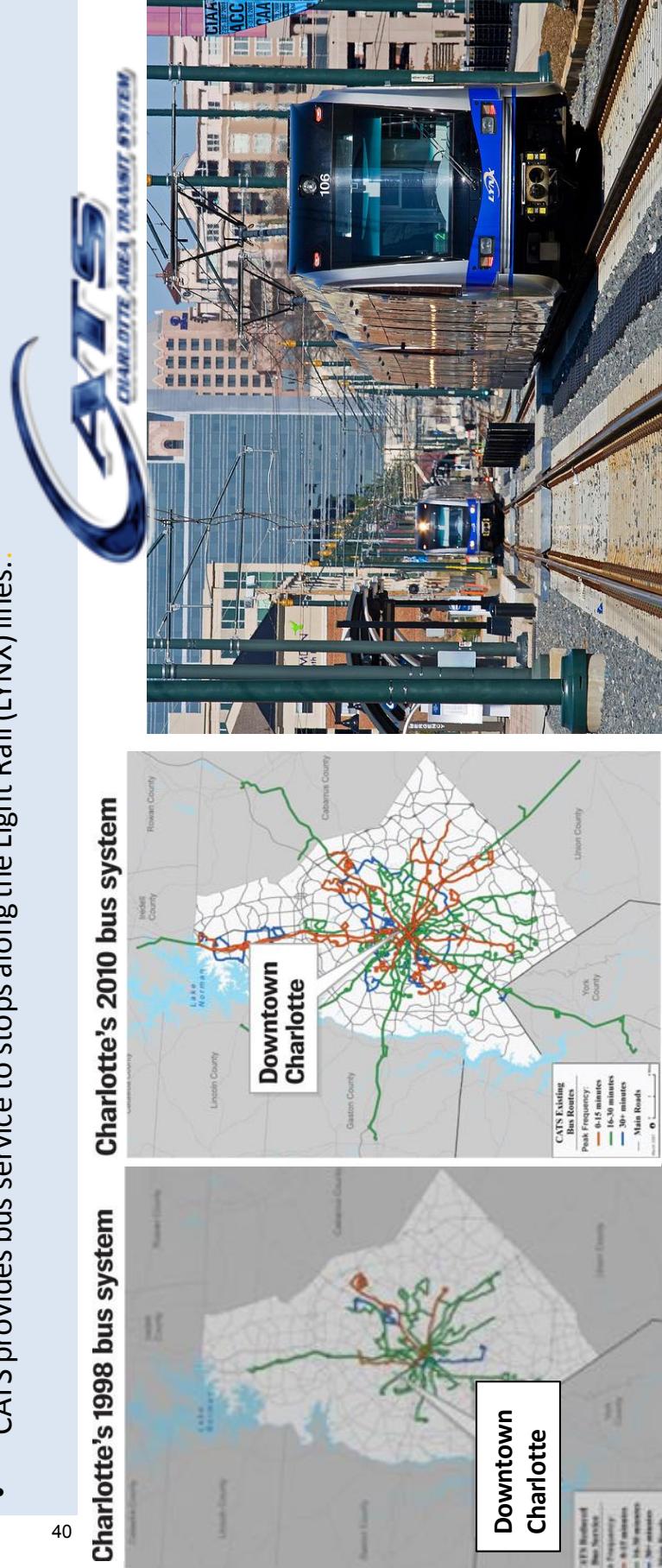
## HRT Case Study 2: Regional Transit Service and Lift Line (RTS)

- The **Regional Transit Service and Lift Line Inc. (RTS)** in Rochester, NY is the second ranked comparable agency for HRT with a composite score of **35**. RTS ranked in the top ten for four measures in this section of the study (see Figure 24). In addition, RTS is the number four ranked transit agency in the HRT group in terms of average fare box recovery ratio.
- Potential contributing factors to the success of RTS are shown on page 37. Generally, a higher level of Zero Car Households (HH), Park-n-ride facilities, Poverty Rate, and Transit Mode to Work % appears to result in increased ridership of the transit system. RTS ranked near the top in these categories.
- RTS received only 5% of their funding from local sources and a large share from state/federal sources (60%). The remaining funding (35%) was directly generated from fare revenue and other sources such as the Finger Lakes Regional Economic Development Council, the Rochester-Monroe Anti-Poverty Initiative, and a Mortgage Recording Tax.
- A portion of the total revenue collected by RTS is derived from a long-term contract that the agency has with the Rochester City School District.



## HRT Case Study 3: Charlotte Area Transit System (CATS)

- The **Charlotte Area Transit System (CATS)** in *Charlotte, NC* is the fifth ranked comparable agency for HRT with a composite score of **41**. CATS ranked in the top ten for two measures in this section of the study (see Figure 24). In addition, CATS is the number six ranked transit agency in the HRT group in terms of total annual bus ridership.
- Potential contributing factors to the success of CATS are shown on page 37. Generally, a higher level of Zero Car Households (HH), Park-n-ride facilities, Poverty Rate, and Transit Mode to Work % appears to result in increased ridership of the transit system. CATS ranked at the top in the park-n-ride facilities (49) and the local funding source (64%) categories.
- CATS received a large share (64%) of their funding from local sources and a lower share from state/federal sources (13%). The remaining funding (23%) was directly generated from fare revenue and other sources.
- CATS operating revenue in FY 2015 included nearly \$60 million from a sales tax operating allocation.
- CATS provides bus service to stops along the Light Rail (LYNX) lines...



## Williamsburg Area Transit Authority – Peer Case Studies

WATA was ranked in relation to its peer agencies on each of the following:

- Total Annual Bus Ridership (2005-2014 average)
- Bus Riders per Revenue Hour (2005-2014 average)
- Bus Riders per Revenue Mile (2005-2014 average)
- Bus Operating Expenses per Rider (2005-2014 average)
- Bus Fare Revenue per Rider (2005-2014 average)
- Bus Farebox Recovery Ratio (2005-2014 average)

Figure 25 shows the results of the comparison of peer agency rankings in each measures category: The University of Arkansas Transit System in Fayetteville, AR ranked third highest in the comparison of peer agencies, but was not chosen for the case study because it is operated by and only serves the university system.

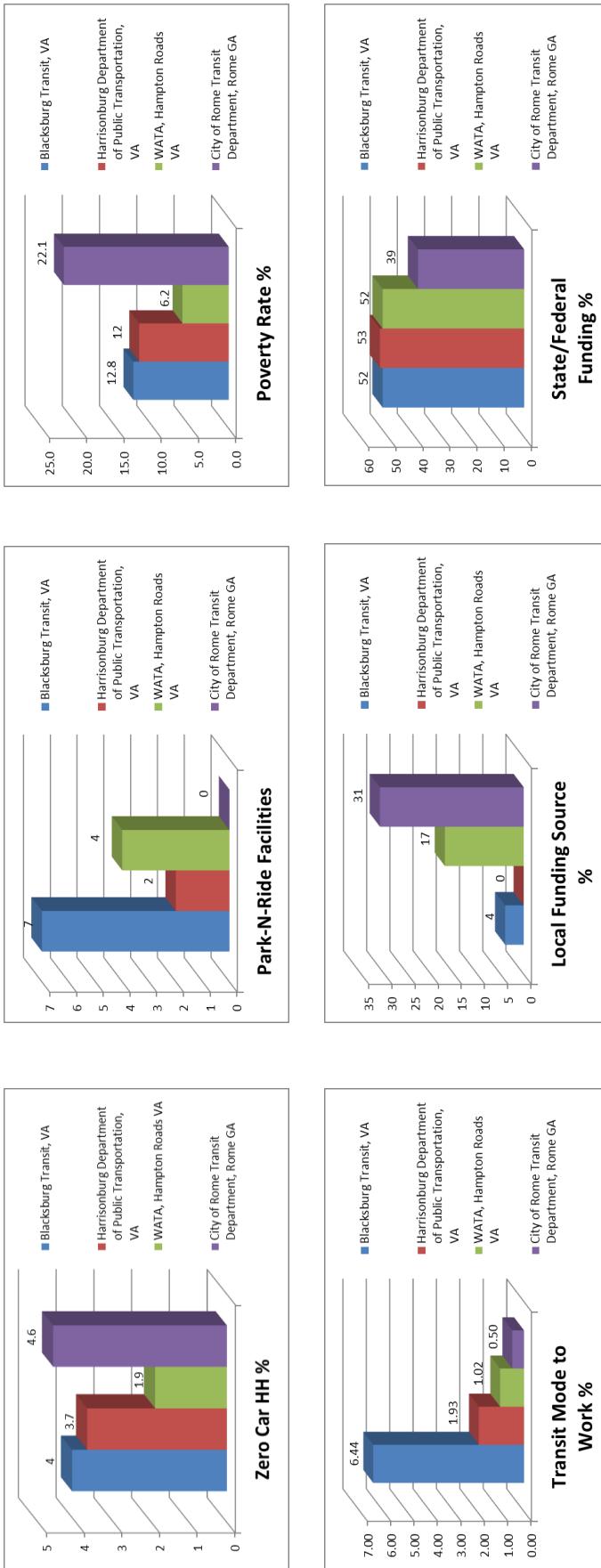
### WATA Peer Agency Rankings\*

Transit Agency	2005-2014 (avg.) Total Annual Bus Ridership	2005-2014 (avg.) Bus Riders per Revenue Hour	2005-2014 (avg.) Bus Riders per Revenue Mile	2005-2014 (avg.) Bus Operating Expenses per Rider	2005-2014 (avg.) Bus Fare Revenue per Rider	2005-2014 (avg.) Bus Farebox Recovery Ratio	Composite Score	Final Rank
<i>Blacksburg Transit, VA</i>	1	2	2	2	11	1	19	1
<i>Harrisonburg Department of Public Transportation, VA</i>	4	5	3	3	13	3	31	2
<i>University of Arkansas, Fayetteville, AR</i>	6	1	1	1	25	2	36	3
<i>City of Rome Transit Department, GA</i>	16	6	8	7	3	5	45	4
<i>Iowa City Transit, IA</i>	5	4	4	10	22	6	51	5
<i>Greater Lynchburg Transit Company, VA</i>	2	8	7	5	20	11	53	6
<i>Williamsport Bureau of Transportation, PA</i>	9	9	10	14	9	10	61	7
<i>Northern Intergovernmental Public Trans. Authority, AZ</i>	8	10	6	11	21	7	63	8
<i>Bangor-BAT Community Connector, ME</i>	14	17	15	4	10	4	64	9
<i>LaCrosse Municipal Transit Utility, WI</i>	12	13	12	20	2	9	68	10
<i>Eau Claire Transit, WI</i>	13	12	13	15	14	8	75	11
<i>ART (Asheville Redefines Transit), NC</i>	7	11	9	12	23	16	78	12
<i>Muncie Indiana Transit System, IN</i>	3	3	5	6	32	32	81	13
<i>Wausau Area Transit System, WI</i>	19	7	14	22	8	18	88	14
<i>City of Monroe Transit System, LA</i>	11	14	11	8	27	19	90	15
<i>Altoona Metro Transit, PA</i>	21	20	20	26	1	14	102	16
<i>Petersburg Area Transit, VA</i>	22	23	18	16	12	13	104	17
<i>Missoula Urban Transportation District, MT</i>	18	16	17	18	16	23	108	18
<i>Decatur Public Transit System, IL</i>	10	15	19	17	29	27	117	19
<i>Janesville Transit System, WI</i>	26	22	25	27	5	12	117	19
<i>Williamsburg Area Transit Authority</i>	15	21	23	21	18	20	118	21
<i>Transit Services of Frederick County, MD</i>	20	25	24	29	4	17	119	22
<i>Johnson City Transit System, TN</i>	23	18	16	9	31	28	125	23
<i>Shoreline Metro, Sheboygan, WI</i>	25	26	29	28	6	15	129	24
<i>Battle Creek Transit, MI</i>	24	19	22	24	17	24	130	25
<i>The Lawton Area Transit System, OK</i>	21	30	30	19	15	21	136	26
<i>City of Dubuque, IA</i>	30	27	21	13	28	26	145	27
<i>Great Falls Transit District, MT</i>	29	24	26	25	19	25	148	28
<i>Ohio Valley Regional Transportation Authority Wheeling, WV</i>	27	31	31	30	7	22	148	28
<i>Santa Fe Trails - City of Santa Fe, NM</i>	17	28	27	31	26	30	159	30
<i>Mid-Ohio Valley Transit Authority Parkersburg, WV</i>	28	29	28	23	30	29	167	31
<i>St. Joseph Transit, MO</i>	32	32	32	32	24	31	183	32

\*Rankings are calculated by the lowest composite score = top ranking. Top ranked and local agencies selected for case studies are highlighted in purple.

[Figure 25 - WATA and Peer Agency Rankings](#)

## WATA Case Studies – Top Ranked Agencies: Potential Contributing Factors



	Zero Car HH %	Park-N-Ride Facilities	Poverty Rate % (families)	Transit Mode to Work %	Local Funding Source %	State/Federal Funding %
<b>Blacksburg Transit, VA</b>	<b>4</b>	<b>7</b>	<b>12.8</b>	<b>6.44</b>	<b>4</b>	<b>52</b>
<b>Harrisonburg Department of Public Transportation, VA</b>	<b>3.7</b>	<b>2</b>	<b>12</b>	<b>1.93</b>	<b>0</b>	<b>53</b>
<b>WATA, Hampton Roads VA</b>	<b>1.9</b>	<b>4</b>	<b>6.2</b>	<b>1.02</b>	<b>17</b>	<b>52</b>
<b>City of Rome Transit, GA</b>	<b>4.6</b>	<b>0</b>	<b>22.1</b>	<b>0.50</b>	<b>31</b>	<b>39</b>

# WATA Case Study 1: The Blacksburg Transit System

- The **Blacksburg Transit System** in Blacksburg, VA is the top ranked comparable agency for WATA with a composite score of **19**. Blacksburg Transit ranked in the top ten for 5 measures in this section of the study (Figure 25). In addition, Blacksburg Transit is the number one ranked transit agency, in the WATA group, in average fare box recovery ratio and total annual bus ridership measures.
- Potential contributing factors to the success of Blacksburg Transit are listed on page 43. Generally, a higher level of Zero Car Households (HH), Park-n-ride facilities, Poverty Rate, and Transit Mode to Work % appears to result in increased ridership of the transit system. Blacksburg Transit ranked at or near the top in all of these categories.
- The three top ranked transit systems in the WATA group are all located within or near a large public university system. A relatively high number of commuters in the BTS service area use transit as their primary mode to work (6.44%).
- Blacksburg Transit received only 4% of their funding from local sources and a large share from state /federal sources (52%). The remaining funding (44%) was directly generated.



## WATA Case Study 2: Harrisonburg Department of Public Transit (HDPT)

- The **Harrisonburg Department of Public Transit (HDPT)** in *Harrisonburg, VA* is the second ranked comparable agency for WATA with a comparable ranking score of **31**. HDPT ranked in the top ten for all but one measure in this section of the study (Figure 25). In addition, HDPT is the number three ranked transit agency, in the WATA group, in the average fare box recovery ratio and bus operating expense per rider measures.
- Potential contributing factors to the success of HDPT are listed on page 43. Generally, a higher level of Zero Car Households (HH), Park-n-ride facilities, Poverty Rate, and Transit Mode to Work % appears to result in increased ridership of the transit system. HDPT ranked at or near the top in all of these categories.
- The top ranked transit systems in the WATA group are all located within or near a large public university system. The planned contribution from James Madison University for transit services in FY 2017 is \$2,394,768. The fare rates for a JMU student with a valid ID and City Students is free.
- Harrisonburg Department of Public Transit received 0% of their funding from local sources and a large share from state/federal sources (53%). The remaining funding (47%) was directly generated.



## WATA Case Study 3: City of Rome Transit Department (RTD)

- The **City of Rome Transit Department (RTD)** in *Rome, GA* is the fourth ranked comparable agency for WATA with a composite score of **45**. RTD ranked in the top ten for all but one measure in this section of the study (see Figure 25). In addition, RTD is the number three ranked transit agency, in the WATA group, in the bus fare revenue per rider measure.
- Potential contributing factors to the success of RTD are listed on page 43. Generally, a higher level of Zero Car Households (HH), Park-n-ride facilities, Poverty Rate, and Transit Mode to Work % appears to result in increased ridership of the transit system. RTD ranked near the top in these categories.
- RTD received 31% of their funding from local sources and 39% from state /federal sources. The remaining funding of 30% was directly generated.
- The main mode of transportation for students attending Rome City Schools is through the Rome Transit Department.



