HAMPTON ROADS REGIONAL TRANSIT BENCHMARKING
HAMPTON ROADS TRANSPORTATION PLANNING ORGANIZATION

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Alan P. Krasnoff
Ella P. Ward – Alternate

JAMES CITY COUNTY
Michael Hipple
Vacant - Alternate

SOUTHPHANTON COUNTY
Barry T. Porter
R. Randolph Cook - Alternate

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Barry Cheatham
Frank Rabil - Alternate

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Rudolph Jefferson - Alternate

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The Honorable Frank W. Wagner

MEMBERS OF THE VIRGINIA HOUSE OF DELEGATES
The Honorable Christopher P. Stolle
The Honorable David Yancey

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James Utterback, Hampton Roads District Administrator
Eric Stringfield – Alternate

VA DEPARTMENT OF RAIL AND PUBLIC TRANSPORTATION
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Jennifer DeBruhl – Alternate

VIRGINIA PORT AUTHORITY
John Reinhart, CEO/Executive Director
Cathie Vick – Alternate

WILLIAMSBURG AREA TRANSIT AUTHORITY
William Porter, Interim Executive Director
Vacant – Alternate
## HAMPTON ROADS TRANSPORTATION PLANNING ORGANIZATION

### NON-VOTING MEMBERS:

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<td>James E. Baker</td>
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<td>Bryan J. Hill</td>
<td>SOUTHAMPTON COUNTY</td>
<td>Michael W. Johnson</td>
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<td>R. Randy Martin</td>
<td>NEWPORT NEWS</td>
<td>James M. Bourey</td>
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<td>Douglas L. Smith</td>
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<td>HAMPTON</td>
<td>Mary Bunting</td>
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<td>W. Randall Wheeler</td>
<td>WILLIAMSBURG</td>
<td>Marvin Collins</td>
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<td>ISLE OF WIGHT COUNTY</td>
<td>Randy Keaton</td>
<td>PORTSMOUTH</td>
<td>Linda Pettis Patton</td>
<td>YORK COUNTY</td>
<td>Neil A. Morgan</td>
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### FEDERAL HIGHWAY ADMINISTRATION

Jessie Yung, Acting Division Administrator – Virginia Division

### FEDERAL TRANSIT ADMINISTRATION

Terry Garcia Crews, Region 3 Administrator

### FEDERAL AVIATION ADMINISTRATION

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Randall P. Burdette, Director

### PENINSULA AIRPORT COMMISSION

Ken Spirito, Executive Director

### NORFOLK AIRPORT AUTHORITY

Robert S. Bowen, Executive Director

### CITIZEN TRANSPORTATION ADVISORY COMMITTEE

Gregory Edwards, Chair

### FREIGHT TRANSPORTATION ADVISORY COMMITTEE

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Delegate Christopher P. Stolle, Co-Chair (Voting Board Member)

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Dean Vanderley, Captain, U.S. Navy - Alternate
Rick Wester, Captain, U.S. Coast Guard
William S. Galbraith, Colonel, Langley-Eustis

### INVITED PARTICIPANT

John Malbon, CTB

### HRTPO PROJECT STAFF

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>Camelia Ravanbakht, Ph.D.</td>
<td>Deputy Executive Director</td>
</tr>
<tr>
<td>Michael Kimbrel</td>
<td>Principal Transportation Engineer</td>
</tr>
<tr>
<td>John Mihaly</td>
<td>Transportation Analyst II</td>
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<tr>
<td>Kathlene Grauberger</td>
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</tr>
<tr>
<td>Kendall L. Miller</td>
<td>Public Involvement and Title VI Administrator</td>
</tr>
<tr>
<td>Michael Long</td>
<td>General Services Manager</td>
</tr>
<tr>
<td>Christopher Vaigneur</td>
<td>Assistant General Services Manager</td>
</tr>
</tbody>
</table>
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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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.”¹ 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

---

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.”

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.”

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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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.

![Figure 1: HRTP0 Transit Benchmarking Study](image-url)

*Measures Categories chosen for HRTP0 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.

