

2015 Report Year



# NTD

National Transit Database



## National Transit Summary and Trends: Appendix

Office of Budget and  
Policy October 2016



Federal Transit Administration  
U.S. Department of Transportation

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## Transit in the United States

### Total Federal Assistance Applied to Transit and Unlinked Passenger Trips

The Federal Transit Administration (FTA) uses federal funds to offset operating, capital, and planning costs for agencies. Since 2006, ridership has increased 10.5 percent, while federal assistance for transit has increased 23.0 percent (2015 constant dollars).

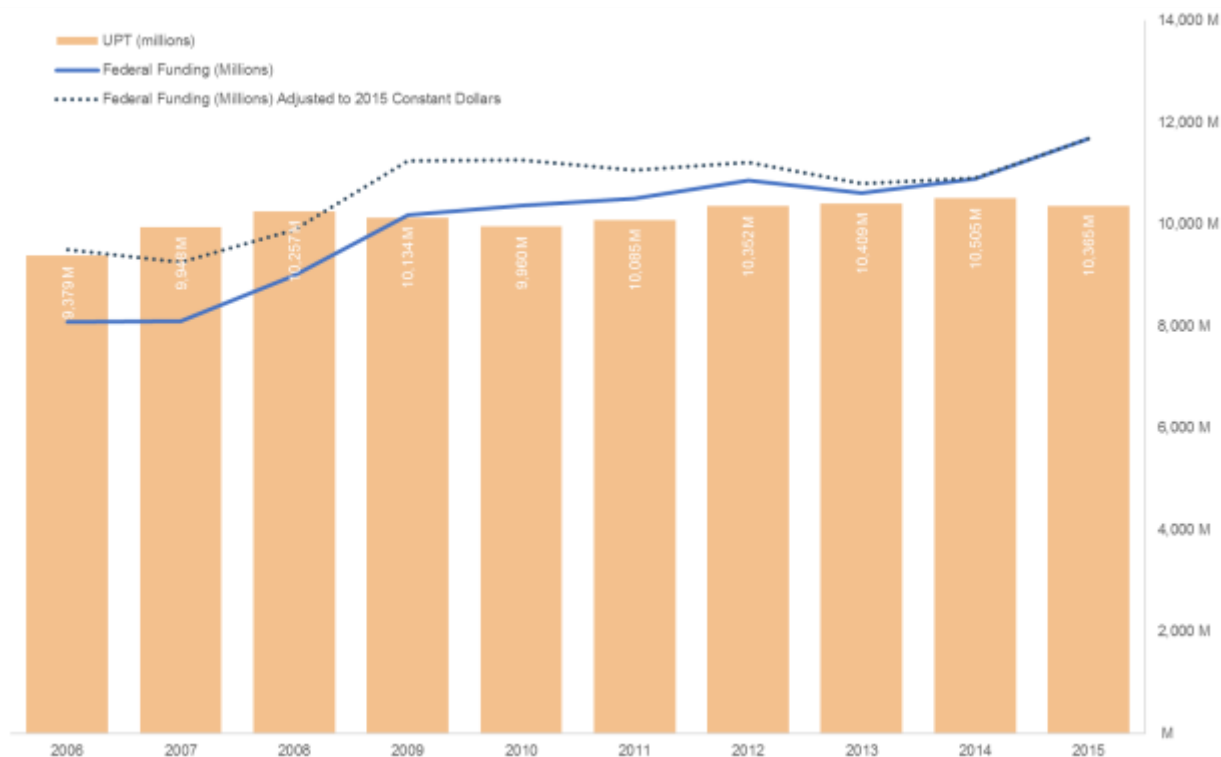


Exhibit A1 – Unlinked Passenger Trips and Funds Applied to Transit (2006-2015)

### Number of Transit Agencies

Transit agencies that receive or benefit from FTA Urbanized Area Formula Program are required to report financial data and non-financial operating statistics to the National Transit Database (NTD) program. In order to receive funding from FTA, transit agencies must report to the NTD and follow NTD requirements. FTA uses NTD data to apportion funding to transit agencies in the United States. Transit agencies not receiving FTA funds are encouraged to submit data to the NTD on a voluntary basis to help create a clearer picture of the public transit system throughout the United States.

The NTD separates urban and rural recipients and beneficiaries into two reporting groups: urban reporters and rural reporters. In 2015, 866 urban transit agencies, 54 states, 1,278 sub-recipients and 132 tribes reported data to the NTD program.

## Reduced Reporters

Prior to 2011, agencies operating less than ten revenue vehicles were granted a waiver from reporting financial and service data. Agencies receiving this waiver, called the 9 or Fewer Vehicles Waiver, were still required to report basic information about their agency,

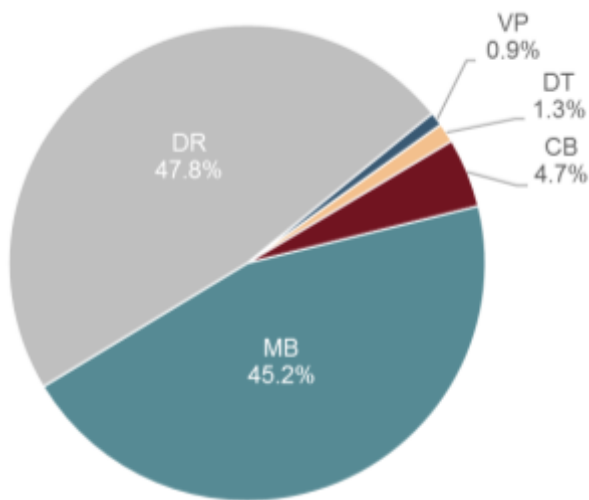


Exhibit A2 – 2015 Reduced Reporter Modes

including the number of vehicles operated in maximum service (VOMS) for each mode of service they offered. In 2011, the 9 or Fewer Vehicles Waiver was eliminated and replaced by the Small Systems Waiver (SSW). This policy required all agencies receiving FTA Urbanized Area Formula Program funding to report financial and service data. Agencies operating 30 or fewer VOMS and no fixed guideway or high intensity busway can report a condensed version of the full NTD report with only basic financial and service data. In 2014, Small Systems Waivers were renamed Reduced Reporters.

The data in Exhibit A2 shows transit modes operated by active agencies that received Reduced Reporting Waivers in 2015.

## Relative Impact on Data by UZA Size Group

The US Census defines urbanized areas as geographic areas with a population of 50,000 or more. According to the 2010 US Census, there are 498 urbanized areas. For National Transit Database purposes, the NTST groups urbanized areas into three size categories:

- **Large urbanized areas:** population of more than 1 million (42 urbanized areas, 291 agencies, or 34.7 percent of all agencies reporting).
- **Medium urbanized areas:** population of more than 200,000 but less than 1 million (241 urbanized areas and agencies, or 28.7 percent of all agencies reporting).



- **Small urbanized areas:** population of less than 200,000 but more than 50,000 (319 urbanized areas, 306 agencies, or 36.6 percent of all agencies reporting).

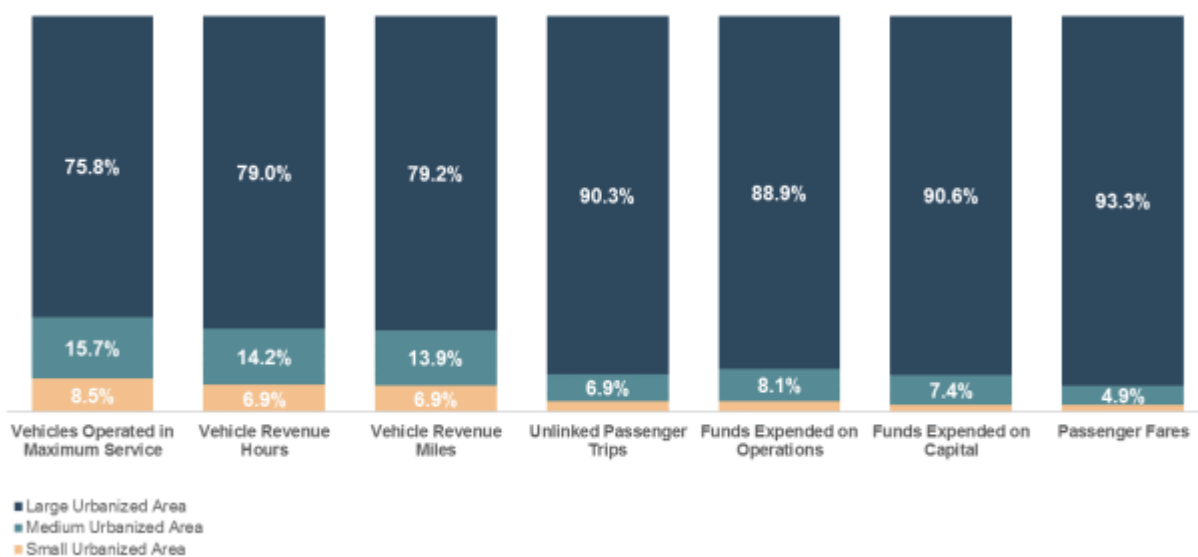


Exhibit A3 – 2015 Data Distribution According to UZA Size

## Rural Reporters

The US Census defines rural areas as geographic areas with a population of less than 50,000. Because many of these geographic areas are quite large, rural areas usually have low population density, resulting in low recovery ratios and high cost per trip.

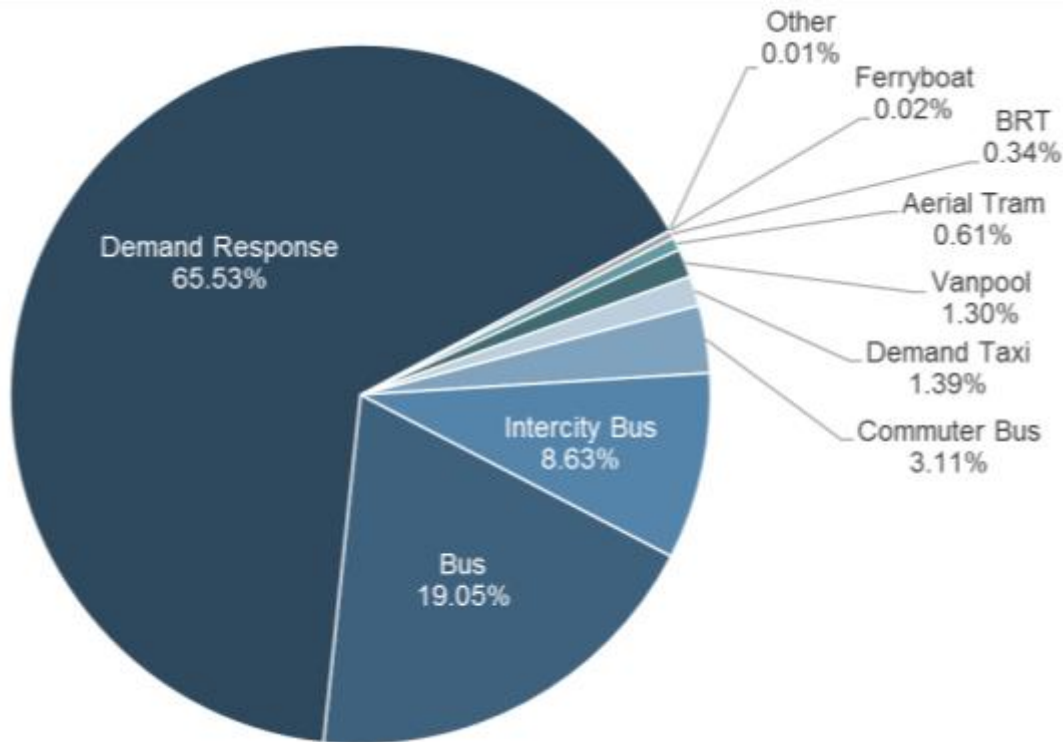


Exhibit A4 – 2015 Breakdown of Rural Service by Mode

For report year 2015, 1,278 sub-recipients and 54 states (The NTD considers Puerto Rico, Virgin Islands, American Samoa, Guam, and the Northern Mariana Islands as States for the purpose of rural data collection and funding) submitted data to the NTD through their state's Department of Transportation.

The types of service provided in rural areas are similar to those in urban areas. In rural areas, bus service is divided into four categories: fixed route, deviated fixed route, fixed and deviated route, and private intercity bus service (Exhibit A4 above combines and classifies the fixed route and deviated fixed route as *Bus*). Bus, demand response, and deviated fixed routes accounted for 84.58 percent of all rural transit service in 2015 due to the low population density of rural areas. For the definitions of modes and types of service, refer to the NTD Glossary available at <https://www.transit.dot.gov/ntd/national-transit-database-ntd-glossary>.

## Operating Expenses and Performance Measures

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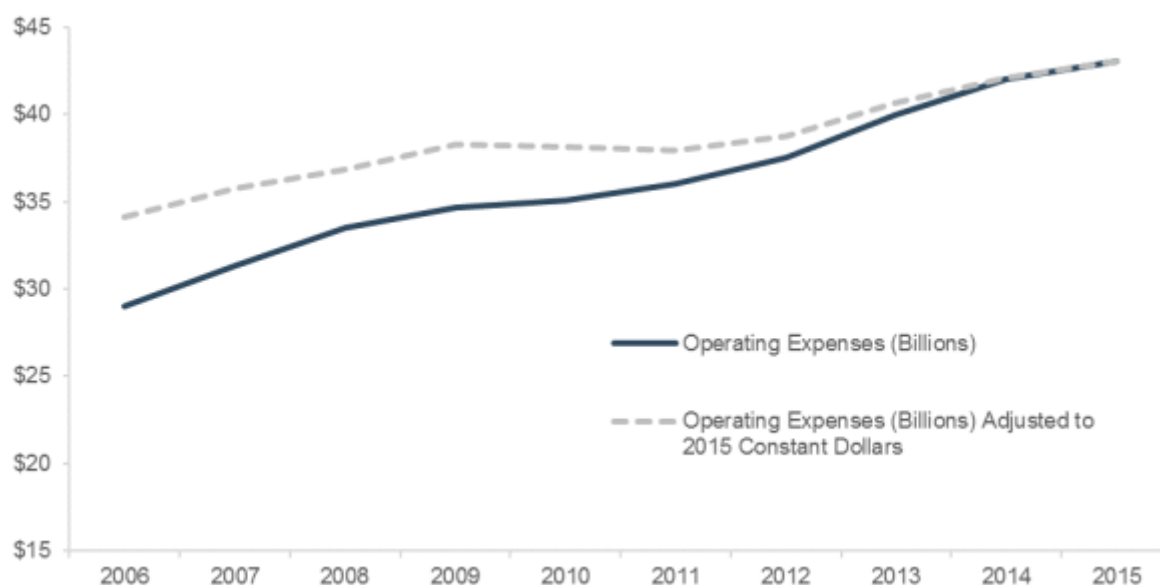


Exhibit A5 – Total Operating Expenses

Transit agencies that provide mass transportation services (vehicle operations, vehicle and non-vehicle maintenance, and administration) incur operating expenses. Transit agencies have various Reconciling items expenses because of different accounting practices implemented by local ordinances. The NTST excludes depreciation, interest expenses, leases, and rentals when accounting for Reconciling items expenses. Operating expenses have increased 26.2 percent over the past ten years (in 2015 Constant Dollars).