## Suffolk Transit – Peer Case Studies

Suffolk Transit was ranked in relation to its peer agencies on each of the following:

- Total Annual Bus Ridership (2005-2014 average)
- Bus Riders per Revenue Hour (2005-2014 average)
- Bus Riders per Revenue Mile (2005-2014 average)
- Bus Operating Expenses per Rider (2005-2014 average)
- Bus Fare Revenue per Rider (2005-2014 average)
- Bus Farebox Recovery Ratio (2005-2014 average)

Figure 26 shows the results of the comparison of peer agency rankings in each measures category:

### Suffolk Transit Peer Agency Rankings\*

Transit Agency	2005-2014 (avg.) Total Annual Bus Ridership	2005-2014 (avg.) Bus Riders per Revenue Hour	2005-2014 (avg.) Bus Riders per Revenue Mile	2005-2014 (avg.) Bus Operating Expenses per Rider	2005-2014 (avg.) Bus Fare Revenue per Rider	2005-2014 (avg.) Bus Farebox Recovery Ratio	Composite Score	Final Rank
<i>Glens Falls Transit System, NY</i>	2	5	7	1	6	1	22	<b>1</b>
<i>Allegany County Transit, MD</i>	9	8	11	4	2	3	37	<b>2</b>
<i>City of St. George, UT</i>	1	1	1	2	27	7	39	<b>3</b>
<i>City of Middletown Transit System, OH</i>	8	7	8	3	11	8	45	<b>4</b>
<i>Fond du Lac Area Transit, WI</i>	18	9	13	9	5	10	64	<b>5</b>
<i>City of Salisbury, NC</i>	14	4	2	16	21	9	66	<b>6</b>
<i>Goldsboro-Wayne Transportation Authority, NC</i>	4	10	20	14	13	6	67	<b>7</b>
<i>City of Joplin Metro Area Public, MO</i>	22	17	12	7	15	2	75	<b>8</b>
<i>Lake Charles Transit System, LA</i>	3	3	3	20	24	25	78	<b>9</b>
<i>Intracity Transit, Hot Springs, AR</i>	13	6	6	17	22	15	79	<b>10</b>
<i>Longview Transit, TX</i>	6	12	17	24	9	12	80	<b>11</b>
<i>Fort Smith Transit, AR</i>	7	14	16	8	17	18	80	<b>11</b>
<i>City of Loveland Transit, CO</i>	19	15	15	6	10	16	81	<b>13</b>
<i>City of Albany, OR</i>	5	2	5	13	30	27	82	<b>14</b>
<i>City of Delano, CA</i>	21	20	14	21	1	5	82	<b>14</b>
<i>City of Sierra Vista, AZ</i>	15	13	10	15	19	11	83	<b>16</b>
<i>El Dorado County Transit Authority, CA</i>	10	11	18	30	4	14	87	<b>17</b>
<i>Bettendorf Transit System, IA</i>	11	19	23	5	23	23	104	<b>18</b>
<i>ColumBUS Transit, IN</i>	12	16	9	11	31	31	110	<b>19</b>
<i>Kingsport Area Transit System, TN</i>	17	21	19	12	26	21	116	<b>20</b>
<i>Voluntary Action Center, Sycamore, IL</i>	16	18	4	23	29	29	119	<b>21</b>
<i>Port Arthur Transit, TX</i>	20	24	24	19	7	26	120	<b>22</b>
<i>Hub City Transit, Hattiesburg, MS</i>	24	23	21	29	25	4	126	<b>23</b>
<i>Bowling Green/Community Action of Southern, KY</i>	23	25	22	18	20	22	130	<b>24</b>
<i>City of Lake Havasu, AZ</i>	25	27	27	28	8	20	135	<b>25</b>
<i>Cape Girardeau County Transit Authority, MO</i>	31	31	31	27	3	13	136	<b>26</b>
<i>St. Bernard Urban Rapid Transit, LA</i>	30	22	25	22	14	24	137	<b>27</b>
<i>Suffolk Transit</i>	27	28	28	25	16	17	141	<b>28</b>
<i>Jonesboro Economical Transportation System, AR</i>	29	29	30	26	12	19	145	<b>29</b>
<i>Cleveland Urban Area Transit System, TN</i>	28	30	26	10	28	30	152	<b>30</b>
<i>Pine Bluff Transit, AR</i>	26	26	29	31	18	28	158	<b>31</b>

\*Rankings are calculated by the lowest composite score = top ranking. Top ranked and local agencies selected for case studies are highlighted in purple.

Figure 26 - Suffolk Transit and Peer Agency Rankings

# Suffolk Transit Case Studies - Top Ranked Contributing Factors



Sources: U.S. Census Bureau – American Community Survey 2014  
<http://www.agftc.org/ggft/>; <http://gov.allconet.org/315/Transit>  
<https://www.statey.org/transportationandengineering/suntran>;  
[www.suffolktransit.org](http://www.suffolktransit.org); Agency staff phone interviews.

# Suffolk Transit Case Study 1: Greater Glens Falls Transit (GGFT)

- The **Greater Glens Falls Transit agency (GGFT)** in *Greater Glens Falls, NY* is the top ranked comparable agency for Suffolk Transit with a composite score of **22**. GGTF ranked in the top ten for all measures in this section of the study (Figure 26). In addition, GGTF is the number one ranked transit agency in the Suffolk Transit group in terms of average fare box recovery ratio and the bus operating expense per rider measure.
- Potential contributing factors to the success of GGFT are listed on page 49. Generally, a higher level of Zero Car Households (HH), Park-n-ride facilities, Poverty Rate, and Transit Mode to Work % appears to result in increased ridership of the transit system. GGFT ranked near the top in these categories.
- GGFT received only 6% of their funding from local sources and a large share from state /federal sources (74%). The remaining funding (20%) was directly generated.



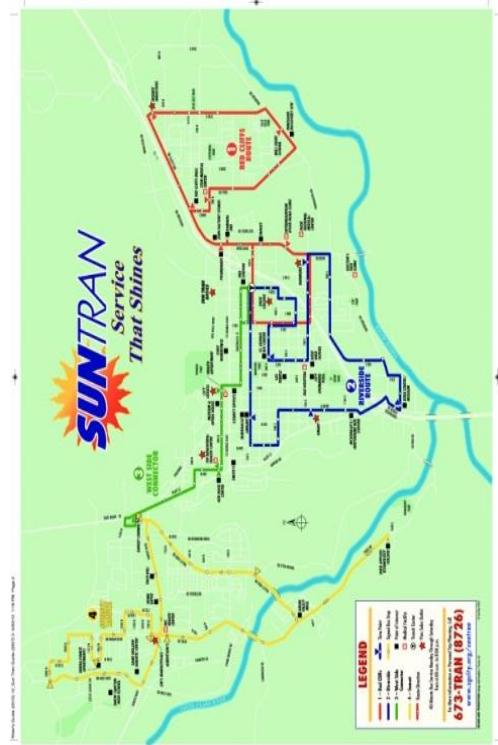
## Suffolk Case Study 2: Allegany County Transit (ACT)

- The **Allegany County Transit (ACT)** in *Allegany County, MD* is the second ranked comparable agency for Suffolk Transit with a composite score of **37**. ACT ranked in the top ten for all but one measure in this section of the study (Figure 26). In addition, ACT is the number two ranked transit agency in the Suffolk Transit group for bus fare revenue per rider measure.
- Potential contributing factors to the success of ACT are listed on page 49. Generally, a higher level of Zero Car Households (HH), Park-n-ride facilities, Poverty Rate, and Transit Mode to Work % appears to result in increased ridership of the transit system. ACT ranked near the top in these categories.
- ACT received only 17% of their funding from local sources and a large share from state /federal sources (74%). The remaining funding (16%) was directly generated.
- ACT provides bus service for Frostburg State University and Allegany County College.



## Suffolk Case Study 3: City of St. George Transit (SUNTRAN)

- The **City of St. George Agency (SUNTRAN)** in St. George, UT is the third ranked comparable agency for Suffolk Transit with a comparable ranking score of **39**. SUNTRAN ranked in the top ten in all but one measure in this section of the study (Figure 26). In addition, SUNTRAN is the number one ranked transit agency in the Suffolk Transit group for total annual bus ridership, bus riders per revenue hour, and the bus riders per revenue measures.
- Potential contributing factors to the success of SUNTRAN are listed on page 49. Generally, a higher level of Zero Car Households (HH), Park-n-ride facilities, Poverty Rate, and Transit Mode to Work % appears to result in increased ridership of the transit system. SUNTRAN ranked near the top in these categories.
- SUNTRAN received 41% of their funding from local sources and a fair share from state/federal sources (47%). The remaining funding (12%) was directly generated.
- SUNTRAN and the City of St. George partner to offer students and employees of Dixie State University unlimited access to fixed route bus services at no cost to them.



## Transit Operating Funds

Nationally, transit agencies are funded using a variety of federal, state, and local sources (see Appendix B), in addition to revenue generated directly by the agencies through fares and advertisements. This section reviews the funding breakdowns for the case study agencies for each transit agency in Hampton Roads.

### Hampton Roads Transit and Peer Agencies: Breakdown of 2014 Operating Funds

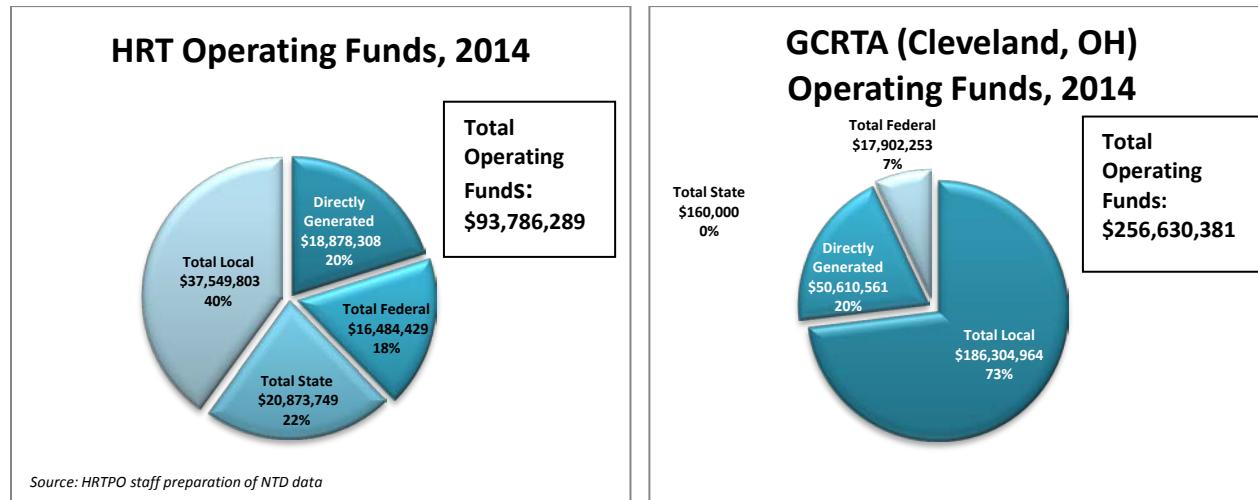


Figure 27 – HRT Operating Funds in 2014 and Sources

Figure 28 – NFT Metro Operating Funds in 2014 and Sources

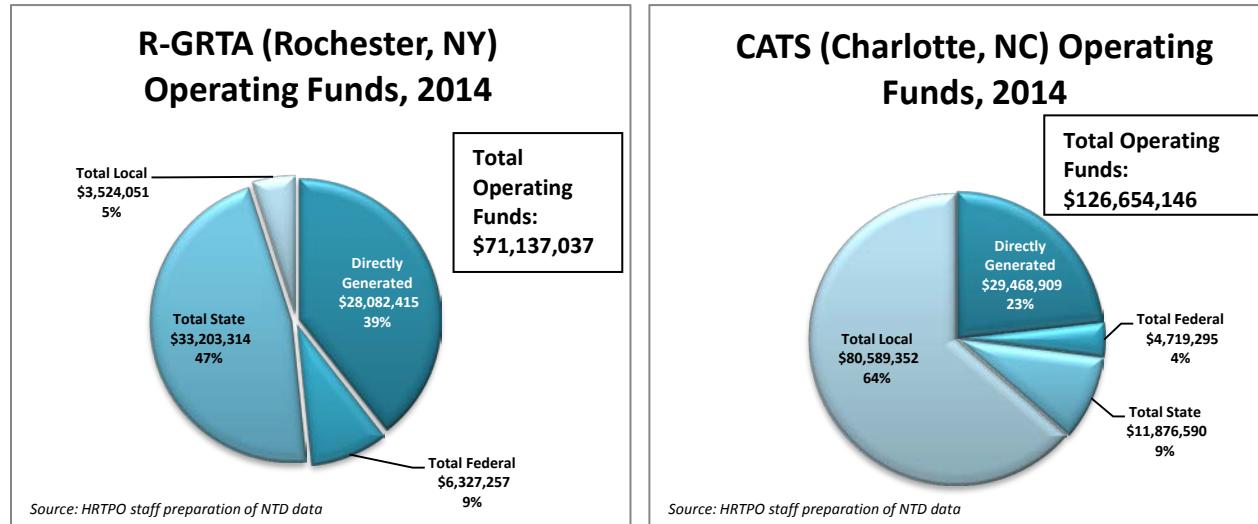


Figure 29 – R-GRTA Operating Funds in 2014 and Sources

Figure 30 – CATS Operating Funds in 2014 and Sources

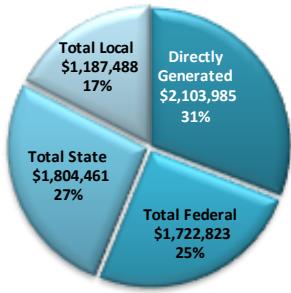
In 2014, local funding sources comprised the largest share of operating funds by Hampton Roads Transit at 40%. The next-largest shares were from the Virginia Department of Rail and Public Transportation (DRPT) at 22%, and directly generated sources (including fare and advertising revenue), at 20%. The federal share to HRT's operating funds applied was 18%.

For the Peer Agencies, GCRTA's operating funds in 2014 came from state sources (0.1%), followed by directly generated (18%), local (73%), and federal (7%); R-GRTA's operating funds in 2014 came from state sources (47%), followed by directly generated (39%), federal (9%), and local (5%); and CATS' operating funds in 2014 came from local sources (64%), followed by directly generated (23%), state (9%), and federal (4%).

As noted in the case studies for the HRT group, three out of the four agencies considered include operating funds for a light rail transit (LRT) service. Hampton Roads Transit (HRT), Charlotte Area Transit Service (CATS), and Greater Cleveland Regional Transit Authority (GCRTA) have a higher funding total, in part, because of the presence of LRT.

## WATA and Peer Agencies: Breakdown of 2014 Operating Funds

### WATA Operating Funds, 2014

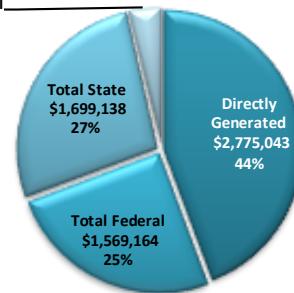


**Total Operating Funds:**  
\$71,137,037

Source: HRTPO staff preparation of NTD data

Figure 31 – WATA Operating Funds in 2014 and Sources

### BT (Blacksburg, VA) Operating Funds, 2014

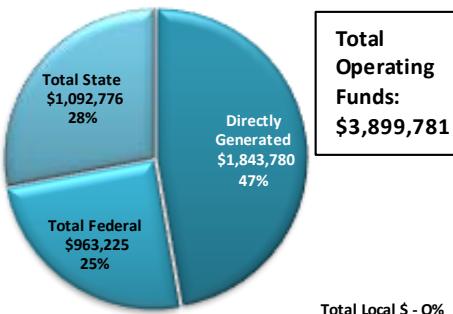


**Total Operating Funds:**  
\$6,264,642

Source: HRTPO staff preparation of NTD data

Figure 32 – BT Operating Funds in 2014 and Sources

### Harrisonburg Transit (Harrisonburg, VA) Operating Funds, 2014

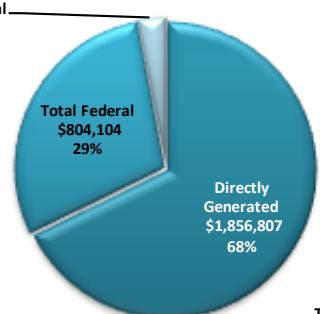


**Total Operating Funds:**  
\$3,899,781

Source: HRTPO staff preparation of NTD data

Figure 33 – Harrisonburg Transit Operating Funds in 2014 and Sources

### Razorback Transit (University of Arkansas, Fayetteville, AR) Operating Funds, 2014



**Total Operating Funds:**  
\$2,741,059

Source: HRTPO staff preparation of NTD data

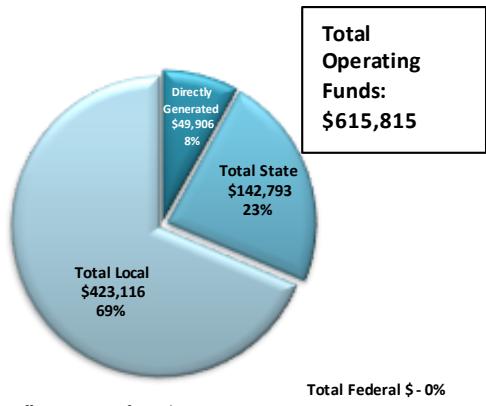
Figure 34 – Razorback Transit Operating Funds in 2014 and Sources

The largest share of WATA's operating funds in 2014 came from directly generated sources (31%), which included fare and advertising revenue. The next-largest source was from DRPT (27%), followed by federal (25%) and local sources (17%). Most of Blacksburg Transit's operating funds applied in 2014 came from directly generated sources (44%), followed by state (27%), federal (25%), and local (4%).