<table>
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<th>HRT</th>
<th>WATA</th>
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<td>Annual Vehicle Revenue Hours</td>
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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.
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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.

![Service Area Populations of Transit Agencies in Hampton Roads, 2014](image)

*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.

![Gas Prices Versus Bus Ridership: HRT & Peer Agencies](image-url)
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 & Peer Agencies**

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).
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.
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.
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.
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.
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](image-url)
WATA and its Peer Agency Comparisons

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

![2005-2014 Average Annual Bus Ridership: WATA & Peer Agencies](image)

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.
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.
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.
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.

Source: HRTPA Staff Analysis of NTD Data
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.
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 (MITS) in Muncie, IN had the lowest amount at 4%.

Source: HRTPO Staff Analysis of NTD Data
**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.
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.
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.
Figure 20 - Average Bus Riders per Revenue Mile: Suffolk Transit & 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.

Source: HRTPO Staff Analysis of NTD Data
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.

Source: HRTPO Staff Analysis of NTD Data
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.

Source: HRTPO Staff Analysis of NTD Data
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%.
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:

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*Rankings are calculated by the lowest composite score = top ranking. Top ranked and local agencies selected for case studies are highlighted in purple.
### HRT Case Studies—Top Ranked Peer Agencies: Potential Contributing Factors

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<tr>
<th>Agency</th>
<th>Zero Car HH %</th>
<th>Park-N-Ride Facilities</th>
<th>Poverty Rate %</th>
<th>Transit Mode to Work %</th>
<th>Local Funding Source %</th>
<th>State/Federal Funding %</th>
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Sources: U.S. Census Bureau – American Community Survey 2014
Agency staff phone interviews
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.
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.
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*Rankings are calculated by the lowest composite score = top ranking. Top ranked and local agencies selected for case studies are highlighted in purple.*
## WATA Case Studies – Top Ranked Agencies: Potential Contributing Factors

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<tr>
<th>Source</th>
<th>Zero Car HH %</th>
<th>Park-N-Ride Facilities</th>
<th>Poverty Rate % (families)</th>
<th>Transit Mode to Work %</th>
<th>Local Funding Source %</th>
<th>State/Federal Funding %</th>
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Sources:  
U.S. Census Bureau – American Community Survey 2014  
https://www.harrisonburgva.gov/bus-service;  
www.gowata.org; Agency staff phone interviews.
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.
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.
• 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:
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<th></th>
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<td>Total Bus Ridership</td>
<td>Bus Riders per Revenue Hour</td>
<td>Bus Riders per Revenue Mile</td>
<td>Bus Operating Expenses per Rider</td>
<td>Bus Fare Revenue per Rider</td>
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*Suffolk Transit Peer Agency Rankings*  
*Rankings are calculated by the lowest composite score = top ranking. Top ranked and local agencies selected for case studies are highlighted in purple.*
Suffolk Transit Case Studies - Top Ranked Agencies: Potential Contributing Factors

<table>
<thead>
<tr>
<th></th>
<th>Zero Car HH %</th>
<th>Park-N-Ride Facilities</th>
<th>Poverty Rate %</th>
<th>Transit Mode to Work %</th>
<th>Local Funding Source %</th>
<th>State/Federal Funding %</th>
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<tr>
<td>GGFT, Greater Glens Falls Transit, NY</td>
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Sources: U.S. Census Bureau – American Community Survey 2014
https://www.sgcity.org/transportationandengineering/suntran;
www.suffolktransit.org; Agency staff phone interviews.
The Greater Glens Falls Transit agency (GGTF) 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.
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.
The **City of St. George Transit 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

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.
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.
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.
Appendix A: 2014 Profiles for Hampton Roads and Top-Ranked Peer Agencies
Transportation District Commission of Hampton Roads (HRT)
2014 Annual Agency Profile
Chief Executive Officer: Mr. William Harrell
757-222-0003

Appendix A-1

Urbanized Area Statistics - 2010 Census
Virginia Beach, VA 90,047,270
Population: 1,439,666

Service Area Statistics
421 Square Miles
1,134,343 Population
35 Vehicles Operated in Maximum Service (VOMS)
435 Vehicles Available for Maximum Service (VAMS)

Modal Characteristics
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<th>Mode</th>
<th>Vehicles Operated in Maximum Service</th>
<th>Uses of Capital Funds</th>
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<td>Ferryboat</td>
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Performance Measures
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Notes:
1. Demand Response - Taxi (DT) and non-dedicated fleets do not report fleet age data.