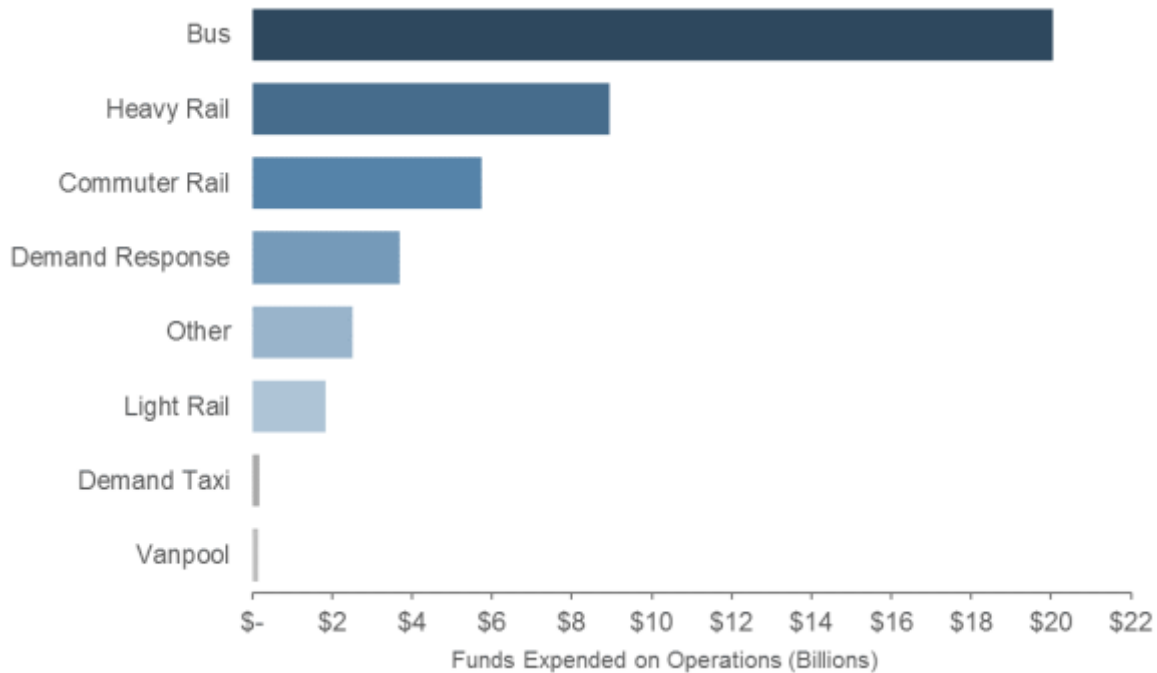


Exhibit A6 – 2015 Total Operating Expenses by Mode

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## Operating Funding

Operating funds are the funds transit agencies receive from federal, state, local, and directly-generated sources that are applied to operating expenditures. Transit agencies apply these funds in the same year that results in liabilities for benefits received, regardless of the year on the receipt or reporting year.

Transit agencies use federal funds to defray some of the operating costs of providing transit service.

Other operating funding sources include:

- Fare revenues
- Federal sources
- State sources
- Local sources
- Other sources

Other funds include non-transportation funds, subsidies from other sectors of operations, auxiliary funds such as advertising and concessions, charter service, freight tariffs, school bus funds, and directly levied taxes.

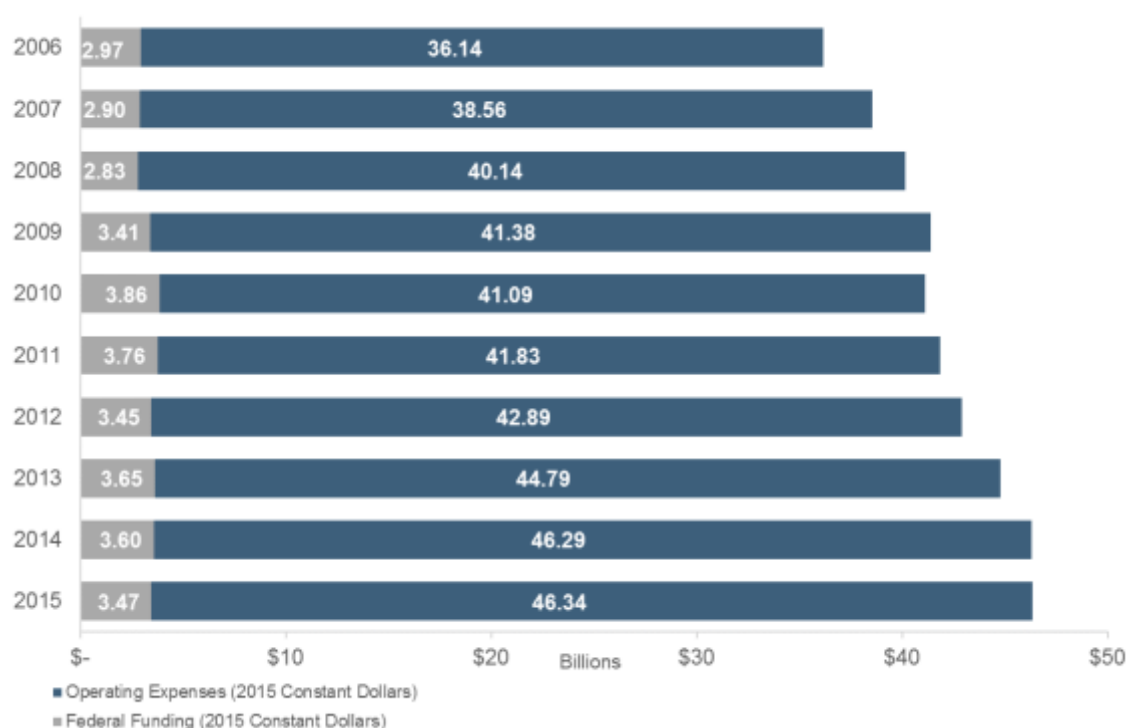


Exhibit A7 – Total Operating Expenses

	Federal	State	Fares	Local	Other
2015	\$3,470 M	\$10,796 M	\$15,396 M	\$11,312 M	\$5,370 M
2014	\$3,594 M	\$11,843 M	\$14,977 M	\$13,851 M	\$1,971 M
2013	\$3,590 M	\$11,613 M	\$14,489 M	\$12,480 M	\$1,850 M
2012	\$3,344 M	\$10,741 M	\$13,608 M	\$11,683 M	\$2,171 M
2011	\$3,571 M	\$9,740 M	\$13,123 M	\$11,228 M	\$2,030 M
2010	\$3,551 M	\$9,432 M	\$12,134 M	\$10,636 M	\$2,048 M
2009	\$3,086 M	\$9,487 M	\$11,813 M	\$10,881 M	\$2,190 M
2008	\$2,568 M	\$9,405 M	\$11,388 M	\$10,756 M	\$2,347 M
2007	\$2,540 M	\$7,938 M	\$10,597 M	\$10,451 M	\$2,208 M
2006	\$2,523 M	\$6,872 M	\$10,374 M	\$8,867 M	\$2,104 M

Exhibit A8 – Total Operating Expenses by Source

When using 2015 constant dollars, the total operating funds applied to transit operations increased 28.2 percent over the past ten years.

## Operating Funding Sources by UZA

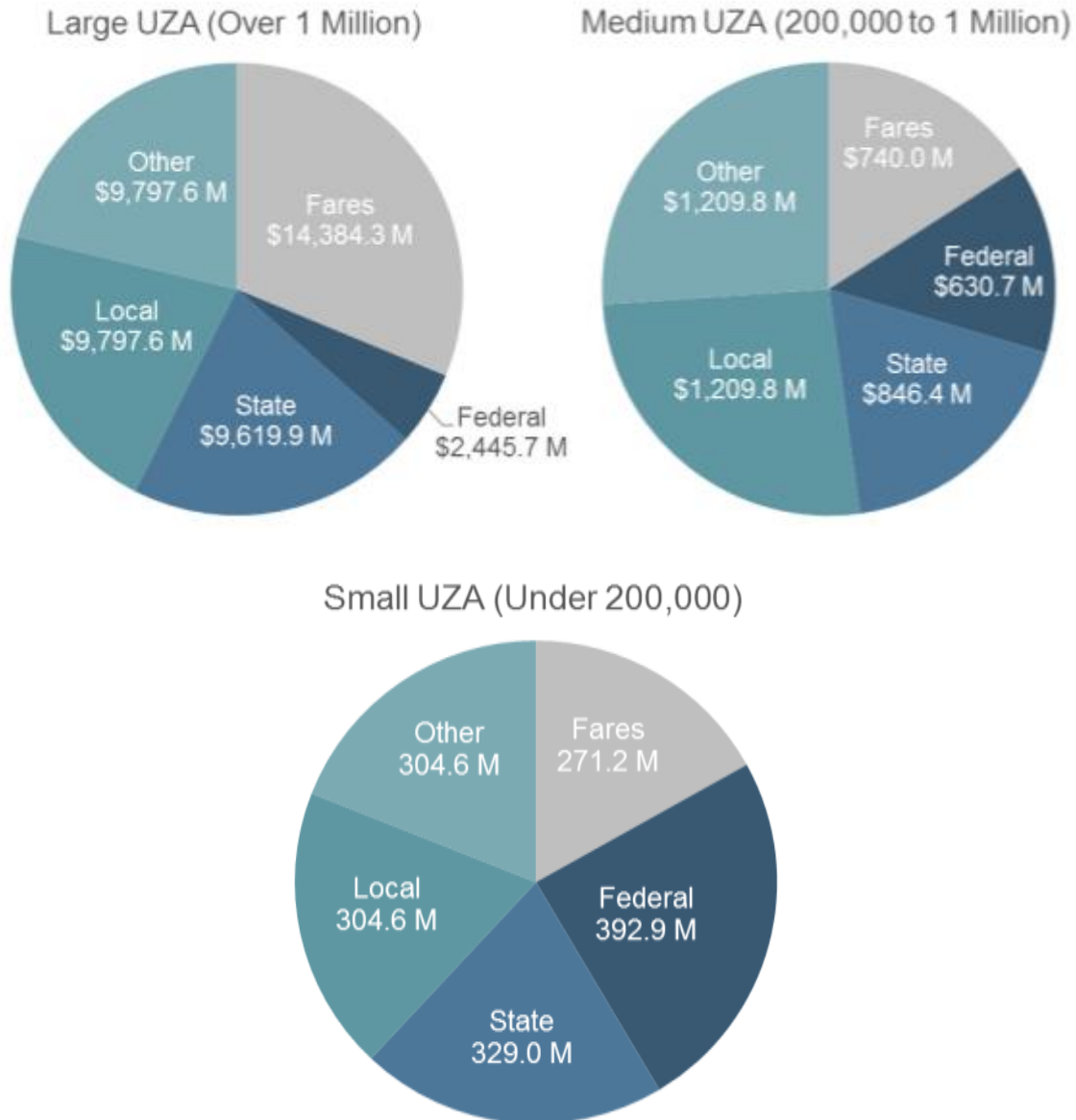


Exhibit A9 – Funding Sources by UZA Size

For large urbanized areas, fare revenues made up 31.2 percent of funding in 2015. Small and medium urbanized areas are more dependent upon operating subsidies than large urbanized areas. Fare revenues account for only about 16 percent for these two types of UZAs in 2015.

## Operating Expenses by Function and Object Class

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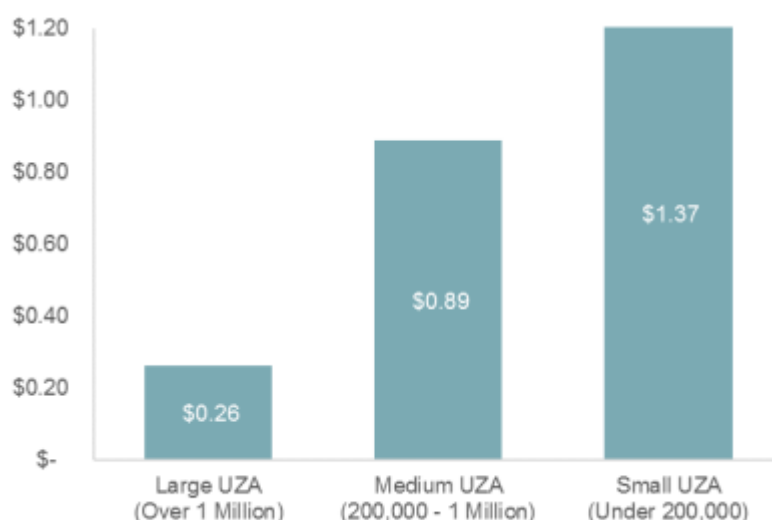


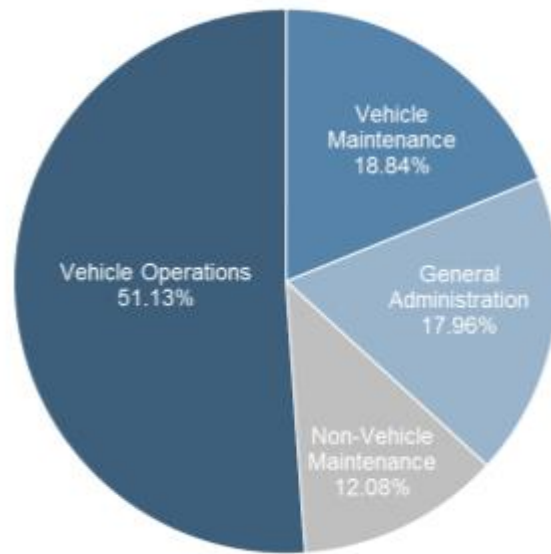
Exhibit A10 – 2015 Federal Operating Assistance per Trip by Urbanized Area Size

Agencies classified as full reporters must report finances according to the Uniform System of Accounts (USOA). The USOA contains the basic accounting structure required by Federal Transit Laws. Agencies must report operating expense data by mode, function, and object class. *Functions* refer to the activity performed, while *Object classes* refer to the cost of goods or services purchased. Agencies reporting a Small Systems Waiver are not required to classify their operating expenses by function and object; therefore, data from agencies reporting a Small Systems Waiver are not included in Exhibits A11 and A12.