For the Peer Agencies, Blacksburg Transit's operating funds in 2014 came from directly generated sources (44%), followed by state (27%), federal (25%), and local (4%). Harrisonburg Transit's operating funds in 2014 came from directly generated sources (47%), followed by state (28%), and federal (25%). No operating funds were applied from local sources. Operating funds in 2014 for Razorback Transit came from directly generated sources (68%), followed by federal (29%), and local (3%). No operating funds were applied from state sources.

## Suffolk Transit and Peer Agencies: Breakdown of 2014 Operating Funds

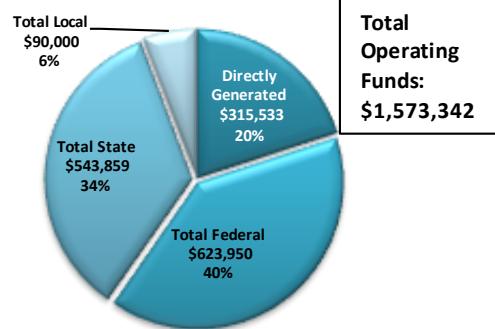
### Suffolk Transit Operating Funds, 2014



Source: HRTPO staff preparation of NTD data

Figure 35 – Suffolk Transit Operating Funds in 2014 and Sources

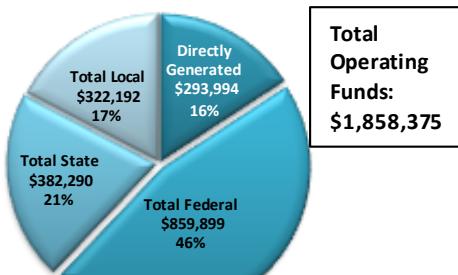
### GGFT (Queensbury, NY) Operating Funds, 2014



Source: HRTPO staff preparation of NTD data

Figure 36 – GGFT Operating Funds in 2014 and Sources

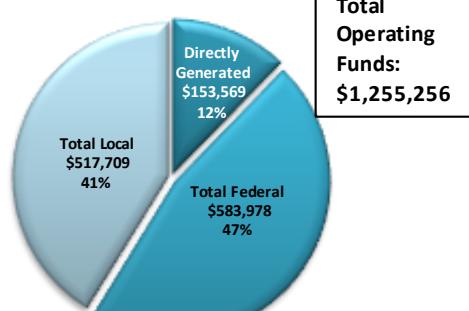
### ACT (Cumberland, MD) Operating Funds, 2014



Source: HRTPO staff preparation of NTD data

Figure 37 – ACT Operating Funds in 2014 and Sources

### SunTran (St. George, UT) Operating Funds, 2014



Source: HRTPO staff preparation of NTD data

Figure 38 – SunTran Operating in 2014 and Sources

The majority of operating funds for Suffolk Transit in 2014 came from local sources (69%), followed by DRPT (23%), and directly generated sources (8%). The agency has received no federal funding to date, but is currently working to become a designated recipient for FTA funds..

For the Peer Agencies, GGFT's operating funds in 2014 came from federal sources (40%), followed by state (34%), directly generated (20%), and local (6%); ACT's operating funds in 2014 came from federal sources (46%), followed by state (21%), local (17%), and directly generated (16%); and SunTran's operating funds in 2014 came from federal sources (47%), followed by local (41%) and directly generated (12%). No state funding was applied to operations in 2014.

## Observations and Topics for Future Research

### Observations

Financial support from community organizations such as hospitals, educational institutions, and large employers tends to contribute to higher ridership numbers.

Special taxes and fees provide additional sources of revenue for some transit agencies. Most of the case study agencies had a special fee or tax as a part of their overall operating funds matrices.

Park-n-ride lots tend to contribute to additional utilization of bus services.

Each of the top ranked agencies in the WATA group had a service area that contained a university or college. In many cases, the institution of higher education contributed directly to the local transit agency in exchange for rides for students, faculty, and employees of the school who presented a valid identification document.

The second ranked agency in the HRT group is located in New York. The State of New York funds transit agencies at a higher rate than most other agencies surveyed in the comparable case studies.

### Topics for Future Research

HRTPO staff recommends the formation of a public transit working group consisting of representatives from HRTPO staff, local transit agencies, and interested localities to guide the selection of topics for further research that may include:

- A more detailed analysis of local economic and geographic profiles of the top ranked and local agencies.
- Focused research on customer amenities and how they may affect ridership (ex. number of shelters vs. number of bus stops).
- An in-depth analysis of the dedicated funding sources of the top ranked agencies.
- Examination of the effect that the presence of high-capacity transit on bus ridership and levels of service.
- Research on the effects of average fleet age and percent of annual breakdowns of equipment on ridership.

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## **Appendix A: 2014 Profiles for Hampton Roads and Top-Ranked Peer Agencies**

## Transportation District Commission of Hampton Roads (HRT)

2014 Annual Agency Profile

### General Information

Urbanized Area Statistics - 2010 Census		Service Consumption		Database Information	
Virginia Beach, VA	515 Square Miles	90,047,270 Annual Passenger Miles (PMT)		NTID: 30083	Operating Funding Sources
1,439,666 Population		17,499,361 Annual Unlinked Trips (UPT)		Fare Revenues	\$17,533,215
34 Pop. Rank out of 498 UZAs		57,513 Average Weekday Unlinked Trips		Local Funds	\$37,549,803
0 Virginia Non-UZA; 371 Williamsburg, VA		38,002 Average Saturday Unlinked Trips		State Funds	\$20,873,749
		16,999 Average Sunday Unlinked Trips		Federal Assistance	\$16,484,429
				Other Funds	\$1,345,093
				<b>Total Operating Funds Expended</b>	<b>\$93,786,289</b>

### Service Supplied

14,273,878 Annual Vehicle Revenue Miles (VRM)
1,038,118 Annual Vehicle Revenue Hours (VRH)
375 Vehicles Operated in Maximum Service (VOMS)
435 Vehicles Available for Maximum Service (VAMS)

### Modal Characteristics

Vehicles Operated in Maximum Service		Uses of Capital Funds			Summary of Operating Expenses (OE)		
Mode	Directly Operated	Purchased Transportation	Revenue Vehicles	Systems and Guideways	Facilities and Stations	Other	Total
Demand Response	-	86	\$0	\$0	\$0	\$0	\$0
Ferryboat	-	3	\$0	\$0	\$0	\$0	\$488,912
Light Rail	6	-	\$0	\$0	\$0	\$0	\$7,644,230
Bus	233	-	\$1,517,122	\$859,108	\$1,341,181	\$3,926,819	\$7,205,319
Vanpool	47	-	\$0	\$0	\$0	\$0	\$33,054
<b>Total</b>	<b>286</b>	<b>89</b>	<b>\$1,517,122</b>	<b>\$859,108</b>	<b>\$1,341,181</b>	<b>\$4,488,927</b>	<b>\$8,206,338</b>
							\$0

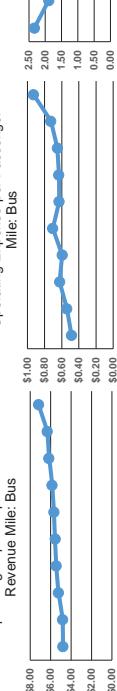
### Operation Characteristics

Mode	Operating Expenses	Fare Revenues	Uses of Capital Funds	Annual Passenger Miles	Unlinked Trips	Annual Vehicle Revenue Miles	Annual Vehicle Revenue Hours	Fixed Guideway Vehicles Available for Maximum Service	Directional Route Miles	Vehicles Operated in Maximum Service	Average Spare Vehicles	Average Fleet Age in Years
Demand Response	\$10,225,860	\$807,075	\$0	2,487,677	311,789	3,259,377	20,726	102	0.0	86	15,7%	6.9
Ferryboat	\$1,300,350	\$567,744	\$488,912	236,720	332,028	18,264	6,341	0.0	3	3	0.0%	28.0
Light Rail	\$10,977,209	\$1,493,060	\$6,296,325	1,668,978	372,914	23,998	14,8	0.0	258	6	33.3%	5.0
Bus	\$70,334,896	\$13,973,870	\$7,644,230	75,683,206	15,026,924	9,794,761	778,804	0.0	0.0	233	9.7%	9.1
Vanpool	\$919,120	\$685,466	\$73,196	5,343,342	159,642	828,572	21,149	0.0	63	47	25.4%	6.3
<b>Total</b>	<b>\$93,753,235</b>	<b>\$17,533,215</b>	<b>\$8,206,338</b>	<b>90,047,270</b>	<b>17,499,361</b>	<b>14,273,878</b>	<b>1,038,118</b>	<b>148</b>	<b>435</b>	<b>375</b>	<b>13.8%</b>	<b>16.9</b>

### Performance Measures

Mode	Operating Expenses per Vehicle Revenue Mile	Operating Expenses per Vehicle Revenue Hour	Mode	Operating Expenses per Passenger Mile	Operating Expenses per Unlinked Passenger Trip	Service Effectiveness
Demand Response	\$3,14	\$50,69	Demand Response	\$4,11	\$32,80	Unlinked Trips per Vehicle Revenue Mile
Ferryboat	\$71,20	\$205,07	Ferryboat	\$5,39	\$3,92	Vehicle Revenue Hour
Light Rail	\$29,43	\$365,80	Light Rail	\$7,74	\$6,67	Vehicle Revenue Hour
Bus	\$7,18	\$90,30	Bus	\$0,93	\$4,86	Vehicle Revenue Hour
Vanpool	\$1,11	\$43,46	Vanpool	\$0,17	\$5,76	Vehicle Revenue Hour
<b>Total</b>	<b>\$6,57</b>	<b>\$90,31</b>	<b>Total</b>	<b>\$1,04</b>	<b>\$5,36</b>	<b>1.2</b>

### Performance Measures



Notes:  
\*Demand Response - Taxi (DT) and non-dedicated fleets do not report fleet age data.

### Financial Information



## Regional Transit Service, Inc. and Lift Line, Inc. (R-GRTA)

2014 Annual Agency Profile

### General Information

Urbanized Area Statistics - 2010 Census		Service Consumption		Database Information	
Rochester, NY	48,621,681 Annual Passenger Miles (PMT)	17,373,842 Annual Unlinked Trips (UPT)	59,049 Average Weekday Unlinked Trips	FNTID: 2013	NTID: 2013
324 Square Miles	17,373,842 Annual Unlinked Trips (UPT)	23,252 Average Saturday Unlinked Trips	29,047 Average Sunday Unlinked Trips	Reporter Type: Full Reporter	Reporter Type: Full Reporter
720,572 Population	60 Pop. Rank out of 498 UZAs	60 Pop. Rank out of 498 UZAs	60 Pop. Rank out of 498 UZAs	Federal Assistance	\$33,203,314
Other UZAs Served	0 New York Non-UZA	0 New York Non-UZA	0 New York Non-UZA	Other Funds	\$6,327,257
Service Supplied	693 Square Miles	544,913 Annual Vehicle Revenue Miles (VRM)	261 Vehicles Operated in Maximum Service (VOMS)	Total Operating Funds Expended	\$76,489 <b>\$71,137,037</b>
Service Area Statistics	694,394 Population	544,913 Annual Vehicle Revenue Miles (VRM)	305 Vehicles Available for Maximum Service (VAMS)	Sources of Capital Funds Expended	100.0% <b>\$71,137,037</b>

### Modal Characteristics

Vehicles Operated in Maximum Service		Uses of Capital Funds		Service Effectiveness	
Directly Operated	Purchased Transportation	Revenue Vehicles	Systems and Facilities and Stations	Operating Expenses per Passenger Mile	Operating Expenses per Passenger Mile
40	-	\$345,571	\$782,324	Vehicle Revenue Hour	Vehicle Revenue Hour
221	-	\$1,100,016	\$1,742	Annual Trips	Unlinked Passenger Trip
<b>Total</b>	<b>261</b>	<b>\$26,319,941</b>	<b>\$1,876,363</b>	<b>Annual Vehicle Revenue Miles</b>	<b>Unlinked Passenger Trip</b>
		<b>\$27,419,957</b>	<b>\$1,876,305</b>	<b>17,373,842</b>	<b>54,913</b>
Operating Expenses	Fare Revenues	Uses of Capital Funds	Annual Trips	Operating Expenses per Vehicle Revenue Hour	Operating Expenses per Vehicle Revenue Hour
\$7,214,405	\$345,571	\$1,984,082	178,915	\$78.45	\$40.32
Bus	Bus	Capital Funds	178,915	\$140.64	\$1.46
<b>Total</b>	<b>\$63,701,364</b>	<b>\$53,253,681</b>	<b>47,083,149</b>	<b>\$130.14</b>	<b>\$4.08</b>

### Service Efficiency

Operating Expenses per Vehicle Revenue Hour		Operating Expenses per Vehicle Revenue Hour		Operating Expenses per Vehicle Revenue Hour	
Mode	Demand Response	Mode	Demand Response	Mode	Demand Response
Bus	Bus	Bus	Bus	Bus	Bus
<b>Total</b>	<b>\$70,915,769</b>	<b>\$24,566,131</b>	<b>\$55,237,763</b>	<b>\$130.14</b>	<b>\$4.08</b>

### Performance Measures

Operating Expenses per Vehicle Revenue Mile		Operating Expenses per Vehicle Revenue Mile		Operating Expenses per Vehicle Revenue Mile	
Mode	Demand Response	Mode	Demand Response	Mode	Demand Response
Bus	Bus	Bus	Bus	Bus	Bus
<b>Total</b>	<b>\$5.09</b>	<b>\$12.44</b>	<b>\$10.85</b>	<b>\$1.46</b>	<b>\$4.08</b>

Notes:  
Demand Response - Taxi (DT) and non-dedicated fleets do not report fleet age data.