Service Effectiveness
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<td>Total</td>
<td>$1.04</td>
<td>$0.3</td>
</tr>
</tbody>
</table>

Summary of Operating Expenses (OE)
Salary, Wages, Benefits: $62,575,659
Materials and Supplies: $14,636,133
Purchased Transportation: $9,336,124
Other Operating Expenses: $7,205,319
Reconciling OE Cash Expenditures: $3,054

Appendix A-1
### General Information

<table>
<thead>
<tr>
<th>Urbanized Area Statistics - 2010 Census</th>
<th>Service Consumption</th>
<th>Database Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rochester, NY</td>
<td>48,621,681 Annual Passenger Miles (PMT)</td>
<td>NTDID: 20113</td>
</tr>
<tr>
<td>1372 East Main Street</td>
<td>17,373,842 Annual Vehicle Revenue Miles (VRM)</td>
<td>Reporter Type: Full Reporter</td>
</tr>
<tr>
<td>2014 Annual Agency Profile</td>
<td>694,913 Annual Vehicle Revenue Hours (VRH)</td>
<td></td>
</tr>
<tr>
<td>Rochester, NY 14609 585-654-0230</td>
<td>261 Vehicles Operated in Maximum Service (VOMS)</td>
<td></td>
</tr>
<tr>
<td>324 Square Miles</td>
<td>72,572 Population</td>
<td></td>
</tr>
<tr>
<td>694,913 Population</td>
<td>59,049 Average Weekday Unlinked Trips</td>
<td></td>
</tr>
<tr>
<td>0 New York Non-UZA</td>
<td>23,252 Average Saturday Unlinked Trips</td>
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</tr>
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<td>19,047 Average Sunday Unlinked Trips</td>
<td>Other UZAs Served</td>
<td></td>
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</table>

### Financial Information

<table>
<thead>
<tr>
<th>Sources of Operating Funds Expended</th>
<th>Operating Funding Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fare Revenues</td>
<td>$27,319,926</td>
</tr>
<tr>
<td>Local Funds</td>
<td>$3,524,051</td>
</tr>
<tr>
<td>State Funds</td>
<td>$33,203,314</td>
</tr>
<tr>
<td>Federal Assistance</td>
<td>$6,327,257</td>
</tr>
<tr>
<td>Other Funds</td>
<td>$762,489</td>
</tr>
<tr>
<td><strong>Total Operating Funds Expended</strong></td>
<td><strong>$71,137,037</strong></td>
</tr>
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</table>

### Service Area Statistics

<table>
<thead>
<tr>
<th>Service Supplied</th>
<th>Financial Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urbanized Area Statistics - 2010 Census</td>
<td>Sources of Capital Funds Expended</td>
</tr>
<tr>
<td>Rochester, NY</td>
<td>Fare Revenues</td>
</tr>
<tr>
<td>72,572 Population</td>
<td>Local Funds</td>
</tr>
<tr>
<td>324 Square Miles</td>
<td>State Funds</td>
</tr>
<tr>
<td>2014 Annual Agency Profile</td>
<td>Federal Assistance</td>
</tr>
<tr>
<td>Rochester, NY 14609 585-654-0230</td>
<td>Other Funds</td>
</tr>
<tr>
<td>324 Square Miles</td>
<td><strong>Total Capital Funds Expended</strong></td>
</tr>
<tr>
<td>694,913 Population</td>
<td><strong>$55,237,763</strong></td>
</tr>
</tbody>
</table>

### Modal Characteristics

<table>
<thead>
<tr>
<th>Modal Overview</th>
<th>Vehicles Operated in Maximum Service</th>
<th>Uses of Capital Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode</td>
<td>Directly Operated</td>
<td>Purchased Transportation</td>
</tr>
<tr>
<td>Demand Response</td>
<td>40</td>
<td>-</td>
</tr>
<tr>
<td>Bus</td>
<td>221</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>261</td>
<td>-</td>
</tr>
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</table>