Full reporting agencies group their operating expenses in the four functions listed below:

- Vehicle operations
- Non-vehicle maintenance
- Vehicle maintenance
- General administration

Funds used for Vehicle Operations account for 51.1 percent of all operating expenses. The categories of salaries and fringe benefits account for 62.2 percent of the total expenditures from direct operations.



Operating Expenses (in millions)	
Vehicle Operations	\$21,724 M
Vehicle Maintenance	\$8,005 M
General Administration	\$7,625 M
Non-Vehicle Maintenance	\$5,135 M
<b>Total</b>	<b>\$42,489 M</b>

Exhibit A11 – 2015 Operating Expenses by Function



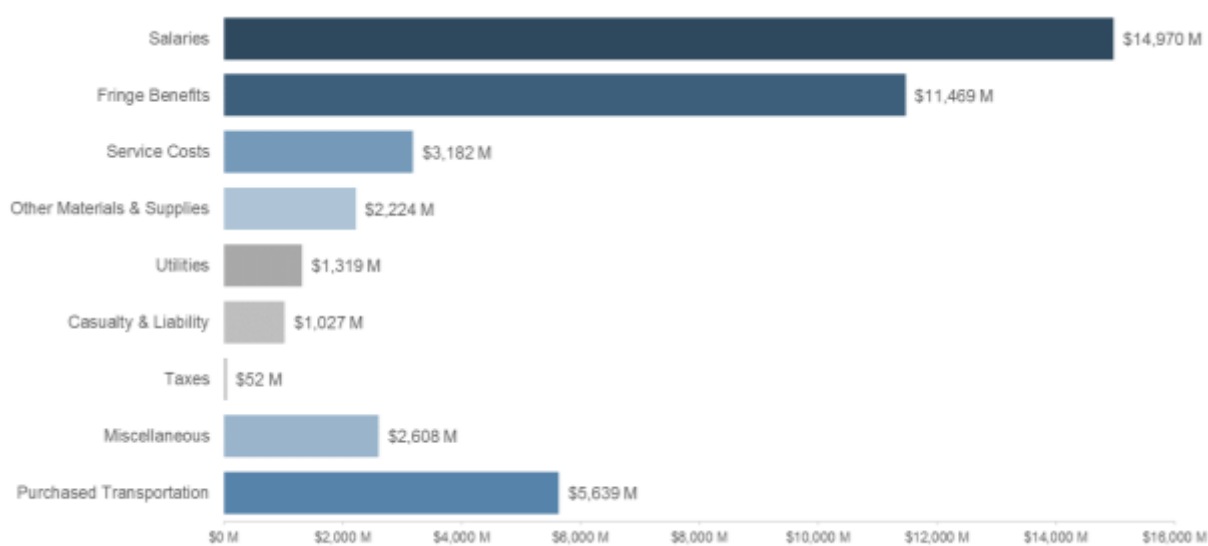


Exhibit A12 – 2015 Operating Expenses by Object Class

### Farebox Recovery Ratio

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Farebox recovery ratio is the proportion of the amount of revenue generated through fares by paying customers as a percentage of total operating expenses. Fare revenues are funds earned through carrying passengers in regularly scheduled service. It includes the base fare, zone premiums, express service premiums, extra cost transfers and quantity purchase discounts applicable to the passenger's ride.

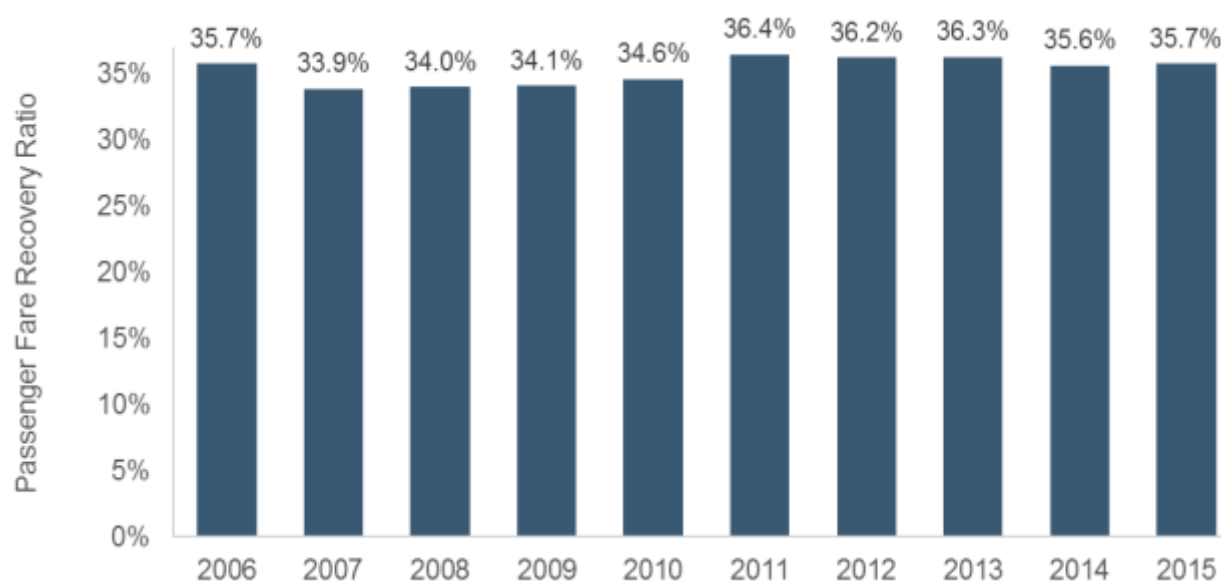


Exhibit A13 – Farebox Recovery Ratio (2006-2015)

Many large transit agencies have shown a steady improvement in farebox recovery ratios following the 2007 implementation of the Government Accounting Standards Board (as shown in green in Exhibit A13.) The Board requires transit agencies to accrue the cost of other post-employment benefits over an employee's career and to disclose the amount of any unfunded liability. This new requirement significantly increased operating costs and initially affected agencies farebox recovery ratios.

## Capital Expenditures

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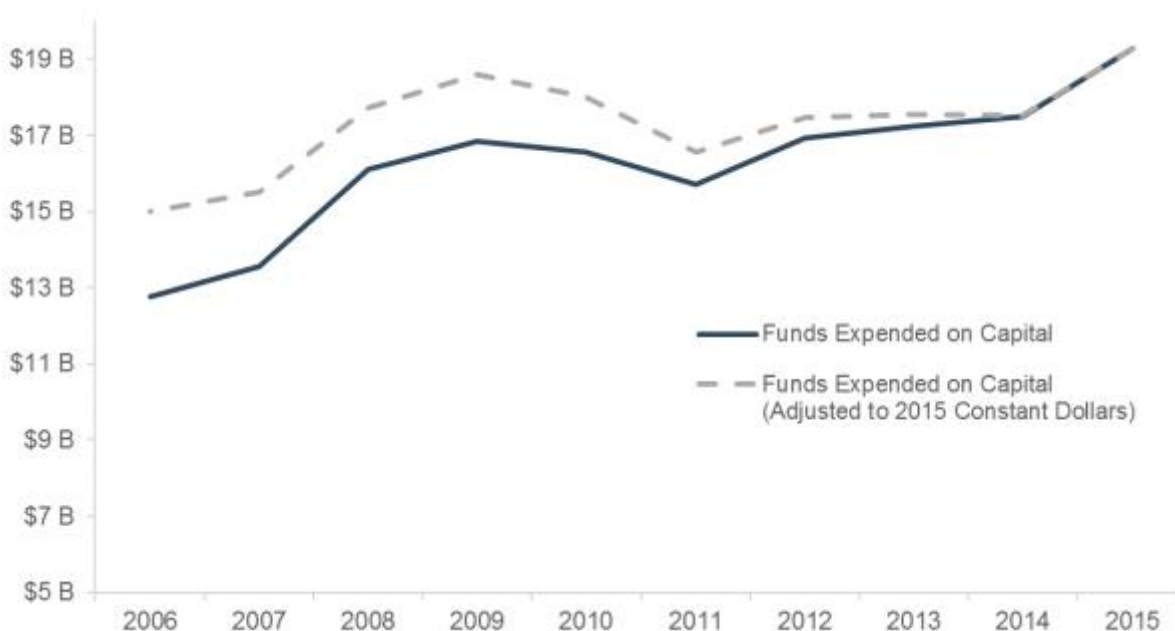


Exhibit A14 – Capital Expenditures

Uses of capital include:

- **Revenue vehicles:** Vehicles used to provide transit service for passengers. A transit agency may use capital funds for the replacement, rehabilitation, remanufacture, rail overhaul, and expansion of its fleet.
- **Guideway:** Buildings and structures dedicated to the operation of transit vehicles, such as: at grade, elevated and subway structures, tunnels, bridges, track and power systems for rail modes, and paved highway lanes dedicated to bus mode.
- **Communication and information systems:** Communication systems include two-way radios for communication between dispatchers and vehicle operations, cab signaling and train control equipment in rail systems, automatic vehicle locator systems, automated dispatching systems, vehicle guidance systems, telephones, facsimile machines, and public address systems. Information systems include computers, monitors, printers, scanners, data storage devices, and associated software that support general office, accounting, scheduling, vehicle and non-vehicle maintenance, and customer service functions.
- **Fare revenue collection equipment:** Includes the acquisition of fare revenue collection equipment such as turnstiles, fare boxes (drop), automated fare boxes

and related software, money changers, and fare dispensing machines (tickets, tokens, passes).

- **Maintenance facilities:** Central/overhaul maintenance facilities, light maintenance facilities, and storage facilities.
- **Passenger stations:** Boarding/alighting facilities with a platform, which may include stairs, elevators, escalators, passenger controls (e.g., fare gates or turnstiles), canopies, wind shelters, lighting, signs. Buildings with a waiting room, ticket office or machines, restrooms, or concessions. Includes transportation/transit/transfer centers, park-and-ride facilities, and transit malls with the above components, including those only utilized by motor buses.
- **Administration buildings:** Administrative buildings including the cost for design and engineering, land acquisition and relocations, demolition, and purchase or construction of administrative buildings.
- **Service (non-revenue) vehicles:** Service, supervisory, and vehicles other than revenue vehicles.
- **Other:** Includes park and ride facilities, passenger shelters, signs and amenities, furniture, and equipment that are not integral parts of buildings and structures.

## Uses of Capital by UZA Size

Large and medium-sized urbanized areas operate most of the country's rail systems. Guideway and facilities account for a significant portion of the overall capital costs. For small urbanized areas, bus and demand response are the most common modes and most uses of capital are revenue vehicles and facilities.

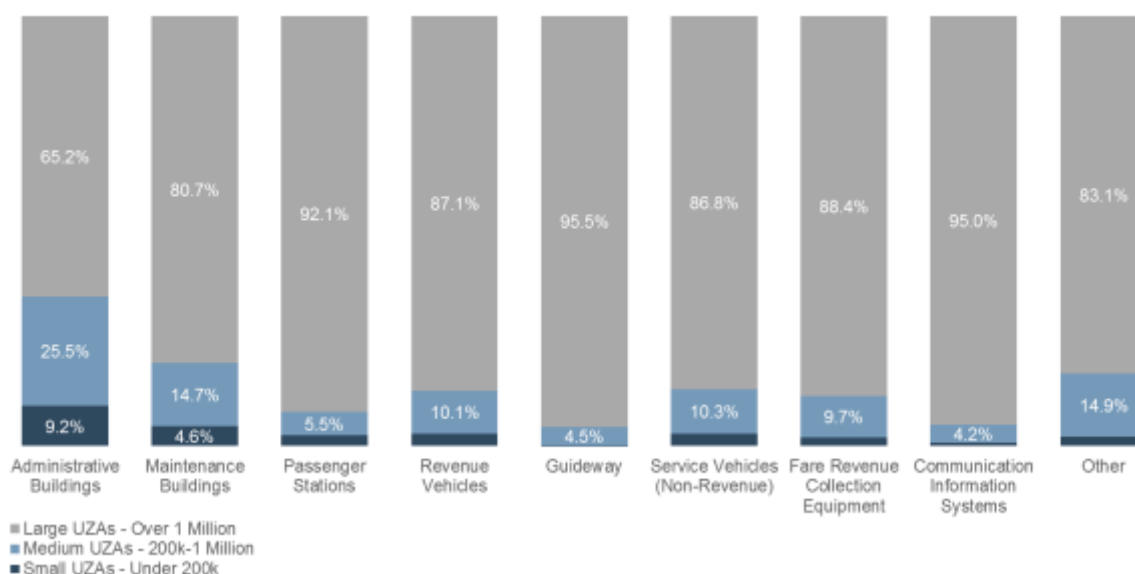


Exhibit A15 – 2015 Capital by Urbanized Area Size

## Sources of Federal Funding by UZA

Federal sources account for most of the capital invested in transit. A significant portion of capital invested in small and medium urbanized areas is from federal funds. Large urbanized areas rely primarily on local and state funds and directly levied taxes to pay for capital projects.