## The Greater Cleveland Regional Transit Authority (GCRTA)

2014 Annual Agency Profile

### General Information

Urbanized Area Statistics - 2010 Census		Service Consumption		Database Information	
Cleveland, OH	223,146,222 Annual Passenger Miles (PMT)	49,124,984 Annual Unlinked Trips (PUT)	NTID: 50015	Fare Revenues	\$50,610,561
772 Square Miles	157,573 Average Weekday Unlinked Trips	1,412,140 Population	Reporter Type: Full Reporter	Local Funds	\$186,304,964
1,780,673 Population	98,272 Average Saturday Unlinked Trips	25 Pop. Rank out of 498 UZAs	Federal Assistance	\$160,000	
25 Pop. Rank out of 498 UZAs	68,066 Average Sunday Unlinked Trips		Other Funds	\$17,902,253	
			Total Operating Funds Expended	\$1,652,603	
				<b>\$256,630,381</b>	100.0%

### Modal Characteristics

Vehicles Operated in Maximum Service		Uses of Capital Funds		Summary of Operating Expenses (OE)	
Directly Operated	Purchased Transportation	Revenue Vehicles	Systems and Facilities and Guideways	Operating Expenses	Operating Funding Sources
70	67	\$632,142	\$30,023	Fare Revenues	19.7%
20	-	\$214,416	\$19,158,802	Local Funds	72.6%
14	-	\$14,289,796	\$1,331,367	State Funds	0.1%
350	-	\$9,209,864	\$2,704,945	Federal Assistance	7.0%
Bus			\$1,888,648	Other Funds	0.6%
Bus Rapid Transit			\$216,999	Total Operating Funds Expended	100.0%
<b>Total</b>	<b>67</b>	<b>\$15,136,354</b>	<b>\$4,012,550</b>	<b>\$61,133,321</b>	<b>\$61,133,321</b>

### Service Efficiency

Operating Expenses per Vehicle Revenue Mile		Operating Expenses per Vehicle Revenue Hour		Service Effectiveness	
Operating Expenses		Mode	Operating Expenses per Passenger Mile	Operating Expenses per Passenger Mile	Operating Expenses per Passenger Mile
\$32,366,962	Fare Revenues	Demand Response	\$4,45	\$43,07	Unlinked Trips per Vehicle Revenue Mile
\$31,143,323	\$737,933	Heavy Rail	\$4,45	\$43,07	Unlinked Trips per Vehicle Revenue Hour
\$13,098,495	\$300,233	Light Rail	\$0.75	\$5,02	Vehicle Revenue Hour
\$166,894,292	\$39,364,303	Bus	\$0.80	\$4,71	
\$27,095,541	\$35,405,303	Bus Rapid Transit	\$1.15	\$4,64	
<b>Total</b>	<b>\$250,399,213</b>	<b>\$50,161,561</b>	<b>\$141,24</b>	<b>\$1,12</b>	<b>\$5,08</b>

### Performance Measures

Operating Expenses per Vehicle Revenue Mile		Operating Expenses per Vehicle Revenue Hour		Service Effectiveness	
Mode		Mode	Operating Expenses per Passenger Mile	Operating Expenses per Passenger Mile	Operating Expenses per Passenger Mile
Demand Response		Demand Response	\$4,45	\$43,07	Unlinked Trips per Vehicle Revenue Mile
Heavy Rail		Heavy Rail	\$4,45	\$43,07	Unlinked Trips per Vehicle Revenue Hour
Light Rail		Light Rail	\$0.75	\$5,02	Vehicle Revenue Hour
Bus		Bus	\$0.80	\$4,71	
Bus Rapid Transit		Bus Rapid Transit	\$1.15	\$4,64	
<b>Total</b>	<b>\$11,21</b>	<b>\$11,21</b>	<b>\$1,12</b>	<b>\$5,08</b>	<b>\$2,2</b>

### Performance Measures

Operating Expenses per Vehicle Revenue Mile: Bus		Operating Expenses per Vehicle Revenue Hour: Bus		Service Effectiveness	
Operating Expenses per Vehicle Revenue Mile: Bus		Operating Expenses per Vehicle Revenue Hour: Bus		Operating Expenses per Passenger Mile: Heavy Rail	Operating Expenses per Passenger Mile: Heavy Rail
\$15.00	\$1.50	\$20.00	\$1.00	\$1.00	\$1.00
\$10.00	\$1.00	\$15.00	\$0.60	\$0.80	\$0.80
\$5.00	\$0.50	\$10.00	\$0.40	\$0.60	\$0.60

### Notes:

<sup>1</sup>Demand Response - Taxi (DT) and non-dedicated fleets do not report fleet age data.

## Charlotte Area Transit System (CATS)

2014 Annual Agency Profile

### General Information

Urbanized Area Statistics - 2010 Census		Service Consumption		Database Information	
Charlotte, NC-SC		157,661,624 Annual Passenger Miles (PMT)		NTID: 40008	
741 Square Miles		29,435,356 Annual Unlinked Trips (UPT)		Reporter Type: Full Reporter	
1,249,442 Population		96,698 Average Weekday Unlinked Trips		Local Funds	
38 Pop. Rank out of 498 UZAs		56,462 Average Saturday Unlinked Trips		State Funds	
Other UZAs Served		35,084 Average Sunday Unlinked Trips		Federal Assistance	
0 North Carolina Non-UZA; 200 Gastonia, NC-SC; 167 Concord, NC; 295 Rock Hill, SC				Other Funds	
Service Supplied		16,192,845 Annual Vehicle Revenue Miles (VRM)		Total Operating Funds Expended	
688 Square Miles		1,022,595 Annual Vehicle Revenue Hours (VRH)		\$27,285,529	
1,098,944 Population		431 Vehicles Operated in Maximum Service (VOMS)		\$80,589,352	
Service Area Statistics		527 Vehicles Available for Maximum Service (VAMS)		\$11,876,590	

### Modal Characteristics

Vehicles Operated in Maximum Service		Uses of Capital Funds		Summary of Operating Expenses (OE)	
Directly Operated	Purchased Transportation	Revenue Vehicles	Systems and Facilities and Guideways	Operating Expenses	Operating Funding Sources
95	-	\$1,531,043	\$44,234	\$2,174,841	Fare Revenues
70	-	\$0	\$198,224	\$401,340	Local Funds
14	-	\$8,520,411	\$1,192,673	\$2,791,871	State Funds
173	-	\$8,962,740	\$258,951	\$2,349,444	Federal Assistance
79	-	\$0	\$0	\$12,731,543	Other Funds
<b>Total</b>	<b>431</b>	<b>\$19,014,194</b>	<b>\$97,552,561</b>	<b>\$124,660,735</b>	<b>Total Capital Funds Expended</b>
				\$133,464,263	

### Operation Characteristics

Operating Expenses per Vehicle Revenue Mile		Operating Expenses per Vehicle Revenue Hour		Service Effectiveness	
Mode		Mode		Operating Expenses per Passenger Mile	Unlinked Trips per Vehicle Revenue Mile
Commuter Bus	\$12,082,517	Passenger Miles	1,042,403	\$0.85	\$11,59
Demand Response	\$8,758,884	Annual Passenger Miles	1,293,948	\$3.64	\$35.46
Light Rail	\$13,779,301	Annual Revenue Miles	2,406,247	\$0.53	\$2.72
Bus	\$70,731,165	Unlinked Trips	261,194,554	\$0.69	\$3.10
Vanpool	\$1,173,545	Annual Trips	102,525,930	\$0.10	\$4.60
<b>Total</b>	<b>\$106,525,412</b>	<b>\$27,285,529</b>	<b>157,661,624</b>	<b>\$0.68</b>	<b>\$3.62</b>

### Performance Measures

Operating Expenses per Vehicle Revenue Mile		Operating Expenses per Vehicle Revenue Hour		Service Effectiveness	
Mode		Mode		Operating Expenses per Passenger Mile	Unlinked Trips per Vehicle Revenue Mile
Commuter Bus	\$10,02	Passenger Miles	\$233,17	\$0.85	0.9
Demand Response	\$3,65	Annual Passenger Miles	\$66,21	\$3.64	20.1
Light Rail	\$4,56	Annual Revenue Miles	\$227,69	\$0.53	1.7
Bus	\$7,29	Unlinked Trips	\$95,58	\$0.69	83.7
Vanpool	\$0,61	Annual Trips	\$30,91	\$0.10	30.9
<b>Total</b>	<b>\$6.58</b>	<b>\$104.17</b>	<b>\$104.17</b>	<b>\$0.68</b>	<b>1.8</b>

### Operating Expenses per Vehicle

Operating Expenses per Passenger Mile, Bus		Operating Expenses per Vehicle Revenue Mile, Light Rail		Service Effectiveness	
Operating Expense per Vehicle Revenue Mile: Bus		Operating Expense per Vehicle Revenue Mile: Light Rail		Operating Expenses per Passenger Mile, Light Rail	Unlinked Passenger Trip per Vehicle Revenue Mile: Light Rail
\$1.00	\$1.00	\$100.00	\$8.00	\$8.00	15.00
\$0.80	\$0.80	\$80.00	\$6.00	\$6.00	10.00
\$0.60	\$0.60	\$60.00	\$4.00	\$4.00	5.00
\$0.40	\$0.40	\$40.00	\$2.00	\$2.00	0.00
\$0.20	\$0.20	\$20.00	\$0.00	\$0.00	0.00
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00
0.05	0.05	0.05	0.05	0.05	0.05
0.06	0.06	0.06	0.06	0.06	0.06
0.07	0.07	0.07	0.07	0.07	0.07
0.08	0.08	0.08	0.08	0.08	0.08
0.09	0.09	0.09	0.09	0.09	0.09
0.10	0.10	0.10	0.10	0.10	0.10
0.11	0.11	0.11	0.11	0.11	0.11
0.12	0.12	0.12	0.12	0.12	0.12
0.13	0.13	0.13	0.13	0.13	0.13
0.14	0.14	0.14	0.14	0.14	0.14

Notes:

<sup>1</sup>Demand Response - Taxi (DT) and non-dedicated fleets do not report fleet age data.



General Information

<b>Urbanized Area Statistics - 2010 Census</b>	
Blacksburg, VA	51 Square Miles
	88,542 Population
	328 Pop. Rank out of 498 UZAs

**Service Supplied**  
22,879 Annual Vehicle Revenue Miles (VRM)  
55,807 Annual Vehicle Revenue Hours (VRH)  
42 Vehicles Operated in Maximum Service (VOMS)  
60 Vehicles Available for Maximum Service (VAMS)

## Modal Characteristics

Modal Overview							Modal Characteristics		
Mode	Vehicles Operated in Maximum Service			Uses of Capital Funds			Other	Total	
	Directly Operated	Purchased Transportation	Revenue Vehicles	Systems and Guidelines	Facilities and Stations				
Demand Response	9	-	\$93,297	\$0	\$0	\$0	\$0	\$93,297	
Bus	33	-\$4,390,745	\$1,125,264	\$284,089	\$58,860	\$58,860	\$5,958,958	\$6,052,255	
Total	42	-\$4,484,042	\$1,125,264	\$284,089	\$58,860	\$58,860	\$5,958,958	\$6,052,255	

Service Efficiency		Operating Expenses per Vehicle Hour		Vehicle Revenue Hour	
Annual Passenger Miles	Passenger Miles	Capital Funds	Capital Funds	Operating Expenses per Mile	Vehicle Revenue per Mile
98,677	98,677	\$93,297	\$93,297	\$6.24	\$59.3
6,510,999	6,510,999	\$5,956,580	\$5,956,580	\$7.07	\$66.5
6,609,677	6,609,677	<b>\$6,052,255</b>	<b>\$6,052,255</b>		
39,740	39,740				
26,060	26,060				

Year	Unlinked Passenger Miles per Passenger Mile: Bus
2000	4.00
2001	3.50
2002	3.00
2003	2.50
2004	2.00

13

fleet age data.

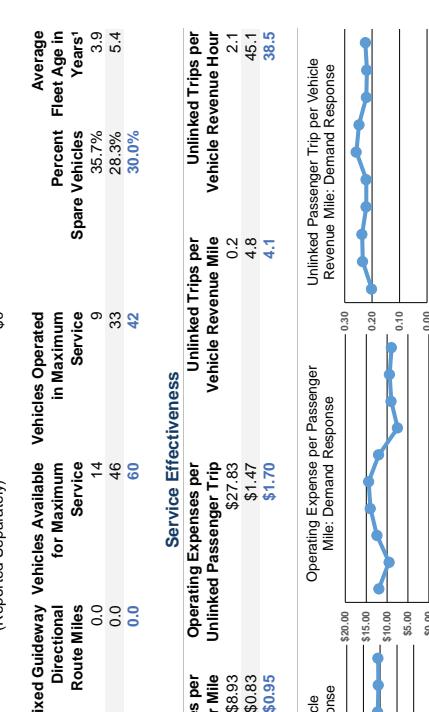
Financial Information



Distance \$5,014,562 82.9%



urchased Transportation  
(Reported Separately) \$0



**Notes:**  
1D constant P and constant  $T_{\text{out}}$  (DT<sub>in</sub> = dedicated fluid,  $\Delta T_{\text{out}}$  = constant fluid exit temperature)

## Appendix A-6

## City of Harrisonburg Department of Public Transportation (Harrisonburg Transit)

2014 Annual Agency Profile

### General Information

Urbanized Area Statistics - 2010 Census	
Harrisonburg, VA	50,057,838 Annual Passenger Miles (PMT)
33 Square Miles	2,800,525 Annual Unlinked Trips (UPT)
66,784 Population	10,207 Average Weekday Unlinked Trips
4113 Pop. Rank out of 498 UZAs	3,318 Average Saturday Unlinked Trips
	762 Average Sunday Unlinked Trips

Service Area Statistics	
17 Square Miles	702,239 Annual Vehicle Revenue Miles (VRM)
53,013 Population	63,494 Annual Vehicle Revenue Hours (VRH)
	39 Vehicles Operated in Maximum Service (VOMS)
	44 Vehicles Available for Maximum Service (VAMS)

### Service Supplied

702,239 Annual Vehicle Revenue Miles (VRM)
63,494 Annual Vehicle Revenue Hours (VRH)
39 Vehicles Operated in Maximum Service (VOMS)
44 Vehicles Available for Maximum Service (VAMS)

### Modal Characteristics

Vehicles Operated in Maximum Service	
Directly Operated	Purchased Transportation
8	-
31	-
<b>Total</b>	<b>39</b>

### Service Efficiency

Operating Expenses per Vehicle Revenue Mile	
Operating Expenses	Passenger Miles
\$642,122	92,282
<b>Total</b>	<b>\$3,899,782</b>

### Performance Measures

Operating Expenses per Vehicle Revenue Hour	
Operating Expenses	Passenger Miles
\$5.73	\$54.55
<b>Total</b>	<b>\$5.55</b>

### Service Effectiveness

Operating Expenses per Passenger Mile	
Operating Expenses	Passenger Miles
\$5.52	\$57.43
<b>Total</b>	<b>\$5.94</b>

### Operating Expenses per Vehicle

Operating Expenses per Vehicle Revenue Mile, Bus	
Operating Expenses	Passenger Miles
\$8.80	6,00
\$8.60	4,00
\$8.40	2,00
<b>Total</b>	<b>\$8.20</b>

### Operating Expenses per Passenger Mile, Bus

Operating Expenses per Passenger Mile, Bus	
Operating Expenses	Passenger Miles
\$8.80	6,00
\$8.60	4,00
\$8.40	2,00
<b>Total</b>	<b>\$8.20</b>

### Operating Expenses per Vehicle

Operating Expenses per Vehicle	
Operating Expenses	Passenger Miles
\$8.80	6,00
\$8.60	4,00
\$8.40	2,00
<b>Total</b>	<b>\$8.20</b>

### Operating Expenses per Passenger Mile

Operating Expenses per Passenger Mile	
Operating Expenses	Passenger Miles
\$8.80	6,00
\$8.60	4,00
\$8.40	2,00
<b>Total</b>	<b>\$8.20</b>

### Financial Information

Database Information	
NTID:	30094
Reporter Type:	Full Reporter
Fare Revenues	\$1,766,613
Local Funds	\$0
State Funds	\$1,092,776
Federal Assistance	\$963,225
Other Funds	\$77,167
<b>Total Operating Funds Expended</b>	<b>\$3,899,781</b>

Sources of Operating Funds Expended	
Fare Revenues	0.0%
Local Funds	9.0%
State Funds	11.0%
Federal Assistance	80.0%
Other Funds	0.0%
<b>Total Capital Funds Expended</b>	<b>100.0%</b>

Sources of Capital Funds Expended	
Fare Revenues	0.0%
Local Funds	51,143.87
State Funds	\$635,347
Federal Assistance	\$4,601,334
Other Funds	\$0
<b>Total Capital Funds Expended</b>	<b>\$5,751,668</b>

### Summary of Operating Expenses (OE)

Summary of Operating Expenses (OE)	
Salary, Wages, Benefits	\$2,664,140
Materials and Supplies	\$858,679
Purchased Transportation	\$0
Other Operating Expenses	\$376,963
<b>Total Operating Expenses</b>	<b>\$3,899,782</b>
Reconciling OE Cash Expenditures	\$0
Purchased Transportation (Reported Separately)	\$0

### Service Effectiveness

Service Effectiveness	
Fixed Guideway Vehicles Available for Maximum Service	9
Directional Route Miles	0.0
Vehicles Operated in Maximum Service	8
<b>Average Guideway Miles per Vehicle</b>	<b>31</b>
Spare Vehicles	8
<b>Average Miles per Spare Vehicle</b>	<b>39</b>
Fleet Age in Years	5.1
<b>Average Fleet Age</b>	<b>5.3</b>
Percent Spare Vehicles	11.1%
<b>Average Miles per Spare Vehicle</b>	<b>11.4%</b>
Percent Fleet Age in Years	5.1
<b>Average Miles per Spare Vehicle</b>	<b>4.0</b>
<b>Average Miles per Spare Vehicle</b>	<b>40.9</b>

### Unlinked Trips per Vehicle Revenue Hour

Unlinked Trips per Vehicle Revenue Hour	
Operating Expenses per Passenger Mile	\$23.81
Unlinked Passenger Trip per Vehicle	\$1.17
Operating Expenses per Vehicle	\$0.77
<b>Unlinked Trips per Vehicle Revenue Hour</b>	<b>4.0</b>

### Unlinked Passenger Trip per Vehicle Revenue Mile: Demand Response

Unlinked Passenger Trip per Vehicle Revenue Mile: Demand Response	
Operating Expenses per Passenger Mile	\$8.00
Unlinked Passenger Trip per Vehicle	\$0.30
Operating Expenses per Vehicle	\$0.20
<b>Unlinked Passenger Trip per Vehicle Revenue Mile: Demand Response</b>	<b>0.10</b>

### Unlinked Passenger Trip per Vehicle Revenue Mile: Demand Response

Unlinked Passenger Trip per Vehicle Revenue Mile: Demand Response	
Operating Expenses per Passenger Mile	\$8.00
Unlinked Passenger Trip per Vehicle	\$0.30
Operating Expenses per Vehicle	\$0.20
<b>Unlinked Passenger Trip per Vehicle Revenue Mile: Demand Response</b>	<b>0.10</b>

Notes:

Demand Response - Taxi (DT) and non-dedicated fleets do not report fleet age data.