### Operation Characteristics

<table>
<thead>
<tr>
<th>Operating Expenses</th>
<th>Fare Revenues</th>
<th>Uses of Capital Funds</th>
<th>Annual Passenger Miles</th>
<th>Annual Unlinked Trips</th>
<th>Annual Vehicle Revenue Miles</th>
<th>Annual Vehicle Revenue Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode</td>
<td>Demand Response</td>
<td>$7,214,405</td>
<td>$3,343,571</td>
<td>$95,253,681</td>
<td>47,066,149</td>
<td>17,194,927</td>
</tr>
<tr>
<td>Bus</td>
<td>$63,701,364</td>
<td>$24,224,560</td>
<td>$53,253,681</td>
<td>47,066,149</td>
<td>17,194,927</td>
<td>5,118,768</td>
</tr>
<tr>
<td>Total</td>
<td>$70,915,769</td>
<td>$24,568,131</td>
<td>$55,237,763</td>
<td>48,621,681</td>
<td>17,373,842</td>
<td>6,536,831</td>
</tr>
</tbody>
</table>

### Performance Measures

<table>
<thead>
<tr>
<th>Performance Measures</th>
<th>Service Efficiency</th>
<th>Service Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode</td>
<td>Operating Expenses per Vehicle Revenue Mile</td>
<td>Operating Expenses per Passenger Mile</td>
</tr>
<tr>
<td>Demand Response</td>
<td>$5.09</td>
<td>$4.69</td>
</tr>
<tr>
<td>Bus</td>
<td>$12.44</td>
<td>$1.35</td>
</tr>
<tr>
<td>Total</td>
<td>$10.85</td>
<td>$1.46</td>
</tr>
</tbody>
</table>

### Notes:

- Demand Response - Taxi (DT) and non-dedicated fleets do not report fleetage data.
The Greater Cleveland Regional Transit Authority (GCRTA)

2014 Annual Agency Profile

CEO/General Manager: Mr. Joseph Calabrese
216-686-5218

General Information

Urbanized Area Statistics - 2010 Census
Cleveland, OH 223,146,222
1,780,673 Population
1,412,140 Square Miles
25. Pop. Rank out of 498 UZAs
782,927 Average Saturday Unlinked Trips
157,573 Average Weekday Unlinked Trips
49,245,884 Annual Vehicle Revenue Miles (VRM)

Service Area Statistics
458 Square Miles
1,142,140 Population
1,772,833 Square Miles
223,146,222 Annual Passenger Miles (PMT)

Service Consumption
- Annual Passenger Miles (PMT) NTDID: Cleveland, OH 223,146,222
- Annual Unlinked Trips (UPT) NTDID: Full Reporter

Database Information
- NTID: 50015
- Reporter Type: Full Reporter

Operating Funding Sources
- Fare Revenues $50,610,561 19.7%
- Local Funds $166,304,904 72.6%
- State Funds $160,000 0.1%
- Federal Assistance $17,902,253 7.0%
- Other Funds $1,652,603 0.6%
Total Operating Funds Expended $256,630,381 100.0%

Operating Funding Sources
- Sources of Capital Funds Expended
  - Fare Revenues $0 0.0%
  - Local Funds $16,465,115 26.9%
  - State Funds $90,171,920 1.6%
  - Federal Assistance $43,676,487 71.4%
  - Other Funds $0 0.0%
Total Capital Funds Expended $80,133,321 100.0%

Financial Information

Fare Revenues $50,610,561 19.7%
Local Funds $166,304,904 72.6%
State Funds $160,000 0.1%
Federal Assistance $17,902,253 7.0%
Other Funds $1,652,603 0.6%
Total Operating Funds Expended $256,630,381 100.0%