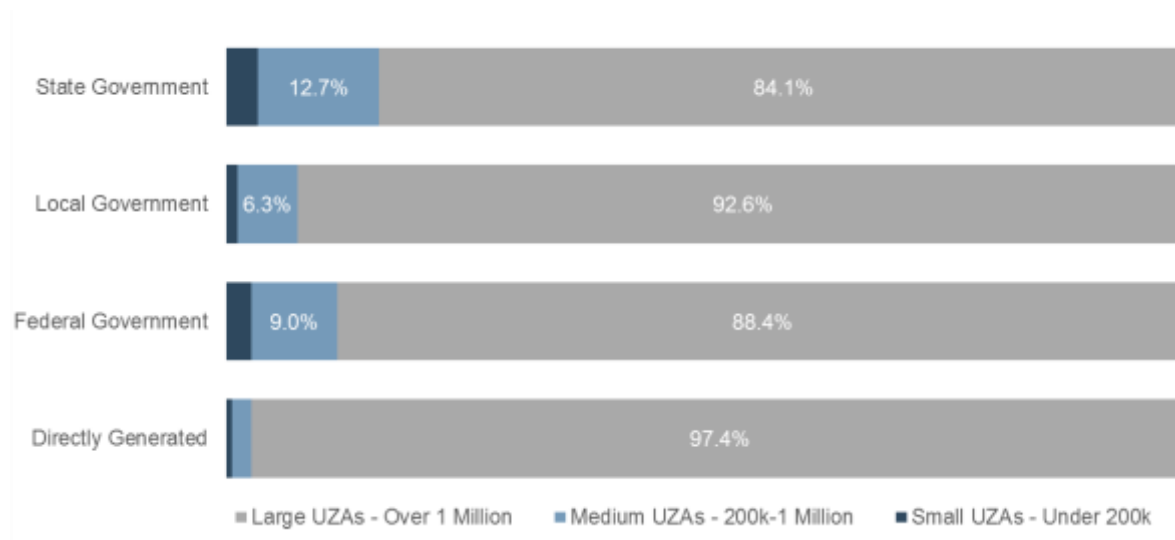


Exhibit A16 – Sources of Capital Funding by UZA

## Capital Investment in Transit

Capital funds are funds from federal, state, and local governments and directly generated sources that transit agencies apply to purchases such as equipment or other assets. Directly generated sources include any funds generated or donated directly to the transit agency including passenger fares, advertising revenues, donations, and grants from private entities.

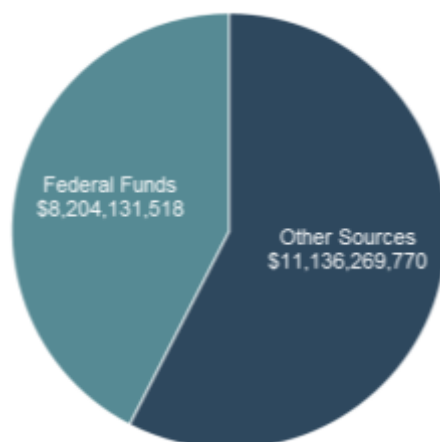


Exhibit A17 – 2015 Sources of Capital Funding

Capital investment increased approximately 51.7 percent over the past ten years. Funds from the federal government accounted for 42.4 percent of capital invested in transit in 2015.

## Distribution of Capital by Mode

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Generally, rail systems are located in high-density corridors within the larger metropolitan areas of the United States. The high levels of service supplied in these areas require large investments in transit infrastructure (e.g., track, signals and communication systems, complex maintenance facilities, passenger stations, inter-modal terminals, real time data acquisition systems and other cost intensive items). Bus systems do not require the same level of investment in infrastructure as rail. Therefore, revenue vehicles are the main use of capital for bus systems.

	<b>Commuter Rail</b>	<b>Heavy Rail</b>	<b>Light Rail</b>
<b>2006</b>	71.0%	87.6%	91.6%
<b>2007</b>	82.2%	82.8%	89.3%
<b>2008</b>	74.1%	79.8%	85.8%
<b>2009</b>	83.2%	72.9%	88.7%
<b>2010</b>	86.2%	84.0%	89.7%
<b>2011</b>	70.1%	91.6%	91.1%
<b>2012</b>	77.3%	95.3%	93.2%
<b>2013</b>	73.6%	92.8%	91.1%
<b>2014</b>	76.4%	88.1%	92.2%
<b>2015</b>	79.4%	94.0%	92.3%

Exhibit A18 – Percent of Capital Expended on Non-Rolling Stock by Rail Mode

## Rural Operating and Capital Funding

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The sources of funds for rural areas (operating and capital) include local, state, and the federal government as well as funds generated by service providers (fares and contract revenues).

FTA funding categories available for Rural Transit include:

- Section 5309 – FTA Capital Program
- Section 5310 – FTA Special Needs of Elderly Individuals and Individuals with Disabilities Program
- Section 5311 – FTA Non-Urbanized Area Program
- Section 5316 – FTA Job Access and Reverse Commute Program
- Section 5317 – FTA New Freedom Program
- Section 5320 – FTA Alternative Transportation in Parks and Public Lands Program

The federal government provided 35.6 percent of the rural transit-operating budget, while 18.0 percent of funds came directly from service providers. The majority of rural transit-operating funds came from State and local funds, making up 42.9 percent.

	<b>Funds Expended on Operations</b>	<b>Percentage of Total</b>
Other Urbanized Area Operating Assistance 5311	\$ 398,382,814	29.37%
Local Funds	\$ 333,578,423	24.59%
State Funds	\$ 248,493,609	18.32%
Contract Revenue	\$ 128,532,005	9.47%
Fares	\$ 115,961,446	8.55%
Other	\$ 47,007,389	3.46%
Other Federal Funds	\$ 33,806,677	2.49%
Tribal Transit Funds 5311	\$ 20,758,489	1.53%
Special Needs Disabilities Program 5310	\$ 13,345,203	0.98%
Job Access Rev Commute 5316	\$ 7,186,440	0.53%
Freedom Program 5317	\$ 3,773,795	0.28%
Other FTA Funds	\$ 2,305,260	0.17%
USDOT Funds	\$ 2,067,355	0.15%
ARRA Other Urbanized Area Program 5311	\$ 1,027,929	0.08%
FTA Capital Program Funds 5309	\$ 389,536	0.03%
Park Transit Funds 5320	\$ 18,143	0.00%
ARRA Tribal Transit Funds 5311	\$ 778	0.00%
<b>Total</b>	<b>\$1,356,635,291</b>	

Exhibit A19 – 2015 Source of Funding Expended on Operations

Rural transit capital budgets relied mostly on federal assistance, accounting for 66.2 percent of all funds expended on capital.



	Funds Expended on Capital	Percentage of Total
Other Urbanized Area Operating Assistance 5311	\$ 60,604,660	31.51%
State Funds	\$ 31,854,560	16.56%
Local Funds	\$ 31,775,615	16.52%
FTA Capital Program Funds 5309	\$ 27,353,537	14.22%
Special Needs Disabilities Program 5310	\$ 9,305,064	4.84%
Other FTA Funds	\$ 8,384,552	4.36%
ARRA Other Urbanized Area Program 5311	\$ 6,796,975	3.53%
ARRA TIGGER Funds	\$ 3,772,055	1.96%
Tribal Transit Funds 5311	\$ 2,978,174	1.55%
Job Access Rev Commute 5316	\$ 2,730,446	1.42%
Other Federal Funds	\$ 2,596,475	1.35%
Freedom Program 5317	\$ 1,941,369	1.01%
Other	\$ 1,052,647	0.55%
USDOT Funds	\$ 457,930	0.24%
Park Transit Funds 5320	\$ 314,978	0.16%
Contract Revenue	\$ 283,954	0.15%
Fares	\$ 85,674	0.04%
ARRA Tribal Transit Funds 5311	\$ 69,591	0.04%
<b>Total</b>	<b>\$192,358,256</b>	

Exhibit A20 – 2015 Source of Funding Expended on Capital

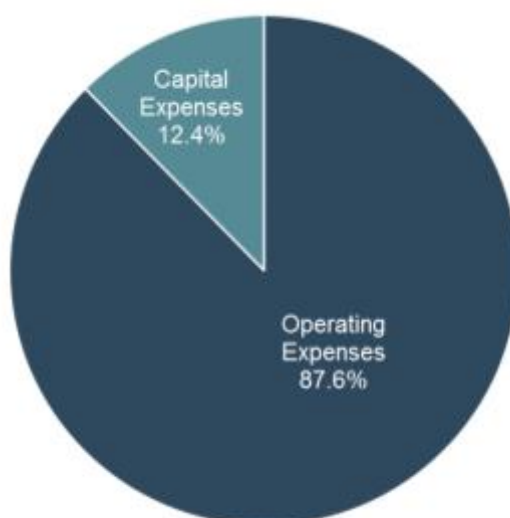


Exhibit A21 – Expenses by Type – Rural Transit

## Unlinked Passenger Trips

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The National Transit Database (NTD) defines Unlinked Passenger Trips (UPT) 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. Unlinked passenger trips have steadily increased over the past twenty years. Exhibit A22 shows the steady 37.0 percent increase in unlinked passenger trips over the twenty-year period spanning 1996 to 2015.

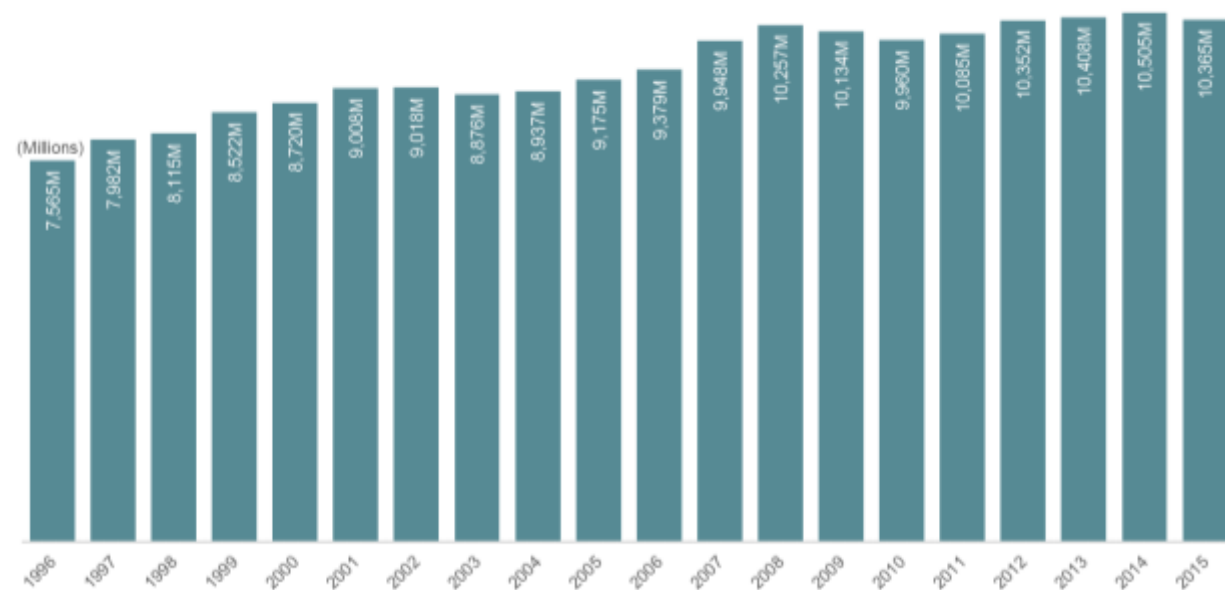


Exhibit A22 – Unlinked Passenger Trips

Ridership increased 10.5 percent from 2006 to 2015. Unlinked passenger trips increased for the following modes over the ten-year period:

- Vanpool – 81.1 percent
- Demand Response – 17.0 percent
- Heavy Rail – 31.9 percent
- Light Rail – 17.9 percent
- Commuter Rail – 11.3 percent
- Bus – (5.9 percent)

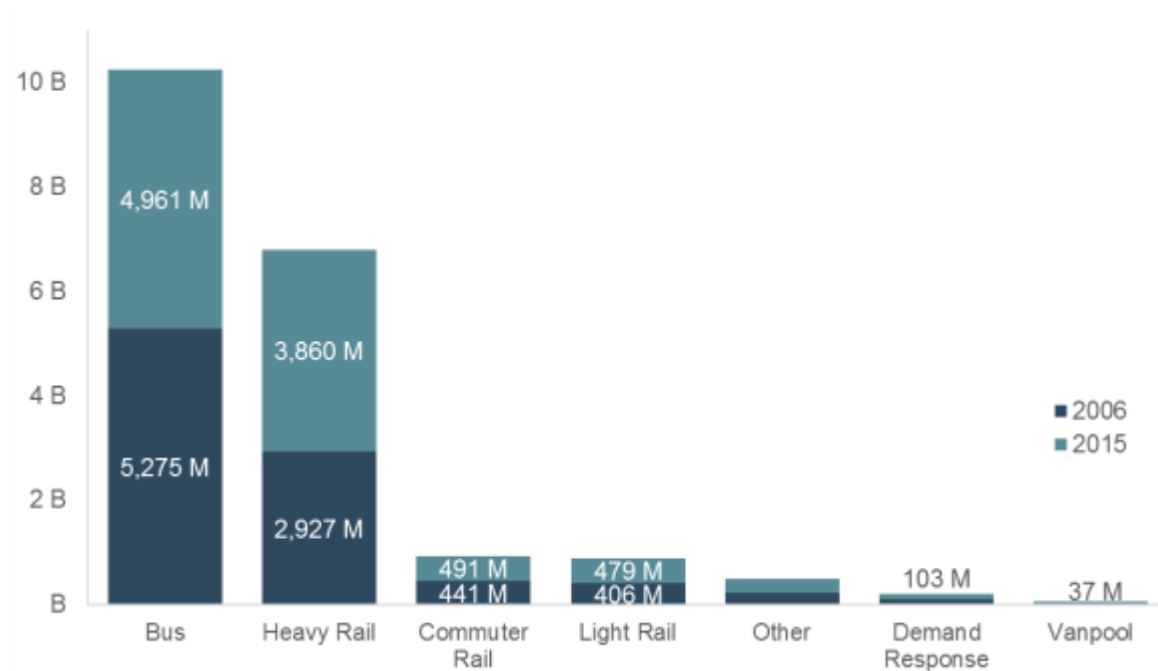


Exhibit A23 – Unlinked Passenger Trips by Mode

Mode	2006	2015	% Change
Bus	5,275 M	5,111 M	-3.10%
Heavy Rail	2,927 M	3,860 M	31.88%
Commuter Rail	441 M	491 M	11.25%
Light Rail	406 M	479 M	17.90%
Other	222 M	277 M	24.85%
Demand Respons	88 M	110 M	24.79%
Vanpool	20 M	37 M	81.09%

Exhibit A24 – Distribution of Unlinked Passenger Trips (Millions) by Mode

<b>2015</b>	10,364.8 M
<b>2014</b>	10,505.0 M
<b>2013</b>	10,408.4 M
<b>2012</b>	10,351.7 M
<b>2011</b>	10,085.4 M
<b>2010</b>	9,959.7 M
<b>2009</b>	10,133.8 M
<b>2008</b>	10,256.7 M
<b>2007</b>	9,948.2 M
<b>2006</b>	9,379.4 M

Exhibit A25 – Unlinked Passenger Trips

## Vehicle Revenue Miles

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<b>2015</b>	4,173.7 M
<b>2014</b>	4,109.2 M
<b>2013</b>	4,039.3 M
<b>2012</b>	3,960.0 M
<b>2011</b>	3,914.8 M
<b>2010</b>	3,919.6 M
<b>2009</b>	3,987.8 M
<b>2008</b>	3,894.5 M
<b>2007</b>	3,769.0 M
<b>2006</b>	3,670.7 M

Exhibit A26 – Vehicle Revenue Miles

Vehicle revenue miles are the miles a transit vehicle travels while in revenue service. A transit vehicle is in revenue service when the vehicle is available to the public with the expectation of carrying passengers. Revenue service includes both times when passengers pay a fare and when the service is operating fare-free. Agencies must exclude non-public transportation services (charter services, school bus services, etc.) and deadhead travel from revenue

service tracking. Deadhead travel consists of the miles a transit vehicle travels while not in revenue service, such as leaving or returning to the garage or yard or changing routes.