# University of Arkansas, Fayetteville (Razorback Transit)

2014 Annual Agency Profile

<http://www.parking.uark.edu>  
 155 Razorback Road  
 ADSB 131  
 Fayetteville, AR 72701

Associate Vice Chancellor for Business: Ms. Colleen Briney  
 479-575-6291

## General Information

Urbanized Area (UZA) Statistics - 2010 Census	
Fayetteville-Springdale-Rogers, AR-MO	
188 Square Miles	
295,083 Population	
129 Pop. Rank out of 498 UZAs	

## Service Area Statistics

18 Square Miles  
 75,102 Population

## Service Consumption

1,978,575 Annual Unlinked Trips (UPT)

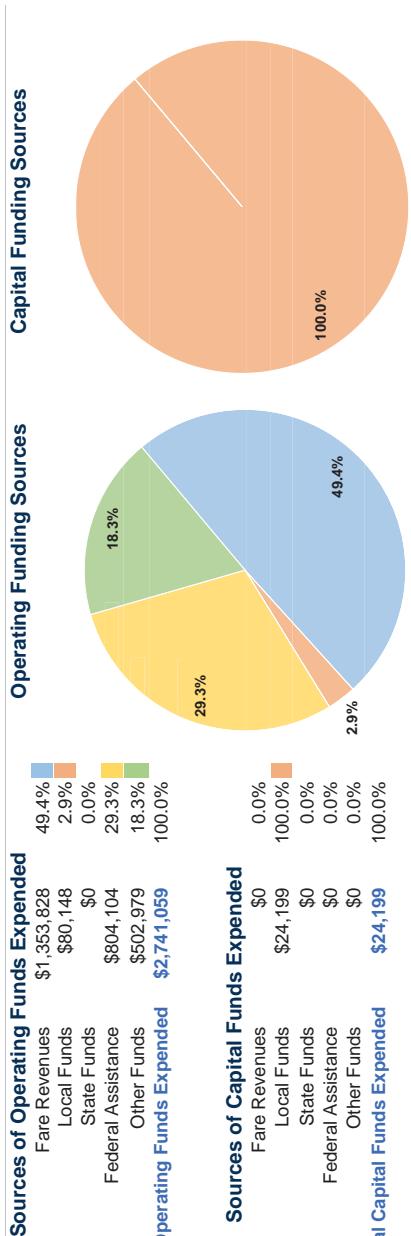
## Service Supplied

460,215 Annual Vehicle Revenue Miles (VRM)  
 48,066 Annual Vehicle Revenue Hours (VRH)

## Database Information

NTIDID: 60062  
 Reporter Type: Small Systems Reporter

## Financial Information



## Operation Characteristics

### Vehicles Operated at Maximum Service

Mode	Directly Operated	Purchased Transportation	Operating Expenses	Fare Revenues	Annual Trips	Annual Revenue Miles	Annual Vehicle Revenue Hours	Average Fleet Age in Years <sup>1</sup>
Demand Response	4	-	\$465,980	\$9,206	\$0	9,257	7,990	3.8
Bus	18	-	\$2,275,079	\$1,344,622	\$24,199	1,969,318	415,503	9.1
<b>Total</b>	<b>22</b>	<b>-</b>	<b>\$2,741,059</b>	<b>\$1,353,828</b>	<b>\$24,199</b>	<b>1,978,575</b>	<b>460,215</b>	

## Modal Characteristics

### Vehicles Operated at Maximum Service

Mode	Directly Operated	Purchased Transportation	Operating Expenses	Fare Revenues	Annual Trips	Annual Revenue Miles	Annual Vehicle Revenue Hours	Average Fleet Age in Years <sup>1</sup>
Demand Response	4	-	\$465,980	\$9,206	\$0	9,257	7,990	3.8
Bus	18	-	\$2,275,079	\$1,344,622	\$24,199	1,969,318	415,503	9.1
<b>Total</b>	<b>22</b>	<b>-</b>	<b>\$2,741,059</b>	<b>\$1,353,828</b>	<b>\$24,199</b>	<b>1,978,575</b>	<b>460,215</b>	

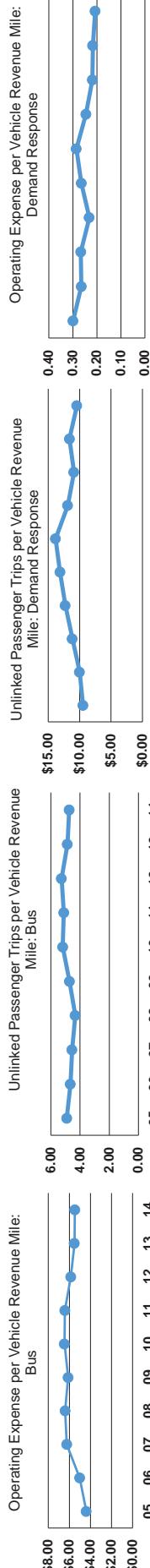
## Performance Measures

### Service Efficiency

Mode	Operating Expenses per Vehicle Revenue Mile	Operating Expenses per Vehicle Revenue Hour	Mode	Operating Expenses per Passenger Trip	Mode	Operating Expenses per Unlinked Trips per Passenger Trip	Mode	Operating Expenses per Unlinked Trips per Vehicle Revenue Mile
Demand Response	\$10.42	\$58.32	Bus	\$5.48	\$56.77	\$57.03	Bus	\$50.34
<b>Total</b>	<b>\$5.46</b>	<b>\$56.77</b>					<b>Total</b>	<b>\$1.39</b>

### Service Effectiveness

Mode	Operating Expenses per Vehicle Revenue Mile	Operating Expenses per Passenger Trip	Mode	Operating Expenses per Unlinked Trips per Passenger Trip	Mode	Operating Expenses per Unlinked Trips per Vehicle Revenue Mile
Demand Response	\$10.42	\$58.32	Bus	\$5.48	\$56.77	\$57.03
<b>Total</b>	<b>\$5.46</b>	<b>\$56.77</b>				



Notes:

<sup>1</sup>Demand Response - Taxi (DT) and non-dedicated fleets do not report fleet age data.



# Greater Glens Falls Transit System (GGFT)

2014 Annual Agency Profile

<http://www.cityofglensfalls.com/>  
495 Queensbury Avenue  
Queensbury, NY 12804

Transportation Director: Mr. Scott Sopczyk  
518-732-1085

## General Information

### Urbanized Area (UZA) Statistics - 2010 Census

Glens Falls, NY 42 Square Miles

65,443 Population

419 Pop. Rank out of 498 UZAs

### Other UZAs Served

0 New York Non-UZA

### Service Area Statistics

57 Square Miles

61,090 Population

### Service Consumption

341,635 Annual Unlinked Trips (UPT)

### Service Supplied

337,335 Annual Vehicle Revenue Miles (VRM)

20,630 Annual Vehicle Revenue Hours (VRH)

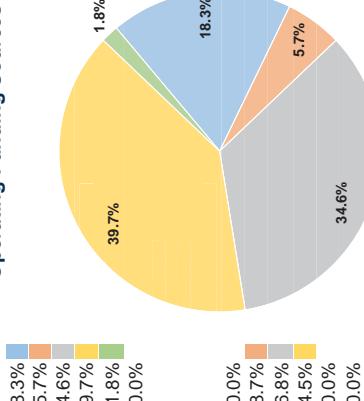
### Database Information

NTIDID: 20120

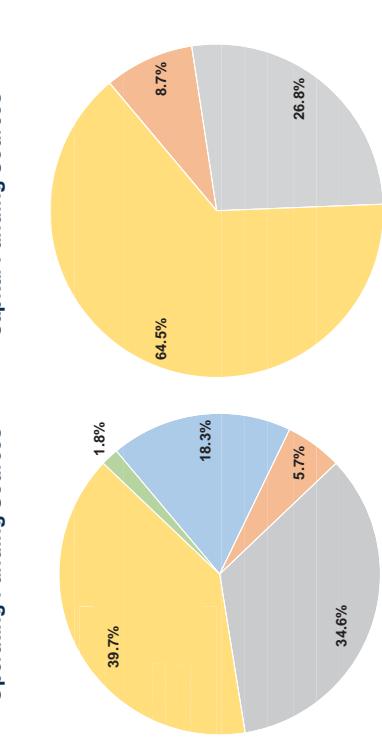
Reporter Type: Small Systems Reporter

## Financial Information

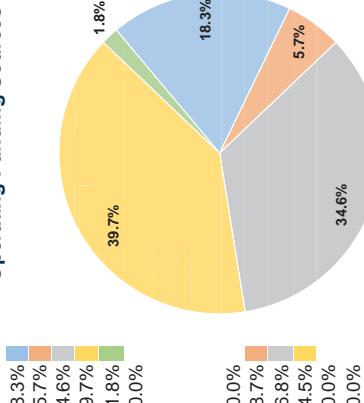
### Sources of Operating Funds Expended



### Capital Funding Sources

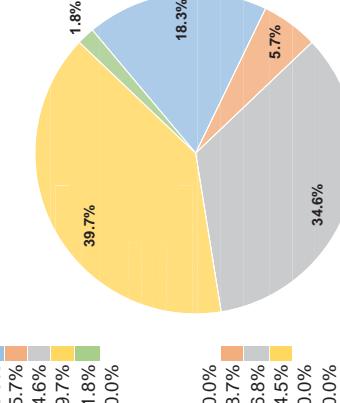


### Operating Funding Sources

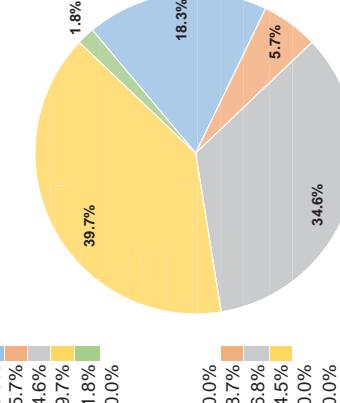


### Financial Information

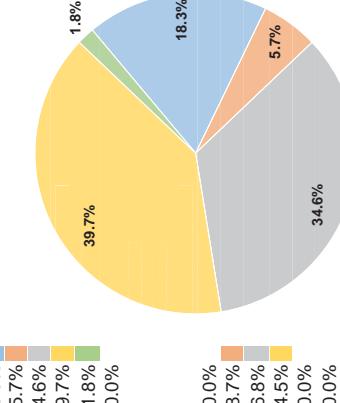
### Sources of Capital Funds Expended



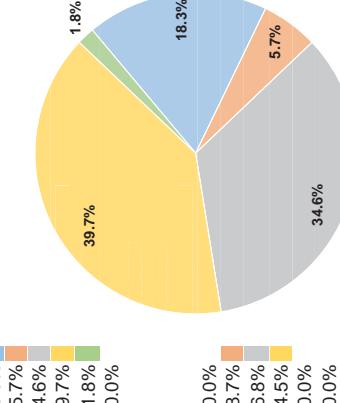
### Operating Expenses per Vehicle Revenue Mile:



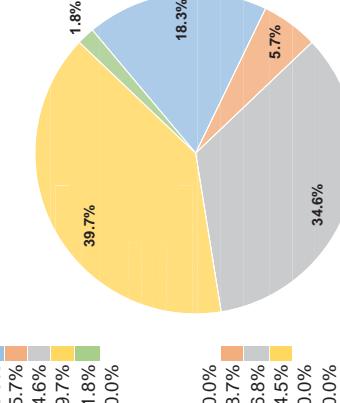
### Unlinked Passenger Trips per Vehicle Revenue Mile: Bus



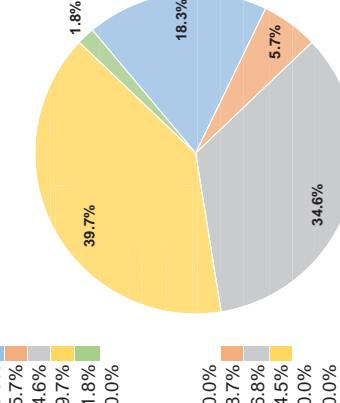
### Unlinked Trips per Vehicle Revenue Hour



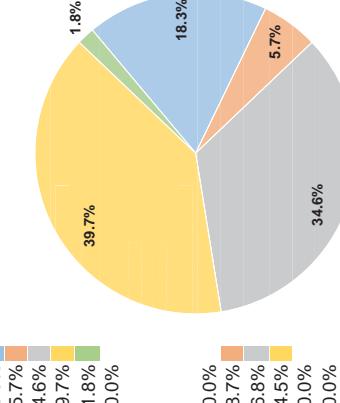
### Annual Vehicle Revenue Miles



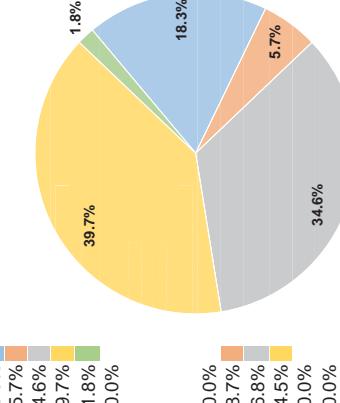
### Annual Vehicle Revenue Hours



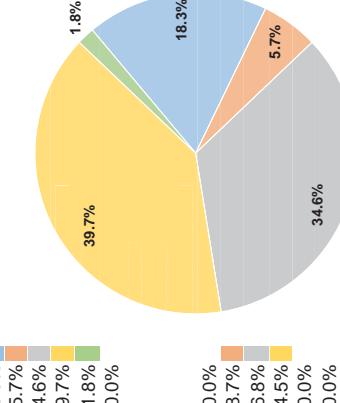
### Average Fleet Age in Years<sup>1</sup>



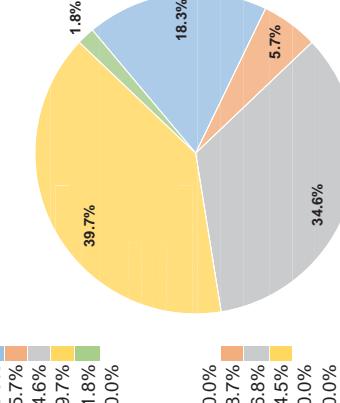
### Unlinked Trips per Vehicle Revenue Mile: Bus



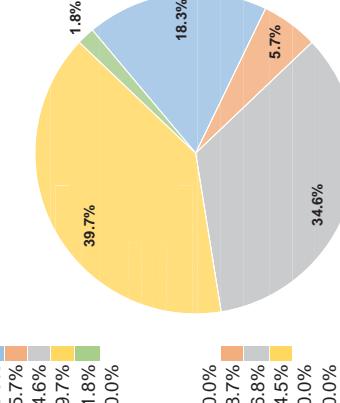
### Unlinked Trips per Vehicle Revenue Hour