Modal Characteristics

<table>
<thead>
<tr>
<th>Mode</th>
<th>Vehicles Operated in Maximum Service</th>
<th>Uses of Capital Funds</th>
<th>Revenue Mile: Bus</th>
<th>Revenue Mile: Heavy Rail</th>
<th>Revenue Mile: Light Rail</th>
<th>Revenue Mile: Bus Rapid Transit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directly Operated</td>
<td>70</td>
<td>$300,233</td>
<td>$15,136,354</td>
<td>$21,727,340</td>
<td>$24,052,628</td>
<td>$10,125,990</td>
</tr>
<tr>
<td>Purchased Transportation</td>
<td>67</td>
<td>$300,233</td>
<td>$21,727,340</td>
<td>$24,052,628</td>
<td>$10,125,990</td>
<td>$15,136,354</td>
</tr>
<tr>
<td>Total</td>
<td>137</td>
<td>$300,233</td>
<td>$21,727,340</td>
<td>$24,052,628</td>
<td>$10,125,990</td>
<td>$30,262,344</td>
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Performance Measures

<table>
<thead>
<tr>
<th>Mode</th>
<th>Operating Expenses per Passenger Revenue Hour</th>
<th>Operating Expenses per Revenue Mile ($)</th>
<th>Operating Expenses per Vehicle Revenue Mile ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand Response</td>
<td>$8.24</td>
<td>$30.26</td>
<td>$30.26</td>
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<tr>
<td>Heavy Rail</td>
<td>$18.91</td>
<td>$73.42</td>
<td>$73.42</td>
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<tr>
<td>Light Rail</td>
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<td>$52.41</td>
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<tr>
<td>Bus</td>
<td>$15.78</td>
<td>$63.96</td>
<td>$63.96</td>
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<tr>
<td>Bus Rapid Transit</td>
<td>$11.07</td>
<td>$44.28</td>
<td>$44.28</td>
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<tr>
<td>Total</td>
<td>$11.21</td>
<td>$45.09</td>
<td>$45.09</td>
</tr>
</tbody>
</table>

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

Appendix A-3
### General Information

**Urbanized Area Statistics - 2010 Census**

- Charlotte, NC-SC: 157,681,624 Annual Passenger Miles (PMT)
- Average Weekday Unlinked Trips (UPT)
- Average Saturday Unlinked Trips
- Population: 96,698

**Service Area Statistics**

- 488 Square Miles
- 688,744 Population
- 1,022,595 Annual Unlinked Trips
- 1,098,944 Annual Vehicle Revenue Hours (VRH)
- 1,200,000 Annual Vehicle Revenue Miles (VRM)

### Financial Information

**Sources of Operating Funds Expended**

- Fare Revenues
- Local Funds
- State Funds
- Federal Assistance
- Other Funds
- Total Operating Funds Expended: $126,654,146

### Summary of Operating Expenses (OE)

- Salary, Wages, Benefits: $84,426,111
- Materials and Supplies: $14,871,391
- Purchased Transportation: $2,183,380
- Total Operating Expenses: $106,525,412

### Modal Characteristics

**Modal Overview**

- Vehicles Operated in Maximum Service
- Uses of Capital Funds

<table>
<thead>
<tr>
<th>Mode</th>
<th>Directly Operated</th>
<th>Purchased Transportation</th>
<th>Revenue Vehicles</th>
<th>Systems and Guideways</th>
<th>Facilities and Stations</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commuter Bus</td>
<td>95</td>
<td>-</td>
<td>$1,531,043</td>
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<td>$198,224</td>
<td>$401,340</td>
<td>$2,174,841</td>
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<tr>
<td>Demand Response</td>
<td>70</td>
<td>-</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Light Rail</td>
<td>14</td>
<td>-</td>
<td>$6,520,411</td>
<td>$97,249,396</td>
<td>$1,192,673</td>
<td>$2,791,871</td>
<td>$109,754,351</td>
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<tr>
<td>Bus</td>
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<td>$256,951</td>
<td>$1,160,408</td>
<td>$2,349,444</td>
<td>$12,731,543</td>
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<tr>
<td>Vanpool</td>
<td>79</td>
<td>-</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Total</td>
<td>431</td>
<td>-</td>
<td>$19,014,194</td>
<td>$97,552,581</td>
<td>$2,551,305</td>
<td>$5,542,655</td>
<td>$124,660,735</td>
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</table>