Vehicle revenue miles increased by 13.7 percent between 2006 and 2015 across all transit modes. Vehicle revenue miles increased for the following modes over the ten-year period:

- Vanpool – (2.7 percent)
- Demand Response – 35.2 percent
- Light Rail – 44.5 percent
- Commuter Rail – 19.2 percent
- Bus – 2.4 percent
- Heavy Rail – 6.6 percent

	2006	2015	% Change
Bus	1,910,024,095	1,956,090,673	2.41%
Commuter Rail	287,007,333	342,078,707	19.19%
Demand Response	607,090,870	820,949,034	35.23%
Heavy Rail	633,793,973	675,885,816	6.64%
Light Rail	72,925,992	105,630,036	44.85%
Vanpool	49,391,199	48,053,717	-2.71%
Other	110,430,022	225,014,048	103.76%

Exhibit A27 – Distribution of Vehicle Revenue Miles by Mode

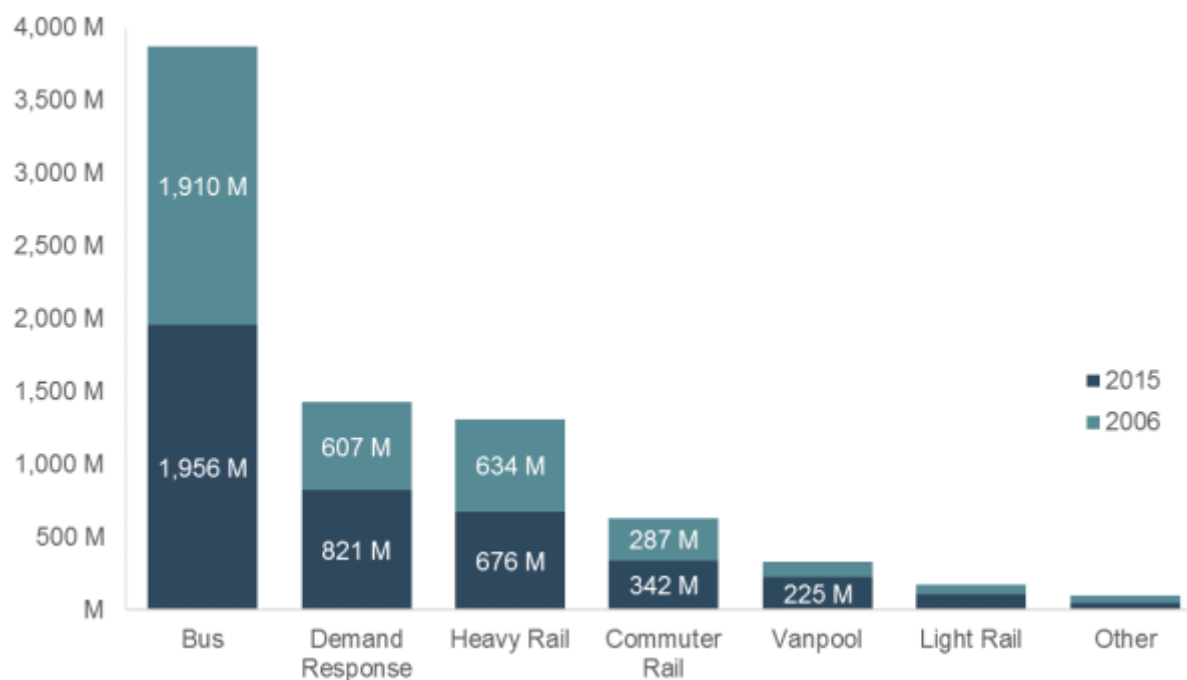


Exhibit A28 – Vehicle Revenue Miles (Millions) by Mode

## Subsidy per Trip

A subsidy is financial assistance received from federal, state and local governments. Subsidies also include directly generated funds, including grants from private foundations, directly levied taxes and other funds dedicated to transit. Subsidies do not include the fare revenue collected by the agency.



Exhibit A29 – Total Operating Subsidy per Trip

Subsidies for prior years adjusted to 2015 Constant Dollars

Subsidy per trip has increased 16.9 percent over the past ten years. Medium and small urbanized areas have a greater subsidy per trip rate increase than large urbanized areas. This is due in part to the expansion of fixed route service in low-density areas, combined with the expansion of in-demand response services. Demand response service accounts for a substantial portion of the service provided in medium and small urbanized areas.

## Cost Effectiveness

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Exhibit A30 – Operating Expenses per Unlinked Passenger Trip

Operating expenses for prior years adjusted to 2015 Constant Dollars

Cost effectiveness is the relationship between service input and service consumption. Service input is the quantity of resources expended to produce transit service, expressed in operating cost (dollars expended for operations, maintenance, and administration). Service consumption is the amount of service used by the public, expressed in non-monetary terms as unlinked passenger trips. Using 2015 constant dollars, operating expense per unlinked passenger trip increased 14.2 percent over the past ten years.

	<b>Cost Efficiency Ratio</b>	<b>Unlinked Passenger Trips</b>	<b>Operating Expenses</b>
<b>2006</b>	\$3.64	9,379,390,013	\$34,123,578,716
<b>2007</b>	\$3.60	9,948,210,473	\$35,783,829,815
<b>2008</b>	\$3.59	10,256,681,637	\$36,855,896,138
<b>2009</b>	\$3.78	10,133,816,578	\$38,266,628,676
<b>2010</b>	\$3.83	9,959,675,640	\$38,120,980,527
<b>2011</b>	\$3.76	10,085,446,841	\$37,942,422,683
<b>2012</b>	\$3.75	10,351,682,871	\$38,769,017,950
<b>2013</b>	\$3.91	10,408,368,210	\$40,651,096,419
<b>2014</b>	\$4.01	10,504,992,319	\$42,102,751,899
<b>2015</b>	\$4.16	10,364,763,427	\$43,072,579,644

Exhibit A31 – Total Operating Expenses per Unlinked Passenger Trip

Operating expenses for prior years adjusted to 2015 Constant Dollars

	<b>Bus</b>	<b>Commuter Rail</b>	<b>Heavy Rail</b>	<b>Light Rail</b>
<b>2006</b>	\$3.00	\$8.53	\$1.81	\$2.45
<b>2007</b>	\$3.19	\$8.73	\$1.70	\$2.78
<b>2008</b>	\$3.30	\$9.11	\$1.73	\$2.79
<b>2009</b>	\$3.42	\$9.78	\$1.81	\$3.00
<b>2010</b>	\$3.58	\$9.99	\$1.79	\$3.28
<b>2011</b>	\$4.98	\$10.12	\$1.83	\$3.21
<b>2012</b>	\$4.65	\$10.51	\$1.87	\$3.31
<b>2013</b>	\$5.25	\$11.12	\$2.14	\$3.46
<b>2014</b>	\$5.56	\$11.65	\$2.20	\$3.62
<b>2015</b>	\$5.68	\$11.68	\$2.32	\$3.83

Exhibit A32 – Operating Expenses per UPT for Bus and Rail Modes

Operating expenses for prior years adjusted to 2015 Constant Dollars

## Cost Efficiency

Cost efficiency is the relationship between service inputs and service outputs. Service output is the quantity of service produced by a transit operator, expressed in non-monetary terms as vehicle revenue hours. Overall, operating expenses per vehicle revenue hour increased 12.4 percent over the last ten years.





Exhibit A33 – Total Operating Expenses per Vehicle Revenue Hour

Operating expenses for prior years adjusted to 2015 Constant Dollars

## Service Effectiveness

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Service effectiveness is the relationship between service consumption and service output. Unlinked passenger trips per vehicle revenue hour decreased 1.6 percent over the past ten years.

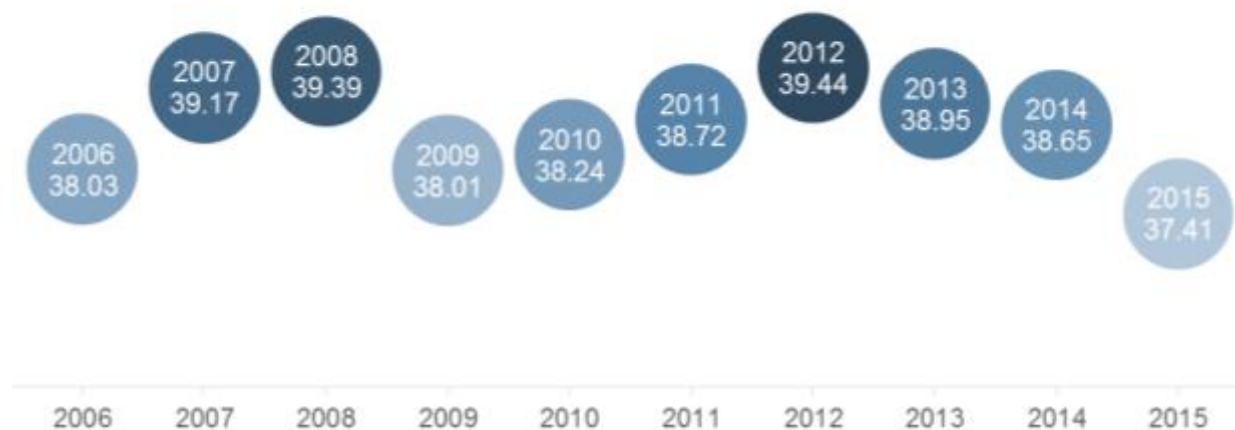


Exhibit A34 – Unlinked Passenger Trips per Vehicle Revenue Hour

	Bus	Commuter Rail	Heavy Rail	Light Rail
2006	34.8	48.2	92.6	82.3
2007	34.3	48.5	108.8	77.0
2008	34.8	47.7	109.3	78.7
2009	34.1	46.4	106.2	79.0
2010	33.5	48.0	110.8	74.6
2011	34.1	48.5	114.9	77.5
2012	34.8	48.3	117.6	77.1
2013	34.3	47.1	117.1	72.2
2014	33.5	46.1	119.9	75.0
2015	32.4	45.9	115.3	71.4

Exhibit A35 – Unlinked Passenger Trips per Vehicle Revenue Hour by Mode

## Load Factor

Average load factor is the ratio of passenger miles traveled per vehicle revenue mile. Beginning in 2011, reporting agencies operating 30 vehicles or fewer were not required to report passenger miles traveled. For this reason, the NTST excludes data from agencies reporting a Small Systems Waiver or Reporting Waiver during the years 2011 to 2015 in the following load factor exhibits.

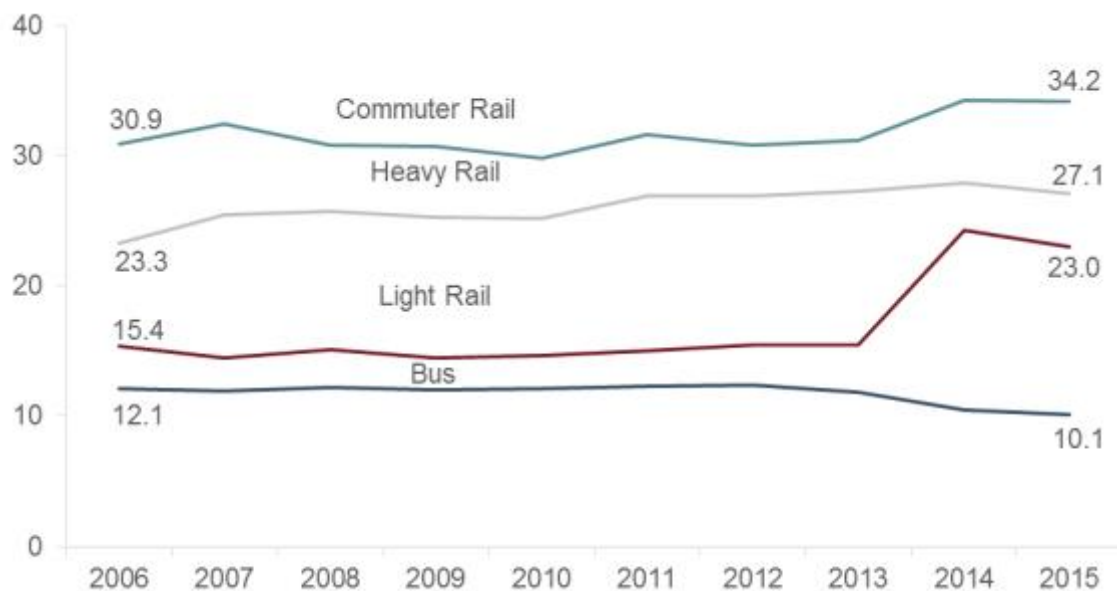


Exhibit A36 – Load Factor by Mode

Data for agencies reporting a Small Systems or Reduced Reporter Waiver in 2011-2015 have been excluded from this exhibit.

The load factor exhibits provide the following information:

- Commuter Rail average load factor increased 10.2 percent over the past ten years, and 9.6 percent over the past three years.
- Heavy Rail average load factor increased 16.0 percent over the past ten years. In the past three years, the heavy rail average load factor decreased 1.0 percent.
- Light Rail average load factor increased 49.5 percent in the past ten years. In the past three years, the light rail average load factor increased 48.5 percent.
- Bus average load factor decreased 16.6 percent in the past ten years. In the past three years, the bus average load factor decreased 15.2 percent.