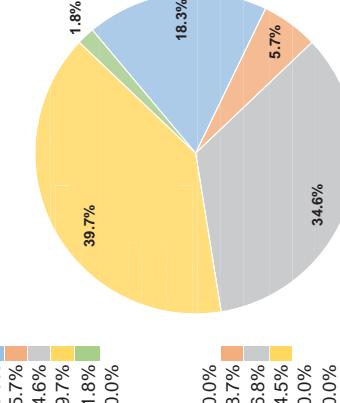
### Operating Expenses per Vehicle Revenue Mile: Demand Response



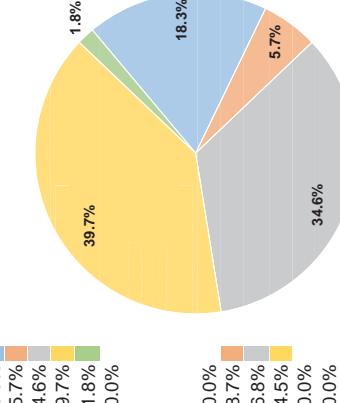
### Operating Expenses per Unlinked Passenger Trip



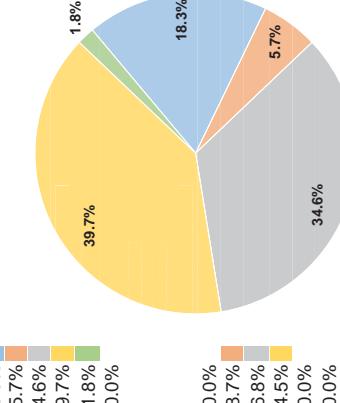
### Unlinked Passenger Trips per Vehicle Revenue Mile



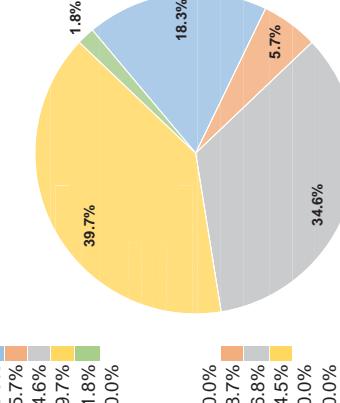
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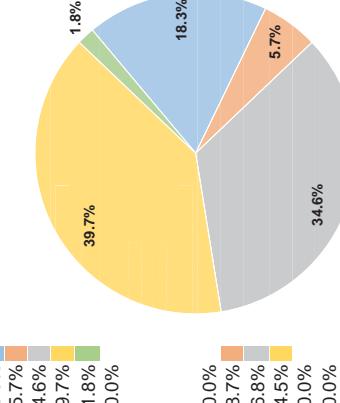
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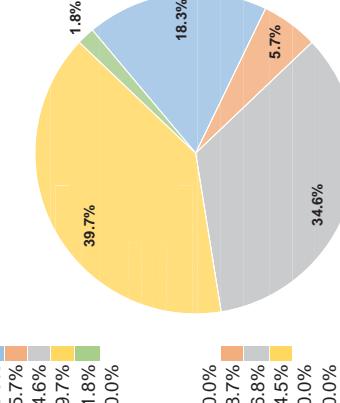
### Annual Vehicle Revenue Hours



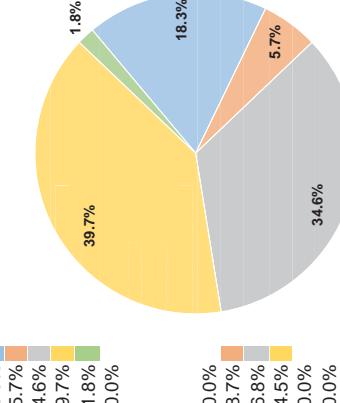
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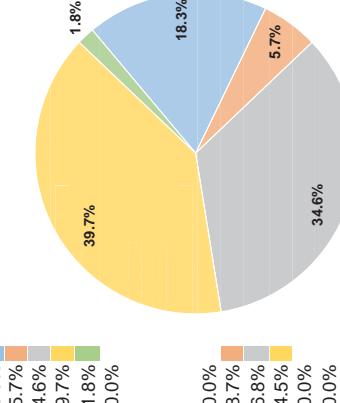
### Unlinked Trips per Vehicle Revenue Mile: Demand Response



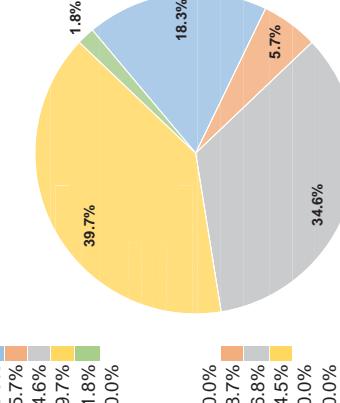
### Operating Expenses per Vehicle Revenue Mile: Demand Response



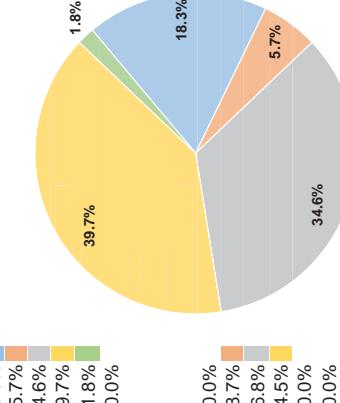
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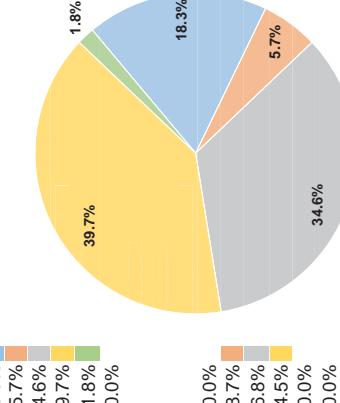
### Unlinked Passenger Trips per Vehicle Revenue Mile: Demand Response



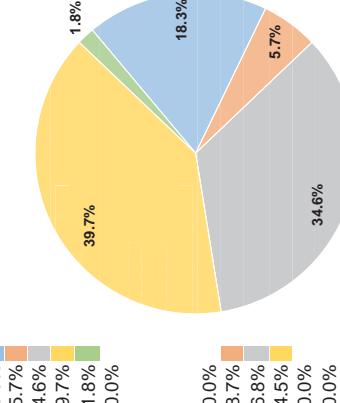
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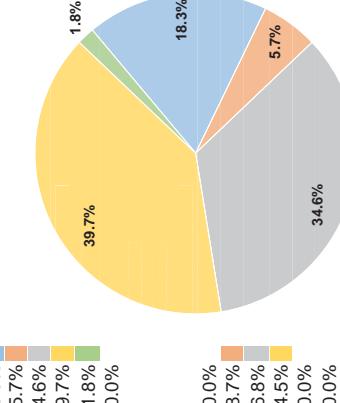
### Operating Expenses per Unlinked Passenger Trip: Demand Response



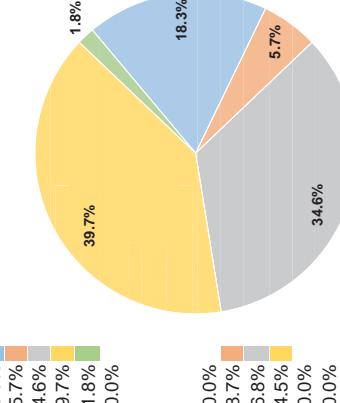
### Unlinked Trips per Vehicle Revenue Hour: Total



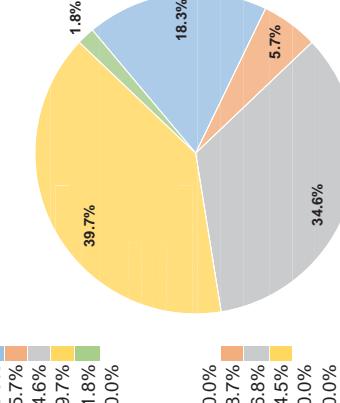
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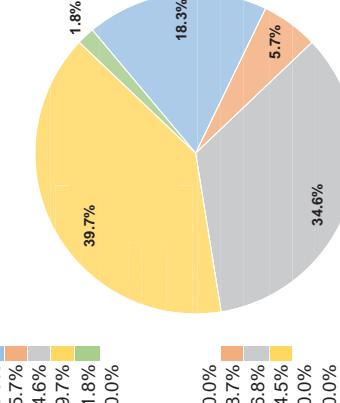
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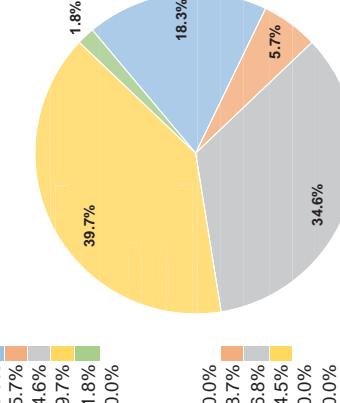
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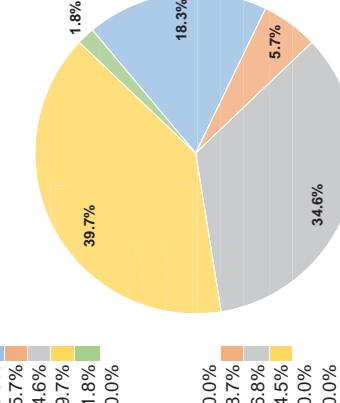
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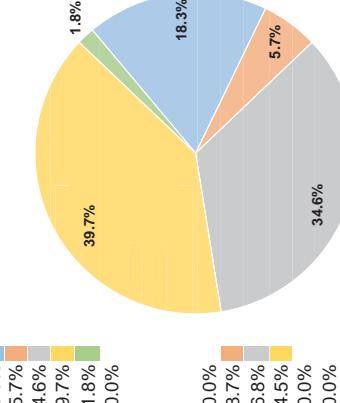
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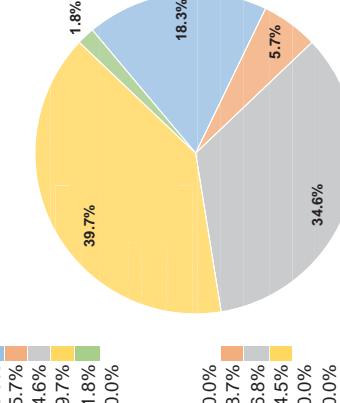
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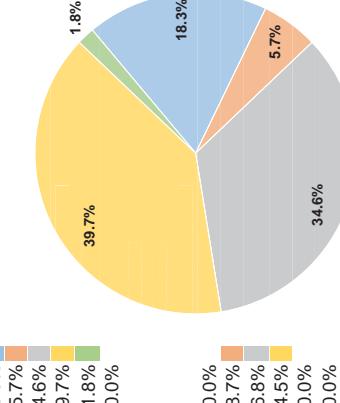
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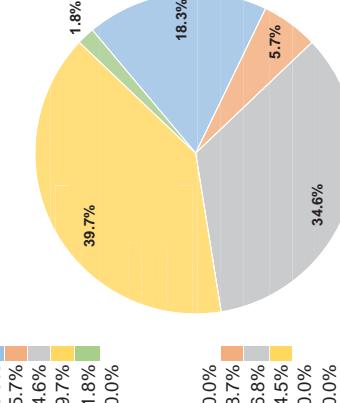
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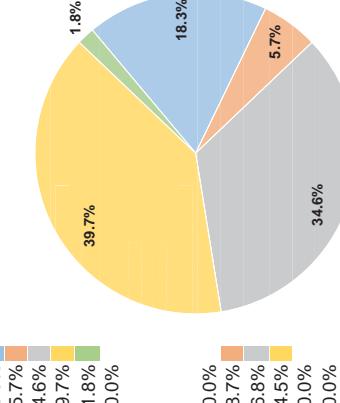
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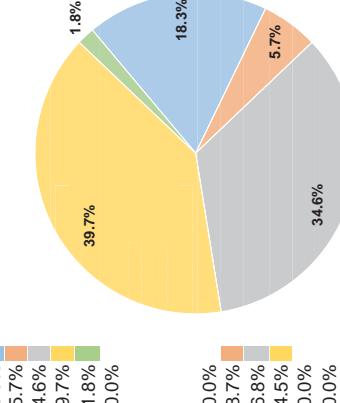
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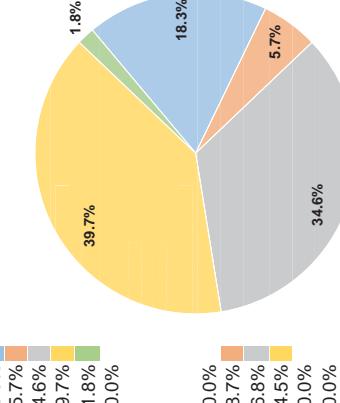
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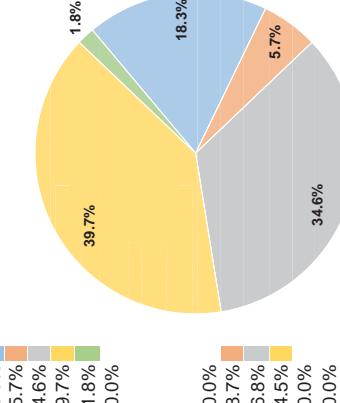
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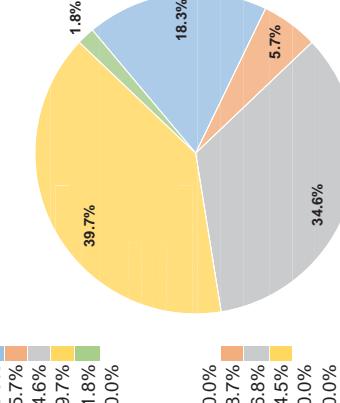
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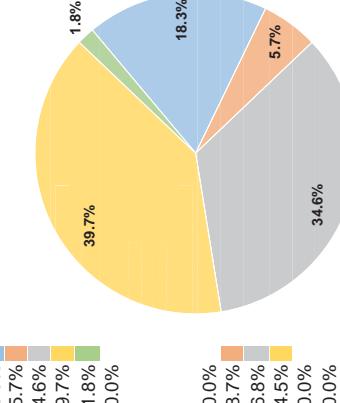
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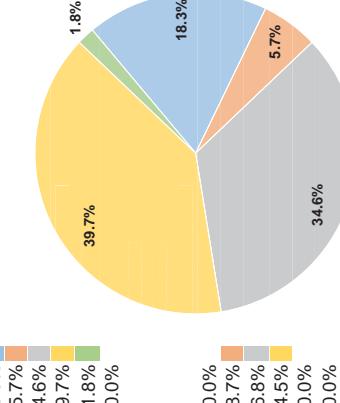
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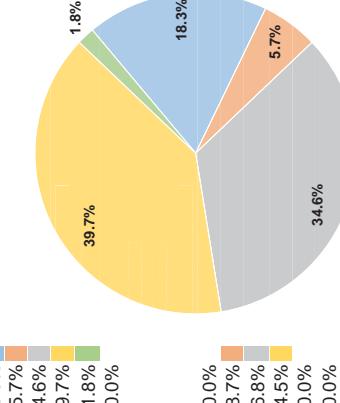
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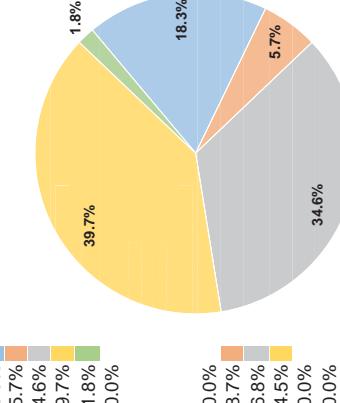
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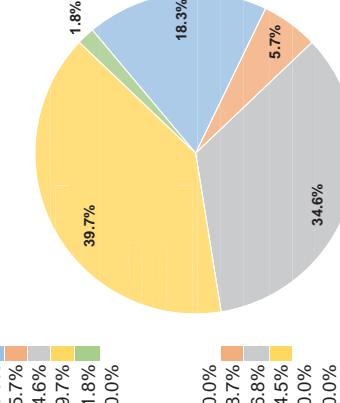
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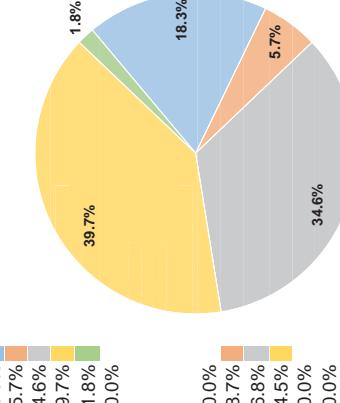
### Unlinked Trips per Vehicle Revenue Mile: Total