### Performance Measures

**Service Efficiency**

- Operating Expenses per Vehicle Revenue Mile (VRM)
- Unlinked Passenger Trip per Vehicle Revenue Mile (VRM)

<table>
<thead>
<tr>
<th>Mode</th>
<th>Operating Expenses per VRM</th>
<th>Unlinked Passenger Trip per VRM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commuter Bus</td>
<td>$0.02</td>
<td>$233.17</td>
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<tr>
<td>Demand Response</td>
<td>$3.65</td>
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</tr>
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<td>Light Rail</td>
<td>$14.56</td>
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<tr>
<td>Bus</td>
<td>$7.29</td>
<td>$95.58</td>
</tr>
<tr>
<td>Vanpool</td>
<td>$0.61</td>
<td>$30.91</td>
</tr>
<tr>
<td>Total</td>
<td>$6.58</td>
<td>$104.17</td>
</tr>
</tbody>
</table>

### Notes:

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

---
null
### General Information

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

#### Service Consumption
- Annual Passenger Miles (PMT): 30,911,671
- Annual Vehicle Revenue Miles (VRM): 28,087,549
- VMT: 43,863,638

#### Service Area Statistics
- 28 Square Miles
- 63,661 Population
- 902,879 Square Miles

### Financial Information

#### Sources of Operating Funds Expended
- Fare Revenues: $2,602,586
- Local Funds: $221,297
- State Funds: $1,569,164
- Federal Assistance: $1,699,138
- Other Funds: $172,457

#### Total Operating Funds Expended
- $6,264,642

#### Sources of Capital Funds Expended
- Fare Revenues: $159,634
- Local Funds: $5,300
- State Funds: $802,087
- Federal Assistance: $5,014,562
- Other Funds: $70,672

### Service Effectiveness

#### Unlinked Trips per Vehicle Revenue Mile
- Demand Response: 0.0
- Bus: 0.0
- Total: 0.0

#### Unlinked Trips per Vehicle Revenue Hour
- Demand Response: 0.0
- Bus: 0.0
- Total: 0.0

### Performance Measures

#### Service Efficiency

<table>
<thead>
<tr>
<th>Mode</th>
<th>Operating Expenses per Vehicle Revenue Mile</th>
<th>Operating Expenses per Vehicle Revenue Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand Response</td>
<td>$6.24</td>
<td>$59.30</td>
</tr>
<tr>
<td>Bus</td>
<td>$7.07</td>
<td>$66.51</td>
</tr>
<tr>
<td>Total</td>
<td>$6.94</td>
<td>$65.19</td>
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</table>

### Notes:
- Demand Response - Taxi (DT) and non-dedicated fleets do not report fleet age data.
- Capital Funding Sources:
  - Federal Assistance: 82.9%
  - State Funds: 13.3%
  - Local Funds: 0.1%
  - Other Funds: 1.2%

---

**Appendix A-6**

Blacksburg Transit
2014 Annual Agency Profile
Deputy Town Manager: Mr. Steve Ross
540-961-1130

http://www.btransit.org/
Appendix A-7

City of Harrisonburg Department of Public Transportation (Harrisonburg Transit)
2014 Annual Agency Profile

Director of Public Transportation: Mr. Reggie Smith
540-432-0496

Urbanized Area Statistics - 2010 Census
Harrisonburg, VA
Square Miles: 33
Population: 66,754
Pop. Rank out of 498 UZAs: 413

Service Area Statistics
17 Square Miles
66,494 Annual Vehicle Revenue Hours (VRH)
39 Vehicles Operated in Maximum Service (VOMS)
44 Vehicles Available for Maximum Service (VAMS)

Modal Characteristics

<table>
<thead>
<tr>
<th>Mode</th>
<th>Vehicles Operated in Maximum Service</th>
<th>Uses of Capital Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Directly Operated</td>
<td>Purchased Transportation</td>
</tr>
<tr>
<td>Demand Response</td>
<td>8</td>
<td>-</td>
</tr>
<tr>
<td>Bus</td>
<td>31</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>-</td>
</tr>
</tbody>
</table>