	<b>Bus</b>	<b>Commuter Rail</b>	<b>Heavy Rail</b>	<b>Light Rail</b>
<b>2006</b>	12.1	30.9	23.3	15.4
<b>2007</b>	11.9	32.4	25.5	14.5
<b>2008</b>	12.3	30.8	25.7	15.2
<b>2009</b>	12.1	30.8	25.3	14.5
<b>2010</b>	12.1	29.8	25.2	14.6
<b>2011</b>	12.3	31.6	26.9	15.1
<b>2012</b>	12.4	30.8	26.9	15.5
<b>2013</b>	11.9	31.2	27.3	15.5
<b>2014</b>	10.5	34.3	27.9	24.3
<b>2015</b>	10.1	34.2	27.1	23.0

Exhibit A37 – Load Factor by Mode

Data for agencies reporting a Small Systems or Reduced Reporter Waiver in 2011-2015 have been excluded from this exhibit.

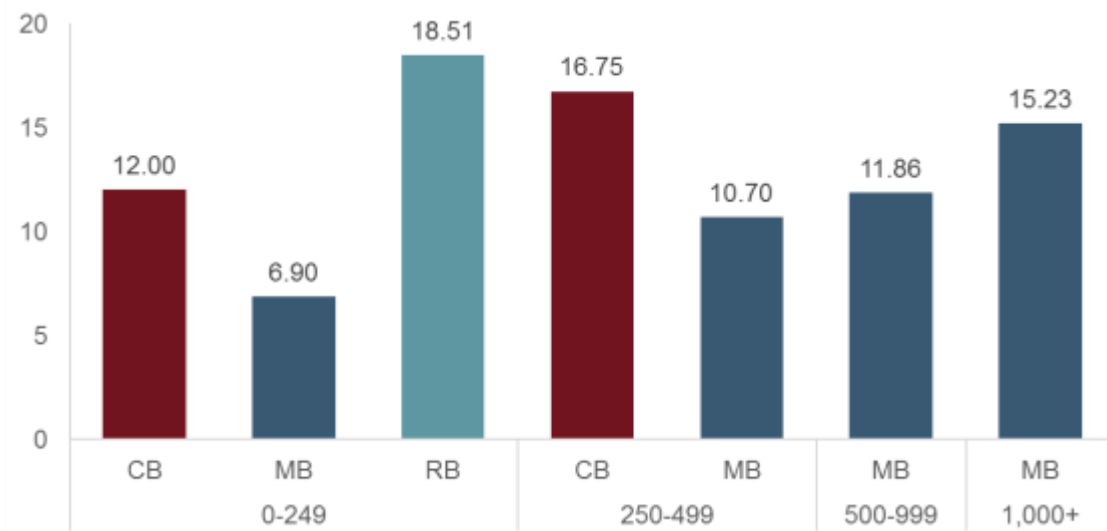


Exhibit A38 – Load Factor by VOMS for Bus Mode

Data for agencies reporting a Small Systems or Reduced Reporter Waiver in 2011-2015 have been excluded from this exhibit.

## Rural Service Supplied and Consumed

	2015 Totals
<b>Operating Expense (OE)</b>	\$1,325,537,482
<b>Fares</b>	\$116,367,790
<b>Unlinked Passenger Trips (UPT)</b>	135,621,545
<b>Vehicle Revenue Miles (VRM)</b>	536,445,890
<b>Vehicle Revenue Hours (VRH)</b>	27,692,718
<b>Operating Expenses per UPT</b>	\$9.77
<b>Operating Expenses per VRM</b>	\$2.47
<b>Fare Recovery (Fares per OE)</b>	8.78%

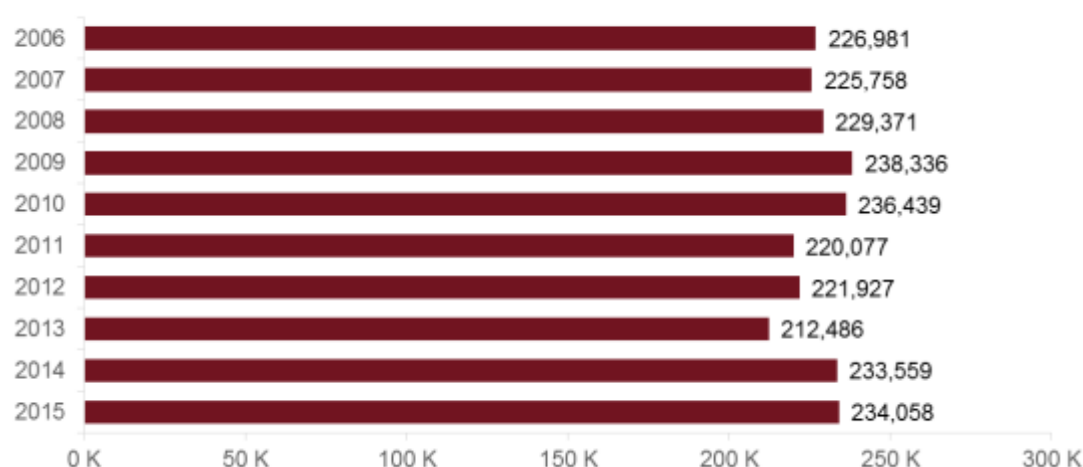
Exhibit A39 – Rural Service Supplied and Consumed

## Fixed Guideway Mileage

Fixed guideway directional route miles are the miles in each direction that transit vehicles travel while in revenue service on fixed guideways (high occupancy vehicle lanes, transit malls, busways, or rail track).

Fixed guideway mileage is a measure of the route path over a facility or roadway; it does not measure the service carried on the facility. This mileage is computed with regard to direction of service and is recorded without regard to the number of traffic lanes or rail tracks existing on the right-of-way.

### Bus



### Rail

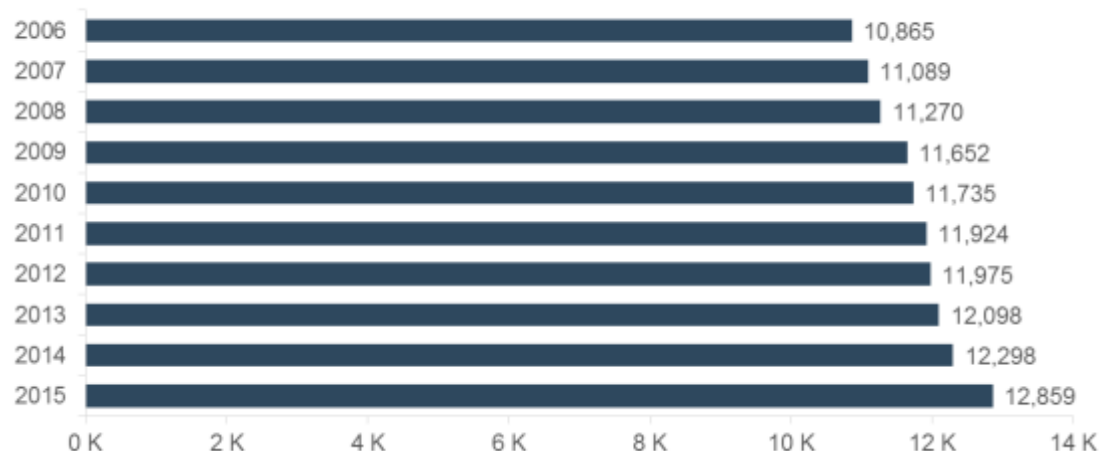


Exhibit A40 – Fixed Guideway Mileage – Bus and Rail Modes

Beginning in 2013, FTA classified segments previously reported as fixed guideway into three subcategories:

- **Fixed Guideway (FG).** Roadways that agencies reserve at all times (24 hours / 7 days per week) for public transportation vehicles. This type of ROW must meet safe operations and have strict enforcement.
- **High Intensity Bus (HIB).** Roadways that agencies reserve at some times for transit use, for high occupancy vehicle (HOV), or high occupancy / toll (HO/T) operations.
- **Mixed-traffic ROW (Non-Fixed Guideway (NFG)).** Mixed-traffic ROW are normal streets and roads where transit vehicles operate. Public transportation shares these roadways with personal cars and trucks. Mixed Traffic ROW is the most common ROW.

## Service Utilization

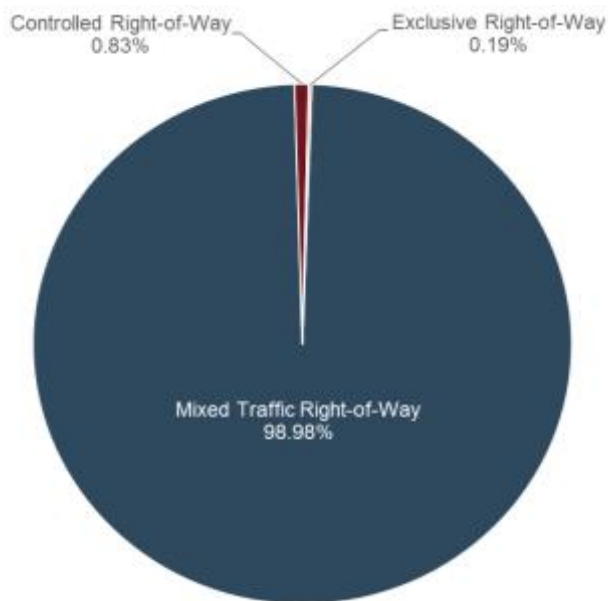


Exhibit A41 – Guideway Classes

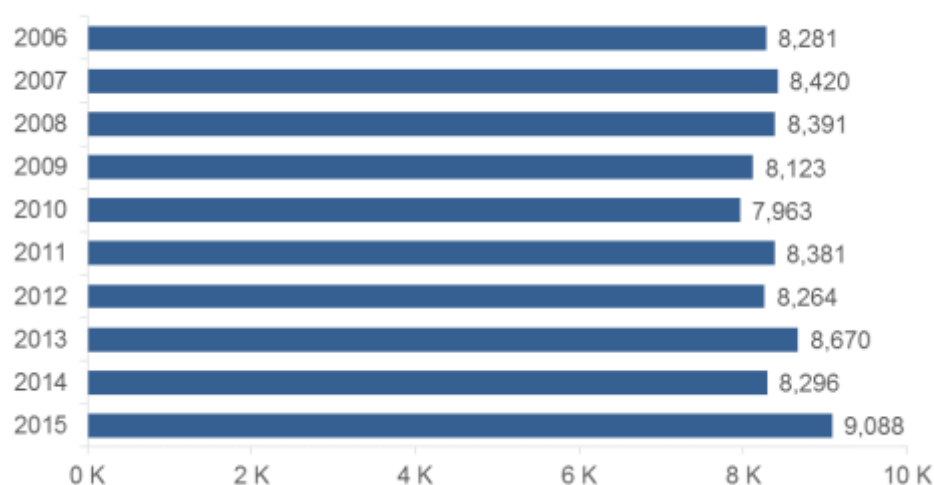
The NTST defines the average service utilization as the ratio of vehicle revenue miles per directional route mile.

Average service utilization is inversely proportional to average headway, meaning the higher the average service utilization, the smaller the average headway, and vice versa.

The geographical expansion of transit service contributes to reductions in average service utilization if the average headway of expanded areas is greater than the average headway before the expansion.

For this section, *Bus* includes motor bus (MB), commuter bus (CB), and bus rapid transit (RB). Beginning in 2011, reporting agencies operating 30 vehicles or fewer were not required to report passenger miles traveled. Hence, the NTST excludes data from agencies reporting a Small Systems or Reporting waiver from 2011 to 2015 in the following service utilization exhibits.

## Bus



## Commuter Rail

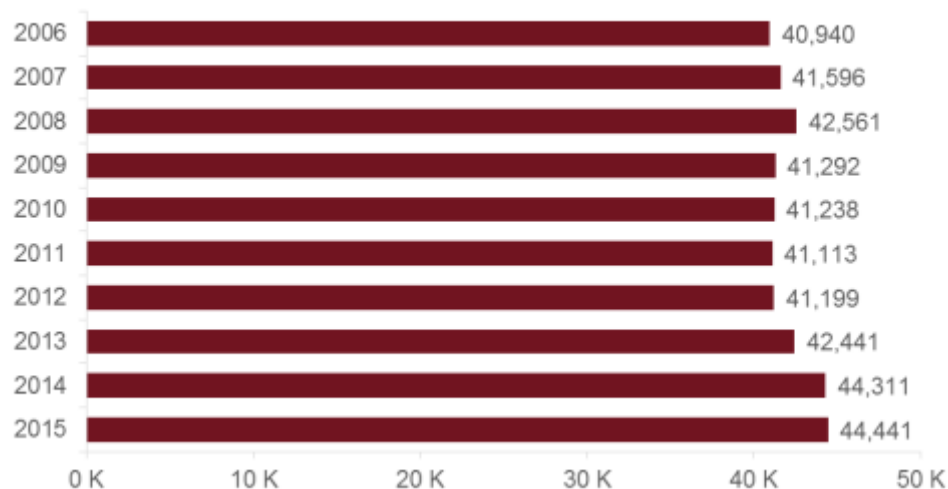


Exhibit A42 – Bus and Commuter Rail Service Utilization

- From 2011 to 2015, fixed guideway directional route mile totals for *Bus* included segments defined as Fixed Guideway and High Intensity Bus. The bus-service use average increased 9.7 percent over the past ten years and increased 4.8 percent over the past three years.
- Commuter rail use average increased 8.6 percent over the past ten years and increased 4.7 percent over the past three years.