### Operating Expenses per Unlinked Passenger Trip: Total



### Unlinked Trips per Vehicle Revenue Hour: Demand Response



## General Information

### Urbanized Area (UZA) Statistics - 2010 Census

Cumberland, MD/WV-PA

33 Square Miles

51,899 Population

484 Pop. Rank out of 498 UZAs

Other UZAs Served

0 Maryland Non-UZA

### Service Area Statistics

131 Square Miles

68,780 Population

### Service Consumption

204,387 Annual Unlinked Trips (UPT)

### Service Supplied

363,449 Annual Vehicle Revenue Miles (VRM)

29,580 Annual Vehicle Revenue Hours (VRH)

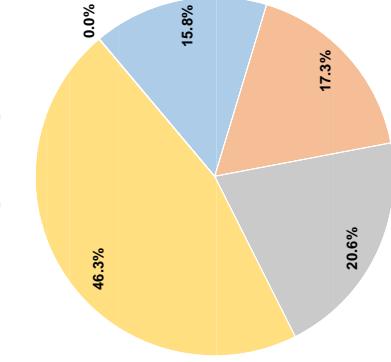
### Database Information

NTIDID: 30041

Reporter Type: Small Systems Reporter

## Financial Information

### Operating Funding Sources



### Sources of Operating Funds Expended

Fare Revenues	\$293,394
Local Funds	\$322,192
State Funds	\$382,290
Federal Assistance	\$859,899
Other Funds	\$600
<b>Total Operating Funds Expended</b>	<b>\$1,856,375</b>

### Sources of Capital Funds Expended

Fare Revenues	\$0
Local Funds	\$0
State Funds	\$0
Federal Assistance	\$0
Other Funds	\$0
<b>Total Capital Funds Expended</b>	<b>\$0</b>

## Modal Characteristics

### Vehicles Operated at Maximum Service

Mode	Directly Operated	Purchased Transportation	Operating Expenses	Fare Revenues	Annual Trips	Annual Vehicle Revenue Miles	Annual Vehicle Revenue Hours	Average Fleet Age in Years <sup>1</sup>
Demand Response	6	-	\$942,288	\$42,436	\$0	25,834	153,733	14,625
Bus	7	-	\$916,087	\$250,958	\$0	178,553	209,716	14,625
<b>Total</b>	<b>13</b>	<b>-</b>	<b>\$1,858,375</b>	<b>\$293,394</b>	<b>\$0</b>	<b>204,387</b>	<b>363,449</b>	<b>29,580</b>

### Operation Characteristics

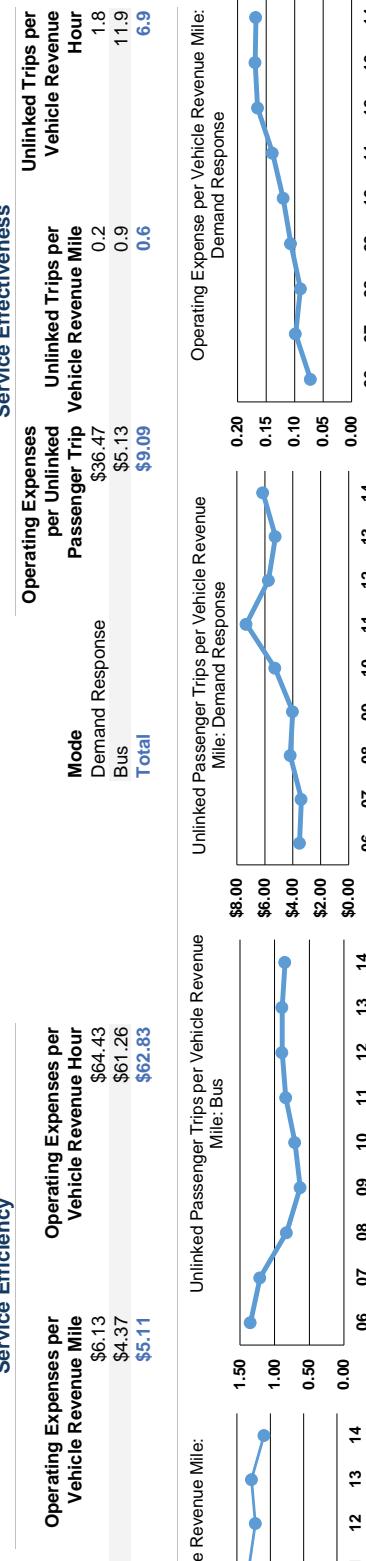
### Vehicles Operated at Maximum Service

Mode	Demand Response	Bus	Total	Mode	Demand Response	Bus	Total	Mode	Demand Response	Bus	Total
Operating Expenses per Vehicle Revenue Mile	\$6.13	\$4.37	<b>\$5.11</b>	Operating Expenses per Passenger Trip	\$64.43	\$61.26	<b>\$62.83</b>	Operating Expenses per Unlinked Passenger Trips per Vehicle Revenue Mile: Bus	\$36.47	\$5.13	<b>\$9.09</b>
Vehicle Revenue Hour	\$61.26	\$60.00		Vehicle Revenue Hour	\$36.47	\$5.13		Vehicle Revenue Hour	\$36.47	\$5.13	

### Performance Measures

Mode	Demand Response	Bus	Total	Mode	Demand Response	Bus	Total	Mode	Demand Response	Bus	Total
Operating Expense per Vehicle Revenue Mile:				Unlinked Passenger Trips per Vehicle Revenue Mile: Bus				Unlinked Passenger Trips per Vehicle Revenue Mile: Demand Response			
Bus											

### Service Effectiveness



**Notes:**

<sup>1</sup>Demand Response - Taxi (DT) and non-dedicated fleets do not report fleet age data.

## General Information

### Urbanized Area (UZA) Statistics - 2010 Census

St. George, UT 45 Square Miles  
 98,370 Population  
 305 Pop. Rank out of 498 UZAs

### Financial Information

#### Sources of Operating Funds Expended

Fare Revenues	\$135,304	10.8%
Local Funds	\$517,709	41.2%
State Funds	\$0	0.0%
Federal Assistance	\$583,978	46.5%
Other Funds	\$18,265	1.5%
<b>Total Operating Funds Expended</b>	<b>\$1,255,256</b>	<b>100.0%</b>

#### Sources of Capital Funds Expended

Fare Revenues	\$27,807	5.4%
Local Funds	\$98,281	18.9%
State Funds	\$0	0.0%
Federal Assistance	\$393,124	75.7%
Other Funds	\$0	0.0%
<b>Total Capital Funds Expended</b>	<b>\$519,212</b>	<b>100.0%</b>

### Service Area Statistics

#### 35 Square Miles

75,561 Population

### Service Consumption

464,600 Annual Unlinked Trips (UPT)

### Service Supplied

308,726 Annual Vehicle Revenue Miles (VRM)

25,085 Annual Vehicle Revenue Hours (VRH)

### Database Information

NTIDID: 80026

Reporter Type: Small Systems Reporter

### Operation Characteristics

#### Vehicles Operated at Maximum Service

Mode	Directly Operated	Purchased Transportation	Operating Expenses	Fare Revenues	Annual Capital Funds	Annual Trips	Annual Vehicle Revenue Miles	Annual Vehicle Revenue Hours	Average Fleet Age in Years <sup>1</sup>
Demand Response	4	-	\$226,128	\$18,773	\$126,119	10,148	56,574	6,592	5.2
Bus	5	-	\$1,029,128	\$144,338	\$393,093	454,452	252,152	18,493	5.9
<b>Total</b>	<b>9</b>	<b>-</b>	<b>\$1,255,256</b>	<b>\$163,111</b>	<b>\$519,212</b>	<b>464,600</b>	<b>308,726</b>	<b>25,085</b>	<b>5.9</b>

### Performance Measures

Mode	Operating Expenses per Vehicle Revenue Mile	Operating Expenses per Vehicle Revenue Hour	Unlinked Passenger Trips per Vehicle Revenue Mile: Bus	Unlinked Passenger Trips per Vehicle Revenue Mile: Demand Response	Operating Expenses per Unlinked Passenger Trip	Unlinked Trips per Vehicle Revenue Hour
Demand Response	\$4.00	\$34.30	\$15.00	\$10.00	\$22.28	1.5
Bus	\$4.08	\$55.65	\$10.00	\$5.00	\$22.26	1.8
<b>Total</b>	<b>\$4.07</b>	<b>\$50.04</b>	<b>\$10.00</b>	<b>\$5.00</b>	<b>\$2.70</b>	<b>1.5</b>

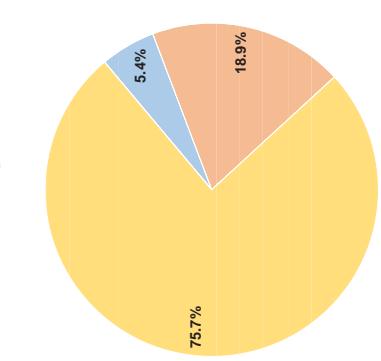
Mode	Operating Expenses per Vehicle Revenue Mile: Bus	Operating Expenses per Vehicle Revenue Mile: Demand Response	Unlinked Passenger Trips per Vehicle Revenue Mile: Bus	Unlinked Passenger Trips per Vehicle Revenue Mile: Demand Response	Operating Expenses per Unlinked Passenger Trip	Unlinked Trips per Vehicle Revenue Hour
Demand Response	\$4.00	\$34.30	\$15.00	\$10.00	\$22.28	1.5
Bus	\$4.08	\$55.65	\$10.00	\$5.00	\$22.26	1.8
<b>Total</b>	<b>\$4.07</b>	<b>\$50.04</b>	<b>\$10.00</b>	<b>\$5.00</b>	<b>\$2.70</b>	<b>1.5</b>

**Notes:**

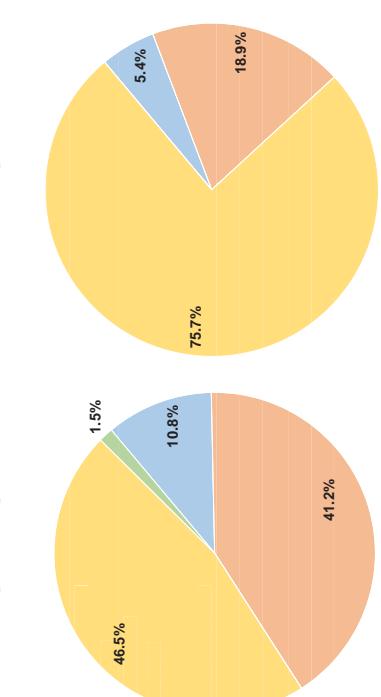
<sup>1</sup>Demand Response - Taxi (DT) and non-dedicated fleets do not report fleet age data.

### Financial Information

#### Operating Funding Sources

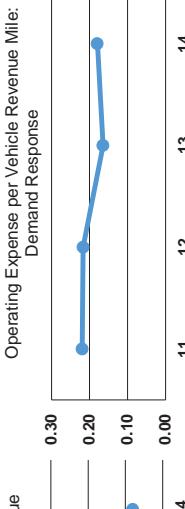


#### Capital Funding Sources



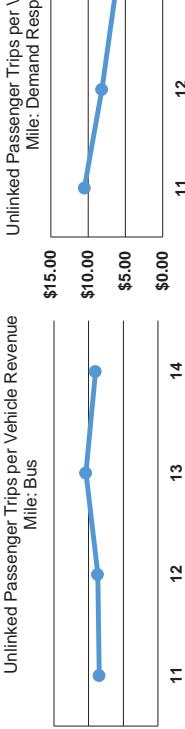
### Modal Characteristics

Mode	Demand Response	Bus	Total
Annual Vehicle Revenue Miles	56,574	252,152	308,726
Annual Vehicle Revenue Hours	6,592	18,493	25,085



### Service Efficiency

Mode	Demand Response	Bus	Total
Unlinked Trips per Vehicle Revenue Hour	1.5	1.8	1.5
Unlinked Trips per Vehicle Revenue Mile	0.2	0.2	0.2



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## Appendix B: General Methods of Funding Transit

According to a joint study from FTA and TRB, there are a number of potential dedicated revenues sources for transit<sup>4</sup>:

Sales Tax	Employer/Payroll Taxes	TOD/Joint Dev Income (TIF)
Gas Tax	Room/Occupancy Taxes	Special Assessment Districts (TIF, TID, SID, BID)
Rental Car Tax	Development Impact Fees	Community Improvement Districts/Community Facilities Districts
License, Registration, or Title Fees	Storm Water Fees	Right-of-way Leasing
Tire Tax	Real Estate Transfer Tax	Station Rents
Weight-Based Vehicle Sales Tax	Parking Tax	Station Air Rights
Vehicle Battery Tax	Property Taxes	Utility Levy
Weight-Mile Truck Fee	Regional Sales Tax	Congestion Pricing
Toll Roads	Employee Levy	Emissions Fees
Earnings/Income Taxes	Land Value Capture	VMT Fees

While the above list from the authors attempts to be exhaustive, there is a more limited list of examples that can be developed from the peer agencies analyzed for this study. Among those examples, the most common forms of dedicated transit funding were county-wide sales taxes, an income or occupational tax, and property taxes. Additionally, some localities dedicated a portion of gas taxes or other vehicular fees to transit. Other examples from the peer agencies include a mortgage recording tax and developer fees.

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<sup>4</sup> Sources: Local and Regional Funding Mechanisms for Public Transportation (TRB/FTA); Local Transit Options for Public Transportation (Victoria Transport Policy Institute); Why and How to Fund Public Transportation (Arizona PIRG Education Fund)

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## **Appendix C: Public Comments**



Virginia Department of Rail and Public Transportation

## MEMORANDUM

**TO:** John Mihaly, Hampton Roads Transportation Planning Organization (HRTPO)

**FROM:** Katie Schwing and Jitender Ramchandani, Virginia Department of Rail and Public Transportation (DRPT)

**DATE:** January 17, 2017

**SUBJECT:** HRTPO Regional Transit Benchmarking Study draft report

Thank you for giving us an opportunity to comment on the Regional Transit Benchmarking Study draft report. Virginia Department of Rail and Public Transportation (DRPT) supports the use of benchmarking to develop more efficient and effective transit systems. This new benchmarking study will provide a way for the local transit systems in the Hampton Roads area to see how they compare to agencies around the country with similar population, service area, and level of service provided. This is especially important in a large and varied region such as Hampton Roads where comparing the distinct transit systems to each other will not yield meaningful results. The results of this report will help the three agencies in the region understand how their individual characteristics affect their performance, and can help inform future projects that fit their unique needs and opportunities.

DRPT urges the Hampton Roads Transportation Planning Organization (HRTPO) to make the report as meaningful to each subject transit agency as possible and have the following minor suggestions.

1. In future studies, it may be helpful to each agency if their respective service goals, local funding sources/amounts, and service area boundary histories were examined or summarized in this study and compared with the relevant case study peers. Seeing the results of the benchmarking, alongside the choices and goals agencies have made in the past, may help the agencies put their rankings into perspective and focus resources on future projects that best further their established goals. For example, a focus on serving as large an area as possible will yield noticeably different farebox recovery rates, passengers per mile, etc, than a focus on maximizing the number of annual riders.
2. You may also consider additional discussion of how the major controllable and uncontrollable system characteristics differ between the peer agencies will

also help put the rankings into perspective. For example, a transit system with a dedicated funding source may operate much differently than a system without a dedicated funding source. Similarly, characteristics and performance of transit systems in a region with significant physical barriers can be significantly different from those without any large physical barriers.

3. Please note that although gasoline prices are one of the external factors affecting ridership, they are not in the control of transit agencies. And, although prices vary from region to region, the prices tend to follow national trends.
4. Finally, in future studies, you may consider a peer comparison of paratransit services and other modes, such as bus rapid transit or light rail as these services may influence the performance of the agency as a whole.

To summarize, DRPT staff support this report and encourage its use by the region and by the respective transit agencies to make meaningful progress towards their established goals.