Performance Measures

<table>
<thead>
<tr>
<th>Mode</th>
<th>Operating Expenses per Vehicle Revenue Mile: Bus</th>
<th>Operating Expenses per Passenger Mile: Bus</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$5.53</td>
<td>$5.55</td>
</tr>
</tbody>
</table>

Notes:
¹Demand Response - Taxi (DT) and non-dedicated fleets do not report fleetage data.
**General Information**

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

**Service Area Statistics**
- 15 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**
- NTDID: 60062
- Reporter Type: Small Systems Reporter

---

**Financial Information**

**Sources of Operating Funds Expended**
- **Fare Revenues**: $1,353,828 (49.4%)
- **Local Funds**: $80,148 (2.9%)
- **State Funds**: $0 (0.0%)
- **Federal Assistance**: $804,104 (29.3%)
- **Other Funds**: $502,979 (18.3%)
- **Total Operating Funds Expended**: $2,741,059 (100.0%)

**Sources of Capital Funds Expended**
- **Fare Revenues**: $0 (0.0%)
- **Local Funds**: $24,199 (100.0%)
- **State Funds**: $0 (0.0%)
- **Federal Assistance**: $0 (0.0%)
- **Other Funds**: $0 (0.0%)
- **Total Capital Funds Expended**: $24,199 (100.0%)

**Operating Funding Sources**
- **Fare Revenues**: 49.4%
- **Local Funds**: 2.9%
- **State Funds**: 0.0%
- **Federal Assistance**: 29.3%
- **Other Funds**: 18.3%
- **Total**: 100.0%

**Capital Funding Sources**
- **Local Funds**: 100.0%

---

**Modal Characteristics**

**Mode**
- **Demand Response**: 4 Directly Operated, 18 Purchased Transportation
- **Bus**: 22 Directly Operated

**Uses of Capital Funds**
- **Annual Unlinked Trips**: 24,199
- **Annual Vehicle Revenue Miles**: 460,215

**Performance Measures**

**Service Efficiency**
- **Operating Expenses per Vehicle Revenue Mile**: Bus: $465,980, Demand Response: $455,860
- **Operating Expenses per Vehicle Revenue Hour**: Bus: $2,275,079, Demand Response: $2,275,079

**Service Effectiveness**
- **Operating Expenses per Unlinked Passenger Trip**: Bus: $1.16, Demand Response: $465,980
- **Unlinked Trips per Vehicle Revenue Mile**: Bus: 44,712, Demand Response: 1,969,318

---

**Notes:**
- Demand Response - Taxi (DT) and non-dedicated fleets do not report fleet age data.
Greater Glens Falls Transit System (GGFT)  
2014 Annual Agency Profile  
Transportation Director: Mr. Scott Sopczyk  
518-792-1085

General Information

Urbanized Area (UZA) Statistics - 2010 Census
Glens Falls, NY
- 42 Square Miles
- 65,443 Population
- 419 Pop. Rank out of 408 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
NTDID: 20120
Reporter Type: Small Systems Reporter

Financial Information

Sources of Operating Funds Expended
- Fare Revenues $287,649 18.3%
- Local Funds $90,000 5.7%
- State Funds $543,859 34.6%
- Federal Assistance $623,950 39.7%
- Other Funds $27,884 1.8%
- Total Operating Funds Expended $1,573,342 100.0%

Sources of Capital Funds Expended
- Fare Revenues $0 0.0%
- Local Funds $31,054 8.7%
- State Funds $95,540 26.8%
- Federal Assistance $230,175 64.5%
- Other Funds $0 0.0%
- Total Capital Funds Expended $356,769 100.0%

Operating Funding Sources
- Urbanized Area (UZA) Statistics - 2010 Census
- Service Area Statistics
- Service Consumption
- Service Supplied
- Database Information
- General Information