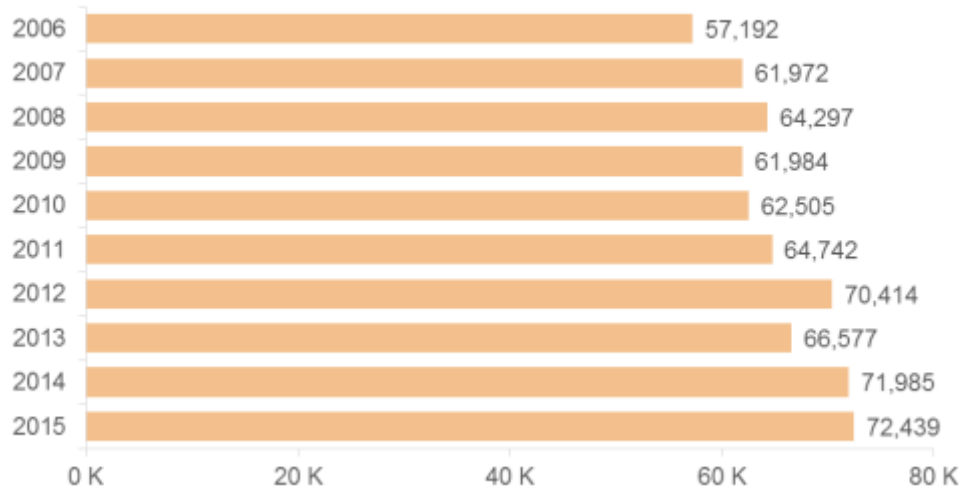
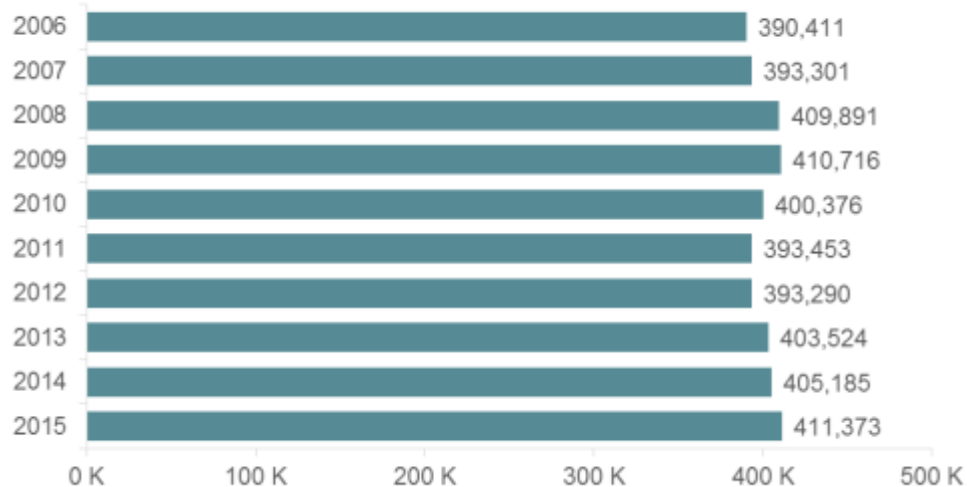
**Light Rail****Heavy Rail**

Exhibit A43 – Heavy and Light Rail Service Utilization

- Light rail average service utilization increased 26.7 percent over the past ten years and increased 8.8 percent over the past three years.
- Heavy rail average service utilization increased 5.4 percent over the past ten years and 1.9 percent over the past three years.



## Quality of Transit Service

### Safety

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The NTD defines a fatality as a death confirmed within 30 days following a transit-related incident. Deaths in or on transit property resulting from illness or other natural causes are not reportable to the NTD and are excluded from this dataset. Suicides are included in these totals. NTD defines an injury as any person who was transported from the scene of the event for medical attention.

#### **Additional notes on safety data:**

- All safety data presented on the following pages are sourced from Calendar Year 2015 NTD major event reports. At the time of this document's publication, NTD reporters can still add, modify, and delete major event data for Calendar Year 2015. As such, these data are considered "preliminary" and numbers may change based on ongoing validation activity.
- The analyses on the following page uses Fiscal Year service data sourced from the NTD's Annual Report data collection and Calendar Year Safety and Security data to estimate Fatalities per 100 million Passenger Miles Traveled.
- The Federal Railroad Administration oversees safety for Commuter Rail (CR) systems and a select set of Hybrid Rail (YR) and Heavy Rail (HR) systems. These agencies do not report safety data to the NTD and are therefore excluded from any safety analyses in this document.

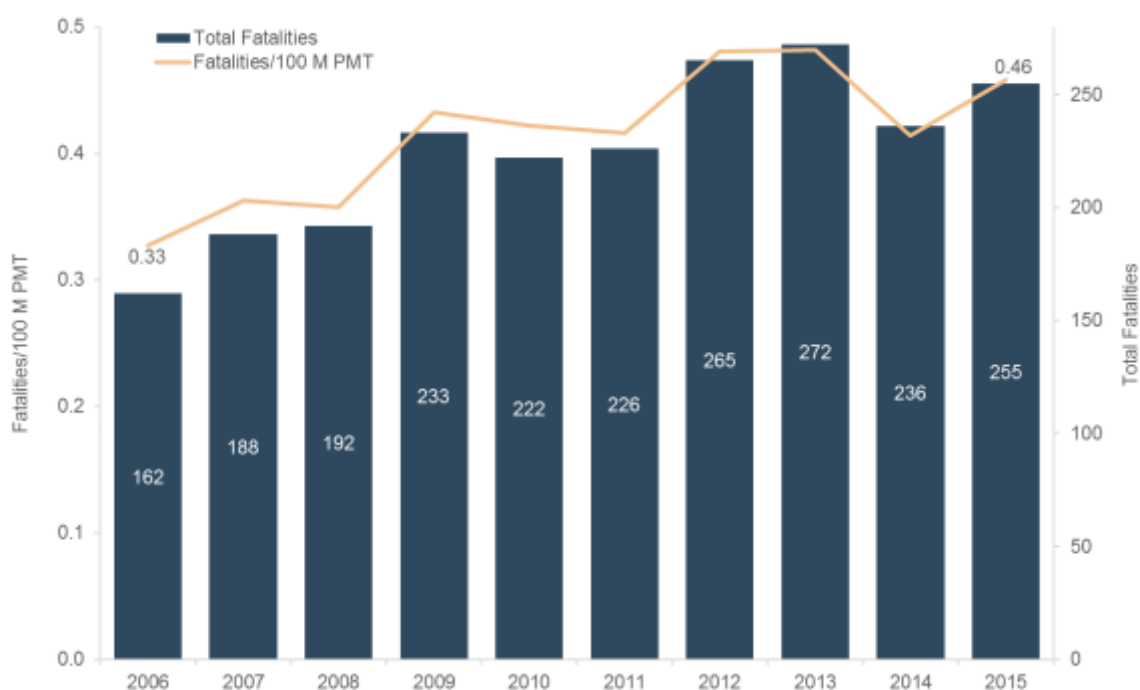


Exhibit A44 – Fatalities per 100 Million Passenger Miles (Full Reporting Agencies)

The NTD groups injuries and fatalities according to seven categories of individuals:

- **Passenger:** An individual who is onboard a transit vehicle or who is boarding/alighting, including those using ramps and lifts.
- **Revenue facility occupant:** An individual who is inside the public passenger area of transit revenue facility. Employees, other workers, and trespassers are not considered revenue facility occupants.
- **Employee:** An employee of the transit agency.
- **Other worker:** A non-employee who is contracted to provide specific services to the transit agency.
- **Pedestrian:** An individual walking in a crosswalk, out of a crosswalk, crossing tracks, or walking along tracks, and bicyclists.
- **Other Vehicle Occupant:** A driver or passenger in a privately owned vehicle.
- **Others:** An individual who is not included in the above categories – many trespassing-related fatalities are reported under this category.

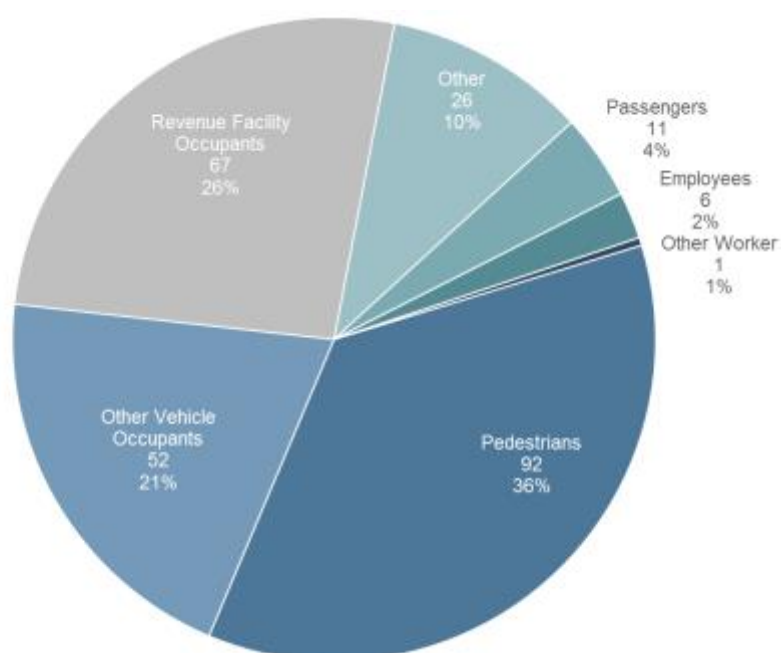


Exhibit A45 – 2015 Total Fatalities by Person Type

Most fatalities in transit-related accidents are non-passengers. Passenger fatalities accounted for less than 5 percent of all reportable fatalities in 2015.

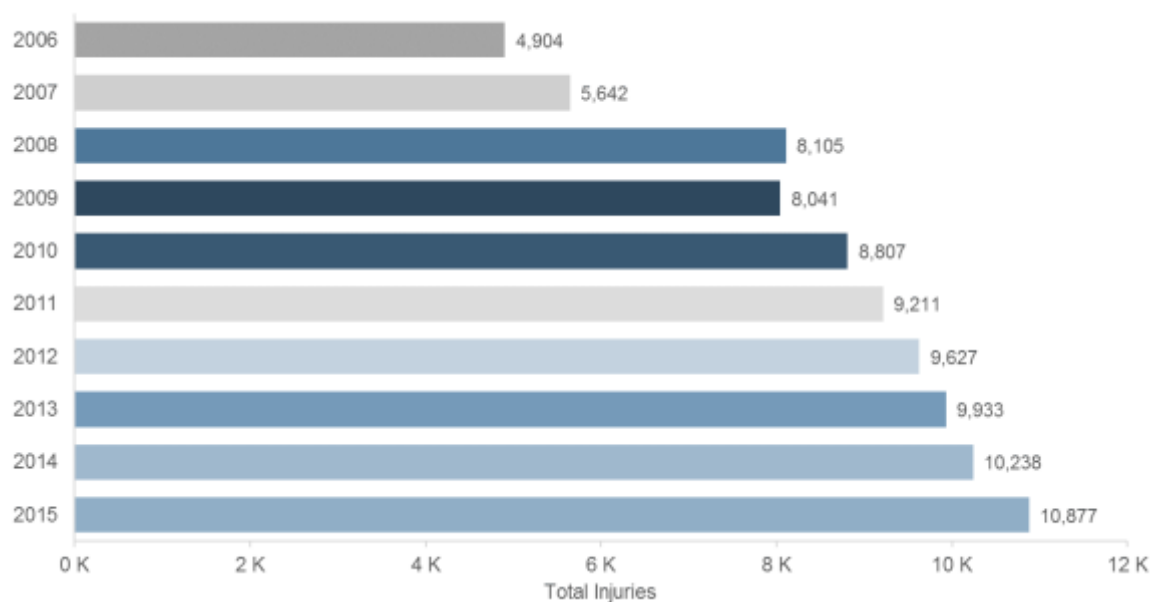


Exhibit A46 – Total Injuries (Major Events)

	<b>Injuries</b>	<b>Fatalities</b>
<b>2006</b>	4,904	162
<b>2007</b>	5,642	185
<b>2008</b>	8,105	192
<b>2009</b>	8,041	233
<b>2010</b>	8,807	222
<b>2011</b>	9,211	226
<b>2012</b>	9,627	265
<b>2013</b>	9,933	272
<b>2014</b>	10,238	236
<b>2015</b>	10,877	255

Exhibit A47 – Injuries and Fatalities (Major Events)

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## Reduced Reporter Safety Data

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Agencies using a Reduced Report submit safety data differently than Full Reporter agencies. These Reduced Reporters report only the total number of events which meet a major event threshold and fatalities and injuries resulting from such events for the entire Fiscal Year of that agency. Most Reduced Reporters (1,155 agencies) reported zero major safety and security events in 2015. Of the 319 agencies that did report events, only 12 experienced fatalities.

	<b>Fatalities</b>	<b>Injuries</b>	<b>Reportable Events</b>
<b>Total Safety Incidents</b>	13	622	725
<b>Number of Agencies</b>	12	212	319

Exhibit A48 – 2015 Safety Events, Reduced Reporting Transit

## Reliability

### Miles between Major Mechanical System Failures

Major mechanical system failures prevent the revenue vehicle from completing a scheduled revenue trip, starting the next scheduled revenue trip because actual movement is limited, or because of safety concerns. Examples of major mechanical bus failures include breakdowns of air equipment, brakes, doors, engine cooling system, steering and front axle, rear axle, and suspension and torque converters.

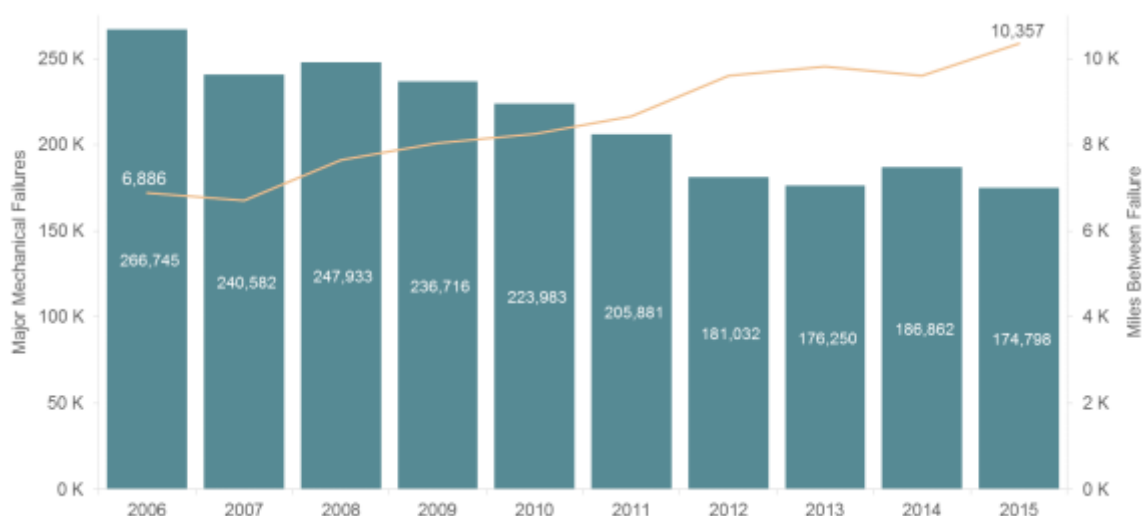


Exhibit A49 – Miles between Major Mechanical System Failures, Directly Operated Bus Service

A number of factors can affect how many major mechanical system failures a transit agency incurs. A few examples are local operating conditions, types of vehicles operated, and effectiveness of the maintenance program. However, different transit agencies report the same types of major mechanical system failures. The differences among agencies are in the numbers reported, not the types of major mechanical system failures.