***HRTPO Staff Comments:***

*HRTPO Staff is in receipt of the Virginia Department of Rail and Public Transportation (DRPT) review of the draft Hampton Roads Regional Transit Benchmarking Study, as submitted in a letter dated January 17, 2017. HRTPO staff appreciates the thorough review and thoughtful comments regarding the study.*

- *With regard to the first comment, which was related to transit agency service goals, local funding sources/amounts, and service area boundary history – HRTPO staff agrees that these are important elements that could be included in a follow up study on regional transit planning.*
- *With regard to the second comment, which was related to major controllable and uncontrollable system characteristics between the peer agencies – HRTPO staff agrees that this is an area that could be included in a follow up study on regional transit planning. In the final report, the need for an in-depth analysis of the dedicated funding sources of the top ranked agencies is included among possible topics for future research.*
- *With regard to the third comment, which was related to the price of gasoline as a potential external factor affecting ridership – It should be noted that HRTPO staff utilized the national average price of gasoline in figure 4 of the report and not a regional average price.*
- *With regard to the fourth comment, which was related to peer comparison of paratransit services and other modes – HRTPO staff agrees that this should be considered as a topic for a follow up study on regional transit planning.*

*Your comments will be provided for consideration by the public transit working group.*

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**HRTPO Public Comment**

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**RE: Regional Benchmarking Transit Study**

**Name:** Ms. Kyra A. Cook

**Date:** January 17, 2017

**Subject:** Regional Benchmarking Transit Study

**Public Comment Input (Via E-Mail)**

Mr. Mihaly,

James City County's Paul Holt shared your study with me and I read it with great interest. At the health foundation where I work we know that transportation is a social determinant of health and we have therefore been trying to better understand transportation needs in our service area (Poquoson, Williamsburg, James City, York). To that end, we've interviewed all health and human service providers that provide transportation as part of their work. What we learned, is that data is not easy to collect for a variety of reasons. I realize your work covers a much larger service area than ours. But as I've studied this issue, I learned a lot about what we don't know. I'm happy to share what I've got if you're interested. If not, no worries.

Best,  
Kyra

***HRTPO Staff Comment:***

***HRTPO staff appreciates the thorough review and thoughtful comments regarding the Hampton Roads Regional Transit Benchmarking Study. With regard to the comment about the relationship between transportation and public health – HRTPO staff will provide this comment for consideration by the public transit working group.***

# **HAMPTON ROADS REGIONAL TRANSIT BENCHMARKING STUDY**

## **Public response**

**Brenda Johnson**

**Newport News**

**multimodalmama@aol.com**

**January 18, 2017**

Hampton Roads connectivity plays a crucial role as agencies at the federal, state and local level focus on examining transit's role in a multimodal transportation system. Improving connectivity by improving service is the goal. But there are several challenges and figuring out how to quantify and evaluate transit service to help prioritize transit funding is chief among them.

Evaluating a transit system's ridership without considering access gives a very limited view of the transit system's service. It's like addressing the HRBT congestion problem by building the tube with bridges that don't quite reach either side and being alarmed at the abysmal use rate. Norfolk enjoys the best transit service provided in the area, but is not indicative of the service provided in Newport News. That's what comes of a regional transit system disproportionately dependent on parochial funding.

It is perhaps only fitting that public comment to this transit study concludes the week marking the anniversary of Dr. Martin Luther King, Jr.'s birth. Dr. King and transit access are enduring symbols of freedom. Sunday marked what would have been his 88<sup>th</sup> birthday. He would no doubt be remembering events more than 60 years ago that launched him as a champion of civil rights; events that revolve around transit.

## History

Many do not know the roots of the 13-month Montgomery Bus Boycott<sup>1</sup> actually began years before Rosa Parks' December 1955 arrest for refusing to give up her seat on the bus. The Women's Political Council (WPC), a group of black professionals founded in 1946, had already begun to address the Jim Crow practices on Montgomery's buses. Its president, Jo Ann Robinson, had suffered a humiliating experience in 1949 when she was ordered off the bus for sitting in the fifth row on a nearly empty bus. Finally in a 1954 meeting with Mayor Gayle, the group listed the changes they sought: no one standing over empty seats; a decree that black individuals not be made to pay at the front of the bus and enter from the rear; and a policy that would require buses to stop at every corner in black residential areas, as they did in white communities.

<sigh> What I wouldn't give for a transit system that stops in my residential *area*, much less every block. But I digress.

Their concerns were ignored. A year later 15-year-old Claudette Colvin was arrested for challenging segregation on a Montgomery bus. Seven months after that, 18-year-old Mary Louise Smith was arrested for failing to yield her seat to a white passenger. It took the arrest of Rosa Parks, one of the most esteemed members of the community, to spark action.

Robinson and the WPC responded by working with others to secure Parks' bail, calling for a bus boycott December 5, printing and distributing leaflets and contacting local leaders. One of them was Dr. King. Amazingly, 90% of Montgomery's black citizens stayed off the bus that day. That afternoon the Montgomery Improvement Association was formed, the boycott extended and Dr. King selected its

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<sup>1</sup> "Montgomery Bus Boycott (1955-1956)", Martin Luther King, Jr and the Global Freedom Struggle, [http://kingencyclopedia.stanford.edu/encyclopedia/enc\\_montgomery\\_bus\\_boycott\\_1955\\_1956/](http://kingencyclopedia.stanford.edu/encyclopedia/enc_montgomery_bus_boycott_1955_1956/)

leader. The Civil Rights Movement was born and the rest is history. All those years ago, the access to transit was a symbol of freedom. And for many like me, it remains so today.

### **It's About Access**

*"Transportation is about more than just moving people from point A to point B. It's also a system that can either limit or expand the opportunities available to people"* writes Gillian B. White in her *Atlantic* article "Stranded: How America's Failing Public Transportation Increases Inequality". *"To be certain, the aging and inadequate transportation infrastructure is an issue for Americans up and down the economic ladder. Throughout the country highways are crumbling, bridges are in need of repair, and railways remain inadequate. Improvement to public transportation—buses, trains, and safer routes for bicycles—is something that just about everyone who lives in a major metropolitan area has on their wish list. But there's a difference between preference and necessity..."*

There've been any number of studies on transit and poverty as Harvard professor Rosabeth Moss Kantor, author of Move: Putting America's Infrastructure Back in the Lead points out:

*"The cities identified by Raj Chetty, an economics professor at Harvard University, as having the highest chances for a person moving from the bottom fifth to the top fifth of income across generations are the cities ranked as having the best public transportation, as my research found..."*

*...Access is the ticket. People from neighborhoods that lack reliable transportation are stuck and can't find opportunity. For example, Chicago ranks sixth in public transit in general but 53d out of the 100 largest US metropolitan areas in labor market access, with only 22.8 percent of residents able to reach their jobs using public transit in 90 minutes or less, according to a Brookings Institution study, which accounts for especially high unemployment in underserved neighborhoods."*<sup>3</sup>

### **The Rider Classes**

When speaking of transit users, conventional transit wisdom divides them into two camps: "Choice" (higher income people with cars) vs "Captive" (lower-income people who must use transit because they don't own cars). I'm always uncomfortable with these classifications because I don't fit.

At the end of the day I just want fast, frequent, reliable service that takes me where I want to go. A new report<sup>4</sup> indicates I'm not alone; that's pretty much what everyone wants from transit. TransitCenter surveyed more than 3,000 transit riders across 17 regions — and conducted focus groups in three major

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<sup>2</sup> The Atlantic, May 16, 2015, <http://www.theatlantic.com/business/archive/2015/05/stranded-how-americas-failing-public-transportation-increases-inequality/393419/>

<sup>3</sup> "Public Transportation Can Be a Ride Out of Poverty", Opinion, Boston Globe, May 26, 2015  
<https://www.bostonglobe.com/opinion/2015/05/25/public-transportation-can-ride-out-poverty/KtzBMWFO1Xpsqks7NfbYXL/story.html>

<sup>4</sup> "Who's On Board: What today's Riders Teach Us About Transit That Works", [http://transitcenter.org/wp-content/uploads/2016/07/Whos-On-Board-2016-7\\_12\\_2016.pdf](http://transitcenter.org/wp-content/uploads/2016/07/Whos-On-Board-2016-7_12_2016.pdf)

cities — to get a better picture of why people take transit. The responses were combined with data from All Transit, a tool that assesses the quality of transit service in different locations, to inform the report’s conclusions.

StreetsBlog’s Angie Schmitt says: *“Far from being “captive,” transit riders without cars are in fact very sensitive to the quality of service. So-called “captive” riders have other choices available, like biking, taxis, and borrowing cars, and most do take advantage of them — almost two-thirds of car-free transit riders had done so in the last month.*

*A big problem with the “choice/captive” rider dichotomy, says lead report author Steven Higashide, is that it prompts planners to invest in “sexy” features aimed at luring “choice” riders out of cars — like Wi-Fi or comfortable seats.”*

They suggest a new way of looking at transit riders by the types of trips:

- “Occasional riders” only use transit for unusual trips.
- “Commuters” use it to travel to work but not for many other journeys.
- “All-purpose riders” take transit to work, to do errands, and for a variety of trips.

Want more all-purpose riders? There are three important factors the report says:

1. Walkability near transit
2. Frequent Service
3. On Board Travel Time

The report contains valuable data, tools and suggestions.

## **Conclusion**

Hampton Roads is comprised of medium to small cities and equally sized local governments. While this is probably one of the most historic areas in the nation, it is an area that has experienced most of its growth and development in the post automobile era. Hampton Roads neighborhoods reflect a suburban model as is true of much of the country. These factors are oft cited stumbling blocks in identifying strategies to bring us into a 21st century multi-modal transportation community. But there are communities, like ours, overcoming those barriers. We would do well to learn what they got right and avoid their pitfalls.

***HRTPO Staff Comment:***

***HRTPO Staff appreciates the valuable comments that you provided in regard to transit connectivity, funding, ridership, access, rider types, and history. HRTPO staff believes these would be excellent items for a follow up study on regional transit planning. Your comments will be provided for consideration by the public transit working group.***



## COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION  
HAMPTON ROADS DISTRICT  
1700 NORTH MAIN STREET  
SUFFOLK, VIRGINIA 23434

Charles A. Kilpatrick, P.E.  
Commissioner

January 18, 2017

Camelia Ravanbakht, Ph.D.  
Hampton Roads Transportation Planning Organization  
723 Woodlake Drive  
Chesapeake, Virginia 23320

Re: District Review of HRTPO Draft Transportation Studies -January 2017

- Hampton Roads Regional Transit Benchmarking Study (Draft)
- Moving the Economy-“How Well the Hampton Roads Transportation System...” (Draft)

Dear Dr. Ravanbakht,

The Hampton Roads District Transportation Planning Office has completed a formal review of the HRTPO's Transportation Studies *Hampton Roads Regional Transit Benchmarking Study* (Draft) and *Moving the Economy-How Well the Hampton Roads Transportation System Serves Three Key Economic Sectors* (Draft). The primary focus of this review is to ensure consistency with federal and state program requirements as identified in federal transportation code.

The *Hampton Roads Regional Transit Benchmarking Study* was developed by HRTPO staff in coordination with staff from Hampton Roads Transit (HRT), Williamsburg Area Transit Authority (WATA), and Suffolk Transit to show how the performance of the transit agencies in Hampton Roads compares to peer agencies nationwide and provides a baseline against which future performance could be measured. The *Moving the Economy-How Well the Hampton Roads Transportation System Serves Three Key Economic Sectors* is a study to inform the HRTPO Board how well the Transportation System of Hampton Roads serves three key economic sectors- port, military, and hospitality.

The Hampton Roads District has reviewed the documents and finds that it is consistent with state and federal MPO program requirements and will continue to coordinate and provide data with the HRTPO for subsequent updates. We do however have the following comments regarding the documents:

### Hampton Roads Regional Transit Benchmarking Study (Draft)

- Please note that there are 23 Park and Ride lots in the Hampton Roads District according to VDOT's Park & Ride Inventory. Twelve (12) lots are accessible by HRT, 4 by WATA (Surry Municipal Center, Jamestown Ferry, Jamestown Center and Lightfoot), and 2 by Suffolk Transit (Magnolia Lot, Route 58 lot). Please update the study accordingly (Page 35, 41, 47).
- Please re-evaluate Figure 24. Based on previous figures in the study, Hampton Roads Transit has one of the lowest operating expenses per rider and one of the highest fare box recovery ratios. Perhaps HRT should rank higher on the Peer Agency Rankings (Page 34).
- Please reconsider some of the peer agencies used for Suffolk Transit, many of these agencies have much higher ridership and received federal funding (which Suffolk currently does not).
- Recommend including a comparison of fares between the Hampton Roads Region and other peer agencies. It may also be helpful to compare the impact of peer agencies with dedicated funding sources versus the region's current funding sources.
- Recommend the future inclusion of light rail transit benchmark comparisons, since LRT is a meaningful portion of HRT network, as well as its peer agencies.

### Moving the Economy- "How Well the Hampton Roads Transportation System..." (Draft)

- Additional I-64 improvements west of Segment III have been recommended in VDOT's latest I-64 FEIS but are outside of the Hampton Roads District. Improvements along this portion of I-64 will need to be approved by the Richmond Regional TPO and adopted into their next constrained long range plan update. As mentioned in your report, VDOT Richmond District is moving ahead with improvements to I-64 in Henrico and a portion of New Kent (Page 14).
- Is there a more accurate way of measuring freight movements than "highway hours" which can change based on speed and distance (Page 6-11)?
- Active transportation along the inactive 12-mile Virginia Beach right-of-way was developed in collaboration with light rail, not as an alternative to it. Therefore it's not necessary to include the "failed referendum on light rail" to justify a new trail since these projects complemented each other (Page 46).

Camelia Ravanbakht, Ph.D.

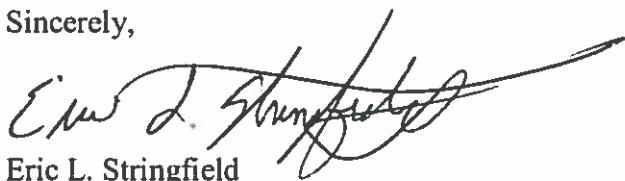
January 18, 2017

Page Two

- It may not be appropriate to advertise or promote private consultants in this study when referencing the Paths Connecting to the Virginia Capital Trail (Page 51).
- Not sure why public transit times to the Amtrak Station in Norfolk from Virginia Beach is so high. HRT has an express bus between the Virginia Beach Oceanfront and Downtown Norfolk. Amtrak also offers coach bus service between Virginia Beach and Newport News Amtrak stations (Page 72).

The comments identified are preliminary in nature and provided for your review or revision as deemed appropriate. Please notify Mr. Carl Jackson at 757-925-2596, should you have any questions.

Sincerely,



Eric L. Stringfield  
Hampton Roads Transportation Planning Director

ELS/cej

***HRTPO Staff Comments:***

***HRTPO Staff is in receipt of the VDOT Hampton Roads District Planning Office review of the draft Hampton Roads Regional Transit Benchmarking Study, as submitted in a letter dated January 18, 2017.***

- ***With regard to the first comment, which was related to Park and Ride lots – HRTPO staff asked each of the local transit providers how many Park and Ride lots were accessible by their bus service. HRT replied with 12, WATA replied with 0, and Suffolk Transit replied with 0. Given your comment, HRTPO staff followed up with each transit agency and received the amended figures of 4 Park and Ride lots for WATA and 2 for Suffolk Transit. HRTPO staff has updated that information in the study accordingly.***
- ***With regard to the second comment, which was related to the scoring of operating expenses per rider and fare box recovery ratio – HRTPO staff agrees with the comment and has corrected the scoring of peer agencies. The agency comparisons have been updated in the final report.***
- ***With regard to the third comment, which was related to the selection of peer agencies for Suffolk Transit – As stated on page 10 of the draft report, the following measures from the National Transit Database were used to determine comparable agencies for each Hampton Roads' transit agency:***
  - ***Service Area Population***
  - ***Vehicle Revenue Hours***
  - ***Vehicles Operated in Maximum Service***

***Agencies that fell within + or - 50% of the figure for a Hampton Roads transit provider for each of the above criteria were identified as peer agencies for that local agency. HRTPO staff coordinated with the local transit agencies on what measures they would use to identify peer agencies and it was agreed to use the three measures above. Since ridership and whether or not an agency received federal funding were not among the measures used to select peer agencies for HRT and WATA, it would not be consistent to use those measures to select peer agencies for Suffolk Transit.***

- ***With regard to the fourth comment, which was related to a comparison of fares between Hampton Roads transit agencies and its peer agencies, as well as the impact of dedicated funding sources – HRTPO staff believes these items are beyond the scope of the Benchmarking study, but would be excellent items for a follow up study on regional transit planning. This comment will be provided for consideration by the public transit working group.***
- ***With respect to the fifth comment, which was related to future inclusion of light rail transit benchmark comparisons – HRTPO staff will provide this comment for consideration by the public transit working group.***