Capital Funding Sources
- Mode: Demand Response
- Mode: Bus

Notes:
¹Demand Response - Taxi (DT) and non-dedicated fleets do not report fleet age data.
Allegany County Transit (ACT)
2014 Annual Agency Profile
Acting Transit Chief: Mr. Roy Cool
301-722-6360

General Information
Urbanized Area (UZA) Statistics - 2010 Census
Cumberland, MD-WV-PA
33 Square Miles
51,899 Population
484 Pop. Rank out of 488 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)

Sources of Operating Funds Expended
- Fare Revenues: $293,394 (15.8%)
- Local Funds: $322,192 (17.3%)
- State Funds: $382,290 (20.6%)
- Federal Assistance: $859,899 (46.3%)
- Other Funds: $600 (0.0%)
Total Operating Funds Expended: $1,858,375 (100.0%)

Operating Funding Sources
- Federal Assistance: 46.3%
- Other Funds: 0.0%
- Urbanized Area (UZA) Statistics - 2010 Census
- Other UZAs Served
Urbanized Area (UZA): Cumberland, MD-WV-PA
Square Miles: 33
Population: 51,899
Fare Revenues: $293,394 (15.8%)
Local Funds: $322,192 (17.3%)
State Funds: $382,290 (20.6%)
Federal Assistance: $859,899 (46.3%)
Total Operating Funds Expended: $1,858,375 (100.0%)

Operating Expense per Vehicle Revenue Mile:
- Bus: $6.13
- Demand Response: $5.11

Unlinked Passenger Trips per Vehicle Revenue Mile:
- Bus: 1.50
- Demand Response: 0.20

Notes:
¹Demand 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 408 UZAs

### 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

- **NTDID:** 80026
- **Reporter Type:** Small Systems Reporter

## 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%)

### Total Operating Funds Expended

- **$1,255,256 (100.0%)**

### 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%)

### Total Capital Funds Expended

- **$519,212 (100.0%)**

## Modal Characteristics

### Operation Characteristics

- **Vehicles Operated at Maximum Service**

<table>
<thead>
<tr>
<th>Mode</th>
<th>Directly Operated</th>
<th>Purchased Transportation</th>
<th>Operating Expenses</th>
<th>Fare Revenues</th>
<th>Uses of Capital Funds</th>
<th>Annual Unlinked Trips</th>
<th>Annual Vehicle Revenue Miles</th>
<th>Annual Vehicle Revenue Hours</th>
<th>Average Fleet Age in Years¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand Response</td>
<td>4</td>
<td></td>
<td>$208,128</td>
<td>$144,338</td>
<td>$393,093</td>
<td>454,452</td>
<td>252,152</td>
<td>18,493</td>
<td>5.0</td>
</tr>
<tr>
<td>Bus</td>
<td>5</td>
<td></td>
<td>$1,255,256</td>
<td>$519,212</td>
<td>464,600</td>
<td>308,726</td>
<td>25,085</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td></td>
<td>$1,255,256</td>
<td>$519,212</td>
<td>464,600</td>
<td>308,726</td>
<td>25,085</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Performance Measures

- **Service Efficiency**
- **Operating Expenses per Vehicle Revenue Mile:** $4.00
- **Operating Expenses per Vehicle Revenue Hour:** $34.30

- **Service Effectiveness**
- **Operating Expenses per Unlinked Passenger Trip:** $22.28
- **Unlinked Trips per Vehicle Revenue Hour:** $2.26

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Notes:

¹Demand Response - Taxi (DT) and non-dedicated fleets do not report fleet age data.
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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:

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

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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4 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
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.
HRTPO Public Comment

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
multimodal mama@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 88th 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 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.

<signed> 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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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.”

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 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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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.
HRTP Staff Comment:

HRTP Staff appreciates the valuable comments that you provided in regard to transit connectivity, funding, ridership, access, rider types, and history. HRTP 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.
January 18, 2017

Camelia Ravanbakhht, 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. Ravanbakhht,

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).
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
HRPO Staff Comments:

HRPO 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 – HRPO 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, HRPO 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. HRPO 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 – HRPO 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. HRPO 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 – HRPO 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 – HRPO staff will provide this comment for consideration by the public transit working group.