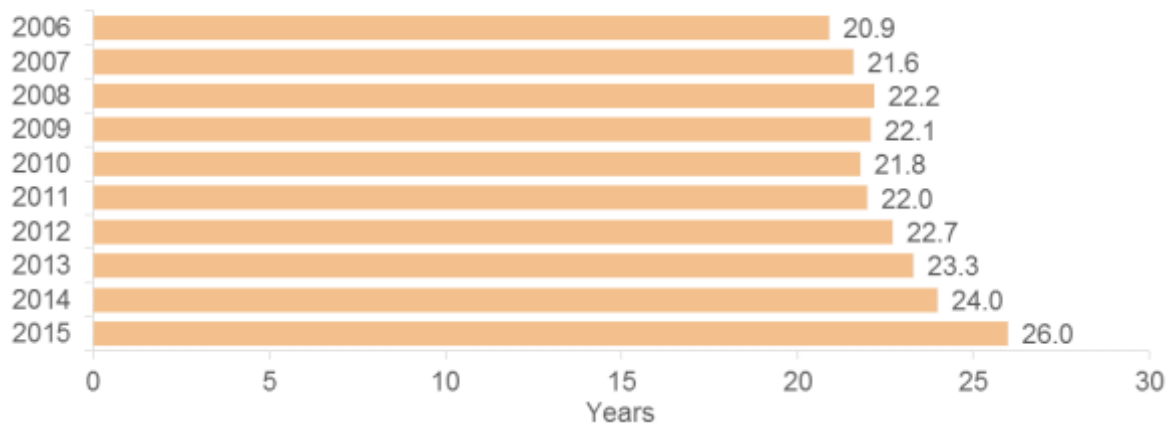
Vehicle miles are the total miles that a vehicle travels while in service (actual vehicle revenue miles and deadhead miles). See the *Transit in the United States* section for definitions of vehicle revenue miles and deadhead miles.

Major mechanical system failures have decreased 34.5 percent over the last ten years. Vehicle miles between major mechanical system failures have increased 50.4 percent over the same period.

## Fleet Characteristics

### Average Fleet Age by Vehicle Type

#### Heavy Rail



#### Light Rail

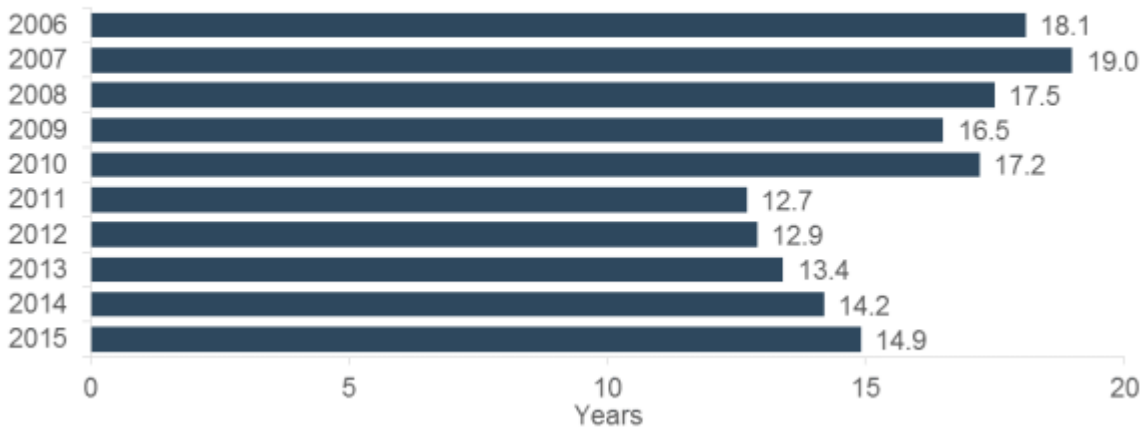
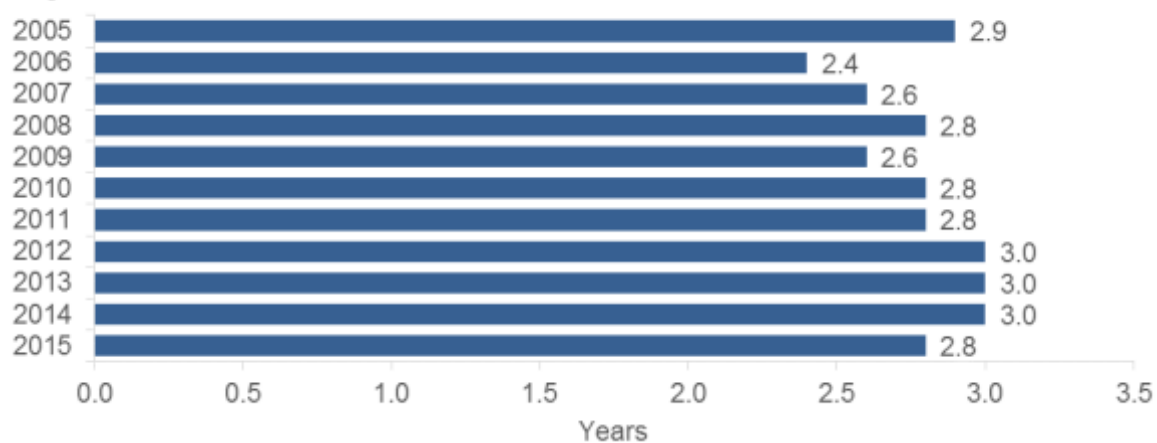


Exhibit A50 – Average Heavy Rail and Light Rail Mode Fleet Age

## Vanpool



## Motorbus

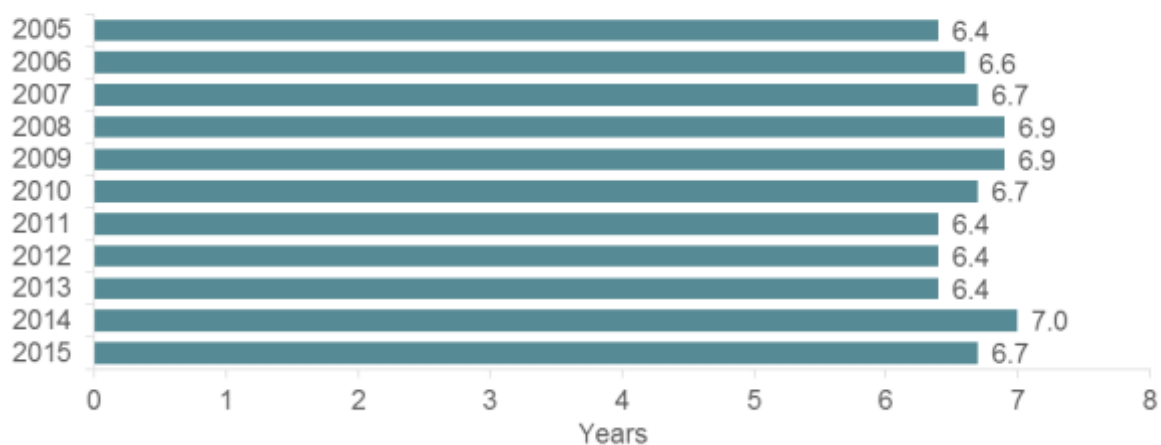


Exhibit A51 – Average Bus and Vanpool Mode Age

### Ferryboat

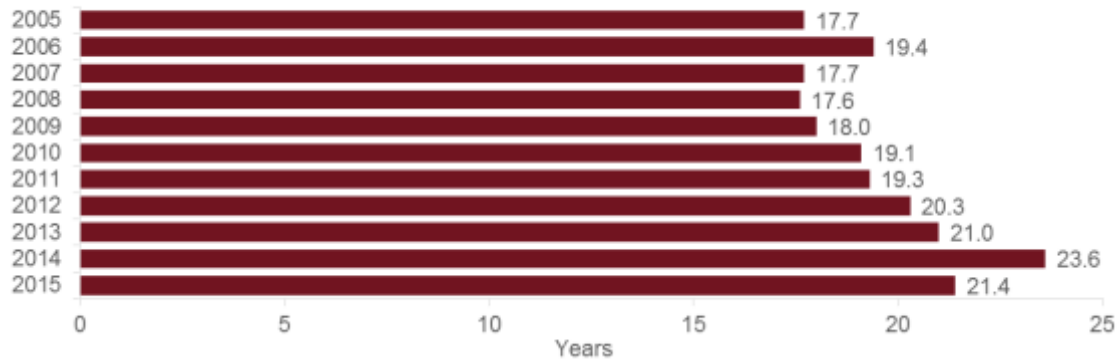


Exhibit A52 – Average Ferryboat Mode Fleet Age

### Alternative Fuel Usage

Alternative fuels are not diesel or gasoline. They include compressed natural gas (CNG), electric, battery, ethanol, methanol, liquefied petroleum gas, liquefied natural gas (LNG), kerosene, bio-diesel, grain substitute and other fuels. The national bus fleet includes only buses fully dedicated to transit service.

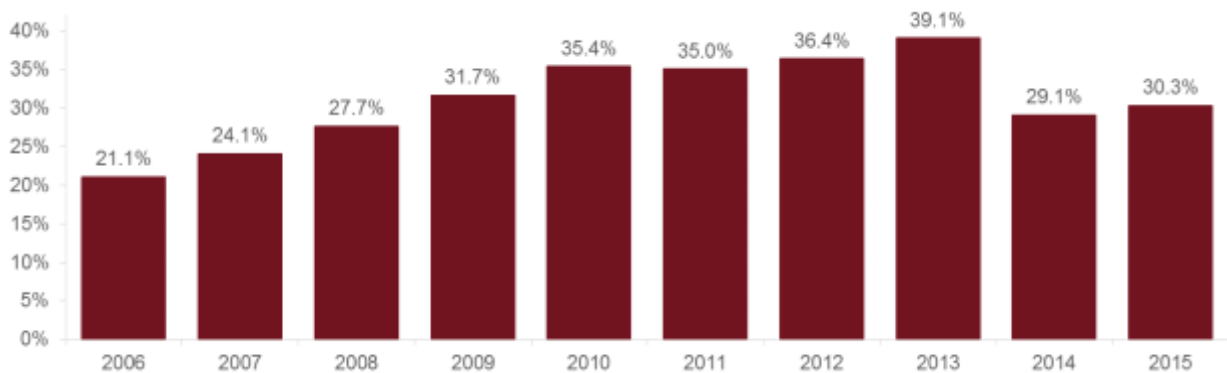


Exhibit A53 – Percent of National Bus Fleet Using Alternative Fuels

The share of the national bus fleet using alternative fuels rose from 21.1 percent in 2006 to 30.3 percent in 2015.



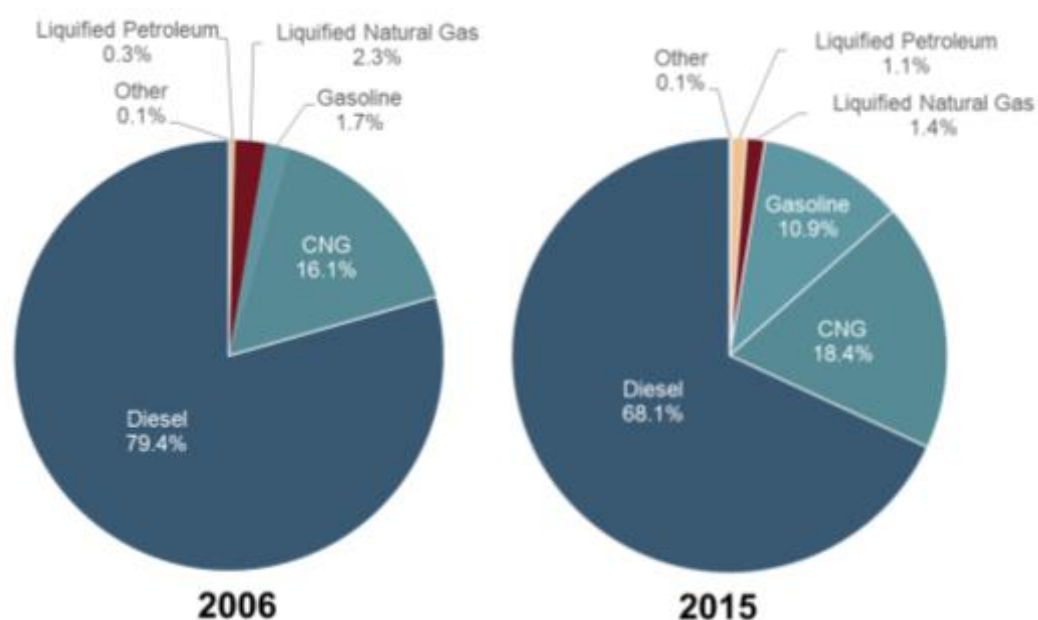


Exhibit A54 – Percentage of Fuel Consumption for Non-Electric Modes

## ADA Compliance

### ADA Lift or Ramp-equipped Vehicles

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The Americans with Disabilities Act of 1990 requires that transit agencies are accessible to individuals with special needs.

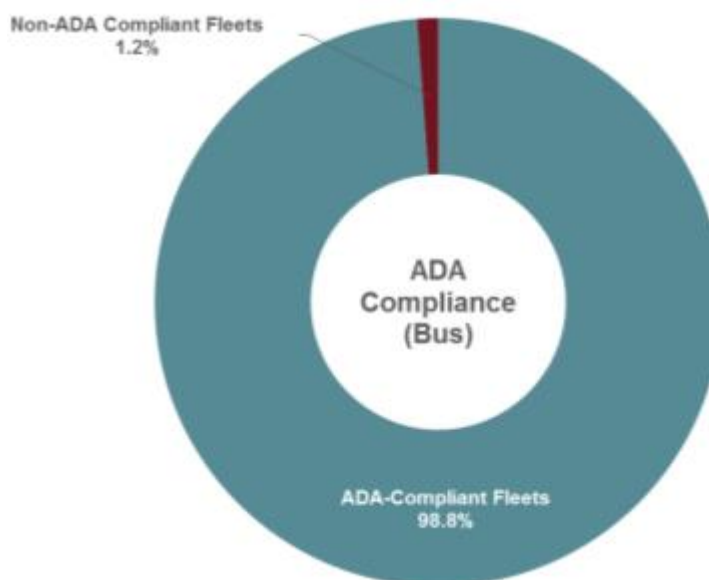


Exhibit A55 – 2015 ADA Compliance (Bus)